

U.S. DEPARTMENT OF TRANSPORTATION

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PIPELINE AND HAZARDOUS MATERIALS SAFETY ADMINISTRATION (PHMSA)

SPECIAL PERMIT

Docket Number: PHMSA-2008-0066
Requested By: Columbia Gulf Transmission Company¹
Date Requested: December 5, 2007
Code Sections: 49 CFR § 192.611

Grant of Special Permit:

By this order, subject to the terms and conditions set forth below, the Pipeline and Hazardous Materials Safety Administration (PHMSA) grants this special permit to Columbia Gulf Transmission Company (Columbia Gulf), waiving compliance from 49 CFR § 192.611(a) for nine natural gas transmission pipeline segments downstream of the Hampshire compressor station. These nine segments described below are located in Williamson and Davidson Counties, Tennessee.

Special Permit Segments and Inspection Areas:

Williamson and Davidson Counties, Tennessee

PHMSA waives compliance from 49 CFR § 192.611(a) for nine natural gas transmission pipeline segments on the 30-inch Mainline 100, the 30-inch Mainline 200, and the 36-inch Mainline 300 pipelines located in Williamson and Davidson Counties, Tennessee, where a change has occurred from an original Class 1 location to a Class 3 location, or a Class 2² location to Class 3 location. The Federal pipeline safety regulations in 49 CFR § 192.611(a) require natural gas pipeline operators to confirm or revise the maximum allowable operating pressure (MAOP) of pipeline segments after a change in class location. This special permit allows Columbia Gulf to continue to operate each *special permit segment* at its current maximum allowable operating pressure (MAOP) of 935 pounds per square inch gauge (psig) for the 30-inch Mainline 100 and a MAOP of 1008 psig for both of the 30-inch Mainline 200 and the 36-inch Mainline 300 pipelines.

¹ Columbia Gulf Transmission Company is owned and operated by NiSource Gas Transmission and Storage (NGT&S).

² The Class 3 location *special permit segments* were originally a Class 1 location that were upgraded to a Class 2 location in accordance with § 192.611 (a) hydrostatic test.

This special permit applies to the *special permit segments* defined as follows using Columbia Gulf's stationing:

- *Special Permit Segment 1, 30-inch Mainline 100* - 690 ft., Station 1584+69 to 1591+59
- *Special Permit Segment 2, 30-inch Mainline 200* - 1,081 ft., Station 1584+58 to 1595+39
- *Special Permit Segment 3, 36-inch Mainline 300* - 534 ft., Station 1584+74 to 1590+08
- *Special Permit Segment 4, 30-inch Mainline 100* - 10,797 ft., Station 1783+03 to 1891+00
- *Special Permit Segment 5, 30-inch Mainline 200* - 10,525 ft., Station 1785+75 to 1891+00
- *Special Permit Segment 6, 36-inch Mainline 300* - 9,816 ft., Station 1792+84 to 1891+00
- *Special Permit Segment 7, 30-inch Mainline 100* - 5,567 ft., Station 2210+36 to 2266+03
- *Special Permit Segment 8, 30-inch Mainline 200* - 5,487 ft., Station 2212+41 to 2267+28
- *Special Permit Segment 9, 36-inch Mainline 300* - 603 ft., Station 2208+45 to 2214+48

Special permit inspection areas – means the area that extends 220 yards on each side of the centerline of the outermost pipeline on each side of the right-of-way along the entire length of Columbia Gulf pipeline system (30-inch Mainline 100, 30-inch Mainline 200 and 36-inch Mainline 300) as follows:

- *Special Permit Inspection Area 1, 30-inch Mainline 100* - Station 264+69 to 3586+03 (62.9 miles)
- *Special Permit Inspection Area 2, 30-inch Mainline 200* - Station 264+58 to 3587+28 (62.9 miles)
- *Special Permit Inspection Area 3, 36-inch Mainline 300* - Station 264+74 to 3534+48 (62.9 miles)

Note: Each *special permit inspection area* extends approximately 62.9 miles along each pipeline (Mainlines 100, 200 and 300) with overlapping areas and includes the *special permit segments*.

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-2008-0066 in the Federal Docket Management System (FDMS) located on the internet at www.Regulations.gov.

Conditions:

PHMSA grants this special permit subject to the following conditions:

- 1) Columbia Gulf must continue to operate the *special permit segments* at or below their existing MAOP as follows: Mainline 100 - 935 psig; Mainline 200 - 1008 psig; Mainline 300 - 1008 psig.

- 2) Columbia Gulf must incorporate each of the *special permit segments* and *special permit inspection areas*³ into its written integrity management program (IMP) as a “covered segment” in a “high consequence area (HCA)” per § 192.903, except for the reporting requirements contained in § 192.945. Columbia Gulf need not include the *special permit segments* described in this special permit in its IMP baseline assessment plan unless those segments are in HCAs, in accordance with § 192.905.
- 3) Columbia Gulf must perform a close interval survey (CIS) of the Mainline 100, 200 & 300 pipelines along the entire length of all *special permit segments* and *special permit inspection areas* and remediate any areas of inadequate cathodic protection no later than one year after the grant of this special permit. A CIS and remediation need not be performed if Columbia Gulf has performed a CIS and remediation on the Mainlines 100, 200 & 300 along the entire length of all *special permit inspection areas* less than two years prior to the grant of this special permit. If factors beyond Columbia Gulf’s control prevent the completion of the CIS and remediation within one year, a CIS and remediation must be completed as soon as practicable and a letter justifying the delay and providing the anticipated date of completion must be submitted to the Director, PHMSA Southern Region⁴ no later than one year after the grant of this special permit.
- 4) Columbia Gulf must perform periodic CIS of the *special permit segments* and *special permit inspection areas* at least once every five (5) calendar years at reassessment intervals not exceeding 63 months. Columbia Gulf must also integrate CIS data with in-line inspection (ILI) data, and data on any other threats, in accordance with 49 CFR §§ 192.937 (a) and (b), and 192.917.
- 5) Within one year of the grant of this special permit Columbia Gulf must perform a Direct Current Voltage Gradient (DCVG) survey or an Alternating Current Voltage Gradient (ACVG) survey of each *special permit segment* to determine the pipeline coating conditions and must then remediate any integrity issues in the *special permit segments*. A DCVG or ACSVG survey and remediation need not be performed on the *special permit segments* if

³ Each condition that requires Columbia Gulf to perform an action with respect to the *Special Permit Inspection Areas* shall also require Columbia Gulf to perform that action on all *Special Permit Segments* within such Areas.

⁴ In the case of any Special Permit condition that requires Columbia Gulf to provide documentation to the PHMSA Region, Columbia Gulf must also send a copy of such documentation to the appropriate state authorities, in states that have interstate agent agreements with PHMSA.

Columbia Gulf has performed a DCVG or ACVG and remediation in accordance with this special permit condition on the Mainline 100, 200 & 300 pipelines along the entire length of all *special permit inspection areas* less than two years prior to the grant of this special permit. Columbia Gulf must remediate any damaged coating indications found during these assessments that are classified as moderate (i.e. 35% IR and above for DCVG or 50 dB μ V and above for ACVG) or severe based on (NACE) International Recommended Practice "*Pipeline External Corrosion Direct Assessment Methodology*," (NACE RP 0502-2002⁵). A minimum of two coating survey assessment classifications must be excavated, classified and/or remediated per each survey crew per each time the survey is performed. If factors beyond Columbia Gulf's control prevent the completion of the DCVG or ACVG survey and remediation within one year, a DCVG or ACVG survey and remediation must be performed as soon as practicable and a letter justifying the delay and providing the anticipated date of completion must be submitted to the Director, PHMSA Southern Region no later than one year after the grant of this special permit.

- 6) Columbia Gulf must evaluate the Mainline 100, 200 & 300 pipelines for stress corrosion cracking (SCC) as follows:
 - a) Columbia Gulf must perform a stress corrosion cracking direct assessment (SCCDA) or other appropriate assessment method for SCC [such as pressure test or ILI with a crack detection tool] of the Mainline 100, 200 & 300 pipelines along the entire length of all *special permit inspection areas*, according to the requirements of § 192.929 and/or NACE SP 0204-2008 and remediate any SCC found, no later than one year after of the grant of this special permit. The SCCDA or other approved method must address both high pH SCC and near neutral pH SCC. A SCCDA need not be performed if Columbia Gulf has performed a SCCDA of the Mainline 100, 200 & 300 pipelines along the entire length of the *special permit inspection areas* less than two years prior to the grant of this special permit. If factors beyond Columbia Gulf's control prevent the completion of the SCCDA survey and remediation within one year, a SCCDA and remediation must be performed as soon as practicable and a letter justifying the delay and providing the anticipated date of completion must be submitted to the Director, PHMSA Southern Region no later than one year after the grant of this special permit. PHMSA may eliminate this Condition 6 (a), if Columbia Gulf provides an engineering assessment

⁵ When PHMSA adopts a revised edition of a referenced NACE or ASME standard into 49 CFR Part 192, the referenced requirements of those revised standards are automatically incorporated into these special permit conditions.

showing that the pipeline does not meet any of the criteria for both near neutral and high pH SCC per 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]

- b) When the Columbia Gulf Mainline 100, 200 or 300 pipelines are exposed for any reason in the *special permit segments* and *special permit inspection areas* and the coating has been identified as poor during the pipeline examination, then Columbia Gulf must directly examine the pipe for SCC using an accepted industry detection practice such as dry or wet magnetic particle tests. Poor coating is a coating that has become damaged and is losing adhesion to the pipe which is shown by falling off the pipe, is porous, has pin holes, and/or shields the cathodic protection. Visual inspection is not sufficient to determine if the coating is damaged and a holiday detection test at the correct voltage must be performed. Columbia Gulf must keep coating records of all excavation locations for the *special permit segments* and *special permit inspection areas* to demonstrate the coating condition.
- 7) Columbia Gulf must submit the DCVG or ACVG, CIS and SCCDA [or other PHMSA approved methods of determining SCC] findings including remediation actions in a written report to the Director, PHMSA Southern Region, no later than one year after the grant of this special permit.
- 8) Columbia Gulf must amend applicable sections of its operations and maintenance (O&M) manual(s) to incorporate the inspection and reassessment intervals by in-line inspection (ILI) including both metal loss and geometry tools of the Mainlines 100, 200 & 300 pipelines along the entire length of the *special permit segments* and *special permit inspection areas* at a frequency consistent with 49 CFR Part 192, Subpart O. [Deformation tools may be substituted for geometry tools in accordance with Condition 20 (c).] Condition 20(c) requires Columbia Gulf to run deformation tools on the pipelines.
- 9) Columbia Gulf must amend applicable sections of its O&M manual(s) to require CIS inspection and reassessment intervals of the Mainlines 100, 200 & 300 *special permit segments* and *special permit inspection areas* at a frequency consistent with 49 CFR Part

192, Subpart O, but at least once every 5 calendar years at reassessment intervals not exceeding 63 months.

- 10) Columbia Gulf must perform an ILI assessment along the entire length of the *special permit segments* and *special permit inspection areas* using high resolution MFL and deformation in-line inspection tools within 6 months of issuance of this permit and must remediate discovered conditions in accordance with Condition 20 of this permit.
- 11) Columbia Gulf must perform ILI reassessment of the Mainline 100, 200 & 300 pipelines along the entire length of the *special permit segments* and *special permit inspection areas* according to § 192.939 by adding the required time interval to the previous assessment date, but reassessments must be at least once every five (5) calendar years at intervals not exceeding 63 months.
- 12) Columbia Gulf must incorporate the applicable best practices of the Common Ground Alliance (CGA) into its damage prevention program within the *special permit segments* and *special permit inspection areas*.
- 13) Columbia Gulf must give a minimum of 14 days notice to the Director, PHMSA Southern Region to enable him/her to observe the excavations relating to Conditions 5, 6 (b), 19, 20, 21, 22, 23 and 24 in the *special permit segments* and *special permit inspection areas*. Immediate response conditions do not require a 14-day notice, but the PHMSA Region Director must be notified by Columbia Gulf no later than two business days after the immediate condition is discovered.
- 14) Columbia Gulf shall not use this special permit as a basis for deferring any of its assessments for HCAs under 49 CFR Part 192, Subpart O.
- 15) Within three months following the grant of this special permit and annually⁶ thereafter, Columbia Gulf must report the following to the Director, PHMSA Southern Region and Director, PHMSA Regulations:

⁶Annual reports must be received by PHMSA by the last day of the month in which the Special Permit is dated. For example, the annual report for a Special Permit dated January, 2010, must be received by PHMSA no later than January 31, each year beginning in 2011.

- a) In the first annual report, Columbia Gulf must describe the economic benefits of the special permit including both the costs avoided from not replacing the pipe and the added costs of the inspection program. Subsequent annual reports should address any changes to these economic benefits.
 - b) In the first annual report, fully describe whether the public benefits from energy availability. This should address the benefits of avoided disruptions as a consequence of pipe replacement and the benefits of maintaining system capacity. Subsequent reports must indicate any changes to this initial assessment.
 - c) The number of new residences, other structures intended for human occupancy and public gathering areas built within the *special permit segments* and *special permit inspection areas*.
 - d) Any new integrity threats identified during the previous year and the results of any ILI or direct assessments performed during the previous year in the *special permit segments* and *special permit inspection areas*.
 - e) Any reportable incident, any leak normally indicated on the DOT Annual Report and all repairs on the pipeline that occurred during the previous year in the *special permit segments* and *special permit inspection areas*.
 - f) Any on-going damage prevention initiatives affecting the *special permit segments* and *special permit inspection areas* and a discussion of the success of the initiatives.
 - g) Any mergers, acquisitions, transfer of assets, or other events affecting the regulatory responsibility of the company operating the pipeline.
- 16) At least one cathodic protection (CP) pipe-to-soil test station must be located within each HCA with a maximum spacing between test stations of one-half mile within an HCA. In cases where obstructions or restricted areas prevent test station placement, the test station must be placed in the closest practical location. This requirement applies to all HCA within the *special permit segments* and *special permit inspection areas*.
- 17) If any annual CP test station readings on the Mainlines 100, 200 & 300 within the *special permit segments* and *special permit inspection areas* fall below 49 CFR Part 192, Subpart I requirements, remediation must occur within six months. This must include a CIS on each side of the affected test station to the next test station and identified corrosion system modifications must be performed to ensure acceptable corrosion control. If factors beyond Columbia Gulf's control prevent the completion of remediation within six months,

remediation must be completed as soon as practicable, and a letter justifying the delay and providing the anticipated date of completion, must be submitted to the Director, PHMSA Southern Region, no later than the end of the six months completion date.

- 18) Interference Currents Control: Columbia Gulf must address induced AC from parallel electric transmission lines and other interference issues in the *special permit segments* and *special permit inspection areas* that may affect the pipeline. An induced AC program and remediation to protect the pipeline from corrosion caused by stray currents must be in place within one year of the date of this special permit.
- 19) Field Coating: The coatings used on the pipeline and girth weld joints in the *special permit segments* and *special permit inspection areas* must be non-shielding to CP. In the event that the coating type is unknown or is known to shield CP for girth weld joints then Columbia Gulf must take special care to:
- a) Analyze ILI logs in the areas of girth welds for potential corrosion indications.
 - b) Any ILI corrosion indications above 30% wall loss at girth welds where the coating type is unknown or is known to shield CP, must be exposed and evaluated each time the ILI is run or until the girth weld coating is replaced.
 - c) A minimum of two girth weld joints at locations most likely to have shielding and corrosion shall be exposed and evaluated each time ILI is run. If corrosion is found, the next most likely joint is to be exposed and evaluated until no corrosion is found.
- 20) Anomaly Investigation, Evaluation, and Repair:
- a) General: Columbia Gulf must account for ILI tool tolerance and corrosion growth rates in scheduled response times and repairs with documentation and technical justification of the values used. Columbia Gulf must demonstrate ILI Tool tolerance accuracy for each ILI Tool run by usage of calibration excavations (minimum of 5 excavations for each ILI Tool run) and unity plots that demonstrate ILI Tool accuracy for depth within + 10% accuracy for 80% of the time. The unity plots must show: a) actual anomaly depth versus predicted depth and b) actual failure pressure/MAOP versus predicted failure pressure/MAOP. Discovery date must be within 60 days of an ILI Tool run for each type ILI Tool (geometry, deformation or high resolution MFL)
 - b) Dents: Columbia Gulf must repair dents to the Mainline 100, 200 & 300 pipelines in the special permit inspection areas in accordance with § 192.933 repair criteria. *Special*

permit segments and *special permit inspection areas* must have a geometry tool inspection as part of the initial ILI and all dent repairs must be made in accordance with § 192.933 repair criteria. The geometry tool can be from past ILI inspections. The timing for these dent repairs should follow Columbia Gulf's O&M Manual but must not be longer than one (1) year after discovery.

- c) Deformation Tool: Columbia Gulf must run a deformation tool through all *special permit segments* and *special permit inspection areas* within six (6) months of the grant of this special permit and remediate all expanded pipe in accordance with PHMSA's "Interim Guidelines for Confirming Pipe Strength in Pipe Susceptible to Low Yield Strength" dated September 10, 2009, within 12 months of grant date of this special permit.
- d) Investigation and Repair Criteria: Investigation, evaluation, and repair criteria applies to all anomalies located on the Mainline 100, 200 & 300 pipelines within the *special permit segments* and *special permit inspection areas* when they are excavated, investigated, and remediated in accordance with §§ 192.485 and 192.933 incorporating appropriate class location design factors in the anomaly repair criteria, including HCAs as follows:
- Special permit segments - Repair any anomaly within a *special permit segment* that meets either: (1) a failure pressure ratio⁷ (FPR) less than or equal to 1.39 for original Class 1 location pipe in a Class 3 location operating up to 72% of the specified minimum yield strength (SMYS); (2) an anomaly depth greater than or equal to 40% of pipe wall thickness.
 - Special permit inspection areas - Repair any anomaly within a *special permit inspection area* that meets either: (1) an FPR less than design factor - for Class 1 location - FPR equal to or less than 1.39; for Class 2 location - FPR equal to or less than 1.67; and for Class 3 location - FPR equal to or less than 2.0; (2) an anomaly depth equal to or greater than 60% wall thickness loss.
 - Repair anomalies in original Class 1 location pipe that are now in a Class 2 location in accordance with §§ 192.5 and 192.611 that meets either: (1) is equal to or less than the Class 1 location FPR of 1.39; (2) an anomaly depth equal to or greater than 50% wall thickness loss for anomaly repairs.
 - Repair anomalies in original Class 2 location pipe that is now in a Class 3 location in accordance with § 192.611 that meets either: (1) is equal to or less

⁷ Failure pressure ratio (FPR) is based upon the class location where the *special permit segment* or *special permit inspection area* pipe is located in accordance with § 192.5 and is the reciprocal of the class location design factor in § 192.111(a).

than the Class 2 location FPR of 1.67; (2) an anomaly depth equal to or greater than 50% wall thickness loss for anomaly repairs.

e) Response Time for ILI Results: The following guidelines provide the required timing for excavation, investigation, and remediation of anomalies based on ILI data results in accordance with §§ 192.485 and 192.933, and incorporate appropriate class location design factors in the anomaly repair criteria for *special permit segments* and *special permit inspection areas* including all HCAs. Reassessment by ILI will reset the timing for anomalies not already investigated and/or repaired. Columbia Gulf must evaluate ILI data by using either the ASME Standard B31G, “*Manual for Determining the Remaining Strength of Corroded Pipelines*” (ASME B31G), the modified B31G (0.85dL) or R-STRENG for calculating the predicted FPR to determine anomaly responses.

▪ *Special permit segments*:

- Immediate response: Any anomaly within a *special permit segment* operating up to 72% SMYS that meets either: (1) an FPR equal to or less than 1.1; (2) an anomaly depth equal to or greater than 80% wall thickness loss.
- One-year response: Any anomaly within a *special permit segment* with original Class 1 location pipe in a Class 3 location operating up to 72% SMYS that meets either: (1) an FPR equal to or less than 1.39; (2) an anomaly depth equal to or greater than 40% wall thickness loss.
- Monitored response: Any anomaly within a *special permit segment* with original Class 1 location pipe in a Class 3 location operating up to 72% SMYS that meets both: (1) an FPR greater than 1.39; (2) an anomaly depth less than 40% wall thickness loss.
- The schedule for the response must take tool tolerance and corrosion growth rates into account.

▪ *Special permit inspection areas*:

- Immediate response: Any anomaly within a *special permit inspection area* operating up to 72% SMYS that meets either: (1) an FPR equal to or less than 1.1; (2) an anomaly depth equal to or greater than 80% wall thickness loss.
- One-year response: Any anomaly within a *special permit inspection area* that meets either: (1) an FPR less than design factor – for Class 1 location- FPR equal to or less than 1.39; Class 2 location – FPR equal to or less than 1.67; and for Class 3 location – FPR equal to or less than 2.0; (2) an anomaly depth equal to or greater than 60% wall thickness loss.

Any anomaly for Class location changes from original Class 1 to 2 location or original Class 2 to 3 location in accordance with §§ 192.5 and 192.611 that meets either: (1) an anomaly FPR equal to or less than the FPR of the original Class location; (2) an anomaly depth equal to or greater than 50% wall thickness loss.

- Monitored response: Any anomaly within a *special permit inspection area* that meets both: (1) an FPR less than design factor – for Class 1 location – FPR greater than 1.39; Class 2 location – FPR greater than 1.67; and for Class 3 location – FPR greater than 2.0; (2) an anomaly depth less than 60% wall thickness loss.

Any anomaly repairs for Class location changes from original Class 1 to 2 location or original Class 2 to 3 location in accordance with §§ 192.5 and 192.611 that meets both: (1) an anomaly FPR greater than the FPR of the original Class location; (2) an anomaly depth less than 50% wall thickness loss.

- The schedule for the response must take tool tolerance and corrosion growth rates into account.

21) Columbia Gulf must provide records to PHMSA to demonstrate the girth welds on the Mainline 100, 200 & 300 pipelines were nondestructively tested at the time of construction in accordance with:

- a) The Federal pipeline safety regulations at the time the pipelines were constructed. If not, show that at least 10% of the girth welds in each *special permit segment* were non-destructively tested after construction but prior to the application for this special permit provided at least two girth welds in each *special permit segment* were excavated and inspected.
- b) If Columbia Gulf cannot provide girth weld records to PHMSA to demonstrate either of the above in Condition 21 (a), Columbia Gulf must accomplish either: (i); or (ii) and either (iii) or (iv) of the following:
 - i) Certify to PHMSA in writing that there have been no in-service leaks or breaks in the girth welds on the Mainline 100, 200 & 300 pipelines within the entire *special permit inspection areas* for the entire life of the pipelines; or

- ii) Evaluate the terrain along the *special permit segments* for threats to girth weld integrity from soil or settlement stresses and remediate all such integrity threats; and
- iii) Excavate⁸, visually inspect and nondestructively test at least two girth welds on the Mainline 100, 200 & 300 pipelines in each *special permit segment* in accordance with the American Petroleum Institute Standard 1104, “*Welding of Pipelines and Related Facilities*” (API 1104) as follows:
 - A. Use the edition of API 1104 current at the time the pipelines were constructed; or
 - B. Use the edition of API 1104 recognized in the Federal pipeline safety regulations at the time the pipelines were constructed; or
 - C. Use the edition of API 1104 currently recognized in the Federal pipeline safety regulations.
- iv) As an alternative to Condition 21 (b) (iii), Columbia Gulf may perform an HRMFL in-line inspection capable of identifying girth weld anomalies. If this technique is employed, Columbia Gulf must develop a technical basis for evaluating the serviceability of the girth welds based on HRMFL ILI data. The girth weld ILI inspection plan including ILI findings, technical determination for identifying weld anomalies and confirmation excavations must be submitted to Director, PHMSA Southern Region for approval 14 days prior to confirmation excavations.
- c) If any girth weld in any of the *special permit segments* does not comply with API 1104, Columbia Gulf must repair the girth weld immediately and then prepare an inspection and remediation plan for all remaining girth welds in the *special permit segments* based upon the repair findings and the threat to the *special permit segments*. Columbia Gulf must submit the inspection and remediation plan for girth welds to the Director, PHMSA Southern Region and remediate girth welds in the *special permit segments* in accordance with the inspection and remediation plan within 60 days of finding girth welds that do not meet this Condition 21 (c).
- d) Additionally, all oxy-acetylene girth welds, mechanical couplings and wrinkle bends in *special permit segments* must be removed.

⁸ Columbia Gulf must evaluate for SCC any time the Mainline 100, 200 & 300 pipelines are uncovered in accordance with Condition 6 (b) of this special permit.

- e) Columbia Gulf must complete the girth weld testing, and the girth weld inspection and remediation plan, within six months after the grant of this special permit. If factors beyond Columbia Gulf's control prevent the completion of these tasks within six months, the tasks must be completed as soon as practicable and a letter justifying the delay and providing the anticipated date of completion must be submitted to the Director, PHMSA Southern Region no later than six months after the grant of this special permit.
- 22) Columbia Gulf must identify all shorted casings (metallic or electrolytic) within the *special permit segments* and *special permit inspection areas* no later than six (6) months after the grant of this special permit and classify any shorted casings as either having a "metallic short" (the carrier pipe and the casing are in metallic contact) or an "electrolytic short" (the casing is filled with an electrolyte) using a commonly accepted method such as the Panhandle Eastern, Pearson, DCVG, ACVG or AC Attenuation.
- a) Metallic Shorts: Columbia Gulf must clear any metallic short on a casing in the *special permit segments* and *special permit inspection areas* no later than six months after the short is identified.
 - b) Electrolytic Shorts: Columbia Gulf must remove the electrolyte from the casing/pipe annular space on any casing in the *special permit segments* and *special permit inspection areas* that has an electrolytic short no later than six (6) months after the short is identified.
 - c) All Shorted Casings: Columbia Gulf must install external corrosion control test leads on both the carrier pipe and the casing in accordance with § 192.471 to facilitate the future monitoring for shorted conditions and may then choose to fill the casing/pipe annular space with a high dielectric casing filler or other material which provides a corrosion inhibiting environment provided an assessment and all repairs were completed.

If Columbia Gulf identifies any shorted casings within the *special permit segments* and *special permit inspection areas*, they must monitor⁹ all casings within the *special permit segments* and *special permit inspection areas* for shorts at least once each calendar quarter, but at intervals not to exceed 100 days, for four consecutive calendar quarters after the grant

⁹ Monitoring of casings in this situation means an acceptable test method in accordance with 49 CFR Part 192 to determine if the casing and carrier pipe have either a metallic or electrolytic short (connection or contact).

of this special permit. The intent is to identify through monitoring the calendar quarter(s) when electrolytic casing shorts are most likely to be identified. Columbia Gulf must then monitor all casings for shorts within the *special permit segments* and *special permit inspection areas* at least once each calendar year during the calendar quarter(s) when electrolytic casing shorts are most likely to be identified. Any casing shorts found in the *special permit segments* and *special permit inspection areas* at any time must be classified and cleared as explained above.

- 23) Pipe Seam Evaluations: Columbia Gulf must identify any pipeline in the *special permit segments* and *special permit inspection area* that may be susceptible to pipe seam issues because of the vintage of the pipe, the manufacture of the pipe, or other issues. Once Columbia Gulf has identified such issues, they must complete one or all of the following:
- a) Columbia Gulf must perform an engineering analysis to determine if there are any pipe seam threats on the Mainline 100, 200 & 300 pipelines located in the *special permit segments* and *special permit inspection area*. This analysis must include the documentation that the processes in 'M Charts' in "Evaluating the Stability of Manufacturing and Construction Defects in Natural Gas Pipelines" by Kiefner and Associates updated April 26, 2007, under PHMSA Contract DTFAA-C0SP02120 and Figure 4.2, 'Framework for Evaluation with Path for the Segment Analyzed Highlighted' from TTO-5 "Low Frequency ERW and Lap Welded Longitudinal Seam Evaluation" by Michael Baker Jr., and Kiefner and Associates, et. al. under PHMSA Contract DTRS56-02-D-70036 were utilized along with other relevant materials. If the engineering analysis shows that the pipe seam issues on the Mainline 100, 200 & 300 pipelines located in the *special permit segments* and *special permit inspection area* are not a threat to the integrity of the pipeline, Columbia Gulf does not have to complete Conditions 23 (b) through 23 (e). If there is a seam integrity threat to the integrity of the pipeline, then one or more of Conditions 23 (b) through 23 (e) must be completed;
 - b) The *special permit segment* pipeline must be hydrostatically tested to a minimum pressure of 100 percent SMYS, per 49 CFR Part 192, Subpart J requirements for eight continuous hours, within one year of issuance of this special permit if no 49 CFR Part 192, Subpart J test has been performed since 1971. The hydrostatic test must confirm no systemic issues with the weld seam or pipe. A root cause analysis, including metallurgical examination of the failed pipe, must be performed for any failure

- experienced to verify that it is not indicative of a systemic issue. The results of this root cause analysis must be reported to each PHMSA pipeline safety region office where the pipe is in service within 60 days of the failure; or
- c) If the pipeline in the *special permit inspection area* has experienced a seam leak or failure in the last five years and no hydrostatic test meeting the conditions per 49 CFR Part 192, Subpart J was performed after the seam leak or failure, then a hydrostatic test must be performed within one year after the grant of this special permit on the *special permit segment* pipeline; and
 - d) If the pipeline in the *special permit segment* has any LF ERW seam or EFW seam conditions as noted in (i), (ii), or (iii) below, the *special permit segment* pipeline must be replaced:
 - i) constructed or manufactured prior to 1954 and has had any pipe seam leaks or ruptures in the *special permit inspection area*,
 - ii) has unknown manufacturing processes, or
 - iii) has known manufacturing or construction issues that are unresolved [such as concentrated hard spots, hard heat-affected weld zones, selective seam corrosion, pipe movement that has led to buckling, have had past leak and rupture issues, or any other systemic issues].
 - e) If the pipeline in the *special permit segment* has a reduced longitudinal joint seam factor, below 1.0, as defined in § 192.113 the *special permit segment* pipeline must be replaced.
 - f) All pipe in *special permit segments* and *special permit inspection areas* must have all weld seam or girth weld repairs that have been made by the usage of fittings such as weldolets, threadolets, repair clamps and pipe sleeves removed and replaced with pipe in accordance with 49 CFR Part 192 requirements.
- 24) Columbia Gulf must comply with the following requirements.
- a) Columbia Gulf must mechanically and hydrostatically test pipe in each *special permit segments* that does not meet Condition 25 (b) as follows:
 - i) Test a minimum of 10% of pipe lengths/joints, or at least two (2) pipe lengths/joints when the percentage is less than two (2) pipe lengths/joints, in accordance with §§ 192.109 and 192.107(b).
 - ii) *Special permit segments* pipe must meet the requirements of § 192.107 (b).
 - iii) *Special permit segments* pipe must be tested for mechanical and chemical

- properties (properties) as required in 49 CFR Part 192, Appendix B, Section III (B) and (C).
- iv) Pipe that is tested for properties in accordance with Condition 24 (a) (i),(a) (ii) and (a)(iii), must meet the hydrostatic test requirements of 49 CFR Part 192, Appendix B, Section III (C)(2). Original Class 1 location pipe that is approved for Class 3 locations per this special permit must be tested to a minimum of 100% SMYS for 8 continuous hours in accordance with 49 CFR Part 192, Subpart J.
 - v) The requirements in Condition 24 (a) must be completed within one year of issuance of this special permit and must meet pipe properties requirements for the pipe designed class location factor in accordance with § § 192.103, 192.105, 192.107, 192.109, 192.111 and 192.113.
- b) Columbia Gulf must complete within six (6) months of the grant of this special permit a depth of cover survey of the *special permit segments*. For any pipe in the *special permit segments* that does not meet § 192.327(a), Columbia Gulf must implement additional safety measures in areas with reduced depth of cover. Columbia Gulf must submit to the Director, PHMSA Southern Region for PHMSA approval remedial measures to implement based upon the threat, such as lowering the pipeline, increased pipeline patrols and/or additional line markers.
- c) Columbia Gulf must install and maintain line-of-sight markings on the pipeline in the *special permit segments* and *special permit inspection areas* except in agricultural areas or large water crossings such as lakes where line-of-sight signage is not practical.
- d) Columbia Gulf must install pipeline warning tape above the pipe for the length of the excavation in all integrity excavations in the *special permit segments* and *special permit inspection areas*.
- 25) Columbia Gulf must maintain the following records for each *special permit segment*:
- a) Documentation showing that each *special permit segment* has received a § 192.505, Subpart J, hydrostatic test for eight (8) continuous hours and at a minimum pressure of 1.25 X MAOP. If Columbia Gulf does not have hydrostatic test documentation, then the *special permit segment* must be hydrostatically tested to meet this requirement within one year of receipt of this special permit.

- b) Documentation (mill test reports) showing that the pipe in each *special permit segments* meets the wall thickness, yield strength, tensile strength and chemical composition of either the American Petroleum Institute Standard 5L, 5LX or 5LS, "Specification for Line Pipe" (API 5L) referenced in the 49 CFR § 192 code at the time of manufacturing or if pipe was manufactured and placed in-service prior to the inception of 49 CFR § 192 then the pipe meets the API 5L standard in usage at that time. Any *special permit segment* that does not have mill test reports for the pipe can not be authorized per this special permit unless it is qualified in accordance with Condition 24 (a) above.
- c) Documentation of compliance with all conditions of this special permit must be kept for the applicable life of this special permit for the referenced *special permit segments* and *special permit inspection areas*.
- 26) PHMSA may extend the original *special permit segments* to include contiguous segments of the Mainline 100, 200 & 300 pipelines up to the limits of the *special permit inspection areas* pursuant to the following conditions. Columbia Gulf must:
- a) Provide notice to the Director, PHMSA Southern Region and PHMSA Headquarters of an extension request of the Mainline 100, 200 & 300 *special permit segments* based on actual class location change, and include a schedule of inspections and of any anticipated remedial actions. All requests for *special permit segment extensions* must be submitted in the first nine (9) months of the § 192.611(d) timing limits.
 - b) Complete all inspections and remediation of the proposed *special permit segment* extension required by the special permit.
 - c) Comply with all the special permit conditions and limitations included herein on all future extensions.
 - d) Comply with the conditions of this special permit for the contiguous new *special permit segments* required for implementation and certification in accordance with § 192.611(d) timing limits, including submittal of documents to PHMSA required in Condition 27.
- 27) Certification: A senior executive officer (Executive Vice President and Group CEO or higher) of Columbia Gulf must certify completion of the following in writing to the PHMSA Associate Administrator within twelve (12) months of the grant of this special permit or as provided below:

- a) Columbia Gulf pipeline *special permit inspection areas* and *special permit segments* meet the conditions described in this special permit or the pipeline complies with § 192.611 requirements.
- b) The written manual of O&M procedures for the Columbia Gulf pipeline has been updated to include all additional requirements of this special permit.
- c) Columbia Gulf's Senior Executive Management (Executive Vice President and Group CEO, Vice President of Operations and Vice President of Engineering), Engineering and Operations Managers and Supervisors, and Technical/Construction/Operational Personnel (Engineers and Operations Technicians) involved in pipeline integrity construction and operations reviewed this special permit prior to undertaking to comply with these special permit conditions and within ninety (90) days of the issue date of this special permit. This review shall include but not be limited to:
 - i) An overview of each special permit inspection segment and special permit inspection area,
 - ii) An overview of the pipe properties, operating history and geographic area along each special permit inspection segment and special permit inspection area,
 - iii) An overview of the special permit conditions and timelines associated with the conditions,
 - iv) An overview of documentation and reporting requirements for compliance with the special permit conditions, and
 - v) An overview and risk assessment of each special permit segment for operating until the next ILI interval.
- d) Columbia Gulf must show a commitment from the responsible employees, as listed in Condition 27 (f) below, involved in implementing the special permit by Columbia Gulf (NGT&S) requiring that these individuals commit in writing to specific quality assurance and quality control elements of the Special Permit to reinforce and demonstrate the full commitment of Columbia Gulf throughout the organization within ninety (90) days of the issue date of this special permit.
- e) Columbia Gulf Executive Management must provide the Director, PHMSA Southern Region and PHMSA Director of Engineering and Emergency Support, a quarterly certified summary of activities conducted for each special permit condition, including any integrity issues identified during this period. Each summary must be signed by

the Columbia Gulf Executive Vice President and Group CEO.

- f) Columbia Gulf must complete the training of Senior Executive Management (Executive Vice President and Group CEO, Vice President of Operations and Vice President of Engineering), Engineering and Operations Managers and Supervisors, and Technical Personnel (Engineers and Operations Technicians) in natural gas pipeline integrity management, corrosion control, anomaly evaluation, validation, and repairs to meet Part 192, and these special permit conditions. Training shall cover but not be limited to:
- i) Performance requirements and procedures for above ground surveys required as a condition of this permit, including close interval survey, voltage gradient surveys, and depth of cover surveys.
 - ii) Performance requirements and procedures for SCCDA required as a condition of this permit.
 - iii) Performance requirements and procedures for in-line inspection required as a condition of this permit, including assessment timelines, anomaly evaluation criteria and response times.
 - iv) Additional preventive and mitigative activities required by this permit, such as the placement and monitoring of cathodic protection test points and the incorporation of damage prevention requirements (line of sight markers and pipeline warning tape).
 - v) Requirements for the monitoring and management of casings within the special permit segments and special permit inspection areas.
 - vi) Requirements and procedures for the evaluation of seam weld integrity of pipe located within the special permit segments and special permit inspection areas.
 - vii) Documentation and reporting requirements required under this permit.
 - viii) Overall review and training of Columbia Gulf O&M Plan, Integrity Management Plan and Engineering and Design Procedures and Specifications to all engineering, construction and operational employees on a yearly basis. This training must include a “lessons learned” from the incidents that led to PHMSA Corrective Action Orders (CAO) and PHMSA workshops for the past four years (2006 through 2009) on operational, integrity management, and construction issues.
- g) Columbia Gulf (NGT&S) must maintain an open and transparent relationship with

28) Demonstration of Overall Improvement: One year after the grant date of this Special Permit, Columbia Gulf (NGT&S) must prepare and present a report describing system wide actions it has taken and the results of any initiatives, not limited to the Special Permit inspection areas, to improve its programs for compliance with 49 CFR Part 192. Columbia Gulf (NGT&S) shall present the report to the PHMSA Associate Administrator. PHMSA will compare the report with the results of any enforcement actions to determine if continuation under the special permit is warranted based on Columbia Gulf (NGT&S) assurances of system wide improvements.

Columbia Gulf must send a copy of the certifications required in Condition 27 (a) through (g) with completion date, compliance documentation summary, list of trainees, and the required senior executive signature and date of signature to the PHMSA Associate Administrator with copies to the Director, PHMSA Southern Region, Director, PHMSA Regulations, and Director, PHMSA Engineering and Emergency Support within one year of the date of this special permit.

Limitations:

PHMSA grants this special permit subject to the following limitations:

- 1) PHMSA has the sole authority to make all determinations on whether Columbia Gulf has complied with the specified conditions of this special permit.
- 2) Failure to submit the certifications required by Condition 27 within the time frames specified therein will result in automatic revocation of this special permit.
- 3) Should Columbia Gulf fail to comply with any of the specified conditions of this special permit, PHMSA may revoke this special permit and require Columbia Gulf to comply with the regulatory requirements in 49 CFR § 192.611.
- 4) PHMSA may revoke, suspend or modify a special permit as provided by 49 CFR § 190.341(h)(1) and may then require Columbia Gulf to comply with the regulatory requirements in 49 CFR § 192.611.
- 5) Should PHMSA revoke, suspend or modify a special permit as provided by 49 CFR § 190.341(h)(1), PHMSA will notify Columbia Gulf in writing of the proposed action and provide Columbia Gulf an opportunity to show cause why the action should not be taken unless PHMSA determines that taking such action is immediately necessary to avoid the risk of significant harm to persons, property or the environment (see 49 CFR § 190.341(h)(2)).

- 6) The terms and conditions of any corrective action order, compliance order or other order applicable to a pipeline facility covered by this special permit will take precedence over the terms of this special permit in accordance with 49 CFR § 190.341(h)(4).
- 7) PHMSA grants this special permit for a period of no more than five (5) years from the grant date. If Columbia Gulf elects to seek renewal of this special permit, Columbia Gulf must submit its renewal request at least 180 days prior to expiration of the 5-year period to the PHMSA Associate Administrator, with copies to the Director, PHMSA Southern Region, Director, PHMSA Office of Regulations, and Director, PHMSA Engineering and Emergency Support. PHMSA will consider requests for a special permit renewal for up to an additional 5-year period. All requests for a special permit renewal must include a summary report in accordance with the requirements in Condition 15 above, and must demonstrate that the special permit is still consistent with pipeline safety. PHMSA may seek additional information from Columbia Gulf prior to granting any request for special permit renewal.

AUTHORITY: 49 U.S.C. 60118 (c)(1) and 49 CFR § 1.53.

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Associate Administrator for Pipeline Safety