



September 20, 2011

803 Highway 212 S
P.O. Box 909
Laurel, MT 59044-0909

406-628-5200
chsinc.com

Mr. Chris Hoidal
Director, Western Region
Office of Pipeline Safety
Research and Special Programs Administration
12300 W. Dakota Avenue, Suite 110
Lakewood, Colorado 80228

RE: CPF No. 5-2011-5018M

Dear Mr. Hoidal,

This letter is in response to the Notice of Amendment issued by PHMSA on July 26, 2011 associated with the Integrity Management program procedures that cover Cenex Pipeline, LLC. (CPL) and Front Range Pipeline, LLC. CHS has the following comments regarding the Warning Letter.

Item A: CHS updated the Verification and Remediation Dig Procedure (Verification and Remediation Dig Procedure).

Item B: CHS revised the continual process of evaluation and assessment procedure (Sections 7.1 to 7.6).

Item C: CHS updated the procedure to include the address and fax number for reporting (Sections 12.4 and 12.5).

Item D: CHS updated the procedure to include the address and fax number for reporting (Section 12.6).

Item E: CHS updated the procedure to include reference to the SRC procedure in the Operation and Maintenance manual and the timeframe for reporting, and the address and fax number for reporting (Section 6.1).

Item F: CHS revised the Risk Analysis algorithm to integrate threats related to defects identified (See attached Risk Algorithm Matrix).

If you need any further information from CHS, please let me know.

Sincerely,

John Traeger
Manager, Pipelines and Terminals
CHS, Inc.
(406)628-5202

C: Mike Stahly
Michelle L. Slyder
Dan Knepper

Verification and Remediation Digs

1.0 Scope

The procedure describes the process of validating ILI inspection data and the schedule for remediation digs.

2.0 Records

CHS shall retain a copy of the in-line inspection report and all documents associated with validation for the life of the facilities.

3.0 Definitions

ANOMALY – Any possible deviation from sound pipe material or welds generated by nondestructive examination, such as ILI, and which may or may not be a defect.

DEFECT – An anomaly which has been confirmed to exist, for which measurements have been recorded and which has the potential to reduce the pressure-carrying capacity integrity of the line pipe or welds.

DEFORMATION – A localized change in the internal diameter of the pipe such as a dent or ovality.

SEGMENT – A contiguous portion of a pipeline to be assessed using ILI.

4.0 Verification Procedures

4.1 ILI Data Verification by Verification Spool

- 1 A pipe spool with fabricated defects will be placed in the pipe segment during the ILI run.
- 2 The reported anomalies in the verification spool will be compared to the data for the verification spool defects to verify that the ILI data is within the vender's stated tolerance.
- 3 If the ILI data is within the vender's stated tolerance the data will be deemed verified.
- 4 If the ILI data is outside the vender's stated tolerance the data will be reanalyzed by the ILI vender or a rerun of the inspection will be performed.

4.2 ILI Data Verification by Verification Digs

- 1 A minimum of 3 metal loss and 3 deformation anomalies of varying size will be excavated and measured.
- 2 Reported anomaly data will be compared to field measurements to verify that the ILI data is within the vender's stated tolerance.
- 3 If the ILI data is within the vender's stated tolerance the data will be deemed verified.
- 4 If the ILI data is outside the vender's stated tolerance the data will be reanalyzed by the ILI vender or a rerun of the inspection will be performed.

4.3 ILI Data Verification by Previously Measured Defects

- 1 A minimum of 3 metal loss and 3 deformation defects with known field measured depth, location, and orientation will be compared to ILI data.
- 2 If the ILI data is within the vender's stated tolerance the data will be deemed verified.
- 3 If the ILI data is outside the vender's stated tolerance the data will be reanalyzed by the ILI vender or a rerun of the inspection will be performed.

4.4 ILI Data Verification by Combination of Verification Digs and Previously Measured Defects

- 1 A combination of Verification Digs and Previously Measured Defects may be used for verification as long as a minimum of 3 metal loss and 3 deformation anomalies are analyzed for the verification
- 2 If the ILI data is within the vender's stated tolerance the data will be deemed verified.
- 3 If the ILI data is outside the vender's stated tolerance the data will be reanalyzed by the ILI vender or a rerun of the inspection will be performed.

5.0 Tolerance Determination

Once the ILI data has been verified to be acceptable the advertised tool tolerance will be added to the reported data prior to the data being analyzed.

6.0 Remediation Digs

6.1 Anomalies in Could Affect Areas

Will be excavated and repaired in accordance with CFR 49 §195.452 (h)(4)).

6.2 Anomalies in Non-Could Affect Areas

Will be excavated and repaired in accordance with CFR 49 §195.452 (h)(4)) with priority for scheduling being given to time dependent anomalies in Could-Affect Areas

The timeline for repairs in Non-Could Affect Areas may extend past the requirements set forth in CFR 49 §195.452 (h)(4)) with approval from the Manager, Pipelines and Terminals or designee.

- Date and level of any pressure reduction. Note: Operating pressure reductions may not exceed 365 days while taking repair/remediation action without taking additional remedial action.
- Dates, locations and results of validation digs.
- Repair/remediation classification (immediate, 60-day etc.) for each anomaly.
- Discovery Date for each anomaly as appropriate.
- Repair/remediation action taken for each anomaly.
- Dates of repair/remediation action initiated.
- Date repair/remediation action completed.
- Date the field work for the assessment was completed.

6.8. Significant Changes to the Repair Schedule

A significant change to a Repair/Remediation Schedule will be managed through the CHS Management of Change Process. Changes that extend the schedule beyond the applicable repair period must clearly demonstrate that risks to HCAs will not be increased by such change.

Significant changes include identification of an Immediate Repair Condition not previously identified or identified as a less severe condition, reclassification of an Immediate, 60-day or 180-day to a less severe condition based on results from a validation dig, etc.

Article 7 - Continual Evaluation and Assessment (Reference §195.452(j))

7.1. Annual Evaluation and Assessment Review

On an annual basis the DOT Compliance Coordinator will coordinate a periodic review of the Pipeline Integrity Program which includes: integrity evaluation of each pipeline segment capable of affecting an HCA (reconfirms or supports revision of re-assessment intervals), review and revision if appropriate of the Risk Analysis Process, update of the risk analysis for each pipeline segment capable of affecting an HCA, an evaluation of program performance parameters, HCA Assessment, an IMP update, and any other activities required to assess the Pipeline Integrity Program.

7.2. Annual Integrity Evaluation for Determining Reassessment Intervals

The Annual Integrity Evaluation establishes the reassessment interval for each pipeline.

The Manager Pipelines and Terminals and DOT Compliance Coordinator will coordinate annual integrity evaluations of CHS' pipelines.

CHS may carry out an unscheduled integrity evaluation if unusual or unexpected conditions arise that warrant such a review. Such conditions include a release or

spill from one of CHSs pipelines, occurrence of an Abnormal Operating Condition as described in §195.402(d), an encroachment incident, unexplained changes in cathodic protection levels, landslides or washouts in a pipeline ROW or any other events that give rise to questions concerning a particular pipeline's integrity condition. The DOT Compliance Coordinator will use the Annual Integrity Evaluation form found in Appendix F to document each evaluation. The DOT Compliance Coordinator will consult with appropriate operations, maintenance and/or engineering personnel to determine the need for an unscheduled integrity evaluation. Results from these consultations will be recorded in the Comments section of the evaluation form.

CHS will continually collect, analyze and integrate all routine inspection/patrol reports, information on development of new HCAs, leak/spill incident reports, prior integrity assessment results, results of integrity assessment completed within the year, pipeline repair/remediation reports, discussions with field personnel, modification work reports and other pertinent information. CHS will utilize this information in the annual Integrity Evaluation, Risk Analysis and IMP update. Re-assessment intervals are confirmed or revised based on the results of these evaluations. Forms for gathering this information are located in Appendix A and Appendix E.

7.3. Risk Analysis Update

Prior to the annual Risk Analysis update, the SMEs will review the in-effect Risk Factors, modify, add or delete Risk Factors to reflect current pipeline conditions and revise the threat and consequence weighting factors to reflect the most currently available information in the sections assigned.

Each year, the SMEs will update each assigned section of the pipeline Risk Analysis data using the process contained in Article 10. The DOT Compliance Coordinator will schedule a review of the data with the SMEs to consider, when appropriate, any situations or circumstances not included in the risk model when analyzing and finalizing the risk numbers and rankings. This updated analysis will be reviewed and approved by the SME group and at a minimum the ten highest risk ranked segments will be distributed per Article 1 to the SME group for consideration of P&M Measures. All changes resulting from the Risk Analysis Update will be saved in the annual review folder and a printout of top ten highest risk segments will be included in the P&M review.

SME's will collect, analyze, and integrate the following data (minimum) for use in the Risk Analysis Update

- Patrol reports;
- Rectifier inspection reports;
- Valve inspection reports;
- Dig reports;
- Relief valve test reports;

- Pipe to soil reading reports;
- “One Call” reports;
- Above ground pipe inspection reports;
- Information on development of new HCAs;
- Leak/spill/near miss incident reports;
- Prior integrity assessment results reports;
- Results of integrity assessments completed within the last year;
- Repair/remediation reports;
- Information and insights gained from field personnel;
- Industry Statistics and information;
- Abnormal operating condition reports;
- Pipeline maintenance work reports; and
- Other relevant information;

Personnel evaluating the risk analysis process and the information analysis are SMEs identified by the Manager Pipelines and Terminals and shall have adequate experience and knowledge to perform the work required. CHS provides appropriate Integrity Management training to ensure Integrity Management procedures and processes are thoroughly understood and are followed. SME minimum requirements are as follows:

- Degreed Engineer with a minimum of 5 years experience in engineering, pipeline operations, and/or maintenance work.
- Working knowledge of Part 195 and detailed knowledge of §195.450 & §195.452 and §195 Appendix C.
- Detailed knowledge of CHS’ Pipeline Integrity Management Plan.
- Knowledge of Risk Management methods.
- Thorough understanding of the Risk Analysis System used by CHS.

7.4. Program Performance Parameters Review

CHS will perform an annual review of the Program Performance Parameters for continued suitability based on the following factors: current operations, current year performance history, trends in personnel and materials performance and expected changes in operations or maintenance in the coming year. This evaluation will be included in the Annual Pipeline Integrity Management Review. The results will be included in the annual update to the IMP.

7.5. IMP Update

The DOT Compliance Coordinator will update the IMP annually based on new information, implementation of new preventative and mitigative measures, the

newly updated Risk Analysis, work completed in the previous year, relevant changes to API Standard 1160, §195, other industry and regulatory standards, updates to the Program Performance Parameters, and all other relevant information.

The updated IMP will be reviewed and approved per CHS' Quality Assurance Procedures that are located in Article 12.

7.6. Annual HCA Assessment

Each year the Manager Pipelines and Terminals, Manager EH&S and DOT Compliance Manager will determine if an update to the Annual HCA Assessment is required. If required an update will be completed as described in Article 11.

7.7. Root Cause Analysis

CHSs root cause analysis is located in its Operating and Maintenance Manual and is called Incident Analysis.

CHS will use root cause analysis to evaluate issues associated with risks to its pipelines. This analysis will consider negative situations including unplanned releases, inability to sustain personnel qualifications, abnormal operation,⁸ component failures, management system problems and events which limit CHSs ability to implement its IMP successfully.

CHS will also use a root cause analysis to evaluate issues associated with risks to its pipeline segments that have one or more positive impacts on its pipelines. In this case, events such as results from implementation of industry accepted best practices, exceptional performance achieved on one or more performance measures and positive trends that develop in areas such as reduced number of encroachment incidents, declining corrosion rates and positive audit results will be evaluated.

The DOT Compliance Coordinator will communicate results and lessons learned from each root cause analysis event via the communication plan Found in Article 12.3.

The DOT Compliance Coordinator will prepare a tracking mechanism in order to follow up implementation of recommended actions that result from the application of the root cause analysis process. The DOT Compliance Coordinator may require assistance from other CHS personnel or outside resources in preparing and implementing this tracking mechanism. This tracking mechanism will include the following components.

1. Description of results to be achieved from implementation of the recommended actions.
2. Description of performance steps necessary for implementation.

⁸ Including unintended valve closures, unexpected pressure fluctuations, unexpected flow rates, communications loss and occurrence of events which cause a hazard to HCAs.

| DOCUMENT | ORIGINATOR | DOCUMENT RECIPIENT | ACTION REQUIRED | DUE DATE |
|---|----------------------------|---|--------------------|--|
| Integrity Assessment Results with Repair/Remediation Action Taken | DOT Compliance Coordinator | All IMP Plan Users (as appropriate) | Annual IMP update | Results within 180 days of completing assessment, repair/remediation per Repair Plan |
| Meeting Report with Local Emergency Agencies | Manager EH&S | All IMP Plan Users (as appropriate) | As appropriate | Annually (as a minimum) |
| Root Cause Analysis Results and Lesson Learned | Safety Coordinator | All personnel involved in integrity management related activities | Distribute results | As appropriate |

12.4. Variance Request from 5-Year Assessment Interval for Engineering Reasons

If CHS determines that a variance from the required five-year assessment is warranted for engineering reasons, CHS will submit such request at least 270 days prior to the end of the five-year interval. The request will contain justification for a longer interval and propose an alternative interval.

The request must be filed via one of the following methods:

- PHMSA Online Reporting System: <http://primis.phmsa.dot.gov/imdb/>
- Fax: (202) 366-7128
- Mail
 - Information Resources Manager
Office of Pipeline Safety-PHMSA
1200 New Jersey Avenue, S.E.
Suite E 22004
Washington, DC 20590

12.5. Variance Request from 5-Year Assessment Interval because of Unavailable Technology

If CHS determines that a variance from the required five-year assessment is warranted because of unavailable technology, CHS will submit such request at least 180 days prior to the end of the five-year interval. The request will contain justification for a longer interval and propose an alternative interval.

The request must be filed via one of the following methods:

- PHMSA Online Reporting System: <http://primis.phmsa.dot.gov/imdb/>
- Fax: (202) 366-7128
- Mail
 - Information Resources Manager
Office of Pipeline Safety-PHMSA
1200 New Jersey Avenue, S.E.
Suite E 22004
Washington, DC 20590

12.6. Variance Notification from Repair/Remediation Time Limits

If CHS determines that it cannot complete repair/remediation of an anomaly within the time limits specified in its Repair/Remediation Criteria, CHS will submit such notice with a complete explanation of the situation and proposed plan for repair/remediation completion.

The request must be filed via one of the following methods:

- PHMSA Online Reporting System: <http://primis.phmsa.dot.gov/imdb/>
- Fax: (202) 366-7128
- Mail
 - Information Resources Manager
Office of Pipeline Safety-PHMSA
1200 New Jersey Avenue, S.E.
Suite E 22004
Washington, DC 20590

12.7. Integrity Management Training

The DOT Compliance Coordinator provides training on the Integrity Management Program to all personnel. The level of training is appropriate to their involvement with the Program. Annual updates are provided to all employees. This information is typically provided during safety meetings but may also be provided through written announcements or during other types of meetings.

12.8. Records Retention Requirements

The DOT Compliance Coordinator is responsible for all record keeping. All records will be maintained in CHSs Laurel office.

Records will be maintained in accordance with requirements of §195.452 (l) & §195 - Appendix C VI including the following records.

1. Original IMP.
2. Updates and changes to the IMP.

5.3. Risk Factors

Risk Factors for each pipeline are included in Article 10 (Risk Analysis Factors and Process) and evaluated in the CHS Hazardous Liquids Pipeline Risk Assessment.

Repair and Remediation Criteria (Reference §195.452(h))

The Manager, Pipelines and Terminals is responsible for oversight of all repairs and for all remediation activities. CHS will take prompt action to address all anomalous conditions that are discovered through integrity assessment or information analysis. Action categories are described herein.

6.1. Immediate Repair Conditions

Upon discovery of an Immediate Repair Condition located either within or outside of a could affect segment, the Manager, Pipelines and Terminals will ensure that the pipeline segment is either shut down or the operating pressure reduced until the immediate repair condition is repaired or remediated.

A safety related condition (SRC) report must be filed per the procedures identified in the applicable Operation and Maintenance manual, if the repair cannot be made within five days of determination that the condition exists or 10 days of discovery of an immediate repair condition.

The SRC Report must be filed via one of the following methods:

- PHMSA Online Reporting System
- Mail
 - Information Resources Manager
Office of Pipeline Safety-PHMSA
1200 New Jersey Avenue, S.E.
Suite E 22004
Washington, DC 20590

Immediate repair conditions will be repaired as soon as possible and the appropriate pressure reduction will be in place until such time as the repairs are made.

For corrosion anomalies, the reduction in operating pressure shall be determined by the formula in Section 451.7 of ASME/ANSI B31.4.

For all other types of anomalies, the minimum pressure reduction will not be less than twenty percent of the highest operating pressure occurring at the anomaly's location during the preceding sixty days.

Operating pressure reductions may not exceed 365 days while taking repair/remedial action without taking additional remedial action.

Algorithm Additions to CHS Risk Model

| Risk Category Description and available Ranking Descriptions | Risk Value |
|--|------------|
| Defect Contributed to Third Party Intervention | |
| | 0 |
| No Required Repairs | 1 |
| 1-3 180 Day Repairs and No Immediate or 60 day Repairs | 2 |
| One 60 day and/or 3-5 180 Day Repairs Present | 3 |
| Multiple 60 day and/or >5 180 day Repairs Present | 4 |
| Immediate Repair(s) Present | 5 |
| | |
| Defect Contributed to Corrosion | |
| | 0 |
| No Required Repairs | 1 |
| 1-3 180 Day Repairs and No Immediate or 60 day Repairs | 2 |
| One 60 day and/or 3-5 180 Day Repairs Present | 3 |
| Multiple 60 day and/or >5 180 day Repairs Present | 4 |
| Immediate Repair(s) Present | 5 |
| | |
| Defect Contributed to Manufacturing or Construction | |
| | 0 |
| No Required Repairs | 1 |
| 1-3 180 Day Repairs and No Immediate or 60 day Repairs | 2 |
| One 60 day and/or 3-5 180 Day Repairs Present | 3 |
| Multiple 60 day and/or >5 180 day Repairs Present | 4 |
| Immediate Repair(s) Present | 5 |
| | |
| Defect Contributed to Natural Forces | |
| | 0 |
| No Required Repairs | 1 |
| 1-3 180 Day Repairs and No Immediate or 60 day Repairs | 2 |
| One 60 day and/or 3-5 180 Day Repairs Present | 3 |
| Multiple 60 day and/or >5 180 day Repairs Present | 4 |
| Immediate Repair(s) Present | 5 |
| | |
| Defect Contributed to Operator Error | |
| | 0 |
| No Required Repairs | 1 |
| 1-3 180 Day Repairs and No Immediate or 60 day Repairs | 2 |
| One 60 day and/or 3-5 180 Day Repairs Present | 3 |
| Multiple 60 day and/or >5 180 day Repairs Present | 4 |
| Immediate Repair(s) Present | 5 |