U.S. DEPARTMENT OF TRANSPORTATION
PIPELINE AND HAZARDOUS MATERIALS SAFETY ADMINISTRATION
Special Permit Analysis and Findings

Special Permit Information:

Docket Number:	PHMSA-2018-0099
Requested By:	Gulf South Pipeline Company, LP
Operator ID#:	31728
Original Date Requested:	September 28, 2018
Original Issuance Date:	April 2, 2019
Effective Dates:	April 1, 2029
Code Section(s):	49 CFR 192.611

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 Gulf South Pipeline Company[2] (GSPC), to discuss any relevant public comments received with respect to the application, to present the engineering/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.

Pipeline System Affected:

This special permit waives compliance from 49 CFR 192.611 for approximately 4.65 miles (24,527 feet) of natural gas transmission pipeline on the 30-inch diameter Index 130 Pipeline (Index 130 Pipeline). This special permit is granted for the segments of the Index 130 Pipeline

[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] GSPC is a wholly-owned, operating subsidiary of Boardwalk Pipeline Partners, LP.

where the class location of the pipeline has changed from a Class l location to a Class 3 location in Ascension and Livingston Parishes, Louisiana.

This special permit allows GSPC to uprate the operating pressure on four (4) ***special permit segments*** and the ***special permit inspection area***, defined below, from its current maximum allowable operating pressure (MAOP) of 780 pounds per square inch gauge (psig) to 936 psig. Due to changing operating conditions, GSPC seeks a special permit to regain the previously de-rated MAOP on these ***special permit segments*** of the Index 130 Pipeline for class location changes of Class 1 to Class 3 pipe and through 49 CFR 192.555, subpart K - Uprating, for the MAOP uprate from 780 psig to 936 psig.

The Index 130 Pipeline segments affected are described below.

Ascension, Livingston, and St. Helena Parishes, Louisiana

Special Permit Segments:

This special permit applies to the ***special permit segment(s)*** defined as follows using the GSPC Index 130 Pipeline survey station references:

- ***Special permit segment 1*** – Index 130 — 1,522 feet, Survey Station 4408+56 to Survey Station 4423+78;
- ***Special permit segment 2*** – Index 130 – 5,294 feet, Survey Station 4519+98 to Survey Station 4572+92;
- ***Special permit segment 3*** – Index 130 – 2,486 feet, Survey Station 4729+62 to Survey Station 4754+48;[3] and
- ***Special permit segment 4*** – Index 130 – 15,225 feet, Survey Station 4894+00 to Survey Station 5046+25.

Special permit inspection area[4] is defined to mean the area that extends 220 yards on each side of the centerline along the entire 32.8 miles of the Index 130 Pipeline from:

[3] Any survey station distance differences are due to a survey equation as follows: Survey Station 4729+93 Back (BK) = 4729+62 Ahead (AH), a total of 31 feet.

[4] There are seven (7) survey station equations in the ***special permit inspection area***, which explain the discrepancy between the reported length and the difference between the beginning and ending stations of the Inspection Area:

- Survey Station 4407+90 (valve site at Marchand Junction in Ascension Parish, Louisiana) to Survey Station 6139+99 at Montpelier Compressor Station located in St. Helena Parish, Louisiana. The Index 130 Pipeline ***special permit inspection area*** extends approximately 32.8 miles (173,237 feet) including field survey equations.
- HCAs located in the ***special permit inspection area*** are at the following survey stations:
    - Survey Station 4407+59 to 4436+05, (2,846 feet)
    - Survey Station 4451+96 to 4511+93, (5,996 feet)
    - Survey Station 4530+22 to 4559+81, (2,959 feet)
    - Survey Station 4572+17 to 4668+85, (9,671 feet)
    - Survey Station 4682+68 to 4708+63 (2,596 feet)
    - Survey Station 4785+26 to 0000+10, (1,436 feet)
    - Survey Station 4905+51 to 4926+92, (2,141 feet)
    - Survey Station 4962+63 to 4979+71, (1,708 feet)
    - Survey Station 4962+49 to 4979+57, (1,708 feet)

The ***special permit inspection area,*** which includes the ***special permit segments*** and high consequence areas (HCAs), is located in Ascension, Livingston, and St. Helena Parishes, Louisiana. Attachments A and B are maps showing the Index 130 Pipeline ***special permit segments*** and ***special permit inspection area***, class locations and location of remote controlled valves.

PHMSA grants this special permit based on the findings set forth in the "Special Permit Analysis and Findings" document, which can be read in its entirety in Docket No. PHMSA-2018-0099 in the Federal Docket Management System (FDMS) located on the internet at www.regulations.gov.

Special Permit Request:

GSPC submitted an application to PHMSA on September 28, 2018, for a special permit seeking relief from the Federal Pipeline Safety Regulations in 49 CFR 192.611 for four (4) segments of the 30-inch diameter Index 130 natural gas transmission pipeline, where a change

BK=4520+07 AH=4519+98, BK=4589+34 AH=4589+31, BK=4729+93 AH=4729+62, BK=4799+52 AH=0+00, BK=12+75 AH=4812+62, BK=5373+44 AH=5373+32, and BK=5747+73 AH=5747+65.

has occurred from the original Class 1 locations to Class 3 locations in Ascension and Livingston Parishes, Louisiana. As requested, this special permit allows GSPC to operate the pipeline ***special permit segments*** at a maximum allowable operating pressure (MAOP) of 936 psig after uprating the MAOP from 780 psig. The MAOP uprating would be in accordance with 49 CFR Part 192, subpart K – Uprating, and the special permit conditions. The Federal Pipeline Safety Regulations in 49 CFR 192.611(a) require natural gas pipeline operators to confirm or revise the MAOP of a pipeline segment after a change in class location without the granting of this special permit.

Public Notice:

On December 6, 2018, PHMSA posted a notice of this special permit request in the Federal Register (83 FR 62952). The Federal Register notice period ended on January 4, 2019. The request letter, Federal Register notice, and all other pertinent documents are available for review in Docket No. PHMSA-2018-0099 in the FDMS located on the internet at www.regulations.gov.

PHMSA did not receive any comments on the Federal Register docket concerning the granting of this special permit with conditions to allow Class 1 design factor pipe to operate in a Class 3 location after the pipeline MAOP was uprated from 780 psig to 936 psig.

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 GPSC's Operations and Management Plan (O&M Plan) 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 this ***special permit segment*** class location change as outlined in the Operational Integrity Compliance section of this document.

Analysis:

Background: On June 29, 2004, PHMSA published in the Federal Register (69 FR 38948) the criteria it uses for the consideration of class location change waivers, now being granted through a special permit. First, certain threshold requirements must be met for a pipeline section to be further evaluated for a class location change special permit. 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 Number PHMSA-RSPA-2004-17401. Third, such special permits will only then be granted when pipe conditions and active integrity management provide a level of safety greater than or equal to a pipe replacement or pressure reduction.

Threshold Requirements: Each of the threshold requirements published by PHMSA in the June 29, 2004, Federal Register notice is discussed below in regards to the GSPC's special permit petition.

1) No pipeline segments in a class location changing to Class 4 location will be considered. This special permit request is for four (4) segments of GSPC's Index 130 Pipeline where a class location change has occurred from an original Class 1 location to a Class 3 location. GSPC has met this requirement.
2) No bare pipe will be considered. The GSPC ***special permit segments*** are coated with coal tar enamel coating. GSPC has met this requirement.
3) No pipe containing wrinkle bends will be considered. There are no wrinkle bends in the ***special permit segments.*** GSPC 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. GSPC 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. GSPC records submitted show that the sections of the Index 130 Pipeline containing the ***special permit segments*** have been hydrostatically tested. The special permit conditions require a 49 CFR Part 192, subpart J, pressure test at 1.39 times MAOP (936 psig) for 8 continuous hours for the ***special permit segments***, Class 2 and 3 locations, and all HCAs. This requirement is due to the MAOP uprating from 780 psig to 936 psig and the Class 1 to Class 3 location change. GSPC will meet this requirement prior to uprating the MAOP.
6) In-line inspection (ILI) must have been performed with no significant anomalies identified that indicate systemic problems. The proposed ***special permit segments*** have been inspected on June 24, 2015, using a high resolution magnetic flux leakage (HR-MFL), HR-

Deformation, and Hard Spot ILI with six (6) anomalies found with wall loss greater than 40% of pipe wall thickness. No hard spots were found by ILI. GSPC has met this requirement, but will be required to run future ILI inspections and remediate anomalies with wall loss greater than 40% of the pipe wall thickness.

7) Criteria for consideration of a class location change waiver, now being granted through 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 either side of the *waiver segment (**special permit segment**).* The ***special permit inspection area*** must be inspected according to GSPC's integrity management program and periodically inspected with an in-line inspection technique. The ***special permit inspection area*** is approximately 32.8 miles of the Index 130 Pipeline and includes the ***special permit segment***. This special permit is contingent upon GSPC'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. The ***special permit inspection area*** was reduced from approximately 50 miles to 32.8 miles since the special permit conditions require mainline valve monitoring and remote control for leaks or ruptures in Special Permit Condition 18.
8) The ***special permit segments*** and ***special permit inspection area*** of the Index 130 Pipeline are composed of pipe manufactured in 1952 by A.O. Smith with an electric flash weld (EFW) weld seam. To confirm the weld seam integrity and for uprating the MAOP from 780 psig to 936 psig, PHMSA is requiring in Special Permit Condition 1(a) for the ***special permit segments***, existing Class 2 and 3 locations, and HCAs a pressure test at 1.39 times MAOP (936 psig) for 8 continuous hours prior to uprating the MAOP. The test pressure would be at or above 1301 psig.

The ***special permit segments*** meet the threshold requirements; however additional ILI tool runs and other integrity surveys will be necessary to ensure safety and therefore will be required in the special permit conditions.

Criteria Matrix: The original and supplemental data submitted by GSPC for the ***special permit segment*** have been compared to the class location change special permit criteria matrix. The

data fall within the *probable acceptance* column of the criteria matrix except class location change falling under possible acceptance.

- The ***special permit segment*** falls in the probable acceptance column of the criteria matrix for all criteria except for:
    - Possible acceptance – Class location change from Class 1 to Class 3

The data findings below fall within the "probable acceptance" columns of the criteria matrix:

1) The Index 130 Pipeline ***special permit inspection area*** has had no mainline pipe or EFW seam failures since a 1974 pressure test. There was a leak on the Index 130 Pipeline due to a lightning strike at Montpelier Station.

2) Six (6) anomalies were found to require investigation and remediation. These anomalies will be remediated prior to uprating the MAOP above 780 psig.

   This places all *special permit segments* in the "possible acceptance" column of the criteria matrix

   To further address any pipe design, construction, and operational integrity issues, this special permit will include conditions requiring GSPC to treat all ***special permit segments*** as "covered segments" in an HCA in accordance with 49 CFR 192.903. GSPC will also be required to perform ILI assessments, anomaly repairs, CIS, and stress corrosion cracking direct assessment (SCCDA) of the Index 130 Pipeline along the entire length of the ***special permit inspection area*** and ***special permit segments*** according to the requirements of 49 CFR 192.929 or an engineering assessment showing that the pipeline does not meet any of the criteria for near neutral and high pH SCC in accordance with the applicable edition of the American Society of Mechanical Engineers Standard B31.8S, *"Managing System Integrity of Gas Pipelines"* (ASME B31.8S), Appendix A3, or NACE SP 0204-2008, "*Stress Corrosion Cracking (SCC) Direct Assessment Methodology",* Section 1.2.1.1 and 1.2.2.

3) PHMSA will require GSPC to implement the special permit conditions and to certify completion in Special Permit Condition 26 through the granting of the special permit.

PHMSA has determined that imposing the special permit conditions will address these concerns and provide equivalent safety for these areas.

Operational Integrity Compliance: PHMSA reviewed this special permit request to ensure that integrity threats to the pipeline in the ***special permit segments*** and ***special permit inspection area*** are in the Operator's O&M Plan to provide a systematic program to review and remediate the pipeline for safety concerns. Additional operational integrity review and remediation requirements have been required by this special permit. The pipeline operational integrity requirements are 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 for third party damage, weld seam and girth weld integrity, anomalies in the pipe steel, and material and structures either along or near the pipeline that could cause the cathodic protection system to be ineffective. PHMSA carefully designed a comprehensive set of conditions that GSPC would be required to meet in order for the special permit to be granted. Among other things, the conditions include:

- A close interval survey (CIS) to determine the effectiveness of the cathodic protection system must be performed within the ***special permit inspection area*** and all areas with inadequate cathodic protection must be remediated prior to implementation of any MAOP uprating from 780 psig. Future CIS must be conducted in accordance with 49 CFR Part 192, subpart O reassessment intervals as contained in 49 CFR 192.937 (a) and (b) and 192.939, not to exceed the 7 calendar year reassessment interval in 49 CFR 192.939(a).
- Coating surveys to determine the quality of the pipe coating must be conducted and in-effective coating areas must be remediated in the ***special permit segments*** no later than one (1) year after the grant of this special permit and prior to implementation of any MAOP uprating from 780 psig.
- An SCC engineering assessment showing that the pipeline in the ***special permit inspection area*** does not meet the criteria for either near neutral and high pH SCC.
- The latest methods of damage prevention must be incorporated by the operator, such as the best practices of the Common Ground Alliance within the ***special permit inspection area***.

- Interference currents from parallel electric transmission lines and other interfering structures in the ***special permit inspection area*** must be identified, controlled and mitigated by conducting surveys and installing grounding systems where required.
- GSPC must automate or close mainline valves during leaks or ruptures for consequence mitigation and must develop and implement procedures for the isolation of the Index 130 Pipeline ***special permit inspection area.*** Closure of the appropriate valves following a pipeline leak or rupture meeting the criteria of Special Permit Condition 18(d)(i) must occur as soon as practicable from the time the pipeline leak or rupture location is confirmed, not to exceed 30 minutes from such confirmation.
- Anomalies and dents in the pipeline must be repaired based upon the special permit repair criteria.
- Girth welds in the ***special permit segments*** must have been inspected to a nondestructive test plan during construction, or a quality review and remediation program must be implemented by GSPC.
- All shorted casings, either metallic or electrolytic, at road and railroad crossings in the ***special permit segments*** must be cleared to prevent corrosion.
- Periodic close interval surveys and in-line inspection surveys (pipeline internal surveys to determine corrosion in the pipeline) must be performed on the ***special permit segments*** at the applicable reassessment intervals.
- ILI must be conducted through the ***special permit segments*** and ***special permit inspection area*** in accordance with 49 CFR Part 192, subpart O; 192.485; and the conditions of this special permit.
- GSPC must install and maintain line-of-sight markings on the pipeline in the ***special permit inspection area*** except in agricultural areas or large water crossings such as lakes where line-of-sight signage is not practical.
- GSPC must maintain data integration of all special permit condition findings and remediation in the ***special permit inspection area***.
- For pipeline system flow reversals lasting longer than 90 days in a ***special permit segment***, GSPC must prepare a written plan that corresponds to those applicable criteria identified in PHMSA Advisory Bulletin (ADB-2014-04), “Guidance for Pipeline Flow

Reversals, Product Changes and Conversion of Service" issued on September 18, 2014, (79 FR 56121, Docket PHMSA-2014-0040).

- GSPC must evaluate the potential environmental consequences and affected resources of any land disturbances and water body crossings needed to implement the special permit conditions for a ***special permit segment*** or a ***special permit inspection area*** prior to the disturbance.
- GSPC must maintain documentation of compliance with all conditions of this special permit for the life of this special permit.

PHMSA has determined that imposing these conditions (along with the remainder of the conditions set forth in the special permit) will ensure that granting the special permit will not be inconsistent with safety.

Compliance History – January 1, 2008 through January 31, 2019: A review of PHMSA enforcement actions of Boardwalk Pipeline Partners (Boardwalk) from January 1, 2008 through January 31, 2019, shows the following closed enforcement actions against Boardwalk. GSPC is owned and operated by Boardwalk Pipeline Partners. Operator Identification Number (OPID#) is 31728 for the Index 130 Pipeline. Boardwalk operates the following pipeline systems that have had enforcement cases during the review interval:

OPID# 19270 -TEXAS GAS TRANSMISSION, LLC
OPID# 31554 - BOARDWALK PETROCHEMICAL PIPELINE, LLC
OPID# 31728 - GULF SOUTH PIPELINE COMPANY, LP
OPID# 32299 - GULF CROSSING PIPELINE COMPANY LLC

Below is a listing of PHMSA closed enforcement matters of all types in all PHMSA Regions for all Boardwalk pipelines from January 1, 2008 through January 31, 2019:

Total Number of Enforcement Cases – Boardwalk January 1, 2008 through January 31, 2019						
Case Status	**Corrective Action Order**	**Notice of Amendment**	**Notice of Probable Violation**	**Safety Order**	**Warning Letter**	**Total Number of Cases**
Closed	1	4	11	0	15	31
Open	0	0	1	1	0	2
Grand Total	1	4	12	1	15	33

Civil Penalty Status - Boardwalk for January 1, 2008 through January 31, 2019				
Proposed	**Awaiting Order**	**Assessed**	**Withdrawn/Reduced**	**Collected**
$906,700	$62,000	$844,700	$0	$906,700
Withdrawn / Reduced Amount included withdrawn case				

This enforcement history reveals some compliance issues, including pipeline operations and maintenance issues.

Based upon GSPC's enforcement history indicating some non-compliance issues with 49 CFR Part 192, PHMSA concludes that a grant of a special permit requiring GSPC to meet 49 CFR Part 192 regulations and the special permit conditions will ensure the long term safety of the pipeline ***special permit segments***. PHMSA has determined that imposing the special permit conditions will ensure that this grant will not be inconsistent with pipeline safety.

Findings:

Based on the information submitted by GSPC and PHMSA's analysis of the technical, operational, and safety issues, and given the special permit conditions that will be implemented, PHMSA finds that granting this special permit to GSPC to operate four (4) ***special permit segments*** (approximately 4.65 miles or 24,527 feet in length) of the Index 130 Pipeline where class location changes have occurred from Class 1 to Class 3 and the MAOP has been uprated to 936 psig is not inconsistent with pipeline safety.

Completed in Washington DC on: April 2, 2019

Prepared by: PHMSA OPS - Engineering and Research Division