



U.S. Department
of Transportation

**Pipeline and
Hazardous Materials Safety
Administration**

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WARNING LETTER

CERTIFIED MAIL - RETURN RECEIPT REQUESTED

February 19, 2009

Mr. Norman Verbanic, Jr.
Production Manager
Hawaiian Electric Light Company, Inc.
54 Halekauila Street
Hilo, HI 96721-1027

CPF 5-2009-5011W

Dear Mr. Verbanic:

Between August 1 and 4, 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 Light Company's (HELCO) Integrity Management Program (IMP) in Hilo, 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:

(1) A process for identifying which pipeline segments could affect a high consequence area;

At the time of the inspection, there is no documentation to indicate that the HELCO did submit their geospatial to the National Pipeline Mapping System (NPMS) by July 17, 2003. It is our understanding that the HELCO is currently working with the depository to update their pipeline system in the NPMS.

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

(d) When must operators complete baseline assessments? Operators must complete baseline assessments as follows:

(1) Time periods. Complete assessments before the following deadlines:

If the pipeline is	Then complete baseline assessments not later than the following date according to a schedule that prioritizes assessments	And assess at least 50 percent of the line pipe on an expedited basis, beginning with the highest risk pipe, not later than:
Category 1	March 31, 2008	September 30, 2004.
Category 2	February 17, 2009	August 16, 2005.
Category 3	Date the pipeline begins operation.	Not applicable.

HELCO's risk model indicates that the segment 1.B. of their Fuel Oil Pipeline is the highest risk segment; however, it did not schedule to be assessed accordingly. In addition, there is no documentation to indicate that their 2005 annual report was submitted.

3. §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.**

There is no documentation to indicate that the other pertinent data was integrated in a timely manner during an evaluation of the assessment results. The HELCO needs to implement a review of their data integration derived from their assessment results to strengthen the HELCO integrity management performance.

4. §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.**

4. A. HELCO did not adequately consider all the required risk factors from their pipeline, i.e. paraffin, coating condition, field input, and etc...

4. B. There is no documentation to indicate that the HELCO did conduct a periodically evaluation of their risk model.

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).

(3) Assessment intervals. An operator must establish five-year intervals, not to exceed 68 months, for continually assessing the line pipe's integrity. An operator must base the assessment intervals on the risk the line pipe poses to the high consequence area to determine the priority for assessing the pipeline segments. An operator must establish the assessment intervals based on the factors specified in paragraph (e) of this section, the analysis of the results from the last integrity assessment, and the information analysis required by paragraph (g) of this section.

5. A. HELCO must ensure that a continual evaluation of their pipeline integrity is being pursued. This means that all information (for instance the risk score was not adjusted after the 2004 assessment) regarding a pipeline's integrity is being continually evaluated to determine impacts on reassessment schedules, assessment methods, and other aspects of HELCO's Integrity Management Program. In addition, the high potential pipe-to-soil readings on their pipeline were identified from the corrosion report; however, the weighting factor from the risk model was not adjusted for their corrosion control program.

5. B. There is no documentation to indicate that the periodic evaluations were adequately followed and/or the results were adequately documented.

5. C. The HELCO procedures did specify that it will reassess their pipeline at least every five (5) year intervals; however, the HELCO did not consider all the relevant information, i.e. paraffin, coating conditions, and etc...to develop the reassessment interval.

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:

(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.

6. A. There is no documentation to indicate that the timely evaluation of P&MM was adequately performed. In addition, the HELCO did not adequately document additional candidates for P&MM.

6. B. There is no documentation to indicate that all the required risk factors were adequately considered in the P&MM evaluation process.

6. C. There is no documentation to indicate that their EFRD and leak detection were evaluated.

7. **§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.

7. A. There is no documentation to indicate that an IM program effectiveness evaluation was adequately performed and/or the results were adequately documented annually. In addition, the management team was not adequately involved in the key aspects of the implementation on the program evaluation.

7. B. The HELCO did not have an adequate set of the performance metric data to address a segment specific issues or problems.

7. C. HELCO's root cause analysis was not adequately integrated into their IM program. The analysis currently used by the HELCO is not referenced in its IMP to ensure a process for an effective root cause analysis and lessons learned.

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 Light 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 5-2009-5011W**. 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 over a circular stamp.

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

cc: PHP-60 Compliance Registry
PHP-500 H. Nguyen (#121975)