



P.E.M.C Pipeline Conversion to Service Plan

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Objective;

Dominion Energy Utah (DEU) will follow guidance outlined in the Conversion to Service section of Part 192.14 of the U.S. Department of Transportation Code to ensure the P.E.M.C pipeline is in code compliance. This Conversion to Service Plan outlines the framework that DEU will follow to bring the line back into service.

Pre-Design Work

1. DEU will perform a full records search of all pertinent records relating to the P.E.M.C pipeline including:
 - a. Review all environmental permits and right-of-way documents;
 - b. Review all Material Test Records and document minimum yield strength for material to create the foundation of a Maximum Allowable Operating Pressure for the line;
 - c. Review hydrotest records, documenting the length of time held at pressure and the minimum pressure documented; and
 - d. Review x-ray reports for girth welds during pipeline construction and document whether the line was appropriately Non-Destructively Tested.
2. DEU will conduct a centerline survey of the portion of the pipeline between the Northwest Pipeline Interconnect and the crossing of Highway 6.
 - a. Conduct a Class Location Study to investigate for High-Consequence Area's (HCA's) and to quantify the number, distance and locations for:
 - i. Designated camping (Moab under canvas);
 - ii. Existing undeveloped camping;
 - iii. Potential locations in the future for undeveloped camping; and
 - iv. Possible future recreation opportunities that may create HCA's or impact class locations.
3. DEU will conduct a depth-of-cover survey on the line, ensuring that the line was installed using the appropriate minimum depths of cover.
4. DEU will contract with an engineering consultant to conduct an induced AC study. This study will model the effects of having an electrical transmission line parallel to the northern portion of the pipeline. The consultant will be retained to study the effectiveness of existing mitigation measures and determine if additional mitigation measures need to be undertaken. DEU will utilize this plan to develop its induced AC corrosion program and install any recommended mitigation prior to operating the pipeline.
5. DEU will formulate an External Corrosion Direct Assessment (ECDA) plan on the line to survey the line for external corrosion and ensure that all defects related to coating loss are identified and addressed.

Investigative Field Work

1. When there are opportunities, DEU will excavate and investigate buried fitting locations to compare material yield stress markings on fittings with material records that have been provided. The intent of this effort is to determine if there are differences between what the original installer intended to utilize and what was installed.
2. DEU will verify the pipeline yield stress properties using in-situ scratch testing on the pipe. This work will be performed concurrently with our investigative digs identified above for fitting investigation.
3. DEU will survey the line using a Closed Interval Survey (CIS) or a Direct Current Voltage Gradient (DCVG) survey. All defects found will be located using a Global Positioning Survey (GPS) and documented. For substantial anomalies, DEU will excavate the pipeline and the defects will be analyzed. If required by analysis, the defects will be removed or repaired prior to putting the line into service.
4. DEU will select an In-Line Inspection (ILI) tool vendor and conduct an ILI survey. This vendor will clean the line using nitrogen, run a gauge tool to check for dents, and then perform an ILI survey along the entire length of the line. Within 90 days of running the ILI, DEU should have a preliminary report documenting areas of concern that need further investigation. Based on that report, DEU will investigate, and if necessary, repair or replace any areas of concern prior to placing the line into service.

Final Measures Prior to Commissioning

1. All locations that do not have the appropriate depth of cover will be analyzed to determine if mitigation is necessary to ensure integrity of the line. DEU will mitigate any cover issues determined to need addressing prior to putting the line into service.
2. DEU will load the line into our GIS mapping system and all valves will be documented in DEU's record system, and valve book drawings will be created. Procedures for emergency operation will reference these drawings and will be available for operations personnel prior to operation of the line.
3. DEU will investigate all locations with above ground facilities and ensure they are fenced for security purposes. All valves will be tagged and locked.

Commissioning

1. The line will be purged with natural gas from the Northwest Interconnect to the mid-pipe block valve near the airport. This section is the most critical as it will likely have the Class 3 areas and HCA's.
2. After the pipe is purged, the line will be brought up to 200 PSIG and the line will be "shut-in" and flow will be shut off as the line stabilizes pressure.

3. During the “shut-in” period, a leak detection survey will be conducted on the first segment of line between the Northwest Interconnect and the mid-pipe block valve.
4. If the leak survey is successful, the line will then be brought up to its final operating pressure.
5. After final pressurization, the entire line will be leak tested.
6. After a successful final leak test, the line will be ready for service.

References

PHMSA (2014). Guidance for Pipeline Flow Reversals, Product Changes, and Conversion to Service.