



---

# Operator Qualification Integrity Program

## Executive Summary

Transportation of gas and hazardous liquids through pipelines is considered to be a very safe form of transportation; however, investigations of pipeline accidents in the late 20<sup>th</sup> century revealed that, when pipeline failures did occur, human error at times was a contributing factor. Given this information, the United States Department of Transportation (DOT) Pipeline and Hazardous Materials Administration (PHMSA) published the Qualification of Pipeline Personnel Rule, commonly referred to as the OQ Rule, which provided direction on the testing and qualification of pipeline employees.

The OQ Rule proved to be effective in advancing the evaluation of pipeline employees. However, the original requirements were not very prescriptive, and so pipeline operators, contractors, and OQ providers had to develop individual programs that met the intent of the OQ Rule. With the Rule being open to broad interpretations, operators' programs were tailored to their unique operating conditions and environments, including variances in key areas such as covered task lists and the qualification of individuals. Pipeline operators were held responsible for compliance with the OQ Rule, so they often insisted that contractors who work on their pipeline, meet their strict requirements, without exception.

## About this Document

Since the Final Rule on pipeline Operator Qualification (OQ) went into effect on October 26, 1999, there have been several initiatives intended to facilitate compliance and standardization with varying OQ requirements overseen by natural gas utilities and the contractors who build gas distribution infrastructure on their behalf. In 2016, the Distribution Contractors Association (DCA) established a task force to investigate whether and how the industry can improve the OQ process and provide more consistency in compliance with operator OQ programs. Recognizing pending adjustments by PHMSA to several provisions of the OQ rule, the task force believes a fresh look at and potential new approaches to OQ will benefit all stakeholders.

The work of the task force has evolved from a discussion of several OQ-related issues by an ad hoc group of interested stakeholders to a structured and chartered coalition consisting of DCA contractors, OQ service providers, industry consulting groups, subject matter experts and regional gas associations who represent gas utilities from all areas of the nation. Staff from DCA and the American Gas Association also are supporting this effort. This group evolved and built a strong, Industry Coalition on OQ Integrity, establishing high expectations and placing validating measures in place to assure member organizations are performing with “the bar raised higher” than we have often seen in our industry.

The ASME B31Q standard on Pipeline Personnel Qualification was first published in 2006 and is regularly updated to improve OQ programs and facilitate compliance with the rule. The OQIP model relies on many provisions found within the ASME B31Q.

The OQ Integrity Coalition realized that while a fully consistent and standardized OQ process was not a realistic goal, given the uniqueness and specific requirements of each Operator, there is a strong belief that utilizing consistent approaches to qualify individuals regarding a large majority of common core competencies was realistic, with the understanding there will be certain OQ requirements held by pipeline operators that are appropriate to their unique systems. Therefore, the “end goal” established by the Coalition was to develop and

promote a more consistent and standardized OQ process. This will understandably derive several positive results associated with credibility and validity to the individual pipeline worker's OQ credentials they obtain.

The OQ Integrity Program is not intended to be the basis of future regulation. While increasing consistency and standardization will result in "raising the bar" by going above and beyond current regulation, this will be achieved by voluntary actions overseen by Program participants. Operators should not be penalized in the future for exceeding regulatory compliance in the spirit of improving the effectiveness of their OQ programs.

As the Program develops, participants may find value in conducting gap analyses of their OQ programs. A gap analysis will enable a participant to compare the effectiveness of its current OQ program to its potential effectiveness under the elements provided in the OQ Integrity Program.

### Key Elements

From the beginning, the Coalition worked to identify and build on a wide range of elements that will serve as the backbone for an OQ Integrity Program ("Program"). These elements are driven by expectations of both operators and regulators, and consistency of the OQ process must be pursued through enhanced training, knowledge testing, and performance evaluations with an auditable validation of Program effectiveness.

The following is a description of these elements.

#### People:

*Trainers* in the Program require certain prerequisites (i.e. initial training), and must be able to meet a range of responsibilities and renew their training credentials. This applies to both in-house and third-party trainers. (Sec. 5.1)

*Proctors* require orientation and must have a full understanding of their responsibilities needed to ensure the integrity of OQ testing. (Sec. 5.2)

*Evaluators* require a standard set of credentials (knowledge, skills and abilities); a full understanding of their responsibilities; required training; and renewable credentials. (Sec. 5.3)

*Auditors* for Program effectiveness require training, education and experience. Auditors must carry credentials, understand their responsibilities, and be able to review records and report audit findings. (Secs. 5.4 – 5.5)

#### Process:

The Program requires *identification of all covered tasks*. The Program relies on the effective processes already established by the ASME B31Q standard for the development of core competencies for covered tasks. Consistent with current OQ regulations, the Program requires an ability to recognize and react to *abnormal operating conditions*. (Sec. 6.1)

A list of *core common competencies* must be developed and maintained. (Sec. 6.2)

The Program includes *training requirements* regarding the content needed to provide the knowledge and skills necessary to perform covered tasks. (Sec. 6.3)

*Knowledge Testing* is a critical part of any OQ program...minimum number of questions on an exam, maximum time limits, types of questions (multiple choice, true/false, etc.), use of test question banks, and minimum passing scores are all areas that should be considered. Time intervals between test attempts when individuals fail a test, use of proctors and other methods to provide test security, and use of reference manuals are also important considerations that are addressed in this document. (Sec. 6.4)

While classroom training and testing may be useful methods to initially prepare individuals to perform covered tasks safely, evaluating performance is imperative. *Performance evaluations* are conducted through “on-the-job” observations, simulations, and other methods, with the level of detail of the evaluation based on related core competencies and overall learning objectives. As with knowledge testing, use of testing books, reference manuals and other training aides during performance evaluations, as well as appropriate wait times between reevaluations must be carefully considered. Of course, proper records and other documentation regarding continued knowledge and performance observed during performance evaluations is a must. (Sec. 6.5)

Effective *management of change* (MOC) policies are important to pipeline operations and are considered key to maintaining a solid program. The Coalition again relies on the B31Q standard when considering MOC provisions regarding communication both at the company (employee) level and to external audiences to ensure appropriate management and communication of changes. Feedback from Program effectiveness reviews as well as participants in the Program would be considered. Approved changes to the Program would be communicated and properly documented. (Sec. 6.6)

When it is necessary to *suspend or revoke an individual’s qualifications*, the Program offers a few rules of engagement, including who should be authorized to suspend them, what processes should be followed, and the conditions of the suspensions or revocations. (Sec. 6.7)

#### Program Validation:

Audits and other methods to validate the effectiveness of the Program are considered a vital and ongoing part of maintaining effective qualifications of persons working on gas pipelines. The Coalition suggests a range of items for consideration.

*Internal audits* are imperative to determine if all areas of any OQ program are being followed and if intended goals are being achieved. Procedures, training, testing, evaluations (including field audits of individuals’ performance) and records will be conducted using a standardized audit form.

Contractor audits should focus on core competencies and how well the contractor is ensuring that personnel performing covered tasks are qualified to do so, as well as their ability to recognize and react to AOCs. Review of trainers, proctors, evaluators and others, as well as training curriculum and evaluation records would be all reviewed under the Program model.

Operator audits would focus on the operations and practices that are unique to that operator's program and how well the operator is ensuring that any contract personnel performing covered tasks is qualified, and that they are able to recognize and react to AOCs. Procedures, standards, training, evaluations and other requirements such as span-of-control, MOC, etc. would be part of an operator's internal audit. (Sec. 7.1.2)

Consistent with B31Q and pending PHMSA rulemaking action, the Program would require participants to review *program effectiveness*, recognizing this should be included in any program that will be closely examined by regulatory entities. Program effectiveness reviews would include all areas of the OQ process, including ensuring all personnel performing covered tasks have been provided all company-specific information. Additionally, detailed information regarding how individuals determined to have adversely affected the safety and integrity of an operator's pipeline are reviewed and what corrective actions are taken.

Knowledge, skills and abilities (KSAs) and related training/testing regarding covered tasks, MOC, and performance evaluations are all on the "consideration table" during Program effectiveness under the Program model. (Sec. 7.2)

Use of *independent, third-party audits* are also included in the Program. Scrutiny by audits, both internal and third-party, lend credibility to Program validation and OQ integrity. Third-party audits would be followed by summaries for the contractor and operator that identify areas that need improvement and provide recommendations to address those areas. After comparisons of audits are made, an action plan would be developed that address areas of needed improvement, including communicating any changes to all affected personnel. (Sec. 7.3)

Participants in the Program would agree to a range of recordkeeping and documentation requirements to ensure for ongoing integrity. This would include agreeing to working with approved third-party vendor(s) and a range of requirements with regard to use of contractor and operator data. (Sec. 7.4)

### Governance

The Coalition was sponsored by DCA and includes a Chair and Vice-Chair serving two-year terms. Coalition membership includes a maximum of 20 industry representatives consisting of DCA contractors and staff, service providers and gas associations, with opportunity for additional resources as needed.

Objectives include identification of specific methods to provide more consistent OQ programs and the establishment of standardized processes to support those methods. Engaging and gaining support of key stakeholders along the way was a key objective from the beginning.

The Coalition has followed DCA's anti-trust requirements, and members committed to attending two-thirds of scheduled meetings. Proxies were permitted as long as they were from the same organization and knowledgeable in OQ issues and Coalition objectives and guidelines. Decision making was based on a majority of representatives from each membership group (contractors, service providers and national and regional gas associations representing operators).

Opportunities to amend the charter were available at any time by a vote by all Coalition members. Members signed an agreement to uphold the charter's elements, guidelines and principles.

The Coalition believes the merits to this approach will be enjoyed by operators, contractors, and regulators. Possible benefits include:

- Risk mitigation
- Regulatory confidence
- Mutual-aid agreements and response time between operators and contractors
- Standardized regulatory compliance
- Addressing challenges to replace aging infrastructure coupled by an aging workforce entering retirement
- Consistency for regulatory audits
- Continuous improvements to OQ programs

**National OQ Integrity Committee Coalition Members**

**Rob Darden**, Executive Vice President, Distribution Contractors Association

**Brad Heck**, Chair, Director of Corporate Compliance, Miller Pipeline

**Jaeson Osborn**, Group Vice President, Primoris Utilities & Distribution

**Mike Hickey**, Executive Vice President, The Hallen Construction Company

**Ben Nelson**, Vice President of Western Operations, Michels Corporation

**Kevin Parker**, Vice President, Safety, Training & Environment, Mears Group, Inc.

**Christina Sames**, Vice President, Operations & Engineering, American Gas Association

**Kofi Woodley**, Manager, Operations & Engineering Services, American Gas Association

**John Erickson**, Advisor Emeritus, American Public Gas Association

**Erin Kurilla**, Vice President, Operations & Pipeline Safety, American Public Gas Association

**Richard Stump**, Member Relations Vice President, MEA Energy Association

**Paul Armstrong**, Vice President, Training and Qualification Services, Northeast Gas Association

**Geoff Isbell**, President, ENERGYworldnet, Inc.

**Stephanie Balmer**, President, Industrial Training Services

**Jim Webb**, Senior Vice President, eWebOQ

**Jason Montoya**, Bureau Chief, New Mexico Public Regulation Commission; NAPSR

**Sean Mayo**, Director, Pipeline Safety, Washington Public Service Commission; NAPSR

**David Chislea**, Manager, Operations and Wholesale Markets Division, Michigan PSC, NAPSR

**Mike Burkhart**, Principal, The Burkhart Group, Chair ASME B31Q

**Amelia Livingston**, Compliance Manager, Kinder Morgan

**Andrea Martinez**, Compliance Project Manager, New Mexico Gas Company

**Angela Serrano de Rivera**, **Director**, Engineering & Technical Services, New Mexico Gas Company

**Troy Nutter**, Manager, Operations Training, Puget Sound Energy (representing Western Energy Institute-WEI)

**Warren Miller**, Principal, Warren Miller Enterprises

**Eben Wyman**, Principal, Wyman Associates

**TABLE OF CONTENTS**

FOREWORD		i
COMMITTEE ROSTER		vii
<b>1.0</b>	PURPOSE.....	3
<b>2.0</b>	SCOPE.....	3
<b>3.0</b>	DEFINITIONS.....	3
<b>4.0</b>	REFERENCES.....	6
<b>5.0</b>	PEOPLE.....	6
	5.1 Trainer	
	5.2 Proctor	
	5.3 Evaluator	
	5.4 Program Effectiveness (PE) Auditor	
	5.5 Independent Auditor	
<b>6.0</b>	PROCESSES.....	9
	6.1 Covered Task Development and AOC's	
	6.2 Core Competency Development	
	6.3 Training Requirements	
	6.4 Knowledge Testing	
	6.5 Performance Evaluations	
	6.6 Management of Change	
	6.7 Suspension/Revocation of Qualifications due to a Failed Examination	
<b>7.0</b>	PROGRAM VALIDATION.....	14
	7.1 Incident Investigation	
	7.2 Internal Audit	
	7.3 Program Effectiveness Review	
	7.4 Independent Audits	
	7.5 Recordkeeping and Documentation	
<b>8.0</b>	GOVERNANCE	

APPENDICES

<b>A</b>	<b>Trainer Program.....</b>	<b>20</b>
<b>B</b>	<b>Evaluator Training Program.....</b>	<b>21</b>
<b>C</b>	<b>Common Covered Tasks.....</b>	<b>23</b>
<b>D</b>	<b>Addressing Deficiencies.....</b>	<b>26</b>
<b>E</b>	<b>Recordkeeping.....</b>	<b>27</b>
<b>F</b>	<b>Transcript Report – Standard Format.....</b>	<b>28</b>

## 1 PURPOSE

The purpose of this Program is to establish the minimum requirements for a national OQ Integrity Program. The Program detailed in this document identifies the specific elements needed for an owner-operator or contactor's program to be considered conformant to a standard of operation to meet increasing expectations in the industry that exceed minimum regulatory requirements and attains a consistent level of integrity and continuity. The Program does not in any way diminish the OQ Rule's primary focus to minimize the impact on safety and integrity of the pipeline due to human error that may result from an individual's lack of knowledge, skills, or abilities during the performance of certain activities. Instead, this Program strengthens the requirements needed, while creating a path to increased integrity, reliability and portability of qualifications issued to the industry's workforce.

## 2 SCOPE

This Program establishes the minimum requirements for developing and implementing an effective OQ program. If followed, the user of this Program will be recognized as maintaining an OQ Program that meets an elevated and consistent level of integrity, and which may be accepted at a national level.

This Program is built on the principle which recognizes that qualification of core competencies can be attained and transferred from one owner-operator or contractor to another, but that operator-specific competencies for covered tasks are specific to an individual pipeline owner and must be qualified separately and accordingly.

While the scope of this Program is on gas distribution systems, many operators who participate in the Program may operate gas transmission pipelines, and many gas distribution contractors may also work on transmission lines. Therefore, the Coalition believes most of the concepts included in the Program should be workable in the gas transmission pipeline industry.

## 3 DEFINITIONS

- 3.1 **Ability:** The mental and physical capacity to perform a covered task which may be clearly defined as a covered task (e.g., color vision, visual acuity, hearing, smell).
- 3.2 **Abnormal Operating Condition (AOC):** A condition that may indicate a malfunction of a component or deviation from normal operations that may indicate a condition exceeding design limits or result in a hazard(s) to persons, property, or the environment.
- 3.3 **Audit:** Systematic and independent review to determine whether an OQ program complies with the requirements of this Program.
- 3.4 **Auditor, Independent:** An individual who is authorized to inspect the processes and procedures that are developed to ensure OQ integrity.
- 3.5 **Common Core Competency:** The specific knowledge and skill an individual must possess and demonstrate to be qualified to perform a covered task.
- 3.6 **Contractor:** A company participating in the Program and hired by a pipeline Operator to perform covered tasks on behalf of the operator.
- 3.7 **Covered Task:** A task as defined in 49 CFR 192 and Subpart N.

- 3.8 **Direct and Observe:** The process by which a qualified individual oversees the work activities of a nonqualified individual(s) and is able to take immediate corrective action when necessary.
- 3.9 **Evaluation:** A process established to determine an individual's ability to perform a covered task. The term can be used to refer to the process, instrument(s), or both. The process may entail one or more evaluation methods or one or more distinct evaluation instruments.
- 3.10 **Evaluator:** An individual performing evaluations who possess the required knowledge to (1) ascertain a candidate's ability to perform the covered tasks and (2) substantiate a candidate's ability to recognize and react to abnormal operating conditions that might occur while performing those activities.
- 3.11 **Knowledge:** A body of information that can be applied directly to the performance of a task.
- 3.12 **Mutual Aid:** Pipeline operator personnel assistance (aid) provided to another pipeline operator in the performance of covered tasks.
- 3.13 **On-the-Job Training (OJT):** Instruction at or near the work setting.
- 3.14 **Operator:** an entity that owns or operates pipeline assets and is under the jurisdiction of pipeline safety regulations.
- 3.15 **Performance:** Demonstration of the knowledge, skills, and abilities (KSAs) required to complete a task.
- 3.16 **Performance Monitoring:** Conducting field audits to confirm that an individual is performing covered tasks in accordance with applicable standards or procedures.
- 3.17 **Pipeline:** All parts of physical facilities through which gas, hazardous liquids, or carbon dioxide moves in transportation, including pipe, valves, fittings, flanges (including bolts and gaskets), regulators, pressure vessels, pulsation dampeners, relief valves, and other appurtenances attached to pipe, compressor units, metering stations, regulator stations, pumping units, breakout tanks, and fabricated assemblies.
- 3.18 **Portability:** The process in which two or more entities mutually agrees to accept identified criteria to satisfy established qualification requirements.
- 3.19 **Proctor:** An individual selected to administer a written examination.
- 3.20 **Program Effectiveness (PE):** A process developed to appraise an OQ Plan or Program.
- 3.21 **Qualified:** An individual that has been evaluated and can (a) perform assigned covered tasks (b) recognize and react to abnormal operating conditions.
- 3.22 **Revocation:** A cancellation of an individual's qualification to perform an identified covered task.
- 3.23 **Skill:** The ability to perform mental and physical activities acquired or developed through training or experience.
- 3.24 **Span of Control:** The maximum number of nonqualified individuals that a qualified individual can direct and observe performing a covered task.
- 3.25 **Subject-Matter Expert (SME):** An individual who possesses knowledge and experience in the process/discipline they represent.
- 3.26 **Subsequent Qualification:** A process to evaluate, for continued qualification, an individual who is currently qualified to perform a covered task.

- 3.27 **Suspension:** Temporary prevention of a qualified individual from performing identified covered task(s).
- 3.28 **Trainer:** An individual who has been credentialed in accordance with the requirements outlined in this Program and is authorized to serve as a trainer for any OO portable training program.

#### 4 REFERENCES

##### 4.1 The following is a list of publications referenced in this Program:

- 4.1.1 U.S. Department of Transportation (DOT) 49 CFR Part 192, Subpart N - Qualification of Individuals
- 4.1.2 ASME B31Q 2016 Pipeline Personnel Qualification

#### 5 PEOPLE

##### 5.1 Trainer

###### 5.1.1 Prerequisites:

- 1) Initial Training – Individual must successfully complete a Trainer program that meets the minimum requirements as outlined in APPENDIX A.

###### 5.1.2 Responsibilities

- 1) Confirm necessary prerequisites are met by participants prior to the start of training.
- 2) Ensure all safety rules and regulations are followed in the classroom.
- 3) Clearly communicate the course objectives (see section 6.3 to ensure core competencies are covered in the training).
- 4) Supply the required training materials and equipment to participants.
- 5) Set expectations; maintain a classroom and hands-on training environment that is conducive to adult learning.
- 6) Ensure all required material is covered.

###### 5.1.3 Credential Renewal

- 1) Trainers shall renew their credentials every three years following the practices outlined in APPENDIX A.

##### 5.2 Proctor

###### 5.2.1 Prerequisites

- 1) There are no prerequisites for serving as a proctor.

###### 5.2.2 Orientation

- 1) Proctors will be required to complete an orientation program outlining their responsibilities as described in 5.2.3. Expectations and responsibilities shall be reviewed and understood, with documentation, for anyone who serves as a proctor.

###### 5.2.3 Responsibilities

- 1) Ensure identification of the participant before the test start time.
- 2) Ensure that the candidate does not bring into the test room, or use, any unapproved written materials, electronic resources, communication devices, photographic devices, or any other means to impugn the integrity of the test environment.
- 3) Seating should be comfortable for participants, conducive to a testing environment, and ensure the ability to maintain the security and integrity of the exam.
- 4) Provide time for bathroom and rest breaks, meals, etc. prior to beginning exam.
- 5) Ensure testing process is understood and followed.
- 6) Maintain the integrity of the testing material and testing environment.
- 7) Remain in the room during the test period.
- 8) Ensure there is no talking; cross-looking at others' testing, or cheating.
- 9) Ensure testing records are properly submitted.

### 5.3 Evaluator

#### 5.3.1 Prerequisites (Knowledge, Skills, and Ability) See APPENDIX B

- 1) Knowledge and Skills
  - a) Technical experience and competency in the covered tasks that they will be evaluating
  - b) Effective interpersonal skills
  - c) Act in an ethical manner throughout the evaluation process.
  - d) Adhere to and interpret applicable standards and performance evaluation/verification documents/records.
  - e) Ascertain an individual's competency to perform a covered task and recognize and react to Abnormal Operating Conditions (AOCs).
- 2) Abilities
  - a) Able to read and interpret applicable company standards and evaluation checklists.
  - b) Individual does not have to hold a current qualification to serve as an evaluator.

#### 5.3.2 Training/ Credentials

- 1) Individual must successfully complete an Evaluator Class that meets the minimum requirements as outlined in APPENDIX B.

#### 5.3.3 Responsibilities

- 1) Comply with all site safety rules and regulations that tie directly to the task(s) being performed.
- 2) Ensure any necessary prerequisites of the covered task(s) are met by the participant prior to the start of an evaluation.
- 3) Emphasize the importance of following manufacturer and operator specific policies and procedures.
- 4) Consistently apply the performance evaluation review process as outlined in section 6.5.

- 5) Ascertain a participant's competency to perform a covered task, and the participant's ability to recognize and react to Abnormal Operating Conditions (AOCs).
- 6) Produce and submit necessary records and documentation.

5.3.4 Credential Renewal

- 1) Evaluators shall renew their credentials every three years following the practices outlined in APPENDIX B.

5.4 **Program Effectiveness (PE) Auditor**

5.4.1 Prerequisites

- 1) Must be able to read, comprehend, and audit to the ascribed OO Program Effectiveness Elements to identify compliance to, or deficiency(s) of that Program. (reference Appendix \_\_\_)
- 2) Must be able to follow the processes identified in Section 7.2 of the OO Integrity Program.

5.4.2 Training/Credentials

- 1) Must understand their responsibilities as described in 5.4.3, and the OO Integrity Program requirements.

5.4.3 Responsibilities

- 1) Onsite
  - a) Comply with all site safety rules and regulations on the job site.
  - b) Consistently apply the minimum requirements for an approved Program Effectiveness (defined in Section 3.20) audit document.
  - c) Ensure onsite personnel understand what is required during the PE audit process.
  - d) Verify identity of the individuals performing covered tasks for records review.
- 2) Records Review
  - a) Conduct review of OO records, processes, individual stakeholders involved with OO, and documentation relating to the OO Integrity Program elements and expectations.
- 3) Reporting
  - a) Document and report PE findings as required in Section 7.2 and Appendix D.

5.5 **Independent Auditor**

5.5.1 Prerequisites

- 1) Must be able to read, comprehend, and audit to the ascribed OO Program Elements to identify compliance to, or deficiency(s) of that Program.
- 2) Must be able to follow the processes identified in Section 7.3 of the OO Integrity Program.

5.5.2 Training/Credentials

- 1) Must understand their responsibilities as described in 5.5.3, and the OO Integrity Program requirements.

### 5.5.3 Responsibilities

- 1) Onsite
  - a) Comply with all site safety rules and regulations on the job site.
  - b) Consistently apply industry recognized audit practices.
  - c) Ensure onsite personnel understand what is required during the audit process.
  - d) Conduct audits of trainers, proctors, and evaluators administering the OQ Integrity Program requirements in accordance with Appendix (5.5.1. sub-element 1).
- 2) Records Review
  - a) Conduct review of internal audits, OQ records, processes, individual stakeholders involved with OQ, and documentation relating to the OQ Integrity Program elements.
- 3) Reporting
  - a) Document and report audit findings as required in Section 7.2 and Appendix D.

## 6 PROCESSES

### 6.1 Covered Task Development & AOC's

- 6.1.1 The ASME B31Q standard for Pipeline Personnel Qualification has been selected as the task standard for the Program.
- 6.1.2 The Program is applicable to all tasks identified in the ASME B31Q Standard. With regards to opportunities for Program consistency, recognized core competencies for qualifications, and portability, common contractor tasks have been selected and prioritized as the baseline for establishing integrity and consistency for training, testing, evaluations and recordkeeping (APPENDIX C of this Program document).
- 6.1.3 Abnormal Operating Conditions (AOCs). The Program has adopted the definition of an AOC as identified in the ASME B31Q.
  - 1) ASME B31Q handling of AOCs. The ASME B31Q does not identify general AOCs, or task specific AOCs that correspond directly to each specific task included in the B31Q. However, the B31Q Non-Mandatory Appendix E – Abnormal Operating Conditions (AOCs), provides a baseline list of AOCs which can be utilized in an Operator Qualification program.
  - 2) PHMSA Guidance on AOCs. In accordance with 49 CFR 192.803, Subpart N, to be qualified to perform a covered task, individuals must not only demonstrate the knowledge, skill and ability (KSA) to perform the task, but also be able to recognize and react to AOCs that the individual may reasonably be expected to encounter while performing a covered task. Operators are expected to develop a thorough listing of AOCs, both task-specific and generic. The task-specific AOCs may be included within the evaluation criteria for the specific task, but the generic AOCs should be maintained in a separate list and reviewed periodically.

- 3) Program requirements for AOCs. Each content provider participating in the OQ Integrity Program shall ensure that appropriate AOCs have been identified and included in their training and evaluation content in accordance with the guidance from the ASME B31Q, PHMSA, and industry practices.
  - a) Content providers shall ensure that each task related training and evaluation content shall include corresponding task specific AOCs as part of the qualification requirements of the covered task.
  - b) Content providers are encouraged to ensure their programs offer training and evaluation content for generic AOCs.
  - c) It is the responsibility of the Operator to ensure that any Operator unique or specific AOC requirements and reaction protocols (for generic AOCs or task specific AOCs) are included in the Operator specific portion of a worker's qualification.

## 6.2 Core Competency Development

- 6.2.1 The OQIP relies on the ASME B31Q for the identification and development of tasks and associated core competencies. The OQIP does not develop these core competencies. ASME B31Q utilizes a comprehensive process and subject matter experts (SMEs) from across multiple industry segments to determine covered tasks, appropriate evaluations methods, and the core competency knowledge, skill and ability requirements associated with each task. These processes are outlined in the Nonmandatory Appendices of the ASME B31Q.
- 6.2.2 The Program shall rely on the processes established by the ASME B31Q for the development of core competencies for covered tasks. The National OQ Integrity Committee Task Force Members shall provide guidance and input to the ASME B31Q regarding core competency development based on feedback from Program participants and stakeholders, information obtained through Section 7 – Program Effectiveness of this Program, and general guidance from the OQ Integrity Committee Task Force Members.

## 6.3 Training Requirements

- 6.3.1 Training materials must include content necessary to convey the knowledge and skills necessary to perform a task in alignment with the core competencies identified in the ASME B31Q, Appendix A – Non-Mandatory Integrated Task List.
- 6.3.2 Training content should sufficiently prepare an individual to perform covered tasks, including consideration for the individual's required knowledge and skills.
- 6.3.3 Training material should be developed using industry best practices for identification of learning objectives and content development. As such, training content utilized in the OQ Integrity Program should be developed utilizing methodology established by IACET (International Association for Continuing Education and Training), ANSI (American National Standards Institute), Association for Talent Development (ATD), or similar industry recognized, and accredited programs intended for the development of training and educational content.

## 6.4 Knowledge Testing

### 6.4.1 Minimum number of questions per exam

- 1) Minimum 1 question per learning objective (including AOC's) or subset thereof

### 6.4.2 Exam time limits: Exam time limits can serve to assist in validating knowledge proficiency (i.e.; the ability to demonstrate knowledge in a reasonable response period). Exam time limits are not required but should be administered with consideration to needs of the participant (reasonable accommodations, new qualifications, re-qualifications, etc.). Explanatory Note: For general guidance, 30-60 seconds per exam questions is a typical acceptable response period. As such, it is recommended that total examination time should be based on three (3) minutes per exam question, not to exceed three hours for any given exam.

### 6.4.3 Exam question types (multiple choice, matching, sequencing, true/false, etc.)

- 1) Limit number of true/false questions per exam
  - a) Not more than 10% of total questions

### 6.4.4 Test Question Banks

- 1) At least two equivalent questions per learning objective or subset thereof
- 2) Randomized question order for exams
- 3) Randomized answers for a given question, where appropriate

### 6.4.5 Minimum passing score

- 1) 80% minimum to pass knowledge exam. (Note the additional requirements in 6.5.2 (2)).

### 6.4.6 Test attempts

- 1) Second attempt allowed after documented post-test conference between candidate and designated personnel for issue review.
- 2) Third attempt allowed after documented post-test conference between candidate and designated personnel for issue review and remediation plan, as appropriate.
- 3) Additional attempts after documented developmental training, field practice with a qualified individual, and/or structured On the Job Training (OJT).

### 6.4.7 Lock-out/waiting periods between test attempts

- 1) Upon the failure of a first attempt, a candidate must wait a minimum of 24 hours before re-attempting the same exam.
- 2) Upon the failure of a second attempt, a candidate must wait a minimum of 48 hours before re-attempting the same exam.
- 3) Upon the failure of a third or subsequent attempt, if allowed, a candidate must wait a minimum of 72 hours between each attempt of the same exam.

### 6.4.8 Proctoring

- 1) Proctoring is required on all tests.

### 6.4.9 Test Security

- 1) Computer Based/Electronic Testing
  - a) Digital records of individually identifiable test results must be retained by the test provider.

- b) Access to the test materials must be controlled by company program administrators.
  - c) Detailed records for Program effectiveness analytics and audits must be retained by the test provider.
- 2) Paper Based/Oral exams.
- a) Records of individually identifiable test results must be retained by the test provider.
  - b) Access to the test materials must be controlled by Program administrators.
  - c) Paper copies must be kept in a secure location.
  - d) Detailed records for Program effectiveness analytics and audits must be retained by the test provider.
  - e) Electronic delivery of exams is a preferred method and should be utilized wherever technology and internet access allow.

6.4.10 The use of Training Books or Study Aids is not allowed during the examination process. Technical Reference Materials may be used and include a company's policies and procedures that are available in the field, such as Operation & Maintenance Manuals, Standard Operating Procedures, Construction Manuals, and other similar official policies and procedures.

**6.5 Performance Evaluations**

6.5.1 Evaluations shall be completed by authorized Evaluators per the requirements of Section 5.3 Evaluator.

6.5.2 Evaluation environments/conditions (on-the-job, simulations, equipment requirements, etc.).

- 1) Mandatory Requirement.
- 2) Pass/Fail. This requires evaluator judgement that the individual performed satisfactory on each item.
- 3) On-the-job/field and simulated environments are allowable.
- 4) Equipment that is significantly similar to production environment.
- 5) Must be conducted in an environment without other candidates present.

6.5.3 Level of detail.

- 1) Detailed based on core competencies and learning objectives.
- 2) AOC's must be addressed in the performance evaluation.

6.5.4 Reference Materials Allowed During Evaluation

- 1) Training Books/Study Aides: No.
- 2) Technical Reference Materials relied upon when performing task: Yes. Technical Reference Materials may be used and include a company's policies and

procedures that are available in the field, such as Operation & Maintenance Manuals, Standard Operating Procedures, Construction Manuals, and other similar official policies and procedures.

6.5.5 Evaluation Attempts

- 1) Second attempt allowed after documented post-evaluation conference between candidate and designated personnel for issue review.
- 2) Third attempt allowed after documented post-evaluation conference between candidate and designated personnel for issue review and remediation plan, as appropriate.
- 3) Additional attempts after documented developmental training, field practice with a qualified individual, and/or structured On the Job Training (OJT).

6.5.6 Failed Evaluation Waiting/Re-Evaluation Period

- 1) Upon the failure of a first attempt, a candidate must wait a minimum of 24 hours before re-attempting the same evaluation.
- 2) Upon the failure of a second attempt, a candidate must wait a minimum of 48 hours before re-attempting the same evaluation.
- 3) Upon the failure of a third attempt, a candidate must wait a minimum of 72 hours before re-attempting the same evaluation.

6.5.7 Record keeping

- 1) All passed evaluation, both knowledge and performance, must be recorded and retained.
- 2) All failed evaluation attempts, both knowledge and performance, must be recorded and retained.
- 3) Individual's employer must be notified or have access to test results.

6.6 **Management of Change**

6.6.1 Communication requirements of the OQIP Program.

- 1) The OQIP will follow Section 12 of the ASME B31Q with regards to managing Program changes related to the Program.

6.6.2 Communication requirements at the participating company level.

- 1) Participants in the Program should follow the ASME B31Q or similar methodology to ensure appropriate management and communication of changes.

6.6.3 Communication requirements of participating companies to the OQIP.

- 1) Feedback from company Program effectiveness reviews to the OQIP Program Administrator
- 2) Feedback from participants, including Program effectiveness results identified in Section 7.2 of this document, should be submitted by participant administrators to the OQIP Program Administrator.
- 3) Feedback will be reviewed by the OQIP Program Administrator for assessment and revision to Program standards and requirements.

6.7 **Suspension/Revocation of Qualifications due to a failed evaluation**

6.7.1 Who can Suspend/Revoke.

- a) Operators
- b) Contractors
- c) Service Providers

6.7.2 Documentation

- a) The suspension or revocation of an individual's qualification to perform a covered task shall be recorded and reported in accordance with the recordkeeping and record sharing requirements outlined in Section 7.4.7 and 7.4.9.

**7 PROGRAM VALIDATION**

**7.1 Incident Investigation**

7.1.1 Overview: The participating entities in the OQIP will share the results of incident investigations with the task force for use in creating lessons learned to be shared in the member section of the OQIP webpage.

7.1.2 Information: The information shared will not have identifying information but will be a synopsis of the event and actions taken for prevention and mitigation of future events.

**7.2 Internal Audit**

7.2.1 Overview

At prescribed intervals identified in Section 7, an internal audit shall be performed by each participating contractor and operator to determine if all facets of their OQ program are being met. An internal audit would include a review of procedures, records, training, evaluations, and a field audit of personnel performing covered tasks. An audit form should be utilized by all auditors which addresses all Program elements.

7.2.2 Process

1) Contractor

- a) For internal audits, contractors' primary focus should be on the core competencies of the Program. Contractors are held responsible for ensuring any personnel performing covered task for an operator are qualified. This would consist of training and evaluation on the core elements derived by the DCA for each covered task, including abnormal operating conditions.
- b) An internal audit will require a review of current trainers, proctors, evaluators, and other personnel in responsible positions. The personnel review will ensure that current trainers, proctors, evaluators, and other personnel meet the established criteria of the Program.
- c) An internal audit will require a review of training, evaluation, and qualification records associated with the covered tasks each individual is qualified to perform.

**NOTE:** Internal audits may require the auditor to review processes and records from the associated third-party service provider.

- 2) Operator
  - a) For internal audits, operators' primary focus should be on the unique operations and practice of the Program. Operators are held responsible for ensuring any contractor personnel performing covered tasks on their facilities are qualified. It is recommended that the operator review and validate each contractor's core competencies as outlined in Appendix C of the Program. This would consist of any operator-specific procedures, standards, training, additional evaluations, abnormal operating conditions, and facility requirements that would not be covered by the core elements for the covered tasks each contractor has been qualified to perform.
  - b) Additional requirements of the operator (i.e. span of control, change communication of covered task, Program effectiveness) may also be reviewed as a part of the internal audit.

### 7.3 Program Effectiveness Review

#### 7.3.1 Overview

With the development of the Program, Program effectiveness (PE) is a required element that must be implemented by each participating operator, contractor and subcontractor. Although not currently required by regulation, PE is an important aspect of any program that may receive regulatory scrutiny by outside entities.

The findings of a PE review may require changes addressed at the contract company, the OOIP, third party service provider, or the operator level.

#### 7.3.2 Process

- 1) At an interval of each calendar year, not to exceed 15 months, a PE review shall be performed to measure the Program effectiveness as it relates to operator qualification.
- 2) As contractor/subcontractor employees could be performing covered tasks for many operators in a given year; each operator that utilizes the OO Integrity Program will be responsible for ensuring individuals have been given all "company-specific" information to correctly perform the covered tasks on their facilities.
- 3) Each contractor shall interview the individual in question to make a determination also. Some contractors will have their own OO program.
- 4) PE elements have been identified and aligned into specific requirements and who is responsible for addressing each item (different work contracts may carry different responsibilities). The elements and the responsible party are described in Appendix D.
- 5) In addition to assessment of specific PE elements identified in Appendix D, utilization of an interview process may provide insight and information that an individual made certain choices, regardless of their training and evaluation, that

adversely affected safety and integrity of the operator’s pipeline. These could include, (1) choosing to not follow the procedure, (2) attempting to perform the task that they had not performed in a number of months, (3) a distraction, or (4) influence or pressure from another individual.

**7.3.3 Outcome:** Records must be maintained as outlined in Appendix E of this Program

- 1) A report must be developed that details the findings of the PE review.
- 2) An action plan shall be developed to address the correctible findings within the contractor’s program.
- 3) As changes are implemented, notifications should be made to all stakeholders affected by the changes, including employees (operator or contractor), trainers, proctors, evaluators, auditors, and others.
- 4) If findings are made that relate to an operator, third party provider, or DCA, that information shall be forwarded those entities for their knowledge and action.

**7.4 Independent Audits**

**7.4.1 Overview**

The development of the Program raises the bar of expectation; from contractors to operators, and operators to regulators. Additional scrutiny through audits, both internal and independent, will substantiate the integrity of the Program. Requiring two audits differentiates the OO Integrity Program from most other OO programs in the industry, where some audits are performed, but rarely by non-partisan personnel. Internal audits and independent audits should be required for any contractors and operators who subscribe to the Program to ensure the Program elements are followed by all parties.

**7.4.2 Process**

- 1) At prescribed intervals (after the first year of application and every 3 years afterward), after internal audits have been performed, a non-partisan individual should perform an independent audit on each contractor and operator in the Program. This individual should evaluate the same program for the same elements, dependent on whether contractor or operator. A standardized form should be utilized by all auditors. The auditor shall only be allowed to review information associated with the specific operator, contractor, and/or the contractor’s training provider as it related to the scope of the audit.
  - a) Contractor:
    - 1) An independent auditor, as required by the Program should perform the independent audit for the operator. An individual from an operator can perform a partial third-party audit of the contractor, if that company individual meets the requirement of an independent auditor of the Program.
  - b) Operator:

- 1) An independent auditor, as required by the Program should perform the independent audit for the operator.

#### 7.4.3 Outcome

- 1) Independent audits will have an executive summary developed for the contractor and company. The summary will address the elements of the program that need improvement and provide recommendations to address those needs.
- 2) Once a contractor or operator receives their independent audit, a comparison should be made to the internal audit. An action plan shall be developed to address the correctable findings within the contractor's program. As changes are implemented, notifications must be made to all affected by the changes; employees, trainers, evaluators and others.
- 3) If findings are made that relate to an operator, third party provider, or DCA; that information must be forwarded those entities for their knowledge and action.
- 4) Critical findings: If an independent auditor discovers areas of the program that have not been met; i.e. evaluators not meeting established criteria, training requirements are not being met or evaluations not being performed as required, the DCA gatekeeper shall be notified with details about the critical program findings. DCA will make notification to the operators affected and relate findings of the audit. If disqualifications must be implemented, the respective record holder(s) shall be notified.

**NOTE:** If performance of a covered task that adversely affects an operator's pipeline results in an accident or incident, the information gathered during the investigation process may require immediate actions be taken to ensure there is no reoccurrence of the accident of incident.

#### 7.5 Recordkeeping and Documentation

- 7.5.1 This section identifies the necessary documents and records required to support the Program, with consideration for Program quality, auditability, Program effectiveness review, transferability of qualifications and compliance with Federal OQ Regulations.
- 7.5.2 Operators and Contractors that choose to be a part of the Program must utilize an approved program (internal or third-party vendor) for training, testing and record-keeping of the required Program elements. These records could be delivered to an in-house system. Any third-party record systems must be approved and meet the security requirements for the Program, as well as cyber security and personal information requirements.
- 7.5.3 In addition to any employer or third-party ID numbers utilized, a unique and nationally recognized identification number will be utilized for validation of a worker and their associated records. The requirement and methodology for generating a unique identification number will be developed and held by DCA, or their designee (such as the Program Governing body), as part of the OQ Integrity Program. Participating

entities will be provided with the necessary information to generate the unique identification number.

- 7.5.4 Records of individual employees shall be transferrable to any third-party that is approved by the Program. A standard transcript report format will be created and included as Appendix F and must be maintained in each reporting system that captures the same data fields for each individual based on the recordkeeping requirements outlined in Appendix E of this Program. Records shall include the requirements in 49 CFR 192.807 Recordkeeping, which states

*“Each operator shall maintain records that demonstrate compliance with this subpart.*

*“Qualification records shall include:*

- (1) Identification of qualified individual(s);*
- (2) Identification of the covered tasks the individual is qualified to perform;*
- (3) Date(s) of current qualification; and*
- (4) Qualification method(s).”*

- 1) Individual’s current qualification shall be maintained while the individual is performing the covered task.
  - 2) Records of prior qualification and records of individuals no longer performing covered tasks shall be retained for a period of five years or as required by Federal Regulation, whichever is greater.
  - 3) Records indicating the OQ content provider shall be maintained.
- 7.5.5 The records from section 7.5.4 will be the approved transcript that will be requested and transferred from system to system. Fields required for the transcript report must include the fields outlined in Appendix E. Each individual will be assigned a specific unique identification number as outlined in 7.4.3 above.
- 7.5.6 Record retention would be based on a contract with Operator/Contractor and the service provider. In the event of contract cancellation, the service provider will send a data file containing all records to the Operator/Contractor in the format that is documented in Appendix F - Transcript Report.
- 7.5.7 Reporting of records that are intended to be portable (e.g. contractor/operator mutual assistance) must come from an approved OQIP participant. Internal LMS systems and databases may be used as a back-up of records, but to maintain the integrity of records at a national level, all source records must be standardized, maintained and managed from an approved provider that has a system that requires lock-outs, workflows, and controls, and is audited so that the entire program is using the same standard guidelines.
- 7.5.8 Each program’s database must transfer routine record updates at least daily. Non-routine record updates such as revocations and suspensions must, during normal business hours, be communicated within two hours of the decision to revoke or suspend. If the decision is made outside of normal business hours, the revocation or suspension must be communicated no later than 8am local time.
- 7.5.9 The core competencies associated with Tasks in Appendix C of this Program and that are more fully described in the ASME B31Q Non-Mandatory Appendix A - Integrated

Task List, will be portable and shall have the ability to be transferred throughout the industry by request of transcript. The transcript report will be sent by the third-party administrator to a corresponding third-party administrator for transfer. The individual may not submit transcripts personally. The portion of any qualification that is specific to each operator is not considered portable under this Program and is owned by the operator. The operator specific portion of a qualification record may be stored in-house or contracted to be serviced through a third-party provider.

- 7.5.10 The Program will develop and maintain a communication process between third-party provider, operator, and contractor members for qualifications and personnel, including, but not limited to:
- 1) **Qualifications:** Each qualification will be reported in a standardized transcript report, utilizing the format shown in Appendix F. It must be an official transcript that is transferred from an approved system.
  - 2) **Trainers:** The information relevant to each qualified trainer will be stored in an approved system.
  - 3) **Revocation:** Revocations of a task must be updated and communicated out to the Program network within two hours of the decision to revoke.
  - 4) **Evaluators:** The information relevant to each qualified evaluator will be stored in an approved system.
  - 5) **Suspensions:** Suspensions of a task must be updated and communicated out to the central database within two hours of the decision to suspend.
  - 6) **Proctors:** The information relevant to each qualified proctor will be stored in an approved system.

## APPENDIX A

### Trainer Program (Minimum Training Requirements)

#### 1.0 Trainer Qualification

A trainer must successfully complete a training class that meets the minimum requirements for a technical trainer program as outlined below.

#### 2.0 Prerequisites

2.1 Must meet one of the following requirements prior to becoming a credentialed trainer:

2.1.1 Minimum of five years of experience performing the functions which the individual will train on, OR;

2.1.2 Three years of experience performing the functions which the individual will train on, AND, a minimum of two years of experience at a supervisory level or higher in the natural gas industry, AND, specific to the covered task the training will be the subject of, OR;

2.1.3 An associate degree or higher in education, AND, a minimum of three years of experience performing the functions which the individual will train on, OR;

2.1.4 Two years of experience as a trainer, AND, a minimum of three years of experience performing the functions the individual will train on, OR,

2.1.5 Successful completion of an Original Equipment Manufacturer (OEM) Train-the-Trainer credentialing program, AND, a minimum of three years of experience performing the OEM functions which the individual will train on.

#### 3.0 Classroom Training

3.1 Learn the basics of adult learning theory.

3.2 Gain the basis for conducting a needs assessment and developing learning objectives.

3.3 Learn effective training techniques for leading classrooms and engaging a variety of learning styles.

3.4 Practice classroom facilitation, student engagement, and presentation skills through exercises.

3.5 Reinforce trainer characteristics to include ethics, judgment, consistency, patience, temperament, etc. through exercises.

#### 4.0 Records and Validation

4.1 Training records maintained by Employer, and/or Employee, and/or Training Organization Provider.

4.2 Random audits are performed on trainers as provided for in the OQ Integrity Program.

## APPENDIX B

### Evaluator Training Program (Minimum Training Requirements)

An Evaluator must successfully complete an evaluator training class as outlined below.

- 1.0 Prerequisites
  - 1.1 3 years of gas industry experience in the covered task to be evaluated, OR;
  - 1.2 1 year of general gas industry experience, AND, an industry recognized certification or credential (e.g. NACE, ASNT) that evidences the necessary expertise in the covered task to be evaluated, OR;
  - 1.3 1 year of general gas industry experience, AND, successful completion of an OEM Train-the-Trainer credentialing program for the activity to be evaluated.
  - 1.4 Submit required documentation which includes:
    - 1.4.1 Resume outlining employment history and industry work experience
    - 1.4.2 Two (2) letters of reference related to relevant work experiences
    - 1.4.3 Photo identification
    - 1.4.4 List of covered tasks that they are eligible to evaluate (each covered task requires a minimum of three years of experience in that task)
  - 1.5 The evaluator training program does not include any technical training. That is completed outside of the evaluator training.
- 2.0 Classroom Training
  - 2.1 Class purpose, objectives, etc. are reviewed.
  - 2.2 Basic Introduction of Operator Qualification (OQ), including applicable standards
    - 2.2.1 OQ Rule, 49 CFR 192 and 195; PHMSA Inspection Protocols
    - 2.2.2 ASME B31Q
  - 2.3 Evaluator characteristics
    - 2.3.1 Includes ethics, judgment, consistency, patience, temperament, and observation skills. Exercises will be used to emphasize characteristics needed.
  - 2.4 Evaluator processes
    - 2.4.1 Pre-planning
      - 2.4.1.1 Evaluation materials and site preparation; notifications
    - 2.4.2 Conducting the evaluation
      - 2.4.2.1 Introductions and verification of individual/check ID
      - 2.4.2.2 Set the ground rules.
      - 2.4.2.3 Closely adhere to the performance evaluation documentation requirements.
      - 2.4.2.4 Manage problem situations (class exercises).
    - 2.4.3 Post evaluation
      - 2.4.3.1 Communication of results and performance feedback
      - 2.4.3.2 Records/documentation
  - 2.5 Evaluator exercises to underscore key issues
- 3.0 Records and Validation

- 3.1 Evaluator training records shall be maintained by the Employer, and/or Employee, and/or Training Organization Provider
- 3.2 Random audits are performed on evaluators as provided for in the OQ Integrity Program.

## APPENDIX C

### Common Covered Tasks

As identified in a 2017 DCA contractor member survey, these are the most utilized ASME B31Q covered tasks (from most used to least used.)

- 0980 Backfilling
- 1321 Damage Prevention during Excavation Activities by or on Behalf of the Operator
- 0861 Installation of Steel Pipe in a Ditch
- 0871 Installation of Steel Pipe in a Bore
- 0901 Installation of Plastic Pipe in a Ditch
- 0911 Installation of Plastic Pipe in a Bore
- 1301 Install and Maintain Pipeline Markers
- 0151 Visual Inspection of Buried Pipe and Components When Exposed
- 0751 Joining of Plastic Pipe - Butt Heat Fusion: Manual
- 0761 Joining of Plastic Pipe - Butt Heat Fusion: Hydraulic Machine
- 0781 Joining of Plastic Pipe: Electrofusion
- 0941 Install Tracer Wire
- 1011 External Coating Application and Repair: Wrapped
- 0141 Visual Inspection for Atmospheric Corrosion
- 0201 Visual Inspection of Installed Pipe and Components for Mechanical Damage
- 0641 Visually Inspect Pipe and Components Prior to Installation
- 0801 Welding
- 0811 Visual Inspection of Welding and Welds
- 0991 Coating Application and Repair: Brushed or Rolled
- 1141 Squeeze off Plastic Pipe
- 1291 Locate Underground Pipelines
- 1651 Purge – Flammable or Inert Gas

- 0561 Pressure Test: Nonliquid Medium - MAOP Less Than 100 Psi
- 0591 Leak Test at Operating Pressure
- 0731 Joining of Pipe: Flange Assembly
- 0771 Joining of Plastic Pipe: Sidewall Heat Fusion
- 1081 Tapping a Pipeline (Tap Diameter 2 in. and Less)
- 0721 Joining of Pipe: Threaded Joints
- 0971 Installation and Maintenance of Casing Spacers, Vents and Seals
- 1101 Tapping a Pipeline with a Built-In Cutter
- 1201 Temporary Isolation of Service Lines and Service Discontinuance
- 0161 Visual Inspection for Internal Corrosion
- 0571 Pressure Test: Nonliquid Medium - MAOP Greater Than or Equal to 100 Psi
- 0921 Installation of Plastic Pipe Plowing/Pull-In
- 0951 Installation of Pipe above Ground
- 1161 Installation of Customer Meters and Regulators Residential and Small Commercial
- 0081 Install Cathodic Protection Electrical Isolation Devices
- 0581 Pressure Test: Liquid Medium
- 0681 Joining of Plastic Pipe: Stab Fittings
- 0711 Joining of Pipe: Compression Couplings
- 0931 Installation of Plastic Pipe by Plowing/Planting
- 1041 Install Mechanical Clamps and Sleeves: Bolted
- 1091 Tapping a Pipeline (Tap Diameter Greater Than or Equal to 2 in.)
- 1131 Stopper (Stopple) Pipe
- 1341 Provide or Ensure Adequate Pipeline Support during Operator Initiated Excavation Activities
- 0791 Joining of Plastic Pipe: Socket Heat Fusion
- 0961 Above-Ground Supports and Anchors: Inspection, Preventive, and Corrective Maintenance

- 1001 Coating Application and Repair: Sprayed
- 1111 Tapping Cast and Ductile Iron Pipe and Low-Pressure Steel Pipe
- 1631 Launching and/or Receiving Internal Devices (Pigs) Without Launcher and/or Receiver for Lines Out of Service
- 0041 Installation and Maintenance of Mechanical Electrical Connections
- 0301 Manually Opening and Closing Valves
- 0891 Field Bending of Steel Pipe
- 1071 Repair of Steel Pipe by Grinding
- 1121 Bagging and Stopping Low-Pressure Pipe
- 1171 Installing Customer Meters: Large Commercial and Industrial
- 0051 Installation of Electric Electrical Connections
- 0881 Installation of Steel Pipe Plowing/Pull-In
- 1051 Fit-Up of Weld-Type Repair Sleeve
- 1181 Installing and Maintaining Customer pressure regulating, Limiting, and Relief Device - Large Commercial & Industrial
- 0001 Measure Structure-To-Electrolyte Potential
- 0691 Joining of Pipe: Non-Bottom-Out Compression Couplings
- 0701 Joining of Pipe: Bottom-Out Compression Couplings

## APPENDIX D

### Addressing Deficiencies

The following areas are broken down into specific requirements and parties responsible for addressing the deficiency (different work contracts carry different responsibilities):

#### 1.0 Operator:

- 1.1 KSAs for the specific covered task(s) were not adequately determined.
- 1.2 Training was not adequate for the specific covered task(s).
- 1.3 Change to a covered task(s) or the KSAs was not adequately communicated.
- 1.4 Nonqualified individual was not being directed and observed by a qualified individual.
- 1.5 Span of control was not followed.
- 1.6 The qualified individual supervised more than one covered task at the time.

#### 2.0 Program:

- 2.1 Core elements of covered task did not adequately address the covered task.
- 2.2 KSAs for the specific covered task(s) were not adequately determined.
- 2.3 Change to a covered task(s) or the KSAs was not adequately communicated.

#### 3.0 Service Provider:

- 3.1 Evaluator or training did not follow Program or meet requirements.
- 3.2 Evaluation was not conducted properly.
- 3.3 Training was not adequate for the specific covered task(s).

#### 4.0 Contractor:

- 4.1 Evaluation was not conducted properly.
- 4.2 Training was not adequate for the specific covered task(s).
- 4.3 Individual failed to recognize an abnormal operating condition, whether it is task specific or non-task specific, which occurs anywhere on the system.
- 4.4 Individual was not qualified.
- 4.5 Nonqualified individual was not being directed and observed by a qualified individual.
- 4.6 Span of control was not followed.
- 4.7 Evaluator or training did not follow Program or meet requirements.
- 4.8 The qualified individual supervised more than one covered task at a time.
- 4.9 A contractor with their own OQ program will have to determine at least one other measure to review for Program effectiveness. Any area chosen for review must be measurable. Additionally, it must be possible to document the element. Some areas for consideration include the following:
  - 1) Performance of Line Locating – Percentages of mismarks/non-locates
  - 2) Performance of Excavation – Percentages of damages per excavation
  - 3) Disqualifications – Look for trend of issues, i.e. complacency, training
  - 4) Construction – Excessive repair and material waste

## APPENDIX E

### Recordkeeping

Key records for OQ integrity and standardization to support the transfer and sharing of records have been outlined below. These records include regulatory requirements and additional requirements to support Program audits, Program effectiveness reviews and an increased level of qualification integrity.

- 1.0 Current Employer Company Name
- 2.0 Employee Name
  - 2.1 Employee Last Name
  - 2.2 Employee First Name
  - 2.3 Employee Middle Name/Initial (if any)
  - 2.4 Employee Suffix (if any)
  - 2.5 Unique identifier (employee ID number or last four digits of SSN)
- 3.0 Task Information
  - 3.1 Name of Covered Task
  - 3.2 Number Reference of Qualified Task
  - 3.3 Training Completed Date (*could appear as part of task or as part of individual evaluation methods*)
  - 3.4 Date of Task Expiration
  - 3.5 Employer Company Providing/Sponsoring Qualification
  - 3.6 Service Company Supporting/Delivering Qualification
  - 3.7 Appropriate notations for the existence of current or historical suspensions or disqualifications associated with the reported record
- 4.0 Evaluation Method(s) – Per each task above
  - 4.1 Type of Evaluation Method (knowledge, observation/performance)
  - 4.2 Format for evaluation delivery (electronic, paper, oral)
  - 4.3 Training Completed Date (*could appear as part of task or as part of individual evaluation methods*)
  - 4.4 Number Reference of Evaluation Method
  - 4.5 Number of attempts to pass (per qualification cycle)
  - 4.6 Date of Qualification Completion
  - 4.7 Date of Qualification Expiration
  - 4.8 Exam/Evaluation Score: Grade 80% or Passed/Failed Status
  - 4.9 Name of Proctor or Evaluator
    - 4.9.1 Evaluator (or proctor) Training Date
    - 4.9.2 Company Providing Evaluator Training
    - 4.9.3 Evaluator Credentialed Date
    - 4.9.4 Company Providing Evaluator Vetting/Credentialing

**APPENDIX F**

**Recordkeeping Transcript Report – Standard Format**

To Be Determined