Hazardous Liquid Pipeline Operator Qualification (OQ)

API RECOMMENDED PRACTICE 1161
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Introduction

API 1161 *Hazardous Liquid Pipeline Operator Qualification (OQ)* provides guidance to the pipeline industry to create and manage an operator qualification (OQ) program as described in 49 *Code of Federal Regulations (CFR)* Part 195, Subpart G—Qualification of Pipeline Personnel, Rule of August 1999. The rule applies to all employees and contractors working on the Pipeline and Hazardous Materials Safety Administration–regulated facilities when performing tasks that meet the Four-part Test. The four parts of the Four-part Test (listed below) identify work that:

— is performed on a pipeline facility;

— is an operations or maintenance task;

— is performed as a requirement of 49 *CFR* Part 195;

— affects the operation or integrity of the pipeline.

API 1161 is intended to be used by operators, training providers, vendors, and regulators. The document includes a recommended covered task list with supporting covered task standards developed by subject matter experts from operators, training providers, vendors, and other industry sources.

API 1161 has been published five times prior to this edition.

a) August 2000, API Publication 1161, Guidance Document for the Qualification of Liquid Pipeline Personnel, First Edition.

    1) Created by the Consortium on Operator Qualification sponsored by API in response to the publication of the OQ rule. The First Edition focused on requirements to establish an OQ program.

    2) Forty-five initial tasks identified.

b) April 2012, API Recommended Practice 1161, *Recommended Practice for Pipeline Operator Qualification (OQ)*, Second Edition.

    1) Standardized the format and published the document as a formal API recommended practice.

    2) Task list expanded to 99 tasks.

    3) Published task standards that contained knowledge and skills for some of the tasks included in the task list.

c) January 2014, API Recommended Practice 1161, *Recommended Practice for Pipeline Operator Qualification (OQ)*, Third Edition.

    1) Additional task standards published.

    2) Added Annex C, Evolution of the Covered Tasks.

    3) Standardized the titles of task names.

d) February 2019, API Recommended Practice 1161, *Recommended Practice for Pipeline Operator Qualification (OQ)*, Fourth Edition.

    1) Published task standards for all tasks listed on the task list.

    2) Codified the format for the task list and task standards.

    3) Expanded the abnormal operating conditions for each task.

4) Added Annex D, Testing and Evaluation Guidance.

5) Added Annex E, Program Effectiveness Guidance.

6) Annex C removed.

e) November 2021, API Recommended Practice 1161, *Recommended Practice for Pipeline Operator Qualification (OQ)*, Fifth Edition.

1) Task list expanded to 100 tasks.

2) Introduced revised language on evaluation with a specific focus on conducting remote evaluations.

3) Added Annex F, Management of Change Guidance.

4) Added Annex G, Abnormal Operating Conditions Guidance.

Changes to the Sixth Edition include the following:

— changed the title to *Hazardous Liquid Pipeline Operator Qualification (OQ)*;

— reduced scope to liquids assets regulated by 49 *CFR* Part 195 (all references to gas assets regulated by 49 *CFR* Part 192 have been removed);

— general updates to the front matter;

— Annex C, Covered Task Development, was updated and republished;

— updates to Annex G, Abnormal Operating Conditions Guidance;

— task-specific abnormal operating conditions identified for all covered tasks;

— revisions to all covered tasks previously published in the Fifth Edition;

— expansion of the task list to 120 tasks.

New tasks published in the Sixth Edition include the following:

Task Number	Task Name
9.6.1	Install Electrical Insulating Device—Piping Isolation
9.6.2	Install Electrical Insulating Device—Casing Isolation
9.6.3	Install Electrical Insulating Device—Isolation Joints
9.6.4	Install Electrical Insulating Device—Lightning Protection and Electrical Grounding
33	Move In-service Pipe
35	Inspect Clearance of Existing Pipe to Underground Structures
38.8	Perform Nondestructive Testing—Magnetic Flux Leakage Testing
40.12	Cutting on Steel Pipeline
40.13	Perform Flange Bolting
40.14	Install Threaded Connections
40.15	Install and Monitor Vapor Barriers

Task Number	Task Name
40.16	Remove Casings
40.17	Install Tubing
45	Operate Pressure Relieving Devices for Launching and Receiving Facilities
101	Underwater—Measure Structure-to-electrolyte Potentials
102	Underwater—Examine for Mechanical Damage
103	Underwater—Examine for External Corrosion
104	Underwater—Inspect the Condition of External Coating
105	Underwater—Install Galvanic Anodes
120	Underwater—Install Pipe-end Connectors
140	Underwater—Locate Line and Install Temporary Marker

Hazardous Liquid Pipeline Operator Qualification (OQ)

1 Scope

API 1161 establishes a framework for developing and maintaining an operator qualification (OQ) program for hazardous liquid pipeline personnel. This recommended practice is applicable for all hazardous liquid pipelines, both onshore and offshore, subject to 49 *Code of Federal Regulations (CFR)* Part 195, Subpart G. Operators may choose to use all or part of this document as applicable to their operations.

For the purposes of this document, the word "pipeline" is used interchangeably with "pipeline facility" or "pipeline system," as defined in 49 *CFR* Part 195. This document pertains to all employees, contractors, subcontractors, or other entities who perform covered tasks on behalf of the operator.

2 Normative References

The following referenced documents are indispensable for the application of this document. For dated references, only the edition cited applies. For undated references, the latest edition of the referenced document (including any amendments) applies.

API 510, *Pressure Vessel Inspection Code: In-service Inspection, Rating, Repair, and Alteration*, Ninth Edition, June 2006

API Standard 653, *Tank Inspection, Repair, Alteration, and Reconstruction*, Third Edition, December 2001, including Addendum 1 (September 2003), Addendum 2 (November 2005), Addendum 3 (February 2008), and Errata (April 2008)

API Standard 1104, *Welding of Pipelines and Related Facilities*, 21st Edition, September 2013, including Errata 1 through 5 (April 2014 through September 2018), Addendum 1 (July 2014), and Addendum 2 (May 2016)

API Standard 2350, *Overfill Prevention for Storage Tanks in Petroleum Facilities*, Fifth Edition, September 2020, including Errata 1 (April 2021)

ASME *Boiler and Pressure Vessel Code* [1], *Section IX: Qualification Standard for Welding and Brazing Procedures, Welders, Brazers, and Welding and Brazing Operators*, 2007 Edition, July 2007

ASNT SNT-TC-1A [2], *Personnel Qualification and Certification in Nondestructive Testing*

U.S. DOT Title 49, *Code of Federal Regulations* Part 195 [3], *Transportation of Hazardous Liquids by Pipeline*

NOTE Dated editions referenced above are incorporated by reference (IBR) into 49 *CFR* § 195.3 and are current as of the publication date of this document.

3 Terms, Definitions, Acronyms, and Abbreviations

3.1 Terms and Definitions

For the purposes of this document, the following terms and definitions apply.

NOTE When identical terms are defined within the task standard and in this section, the task standard definitions apply.

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1 ASME International, 2 Park Avenue, New York, NY 10016, www.asme.org.

2 American Society for Nondestructive Testing, 1201 Dublin Road, Suite G04, Columbus, OH 43215, www.asnt.org.

3 U.S. Department of Transportation, Pipeline and Hazardous Materials Safety Administration, 1200 New Jersey Avenue, SE, Washington, DC 20590, www.phmsa.dot.gov.