U.S. Department
of Transportation

Pipeline and Hazardous Materials
Safety Administration

12300 W. Dakota Ave., Suite 110
Lakewood, CO 80228

# NOTICE OF PROBABLE VIOLATION
# PROPOSED CIVIL PENALTY
# and
# PROPOSED COMPLIANCE ORDER

**CERTIFIED MAIL - RETURN RECEIPT REQUESTED**

November 16, 2016

Ms. Alicia Moy
President & CEO
Hawaii Gas
745 Fort Street Mall, Ste. 1800
Honolulu, HI 96813

**CPF 5-2016-0026**

Dear Ms. Moy:

On October 20-24 and October 27-30, 2014, a representative of the Pipeline and Hazardous Materials Safety Administration (PHMSA), Office of Pipeline Safety (OPS), pursuant to Chapter 601 of 49 United States Code, inspected Hawaii Gas' 22.6 mile synthetic natural gas (SNG) transmission pipeline system on the island of Oahu, Hawaii.

As a result of the inspection, it is alleged that Hawaii Gas has committed probable violations of the Pipeline Safety Regulations, Title 49, Code of Federal Regulations. The items inspected and the probable violations are:

1. **§192.491 Corrosion control records.**
   **... (c) Each operator shall maintain a record of each test, survey, or inspection required by this subpart in sufficient detail to demonstrate the adequacy of corrosion control measures or that a corrosive condition does not exist. These records must be retained for at least 5 years, except that records related to §§192.465(a) and (e) and 192.475(b) must be retained for as long as the pipeline remains in service.**

Hawaii Gas did not maintain a record of each test, survey, or inspection required by this subpart in sufficient detail to demonstrate the adequacy of corrosion control measures or that a corrosive condition does not exist on its synthetic natural gas (SNG) transmission pipeline system.

Section 192.475(a) prohibits the transportation of corrosive gas by pipeline unless the corrosive effect of the gas on the pipeline has been investigated and steps have been taken to minimize internal corrosion. Yet, Hawaii Gas did not provide any records or other documentation to demonstrate that it did not transport corrosive gas or that it had investigated the corrosive effects of the gas on its SNG pipeline system and taken steps to minimize internal corrosion.

2. **§192.603 General provisions**
**... (b) Each operator shall keep records necessary to administer the procedures established under §192.605.**

Hawaii Gas did not keep records necessary to administer the procedures it established under §192.605 for its SNG transmission pipeline system.

At the time of inspection, the PHMSA inspector noted that the maximum allowable operating pressure (MAOP) of Hawaii Gas' SNG transmission pipeline system was recorded as 500 psig in Hawaii Gas' Integrity Management (IM) documentation. The establishment of MAOP is a normal operating procedure required by §192.605(b). However, Hawaii Gas did not provide any additional records to substantiate how it actually established the MAOP of its SNG transmission pipeline system.

3. **§192.605 Procedural manual for operations, maintenance, and emergencies**
**Each operator shall include the following in its operating and maintenance plan:**
**(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.**

Hawaii Gas did not follow its manual of written procedures for conducting operations and maintenance activities on its SNG transmission pipeline system.

Hawaii Gas' written Operations and Maintenance (O&M) Procedures Manual D-960 Odorizing Program, Section VI stated *"The SNG will be sampled at least four times per year at representative locations within the SNG distribution system for verification of odorant adequacy. Standard SNG distribution system test locations are: 1) Jenny's Drive In (Waipahu) 94-861 Farrington Highway, 2) Manoa Marketplace 2851 East Manoa Road, 3) Residential home (Hawaii Kai) 576 Pepeekeo Place."*

During the records review, the PHMSA inspector discovered that Hawaii Gas did not meet its frequency for sampling of gas at least four times per year. In 2011, only two odorant test site records were found. Those two records were dated May 10, 2011, and December 5, 2011. In 2012, only two odorant test site record were provided, and they were dated May 8, 2012, and October 11, 2012. And, in 2013 only one SNG odorant test site record dated August 14, 2013, was provided.

Additionally, Hawaii Gas failed to follow its written procedures for conducting the calibration of its odorization test equipment on an annual basis. Hawaii Gas' O&M Procedures Manual D-960 Odorizing Program, Section VII stated, *"The odorometer will be calibrated on an annual basis by the manufacturer."* During the records review, the PHMSA inspector discovered that Hawaii Gas did not meet its annual calibration frequency. The most recent record provided for the odorometer with serial number 1698 had a calibration date of October 15, 2010, performed by Heath Consultants.

4. **§192.706 Transmission lines: Leakage surveys.**
**Leakage surveys of a transmission line must be conducted at intervals not exceeding 15 months, but at least once each calendar year. However, in the case of a transmission line which transports gas in conformity with § 192.625 without an odor or odorant, leakage surveys using leak detector equipment must be conducted—**
**(a) In Class 3 locations, at intervals not exceeding 7 1/2 months, but at least twice each calendar year; and**
**(b) In Class 4 locations, at intervals not exceeding 4 1/2 months, but at least four times each calendar year.**

Hawaii Gas did not conduct leakage surveys on its SNG transmission pipeline system at intervals not exceeding 15 months, but at least once each calendar year.

Hawaii Gas failed to perform a leakage survey of its SNG transmission pipeline system during calendar year 2013. An internal Hawaii Gas memorandum dated February 21, 2014, revealed that there was no documentation of performing a leakage survey on the SNG transmission line for 2013. After Hawaii Gas discovered the missed leakage survey, it performed a leakage survey on February 21, 2014. The leakage survey identified three leaks found on mains, which have since been repaired. Hawaii Gas performed a second leakage survey on September 3, 2014. There were no leaks found.

5. **§192.709 Transmission lines: Record keeping.**
**Each operator shall maintain the following records for transmission line for the periods specified:**
**(a) The date, location, and description of each repair made to pipe (including pipe-to-pipe connections) must be retained for as long as the pipe remains in service.**

Hawaii Gas did not maintain records for its SNG transmission pipeline system regarding the date, location, and description of each repair made to pipe (including pipe-to-pipe connections). These records must be retained for as long as the pipe remains in service. Hawaii Gas did not adequately document the date and describe each repair made to regulator station equipment on its SNG transmission pipeline system that resulted from

periodic regulator station inspections. The transmission regulator station report for the Kunia regulator station dated July 29, 2013, stated, *"pilot spring corroded at first stage and water in booth"* under *"work performed/condition as left."* Also, the transmission regulator station report for the Palama Meat Co. regulator station dated July 28, 2014, stated, *"metal shaving in first and second stage port and change pilot springs corroded from liquid in system"* under *"work performed/condition as left."*

The documentation for the above conditions does not include a description of how each repair had been made, if the repairs had actually been made, or if these unrepaired conditions remained.

6. **§192.739 Pressure limiting and regulating stations: Inspection and testing.**
**(a) Each pressure limiting station, relief device (except rupture discs), and pressure regulating station and its equipment must be subjected at intervals not exceeding 15 months, but at least once each calendar year, to inspections and tests to determine that it is**
**... (2) Adequate from the standpoint of capacity and reliability of operation for the service in which it is employed;**

   Hawaii Gas did not ensure that each pressure limiting station, relief device (except rupture discs), and pressure regulating station and its equipment on its SNG transmission pipeline system was adequate from the standpoint of capacity and reliability of operation for the service in which it is employed.

   Hawaii Gas' inspection and testing report for the Malakole Regulator Station on the SNG transmission pipeline dated April 7, 2014, had a recorded lock up pressure of 170 psig for its first stage regulator that exceeded the regulator's set outlet pressure of 80 psig. The report also had a recorded lock up pressure of 24 psig for its second stage regulator that exceeded the regulator's set outlet pressure of 12 psig.

7. **§192.805 Qualification program.**
**Each operator shall have and follow a written qualification program. The program shall include provisions to:**
**... (b) Ensure through evaluation that individuals performing covered tasks are qualified;**

   Hawaii Gas did not ensure through evaluation that individuals performing covered tasks on its SNG transmission pipeline system were qualified.

   Three Hawaii Gas individuals were identified on SNG odorant test site records as having performed odorization tests between 2011 and 2014. During the Operator Qualification (OQ) program records review, the PHMSA inspector noted there were no records of completion of Module 251 *"Odorization"* by these individuals. Hawaii Gas' OQ program uses the Midwest Gas Association (MGA) module list, which includes module 251 and other covered task modules. Accordingly, the PHMSA inspector was unable to verify if the three individuals who performed odorization tests between 2011 and 2014 were qualified to do so.

Additionally, four individuals were identified on the *Transmission Line Inspection Reports D-934-1* as having performed patrolling on the SNG transmission pipeline system between 2012 and 2014. During the OQ program records review, the PHMSA inspector noted there were no records of completion of module 271 *"Leak Survey and Patrols;"* which is also on the MGA module list. The PHMSA inspector was unable to verify if the four individuals who performed patrols between 2012 and 2014 were qualified to do so.

8. **§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.**

Hawaii Gas did not follow its written integrity management program (IMP) procedures for its SNG transmission pipeline system.

Hawaii Gas' IMP Manual

- Section 3.3 titled *"Program Evaluation"* stated, *"In order to effectively manage IMP and its performance Hawaii Gas conducts the following activities as part of the Performance Plan requirements: Annual program review, annual pipeline system review, and triennial program third-party audit ('mock' audit based on PHMSA Inspection Protocols.)"* However, the PHMSA inspector discovered during the IMP records review that Hawaii Gas did not conduct periodic evaluations of its pipeline integrity program on an annual basis. The last documented IMP annual review was on September 19, 2012.
- Section 6.2.3 titled *"Roles and Responsibilities"* stated, *"The IMP Engineer maintains...current IMP Organizational Chart with names of Hawaii Gas' personnel and contractors, vendors, and consulting companies involved in IMP activities."* At the time of the inspection, however, Hawaii Gas did not provide the PHMSA inspector with an *"IMP Organizational Chart."*

9. **§192.917 How does an operator identify potential threats to pipeline integrity and use the threat identification in its integrity program?**
**(a) *Threat identification.* An operator must identify and evaluate all potential threats to each covered pipeline segment. Potential threats that an operator must consider include, but are not limited to, the threats listed in ASME/ANSI B31.8S (incorporated by reference, see §192.7), section 2, which are grouped under the following four categories:**

**(1) Time dependent threats such as internal corrosion, external corrosion, and stress corrosion cracking;**
**(2) Static or resident threats, such as fabrication or construction defects;**
**(3) Time independent threats such as third party damage and outside force damage; and**
**(4) Human error.**

Hawaii Gas did not identify and evaluate all potential threats to its SNG transmission pipeline system.

A review of the Hawaii Gas' *Risk Assessment and P&MM Evaluation Report* dated February 10, 2014 showed no indication that interactive threats were considered by Hawaii Gas' subject matter experts. Section 2.5.1 titled "Identification of Potential Threats" of Hawaii Gas' IMP Manual dated August, 9, 2012 stated that "the interactive nature of other threats must also be considered." Further, ASME/ANSI B31.8S states that "[t]he interactive nature of threats (i.e., more than one threat occurring on a section of a pipeline at the same time) shall be considered."

**10. §192.935 What additional preventive and mitigative measures must an operator take?**
**(a) *General requirements.* An operator must take additional measures beyond those already required by Part 192 to prevent a pipeline failure and to mitigate the consequences of a pipeline failure in a high consequence area. An operator must base the additional measures on the threats the operator has identified to each pipeline segment. (*See* § 192.917) An operator must conduct, in accordance with one of the risk assessment approaches in ASME/ANSI B31.8S (incorporated by reference, *see* § 192.7), section 5, a risk analysis of its pipeline to identify additional measures to protect the high consequence area and enhance public safety. Such additional measures include, but are not limited to, installing Automatic Shut-off Valves or Remote Control Valves, installing computerized monitoring and leak detection systems, replacing pipe segments with pipe of heavier wall thickness, providing additional training to personnel on response procedures, conducting drills with local emergency responders and implementing additional inspection and maintenance programs.**

Hawaii Gas did not provide records or other documentation to demonstrate that it had taken any additional preventive and mitigative measures (P&MM) beyond those already required by Part 192 to prevent a pipeline failure and to mitigate the consequences of a pipeline failure in a high consequence area on its SNG transmission pipeline.

Hawaii Gas failed to provide the P&MM tracking form that was referenced in its *Risk Assessment and P&MM Evaluation Report* dated February 10, 2014. The PHMSA inspector was unable to ascertain if additional P&MM identified in the report had actually been implemented or scheduled for implementation.

11. **§192.945 What methods must an operator use to measure program effectiveness?**
**(a) *General.* An operator must include in its integrity management program methods to measure whether the program is effective in assessing and evaluating the integrity of each covered pipeline segment and in protecting the high consequence areas. These measures must include the four overall performance measures specified in ASME/ANSI B31.8S (incorporated by reference, *see* § 192.7 of this part), section 9.4, and the specific measures for each identified threat specified in ASME/ANSI B31.8S, Appendix A. An operator must submit the four overall performance measures as part of the annual report required by § 191.17 of this subchapter.**

Hawaii Gas did not provide records or other documentation to demonstrate that it measured its integrity management (IM) program's effectiveness in assessing and evaluating the integrity of its SNG transmission pipeline and in protecting high consequence areas.

Hawaii Gas did not provide adequate documentation to demonstrate that its IM program's effectiveness performance measures were trended over time or an analysis of these trends. For example, there were no records to show a trending analysis of equipment or material failures as a means to evaluate pipeline equipment deterioration or records to trending of leading indicators such as inadvertent over-pressurization, right-of-way encroachments without a one-call notification, or other abnormal operating conditions such as those listed in 192.605(c).

Proposed Civil Penalty

Under 49 United States Code, § 60122, you are subject to a civil penalty not to exceed $205,638 per violation per day the violation persists up to a maximum of $2,056,380 for a related series of violations. For violations occurring between January 4, 2012 to August 1, 2016, the maximum penalty may not exceed $200.000 per violation per day, with a maximum penalty not to exceed $2,000,000 for a related series of violations. For violations occurring prior to January 4, 2012, the maximum penalty may not exceed $100,000 per violation per day, with a maximum penalty not to exceed $1,000,000 for related series of violations. The Compliance Officer has reviewed the circumstances and supporting documentation involved in the above probable violations and has recommended that you be preliminarily assessed a civil penalty of $60,300 as follows:

| Item number | PENALTY |
|---|---|
| 3 | $14,800 |
| 6 | $14,800 |
| 7 | $16,900 |
| 10 | $13,800 |

Warning Items

With respect to items 1, 4, 5, & 8 we have reviewed the circumstances and supporting documents involved in this case and have decided not to conduct additional enforcement action or penalty assessment proceedings at this time. We advise you to promptly correct these items. Failure to do so may result in additional enforcement action.

Proposed Compliance Order

With respect to items 2, 3, 6, 7, 9, 10, & 11 pursuant to 49 United States Code § 60118, the Pipeline and Hazardous Materials Safety Administration proposes to issue a Compliance Order to Hawaii Gas. Please refer to the *Proposed Compliance Order*, which is enclosed and made a part of this Notice.

Response to this Notice

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. All material you submit in response to this enforcement action may be 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). 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 a Final Order.

In your correspondence on this matter, please refer to **CPF 5-2016-0026** and for each document you submit, please provide a copy in electronic format whenever possible.

Sincerely,

Chris Hoidal
Director, Western Region
Pipeline and Hazardous Materials Safety Administration

Enclosures: *Proposed Compliance Order*
*Response Options for Pipeline Operators in Compliance Proceedings*

cc: PHP-60 Compliance Registry
PHP-500 C. Ishikawa (#147745)

## PROPOSED COMPLIANCE ORDER

Pursuant to 49 United States Code § 60118, the Pipeline and Hazardous Materials Safety Administration (PHMSA) proposes to issue to Hawaii Gas a Compliance Order incorporating the following remedial requirements to ensure the compliance of Hawaii Gas with the pipeline safety regulations:

1. In regard to Item Number 2 of the Notice pertaining to Hawaii Gas' failure to keep records necessary to substantiate how it established the MAOP of its pipeline system, Hawaii Gas must provide records to PHMSA's Western Region Director (Director) to verify how it had previously established the MAOP of its pipeline system. If Hawaii Gas does not possess MAOP records, it must either develop written records to accurately document how it had previously established the MAOP of its pipeline or, if the process by which the MAOP was established is unknown, it must reestablish the MAOP of the pipeline in accordance with Part 192 and provide the records to the Director.

2. In regard to Item Number 3 of the Notice pertaining to Hawaii Gas' failure to follow its manual of written procedures for conducting operations and maintenance activities on its SNG transmission pipeline system, Hawaii Gas must train all its operations and maintenance personnel on the proper use of its written O&M procedures manual to ensure all future odorant tests are performed in accordance with Hawaii Gas' written procedures. In addition, Hawaii Gas must calibrate or verify that all its odorant test equipment has been calibrated within the times frames specified in its written O&M. Hawaii gas must also conduct an odorant test of its pipeline system after receipt of this Notice, and provide the records to the Director.

3. In regard to Item Number 6 of the Notice pertaining to Hawaii Gas' failure to ensure that each pressure regulating station and its equipment on its SNG transmission pipeline system was adequate from the standpoint of capacity and reliability of operation for the service in which it is employed,, Hawaii Gas must conduct an inspection and testing of its Malakole Regulator Station and ensure the lock-up pressure for its first stage regulator is properly set and recorded.

4. In regard to Item Number 7 of the Notice pertaining to Hawaii Gas' failure to ensure through evaluation that individuals performing covered tasks on its SNG transmission pipeline system were qualified, Hawaii Gas must modify its written Operator Qualification (OQ) program with procedures designed to ensure that only properly qualified individuals perform covered tasks on its pipeline system.

5. In regard to Item Number 9 of the Notice pertaining to Hawaii Gas' failure to identify and evaluate all potential threats to its SNG transmission pipeline system, Hawaii Gas must amend its IM Program to specifically address the form used in its evaluation titled, *Risk Assessment and P&MM Evaluation Report,* to show indications that interactive threats are considered.

6. In regard to Item Number 10 of the Notice pertaining to Hawaii Gas' failure to provide records or other documentation to demonstrate that it had taken any additional preventive and mitigative measures (P&MM) beyond those already required by Part 192, Hawaii Gas must create and provide an up-to-date P&MM tracking form to the Director, or equivalent documentation, that would show if additional P&MM were implemented or scheduled for implementation.

7. In regard to Item Number 11 of the Notice pertaining to Hawaii Gas' failure to provide records or other documentation to demonstrate that it measured its IM program's effectiveness, Hawaii Gas must gather data and create trending analyses of equipment or material failures as a means to evaluate pipeline equipment deterioration and of leading indicators such as inadvertent over-pressurization, right-of-way encroachments without a one-call notification, or other abnormal operating conditions such as those listed in 192.605(c). After completion, Hawaii Gas must provide a written summary of the analyses, including statistical diagrams or charts, to the Director.

8. Hawaii Gas must submit new written procedures, records or other documentation to Chris Hoidal, Director, Western Region, Pipeline and Hazardous Materials Safety Administration within 90 days of the date of issuance of the Final Order to show that the above eight (8) items were completed as required by this Compliance Order.

9. It is requested (not mandated) that Hawaii Gas maintain documentation of the safety improvement costs associated with fulfilling this Compliance Order and submit the total to Chris Hoidal, Director, Western Region, Pipeline and Hazardous Materials Safety Administration. It is requested that these costs be reported in two categories: 1) total cost associated with preparation/revision of plans, procedures, studies and analyses, and 2) total cost associated with replacements, additions and other changes to pipeline infrastructure.