U.S. DEPARTMENT OF TRANSPORTATION

PIPELINE AND HAZARDOUS MATERIALS SAFETY ADMINISTRATION

SPECIAL PERMIT

Special Permit Information:

Docket Number:	PHMSA-2016-0004
Requested By:	Tennessee Gas Pipeline Company, L.L.C.
Operator ID#:	19160
Date Requested:	January 11, 2016
Original Issuance Date:	September 1, 2016
Effective Dates:	September 1, 2016 to September 1, 2021
Code Section(s):	49 CFR §§ 192.611(a) and (d), 192.619(a), and 192.5

Grant 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 (PHMSA-2016-004) from September 1, 2016 to September 1, 2021, to Tennessee Gas Pipeline Company[1] (TGP) waiving compliance from 49 Code of Federal Regulations (CFR) §§ 192.611(a) and (d), 192.619(a), and 192.5 for 192 **special permit segments** and 49.00 miles of natural gas transmission pipeline as described in Appendix A[2] of this special permit.

I. Special Permit Segment and Special Permit Inspection Area:

States of Kentucky, Louisiana, Mississippi, New Jersey, New York, Ohio, Pennsylvania, Tennessee, Texas and West Virginia

On the condition that TGP complies with the terms and conditions set forth below, this special permit waives compliance from 49 CFR § 192.611(a) for 192 ***special permit segments*** and 49.00

[1] TGP is owned by Kinder Morgan, Inc.

[2] Appendix A of this special permit lists the pipeline ***special permit segment*** location (County and State), MAOP, class location, diameter, wall thickness, grade, seam type, boundaries, and other attributes.

miles of natural gas transmission pipeline as described in Appendix A. This special permit allows TGP to continue to operate each ***special permit segment*** listed in Appendix A at its current listed maximum allowable operating pressure (MAOP). The Federal pipeline safety regulations in 49 CFR § 192.611(a) require natural gas pipeline operators to confirm or revise the MAOP of a pipeline segment after a change in class location.

This special permit applies to the ***special permit segments*** listed in Appendix A. ***Special permit segments*** shall be divided into two (2) categories: ***Type A special permit segments*** and ***Type B special permit segments***.

Type A special permit segments include those ***special permit segments*** where there is a cluster, as described in 49 CFR § 192.5(c), of more than 10 buildings intended for human occupancy in a "class location unit" and for which the MAOP has not been confirmed in accordance with 49 CFR § 192.611(a). ***Type A special permit segments*** must be replaced so that the MAOP is commensurate with the present class location within five (5) years of issuance of this special permit. ***Type A special permit segments***[3] total 11.22 miles of pipe as described in Attachment A.

Type A special permit segments with pipe with integrity issues as determined by Conditions 6(c) and 14 or that have not been pressure tested in accordance with 49 CFR Part 192, Subpart J to 1.25 times MAOP of this special permit must be replaced within two and one-half (2½) years of the grant of this special permit or within two (2) years of assessment finding.

Type B special permit segments include those ***special permit segments*** where there is a cluster, as described in 49 CFR § 192.5(c), of 10 or fewer buildings intended for human occupancy in a "class location unit" and for which the MAOP has not been confirmed in accordance with 49 CFR § 192.611. ***Type B special permit segments***[4] total 37.78 miles of pipe as described in Attachment A.

---

[3] There are 11.22 miles of ***Type A special permit segments*** and of this total 10.59 miles must be replaced and 0.63 miles must be pressure tested as listed on Attachment A, see Condition 16 for pressure test requirements.

[4] There are 37.78 miles of ***Type B special permit segments*** and 3.84 miles of this total must be pressure tested as listed on Attachment A, see Condition 16 for pressure test requirements. Four (4) ***Type B special permit segments*** (KM segment number 103, 181, 310, and 311) are § 192.619(c) Grandfathered segments and will require pressure testing.

Subsequent to the issuance of this special permit, those ***special permit segments*** that have been pressure tested or replaced such that the MAOP has been made commensurate with the present class location as defined in 49 CFR § 192.611 would no longer be included in this special permit.

Special permit inspection area[5] – is defined as a one (1) mile continuous segment on both sides of the ***special permit segment*** (Type A and Type B) plus the footage in the ***special permit segment***. Appendix A lists the boundaries for the ***special permit inspection area*** associated with each ***special permit segment***. The TGP ***special permit inspection area*** totals 433.71 miles of pipe as described in Attachment A.

PHMSA hereby grants this special permit for the pipeline ***special permit segments*** listed in Appendix A 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-2016-0004 in the Federal Docket Management System (FDMS) located on the internet at www.Regulations.gov.

II. Conditions:

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

1) **Maximum Allowable Operating Pressure**: TGP must continue to operate the ***special permit segments*** at or below their existing MAOP as noted in Appendix A.

2) **Integrity Management Program**: TGP must incorporate the ***special permit inspection areas*** into its written integrity management program (IMP) as a *"covered segment"* in a *"high consequence area (HCA)"* in accordance with 49 CFR § 192.903[6].

3) **Close Interval Surveys**: TGP must perform a close interval survey (CIS) along the entire

---

[5] ***Special permit inspection areas*** throughout these conditions include ***special permit segments*** unless specifically defined as not applicable or if the ***special permit segment*** has more stringent conditions.

[6] TGP is not required to report the mileage included as part of this special permit in its annual report per the requirements of 49 CFR § 191.17, unless it is in a high consequence area.

length of all ***special permit inspection areas***[7] and remediate any areas of inadequate cathodic protection no later than three (3) years after the issuance of this special permit. However, a CIS need not be performed if TGP has performed a CIS and completed remediation[8] including damaged coating repair along the entire length of all ***special permit inspection areas*** less than seven (7) years[9] prior to the issuance of this special permit. If environmental permitting or right-of-way factors beyond TGP control should prevent the completion of the CIS within three (3) years from the issuance of this special permit, a CIS and subsequent remediation including coating repair 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 appropriate PHMSA OPS Region Director no later than three (3) months prior to the end of three (3) years after the issuance of this special permit and must receive a "no objection" from the PHMSA OPS Region Director for a delay. CIS remediation activities must be completed within one (1) year of the finding. Any extended evaluation and remediation schedules submitted to PHMSA from TGP must receive a "no objection" from the appropriate PHMSA OPS Region Director to implement an extended CIS and remediation interval.

4) **<u>Close Interval Surveys – Reassessment Interval</u>**: TGP must perform a periodic close interval survey (CIS) of the ***special permit inspection areas*** at the applicable reassessment interval(s) for a "covered segment" in accordance with 49 CFR Part 192, Subpart O, for reassessment intervals as contained in 49 CFR §§ 192.937(a) and (b) and 192.939, not to exceed a seven (7) year reassessment interval[10]. CIS data shall be integrated with in-line inspection (ILI) data. Condition 15(b) – Data Integration – gives a complete description of

---

7 Each condition that requires TGP to perform an action with respect to the ***special permit inspection areas*** shall also require TGP to perform that action on all ***special permit segments*** within such areas. ***Type A special permit segments*** that will be replaced within three (3) years of this special permit issuance do not require a CIS.

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

9 If 49 CFR § 192.939(a) integrity management reassessment interval should change from seven (7) years to some other reassessment interval under eight (8) years, TGP may use that reassessment interval instead of seven (7) years.

10 If 49 CFR § 192.939(a) integrity management reassessment interval should change from seven (7) years to some other reassessment interval under eight (8) years, TGP may use that reassessment interval instead of seven (7) years.

data integration information that an operator must maintain for a special permit in the ***special permit inspection areas*** which includes CIS and ILI data. CIS assessments within the reassessment interval are not required to be performed in the same year as ILI reassessments.

5) **<u>Cathodic Protection Reliability Improvement Plan</u>**: TGP shall implement a plan to improve cathodic protection reliability and perform inspections for stress corrosion cracking (SCC).
   a) Cathodic Protection Reliability Improvement Plan
      i) TGP must perform a periodic CIS of ***special permit inspection areas*** as part of Condition 4, Close Interval Surveys, with reassessment intervals at an increased frequency, not to exceed a seven (7) year reassessment interval with CIS data integrated with the most-recent in-line inspection data[11];
      ii) TGP must integrate the most current CIS data with in-line inspection results in the ***special permit inspection area*** in accordance with Condition 15(b) timing requirements;
      iii) Within 90 days of the issuance of this special permit, TGP must amend applicable sections of its operations and maintenance (O&M) manual(s) to prohibit future use of coating that is known to shield cathodic protection along the entire length of the ***special permit inspection areas***; and
      iv) TGP must perform a run comparison analysis of in-line inspection results subsequent to the baseline inspection in the ***special permit inspection areas*** to identify areas of external corrosion growth after each new tool run when the same in-line inspection vendor is used for consecutive inspections. Areas with corrosion growth over 30% in depth must be remediated within one (1) year of the finding or direct current voltage gradient (DCVG) survey run to locate problem coating areas within six (6) months of the finding with remediation completed within six (6) months of the DCVG survey.

[11] If 49 CFR § 192.939(a) integrity management reassessment interval should change from seven (7) years to some other reassessment interval under eight (8) years, TGP may use that reassessment interval instead of seven (7) years.

v) Within one (1) year of the issuance of this special permit, TGP must install cathodic protection remote monitoring units (RMUs) at all impressed current sources directly influencing the ***special permit segments***;

vi) TGP must configure the RMUs in the ***special permit segments*** with alarms to notify TGP immediately in the event of any interruption in cathodic protection current output; and

vii) TGP must respond and correct any interruption in cathodic protection current output immediately (within two (2) working days). If a systemic issue is present, then TGP must investigate and remediate the problem within one (1) month or less or TGP must receive a "no objection" from the appropriate PHMSA OPS Region Director for issues that require longer to remediate.

b) Stress Corrosion Cracking Inspections

i) TGP must review historical records to determine if SCC inspections have been performed in the ***special permit segments*** and from these inspections evaluate the threat of stress-corrosion cracking as part of the SCCDA Pre-Assessment Step in Condition 6(a).

ii) TGP must perform magnetic particle inspection on any pipe (with the exception of pipe coated with fusion-bonded or liquid-applied epoxy coatings, which are not at risk for SCC) excavated in the ***special permit inspection areas*** to evaluate the pipe for SCC where disbonded coating is removed in order to perform the inspection.

6) **Stress Corrosion Cracking Direct Assessment**: TGP must evaluate pipelines along the entire length of the ***special permit inspection areas*** for SCC as follows:

a) TGP must perform a stress corrosion cracking direct assessment (SCCDA) or other appropriate assessment method for SCC [such as pressure test or in-line inspection (ILI) with a crack detection tool] of pipelines along the entire length of all ***special permit inspection areas*** according to the requirements of 49 CFR § 192.929 and NACE SP 0204-2008 no later than three (3) years after of the issuance of this special permit. The SCCDA or other approved method must address high pH SCC and near neutral pH SCC. The SCCDA Pre-Assessment Step will include the results of all close-interval surveys and coating surveys required in Conditions 3, 4, and 5.

i) If environmental permitting or right-of-way factors beyond TGP control prevent the completion of the SCCDA survey and remediation within three (3) years from the issuance of this special permit, 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 appropriate PHMSA OPS Region Director no later than three (3) months prior to the end of three (3) years after the issuance of this special permit and must receive a "no objection" from the PHMSA OPS Region Director for a delay.

ii) TGP may eliminate this Condition 6(a), provided TGP provides an engineering assessment showing that the pipeline does not meet the criteria for either near neutral or high pH SCC in accordance with the applicable edition of the American Society of Mechanical Engineers Standard B31.8S, *"Managing System Integrity of Gas Pipelines"* (ASME B31.8S), Appendix A3, or NACE SP 0204-2008, *"Stress Corrosion Cracking (SCC) Direct Assessment Methodology"*, Section 1.2.1.1 and 1.2.2.

iii) A SCCDA need not be performed if TGP has performed a SCCDA of pipelines along the entire length of the ***special permit inspection areas*** within the timeframe for SCCDA re-assessments specified in 49 CFR Part 192, Subpart O, not to exceed seven (7) years[12] prior to the issuance of this special permit.

b) If the SCCDA required in Condition 6(a) demonstrates SCC, TGP must directly examine pipe in the ***special permit inspection areas*** for SCC using an accepted industry detection practice, such as dry or wet magnetic particle tests, anytime the pipelines are exposed for any reason, including damage prevention activities. Poor coating is coating losing adhesion to the pipe which is shown by falling off the pipe,

[12] If 49 CFR § 192.939(a) integrity management reassessment interval should change from seven (7) years to some other reassessment interval under eight (8) years, TGP may use that reassessment interval instead of seven (7) years.

and/or shields the cathodic protection. TGP must keep coating records[13] of all excavation locations for the ***special permit inspection areas*** to demonstrate the coating condition.

c) If SCC[14] activity is discovered by any means within the ***special permit inspection area*** in similar pipe and pipe coating vintage [in accordance with 49 CFR § 192.917(e)], or has had an in service or hydrostatic test SCC failure or leak; the ***special permit segment*** must be further assessed and mitigated, using one of the following methods, within one (1) year of finding SCC:

   i) Hydrostatic test program

      A. The SCC hydrostatic test program must be performed at a reassessment interval no greater than seven (7) calendar years (but may be at a lesser interval in accordance with the results of an engineering critical assessment) in the ***special permit segment***.

      B. If pipe in the ***special permit segment*** leaks or ruptures during a hydrostatic test due to SCC, all pipe in the ***special permit segment*** must be replaced with new pipe within 18 months of the completion of a successful SCC hydrostatic test. A successful SCC hydrostatic test must be completed prior to returning the ***special permit segment*** to operational service.

   ii) Crack detection tool assessment

      A. SCC detection tool must be run in the ***special permit inspection area***,

      B. All SCC[15] cracking found in the ***special permit segment*** must be replaced with new pipe within one (1) year of finding SCC,

   iii) Operating pressure lowered to 60% of the specified minimum yield strength (SMYS),

   iv) Replace all affected pipe to meet 49 CFR § 192.611 in the ***special permit segment***.

---

[13] The records must include, at a minimum, a description of the TGP's detection procedures, records of finding, and mitigation procedures implemented for the excavation.

[14] "SCC" activity shall be defined as over both 10 percent wall thickness depth and 2-inches in length.

[15] "SCC" activity shall be defined as over both 10 percent wall thickness depth and 2-inches in length.

d) If any SCC activity is discovered in the ***special permit inspection area***, TGP must submit a SCC remediation plan to the appropriate PHMSA OPS Region Director with a copy to the Director, PHMSA OPS Engineering and Research Division no later than 60 days after the finding of SCC:

    i) That meets Condition 6(c), including a SCC remediation/repair plan with SCC characterization and timing, or

    ii) Technical justification that shows that the threat for SCC in the ***special permit segment*** is being addressed.

7) **<u>O&M Manual – In-line Inspections, Close Interval Survey Inspections, and Reassessment Intervals</u>**: TGP must amend applicable sections of its operations and maintenance (O&M) manual(s) to incorporate the in-line inspection (ILI), close interval inspections (CIS), and reassessment intervals by the appropriate integrity assessment method including both high resolution metal loss and deformation/geometry tools along the entire length of the ***special permit inspection areas*** at a frequency consistent with 49 CFR Part 192, Subpart O, but not to exceed a seven (7) year reassessment interval[16].

8) **<u>In-Line Inspection Initial Assessment</u>**: TGP must perform integrity assessments along the entire length of the ***special permit inspection areas*** using appropriate assessment methods based on threats identified during the risk assessment process including both high resolution magnetic flux leakage (HR-MFL) and either HR-geometry or HR-deformation tools. If integrity assessments have not been performed within seven (7) years prior to the issuance of this special permit, TGP must complete initial integrity assessments along the entire length of the ***special permit inspection areas*** within three (3) years of the issuance of this special permit. Subsequent integrity assessments along the entire length of the ***special permit inspection areas*** must conform to the required maximum reassessment intervals specified in 49 CFR § 192.939, but may not exceed a seven (7) year reassessment interval[17].

---

[16] If 49 CFR § 192.939(a) integrity management reassessment interval should change from seven (7) years to some other reassessment interval under eight (8) years, TGP may use that reassessment interval instead of seven (7) years.

[17] If 49 CFR § 192.939(a) integrity management reassessment interval should change from seven (7) years to some other reassessment interval under eight (8) years, TGP may use that reassessment interval instead of seven (7) years.

9) **Integrity Reassessment Intervals**: TGP must schedule integrity reassessment dates for the entire length of the ***special permit inspection areas*** according to 49 CFR § 192.939 by adding the required time interval to the previous assessment date, but may not exceed a seven (7) year reassessment interval[18].

10) **High Consequence Area Assessments**: TGP must not let this special permit be a basis for deferring any of its assessments for HCAs in accordance with 49 CFR Part 192, Subpart O.

11) **Annual Reports to PHMSA**: Within three (3) months following the issuance of this special permit and annually[19] thereafter, TGP must report the following to the appropriate PHMSA OPS Region Director with copies to the Deputy Associate Administrator, PHMSA Field Operations; Deputy Associate Administrator, PHMSA Policy and Programs; Director, PHMSA Engineering and Research Division; and Director, PHMSA Standards and Rulemaking Division:

    a) The number of new residences, other structures intended for human occupancy and public gathering areas built within the special permit segment and also within one (1) mile on either end of the ***special permit segment***.
    b) 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 segment***.
    c) Any reportable incident or 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 areas***.

---

[18] If 49 CFR § 192.939(a) integrity management reassessment interval should change from seven (7) years to some other reassessment interval under eight (8) years, TGP may use that reassessment interval instead of seven (7) years.

[19] 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 modified Special Permit dated November, 2012, must be received by PHMSA no later than November 30, each year beginning in 2013.

d) Summary report of any fatigue analysis performed on all in-service, non-remediated dents over 6% and with total strain $\leq$ 5%, as required in Condition 13(b).

e) Annual data integration information, as required in Condition 15(b) - Data Integration must be submitted beginning with the 2nd annual report that includes an annual overview of any new threats, or if requested by PHMSA a full information package.

f) Any mergers, acquisitions, transfer of assets, or other events affecting the regulatory responsibility of the company operating the pipeline.

g) An updated Appendix A reflecting changes in ***Special Permit Segment*** boundaries including extensions, deletions, or modifications.

h) In the first annual report, TGP must describe the estimated economic benefits of the special permit including both the capital and operational costs avoided from not replacing the pipe and the estimated incremental operational costs of any inspection program requirements of the special permit for the 5-year grant period that are not already being conducted by TGP through their operational procedures.

i) In the first annual report, TGP must describe whether the public benefits from energy availability. This should address the benefits of any avoided disruptions as a consequence of pipe replacement and the benefits of maintaining system capacity.

12) **Interference Currents Control**: TGP must address induced alternating current (AC) from parallel electric transmission lines and other interference issues such as direct current (DC) in the ***special permit inspection areas*** that may affect the pipeline. An induced AC or DC program and remediation plan 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.

a) At least once every seven (7) years not exceeding 90 months, TGP must perform an engineering analysis on the effectiveness of the AC and DC mitigation measures and must evaluate any AC interference between 20 and 50 Amps per meter squared. In evaluating such interference, TGP must integrate AC interference data with the most recent ILI results to determine remediation measures. Any AC interference between 20 and 50 Amps per meter squared must be remediated within six (6) months of the finding. If TGP does not remediate AC interference between 20 and 50 Amps per meter squared, TGP must provide an engineering justification for not remediating such interference to the appropriate PHMSA OPS Region Director, who may accept or reject the justification and require remediation.

b) In ***special permit inspection areas*** with co-located high voltage alternating current (HVAC) power lines, TGP must take interference readings (continuous 24-hour recordings) during the calendar quarter of the known or anticipated highest voltage reading. If there are any significant increases to the amount of electricity/current flowing in any co-located high voltage alternating current (HVAC) power lines, such as from additional generation, a voltage up-rating, additional lines, or new or enlarged substations, TGP must perform an AC mitigation survey along the entire co-located pipeline ***special permit inspection area*** right of way within six (6) months of any such change.

c) Within six (6) months of the engineering analysis, TGP must remediate any AC interference greater than 50 Amps per meter squared. Remediation means the implementation of performance measures including, but not limited to, additional grounding along the pipeline to reduce interference currents. Any DC interference that results in CP levels that do not meet the requirements of 49 CFR Part 192, Subpart I, must be remediated within six (6) months of this evaluation.

d) If environmental permitting or right-of-way factors beyond TGP control prevent the completion of remediation within six (6) months of the interference evaluation, 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 appropriate PHMSA OPS Region Director no later than one (1) month prior to the end of the six (6) months completion date. Any extended evaluation and remediation schedules submitted to PHMSA from TGP must receive a "no objection" from the appropriate PHMSA OPS Region Director.

13) **Anomaly Evaluation and Repair**:

a) **General**: TGP must account for ILI tool tolerance and corrosion growth rates in scheduled response times and repairs and document and justify the values used. TGP must demonstrate ILI Tool tolerance accuracy for each ILI Tool run by usage of calibration excavations and unity plots that demonstrate ILI Tool accuracy to meet the tool accuracy specification provided by the vendor (typical for depth within +10% accuracy for 80% of the time). 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 120 days of an ILI Tool run for each type ILI Tool (HR-geometry, HR-deformation, or HR-MFL).

i) ILI tool evaluations for metal loss must use "6t x 6t" interaction criteria (or more conservative criteria) for determining anomaly failure pressures and remediation response timing with *"6t"* being pipe wall thickness times six.

b) **Dents**: TGP must repair dents in the ***special permit segment*** and ***special permit inspection area*** in accordance with 49 CFR § 192.933 if it is located in a HCA and in accordance with 49 CFR §§ 192.933(a)-(c) repair criteria and "Table 1 – Special Requirements for Scheduling Remediation of Dents" if it is not located in an HCA.

Table 1 – Special Requirements for Scheduling Remediation of Dents

Defect Type	Orientation	Required Response Special Permit Segment	Required Response Special Permit Inspection Area
Dent Associated with Cracks or Stress Risers	Top or Bottom	Immediate	Immediate
Dent Associated with Metal Loss	Top or Bottom	1 Year Scheduled	2 Year Scheduled
Plain Dent > 6 % OD Deep or that exhibits total strain > 5 %	Top	1 Year Scheduled	2 Year Scheduled
Plain Dent > 2% OD Deep Associated with Girth or Seam Weld	Top or Bottom	1 Year Scheduled	2 Year Scheduled
Plain Dent > 6 % OD Deep and that exhibits total strain ≤ 5 %	Top or Bottom	Monitored	Monitored
Plain Dent ≤ 2% OD Deep Associated with Girth or Seam Weld	Top or Bottom	Monitored	Monitored

Definitions

1. Plain Dent – Dent without metal loss, crack or stress riser.
2. Immediate Response – Reduce pressure to 80% of recent maximum pressure. Immediate dents require an immediate pressure reduction and / or restriction and examination and remediation as required in conformance with TGP requirements within five (5) calendar days from the date of discovery. If the remediation cannot be met according to the response schedule, a technical justification must be prepared that explains the reasons why the remediation cannot be met according to the schedule and indicate how the changed schedule will not jeopardize public safety. Any extended response schedules must be submitted to PHMSA from TGP within 14 days of pressure reduction after discovery and must receive a "no objection" from the appropriate PHMSA OPS Region Director.
3. Scheduled Response – Schedule excavation within an appropriate time frame based on the opinion of the TGP SME (not to exceed 365 days for ***special permit segments*** and 730 days for ***special permit inspection areas***).
4. Monitored – Catalog data for future monitoring.
5. Top – located between 8 o'clock and 4 o'clock positions (upper 2/3 of the pipe).
6. Bottom – located between 4 o'clock and 8 o'clock positions (bottom 1/3 of pipe).

Special permit segments and ***special permit inspection areas*** must have a HR-geometry or HR-deformation tool inspection as part of the initial ILI or these ILI inspections must be completed within two (2) years after issuance of this special permit. All dent repairs must be made in accordance with 49 CFR §§ 192.933(a) through (c) repair criteria and "Table 1 – Special Requirements for Scheduling Remediation of Dents" on page 13 of 24. TGP must conduct the following fatigue analysis of dents in ***special permit segments*** and ***special permit inspection areas:***

i) **TGP** must conduct a fatigue analysis of all in-service, non-remediated dents above 6% and with total strain ≤ 5% after each high resolution MFL and high resolution caliper or deformation ILI evaluations. Dent fatigue analysis must include as a minimum the following: gross geometry of dent; orientation of dent; soil cover and type; pressure and temperature; including cycles; and stress and strains caused by terrain. The fatigue analysis must be completed within the time frames in "Table 1 – Special Requirements for Scheduling Remediation of Dents" of this special permit.
ii) The overall remaining fatigue life of all in-service, non-remediated dents over 6% and with total strain ≤ 5% must be either twice the designated

remaining life of the pipeline or at least 500 years.

c) **Investigation and Repair Criteria**: In-line inspection anomalies in the ***special permit inspection areas*** with a safe pressure less than MAOP (e.g. Failure Pressure Ratio (FPR) < 1.39) or an anomaly depth greater than 80% of pipe wall thickness require an immediate pressure reduction and/or restriction and continuous action until the anomaly is examined, evaluated, and remediated.

d) **Response Time for ILI Results**: TGP will follow Kinder Morgan O&M Procedure 916 (In-Line Inspections)[20] for excavating, investigating, and remediating anomalies[21] based on ILI data results in accordance with 49 CFR §§ 192.485 and 192.933. TGP 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*** and ***special permit inspection areas***:
  - **Immediate response:** Any anomaly within a ***special permit segment*** and ***special permit inspection areas*** operating up to 72% SMYS that meets either: (1) an FPR equal to or less than 1.1; or (2) an anomaly depth equal to or greater than 80% wall thickness loss.
  - **One-year response:** Any anomaly within a ***special permit segment*** and ***special permit inspection areas*** with original Class 1 location pipe in a Class 3 location (cluster area) operating up to 72% SMYS that meets either: (1) an FPR less than 1.39; or (2) an anomaly depth greater than 40% wall thickness loss.
  - **Monitored response:** Any anomaly within a ***special permit segment*** and ***special permit inspection areas*** with original Class 1 location pipe in a Class 3 location (cluster area) operating up to 72% SMYS that meets both: (1) an FPR equal to or greater than 1.39; or (2) an anomaly depth equal to or less than 40% wall thickness loss.

e) ***Special permit segments*** and ***special permit inspection areas:*** Upon issuance of this

[20] The requirements of this Special Permit and 49 CFR §§ 192.485 and 192.933 supersedes Kinder Morgan O&M Procedure 916 (In-Line Inspections).

[21] The timing intervals for dent remediation in non-HCAs are in Condition 6(b).

special permit, TGP must implement the repair and remediation of any pipe anomalies or dents that are not in compliance with Condition 13 based upon existing ILI assessment results from the high resolution MFL and geometry/deformation tools used to previously assess pipelines in the ***special permit segments*** and ***special permit inspection areas***. TGP must review existing ILI assessment results within 18 months from the issuance of this special permit according to the following schedule: 30% of pipelines in the ***special permit segments*** and ***special permit inspection areas*** must be reviewed within six (6) months of the issuance of this Special Permit, 65% of pipelines in the ***special permit segments*** and ***special permit inspection areas*** must be reviewed within 12 months of the issuance this special permit, and 100% of pipelines in the ***special permit segments*** and ***special permit inspection areas*** must be reviewed within 18 months of the issuance of this Special permit. Anomalies and dents discovered during this review must be remediated in accordance with Condition 13 timing requirements.

14) **Pipe Seam Evaluations**:

a) TGP must identify any pipe in the ***special permit segment*** that may be susceptible to pipe seam issues (e.g., due to the vintage of the pipe, the manufacturing process of the pipe, or other issues). If TGP identifies a pipe seam issue, TGP must complete Condition 14(a). If the engineering analysis required in Condition 14(a) reveals that there is a threat to the pipeline, then TGP must complete all of the applicable condition requirements in Condition 14(a)(ii), (a)(iii), (a)(iv), (a)(v), (a)(vi), (a)(vii), and (a)(viii):

i) TGP must perform an engineering analysis to determine if there are any pipe seam threats on pipelines located in the ***special permit segment***. 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 pipelines located in the ***special permit segment*** are not a threat to the integrity of the pipeline, TGP does not have to complete Conditions 14(a)(ii) through (vii), but must complete Conditions 14(a)(viii) and (ix).

ii) If a 49 CFR Part 192, Subpart J hydrostatic test has not been performed, the ***special permit segments*** must be hydrostatically tested to a minimum pressure of 100 percent SMYS, in accordance with 49 CFR Part 192, Subpart J requirements for eight (8) continuous hours, within two and one-half (2½) years 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[22] experienced to verify that it is not indicative of a systemic issue. The results of this root cause analysis must be reported to the appropriate PHMSA Region Director with a copy to the Director, PHMSA Engineering and Research Division, within 60 days of the failure;

iii) ***Special permit segments*** with low frequency electric resistance welded (LF-ERW) pipe with a history of leaks or failures without a "spike test" within the ***special permit inspection area*** must be pressure tested[23] with a "spike test" within two and one-half (2½) years of the issuance of this special permit.

iv) ***Special permit segments***[24] with pressure tests less than 1.25 times MAOP that may be susceptible to pipe seam issues must be tested with a Subpart J pressure test within two and one-half (2½) years of issuance of this special

[22] A root cause analysis, including metallurgical examination of the pipe, must be performed for any leaks that are removed from the ***special permit segment***.

[23] A root cause analysis, including metallurgical examination of the pipe, must be performed for any pressure test failures or leaks from the ***special permit segment***.

[24] TGP must implement the replacement of all Type A special permit segments as defined on page 2 of this special permit as noted: "Type A special permit segments with pipe with integrity issues as determined by Conditions 6 and 14 or that have not been pressure tested in accordance with 49 CFR Part 192, Subpart J to 1.25 times MAOP of this special permit must be replaced within two and one-half (2½) years of the grant of this special permit or within two (2) years of assessment finding."

permit or the pipe must be replaced with pipe that meets § 192.619 within two and one-half (2½) years of issuance of this special permit. If the pipe is then commensurate with the Class location in accordance with § 192.611(a)(3)(ii) the segment is no longer part of this Special Permit.

v) 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 two and one-half (2½) years after the issuance of this special permit on the ***special permit segment*** pipeline[25];

vi) If the pipeline in any ***special permit segment*** has pipe seam conditions as noted below in (A), (B), or (C), such ***special permit segment*** pipeline shall not be eligible for this special permit:

A) has unknown manufacturing processes without the greater of a 49 CFR Part 192, Subpart J hydrostatic test or a 1.25 times MAOP pressure test, or

B) has low fracture toughness pipe that will not ensure ductile fracture and arrest, or

C) 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].

vii) If the pipeline in any ***special permit segment*** has a reduced longitudinal joint seam factor, below 1.0, as defined in 49 CFR § 192.113 the ***special permit segment*** pipeline must be replaced.

viii) Pipe in the ***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.

[25] A root cause analysis, including metallurgical examination of the pipe, must be performed for any pressure test failures or leaks from the ***special permit segment***.

b) TGP must submit a seam remediation plan for the ***special permit segments*** to the appropriate PHMSA Region Director no later than 30 days after finding a seam leak in the ***special permit segment***:

   i) Longitudinal weld seam remediation/repair plan that meets Condition 14(a) and includes either replacement, hydrostatic testing, or in-line inspection (ILI), and timing of the plan not to exceed six (6) months, or

   ii) Technical justification that shows that the ***special permit segment*** is not at risk for future longitudinal seam leaks or failures.

15) ***Special Permit Segment*** **Specific Conditions**: TGP must comply with the following requirements.

a) **Line-of-Sight Markers**: TGP must install and maintain line-of-sight markings on the pipeline in the ***special permit inspection areas*** except in agricultural areas or large water crossings such as lakes where line-of-sight signage is not practical. Line-of-sight markers must be installed within three (3) months of issuance of this special permit and replaced as necessary by TGP within 30 days after identification.

b) **Data Integration**: TGP must maintain data integration of special permit condition findings and remediation in the ***special permit inspection areas***. Data integration must include the following information: Pipe diameter, wall thickness, grade, and seam type; pipe 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; rectifier readings; cathodic protection test point survey readings; AC/DC interference surveys; pipe coating surveys; pipe coating and anomaly evaluations from pipe excavations; stress corrosion cracking (SCC) excavations and findings; and pipe exposures from encroachments. 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 initial filing and every three (3) years thereafter).

i) Data integration documentation and drawings to meet Condition 15(b) must be completed and must be submitted, if requested by PHMSA, beginning with the 2nd annual report of this special permit with four (4) years of prior data.

ii) Data integration must be updated on an annual basis and with at least an annual review of integrity issues to be remediated.

c) **Pipe Properties Testing**: TGP must test pipe in each ***special permit segment*** that does not meet Condition 16(b) as follows:

i) Develop and implement procedures for conducting non-destructive or destructive tests, examinations, and assessments for ***special permit segments*** without pipe material records within 12 months of issuance of this special permit;

ii) A minimum of two (2) destructive or non-destructive test methods must be performed at an excavation site for each ***special permit segment***. For each ***special permit segment***, TGP will conduct one (1) non-destructive yield test assessment using TD Williamson test procedures and ball indention methodology[26], or equivalent, and secondly, confirm yield strength through diameter tape measurements. Should non-destructive testing of pipe material properties show that the pipe wall thickness is not within API 5L specification tolerances and the pipe grade is under the strength requirements of API 5L by three (3) KSI or more, then the yield strength of that individual pipe shall be confirmed using destructive test methods or the ***special permit segment*** pipe must be removed within 18 months of issuance of this special permit. Acceptance limits for the diameter tape measurements shall be in accordance with PHMSA Advisory Bulletin ADB-09-01.

iii) Assessments must be made for each unique combination of the following attributes with missing mill test reports (MTRs) or mill inspection reports (i.e. Moody Engineering Reports): wall thicknesses (within 10 percent of the smallest wall thickness in the population), grade, manufacturing process, pipe

[26] Non-destructive assessment method and procedures must be submitted to PHMSA OPS Region Director and PHMSA OPS Director of Engineering and Research Division for review and "no objection".

manufacturing dates (within a two (2) year interval) and construction dates (within a two (2) year interval).

iv) The material properties determined from either destructive or non-destructive tests required by this Condition cannot be used to raise the original grade or specification of the material, which must be based upon the applicable standard referenced in 49 CFR § 192.7.

v) For future ***special permit segments*** with missing MTRs or mill inspection reports, the above methodology shall be applied or TGP may elect to remove pipe joints for destructive testing[27]. Such testing shall be performed within one (1) year of identification of the new ***special permit segment***.

d) **Pipeline System Flow Reversals**: For long term pipeline system flow reversals exceeding 90 days where either 49 CFR § 192.619(a)(1) or § 192.611 MAOP for class location changes are exceeded[28] in a ***special permit segment***, TGP shall prepare a written plan that corresponds to those applicable criteria identified in PHMSA Advisory Bulletin (ADB-2014-04), "Guidance for Pipeline Flow Reversals, Product Changes and Conversion of Service" issued on September 18, 2014 (79 FR 56121, Docket PHMSA-2014-0400). The written flow reversal plan must be submitted to the appropriate PHMSA OPS Regional Director with a copy of the plan submitted to the Federal Docket for this special permit at www.regulations.gov. TGP must receive a "no objection" from the appropriate PHMSA OPS Region Director prior to implementing the pipeline system flow reversal through the ***special permit segment.***

e) **Environmental Assessments and Permits**: TGP must evaluate the potential environmental consequences and affected resources of any land disturbances and water body crossings needed to implement the special permit conditions for a ***special permit segment*** or a ***special permit inspection area*** prior to the disturbance. If a land disturbance or water body crossings is required, TGP must obtain and adhere to all applicable (Federal, State, and Local) environmental permit requirements when conducting the special permit conditions activity.

---

[27] TGP must prepare a procedure in accordance with Condition 15(c) for material documentation and submit to PHMSA's OPS Region Director for "no objection".

[28] 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.

16) **Documentation**: TGP must maintain the following records for each ***special permit segment*** and ***special permit inspection areas:***

a) Documentation showing that each ***special permit segment*** has received a 49 CFR § 192.505, Subpart J, hydrostatic test for eight (8) continuous hours and at a minimum pressure of 1.25 times MAOP (1.25 x MAOP). If TGP does not have hydrostatic test documentation, then:
   - ***Type A special permit segments*** must be hydrostatically tested to meet this requirement within two and one-half (2½) years of the issuance of this special permit, and
   - ***Type B special permit segments*** must be hydrostatically tested to meet this requirement within five (5) years of the issuance of this special permit.

b) Documentation of mechanical and chemical properties including pipe toughness (mill test reports) showing that the pipe in each ***special permit segment*** 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 Part 192 code 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 use at that time.

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 areas.***

17) **Extension of Special Permit Segments**: PHMSA may extend each original ***Type B special permit segment*** to include contiguous segments of pipeline on either side of the ***Type B special permit segment*** where, following the issuance of this special permit, an increase in population density indicates a change in class location. ***Type A special permit segments*** may not be extended. ***Type B special permit segments*** may not be extended if the extension would redefine the extended segment as a ***Type A special permit segment*** as described in Section I of this special permit. TGP must:

a) Provide notice to the Director, PHMSA OPS Standards and Rulemaking Division;

Director, PHMSA OPS Engineering and Research Division; and appropriate PHMSA OPS Region Director of a requested ***special permit segment or extension***[29] 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 49 CFR § 192.611(d) timing limits, and must include data integration (see Condition 15(b)) and information on the potential environmental impacts of the extension to determine whether an environmental assessment is required for the ***special permit segment extension***.

b) Complete all inspections and remediation of the proposed ***special permit segment extension*** to the extent required of the original ***special permit segment***.

c) Comply with all the special permit conditions and limitations included herein to all future ***special permit segments or extensions***.

d) ***New Type A special permit segments*** created following the grant date of this special permit must be replaced or pressure tested so that the MAOP is commensurate with the present class location as defined in 49 CFR § 192.611 within two (2) years of the class location change.

e) Comply with all conditions of this special permit for the contiguous new ***special permit segments or extensions*** required for implementation and certification in accordance with 49 CFR § 192.611(d) timing limits, including submittal of documents to PHMSA required in Condition 18 - Certification.

18) **Certification**: A senior executive officer, vice president or higher, of TGP must certify in writing the following:

a) TGP pipeline ***special permit inspection areas*** and ***special permit segments*** meet the conditions described in this special permit,

b) The written manual of O&M procedures (required by § 192.605) for the TGP pipeline has been updated to include all additional requirements of this special permit; and

c) TGP has implemented all Conditions as required by this special permit.

---

[29] For a new ***special permit segment or extension*** to be considered by PHMSA, TGP must notify the appropriate PHMSA OPS Region Director to determine the need for a draft environmental assessment.

TGP must send the certifications required in Condition 18(a) through (c) with completion date, compliance documentation summary, and the required senior executive signature and date of signature to the PHMSA OPS Associate Administrator with copies to the Deputy Associate Administrator, PHMSA OPS Policy and Programs; appropriate PHMSA OPS Region Director; Director, PHMSA OPS Standards and Rulemaking Division; Director, PHMSA OPS Engineering and Research Division; and to the Federal Register Docket (PHMSA-2016-0004) at www.Regulations.gov within one (1) year of the issuance date of this special permit.

III. Limitations:

PHMSA modifies this special permit subject to the following limitations:

1) PHMSA has the sole authority to make all determinations on whether TGP has complied with the specified conditions of this special permit.

2) Failure to submit the certifications required by Condition 18 within the time frames specified may result in revocation of this special permit.

3) PHMSA may revoke, suspend or modify a special permit based on any finding listed in 49 CFR § 190.341(h)(1) and require TGP to comply with the regulatory requirements in 49 CFR § 192.611. As provided in 49 U.S.C. Chapter 601 and 49 CFR Part 190, PHMSA may also issue an enforcement action for failure to comply with this Order. Any work plans and associated schedules shall be automatically incorporated into this order and are enforceable in the same manner.

4) Should PHMSA revoke, suspend, or modify a special permit under 49 CFR § 190.341(h)(1), PHMSA will notify TGP in writing of the proposed action and provide TGP an opportunity to show cause why the action should not be taken. In accordance with 49 CFR § 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.

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 TGP sells, merges, transfers, or otherwise disposes of the assets known as the ***special permit segments*** or the ***special permit segment extension***, TGP 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 to limit it to a term of no more than five (5) years from the issuance date. If TGP elects to seek renewal of this special permit, as modified, TGP must submit its renewal request at least 180 days prior to expiration of the five (5) year period to the PHMSA Associate Administrator with copies to the Deputy Associate Administrator, PHMSA Policy and Programs; appropriate PHMSA OPS Region Director; Director, PHMSA OPS Standards and Rulemaking Division; 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 11 (Annual Report) above and must demonstrate that the special permit is still consistent with pipeline safety. PHMSA may seek additional information from TGP prior to granting any request for special permit renewal.

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

Issued in Washington, DC on September 1, 2016.

Alan K. Mayberry,
Acting Associate Administrator for Pipeline Safety

PHMSA REGION	PHMSA No.	KM No.	State	County	Line Name	Special Permit Segment Stationing (Beginning) Valve - Station	Special Permit Segment Stationing (Ending) Valve - Station	Special Permit Segment Type	Special Permit Inspection Area Stationing (Beginning) Valve - Station	Special Permit Inspection Area Stationing (Ending) Valve - Station	Class (present)	Class (pipe)	HCA	Latest HCA Assessment and Date	Special Permit Inspection Area Length (ft)	Special Permit Segment Length not meeting present Class (ft)	Replace Length (ft)	Pressure Test Length (ft)	Dwellings in length not meeting present Class	Pipe Diameter (in)	MAOP (psig)
SOUTHERN	1	69	KY	MADISON	100-1	102-1A - 68849	102-1A - 69473	B	102-1A - 63569	102-1A - 74753	3	1	NO	N/A	11183.76	623.76	543.90	79.86	3	24	750
SOUTHERN	2	70	KY	MADISON	100-1	102-1A - 71157	102-1A - 71170	B	102-1A - 65877	102-1A - 76450	3	1	NO	N/A	10572.7	12.70	12.70	0.00	1	24	750
SOUTHERN	3	71	KY	MADISON	100-1	102-1A - 77036	102-1A - 77204	B	102-1A - 71756	102-1A - 82484	3	1	NO	N/A	10728.34	168.34	168.34	0.00	1	24	750
SOUTHERN	4	72	KY	BATH	100-2	108-2 - 33270	108-2 - 33876	B	108-2 - 27990	108-2 - 39156	3	1	NO	N/A	11166.6	606.60	606.60	0.00	6	26	750
SOUTHERN	5	73	KY	BATH	100-2	108-2 - 33922	108-2 - 35519	A	108-2 - 28642	108-2 - 40799	3	1	NO	N/A	12156.9	1,596.90	1,596.90	0.00	11	26	750
SOUTHERN	6	74	KY	BATH	100-2	108-2 - 40523	108-2 - 42039	B	108-2 - 35243	108-2 - 47319	3	1	NO	N/A	12075.3	1,515.30	1,515.30	0.00	6	26	750
SOUTHERN	7	75	KY	BATH	100-2	108-2 - 44555	108-2 - 44899	B	108-2 - 39275	109-2 - 597	3	1	NO	N/A	10904.2	344.20	344.20	0.00	7	26	750
SOUTHERN	8	76	KY	ROWAN	100-2	109-2 - 1131	109-2 - 1467	B	108-2 - 45434	109-2 - 6747	3	1	NO	N/A	10895.85	335.85	335.85	0.00	1	26	750
SOUTHERN	9	77	KY	ROWAN	100-2	109-2 - 19148	109-2 - 22306	A	109-2 - 13868	109-2 - 27586	3	1	NO	N/A	13717.39	3,157.39	3,157.39	0.00	11	26	750
SOUTHERN	10	78	KY	MADISON	100-3	102-3 - 53420	102-3 - 54095	B	102-3 - 48140	103-3 - 5236	3	1	NO	N/A	11234.03	674.03	674.03	0.00	10	30	750
SOUTHERN	11	79	KY	MADISON	100-3	103-3 - 1904	103-3 - 2440	B	102-3 - 50762	103-3 - 7720	3	1	NO	N/A	11096.3	536.30	536.30	0.00	2	30	750
SOUTHERN	12	80	KY	MADISON	100-3	103-3 - 8570	103-3 - 9377	B	103-3 - 3290	103-3 - 14657	3	1	YES	ILI - 2008	11366.72	806.72	806.72	0.00	1	30	750
SOUTHERN	13	82	KY	ROWAN	100-3	108-3 - 52941	108-3 - 53995	B	108-3 - 47661	109-3 - 4870	3	1	NO	N/A	11614.07	1,054.07	1,054.07	0.00	10	26	750
SOUTHERN	14	83	KY	ROWAN	100-3	108-3 - 54035	108-3 - 54402	B	108-3 - 48755	109-3 - 5277	3	1	NO	N/A	10926.6	338.70	338.70	0.00	10	26	750
SOUTHERN	15	84	KY	ROWAN	100-3	109-3 - 472	109-3 - 1385	B	108-3 - 49597	109-3 - 6665	3	1	NO	N/A	11472.96	912.96	912.96	0.00	6	26	750
SOUTHERN	16	85	KY	ROWAN	100-3	109-3 - 24240	109-3 - 27383	A	109-3 - 18960	109-3 - 32663	3	1	NO	N/A	13702.35	3,142.35	3,130.65	11.70	16	26	750
SOUTHERN	17	86	KY	BOYD	100-3	112-3 - 47754	112-3 - 48425	B	112-3 - 42474	112-3A - 53705	3	1	NO	N/A	11230.87	655.37	655.37	0.00	1	26	790
SOUTHERN	18	87	KY	BOYD	100-3	112-3A - 48525	112-3A - 49019	B	112-3 - 43245	112-3A - 54299	3	1	YES	ILI/Caliper - 2009	11054.4	494.40	494.40	0.00	1	26	790
SOUTHERN	19	88	KY	MADISON	100-4	103-4 - 15933	103-4 - 16455	B	103-4 - 10653	103-4 - 21735	3	1	NO	N/A	11081.39	521.39	521.39	0.00	1	30	750
SOUTHERN	20	89	KY	MADISON	100-4	103-4 - 17254	103-4 - 17861	B	103-4 - 11974	103-4 - 23141	3	1	YES	MFL/Caliper - 2013	11167.56	607.56	607.56	0.00	2	30	750
SOUTHERN	21	90	KY	MADISON	800-2	874-2 - 69802	874-2 - 71493	B	874-2 - 64522	874-2 - 76773	3	1	NO	N/A	12250.82	1,690.82	1,690.82	0.00	2	36	936
SOUTHWEST	22	100	LA	SABINE	100-1	36-1 - 45060	36-1 - 46910	A	36-1 - 39780	36-1 - 52190	3	1	NO	N/A	12409.64	1,849.64	1,467.94	381.70	18	24	750
SOUTHWEST	23	101	LA	SABINE	100-1	36-1 - 47580	36-1 - 48240	B	36-1 - 42300	36-1 - 53520	3	1	NO	N/A	11219.8	659.80	337.90	321.90	4	24	750
SOUTHWEST	24	102	LA	NATCHITOCHES	100-1	39-1 - 57784	39-1 - 58902	B	39-1 - 52504	39-1 - 64182	3	1	NO	N/A	11678.3	1,118.30	1,118.30	0.00	4	24	750
SOUTHWEST	25	103	LA	NATCHITOCHES	100-1	40-1D - 25649	40-1D - 26260	B	40-1D - 20369	41-1 - 1753	3	2	NO	N/A	11170.56	610.76	0.00	610.76	9	24	750
SOUTHWEST	26	105	LA	SABINE	100-2	36-2 - 45462	36-2 - 47125	A	36-2 - 40182	36-2 - 52405	3	1	NO	N/A	12223.31	1,653.31	1,126.01	527.30	15	30	750
SOUTHWEST	27	106	LA	SABINE	100-2	36-2 - 47604	36-2 - 47906	B	36-2 - 42324	36-2 - 53186	3	1	NO	N/A	10862.5	302.50	302.50	0.00	2	30	750
SOUTHWEST	28	108	LA	NATCHITOCHES	100-2	39-2 - 57758	39-2 - 58879	B	39-2 - 52478	39-2 - 64159	3	1	NO	N/A	11681.16	1,121.16	1,121.16	0.00	4	31	604
SOUTHWEST	29	109	LA	OUACHITA	100-2	47-2D - 10183	47-2D - 11104	B	47-2D - 4903	47-2D - 16384	3	1	NO	N/A	11480.8	920.80	920.80	0.00	3	26	750
SOUTHWEST	30	110	LA	SABINE	100-3	36-3 - 45072	36-3 - 46877	A	36-3 - 39792	36-3 - 52157	3	1	NO	N/A	12364.93	1,804.93	1,558.23	246.70	15	30	750
SOUTHWEST	31	111	LA	SABINE	100-3	36-3 - 47467	36-3 - 48221	B	36-3 - 42187	36-3 - 53501	3	1	NO	N/A	11313.9	753.90	306.70	447.20	2	30	750
SOUTHWEST	32	113	LA	NATCHITOCHES	100-3	39-3 - 57763	39-3 - 58870	B	39-3 - 52483	39-3 - 64150	3	1	NO	N/A	11666.96	1,106.96	1,106.96	0.00	5	30	750
SOUTHWEST	33	115	LA	OUACHITA	100-3	47-3D - 10212	47-3D - 11459	B	47-3D - 4932	47-3D - 16739	3	1	NO	N/A	11806.61	1,246.61	1,246.61	0.00	3	30	750
SOUTHWEST	34	116	LA	OUACHITA	100-4	47-4D - 9988	47-4D - 11402	B	47-4D - 4708	47-4D - 16682	3	1	NO	N/A	11974.14	1,414.14	1,373.54	40.60	3	30	750
SOUTHWEST	35	117	LA	VERMILION	500-1	511-1 - 8439	511-1 - 10644	A	511-1 - 3167	511-1 - 15924	3	1	YES	MFL/Caliper - 2008	12765.49	2,205.49	2,205.49	0.00	17	24	973
SOUTHWEST	36	118	LA	VERMILION	500-1	511-1 - 10843	511-1 - 11716	B	511-1 - 5572	511-1 - 16996	3	1	NO	N/A	11432.7	872.70	872.70	0.00	6	24	973
SOUTHWEST	37	119	LA	VERMILION	500-1	511-1 - 15728	511-1 - 18734	B	511-1 - 10448	511-1 - 24014	3	1	NO	N/A	13565.66	3,005.66	3,005.66	0.00	10	24	973
SOUTHWEST	38	120	LA	IBERIA	500-1	512-1 - 45271	512-1 - 46129	B	512-1 - 39991	512-1 - 51409	3	1	NO	N/A	11418.5	858.45	858.45	0.00	3	24	973
SOUTHWEST	39	121	LA	CALCASIEU	800-1	821-1A - 70063	821-1A - 73174	A	821-1A - 64783	821-1A - 78396	3	1	NO	N/A	13671.52	3,111.52	3,111.52	0.00	11	30	936
SOUTHWEST	40	122	LA	CALCASIEU	800-1	821-1A - 73870	821-1A - 74077	B	821-1A - 68590	821-1A - 79299	3	1	NO	N/A	10766.64	206.64	206.64	0.00	4	30	936
SOUTHWEST	41	124	LA	FRANKLIN	800-1	834-1 - 77986	834-1 - 78101	B	834-1 - 72707	834-1 - 83381	3	1	NO	N/A	10674.06	114.82	114.82	0.00	1	30	936
SOUTHWEST	42	125	LA	FRANKLIN	800-1	834-1 - 78142	834-1 - 79401	B	834-1 - 72862	834-1 - 84682	3	1	NO	N/A	11819.86	1,259.31	1,259.31	0.00	1	30	936
SOUTHWEST	43	126	LA	FRANKLIN	800-1	835-1 - 694	835-1 - 2025	B	834-1 - 80806	835-1 - 7305	3	1	NO	N/A	11891.13	1,331.13	1,331.13	0.00	1	30	936
SOUTHERN	44	131	MS	WASHINGTON	100-1	53-1B1 - 95339	53-1B1 - 96070	B	53-1B1 - 90059	53-1B1 - 101350	3	1	NO	N/A	11291.04	731.04	731.04	0.00	1	24	750
SOUTHERN	45	132	MS	WASHINGTON	100-1	53-1B1 - 101306	53-1B1 - 102270	B	53-1B1 - 96026	53-1B1 - 107550	3	1	NO	N/A	11524.23	964.40	964.40	0.00	1	24	750
SOUTHERN	46	134	MS	WASHINGTON	100-2	53-2B - 95230	53-2B - 95343	B	53-2B - 89950	53-2B - 100623	3	1	NO	N/A	10672.4	112.40	112.40	0.00	1	26	750
SOUTHERN	47	135	MS	WASHINGTON	100-2	53-2B - 95383	53-2B - 97479	B	53-2B - 90103	53-2B - 102759	3	1	NO	N/A	12656.83	2,096.83	2,096.83	0.00	2	26	750
SOUTHERN	48	136	MS	BENTON	100-3	69-3 - 3436	69-3 - 4635	B	68-3 - 59355	69-3 - 9915	3	1	NO	N/A	11758.98	1,198.98	1,198.98	0.00	2	30	750
SOUTHERN	49	137	MS	BENTON	100-4	69-4 - 3494	69-4 - 4728	B	68-4 - 59426	69-4 - 10008	3	1	NO	N/A	11794.46	1,234.46	1,234.46	0.00	2	30	750
SOUTHERN	50	139	MS	HANCOCK	500-1	530-1 - 71166	530-1 - 72659	B	530-1 - 65886	530-1 - 77939	3	1	NO	N/A	12053.14	1,493.14	1,493.14	0.00	2	30	936
SOUTHERN	51	140	MS	FORREST	500-1	535-1 - 38349	535-1 - 38831	B	535-1 - 33069	535-1 - 44111	3	1	NO	N/A	11042.4	482.40	482.40	0.00	1	30	936
SOUTHERN	52	141	MS	FORREST	500-1	535-1 - 38884	535-1 - 40254	B	535-1 - 33604	535-1 - 45534	3	1	NO	N/A	11930.49	1,370.49	1,370.49	0.00	2	30	936
SOUTHERN	53	142	MS	LAUDERDALE	500-1	540-1 - 77758	540-1 - 79233	B	540-1 - 72478	540-1 - 84513	3	1	NO	N/A	12034.9	1,474.90	1,474.90	0.00	9	30	936
SOUTHERN	54	143	MS	LAUDERDALE	500-1	540-1 - 83303	540-1 - 86280	A	540-1 - 78023	541-1 - 5226	3	1	NO	N/A	13536.8	2,976.80	2,875.80	101.00	12	30	936
SOUTHERN	55	144	MS	LAUDERDALE	500-1	541-1 - 00042	541-1 - 00313	B	540-1 - 81096	541-1 - 5593	3	1	NO	N/A	10831.08	257.20	247.70	9.50	4	30	936
SOUTHERN	56	146	MS	LOWNDES	500-1	545-1 - 66055	545-1 - 66745	B	545-1 - 60775	545-1 - 72025	3	1	YES	ILI - 2014	11249.8	689.80	689.80	0.00	5	30	936
SOUTHERN	57	147	MS	LOWNDES	500-1	545-1 - 72300	545-1 - 73241	B	545-1 - 67020	546-1 - 4529	3	1	NO	N/A	11501.2	941.20	941.20	0.00	4	30	936
SOUTHERN	58	148	MS	LOWNDES	500-1	546-1 - 26190	546-1 - 27149	B	546-1 - 20910	546-1 - 32429	3	1	NO	N/A	11519.21	959.21	891.01	68.20	3	30	936

PHMSA REGION	PHMSA No.	KM No.	State	County	Line Name	Special Permit Segment Stationing (Beginning) Valve - Station	Special Permit Segment Stationing (Ending) Valve - Station	Special Permit Segment Type	Special Permit Inspection Area Stationing (Beginning) Valve - Station	Special Permit Inspection Area Stationing (Ending) Valve - Station	Class (present)	Class (pipe)	HCA	Latest HCA Assessment and Date	Special Permit Inspection Area Length (ft)	Special Permit Segment Length not meeting present Class (ft)	Replace Length (ft)	Pressure Test Length (ft)	Dwellings in length not meeting present Class	Pipe Diameter (in)	MAOP (psig)
SOUTHERN	59	150	MS	LOWNDES	500-1	546-1 - 34988	546-1 - 36570	B	546-1 - 29708	546-1 - 41850	3	1	NO	N/A	12141.69	1,581.69	1,581.69	0.00	3	30	936
SOUTHERN	60	152	MS	HANCOCK	500-2	530-2 - 71038	530-2 - 72527	B	530-2 - 65758	530-2 - 77807	3	1	NO	N/A	12048.68	1,488.68	1,488.68	0.00	2	36	936
SOUTHERN	61	153	MS	FORREST	500-2	535-2 - 38304	535-2 - 40214	B	535-2 - 33024	535-2 - 45494	3	1	NO	N/A	12469.29	1,909.29	1,869.39	39.90	2	36	936
SOUTHERN	62	154	MS	LAUDERDALE	500-2	540-2 - 77710	540-2 - 79150	B	540-2 - 72430	540-2 - 84430	3	1	NO	N/A	11999.84	1,439.84	1,439.84	0.00	9	36	936
SOUTHERN	63	155	MS	LAUDERDALE	500-2	540-2 - 83326	540-2 - 86270	A	540-2 - 78046	541-2 - 5214	3	1	NO	N/A	13503.9	2,943.90	2,789.70	154.20	13	36	936
SOUTHERN	64	157	MS	LOWNDES	500-2	546-2 - 34989	546-2 - 36574	B	546-2 - 29709	546-2 - 41854	3	1	NO	N/A	12145.26	1,585.26	1,505.76	79.50	3	36	936
SOUTHERN	65	158	MS	HANCOCK	500-3	530-3 - 70819	530-3 - 72178	B	530-3 - 65539	530-3 - 77458	3	1	NO	N/A	11918.93	1,358.93	1,358.93	0.00	1	36	936
EASTERN	66	159	NJ	SUSSEX	300-1	324-1A - 55004	324-1A - 57957	B	324-1A - 49724	324-1A - 63237	3	2	NO	N/A	13513.04	2,947.18	0.00	2,947.18	10	24	1170
EASTERN	67	160	NJ	SUSSEX	300-1	324-1A - 63558	324-1A - 64196	B	324-1A - 58278	324-1A - 69476	3	1	NO	N/A	11198.57	638.14	638.14	0.00	1	24	1170
EASTERN	68	162	NJ	SUSSEX	300-1	325-1 - 16351	325-1 - 16837	B	325-1 - 11071	325-1A - 22117	3	1	NO	N/A	11046.5	486.50	486.50	0.00	5	24	1170
EASTERN	69	163	NJ	SUSSEX	300-1	325-1 - 17148	325-1 - 18277	B	325-1 - 11868	325-1A - 23557	3	1	NO	N/A	11688.64	1,118.84	436.76	682.08	8	24	1170
EASTERN	70	164	NJ	SUSSEX	300-1	325-1A - 38824	325-1A - 39647	B	325-1A - 33544	326-1 - 3531	3	1	YES	SCCDA/MFL/Caliper - 2008	11383.33	823.33	823.33	0.00	2	24	1170
EASTERN	71	166	NJ	SUSSEX	300-1	326-1 - 8121	326-1 - 8582	B	326-1 - 2841	326-1 - 13862	3	1	NO	N/A	11021.62	461.62	461.62	0.00	2	24	1170
EASTERN	72	167	NJ	SUSSEX	300-1	326-1 - 11732	326-1 - 13479	B	326-1 - 6452	326-1 - 18759	3	1	NO	N/A	12306.24	1,746.24	950.24	796.00	2	24	1170
EASTERN	73	168	NJ	BERGEN	300-1	328-1 - 29030	328-1 - 30884	A	328-1 - 23750	328-1 - 36164	3	1	NO	N/A	12413.5	1,841.60	1,229.60	612.00	12	24	1170
EASTERN	74	177	NY	ONTARIO	200-1	236-1 - 5396	236-1 - 7119	A	236-1 - 116	236-1 - 12399	3	1	NO	N/A	12283.32	1,723.32	1,723.32	0.00	11	24	760
EASTERN	75	178	NY	ONTARIO	200-1	236-1 - 13357	236-1 - 14012	B	236-1 - 8077	236-1 - 19292	3	1	NO	N/A	11214.33	654.33	654.33	0.00	2	24	760
EASTERN	76	179	NY	MADISON	200-1	243-1 - 11491	243-1 - 15551	A	243-1 - 6211	243-1 - 20831	3	1	YES	MFL/Caliper - 2008	14620.14	4,060.14	4,048.14	12.00	12	24	760
EASTERN	77	180	NY	MADISON	200-1	243-1 - 20334	243-1 - 21827	B	243-1 - 15054	243-1 - 27107	3	1	NO	N/A	12052.73	1,492.73	1,492.73	0.00	3	24	760
EASTERN	78	181	NY	ONEIDA	200-1	244-1 - 21246	244-1 - 21803	B	244-1 - 15966	244-1 - 27083	2	1	NO	N/A	11117.12	557.12	0.00	557.12	2	24	760
EASTERN	79	182	NY	ALBANY	200-1	251-1 - 18683	251-1 - 19837	B	251-1 - 13403	251-1 - 25117	3	1	NO	N/A	11713.88	1,153.88	1,153.88	0.00	1	24	760
EASTERN	80	183	NY	ALBANY	200-1	251-1 - 34314	251-1 - 35374	B	251-1 - 29034	252-1 - 2901	3	1	YES	MFL/Caliper - 2014	11619.96	1,059.96	1,059.96	0.00	1	24	760
EASTERN	81	186	OH	CARROLL	200-1	213-1 - 27955	213-1 - 32095	A	213-1 - 22675	213-1 - 37375	3	1	NO	N/A	14699.46	4,139.46	4,139.46	0.00	12	26	790
EASTERN	82	187	OH	CARROLL	200-1	213-1 - 35693	213-1 - 38385	B	213-1 - 30413	213-1 - 43665	3	1	YES	MFL/Caliper - 2011	13251.92	2,691.92	2,691.92	0.00	6	26	790
EASTERN	83	188	OH	COLUMBIANA	200-1	215-1 - 37377	215-1 - 39422	B	215-1 - 32097	215-1 - 44702	3	1	NO	N/A	12604.66	2,044.66	2,044.66	0.00	8	26	790
EASTERN	84	189	OH	COLUMBIANA	200-1	215-1 - 44383	215-1 - 45653	B	215-1 - 39103	215-1 - 50933	3	1	NO	N/A	11830.1	1,270.10	1,270.10	0.00	3	26	790
EASTERN	85	190	OH	COLUMBIANA	200-1	215-1 - 46382	215-1 - 47765	B	215-1 - 41102	215-1 - 53045	3	1	NO	N/A	11942.31	1,382.31	1,382.31	0.00	1	26	790
EASTERN	86	191	OH	ATHENS	200-2	205-2 - 8795	205-2 - 9953	B	205-2 - 3515	205-2 - 15233	3	1	NO	N/A	11717.94	1,157.94	1,157.94	0.00	3	26	790
EASTERN	87	192	OH	CARROLL	200-2	213-2 - 27040	213-2 - 31544	A	213-2 - 21760	213-2 - 36824	3	1	NO	N/A	15063.91	4,503.91	4,424.11	79.80	27	26	790
EASTERN	88	193	OH	CARROLL	200-2	213-2 - 35739	213-2 - 38466	B	213-2 - 30459	213-2 - 43746	3	1	YES	ILI - 2015	13286.95	2,726.95	2,726.95	0.00	6	26	790
EASTERN	89	194	OH	COLUMBIANA	200-2	216-2 - 15651	216-2 - 16947	B	216-2 - 10371	216-2 - 22227	3	1	NO	N/A	11856.36	1,296.36	1,296.36	0.00	5	26	790
EASTERN	90	195	OH	CARROLL	200-3	213-3 - 26889	213-3 - 28192	B	213-3 - 21609	213-3 - 33470	3	1	NO	N/A	11860.67	1,302.87	1,302.87	0.00	5	26	790
EASTERN	91	196	OH	CARROLL	200-3	213-3 - 28311	213-3 - 31130	A	213-3 - 23033	213-3 - 36410	3	1	NO	N/A	13377	2,819.20	2,819.20	0.00	18	26	790
EASTERN	92	197	OH	CARROLL	200-3	213-3 - 35492	213-3 - 36384	B	213-3 - 30212	213-3 - 41664	3	1	YES	MFL/Caliper - 2011	11452.2	892.20	892.20	0.00	5	26	790
EASTERN	93	198	OH	CARROLL	200-4	213-4 - 27918	213-4 - 32112	A	213-4 - 22638	213-4 - 37392	3	1	YES	MFL/Caliper - 2012	14754.03	4,194.03	3,568.83	625.20	12	36	790
EASTERN	94	200	OH	CARROLL	200-4	213-4 - 35689	213-4 - 38338	B	213-4 - 30409	213-4 - 43618	3	1	YES	MFL/Caliper - 2012	13208.75	2,648.75	2,648.75	0.00	6	36	790
EASTERN	95	201	OH	COLUMBIANA	200-4	215-4 - 37485	215-4 - 39436	B	215-4 - 32205	215-4 - 44716	3	1	NO	N/A	12510.62	1,950.62	1,950.62	0.00	8	36	790
EASTERN	96	202	OH	COLUMBIANA	200-4	215-4 - 44504	215-4 - 45766	B	215-4 - 39224	215-4 - 51046	3	1	NO	N/A	11821.5	1,261.50	598.90	662.60	3	36	790
EASTERN	97	203	OH	COLUMBIANA	200-4	215-4 - 46470	215-4 - 47844	B	215-4 - 41190	215-4 - 53124	3	1	NO	N/A	11933.93	1,373.93	1,126.93	247.00	1	36	790
EASTERN	98	205	PA	LAWRENCE	200-1	217-1 - 38468	217-1 - 40404	B	217-1 - 33188	217-1 - 45684	3	1	NO	N/A	12495.75	1,935.75	1,935.75	0.00	5	26	790
EASTERN	99	206	PA	MERCER	300-1	219-2D - 22726	219-2D - 23573	B	219-2D - 17446	219-2D - 28853	3	1	NO	N/A	11406.47	846.47	846.47	0.00	1	24	877
EASTERN	100	207	PA	MERCER	300-1	219-2D - 28609	219-2D - 29100	B	219-2D - 23329	219-2D - 34380	3	1	NO	N/A	11051.7	491.70	491.70	0.00	1	24	877
EASTERN	101	208	PA	MERCER	300-2	219-3 - 22832	219-3 - 23723	B	219-3 - 17552	219-3 - 29003	3	1	NO	N/A	11450.88	890.88	890.88	0.00	1	30	877
EASTERN	102	209	PA	MERCER	300-2	219-3 - 27079	219-3 - 29227	B	219-3 - 21799	219-3 - 34507	3	1	NO	N/A	12707.8	2,147.80	599.90	1,547.90	1	30	877
SOUTHERN	103	213	TN	DICKSON	100-1	82-1C - 18258	82-1C - 18849	B	82-1C - 12978	82-1C - 24129	3	1	NO	N/A	11150.98	590.98	590.98	0.00	2	24	750
SOUTHERN	104	215	TN	CHEATHAM	100-1	83-1A - 78304	83-1A - 81086	B	83-1A - 73024	83-1A - 86366	3	1	NO	N/A	13342.53	2,782.53	2,782.53	0.00	10	24	750
SOUTHERN	105	216	TN	CHEATHAM	100-1	83-1A - 97294	83-1A - 98785	B	83-1A - 92014	83-1A - 104065	3	1	NO	N/A	12050.6	1,490.60	1,490.60	0.00	7	24	750
SOUTHERN	106	217	TN	CHEATHAM	100-1	83-1A - 105135	83-1A - 105164	B	83-1A - 99855	83-1A - 110444	3	1	NO	N/A	10588.61	28.61	28.61	0.00	1	24	750
SOUTHERN	107	220	TN	ROBERTSON	100-1	84-1 - 49133	84-1 - 49815	B	84-1 - 43853	85-1 - 5224	3	1	NO	N/A	11241.91	681.91	681.91	0.00	5	24	750
SOUTHERN	108	221	TN	ROBERTSON	100-1	85-1 - 150	85-1 - 1509	B	84-1 - 44741	85-1 - 6789	3	1	NO	N/A	11919.86	1,359.86	1,359.86	0.00	7	24	750
SOUTHERN	109	223	TN	DICKSON	100-2	82-2C - 49652	82-2C - 50206	B	82-2C - 44372	82-2C - 55486	3	1	NO	N/A	11114.05	554.05	554.05	0.00	1	26	750
SOUTHERN	110	224	TN	DICKSON	100-2	82-2C - 59530	82-2C - 59708	B	82-2C - 54250	83-2 - 2036	3	1	NO	N/A	10737.44	177.44	177.44	0.00	1	26	750
SOUTHERN	111	226	TN	LEWIS	500-1	557-1 - 27029	557-1 - 27604	B	557-1 - 21749	557-1 - 32884	3	1	NO	N/A	11134.4	574.40	574.40	0.00	1	30	936
SOUTHERN	112	227	TN	LEWIS	500-1	557-1 - 32179	557-1 - 32906	B	557-1 - 26899	557-1 - 38186	3	1	NO	N/A	11287.33	727.33	727.33	0.00	1	30	936
SOUTHERN	113	228	TN	LEWIS	500-1	557-1 - 33305	557-1 - 34682	B	557-1 - 28025	557-1 - 39962	3	1	NO	N/A	11936.94	1,376.94	1,376.94	0.00	4	30	936
SOUTHERN	114	232	TN	CHEATHAM	500-1	560-1 - 37132	560-1 - 37885	B	560-1 - 31852	560-1 - 43165	3	1	NO	N/A	11312.49	752.49	752.49	0.00	1	30	936
SOUTHERN	115	233	TN	CHEATHAM	500-1	560-1 - 42304	560-1 - 43310	B	560-1 - 37024	560-1 - 48590	3	1	YES	ILI - 2001	11566	1,006.00	848.20	157.80	10	30	936
SOUTHERN	116	234	TN	CHEATHAM	500-1	560-1 - 43428	560-1 - 44207	B	560-1 - 38148	560-1 - 49487	3	1	YES	ILI - 2001	11338.61	778.61	539.01	239.60	7	30	936

Attachment A: Listing of Tennessee Gas Pipeline (TGP) special permit segments

PHMSA REGION	PHMSA No.	KM No.	State	County	Line Name	Special Permit Segment Stationing (Beginning) Valve - Station	Special Permit Segment Stationing (Ending) Valve - Station	Special Permit Segment Type	Special Permit Inspection Area Stationing (Beginning) Valve - Station	Special Permit Inspection Area Stationing (Ending) Valve - Station	Class (present)	Class (pipe)	HCA	Latest HCA Assessment and Date	Special Permit Inspection Area Length (ft)	Special Permit Segment Length not meeting present Class (ft)	Replace Length (ft)	Pressure Test Length (ft)	Dwellings in length not meeting present Class	Pipe Diameter (in)	MAOP (psig)
SOUTHERN	117	235	TN	CHEATHAM	500-1	560-1 - 98120	560-1 - 99452	B	560-1 - 92840	562-1 - 2902	3	1	NO	N/A	11892.21	1,331.81	1,331.81	0.00	1	30	936
SOUTHERN	118	236	TN	CHEATHAM	500-1	560-1 - 99840	560-1 - 100511	B	560-1 - 94560	562-1 - 3961	3	1	NO	N/A	11230.56	649.36	637.26	12.10	2	30	936
SOUTHERN	119	237	TN	CHEATHAM	500-1	562-1 - 35	562-1 - 1061	B	560-1 - 96585	562-1 - 6341	3	1	YES	ECDA - 2012	11585.85	1,007.75	985.90	21.85	6	30	936
SOUTHERN	120	238	TN	CHEATHAM	500-1	562-1 - 1259	562-1 - 1269	B	560-1 - 97810	562-1 - 6549	3	2	YES	ECDA - 2012	10569.9	9.90	0.00	9.90	1	30	936
SOUTHERN	121	239	TN	CHEATHAM	500-1	562-1 - 6239	562-1 - 7606	B	562-1 - 959	562-1 - 12886	3	1	NO	N/A	11927.1	1,367.10	1,367.10	0.00	1	30	936
SOUTHERN	122	240	TN	ROBERTSON	500-1	563-1 - 29453	563-1 - 31925	B	563-1 - 24173	563-1 - 37205	3	1	NO	N/A	13032.57	2,463.07	2,036.57	426.50	7	30	936
SOUTHERN	123	241	TN	ROBERTSON	500-1	563-1 - 42160	563-1 - 45772	B	563-1 - 36880	563-1 - 51052	3	1	NO	N/A	14171.84	3,611.84	2,978.54	633.30	8	30	936
SOUTHERN	124	242	TN	ROBERTSON	500-1	564-1 - 14347	564-1 - 16298	B	564-1 - 9067	564-1 - 21578	3	1	NO	N/A	12511.47	1,951.47	1,951.47	0.00	5	30	936
SOUTHERN	125	243	TN	ROBERTSON	500-1	564-1 - 20668	564-1 - 23931	B	564-1 - 15388	564-1 - 29211	3	1	NO	N/A	13822.8	3,262.84	3,182.94	79.90	10	30	936
SOUTHERN	126	244	TN	LEWIS	500-2	557-2 - 27013	557-2 - 27483	B	557-2 - 21733	557-2 - 32763	3	1	YES	ILI/Caliper - 2012	11029.38	469.38	469.38	0.00	1	36	936
SOUTHERN	127	245	TN	LEWIS	500-2	557-2 - 32134	557-2 - 32888	B	557-2 - 26854	557-2 - 38168	3	1	NO	N/A	11314.04	754.04	754.04	0.00	1	36	936
SOUTHERN	128	250	TN	CHEATHAM	500-2	560-2 - 37151	560-2 - 38470	B	560-2 - 31871	560-2 - 43750	3	1	NO	N/A	11878.68	1,318.68	1,318.68	0.00	3	36	936
SOUTHERN	129	251	TN	CHEATHAM	500-2	560-2 - 43790	560-2 - 44171	B	560-2 - 38510	560-2 - 49451	3	1	YES	MFL/Caliper - 2011	10941.21	381.21	381.21	0.00	5	36	936
SOUTHERN	130	252	TN	CHEATHAM	500-2	560-2 - 99058	560-2 - 100024	B	560-2 - 93778	562-2 - 3915	3	1	YES	ECDA - 2012	11526.61	966.61	846.31	120.30	2	36	936
SOUTHERN	131	253	TN	CHEATHAM	500-2	562-2 - 551	562-2 - 1054	B	560-2 - 96661	562-2 - 6334	3	1	YES	ECDA - 2012	11062.7	502.70	487.40	15.30	6	36	936
SOUTHERN	132	254	TN	CHEATHAM	500-2	562-2 - 1253	562-2 - 1270	B	560-2 - 97362	562-2 - 6550	3	2	YES	ECDA - 2012	10576.9	16.90	0.00	16.90	1	36	936
SOUTHERN	133	255	TN	CHEATHAM	500-2	562-2 - 5572	562-2 - 7598	B	562-2 - 292	562-2 - 12878	3	1	NO	N/A	12585.96	2,025.96	2,025.96	0.00	2	36	936
SOUTHERN	134	256	TN	ROBERTSON	500-2	563-2 - 29422	563-2 - 30424	B	563-2 - 24142	563-2 - 35704	3	1	NO	N/A	11561.81	1,001.81	911.41	90.40	4	36	936
SOUTHERN	135	257	TN	ROBERTSON	500-2	563-2 - 30503	563-2 - 31930	B	563-2 - 25223	563-2 - 37210	3	1	YES	MFL/Caliper - 2011	11986.43	1,426.43	1,267.53	158.90	6	36	936
SOUTHERN	136	258	TN	ROBERTSON	500-2	563-2 - 42134	563-2 - 42438	B	563-2 - 36854	563-2 - 47718	3	1	YES	MFL/Caliper - 2011	10863.7	303.70	293.70	10.00	1	36	936
SOUTHERN	137	259	TN	ROBERTSON	500-2	563-2 - 42518	563-2 - 45775	B	563-2 - 37238	563-2 - 51055	3	1	NO	N/A	13817.08	3,257.08	2,680.60	576.48	8	36	936
SOUTHERN	138	260	TN	ROBERTSON	500-2	564-2 - 14379	564-2 - 16326	B	564-2 - 9099	564-2 - 21606	3	1	NO	N/A	12506.58	1,946.58	1,946.58	0.00	5	36	936
SOUTHERN	139	261	TN	ROBERTSON	500-2	564-2 - 20671	564-2 - 20890	B	564-2 - 15391	564-2 - 26170	3	1	NO	N/A	10779.1	219.10	208.80	10.30	6	36	936
SOUTHERN	140	262	TN	ROBERTSON	500-2	564-2 - 20965	564-2 - 23936	B	564-2 - 15685	564-2 - 29216	3	1	NO	N/A	13530.93	2,970.93	2,960.63	10.30	10	36	936
SOUTHERN	141	271	TN	CHEATHAM	800-1	861-1 - 44265	861-1 - 44666	B	861-1 - 38985	861-1 - 49946	3	1	NO	N/A	10960.95	400.95	400.95	0.00	1	30	936
SOUTHERN	142	272	TN	CHEATHAM	800-1	861-1 - 99945	861-1 - 100526	B	861-1 - 94665	863-1 - 3910	3	1	NO	N/A	11141.5	581.50	581.50	0.00	2	30	936
SOUTHERN	143	273	TN	CHEATHAM	800-1	863-1 - 94	863-1 - 1199	B	861-1 - 96711	863-1 - 6479	3	1	YES	ECDA - 2012	11664.3	1,104.30	972.70	131.60	5	30	936
SOUTHERN	144	275	TN	CHEATHAM	800-1	863-1 - 6197	863-1 - 7564	B	863-1 - 917	863-1 - 12844	3	1	NO	N/A	11926.34	1,366.34	1,366.34	0.00	1	30	936
SOUTHERN	145	276	TN	ROBERTSON	800-1	864-1 - 29457	864-1 - 30426	B	864-1 - 24177	864-1 - 35706	3	1	NO	N/A	11528.97	968.97	968.97	0.00	4	30	936
SOUTHERN	146	277	TN	ROBERTSON	800-1	864-1 - 30649	864-1 - 31930	B	864-1 - 25369	864-1 - 37210	3	1	NO	N/A	11840.45	1,280.45	1,280.45	0.00	6	30	936
SOUTHERN	147	278	TN	ROBERTSON	800-1	864-1 - 42177	864-1 - 45792	B	864-1 - 36897	864-1 - 51072	3	1	NO	N/A	14174.31	3,614.31	3,614.31	0.00	8	30	936
SOUTHERN	148	279	TN	ROBERTSON	800-1	865-1 - 14335	865-1 - 16327	B	865-1 - 9055	865-1 - 21607	3	1	NO	N/A	12551.43	1,991.43	1,991.43	0.00	5	30	936
SOUTHERN	149	280	TN	ROBERTSON	800-1	865-1 - 20783	865-1 - 23917	B	865-1 - 15503	865-1 - 29197	3	1	NO	N/A	13693.48	3,133.48	3,133.48	0.00	7	30	936
SOUTHWEST	150	289	TX	NUECES	100-1	1-1D - 32112	1-1D - 32137	B	1-1D - 26832	1-1D - 37417	3	1	NO	N/A	10585.02	25.02	25.02	0.00	3	24	750
SOUTHWEST	151	290	TX	WALLER	100-1	19-1 - 21876	19-1 - 24570	B	19-1 - 16596	19-1 - 29850	3	1	YES	MFL/Caliper - 2011	13254.69	1,677.99	1,677.99	0.00	6	24	750
SOUTHWEST	152	291	TX	HARRIS	100-1	20-1 - 35995	20-1 - 37071	B	20-1 - 30715	20-1 - 42340	3	1	NO	N/A	11635.35	1,075.35	1,075.35	0.00	2	24	750
SOUTHWEST	153	292	TX	SABINE	100-1	36-1 - 13320	36-1 - 13995	B	36-1 - 8040	36-1 - 19275	3	1	NO	N/A	11235	675.00	548.00	127.00	1	24	750
SOUTHWEST	154	293	TX	SABINE	100-1	36-1 - 18211	36-1 - 19750	B	36-1 - 12931	36-1 - 25030	3	2	NO	N/A	12099.3	1,539.30	0.00	1,539.30	8	24	750
SOUTHWEST	155	294	TX	SABINE	100-1	36-1 - 20133	36-1 - 20706	B	36-1 - 14853	36-1 - 25986	3	2	NO	N/A	11133.4	573.40	0.00	573.40	3	24	750
SOUTHWEST	156	295	TX	WALLER	100-2	19-2 - 21943	19-2 - 23622	B	19-2 - 16663	19-2 - 28902	3	1	YES	MFL/Caliper - 2011	12238.93	472.53	472.53	0.00	3	30	750
SOUTHWEST	157	297	TX	HARRIS	100-2	19-2 - 47755	19-2 - 48989	B	19-2 - 42475	20-2 - 5219	3	1	NO	N/A	11794.7	1,234.70	1,234.70	0.00	4	30	750
SOUTHWEST	158	298	TX	HARRIS	100-2	20-2 - 00048	20-2 - 01438	B	19-2 - 43818	20-2 - 6718	3	1	NO	N/A	11950.45	1,390.45	1,158.35	232.10	5	30	750
SOUTHWEST	159	299	TX	SABINE	100-2	36-2 - 17089	36-2 - 19687	B	36-2 - 11809	36-2 - 24967	3	1	YES	MFL/Caliper - 2011	13157.7	2,597.70	1,069.90	1,527.80	8	30	750
SOUTHWEST	160	300	TX	WALLER	100-3	19-3 - 22006	19-3 - 23684	B	19-3 - 16726	19-3 - 28964	3	1	YES	MFL/Caliper - 2011	12237.69	449.79	449.79	0.00	3	30	750
SOUTHWEST	161	301	TX	WALLER	100-3	19-3 - 41139	19-3 - 42867	B	19-3 - 35859	19-3 - 48147	3	1	NO	N/A	12287.52	1,727.52	1,727.52	0.00	3	30	750
SOUTHWEST	162	302	TX	HARRIS	100-3	19-3 - 48100	19-3 - 49125	B	19-3 - 42820	20-3 - 5225	3	1	NO	N/A	11584.5	1,024.50	1,014.20	10.30	5	30	750
SOUTHWEST	163	303	TX	HARRIS	100-3	20-3 - 61	20-3 - 278	B	19-3 - 43960	20-3 - 5558	3	1	NO	N/A	10777	217.00	217.00	0.00	2	30	750
SOUTHWEST	164	304	TX	HARRIS	100-3	20-3 - 398	20-3 - 2162	B	19-3 - 44297	20-3 - 7442	3	1	YES	ILI - 2011	12323.65	1,733.65	1,733.65	0.00	5	30	750
SOUTHWEST	165	306	TX	HARRIS	100-3	20-3 - 36109	20-3 - 37211	B	20-3 - 30829	20-3 - 42491	3	1	NO	N/A	11661.34	1,101.34	1,101.34	0.00	2	30	750
SOUTHWEST	166	307	TX	SABINE	100-3	36-3 - 18156	36-3 - 19658	B	36-3 - 12876	36-3 - 24938	3	2	NO	N/A	12062.4	1,502.40	0.00	1,502.40	8	30	750
SOUTHWEST	167	310	TX	BROOKS	400-2	405-2 - 23830	405-2 - 24934	B	405-2 - 18550	405-2 - 30214	2	1	NO	N/A	11664.09	1,104.09	0.00	1,104.09	1	26	860
SOUTHWEST	168	311	TX	BROOKS	400-2	405-2 - 32982	405-2 - 34341	B	405-2 - 27702	405-2 - 39621	2	1	NO	N/A	11918.83	1,358.83	0.00	1,358.83	1	26	860
SOUTHWEST	169	312	TX	HIDALGO	409A-100 DONNA LINE	409A-101.1 - 5411	409A-101.1 - 6648	B	409A-101.1 - 131	409A-101.1 - 11928	3	1	YES	MFL/Caliper - 2010	11797.01	1,237.01	1,237.01	0.00	2	24	933
SOUTHWEST	170	313	TX	HIDALGO	409A-100 DONNA LINE	409A-101.1 - 13130	409A-101.1 - 15880	A	409A-101.1 - 7850	409A-101.1 - 21160	3	1	NO	N/A	13310.04	2,750.04	2,750.04	0.00	13	24	933
SOUTHWEST	171	316	TX	HIDALGO	409A-100 DONNA LINE	409A-102 - 10073	409A-102 - 11643	B	409A-102 - 4793	409A-102 - 16923	3	1	NO	N/A	12129.98	1,569.98	1,569.98	0.00	4	24	933
SOUTHWEST	172	317	TX	HIDALGO	409A-100 DONNA LINE	409A-102 - 35417	409A-102 - 37204	B	409A-102 - 30137	409A-102 - 42484	3	1	NO	N/A	12347.31	1,787.31	1,787.31	0.00	7	24	933
EASTERN	173	318	WV	KANAWHA	100-1	118-1 - 50540	118-1 - 51890	B	118-1 - 45260	118-1 - 57170	3	1	NO	N/A	11909.06	1,349.06	1,349.06	0.00	1	20	910
EASTERN	174	319	WV	KANAWHA	100-1	118-1 - 53912	118-1 - 55181	B	118-1 - 48632	118-1 - 60461	3	1	YES	MFL/Caliper - 2012	11829.84	1,269.84	1,269.84	0.00	2	20	910

PHMSA REGION	PHMSA No.	KM No.	State	County	Line Name	Special Permit Segment Stationing (Beginning) Valve - Station	Special Permit Segment Stationing (Ending) Valve - Station	Special Permit Segment Type	Special Permit Inspection Area Stationing (Beginning) Valve - Station	Special Permit Inspection Area Stationing (Ending) Valve - Station	Class (present)	Class (pipe)	HCA	Latest HCA Assessment and Date	Special Permit Inspection Area Length (ft)	Special Permit Segment Length not meeting present Class (ft)	Replace Length (ft)	Pressure Test Length (ft)	Dwellings in length not meeting present Class	Pipe Diameter (in)	MAOP (psig)
EASTERN	175	320	WV	KANAWHA	100-1	118-1 - 70005	118-1 - 70589	B	118-1 - 64725	118-1 - 75869	3	1	YES	MFL/Caliper - 2012	11144.46	584.46	584.46	0.00	1	20	910
EASTERN	176	322	WV	KANAWHA	100-1	121-1 - 19093	121-1 - 21342	B	121-1 - 13813	121-1 - 26622	3	1	NO	N/A	12809.91	2,249.91	2,249.91	0.00	3	20	936
EASTERN	177	323	WV	WAYNE	100-2	115-2 - 18573	115-2 - 21231	B	115-2 - 13293	115-2 - 26511	3	1	NO	N/A	13217.51	2,657.51	2,657.51	0.00	4	24	973
EASTERN	178	326	WV	PUTNAM	100-2	119-2 - 3970	119-2 - 5913	B	118-3 - 65930	119-2 - 11193	3	1	YES	ILI/Caliper - 2009	12503.22	1,943.22	1,943.22	0.00	5	24	938
EASTERN	179	327	WV	PUTNAM	100-2	119-2 - 13276	119-2 - 16704	A	119-2 - 7996	119-2 - 21984	3	1	NO	N/A	13988.57	3,428.57	2,871.47	557.10	16	24	938
EASTERN	180	328	WV	CABELL	100-3	115-3 - 52772	115-3 - 53741	B	115-3 - 47492	115-3 - 59021	3	1	NO	N/A	11529.77	969.77	969.77	0.00	2	26	991
EASTERN	181	329	WV	CABELL	100-3	117-3 - 37414	117-3 - 37852	B	117-3 - 32134	117-3 - 43132	3	2	NO	N/A	10998.1	438.10	0.00	438.10	2	26	910
EASTERN	182	330	WV	PUTNAM	100-3	118-3 - 25714	118-3 - 27130	B	118-3 - 20434	118-3 - 32410	3	1	NO	N/A	11975.75	1,415.75	1,415.75	0.00	2	30	910
EASTERN	183	331	WV	PUTNAM	100-3	118-3 - 31972	118-3 - 32863	B	118-3 - 26692	118-3 - 38143	3	1	NO	N/A	11451.2	891.20	891.20	0.00	3	30	910
SOUTHWEST	184	334	TX	WALLER	100-1	19-1 - 40866	19-1 - 44295	A	19-1 - 35586	20-1 - 572	3	1	NO	N/A	13989.29	3,429.29	3,429.29	0.00	11	24	750
SOUTHWEST	185	335	TX	HARRIS	100-1	19-1 - 47777	19-1 - 48959	B	19-1 - 42497	20-1 - 5235	3	1	NO	N/A	11741.7	1,181.70	1,181.70	0.00	3	24	750
SOUTHWEST	186	336	TX	HARRIS	100-1	20-1 - 34	20-1 - 709	B	19-1 - 43757	20-1 - 5989	3	1	NO	N/A	11235.07	675.07	661.17	13.90	3	24	750
EASTERN	187	340	WV	KANAWHA	100-2	121-2 - 54382	121-2 - 55616	B	121-2 - 49102	121-2 - 60896	3	1	NO	N/A	11793.7	1,233.70	1,233.70	0.00	2	24	910
SOUTHERN	188	341	TN	CHEATHAM	100-4	83-4B - 114836	83-4B - 115333	B	83-4B - 109556	84-4 - 3287	3	1	NO	N/A	11057.5	497.50	497.50	0.00	6	30	750
SOUTHERN	189	342	KY	MADISON	100-4	103-4 - 7517	103-4 - 8889	B	103-4 - 2237	103-4 - 14169	3	1	NO	N/A	11932.39	1,342.49	1,342.49	0.00	1	30	750
SOUTHERN	190	343	KY	MADISON	100-4	103-4 - 9445	103-4 - 9687	B	103-4 - 4165	103-4 - 14967	3	1	NO	N/A	10802.74	242.74	242.74	0.00	1	30	750
SOUTHERN	191	348	MS	LAUDERDALE	500-2	541-2 - 72	541-2 - 383	B	540-2 - 81127	541-2 - 5663	3	1	NO	N/A	10871.51	311.51	311.51	0.00	4	36	936
SOUTHWEST	192	360	LA	CALCASIEU	800-1	821-1A - 76685	821-1A - 78674	A	821-1A - 71463	821-1A - 83954	3	1	YES	MFL/Caliper - 2014	12549.64	1,913.54	1,913.54	0.00	17	30	936

2,289,985.38	258,738.88	235,144.23	23,594.65	FOOTAGE
433.71	49.00	44.53	4.47	MILEAGE

LEGEND

DSAW - Double Submerged Arc Weld
EFW - Electric Fusion Weld
ERW- Electric Resistance Weld
EW - Electric Weld (SAW or DSAW, not ERW)
FW - Flash Weld
SAW - Submerged Arc Weld
SMLS - Seamless
NLP - 'Not Like Pipe' for Leaks
NSLP - 'Non-Susceptible Location or Pipe' for SCC
PIR - Potential Impact Radius
MAOP - Maximum Allowable Operating Pressure
MLV - Mainline Valve
HCA - High Consequence Area
SCC[1] - Stress Corrosion Cracking - Bellhole Inspection
SCC[2] - Stress Corrosion Cracking - Hydrotest Failure
SCC[3] - Stress Corrosion Cracking - In-Service Failure
SCC[4] - Stress Corrosion Cracking - Special Permit segment located in upstream compressor segment from SCC indication (within 20 miles), Segment deemed not susceptible to SCC
SSWC - Selective Seam Weld Corrosion
MP5 - Maximum Pressure in 5 Years Preceding 7/1/1970

NOTES

1. When a segment has multiple pipe attributes (test pressure, seam, coating, etc.), the attributes for the weakest pipe element is displayed
2. The actual length of the special permit segment from begin station to end station may be greater than the length not meeting present class due to compliant pipe in the segment.
3. Pipeline stationing subject to change due to station equations, centerline changes, etc.

07/21/2016 rev

PHMSA No.	KM No.	Test Pressure (psig)	Pipe Design Pressure @0.72 (psig)	Pipe Wall Thickness (in)	PIR (ft)	Pipe Grade (psig)	Pipe Seam Type	Pipe Coating	Pipe Installation Date	Distance to MLV Upstream/ Downstream (mi)	Compressor Station Spacing (mi)	MAOP Established per 192.619	Aerial Photography	Material/ Pressure Test Documents	Leak/SCC/SSWC (w/i 20 mi of segment)	Segment Pressure Tested after Leak/SCC/SSWC	In-Line Inspected	MPS only or MPS record (to back up 'test')
1	69	949	750	0.25	454	50000	FW	HOT APPLIED WAX	1971	1.8 / 2.5	89.2	(a)(1)	2012	Y / Y	Leak (11/15/1986)	NLP	YES	N/A
2	70	1148	876.72	0.281	454	52000	SAW	HOT APPLIED WAX	1971	2.3 / 2.2	89.2	(a)(1)	2012	Y / Y	Leak (11/15/1986)	YES	YES	N/A
3	71	949	750	0.25	454	50000	FW	HOT APPLIED WAX	1971	3.4 / 1.0	89.2	(a)(1)	2012	Y / Y	Leak (11/15/1986)	NLP	YES	N/A
4	72	1029	809.28	0.281	491	52000	FW	COAL TAR ENAMEL	1948	6.3 / 3.0	42.9	(a)(3)	2012	Y / Y	Leak (4/11/1984)	YES	YES	N/A
5	73	1029	809.28	0.281	491	52000	FW	COAL TAR ENAMEL	1948	6.4 / 2.6	42.9	(a)(3)	2012	Y / Y	Leak (4/11/1984)	YES	YES	N/A
6	74	1029	809.28	0.281	491	52000	FW	FUSION BONDED EPOXY	1948	7.6 / 1.4	42.9	(a)(3)	2012	Y / Y	Leak (4/11/1984)	YES	YES	N/A
7	75	1029	809.28	0.281	491	52000	FW	FUSION BONDED EPOXY	1948	8.4 / 0.9	42.9	(a)(3)	2012	Y / Y	Leak (4/11/1984)	YES	YES	N/A
8	76	1040	809.28	0.281	491	52000	FW	FUSION BONDED EPOXY	1948	0.2 / 13.1	42.9	(a)(3)	2012	Y / Y	Leak (4/11/1984)	YES	YES	N/A
9	77	1040	809.28	0.281	491	52000	FW	HOT APPLIED WAX	1948	3.6 / 9.2	42.9	(a)(3)	2012	Y / Y	Leak (4/11/1984)	YES	YES	N/A
10	78	978	778.75	0.312	567	52000	DSAW	COAL TAR ENAMEL	1950	10.0 / 0.0	89.2	(a)(3)	2012	Y / Y	Leak (6/1/1965)	YES	YES	N/A
11	79	1045	778.75	0.312	567	52000	DSAW	COAL TAR ENAMEL	1950	0.4 / 7.8	89.2	(a)(3)	2012	Y / Y	Leak (6/1/1965)	YES	YES	N/A
12	80	1045	778.75	0.312	567	52000	DSAW	COAL TAR ENAMEL	1950	1.6 / 6.5	89.2	(a)(3)	2012	Y / Y	Leak (6/1/1965)	YES	YES	N/A
13	82	1034	809.28	0.281	491	52000	FW	COAL TAR ENAMEL	1949	10.0 / 0.1	42.9	(a)(3)	2012	Y / Y	Leak (4/2/1998)	NO	YES	N/A
14	83	1022	809.28	0.281	491	52000	FW	COAL TAR ENAMEL	1949	10.2 / 0.0	42.9	(a)(3)	2012	Y / Y	Leak (4/2/1998)	NO	YES	N/A
15	84	1022	809.28	0.281	491	52000	FW	COAL TAR ENAMEL	1949	0.1 / 12.1	42.9	(a)(3)	2012	Y / Y	Leak (4/2/1998)	NO	YES	N/A
16	85	1020	809.28	0.281	491	52000	FW	COAL TAR ENAMEL	1949	4.6 / 7.2	42.9	(a)(3)	2012	Y / Y	Leak (2/15/1983)	YES	YES	N/A
17	86	1029	809.28	0.281	504	52000	FW	COAL TAR ENAMEL	1950	9.0 / 0.0	32.5	(a)(1)	2012	Y / Y	Leak (4/30/2011)	NO	YES	N/A
18	87	1033	809.28	0.281	504	52000	FW	COAL TAR ENAMEL	1950	0.0 / 3.2	32.5	(a)(1)	2012	Y / Y	Leak (4/30/2011)	NO	YES	N/A
19	88	993	778.75	0.312	567	52000	DSAW	COAL TAR ENAMEL	1951	3.0 / 5.9	89.2	(a)(3)	2012	Y / Y	Leak (9/25/1995)	NO	YES	N/A
20	89	993	778.75	0.312	567	52000	DSAW	COAL TAR ENAMEL	1951	3.3 / 5.6	89.2	(a)(3)	2012	Y / Y	Leak (9/25/1995)	NO	YES	N/A
21	90	1284	936	0.39	760	60000	DSAW	HOT APPLIED WAX	1969	13.2 / 3.6	89.2	(a)(1)	2012	Y / Y		N/A	YES	N/A
22	100	1037	750	0.25	454	50000	FW	COAL TAR ENAMEL	1944	8.6 / 5.0	81.1	(a)(1)	2012	Y / Y	Leak (1/1/1986)	NO	YES	N/A
23	101	1037	750	0.25	454	50000	FW	COAL TAR ENAMEL	1944	9.0 / 4.7	81.1	(a)(1)	2012	Y / Y	Leak (1/1/1986)	NO	YES	N/A
24	102	1039	750	0.25	454	50000	FW	FUSION BONDED EPOXY	1944	10.9 / 1.3	81.1	(a)(1)	2012	Y / Y	Leak (3/1/1965) / SCC[4]	YES / NSLP	YES	N/A
25	103	MPS	1012.5	0.375	454	45000	SMLS	HOT APPLIED WAX	1944	4.6 / 0.7	78.7	(c)	2012	Y / MPS	Leak (3/1/1965) / SCC[1,3]	NLP / NSLP	YES	YES
26	105	1037	858.62	0.344	567	52000	DSAW	COAL TAR ENAMEL	1949	8.6 / 4.9	81.1	(a)(1)	2012	Y / Y	Leak (12/15/1969)	NO	YES	N/A
27	106	1037	858.62	0.344	567	52000	DSAW	COAL TAR ENAMEL	1949	9.0 / 4.7	81.1	(a)(1)	2012	Y / Y	Leak (12/15/1969)	NO	YES	N/A
28	108	757	603.87	0.25	526	52000	DSAW	COAL TAR ENAMEL	1948	10.9 / 1.3	81.1	(a)(1)	2012	Y / Y	Leak (11/30/2010) / SCC[4]	NO / NSLP	YES	N/A
29	109	1114	809.28	0.281	491	52000	FW	COAL TAR ENAMEL	1947	1.7 / 5.0	87	(a)(1)	2012	Y / Y	Leak (6/24/1993) / SCC[1]	NLP / YES	YES	N/A
30	110	1072	778.75	0.312	567	52000	DSAW	COAL TAR ENAMEL	1951	8.6 / 4.9	81.1	(a)(1)	2012	Y / Y	Leak (5/15/1969)	NO	YES	N/A
31	111	1072	778.75	0.312	567	52000	DSAW	COAL TAR ENAMEL	1951	9.0 / 4.7	81.1	(a)(1)	2012	Y / Y	Leak (5/15/1969)	NO	YES	N/A
32	113	1067	778.75	0.312	567	52000	DSAW	FUSION BONDED EPOXY	1951	10.9 / 1.3	81.1	(a)(1)	2012	Y / Y	Leak (9/27/2007) / SCC[4]	NO / NSLP	YES	N/A
33	115	1149	858.62	0.344	567	52000	DSAW	COAL TAR ENAMEL	1949	1.6 / 5.0	87	(a)(3)	2012	Y / Y	Leak (6/15/1984) / SCC[1]	YES / YES	YES	N/A
34	116	1068	778.75	0.312	567	52000	DSAW	COAL TAR ENAMEL	1951	1.6 / 4.9	87	(a)(1)	2012	Y / Y	Leak (6/15/1959) / SCC[1]	YES / YES	YES	N/A
35	117	1407	973.44	0.312	517	52000	DSAW	COAL TAR ENAMEL	1956	1.6 / 8.9	186.1	(a)(3)	2012	Y / Y	Leak (4/15/1971)	YES	YES	N/A
36	118	1407	973.44	0.312	517	52000	DSAW	COAL TAR ENAMEL	1956	2.1 / 8.7	186.1	(a)(3)	2012	Y / Y	Leak (4/15/1971)	YES	YES	N/A
37	119	1407	973.44	0.312	517	52000	DSAW	COAL TAR ENAMEL	1956	3.0 / 7.4	186.1	(a)(3)	2012	Y / Y	Leak (4/15/1971)	YES	YES	N/A
38	120	1407	973.44	0.312	517	52000	DSAW	COAL TAR ENAMEL	1956	8.6 / 2.5	186.1	(a)(3)	2012	Y / Y		N/A	YES	N/A
39	121	1338	936	0.375	633	52000	DSAW	COAL TAR ENAMEL	1955	13.2 / 5.6	51.1	(a)(3)	2012	Y / Y	SCC[1]	YES	YES	N/A
40	122	1338	936	0.375	633	52000	DSAW	COAL TAR ENAMEL	1955	14.5 / 4.8	51.1	(a)(3)	2012	Y / Y	SCC[1]	YES	YES	N/A
41	124	1329	936	0.375	633	52000	DSAW	COAL TAR ENAMEL	1954	14.8 / 1.4	60.1	(a)(3)	2012	Y / Y	SCC[1]	YES	YES	N/A
42	125	1329	936	0.375	633	52000	DSAW	COAL TAR ENAMEL	1954	14.8 / 1.1	60.1	(a)(3)	2012	Y / Y	SCC[1]	NO	YES	N/A
43	126	1329	936	0.375	633	52000	DSAW	COAL TAR ENAMEL	1954	0.1 / 16.9	60.1	(a)(3)	2012	Y / Y	SCC[1]	NO	YES	N/A
44	131	1093	758.7	0.281	454	45000	SMLS	COAL TAR ENAMEL	1944	3.7 / 2.4	87	(a)(3)	2012	Y / Y	Leak (11/15/1953)	YES	YES	N/A
45	132	1093	758.7	0.281	454	45000	SMLS	COAL TAR ENAMEL	1944	4.8 / 1.2	87	(a)(3)	2012	Y / Y	Leak (11/15/1953)	YES	YES	N/A
46	134	1178	809.28	0.281	491	52000	FW	COAL TAR ENAMEL	1948	3.7 / 2.5	87	(a)(3)	2012	Y / Y	Leak (2/28/1991) / SCC[4]	NO / NSLP	YES	N/A
47	135	1178	809.28	0.281	491	52000	FW	COAL TAR ENAMEL	1948	3.7 / 2.1	87	(a)(3)	2012	Y / Y	Leak (2/28/1991) / SCC[4]	NO / NSLP	YES	N/A
48	136	1026	778.75	0.312	567	52000	DSAW	COAL TAR ENAMEL	1949	0.7 / 13.1	85.1	(a)(3)	2012	Y / Y	Leak (2/15/1977)	NO	YES	N/A
49	137	1027	778.75	0.312	567	52000	DSAW	COAL TAR ENAMEL	1952	0.7 / 13.1	85.1	(a)(3)	2012	Y / Y	Leak (1/30/1989)	NO	YES	N/A
50	139	1309	936	0.375	633	52000	FW	COAL TAR ENAMEL	1959	13.5 / 1.1	58.7	(a)(3)	2012	Y / Y	Leak (9/15/1975)	NO	YES	N/A
51	140	1324	936	0.375	633	52000	FW	HOT APPLIED WAX	1959	7.3 / 8.0	53.1	(a)(3)	2012	Y / Y		N/A	YES	N/A
52	141	1324	936	0.375	633	52000	FW	HOT APPLIED WAX	1959	7.4 / 7.8	53.1	(a)(3)	2012	Y / Y		N/A	YES	N/A
53	142	1262	936	0.375	633	52000	SAW	HOT APPLIED WAX	1959	14.7 / 1.4	60.2	(a)(3)	2012	Y / Y		N/A	YES	N/A
54	143	1262	936	0.375	633	52000	SAW	HOT APPLIED WAX	1959	15.7 / 0.0	60.2	(a)(3)	2012	Y / Y		N/A	YES	N/A
55	144	1232	936	0.375	633	52000	DSAW	HOT APPLIED WAX	1959	0.0 / 15.4	60.2	(a)(3)	2012	Y / Y		N/A	YES	N/A
56	146	1332	936	0.375	633	52000	SAW	HOT APPLIED WAX	1959	12.5 / 1.3	59.2	(a)(3)	2012	Y / Y	Leak (12/15/1976)	NLP	YES	N/A
57	147	1332	936	0.375	633	52000	SAW	HOT APPLIED WAX	1959	13.7 / 0.1	59.2	(a)(3)	2012	Y / Y	Leak (12/15/1976)	NLP	YES	N/A
58	148	1340	936	0.375	633	52000	DSAW	COAL TAR ENAMEL	1959	4.9 / 10.7	57.5	(a)(3)	2012	Y / Y	Leak (6/15/1984)	NLP	YES	N/A

PHMSA No.	KM No.	Test Pressure (psig)	Pipe Design Pressure @0.72 (psig)	Pipe Wall Thickness (in)	PIR (ft)	Pipe Grade (psig)	Pipe Seam Type	Pipe Coating	Pipe Installation Date	Distance to MLV Upstream/ Downstream (mi)	Compressor Station Spacing (mi)	MAOP Established per 192.619	Aerial Photography	Material/ Pressure Test Documents	Leak/SCC/SSWC (w/i 20 mi of segment)	Segment Pressure Tested after Leak/SCC/SSWC	In-Line Inspected	MP5 only or MP5 record (to back up 'test')
59	150	1340	936	0.375	633	52000	DSAW	COAL TAR ENAMEL	1959	6.6 / 8.9	57.5	(a)(3)	2012	Y / Y	Leak (6/15/1984)	NLP	YES	N/A
60	152	1360	936	0.39	760	60000	FW	LIQUID EPOXY	1965	13.5 / 1.1	58.7	(a)(1)	2012	Y / Y	Leak (3/15/1964)	YES	YES	N/A
61	153	1258	936	0.39	760	60000	ERW	TAPE- UNKNOWN BACKING	1966	7.3 / 7.8	53.1	(a)(1)	2012	Y / Y	Leak (7/15/1966)	YES	YES	N/A
62	154	1294	936	0.39	760	60000	DSAW	TAPE- UNKNOWN BACKING	1966	14.7 / 1.4	60.2	(a)(1)	2012	Y / Y		N/A	YES	N/A
63	155	1294	936	0.39	760	60000	ERW	TAPE- UNKNOWN BACKING	1966	15.7 / 0.0	60.2	(a)(1)	2012	Y / Y		N/A	YES	N/A
64	157	1390	974.88	0.4062	760	60000	DSAW	TAPE- UNKNOWN BACKING	1964	6.6 / 8.9	57.5	(a)(3)	2012	Y / Y		N/A	YES	N/A
65	158	1345	938.4	0.391	760	60000	DSAW	FUSION BONDED EPOXY	1972	13.4 / 1.1	58.7	(a)(1)	2012	Y / Y		N/A	YES	N/A
66	159	1471	1560	0.5	566	52000	SMLS	COAL TAR ENAMEL	1955	3.6 / 7.9	38	(a)(3)	2012	Y / Y		N/A	YES	N/A
67	160	1471	1170	0.375	566	52000	SMLS	COAL TAR ENAMEL	1955	5.2 / 6.8	38	(a)(3)	2012	Y / Y		N/A	YES	N/A
68	162	1467	1170	0.375	566	52000	SMLS	COAL TAR ENAMEL	1955	3.1 / 0.4	30.4	(a)(3)	2012	Y / Y		N/A	YES	N/A
69	163	1467	1170	0.375	566	52000	SMLS	COAL TAR ENAMEL	1955	3.2 / 0.2	30.4	(a)(3)	2012	Y / Y		N/A	YES	N/A
70	164	1468	1170	0.375	566	52000	SMLS	COAL TAR ENAMEL	1955	3.7 / 0.3	30.4	(a)(3)	2012	Y / Y	Leak (12/15/2008)	NO	YES	N/A
71	166	1478	1170	0.375	566	52000	SMLS	COAL TAR ENAMEL	1955	1.5 / 5.4	30.4	(a)(3)	2012	Y / Y	Leak (12/15/2008)	NO	YES	N/A
72	167	1478	1170	0.375	566	52000	SMLS	COAL TAR ENAMEL	1955	2.2 / 4.5	30.4	(a)(3)	2012	Y / Y	Leak (12/15/2008)	NO	YES	N/A
73	168	1479	1170	0.375	566	52000	DSAW	COAL TAR ENAMEL	1955	5.5 / 1.6	30.4	(a)(3)	2012	Y / Y	Leak (12/15/2008)	NO	YES	N/A
74	177	1174	876.72	0.281	457	52000	FW	COAL TAR ENAMEL	1951	1.0 / 7.6	53.6	(a)(3)	2012	Y / Y	Leak (7/11/2002)	NLP	YES	N/A
75	178	1174	876.72	0.281	457	52000	FW	COAL TAR ENAMEL	1951	2.5 / 6.3	53.6	(a)(3)	2012	Y / Y	Leak (7/11/2002)	NLP	YES	N/A
76	179	1096	876.72	0.281	457	52000	DSAW	COAL TAR ENAMEL	1951	2.2 / 9.7	68.8	(a)(3)	2012	Y / Y	Leak (8/15/1954)	YES	YES	N/A
77	180	1096	876.72	0.281	457	52000	DSAW	COAL TAR ENAMEL	1951	3.9 / 8.6	68.8	(a)(3)	2012	Y / Y	Leak (8/15/1954)	YES	YES	N/A
78	181	MP5	876.72	0.281	457	52000	DSAW	COAL TAR ENAMEL	1951	4.0 / 11.5	68.8	(c)	2012	Y / MP5	Leak (7/15/1954)	YES	YES	YES
79	182	1158	876.72	0.281	457	52000	DSAW	COAL TAR ENAMEL	1951	3.5 / 3.4	65.8	(a)(3)	2012	Y / Y	Leak (6/15/1972)	YES	YES	N/A
80	183	1158	876.72	0.281	457	52000	DSAW	COAL TAR ENAMEL	1951	6.5 / 0.5	65.8	(a)(3)	2012	Y / Y	Leak (6/15/1972)	YES	YES	N/A
81	186	1049	809.28	0.281	504	52000	FW	COAL TAR ENAMEL	1950	5.3 / 3.9	62.8	(a)(1)	2012	Y / Y	Leak (8/15/1974)	YES	YES	N/A
82	187	1049	809.28	0.281	504	52000	FW	COAL TAR ENAMEL	1950	6.7 / 2.8	62.8	(a)(1)	2012	Y / Y	Leak (8/15/1974)	YES	YES	N/A
83	188	1073	809.28	0.281	504	52000	FW	COAL TAR ENAMEL	1950	7.1 / 5.0	64.4	(a)(1)	2012	Y / Y	Leak (6/15/1977)	NO	YES	N/A
84	189	1073	809.28	0.281	504	52000	FW	COAL TAR ENAMEL	1950	8.4 / 3.9	64.4	(a)(1)	2012	Y / Y	Leak (6/15/1977)	NO	YES	N/A
85	190	1073	809.28	0.281	504	52000	FW	COAL TAR ENAMEL	1950	8.8 / 3.5	64.4	(a)(1)	2012	Y / Y	Leak (6/15/1977)	NO	YES	N/A
86	191	1073	809.28	0.281	504	52000	FW	COAL TAR ENAMEL	1952	1.7 / 14.3	64.1	(a)(3)	2012	Y / Y	Leak (5/19/2006)	NO	YES	N/A
87	192	1058	809.28	0.281	504	52000	FW	COAL TAR ENAMEL	1952	5.1 / 4.1	62.8	(a)(1)	2012	Y / Y		N/A	YES	N/A
88	193	1104	809.28	0.281	504	52000	FW	FUSION BONDED EPOXY	1952	6.8 / 2.8	62.8	(a)(1)	2012	Y / Y		N/A	YES	N/A
89	194	1077	809.28	0.281	504	52000	FW	COAL TAR ENAMEL	1954	3.0 / 12.1	64.4	(a)(1)	2012	Y / Y	Leak (8/15/1969)	NO	YES	N/A
90	195	1018	809.28	0.281	504	52000	DSAW	COAL TAR ENAMEL	1956	0.5 / 4.7	62.8	(a)(3)	2012	Y / Y	Leak (5/20/2002)	NO	YES	N/A
91	196	1018	809.28	0.281	504	52000	DSAW	COAL TAR ENAMEL	1956	0.8 / 4.1	62.8	(a)(3)	2012	Y / Y	Leak (5/20/2002)	NO	YES	N/A
92	197	1018	809.28	0.281	504	52000	DSAW	COAL TAR ENAMEL	1956	2.1 / 3.1	62.8	(a)(3)	2012	Y / Y	Leak (5/20/2002)	NO	YES	N/A
93	198	1086	825.6	0.344	698	60000	DSAW	COAL TAR ENAMEL	1963	5.3 / 3.9	62.8	(a)(1)	2012	Y / Y	Leak (2/10/2011)	NO	YES	N/A
94	200	1123	825.6	0.344	698	60000	DSAW	COAL TAR ENAMEL	1963	6.7 / 2.8	62.8	(a)(1)	2012	Y / Y	Leak (2/10/2011)	NO	YES	N/A
95	201	1058	825.6	0.344	698	60000	DSAW	COAL TAR ENAMEL	1963	7.1 / 5.0	64.4	(a)(3)	2012	Y / Y	Leak (2/10/2011)	NO	YES	N/A
96	202	1058	825.6	0.344	698	60000	DSAW	COAL TAR ENAMEL	1963	8.4 / 3.9	64.4	(a)(3)	2012	Y / Y	Leak (2/10/2011)	NO	YES	N/A
97	203	1058	825.6	0.344	698	60000	DSAW	COAL TAR ENAMEL	1963	8.8 / 3.5	64.4	(a)(3)	2012	Y / Y	Leak (2/10/2011)	NO	YES	N/A
98	205	1064	809.28	0.281	504	52000	DSAW	COAL TAR ENAMEL	1950	7.2 / 5.0	64.4	(a)(1)	2012	Y / Y	Leak (6/15/1977)	NO	YES	N/A
99	206	1144	876.72	0.281	490	52000	DSAW	COAL TAR ENAMEL	1953	4.3 / 6.3	70.2	(a)(1)	2012	Y / Y	Leak (2/15/1957) / SCC[1]	YES / NO	YES	N/A
100	207	1144	876.72	0.281	490	52000	DSAW	COAL TAR ENAMEL	1953	5.4 / 5.3	70.2	(a)(1)	2012	Y / Y	Leak (2/15/1957) / SCC[1]	YES / NO	YES	N/A
101	208	1286	898.56	0.312	613	60000	DSAW	COAL TAR ENAMEL	1965	4.1 / 6.3	70.2	(a)(1)	2012	Y / Y		N/A	YES	N/A
102	209	1286	898.56	0.312	613	60000	DSAW	COAL TAR ENAMEL	1965	5.2 / 5.3	70.2	(a)(1)	2012	Y / Y		N/A	YES	N/A
103	213	1037	758.7	0.281	454	45000	SMLS	COAL TAR ENAMEL	1944	3.5 / 2.4	89.8	(a)(1)	2012	Y / Y	Leak (1/15/1982)	NO	YES	N/A
104	215	964	758.7	0.281	454	45000	SMLS	COAL TAR ENAMEL	1944	4.0 / 6.6	89.8	(a)(1)	2012	Y / Y	Leak (1/3/1988)	YES	YES	N/A
105	216	964	758.7	0.281	454	45000	SMLS	COAL TAR ENAMEL	1944	7.6 / 3.3	89.8	(a)(1)	2012	Y / Y	Leak (1/3/1988)	YES	YES	N/A
106	217	964	758.7	0.281	454	45000	SMLS	COAL TAR ENAMEL	1944	9.0 / 2.1	89.8	(a)(1)	2012	Y / Y	Leak (1/3/1988)	YES	YES	N/A
107	220	964	758.7	0.281	454	45000	SMLS	COAL TAR ENAMEL	1944	9.3 / 0.0	89.8	(a)(1)	2012	Y / Y	Leak (1/3/1988)	NO	YES	N/A
108	221	956	758.7	0.281	454	45000	SMLS	COAL TAR ENAMEL	1944	0.0 / 9.2	89.8	(a)(3)	2012	Y / Y	Leak (1/3/1988)	YES	YES	N/A
109	223	1036	809.28	0.281	491	52000	FW	COAL TAR ENAMEL	1948	3.5 / 2.4	89.8	(a)(3)	2012	Y / Y	Leak (10/16/1996)	NO	YES	N/A
110	224	1036	809.28	0.281	491	52000	FW	COAL TAR ENAMEL	1948	5.3 / 0.6	89.8	(a)(3)	2012	Y / Y	Leak (10/16/1996)	NO	YES	N/A
111	226	1224	936	0.375	633	52000	SAW	COAL TAR ENAMEL	1959	5.1 / 8.9	61.2	(a)(3)	2012	Y / Y	Leak (6/20/2012)	NLP	YES	N/A
112	227	1224	936	0.375	633	52000	SAW	COAL TAR ENAMEL	1959	6.1 / 7.9	61.2	(a)(3)	2012	Y / Y	Leak (6/20/2012)	NLP	YES	N/A
113	228	1224	936	0.375	633	52000	SAW	COAL TAR ENAMEL	1959	6.3 / 7.5	61.2	(a)(3)	2012	Y / Y	Leak (6/20/2012)	NLP	YES	N/A
114	232	1182	936	0.375	633	52000	DSAW	COAL TAR ENAMEL	1959	7.0 / 11.8	75.9	(a)(3)	2012	Y / Y	Leak (8/15/1966)	YES	YES	N/A
115	233	1182	936	0.375	633	52000	DSAW	COAL TAR ENAMEL	1959	8.0 / 10.8	75.9	(a)(3)	2012	Y / Y	Leak (8/15/1966)	YES	YES	N/A
116	234	1182	936	0.375	633	52000	DSAW	COAL TAR ENAMEL	1959	8.2 / 10.6	75.9	(a)(3)	2012	Y / Y	Leak (8/15/1966)	YES	YES	N/A

Attachment A: Listing of Tennessee Gas Pipeline (TGP) special permit segments

OPID 19160

PHMSA No.	KM No.	Test Pressure (psig)	Pipe Design Pressure @0.72 (psig)	Pipe Wall Thickness (in)	PIR (ft)	Pipe Grade (psig)	Pipe Seam Type	Pipe Coating	Pipe Installation Date	Distance to MLV Upstream/ Downstream (mi)	Compressor Station Spacing (mi)	MAOP Established per 192.619	Aerial Photography	Material/ Pressure Test Documents	Leak/SCC/SSWC (w/i 20 mi of segment)	Segment Pressure Tested after Leak/SCC/SSWC	In-Line Inspected	MPS only or MPS record (to back up 'test')
117	235	1182	936	0.375	633	52000	DSAW	COAL TAR ENAMEL	1959	18.5 / 0.2	75.9	(a)(3)	2012	Y / Y		N/A	YES	N/A
118	236	1182	936	0.375	633	52000	DSAW	COAL TAR ENAMEL	1959	18.8 / 0.0	75.9	(a)(3)	2012	Y / Y		N/A	YES	N/A
119	237	1179	936	0.375	633	52000	SAW	COAL TAR ENAMEL	1959	0.0 / 11.9	75.9	(a)(3)	2012	Y / Y		N/A	YES	N/A
120	238	1179	1248	0.5	633	52000	FW	HOT APPLIED WAX	1959	0.2 / 11.8	75.9	(a)(3)	2012	Y / Y		N/A	YES	N/A
121	239	1179	936	0.375	633	52000	SAW	COAL TAR ENAMEL	1959	1.0 / 10.6	75.9	(a)(3)	2012	Y / Y		N/A	YES	N/A
122	240	1237	936	0.375	633	52000	DSAW	COAL TAR ENAMEL	1959	5.6 / 6.9	75.9	(a)(3)	2012	Y / Y		N/A	YES	N/A
123	241	1237	936	0.375	633	52000	DSAW	COAL TAR ENAMEL	1959	7.9 / 4.3	75.9	(a)(3)	2012	Y / Y		N/A	YES	N/A
124	242	1252	936	0.375	633	52000	DSAW	COAL TAR ENAMEL	1959	2.7 / 10.1	75.9	(a)(3)	2012	Y / Y		N/A	YES	N/A
125	243	1252	936	0.375	633	52000	DSAW	COAL TAR ENAMEL	1959	3.9 / 8.8	75.9	(a)(3)	2012	Y / Y		N/A	YES	N/A
126	244	1280	974.4	0.406	760	60000	DSAW	COAL TAR ENAMEL	1964	5.1 / 8.9	61.2	(a)(3)	2012	Y / Y	Leak (11/15/1972)	YES	YES	N/A
127	245	1280	974.4	0.406	760	60000	DSAW	COAL TAR ENAMEL	1964	6.1 / 7.9	61.2	(a)(3)	2012	Y / Y	Leak (11/15/1972)	YES	YES	N/A
128	250	1284	936	0.39	760	60000	ERW	COAL TAR ENAMEL	1968	7.0 / 11.6	75.9	(a)(1)	2012	Y / Y		N/A	YES	N/A
129	251	1284	936	0.39	760	60000	ERW	COAL TAR ENAMEL	1968	8.3 / 10.5	75.9	(a)(1)	2012	Y / Y		N/A	YES	N/A
130	252	1303	936	0.39	760	60000	ERW	COAL TAR ENAMEL	1968	18.7 / 0.0	75.9	(a)(1)	2012	Y / Y		N/A	YES	N/A
131	253	1224	974.4	0.406	760	60000	DSAW	COAL TAR ENAMEL	1963	0.1 / 11.9	75.9	(a)(3)	2012	Y / Y		N/A	YES	N/A
132	254	1224	1125.6	0.469	760	60000	DSAW	HOT APPLIED WAX	1963	0.2 / 11.8	75.9	(a)(3)	2012	Y / Y		N/A	YES	N/A
133	255	1224	974.4	0.406	760	60000	DSAW	190 COAL TAR ENAMEL	1963	1.1 / 10.6	75.9	(a)(3)	2012	Y / Y		N/A	YES	N/A
134	256	1401	974.4	0.406	760	60000	DSAW	COAL TAR ENAMEL	1965	5.6 / 7.2	75.9	(a)(1)	2012	Y / Y	Leak (2/15/1986)	NO	YES	N/A
135	257	1401	974.4	0.406	760	60000	DSAW	COAL TAR ENAMEL	1965	5.8 / 6.9	75.9	(a)(1)	2012	Y / Y	Leak (2/15/1986)	NO	YES	N/A
136	258	1401	974.4	0.406	760	60000	DSAW	COAL TAR ENAMEL	1965	7.9 / 4.9	75.9	(a)(1)	2012	Y / Y	Leak (2/15/1986)	NO	YES	N/A
137	259	1401	974.4	0.406	760	60000	DSAW	COAL TAR ENAMEL	1965	8.0 / 4.3	75.9	(a)(1)	2012	Y / Y	Leak (2/15/1986)	NO	YES	N/A
138	260	1321	936	0.39	760	60000	DSAW	COAL TAR ENAMEL	1965	2.7 / 10.1	75.9	(a)(1)	2012	Y / Y	Leak (2/15/1986)	NO	YES	N/A
139	261	1321	936	0.39	760	60000	DSAW	COAL TAR ENAMEL	1965	3.9 / 9.2	75.9	(a)(1)	2012	Y / Y	Leak (2/15/1986)	NO	YES	N/A
140	262	1321	936	0.39	760	60000	DSAW	COAL TAR ENAMEL	1965	4.0 / 8.8	75.9	(a)(1)	2012	Y / Y	Leak (2/15/1986)	NO	YES	N/A
141	271	1190	936	0.375	633	52000	EW	COAL TAR ENAMEL	1954	8.3 / 10.6	75.9	(a)(3)	2012	Y / Y		N/A	YES	N/A
142	272	1190	936	0.375	633	52000	EW	COAL TAR ENAMEL	1954	18.8 / 0.0	75.9	(a)(3)	2012	Y / Y		N/A	YES	N/A
143	273	1174	936	0.375	633	52000	EW	COAL TAR ENAMEL	1954	0.0 / 11.9	75.9	(a)(3)	2012	Y / Y		N/A	YES	N/A
144	275	1174	936	0.375	633	52000	EW	COAL TAR ENAMEL	1954	1.1 / 10.7	75.9	(a)(3)	2012	Y / Y		N/A	YES	N/A
145	276	1242	936	0.375	633	52000	EW	COAL TAR ENAMEL	1954	5.6 / 7.2	75.9	(a)(3)	2012	Y / Y		N/A	YES	N/A
146	277	1242	936	0.375	633	52000	EW	COAL TAR ENAMEL	1954	5.8 / 6.9	75.9	(a)(3)	2012	Y / Y		N/A	YES	N/A
147	278	1296	936	0.375	633	52000	EW	COAL TAR ENAMEL	1954	7.9 / 4.2	75.9	(a)(3)	2012	Y / Y		N/A	YES	N/A
148	279	1282	936	0.375	633	52000	EW	COAL TAR ENAMEL	1954	2.7 / 10.1	75.9	(a)(3)	2012	Y / Y		N/A	YES	N/A
149	280	1282	936	0.375	633	52000	EW	COAL TAR ENAMEL	1954	3.9 / 8.8	75.9	(a)(3)	2012	Y / Y		N/A	YES	N/A
150	289	1091	750	0.25	454	50000	FW	COAL TAR ENAMEL	1944	6.1 / 4.0	86.2	(a)(1)	2012	Y / Y	Leak (12/5/1995) / SCC[1,2]	NLP / YES	YES	N/A
151	290	1051	750	0.25	454	50000	FW	COAL TAR ENAMEL	1944	4.4 / 0.1	80.5	(a)(3)	2012	Y / Y	Leak (4/5/2012) / SCC[1]	NO / YES	YES	N/A
152	291	1054	750	0.25	454	50000	FW	COAL TAR ENAMEL	1944	6.8 / 0.3	80.5	(a)(3)	2012	Y / Y	Leak (3/18/1988) / SCC[1]	YES / NSLP	YES	N/A
153	292	1028	750	0.25	454	50000	FW	COAL TAR ENAMEL	1944	2.5 / 11.2	81.1	(a)(1)	2012	Y / Y	Leak (12/15/1944)	YES	YES	N/A
154	293	1028	973.44	0.312	454	52000	DSAW	COAL TAR ENAMEL	1964	3.5 / 10.1	81.1	(a)(1)	2012	Y / Y	Leak (12/15/1944)	YES	YES	N/A
155	294	1028	973.44	0.312	454	52000	DSAW	COAL TAR ENAMEL	1964	3.8 / 9.9	81.1	(a)(1)	2012	Y / Y	Leak (12/15/1944)	YES	YES	N/A
156	295	1110	778.75	0.312	567	52000	DSAW	COAL TAR ENAMEL	1948	4.4 / 0.3	80.5	(a)(3)	2012	Y / Y	Leak (2/17/2007) / SCC[1]	NLP / YES	YES	N/A
157	297	1110	778.75	0.312	567	52000	DSAW	COAL TAR ENAMEL	1948	4.3 / 0.0	80.5	(a)(3)	2012	Y / Y	Leak (2/17/2007) / SCC[1]	NLP / YES	YES	N/A
158	298	1063	778.75	0.312	567	52000	DSAW	COAL TAR ENAMEL	1948	0.0 / 7.3	80.5	(a)(3)	2012	Y / Y	Leak (2/17/2007) / SCC[1]	NLP / NSLP	YES	N/A
159	299	1035	858.62	0.344	567	52000	SAW	COAL TAR ENAMEL	1949	3.2 / 10.1	81.1	(a)(1)	2012	Y / Y	Leak (6/15/1969)	NLP	YES	N/A
160	300	1041	778.75	0.312	567	52000	EFW	COAL TAR ENAMEL	1952	4.4 / 0.2	80.5	(a)(3)	2012	Y / Y	SCC[1]	YES	YES	N/A
161	301	1041	778.75	0.312	567	52000	EFW	COAL TAR ENAMEL	1952	3.1 / 1.2	80.5	(a)(3)	2012	Y / Y	SCC[1]	YES	YES	N/A
162	302	1041	778.75	0.312	567	52000	EFW	COAL TAR ENAMEL	1952	4.4 / 0.0	80.5	(a)(3)	2012	Y / Y	SCC[1]	YES	YES	N/A
163	303	1082	778.75	0.312	567	52000	DSAW	COAL TAR ENAMEL	1952	0.0 / 7.3	80.5	(a)(1)	2012	Y / Y	SCC[1]	NSLP	YES	N/A
164	304	1082	778.75	0.312	567	52000	DSAW	COAL TAR ENAMEL	1952	0.1 / 7.3	80.5	(a)(1)	2012	Y / Y	SCC[1]	NSLP	YES	N/A
165	306	1082	778.75	0.312	567	52000	DSAW	COAL TAR ENAMEL	1952	6.9 / 0.3	80.5	(a)(1)	2012	Y / Y	SCC[1]	NSLP	YES	N/A
166	307	1071	936	0.375	567	52000	DSAW	COAL TAR ENAMEL	1964	3.4 / 10.1	81.1	(a)(1)	2012	Y / Y	Leak (5/15/1969)	NLP	YES	N/A
167	310	MPS	898.56	0.312	526	52000	DSAW	COAL TAR ENAMEL	1953	4.5 / 5.2	98.8	(c)	2012	Y / MPS	Leak (9/15/1962) / SCC[1]	YES / NSLP	YES	YES
168	311	MPS	898.56	0.312	526	52000	DSAW	COAL TAR ENAMEL	1953	6.3 / 3.4	98.8	(c)	2012	Y / MPS	Leak (9/15/1962) / SCC[1]	YES / NSLP	YES	YES
169	312	1414	973.44	0.312	506	52000	FW	COAL TAR ENAMEL	1950	1.0 / 6.1	20	(a)(3)	2012	Y / Y	Leak (10/15/1951)	YES	YES	N/A
170	313	1414	973.44	0.312	506	52000	FW	COAL TAR ENAMEL	1950	2.5 / 4.4	20	(a)(3)	2012	Y / Y	Leak (10/15/1951)	YES	YES	N/A
171	316	1406	973.44	0.312	506	52000	FW	COAL TAR ENAMEL	1950	1.9 / 6.9	20	(a)(3)	2012	Y / Y	Leak (3/15/1958)	YES	YES	N/A
172	317	1406	973.44	0.312	506	52000	FW	COAL TAR ENAMEL	1950	6.7 / 2.1	20	(a)(3)	2012	Y / Y	Leak (3/15/1958)	YES	YES	N/A
173	318	1180	936	0.25	416	52000	DSAW	FUSION BONDED EPOXY	1984	9.5 / 1.0	87.8	(a)(1)	2012	Y / Y	Leak (11/1/1983)	YES	YES	N/A
174	319	1180	936	0.25	416	52000	DSAW	FUSION BONDED EPOXY	1984	10.1 / 0.3	87.8	(a)(1)	2012	Y / Y	Leak (11/1/1983)	YES	YES	N/A

PHMSA No.	KM No.	Test Pressure (psig)	Pipe Design Pressure @0.72 (psig)	Pipe Wall Thickness (in)	PIR (ft)	Pipe Grade (psig)	Pipe Seam Type	Pipe Coating	Pipe Installation Date	Distance to MLV Upstream/ Downstream (mi)	Compressor Station Spacing (mi)	MAOP Established per 192.619	Aerial Photography	Material/ Pressure Test Documents	Leak/SCC/SSWC (w/i 20 mi of segment)	Segment Pressure Tested after Leak/SCC/SSWC	In-Line Inspected	MPS only or MPS record (to back up 'test')
175	320	1320	936	0.25	416	52000	DSAW	FUSION BONDED EPOXY	1984	2.4 / 7.1	87.8	(a)(1)	2012	Y / Y	Leak (11/1/1983)	YES	YES	N/A
176	322	1209	936	0.25	422	52000	DSAW	FUSION BONDED EPOXY	1984	3.8 / 1.1	87.8	(a)(1)	2012	Y / Y	Leak (11/1/1983)	YES	YES	N/A
177	323	1222	973.44	0.312	517	52000	FW	COAL TAR ENAMEL	1948	3.5 / 8.2	87.7	(a)(3)	2012	Y / Y	Leak (5/15/1978)	YES	YES	N/A
178	326	1222	973.44	0.312	507	52000	FW	COAL TAR ENAMEL	1948	0.8 / 9.2	87.7	(a)(3)	2012	Y / Y	Leak (5/15/1958)	YES	YES	N/A
179	327	1222	973.44	0.312	507	52000	FW	COAL TAR ENAMEL	1948	2.5 / 7.3	87.7	(a)(3)	2012	Y / Y	Leak (5/15/1958)	YES	YES	N/A
180	328	1244	990.72	0.344	565	52000	FW	TAPE- UNKNOWN BACKING	1959	10.0 / 7.5	89.1	(a)(3)	2012	Y / Y	Leak (12/15/1966)	YES	YES	N/A
181	329	1269	1246.15	0.375	541	60000	FW	COAL TAR ENAMEL	1966	7.0 / 3.5	89.1	(a)(2)	2012	Y / Y	Leak (12/15/1966)	YES	YES	N/A
182	330	1151	910.08	0.316	624	60000	DSAW	FUSION BONDED EPOXY	1972	4.8 / 7.5	89.1	(a)(1)	2012	Y / Y		N/A	YES	N/A
183	331	1151	910.08	0.316	624	60000	DSAW	FUSION BONDED EPOXY	1972	6.0 / 6.5	89.1	(a)(1)	2012	Y / Y		N/A	YES	N/A
184	334	1054	750	0.25	454	50000	FW	COAL TAR ENAMEL	1944	2.6 / 1.1	80.8	(a)(3)	2012	Y / Y	Leak (4/5/2012) / SCC[1]	NO / YES	YES	N/A
185	335	1054	750	0.25	454	50000	FW	COAL TAR ENAMEL	1944	4.3 / 0.0	80.8	(a)(3)	2012	Y / Y	Leak (4/5/2012) / SCC[1]	NO / YES	YES	N/A
186	336	1044	750	0.25	454	50000	FW	COAL TAR ENAMEL	1966	0.0 / 7.3	80.8	(a)(3)	2012	Y / Y	Leak (4/5/2012) / SCC[1]	NLP / NSLP	YES	N/A
187	340	1228	973.44	0.312	500	52000	FW	COAL TAR ENAMEL	1948	10.2 / 1.0	87.7	(a)(3)	2012	Y / Y	Leak (2/15/1969)	YES	YES	N/A
188	341	1024	778.75	0.312	567	52000	DSAW	COAL TAR ENAMEL	1952	8.8 / 0.5	91.7	(a)(1)	2012	Y / Y	Leak (7/15/1981)	NO	YES	N/A
189	342	993	778.75	0.312	567	52000	DSAW	FUSION BONDED EPOXY	1951	1.4 / 7.5	88.7	(a)(3)	2012	Y / Y	Leak (9/25/1995)	NO	YES	N/A
190	343	993	778.75	0.312	567	52000	DSAW	COAL TAR ENAMEL	1951	1.8 / 7.2	88.7	(a)(3)	2012	Y / Y	Leak (9/25/1995)	NO	YES	N/A
191	348	1302	974.88	0.4062	760	60000	FW	TAPE- UNKNOWN BACKING	1963	0.0 / 15.3	59.9	(a)(3)	2012	Y / Y		N/A	YES	N/A
192	360	1338	936	0.375	633	52000	DSAW	COAL TAR ENAMEL	1955	15.0 / 4.6	51.1	(a)(3)	2012	Y / Y	SCC[1]	YES	YES	N/A