U.S. DEPARTMENT OF TRANSPORTATION
PIPELINE AND HAZARDOUS MATERIALS SAFETY ADMINISTRATION

FINAL ENVIRONMENTAL ASSESSMENT
and
FINDING OF NO SIGNIFICANT IMPACT

Special Permit Information:

Docket Number:	PHMSA-2019-0152
Requested By:	Tennessee Gas Pipeline Company, LLC
Operator ID#:	19160
Original Date Requested:	December 19, 2018
Issuance Date:	March 30, 2023
Code Section(s):	49 CFR 192.611(a) and (d) and 192.619(a)

I. Background

The National Environmental Policy Act (NEPA), 42 United States Code (USC) 4321 – 4375 et seq., Council on Environmental Quality Regulations, 40 Code of Federal Regulation (CFR) 1500-1508, and U.S. Department of Transportation (DOT) Order No. 5610.1C, requires the Pipeline and Hazardous Materials Safety Administration (PHMSA), Office of Pipeline Safety (OPS),[1] to analyze a proposed action to determine whether the action would have a significant impact on the human environment. PHMSA analyzes special permit requests for potential risks to public safety and the environment that could result from our decision to grant, grant with additional conditions, or deny the request. As part of this analysis, PHMSA evaluates whether a special permit would impact the likelihood or consequence of a pipeline failure as compared to the operation of the pipeline in full compliance with the Federal pipeline safety regulations. PHMSA's environmental review associated with the special permit application is limited to impacts that would result from granting or denying the special permit. PHMSA

[1] References to PHMSA in this document means PHMSA OPS.

developed this assessment to determine what effects, if any, our decision would have on the environment.

Pursuant to 49 USC 60118(c) and 49 CFR 190.341, PHMSA may only grant special permit requests that are not inconsistent with pipeline safety. PHMSA will impose conditions in the special permit if we conclude they are necessary for safety, environmental protection, or are otherwise in the public interest. If PHMSA determines that a special permit would be inconsistent with pipeline safety or is not justified, the application will be denied.

The purpose of this Final Environmental Assessment (FEA) is to comply with NEPA for the Tennessee Gas Pipeline Company, LLC (TGP)[2] application for a special permit request to waive compliance with the requirements of 49 CFR 192.611(a) and (d) and 192.619(a) for one (1) ***special permit segment*** and one (1) ***special permit inspection area*** in Kentucky. This FEA and finding of no significant impact (FONSI) is prepared by PHMSA to assess the pipeline special permit request, in accordance with 49 CFR 190.341, and is intended to specifically analyze any environmental impact associated with the waiver of certain Federal pipeline safety regulations found in 49 CFR 192.611(a) and (d) and 192.619(a). This special permit requires TGP to implement additional conditions regarding the operations, maintenance, and integrity management (IM) of the approximately 0.536 miles (***special permit segment***) and 50.54 miles (***special permit inspection area***) of the TGP natural gas transmission pipeline system located in Barren County, Kentucky.

II. Introduction

Pursuant to 49 USC 60118(b) and 49 CFR 190.341, TGP submitted an application for a special permit to PHMSA on December 19, 2018, requesting that PHMSA waive the requirements of 49 CFR 192.611(a) and (d) and 192.619(a) to permit TGP to maintain the maximum allowable operating pressure (MAOP) of the pipeline segment where the class location has changed from Class 1 to Class 3 of one (1) ***special permit segment*** in Barren County, Kentucky, for which the class location has changed from Class 1 to Class 3 due to a population density increase near the pipeline. Without the special permit, 49 CFR 192.611(a) would require TGP to replace the ***special permit segment*** or reduce the pipeline MAOP.

[2] Tennessee Gas Pipeline Company, LLC is owned by Kinder Morgan, Inc.

PHMSA may issue a special permit to waive certain regulatory requirements where it is not inconsistent with pipeline safety and which is typically contingent on the performance of additional measures beyond minimum Federal pipeline safety regulations, in accordance with 49 CFR 190.341.

III. Regulatory Background

PHMSA regulations at 49 CFR 192.611(a) require that an operator to confirm or revise the MAOP of a pipe segment that is in satisfactory condition when the hoop stress of the segment is no longer commensurate with the class location. Under 49 CFR 192.611(a), an operator may be required to reduce the operating pressure of a pipe segment, or alternatively, may have to replace the pipe in order to maintain the MAOP. Under 49 CFR 192.619(a)(2) the ***special permit segment*** would be required to be pressure tested to 1.5 times MAOP for eight (8) hours. Below are the relevant text of 49 CFR 192.611(a) and (d) and 192.619(a):

49 CFR 192.611 Change in class location: Confirmation or revision of maximum allowable operating pressure.

(a) If the hoop stress corresponding to the established maximum allowable operating pressure of a segment of pipeline is not commensurate with the present class location, and the segment is in satisfactory physical condition, the maximum allowable operating pressure of that segment of pipeline must be confirmed or revised according to one of the following requirements:

(1) If the segment involved has been previously tested in place for a period of not less than 8 hours:

(i) The maximum allowable operating pressure is 0.8 times the test pressure in Class 2 locations, 0.667 times the test pressure in Class 3 locations, or 0.555 times the test pressure in Class 4 locations. The corresponding hoop stress may not exceed 72 percent of the SMYS of the pipe in Class 2 locations, 60 percent of SMYS in Class 3 locations, or 50 percent of SMYS in Class 4 locations.

(ii) The alternative maximum allowable operating pressure is 0.8 times the test pressure in Class 2 locations and 0.667 times the test pressure in Class 3 locations. For pipelines operating at alternative maximum allowable pressure per §192.620, the corresponding hoop stress may not exceed 80 percent of the SMYS of the pipe in Class 2 locations and 67 percent of SMYS in Class 3 locations.

(2) The maximum allowable operating pressure of the segment involved must be reduced so that the corresponding hoop stress is not more than that allowed by this part for new segments of pipelines in the existing class location.

(3) The segment involved must be tested in accordance with the applicable requirements of subpart J of this part, and its maximum allowable operating pressure must then be established according to the following criteria:

(i) The maximum allowable operating pressure after the requalification test is 0.8 times the test pressure for Class 2 locations, 0.667 times the test pressure for Class 3 locations, and 0.555 times the test pressure for Class 4 locations.

(ii) The corresponding hoop stress may not exceed 72 percent of the SMYS of the pipe in Class 2 locations, 60 percent of SMYS in Class 3 locations, or 50 percent of SMYS in Class 4 locations.

(iii) For pipeline operating at an alternative maximum allowable operating pressure per §192.620, the alternative maximum allowable operating pressure after the requalification test is 0.8 times the test pressure for Class 2 locations and 0.667 times the test pressure for Class 3 locations. The corresponding hoop stress may not exceed 80 percent of the SMYS of the pipe in Class 2 locations and 67 percent of SMYS in Class 3 locations.

(d) Confirmation or revision of the maximum allowable operating pressure that is required as a result of a study under §192.609 must be completed within 24 months of the change in class location. Pressure reduction under paragraph (a) (1) or (2) of this section within the 24-month period does not preclude establishing a maximum allowable operating pressure under paragraph (a)(3) of this section at a later date.

49 CFR 192.619 What is the maximum allowable operating pressure for steel or plastic pipelines?

(a)(2)(ii) For steel pipe operated at 100 p.s.i. (689 kPa) gage or more, the test pressure is divided by a factor determined in accordance with the following table:

Table 1 to Paragraph (a)(2)(ii)

Class location	Factors, [1] segment - Installed before (Nov. 12, 1970)	Installed after (Nov. 11, 1970) and before July 1, 2020	Installed on or after July 1, 2020	Converted under § 192.14
1	1.1	1.1	1.25	1.25
2	1.25	1.25	1.25	1.25
3	1.4	1.5	1.5	1.5
4	1.4	1.5	1.5	1.5

[1] For offshore pipeline segments installed, uprated or converted after July 31, 1977, that are not located on an offshore platform, the factor is 1.25. For pipeline segments installed, uprated or converted after July 31, 1977, that are located on an offshore platform or on a platform in inland navigable waters, including a pipe riser, the factor is 1.5.

(3) The highest actual operating pressure to which the segment was subjected during the 5 years preceding the applicable date in the second column. This pressure restriction applies unless the segment was tested according to the requirements in paragraph (a)(2) of this section after the applicable date in the third column or the segment was uprated according to the requirements in subpart K of this part:

- Section 192.619(a) requires Class 3 location pipe to be pressure tested to 1.5 times MAOP.

IV. Purpose and Need

TGP requested a special permit, and PHMSA has reviewed the special permit application for implementing increased IM activities in lieu of replacing pipe within the ***special permit segment*** located on TGP's 800-2 Pipeline in Barren County, Kentucky, where the class location has changed from a Class 1 to a Class 3 location, and to include contiguous ***special permit segment extensions*** that may experience further development and class change in the future.

This special permit consists of one (1) ***special permit segment*** and waives the requirements of 49 CFR Part 192.611(a) and (d) and 192.619(a) with implementation of the special permit conditions. The special permit will allow TGP to maintain the MAOP of one (1) ***special pipe segment*** for which the class location has changed from Class 1 to Class 3 due to population density increase. Without the special permit, 49 CFR 192.611(a) will require TGP to replace the ***special permit segment*** or reduce pipeline MAOP. **Figures 1** – **3** are general maps that includes the pipeline route showing the ***special permit segment*** and ***special permit inspection area***.

PHMSA is granting the special permit, which includes conditions, for the 2,829.60 feet (approximately 0.536 miles) of ***special permit segment*** and the 50.54 miles of ***special permit inspection area***. The special permit also allows continued operation at the existing MAOP in the event of future class changes within the ***special permit inspection area*** (***special permit segment extensions***), if the ***special permit segment extensions*** meet the special permit conditions applicable to the ***special permit segment***.

V. Site Description

The ***special permit segment*** consists of 2,829.60 feet (approximately 0.536 miles) of the 36-inch Line 800-2 Pipeline in Barren County, Kentucky. The ***special permit inspection area*** extends approximately 50.54 miles of the pipeline.

VI. Special Permit Segment and Special Permit Inspection Area

This special permit pertains to the specified ***special permit segment*** and corresponding ***special permit inspection area*** defined in this section. This special permit allows TGP to maintain the current MAOP as shown in **Table 1 – Special Permit Segment**.

1) **Special Permit Segment**:

This special permit applies to the ***special permit segment*** in **Table 1 – Special Permit Segment** and are identified using the TGP valve and survey station (SS) references.

Table 1 – Special Permit Segment

Special Permit Segment Number[3]	Outside Diameter (inches)	Line Name	Length (feet)	Start Survey Station (Valve - SS)	End Survey Station (Valve - SS)	County, State	No. Dwellings	Year Installed	Seam Type	MAOP (psig)
508	36	800-2	2,829.60	868-2 - 56874	868-2 - 59963	Barren, KY	19	1968	DSAW	936

Note: DSAW is double submerged arc longitudinal weld seam type.

2) **Special Permit Inspection Area**:

The ***special permit inspection area*** is defined as the area that extends 220 yards on each side of the centerline as listed in **Table 2 – Special Permit Inspection Area**.

Table 2 – Special Permit Inspection Area

Special Permit Inspection Area Number	Special Permit Segment(s) Included	Outside Diameter (inches)	Line Name	Start Survey Station (Valve - SS)	End Survey Station (Valve - SS)	Length[4] (miles)
1	508	36	800-2	867-2 - 2558	869-2 - 79291	50.54

Figures 1 through 3 contain maps including the pipeline route map and more detailed maps showing the area near the ***special permit segment***.

[3] On February 3, 2022, TGP rescinded requested ***special permit segments 506, 507, 509, 510, 511,*** and ***512***.

[4] If the ***special permit inspection area*** footage does not extent from launcher to receiver then the ***special permit inspection area*** would need to be extended.

PHMSA grants this special permit request based on this document and the "Special Permit Analysis and Findings" document, which is incorporated by reference into this document and can be read in its entirety in Docket No. PHMSA-2019-0152 in the Federal Docket Management System (FDMS) located on the internet at www.regulations.gov.

VII. Alternatives

Alternative 1: "No Action" Alternative

Denial of the special permit would require the replacement and pressure testing of the pipeline segment associated with this special permit request, which includes approximately 0.536 miles of mainline pipe. If TGP opted not to replace the ***special permit segment***, 49 CFR 192.611 requires a reduction in the pipeline MAOP.[5]

Alternative 2: "Selected" Alternative

PHMSA is granting the special permit with conditions, and TGP is allowed to continue to operate at the current MAOP of 936 pounds per square inch gauge (psig) in the Class 3 location without replacing pipe while complying with the special permit conditions, as described below.

All of the special permit conditions are attributes of a robust IM program. These special permit conditions include conducting periodic: Close interval surveys, cathodic protection (CP) reliability improvements, stress corrosion cracking assessment, running inline inspection (ILI) assessments (smart pigs), interference current control surveys, remediating ILI findings through anomaly evaluation and repairs, pipe seam evaluations, pipe properties records review and documentation, and maintaining line-of-sight markers. Many of these integrity activities are currently required in 49 CFR Part 192, Subpart O, an IM program to manage HCAs at specified reassessment intervals. The assessment and reassessment intervals, the level of remediation and the maintenance activities required in a special permit are more stringent to maintain pipe integrity and protect both the public and the environment for the class location units in which the ***special permit segment*** is located.

[5] These regulatory options are specified in 49 CFR 192.611 Change in class location: Confirmation or revision of maximum allowable operating pressure.

Overview of Special Permit Conditions:

To provide an equivalent level of safety in the absence of either lowering the pipeline operating pressure or upgrading the pipe, this special permit has additional operations and maintenance requirements (conditions) which are intended to decrease the likelihood of a release of gas. PHMSA believes that these additional measures designed to prevent leaks and ruptures will ensure that the special permit is not inconsistent with pipeline safety. This section provides an overview of the special permit conditions. For TGP specific technical requirements and the special permit conditions can be read in its entirety in the FDMS at Docket No. PHMSA-2019-0152 located on the internet at www.regulations.gov or on the PHMSA website for special permits issued at https://www.phmsa.dot.gov/pipeline/special-permits-state-waivers/special-permits-issued.

1) **Current Status of Pipe in the Ground**

   To ensure that key characteristics of the pipe currently installed in a ***special permit segment*** are known, records that confirm pipe specifications, successful pressure tests, and girth weld non-destructive tests are required. Should records be unavailable or unacceptable, additional activities as detailed in the special permit must be completed. If these additional activities are not completed or should pipe be discovered that does not meet specific requirements of eligibility, the ***special permit segment*** must be replaced.

2) **Operating Conditions**

   The ***special permit inspection area*** must continue to be operated at or below the existing MAOP until a restoration or uprating plan has been approved, if allowed by the special permit. To ensure compliance with special permit conditions, TGP's Operations and Maintenance Manual (O&M), IM Program, and Damage Prevention (DP) program must be modified to implement the special permit conditions. In addition, PHMSA must approve any long-term flow reversals that would impact a ***special permit segment***.

3) **Threat Management**

   Threats are factors that can lead to the failure of a pipeline. Activities are required to identify, assess, remediate, and monitor threats to the pipeline.

a) **General activities**. TGP must perform annual data integration and identification of threats to which the ***special permit inspection area*** is susceptible. These activities must include integrity assessments with specific inline inspection tools, strict anomaly repair criteria, and appropriate environmental assessment and permitting. Additional integrity assessment methodologies may be used if allowed by the special permit. Integrity assessments must then be conducted periodically at an interval determined in the special permit for each threat identified.

b) **External corrosion control requirements**. The special permit requires additional activities to monitor and mitigate external corrosion. These activities include installation and annual monitoring of CP test stations, periodic close interval surveys (CIS), and clearing or remediating shorted casings that may impede CP effectiveness. These activities ensure the appropriate level of CP is reaching the pipeline in areas where coating loss or damage has occurred in order to prevent or mitigate external corrosion. In addition, TGP will be required to develop and implement a plan that identifies and remediates interference from alternating or direct current (AC/DC) sources (such as high-voltage powerlines) that could adversely impact the effectiveness of CP.

c) **Internal corrosion control requirements**. The special permit includes gas quality specifications to mitigate internal corrosion because internal corrosion is highly dependent on the quality of the gas transported within the pipeline.

d) **Stress corrosion cracking (SCC) requirements**. To ensure that SCC is discovered and remediated, any time a pipe segment in the ***special permit inspection area*** is exposed during an excavation TGP must examine coating to determine type and condition. If the coating is in poor condition, TGP must conduct additional SCC analysis. If SCC is confirmed, TGP must implement additional special permit defined remediation and mitigation.

e) **Pipe seam requirements**. TGP must perform an engineering integrity analysis to determine susceptibility to seam threats. TGP must re-pressure test any ***special permit segment*** with an identified seam threat to ensure the issue is not systemic in nature.

f) **External pipe stress requirements**. Upon identification of any source of external stress on the pipeline (such as soil movement), TGP must develop procedures to evaluate and periodically monitor these stresses.

g) **Third-party specific requirements**. To assist in identifying the pipeline location and minimizing the chance of accidental pipeline strikes, TGP must install and maintain line-of-site markers for the pipeline. TGP must perform mitigation activities for any location where a depth-of-cover survey shows insufficient soil cover.

4) **Consequence Mitigation**

To ensure quick response and decreased adverse outcome in the event of a failure, each side (upstream and downstream) of the ***special permit segment*** must have and maintain operable automatic shutdown valves (ASV) or remote-controlled valves (RCV). TGP must monitor valves through a control room with a supervisory control and data acquisition (SCADA) system. In addition to the mainline valves, should a crossover or lateral connect between the valve locations, additional isolation valves may be required. To ensure a leak is discovered promptly, leakage surveys are required twice a year.

5) **Gas Leakage Surveys and Remediation**

The ***special permit segment*** and ***special permit inspection area*** have requirements in the special permit to conduct leakage surveys more frequently than is presently required in 49 CFR 192.706. Gas leakage surveys using instrumented gas leakage detection equipment must be conducted along each ***special permit segment*** and at all valves, flanges, pipeline tie-ins with valves and flanges, ILI launcher, and ILI receiver facilities in each ***special permit inspection area*** at least twice each calendar year, not to exceed 7½ months. The type of leak detection equipment used, survey findings, and remediation of all instrumented gas leakage surveys must be documented by TGP. The special permit will require a three-step grading process with a time interval for remediation based upon the type of leak.

6) **Post Leak or Failure**

Should an in-service leak occur, the leak must be graded and remediated as required in the permit. In addition, for all in-service or pressure test leak/failure(s), TGP must conduct a root cause analysis to determine the cause. If the cause is determined to be systemic in nature, TGP must implement a remediation plan or the ***special permit segment*** must be replaced, as determined by the special permit specific conditions.

7) **Class Location Study and Potential Extension of Special Permit Segment**

TGP must conduct a class location study at an interval specified in the special permit. This allows TGP to quickly identify extended locations that must comply with the special permit requirements. TGP may extend a ***special permit segment*** with proper notification, update of the FEA, and implementation of all requirements in the special permit.

8) **PHMSA Oversight and Management**

PHMSA maintains oversight and management of each special permit. This includes annual meetings with executive level officers on special permit implementation status, written certification of the special permit, special permit required notification of planned activities, notification of root cause analysis results, and notification prior to certain excavation activities so that PHMSA may observe.

9) **Documentation**

TGP must maintain documentation that supports compliance with special permit conditions for the life of the pipeline.

VIII. Affected Resources and Environmental Consequences

1) Affected Resources and Environmental Consequences of the "Selected" Alternative and the "No Action" Alternative

TGP is granted a special permit that waives compliance with 49 CFR 192.611(a) and (d) and 192.619(a) for a ***special permit segment*** totaling 2,829 feet (approximately 0.536 miles) of 36-inch diameter gas transmission pipeline located within a ***special permit inspection area*** totaling approximately 50.54 miles. TGP must comply with the special permit conditions within the ***special permit segment*** and ***special permit inspection area***.

Implementation of the special permit conditions, including enhanced IM procedures, provides an additional level of safety without the impacts of excavation to remove existing pipe, install the replacement pipe, and conduct pressure testing of the existing pipe. Thus, TGP will avoid disturbing approximately 0.536 miles of the pipeline right of way (ROW), with the exception of additional

inspections that may be required to satisfy the conditions of the special permit such as those related to the IM protocols that may require verification digs and potential anomaly evaluations/repairs.

Implementing additional preventative and mitigative measures enables a pipeline to improve its knowledge and understanding of the pipeline's integrity, accelerate the identification and repair of actionable anomalies, and better manage and mitigate threats to the public and environment. Therefore, implementing enhanced inspection and assessment practices within the ***special permit inspection area***, in lieu of replacing and pressure testing the small sections of pipe experiencing the class location changes, extends pipeline safety benefits to a much greater area, and avoids environmental disturbances.

The pipeline integrity attributes (such as pipe diameter, wall thickness, grade, coating type (fusion bonded epoxy), pipe seam type (high frequency electric resistance welded), pressure test, maximum allowable operating pressure, and anomaly findings) for the special permit segment can be reviewed in the FDMS located at www.regulations.gov under the document titled **"Attachment A – 2019-0152 – TGP."** Details about the pipeline's integrity and compliance history are provided in the **Special Permit Analysis and Findings (SPAF)** document, which is available in the docket (PHMSA-2019-0152) in the FDMS at www.regulations.gov. The SPAF does not describe any integrity issues (such as pipe body, seam or girth weld, operational or environmental) that would affect the approval of the special permit with implementation by KMTP of conditions to maintain safety. PHMSA has determined that the pipeline and ***special permit segment*** are in satisfactory condition for the issuance of the special permit.

Aesthetics: The visual character of the ***special permit segment*** and the ***special permit inspection area*** will not be changed by the "Selected" Alternative. The objective of the special permit is to avoid construction or ground disturbances in the pipeline ROW that would be necessitated if the special permit was not granted. Therefore, the issuance of the requested special permit will result sporadic and temporary aesthetic impacts due to increased monitoring, maintenance, and repair activities along the affected ***special permit segment*** or ***special permit inspection area***.

Denial of the special permit request, the "No Action" Alternative, would require the replacement or pressure testing of the pipeline segment associated with this special permit request. Pipe replacement would require removal of the existing pipe and installation of a new pipe. This would result in the use of heavy equipment and ground disturbance. Furthermore, pressure testing would also require disturbances along the pipeline ROW.

Agricultural Resources: The area surrounding the ***special permit segment*** contain cultivated crops. The issuance of the special permit, "Selected" Alternative, will reduce impact to agricultural resources in the ***special permit segment***. Increased monitoring and maintenance requirements imposed by the special permit conditions could increase these activities causing temporary and isolated impacts to the ***special permit inspection area***. The aim of the special permit is to avoid the higher impact construction activities associated with pipeline replacement in the ROW along the ***special permit segment***.

Air Quality: The "Selected" Alternative will have minimal impacts on air quality in the ***special permit segment*** due to combustion emissions resulting from surveillance, assessment, and maintenance activities required by the permit. If the permit was not granted, "No Action" Alternative, pipe replacement of the ***special permit segment*** would be required, which would necessitate blowing down the pipeline to release unburned natural gas, which is a powerful greenhouse gas. The "No Action" Alternative would have a more substantial, though still minimal effects on air quality, with additional emissions that are temporary caused by equipment use during excavation, pipe removal, pipe replacement, and pipe installation.

Biological Resources: The ***special permit segment*** is dominated by hay/pasture-land cover. Federally listed species that may occur within the project vicinity include northern long-eared bat, red-cockaded woodpecker, American burying beetle, rattlesnake-master borer moth, and harperella. No critical habitat occurs within the ***special permit segment***.

Table 3.
Federally Listed Threatened and Endangered Species with the Potential to Occur along the *Special Permit Segment* and Preliminary Effect Determination for the "Selected" Alternative, Barren County, Kentucky

Common Name	Scientific Name	Federal	Habitat Description	Occurrence	Effect
Birds					
Red-cockaded Woodpecker	*Picoides borealis*	E	This species of bird roost and nest exclusively in live pine trees. They require pines at least 60 years old but prefer 80 to 100-year old pines infected with red heart fungus (USFWS 2021).	Potential to occur in forested areas directly adjacent to the ROW.	Not likely to effect
Clams					
Clubshell	*Pleurobema clava*	E	This mussel prefers clean, loose sand and gravel in medium to small rivers and streams. This mussel will bury itself in the bottom substrate to depths of up to four inches (USFWS 2021).	Not likely to occur.	No effect
Cracking Pearlymussel	*Hemistena lata*	E	This mussel prefers gravel riffles of medium-sized streams, and mud and sand bottoms in slower-moving water. It buries itself in the gravel with only its feeding siphons exposed (USFWS 2021).	Not likely to occur.	No effect

Table 3. Federally Listed Threatened and Endangered Species with the Potential to Occur along the *Special Permit Segment* and Preliminary Effect Determination for the "Selected" Alternative, Barren County, Kentucky					
Common Name	**Scientific Name**	**Federal**	**Habitat Description**	**Occurrence**	**Effect**
Fanshell	*Cyprogenia stegaria*	E	This mussel is found in medium to large rivers. It buries itself in sand or gravel in deep water of moderate current, with only the edge of its shell and its feeding siphons exposed (USFWS 2021).	Not likely to occur.	No effect
Northern Rifflesheell	*Epioplasma torulosa rangiana*	E	This mussel is found in a wide variety of streams from large to small. It buries itself in bottoms of firmly packed sand or gravel with its feeding siphons exposed (USFWS 2021).	Not likely to occur.	No effect
Orangefoot Pimpleback (pearlymussel)	*Plethobasus cooperianus*	E	This mussel prefers clean, fast-flowing water in silt-free rubble, gravel or sand of medium to large rivers. It buries itself in sand or gravel in water as deep as 29 feet (USFWS 2021).	Not likely to occur.	No effect
Pale Lilliput (pearlymussel)	*Toxolasma cylindrellus*	E	Large creek and small rivers, typically found in gravel in moderate current (Outdoor Alabama 2021a).	Not likely to occur.	No effect
Pink Mucket	*Lamsilis abrupta*	E	This mussel is found in mud and sand in shallow riffles and shoals swept free of silt in major rivers and tributaries. This mussel buries itself in sand or gravel, with only the edge of its shell and its feeding siphons exposed (USFWS 2021).	Not likely to occur.	No effect
Purple Cat's Paw	*Epioblasma obliquata obliquata*	E	The purple cat's paw inhabits large rivers with sandy gravel substrates. It occurs in water of shallow to moderate depth with a swift current.	Not likely to occur.	No effect
Rabbitfoot	*Quadrula cylindrical cylindrical*	T	This species generally inhabits small- to medium-sized stream and some larger rivers. It occurs shallow water areas along the bank and in shoals with reduced water velocity. Individuals have also been found in deep water runs (9-12 ft.). Primary substrate includes gravel and sand (USFWS 2021).	Not likely to occur.	No effect
Ring Pink (mussel)	*Obovaria retusa*	E	This species is endemic to the Ohio River basin and is found in gravel and sandy substrates in large rivers (USFWS 2021).	Not likely to occur.	No effect
Rough Pigtoe	*Pleurobema plenum*	E	This species is endemic to the Ohio River system and is found in stable substrates composed of a mixture of relatively firm and clean gravel, sand, and silt (USFWS 2021).	Not likely to occur.	No effect
Sheepnose Mussel	*Plethobasus cyphus*	E	This species lives in larger rivers and streams where they are usually found in shallow areas with moderate to swift currents that flow over coarse sand and gravel. However, they have also been found in areas of mud, cobble and boulders, and in large rivers they may be found in deep runs (USFWS 2021).	Potential to occur in the Tennessee River; however, if pipe replacement is required, the method would most likely be via horizontal direction drill.	No effect
Slabside Pearlymussel	*Pleuronaia dolabelloides*	E	This species is primarily a large creek to moderately-sized river species. It generally is found in gravel substrates with interstitial sand, with moderate current, at depths less than 1 meter deep in moderate to swift current velocities. This species requires flowing, well oxygenated waters to thrive (USFWS 2021).	Not likely to occur.	No effect
Snuffbox Mussel	*Epioblasma triquetra*	E	This mussel is primarily a large creek to moderately-sized river species. It generally is found in gravel substrates with interstitial sand, with moderate current, at depths less than 1 meter deep in moderate to swift current velocities. This species requires flowing, well oxygenated waters to thrive (USFWS 2021).	Not likely to occur.	No effect

Table 3. Federally Listed Threatened and Endangered Species with the Potential to Occur along the *Special Permit Segment* and Preliminary Effect Determination for the "Selected" Alternative, Barren County, Kentucky					
Common Name	**Scientific Name**	**Federal**	**Habitat Description**	**Occurrence**	**Effect**
Spectaclecase (mussel)	*Cumberlandia monodonta*	E	This species of mussels are found in large rivers where they live in areas sheltered from the main force of the river current. This species often clusters in firm mud and in sheltered areas, such as beneath rock slabs, between boulders and even under tree roots (USFWS 2021).	Not likely to occur.	No effect
White Wartyback (pearlymussel)	*Plethobas cicatricosus*	E	This mussel is found in clean, fast-flowing water in silt-free rubble, gravel and sand bottoms of large rivers. It buries itself in sand or gravel between bedrock ledges with only the edge of its sell and its feeding siphons exposed (USFWS 2021).	Potential to occur in the Tennessee River; however, if pipe replacement is required, the method would most likely be via horizontal direction drill.	No effect
Winged Mapleleaf	*Quadrula fragosa*	E	This species is found in riffles with clean gravel, sand, or rubble bottoms and in clear, high quality water. In the past, it may also have been found in large rivers and streams on mud, mud-covered gravel, and gravel bottoms (USFWS 2021).	Not likely to occur.	No effect
Crustaceans					
Kentucky Cave Shrimp	*Palaemonias ganteri*	E	This species only lives in underground streams. They typically inhabit large, base-level cave streams characterized by slow flow, abundant organic material, coarse to fine grain sand, and coarse silt sediments (USFWS 2021).	Not likely to occur.	No effect
Insects					
American Burying Beetle	*Nicrophorus americanus*	T	This species prefers many types of habitat, with a slight preference for grasslands and open understory oak hickory forests. However, the beetles need carrion the size of a dove or a chipmunk to reproduce. Carrion availability may be the greatest factor determining where the species can survive (USFWS 2021).	Not likely to occur.	No effect
Fish					
Pygmy Madtom	*Noturus stanauli*	E	This species inhabits gravel runs of clear, medium-sized rivers.	Not likely to occur.	No effect
Slackwater Darter	*Etheostoma boschungi*	T	The slackwater darter is known from south-central Tennessee and from the headwaters of the Buffalo River in Tennessee (Outdoor Alabama 2021b).	Not likely to occur.	No effect
Spotfin Chub	*Erimonax monachus*	T	Spotfin chubs inhabit clear water over gravel, boulders, and bedrock in large creeks and medium-sized rivers having moderate current. This fish is rarely seen over sand, and appears to avoid silty areas (USFWS 2021).	Not likely to occur.	No effect
Flowering Plants					
Prairie Bush-clover	*Lespedeza leptostachya*	T	This species prefers dry to mesic prairies with gravelly soils (USFWS 2021).	Not likely to occur.	No effect
Western Prairie Fringed Orchid	*Platanthera praeclara*	T	This species occurs most often in mesic to wet unplowed tallgrass prairies and meadows but have been found in old fields and roadside ditches (USFWS 2021).	Not likely to occur.	No effect
Mammals					

Table 3. Federally Listed Threatened and Endangered Species with the Potential to Occur along the *Special Permit Segment* and Preliminary Effect Determination for the "Selected" Alternative, Barren County, Kentucky					
Common Name	**Scientific Name**	**Federal**	**Habitat Description**	**Occurrence**	**Effect**
Gray Bat	*Mytosis grisescens*	E	With rare exceptions, gray bats live in caves year-round. During the winter, gray bats hibernate in deep, vertical caves. In the summer, they roost in caves which are scattered along rivers. These caves are in limestone karst areas of the southeastern United States (USFWS 2021).	Potential habitat in adjacent forested areas.	Not likely to effect
Indiana Bat	*Mytosis sodalis*	E	Indiana bats hibernate in tight clusters on the ceilings and sides of caves and mines. Their Summer habitat includes small to medium river and stream corridors with well developed riparian woods; woodlots within 1 to 3 miles of small to medium rivers and streams; and upland forests (USFWS 2021).	Potential habitat in adjacent forested areas.	Not likely to effect
Northern Long-eared Bat	*Mytosis septentrionalis*	T	Northern long-eared bats spend winter hibernating in caves and mines, called hibernacula. During the summer, northern long-eared bats roost singly or in colonies underneath bark, in cavities or in crevices of both live trees and snags (dead trees) (USFWS 2021).	Potential habitat in adjacent forested areas.	Not likely to effect
West Indian Manatee	*Trichechus manatus*	T	Manatees live in marine, brackish, and freshwater systems in coastal and riverine areas throughout their range. Preferred habitats include areas near the shore featuring underwater vegetation like seagrass and eelgrass (USFWS 2021).	Not likely to occur.	No effect
Reptiles					
Eastern Massasauga	*Sistrurus catenatus*	T	This species lives in wet areas including wet prairies, marshes and low areas along rivers and lakes. They also use adjacent uplands during part of the year. They often hibernate in crayfish burrows but may also be found under logs and tree roots or in small mammal burrows (USFWS 2021).	Not likely to occur.	No effect
Hawksbill Sea Turtle	*Eretmochelys imbricate*	E	This species is found throughout the tropical waters of the Atlantic, Pacific, and Indian Oceans (USFWS 2021).	Not likely to occur.	No effect
Kemp's Ridley Sea Turtle	*Lepidochelys kempii*	E	The major habitat for Kemp's ridleys is the nearshore and inshore waters of the northern Gulf of Mexico. Adult and sub-adult Kemp's ridleys primarily occupy nearshore habitats that contain muddy or sandy bottoms where prey can be found (USFWS 2021).	Not likely to occur.	No effect
Leatherback Sea Turtle	*Dermochelys coriacea*	E	The leatherback is the most pelagic of the sea turtles. Adult females require sandy nesting beaches backed with vegetation and sloped sufficiently so the distance to dry sand is limited. Their preferred beaches have proximity to deep water and generally rough seas (USFWS 2021).	Not likely to occur.	No effect
Loggerhead Sea Turtle	*Caretta caretta*	T	Loggerhead turtles are found worldwide primarily in subtropical and temperate regions of the Atlantic, Pacific, and Indian Oceans, and in the Mediterranean Sea (USFWS 2021).	Not likely to occur.	No effect
T: Threatened E: Endangered					

Increased maintenance, monitoring, and repair activities will be required to achieve compliance with the special permit in the ***special permit segment*** and ***special permit inspection area*** that will be conducted within the boundaries of the previously disturbed pipeline ROW. TGP will request no effect concurrence from the United States Fish and Wildlife Service (USFWS) Twin Cities Ecological Services Field Office for any future work by TGP, regarding work to be undertaken within its existing, previously disturbed ROW, to ensure compliance with Section 9 of the Endangered Species Act (ESA).

Replacement of line pipe in the ***special permit segment***, or "No Action" Alternative, would result in increased disturbance to wildlife habitat, though that disturbance would also be temporary and limited in nature.

Climate Change: The scope and duration of any activities associated with the special permit, including maintenance and repair activities will have minimal impact on climate change. A benefit of the "Selected" Alternative is that it will avoid methane venting, construction, or ground disturbances in the pipeline ROW. The "No Action" Alternative where a special permit were not granted, pipe replacement and/or hydrotesting would be required, which would necessitate the use of heavy equipment during construction and blowing down the pipeline releasing natural gas, a known greenhouse gas (GHG). Pipeline operators can and should mitigate blowdowns through pressure reductions and capture and storage of natural gas during pipeline work. However, PHMSA does not currently have authority to mandate these mitigation measures.

The "Selected" Alternative will result in emissions that result from increased maintenance, monitoring, and repair requirements for the duration of the special permit. These emissions would be expected to be significantly less than the replacement associated with the "No Action" Alternative. The scope and duration of any activities associated with the special permit will have an insignificant impact on climate change.

With the "No Action" Alternative, pipe replacement would be required, which would necessitate blowing down the pipeline releasing unburned natural gas, a greenhouse gas more potent than carbon dioxide. Pipeline replacement would also result in increased emissions from manufacture of new pipe, transportation of materials, and construction activities related to pipeline replacement. The special permit requires increased pipeline maintenance activities that will result in increased emissions from equipment and transportation utilized to perform those actions, but these emissions are likely substantially less than what would result from pipeline removal, manufacture, transportation, and replacement. The scope and duration of any activities associated with the special permit will have an insignificant impact on climate change.

Cultural Resources: There are no cultural, archaeological, or paleontological resources that will be impacted by this special permit, "Selected" Alternative, because the ROW was disturbed during initial construction of the pipeline. A cultural resource survey completed in 2020 determined no National

Register of Historical Places (NRHP) listed building is located within 1 mile of the ***special permit segment***.

Environmental Justice: The ***special permit segment*** is not situated in or disproportionately impacts any predominantly minority or non-English language populations. In any event, the activities of the special permit, "Selected" Alternative, are intended to maintain safety along the ***special permit segment*** and increase the level of the safety along the 50.54-mile ***special permit inspection area.***

The special permit is intended to maintain or increase safety with the implementation of safety conditions in the ***special permit segment***. Many special permit conditions apply to the ***special permit inspection area*** and will not have a disparate impact on any minority, low income, or limited English proficiency populations. This special permit will also reduce climate change impacts, which are understood to disproportionately affect low-income and minority communities. Therefore, consistent with DOT Order 5610.2C ("Department of Transportation Actions to Address Environmental Justice in Minority Populations and Low-Income Populations") and Executive Orders 12898 ("Federal Actions to Address Environmental Justice in Minority Populations and Low-Income Populations"), 13985 ("Advancing Racial Equity and Support for Underserved Communities Through the Federal Government"), 13990 ("Protecting Public Health and the Environment and Restoring Science To Tackle the Climate Crisis"), 14008 ("Tackling the Climate Crisis at Home and Abroad"), 12898 and DOT Order 5610.2(a), and Department of Transportation Actions to Address Environmental Justice in Minority Populations and Low-Income Populations, PHMSA does not anticipate that the special permit will result in disproportionately high and adverse effects on minority or low-income populations.

Table 4 - Demographic Information for Special Permit Segment – Using EPA EJScreen

Special Permit Segment No.	State	County	Total Population (Along Special Permit Segment)	Minority*/ People of Color** Population	Low Income Population	Linguistically Isolated
508	KY	Barren	597	0%	28%	0%

Minority*: The term minority is used in the currently active DOT Environmental Justice Order 5610.2(a), available at: https://www.fhwa.dot.gov/environment/environmental_justice/ej_at_dot/orders/order_56102a/index.cfm

People of Color**: The term people of color is used in the EPA's Environmental Justice Screening and mapping tool (EJSCREEN). An overview of demographic indicators through EJSCREEN is available at: https://www.epa.gov/ejscreen/overview-demographic-indicators-ejscreen

Geology, Soils, and Mineral Resources: The ***special permit segment*** is located within the Salem, Warsaw, and Harrodsburg Limestone Geologic Formations. The dominant soils are the Talbot cherty silty clay loam. Soils in this group have moderately low runoff potential when thoroughly wet and are well drained. These soils are highly erodible and are classified as farmland of statewide importance.

There have been 15 historical earthquakes in a 62-mile radius from the ***special permit segment***. The epicenter of the closest historic earthquake is located ~17 miles from the ***special permit segment***. The two (2) most severe historical earthquakes had a magnitude of 3.1, which are classified as Minor Earthquakes. The remainder of the historical earthquakes range from magnitude 0-2.6, which are classified as Micro Earthquakes to Minor Earthquakes.

Earthquake activity impact analysis for TGP's pipelines is based upon magnitude, location, intensity extents, and analytical information provided by the USGS quantifying ground shaking and strength at our pipelines. The Modified Mercalli Intensity (MMI) scale provides an understanding of the intensity decrease with distance. For TGP, conditions of initial interest would not be expected until an earthquake magnitude reaches M4.5 and greater with the epicenter directly at the pipeline or when the local ground shaking at the pipeline resulting from a remotely located event reaches an assigned MMI value of at least VI.

Indian Trust Assets: According to the U.S. Department of Interior, Bureau of Indian Affairs (2016), there are no federally recognized Indian tribes or tribal reservations in the counties with the ***special permit segment***. The scope and duration of any compliance work resulting from the special permit will have little to no effect or impact on the socioeconomics in the surrounding area.

Land Use: Minimal ground disturbance or modifications to the TGP system along the ***special permit segment*** and ***special permit inspection area*** will occur as part of the special permit, "Selected" Alternative, from increased maintenance activities. The special permit will not impact land use or planning and does not require permits from local governments.

Noise: The "Selected" Alternative will not negatively alter the noise levels in the vicinity of the ***special permit segment***. Granting the permit will increase the monitoring, maintenance, and repair requirements and could increase the frequency of use of equipment, including heavy machinery for conducting excavations and repairs throughout the life of the pipeline's operation under this special permit. These

activities will result in short term, isolated, and sporadic noise impacts in the ***special permit inspection area***. Replacement of the pipeline segment under the "No Action" Alternative will generate comparatively more noise from operation of construction equipment in the ***special permit segment***, but these impacts will end with completion of the replacement. Construction will progress along the route such that impacts at any location will be of a short duration. Nonetheless, noise impacts resulting from both the "Selected" Alternative and the "No Action" Alternative will be localized, minor, and temporary.

Recreation: The "Selected" Alternative will have minimal impacts on recreational resources in the ***special permit segment*** and ***special permit inspection area*** due to compliance with increased maintenance, monitoring, and repair activities required for compliance. The "Selected" Alternative will not impact any recreational resources in the ***special permit inspection area***, except for those in ***special permit inspection area*** associated with temporary and sporadic maintenance, monitoring, and repair activities required by the special permit conditions.

A denial of the special permit or the "No Action" Alternative would have resulted in temporary increases in disturbances to recreational activities during the replacement of the existing pipe.

Safety: Class locations are based upon the population (dwellings for human occupancy) within a "class location unit" which is defined as an onshore area that extends 220 yards on either side of the centerline of any continuous 1-mile of pipeline. These locations are determined by surveying the pipeline for population growth. The more conservative safety factors are required as dwellings for human occupancy (population growth) increases near the pipeline. Replacing existing pipe in areas that have experienced population growth with stronger pipe with new coating would provide significant safety protections. However, under the conditions of the special permit, TGP will be required to comply with the special permit conditions in the ***special permit segment*** and the ***special permit inspection area***.

This FEA incorporates the SPAF, which is available under this docket on regulations.gov. The SPAF does not describe any integrity issue that would affect the approval of the special permit or the development of the special permit conditions.

The safety risk with respect to this request for a special permit focuses on maintaining the integrity of the pipeline and to the increased population. Granting this special permit does not increase the potential

impact radius (PIR) the radius of a circle within which the potential failure of the pipeline could have significant impact on people or property) of the pipeline. However, the risk from the increased human population around the pipeline will be mitigated through implementation of the special permit conditions.

PHMSA will require IM inspections for any pipeline segment adjacent to a ***special permit segment***, which will lower the risk in areas beyond the special permit. PHMSA will require that TGP conduct IM Procedures (conditions in the special permit) on the ***special permit inspection area*** as defined in the special permit. TGP must implement the conditions in ***special permit inspection area*** for the duration of the special permit.

Full implementation of the conditions in the special permit provides an equivalent or greater level of safety for the public and environment. The ***special permit segment*** will be treated as HCAs with the additional risk analysis and remedial activities associated with this designation. The special permit also includes several conditions that address potential safety threats and risks. Among these are incorporation of this ***special permit segment*** into the Kinder Morgan IMP, additional close interval corrosion surveys, implementation of a CP reliability improvement plan, a more comprehensive SCC assessment program, an ILI program with intervals not to exceed seven (7) years, anomaly evaluation and repair meeting more stringent criteria, additional testing and remediation of interference currents caused by induced alternating current sources, pipe seam evaluations, criteria for the identification of pipe properties, installation of line-of-sight markers, and the integration of all inspection and remediation data. This comprehensive list of additional risk related special permit conditions incorporated in the special permit is intended to provide for a significant added level of safety for the ***special pipeline segment*** and ***special permit inspection area***.

(a) Would operation under a special permit change the risk of rupture or failure?

Operation under the special permit will not be expected to have an impact on the risk of failure or rupture as the operating conditions of the ***special permit segment*** has not changed. The ***special permits segment*** in the special permit will have inspections at intervals similar to IM program intervals, which will maintain the integrity of the ***special permit segment*** over the life of the special permit.

(b) If a failure occurred, would consequences and spill or release volumes be different if PHMSA granted the permit? Would granting this permit increase, decrease, or have no change on the risk of failure?

The consequences of any spill or release will not be impacted as a result of the special permit and the potential for such an event is expected to be less likely with the added safety programs noted above.

(c) Would the Potential Impact Radius of a rupture change under the Special Permit? Please calculate and provide the PIR data, if applicable. Would more people be affected by a failure if PHMSA granted the permit?

The PIR is calculated in accordance with 49 CFR 192.903 and would not change under the special permit since the maximum allowable operating pressure and pipe diameter will not change. Thus, there will be no additional impact on the public. The PIR for the ***special permit segment*** is calculated below.

$$PIR = 0.69 * (MAOP * NOMINAL\ DIAMETER^2)^{0.5}$$

For ***special permit segment*** 508, calculated PIR $= 0.69 * (936 * 36^2)^{0.5} = 760$ feet

(d) Would operation under the Special Permit have any effect on pipeline longevity or reliability? Would there be any life cycle or maintenance issues?

Operation under the special permit conditions will provide a positive impact on pipeline longevity and reliability. PHMSA does not anticipate any deleterious life cycle or maintenance issues related to operation of the ***special permit segment*** by implementation the special permit.

Socioeconomics: The ***special permit segment*** is not situated in, or disproportionately impacts, any predominantly low-income populations. The special permit is designed to maintain pipeline safety for the ***special permit segment*** and increase pipeline safety for the ***special permit inspection area.***

Topography: The topography of the area surrounding the requested ***special permit segment*** is flat open and forested land. The aim of the special permit is to avoid construction and other ground disturbing activities in the ROW.

The "Selected" Alternative will not require excavation, thus will not alter the existing terrain. Alternatively, the "No Action" Alternative will require excavation of the pipeline trench to allow the

existing ***special permit segment*** to be removed and to install replacement pipe. In the event of any excavations due to special permit requirements, or anomaly digs, there are no anticipated long-term effects on topography in the vicinity of the ***special permit segment***.

Transportation: When the ***special permit segment*** needs to be accessed to perform tasks required under the conditions of the special permit, existing ROW access points will be used. The granting of the special permit will not significantly increase traffic or require additional roads to be constructed or maintained more frequently. The "Selected" Alternative will not alter the current transportation conditions near the ***special permit segment***.

Under the "No Action" Alternative pipe replacement activities could pose adverse impacts to local roads and transportation would be anticipated as the ***special permit segment*** crosses multiple existing local roads. Temporary road closures may be necessary during pipe and equipment delivery and a minor increase in local traffic would be anticipated to occur within the immediate vicinity of the ***special permit segment*** ROW.

Water Resources: The ***special permit segment*** is in the Skaggs Creek watershed and does not cross any wetland or surface waterbody features. The ***special permit segment*** is not located within the Federal Emergency Management Agency (FEMA) (FEMA) mapped 100-year floodplain. The ***special permit segment*** does not cross any sole source aquifers.

2) Comparative Environmental Impacts of Alternatives

As PHMSA recognized in its June 29, 2004, Criteria for Class Location Change Waivers, Federal Register Notice (69 FR 38948), implementing additional preventative and mitigative measures enables a pipeline operator to improve its knowledge and understanding of the pipeline's integrity, accelerate the identification and repair of actionable anomalies, and better manage and mitigate threats to the public and environment. Implementing enhanced inspection and assessment practices throughout the ***special permit segment*** and ***special permit inspection area***, in lieu of replacing small segments of pipe experiencing the class location change, extends pipeline safety benefits to a much greater area along the pipeline. In addition, avoiding pipe excavation and replacement will minimize costs to the operator, will avoid delivery interruptions and supply shortages, and avert environmental disturbance. All of these benefits will be realized under a granting of the ***special permit***.

If the special permit is not granted, 49 CFR 192.611(a) would require pipe replacement. However, the monitoring conditions associated with the special permit would not be applicable if the special permit was denied because those conditions are not mandated by applicable regulations. Accordingly, both alternatives are anticipated to lead to a similar safety result.

The mode of pipeline failure would be the same whether the pipe operates under a special permit or is replaced. The natural environment would be temporarily disturbed if the pipe is replaced; a special permit will have no impact on the environment.

IX. Consultation and Coordination

TGP and PHMSA personnel involved in preparation of this document include:

Personnel from TGP

Jaime Hernandez - Director of Codes and Standards

Charlie Childs - Manager, IC Pipeline Integrity

Justin Durham - Manager, Engineering

Gary Taylor- Manager, Pipeline Compliance Systems

Johnson Samuel - Project Management Specialist Compliance systems

Cass Shannon - Specialist SR 1, Project Permitting – Minor Projects

PHMSA

Amelia Samaras – Attorney, PHMSA, US DOT

Steve Nanney – Senior Technical Advisor, PHMSA, US DOT

X. Response to Public Comments Placed on Docket PHMSA-2019-0152

PHMSA published the special permit request in the Federal Register (87 FR 32495) for a 30-day public comment period from May 31, 2022, through June 30, 2022. The special permit application from TGP, draft environmental assessment, and draft special permit conditions were available in Docket No. PHMSA-2019-0152 at: www.regulations.gov for public review. PHMSA received two (2) public comment concerning this special permit request through June 30, 2022. PHMSA received comments from the Pipeline Safety Trust (PST) which asked PHMSA to examine several topics:

(1) **PST Comment**: PST commented that PHMSA should provide more information regarding the characteristics of the ***special permit inspection areas***. Further, PST comments that the special permit should not be automatically extended to include ***special permit inspection areas*** in the future without the public having more information regarding the condition of pipelines in those areas.

- **PHMSA Response**: The ***special permit inspection areas*** do not require a waiver of the regulations because the class locations in those areas have not changed. The purpose of the ***special permit inspection areas*** in the permit is to increase the protection afforded to populated and environmentally sensitive areas along the right of way by requiring operators to perform in-line inspections, assessments, and repairs of any actionable anomalies identified in the special permit inspection area. PHMSA will not automatically allow waivers of the regulations in the ***special permit inspection areas*** that are not adjacent to the ***special permit segment*** without a request from the operator. Such requests will be noticed for public comment. Requests for pipe segments adjacent to a ***special permit segment*** will be reviewed for integrity, pressure test records, material records, and any environmental impacts.
  PHMSA notes that on August 26, 2022, it posted a document titled, **Attachment A - 2019-0152 – TGP**, which contains integrity information for the ***special permit segment*** and portions of the ***special permit inspection area***. PHMSA has reviewed the integrity information for all of the ***special permit segment*** to ensure the special permit conditions address pipeline safety and integrity threats to the ***special permit segment***. These conditions will require TGP to provide a systematic program to review and remediate the pipeline for safety concerns in its Operations and Maintenance (O&M) Manual and procedures. PHMSA understands PST's request for such information regarding the ***special permit inspection area*** and will continue to post all relevant information to the public dockets associated with each application, as it pertains to a ***special permit segment*** or the extension of a ***special permit segment***.

(2) **PST Comment**: PST commented that Kinder Morgan, Inc.[6] was issued, a Notice of Proposed Safety Order (CPF No. 5-2021-056-NOPSO) on October of 2021, which identified extensive concerns regarding Kinder Morgan's integrity management program and identified several

[6] Kinder Morgan, Inc., is the operator of the TGP system.

thousand unremediated anomalies in multiple States through their hazardous liquids pipeline system. PST comments that the operator's enforcement history presents a concern regarding whether the operator can be relied upon to comply with the conditions imposed under a new special permit.

- **PHMSA Response**: PHMSA has reviewed this enforcement action and is granting the special permit request based upon the findings detailed in the SPAF posted to the special permit Docket Number: PHMSA-2019-0152. PHMSA has designed a robust set of conditions that TGP must abide by in lieu of compliance with the Federal pipeline safety regulations in the ***special permit segment***. The special permit conditions require assessment and remediation of integrity threats to the pipeline. To ensure TGP properly implements the special permit conditions, TGP is required to give PHMSA an annual review of their compliance with the special permit. If TGP fails to comply with any material term or condition of the special permit, PHMSA may revoke, suspend, or modify the special permit per 49 CFR 190.341(j). PHMSA also has the authority to utilize its various enforcement tools if violations of the permit are discovered.

(3) **PST Comment**: PST states that TGP claims the permit will provide environmental and safety benefits by eliminating methane emissions that would occur from blowdowns in anticipation of hydrotesting and/or replacement. PST comments that non-emergency blowdowns should not be considered a sufficient reason to avoid strength testing and replacement of pipe segments where necessary to comply with the pipeline safety regulations.

- **PHMSA Response**: PHMSA uses strict criteria when determining whether a class location special permit will provide at least an equivalent level of safety to people and the environment as the Federal pipeline safety regulations. While avoidance of blowdown emissions is beneficial, the special permit criteria focus is on the safety of communities that are in proximity to the ***special permit segment***. Please see the Federal Register Notice, "Pipeline Safety: Development of Class Location Change Waiver Criteria," (69 FR 38948, June 29, 2004) for detailed description of the criteria that PHMSA evaluates when determining if granting a special permit is consistent with pipeline safety. Furthermore, PHMSA imposes special permit conditions that require minimization of gas loss during blowdowns and leakage surveys along the pipeline.

(4) **PST Comment**: PST commented that TGP's application does not contain adequate justification for the need of the special permit.

- **PHMSA Response**: Section 190.341(c)(4) requires operators to provide, "an explanation of the unique circumstances that the applicant believes make the applicability of that regulation or standard (or portion thereof) unnecessary or inappropriate for its facility" with their special permit application. The Federal Register Notice, "Pipeline Safety: Development of Class Location Change Waiver Criteria," (69 FR 38948, June 29, 2004), describes the specific circumstances in which PHMSA will consider special permit applications for class location changes. The Federal Register Notice includes the criteria that PHMSA evaluates to determine the suitability of granting a permit, in addition to consideration of the justification for the waiver. The TGP application stated that implementation of enhanced integrity management with enhanced monitoring and maintenance requirements will ensure the integrity of the pipe and protection of the population living near the pipeline segment to a similar degree as replacing with heavier walled or higher-grade pipe without the enhanced integrity management activities (see **Attachment A - 2019-0152 – TGP**). PHMSA considered TGP's analysis of the suitability criteria in determining whether issuing the permit is consistent with pipeline safety.

PHMSA received one comment from a member of the public:

(1) **Public Comment**: The public comment recommends Nationalizing the Fossil Fuel industry in America as the fossil fuel industry to continue to operate with impunity. The only ways to save the planet is to immediately reduce and contract fossil fuel production.

- **PHMSA Response**: PHMSA has reviewed this public comment recommending a permit not being issued. The commenter did not give an explanation on why the permit should not be issued from a safety standpoint.

XI. Finding of No Significant Impact

In consideration of the FEA and the special permit conditions explained above, PHMSA finds that no significant negative impact to human health of safety or the environment will result from the issuance and full implementation of the above-described special permit to waive the requirements of 49 CFR 192.611(a) and (d), and 192.619(a) for the one (1) ***special permit segment***, which consists of 2,829.60 feet (approximately 0.536 miles) of 36-inch diameter Line 800-2 Pipeline located in Barren County, Kentucky. This special permit will require TGP to implement additional conditions on the operations, maintenance, and IM of the ***special permit segment*** and ***special permit inspection area***.

The granted special permit conditions are available in the FDMS Docket No. PHMSA-2019-0152 at: www.regulations.gov for public review.

XII. Bibliography

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Earthquake Magnitude Scale

Richter Magnitudes	Description	Earthquake Effects	Frequency of Occurrence
Less than 2.0	Micro	Micro-earthquakes, not felt.	About 8,000 per day
2.0 - 2.9	Minor	Generally not felt, but recorded.	About 1,000 per day
3.0 - 3.9	Minor	Often felt, but rarely causes damage.	49,000 per year (est.)
4.0 - 4.9	Light	Noticeable shaking of indoor items, rattling noises. Significant damage unlikely.	6,200 per year (est.)
5.0 - 5.9	Moderate	Can cause major damage to poorly constructed buildings over small regions. At most slight damage to well-designed buildings.	800 per year
6.0 - 6.9	Strong	Can be destructive in areas up to about 160 kilometers (100 mi) across in populated areas.	120 per year
7.0 - 7.9	Major	Can cause serious damage over larger areas.	18 per year
8.0 - 8.9	Great	Can cause serious damage in areas several hundred miles across.	1 per year
9.0 - 9.9	Great	Devastating in areas several thousand miles across.	1 per 20 years
10.0+	Epic	Never recorded	Extremely rare (Unknown)

(Based on U.S. Geological Survey documents.)[2]

Modified Mercalli Intensity Scale

Intensity	Shaking	Description/Damage
I	Not felt	Not felt except by a very few under especially favorable conditions.
II	Weak	Felt only by a few persons at rest,especially on upper floors of buildings.
III	Weak	Felt quite noticeably by persons indoors, especially on upper floors of buildings. Many people do not recognize it as an earthquake. Standing motor cars may rock slightly. Vibrations similar to the passing of a truck. Duration estimated.
IV	Light	Felt indoors by many, outdoors by few during the day. At night, some awakened. Dishes, windows, doors disturbed; walls make cracking sound. Sensation like heavy truck striking building. Standing motor cars rocked noticeably.
V	Moderate	Felt by nearly everyone; many awakened. Some dishes, windows broken. Unstable objects overturned. Pendulum clocks may stop.
VI	Strong	Felt by all, many frightened. Some heavy furniture moved; a few instances of fallen plaster. Damage slight.
VII	Very strong	Damage negligible in buildings of good design and construction; slight to moderate in well-built ordinary structures; considerable damage in poorly built or badly designed structures; some chimneys broken.
VIII	Severe	Damage slight in specially designed structures; considerable damage in ordinary substantial buildings with partial collapse. Damage great in poorly built structures. Fall of chimneys, factory stacks, columns, monuments, walls. Heavy furniture overturned.
IX	Violent	Damage considerable in specially designed structures; well-designed frame structures thrown out of plumb. Damage great in substantial buildings, with partial collapse. Buildings shifted off foundations.
X	Extreme	Some well-built wooden structures destroyed; most masonry and frame structures destroyed with foundations. Rails bent.

(Public domain.)

The special permit with conditions granted to TGP, SPAF, and **Attachment A – 2019-0152 - TGP** for Docket No. PHMSA-2019-0152 can be found on the FDMS located on the internet at www.regulations.gov or on the PHMSA website for special permits issued at https://www.phmsa.dot.gov/pipeline/special-permits-state-waivers/special-permits-issued.

Completed by PHMSA in Washington, DC on: March 30, 2023

FIGURE 1. PROJECT LOCATION AND SPECIAL PERMIT SEGMENT MAP

36-inch Line 800-2

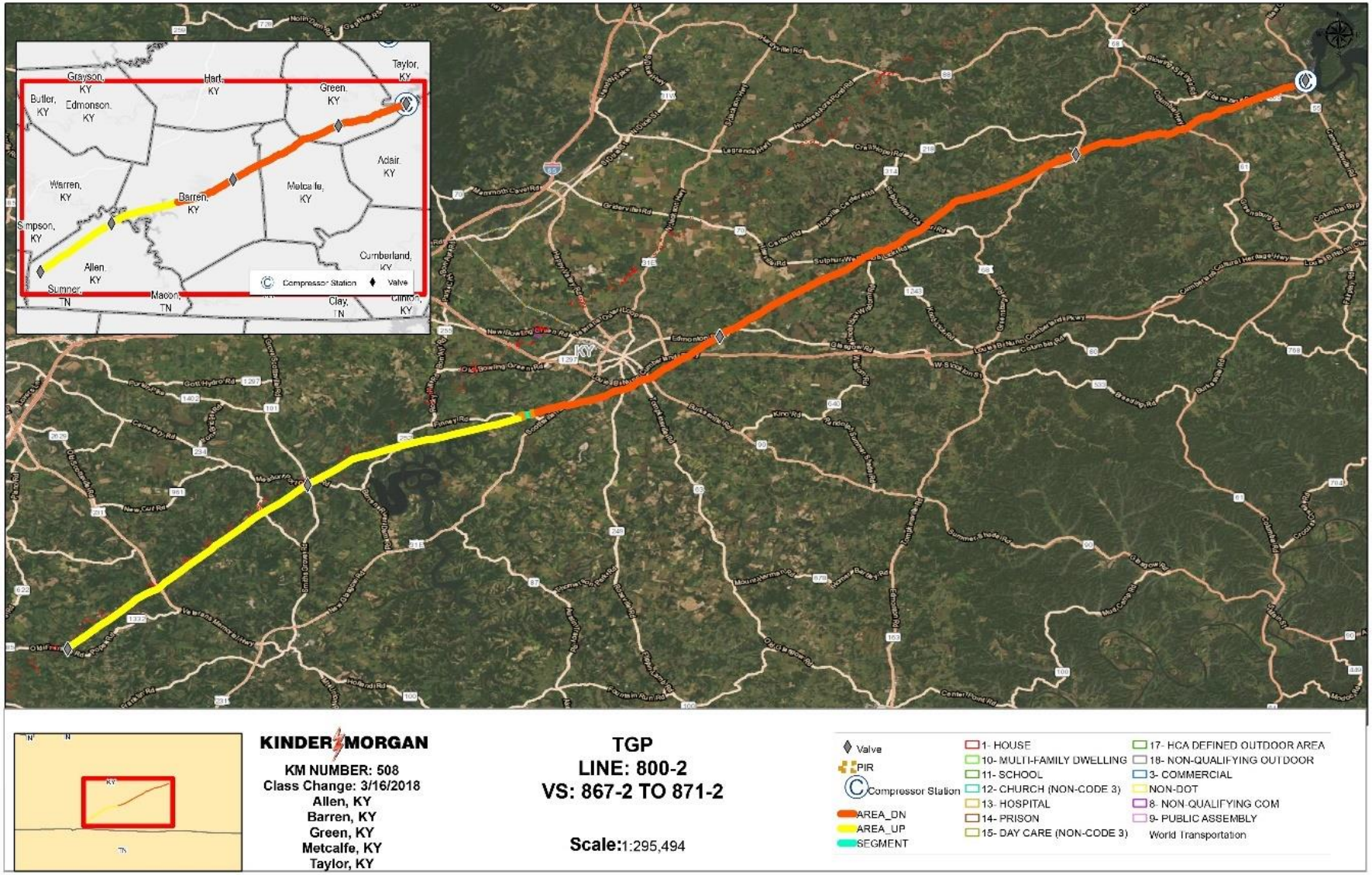


FIGURE 2. SPECIAL PERMIT SEGMENT

36-inch Line 800-2

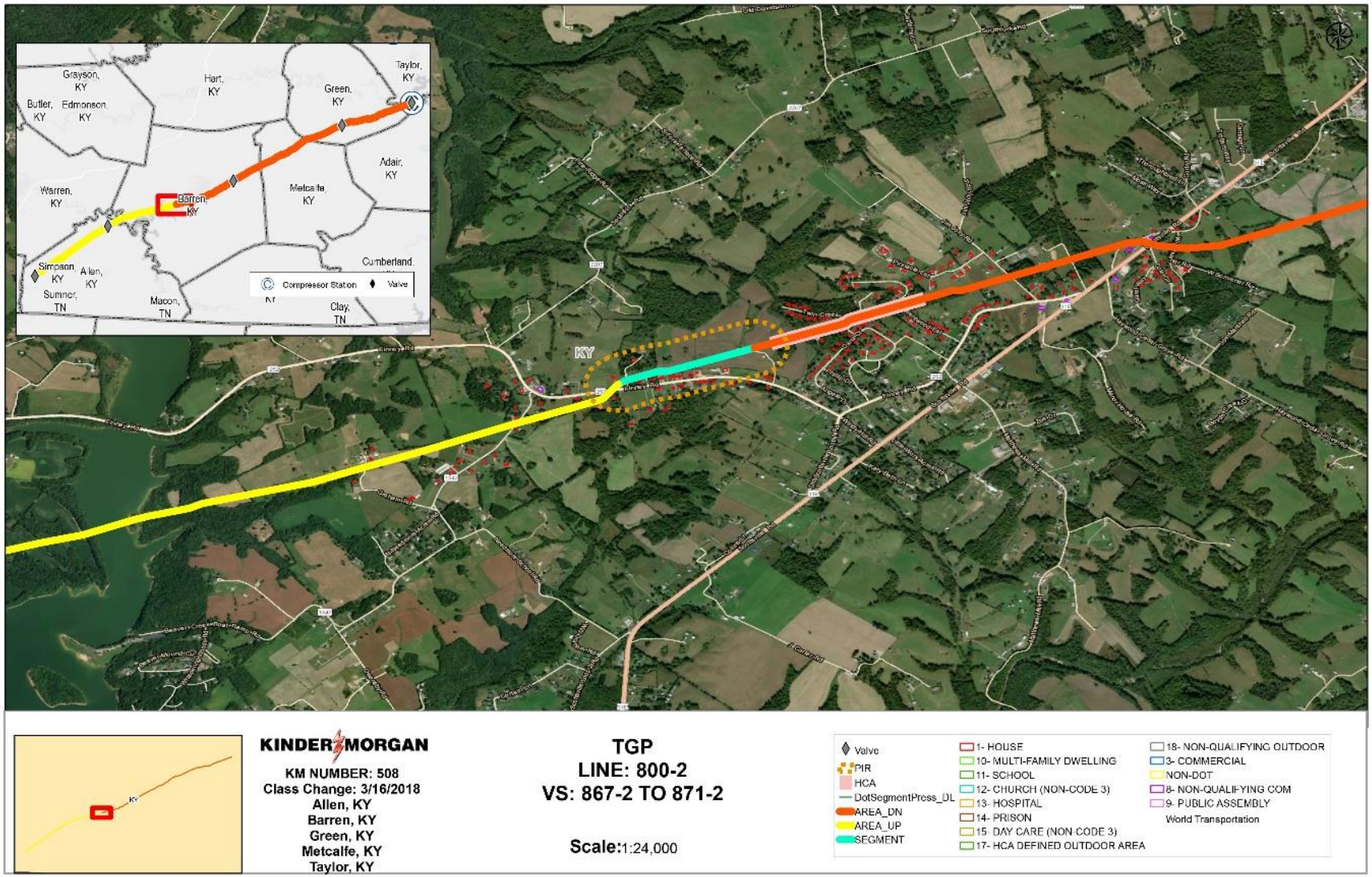
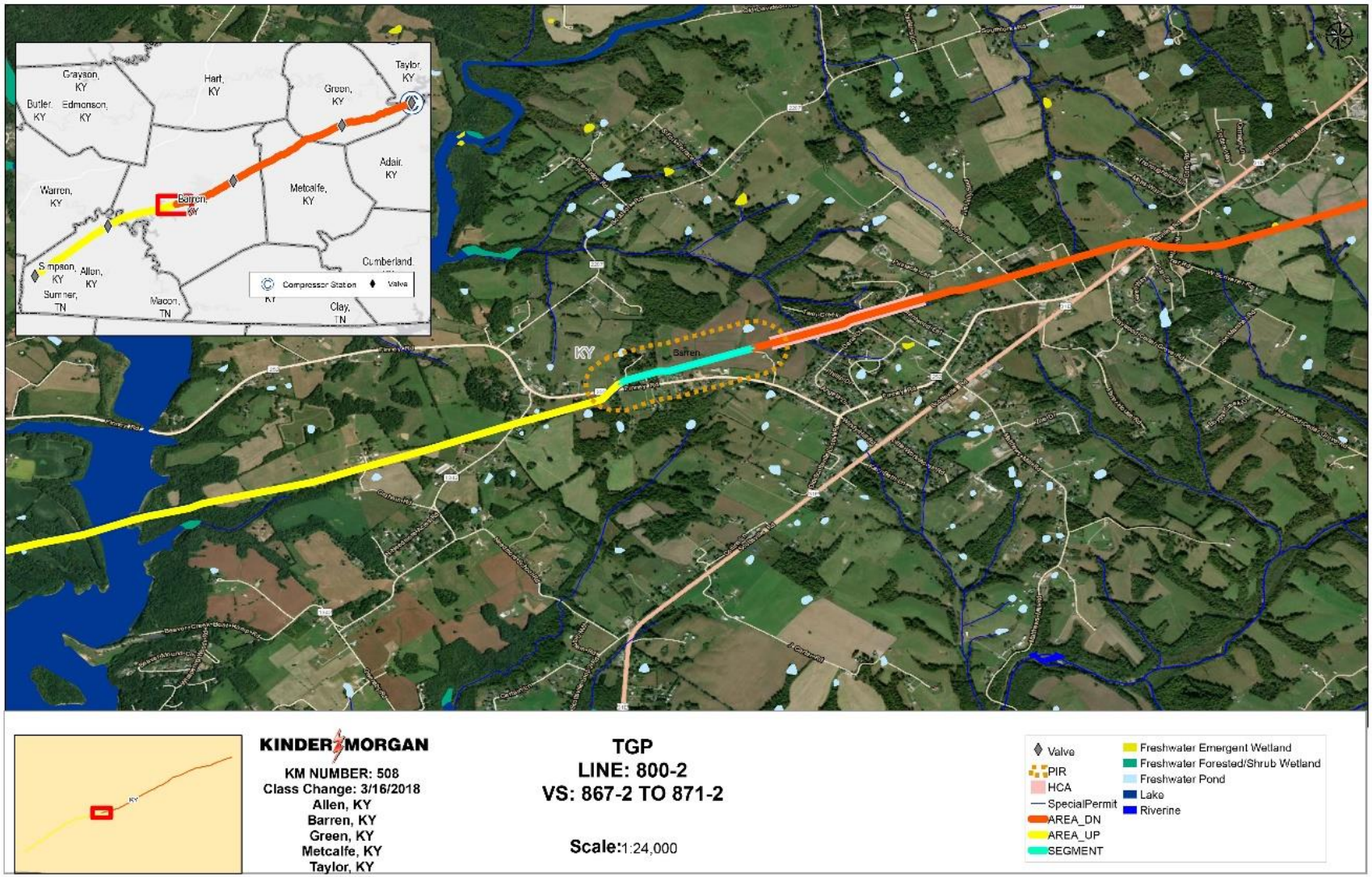


FIGURE 3. WETLANDS AND WATERBODY MAPS

36-inch Line 800-2



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