

U.S. DEPARTMENT OF TRANSPORTATION
PIPELINE AND HAZARDOUS MATERIALS SAFETY ADMINISTRATION
Special Permit Analysis and Findings
Class 1 to 3 Locations

Special Permit Information:

Docket Number:	PHMSA-2020-0007
Requested By:	Southern Natural Gas Company, LLC
Operator ID#:	18516
Original Date Requested:	December 23, 2019
Original Issuance Date:	July 27, 2022
Code Section(s):	49 CFR 192.611(a) and (d) and 192.619(a)

Purpose:

The Pipeline and Hazardous Materials Safety Administration (PHMSA), Office of Pipeline Safety (OPS),¹ provides this information to describe the facts of the subject special permit application submitted by Southern Natural Gas Company, LLC (SNG),² to discuss any relevant public comments received with respect to the application, to present the engineering and safety analysis of the special permit application, and to make findings regarding whether the requested special permit should be granted and, if so, under what conditions. SNG requested that PHMSA waive compliance from the 49 Code of Federal Regulations (CFR) 192.611(a) and (d) and 192.619(a) for natural gas transmission pipeline segments, where the class location has changed from Class 1 to a Class 3 locations.

Pipeline System Affected:

This special permit application applies to the SNG request for a waiver of the class location change requirements in 49 CFR 192.611(a) and (d) and 192.619(a) for approximately 0.621

¹ Throughout this special permit the usage of “PHMSA” or “PHMSA OPS” means the U.S. Department of Transportation’s Pipeline and Hazardous Materials Safety Administration Office of Pipeline Safety.

² Southern Natural Gas Company, LLC is owned by Kinder Morgan, Inc.

miles of gas transmission pipelines located in Effingham and Harris Counties, Georgia; and Clarke County, Mississippi.

Pipe specifications including outside diameter, year installed, seam type, coating type, pipe grade, wall thickness, maximum allowable operating pressure (MAOP), minimum pressure test pressure, and pressure test factor based on the minimum test pressure are detailed in **Table 1 – Pipe Specifications by Line Name**.

Table 1 – Pipe Specifications by Line Name									
Line Name	Outside Diameter (inches)	Year Installed	Seam Type	Coating Type	Grade	Wall Thickness (inches)	MAOP (psig)	Min Test Pressure (psig)	Pressure Test Factor
Cypress Line	24	2007	ERW-HF	FBE	X70	0.298	1,250	1,602	1.28
South Main 2 nd Loop Line	26	1967	DSAW	Coal Tar Enamel	X60	0.375	1,200	1,600	1.33
South Main 3 rd Loop Line	36	2003 / 2004	DSAW	Polymer Concrete	X70	0.438 / 0.562	1,200	1,552 / 1,881	1.29

Notes: ERW-HF is Electric Resistance Welded-High Frequency.
DSAW is double submerged arc welded pipe weld seam type.
PSIG is pounds per square inch gauge.

Without this special permit, 49 CFR 192.611(a) would require SNG to replace the *special permit segments* with stronger pipe or reduce the pipeline MAOP for a Class 1 to Class 3 location change.

Special Permit Request:

On December 23, 2019, SNG applied to PHMSA for a special permit seeking relief from 49 CFR 192.611(a) and (d) and 192.619(a) for the below-listed *special permit segments*, where a class location change occurred from the original Class 1 to a Class 3 location on the 24-inch diameter Cypress Line, 26-inch diameter South Main 2nd Loop Line, and 36-inch diameter South Main 3rd Loop Line Pipelines in Effingham and Harris Counties, Georgia; and Clarke County, Mississippi.

This special permit applies to the *special permit segments* and *special permit inspection areas* described and defined as follows, using the SNG survey station references:

Special Permit Segments:

This special permit applies to the *special permit segments* in **Table 2 – Special Permit Segments** and are identified using the SNG mile post (MP) and survey station (SS) references.

Table 2 – Special Permit Segments

Special Permit Segment Number ³	Outside Diameter (inches)	Line Name	Length (feet)	Start Survey Station (MP - SS)	End Survey Station (MP - SS)	County, State	No. Dwellings	Year Installed	Seam Type	MAOP (psig)
1 (KM 555)	24	Cypress Line	1,503.00	2 – 3968	3 – 191	Effingham, GA	1	2007	ERW-HF	1,250
2 (KM 556)	26	South Main 2 nd Loop Line	224.78	77 – 1899	77 – 2124	Clarke, MS	3	1967	DSAW	1,200
4 (KM 558)	36	South Main 3 rd Loop Line	329.96	77 – 1728	77 – 2058	Clarke, MS	4	2003	DSAW	1,200
5 (KM 559)	36	South Main 3 rd Loop Line	1,220.32	315 – 1862	315 – 3083	Harris, GA	7	2004	DSAW	1,200

Note: ERW-HF is a high frequency electric resistance welded pipe longitudinal seam.
DSAW is double submerged arc welded pipe longitudinal seam.

Special Permit Inspection Areas:

The *special permit inspection areas* are defined as the area that extends 220 yards on each side of the centerline as listed in **Table 3 – Special Permit Inspection Areas**.

Table 3 – Special Permit Inspection Areas

Special Permit Inspection Area Number	Special Permit Segment(s) Included	Outside Diameter (inches)	Line Name	Master Segment	Start Survey Station (SS)	End Survey Station (SS)	Length ⁴ (miles)
1	1 (KM 555)	24	Cypress Line	Cypress Line 1	00 – 24.78	87 – 4810	87.63
2	2 (KM 556)	26	South Main 2 nd Loop Line	Enterprise to York	67 – 1394	102 – 4372	35.57
3	4 (KM 558)	36	South Main 3 rd Loop Line	Enterprise Station	67 – 1631	97 – 2268	30.06
4	5 (KM 559)	36	South Main 3 rd Loop Line	D/S of Ellerslie	311 - 3355	328 - 1743	16.46

Public Notice:

On January 22, 2021, PHMSA posted a notice of this special permit request in the Federal Register (86 FR 6737) with a closing date of February 22, 2021. PHMSA received no comments

³ On February 3, 2022, SNG rescinded requested *special permit segments number 3 (KM 557) and 6 (KM 560)*. These segments were withdrawn at the request of PHMSA

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.

on this special permit application during the comment period.

PHMSA has reviewed this special permit application to ensure the special permit conditions address pipeline safety and integrity threats to the pipeline in the *special permit segments* and *special permit inspection areas*. The special permit will require SNG's Operations and Maintenance (O&M) Manual and Procedures to provide a systematic program to review and remediate the pipeline for safety concerns. Additional operational integrity reviews and remediation requirements will be required by this special permit for these *special permit segments* for Class 1 to 3 location changes.

The SNG special permit application letter, Federal Register notice, Final Environmental Assessment and Finding of No Significant Impact, special permit with conditions, special permit analysis and findings document, and all other pertinent documents are available for review in Docket No. PHMSA-2020-0007 in the Federal Docket Management System (FDMS) located on the internet at www.Regulations.gov.

Analysis:

Background: On June 29, 2004, PHMSA published in the Federal Register (69 FR 38948) the criteria it uses for the consideration of applications for class location change waivers, now being granted or denied through a special permit. First, certain threshold requirements should be met on a pipeline *special permit segment* for a class location change special permit to be granted. Second, the age and manufacturing process of the pipe; system design, and construction; environmental, operating and maintenance histories; and integrity management program elements are evaluated as significant criteria. These significant criteria are presented in matrix form and can be reviewed in the FDMS, Docket No. PHMSA-RSPA-2004-17401. Third, special permits will only be granted when pipe conditions and active integrity management provides a level of safety greater than or equal to a pipe replacement or pressure reduction. The operator's Federal pipeline safety regulation compliance history is also evaluated as part of the criteria matrix for acceptability prior to issuance of a special permit.

Threshold Requirements: Each of the threshold requirements published by PHMSA in the June 29, 2004, Federal Register notice is discussed below regarding the SNG special permit request.

- 1) No pipeline segments in a class location changing to Class 4 location will be considered.
 - This special permit request is for the *special permit segments* the 24-inch diameter Cypress Line, 26-inch diameter South Main 2nd Loop Line, and 36-inch diameter South Main 3rd Loop Line Pipelines, where a change has occurred from a Class 1 location to a Class 3 location.
 - SNG has met this requirement.
- 2) No bare pipe will be considered.
 - The *special permit segments* are externally coated with poly concrete, epoxy, coal tar enamel, or fusion bonded epoxy.
 - SNG has met this requirement.
- 3) No pipe containing wrinkle bends will be considered.
 - There are no wrinkle bends in the *special permit segments*.
 - SNG has met this requirement.
- 4) No pipe segments operating above 72% of the specified minimum yield strength (SMYS) will be considered for a Class 3 special permit.
 - The *special permit segments* operate at or below 72% SMYS.
 - SNG has met this requirement.
- 5) Records must be produced that show a hydrostatic test to at least 1.25 times MAOP and 90% of SMYS. The records should include test pressure, year of the test, test duration, and pressure test percent of MAOP for each pipeline:
 - The *special permit segments* on the Cypress Line, South Main 2nd Loop Line, and South Main 3rd Loop Line Pipeline were all pressure tested for 8 hours to at least 1.25 times the pipeline MAOP.
 - SNG has met this requirement.
- 6) Inline inspection (ILI) must have been performed with no significant anomalies identified that indicate systemic problems such as stress corrosion cracking (SCC).
 - SNG ran ILI tools on the Cypress Line Pipeline in 2016.
 - SNG ran ILI tools on the South Main 2nd Loop Line Pipeline in 2010.
 - SNG ran ILI tools on the South Main 3rd Loop Line Pipeline one segment was completed in 2014 and the other in 2019.
 - SNG has met this requirement.

7) Criteria for consideration of a class location change waiver, being considered through the special permit, published by PHMSA in the Federal Register (69 FR 38948), define a *waiver inspection area (special permit inspection area)* as up to 25 miles of pipe on either side of the *waiver segment (special permit segment)*.

- A special permit would be contingent upon SNG's incorporation of the *special permit segments* in its written integrity management program as covered segments in a high consequence area in accordance with 49 CFR 192.903 and to assess and remediate threats to the *special permit inspection areas*.

Criteria Matrix: The data submitted by SNG for the *special permit segments* have been compared to the class location change special permit criteria matrix and are as follows:

- The *special permit segments* fall in the *probable acceptance* column of the criteria matrix for:
 - Design stress, test failures, pressure fluctuations, safety related condition reports, program, ILI type, direct assessment, coating assessment, and damage prevention.
- The *special permit segments* fall in the *possible acceptance* column of the criteria matrix for:
 - Class 1 to 3 location, pipe manufacture, pipe girth welds, pipe coating, test pressure, depth of cover, local geology, leaks and failures, service, cathodic protection (CP), ILI timeframe, and inspection findings.
- The *special permit segments* fall in the *requires substantial justification* column of the criteria matrix for:
 - Kinder Morgan, Inc. overall enforcement findings fall in the *requires substantial justification category*. SNG's 11-year enforcement findings do not fall within this category.
 - This special permit requires SNG to implement the special permit conditions that include safety requirements on the operations, maintenance, and integrity management of the *special permit segments (approximately 0.621 miles)* and the *special permit inspection areas (169.72 miles)*. Therefore, the safety benefits are obtained well beyond the portion of the pipeline that experienced a class location change.

- SNG will be required to submit to PHMSA an annual report for this special permit on integrity threats to the pipeline in the *special permit segment* and the *special permit inspection area*.

Operational Integrity Compliance:

To inform PHMSA’s decision about whether a special permit could provide a level of safety greater than or equal to a pipe replacement or pressure reduction and is consistent with pipeline safety, PHMSA reviewed this special permit request to understand the known type of integrity threats that are in the *special permit segments* and *special permit inspection areas*. This integrity information was used to design special permit conditions to provide a systematic program to review and remediate the pipeline for safety concerns. Additional operational integrity review and remediation requirements are required by this special permit to ensure that the operator has an ongoing program to locate and remediate safety threats. These threats to integrity and safety include any issues with the pipe coating quality, CP effectiveness, operations damage prevention program, pipe depth of soil cover, weld seam and girth weld integrity, anomalies in the pipe steel and welds, and material and structures either along or near the pipeline that could cause the CP system to be ineffective. PHMSA has carefully designed a comprehensive set of conditions that SNG must implement to comply with this special permit.

Past Enforcement History – January 1, 2011 through January 31, 2022:

During January 1, 2011 through January 31, 2022, SNG was cited in four (4) enforcement actions. PHMSA issued one (1) Notice of Amendment, one (1) Notice of Probable Violation and two (2) Warning Letters to SNG. **Tables 4 and 5** below show PHMSA’s enforcement actions and civil penalties for SNG:

Table 4: SNG Enforcement Matters from January 1, 2011, through January 31, 2022						
Status	Corrective Action Order	Notice of Amendment	Notice of Probable Violation	Safety Order	Warning Letter	Total
CLOSED	0	1	1	0	2	4
OPEN	0	0	0	0	0	0
Total	0	0	1	0	2	4

Table 5: SNG Enforcement Civil Penalty Status January 1, 2011 through January 31, 2022				
Proposed	Awaiting Order	Assessed	Withdrawn/Reduced	Collected
\$72,900	\$0	\$72,900	\$0	\$72,900

Summary of Enforcement Findings for SNG includes: Reporting, welding, conversion of service, operations and maintenance procedures, records, and integrity management:

- 49 CFR 192.161, 192.163, 192.3, 192.465, 192.475, 192.605, 192.705, 192.709, 192.735, 192.745, and 192.911,

Table 6 below shows PHMSA’s enforcement actions and civil penalties for SNG and the specific 49 CFR Part 191 and 192 violations:

Table 6: Summary of Enforcement Findings for SNG January 1, 2011 through January 31, 2022					
Notice of Amendment					
OME Procedural Manual	4	Integrity Management	7		
Notice of Amendment Total:					11
Notice of Probable Violation					
Corrosion Control	2	Operation and/or Maintenance	1	Integrity Management	3
OME Procedural Manual	2	Design	1		
Notice of Probable Violation Total:					10
Warning Letter					
Design	1	Operation and/or Maintenance	2		
Warning Letter Total:					3
Grand Total:					24

Summary of Enforcement Findings for the Kinder Morgan Gas Pipelines Companies - CIG, EPNG, NGPL, SNG, TEJAS, and TGP:

From January 1, 2011, through January 31, 2022, Kinder Morgan, the operator of NGPL, was cited in 64 enforcement actions with a total of \$1,077,800 in assessed civil penalties on its Colorado Interstate Gas Company (CIG), El Paso Natural Gas Company (EPNG), Natural Gas Pipeline of America (NGPL), Southern Natural Gas Company (SNG), Tejas Pipeline (TEJAS), and Tennessee Gas Pipeline Company (TGP) pipeline systems. PHMSA issued sixteen (16) Notice of Amendments, twenty-two

(22) Notices of Probable Violations, twenty-one (21) Warning Letters, one (1) Safety Order, and six (6) Corrective Action Orders to Kinder Morgan.

Tables 7 and 8 below show PHMSA’s enforcement actions and civil penalties for Kinder Morgan on these pipeline systems – CIG, EPNG, NGPL, SNG, TEJAS, and TGP with operator identification numbers (OPID#) 2564, 4280, 13120, 18516, 4900, and 19160.

Table 7 - Kinder Morgan Enforcement Matters from January 1, 2011, through January 31, 2022						
Status	Corrective Action Order	Notice of Amendment	Notice of Probable Violation	Safety Order	Warning Letter	Total
CLOSED	5	16	21	1	21	64
OPEN	3	1	1	0	0	5
Total	8	17	22	1	21	69

Table 8 - Kinder Morgan Enforcement Civil Penalty Status January 1, 2011 through January 31, 2022				
Proposed	Awaiting Order	Assessed	Withdrawn/Reduced	Collected
\$1,461,500	\$0	\$1,077,800	\$383,700	\$1,077,800

The type of 49 CFR Part 192 enforcement violations against Kinder Morgan on these six (6) pipeline systems from January 1, 2011, through January 31, 2022, were as follows:

Summary of Enforcement Findings for CIG, EPNG, NGPL, SNG, TEJAS, and TGP

includes: reporting, design, welding, compliance with specifications or procedures, corrosion control, operations and maintenance procedures, continuing surveillance, public awareness, emergency plans, maximum allowable operating pressure, control room management, relief devices, maintenance of valves, qualification of operating personnel, and integrity management:

- 49 CFR 191.5, 191.14, 191.15, 191.22, 191.25, 191.27, 192.12, 192.14, 192.161, 192.199, 192.225, 192.227, 192.229, 192.303, 192.459, 192.463, 192.465, 192.469, 192.475, 192.479, 192.481, 192.603, 192.605, 192.613, 192.615, 192.616, 192.619, 192.625, 192.631, 192.705, 192.706, 192.707, 192.709, 192.713, 192.735, 192.736, 192.739, 192.743, 192.745, 192,805, 192.807, 192.905, 192.911, 192.917, 192.921, 192.933, 192.935, and 192.937.

Table 9 below gives a complete summary of the findings and the specific 49 CFR Part 191 and 192 violation:

Table 9 – Summary of Enforcement Findings for CIG, EPNG, Tejas, NGPL, SNG, and TGP January 1, 2011 through January 31, 2022					
Notice of Amendment					
OME Procedural Manual	11	Operation and/or Maintenance	2	Operator Qualification	3
Public Awareness	8	Reporting	3	Transportation of Gas	5
Integrity Management	10	Control Room Management	4	Construction	1
Welding of Steel in Pipelines	3				
Notice of Amendment Total:					50
Notice of Probable Violation					
Corrosion Control	13	OME Procedural Manual	14	Operation and/or Maintenance	26
Operator Qualification	7	Public Awareness	2	Reporting	5
Integrity Management	10	Control Room Management	1	Welding of Steel in Pipelines	1
Design	2				
Notice of Probable Violation Total:					81
Warning Letter					
Corrosion Control	10	OME Procedural Manual	9	Operation and/or Maintenance	31
Operator Qualification	2	Public Awareness	4	Reporting	1
Transportation of Gas	1	Integrity Management	1	Design	1
Notice of Amendment Total:					60
Grand Total:					191

Findings:

Based on the information submitted by SNG and PHMSA's analysis of the technical, operational, and safety issues, PHMSA finds that granting this special permit to SNG to operate the *special permit segments* on the 24-inch diameter Cypress Line, 26-inch diameter South Main 2nd Loop Line, and 36-inch diameter South Main 3rd Loop Line Pipelines in Harris and Effingham Counties, Georgia, and Clarke County, Mississippi, for approximately 0.621 miles of Class 1 location pipe in a Class 3 location is consistent with pipeline safety.

PHMSA has designed the special permit conditions to effectively assess and remediate threats to the *special permit segments* and *special permit inspection areas*, including pressure testing, obtaining pipe material records, and conducting assessments to evaluate pipe girth welds that have not been non-destructively tested, any pipe with missing material records, and SCC. To ensure SNG properly implements the special permit conditions, SNG will be required to give PHMSA an annual review of their compliance with the special permit.

PHMSA finds that no significant negative impact to human safety and the environment will result from the issuance and full implementation of a special permit that waives the requirements of 49 CFR 192.611 for class location changes to a Class 3 location. This special permit requires SNG to implement the special permit conditions that include safety requirements on the operations, maintenance, and integrity management of the *special permit segments* and the *special permit inspection areas*. SNG will be required to implement the special permit conditions along the *special permit segments* and *special permit inspection areas* in pipeline segments that are not high consequence areas and would not normally be required by 49 CFR Part 192 to be assessed on a periodic interval for threats.

Completed in Washington DC on: July 27, 2022

Prepared by: PHMSA - Engineering and Research Division

Final Page of the Special Permit Analysis and Findings