



June 8, 2018

Mr. James A. Urisko
Director, Office of Pipeline Safety Southern Region
Pipeline & Hazardous Materials Safety Administration
233 Peachtree Street
Suite 600
Atlanta, Georgia 30303

Re: Response to CPF 2-2018-6002 – Notice of Probable Violations (NOPV) and Proposed Compliance Order

Dear Mr. Urisko:

Duke Energy submits this Response to the NOPV and Proposed Compliance Order dated May 15, 2018. Duke Energy requests that upon completion of your review and payment of the proposed civil penalties the final order reflect the closure of this NOPV.

Your letter addressed twelve items, in which Items 2, 3, 5, 7, 8, 10, 11 and 12 were listed as Warning Items. Duke Energy has thoroughly reviewed these items and will take appropriate action so as to avoid any subsequent enforcement action. This letter outlines Duke Energy's response to Items, 1, 4, 6 and 9. With respect to proposed civil penalties for Item #6 in the amount of \$39,200 and Item #9 in the amount of \$16,500 listed below, Duke Energy does not contest the allegations and will provide payment in a separate correspondence. We address those two items first.

In regards to the Proposed Civil Penalty assessed for Items 6 and 9, Duke Energy submits the following response:

Item #6

§195.452 Pipeline integrity management in high consequence areas.

.. (b) What program and practices must operators use to manage pipeline integrity?

Each operator of a pipeline covered by this section must:

.. (5) Implement and follow the program.

Duke Energy failed to comply with the regulation because it did not follow its Integrity Management (IM) program as follows:

- A. *Duke Energy performed an integrity assessment on its Line LP03 in 2016 using a Liquid Petroleum Internal Corrosion Direct Assessment (LP-ICDA) assessment method. At the time of the assessment, which was completed on July 1, 2016, Section 8 of Duke Energy's Hazardous Liquid Pipeline IMP, dated September 30, 2013, and Duke Energy Procedure GD70.06-006, titled "Assessment Methods Selection Process Flowchart," did not specify LP-ICDA as an approved integrity assessment method. Duke Energy drafted a LP-ICDA procedure in February of 2016, prior to the 2016 assessment, but the procedure was not finalized until April 6, 2017. Furthermore, as of PHMSA's 2017 inspection, Duke Energy had not incorporated the above-referenced LP-ICDA procedure into its IM program.*
- B. *Item 4A of Duke Energy Procedure GD75.01-008, titled "Hazardous Liquid IMP Liquid Analysis," requires that "Within 150 days of completion of the Integrity Assessment for each pipeline, a review of the assessment's results will be completed and the Information Analysis will be performed." Following a June 6, 2016 External Corrosion Direct Assessment (ECDA) of Line LP03, the required Information Analysis*

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was submitted to Duke Energy on July 20, 2017, 259 days after the 150-day deadline required by the above-referenced procedure.

- C. Section 3 of Duke Energy Procedure GD75.01-007 (Effective Date November 25, 2013), titled "Continuing Evaluation and Assessment," requires that Duke Energy perform formal evaluations of the integrity of its pipelines, including the development and documentation of a formal process for such evaluations. Furthermore, the same procedure requires that the evaluations "will consider the results of the baseline and subsequent assessments, the information analysis performed after each assessment, decisions regarding remediation and decisions regarding preventive and mitigative measures." Duke Energy conducted an ECDA assessment of its Line LP03 on June 6, 2016. At the time of PHMSA's inspection, Duke Energy personnel were unable to produce a record of the required formal evaluation. Duke Energy stated that its Continual Assessment Plan (CAP) complied with the requirement. However, the CAP does not provide the information required by the above-referenced procedure, such as the results of the assessment, the information analysis, decisions regarding remediation, and decisions regarding Preventive and Mitigative Measures (P&MMs).
- D. Duke Energy failed to compile Integrity Management Program (IMP) performance measures for Calendar Years 2013, 2014, and 2015 on the Performance Measures spreadsheet, as required to be gathered annually by Duke Energy's Hazardous Liquid Pipeline IMP "Section 9 – Performance Plan, and Appendix B – Performance Measures."

Duke Energy's Response:

- A. The Duke Energy Procedure GD70.06-006, titled "Assessment Methods Selection Process Flowchart" has been revised and now states LP-ICDA is not an acceptable assessment for hazardous liquids pipelines unless permitted as an "other technology." The Duke Energy Integrity Management Plan will be revised as well to include LP-ICDA as an assessment by "other technology" and will specify that a permit must be submitted to the Office of Pipeline Safety for approval 90 days in advance of using "other technology."
- B. Duke Energy acknowledges that the reassessment was not completed within the prescribed time period and will take appropriate action so that there is no reoccurrence. For example, Hazardous Liquid Integrity Management tasks will be incorporated into a RASCI (Responsible, Accountable, Support, Control, and Informed) matrix. Tasks will be reviewed on a periodic basis to ensure the Duke Energy TIMP team completes each task per the Integrity Management Plans and Procedures within the appropriate time interval to comply with integrity management requirements.
- C. Duke Energy is currently modifying the Continuing Evaluation and Assessment spreadsheet for 2018 to comply with Duke Energy's Hazardous Liquids Integrity Management Plan and Procedure GD75.01-007, titled "Continuing Evaluation and Assessment." Duke Energy plans to be complete with the modification by July, 2018.
- D. Duke Energy acknowledges that the reassessment was not completed within the prescribed time period and will take appropriate action so that there is no reoccurrence. For example, Hazardous Liquid Integrity Management tasks will be incorporated into a RASCI. Tasks will be reviewed on a periodic basis to ensure the Duke Energy TIMP team completes each task per the Integrity Management Plans and Procedures within the appropriate time interval to comply with integrity management requirements.

Item #9

§195.452 Pipeline integrity management in high consequence areas.

... (l) What records must an operator keep to demonstrate compliance?

(1) An operator must maintain, for the useful life of the pipeline, records that demonstrate compliance with the requirements of this subpart. At a minimum, an operator must maintain the following records for review during an inspection:

... (ii) Documents to support the decisions and analyses, including any modifications, justifications, deviations and determinations made, variances, and actions taken, to implement and evaluate each element of the integrity management program listed in paragraph (f) of this section.

Duke Energy failed to comply with the regulation because it did not maintain records or documents to support its decisions and analyses, including any modifications, justifications, deviations and determinations made, variances, and actions taken, to implement and evaluate each element of the integrity management program listed in §195.452(f).

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Duke Energy could not produce records or documentation as to why the segments listed below were not assessed within Duke Energy's prescribed time period, contrary to the requirements of §195.452(l)(1)(ii). Each segment was baseline-assessed by pressure test on October 20, 2005 and, per the procedure, each was required to be re-assessed by October 20, 2010. It is noted that the below-listed segments were components of the pipelines that were still in service as of the dates of the PHMSA inspection.

- Segment in Casing 23: 400-foot Interstate I-71/75 crossing; pipe was not re-assessed, and was replaced on November 15, 2011.
- Segment in Casing 55: Amsterdam Road; re-assessed on December 5, 2012.
- Segment in Casing 39: Crescent Springs Pike crossing; pipe was not re-assessed, and was abandoned in place on August 3, 2012.
- Segment in Casing 13221: I-275 crossing; pipe was not re-assessed, and was replaced on September 10, 2012.

Duke Energy's Response:

Duke Energy acknowledges that the reassessment was not completed within the prescribed time period and will take appropriate action to avoid any reoccurrence. For example, Hazardous Liquid Integrity Management tasks will be incorporated into a RASCI. Tasks will be reviewed on a periodic basis to ensure the Duke Energy TIMP team completes each task per the Integrity Management Plans and Procedures within the appropriate time interval to comply with integrity management requirements. Duke Energy will take appropriate action to maintain appropriate records and documentation.

The pipeline is currently out of service for maintenance and in preparation for a pressure test during the summer of 2018. The pressure test will serve as a mainline pipeline assessment as well as an assessment for the remaining casings. Since the line is presently out of service, Duke Energy used a low definition caliper tool on April 11, 2018 to help find geometries within the pipeline that would prohibit more enhanced in-line inspection tools from successfully passing through the line.

In regards to the Proposed Compliance Order for Items 1 and 4, Duke Energy submits the following response:

Item #1

§195.1 Which pipelines are covered by this Part?

- (a) **Covered. Except for the pipelines listed in paragraph (b) of this Section, this Part applies to pipeline facilities and the transportation of hazardous liquids or carbon dioxide associated with those facilities in or affecting interstate or foreign commerce, including pipeline facilities on the Outer Continental Shelf (OCS). Covered pipelines include, but are not limited to:**
- (1) Any pipeline that transports a highly volatile liquid;
 - (2) Any pipeline segment that crosses a waterway currently used for commercial navigation;
 - (3) Except for a gathering line not covered by paragraph (a)(4) of this Section, any pipeline located in a rural or non-rural area of any diameter regardless of operating pressure;
 - (4) Any of the following onshore gathering lines used for transportation of petroleum;
 - (i) A pipeline located in a non-rural area;
 - (ii) A regulated rural gathering line as provided in §195.11; or
 - (iii) A pipeline located in an inlet of the Gulf of Mexico as provided in §195.413.

Duke Energy failed to comply with the regulation because it did not incorporate its Constance Cavern Liquid Propane Gas (LPG) Storage Facility (Constance Cavern) into all relevant portions of its pipeline safety program. Section 195.2 defines pipeline or pipeline system as "all parts of a pipeline facility through which a hazardous liquid or carbon dioxide moves in transportation, including, but not limited to, line pipe, valves, and other appurtenances connected to line pipe, pumping units, fabricated assemblies associated with pumping units, metering and delivery stations and fabricated assemblies therein, and breakout tanks." Furthermore, §195.2 defines pipeline facility as "new and existing pipe, rights-of-way and any equipment, facility, or building used in the transportation of hazardous liquids or carbon dioxide."

Duke Energy's Constance Cavern meets the above-referenced definition of "pipeline facility" because the submerged pumps and appurtenances within the cavern transfer LPG out of the storage cavern to the bi-directional

pipeline for transportation downstream (relative to the cavern) to the Erlanger plant. Furthermore, the cavern receives LPG from the same bi-directional pipeline via trucking injection at the Erlanger plant. Consequently, Constance Cavern is covered under §195.1.

Duke Energy's Response:

Duke Energy will incorporate its Constance Cavern Liquid Propane Storage Facility into its pipeline safety program. Since the use of the pipeline is for propane-air peak shaving during the winter heating season, the pipeline has been taken out of service in order to perform maintenance and pressure testing operations. This pipeline will not resume operations until the requirements of this item have been met. Within 30 days of receipt of the Final Order, Duke Energy will provide a list of pipeline safety program activities to be undertaken associated with the pipeline, to include a completion schedule.

Item #4

§195.446 Control room management.

- (a) **General.** This section applies to each operator of a pipeline facility with a controller working in a control room who monitors and controls all or part of a pipeline facility through a SCADA system. Each operator must have and follow written control room management procedures that implement the requirements of this section. The procedures required by this section must be integrated as appropriate, with the operator's written procedures required by §195.402. An operator must develop the procedures no later than August 1, 2011, and must implement the procedures according to the following schedule. The procedures required by paragraphs (b), (c)(5), (d)(2) and (d)(3), (f) and (g) of this section must be implemented no later than October 1, 2011. The procedures required by paragraphs (c)(1) through (4), (d)(1), (d)(4) and (h) must be implemented no later than August 1, 2012. The training procedures required by paragraph (h) must be implemented no later than August 1, 2012, except that any training required by another paragraph of this section must be implemented no later than the deadline for that paragraph.

Duke Energy failed to comply with the regulation because it did not have and follow written control room management (CRM) procedures that implement the requirements of §195.446. Specifically, Duke Energy did not identify the Erlanger air-propane plant office (Erlanger office) as a control room, as defined in §195.2.

Control room is defined in §195.2 as "an operations center staffed by personnel charged with the responsibility for remotely monitoring and controlling a pipeline facility." Furthermore, controller is defined in §195.2 as "a qualified individual who remotely monitors and controls the safety-related operations of a pipeline facility via a SCADA system from a control room, and who has operational authority and accountability for the remote operational functions of the pipeline facility." During the inspection, PHMSA inspectors interviewed personnel at the Erlanger office regarding certain plant operators' roles in operating and controlling Duke Energy's Line LP03, as well as its Constance Cavern facility.

Based on the information and facts listed below, the Erlanger office is a Control Room and certain Erlanger plant operators are Controllers, per §195.2.

- *August 3, 2017 interview with the gas Control Manager (Cincinnati): Control Center calls the Erlanger air-propane plant (Erlanger Plant), located at the north end of Line LP03, and instructs Erlanger personnel when to operate the pipeline. (See below regarding Erlanger operation of the pipeline.) Cincinnati Gas Control monitors the LP03 line pressures, receives safety-related alarms, and has the ability to shut down the pumps at Constance Cavern.*
- *August 4, 2017 and September 21, 2017 interviews at Erlanger plant with the Systems Operations Manager and an Erlanger Plant Operator:*
 - *Erlanger could be called on the start and operate the LP03 line to supply its natural gas system during certain peak demand days during winter months,*
 - *Starting the pipeline on peak days to supply the propane-air plant: Erlanger operator(s) remotely start the submerged pump(s) and manipulate certain valves located at Constance Cavern (3.41 pipeline miles from Erlanger), via the use of Erlanger SCADA screen data and pump on/off and valve positioning commands. Erlanger operators monitor the pipeline operation and pressure on a 24/7 basis when the line is operating in withdrawal mode.*

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- Refilling Constance Cavern: propane trucks typically pump the propane into the pipeline at Erlanger, and the product moves down the pipeline into the cavern via gravity flow. May take a month to refill the cavern, depending on storage volume and number of Mon-Fri 12-hour daytime (only) shifts when a re-filling the cavern.
- November 10, 2017 email response conveys that Duke Energy considers Cincinnati Gas Control to be its only control room. Procedure GD50.1263-2, titled "Erlanger Gas Plant – Starting, Operating And Shutting Down Mixing System," also conveys pipeline start up and shutdown as part of the Erlanger plant operation.

As of PHMSA's inspection, Duke Energy did not consider the Erlanger office as a Control Room, and the referenced operators as Controllers, subject to the Control Room Management requirements of §195.2, to determine whether the Erlanger office was a Control Room. The Erlanger office is located at the south end of the 3.41 mile long Line LP03, and remotely controls the pipeline; therefore, it meets the definition of a Control Room, as defined in §195.2. Because the Erlanger office is a Control Room, Duke Energy was required to have and follow written CRM procedures that implement the requirements of §195.446.

Duke Energy's Response:

Duke Energy acknowledges that its operations of running the pipeline LP03 are Control Room Management (CRM) tasks and should be incorporated in a CRM Plan. Future operations of propane assets through SCADA will be performed by a Controller in accordance with the CRM plan. This change will be fully implemented prior to resuming operation of the LP03 pipeline. Duke Energy is evaluating the CRM function and will determine if these operations will be performed at the Erlanger Gas Plant or at the Gas Control Primary Control Center.

If you have any questions regarding this information, please contact Ms. Susan Gilb at sue.gilb@duke-energy.com or (513) 287-2752.

Sincerely,



Victor Gaglio
Senior Vice President & Chief Operations Officer Natural Gas
Duke Energy

cc: M. Henderson
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