SEMCOENERGY
GAS COMPANY

Implementation of the

Operator Qualification Integrity Process

(OQIP)

at SEMCO ENERGY Gas Company

February 2023

Executive Summary

This is an informational document that outlines SEMCO ENERGY Gas Company's (SEMCO) participation in the Operator Qualification Integrity Process (OQIP). The OQIP ("Process") is intended to be a framework to elevate the integrity of OQ programs across the industry. It provides an industry consensus that leads to consistency in three elements: people, process, and process validation. The ultimate goal is to reduce pipeline incidents due to human error resulting from an individual's lack of knowledge, skills, or ability during the performance of covered tasks.

This document will provide the background, approach, and benefits that SEMCO has experienced due to the implementation of this process.

Background

Since the establishment of the United States Department of Transportation (DOT) Pipeline and Hazardous Materials Safety Administration (PHMSA) Qualification of Pipeline Personnel Rule (OQ Rule) in 1999, gas operators have worked to ensure they were meeting the requirements of the rule. While the rule established the minimum requirements in the qualification and training of pipeline personnel, the original rule was not prescriptive, leaving operators to develop individual programs to ensure compliance with the rule. With these individual programs, contractors who perform covered tasks must also meet the requirement of each operator. These individual requirements create a lack of consistency between operators and affect the integrity of the OQ process.

In 2016, the Distribution Contractors Association (DCA) established a task force to investigate whether the industry could improve the integrity of the OQ process for contractors. The intention was to provide more consistency with OQ programs while increasing standardization and compliance, ensuring continuous improvement.

The work of the task force ultimately led to a structured, chartered coalition consisting of DCA contractors, gas operators, OQ service providers, regional and national gas associations, industry consulting groups, and subject matter experts who represent various sectors of the gas industry from all areas of the nation. This group evolved and built a strong industry coalition on OQ integrity, establishing the foundation of the process that met the expectations of both operators and regulators.

OQIP relies on many aspects found within the ASME B31Q Standard on Pipeline Personnel Qualification and is a basis to support many of requirements outlined in each of the people, process, and process validation elements of OQIP. The ASME B31Q was first published in 2006 and is regularly updated to improve OQ programs and ensure compliance with the Rule.

In 2019, SEMCO was asked to take part in OQIP task force and participated in many of the task force discussions and workshops. The end goal was to develop a pilot model for contractor implementation. Leading up to this, SEMCO had made significant changes to their OQ program, including changes to support improved competence, training, documentation, and record keeping. Most of those changes however focused solely on internal employees. This initiative was supported by the Michigan Public Service Commission (MPSC), the state gas safety regulator, who was already part of the task force.

Methodology

Like many operators, SEMCO utilizes a service provider model to manage operator qualifications for maintenance and construction activities. This model is followed for both internal employees and external contractors who support this work. SEMCO follows a 3-year qualification process for most covered tasks. The majority of its new and replacement construction is managed by one to three blanket contractors across the state. A smaller part of the more complex construction is completed through a bid process and those projects are awarded through a request for proposal process. While much of the maintenance processes are completed by internal employees, SEMCO does use contractors for some maintenance related tasks. For all of these scenarios, a review to evaluate the contractor's pipeline safety management elements including training and OQ is required before projects are awarded.

In 2003, SEMCO began taking part in the Michigan OQ consortium. This group of Michigan based operators worked together to develop the minimum requirements of an OQ program for a contractor who works for an operator within the consortium. The requirements were developed using industry best practices and the evaluation of findings and recommendations based on regulatory audits by the state public service commission. While an effective step, the process still allowed for inconsistencies in OQ requirements from operator to operator and required contractors to develop separate OQ process for each operator. Training and evaluation requirements were often solely based on industry standard material. Covered tasks were usually numbered differently and task requirements could have slight variations. This model creates confusion for contractors who work for multiple operators within the state.

In 2015, SEMCO continued to enhance their OQ program by further defining training, evaluator, and testing requirements, primarily driven by the American Gas Association (AGA) peer review process. Based on stakeholder engagement, SEMCO decided to move to a new OQ service provider in order to provide flexibility in creating "SEMCO" based training and evaluation content. During that time, SEMCO recognized the task specific ASME model aligned with the company specific training content model; therefore the decision to switch to the ASME B31Q tasks for internal employees was also included in the project.

By 2018, SEMCO began the transition to ASME B31Q for its internal employees. During that time, SEMCO managed a list of ASME tasks and 192 based tasks to support the 3-year cycle shift and to align with the contractors who were still following the 192 model. By 2020, SEMCO had completed the full transition to ASME B31Q tasks and had updated its OQ program and standards to align with the ASME code.

As a core aspect of the process, the minimum requirements of OQIP could allow a contractor to use industry standard based training and evaluation content from multiple industry recognized OQ service providers using the ASME B31Q as a recommended task standard. Using this method and following the integrity built within the process, operators can be confident in the contractor's program and focus efforts to improve training, evaluation and the management of change to the aspects of their procedures that are specific to their operations.

Implementation

After the adoption of ASME B31Q, SEMCO conducted a gap analysis using the audit tool developed by the task force. SEMCO and their pilot contractor, who is also a member of the taskforce, recognized the partnership and the value the process provided. The contractor conducted a gap analysis using the same method and audit tool. Results were compared and improvements were developed, implemented, or added to the pilot timeline.

Since a large focus is placed on process validation, SEMCO and its contractor found the need to conduct additional auditing. The program requires audits at every element and these audits are crucial to ensure program integrity.

Training and evaluation materials are essential. The majority of the time required for implementation was held in the development of SEMCO-specific procedural requirements. Since SEMCO followed the service provider model, it was important to develop the company specific training material.

A system was also developed for documentation and record keeping. Since a portion of the qualification record was based on the evaluation and testing from industry standards, a team collaboration of SEMCO, its contractor and OQ service provider developed a method to capture the industry standard and company specific evaluation and testing records.

SEMCO also created a process to conduct a baseline assessment as part of the process implementation. Working with the contractor, a small cross section of the workforce that included a subset of various experience, personnel classification, age, and technical ability was identified. These individuals were first given an evaluation of company specific material. Computer based training was then supplied and employees were given a similar test to show the retention of information.

Following the 2023 testing phase, SEMCO and its contractor will evaluate gaps and make improvements to training, testing, and evaluation based on the analysis of the results from the testing in 2022 and 2023. SEMCO is currently developing a schedule to add other contractors to this model.

SEMCO's implementation roadmap is shown in the table below.

2019	2020	2021	2022	2023
Initial planning with identified contractor. Conduct gap analysis using the program audit tool. Identify SEMCO specific standard training and evaluation modules	Development of training course creation for company specific material.	Completed gap analysis using audit tool. (SEMCO and contractor) Implemented corrective actions based on analysis. Develop plan to display courses in learning management systems. Updated OQ plan.	Completed initial testing and evaluation process with baseline assessment. Conducted field audits (included stakeholder engagement sessions with contractor personnel).	Update training and evaluation based on initial assessments Re-evaluate employees first pilot groups. Conduct performance evaluation and field audits Roll-out process to more pilot contract crews

			Conducted baseline assessment with internal employees over same material.	Prepare to add other contractors to process.

Lessons and Value Learned

Upon the involvement of the OQIP taskforce, SEMCO quickly realized the value of the program. SEMCO not only experienced the benefit to improve contractor management and ensuring compliance with their OQ programs, but the process also greatly supported continuous improvement for internal employees' training, evaluation, and qualification.

Utilizing this process and partnering with contractors who follow this model will allow SEMCO to focus more time evaluating the elements that support OQIP integrity (people, process, and program validation), and less time ensuring a contractor OQ program is compliant.

Operators and contractors who follow an OQIP model will likely see the value in improving emergency preparedness and response by having a method to share company specific training requirements to support effective and efficient mutual aid responses.

Operators and contractors who engage in the process should ensure that the process to capture qualification records is established and well understood between partners.

Like any integrity program, OQIP supports a pipeline safety management system approach that follows the plan, do, check, act model. This is a systematic approach to ensure operational excellence.

About SEMCO ENERGY Gas Company

SEMCO ENERGY Gas Company, headquartered in Port Huron, Michigan, is a regulated public utility that delivers natural gas to approximately 320,000 residential, commercial, and industrial customers in service territories in the southern half of the state's Lower Peninsula (including in and around the cities of Albion, Battle Creek, Holland, Niles, Port Huron, and Three Rivers) and in the central, eastern, and western parts of the state's Upper Peninsula.

SEMCO ENERGY Gas Company is a division of SEMCO Energy, Inc., an indirect wholly owned subsidiary of AltaGas Ltd.

For more information, contact: Phil Lenn, Director of Operations Support Services phil.lenn@semcoenergy.com

Heather Stein, Curriculum Specialist heather.stein@semcoenergy.com