

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

**FINAL ENVIRONMENTAL ASSESSMENT  
and  
FINDING OF NO SIGNIFICANT IMPACT**

**Special Permit Information:**

<b>Docket Number:</b>	PHMSA-2019-0174
<b>Requested By:</b>	Gulf South Pipeline Company, LP
<b>Operator ID#:</b>	31728
<b>Original Date Requested:</b>	September 4, 2019
<b>Effective Dates:</b>	April 22, 2020 to April 22, 2030
<b>Code Section(s):</b>	49 CFR 192.625

**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)<sup>1</sup> 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

---

<sup>1</sup> 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, LP (GSPC or Gulf South)<sup>2</sup> application for a special permit request to waive compliance from 49 CFR 192.625 for 1.31 miles of 30-inch diameter gas transmission pipeline segments in Fort Bend County, Texas. This FEA and finding of no significant impact 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 will require the implementation of additional conditions on the operations, maintenance, and integrity management (IM) of the 1.31 miles (6,929 feet) of the 30-inch-diameter natural gas transmission pipeline (Index 129-72 Pipeline) located in Fort Bend County, Texas. The entire pipeline constitutes the *special permit segment*.

As explained below, granting the special permit will result in virtually no environmental impacts. Denying the special permit will result in the need to construct odorant injection and withdrawal equipment on the right of way, resulting in short-term environmental disturbance and long-term environmental impacts.

## **II. Introduction**

Pursuant to 49 U.S.C. 60118(b) and 49 CFR 190.341, GSPC submitted a special permit petition to PHMSA on September 4, 2019, requesting that it waive the requirements of 49 CFR 192.625

---

<sup>2</sup> GSPC is a wholly-owned, operating subsidiary of Boardwalk Pipeline Partners, LP.

for odorization in a class 3 location for the Index 129-72 Pipeline located in Fort Bend County, Texas. Under the special permit, GSPC must implement alternative risk and IM measures that exceed 49 CFR Part 192 requirements.

PHMSA may issue a special permit to waive certain regulatory requirements where it is not inconsistent with pipeline safety. Special permits are typically conditioned 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 192.625(b) require that combustible gas transported in a transmission pipeline in a Class 3 or Class 4 location be odorized so that the gas is readily detectable by a person with a normal sense of smell. Below is the relevant text of 49 CFR 192.625:

#### ***§192.625 Odorization of gas.***

*(a) A combustible gas in a distribution line must contain a natural odorant or be odorized so that at a concentration in air of one-fifth of the lower explosive limit, the gas is readily detectable by a person with a normal sense of smell.*

*(b) After December 31, 1976, a combustible gas in a transmission line in a Class 3 or Class 4 location must comply with the requirements of paragraph (a) of this section unless:*

*(1) At least 50 percent of the length of the line downstream from that location is in a Class 1 or Class 2 location;*

*(2) The line transports gas to any of the following facilities which received gas without an odorant from that line before May 5, 1975;*

*(i) An underground storage field;*

*(ii) A gas processing plant;*

*(iii) A gas dehydration plant; or*

*(iv) An industrial plant using gas in a process where the presence of an odorant:*

*(A) Makes the end product unfit for the purpose for which it is intended;*

*(B) Reduces the activity of a catalyst; or*

*(C) Reduces the percentage completion of a chemical reaction;*

#### **IV. Purpose and Need**

GSPC is requesting a waiver of 49 CFR 192.625 of PHMSA's regulations to permit a 1.31-mile natural gas transmission pipeline in a Class 3 location to transport unodorized natural gas.

The physical characteristics and operational circumstances of Index 129-72 Pipeline create unique circumstances that warrant granting a special permit waiving 49 CFR 192.625(b)'s requirement to odorize the pipeline when gas flows in the direction of Katy Storage. Moreover, the Index 129-72 Pipeline can be operated safely without odorization. The Index 129 Pipeline is a natural gas transmission pipeline which carries unodorized natural gas to and from the Katy Storage. Katy Storage is an underground natural gas storage facility that cannot accept odorized gas. In addition, Katy Storage delivers gas to a number of pipelines that do not transport odorized gas. Accepting odorized gas into the storage cavern would preclude customers at Katy Storage from delivering gas to some of these pipelines.

The Index 129-72 Pipeline was constructed in 2017. If operated bi-directionally, the direction of gas flows at any given time will be determined based on several considerations, including whether customers are withdrawing or injecting gas at the storage facility and whether GSPC needs to use Katy Storage for system operational purposes. The direction of flow may be dynamic and unpredictable depending on commercial and operational circumstances at any given time. Customers can decide whether to use storage based on a number of factors, such as market price fluctuations, weather, commercial obligations, operational restrictions and business objectives.

If GSPC operates the Index 129-72 Pipeline bi-directionally, under 49 CFR 192.625(b), GSPC will be required to odorize the Index 129-72 Pipeline only when gas is flowing in the direction of Katy Storage, because the pipeline is located entirely in a Class 3 location and more than 50 percent of the downstream portion of the pipeline is not located in Class 1 or Class 2 locations. Odorization is not, however, required when the pipeline is flowing away from Katy Storage toward the Index 129 Pipeline because more than 50 percent of the downstream portion of the pipeline runs through Class 1 and Class 2 locations. The requirement that gas transported in the

Index 129-72 Pipeline be odorized only when gas flows in one direction, even though the safety risks presented by the pipeline are the same regardless of the direction of gas flow, combined with the pipeline's dynamic, bi-directional operations, create unique operational circumstances that make odorizing the Index 129-72 Pipeline unnecessary and impractical.

PHMSA has previously granted a special permit waiving the odorization requirement of 49 CFR 192.625 for a pipeline when the odorization requirement applied only when gas flowed in one (1) direction. The circumstances on GSPC's Index 129-72 Pipeline is similar to the previous special permit.

Requiring GSPC to odorize the gas in the Index 129-72 Pipeline when gas flows toward Katy Storage would have environmental impacts that could be avoided if a special permit is granted. First, without a special permit, GSPC would be required to construct odorization facilities in the Index 129-72 Pipeline right of way. These facilities present design and engineering challenges and would be disruptive to nearby homeowners. The facilities would be located near the interconnect with the Index 129 Pipeline and would be constructed less than 50 feet from the nearest home. The facilities would include a 30-inch x 122-inch tank to store odorant, an injection pump, measurement facilities, a 30-inch diameter gate valve and associated valve assembly, and SCADA equipment. Even if GSPC were to install the odorant tank below ground in a vault, GSPC would be required to construct a 50-foot x 20-foot building on the right of way to house odorization facilities. Assuming that gas flows toward Katy Storage approximately 100 days out of the year, the odorant tank would require refilling via a large truck monthly. To install these facilities, GSPC would need to negotiate right-of-way surface rights with the homeowner's association, which owns the fee interest in the property.

More importantly, while the initial impacts of constructing the odorization facilities would be short-term, their adverse and unpleasant long-term effects will linger and affect the nearby residential neighborhood for as long as the facilities are in service. The facilities would be located within approximately 50 feet of the nearest home, creating the risk that noise from the odorization facilities and trucks accessing the tank to refill and maintain it would be disruptive to nearby residents. Moreover, unpleasant odors from the facilities are likely to be an annoyance, especially when the odorant tank is refilled and some odorant may escape.

In addition to odorization facilities, GSPC would be required to construct facilities at Katy Storage to remove the odorant from the gas before delivering it because the storage facility does not accept odorized gas. The odorant removal process results in a highly-concentrated odorant waste product that must be removed and disposed.

## **V. Site Description**

The Index 129-72 Pipeline was constructed in an existing GSPC right-of-way and replaced a 12-inch diameter transmission pipeline that GSPC abandoned and removed.

The Index 129-72 Pipeline begins at an interconnect with GSPC's existing Index 129 Pipeline, a transmission pipeline located near that pipeline's Station Number 7367+89. The pipeline terminates at Katy Storage, which provides interstate underground natural gas storage services. GSPC's Index 129-72 Pipeline is located in a Class 3 location for its entire length and none of the pipeline is in a Class 1, 2 or 4 locations. GSPC currently operates the pipeline to transport gas from storage and into GSPC's existing Index 129 Pipeline.

The Index 129-72 Pipeline connects two (2) facilities that do not carry odorized natural gas. Katy Storage, which is owned and operated by Enstor Inc., cannot accept odorized natural gas for operational and commercial reasons. In addition, Katy Storage is connected to 14 different pipelines, including GSPC, and serves as a natural gas storage hub. Customers at Katy Storage have the flexibility to transport gas into and out of Katy Storage on different pipelines so that they can access markets across the interstate and intrastate pipeline grid. The gas that Katy Storage receives from pipelines and stores for its customers is commingled in the storage cavern and is re-delivered into a number of take-away pipelines that also do not transport odorized natural gas.

The Index 129-72 Pipeline connects to GSPC's Index 129 Pipeline, which also transports unodorized gas. The Index 129 Pipeline extends approximately 391 miles from Jackson County, Texas, to Ouachita Parrish, Louisiana, and is comprised predominantly of 30-inch diameter pipe. Eighty-five percent of Index 129 is located in Class 1 and Class 2 locations. Therefore, under 49 CFR 192.625(b)(1) of PHMSA's regulations, because at least 50 percent of the downstream section of Index 129 runs through Class 1 and Class 2 locations, gas transported in the pipeline does not require odorization.

The Index 129-72 Pipeline is located in Fort Bend County, Texas, approximately 10 miles west of Houston. The beginning point on Index 129-72 is Station Number 0+00, located at an interconnection with GSPC's existing Index 129 at that pipeline's Station Number 7367+89. Index 129-72 extends 6,929 feet, or approximately 1.31 miles, to Station Number 69+29, at an interconnection with Katy Storage.

The pipeline is in a Class 3 location for its entire length. The pipeline is located in a high consequence area (HCA) and, therefore, subject to 49 CFR Part 192, subpart O and GSPC's IM Plan. Index 129-72 Pipeline was constructed near two (2) existing pipelines located in the same right-of-way, but owned and operated by parties not affiliated with GSPC.

As shown on the attached aerial map of the pipeline right-of-way, Index 129-72 begins at the interconnection with GSPC's existing Index 129 Pipeline and from there extends a total of 6,929 feet. The pipeline is located in an existing right of way in which GSPC has ownership rights, and traverses a residential neighborhood and then an area with mixed residential and commercial development. Specifically, the interconnect at the Index 129 Pipeline is located in a residential development approximately 650 feet east of Westheimer Parkway, a four-lane divided road. The Index 129-72 Pipeline right-of-way continues northward and east of Westheimer Parkway for approximately 5,750 feet and then crosses Westheimer Parkway. The right-of-way then runs along the west side of Westheimer Parkway for approximately 600 feet, where it enters the property of Katy Storage. The pipeline extends another approximately 200 feet from the property line and terminates at the underground storage facility. The area adjacent to Westheimer Parkway is a mix of residential and commercial development.

Index 129-72 Pipeline was constructed with 30-inch nominal diameter, X-60 grade steel pipe with a wall thickness of 0.550 inches and 0.625 inches and double submerged arc weld seam. The external coating is Fusion Bonded Epoxy. The total length of the pipeline is 6,929 feet, or approximately 1.31 miles. The pipeline has a maximum allowable operating pressure (MAOP) of 1,100 pounds per square inch gauge (psig).

GSPC installed a below-ground tap valve at the interconnect with the Index 129 Pipeline. At the Katy Storage interconnect, GSPC installed a below-ground tap valve and an above-ground block valve. Both of these interconnect valves are currently remotely controlled and are designated as required emergency shut-off valves pursuant to 49 CFR 192.745 of PHMSA's regulations. Immediately downstream of the valve at the interconnect with the Index 129 Pipeline, the fabrication comes above ground where a blind flange was installed which allows GSPC to run instrumented internal inspection (ILI) devices. This site includes security fencing, a remote terminal unit (RTU) and communications equipment. A post-construction direct current voltage gradient (DCVG) survey yielded no actionable coating defects.

## **VI. Special Permit Segment**

### **Fort Bend County, Texas**

GSPC is requesting a special permit that waives compliance with 49 CFR 192.625(b) for the 1.31 miles (6,929 feet) of the Index 129-72 Pipeline when gas flows in the direction of Katy Storage. As a condition of the special permit, GSPC must implement enhanced safety measures that exceed regulatory requirements.

### **Special permit segments: Fort Bend County, Texas.**

This special permit applies to the *special permit segment* defined as follows using the GSPC Index 129-72 Pipeline survey station references:

- ***Special permit segment*** – Index 129-72 — 6,929 feet (1.31 miles), Survey Station 0+00 to Survey Station 69+29. This is the entire length of the pipeline.
  - o Survey station 0+00 (Valve site at Index 129) to survey station 69+29 at Katy Storage. This is the entire length of the pipeline.
  - o The entire special permit segment is a high consequence area (HCA).

The *special permit segment* is located in Fort Bend County, Texas.

## **VII. ADDITIONAL DESIGN, CONSTRUCTION, OPERATIONS & MAINTENANCE REQUIREMENTS**

To provide an equivalent level of safety in the absence of odorant, the special permit has additional operations and maintenance (O&M) requirements (conditions) which are intended to



decrease the likelihood of a release of gas. PHMSA believes that these additional measures designed to prevent leaks and ruptures will ensure an equivalent level of safety. An overview of the special permit conditions is below:

### **Overview of the Special Permit Conditions:**

GSPC recognizes the safety and public benefit of odorizing gas transported in a transmission line located in residential and commercial areas. To fully offset potential safety risks associated with granting a waiver of the odorization requirement for the Index 129-72 Pipeline, GSPC will be required by the special permit conditions to implement several additional safety measures on the Index 129-72 Pipeline, i.e. the *special permit segment*. In addition, because the Index 129-72 Pipeline is located in an HCA, it is included in GSPC's IM Program as a covered segment. GSPC believes that, taken together, the IM requirements and additional enhanced safety measures provide an additional margin of safety that will exceed the safety benefit of odorization.

GSPC complies with the requirements of its O&M manual. The following is a summary of the special permit conditions that GSPC will be required to implement along the pipeline.

- The Index 129-72 Pipeline must be capable of inline inspection (ILI) in accordance with 49 CFR 192.150.
- GSPC must perform direct current voltage gradient survey over the special permit segment and remediate any coating anomalies found.
- The Index 129-72 Pipeline cannot be direct connected to directly deliver natural gas to any dwellings for human occupancy in the *special permit segment*, except for GSPC operational buildings.
- GSPC must conduct baseline assessments of the special permit segment using high resolution magnetic flux leakage (HR MFL) and high resolution (HR) Deformation ILI tools within three (3) calendar years of the grant of this special permit, not to exceed 42 months.
- GSPC must perform patrolling, referenced in 49 CFR 192.705 weekly not to exceed 10 days, and leakage surveys, referenced in 49 CFR 192.706, twice a year at intervals that do not exceed seven and one-half (7.5) months.
- GSPC must mark *special permit segments* with line-of-sight signage where practical and where not restricted by other agencies.
- GSPC will conduct in-line inspections along the entire pipeline in compliance with PHMSA's IM regulations by 2023 and every seven (7) years thereafter.

- GSPC must repair pipeline anomalies found in the *special permit segment* at shorter intervals than allowed in 49 CFR 192.933(d)
- GSPC will conduct a close interval survey of the pipeline within one (1) year and every 7 years thereafter.
- GSPC has installed remotely actuated valves at the beginning and end of the pipeline and they must be controlled by a supervisory control and data acquisition (SCADA) system.
- GSPC must perform surveys and remediation, with corrosion control implemented, for induced currents from electric transmission lines and other known sources of potential interference within the *special permit segment*.
- GSPC must submit an annual pipeline integrity report to PHMSA.
- GSPC must provide pipeline safety awareness material to residents within the potential impact radius (PIR) of the *special permit segment* each calendar year not to exceed 15 months.
- GSPC must maintain data integration of special permit condition findings and remediation in the *special permit segment*.
- A GSPC senior executive officer, vice president or higher, must certify in writing the following to PHMSA:
  - The GSPC pipeline *special permit segment* meets the conditions described in this special permit;
  - The written manual of O&M procedures required by 49 CFR 192.605 for the GSPC pipeline has been updated to include all requirements of this special permit; and
  - GSPC has implemented all Conditions as required by this special permit.
- The full list of special permit conditions can be found in Docket PHMSA-2019-0174 at [www.regulations.gov](http://www.regulations.gov).

## VIII. 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 *special permit segment*. In terms of the potential alternatives for PHMSA action, the options include: **(1)** do nothing/PHMSA denies the requested special permit, in which case the GSPC Index 129-72 Pipeline and its operation would need to be fully compliant with 49 CFR 192.625(b) or **(2)** grant the requested special permit and impose additional O&M including IM activities beyond those required under 49 CFR Part 192.

### **Alternative 1: “No Action” Alternative**

The “no action” alternative would result in requiring odorization of gas in the Index 129-72 Pipeline, if GSPC were to transport gas in the direction of Katy Storage. The environmental impacts of this alternative include those related to the construction and long-term maintenance of odorizing injection and removal facilities in the pipeline right of way.

Odorants are added to natural gas to provide an artificial and distinctive smell to an otherwise odorless gas. Odorants are added as a safety precaution to allow early detection of gas leaks by the public where pipelines are located in proximity to populated areas. Odorization does not prevent leaks or decrease the likelihood of occurrence. If the special permit is not granted, there would be significant impacts to customers at Katy Storage that desire to receive gas from the Index 129-72 Pipeline. Katy Storage cannot accept odorized gas because the odorant causes severe maintenance issues. Odorized gas contains sulfur compounds that can form a corrosive environment, which can be detrimental to sensitive equipment and reduce component efficiency and lifetime.

Therefore, if required to odorize gas when it is flowing toward Katy Storage, GSPC would need to construct an odorant removal facility at Katy Storage. Receipt and deodorization is not an economically feasible option due to operational and technical challenges. The construction of a facility to remove odorant from the gas would result in significant expense and occupy a considerable footprint on the customer’s property, creating design and operational challenges. The construction of this facility could also have environmental impacts, including the need to remove a highly-concentrated odorant waste product that requires proper disposal. In addition, if required to odorize gas when flowing in the direction of Katy Storage, GSPC would be required to construct odorant injection facilities, including a structure on the right of way, resulting in environmental disturbance. In addition, ongoing impacts include periodic truck traffic in the right of way to maintain and refill the odorant injection equipment. Such traffic would create a potential disturbance for nearby residents.

### **Alternative 2: Granted Alternative**

Under the granted alternative, PHMSA will grant a special permit with conditions that GSPC must implement for waiving the odorization requirements of 49 CFR 192.625 when gas is

transported toward Katy Storage. This option does not require construction of odorant removal facilities at the customer's property or the construction of odorant injection facilities in the right of way, which eliminates any potential environment impacts. Additional maintenance, inspection, and IM activities must be implemented by GSPC on the *special permit segment* in order to prevent leaks, and detect any that may occur.

GSPC will comply with the Federal Energy Regulatory Commission (FERC) Environmental Guidelines and all Federal, state and county permitting requirements in performing the alternative risk control activities.

## **IX. AFFECTED RESOURCES AND ENVIRONMENTAL CONSEQUENCES**

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

*Aesthetics:* If the special permit is approved and odorization is not required, odorization injection facilities at the Index 129 tap will not be installed on the right-of-way and odorization removal facilities at Katy Storage will not be installed. No other physical/construction activities will be performed as a result of approval of this special permit. This would result in no impact to the visual character of the surrounding area. Denial of the special permit could result in construction of odorization injection and removal facilities, which could decrease aesthetic values for nearby homeowners.

*Agricultural Resources:* The right-of-way of the *special permit segment* is in an area of dense residential and commercial development. Approval or denial of the special permit would result in no impacts to agricultural resources.

*Air Quality and Climate Change:* For a pipeline, the greatest potential impact to air quality occurs during a leak. If the special permit is approved, GSPC will implement additional O&M requirements on the *special permit segment* in an effort to prevent leaks, thereby resulting in reduced potential for air quality and climate change impacts. If the special permit is denied and odorization removal facilities are constructed, increased emissions would be anticipated. In addition, the risk of spilling odorant could have short-term effect on air quality in the vicinity of the odorization injection and removal facilities.

*Biological Resources:* If the special permit is approved and odorization is not required, there would be no impact to the biological resources of the surrounding area. Approval or denial of the special permit should result in no changes to the biological resources in the vicinity of the *special permit segment*. The Index 129-72 Pipeline is located in a previously disturbed right-of-way and primarily in areas of recent commercial and residential development; any biological resources would be expected to have already been disturbed.

*Cultural Resources:* If the special permit is approved and odorization is not required, there would be no impact to the cultural resources of the surrounding area. Approval or denial of the special permit should result in no changes to the cultural resources in the vicinity of the *special permit segment*. The Index 129-72 Pipeline is located in a previously disturbed right-of-way and primarily in areas of recent commercial and residential development; any cultural resources would be expected to have already been disturbed.

*Environmental Justice:* If the special permit is approved and odorization is not required, there would be no adverse impact on the local population. Based on US Census data for Fort Bend County the average residence has 3.17 persons per household. The *special permit segment* area is composed of 67.5 percent minority, 38.4 percent non-English first language, and 8-percent poverty. Considering the 407 single family homes, 23 multi-family homes, 2 impaired mobility structures, and 2 outdoor areas within the class buffer zone, it is possible that 1,954 persons could benefit from the increased safety measures that will be implemented if the special permit is approved.

*Geology, Soils, and Mineral Resources:* If the special permit is approved and odorization is not required, there would be no impact to the geology, soils, and mineral resources of the surrounding area. No physical/construction activities will be performed as a result of approval of this special permit. If the permit is denied, then odorization and deodorization facilities may be installed.

*Indian Trust Assets:* Approval or denial of the special permit would have no impact on Native Americans or any land owned or otherwise administered by Native American tribes. The Index 129-72 Pipeline is located in a previously disturbed right-of-way and primarily in areas of recent

commercial and residential development. There are no Indian Trust Assets or reservations near the *special permit segment*.

*Land Use:* The right-of-way of the *special permit segment* is in an area of dense residential and commercial development. Approval or denial of the special permit would result in no impacts to future land use planning.

*Noise:* If the special permit is approved and odorization is not required, odorization injection and removal facilities would not be installed. No other physical/construction activities will be performed as a result of approval of this special permit. If the permit is denied then odorization injection and removal facilities may be installed, which will result in some temporary construction noise. In addition, assuming that gas flows toward Katy Storage approximately 100 days out of the year, the odorant tank would require refilling via a large truck monthly, which could result in some additional noise.

*Recreation:* Approval or denial of the special permit would have no impact on recreation in the vicinity of the pipeline.

*Safety:* If the special permit is approved, GSPC will implement additional O&M requirements that exceed the requirements of 49 CFR Part 192 on the *special permit segment* in an effort to prevent leaks and ruptures, thereby resulting in improved safety for the population living near the pipeline. The additional O&M requirements include: remote controlled valves, periodic ILI, periodic close interval surveys, more stringent anomaly repair requirements, leakage patrols and right-of-way patrols on a monthly basis. If the special permit is denied, these additional O&M requirements will not be implemented, and odorant may be added if GSPC decides to operate the pipeline bi-directionally.

*(a) Would operation under the special permit change the risk of rupture or failure?* GSPC has a practice of implementing a number of pipeline safety measures that exceed the current IM requirements of 49 CFR Part 192, Subpart O. These measures include specifying ILI and using more conservative repair conditions than required by 49 CFR Part 192, that do not present a near-term risk to pipeline integrity in order to help ensure the integrity and safety of the pipeline. Additionally, line patrols are commonly performed more often than required

by the Federal regulation to verify the right-of-way condition and help prevent third party damage. If the special permit is approved, GSPC will be required by the special permit to implement additional O&M requirements on the *special permit segment* in an effort to prevent leaks and ruptures. PHMSA believes that additional O&M requirements will provide a margin of safety that equals or exceeds odorization of gas and that granting the special permit is consistent with pipeline safety. Odorization allows for quick identification of a leak. The additional O&M requirements will help to prevent leaks, which ultimately protects the public more than quick detection.

*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?* In the event of failure, the volume of lost product should not change based on approval or denial of the special permit because the pipeline will operate at the same pressure regardless of the permit. If issued, the special permit would require the installation of remote-controlled valves on either side of the *special permit segment*. Remote-controlled valves are intended to reduce the quantity of natural gas released following a pipeline failure because it facilitates quicker closing of valves to stop the flow of product to a failure site.

However, a pipeline leak not otherwise detected could go undetected for a longer period of time if the natural gas is not odorized. Slower detection could allow a leak to grow into a full pipeline failure. The purpose of odorant is to notify the public of a natural gas leak. Without odorant, natural gas is colorless, odorless, and difficult to detect. When natural gas accumulates, it can cause asphyxiation because it can displace oxygen without anyone noticing. Prolonged inhalation of natural gas can cause central nervous system depression with nausea, headache, dizziness, vomiting, and incoordination. Natural gas is a simple asphyxiant and may cause loss of consciousness, serious injury, or death by displacing air. Even more dangerous, when natural gas reaches 5-15% concentration with ambient air, the mixture will ignite if an ignition source is present, causing explosion. These explosions can cause dangerous pressure waves and fires.

Despite the serious risks that a natural gas pipeline leak or failure could cause, given the numerous added safety protections (i.e. additional O&M requirements) that exceed the pipeline safety requirements in 49 CFR Part 192, PHMSA believes that granting the special permit

would not increase, and could decrease the risk of failure. Also, given that there is no physical connection between the Index 129-72 Pipeline and any enclosed structure, PHMSA believes there is little if any chance that natural gas could accumulate unnoticed in an enclosed structure and facility asphyxiation or explosion. Without physical connection, PHMSA believes that the distance between the pipeline and occupied structures (a minimum of 13 feet) would make it very unlikely that concentrated amounts of natural gas could enter a structure.

*(b) 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 the **special permit segment** will not change based on the special permit; therefore, the PIR calculation is unaffected. The number of persons affected by a failure would not change if the special permit request is approved or denied.

*(c) Would operation under the Special Permit have any effect on pipeline longevity or*

*reliability? Would there be any life cycle or maintenance issues?* Application of the additional O&M requirements, including pipeline assessments and frequent patrols, will likely have a positive impact on pipeline longevity and reliability. Additionally, operating the pipeline without odorant in the gas stream avoids the risk of increased internal corrosion in the pipeline. If the special permit is denied, additional operation and maintenance measures that enhance pipeline longevity and reliability would not be implemented.

**Socioeconomics:** If the special permit is approved and odorization is not required, there would be no socioeconomic changes in the vicinity of the **special permit segment**.

**Topography:** If the special permit is approved and odorization is not required, odorization injection and removal facilities would not be installed. If the permit is denied then odorization injection and removal facilities may be installed, affecting the topography of the right of way because of the need to construct new odorization infrastructure.

**Transportation:** If the special permit is approved and odorization is not required, there would be no changes to transportation in the vicinity of the **special permit segment**.



*Water Resources:* Granting the special permit will have no impact to the water resources of the surrounding area. No physical/construction activities would be needed. If the permit is denied then odorization injection and removal facilities may be installed, but they should not affect water resources.

## **B. Comparative Environmental Impacts of Alternatives**

Granting the special permit would enable GSPC to transport gas into Katy Storage without having to construct odorant injection and removal equipment and related building facilities. This would avoid immediate impacts of constructing the odorant injection equipment and related facilities in the right of way, as well as the longer-term impacts of truck traffic that is required to maintain such equipment. Granting the special permit also avoids the long-term effects to residents located adjacent to the right-of-way. In addition, granting the special permit avoids the impacts of having to construct odorant removal equipment and the risks associated with having to dispose of a highly-concentrated waste product.

## **X. Consultation and Coordination**

GSPC personnel involved in preparation of this document: personnel from parent owner and operator of GSPC:

Darral Ward, Manager Pipeline Safety, Boardwalk Pipeline Partners, MLP

Tina Baker, Manager Compliance Services, Boardwalk Pipeline Partners, MLP

Sam Swift, Pipeline Safety Engineer, Boardwalk Pipeline Partners, MLP

PHMSA personnel involved in preparation of this document:

Amelia Samaras, PHMSA, US DOT

Joshua Johnson, PHMSA, US DOT

## **XI. Response to Public Comments Placed on Docket PHMSA-2019-0174**

PHMSA published the special permit request in the Federal Register for a 30-day public comment period on December 13, 2019. The special permit application from GSPC, environmental assessment, and special permit conditions were available in Docket No. PHMSA-2019-0174 at: [www.regulations.gov](http://www.regulations.gov).

PHMSA received a public stakeholder comment which is summarized below:

**Stakeholder Comment:** I recommend we don't issue a permit to Gulf South to better protect the environment and public health. I further recommend we nationalize the oil and gas industry that operates on Americans Public Lands;

- **PHMSA Response:** PHMSA has structured the special permit conditions to exceed PHMSA pipeline safety code requirements in 49 CFR Part 192 for the GSPC Index 129-72 Pipeline life-cycle that included design, construction, operations, maintenance and emergency response. The special permit conditions will protect the environment and public health to a greater extent than odorizing the gas. Denial of the special permit would result in additional construction and environmental impacts. PHMSA has no authority to nationalize the oil and gas industries.

## **XII. Finding of No Significant Impact**

In consideration of the safety conditions explained above, PHMSA finds that no significant negative safety or environmental impact will result from the issuance and full implementation of the above-described special permit to waive the requirements of 49 CFR 192.625 for the *special permit segment*, which consists of 1.31 miles of 30-inch diameter Index 129-72 Pipeline located in Fort Bend County, Texas. This permit will require GSPC to implement additional conditions in the operation, maintenance, and integrity management of the *special permit segment*.

## **XIII. Bibliography**

United States Census Bureau. 2019. Quick Facts, Harris County, Texas; Fort Bend County, Texas.

<https://www.census.gov/quickfacts/fact/table/harriscountytexas,fortbendcountytexas/PST045218>. Accessed June 2019.

Bureau of Indian Affairs (BIA), Office of Trust Services (OTS), Division of Water and Power (DWP). 2014. Indian Lands in the United States. Accessed November 2018.

<https://www.bia.gov/sites/bia.gov/files/assets/public/pdf/idc013422.pdf>

**Completed by PHMSA in Washington, DC on: April 22, 2020**



# Attachment A – Index 129-72 Location Map

