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August 3, 2012

Mr. Wayne T. Lemoi
Director, Office of Pipeline Safety
PHMSA Southern Region
233 Peachtree Street, Ste. 600
Atlanta, GA 30303

Re: Response to Notice of Amendment CPF 2-2012-6012M

Dear Mr. Lemoi:

This letter is in response to your Notice of Amendment that we received on July 12, 2012 in regards to the Duke Energy Kentucky Hazardous Liquid Pipeline Integrity Management Program audit in Kenton County, Kentucky.

Duke Energy does not dispute your findings that our IMP Section 6.3 Implementation of Annual Assessment Plan did not identify ECDA as an acceptable method to assess its pipeline. Duke Energy used its IMP Procedure GD70.06-014, External Corrosion Direct Assessment Plan, to assess its pipeline.

Duke Energy has now included ECDA in its IMP Plan under Section 6.3.1.3 Direct Assessment and is enclosed herein for your reference.

Best Regards,

Dennis J Westenberg

Dennis Westenberg
Duke Energy
Manager, Gas Compliance
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Enclosure

6.3 Implementation of Annual Assessment Plan

Implementing the annual plan requires the assessments as well as the repairs or mitigation determined by the assessment results. Each assessment is completed with strict adherence to all applicable environmental and safety laws to insure the protection of employees, customers, the public, and the environment.

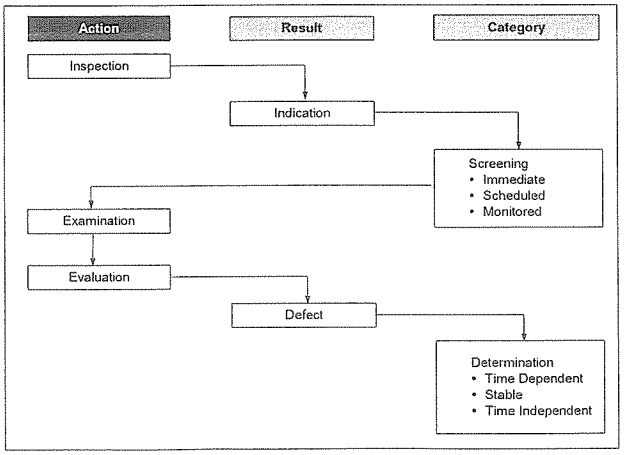
6.3.1 Perform Planned Assessments

Integrity assessment is the process of conducting inspections, examinations or surveys to determine the condition of a pipeline segment. The company views continual reassessment as a standard practice. Procedure GD75.01-007: *Continuing Evaluation and Assessment* establishes the guidelines for this process. There are essentially three integrity assessment methods that can be used. The Company uses the following inspection protocols:

- In-line inspection
- Pressure testing
- External Corrosion Direct Assessment (ECDA)
- Other technology

Other technology assessment methods may be used if they are OPS recognized and approved.

The following figure provides a graphical flow of terminology for integrity assessment.



6.3.1.1 Pipeline In-Line Inspections

In-line inspection (ILI) is used to locate and characterize a pipeline segment. The effectiveness of ILI methods depends on the condition of the pipeline segment and how well the inspection tool matches the requirements set by the inspection objectives. Results of ILI provide indications of defects with some characterization of the defect. Each threat to be addressed requires a different ILI to obtain the best possible information regarding pipeline condition. We use five different ILI tools to assess internal or external corrosion threats.

- Magnetic flux leakage, standard resolution tool is best suited for detection of metal loss
- Magnetic flux leakage, high-resolution tool is better suited for determining sizing of metal loss areas
- Ultrasonic, compression wave tool is better suited to determine defects other than metal loss
- Ultrasonic, shear-wave tool provides increased sizing accuracy for nonmetal loss defects
- Transverse flux tool provides the most sensitivity to detect axially aligned metal loss defects

Two different tools used to detect stress corrosion cracking threats are:

- Ultrasonic, shear-wave tool is used for detecting crack size. Its effectiveness diminishes as the complexity of the crack colony increases
- Transverse flux tool is able to detect some axially aligned cracks, but it is not considered accurate for sizing

Dents and areas of metal loss are the only aspects of third-party threats where ILI can be effectively used for detection and sizing. The tools used most often to detect damage to the pipeline involving deformation of the pipe cross-section are geometry or deformation tools.

6.3.1.2 Pressure Testing

Pressure testing is an industry-accepted method for validating pipeline integrity and appropriate for addressing time-dependent threats and manufacturing defects. The method may be a strength test and a leak test. Pressure testing at the company follows the guidelines established by ASME B31.8. All pressure testing is conducted in accordance with company procedures, which incorporate all of the guidelines in ASME B31.8.

6.3.1.3 Direct Assessment

Direct assessment is a method that integrates knowledge of the physical characteristics and operating history of the pipeline with the results of inspections, examinations, and evaluations to determine pipeline integrity.

Direct assessment is appropriate for determining pipeline integrity with regard to internal or external corrosion and stress corrosion cracking. Direct assessment is typically not used for assessing pipeline integrity in response to other threats as listed in Section 6.1.3. The specific details regarding how the assessments are conducted are provided in GD70.06-014 *External Corrosion Direct Assessment (ECDA)*, or GD70.06-14B *Stress Corrosion Cracking Direct Assessment (SCCDA)*.

6.3.1.4 Other Integrity Assessment Methodologies

The Company stays abreast of technological developments in the industry and incorporates other assessment methodologies into its array of assessment tools as they are developed and tested for effectiveness. The Office of Pipeline Safety must be notified 90 days before conducting an assessment by "other technology" method as required by §195.452(c)(1)(i)(C).

6.3.2 Implement Repairs an Mitigation Based on Assessment

Responses to indications detected via integrity assessment methodologies may include repairs, preventative measures, and establishment of inspection intervals. Responses are scheduled to achieve risk reduction of a given pipeline segment failure. GD75.06-017 *Pipeline Evaluation and Remediation*,

GD75.06-018 *Schedule of Repair Requirements (Time Lines)*, and GD75.01-005 *Pipeline Repair Criteria* for detailed procedural information.

6.3.2.1 Response to Pipeline In-line Inspection (ILI)

The appropriate response to indications discovered during inspections will depend on the severity of the indication and taking into consideration the results of prior risk assessment efforts for the pipeline segment. We classify the necessary response into three groups:

- Immediate – shows the defect is at failure point
- Scheduled – shows the defect is significant but not at failure point
- Other – shows the defect will not fail before next scheduled inspection

All indications requiring an immediate response will result in immediate pressure reduction or pipeline segment shutdown until the repairs are completed. All others will be prioritized and an action schedule developed within 180 days of the inspection.

6.3.2.2 Response to Pressure Testing

Any defect that fails a pressure test is promptly addressed by repair or replacement of the failed pipe section. Retesting segments where a failure did not occur will be consistent with the guidelines established in 6.3.2 above. Retesting is not required in pipeline segments where the pressure test was used to determine the integrity of a manufacturing defect unless the maximum operating pressure is exceeded. GD75.01-008: *Information Analysis.*

6.3.2.3 Repair Methods

The Company has an extensive list of acceptable repair methods that follow established industry-accepted guidelines. These procedures are found in GD75.06-019: *Pipeline Defect Evaluation and Repair*.

6.3.2.4 Prevention and Mitigation Strategy/Methods

Prevention and mitigation are important proactive elements of the Company's Pipeline Integrity Management Program. Detailed information is provided in GD75.01-004: *Preventative and Mitigative Measures* and the Gas Operations Plan.

Prevention and mitigation strategies are based on system data, identified threats, and risk assessments performed for each pipeline segment within the Company's pipeline system.

Industry accepted prevention and mitigation options include:

- Preventing third-party damage
- Controlling corrosion:
  - Internal
  - External
- Detecting unintended releases
- Minimizing the consequences of unintended releases
- Operating pressure reduction

Aside from the general prevention strategies described above, the Company will consider additional prevention/mitigation measures to prevent failure and to mitigate the consequences of a pipeline failure in a high consequence area. These additional measures may include 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. Refer to GD75.01-004 *Preventive and Mitigative Measures* for detailed process information.