



U.S. Department  
of Transportation

**Pipeline and  
Hazardous Materials Safety  
Administration**

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Lakewood, CO 80228

## WARNING LETTER

### CERTIFIED MAIL - RETURN RECEIPT REQUESTED

February 19, 2009

Mr. Thomas Simmons  
Vice President  
Hawaiian Electric Company, Inc.  
P.O. Box 2750  
Honolulu, HI 96840-0001

CPF 5-2009-5009W

Dear Mr. Simmons:

On July 29-30, 2008, a representative of the Pipeline and Hazardous Materials Safety Administration (PHMSA), pursuant to Chapter 601 of 49 United States Code, conducted an inspection of the Hawaiian Electric Company's (HECO) Integrity Management Program (IMP) in Honolulu, Hawaii.

As a result of the inspection, it appears that you have committed probable violations of the Pipeline Safety Regulations, Title 49, Code of Federal Regulations. The items inspected and the probable violations are:

1. **§195.452 Pipeline integrity management in high consequence areas.**

**(f) What are the elements of an integrity management program? An integrity management program begins with the initial framework. An operator must continually change the program to reflect operating experience, conclusions drawn from results of the integrity assessments, and other maintenance and surveillance data, and evaluation of consequences of a failure on the high consequence area. An operator must include, at minimum, each of the following elements in its written integrity management program:**

- (4) Criteria for remedial actions to address integrity issues raised by the assessment methods and information analysis (see paragraph (h) of this section);**

The HECO's in-line inspection (ILI) vendor specification required the ILI vendor to submit the Final Report within 60 days from the assessment date of October 17, 2007. HECO did not receive the Final Report until March 28, 2008.

**2. §195.452 Pipeline integrity management in high consequence areas.**

**(f) What are the elements of an integrity management program? An integrity management program begins with the initial framework. An operator must continually change the program to reflect operating experience, conclusions drawn from results of the integrity assessments, and other maintenance and surveillance data, and evaluation of consequences of a failure on the high consequence area. An operator must include, at minimum, each of the following elements in its written integrity management program:**

**(3) An analysis that integrates all available information about the integrity of the entire pipeline and the consequences of a failure (see paragraph (g) of this section);**

**(g) What is an information analysis? In periodically evaluating the integrity of each pipeline segment (paragraph (j) of this section), an operator must analyze all available information about the integrity of the entire pipeline and the consequences of a failure. This information includes:**

**(1) Information critical to determining the potential for, and preventing, damage due to excavation, including current and planned damage prevention activities, and development or planned development along the pipeline segment;**

**(2) Data gathered through the integrity assessment required under this section;**

**(3) Data gathered in conjunction with other inspections, tests, surveillance and patrols required by this Part, including, corrosion control monitoring and cathodic protection surveys; and**

**(4) Information about how a failure would affect the high consequence area, such as location of the water intake.**

The HECO needs to implement a review of their data integration derived from their previous ILI assessment results to strengthen the HECO integrity management performance. The ILI results are critical to measure the effectiveness of their damage prevention program, i.e. corrosion growth rate, coating conditions, and etc...

**3. §195.452 Pipeline integrity management in high consequence areas.**

**(e) What are the risk factors for establishing an assessment schedule (for both the baseline and continual integrity assessments)?**

- (1) An operator must establish an integrity assessment schedule that prioritizes pipeline segments for assessment (see paragraphs (d) (1) and (j) (3) of this section). An operator must base the assessment schedule on all risk factors that reflect the risk conditions on the pipeline segment. The factors an operator must consider include, but are not limited to:
- (i) Results of the previous integrity assessment, defect type and size that the assessment method can detect, and defect growth rate;
  - (ii) Pipe size, material, manufacturing information, coating type and condition, and seam type;
  - (iii) Leak history, repair history and cathodic protection history;
  - (iv) Product transported;
  - (v) Operating stress level;
  - (vi) Existing or projected activities in the area;
  - (vii) Local environmental factors that could affect the pipeline (e.g., corrosivity of soil, subsidence, climatic);
  - (viii) geo-technical hazards; and
  - (ix) Physical support of the segment such as by a cable suspension bridge.
- (2) Appendix C of this part provides further guidance on risk factors.

The HECO risk based analysis process based solely on using Subject Matter Experts (SME). The HECO needs to consider risk results in a more comprehensive manner to help assure risk reduction efforts are prioritized on the overall highest risk areas, i.e. data driven risk based scenario.

4. **§195.452 Pipeline integrity management in high consequence areas.**

(f) What are the elements of an integrity management program? An integrity management program begins with the initial framework. An operator must continually change the program to reflect operating experience, conclusions drawn from results of the integrity assessments, and other maintenance and surveillance data, and evaluation of consequences of a failure on the high consequence area. An operator must include, at minimum, each of the following elements in its written integrity management program:

(6) Identification of preventive and mitigative measures to protect the high consequence area (see paragraph (i) of this section);

(i) What preventive and mitigative measures must an operator take to protect the high consequence area?

(1) General requirements. An operator must take measures to prevent and mitigate the consequences of a pipeline failure that could affect a high consequence area. These measures include conducting a risk analysis of the pipeline segment to identify additional actions to enhance public safety or environmental protection. Such actions may include, but are not limited to, implementing damage prevention best practices, better monitoring of cathodic protection where corrosion is a concern, establishing shorter inspection intervals,

installing EFRDs on the pipeline segment, modifying the systems that monitor pressure and detect leaks, providing additional training to personnel on response procedures, conducting drills with local emergency responders and adopting other management controls.

(2) Risk analysis criteria. In identifying the need for additional preventive and mitigative measures, an operator must evaluate the likelihood of a pipeline release occurring and how a release could affect the high consequence area. This determination must consider all relevant risk factors, including, but not limited to:

- (i) Terrain surrounding the pipeline segment, including drainage systems such as small streams and other smaller waterways that could act as a conduit to the high consequence area;
- (ii) Elevation profile;
- (iii) Characteristics of the product transported;
- (iv) Amount of product that could be released;
- (v) Possibility of a spillage in a farm field following the drain tile into a waterway;
- (vi) Ditches along side a roadway the pipeline crosses;
- (vii) Physical support of the pipeline segment such as by a cable suspension bridge;
- (viii) Exposure of the pipeline to operating pressure exceeding established maximum operating pressure.

The process description for the deciding to implement the HECO's Preventive and Mitigative Measures (P&MM) projects should show how their P&MM projects are integrated into the risk model process. The risk model does not appear to be sensitive to the risk attributes impacted by the implementation of their P&MM projects.

**5. §195.452 Pipeline integrity management in high consequence areas.**

(f) What are the elements of an integrity management program? An integrity management program begins with the initial framework. An operator must continually change the program to reflect operating experience, conclusions drawn from results of the integrity assessments, and other maintenance and surveillance data, and evaluation of consequences of a failure on the high consequence area. An operator must include, at minimum, each of the following elements in its written integrity management program:

(5) A continual process of assessment and evaluation to maintain a pipeline's integrity (see paragraph (j) of this section);

(j) What is a continual process of evaluation and assessment to maintain a pipeline's integrity?

(1) General. After completing the baseline integrity assessment, an operator must continue to assess the line pipe at specified intervals and periodically evaluate the integrity of each pipeline segment that could affect a high consequence area.

**(2) Evaluation.** An operator must conduct a periodic evaluation as frequently as needed to assure pipeline integrity. An operator must base the frequency of evaluation on risk factors specific to its pipeline, including the factors specified in paragraph (e) of this section. The evaluation must consider the results of the baseline and periodic integrity assessments, information analysis (paragraph (g) of this section), and decisions about remediation, and preventive and mitigative actions (paragraphs (h) and (i) of this section).

HECO must ensure that a continual evaluation of their pipeline integrity is being pursued. This means that all information regarding a pipeline's integrity is being continually evaluated to determine impacts on reassessment schedules, assessment methods, and other aspects of HECO's Integrity Management Program. Specifically, PHMSA did not see how known coating conditions were being continually evaluated.

**6. §195.452 Pipeline integrity management in high consequence areas.**

**(f) What are the elements of an integrity management program? An integrity management program begins with the initial framework. An operator must continually change the program to reflect operating experience, conclusions drawn from results of the integrity assessments, and other maintenance and surveillance data, and evaluation of consequences of a failure on the high consequence area. An operator must include, at minimum, each of the following elements in its written integrity management program:**

**(7) Methods to measure the program's effectiveness (see paragraph (k) of this section);**

**(k) What methods to measure program effectiveness must be used? An operator's program must include methods to measure whether the program is effective in assessing and evaluating the integrity of each pipeline segment and in protecting the high consequence areas. See Appendix C of this part for guidance on methods that can be used to evaluate a program's effectiveness.**

6. A. The HECO process did not adequately specify the collection of their performance data at a frequency that will provide timely evaluation of the IM program, i.e. the performance measures are only completed at three (3) year intervals.

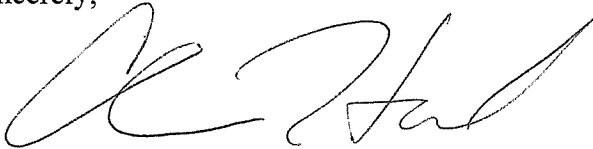
6. B. The results of their IM program effectiveness evaluation were not adequately communicated to the company personnel who need to make use of the information contain a lot of good and factual information in the timely manner.

Under 49 United States Code, § 60122, you are subject to a civil penalty not to exceed \$100,000 for each violation for each day the violation persists up to a maximum of \$1,000,000 for any related series of violations. 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 correct the items identified in this letter. Failure to do so will result in Hawaiian Electric Company, Inc. being subject to additional enforcement action.

No reply to this letter is required. If you choose to reply, in your correspondence please refer to **CPF 5-2009-5009W**. 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).

Sincerely,

A handwritten signature in black ink, appearing to read "Chris Hoidal", written in a cursive style.

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

cc: PHP-60 Compliance Registry  
PHP-500 H. Nguyen (#121974)