

U.S. DEPARTMENT OF TRANSPORTATION  
PIPELINE AND HAZARDOUS MATERIALS SAFETY ADMINISTRATION  
SPECIAL PERMIT RENEWAL

**Docket Number:** PHMSA-2008-0213  
**Pipeline Operator:** Empire Pipeline, Inc.<sup>1</sup> (operator of Empire State Pipeline)  
**Original Date Requested:** August 8, 2008  
**Original Special Permit:** May 20, 2010  
**Segment 6 Date Requested:** August 19, 2016  
**Special Permit Renewal Period:** Through May 20, 2020  
**Code Section(s):** 49 CFR § 192.611

**Renewal of Special Permit:**

By this order, subject to the terms and conditions set forth below, the Pipeline and Hazardous Materials Safety Administration (PHMSA), Office of Pipeline Safety (OPS) grants a special permit to Empire Pipeline, Inc., (Empire), operator of the Empire State Pipeline, waiving compliance from 49 CFR § 192.611(a) for six (6) natural gas transmission pipeline segments located in Niagara, Genesee, Monroe, and Wayne Counties, New York, as described below. This special permit includes a renewal of the May 20, 2010 special permit granted to Empire and adds a new *special permit segment 6*. *Segment 6* includes 1,055 feet of pipeline located in the Town of Macedon, Wayne County, New York. The renewal period for this special permit remains May 20, 2020.

**Special Permit Segments and Inspection Area:**

Niagara, Genesee, Monroe, Ontario, Wayne, Cayuga, Onondaga, and Oswego Counties, New York

The special permit allows Empire a waiver from compliance with 49 CFR § 192.611(a) for six (6) natural gas transmission pipeline segments on the 24-inch Empire State Pipeline, where a change has occurred from a Class 1 Location to a Class 3 Location and a Class 2 Location to a Class 3<sup>2</sup> Location in Niagara, Genesee, Monroe, and Wayne Counties, New York. 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 a pipeline segment after a change in class location.

This special permit allows Empire to continue to operate each of the five (5) *special permit segments*

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<sup>1</sup> Empire Pipeline, Inc., is owned by National Fuel Gas Company.

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

**1 through 5** at their current maximum allowable operating pressure (MAOP) of 1440 pounds per square inch gauge (psig) for the 24-inch Empire State Pipeline, subject to certain conditions, described below. **Special permit segment 6** operates at a MAOP of 1000 psig and is also subject to the conditions below.

This special permit applies to the six (6) **special permit segments** defined as follows using the Empire State Pipeline survey stations (SS) and mile post (MP) references as follows:

- **Special Permit Segment 1** - 24-inch Empire State Pipeline mainline, approximately 730 feet in length, located in Genesee County, NY from Survey Station 3027 + 50 to Survey Station 3034 + 80; (MP 57.33 to MP 57.49),
- **Special Permit Segment 2** - 24-inch Empire State Pipeline mainline, approximately 1,715 feet in length, located in Monroe County, NY from Survey Station 4018 + 73 to Survey Station 4035 + 88; (MP 76.09 to MP 76.42),
- **Special Permit Segment 3** - 24-inch Empire State Pipeline mainline, approximately 1,650 feet in length, located in Monroe County, NY from Survey Station 4483 + 10 to Survey Station 4499 + 60; (MP 84.88 to MP 85.19),
- **Special Permit Segment 4** - 24-inch Empire State Pipeline mainline, approximately 2,675 feet in length, located in Niagara County, NY from Survey Station 1230 + 69 to Survey Station 1257 + 44; (MP 23.30 to MP 23.81),
- **Special Permit Segment 5**, 24-inch Empire State Pipeline mainline, approximately, 2,650 feet in length, located in Niagara County, NY from Survey Station 1330 + 50 to Survey Station 1357 + 00; (MP 25.19 to MP 25.70<sup>3</sup>), and
- **Special Permit Segment 6**, 24-inch Empire State Pipeline mainline, approximately, 1,055 feet in length, located in Wayne County, NY from Survey Station 5234+21 to Survey Station 5244+76; (MP 99.13 to MP 99.33<sup>4</sup>).

This special permit applies to the entire **special permit inspection area**, defined as follows, using the 24-inch Empire State Pipeline mainline mile post stationing as a reference.

<sup>3</sup> On November 20, 2014, Empire requested a **special permit segment 5** extension from Station 1348+ 10 to 1357+00 (MP 25.54 to MP 25.70) of 890 feet. **Special permit segment 5** is located in the Town of Lockport, Niagara County, New York, east of Old Beattie Road.

<sup>4</sup> On August 19, 2016, Empire requested a new **special permit segment 6** from Station 5234+21 to 5244+76 (MP 99.13 to MP 99.33) of 1,055 feet. **Special permit segment 6** is located in the in the Town of Macedon, Wayne County, New York and approximately 1,190 feet west of the Erie Canal crossing.

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***Special permit inspection area*** – means the area that extends 220 yards on each side of the 24-inch pipeline centerline along the entire length of the Empire State Pipeline from:

- Mile Post 0 (New York/Canada border) to Mile Post 157 (Phoenix, New York), totaling about 157 miles in length.

The ***special permit inspection area*** is located in Niagara, Genesee, Monroe, Ontario, Wayne, Cayuga, Onondaga, and Oswego Counties, NY. The ***special permit inspection area*** begins at Mile Post 0 located at the start of the Empire State Pipeline at the Canada/U.S. international border and the Chippawa Channel of the Niagara River and ends at Mile Post 157 at the end of the Empire State Pipeline located in Oswego County, New York. The total length of the ***special permit inspection area*** is approximately 157 miles.

The Empire State Pipeline ***special permit inspection area*** includes the following sections:

- Western Section - from Mile Post 0 in Niagara County, New York to Mile Post 90.8 in Ontario County, New York and the pipeline has an MAOP of 1440 psig; and
- Eastern Section – from Mile Post 90.8 in Ontario County, New York to Mile Post 157 in Oswego County, New York and the pipeline has an MAOP of 1000 psig.

PHMSA noticed the original ***special permit segments 1 through 5*** in the Federal Register, Volume 74, Pages 4296 to 4299, on January 23, 2009. This request for a new ***special permit segment 6*** was noticed in the Federal Register, Volume 81, Pages 76687 to 76688, on November 3, 2016. 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-2008–0213 in the Federal Docket Management System (FDMS) located on the internet at [www.Regulations.gov](http://www.Regulations.gov).

### **Conditions:**

PHMSA OPS grants this special permit subject to the following conditions:

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- 1) **Maximum Allowable Operating Pressure (MAOP):** Empire must continue to operate the 24-inch Empire State Pipeline six (6) *special permit segments* at or below their existing MAOP as follows:
  - a) Western Section - from Mile Post 0 in Niagara County, New York to Mile Post 90.8 in Ontario County, New York - MAOP 1440 psig; and
  - b) Eastern Section - from Mile Post 90.8 in Ontario County, New York to Mile Post 157 in Oswego County, New York - MAOP of 1000 psig.
  
- 2) **Integrity Management Program:** Empire must incorporate each of the six (6) *special permit segments* into its written integrity management program (IMP) as a “covered segment” in a “high consequence area (HCA)” in accordance with § 192.903, except for the reporting requirements contained in § 192.945. Empire need not include the *special permit segments* described in this special permit in its IMP baseline assessment plan unless those areas meet the conditions of an HCA in accordance with § 192.905.
  
- 3) **Close Interval Surveys:** Empire must perform a close interval survey (CIS) of the 24-inch Empire State Pipeline along the entire length of the *special permit inspection area*<sup>5</sup> no later than one (1) year after the grant of this special permit and remediate any areas of inadequate cathodic protection. A CIS and remediation need not be performed if Empire has performed a CIS and remediation on the 24-inch Empire State Pipeline along the entire length of the *special permit inspection area* less than four (4) years prior to the grant of this special permit. If factors beyond Empire’s control prevent the completion of the CIS and remediation within one (1) 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 OPS Eastern Region<sup>6</sup> no later than one (1) year after the grant of this special permit.

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<sup>5</sup> Each condition that requires Empire to perform an action with respect to the *special permit inspection area* shall also require Empire to perform that action on all *special permit segments* within such the *special permit inspection area*.

<sup>6</sup> In the case of any special permit condition that requires Empire to provide documentation to the PHMSA Eastern Region, Empire must also send a copy of such documentation to the appropriate State authorities, in States that have interstate agent agreements with PHMSA.

- 4) **Close Interval Surveys – Reassessment Interval:** Empire must perform periodic CIS of the *special permit segments* at the applicable reassessment interval(s) for a “covered segments” determined in concert and integrated with in-line inspection (ILI) in accordance with 49 CFR 192 Subpart O reassessment intervals, as contained in 49 CFR §§ 192.937(a) and (b), 192.917, and 192.939, not to exceed a seven (7) year reassessment interval.
- 5) **Coating Condition Surveys:** Within one (1) year of the grant of this special permit, Empire must perform a Direct Current Voltage Gradient (DCVG) survey or an Alternating Current Voltage Gradient (ACVG) survey of each *special permit segment* to verify the pipeline coating conditions and must then remediate any integrity issues in the *special permit segments*. A DCVG or ACVG survey and remediation need not be performed on *special permit segments* if Empire has performed a DCVG or ACVG and remediation in accordance with this special permit condition on the 24-inch Empire State Pipeline along the entire length of the *special permit inspection area* less than four (4) years prior to the grant of this special permit. Empire 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 $\mu$ V and above for ACVG) or severe based on NACE International Recommended Practice 0502-2002, “*Pipeline External Corrosion Direct Assessment Methodology*”, (NACE RP 0502-2002<sup>7</sup>). A minimum of two (2) 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 Empire’s control prevent the completion of the DCVG or ACVG survey and remediation within one (1) 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 OPS Eastern Region no later than one (1) year after the grant of this special permit.
- 6) **Stress Corrosion Cracking Direct Assessment:** Empire must evaluate the 24-inch Empire State Pipeline for stress corrosion cracking (SCC) as follows:

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<sup>7</sup> When PHMSA adopts a revised edition of a referenced NACE International or ASME standard into 49 CFR Part 192, the referenced requirements of those revised standards are automatically incorporated into these special permit conditions.

- a) Empire 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 24-inch Empire State Pipeline along the entire length of the *special permit inspection area* according to the requirements of § 192.929 and/or NACE SP 0204-2008, no later than one (1) 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 Empire has performed a SCCDA of the 24-inch Empire State Pipeline along the entire length of the *special permit inspection area* less than four (4) years prior to the grant of this special permit. If factors beyond Empire's control prevent the completion of the SCCDA survey and remediation within one (1) 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 OPS Eastern Region no later than one (1) year after the grant of this special permit. [Empire may eliminate this Condition 6(a), if Empire provides PHMSA an engineering assessment showing that the pipeline does not meet the criteria for either 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) If the threat of SCC exists as determined in Condition 6(a) and when the Empire State Pipeline 24-inch mainline is exposed for any reason in the *special permit inspection area* and the coating has been identified as poor during the pipeline examination, then Empire 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 "poor coating" or damaged coating, and it is expected that a holiday detection test at the correct voltage will be performed. Empire must keep coating records of all excavation locations in the *special permit inspection area* to demonstrate the coating condition.
- 7) **Reporting of Pipe and Coating Remediation:** Empire 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 OPS Eastern Region, no later than one (1) year after the grant of this special permit.

- 8) **O&M Manual – In-Line Inspection and Reassessment Intervals**: Empire 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 high resolution magnetic flux leakage metal loss tools (high resolution MFL) and geometry tools of the 24-inch Empire State Pipeline along the entire length of the *special permit inspection area* at a frequency consistent with 49 CFR Part 192, Subpart O, but not to exceed a seven (7) year reassessment interval<sup>8</sup> (deformation tools with +/- 1% accuracy may be considered as a replacement for geometry tools).
- 9) **O&M Manual - CIS Inspection and Reassessment Intervals**: Empire must amend applicable sections of its O&M manual(s) to require the CIS inspection and reassessment intervals of the 24-inch Empire State Pipeline *special permit segments* at a frequency consistent with 49 CFR Part 192, Subpart O, but not to exceed a seven (7) year reassessment interval.
- 10) **In-Line Inspection Initial Assessment**: Empire must perform ILI assessments on the 24-inch Empire State Pipeline from Canada Mile Post (MP) 0 to Mendon MP 86 by August 31, 2011, and from Mendon MP 86 to Phoenix MP 157 by September 30, 2011. Subsequent ILI assessments of the 24-inch Empire State Pipeline along the entire length of the *special permit inspection area* must conform to the required maximum reassessment intervals specified in § 192.939, but not to exceed a seven (7) year reassessment interval.
- 11) **In-Line Inspection Reassessment Intervals**: Empire must schedule ILI reassessment dates for the 24-inch Empire State Pipeline along the entire length of the *special permit inspection area* according to § 192.939 by adding the required time interval to the previous assessment date, but not to exceed a seven (7) year reassessment interval.

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<sup>8</sup> If § 192.939(a) integrity management reassessment interval should change from seven (7) years to some other reassessment interval under eight (8) years, Empire may use that reassessment interval instead of seven (7) years where applicable in these special permit conditions.

- 12) **Damage Prevention Best Practices**: Empire must incorporate the applicable best practices of the Common Ground Alliance (CGA) into its damage prevention program for the *special permit inspection area*.
  
- 13) **Field Activity Advance Notice to PHMSA**: Empire must give a minimum of 14 days advance notice<sup>9</sup> to the Director, PHMSA OPS Eastern Region, to enable the Director to observe the excavations relating to Conditions 5, 6, 19, 20, 21, 22, 23, and 24 of field activities in the *special permit inspection area*. Immediate response conditions do not require a 14-day notice, but the PHMSA OPS Eastern Region Director should be notified by Empire no later than two (2) business days after the immediate condition is discovered.
  
- 14) **High Consequence Area Assessments**: Empire must not let this special permit impact or defer any of the operator's assessments for HCAs under 49 CFR Part 192, Subpart O.
  
- 15) **Annual Reports to PHMSA**: Within three (3) months following the grant of this special permit, and annually<sup>10</sup> thereafter, Empire must report the following to the Director, PHMSA OPS Eastern Region, and the Director, PHMSA OPS Standards and Rulemaking Division, and submit a copy to the Federal Register Docket (PHMSA-2008-0213) at regulations.gov:
  - a) In the first annual report, Empire 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, Empire must fully describe how 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.

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<sup>9</sup> Empire must give notice in first quarter of each year any planned field activities under this special permit to the Director, PHMSA OPS Eastern Region. PHMSA Director may elect to not witness and be noticed on some field activities.

<sup>10</sup> Annual 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 May 20, 2010, must be received by PHMSA no later than May 31, each year beginning in 2011.



- c) The number of new residences, other structures intended for human occupancy and public gathering areas built within one (1) mile on either end of the *special permit segment*.
- d) Any new integrity threats identified during the previous year and the results of any ILI or direct assessments performed (including any un-remediated anomalies over 30% wall loss; cracking found in the pipe body, weld seam or girth welds; and dents with metal loss, cracking or stress riser) during the previous year in the *special permit inspection area*.
- 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 inspection area*.
- f) Any on-going damage prevention initiatives affecting the *special permit inspection area* 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) **Cathodic Protection Test Station – Location:** At least one (1) 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 any HCA within the *special permit inspection area*.

17) **Cathodic Protection Test Station - Remediation:** If any annual CP test station readings within the *special permit inspection area* fall below 49 CFR Part 192, Subpart I requirements, remediation must occur within six (6) months and include a CIS on each side of the affected test station to the next test station and perform any identified corrosion system modifications to ensure acceptable corrosion control. If factors beyond Empire's control prevent the completion of remediation within six (6) 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 OPS Eastern Region, no later than the end of the six (6) months completion date. Any extended evaluation and remediation schedules submitted to PHMSA from Empire must receive a "no objection" from the Director, PHMSA OPS Eastern Region.

- 18) **Interference Currents Control**: Empire must address induced AC from parallel electric transmission lines and other interference issues in the *special permit inspection area* that may affect the pipeline. An induced AC program or DC program to protect the pipeline from corrosion caused by stray currents must be in place within one (1) 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* 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 Empire 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, girth weld joints must be exposed, evaluated, and remediated each time the ILI is run or until the girth weld coating is replaced.
  - c) A minimum of two (2) girth weld joints at locations most likely to have shielding and corrosion shall be exposed, evaluated, and remediated each time ILI is run. If corrosion is found, the next most likely joint is to be exposed, evaluated, and remediated until no corrosion is found.
- 20) **Anomaly Evaluation and Repair**
- a) **General**: Empire 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. Empire must demonstrate ILI tool tolerance accuracy for each ILI tool run by usage of calibration excavations 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**: Empire must repair dents to the 24-inch Empire State Pipeline in the *special permit inspection area* in accordance with § 192.933 repair criteria, including the use of a geometry or deformation tool inspection as part of the initial ILI. If no geometry or deformation tool has been completed, it must be completed and all dent repairs 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 Empire's O&M manual, but must not be longer than one (1) year after discovery.

c) **Investigation and Repair Criteria:** Investigation, evaluation, and repair criteria applies to all anomalies located on the 24-inch Empire State Pipeline within the *special permit segments* and *special permit inspection area* when they have been 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 ratio<sup>11</sup> (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 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.

d) **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 must incorporate appropriate class location

<sup>11</sup> Failure pressure ratio (FPR) is based upon the class location where the *special permit segments* 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).

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. Empire 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 area:**

- **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 all responses must take tool tolerance and corrosion growth rates into account.

- e) ***Special Permit Segments and Special Permit Inspection Area:*** Upon receipt of this special permit, Empire must implement the repair of any pipe anomalies or dents within the *special permit segments* and *special permit inspection area* that do not meet Condition 20 based upon existing ILI results from the high resolution MFL and geometry/caliper tools. Remediation of anomalies and dents must be completed in accordance with Condition 20 timing requirements and completed within 12 months from grant of this special permit.

21) ***Girth Welds:*** Empire must provide records to PHMSA to demonstrate the girth welds in each *special permit segment* meet the below requirements:

- 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 (2) girth welds in each *special permit segment* were excavated and inspected.
- b) If Empire cannot provide girth weld records to PHMSA to demonstrate either of the above in Condition 21(a), Empire must accomplish either (i); or (ii) and (iii) 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 24-inch Empire State Pipeline within the entire *special permit inspection area* for the entire life of the pipeline, or
- ii) Evaluate the terrain along each *special permit segment* for threats to girth weld integrity from soil or settlement stresses and remediate all such integrity threats; and
- iii) Excavate,<sup>12</sup> visually inspect and nondestructively test at least two (2) girth welds on the 24-inch Empire State Pipeline 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 pipeline was constructed; or
  - B. Use the edition of API 1104 recognized in the Federal pipeline safety regulations at the time the pipeline was constructed; or
  - C. Use the edition of API 1104 currently recognized in the Federal pipeline safety regulations.
- c) If any girth weld in any of the *special permit segments* does not comply with API 1104, Empire 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*. Empire must submit the inspection and remediation plan for girth welds to the Director, PHMSA OPS Eastern 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) All oxy-acetylene girth welds, mechanical couplings and wrinkle bends in any *special permit segment* must be removed.
- e) Empire must complete the girth weld testing as well as the girth weld inspection and remediation plan, within six (6) months after the grant of this special permit. If factors beyond Empire's control prevent the completion of these tasks within six (6) months, the tasks must be completed as soon as practicable, and a letter justifying the delay and

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<sup>12</sup> Empire must evaluate for SCC any time the 24-inch Empire State Pipeline is uncovered in accordance with Condition 6 (b) of this special permit.

providing the anticipated date of completion must be submitted to the Director, PHMSA OPS Eastern Region, no later than six (6) months after the grant of this special permit.

- 22) **Casings:** Empire must identify all shorted casings (metallic or electrolytic) within each *special permit segment* 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:** Empire must clear any metallic short on a casing in the *special permit segments* no later than six (6) months after the short is identified.
  - b) **Electrolytic Shorts:** Empire must remove the electrolyte from the casing/pipe annular space on any casing in the *special permit segments* that has an electrolytic short no later than six (6) months after the short is identified.
  - c) **All Shorted Casings:** Empire 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. Empire 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 Empire identifies any shorted casings within the *special permit segments*, they must monitor<sup>13</sup> all casings within the *special permit segments* for shorts at least once each calendar quarter, but at intervals not to exceed 100 days, for four (4) consecutive calendar quarters after the grant 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. Empire must then monitor all casings for shorts within the *special permit segments* 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* at any time must be classified and cleared as explained above.

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<sup>13</sup> 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).

- 23) **Pipe Seam Evaluations:** Empire must identify any pipeline in the *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 Empire has identified such issues, they must complete one (1) or all of the following:
- a) Empire must perform an engineering analysis to determine if there are any pipe seam threats on the 24-inch pipeline located in the *special permit inspection area*. This analysis must include 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 24-inch Empire State Pipeline located in the *special permit inspection area* are not a threat to the integrity of the pipeline, Empire does not have to complete Conditions 23(b) through 23(e). If there is a threat to the integrity of the pipeline, then one or more of Conditions 23(b) through 23(e) must be completed; or
  - b) If no 49 CFR Part 192, Subpart J hydrostatic test has been performed since 1971, the *special permit segments* in the pipeline must be hydrostatically tested to a minimum pressure of 100 percent SMYS, per 49 CFR Part 192, Subpart J requirements for eight (8) continuous hours, within one (1) year of issuance of this special permit. 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 the Director, PHMSA OPS Eastern Region 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 (5) years and no hydrostatic test meeting the conditions of 49 CFR Part 192, Subpart J was performed after the seam leak or failure, then a hydrostatic test must be performed within one (1) year after the grant of this special permit on the *special*



*permit segment* pipeline; and

- d) If the pipeline in any *special permit segment* has any Low Frequency (LF) Electric Resistance Weld (ERW) seam or Electric Flash Weld (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*, or
  - 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 lead to buckling, have had past leak and rupture issues, or any other systemic issues).
- e) If the pipeline in any *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* 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) **Special Permit Segment Specific Conditions:** Empire must comply with the following requirements:

- a) **Pipe Properties Records:** Empire must mechanically and/or hydrostatically test pipe in each *special permit segment* that does not meet Condition 25(b), as follows:
  - i) A minimum of 10% of pipe lengths/joints, or at least two (2) pipe lengths/joints when percentage is less than two (2) pipe lengths/joints, must be tested in accordance with §§ 192.109 and 192.107 (b).
  - ii) *Special permit segment* pipe must meet the requirements of § 192.107(b).
  - iii) *Special permit segment* pipe must be tested for mechanical and chemical 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 eight (8) continuous hours in accordance with 49 CFR Part 192, Subpart J.

- v) The requirements in Condition 24(a) must be completed within one (1) 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) **Depth of Cover Survey**: Within one (1) year of the grant of this special permit, Empire must complete a depth of cover survey of the *special permit segments*. Any pipe in the *special permit segments* that does not meet § 192.327(a) must have additional safety measures implemented in areas with reduced depth of cover. Empire must submit to the Director, PHMSA OPS Eastern Region for approval remedial measures to implement based upon the threat, such as lowering the pipeline, increased pipeline patrols, and/or additional line markers.
- c) **Line-of-Sight Markers**: Within one (1) year of the grant of this special permit, Empire must install line-of-sight markers in the *special permit segments* and *special permit inspection area*. Agricultural areas or large water crossings, such as lakes, where line-of-sight markers are impractical, will not be required to have line-of-sight markers. The marking of pipelines is also subject to Federal Energy Regulatory Commission (FERC) orders and environmental permits and local restrictions.
- d) **Right-of-Way Patrols**: In the *special permit segments* and *special inspection area*, Empire must perform aerial patrols monthly, with the maximum time interval between patrols not to exceed 45 days, weather permitting.
- e) **Class Locations**: Class 4 locations are not included in this special permit.
- f) **Data Integration**: Empire must maintain data integration of special permit condition findings and remediation in the *special permit segments* and one (1) mile beyond both sides of each *special permit segment*. Data integration must include the following information: Pipe diameter, wall thickness, grade, and seam type; pipe coating including girth weld coating; maximum allowable operating pressure (MAOP); class location (including boundaries on aerial photography); high consequence areas (HCAs) (including boundaries on aerial photography); hydrostatic test pressure including any known test failures; casings; any in-service ruptures or leaks; in-line inspection (ILI) survey results

including HR-MFL, HR-geometry/caliper or deformation tools; close interval survey (CIS) surveys – most recent; depth of cover surveys; rectifier readings; 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. Data integration must be outlined on pipeline route drawings with parallel sections for each integrity category and recent aerial photography (recent photography, within three (3) years of permit modification and every three (3) years thereafter).

- i) Data integration documentation and drawings to meet Condition 24(f) must be completed and submitted, if requested by PHMSA, beginning with the second annual report of this revised special permit with four (4) years of prior data.
- ii) Data integration must be updated on an annual basis and with an annual review of integrity issues to be remediated at minimum.

**g) Pipeline System Flow Reversals**

- i) For long term pipeline system flow reversals exceeding 90 days where either 49 CFR § 192.619(a)(1) or § 192.611 MAOPs for class location changes are exceeded<sup>14</sup> for a *special permit segment*, Empire must document the flow reversal operational, integrity, and safety processes for the *special permit segment* and *special permit inspection area* as follows: all technical, operational, integrity management, and safety procedures implemented, including any pressure tests, pressure control changes (pressure relief or monitor size or location changes), ILI inspections, direct examinations and repairs, emergency responder and public notifications prior to the change in natural gas flow direction and any leaks, failures, incidents, or remediation conducted; and confirmation of the lowest failure pressure (ratio to MAOP), most severe dent, and largest wall loss anomalies remaining.
- ii) Empire must use and document measures implemented to meet PHMSA Advisory Bulletin (ADB-2014-04), "Guidance for Pipeline Flow Reversals, Product Changes and Conversion of Service" issued on September 18, 2014 (79 FR 56121, Docket PHMSA-2014-0400).

<sup>14</sup> An example of exceedance of 49 CFR § 192.619 (a)(1) is a Grandfathered MAOP, which has a design factor above 0.72. An example of exceedance of 49 CFR § 192.611 is a Class 1 to 3 location change.

- iii) Empire must submit the documents in Condition 24(f)(i) and (ii) above to the PHMSA Director, PHMSA OPS Eastern Region, Director, PHMSA OPS Standards and Rulemaking Division, and Director, PHMSA OPS Engineering and Research Division, within 180-days prior to any planned pipeline system long term flow reversals for a *special permit segment* or *special permit inspection area* that would exceed either 49 CFR § 192.619(a)(1) or § 192.611 allowed MAOPs.
- iv) Based upon PHMSA's review of Empire's flow reversal process for the *special permit segment* or *special permit inspection area*, PHMSA may require Empire to acquire a new special permit before the proposed pipeline flow reversal is executed. Alternatively, PHMSA may provide a "no objection" to the pipeline flow reversal.

25) **Documentation:** Empire 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 Empire does not have hydrostatic test documentation, then the *special permit segment* must be hydrostatically tested to meet this requirement within one (1) year of the grant 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 49 CFR Part 192, at the time of manufacturing or, if pipe was manufactured and placed in-service prior to the inception of 49 CFR Part 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 cannot be authorized per this special permit unless it is qualified in accordance with Condition 24(a) above.
- c) Documentation of compliance with all the 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 area*.

- 26) **Extension of Special Permit Segments:** PHMSA may extend the *special permit segments* to include segments of the 24-inch Empire State Pipeline up to the limits of the *special permit inspection area*, pursuant to the following conditions. Empire must:
- a) Provide notice to the Director, PHMSA OPS Eastern Region; Director, PHMSA OPS Standards and Rulemaking Division; and Director, PHMSA OPS Engineering and Research Division, of a requested *special permit segment or extension* of the 24-inch Empire State Pipeline based on actual class location change and include a schedule of inspections, of any anticipated remedial actions, and the location of the new request including survey stationing. All requests for a *special permit segment or extension* must be submitted in the first nine (9) months of the § 192.611(d) timing limits and must include information on the potential environmental impacts of the extension.
  - b) Complete all inspections and remediation of the proposed *special permit segment or extension* to the extent required by the special permit. New *special permit segments* must have the applicable conditions implemented within one (1) year of issuance of the special permit for the new *special permit segment*.
  - c) Comply with all the special permit conditions and limitations included herein to all future *special permit segments or extensions*.
  - d) Comply with the conditions of this special permit for any new *special permit segments or extensions* 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 (Vice President or higher) of Empire must certify completion of the following in writing to the PHMSA OPS Associate Administrator within twelve (12) months of issuance of this special permit or based upon the timing noted below:
- a) Empire State Pipeline *special permit inspection area* 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 Empire State Pipeline have been updated to include all additional requirements of this special permit.
  - c) Empire has implemented all conditions as required by this special permit, including the conditions now applicable for *Special Permit Segment 6*.

Empire must send a copy of the certifications required in Condition 27(a) through (c) with corresponding completion dates and compliance documentation summaries, signed and dated by the certifying senior executive, to the PHMSA OPS Associate Administrator, with copies to the Deputy Associate Administrator, PHMSA OPS Field Operations, Director, PHMSA OPS Eastern Region; Director, PHMSA OPS Standards and Rulemaking Division, and Director, PHMSA OPS Engineering and Research Division, within one (1) year of the modification date of this special permit. A copy of the certification must be submitted to the Federal Register Docket (PHMSA-2008-0213) at regulations.gov.

**Limitations:**

PHMSA grants this special permit subject to the following limitations:

- 1) PHMSA has the sole authority to make all determinations on whether Empire has complied with the specified terms and conditions of this special permit.
- 2) Failure to submit the certifications required by Condition 27 within the time frames and format specified therein will result in automatic revocation of this special permit.
- 3) PHMSA may revoke, suspend or modify this special permit based on any finding listed in 49 CFR § 190.341(h)(1) and may require Empire to comply with the regulatory requirements in 49 CFR § 192.611. As provided in 49 U.S.C. § 60122, PHMSA may also issue an enforcement action for failure to comply with this permit. Any work plans and associated schedules from a PHMSA enforcement action shall be automatically incorporated into this permit and are enforceable in the same manner.
- 4) Should PHMSA revoke, suspend or modify a special permit based on any finding listed in 49 CFR § 190.341(h)(1), PHMSA will notify Empire in writing of the proposed action and provide Empire an opportunity to show cause why the action should not be taken, pursuant to § 190.341(h)(2). In accordance with § 190.341(h)(3), if necessary to avoid the risk of significant harm to persons, property, or the environment, PHMSA will not give advance notice and will declare the proposed action (revocation, suspension, or modification) immediately effective.

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- 5) 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).
  
- 6) If Empire sells, merges, transfers, or otherwise disposes of the assets known as the *special permit segments*, assets within approved *special permit extensions*, or assets within the *special permit segment inspection area*, Empire must provide PHMSA with written notice of the transfer within 30 days of the consummation date. In the event of such transfer, PHMSA reserves the right to revoke, suspend, or modify the permit if the transfer constitutes a material change in conditions or circumstances pursuant to 49 CFR § 190.341(h)(1)(ii) or any other circumstances listed under 49 CFR § 190.341(h)(1).
  
- 7) PHMSA grants this special permit for a period of no more than five (5) years from the grant date. If Empire elects to seek renewal of this special permit, Empire must submit its renewal request at least 180 days prior to expiration of the five-year period to the PHMSA OPS Associate Administrator with copies to the Deputy Associate Administrator, PHMSA OPS Field Operations, Director, PHMSA OPS Eastern Region, Director, PHMSA OPS Standards and Rulemaking, and Director, PHMSA OPS Engineering and Research Division. PHMSA will consider requests for a special permit renewal for up to an additional five (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 Empire prior to granting any request for special permit renewal.

AUTHORITY: 49 U.S.C. 60118 (c)(1) and 49 CFR § 1.97.

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Alan K. Mayberry,  
Associate Administrator for Pipeline Safety

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