



U.S. Department
of Transportation

**Pipeline and Hazardous
Materials Safety
Administration**

1200 New Jersey Avenue SE
Washington, DC 20590

FEB 3 - 2014

Mr. Tom May
President
NSTAR Electric & Gas Corp.
One NSTAR Way
Westwood, MA 02090

Re: CPF No. 1-2012-3001

Dear Mr. May:

Enclosed please find the Final Order issued in the above-referenced case. It makes findings of violation, assesses a reduced civil penalty of \$32,100, and specifies actions that need to be taken by Hopkinton LNG Corp., to comply with the pipeline safety regulations. The penalty payment terms are set forth in the Final Order. When the civil penalty has been paid and the terms of the compliance order completed, as determined by the Director, Eastern Region, this enforcement action will be closed. Service of the Final Order by certified mail is deemed effective upon the date of mailing, or as otherwise provided under 49 C.F.R. § 190.5.

Thank you for your cooperation in this matter.

Sincerely,

for: Jeffrey D. Wiese
Jeffrey D. Wiese
Associate Administrator
for Pipeline Safety

Enclosure

cc: Mr. Paul J. Zohorsky, Acting Vice President, Gas Operations, NSTAR Electric & Gas Corp./Hopkinton LNG Corp.
Mr. Byron Coy, P.E. Director, Eastern Region, OPS

CERTIFIED MAIL - RETURN RECEIPT REQUESTED

**U.S. DEPARTMENT OF TRANSPORTATION
PIPELINE AND HAZARDOUS MATERIALS SAFETY ADMINISTRATION
OFFICE OF PIPELINE SAFETY
WASHINGTON, D.C. 20590**

_____)
In the Matter of)

Hopkinton LNG Corp.,)

Respondent.)
_____)

CPF No. 1-2012-3001

FINAL ORDER

On October 4, 2010, pursuant to 49 U.S.C. § 60117, a representative of the Pipeline and Hazardous Materials Safety Administration (PHMSA), Office of Pipeline Safety (OPS), conducted an on-site pipeline safety inspection of the facilities of Hopkinton LNG Corp. (Hopkinton or Respondent), in Hopkinton, Massachusetts. Hopkinton, a subsidiary of NSTAR Electric and Gas Corp.,¹ operates liquefied natural gas (LNG) facilities in Hopkinton and Acushnet, Massachusetts, to supplement pipeline supply during winter months.²

As a result of the inspection, the Director, Eastern Region, OPS (Director), issued to Respondent, by letter dated April 2, 2012, a Notice of Probable Violation, Proposed Civil Penalty and Proposed Compliance Order (Notice). In accordance with 49 C.F.R. § 190.207, the Notice proposed finding that Hopkinton had committed various violations of 49 C.F.R. Part 193, assessing a civil penalty of \$64,600 for the alleged violations, and ordering Respondent to take certain measures to correct the alleged violations.

Hopkinton responded to the Notice by letter dated April 24, 2012, requesting a hearing and additional time to respond to the Notice. On May 30, 2012, Hopkinton provided its response to the Notice, contested the allegations, presented information seeking elimination of the proposed penalty, and withdrew its request for a hearing, thereby authorizing the entry of this Final Order without further notice.

FINDINGS OF VIOLATION

The Notice alleged that Respondent violated 49 C.F.R. Part 193, as follows:

¹ NSTAR is an operating company of Northeast Utilities. See http://www.nstar.com/about_nstar/, last viewed December 16, 2013.

² See http://www.nstar.com/about_nstar/nonreg.asp (last viewed December 16, 2013).

Item 1: The Notice alleged that Respondent violated 49 C.F.R. § 193.2609, which states:

§ 193.2609 Support systems.

Each support system or foundation of each component must be inspected for any detrimental change that could impair support.

The Notice alleged that Respondent violated 49 C.F.R. § 193.2609 by failing to inspect some of its support systems and foundations for detrimental changes that could impair support. Specifically, the Notice alleged that Hopkinton failed in 2009 and 2010 to inspect some of the support systems and foundations at the Hopkinton LNG facility for detrimental changes. In support of its position, PHMSA provided eight photographs showing areas it believed showed changes to the support systems and foundation deterioration more severe than what was documented in the inspection conducted by Hopkinton in 2010.

In its Response, Hopkinton contested this allegation of violation, providing pictures and information of the support systems that PHMSA had asserted were showing signs of deterioration and detrimental change. Respondent argued that while the pictures may show some superficial damage to several support systems, there was no change that could impair support of the pipeline system. Hopkinton also argued that its reports show that in 2009 and 2010, all of the support systems and/or foundations were, in fact, inspected. While PHMSA may not agree with the rankings Hopkinton gave to the support systems and need for repair, the evidence shows that they were indeed inspected.

Hopkinton has also provided additional information regarding the areas PHMSA asserted showed detrimental changes. After reviewing the photographs and other information provided by Hopkinton, I find that the alleged changes to the support structures were only superficial.

Accordingly, after considering all of the evidence, I find that Hopkinton inspected each support system or foundation of each component for any detrimental change pursuant to § 193.2609 and hereby order that Item 1, along with its related penalty and corrective action, be withdrawn.

Item 2: The Notice alleged that Respondent violated 49 C.F.R. § 193.2625(a), which states:

§ 193.2625 Corrosion protection.

(a) Each operator shall determine which components could, unless corrosion is controlled, have their integrity or reliability adversely affected by external, internal, or atmospheric corrosion during their intended service life.

The Notice alleged that Respondent violated 49 C.F.R. § 193.2625(a) by failing to determine which metallic components could, unless corrosion were controlled, have their integrity or reliability adversely affected by external, internal, or atmospheric corrosion during their intended service life. Specifically, the Notice alleged that Hopkinton had never determined, during the period since their installation in 1970, whether the carbon steel bottoms of three LNG tanks at the Hopkinton LNG facility had been adversely affected by external corrosion.

In its Response, Hopkinton contested this allegation, arguing that it had made a determination, on two separate occasions, that the bottoms on the three tanks were not susceptible to atmospheric corrosion: first, when it selected the initial design and installed the tanks in the 1970's; second, when it reconfirmed the tank bottoms' integrity in 2009. In support of its position, Hopkinton provided detailed information regarding the construction of the tanks and two affidavits from employees declaring that they had initiated and ultimately made a determination regarding whether the tank bottoms would be susceptible to atmospheric corrosion.

Hopkinton failed, however, to provide any written documentation showing it had actually conducted an engineering evaluation or assessment resulting in a formal determination that the three tanks were not susceptible to atmospheric corrosion. Instead, Respondent merely submitted information showing its conclusion that there was no risk of atmospheric corrosion. Implicit in the regulation is a requirement that any determination be properly documented, using acceptable engineering methods and based on sound engineering judgment.

Furthermore, even if we assume, arguendo, that Hopkinton did perform some sort of informal engineering review or analysis, it is essential under Subpart G of Part 193 that such a process be documented. Under 49 C.F.R. § 193.2639(c)(2), an operator must keep records showing each test, survey, or inspection conducted under Subpart G to show the adequacy of the corrosion control measures taken to protect against the threat of corrosion. I do not believe, in this instance, that the evidence provided by Respondent is sufficient to demonstrate the company made an adequate determination that the integrity or reliability of the three tank bottoms could not be adversely affected by corrosion.

Accordingly, after considering all of the evidence, I find that Respondent violated 49 C.F.R. § 193.2625(a) by failing to adequately determine whether its three LNG tanks were susceptible to atmospheric corrosion.

Item 3: The Notice alleged that Respondent violated 49 C.F.R. § 193.2605(b), which states, in relevant part:

§ 193.2605 Maintenance procedures.

- (a) . . .
- (b) Each operator shall follow one or more manuals of written procedures for the maintenance of each component, including any required corrosion control. The procedures must include:
 - (1) The details of the inspection or tests determined under paragraph (a) of this section and their frequency of performance;

The Notice alleged that Respondent violated 49 C.F.R. § 193.2605(b) by failing to follow a manual of written procedures for the maintenance of each component of its system, including any corrosion control. Specifically, it alleged that Hopkinton's procedures failed to prescribe how prompt corrective or remedial action would be taken whenever the company learned, either by inspection or otherwise, that atmospheric, external or internal corrosion was not being controlled as required by Subpart G. The Notice further alleged that Hopkinton's 2005 and 2008

atmospheric corrosion monitoring inspections had revealed that crevice corrosion existed where the pipe was resting directly on a pipe support or trestle, yet the company had no specific procedure to deal with this type of specific situation.

Respondent did not contest this allegation of violation. Accordingly, based upon a review of all of the evidence, I find that Respondent violated 49 C.F.R. § 193.2605(b) by failing to have written procedures setting forth the action needed to be taken when crevice corrosion issue had been identified.

Item 4: The Notice alleged that Respondent violated 49 C.F.R. § 193.2639(a), which states:

§ 193.2639 Maintenance records.

(a) Each operator shall keep a record at each LNG plant of the date and type of each maintenance activity performed on each component to meet the requirements of this part. For each LNG facility that is designed and constructed after March 31, 2000, the operator shall also maintain related periodic inspection and testing records that NFPA 59A (incorporated by reference, *see* § 193.2013) requires. Maintenance records, whether required by this part or NFPA 59A, must be kept for a period not less than five years.

The Notice alleged that Respondent violated 49 C.F.R. § 193.2639(a) by failing to keep a record of the date and type of each maintenance activity performed on each component to meet the requirements of Part 193. Specifically, the Notice alleged that Hopkinton failed to keep a record of the atmospheric corrosion observations made by company personnel at pipe/soil interfaces. It further alleged that Hopkinton did not document any atmospheric corrosion procedures at these particular points, as required in Section 3.6C of the company's own *Corrosion Control Procedures*. In support of its position, PHMSA identified two corrosion reports from 2005 and 2008 that did not conform to Section 3.6 of Hopkinton's own procedures. Additionally, PHMSA noted that during its inspection in 2010, areas of corrosion were present that had not been identified in the company's earlier corrosion surveys.

Hopkinton contested this allegation of violation. Specifically, Respondent pointed to its October 28, 2005 and October 8, 2008 records detailing the findings of its atmospheric corrosion inspections.³ Hopkinton's records indicate that an inspection had occurred in 2008 and noted various areas in need of attention. It is Hopkinton's position that the records satisfy the requirement in § 193.2639(a) that it record the date and type of each maintenance activity performed under Part 193.

I disagree. Although the 2005 and 2008 records show that Hopkinton conducted corrosion inspections in a timely matter, they do not show that the inspections gave "particular attention at soil-to-air interfaces," as required under the company's own procedures under § 193.2605, and that the company recorded information of such observations during the inspection.

³ *See*, Violation Report Exhibit A-4 and A-6.

Accordingly, after considering all of the evidence, I find that Respondent violated 49 C.F.R. § 193.2639(a) by failing to keep a record of the atmospheric corrosion observations made by company personnel at pipe/soil interfaces.

Item 5: The Notice alleged that Respondent violated 49 C.F.R. § 193.2605(b)(1), as quoted above, by failing to follow a manual of written procedures for the maintenance of each component of its system, including any corrosion control. Specifically, it alleged that Hopkinton failed to follow its own procedures, namely, *Corrosion Procedures, Section 3.6C*, which required that “[p]ipelines exposed to the atmosphere will be inspected at least once every three years, at intervals not to exceed thirty-nine months” and that particular attention be paid to areas under thermal insulation. According to the Notice, Hopkinton failed to follow these procedures because not all pipe segments exposed to the atmosphere were inspected every three years and because the company’s procedures failed to specify a schedule establishing the frequency of inspections.⁴

In its Response, Hopkinton contended that its actions were within full compliance of § 193.2605 and its own procedures for monitoring corrosion control. Respondent contended: a) its procedures only required the inspection of its insulated pipeline when the insulation was removed; b) it was not required to remove the insulation to inspect for corrosion; c) removal of the insulation for routine inspections would be detrimental to the pipeline; and d) based upon the type of pipe material used, i.e., stainless steel, it would not be subject to atmospheric corrosion.

I do not find these arguments convincing. First, PHMSA has not asserted that Hopkinton must remove all of its insulation every three years to inspect components for atmospheric corrosion. Instead, the Violation Report specifically references Section 3.6C of Respondent’s own corrosion procedures, which requires that the company pay particular attention to piping under thermal insulation. Hopkinton’s 2008 report notes that it didn’t inspect any areas that were covered with thermal insulation. Second, I would note that there are inconsistencies in Respondent’s procedures. Section 3.6C states that the components covered by thermal insulation are to be paid particular attention, while Section 3.6E states that the components are only to be inspected when the insulation is removed. These procedural inconsistencies, however, do not negate the requirements set forth in 49 C.F.R. § 193.2605 and § 193.2635(d).

Third, § 193.2605 requires operators to periodically inspect their LNG plant and components. The inspection of any component protected from atmospheric corrosion must be conducted at least every three years. The regulation is silent as to the issue of whether all of the insulation must be removed for the inspection, but it clearly states that each component must be inspected for atmospheric corrosion and the company’s own procedures require that particular attention be given to pipe under thermal insulation. Fourth, the regulation makes no distinction between pipelines made with different material, stainless steel or otherwise. As noted in Hopkinton’s 2008 inspection report, it did not inspect components for atmospheric corrosion that were insulated. Therefore, Hopkinton was in violation of its own procedures for failing to conduct inspections of components under thermal insulation at intervals not exceeding three years.

⁴ Pipeline Safety Violation Report (Violation Report), (April 2, 2012) (on file with PHMSA), at 3.

Accordingly, after considering all of the evidence I find that Respondent violated 49 C.F.R. § 193.2605 by failing to follow a manual of written procedures for the maintenance of each component of its system, including any corrosion control.

These findings of violation contained in Items 2, 3, and 5 will be considered prior offenses in any subsequent enforcement action taken against Respondent.

ASSESSMENT OF PENALTY

Under 49 U.S.C. § 60122, Respondent is subject to an administrative civil penalty not to exceed \$100,000 per violation for each day of the violation, up to a maximum of \$1,000,000 for any related series of violations. In determining the amount of a civil penalty under 49 U.S.C. § 60122 and 49 C.F.R. § 190.225, I must consider the following criteria: the nature, circumstances, and gravity of the violation, including adverse impact on the environment; the degree of Respondent's culpability; the history of Respondent's prior offenses; the Respondent's ability to pay the penalty and any effect that the penalty may have on its ability to continue doing business; and the good faith of Respondent in attempting to comply with the pipeline safety regulations. In addition, I may consider the economic benefit gained from the violation without any reduction because of subsequent damages, and such other matters as justice may require. The Notice proposed a total civil penalty of \$64,600 for the violations cited above.

Item 1: The Notice proposed a civil penalty of \$32,500 for Respondent's violation of 49 C.F.R. § 193.2609, for failing to inspect some of its support systems and foundations to identify detrimental changes that could impair support. As noted above, I found that Hopkinton did inspect each support system or foundation of each component for any detrimental change pursuant to § 193.2609. Based upon such finding, I hereby withdraw the proposed penalty for violation of 49 C.F.R. § 193.2609.

Item 5: The Notice proposed a civil penalty of \$32,100 for Respondent's violation of 49 C.F.R. § 193.2605, for failing to follow a manual of written procedures for the maintenance of each component of its system, including any corrosion control. As discussed above, I found that Respondent failed to inspect under all of its thermal insulation for evidence of atmospheric corrosion every three years, despite the express language contained in Section 3C of its Operator's Corrosion Procedures. Hopkinton's failure to properly inspect portions of its pipeline that are thermally insulated could have severe consequences. Corrosion, left unchecked, can lead to pipeline leaks, causing extensive property damage, injuries and clean-up costs. The fact that no accident occurred in this instance is reflected in the penalty being assessed in this instance. While Hopkinton contends that its current insulation inspection practices are appropriate and evidence of its good-faith efforts, its own inspection report from 2008 states that "pipelines covered with insulation were not inspected." Therefore, I find no basis for a reduction of the proposed penalty. Accordingly, having reviewed the record and considered the assessment criteria, I assess Respondent a civil penalty of \$32,100 for violation of 49 C.F.R. § 193.2605.

In summary, having reviewed the record and considered the assessment criteria for each of the Items cited above, I assess Respondent a total civil penalty of **\$32,100**.

Payment of the civil penalty must be made within 20 days of service. Federal regulations (49 C.F.R. § 89.21(b)(3)) require such payment to be made by wire transfer through the Federal Reserve Communications System (Fedwire), to the account of the U.S. Treasury. Detailed instructions are contained in the enclosure. Questions concerning wire transfers should be directed to: Financial Operations Division (AMZ-341), Federal Aviation Administration, Mike Monroney Aeronautical Center, P.O. Box 269039, Oklahoma City, Oklahoma 73125. The Financial Operations Division telephone number is (405) 954-8893.

Failure to pay the \$32,100 civil penalty will result in accrual of interest at the current annual rate in accordance with 31 U.S.C. § 3717, 31 C.F.R. § 901.9 and 49 C.F.R. § 89.23. Pursuant to those same authorities, a late penalty charge of six percent (6%) per annum will be charged if payment is not made within 110 days of service. Furthermore, failure to pay the civil penalty may result in referral of the matter to the Attorney General for appropriate action in a district court of the United States.

COMPLIANCE ORDER

The Notice proposed a compliance order with respect to Items 1, 2, 3, 4 and 5 in the Notice for violations of 49 C.F.R. §193. Item 1 has been withdrawn so no compliance terms are included in this Order. Under 49 U.S.C. § 60118(a), each person who engages in the transportation of gas or who owns or operates a pipeline facility is required to comply with the applicable safety standards established under chapter 601. Pursuant to the authority of 49 U.S.C. § 60118(b) and 49 C.F.R. § 190.217, Respondent is ordered to take the following actions to ensure compliance with the pipeline safety regulations applicable to its operations:

1. With respect to the violation of § 193.2625(a) (**Item 2**), Respondent must determine if the outer LNG tank bottoms could have their integrity or reliability adversely affected by external corrosion unless external corrosion were controlled. Hopkinton has stated that it has already commissioned R.A. Hoffman Engineering to perform an assessment and determination regarding the three LNG tank bottoms. Respondent shall complete the determination within 180 days of the receipt of the Final Order, and submit it to the Regional Director for review. If necessary, Hopkinton shall establish a remediation plan based upon that determination.
2. With respect to the violation of § 193.2605 (**Item 3**), Respondent must incorporate into its corrosion procedures empirical measurements relating its *Good, Fair, and Poor* evaluations to pipe-wall loss, with appropriate remedial actions specified to deal with these severity ratings. This shall be completed within 90 days of receipt of the Final Order, followed by a reevaluation of its pipelines on supports or trestles within 180 days of receipt of the Final Order.
3. With respect to the violation of § 193.2639(a) (**Item 4**), Respondent must expand its procedures to identify the relevant pipelines and to describe the monitoring process of the soil-to-air interface of all pipelines subject to Part 193. This shall be completed within 60 days of receipt of the Final Order. Within 180 days of the receipt of the

Final Order, Hopkinton shall reexamine its pipe-to-soil interfaces for the presence of atmospheric corrosion. Should remedial action be deemed necessary, it shall be accomplished in accordance with the procedures established in **Item 3** above.

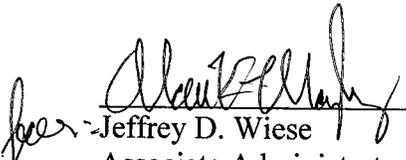
4. With respect to the violation of § 193.2605(b) (**Item 5**), Respondent must revise Section 3.6E of its *Corrosion Procedures* to require monitoring of all pipe exposed to the atmosphere, at intervals no greater than 3 years. The procedure shall make provisions for inspecting under thermally insulated pipe. The procedures shall be revised within 30 days of receipt of the Final Order. Hopkinton shall inspect all piping under thermal insulation within 12 months of issuance of the Final Order. Should remedial action be deemed necessary, it shall be accomplished in accordance with the revised procedures established for **Item 3** above.

5. It is requested (not mandated) that Hopkinton LNG maintain documentation of the safety improvement costs associated with fulfilling this Compliance Order and submit the total to Byron Coy, Director, Eastern Region, Pipeline and Hazardous Materials Safety Administration, 820 Bear Tavern Rd., Suite 103, W. Trenton, NJ 08628. It is requested that these costs be reported in two categories: 1) total cost associated with preparation/revision of plans procedures, studies and analysis; and 2) total associated with replacements, additions and other changes to pipeline infrastructure.

The Director may grant an extension of time to comply with any of the required items upon a written request timely submitted by the Respondent and demonstrating good cause for an extension.

Failure to comply with this Order may result in the administrative assessment of civil penalties not to exceed \$200,000 for each violation for each day the violation continues or in referral to the Attorney General for appropriate relief in a district court of the United States.

Under 49 C.F.R. § 190.215, Respondent has a right to submit a Petition for Reconsideration of this Final Order. The petition must be sent to: Associate Administrator, Office of Pipeline Safety, PHMSA, 1200 New Jersey Avenue, SE, East Building, 2nd Floor, Washington, DC 20590, with a copy sent to the Office of Chief Counsel, PHMSA, at the same address. PHMSA will accept petitions received no later than 20 days after receipt of service of this Final Order by the Respondent, provided they contain a brief statement of the issue(s) and meet all other requirements of 49 C.F.R. § 190.215. Unless the Associate Administrator, upon request, grants a stay, the terms and conditions of this Final Order are effective upon service in accordance with 49 C.F.R. § 190.5.


 Jeffrey D. Wiese
 Associate Administrator
 for Pipeline Safety

FEB 3 - 2014

Date Issued