

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

Special Permit Analysis and Findings

Class 1 to Class 3 Locations

Special Permit Information:

Docket Number: PHMSA-2017-0163
Requested By: Colorado Interstate Gas Company, LLC
Operator ID#: 2564
Original Date Requested: December 7, 2017
Original Issuance Date: May 17, 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 Colorado Interstate Gas Company, LLC (CIG),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. CIG requested that PHMSA waive compliance from the 49 Code of Federal Regulations (CFR) 192.611(a) and (d) and 192.619(a) for a natural gas transmission pipeline segment, where the class location has changed from Class 1 to a Class 3 location.

Pipeline System Affected:

This special permit application applies to the CIG request for a waiver of the class location change requirements in 49 CFR 192.611(a) and (d) and 192.619(a) for approximately 0.156

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 Colorado Interstate Gas Company, LLC is owned by Kinder Morgan, Inc.

miles of gas transmission pipelines located in Weld County, Colorado.

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
250A	24	2008	HF-ERW	Fusion Bonded Epoxy	70X	0.288	1,200	1,632	1.36

Note: HF-ERW is an electric resistance welded pipe longitudinal seam.

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

Special Permit Request:

On December 7, 2017, CIG 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 segment*, where a class location change occurred from the original Class 1 to a Class 3 location on the 24-inch diameter 250A Pipeline (Pipeline) in Weld County, Colorado.

This special permit applies to the *special permit segment* and *special permit inspection area* described and defined as follows, using the CIG survey station references:

Special Permit Segment:

This special permit applies to the *special permit segment* in **Table 2 – Special Permit Segment** and are identified using the CIG survey station (SS) references.

Table 2 – Special Permit Segment									
Special Permit Segment Number ³	Outside Diameter (inches)	Line Name	Length (feet)	Start Survey Station (SS)	End Survey Station (SS)	County, State	Year Installed	Seam Type	MAOP (psig)
469	24	250A	821.12	0069 – 1629	0069 – 2450	Weld, CO	2008	HF-ERW	1,200

³ On February 3, 2022, CIG rescinded requested *special permit segment number 468*. This segment was withdrawn at the request of PHMSA.

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 3 – Special Permit Inspection Area**.

Table 3 – Special Permit Inspection Area							
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	469	24	250A	6 to TOTEM	0044 – 1629	0085 – 1157	40.91

The *special permit inspection area* is in Adams and Weld Counties, Colorado.⁵

Public Notice:

On October 29, 2021, PHMSA posted a notice of this special permit request in the Federal Register (86 FR 60103) with a closing date of November 29, 2021. PHMSA received no comments 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 segment* and *special permit inspection area*. The special permit will require CIG’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 segment* for Class 1 to 3 location changes.

The CIG special permit application letter, Federal Register notice, FEA and FONSI, special permit with conditions, special permit analysis and findings document, and all other pertinent documents are available for review in Docket No. PHMSA-2017-0163 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

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.

⁵ The *special permit inspection area* includes the *special permit segment*.

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 (IM) 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 IM 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 for the CIG 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 segment* on the 24-inch diameter Line 250A Pipeline, where a change has occurred from a Class 1 location to a Class 3 location.
 - CIG has met this requirement.
- 2) No bare pipe will be considered.
 - The *special permit segment* is externally coated with fusion bonded epoxy.
 - CIG has met this requirement.
- 3) No pipe containing wrinkle bends will be considered.
 - There are no wrinkle bends in the *special permit segment*.
 - CIG has met this requirement.
- 4) No pipe segment operating above 72% of the specified minimum yield strength (SMYS) will be considered for a Class 3 special permit.
 - The *special permit segment* operates at or below 72% SMYS.
 - CIG has met this requirement.
- 5) Records must be produced that show a hydrostatic test to at least 1.25 x MAOP and 90% of SMYS.

- The *special permit segment* on the Line 250A Pipeline was pressure tested in 2008 at 1,642 psig for 8 hours.
 - CIG 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).
- CIG has had no SCC findings or failures. Due to the coating type and operational and environmental conditions of the pipeline, CIG has evaluated the *special permit segment* and *special permit inspection area* as being not susceptible to SCC in accordance with ASME B31.8S.
 - CIG 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 CIG's incorporation of the *special permit segment* in its written IM program as a covered segment in a high consequence area in accordance with 49 CFR 192.903 and to assess and remediate threats to the *special permit inspection area*.

Criteria Matrix: The data submitted by CIG for the *special permit segment* has been compared to the class location change special permit criteria matrix. The data fall within the *probable acceptance* or the *possible acceptance* column of the criteria matrix.

- The *special permit segment* falls in the *probable acceptance* column of the criteria matrix for:
 - Design stress, test failures, pressure fluctuations, safety related condition reports, ILI type, coating assessment, direct assessment, damage prevention, pipe manufacture, pipe material, pipe girth welds, pipe coating, test pressure, depth of cover, local geology, leaks and failures, service, cathodic protection (CP), ILI time frame, and inspection findings.

- The *special permit segment* falls in the *possible acceptance* column of the criteria matrix for:
 - Class 1 to 3 location and IM program.
- The *special permit segment* falls in the *requires substantial justification* column of the criteria matrix for PHMSA enforcement findings.
 - Kinder Morgan, Inc. overall enforcement findings fall in the *requires substantial justification category*. CIG's 11-year enforcement findings do not fall within this category.
 - This special permit requires CIG to implement the special permit conditions that include safety requirements on the operations, maintenance, and integrity management of the *special permit segment (0.156 miles)* and the *special permit inspection area (40.91 miles)*. Therefore, the safety benefits are obtained well beyond the portion of the pipeline that experienced a class location change.
 - CIG will be required to submit 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 segment* and *special permit inspection area*. 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 CIG 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, CIG was cited in five (5) enforcement actions. PHMSA issued two (2) Notices of Amendment, two (2) Warning Letters, and one (1) Notice of Probable Violation to CIG. **Tables 4 and 5** below show PHMSA’s enforcement actions and civil penalties for CIG:

Table 4 – CIG 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	2	1	0	2	5
OPEN	0	0	0	0	0	0
Total	0	2	1	0	2	5

Table 5 – CIG Enforcement Civil Penalty Status January 1, 2011 through January 31, 2022				
Proposed	Awaiting Order	Assessed	Withdrawn/Reduced	Collected
\$198,000	\$0	\$154,800	\$43,200	\$154,800

Summary of Enforcement Findings for CIG includes: Reporting, welding, conversion of service, operations and maintenance procedures, records, and IM:

- 49 CFR 191.5, 192.14, 192.225, 192.227, 192.452, 192.603, 192.605, 192.933, and 192.935.

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

Table 6 – Summary of Enforcement Findings for CIG January 1, 2011 through January 31, 2022					
Notice of Amendment					
OME Procedural Manual	2	Reporting	1	Integrity Management	1
Welding of Steel in Pipelines	2	Transportation of Gas	1		
Notice of Amendment Total:					7
Notice of Probable Violation					
Integrity Management	3	Operation and/or Maintenance	2		
Notice of Probable Violation Total:					5
Warning Letter					
Integrity Management	1	Operation and/or Maintenance	1		
Warning Letter Total:					2
Grand Total:					14

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 CIG, 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-one (21) Notices of Probable Violations, twenty (20) 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

Summary of Enforcement Findings for CIG, EPNG, NGPL, SNG, Tejas, and TGP: 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 included 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 IM:

- 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 CIG and PHMSA’s analysis of the technical, operational, and safety issues, PHMSA finds that granting this special permit to CIG to operate the *special permit segment* on the 24-inch diameter Line 250A Pipeline in Weld County, Colorado, for approximately 0.156 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 segment* and *special permit inspection area*, 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 CIG properly implements the special permit conditions, CIG 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 CIG to implement the special permit conditions that include safety requirements on the operations, maintenance, and integrity management of the *special permit segment* and the *special permit inspection area*. CIG will be required to implement the special permit conditions in the *special permit segment* and *special permit inspection area*, which include areas along the pipeline where periodic assessment is not required by 49 CFR Part 192.

Completed in Washington DC on: May 17, 2022

Prepared by: PHMSA - Engineering and Research Division

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