



# PIPELINE OPERATOR QUALIFICATION COURSES

# **Safety Council of Texas City**

Revised: 11/7/2016

Operator Qualification courses assist pipeline operators in complying with the DOT Operator Qualification Rule that requires operators to qualify their workforce on pipeline facility covered tasks. This includes development and maintenance of a written qualification program as required by 49 CFR 192 Subpart N (natural gas) and 49 CFR 195 Subpart G (hazardous liquids).

Pipeline operations and maintenance activities subject to the Operator Qualification Rule are primarily addressed in 49 CFR 192 Subparts L and M, and 49 CFR 195 Subpart F.



## Abnormal Operating Conditions: Recognize and React (07OQABRR)

Covers the definition of AOCs, identifying AOCs, operator qualification, identification of cover tasks, recognition and reaction to AOCs, and rating hazards. This course assists in compliance with DOT regulations, and references the B13Q standard.

#### Abnormal Operations and Safety-Related Conditions (07OQABSR)

Explains the difference between abnormal operations and abnormal operating conditions, describes safety-related conditions, and explains how to recognize possible causes of abnormal operations including appropriate responsive actions. Reporting requirements for safety-related conditions are also stated. References to DOT standards that apply to abnormal operations and safety-related conditions are listed.

#### Pipeline Pigging (07OQPIG)

Explores the reasons for pigging, pig types and use, common pigging techniques, safe launching and receiving practices, and smart pigging techniques.

#### Pipeline Purging with Air and Gas (07OQPURG)

Explains the mechanical nature of purging, isolation methods; and, the processes of purging with either air or gas. Abnormal operating conditions (AOCs) that may be encountered while purging pipelines are also included.

# OSHA/DOT - Excavation Safety (07OQEXCV)

Explains basic excavation safety, excavation requirements, soil classification and testing, causes of cave-ins, excavation protection, and related AOCs.

### Leak Survey and Leak Classification (07OQLEAK)

Examines house counts, class locations, use of a "sliding mile," leak surveys and classification, pipeline patrols, pipeline marker installation, natural gas detection instruments, bar hole testing, natural gas migration patterns, leak survey records, and more.

# LQ: Pipeline Patrol (07OQLQPP)

Explains the methods of pipeline patrols, required inspections, and inspection intervals. Visual inspections include adequate pipeline cover, line markers and signs, exposed sections of pipelines, corrosion, crossings, changes in population, breakout tanks, and leak surveys. Electrical inspections include rectifiers and electrical insulators. Right-of-way maintenance is also discussed.

#### Abandonment of Facilities (07OQABAN)

Examines deactivation and abandonment of steel and plastic pipeline facilities, including mains, services, regulators, meters, and odorizers; and the importance of documenting deactivated and abandoned facilities.

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## Cathodic Protection Troubleshooting (07OQCTHP)

Explains cathodic protection systems, equipment needed for troubleshooting, safety precautions, and troubleshooting procedures for locating rectifier faults, cable breaks, insulators, and contacts. Includes abnormal operating conditions (AOCs) that may be encountered while troubleshooting cathodic protection systems.

## Cathodic Protection – Rectifier Inspections (07OQRECT)

Explains cathodic protection systems, rectifier types, rectifier inspections, and calculating rectifier efficiency. Includes abnormal operating conditions (AOCs) that may be encountered while inspecting and testing rectifiers.



#### Prevention of Accidental Ignition and Potential Ignition Sources (07OQIGN)

Examines the DOT rules governing accidental ignition sources of natural gas. Other topics include: the fire triangle, common ignition sources for escaping natural gas, buildup and/or discharge of static electricity, hot and cold cutting and welding, and isolation of pipeline segments.

#### Pipeline Repair: Grinding, Welding, and Sleeving (07OQGWS)

Explains the various types of pipeline leaks and the methods to repair them. Includes definitions and procedures for "hot" and "cold" cutting and welding. Lists DOT standards and B31Q tasks relevant to pipeline leak repair. Identifies common abnormal operating conditions (AOCs), including possible responses.

# Pipeline Repair: Composites (07OQCOMP)

Explains the use of composites to repair imperfections and damage on pipelines. Lists DOT standards and B31Q tasks relevant to pipeline repair using composites. Identifies common abnormal operating conditions (AOCs), including possible responses.

### Inspecting and Testing Pressure-Limiting Devices (07OQPLD)

Explains how a relief valve operates, along with different design features and their purpose. Discusses the procedure for testing relief valves. Lists DOT standards and B31Q Tasks relevant to inspection and testing of relief valves are listed. Identifies common abnormal operating conditions (AOCs), including possible responses.

#### Inspecting and Testing Regulators (07OQREG)

Explains how a regulator operates, along with different design features and their purpose. Also explains the differences between pilot-operated and spring-operated regulators and how they work and discusses the procedure for testing regulators. Lists DOT standards and B31Q Tasks relevant to inspection and testing of regulators. Identifies common abnormal operating conditions (AOCs), including possible reactions.

#### Inspecting and Testing Control Valves (07OQCONT)

Explains the purpose of control valves in a pipeline system and discusses the different parts that make up a control valve assembly and their functions. Explains the process for inspecting a control valve. Lists DOT standards and B31Q tasks relevant to inspecting and testing control valves. Identifies common abnormal operating conditions (AOCs), including preferred reactions.

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