

**U.S. DEPARTMENT OF TRANSPORTATION**  
**PIPELINE AND HAZARDOUS MATERIALS SAFETY ADMINISTRATION**  
**Special Permit Analysis and Findings**  
**Class 1 to 2 Location**

**Special Permit Information:**

<b>Docket Number:</b>	PHMSA-2022-0044
<b>Requested By:</b>	Rockies Express Pipeline, LLC
<b>Operator ID#:</b>	32163
<b>Original Date Requested:</b>	March 11, 2022
<b>Original Issuance Date:</b>	October 3, 2023
<b>Code Section(s):</b>	49 CFR 192.611

**Purpose:**

The Pipeline and Hazardous Materials Safety Administration (PHMSA), Office of Pipeline Safety (OPS),<sup>1</sup> provides this information to describe the facts of the subject special permit application submitted by Rockies Express Pipeline, LLC (REX)<sup>2</sup> 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. REX requested that PHMSA waive compliance from the 49 Code of Federal Regulations (CFR) 192.611 for natural gas transmission pipeline segments, where the class location has changed from Class 1 to a Class 2 location. The REX 42-inch pipeline Class 1 locations operate at 80% specified minimum yield strength (SMYS) under Special Permit PHMSA-2006-23998 and without a special permit cannot operate Class 1 location pipe in Class 2 location above 72% SMYS.

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<sup>1</sup> 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.

<sup>2</sup> REX is owned by Tallgrass Energy.

## Pipeline System Affected:

This special permit application by REX requests a waiver from the class location change requirements in 49 CFR 192.611 for approximately 4.25 miles of the 42-inch diameter gas transmission pipelines (Pipelines) located in Douglas and Macon Counties, Illinois; Morgan County, Indiana; Buchanan County, Missouri; and Butler, Fairfield, Perry, Pickaway, and Warren Counties, Ohio.

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)	Minimum Test Pressure (psig)	Pressure Test Factor
Steel City to Turney	42	2008	Spiral	FBE	X80	0.486	1,480	1,860	1.26
Blue Mount to Bainbridge	42	2009	DSAW	FBE	X80	0.486	1,480	1,883	1.27
Bainbridge to Hamilton	42	2009	DSAW / Spiral	FBE	X80	0.486	1,480	1,852	1.25
Hamilton to Chandlersville	42	2009	DSAW / Spiral	FBE	X80/X70	0.486 / 0.555	1,480	1,852	1.25
Chandlersville to Clarington	42	2009	Spiral	FBE	X70	0.555	1,480	1,851	1.25

**Note:** **Spiral** is a spiral welded pipe longitudinal seam.  
**DSAW** is double submerged arc welded pipe longitudinal seam.  
**FBE** is fusion bonded epoxy pipe coating.

Without this special permit, 49 CFR 192.611(a) would require REX to replace the *special permit segments* with stronger pipe or reduce the pipeline MAOP for a Class 1 to Class 2 location change.

## Special Permit Request:

On March 11, 2022, REX applied to PHMSA for a special permit seeking relief from 49 CFR 192.611 for the below-listed *special permit segments*, where a class location change occurred from the original Class 1 to a Class 2 on the 42-inch diameter natural gas transmission Pipelines located in Illinois, Indiana, Missouri, and Ohio.

REX's special permit applies to the *special permit segments* and *special permit inspection areas* described and defined as follows, using the REX survey station (SS) references.

### **Special Permit Segments:**

This special permit applies to the *special permit segments* in **Table 2 – Special Permit Segments** and are identified using the REX's SS references.

<b>Table 2 – Special Permit Segments</b>										
Special Permit Segment Number	Outside Diameter (inches)	Line Name	Length (feet)	Start Survey Station (SS)	End Survey Station (SS)	County, State	No. Dwellings	Year Installed	Seam Type	MAOP (psig)
S1	42	Steel City to Turney	938	4598103	4599041	Buchanan, MO	1	2008	Spiral	1,480
S2	42	Blue Mount to Bainbridge	705	6374461	6375166	Macon, IL	1	2009	DSAW	1,480
S3	42	Blue Mount to Bainbridge	3,055	6377503	6380558	Macon, IL	1	2009	DSAW	1,480
S4	42	Blue Mount to Bainbridge	454	6521655	6522109	Douglas, IL	2	2009	DSAW	1,480
S5	42	Blue Mount to Bainbridge	529	6524127	6524656	Douglas, IL	2	2009	DSAW	1,480
S6	42	Blue Mount to Bainbridge	1,567	6526134	6527701	Douglas, IL	2	2009	DSAW	1,480
S7	42	Bainbridge to Hamilton	239	7165080	7165319	Morgan, IN	2	2009	DSAW	1,480
S8	42	Bainbridge to Hamilton	1,671	7188090	7189761	Morgan, IN	2	2009	DSAW	1,480
S9	42	Bainbridge to Hamilton	308	7661845	7662153	Butler, OH	1	2009	DSAW	1,480
S10	42	Bainbridge to Hamilton	1,261	7683607	7684868	Butler, OH	1	2009	DSAW	1,480
S11	42	Bainbridge to Hamilton	163	7744066	7744229	Butler, OH	1	2009	DSAW	1,480
S12	42	Bainbridge to Hamilton	915	7807686	7808601	Butler, OH	1	2009	DSAW	1,480
S13	42	Bainbridge to Hamilton	128	7816472	7816600	Warren, OH	1	2009	Spiral	1,480
S14	42	Hamilton to Chandlersville	461	7862988	7863449	Warren, OH	1	2009	Spiral	1,480
S15	42	Hamilton to Chandlersville	275	8244665	8244940	Pickaway, OH	1	2009	Spiral	1,480
S16	42	Hamilton to Chandlersville	2,215	8328167	8330382	Fairfield, OH	4	2009	DSAW	1,480
S17	42	Hamilton to Chandlersville	758	8370059	8370817	Fairfield, OH	1	2009	Spiral	1,480
S18	42	Hamilton to Chandlersville	111	8374302	8374413	Fairfield, OH	1	2009	DSAW	1,480
S19	42	Hamilton to Chandlersville	2,386	8413892	8416278	Perry, OH	2	2009	Spiral	1,480
S20	42	Chandlersville to Clarington	4,314	8570887	8575201	Muskingum, OH	3	2009	Spiral	1,480

### **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**.

<b>Table 3 – Special Permit Inspection Areas</b>						
Special Permit Inspection Area Number	Special Permit Segment(s) Included	Outside Diameter (inches)	Line Name	Start Survey Station (SS)	End Survey Station (SS)	Length <sup>3</sup> (miles)
SCT4	S1	42	Steele City to Turney	4015415.5	4761805.4	141.36
BB7	S2, S3, S4, S5, S6	42	Blue Mound to Bainbridge	6265422	6969626.1	133.37
BH8	S7, S8, S9, S10, S11, S12, S13	42	Bainbridge to Hamilton	6969977.9	7816977.6	160.42
HC9	S14, S15, S16, S17, S18, S19	42	Hamilton to Chandlersville	7817309.2	8550982.1	138.95
CC10	S20	42	Chandlersville to Clarington	8551337.5	8895996.7	65.28

## Public Notice:

On May 27, 2022, PHMSA posted a notice of this special permit request in the Federal Register (87 FR 32233) with a closing date of June 27, 2022. PHMSA has reviewed all public comments received for Docket Number PHMSA-2022-0044. PHMSA received public comments concerning this special permit request that have been addressed in the Final Environmental Assessment and Finding of No Significant Impact (FEA and FONSI).

The REX special permit application letter, Federal Register notice, FEA and FONSI, and all other pertinent documents are available for review in Docket No. PHMSA-2022-0044 in the Federal Docket Management System (FDMS) located at [www.Regulations.gov](http://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 provide a level of safety greater than or equal to a pipe replacement or

<sup>3</sup> 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.

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 REX 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 20 *special permit segments* where a change has occurred from a Class 1 location to a Class 2 location.
  - REX meets this requirement.
- 2) No bare pipe will be considered.
  - The *special permit segments* are externally coated with fusion bonded epoxy.
  - REX meets this requirement.
- 3) No pipe containing wrinkle bends will be considered.
  - There are no reported wrinkle bends in the *special permit segments*.
  - REX meets 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 80% SMYS in Class 1 or 2 locations as allowed by REX's 80% SMYS special permit, PHMSA-2006-23998.
  - REX meets this requirement since the special permit is only for Class 2 locations.
- 5) Records must be produced that show a hydrostatic test to at least 1.25 time the MAOP. The records should include test pressure, year of the test, test duration, and pressure test percent of MAOP for each pipeline:
  - REX has provided documents showing that all *special permits segments* have been tested to at least 1.25 times the MAOP.
  - REX meets this requirement.
- 6) In-line inspection (ILI) must have been performed with no significant anomalies identified that indicate systemic problems such as stress corrosion cracking (SCC).
  - REX ran a high-resolution magnetic flux leakage (HR-MFL) ILI for corrosion and deformation ILI for denting in the special permit segments between 2016 to 2018.

- REX meets 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)*.
- The *special permit inspection areas* have been extended to the entire segment length between the upstream launcher and downstream receiver on each ILI segment that contains one (1) or more *special permit segments*.
  - A special permit would be contingent upon REX's incorporation of the *special permit segments* in its written integrity management program as a covered segment in a high consequence area in accordance with 49 CFR 192.903.

**Criteria Matrix:** The data submitted by SNG for the *special permit segments* has been compared to the class location change special permit criteria matrix.

- 1) The following *special permit segments* fall in the *probable acceptance* column of the criteria matrix for:
  - Class location change, pipe manufacturer, pipe material, coating type, test pressure, test failures, depth of cover, service, pressure fluctuations, cathodic protection, safety related conditions, direct assessment, ILI type, ILI time frame, and IM program.
- 2) The following *special permit segments* fall in the *possible acceptance* column of the criteria matrix for:
  - Design stress (operating at 80% SMYS), pipe girth welds, and local geology.

### **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 consider 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, cathodic protection 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 cathodic protection system to be ineffective. PHMSA has carefully designed a comprehensive set of conditions that REX must implement to comply with this special permit.

### **Past Enforcement History – January 1, 2013 through March 27, 2023:**

During January 1, 2013 through March 27, 2023, REX was cited in eight (8) enforcement actions with a total of \$148,400 in assessed civil penalties. PHMSA issued five (5) Notice of Probable Violation and three (3) Warning Letters to REX. **Tables 4 and 5** below shows PHMSA’s enforcement actions and civil penalties for REX:

<b>Table 4: REX Enforcement Matters from January 1, 2013 through March 27, 2023</b>						
<b>Status</b>	<b>Corrective Action Order</b>	<b>Notice of Amendment</b>	<b>Notice of Probable Violation</b>	<b>Safety Order</b>	<b>Warning Letter</b>	<b>Total</b>
CLOSED	0	0	1	0	3	4
OPEN	0	0	4	0	0	4
<b>Total</b>	<b>0</b>	<b>0</b>	<b>5</b>	<b>0</b>	<b>3</b>	<b>8</b>

<b>Table 5: REX Enforcement Civil Penalty Status January 1, 2013 through March 27, 2023</b>				
<b>Proposed</b>	<b>Awaiting Order</b>	<b>Assessed</b>	<b>Withdrawn/Reduced</b>	<b>Collected</b>
\$295,500	\$175,700	\$118,700	\$1,100	\$148,400

**Summary of Enforcement Findings for REX includes:** **Atmospheric Corrosion Control:** Monitoring; **External Corrosion Control:** Monitoring, **Gas Transportation:** Class Locations; **Integrity Management:** HCA Identification; **Maintenance:** Pressure Limiting and Regulating Stations-Relief Devices; **Operations:** Change in Class Location; **Welding:** Repair or Removal of Weld Defects.

- 49 CFR 192.5, 192.179, 192.245, 192.456, 192.481, 192.609, 192.611, 192.743, 192.903, and 192.905.

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

<b>Table 6: Summary of Enforcement Findings from REX January 1, 2013 through March 27, 2023</b>					
<b>Notice of Probable Violation</b>					
Corrosion Control	2	Integrity Management	1	Operation and/or Maintenance	2
Transportation of Gas	2				
<b>Notice of Probable Violation Total:</b>					<b>7</b>
<b>Warning Letter</b>					
Corrosion Control	1	Operation and/or Maintenance	1	Reporting	1
Welding of Steel in Pipelines	1				
<b>Warning Letter Total:</b>					<b>4</b>
<b>Grand Total:</b>					<b>11</b>

**Summary of Enforcement Findings for the Tallgrass Pipelines Companies:**

From January 1, 2013, through March 27, 2023, Tallgrass, the operator of REX, was cited in 28 enforcement actions with a total of \$675,520 in assessed civil penalties on its Tallgrass Interstate Gas Transmission (OPID 1007), Tallgrass Midstream (OPID 39216), Tallgrass Pony Express (OPID 39043), Tallgrass Powder River Gateway (OPID 39963), REX (OPID 32163), and Trailblazer (OPID 19574) pipeline systems. PHMSA issued six (6) Notice of Amendments, 14 Notices of Probable Violations, and eight (8) Warning Letters to Tallgrass.

**Tables 7 and 8** below show PHMSA’s enforcement actions and civil penalties for Tallgrass on these pipeline systems.

<b>Table 7: Tallgrass Enforcement Matters from January 1, 2013 through March 27, 2023</b>						
<b>Status</b>	<b>Corrective Action Order</b>	<b>Notice of Amendment</b>	<b>Notice of Probable Violation</b>	<b>Safety Order</b>	<b>Warning Letter</b>	<b>Total</b>
CLOSED	0	5	7	0	8	20
OPEN	0	1	7	0	0	8
<b>Total</b>	<b>0</b>	<b>6</b>	<b>14</b>	<b>0</b>	<b>8</b>	<b>28</b>



Table 8: Tallgrass Enforcement Civil Penalty Status January 1, 2013 through March 27, 2023				
Proposed	Awaiting Order	Assessed	Withdrawn/Reduced	Collected
\$980,200	\$175,700	\$675,520	\$128,980	\$705,220

The type of 49 CFR Part 192 enforcement violations against Tallgrass on these six (6) pipeline systems from January 1, 2013 through March 27, 2023 were as follows:

**Summary of Enforcement Findings for Tallgrass Systems includes: Atmospheric Corrosion**

**Control:** Monitoring; **External Corrosion Control:** Monitoring, **Gas Transportation:** Class

Locations; **Integrity Management:** HCA Identification; **Maintenance:** Pressure Limiting and

Regulating Stations-Relief Devices, Transmission lines - patrolling; **OME Procedural Manual:**

Maintenance and normal operations; **Operations:** Change in Class Location; **Transportation of Gas;**

**Welding:** Repair or Removal of Weld Defects.

- 49 CFR 192.5, 192.179, 192.245, 192.456, 192.463, 192.465, 192.473, 192.481, 192.605, 192.609, 192.611, 192.705, 192.743, 192.745, 192.903, and 192.905.

**Table 9** below gives a complete summary of the findings and the specific 49 CFR Parts 191 and 192 violations:

Table 9: Summary of Enforcement Findings for Tallgrass Systems January 1, 2013 through March 27, 2023					
Notice of Amendment					
OME Procedural Manual	3				
Notice of Amendment Total:					3
Notice of Probable Violation					
Corrosion Control	3	Integrity Management	1	OME Procedural Manual	1
Operation and/or Maintenance	2	Transportation of Gas	2		
Notice of Probable Violation Total:					9
Warning Letter					
Corrosion Control	2	Operation and/or Maintenance	2	Reporting	1
Welding of Steel in Pipelines	1				
Warning Letter Total:					6
Grand Total:					18

## **Findings:**

Based on the information submitted by REX and PHMSA's analysis of the technical, operational, and safety issues, PHMSA finds that granting this special permit with conditions that requires REX to operate the **20 special permit segments** on the 42-inch diameter gas transmission Pipelines located in Douglas and Macon Counties, Illinois; Morgan County, Indiana; Buchanan County, Missouri; and Butler, Fairfield, Perry, Pickaway, and Warren Counties, Ohio for approximately 4.25 miles of Class 1 location pipe in a Class 2 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 REX properly implements the special permit conditions, REX will be required to give PHMSA an annual review of their compliance with the special permit.

PHMSA finds the issuance and full implementation of this special permit that waives the requirements of 49 CFR 192.611 for a class location change to a Class 2 location is not inconsistent with pipeline safety. This special permit requires REX 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**. REX 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:** October 3, 2023

**Prepared by:** PHMSA - Engineering and Research Division