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-2020-0040
Requested By:	Gulf South Pipeline Company, LLC
Operator ID#:	31728
Original Date Requested:	March 17, 2020
Effective Date:	July 24, 2020
Code Section(s):	49 CFR 192.14(a)

I. Background

The National Environmental Policy Act (NEPA), 42 United States Code (USC) 321 – 4375, Council on Environmental Quality regulations, 40 Code of Federal Regulations (C.F.R. or CFR) 1500-1508, and U.S. Department of Transportation (DOT) Order 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 will 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

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

impacts that would result from granting or denying the special permit. PHMSA developed this assessment to determine what effects, if any, our decision would have on the environment.

Pursuant to 49 U.S.C. 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 National Environmental Policy Act (NEPA) for the Gulf South Pipeline Company, LLC (GSPC)[2,3] application for a special permit request to waive compliance from 49 CFR 192.14(a) for 57.7-miles of a 16-inch diameter gas transmission pipeline segment located in Jasper, Clarke, Lauderdale, and Kemper Counties, Mississippi. 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 Part 192. This special permit requires GSPC to implement alternative assessments for the conversion to service of 57.7 miles of the 16-inch-diameter natural gas transmission pipeline (Index 818-9 Pipeline) located in Jasper, Clarke, Lauderdale, and Kemper Counties, Mississippi. The entire pipeline was originally constituted of 61.1 miles of active pipeline, but a 3.4-mile portion of the pipeline will be physically separated and remain idled. The ***special permit segment*** is defined as 57.7 miles of 16-inch diameter Index 818-9 Pipeline from Survey Station 0+00 to 3044+12.

II. Introduction

Pursuant to 49 U.S.C. 60118(b) and 49 CFR 190.341, GSPC submitted a special permit petition to PHMSA on March 17, 2020, requesting that it waive certain requirements of 49 CFR 192.14(a) for conversion to service, by implementing alternative assessments for the GSPC Index 818-9 Pipeline located in Jasper, Clarke, Lauderdale, and Kemper Counties, Mississippi.

[2] GSPC is a wholly-owned, subsidiary of Boardwalk Pipelines.

[3] The PHMSA operator identification number (OPID) for GSPC is: OPID 31728.

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 PHMSA pipeline safety regulations in accordance with 49 CFR 190.341.

III. Regulatory Background

PHMSA regulations at 49 CFR 192.14(a) require a pipeline to be pressure tested when converting to natural gas service. Below is the text of 49 CFR 192.14:

49 CFR 192.14 Conversion to service subject to this part.

(a) A steel pipeline previously used in service not subject to this part qualifies for use under this part if the operator prepares and follows a written procedure to carry out the following requirements:

(1) The design, construction, operation, and maintenance history of the pipeline must be reviewed and, where sufficient historical records are not available, appropriate tests must be performed to determine if the pipeline is in a satisfactory condition for safe operation.

(2) The pipeline right-of-way, all aboveground segments of the pipeline, and appropriately selected underground segments must be visually inspected for physical defects and operating conditions which reasonably could be expected to impair the strength or tightness of the pipeline.

(3) All known unsafe defects and conditions must be corrected in accordance with this part.

(4) The pipeline must be tested in accordance with subpart J of this part to substantiate the maximum allowable operating pressure permitted by subpart L of this part.

(b) Each operator must keep for the life of the pipeline a record of the investigations, tests, repairs, replacements, and alterations made under the requirements of paragraph (a) of this section.

(c) An operator converting a pipeline from service not previously covered by this part must notify PHMSA 60 days before the conversion occurs as required by §191.22 of this chapter.

IV. Purpose and Need

GSPC requests a special permit to waive the hydrostatic pressure test requirement for a pipeline being converted from carbon dioxide service to natural gas transmission service. PHMSA regulations at 49 CFR 192.14(a) require a pipeline to be pressure tested when converting to natural gas service.

The Index 818-9 Pipeline is an existing 61.1-mile, 16-inch diameter pipeline that will be converted by GSPC from carbon dioxide service (49 CFR 195) to natural gas service (49 CFR 192) for 57.7 miles, with a 3.4-mile portion to remain idled and physically separated. The Index 818-9 Pipeline will transport natural gas from a point near Heidelberg, Mississippi to the Kemper County power plant, northwest of Daleville, Mississippi. **Attachment A** is a route map of the 16-inch Index 818-9 Pipeline showing the class locations.

The Index 818-9 Pipeline will have a maximum allowable operating pressure (MAOP) of 1,480 pounds per square inch gauge (psig). The ***special permit segment*** will operate at a maximum stress of 37 percent of the specified minimum yield strength (SMYS).[4] The 16-inch diameter Index 818-9 Pipeline was installed in 2013. The 16-inch diameter pipe is 0.457-inches thick, has a strength of 70,000 psig with a high frequency resistance welded pipe seam, and is coated with fusion bonded epoxy coating.

The Index 818-9 Pipeline was hydrostatically pressure tested to a minimum of 3,726 psig for eight (8) hours in 2013. The test pressure was at a minimum of 90 percent of the pipeline specified minimum yield strength. There were no hydrostatic test failures.

V. Site Description

The Index 818-9 Pipeline is in Jasper, Clarke, Lauderdale, and Kemper Counties, Mississippi. The 57.7-mile pipeline right-of-way consists primarily of woodlands with some residences, businesses, and outside areas.

The Index 818-9 Pipeline has one (1) anticipated high consequence area (HCA), which will be confirmed when GSPC completes its annual HCA determination.

The Index 818-9 Pipeline is a 16-inch diameter, 57.7-mile steel pipeline that will transport natural gas from a point near Heidelberg, Mississippi to the Kemper County power plant, northwest of Daleville, Mississippi. The Index 818-9 Pipeline was installed in 2013.

[4] The special permit segment operated at a maximum operating pressure (MOP) of 2875 psig and 72% of specified minimum yield strength while in carbon dioxide service.

On the condition that GSPC complies with the terms and conditions set forth below, the special permit waives the requirement in 49 CFR 192.14(a) to perform a new pressure test on the pipeline.

PHMSA grants this special permit based on the findings set forth in the Special Permit, FEA and FONSI documents, which can be read in its entirety in Docket No. PHMSA- 2020-0040 in the Federal Docket Management System located on the internet at www.regulations.gov.

VI. Special Permit Segment

Jasper, Clarke, Lauderdale, and Kemper Counties, Mississippi

This special permit applies to the ***special permit segment*** defined as 57.7 miles of the GSPC 16-inch diameter Index 818-9 Pipeline located in Jasper, Clarke, Lauderdale, and Kemper Counties, Mississippi. The entire ***special permit segment*** will be defined as a high consequence area (HCA).

VII. Alternatives

PHMSA's review of the potential alternatives is limited to review of the special permit and possible alternatives as well as associated impacts to the pipeline**.** In terms of the potential alternatives for PHMSA action, the options include: **(1)** no action/PHMSA denies the requested special permit, in which case Index 818-9 would need to be fully compliant with 49 CFR 192.14(a) or **(2)** grant the requested special permit and impose additional operations and maintenance requirements, including integrity management activities beyond those required under 49 CFR Part 192.

ALTERNATIVES

Alternative 1: "No Action" Alternative

The "no action" alternative would entail full compliance with existing regulations, specifically 49 CFR 192.14(a). This provision requires a new pressure test to be performed prior to conversion to service. If the special permit application is denied, GSPC would be required to hydrostatically test the pipe to a minimum of 2,220 psig for eight (8) hours, which is 1.5 times

the proposed MAOP of 1,480 psig. Pressure testing would impact the ***special permit segment*** from construction to install test manifolds along the pipeline right-of-way.

Alternative 2: "Granted" Alternative

Under the "granted" alternative, PHMSA would grant a special permit allowing the pipe to be converted from a carbon dioxide pipeline to a natural gas transmission pipeline using ILI and CIS assessments in lieu of a hydrostatic pressure test. The special permit allows for assessments to be done that will reveal the integrity and condition of the pipeline in more detail than a hydrostatic pressure test through implementation of the special permit conditions.

Overview of the Special Permit Conditions:

To fully offset potential safety risks associated with granting a waiver of the pressure test requirement for the Index 818-9 Pipeline, GSPC would be required by the special permit conditions to implement several additional safety measures for the ***special permit segment***. The following is a summary of the special permit conditions that GSPC must implement along the ***special permit segment***.

1. **General Conditions and Maximum Allowable Operating Pressure**:
    a) The special permit conditions must be included into GSPC Operations and Maintenance (O&M) Procedures in accordance with 49 CFR 192.603 and 192.605.
    b) GSPC must operate the ***special permit segment*** at or below an MAOP of 1,480 psig.
    c) The ***special permit segment*** must be capable of inline inspection (ILI) in accordance with 49 CFR 192.150.
2. **Integrity Management Program**: GSPC must incorporate the requirements of this special permit into its written integrity management program and standard operating procedures (SOPs) for the ***special permit segment***.[5]
    a) GSPC must conduct a baseline assessments of the ***special permit segment*** using high resolution magnetic flux leakage (HR MFL) and high resolution (HR) Deformation ILI tools within twelve (12) months of the grant of this special permit.

[5] Pipeline operating procedures such as GSPC SOPs are required by 49 CFR 192.603(b) and 192.605.

b) GSPC must conduct integrity re-assessments in accordance with 49 CFR 192.939(a) assessment intervals using in-line inspections along the ***special permit segment*** and in compliance with 49 CFR Part 192, Subpart O integrity management regulations.

c) GSPC must treat the ***special permit segment*** as a *"covered segment"* in a *"high consequence area (HCA)"* in accordance with 49 CFR Part 192, Subpart O. Reassessments of the ***special permit segment*** using high resolution magnetic flux leakage (HR-MFL) and high resolution (HR) Deformation ILI must be conducted at the frequency specified for HCAs in 49 CFR 192, Subpart O.

d) If GSPC identifies threats within the ***special permit segment*** that require running additional ILI tools, pursuant to 49 CFR Part 192, Subpart O, such as for crack detection[6] or pipe movement from soil or geologic stresses, GSPC must use the appropriate ILI tools or other evaluation methods for pipeline assessments.

3. **Anomaly Response and Repair**:

a) **General**: GSPC must account for ILI tool tolerance and corrosion growth rates within the scheduled response times and repairs, and must document and justify the values used.

i) GSPC must demonstrate ILI tool tolerance accuracy for each ILI tool run by usage of calibration excavations and unity plots that demonstrate ILI tool accuracy to meet the tool accuracy specification provided by the vendor (typical for depth within +/- 10% accuracy for 80% of the time). GSPC must incorporate ILI tool accuracy by ensuring that each ILI tool service provider determines the tolerance of each tool and includes that tolerance in determining the size of each anomaly feature reported to GSPC. GSPC must compare previous indications to current indications that are significantly different. If a trend is identified where the tool has been consistently overcalling or under-calling, the remaining ILI features must be re-graded accordingly.

ii) The unity plots must show actual anomaly depth versus predicted depth.

[6] "Pipe Crack" activity shall be defined as over both 20% wall thickness depth.

iii) ILI tool evaluations for metal loss must use "6t x 6t"[7] interaction criteria for determining anomaly failure pressures and response timing.

iv) Discovery date[8] must be within 150 days of any ILI tool run for each type of ILI tool (e.g. HR-geometry, HR-deformation or HR-MFL tools).

b) **Dents**: GSPC must repair dents in the ***special permit segment*** in accordance with the 49 CFR 192.933 repair criteria. The ***special permit segment*** must have a HR deformation tool inspection as part of the initial ILI. The HR deformation tool can be from past ILI inspections. The timing for these dent repairs should follow the GSPC O&M Manual but must be no longer than one (1) year after discovery or the timing intervals in 49 CFR 192.933(d), whichever is shorter.

c) **Repair Criteria and Response Time for ILI Results**: The following is the required timing for excavation and investigation of anomalies based on ILI results. GSPC must evaluate ILI data by using either the ASME Standard B31G, "Manual for Determining the Remaining Strength of Corroded Pipelines,"[9] the modified B31G (0.85dL) or R-STRENG[10] for calculating the predicted failure pressure ratio (FPR) to determine corrosion anomaly responses.

The ***special permit segment*** baseline assessment and first reassessment anomaly findings must be remediated in accordance with the below criteria and thereafter must be remediated in accordance with 49 CFR Part 192 criteria for either HCAs or moderate consequence areas. The below remediation criterion applies to anomalies located within the ***special permit segment*** when they have been ILI assessed, excavated and investigated, or the timing intervals in 49 CFR 192.933(d), whichever is shorter as follows:

i) **Immediate response**: Any anomaly within the ***special permit segment*** that meets either: (l) a failure pressure ration (FPR) equal to or less than 1.25; or (2) an anomaly depth equal to or greater than 70% wall thickness loss.

[7] "6t" means pipe wall thickness times six.

[8] Discovery date is the day, month and year that an Operator receives the ILI tool run results from the ILI tool service provider.

[9] The applicable edition incorporated by reference is listed in 49 CFR 192.7.

[10] The applicable edition incorporated by reference is listed in 49 CFR 192.7.

ii) **<u>One-year response</u>**: Repair any anomaly in the ***special permit segment*** that meets either: (l) a FPR less than or equal to 1.39 in a Class 1 location; (2) FPR less than or equal to 1.67 in a Class 2 location; (3) a FPR less than or equal to 2.00 in a Class 3 or 4 location; or (4) an anomaly depth greater than 40% of pipe wall thickness.

iii) **<u>Monitored response</u>:** Any anomaly within the ***special permit segment*** that meets both: (1) an FPR greater than 1.39 in a Class 1 location; (2) a FPR greater than 1.67 in a Class 2 location; (3) a FPR greater than 2.00 in a Class 3 or 4 location; or (2) an anomaly depth less than or equal to 40% wall thickness loss. The schedule for the response must take tool tolerance[11] and corrosion growth rates into account.

iv) **<u>Special permit segment – *Crack Type Anomalies*</u>** - All cracking exceeding 30% of the pipe wall thickness or having a FPR below 1.39 or meeting 49 CFR Part 192 requirements must be remediated within 180 days of discovery.[12, 13]

4. **<u>Close Interval Surveys</u>**: GSPC must perform a close-interval survey (CIS)[14] and remediate[15] any areas of inadequate cathodic protection in the ***special permit segment*** within one (1) year after the grant of this special permit. If environmental permitting or right-of-way factors beyond GSPC's control should prevent the completion of the CIS

[11] Tool tolerance shall be applied only to FPR calculations, not to the anomaly depth criteria.

[12] Should any cracking anomalies above 30% of the pipe wall thickness be found in the ***special permit segment***, GSPC must remediate the cracks or have a crack anomaly evaluation procedure submitted to the Director, PHMSA Central Region with a "no objection" reply prior to using the crack evaluation procedure for cracking anomalies left in the pipeline above 30% of the pipe wall thickness without remediation. If GSPC does not receive a "no objection" letter or request for additional review time from PHMSA within 90 days of the notification, GSPC may proceed.

[13] A fracture mechanics and pressure cycling evaluation is required where an un-remediated crack of 10% or more (of wall thickness) is detected by ILI or direct inspection tools. The pipe must have toughness tests (Charpy V-notch impact values) of the pipe body, seam, or girth weld so that fracture mechanics modeling can be used, if needed.

[14] CIS must be conducted at a maximum 5-foot spacing and with interrupted on/off current.

[15] The terms "remediate" or "remediation" of pipe coating must include repair of damaged external pipe coating, where required to maintain cathodic protection of the pipeline in accordance with 49 CFR 192.463.

within one (1) year from the grant of this special permit, (1) GSPC must complete a CIS and perform subsequent remediation including coating repair as soon as practicable, (2) GSPC must submit a letter justifying the delay and providing the anticipated date of completion to the Director, PHMSA Central Region, no later than one (1) month prior to the end of one (1) year after the grant of this special permit, and (3) must receive a letter of "no objection" from the Director, PHMSA Central Region, for a delay.[16] CIS remediation activities must be completed within one (1) year of the finding. GSPC must submit a written request to the Director, PHMSA Central Region, for any extended evaluation and remediation schedules. GSPC must receive a letter of "no objection" from PHMSA prior to implementing an extended CIS and remediation interval.

5. **Close Interval Surveys – Reassessment Interval**:
    a) GSPC must perform periodic CIS of the ***special permit segment*** at the applicable reassessment interval(s) for a "covered segment" determined in concert and integrated with ILI in accordance with 49 CFR Part 192 Subpart O reassessment intervals as required 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). CIS assessments within the reassessment interval are not required to be performed in the same year as ILI reassessments.
    b) CIS data must be integrated with ILI data. **Condition 10 (Data Integration)** – gives a complete description of data integration information that an operator must maintain for ***special permit segment***, including CIS and ILI data.
6. **Right-of-Way Patrols and Leakage Surveys:** In addition to the requirements of 49 CFR 192.705, GSPC must perform right-of-way patrols as follows:
    a) Aerial flyover patrols or ground patrols by walking or driving of the ***special permit segment*** right-of-way once every two (2) weeks, not to exceed 20 days, contingent on weather conditions. Should mechanical availability of the patrol aircraft or weather conditions become an extended issue, the ***special permit segment*** pipeline

[16] PHMSA has assigned this special permit to the Director, PHMSA Central Region, but upon notice to GSPC could assign this special permit to a different PHMSA Region.

aerial flyover patrol must be completed within 28 days of the last patrol by other methods such as walking or driving the pipeline route, as feasible.

b) If the schedule for either ground patrols or aerial flyover patrols cannot be met due to circumstances beyond GSPC's control, GSPC must notify the Director, PHMSA Central Region, in writing of the reasons the schedule cannot be met and obtain a letter of "no objection" within three (3) business days of the exceedance.

c) GSPC must conduct a leakage survey, referenced in 49 CFR 192.706, within 45 days of placing the ***special permit segment*** into gas service and thereafter in accordance with 49 CFR 192.706 leakage survey intervals.

7. **Line-of-Sight Markers**: GSPC must install and maintain line-of-sight markers within the ***special permit segment*** in accordance with 49 CFR 192.620(d)(4)(iv) to the extent practicable. Any removed or missing line-of-sight markers must be replaced within 60 days of discovering the marker is removed or missing.

8. **Mainline Valve – Monitoring and Remote Control for Leaks or Ruptures**: Mainline valves at Mile Post 0, 17.7, 23.2, 44.9, and 56.7 in the ***special permit segment*** must be controlled by a supervisory control and data acquisition (SCADA) system and must be equipped for remote monitoring and control, or remote monitoring and automatic control and the following requirements:

   a) If any crossover or lateral pipe for gas receipts or deliveries connects to the isolated segment between the upstream and downstream mainline valves, the nearest valve on the crossover connection(s) or lateral(s) must be isolated, such that, when all valves are closed, there is no flow path for gas to flow to the leak or rupture site (except for residual gas already in the shut-off segment); and

   b) Mainline valves must be continuously monitored for valve status (open, closed, or partial closed/open), upstream pressure, and downstream pressure.

9. **Interference Currents Control**: Within one (1) year of the grant of this permit, GSPC must perform surveys and remediation, with corrosion control implemented, for induced currents from electric transmission lines and other known sources of potential interference that may affect the ***special permit segment***. An induced alternating current (AC) or direct current (DC) program and remediation plan to protect the pipeline from corrosion caused by stray

currents must be written and implemented within one (1) year of the grant date of this special permit.

10. **Data Integration**: GSPC must maintain data integration of special permit condition findings and remediation in the ***special permit segment.*** Data integration must include the following information: pipe diameter, wall thickness, grade, and seam type; pipe coating; MAOP; class location (including boundaries on aerial photography); HCAs (including boundaries on aerial photography); hydrostatic test pressure including any known test failures; casings; any in-service ruptures or leaks; ILI survey results including HR-MFL, HR-Deformation tools; most recent CIS; rectifier readings; cathodic protection test point survey readings; AC/DC interference surveys; pipe coating surveys; pipe coating and anomaly evaluations from pipe excavations; stress corrosion cracking (SCC) excavations and findings; and pipe exposures from encroachments.[17] Structures must be validated every three (3) years by obtaining new aerial imagery or by ground patrol.
    a) Data integration documentation and drawings, with four (4) years of prior data, must be maintained and must be submitted, if requested by PHMSA, beginning with the 2nd annual report of this special permit.
    b) Data integration must be updated on an annual basis. GSPC must conduct, at least, an annual review of integrity issues to be remediated.
    c) GSPC must maintain data integration as a composite of all applicable data elements in a data viewer.
11. **Environmental Assessments and Permits**: 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 the ***special permit segment*** prior to the disturbance. GSPC must obtain all applicable (Federal, state, and local) environmental permits and adhere to all applicable (Federal, state, and local) environmental permit requirements when conducting the special permit conditions activity.

[17] Hydrostatic test failures, in-service ruptures, rectifier readings, cathodic protection test point survey readings, AC/DC interference surveys, pipe coating surveys, pipe coating and anomaly evaluations from pipe excavations, SCC excavations and findings, and pipe exposures from encroachments must be maintained for data integration into "IntegraLink" or a comparable data viewer. These data elements may not be on a drawing.

12. **Documentation:** GSPC must maintain documentation for **Conditions 1 through 11 and 13** for the ***special permit segment*** for the life of this special permit.

13. **Certification**: A GSPC senior executive officer, vice president or higher, must certify in writing the following:

    a) The ***special permit segment*** meets the conditions described in this special permit;

    b) The written manual of O&M procedures required by 49 CFR 192.603 and 192.605 for the ***special permit segment*** has been updated to include all additional operating and maintenance requirements of this special permit; and

    c) GSPC has implemented all conditions as required by this special permit.

    Within 12 months after the grant of this special permit, GSPC must send the certifications required in **Condition 13(a) through (c)** with special permit condition status and procedure completion date, compliance documentation summary, and the required senior executive signature and date of the signature to the PHMSA Associate Administrator for Pipeline Safety, with copies to Director, PHMSA Central Region; and to the Federal Register Docket (PHMSA-2020-0040) at www.Regulations.gov.

VIII. AFFECTED RESOURCES AND ENVIRONMENTAL CONSEQUENCES

A. Affected Resources and Environmental Consequences of the Granted Action and the No Action Alternatives

Aesthetics: The special permit assessment alternatives will have minimal impact on the visual character of the pipeline right-of-way, with the installation of line-of-site markers and the potential increase in maintenance activities that are temporary in duration. If the permit is not granted, the hydrostatic test may require a small number of digs to install test headers, temporarily affecting a portion of the right-of-way.

Agricultural Resources: The right-of-way of the pipeline is primarily in forested areas, with some farmland, and some urban areas. The special permit assessment alternatives will have minimal impact on agricultural resources with increased maintenance activities that could temporarily disturb agricultural operations. If the permit is not granted, the hydrostatic pressure test similarly will have no impact on any agricultural resources.

Air Quality: The special permit assessment alternatives will have no impact on the air quality of the pipeline area. If the permit is not granted, the hydrostatic pressure test similarly will have no impact on the air quality of the pipeline area.

Biological Resources: The primary wildlife habitat occurring within, and in the vicinity of the pipeline includes woodland and disturbed lands. The special permit alternative assessments could have temporary and minor impacts on habitats, wetlands, waterbodies, and fishery resources due to ground disturbance. If the special permit is not granted and a hydrostatic pressure test is required, the groundwater and waterbodies in the vicinity of the hydrostatic pressure test would be at a small risk of impact from the water disposal.

No areas in the vicinity of the pipeline are designated as sensitive wildlife habitat. The pipeline does not cross any land administered by federal, state, or local agencies, or non-governmental organizations that could provide sensitive wildlife habitat. No lands enrolled in the Conservation Reserve Program (CRP) or the Wetland Reserve Program (WRP), both administered by the Natural Resource Conservation Service (NRCS), would be affected by granting this special permit.

Any work activities would be conducted within the boundaries of the previously disturbed pipeline right-of-way.

Climate Change: The special permit assessment alternatives will have no impact on climate change. If the special permit is not granted, the hydrostatic pressure test similarly will have no impact on climate change.

Cultural Resources: The assessment activities required by the special permit would be conducted within the boundaries of the previously disturbed pipeline right-of-way. If the special permit is not granted, the hydrostatic pressure test will similarly be conducted within the boundaries of the previously disturbed pipeline right-of-way. According to the National Register of Historic Places there are no known historic properties near the ***special permit segment***.

Environmental Justice: If the special permit is granted, there would not be an adverse impact on the local population. Based on current U.S. Census data, the minority population percentages

for the affected counties is: 52% in Jasper, 35% in Clarke, 39% in Lauderdale, and 39% in Kemper. With 134 residences, 17 businesses and other outside areas located along the ***special permit segment***, the increased monitoring and maintenance activities associated with the special permit would improve safety for those that live near the special permit segment, an estimated 723 people. The special permit will not disproportionately impact any minority, low income, or non-English language populations.

Geology, Soils, and Mineral Resources: If the special permit is granted and a hydrostatic pressure test is not required, there would be no impact on the geology, soils, or mineral resources in the vicinity of the pipeline.

The general lithology of the pipeline right-of-way soils is unconsolidated, undifferentiated. The soils in the pipeline right-of-way are primarily sandy loams, with some clays and silts, common to the Wilcox formation.

The pipeline was originally designed to deliver CO_2 to oil fields to aid in extraction, so it is near some oil wells, at the Heidelberg Fields.

The pipeline is not in an area of known karst terrain. It is not anticipated that karst terrain will adversely impact the pipeline.

Seismic hazards include earthquakes, surface faulting, and soil liquefaction. According to the USGS Seismic Hazards maps, the pipeline is situated in areas of very low seismic probability. Therefore, it is not anticipated that earthquakes will impact the pipeline.

Indian Trust Assets: The assessments required by the special permit would have no impact on Native Americans or any land owned or otherwise administered by Native American tribes. The scope and duration of the work resulting from the special permit would have little to no effect or impact on the socioeconomics in the surrounding area. Similarly, the hydrostatic pressure test would have little to no effect on the socioeconomics in the surrounding area, with no impact on Native Americans or any land owned or otherwise administered by Native American tribes.

Land Use: Most areas within the vicinity of the pipeline are privately owned tracts of land, with some areas owned by the state.

Noise: The ILI assessments and other maintenance activities required by the special permit may temporarily increase noise levels in the vicinity of the pipeline's ILI launchers and receivers. Similarly, the hydrostatic pressure test required if the special permit is denied may temporarily increase noise levels in the vicinity of the test headers.

Recreation: The special permit assessment alternatives could have minimal impacts on recreation in the vicinity of the pipeline due to inspection and maintenance activities. If the permit is not granted, the hydrostatic pressure test similarly will have no impact on recreation in the vicinity of the pipeline.

Safety: The Federal Pipeline Safety Regulations in 49 CFR 192.14(a) require pressure testing when converting a pipeline to natural gas service. The special permit waives the requirement to perform a hydrostatic pressure test. Given that the Index 818-9 Pipeline was hydrostatically pressure tested to a minimum of 3,726 psig for eight (8) hours in 2013, there is little if any practical need to conduct a hydrotest for conversion to natural gas service, wherein the Index 818-9 Pipeline will have a maximum allowable operating pressure (MAOP) of 1,480 psig. Nonetheless, actions included in the special permit conditions intended to improve safety and environmental protection to equal or exceed that provided by the measures required under 49 CFR 192.14(a). The special permit conditions will require the pipeline to be assessed with an ILI and CIS. These assessments will provide a better understanding of the condition of the pipe than a hydrostatic pressure test, as the ILI and CIS are able to find anomalies that would otherwise pass a hydrostatic pressure test, but may be indicative of corrosion growth.

Quarterly patrols, weather permitting, are used to observe surface conditions on and adjacent to the pipeline right-of-way for indications of leaks, third party construction activity, exposed pipe, erosion or other factors that affect the safety and operation of the pipeline.

Close Interval Surveys (CIS) have been and will be performed on the pipeline to ensure cathodic protection (CP) is acceptable. Areas of low CP potentials will be remediated according to GSPC's Integrity Management Plan (IMP).

Any anomalies detected during in-line inspections will be remediated in accordance with 49 CFR Part 192, Subpart O and GSPC's IMP.

The "no action" alternative would require full compliance with 49 CFR 192.14. This would require a new hydrostatic pressure test be performed in accordance with Subpart J. However, assessments associated with the special permit would not be applicable if the special permit were denied because those conditions are not mandated by the current 49 CFR Part 192. The ILI assessment would likely not be completed until a reassessment is required by 49 CFR Part 192, Subpart O.

Accordingly, both alternatives are expected to lead to a similar safety result.

(a) *Would operation under the special permit change the risk of rupture or failure?* Under the special permit, GSPC must assess the pipeline with ILI and CIS instead of a hydrostatic pressure test. These assessments are intended to lower the risk of rupture or failure, as they should detect anomalies or other corrosive conditions that would pass a hydrostatic pressure test. Anomalies detected that could leak of fail will be remediated after ILI assessment.

(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*? Failure consequences would not be changed by granting or denying the permit. GSPC believes that granting the special permit would not increase, and could arguably decrease the risk of failure. The ILI and CIS assessments are intended to enhance GSPC's knowledge and awareness of the integrity of the pipeline, helping to decrease the risk of failure, as the assessments should detect anomalies or other corrosive conditions that would pass a hydrostatic pressure test, in addition to detecting any anomalies that would fail a new hydrostatic pressure test.

The implementation of the assessments will help enhance GSPC's knowledge and awareness of the integrity of Index 818-9 Pipeline and constitute unique circumstances that demonstrate that applying a 49 CFR 192.14(a) hydrostatic pressure test requirement for conversion to service is not necessary.

If the special permit is denied, then GSPC must perform a new hydrostatic pressure test. The hydrostatic pressure test will be in accordance with Subpart J, which requires a significantly lower pressure than the pressure to which the pipeline was originally tested.

No ILI assessment will be performed until required by 49 CFR Part 192, Subpart O. Under these circumstances, it is possible that the pipeline successfully passes its hydrostatic pressure test while anomalies may remain undetected.

(c) *Would the Potential Impact Radius (PIR) 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 MAOP of 1,480 psig will not change whether the special permit is granted or not. Because the MAOP of the pipeline will not change, the PIR calculation will not change. The number of people affected by a failure will not change if the special permit request is denied.

(d) *Would operation under the Special Permit have any effect on pipeline longevity or reliability? Would there be any life cycle or maintenance issues?* The special permit only applies to the assessment required for conversion to natural gas service, and will not affect normal operation of the pipeline. Therefore, there will be no effect on pipeline longevity or reliability. There will be no life cycle or maintenance issues associated with the special permit. If the permit is not granted then pipeline longevity may be affected, as the hydrostatic pressure test may not detect certain anomalies, which may grow undetected until other assessment methods are used at a later time.

Socioeconomics: The scope and duration of any activities associated with the special permit will have no impact on the socioeconomics in the vicinity of the ***special permit segment***. According to U.S. Census data, Jasper, Clarke, Lauderdale, and Kemper Counties have 23% of persons in poverty. The special permit will not disproportionately impact any predominantly low income populations.

Topography: The topography of the pipeline right-of-way is generally flat to gently sloping. The scope and duration of any activities associated with the special permit or the "no action" alternative would have little to no impact on the topography of the right-of-way.

Transportation: The scope and duration of any activities associated with the special permit or the "no action" alternative would have little to no impact on the local infrastructure or roads.

Water Resources: The scope and duration of any activities associated with the special permit would have little to no impact on the surface waters in the vicinity of Index 818-9 Pipeline.

If the special permit is not granted and a hydrostatic pressure test would be required, the groundwater and waterbodies in the vicinity of the hydrostatic test manifolds would be at a small risk of impact from the water disposal.

Index 818-9 Pipeline crosses 22 rivers and creeks in Jasper, Clarke, Lauderdale, and Kemper Counties, Mississippi.

The Index 818-9 Pipeline is underlain by one principal aquifer system, the Mississippi embayment aquifer system. The Mississippi embayment aquifer system extends eastward from Arkansas to northwestern Mississippi and comprises six aquifers that crop out as an arcuate band of poorly consolidated to unconsolidated, bedded sand, silt and clay. Geologic units of the aquifer system range from Late Cretaceous to middle Eocene in age. In southern Mississippi and central Louisiana, an extensive, thick, clay confining unit, the Vicksburg-Jackson confining unit, separates the Mississippi embayment aquifer system from the overlying Oligocene and younger water-yielding strata of the coastal lowlands aquifer system. In the embayed part of the Gulf Coastal Plain of eastern Arkansas, northeastern Louisiana, and northwestern Mississippi, the southward-dipping strata of the Mississippi embayment aquifer system are hydraulically connected to the Mississippi River Valley alluvial aquifer. Fresh ground-water withdrawals from the Mississippi embayment aquifer system are estimated to be 433 million gallons per day. Public supply use accounts for about 52 percent of the total water withdrawn from the aquifer system, or about 224 million gallons per day. Withdrawals for domestic and commercial use were about 23 percent of the total withdrawals, or about 99 million gallons per day. Agricultural withdrawals from the Mississippi embayment aquifer system averaged about 71 million gallons per day, or about 16 percent of the total ground-water withdrawn. Industrial, mining, and thermoelectric power users withdrew about 39 million gallons per day, or about 9 percent of the total withdrawals. (USGS, 2016).

GSPC does not anticipate any impact to domestic water wells because no wells are believed to exist on or close to the project area. The potential for groundwater impact resulting from the Special Permit is very low because existing groundwater flow paths are not expected to change.

The Special Permit will not cause changes in overall groundwater quantity, which is determined by the quantity of recharge to the aquifer. Additionally, due to the depth of groundwater, GSPC does not anticipate encountering groundwater during pipeline excavation activities along the pipeline. There are no known Sole Source Aquifers (SSA) in the vicinity of the pipeline.

B. Comparative Environmental Impacts of Alternatives

As PHMSA recognized in its June 29, 2004 Federal Register Notice (69 FR 38948), 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. Implementing enhanced inspection and assessment practices along the pipeline extends pipeline safety benefits to the area along the pipeline.

If the special permit is not granted, 49 CFR 192.14(a) would require a new Subpart J hydrostatic pressure test. However, the ILI and CIS assessments associated with the special permit would not be applicable if the special permit were denied because those conditions are not mandated by 49 CFR Part 192. Accordingly, both alternatives are expected to lead to a similar safety result. The mode of pipeline failure would be the same regardless of the approval or denial of the Special Permit. Likewise, human safety would not be affected.

The natural environment would be temporarily disturbed at test header locations if the pipe must be hydrostatically pressure tested; the Special Permit would have minimal impact on the environment around the pipeline right of way due to ground disturbances and other disturbances from increased monitoring and maintenance activities that are intended to prevent a pipeline failure.

IX. Consultation and Coordination

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

Personnel from parent owner and operator of GSPC

Darral Ward, Manager Pipeline Safety, Boardwalk Pipelines

Tina Baker, Manager Compliance Services, Boardwalk Pipelines

Sam Swift, Pipeline Safety Engineer, Boardwalk Pipelines

PHMSA

Amelia Samaras, PHMSA, US DOT

Steve Nanney, PHMSA, US DOT

X. Response to Public Comments Placed on Docket PHMSA-2020-0040

PHMSA published the special permit request in the Federal Register for a 30-day public comment period on June 2, 2020. The special permit application from GSPC, draft environmental assessment, and proposed special permit conditions are available in Docket No. PHMSA-2020-0040 at: www.regulations.gov.

Through July 7, 2020, PHMSA has reviewed both public comments received on the docket. The July 2, 2020, anonymous comment was against GSPC receiving a special permit. They stated that there were too many pipeline accidents and alternative green energy should be used.

The July 2, 2020, anonymous comment was against GSPC receiving a special permit. They stated that GSPC was having too many accidents including one (1) fatality, two (2) injuries, and tens of millions in property damages.

PHMSA believes the special permit conditions which require GSPC to implement integrity management principles, additional surveys, more frequent patrols, defined anomaly remediation criteria, and the operation of remote controlled valves will enhance the overall safety of the ***special permit segment*** for the life cycle of the pipeline.

XI. Finding of No Significant Impact

In consideration of the safety conditions explained above, PHMSA finds that no significant negative impact will result from the issuance and full implementation of the above-described special permit to waive the requirements of 49 CFR 192.14(a) for the Index 818-9 Pipeline, which consists of 57.7 miles of 16-inch diameter pipeline located in Jasper, Clarke, Lauderdale, and Kemper Counties, Mississippi. This special permit requires GSPC to implement integrity management principles, additional surveys, more frequent patrols, defined anomaly remediation criteria, and the operation of remote controlled valves on the 57.7-mile natural gas transmission

Index 818-9 Pipeline (***special permit segment***) located in Jasper, Clarke, Lauderdale, and Kemper Counties, Mississippi.

XII. Bibliography

United States Census Bureau. 2018. Quick Facts, Jasper, Clarke, Lauderdale, Kemper Counties, Mississippi. https://www.census.gov/quickfacts/fact/table/jaspercountymississippi,clarkecountymississippi,lauderdalecountymississippi,kempercountymississippi/PST045219

National Geologic Map Database. Geologic map of Mississippi. Bicker, A.R., Mississippi Department of Environmental Quality, Office of Geology. https://ngmdb.usgs.gov/Prodesc/proddesc_16555.htm. Accessed February 2020.

Published Soil Surveys for Mississippi. USDA Natural Resources Conservation Service. https://www.nrcs.usda.gov/wps/portal/nrcs/surveylist/soils/survey/state/?stateId=MS. Accessed February 2020.

USFWS Critical Habitat ArcGIS Feature Server. Accessed February 2020. https://services.arcgis.com/QVENGdaPbd4LUkLV/ArcGIS/rest/services/USFWS_Critical_Habitat/FeatureServer

USGS Ground Water Atlas of the United States. Mississippi Embayment Aquifer System. https://pubs.usgs.gov/ha/ha730/ch_k/K-text6.html. Accessed February 2020.

Completed by PHMSA in Washington, DC on: July 24, 2020

Attachment A – 16-inch Index 818-9 Route Map with Class Locations