

MAR 31 2011

DEPARTMENT OF TRANSPORTATION  
PIPELINE AND HAZARDOUS MATERIALS SAFETY ADMINISTRATION  
OFFICE OF PIPELINE SAFETY  
WASHINGTON, DC 20590

\_\_\_\_\_) )  
In the Matter of ) )  
Tennessee Gas Pipeline Company ) ) CPF No. 3-2011-1001S  
Respondent ) )  
\_\_\_\_\_)

**CONSENT AGREEMENT**

On March 11, 2011, the Pipeline and Hazardous Materials Safety Administration (PHMSA), U.S. Department of Transportation, issued a Notice of Proposed Safety Order (Notice) to Tennessee Gas Pipeline Company (Respondent). The Notice alleges that certain segments of Respondent's natural gas pipeline system designated as the Line 200 Pipeline System have an apparent condition or conditions that, without corrective measures, would pose a pipeline integrity risk to public safety, property, or the environment. Specifically, the Notice alleges that the conditions that caused the February 10, 2011 failure on Line 200-4 in mainline valve section 214 (Line Section 214-4) approximately 2.5 miles southeast of the town of Hanover, Ohio, and the March 1, 2011 failure on Line 200-1 in mainline valve section 209 (Line Section 209-1) approximately 1/2 mile downstream of Compressor Station 209 demonstrate the presence of integrity risks on those segments of Lines 200-1, 200-2, 200-3, and 200-4 running from Compressor Station 200 to Compressor Station 219 including the Pittsburg Spur (the "Affected Segments").

Between March 1 and March 18, 2011, Respondent and PHMSA engaged in good faith settlement discussions resulting in this Consent Agreement (the "Agreement").

Having agreed that settlement of this proceeding will avoid further administrative proceedings or litigation and that entry of this Consent Agreement is the most appropriate means of resolving the Notice, pursuant to 49 C.F.R. Part 190, without adjudication of any issue of fact or law, and upon consent and agreement of Respondent and PHMSA ("the Parties"), the Parties agree as follows:

## **I. General Provisions**

1. Respondent acknowledges that as operator of the Line 200 Pipeline System, Respondent and its pipeline system are subject to the jurisdiction of the Federal pipeline safety laws, 49 U.S.C. 60101 *et seq.*, and the regulations and administrative orders issued thereunder. For purposes of this Consent Agreement, Respondent acknowledges that it received proper notice of PHMSA's action in this proceeding and that the Notice states claims upon which relief may be granted pursuant to 49 U.S.C. 60101 *et seq.* and the regulations and orders issued thereunder.

2. Respondent agrees, for purposes of this proceeding, that the integrity risk identified in the Notice exists in the Affected Segments and agrees to address it by completing the actions specified in Section II of this Consent Agreement ("Work to be Performed"), including the actions set forth in any work plans and schedules each of which shall automatically be incorporated into this agreement upon approval. This Consent Agreement does not constitute a finding of violation of any Federal law or regulation and may not be used in any civil proceeding of any kind as evidence or proof of any fact, fault or liability, or as evidence of the violation of any law, rule, regulation or requirement, except in a proceeding to enforce the provisions of this Agreement.

3. After Respondent returns this signed Consent Agreement, PHMSA's representative will present it to the Associate Administrator for Pipeline Safety recommending that the Associate Administrator adopt the terms of this Agreement by issuing an administrative order (Consent Order) incorporating the terms of this Consent Agreement. The terms of this Consent Agreement constitute an offer of settlement until accepted by the Associate Administrator. Upon the effective date of this Agreement, any request for a hearing submitted by Respondent shall be automatically withdrawn.

4. Respondent consents to the issuance of the Consent Order, and hereby waives any further procedural requirements with respect to its issuance. Except as provided in Item 27 and Section IV of this Agreement, Respondent waives all rights to contest the adequacy of notice, or the validity of the Consent Order or this Consent Agreement, including all rights to administrative or judicial hearings or appeals.

5. This Consent Agreement shall apply to and be binding upon PHMSA, and upon Respondent, its officers, directors, and employees, and its successors, assigns, or other entities or persons otherwise bound by law. Respondent agrees to provide a copy of this Consent Agreement and any incorporated work plans and schedules to all of Respondent's officers, employees, and agents whose duties might reasonably include compliance with this Agreement.

6. For all transfers of ownership or operating responsibility of the Affected Segments, Respondent shall provide a copy of this Consent Agreement to the prospective transferee at least 30 days prior to such transfer and simultaneously provide written notice of the prospective transfer to the PHMSA Central Region Director (Director).

7. This Consent Agreement constitutes the final, complete and exclusive agreement and understanding between the Parties with respect to the settlement embodied in this Agreement, and the Parties acknowledge that there are no representations, agreements or understandings relating to the settlement other than those expressly contained in this Agreement, except that the terms of this Agreement may be construed by reference to the Notice.

8. Nothing in this Consent Agreement affects or relieves Respondent of its responsibility to comply with all applicable requirements of the Federal pipeline safety laws, 49 U.S.C. § 60101 *et seq.*, and the regulations and orders issued thereunder. Nothing in this Consent Agreement alters PHMSA's right of access, entry, inspection, and information gathering or PHMSA's authority to bring enforcement actions against Respondent pursuant to the Federal pipeline safety laws, the regulations and orders issued thereunder, or any other provision of Federal or State law.

9. This Consent Agreement does not waive or modify any Federal, State, or local laws or regulations that are applicable to Respondent's pipeline systems. This Consent Agreement is not a permit, or a modification of any permit, under any Federal, State, or local laws or regulations. Respondent remains responsible for achieving and maintaining compliance with all applicable Federal, State, and local laws, regulations and permits.

10. This Consent Agreement does not create rights in, or grant any cause of action to, any third party not party to this Agreement. The U.S. Department of Transportation is not liable for any injuries or damages to persons or property arising from acts or omissions of Respondent or its officers, employees, or agents carrying out the work required by this Consent Agreement. Respondent agrees to indemnify and hold harmless the U.S. Department of Transportation, its officers, employees, agents, and representatives from any and all causes of action arising from any acts or omissions of Respondent or its contractors in carrying out the work required by this Agreement.

## **II. Work to be Performed**

11. Prior to resuming operation of Line 200-4 from MLV 214-4 to MLV 216-4, develop and submit a written restart plan for approval by the Director for this segment. The restart plan must provide for adequate patrolling of the pipeline during the restart process, specify a daylight restart, include a hydrostatic test of section MLV 214-4 to MLV 215-4, and detail advance communications with local emergency response officials. The restart plan must include actions taken prior to restart by Respondent to confirm the integrity of pipeline facilities that were damaged, or were suspected to be damaged, as a result of the incident.

12. After receiving approval from the Director to restart, the Line 200-4 operating pressure from MLV 214-4 to MLV 216-4 must not exceed 80% of the actual operating pressure in effect immediately prior to the February 10, 2011, failure. Specifically, the discharge pressure at the Carrollton Compressor Station into Line 200-4 must not exceed

586 psig. This pressure reduction requires any relevant remote or local alarm limits, software programming set-points or control points, and mechanical over pressure devices to be adjusted accordingly. Prior to restart, identification of all auto-close valve locations will be communicated to the controllers. The pressure restriction must remain in effect until written approval to increase the pressure or return the pipeline to its pre-failure operating pressure is obtained from the Director as set forth in Item 25. If the results of any action undertaken pursuant to this Agreement necessitate a reduction in the operating pressure permitted by the Agreement, Respondent must further reduce the operating pressure accordingly and notify the Director.

13. Prior to resuming operation of the Line 200-1 from MLV 209-1 to MLV 210-1, develop and submit a written restart plan for approval by the Director for this segment. The restart plan must provide for adequate patrolling of the pipeline during the restart process, specify a daylight restart, and detail advance communications with local emergency response officials.

14. After receiving approval from the Director to restart, the Line 200-1 operating pressure from MLV 209-1 to MLV 210-1 must not exceed 80% of the actual operating pressure in effect immediately prior to the March 1, 2011, failure. Specifically, the discharge pressure at the Station 209 into Line 200-1 must not exceed 567 psig. This pressure reduction requires any relevant remote or local alarm limits, software programming set-points or control points, and mechanical over pressure devices to be adjusted accordingly. Prior to restart, identification of all auto-close valve locations will be communicated to the controllers. The pressure restriction must remain in effect until written approval to increase the pressure or return the pipeline to its pre-failure operating pressure is obtained from the Director as set forth in Item 25. If the results of any action undertaken pursuant to this Consent Agreement necessitate a reduction in the operating pressure permitted by this Agreement, Respondent must further reduce the operating pressure accordingly and notify the Director.

15. Within 15 days of receipt of the Consent Order, submit a written plan to conduct an airborne instrumented leak survey of the Affected Segments to the Director detailing the schedule for the expeditious completion of the leak survey within 30 days of initiating the survey. The plan must include a summary report detailing the findings of the leak survey to be provided directly from the airborne instrumented leak survey provider to the Director. This summary report must include a description of any elements affecting the leak survey data, area covered and associated ranges of the leak survey findings (height of flight and width of area surveyed), verification that all of the pipeline corridors traversed by the Affected Segments including the areas associated with crossover piping located between the Affected Segments has been reviewed, and any other items of significance such as accuracy of the instrumentation or malfunction of equipment. The Director is to receive distribution of all resulting reports in their entirety, including all media, whether draft or final, at the same time they are made available to Respondent.

Submit a separate report detailing the schedule of planned maintenance activities to occur as a result of the leak survey for the Affected Segments.

Continue to perform patrol surveillance activities at periods of 2 times per month for pipe Sections MLV 209-1 to MLV 214-1 and MLV 214-4 to MLV 219-4 until approved otherwise by the Director.

16. Within 45 days of the Director's approval of testing protocols, complete third-party mechanical and metallurgical testing and failure analysis of the Line 200-4 failed pipe and the additional girth weld containing a crack-like indication (606+35.8) that was located upstream of the failed weld. The Line 200-1 failed girth weld and 2 additional girth welds adjacent to the failed weld shall also be subjected to metallurgical testing and failure analysis. The testing and analysis must be completed as follows:

- (A) Document the chain of custody when handling and transporting the failed pipe section and other evidence originating from the failure site;
- (B) Utilize mechanical and metallurgical testing protocols, including selection of the testing laboratory, approved by the Director;
- (C) Prior to commencing the mechanical and metallurgical testing, provide the Director with the scheduled date, time, and location of the testing to allow a PHMSA representative to witness the testing; and
- (D) Ensure that the testing laboratory distributes all resulting reports in their entirety, including all media, whether draft or final, to the Director at the same time they are made available to Respondent.

17. Conduct an evaluation of previous in-line inspection (ILI) results (including raw data) of the failed girth weld and the girth weld with a crack-like indication (606+35.8) to establish ILI capability for detecting and identifying girth weld features or anomalies include review and reporting by the ILI vendors' analysts as follows:

- (A) Within 30 days of receipt of the Consent Order, re-evaluate the 2005 in-line inspection results from MLV 214-4 to MLV 219-4 to determine whether any features with similar characteristics to the feature at the failure site is present elsewhere in this portion of Line 200-4.
- (B) Within 60 days of receipt of the Consent Order, re-evaluate all ILI data available for the Affected Segments to determine if any features with similar characteristics to those at the failure sites are present elsewhere on the Affected Segments.

18. Within 60 days of receipt of the Consent Order, perform in-line inspection on Line 200-1 from MLV 209-1 to MLV 214-1 and specifically evaluate girth weld ILI data. The data analysis must be completed within 30 days of successful completion of the ILI. The ILI vendor shall evaluate the results per a performance specification specific to girth weld anomalies.

19. Within 90 days of receipt of the Consent Order, submit a report to the Director that provides a detailed review of all SCADA activities on Lines 200-1 and 200-4 that relate to the March 1 and February 10, 2011, incidents. SCADA enhancements identified during this review shall be included in the report, which will include approximate timelines for implementation of such enhancements. Activities reviewed and summarized in the report must include, but may not be limited to: controller actions on the day before the incident, day of the incident, and day after the incident; maintenance activities (same three days); controller notes or logs (same three days); actual and calculated instrumentation readings (same three days); available communication statistics (same three days, including pressure and flow value poll times); other SCADA equipment functions (same three days); and SCADA maintenance requests and status (during the 6 months preceding the incident). The report should also include a review of 30 days of detailed pressure information to document any changes in operating conditions since February 10, 2011. The report should provide a specific summary regarding whether or not the controllers had adequate information to recognize an abnormal operating condition on either event date in the control room. If adequate information did not exist to recognize these conditions, identify enhancements for the SCADA activities that could provide the necessary data and allow for controller recognition.

20. Within 120 days of receipt of the Consent Order, develop and submit to the Director for prior approval a Remedial Work Plan (“Work Plan”) that includes corrective measures. The work plan must provide for the verification of the integrity of the Affected Segments and must fully address all known or suspected factors that caused or contributed to the February 10, and March 1, 2011, incidents, including, but not limited to:

- (A) The integration of the information developed from the actions required by this Consent Agreement with all historical construction, operating, maintenance, testing, and assessment data for the Affected Segments as follows:
  - (i) Within 90 days of receipt of the Consent Order complete a root cause failure analysis for the February 10, 2011 (Line 200-4), and March 1, 2011 (Line 200-1) incidents that is supplemented and facilitated by an independent third-party acceptable to the Director. Elements of the root cause analysis must include, but may not be limited to: scoping document of the root cause analysis; procedures associated with root cause analysis; multiple methods used for the analysis and updates on each method as it progresses; contributory factors; documentation of the decision making process; and a final report of the root cause process results including any lessons learned and whether the findings are applicable to other locations within the Respondent’s system. To the extent that the findings from the root cause analysis or other analysis conducted pursuant to this Agreement are applicable to other segments or facilities processes, procedures, or programs across the Respondent’s systems (including Respondent’s gas control processes or SCADA system), Respondent shall develop and submit a plan with activity identified timelines to apply the lessons learned

and implement any applicable remedial actions taken on the Affected Segments to those other segments, facilities, systems processes, procedures or programs.

(ii) No longer than 30 days after the completion of the root cause failure analysis, integrate the findings of the root cause failure analysis into other data integration efforts and the remedial work plan.

(B) The performance of additional field testing, inspections, and evaluations to determine whether and to what extent the conditions associated with the failures, or any other integrity-threatening conditions are present elsewhere on the Affected Segments. Data-gathering activities must include a review of the failure history (in service and pressure test failures) of the Affected Segments and development of a written report containing all available information regarding locations, dates, and causes of failures. Include a detailed description of Respondent's plan to confirm the integrity of the applicable sections of the Affected Segments, including the criteria to be used for the evaluation and prioritization of any integrity threats and anomalies that are identified. Make the results of the actions required by this provision available to the Director;

(C) The performance of repairs or other corrective measures that fully remediate the condition(s) associated with the pipeline failures and any other integrity-threatening condition everywhere along the Affected Segments where such conditions are identified by the evaluation process. Include a detailed description of the repair criteria and method(s) to be used in undertaking any repairs or other remedial actions;

(D) Provisions for continuing long-term periodic testing and integrity verification measures to ensure the ongoing safe operation of the Affected Segments considering the results of the analyses, inspections, and corrective measures undertaken pursuant to the Consent Order; and

(E) A proposed risk based schedule for completion of the actions required by paragraphs (A) through (D) of this Item, including a schedule associated with all elements of the internal root cause analysis. Provide the Director with reasonable advance notice of scheduled repairs.

21. The remedial work plan becomes incorporated into this Consent Agreement and must be revised as necessary to incorporate the results of actions undertaken pursuant to this Agreement and whenever necessary to incorporate new information obtained during the failure investigation and remedial activities. Submit any such plan revisions to the Director for prior approval. The Director may approve plan elements incrementally.

22. Implement the Remedial Work Plan as it is approved by the Director, including any revisions to the plan. The results of all actions taken in accordance with the approved plan must be available for review by PHMSA or its representative.

23. Submit monthly reports to the Director that: (1) include available data and results of the testing and evaluations required by this Consent Agreement; and (2) describe the progress of the repairs and other actions being undertaken as a result of this Agreement. The first monthly report is due on the last day of the month following receipt of the Consent Order. The regular intervals for submitting reports may be adjusted with prior approval of the Director.

24. Respondent agrees to maintain documentation of the costs associated with implementation of this Consent Agreement, and include in each report submitted pursuant to Item 23, the to-date total costs associated with: (1) preparation and revision of procedures, studies and analyses; (2) physical changes to pipeline infrastructure, including repairs, replacements and other modifications; and (3) environmental remediation, if applicable.

25. The Director may allow the removal or modification of the pressure restriction set forth in Items 12 and 14 upon a written request from Respondent demonstrating that the hazard has been abated and that restoring the pipeline, or portion thereof, to its pre-failure operating pressure is justified based on a reliable engineering analysis showing that the pressure increase is safe considering all known defects, anomalies, and operating parameters of the pipeline.

26. The Director may grant an extension of time for compliance with any of the terms of this Consent Agreement upon a written request timely submitted demonstrating good cause for an extension.

27. Respondent may appeal any decision of the Director to the Associate Administrator for Pipeline Safety. Decisions of the Associate Administrator are final.

### **III. Review and Approval Process**

28. With respect to any submission under Section II of this Consent Agreement that requires the approval of the Director, the Director may: (a) approve, in whole or in part, the submission, (b) approve the submission on specified conditions, (c) disapprove, in whole or in part, the submission, or (d) any combination of the foregoing. In the event of approval, approval in part, or approval upon conditions, Respondent will proceed to take all action required by the submission as approved by the Director, subject to Respondent's right to invoke the dispute resolution procedures in Section IV with respect to any conditions identified by the Director. In the event that the Director disapproves all or any portion of the submission, the Director will provide Respondent with a written notice of the deficiencies. Respondent will correct all deficiencies within the time specified by the Director and resubmit it for approval.

### **IV. Dispute Resolution**

29. The Director and Respondent will informally attempt to resolve any disputes arising under this Consent Agreement. If Respondent and the Director are unable to informally resolve the dispute within 15 days, Respondent may request in writing, within 10 days, a written determination resolving the dispute from the Associate Administrator for Pipeline Safety providing all information that Respondent believes is relevant to the dispute. If the request is submitted as provided herein, the Associate Administrator will issue a determination in writing which shall be final. The existence of a dispute and PHMSA's consideration of matters placed in dispute shall not excuse, toll, or suspend any term or timeframe for completion of any work to be performed under this Consent Agreement during the pendency of the dispute resolution process except as agreed by the Director or the Associate Administrator in writing.

## **V. Enforcement**

30. This Consent Agreement, as adopted by the Consent Order, is subject to all enforcement authorities available to PHMSA under 49 U.S.C. § 60101 *et seq.* and 49 C.F.R. Part 190, including administrative civil penalties under § 60122 of up to \$100,000 per violation for each day the non-compliance continues, if PHMSA determines that Respondent is not materially proceeding in accordance with terms of this Agreement, with determinations made by the Director, or if such determinations are appealed with decisions of the Associate Administrator. All work plans and associated schedules set forth or referenced in Section II shall be automatically incorporated into this Consent Agreement and are enforceable in the same manner.

## **VI. Record Keeping and Information Disclosure**

31. Respondent agrees to maintain records demonstrating compliance with all requirements of this Consent Agreement for a period of at least five years following completion of all work to be performed. For any reports, plans, or other deliverables required to be submitted to PHMSA pursuant to this Consent Agreement, Respondent may assert a claim of business confidentiality or other protections applicable to the release of information by PHMSA, covering part or all of the information required to be submitted to PHMSA pursuant to this Agreement in accordance with 49 C.F.R. Part 7. The claim of confidentiality shall be marked in writing on each page, and shall include a statement specifying the grounds for each claim of confidentiality. PHMSA shall determine release of any information submitted pursuant to this Consent Agreement in accordance with 49 C.F.R. Part 7, the Freedom of Information Act, 5 U.S.C. § 552, DOT and/or PHMSA policies, and other applicable regulations and Executive Orders.

## **VII. Effective Date**

32. The "Effective Date" as used herein is the date on which this Consent Agreement has been signed by both Respondent and PHMSA. Unless specified to the contrary, all deadlines for actions required by this Agreement run from the Effective Date of this Agreement.

**VIII. Modification**

33. The terms of this Consent Agreement may be modified by mutual agreement of the Parties. Such modifications shall be in writing and shall be signed by both Parties.

**IX. Termination**

34. This Consent Agreement shall terminate upon the completion of all terms set forth in Section II (Work to Be Performed). Respondent may request written confirmation from PHMSA when this Agreement is terminated. To the extent ongoing monitoring is required, PHMSA may terminate this Agreement with respect to all other requirements with the exception of such monitoring. Nothing in this Agreement prevents Respondent from completing any of the obligations earlier than the deadlines provided for herein.

**X. Ratification**

35. The Parties’ undersigned representatives certify that they are fully authorized to enter into the terms and conditions of this Consent Agreement and to execute and legally bind such party to this document.

36. The Parties hereby agree to all conditions and terms of this Consent Agreement:

For PHMSA:

For Respondent:

\_\_\_\_\_  
Mr. David Barrett  
Director, Central Region  
Pipeline and Hazardous Materials  
Safety Administration

\_\_\_\_\_  
Mr. Jesus Soto, Jr.  
Vice-President  
Tennessee Gas Pipeline Company

\_\_\_\_\_  
Date

\_\_\_\_\_  
Date