



PO Box 209
Evansville, IN 47702

March 29, 2007

Linda Daugherty
Director, Southern Region
Pipeline and Hazardous Materials Safety Administration
233 Peachtree Street
Suite 600
Atlanta, GA 30303

RE: **PF 2-2007-1001M**

Dear Ms. Daugherty:

Vectren Energy Delivery has appreciated the opportunity to present progress reports and discuss with PHMSA ways in which it can improve upon its existing Integrity Management Program. Considerable effort has been taken reviewing the rule, protocols, FAQ's, regulatory guidance, industrial guidance and existing Operations and Maintenance standards in revising the procedures and plans incorporated in the Integrity Management Plan binder included with this response.

Consistent with our initial response to the January 3, 2007 Notice of Amendment, we have now completed our revision of our Integrity Management Plan and Procedures. As such, we have enclosed the following items for your review:

COPIES	DATE	DESCRIPTION
1	3/31/07	Vectren Natural Gas Transmission Pipeline Integrity Management Plan and Procedures (Binder)
1	3/31/07	CD Containing: IM Plan, IM Procedures, Referenced Safety Policies, Referenced Environmental Protocols, Referenced O&M Procedures

Additionally, we are providing you with a bullet point by bullet point response to each of the issues raised in the January 3, 2007 Notice of Amendment. Our response details how and where our IM Plan and Procedures have been revised to address each of the issues raised by the Notice of Amendment.

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Item 1: HCA Analysis

See procedure IMP-01-002 “Identification of High Consequence Areas”

- a. Responsible individuals are identified throughout the procedure in each of the applicable sections
- b. To address the purpose of the procedure, the purpose statement reads, “To provide a standardized approach for determination of High Consequence Areas (HCA).” Additionally, Section 2.0 outlines additional background information about the procedure and its implementation.
- c. Entire procedure addresses this
- d. Entire procedure addresses this
- e. Section 3.1.1 requires that the process be conducted yearly.
- f. Section 5.0 of the procedure addresses documentation of the HCAs
- g. Section 5.0 of the procedure addresses the retention / storage requirements for HCAs
- h. Section 5.0 of the procedure specifies that when the HCA analysis is complete, it is posted to “Top” in GIS. By posting to “Top” every GIS user has access to the HCAs.
- i. IMP-11-002 “Management of Change – Routine O&M Activities” addresses ongoing changes to the pipeline system and its surroundings obtained during day-to-day operations activities

IMP-06-004 “Continuing Data Management and Evaluation” Section 2.0 addresses ongoing data maintenance including that from routine surveys and patrols. (Note: Since Vectren is utilizing Method 2 for its HCA calculations, references to Class Location have not been included in the revised procedures). Procedure 11-002 “Management of Change - Routine O&M Activities” addresses additional pipeline changes including changes in land use around the pipeline.

Section 3.1.1 of IMP-01-002 “Identification of High Consequence Areas” requires that the HCA identification process be conducted yearly.

IMP-02-005 “Risk Assessment and Prioritization” addresses performing the risk analysis on all HCA segments in sections 1.1, 6.1.1, 6.1.5, 7.1.1.2, and 8.1.2.2. IMP-03-002 “Baseline Assessment Plan” also states in Section 1.1 that, “A Baseline Assessment Plan is created based on HCA risk priority and scheduled assessment method.

Item 2: Baseline Assessment Plan (BAP)

See procedure IMP-03-002 “Baseline Assessment Plan”

The revised procedure IMP-13-001 “Providing Notification to PHMSA, IURC, and PUCO” addresses notifying the applicable state(s) in section 1.2.7.

Item 2: Baseline Assessment Plan (BAP) (continued)

Cross references to environmental and safety procedures have been made throughout the applicable procedures. Some of the Safety and Environmental policies referenced include, but are not limited to:

- Excavation and Trenching Policy
- Reflective Vest Safety Policy
- Waste Handling and Disposal Environmental Protocol

Additionally, refer to procedure IMP-15-001 “Environmental and Safety”

Cross references to O&M procedures have been made throughout the applicable procedures. Some of the O&M procedures referenced include, but are not limited to:

- Section 8 (Continuing Surveillance)
- Section 16 (Repairs [Distribution and Transmission])
- Sections 11.3 and 11.9 (Pressure Test Requirements and Records)

Item 3: Threat Identification

See procedure IMP-02-005 “Risk Assessment and Prioritization”

- a. Responsibilities for the risk analysis process are identified throughout procedure for each applicable section.
- b. The procedure has a purpose statement which reads, “To establish a standardized method for prioritizing Integrity Assessments based on Risk Assessment program results and Subject Matter Expertise.” Additionally, objectives are listed in Section 1.2.
- c. Entire procedure addresses what is required to perform the risk analysis.
- d. The entire procedure addresses how to perform the risk analysis,
- e. Section 8.1.2 requires, “Re-run the Risk Model at least annually, not to exceed fifteen (15) months.” Additionally, procedure IMP-06-004 “Continual Data Management and Evaluation” Section 2.1.2.2 addresses running the risk model more frequently if required. IMP-11-002 “Management of Change – Routine O&M Activities” Section 3 addresses running the risk model more frequently if needed due to changes.
- f. Section 7 of the procedure addresses documentation of the risk analysis.
- g. Section 7.1.2 of the procedure addresses where the documentation will be stored.
- h. IMP-13-002 “Internal Communications” addresses communications of changes in the IM Program to key personnel.
- i. Continual feedback is addressed in procedure IMP-11-002 “Management of Change – Routine O&M Activities.” Additionally, procedure IMP-06-004 “Continual Data Management and Evaluation” Section 2.1.2.2 addresses continual improvement to the data.

Cross Referencing with O&M:

Procedure IMP-11-002 “Management of Change – Routine O&M Activities” addresses capturing changes that could affect the risk model that would be identified during routine O&M activities.

Item 3: Threat Identification (continued)

Managing Risk Analysis and Data Management:

Section 2 of procedure IMP-06-004 “Continual Data Management and Evaluation” addresses the incorporation of new information that will be utilized by the risk model.

Integrating Collected Data and Utilizing for Risk Analysis:

See section 8 of IMP-02-005 “Risk Assessment and Prioritization.”

Timelines for Data Integration:

See procedure IMP-06-004 “Continual Data Management and Evaluation”

Validating the Risk Assessment:

Section 3.2 of IMP-02-005 “Risk Assessment and Prioritization” addresses validation of the risk results.

Interactive Threats:

A processes for identifying and incorporating interactive threats is located in Section 5 of IMP-02-005 “Risk Assessment and Prioritization”

Checklist of Data Sources:

Data gathering is addressed by procedure IMP-02-001 “Data Gathering and Research.” Form 90300 includes a checklist of sources for the data teams.

Continuous Improvement of Risk Model:

Continuous improvement to the risk model occurs through:

- Annual re-run (IMP-02-005 “Risk Assessment and Prioritization”)
- Integration of newly obtained / identified data (IMP-06-004 “Continual Data Management and Evaluation”)
- Incorporation of information obtained through routine O&M activities (IMP-11-002 “Management of Change – Routine O&M Activities”)

Item 4: Direct Assessment

See ECDA Plan, ICDA Plan, SCCDA Plan, and other Section 4 Procedures

- a. Within each procedure and each step, the responsible party is identified throughout the procedures.
- b. The purpose of each procedure is identified at the beginning of the document. Some procedures provide an additional background section as well.

Item 4: Direct Assessment (continued)

- c. Feasibility and minimum data requirements are addressed for each of the DA processes (ECDA, ICDA, and SCCDA). The pre-assessment procedures address minimum data requirements and determination of feasibility. Examples include:
 - IMP-04-016 “ECDA Feasibility Assessment”
 - IMP-04-052 “ICDA Feasibility Assessment”
 - SCCDA Plan, Section 3.2
- d. Steps for DA are given in the applicable procedures. ECDA Plan, ICDA Plan, and SCCDA plan provide the outline for each process and refer to additional procedures as needed.
- e. Intervals for indirect surveys are given in the applicable procedures, i.e. (IMP-04-020 “Close Interval Survey” or IMP 04-021 “Direct Current Voltage Gradient”). The ECDA Plan also provides a table with an overview of the survey spacing for the various indirect inspection methods.
- f. Documentation requirements are provided for each procedure.
- g. Data storage / integration requirements are provided in each, individual procedure as well as IMP-06-004 “Continual Data Management and Evaluation”
- h. ECDA and ICDA Plans have a step for Feedback with such personnel as IM team members, operations personnel, and corrosion control personnel. Various procedures and forms have requirements to send copies to the local field operations office. An example of this can be found in procedure IMP-04-008 “Data Collection for Integrity Management Direct Examinations” Section 10.2.3
- i. ECDA and ICDA Plans have step for Feedback with such personnel as IM team members, operations personnel, and corrosion control personnel to incorporate feedback regarding all steps of the process.
- j. IMP-03-001 “Assessment Method Selection” addresses the threats that each assessment method can be utilized for. In addition, to address third party damage when utilizing DA, Vectren has procedure IMP-04-005 “Aligning Indirect Inspection Data with Encroachment Data.”

A. ECDA

ECDA Feasibility:

ECDA feasibility and minimum data requirements for ECDA are addressed in IMP-04-016 “ECDA Feasibility Assessment.” Vectren also has a procedure for ECDA data collection (IMP-04-002 “Pre-Assessment Data Collection for ECDA”)

ECDA Regions:

Procedure IMP-04-017 “ECDA Region Determination” describes the process for establishing ECDA corrosion regions

“Shall and Should” Statements:

Vectren’s procedure IMP-12-005 “Non-Mandatory Statements” addresses the “shall and should” statements from both NACE RP0502 and ASME B31.8S

Item 4: Direct Assessment (continued)**A. ECDA (continued)**

Third Party Damage:

Encroachments, foreign line crossings, coating damage, and third party damage are addressed with respect to the ECDA process in the procedure IMP-04-005 "Aligning Indirect Inspection Data with Encroachment Data."

More Restrictive Criteria ECDA:

Requirements for more restrictive criteria to be applied during the ECDA process are given in the ECDA Plan as follows:

- Pre-Assessment – Section 3.6
- Indirect Inspection – Section 3.7
- Direct Examination – Section 5.10

Data Collection Requirements:

Data collection requirements during direct examinations are found in procedure IMP-04-008 "Data Collection for Integrity Management Direct Examinations"

Root Cause Analysis:

The root cause process can be found in procedure IMP-04-012 "Root Cause Analysis." Root cause analysis pertaining to ECDA is prompted in the ECDA Plan, sections 5.7 and 6.1.3.

Alternative Assessment Methods:

The ECDA Plan requires consideration or use of alternative assessment methods per the following:

- Section 5.5.5 requires that alternate methods of assessing the integrity of an ECDA regions be considered if corrosion defects found are not unique and isolated in nature.
- Section 5.7.2 also requires use of alternative assessment methods if a root cause is identified for which ECDA is not well suited.
- Lastly, re-evaluation of the assessment method is required if subsequent applications of ECDA do not show improvement as given in Section 6.4.2.1.

B. ICDA

Dry Gas:

Requirements for performing ICDA on a dry gas system are provided in procedure IMP-04-052 "ICDA Feasibility Assessment"

Item 4: Direct Assessment (continued)**B. ICDA (continued)**

Who is Responsible:

Within each procedure and each step, the responsible party is identified throughout the procedures. Additionally, detailed steps have been provided in the ICDA plan and corresponding procedures.

ICDA Model:

Procedure IMP-04-054 "Critical Angle and Flow Modeling" provides the NACE Flow Modeling Fitted Equation Approach for pipelines with pressures below 500 psig and the GRI Flow Modeling Iterative Approach for pipelines with pressures between 500 and 1100 psig.

More Restrictive Criteria:

More restrictive criteria for first time use of ICDA is provided in the following sections of the ICDA Plan:

- Pre-Assessment – Section 3.4
- Indirect Inspection – Section 4.3
- Direct Examination – Section 5.3
- Post Assessment – Section 6.7

Examination:

Procedure IMP-04-055 "ICDA Direct Examination" specifies methods for examination of the pipeline at critical angles.

C. SCCDA

A completed SCCDA Plan and associated procedures have been developed. The revised Plan and procedures clearly address both traditional / high-pH SCC and near-neutral SCC.

Data Collection to Identify Whether SCC is Present:

Procedure IMP-02-004 "Threat Identification" requires that if a pipeline is susceptible to SCC, that pertinent data is collected. The ECDA Plan, Section 5.4 also requires that SCC data be collected when appropriate.

Item 5: Remediation

Cross Reference to O&M:

Procedure IMP-05-001 "Addressing Conditions Found During an Integrity Assessment", Section 5.1.5 references implementing repairs in accordance with O&M Procedures, Section 16.

Item 5: Remediation (continued)

Excavation Requirements:

IMP-04-025 “Indirect Inspection Data Alignment and Prioritization,” Section 5.0 addresses requirements for excavating all immediate indications and at least one scheduled indication per ECDA region

Pressure Reduction:

IMP-05-001 “Addressing Conditions Found During an Integrity Assessment,” Section 5.1.1.2 requires a pressure reduction within 5 days of discovering an immediate condition.

Item 6: Preventive & Mitigative (P&M) Measures

See the Section 8 procedures for details on review and implementation of P&M measures.

These procedures also address documentation requirements. Procedure IMP-08-004 “Identify Preventive and Mitigative Measures” establishes the selection methodology and criteria for identifying and implementing Preventive and Mitigative Measures (P&M).

IMP-08-007 “Automatic Shut-Off and Remote Control Valves” details the process for identifying where additional ASVs or RCVs may be required.

Item 7: Record Keeping

Each applicable procedure addresses the documentation requirements specific to the tasks within the procedure. Additionally, procedure IMP-10-001 “Record Keeping” addresses IM record keeping requirements.

Item 8: Management of Change

To better address all sources of changes, Vectren has developed 2 management of change procedures:

- IMP-11-001 “IMP Management of Change”
- IMP-11-002 “Management of Change – Routine O&M Activities”

Document the Basis for Accepting or Rejecting Changes:

Section 4.0 of IMP-11-002 “Management of Change – Routine O&M Activities” addresses determining the implications of changes.

Document the Organizational review of Proposed Changes:

Section 5.0 of IMP-11-001 “IMP Management of Change” addresses the evaluation of changes and the organizational review of proposed changes affecting pipeline integrity.



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Item 9: Quality Assurance

The Quality Assurance procedures have been rewritten. See procedure IMP-12-002 "Integrity Management Program Updates and Compliance Audits."

Again, Vectren appreciates the opportunity to present our progress and submit our revised procedures. If you have any questions, or wish to discuss these procedures, please do not hesitate to contact me.

Sincerely,

A handwritten signature in black ink that reads "Chuck Kanoy". The signature is written in a cursive, flowing style.

Chuck Kanoy
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