



U.S. Department
of Transportation
**Pipeline and Hazardous
Materials Safety Administration**

901 Locust Street, Suite 480
Kansas City, MO 64106

NOTICE OF AMENDMENT

VIA ELECTRONIC MAIL TO: stan.horton@bwpipelines.com, and
tina.baker@bwpipelines.com

November 5, 2021

Stan Horton
CEO Boardwalk Pipelines
Texas Gas Transmission, LLC
9 Greenway Plaza, Suite 2800
Houston, TX 77066

CPF 3-2021-041-NOA

Dear Mr. Horton:

From February 5th, 2020 to February 9th, 2021, a representative of the Pipeline and Hazardous Materials Safety Administration (PHMSA) pursuant to Chapter 601 of 49 United States Code inspected your subsidiary, Texas Gas Transmission, LLC's (Texas Gas) Operation and Maintenance Program procedures in Owensboro, KY. Texas Gas Transmission is the primary for the Safety Program Relationship which supports the following OPID's: **19270 Texas Gas Transmission, LLC** and **31728 Gulf South Pipeline Company, LLC**

On the basis of the inspection, PHMSA has identified the apparent inadequacies found within Texas Gas Transmission plans or procedures, as described below:

1. § 192.605 Procedural manual for operations, maintenance, and emergencies

(a) General. Each operator shall prepare and follow for each pipeline, a manual of written procedures for conducting operations and maintenance activities and for emergency response. For transmission lines, the manual must also include procedures for handling abnormal operations. This manual must be reviewed and

updated by the operator at intervals not exceeding 15 months, but at least one each calendar year. This manual must be prepared before operations of a pipeline system commence. Appropriate parts of the manual must be kept at locations where operations and maintenance activities are conducted.

Boardwalk's procedures for internal corrosion control were found to be inadequate because they failed to define how to control internal corrosion per the requirements of §192.475. The requirements for internal corrosion testing specified in Boardwalk's Corrosion Manual Section 3.3 stated that gas testing shall be performed: "if the flow direction is changed". Boardwalk operates a number of storage fields and bidirectional pipelines, but does not perform testing in each instance of a flow change for these lines. Boardwalk must amend its procedure to specify the testing frequency required to ensure no corrosive condition is created from bidirectional flow.

2. § 192.605 Procedural manual for operations, maintenance, and emergencies

(a) General. Each operator shall prepare and follow for each pipeline, a manual of written procedures for conducting operations and maintenance activities and for emergency response. For transmission lines, the manual must also include procedures for handling abnormal operations. This manual must be reviewed and updated by the operator at intervals not exceeding 15 months, but at least one each calendar year. This manual must be prepared before operations of a pipeline system commence. Appropriate parts of the manual must be kept at locations where operations and maintenance activities are conducted.

Boardwalk's Operations and Maintenance Manual (O&M) Section 3010 was found to be inadequate because it failed to define the frequency of inspection of its emergency equipment per the requirements of §192.615(a)(4). Boardwalk's O&M Section 3010 states "Emergency equipment shall be periodically inspected and maintained in good operating condition." Boardwalk must amend its procedure to provide a schedule for conducting inspection and maintenance activities on emergency equipment.

3. § 192.605 Procedural manual for operations, maintenance, and emergencies

(a) General. Each operator shall prepare and follow for each pipeline, a manual of written procedures for conducting operations and maintenance activities and for emergency response. For transmission lines, the manual must also include procedures for handling abnormal operations. This manual must be reviewed and updated by the operator at intervals not exceeding 15 months, but at least one each calendar year. This manual must be prepared before operations of a pipeline system commence. Appropriate parts of the manual must be kept at locations where operations and maintenance activities are conducted.

Boardwalk's Event Response Plan (ERP) was found to be inadequate because it failed to identify the qualifications needed for personnel who investigate pipeline failures per the requirements of §192.617. Boardwalk's ERP Section 5 states "An employee at the scene of the event should be designated to coordinate the investigation and when necessary, a qualified investigative team should be established." Boardwalk's procedure did not identify what qualifications are needed for a person to lead or participate as a member of the investigative team. The procedure must be amended to provide criteria for establishing an investigative team.

4. § 192.605 Procedural manual for operations, maintenance, and emergencies

(a) General. Each operator shall prepare and follow for each pipeline, a manual of written procedures for conducting operations and maintenance activities and for emergency response. For transmission lines, the manual must also include procedures for handling abnormal operations. This manual must be reviewed and updated by the operator at intervals not exceeding 15 months, but at least one each calendar year. This manual must be prepared before operations of a pipeline system commence. Appropriate parts of the manual must be kept at locations where operations and maintenance activities are conducted.

Boardwalk's procedures were found to be inadequate because they failed to provide personnel with details for determining when a pipeline has been sufficiently purged with air to ensure safety per the requirements of §192.629. Operations and Maintenance Procedure 2140 – Purging (Rev. date 12/20/2019) relied on air movers and sampling of atmosphere in the pipeline facility to verify a safe atmosphere. The procedures failed to specify what final concentration of gas in air to be left in the pipeline is considered non-hazardous. The procedures must be modified to ensure through testing that purged pipelines contain a non-hazardous atmosphere.

5. § 192.605 Procedural manual for operations, maintenance, and emergencies

(a) General. Each operator shall prepare and follow for each pipeline, a manual of written procedures for conducting operations and maintenance activities and for emergency response. For transmission lines, the manual must also include procedures for handling abnormal operations. This manual must be reviewed and updated by the operator at intervals not exceeding 15 months, but at least one each calendar year. This manual must be prepared before operations of a pipeline system commence. Appropriate parts of the manual must be kept at locations where operations and maintenance activities are conducted.

Boardwalk's procedural manual was found to be inadequate because it failed to provide instructions for conducting maintenance and testing of gas detection and alarm systems per the requirements of §192.736. Boardwalk failed to integrate two different procedures into Section 9040 – Compressor Station Gas Detection (Revision effective date 02/14/2020) that are defined as "Work Instructions" (WI): Procedures WI-12502 CI Testing And Maintaining Gas Detection Alarm/Shutdown Systems and WI-12505 CI

Testing And Maintaining Fire And Heat Detection Alarm/Shutdown Systems. These work instructions were added to the manual after the inspection and found to be acceptable. No further action is needed by Boardwalk.

6. § 192.605 Procedural manual for operations, maintenance, and emergencies

(a) General. Each operator shall prepare and follow for each pipeline, a manual of written procedures for conducting operations and maintenance activities and for emergency response. For transmission lines, the manual must also include procedures for handling abnormal operations. This manual must be reviewed and updated by the operator at intervals not exceeding 15 months, but at least one each calendar year. This manual must be prepared before operations of a pipeline system commence. Appropriate parts of the manual must be kept at locations where operations and maintenance activities are conducted.

Boardwalk's procedural manual was found to be inadequate because it failed to provide instructions for performing capacity calculations per the requirements of §192.743. Specifically, Boardwalk failed to integrate necessary procedures into Section 2050 "Regulator and Overpressure Protection" (Revision effective date 01/01/2020) into its manual: WI-06957 "CI Calculating Overpressure Protection Capacity (Effective date December 2019) and an application within the Operations Management System (OMS) Regulator and Relief Valve (RRV) which is used to perform capacity calculations, were not incorporated. These procedures were added to the manual after the inspection and found to be acceptable. No further action is needed by Boardwalk.

7. § 192.605 Procedural manual for operations, maintenance, and emergencies

(a) General. Each operator shall prepare and follow for each pipeline, a manual of written procedures for conducting operations and maintenance activities and for emergency response. For transmission lines, the manual must also include procedures for handling abnormal operations. This manual must be reviewed and updated by the operator at intervals not exceeding 15 months, but at least once each calendar year. This manual must be prepared before operations of a pipeline system commence. Appropriate parts of the manual must be kept at locations where operations and maintenance activities are conducted.

Boardwalk's procedural manual was found to be inadequate because it failed to provide instructions for inspection and operation of mainline valves per the requirements of §192.745. Specifically, procedures did not specify how valves were to be inspected by field services personnel in combination with remote control of the valve by gas control. O&M Section 5030 "Emergency Valve Maintenance" (Revision effective date 01/01/2020) and Task 716OP "Inspect, Maintain and Operate Valves" did not specify the responsibility for personnel to operate a remote automated block valve during an inspection. These procedures were modified to include more detailed instructions after the inspection and found to be acceptable. No further action is needed by Boardwalk.

8. § 192.605 Procedural manual for operations, maintenance, and emergencies

(a) General. Each operator shall prepare and follow for each pipeline, a manual of written procedures for conducting operations and maintenance activities and for emergency response. For transmission lines, the manual must also include procedures for handling abnormal operations. This manual must be reviewed and updated by the operator at intervals not exceeding 15 months, but at least one each calendar year. This manual must be prepared before operations of a pipeline system commence. Appropriate parts of the manual must be kept at locations where operations and maintenance activities are conducted.

Texas Gas O&M Section 5050 “Storage of Combustible Materials” was inadequate because it lacks sufficient guidance for the storage of combustible materials. CFR 49 §192.735 requires all combustible materials not needed for operations to be stored a safe distance from the compressor building. From a review of Texas Gas’ O&M Section 5050, it was found that the procedure refers to “flammable and combustible liquids” instead of combustible material. Texas Gas must amend the procedure to state clearly that it applies to all flammable and combustible material. The procedure was amended after the inspection and found to be acceptable. No further action is needed by Boardwalk.

9. § 192.605 Procedural manual for operations, maintenance, and emergencies

(a) General. Each operator shall prepare and follow for each pipeline, a manual of written procedures for conducting operations and maintenance activities and for emergency response. For transmission lines, the manual must also include procedures for handling abnormal operations. This manual must be reviewed and updated by the operator at intervals not exceeding 15 months, but at least one each calendar year. This manual must be prepared before operations of a pipeline system commence. Appropriate parts of the manual must be kept at locations where operations and maintenance activities are conducted.

Boardwalk's O&M Section 2060 - Upgrading was found to be inadequate per the requirements of §192.553 because it does not specify the methods to be used in detecting leaks, or prescribe criteria for determination of which leaks are allowed to be monitored as nonhazardous. §192.553 requires an operator to check for leaks and repair hazardous leaks when upgrading a pipeline; therefore, Boardwalk must amend its procedures to specify in detail how leaks will be detected and graded.

10. § 192.605 Procedural manual for operations, maintenance, and emergencies

(a) General. Each operator shall prepare and follow for each pipeline, a manual of written procedures for conducting operations and maintenance activities and for emergency response. For transmission lines, the manual must also include procedures for handling abnormal operations. This manual must be reviewed and updated by the operator at intervals not exceeding 15 months, but at least one each calendar year. This manual must be prepared before operations of a pipeline system

commence. Appropriate parts of the manual must be kept at locations where operations and maintenance activities are conducted.

Boardwalk's O&M Section 2020 "Conversion to Gas Service" was found to be inadequate because it fails to reference 49 CFR Subpart J pressure testing requirements for conversion to gas service. The procedure must be amended to include conversion to service requirements relevant to §192.14(a)(4) to substantiate the maximum operating pressure. The procedure was amended after the inspection and found to be acceptable. No further action is needed by Boardwalk.

11. § 192.605 Procedural manual for operations, maintenance, and emergencies

(a) ...

(b) Maintenance and normal operations. The manual required by paragraph (a) of this section must include procedures for the following, if applicable, to provide safety during maintenance and operations.

(1) Operating, maintaining, and repairing the pipeline in accordance with each of the requirements of this subpart and Subpart M of this part.

Boardwalk's O&M Appendix I Subsection 10 was found to be inadequate because it failed to specify how plastic pipe is to be maintained and repaired. Specifically, the procedure did not require the inspection of each joint nor describe the manner in which the joint must be inspected as required by §192.287. Boardwalk's procedure must be amended to include inspection requirements and acceptance criteria for each plastic pipe joint made.

12. § 192.605 Procedural manual for operations, maintenance, and emergencies

(a) ...

(b) Maintenance and normal operations. The manual required by paragraph (a) of this section must include procedures for the following, if applicable, to provide safety during maintenance and operations.

(1) Operating, maintaining, and repairing the pipeline in accordance with each of the requirements of this subpart and Subpart M of this part.

Boardwalk's O&M Section 2070 was found to be inadequate for failing to require replacement pipe to be tested to pressure required for new line installed in the same location per the requirements of §192.719(a). Specifically, Boardwalk's procedure did not specify the number of joints of pretested replacement pipe that are allowed to be installed without a post-construction strength test. Therefore, Boardwalk's procedure must be amended to include criteria that identifies when replacement line pipe requires a post-construction strength test. The procedure was amended after the inspection and found to be acceptable. No further action is needed by Boardwalk.

13. § 192.615 Emergency plans

(a) Each operator shall establish written procedures to minimize the hazard resulting from a gas pipeline emergency. At a minimum, the procedures must provide for the following:

(1) ...

(7) Making safe any actual or potential hazard to life or property.

Boardwalk's procedures were found to be inadequate because they failed to define how to make safe any actual or potential hazard to life. Boardwalk's Operations and Maintenance Manual Section 2130 – General Operation (Rev. date 02/07/2020) and Emergency Response Plan (ERP) Section 4 did not define a safe evacuation perimeter for its personnel to ensure safety from a potential hazard or incident site. These procedures were amended to include more detailed instructions after the inspection and found to be acceptable. No further action is needed by Boardwalk.

14. § 192.907 What must an operator do to implement this subpart?

(a) General. No later than December 17, 2004, an operator of a covered pipeline segment must develop and follow a written integrity management program that contains all the elements described in §192.911 and that addresses the risks on each covered transmission pipeline segment. The initial integrity management program must consist, at a minimum, of a framework that describes the process for implementing each program element, how relevant decisions will be made and by whom, a time line for completing the work to implement the program element, and how information gained from experience will be continuously incorporated into the program. The framework will evolve into a more detailed and comprehensive program. An operator must make continual improvements to the program.

Boardwalk's Integrity Management Plan (IMP) Chapter 2 Table 2-1 and Chapter 8 Table 4-1 were found to be inadequate for failing to establish by whom relevant decisions will be made. Specifically, these tables assign two different Boardwalk Administration Titles, "Mgr. Pipeline Safety" & "Integrity Management Specialist", the same responsibility for Preventive and Mitigative (P&M) Measures identification. The criteria for the qualifications of these positions are not equivalent, the qualifications, education, training or experience that demonstrate knowledge of P&M Measures and threats is not identified and it is not clear who is responsible for implementation of P&M Measures.

15. § 192.907 What must an operator do to implement this subpart?

(a) General. No later than December 17, 2004, an operator of a covered pipeline segment must develop and follow a written integrity management program that contains all the elements described in § 192.911 and that addresses the risks on each covered transmission pipeline segment. The initial integrity management program must consist, at a minimum, of a framework that describes the process for implementing each program element, how relevant decisions will be made and by

whom, a time line for completing the work to implement the program element, and how information gained from experience will be continuously incorporated into the program. The framework will evolve into a more detailed and comprehensive program. An operator must make continual improvements to the program

Boardwalk's IMP Chapter 6 Section 3 was found to be inadequate for failing to require a qualified person determine reassessment intervals, per the requirements of §192.915(b)(3). At the time of the inspection, Boardwalk's procedure required that the "Mgr. Pipeline Services" determine the reassessment interval. However, the Education, Training and Experience requirements for the "Mgr. Pipeline Services" did not include the knowledge and skills necessary for making decisions on actions to be taken based on assessments. Boardwalk must amend its procedure to ensure that a qualified person is determining the reassessment interval based on assessment results.

16. § 192.907 What must an operator do to implement this subpart?

(a) General. No later than December 17, 2004, an operator of a covered pipeline segment must develop and follow a written integrity management program that contains all the elements described in §192.911 and that addresses the risks on each covered transmission pipeline segment. The initial integrity management program must consist, at a minimum, of a framework that describes the process for implementing each program element, how relevant decisions will be made and by whom, a time line for completing the work to implement the program element, and how information gained from experience will be continuously incorporated into the program. The framework will evolve into a more detailed and comprehensive program. An operator must make continual improvements to the program.

Boardwalk's IMP Appendix 4 Section 13 was found to be inadequate for failing to state repair schedules in accordance to ASME/ANSI B31.8S, section 7 per the requirements of §192.933(d)(1). Specifically, Boardwalk's "Full Life" and "Half Life" corrosion growth rate calculations inappropriately utilized the "Install Year" of the pipeline to calculate the growth rates of corrosion defects. Boardwalk's corrosion growth rate equations must be amended to require the identification and utilization of appropriate information, such as prior assessments, to ensure defects will not grow to critical dimensions prior to the next assessment.

17. § 192.907 What must an operator do to implement this subpart?

(a) General. No later than December 17, 2004, an operator of a covered pipeline segment must develop and follow a written integrity management program that contains all the elements described in § 192.911 and that addresses the risks on each covered transmission pipeline segment. The initial integrity management program must consist, at a minimum, of a framework that describes the process for implementing each program element, how relevant decisions will be made and by

whom, a time line for completing the work to implement the program element, and how information gained from experience will be continuously incorporated into the program. The framework will evolve into a more detailed and comprehensive program. An operator must make continual improvements to the program

Boardwalk's IMP Chapter 8 Section 2 was found to be inadequate per the requirements of §192.935 because it failed to implement additional P&M measures as required by Part 192 regulations. Specifically, the procedure states "During the evaluation process, if a selected HCA already has a P&M measure completed for this threat within the last three year evaluation cycle, then it will be replaced with the next highest ranked HCA to ensure that additional HCAs are being evaluated each cycle." This is inconsistent with IMP Chapter 4 Section 1.3 and IMP Chapter 8 Section 2.1 which required the implementation of P&M Measures be based on the annual update and review of the risk assessment. Therefore Boardwalk's procedure for P&M implementation must be amended to ensure that planned P&M measures are reviewed and implemented annually based on the actual risk score determined by the risk analysis.

18. § 192.907 What must an operator do to implement this subpart?

(a) General. No later than December 17, 2004, an operator of a covered pipeline segment must develop and follow a written integrity management program that contains all the elements described in § 192.911 and that addresses the risks on each covered transmission pipeline segment. The initial integrity management program must consist, at a minimum, of a framework that describes the process for implementing each program element, how relevant decisions will be made and by whom, a time line for completing the work to implement the program element, and how information gained from experience will be continuously incorporated into the program. The framework will evolve into a more detailed and comprehensive program. An operator must make continual improvements to the program

Boardwalk's IMP Chapter 8 Table 2-1 "P&M Measures by Threat" was found to be inadequate per the requirements of §192.935(a) because it included measures that do not go beyond the requirements of 49 CFR Part 192. Specifically, the procedure lists measures which are already required by Part 192 such as: "O&M Procedures Training", "CP Maintain/Monitor", and "Monitor Pipeline Excavation with Qualified Company Personnel". Boardwalk must amend its procedure to define how each P&M Measure will exceed regulatory requirements.

19. § 192.907 What must an operator do to implement this subpart?

(a) General. No later than December 17, 2004, an operator of a covered pipeline segment must develop and follow a written integrity management program that contains all the elements described in § 192.911 and that addresses the risks on each covered transmission pipeline segment. The initial integrity management program

must consist, at a minimum, of a framework that describes the process for implementing each program element, how relevant decisions will be made and by whom, a time line for completing the work to implement the program element, and how information gained from experience will be continuously incorporated into the program. The framework will evolve into a more detailed and comprehensive program. An operator must make continual improvements to the program.

Boardwalk's IMP Appendix 4 Table 4.1 was found to be inadequate for failing to identify acceptance criteria for integrity assessments performed with internal inspection tools per the requirements of §192.937. Specifically, the procedure was inadequate for listing unacceptable tool run performance metrics as "Open for discussion". Boardwalk's procedure must be amended so that it provides clear criteria and guidance for acceptance and rejection of an ILI tool run based on recorded tool performance metrics.

Response to this Notice

This Notice is provided pursuant to 49 U.S.C. § 60108(a) and 49 C.F.R. § 190.206. Enclosed as part of this Notice is a document entitled Response Options for Pipeline Operators in Compliance Proceedings.

Please refer to this document and note the response options. Be advised that all material you submit in response to this enforcement action is subject to being made publicly available. If you believe that any portion of your responsive material qualifies for confidential treatment under 5 U.S.C. 552(b), along with the complete original document you must provide a second copy of the document with the portions you believe qualify for confidential treatment redacted and an explanation of why you believe the redacted information qualifies for confidential treatment under 5 U.S.C. 552(b).

Following the receipt of this Notice, you have 30 days to submit written comments, revised procedures, or a request for a hearing under §190.211. If you do not respond within 30 days of receipt of this Notice, this constitutes a waiver of your right to contest the allegations in this Notice and authorizes the Associate Administrator for Pipeline Safety to find facts as alleged in this Notice without further notice to you and to issue an Order Directing Amendment. If your plans or procedures are found inadequate as alleged in this Notice, you may be ordered to amend your plans or procedures to correct the inadequacies (49 C.F.R. § 190.206). If you are not contesting this Notice, we propose that you submit your amended procedures to my office within 45 days of receipt of this Notice. This period may be extended by written request for good cause. Once the inadequacies identified herein have been addressed in your amended procedures, this enforcement action will be closed.

It is requested (not mandated) that Texas Gas Transmission maintain documentation of the safety improvement costs associated with fulfilling this Notice of Amendment (preparation/revision of plans, procedures) and submit the total to Gregory A. Ochs, Director, Central Region, Pipeline and Hazardous Materials Safety Administration. In correspondence concerning this matter,

please refer to **CPF 3-2021-041-NOA** and, for each document you submit, please provide a copy in electronic format whenever possible.

Sincerely,

Gregory A. Ochs
Director, Central Region, Office of Pipeline Safety
Pipeline and Hazardous Materials Safety Administration

Enclosure: Response Options for Pipeline Operators in Enforcement Proceedings