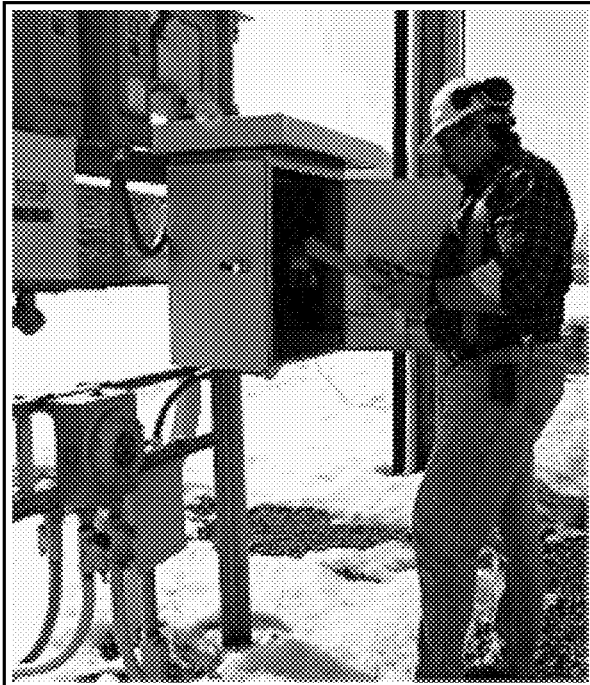


Guidance Document for the Qualification of Liquid Pipeline Personnel

API PUBL 1161
FIRST EDITION, AUGUST 2000



**American
Petroleum
Institute**

**Helping You
Get The Job
Done Right.SM**

Guidance Document for the Qualification of Liquid Pipeline Personnel

Pipeline Segment

API PUBL 1161
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Get The Job
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SPECIAL NOTES

This API Guidance Document for the Qualification of Pipeline Personnel was developed by the API's subcommittee on Training to help pipeline operators comply with the Research and Special Program Administration's (RSPA) Final Rule on Pipeline Safety: Qualification for Pipeline Personnel.

Special acknowledgement is given to the Consortium On Operator Qualification (COOQ), a group of liquid pipeline representatives, which developed several appendices within this publication, including Example Operator Qualification Premises and Definitions, as well as the Example Covered Task Lists. The Consortium on Operator Qualification's efforts and collaboration with the API Subcommittee on Training was instrumental to the development of this publication.

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FOREWORD

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Suggested revisions are invited and should be submitted to the general manager of the Pipeline Segment, American Petroleum Institute, 1220 L Street, N.W., Washington, D.C. 20005.

TABLE OF CONTENTS

<u>Section 1</u>	Background	1
<u>Section 2</u>	Regulatory Deadlines	1
<u>Section 3</u>	Affected Personnel	2
<u>Section 4</u>	Written Program	3
	4.1 Introduction	3
	4.2 Seven Required Elements	3
<u>Section 5</u>	Suggested Program	4
	<u>Figure 1 – Elements of an Operator Qualification Written Program</u>	4
	5.1 Format	4
	5.2 Process for Developing the Written Program Content	4
	5.3 Premises and Definitions	5
	5.4 Task Identification and Analysis	5
	5.5 Identification of Covered Tasks Using the Four-Part Test	6
	<u>Figure 2 – Application of the Four-Part Test to Identify Covered Tasks</u>	7
	5.6 Evaluation	8
	5.7 Communicating Changes in Covered Task Procedures	10
	5.8 Non-Qualified Individuals	11
	5.9 Contractor Personnel	11
	5.10 Record Keeping	12
<u>Section 6</u>	Program Maintenance	12
 APPENDICES		
<u>Appendix A</u>	Discussion of the Rule	13
	Qualification of Liquid Pipeline Personnel	13
	Introduction	13
	Part 195.403 Emergency Response Training – Amended	14
	Part 195.501 Scope – Added	15
	Examples Using the Criteria	20
	Part 195.503 Definitions – Added	22
	<u>Figure A-1 – Abnormal Operating Conditions for Each Covered Task</u>	23
	Part 195.505 Qualification Program – Added	26
	Part 195.507 Record Keeping – Added	29
	Part 195.509 General – Added	29
<u>Appendix B</u>	Example Operator Qualification Premises	31
	<u>Figure B-1 – Abnormal Condition Decision Flowchart</u>	33
<u>Appendix C</u>	Example Covered Task List – Quick Reference	35
<u>Appendix D</u>	Expanded Covered Task List for Liquid Pipelines	37
<u>Appendix E</u>	Acceptable Evaluation Methods	83
<u>Appendix F</u>	Effective Use of Evaluation Methods	85
<u>Appendix G</u>	Example Qualification Record Sheet	89
<u>Appendix H</u>	Example Job Performance Measure	91
<u>INDEX</u>	95

American Petroleum Institute's Guidance Document

Department of Transportation
Research and Special Programs Administration
49 CFR Part 195

QUALIFICATION OF LIQUID PIPELINE PERSONNEL

1. Background

The United States Department of Transportation (DOT), Research and Special Programs Administration (RSPA), requires that pipeline operators develop a written qualification program to evaluate personnel and contractor ability to perform covered tasks and to recognize and respond to abnormal operating conditions that may be encountered while performing these covered tasks. This is a performance-based qualification program. The regulations can be found in 49 CFR Part 195 and became effective October 26, 1999. A detailed discussion of the rule is included in this guidance document as Appendix A.

To provide guidance to the liquids pipeline industry, the American Petroleum Institute's Subcommittee on Training developed this guidance document to help pipeline operators comply with the rule. Pipeline operators may choose to use all or part of this document to design a program to comply with the qualification rule or may elect to develop their own program independent of this publication. Pipeline operators may also choose to modify an existing program.

This publication represents the consensus position of the pipeline companies involved in the development of this document and is designed as an aid in developing a qualification program. **This is a guidance document and should not be interpreted as a standard or recommended practice.** Pipeline operators should continue to exercise independent judgement in determining whether their programs conform to the regulatory requirements.

2. Regulatory Deadlines

The table below shows the compliance deadlines required in the rule:

August 27, 1999	Final rule published: Reference the Federal Register , Volume 64, Number 166, published Friday, August 27, 1999, pages 46853-46867.
October 26, 1999	Rule became effective.
April 27, 2001	Operators must have written qualification program complete.
October 28, 2002	Operators must complete the qualification of individuals performing covered tasks.

3. Affected Personnel

The personnel affected by the qualification program include any individual who performs a "covered task" and those who have involvement in ensuring a qualified workforce.

Descriptions or titles of individuals who may perform covered tasks include:

- Contractors
- Delivery/Gauger Personnel
- Front-line Supervisors including Lead Persons
- Operations and Maintenance Personnel
- Maintenance Technicians
(electrical/instrumentation/mechanical/corrosion)
- Patrol Pilots
- Pipeline Controllers/Dispatchers
- Terminal Operators
- Welders.

Individuals who are involved in ensuring a qualified workforce may include:

- Contractors
- Front-line Supervisors
- Human Resources Personnel
- Operations and Maintenance Trainers
- Operations, Maintenance and Control Center Managers
- Regulatory Compliance Personnel
- Team Leaders.

4. Written Program

The regulation requires that pipeline operators have a written qualification program. Operators without any qualification program must establish a written program to evaluate the individuals performing certain operation and maintenance activities on pipeline facilities that could affect pipeline operation or integrity. **Operators with existing programs may modify those programs as necessary to ensure compliance with the minimum requirements of this rule.**

The written program should include an introduction and address the seven required elements of the qualification rule. Below is a breakdown of the written program.

4.1 Introduction

The written program should include an introduction that addresses the objective of the qualification program, which is to ensure your company has a qualified workforce and to reduce the probability and consequence of accidents caused by human error. It should reference the regulation, 49 CFR Part 195, Subpart G, Sections 195.501 through 195.509. You also may consider including a copy of the regulation as an attachment to the written program for reference.

4.2 Seven Required Elements

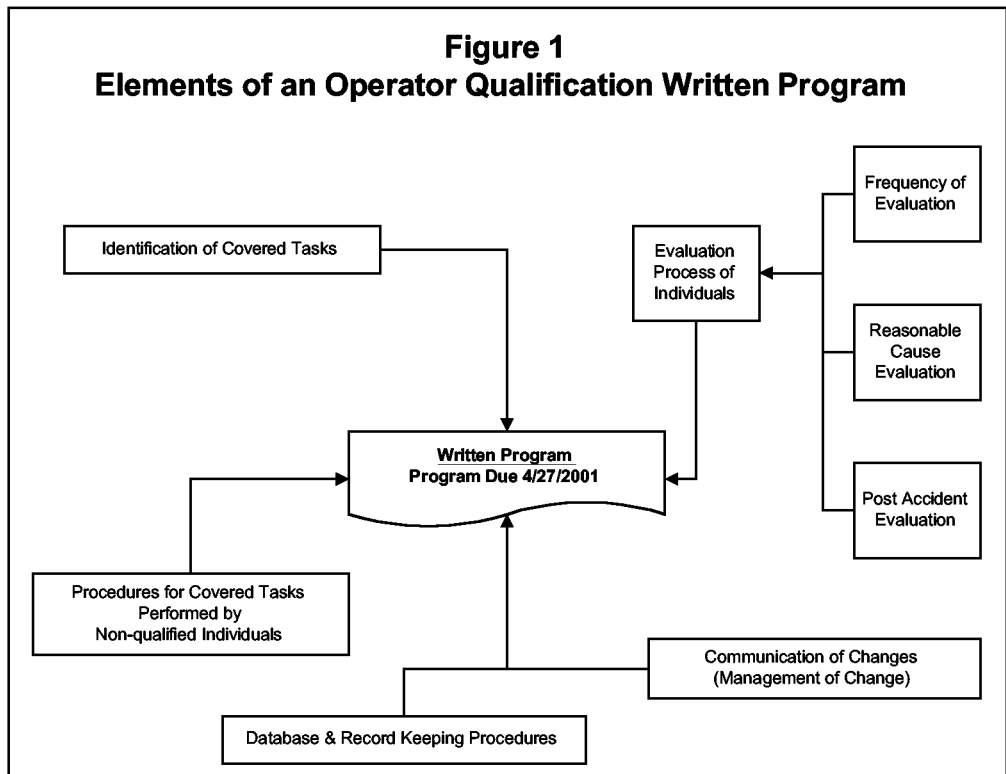
The written program must address the following required seven elements of the rule (49 CFR Part 195.505).

1. Identify covered tasks that personnel perform on your pipeline facilities.
2. Ensure, through evaluation, that individuals are qualified to perform covered tasks.
3. Allow non-qualified individuals to perform a covered task under the direct observation of a qualified person.
4. Evaluate an individual if there is reason to believe that the individual's performance of a covered task contributed to an accident as defined in 49 CFR Part 195.
5. Evaluate an individual if there is reason to believe that the individual is no longer qualified to perform a covered task.
6. Ensure that changes affecting covered tasks are appropriately communicated.
7. Identify the intervals at which re-evaluation of the individual's qualifications is needed

Each of these seven elements is discussed in this guidance document.

5. Suggested Program

Paragraphs 5 through 6 of this guidance document provide a basic outline for a written qualification program. Your program does not have to follow these contents, but at a minimum your company should ensure that the seven elements discussed in paragraph 4.2 are included. Figure 1 shows the elements that must be included in the program.



5.1 Format

A qualification program should be developed in a format that is convenient to your company, such as paper-based, electronic format, or web-based. The program should be accessible to company users and government regulators.

5.2 Process for Developing the Written Program Content

To develop a written program that encompasses the seven required elements, it is recommended that your company's program be developed using the following components.

- Premises and Definitions
- Task Identification and Analysis
- List of Covered Tasks (This may be included as an attachment)
- Evaluation Methods and Ongoing Evaluation
- Non-Qualified Individuals
- Contractor Personnel
- Record Keeping.

5.3 Premises and Definitions

**Develop the
Premises and
Definitions for
Interpreting the
Four-Part Test**

Premises and definitions are important because they provide a standard for accurately and consistently identifying tasks and determining whether they are covered or not covered.

The premises should address how your company interprets and applies the four-part test used to identify covered tasks and the company's understanding of abnormal operating conditions associated with covered tasks.

When developing premises and definitions, it is helpful to review the rule's four-part test and establish what your company considers:

- a pipeline facility
- an operations or maintenance task
- an activity specifically required of 49 CFR Part 195
- an activity that affects the operation or integrity of the pipeline

An example set of premises and definitions is included in Appendix B.

NOTE: When you have fully established your premises and definitions, strictly adhere to them.

5.4 Task Identification and Analysis

This analysis should be completed for each position, required by your company, which performs operations or maintenance activities including contractor positions.

Record each applicable activity on a master task list. It is important to focus on the activities of the position and not its responsibilities to determine if the activities are covered tasks.

Task identification and analysis may be accomplished by:

- Reviewing 49 CFR Part 195
- Interviewing individuals within each job position
- Reviewing operations, maintenance and safety manuals
- Reviewing contracts
- Reviewing the example covered task list in Appendix C of this guidance document. Review Appendix D for an expanded description of each covered task.

5.5 Identification of Covered Tasks Using the Four-Part Test

Note: An example list of covered tasks is included in Appendix C with an expanded list in Appendix D.

To identify which activities are covered tasks for your written program, measure each activity against the rule's four-part test. Adhere to the premises your company developed as you apply the four-part test to identify covered tasks.

The four-part test consists of the criteria listed below:

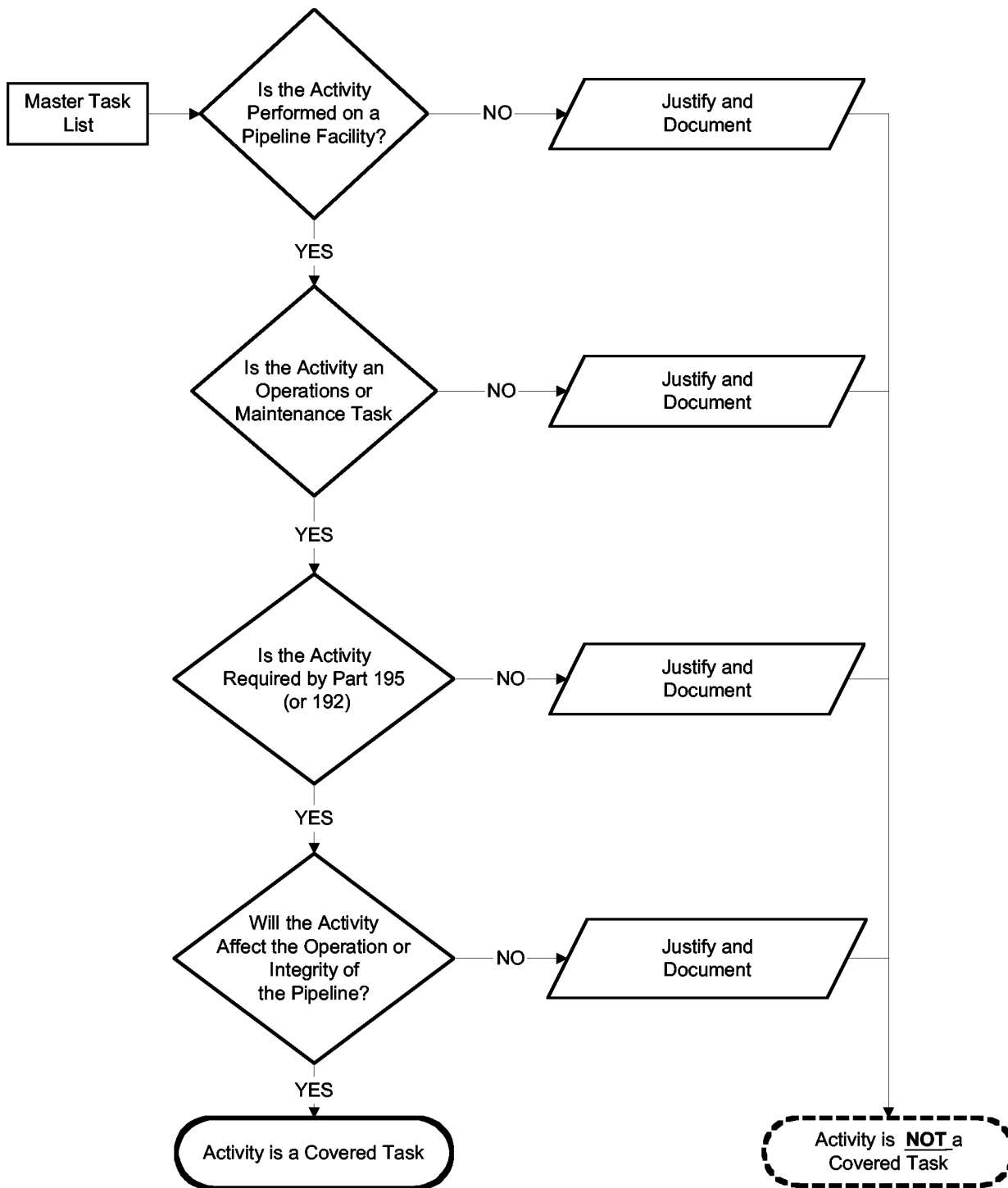
- Is it performed on a pipeline facility?
- Is it an operations or maintenance task?
- Is it performed as a requirement of 49 CFR Part 195?
- Does it affect the operation or integrity of the pipeline facility?

All four questions must be answered “yes” for the activity to be a covered task. Figure 2 shows the process for identifying and documenting covered tasks.

Additional guidance related to the covered task four-part test can be found in the Supplementary Information of the rule. (See Federal Register, Volume 64, Number 166, published Friday, August 27, 1999, pages 46853-46867.)

It is highly recommended that each company document its reason(s) that an activity does not meet the criteria in the four-part test so the rationale may be referenced during regulatory review.

Figure 2
Application of the Four-Part Test to Identify Covered Tasks



5.6 **Evaluation**

5.6.1 **Methods**

The written program must provide information on how the operator will evaluate individuals to determine whether they are qualified to perform covered tasks.

The rule provides several acceptable evaluation methods:

- written exam
- oral exam
- work performance history
- observation during performance on-the-job
- observation during on-the-job training
- simulations
- other forms of assessment

Appendix E provides acceptable evaluation methods for transitional, initial and subsequent qualification.

- **Transitional qualification** is that which is completed by October 28, 2002, for individuals who have been performing a covered task on a regular basis prior to August 27, 1999.
- **Initial qualification** is that done at any time for individuals who were not performing a covered task prior to October 26, 1999.
- **Subsequent qualification** refers to re-evaluating an individual at an interval established by the operator (e.g., annually, every three years, etc.).

Suggestions on the effective use of each evaluation method are listed in Appendix F.

When all covered tasks have been identified, each individual who performs those covered tasks must be evaluated to determine whether they are qualified to perform them. The evaluation method or combination of methods should sufficiently measure the individual's knowledge and skills to perform the covered task.

The evaluator should utilize a covered task evaluation checklist or procedure to ensure accurate and consistent assessment when performing an oral examination, on-the-job performance observation, or an on-the-job training observation.

The operator should determine the acceptable qualification criteria level for each covered task evaluation checklist, written examination, etc. The operator will need to determine what is acceptable performance during the evaluation. This can be in the form of a passing score for a written test and/or steps correctly completed during a performance evaluation.

Although training an individual to perform a covered task may be conducted individually or in a group, the evaluation process should be completed on an individual basis. Written evaluations may be given in a group setting, however the evaluation should reflect an individual's ability.

5.6.2 Subsequent Evaluation (re-evaluation)

The rule addresses certain conditions that require re-evaluation when any of the following apply:

- when the time interval, as established by the operator, has expired;
- if there is reason to believe the individual's performance of a covered task contributed to an accident; or
- if there is reason to believe an employee is no longer able to perform a covered task.

These are discussed in the sections below.

Time Interval

The regulation requires the operator to determine the time intervals appropriate for re-evaluation. Time intervals for subsequent evaluations may be based on:

- the frequency of performance of the covered task
- the complexity of the task
- the risk and consequences involved if the task is incorrectly performed

Tasks that are performed frequently and have low risk may have longer re-evaluation periods than tasks performed infrequently and have high risk. For example, a covered task that is:

- performed infrequently, is highly complex, and has severe consequences (high risk) may require frequent re-evaluation.
- performed weekly or more often and has a low degree of complexity with moderate to low consequences may require infrequent re-evaluation.

Establish the subsequent evaluation intervals and list them in the written program.

In Response to an Accident

The pipeline operator should evaluate an individual if the pipeline operator has reason to believe the individual's performance of a covered task contributed to an accident as defined in 49 CFR Part 195. An accident investigation should be performed to determine if an individual contributed to the accident and needs to be re-evaluated. The root cause analysis may also indicate if other individuals performing the same covered task need additional training to prevent recurrence of the same error.

The re-evaluation should sufficiently address both the knowledge and skill components of the covered task to ensure that the individual has been properly re-evaluated. Finally, all re-evaluations must be documented. Paragraph 5.10 provides information on record keeping.

☛ Employee is No Longer Able to Perform a Covered Task

5.7 Communicating Changes in Covered Task Procedures

When there is reason to believe that an individual may no longer be able to perform a covered task, re-evaluated and re-qualification prior to performing the covered task should occur. Examples of when this may occur are listed below.

- The individual has spent excessive time away from the job due to a disability, special assignment, or a change in job duties. (The specific time period established by the operator should be reflected in this part of the program.)
- The individual displays unsatisfactory performance of a covered task.
- There are significant changes to equipment or procedures.

The rule requires that the qualification program include provisions for communicating changes that affect covered tasks to individuals performing those affected covered tasks. When significant changes occur, the operator should consider whether additional qualification requirements are necessary and whether individuals performing the covered task should be evaluated again.

A management of change (MOC) process should be in place to keep individuals properly informed of changes in the procedures for covered tasks. A management of change process may be used in the cases listed below.

- Modifications to company policies or procedures
- Changes in State or Federal regulations
- Utilization of new equipment and/or technology
- New information from equipment or product manufacturers.

As part of the MOC process, all applicable training documentation and evaluation materials should be updated to reflect the changes.

5.8 Non-Qualified Individuals

There may be instances when non-qualified individuals are utilized to perform covered tasks (new employees in training, temporary employees assisting full-time employees, contractor personnel, etc.). In such situations, a non-qualified individual may perform the covered task provided a qualified person is directing and observing the non-qualified individual.

Below are some factors to consider when qualified persons are supervising non-qualified individuals.

- The qualified person must be close enough to each non-qualified individual to direct and observe his/her work and take immediate corrective action in the event an abnormal condition occurs. A qualified person can effectively observe multiple non-qualified individuals performing covered tasks in a close proximity area.
- There should be no obstructions or distance between the non-qualified individuals and the qualified person which would impede the qualified person's ability to directly observe and take immediate corrective action.

5.9 Contractor Personnel

The operator is responsible for ensuring the qualifications of contractor personnel performing covered tasks under 49 CFR Part 195 just as it is responsible for ensuring the qualifications of its own employees.

Contractor personnel may be qualified to perform covered tasks under the operator's qualification program. In addition, contractor personnel can be qualified under their own qualification program or a third-party qualification program provided the applicable qualification program has been approved by the operator and referenced in the operator's written program.

Non-qualified contractor personnel may perform covered tasks if directed and observed by a qualified person. The qualified person may be an operator's employee, an operator's representative (third-party inspector), or a contractor representative (refer to paragraph 5.8).

5.10 Record Keeping

Records on individuals and covered tasks should include the following:

- the qualified individual's name and/or employee/contractor number;
- the covered tasks that the individual is qualified to perform;
- the date(s) of current qualification; and
- the qualification method.

Retain documentation (such as the graded examination or an on-the-job training evaluation checklist) to support the evaluation procedure for a minimum of five years from the qualification date. Also, qualification documentation must be kept for five years after an individual stops performing covered tasks (refer to 49 CFR Part 195.507(b)).

See Appendix G for an example Qualification Record Sheet.

6. Program Maintenance

The qualification program should be evaluated periodically to verify its effectiveness. Changes to covered tasks, evaluation methods, evaluation materials, and associated training materials should be made as needed. The frequency that the operator establishes to evaluate the qualification program should be reflected in this section of the written program.

APPENDIX A – DISCUSSION OF THE RULE
(Excerpted from the DOT Document Published in the Federal Register August 27, 1999)

Qualification of Liquid Pipeline Personnel

This rule requires pipeline operators to develop and maintain a written qualification program for individuals performing covered tasks on pipeline facilities. The intent of this qualification rule is to ensure a qualified workforce and to reduce the probability and consequence of incidents caused by human error.

This rule

- creates new subparts in the gas and hazardous liquid pipeline safety regulations,
- establishes qualification requirements for individuals performing covered tasks, and
- amends certain training requirements in the hazardous liquid regulations.

The rule became effective October 26, 1999.

Introduction

The objective of this rule is to reduce the risk of accidents on pipeline facilities attributable to human error and provide an additional level of safety.

The rule

- requires operators of pipelines to develop a written qualification program to evaluate an individual's ability to perform covered tasks and to recognize and react to abnormal operating conditions that may occur while performing covered tasks;
- sets record-keeping requirements that operators must comply with to successfully demonstrate compliance; and
- provides the information that must be maintained on each individual evaluated and deemed qualified to work on a pipeline facility.

This rule allows operators with existing programs to modify those programs, as necessary, to ensure compliance with the minimum requirements of this rule. The rule also requires those operators without any qualification program to establish a program to evaluate the qualifications of individuals performing certain operation and maintenance activities on pipeline facilities that could affect pipeline operation or integrity.

The following sections provide the applicable regulatory citation in the left column with guidance in the right column.

THE RULE

49 CFR Part 195 Subpart N – Amended §195.403 Emergency Response Training.

- (a) Each operator shall establish and conduct a continuing training program to instruct emergency response personnel to:
- (1) Carry out the emergency procedures established under 195.402 that relate to their assignments;
 - (2) Know the characteristics and hazards of the hazardous liquids or carbon dioxide transported, including, in case of flammable HVL, flammability of mixtures with air, odorless vapors, and water reactions;
 - (3) Recognize conditions that are likely to cause emergencies, predict the consequences of facility malfunctions or failures and hazardous liquids or carbon dioxide spills, and take appropriate corrective action;
 - (4) Take steps necessary to control any accidental release of hazardous liquid or carbon dioxide and to minimize the potential for fire, explosion, toxicity, or environmental damage; and
 - (5) Learn the proper use of firefighting procedures and equipment, fire suits, and breathing apparatus by utilizing, where feasible, a simulated pipeline emergency condition.
- (b) At the intervals not exceeding 15 months, but at least once each calendar year, each operator shall:
- (1) Review with personnel their performance in meeting the objectives of the emergency response training program set forth in paragraph (a) of this section, and
 - (2) Make appropriate changes to the emergency response training program as necessary to ensure that it is effective.
- (c) Each operator shall require and verify that its supervisors maintain a thorough knowledge of that portion of the emergency response procedures established under §195.402 for which they are responsible to ensure compliance.

GUIDANCE

Previously Section 195.403 prescribed the training requirements for operations, maintenance, and emergencies for operators of hazardous liquid pipelines. The operator qualification rule under subpart G includes a qualification process for operations and maintenance activities, but does not include emergency response qualification requirements. Therefore, 49 CFR §195.403 was amended to address only emergency response activities. This section becomes effective October 28, 2002.

This rule removes the specific operations and maintenance training requirements previously addressed in §195.403. Persons performing operations and maintenance tasks must be qualified in accordance with the new rule.

THE RULE**49 CFR Part 195
Subpart G – Added****§195.501 Scope.**

- (a) This subpart prescribes the minimum requirements for operator qualification of individuals performing covered tasks on a pipeline facility.

GUIDANCE

The Accountable Pipeline Safety and Partnership Act of 1996 required RSPA to adopt regulations requiring that “all individuals who operate and maintain pipeline facilities shall be qualified to operate and maintain the pipeline facilities” and that employers “shall address the ability [of individuals] to recognize and react appropriately to abnormal operating conditions that may indicate a dangerous situation or a condition exceeding design limits.” Such a system offers the advantages of national consistency, including the ability of contractor employees to work for different operators under a single qualification regime.

The mandate is met by a non-prescriptive, performance-based regulation requiring each operator to develop, or have developed, a written program for the qualification of individuals. This allows each program to be tailored to the unique operations and practices of each operator.

Persons Covered by the Rule. This rule applies to operators subject to the requirements of 49 CFR Part 195. The rule also applies to all individuals who perform covered tasks, regardless of whether they are employed by the operator, a contractor, a subcontractor, or any other entity performing covered tasks on behalf of the operator.

Operators are Responsible for Identifying Covered Tasks. Because of large differences between operations of pipelines across the country, RSPA decided that a uniform list of covered tasks would not be useful and could result in overall increased costs. For example, some operators do not have transmission lines in their pipeline systems, others operate only distribution lines, and others do not have compressors, pump stations, or storage facilities. Some operators perform a large number of covered tasks, while other, smaller operators may have only a limited number of activities that would be classified as covered tasks.

Identification of covered tasks is a key component of the qualification requirements under this rule. Suggested covered tasks are identified in Appendix C and Appendix D.

THE RULE**§195.501 Scope.** (cont.)

- (b) For the purpose of this subpart, a covered task is an activity, identified by the operator, that:

GUIDANCE**Identification of Covered Tasks.**

The rule includes a four-part test that each operator must use to determine whether an activity constitutes a covered task. These are shown as numbers 1 – 4 to the left. Each is discussed in detail below.

The words "identified by" means the selection of covered tasks by the operator. The authority to allow pipeline safety regulatory require modifications to programs that fail to meet regulatory requirements is within the scope of federal and state jurisdiction, as is the authority to question particular activities included as covered tasks by the operator.

The operator of a pipeline facility is responsible for identifying which activities performed on that facility are covered tasks. The criteria for identifying such covered tasks on hazardous liquid pipelines are set forth in §195.501.

Although operators are responsible for identifying covered tasks for which individuals must be qualified, pipeline safety regulators remain responsible for reviewing operator qualification programs and ensuring that federal regulatory standards are applied and met nationwide. Regulators may question an operator's inclusion or exclusion of particular activities as covered tasks. Regulators may require modifications to programs that fail to meet the requirements of the rule.

- (1) Is performed on a pipeline facility;

Tasks Performed on a Pipeline Facility. The phrase

"performed on a pipeline facility" means an activity that is performed by an individual whose performance directly impacts the pipeline facility. An individual who works on a pipeline component that is physically connected to the pipeline system is performing work "on a pipeline facility" and may be subject to the rule, regardless of whether or not product is flowing through the pipeline.

However, a person who repairs a pipeline component or appurtenance that has been removed from the system is not performing work on the pipeline and, therefore, would not be performing a covered task.

THE RULE

§195.501 Scope. (cont.)

- (2) Is an operations or maintenance task;

GUIDANCE

Operations or Maintenance Tasks. The act requires that all individuals who operate and maintain pipeline facilities be qualified to operate and maintain those facilities (49 U.S.C. Section 60102(a)(1)(C)).

Most of the operations and maintenance activities on pipeline facilities are found in 49 CFR Part 195, Subpart F. In addition, the regulations contain other subparts that include requirements for conducting operations and maintenance activities.

For example, monitoring corrosion control systems in accordance with requirements is an operations activity. Taking corrective action as required when deficiencies are found in a corrosion control program is a maintenance activity. Therefore, repairing pipelines affected by corrosion is also a maintenance activity.

Certain tasks performed on pipeline facilities may be covered tasks when performed in the course of operation and maintenance activities but not be covered tasks in the course of other activities. For example, "welding" could be a covered task when performed as an operations and maintenance activity on a pipeline, such as when installing a weld-over sleeve to repair an anomaly. However, "welding" is not a covered task under this subpart when performed during the fabrication of new installations because this would not be an operations and maintenance task.

However, welders are currently subject to qualification requirements in 49 CFR Part 195, Subpart D. To comply with the rule, welders would have to be qualified to recognize and react to abnormal operating conditions when performing welding as a covered task.

THE RULE

§195.501 Scope. (cont.)

(3) Is performed as a requirement of this part; and

(4) Affects the operation or integrity of the pipeline.

GUIDANCE

Tasks Performed Pursuant to a Requirement in 49 CFR Part 195. Covered tasks include only those operations and maintenance activities required by 49 CFR Part 195.

Examples of covered tasks might include:

- inspecting navigable water crossings under §195.412 and
- inspecting breakout tanks under §195.432.

Operators of pipeline facilities may voluntarily conduct operations and maintenance activities that are not required by a specific provision in 49 CFR Part 195. However, an activity does not necessarily become a covered task simply because an operator develops procedures for conducting the activity and includes those procedures in its Operations and Maintenance Program.

For example, an operator may voluntarily choose to maintain a customer's buried piping. It includes procedures for such maintenance activity in its Operations and Maintenance Program. Because such maintenance is not specifically required by 49 CFR Part 195, the associated maintenance activities are not covered tasks.

Tasks Affecting the Operation or Integrity of the Pipeline.

Under the rule, covered tasks include only those activities that affect the operation or integrity of the pipeline.

It is important to clarify the term "operation" as used here in the safety context of normal versus abnormal operation, where the latter could result in an unsafe condition. For example, the control of flow and pressure in pipelines could result in abnormal operation if the pressure is allowed to rise above an acceptable limit. Therefore, in this example, activities that include controlling flow and pressure on a pipeline system would be considered covered tasks if the other three criteria for covered tasks were met.

The "integrity" of the pipeline refers to the pipeline's ability to operate safely and to withstand stresses imposed during operations. An example of a short-term effect on integrity would be exceeding the

THE RULE

§195.501 Scope. (cont.)

GUIDANCE

Maximum Operating Pressure (MOP) for liquid pipelines. An example of a long-term effect would be failure from corrosion due to improper coating after repair of a welded joint.

An additional example of a task affecting the integrity of the pipeline would be coating or jacketing of aboveground pipeline components. In the event atmospheric corrosion is present, coating or jacketing the component could affect the integrity of the pipeline. However, painting a pipeline for aesthetic reasons would not affect the integrity of the pipeline.

In identifying covered tasks, operators must consider specific activities and not the job classification of individuals performing the activities, since each job classification may incorporate several activities. For example, an individual with the job classification "meter reader" may be assigned activities other than reading a meter that could be covered tasks; and that individual would need to be qualified for those covered tasks.

EXAMPLES USING THE CRITERIA.

The following are hypothetical examples of how the four-part test can be used to identify a covered task.

If an activity fails to meet any of the four criteria, the activity would not be considered a covered task under this rule.

EXAMPLE #1: MEASURING PIPE-TO-SOIL POTENTIALS

1. Is it performed on a pipeline facility?

Yes, pipe-to-soil potentials are measured at cathodic test stations attached directly to the pipeline.

2. Is it an operations and maintenance task?

Yes, pipe-to-soil potentials are read in the course of pipeline operations and maintenance activities.

3. Is it performed as a requirement of this part?

Yes, pipe-to-soil potential measurements are required by 49 CFR §195.416.

4. Does it affect the operation or integrity of the pipeline?

Yes, pipe-to soil potential measurements, if taken improperly, will not accurately reflect the level of cathodic protection being provided. While not affecting the immediate operation of the pipeline, the future integrity of the pipeline might be jeopardized (for example, corrosion might develop) if inadequate cathodic protection is applied to the pipeline over a period of time.

Since all four criteria are met, the measurement of pipe-to-soil potentials is a covered task.

EXAMPLES USING THE CRITERIA.

The following are hypothetical examples of how the four-part test can be used to identify a covered task.

If an activity fails to meet any of the four criteria, the activity would not be considered a covered task under this rule.

EXAMPLE #2: METER READING

1. Is it performed on a pipeline facility?

Yes, a meter is a part of a pipeline facility.

2. Is it an operations and maintenance task?

Yes, meters are read in the course of pipeline operations and maintenance activities.

3. Is it performed as a requirement of this part?

No, meter reading is not a requirement of Part 195.

4. Does it affect the operation or integrity of the pipeline?

No, meter reading has no impact on pipeline operation or integrity.

Because meter reading fails to meet at least one of the four criteria, meter reading is not considered a covered task.

THE RULE

§195.503

Definitions.

Abnormal operating condition means a condition identified by the operator that may indicate a malfunction of a component or deviation from normal operations that may:

- (a) indicate a condition exceeding design limits; or
- (b) result in a hazard(s) to persons, property, or the environment.

GUIDANCE

This definition is derived from the Accountable Pipeline Safety and Partnership Act of 1996 and codified in 49 CFR Part 195.402(d)(1)(v).

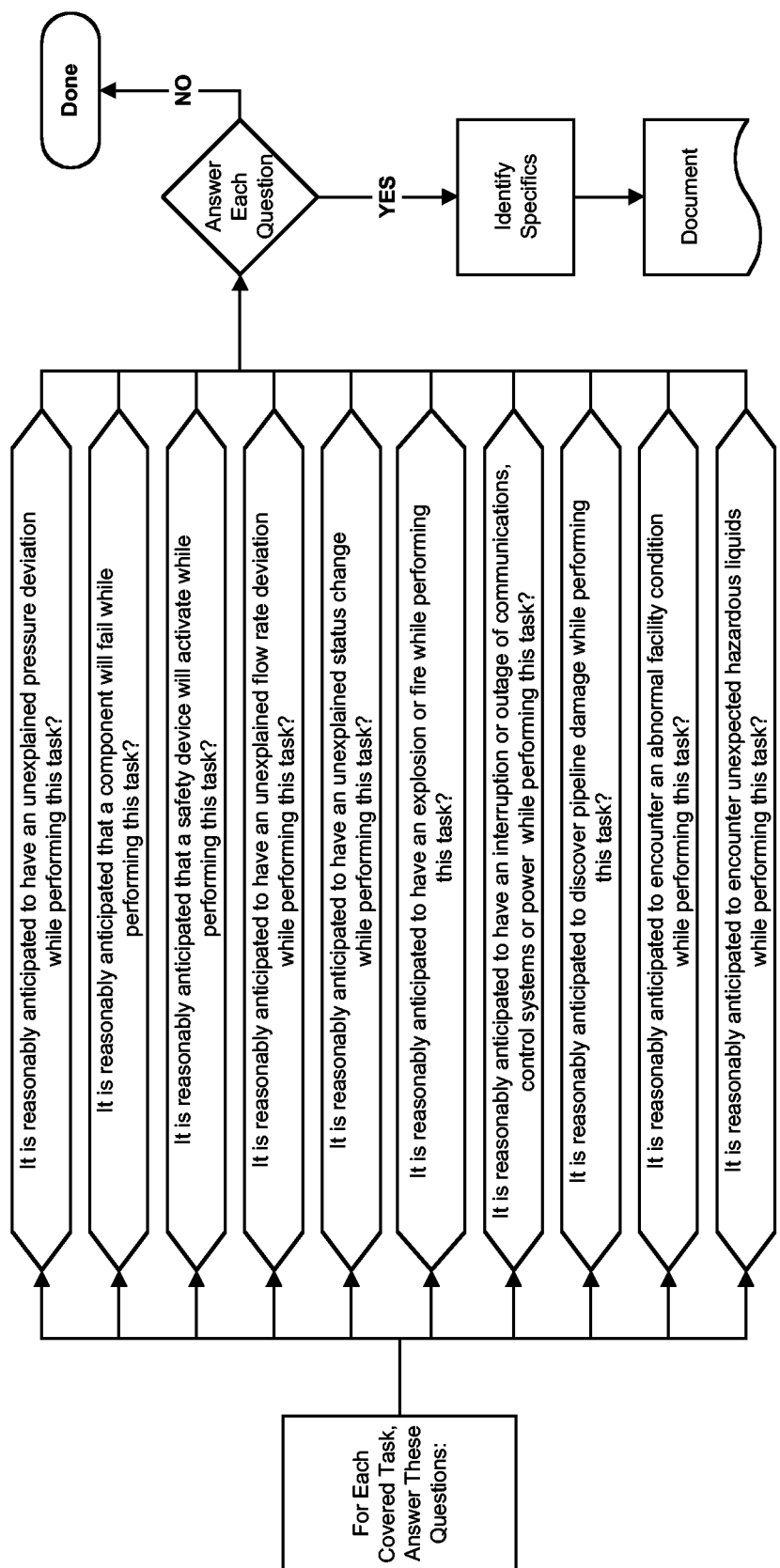
“Abnormal operating conditions” is also referenced in the definition of the term “qualified” (see below).

Not all atypical (unusual) operating conditions are abnormal. An example of an atypical operating condition that is not abnormal is a pipeline which can (not to exceed Maximum Operating Pressure (MOP)) operate up to 200 pounds per square inch (psig), but which typically operates at 50 psig. Operating this pipeline at 150 psig would be atypical, but not abnormal.

If, however, the atypical operating condition could cause the pressure in the pipeline to exceed its allowable limits or cause a hazard to persons, property or the environment, an abnormal operating condition would result. A qualified individual performing control of pressure and flow who observes an unanticipated pressure increase in such a pipeline segment should know to investigate the cause of the change before it reaches the MOP of the line.

Figure A-1 provides information on determining abnormal operating conditions for covered tasks.

Figure A-1
Abnormal Operating Conditions for Each Covered Task



THE RULE

Evaluation means a process, established and documented by the operator, to determine an individual's ability to perform a covered task by any of the following:

- (a) written examination
- (b) oral examination
- (c) work performance history review
- (d) observation during
- (e) performance on the job
- (f) on the job training
- (g) simulations
- (h) other forms of assessment

GUIDANCE

The evaluation of an individual's qualifications should be an objective, consistent process that documents an individual's ability to perform the covered task. This includes the individual's ability to recognize and react to abnormal operating conditions that the operator could reasonably anticipate the qualified individual will encounter while performing the covered task.

The operator should establish the acceptance criteria for the evaluation method used (for example, for on-the-job training, spell out the performance criteria; for a written exam, establish the cutoff score). Although the definition lists several acceptable methods for evaluation, the list is not all-inclusive. Operators might select other methods.

The table in Appendix E shows acceptable evaluation methods for "transitional," "initial" and "subsequent" qualification.

Under §195.509(c), a work performance history review may not be used as a sole evaluation method after October 28, 2002.

"Transitional" qualification may rely on a work performance history review as the sole evaluation method.

"Initial" qualification may not rely on only a work performance history review.

"Subsequent" qualifications may rely on work performance history review if used in conjunction with at least one other evaluation method.

Prior to the October 28, 2000, operators may use work performance history review as the sole method for evaluation when qualifying individuals Who performed the covered task prior to August 29, 2002, if work performance history review is used, it must be combined with at least one other form of assessment. Any of the other forms of assessment specified in the definition of evaluation may be used as the sole method of evaluation both before and after the three-year compliance date. When an operator has qualified an individual prior to the three

THE RULE

GUIDANCE

year compliance date and used work performance history review as the sole method of evaluation, the operator is not required to re-evaluate each individual using additional criteria until the next scheduled evaluation, which may vary by covered task.

The operator must establish the parameters for the work performance history review. For example, a work performance history review may include:

searching existing records for documentation of an individual's past satisfactory performance of covered task(s)

verifying that the individual's work performance history contains no indications of substandard work or involvement in an accident (Part 195), caused by an error in performing a covered task

- verifying that the individual has successfully performed the covered task on a regular basis prior to the effective date of the rule.

Qualified means that an individual has been evaluated and can

- perform assigned covered tasks and
- recognize and react to abnormal operating conditions.

An individual may be qualified using any of the evaluation methods specified in the operator's written qualification program.

To be qualified, an individual needs to be able to properly perform assigned covered tasks and be able to recognize and react to an abnormal operating condition that may be encountered while performing the covered task. For example, this may include notifying the responsible parties or taking corrective action to mitigate the condition.

As an example, an individual who is qualified to perform control of pressure and flow should be able to recognize and react to an abnormal operating pressure in a pipeline segment.

THE RULE**§195.505 Qualification program.**

Each operator shall have and follow a written qualification program. The program shall include provisions to:

- (a) Identify covered tasks
- (b) Ensure thorough evaluation that individuals performing covered tasks are qualified

GUIDANCE

The seven elements (a – g at left) are required in the operator's written qualification program:

The operator must identify the tasks that the operator considers to be covered. This is determined by using the four criteria in §195.501(b). Because operators are responsible for identifying covered tasks, variations among qualification programs are expected.

Although a periodic review requirement is not included in the rule, an operator may consider a periodic review to ensure the accuracy of its covered task list.

The written program must provide information on how the operator intends to evaluate individuals to qualify them for covered tasks.

The pipeline operator is responsible for all individuals working on their pipeline systems. This includes operator, as well as contractor personnel. Persons performing evaluations should possess the required knowledge

(1) to ascertain an individual's ability to perform covered tasks and

(2) to substantiate an individual's ability to recognize and react to abnormal operating conditions that might surface while performing those tasks.

This does not necessarily mean that the persons performing evaluations should be physically able to perform the covered tasks themselves.

Because the operator is responsible for the development and implementation of the evaluation methods, the operator should also be responsible for selecting appropriately knowledgeable individuals to perform evaluations. The rule requires a qualification program that focuses on ensuring an individual can properly perform a covered task(s) rather than the credentials of persons conducting evaluations.

THE RULE

- (c) Allow individuals that are not qualified pursuant to this subpart to perform a covered task if directed and observed by an individual that is qualified

GUIDANCE

Individuals who have not been qualified may perform covered tasks as long as a qualified individual directly observes the non-qualified individual(s) and is able to take immediate corrective actions when necessary.

For example, an operator may use a three-person crew to repair a leak. Two of the crew members could be non-qualified. The crew excavates and makes the repair under the direct and close observation of the qualified member of the crew.

The intent of this provision is to ensure that non-qualified individuals performing covered tasks are subject to close observation of a qualified individual. Ultimately, the qualified member of the crew is responsible for the repair. The ratio of non-qualified individuals to qualified individuals should be kept to a minimum.

If so, the individual's qualification should be evaluated to determine if the individual continues to be qualified to perform the covered task.

This could occur if the individual displays unsatisfactory performance of the task or if there is reason to believe the individual no longer can perform the covered task.

The operator's qualification program must include provisions for evaluating an individual's qualification if the circumstances warrant.

- (d) Evaluate an individual if the operator has reason to believe that the individual's performance of a covered task contributed to an accident as defined in Part 195

- (e) Evaluate an individual if the operator has reason to believe that the individual is no longer qualified to perform a covered task

THE RULE

- (f) Communicate changes that affect covered tasks to individuals performing those covered tasks

GUIDANCE

This paragraph recognizes that changes may occur that impact how a covered task is performed. Changes that may need to be communicated to individuals performing covered tasks may include:

- modifications to company policies or procedures
- changes in state or federal regulations
- utilization of new equipment and/or technology
- new information from equipment or product manufacturers

The rule requires that the qualification program include provisions for communicating information on substantive changes to the individuals performing the affected covered tasks. When significant changes occur, the operator should consider whether additional qualification requirements are necessary and whether individuals performing the covered task should be evaluated again.

- (g) Identify those covered tasks and the intervals at which evaluation of the individual's qualifications is needed.

It is left to the operator to determine which tasks are covered and the interval at which subsequent qualification of an individual performing a covered task will occur. The appropriate intervals may vary depending on the task. The evaluation intervals could be specified in units of time, frequency of task performance, or other appropriate units. Subsequent evaluation methods may differ from initial qualification methods.

The rule does not require that the written qualification program be incorporated into an operator's Operations and Maintenance Program. The operator may expand any of the seven required elements and add additional elements to their program but will only be held accountable to meet the requirements of this subpart.

THE RULE

§195.507 Record Keeping.

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

- (a) 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).
- (b) Records supporting an individual's current qualification shall be maintained while the individual is performing the covered task. Records of prior qualification and records of individuals no longer performing covered tasks shall be retained for a period of five years.

§195.509 General.

- (a) Operators must have a written qualification program by April 27, 2001.
- (b) Operators must complete the qualification of individuals performing covered tasks by October 28, 2002.
- (c) Work performance history review may be used as a sole evaluation method for individuals who were performing a covered task prior to August 27, 1999.
- (d) After October 28, 2002, work performance history may not be used as a sole evaluation method.

GUIDANCE

Under the rule, each operator is required to maintain records that demonstrate compliance, including the information shown at left.

Records of an individual's current qualifications must be maintained while the individual is performing the covered tasks for which he/she is qualified. When an individual is evaluated for subsequent qualification, the prior qualification records must be maintained for a period of five years. Also, when an individual stops performing a covered task (for example, the individual retires or is promoted) the individual's qualification records must be retained for a period of five years. The records may be kept in paper, electronic, or any other appropriate format. The records may be kept at a central location or at multiple locations.

The rule does not address whether a certification or other record of qualification need be issued to each qualified individual. This matter is solely within the discretion of the operator.

This will allow operators with more limited resources and differing budget cycles adequate time to complete the qualification process. Those operators who are able to comply before the mandatory compliance date are encouraged to do so. The rule does not intend to penalize early compliance. Therefore, the starting time for subsequent evaluation intervals determined by the operator is not required to begin until October 28, 2002.

Finally, work performance history review will only be allowed as the sole method of evaluation during the three-year period prior to the mandatory compliance with the rule. After this time, work performance history review will be an acceptable method of evaluating individuals only in combination with another evaluation method.

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The following is provided as an example of the types of premises and definitions that operators may want to include in their written program. This is only an example, and each company should make its own interpretations in preparing its premises and definitions.

A Covered Task

- is a discrete activity performed by an individual or group of individuals
 - has a beginning and an ending point
 - has two or more steps
 - can be observed and measured
 - is identified by the Company and
 - meets all four of the conditions discussed below.
1. **Performed on a pipeline facility** means an **activity** that is performed by an individual or group of individuals whose performance directly impacts the pipeline facility.
 - A. **Pipeline facility** is new and existing pipe, rights-of-way and any equipment, facility or building used in the transportation of hazardous liquid.
 - B. **Activity** means physical, visual or mental effort directed at achieving a result.
 - C. **Removed from the system** means that a part of the **pipeline system** is physically removed from the **pipeline system**.
 - D. **Pipeline system** means all parts of a pipeline facility through which a hazardous liquid moves in transportation (line pipe, valves, appurtenances, pumps, meters, tanks, etc).

2. **Operations and maintenance** tasks are **activities** done by an individual or group of individuals (1) to perform a function on a **pipeline facility** or, (2) to provide upkeep of a **pipeline facility**.

- A. A “new construction task” changes to an **operations and maintenance task** when the **pipeline facility** is being commissioned or during the act of connecting to an active **pipeline facility**.
- B. The following are not operations and maintenance tasks:
 - Activities on pipelines that have never been in service and not physically attached to an operating pipeline.
 - Fabrication of new installations.
 - Emergency response activities.

3. **Required by Part 195** means only those tasks specifically required to be addressed in Part 195. State and local requirements are not applicable to this rule.

4. **Affects the operation or integrity of the pipeline** means any **activity** that could directly or indirectly cause the release of hazardous liquid to the environment or result in a hazard to persons or property.

- A. Pipeline means Pipeline System (See 1 D).
- B. An affect can be either immediate (direct) or delayed (indirect).
- C. The integrity of the pipeline refers to the pipeline’s ability to operate safely and to withstand stresses imposed during operations.

Evaluation means a process, established and documented by the Company, to determine an individual’s ability to perform a covered task.

Qualified means

- that an individual has passed an evaluation
- the individual can perform assigned covered tasks
- the individual can recognize and react to abnormal operating conditions and
- compliance documentation is completed.

Individual means a person who, on behalf of the Company, performs one or more covered tasks on a pipeline facility operated by the Company.

Operate means starting, stopping or monitoring.

Abnormal Operating Condition (AOC) means a condition identified by the Company that may indicate a malfunction of a component or a deviation from normal operations that may indicate an operating condition that could exceed design limits or result in hazard(s) to persons, property, or the environment.

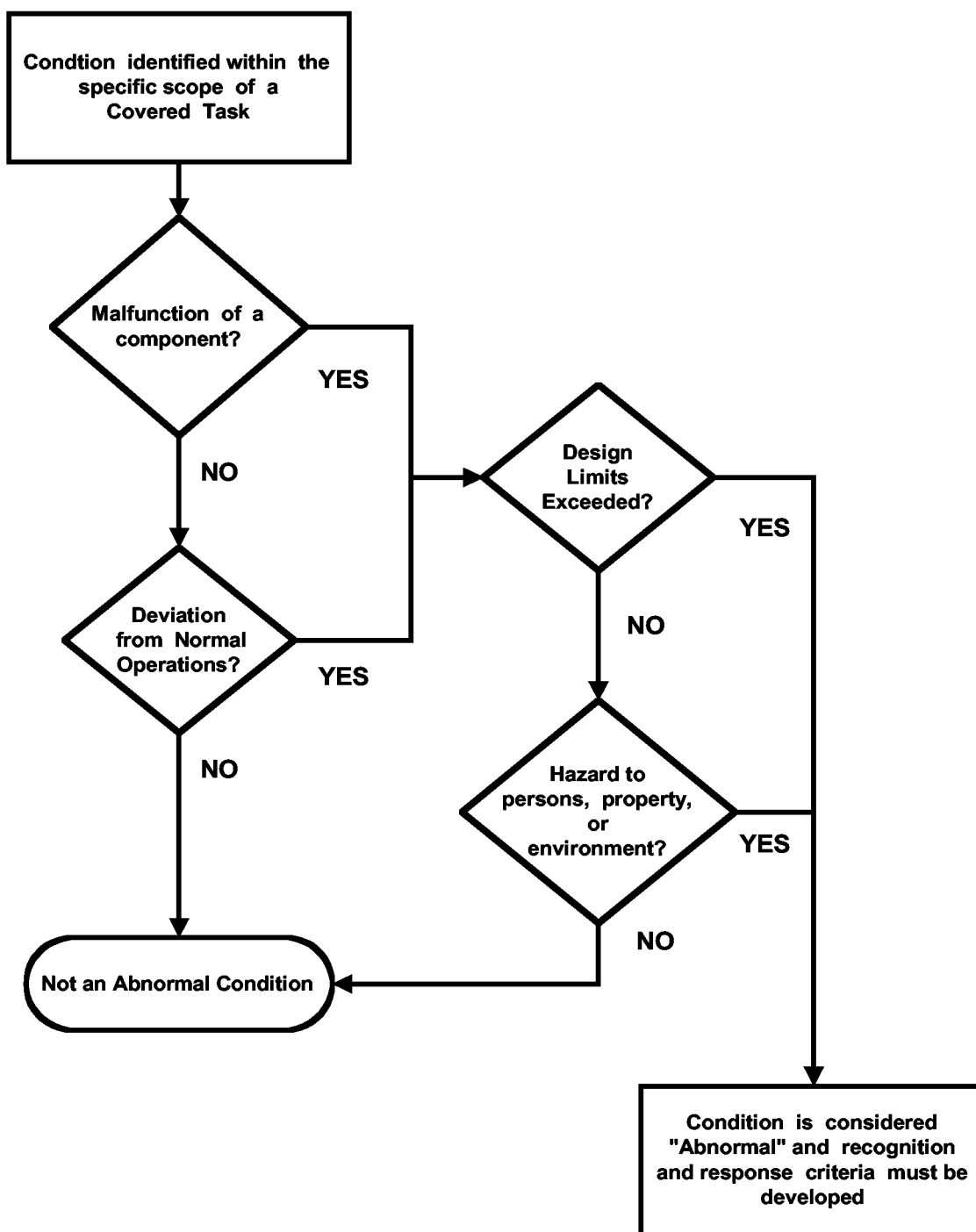
NOTE: A deviation from normal operation does not necessarily mean an abnormal operating condition exists. Refer to Figure B-1 for the Abnormal Condition Decision Flow Chart.

Some examples of AOC may include but are not limited to those shown below:

- Unexpected hazardous liquid or carbon dioxide encounter (unauthorized release, vapors, hazardous atmosphere, and contamination).
- Unexplained pressure deviations (increase, decrease, high, low, absent).
- Activation of a safety device (pressure relief, emergency shut downs, high pressure shut downs, case pressure shutdowns, high temperature shutdowns, etc.).
- Unexplained flow rate deviations (high flow, low flow, no flow).
- Unexplained status change (unit start-up, unit shut-down, valve open, valve close, gravity change, tank level, temperature, flash, haze, S&W, co-mingling of product, etc.).
- Fire/explosion.
- Interruption or failure of communications/control system/power.
- Pipeline system damage (line hit, lightning strikes, tornado, flood, earthquake, damaged pipeline support, etc.).
- Abnormal facility condition (exposed pipe, low cathodic protection levels, missing line markers, frayed or broken test lead wires, line crossing, excessive atmospheric corrosion, exposed river crossing).
- Component failure or malfunctioning component (field and SCADA components including meter failure).

Items listed above may be indications of an abnormal condition or may create an abnormal operating condition related to a specific covered task.

Figure B-1
Abnormal Condition Decision Flowchart



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The tasks in this document are intended to be a **guideline** for developing an Operator's Covered Task List. Some of the items in this list are categories that contain several tasks. For each category, an Operator must determine what tasks are performed as part of that category. Some Covered Tasks may not be included on this list and some items may not be a covered task in all situations. Each Operator must evaluate its specific situations for performing a task and determine if it meets the four-part test.

Task ID From Appendix D	Covered Task Name	Regulatory Citation
1	Conduct Annual Surveys	195.416 (a)
2	Maintain Test Leads	195.416 (b) 195.244
3	Inspect Rectifier	195.416 (c) 195.242
4	Maintain Rectifier	195.416 (c) 195.242
5	Inspect Buried Pipe When Exposed	195.416 (e) 195.242
6	Electrically Inspect Bare Pipe	195.416 (d) 195.242
7	Prevention Of Atmospheric Corrosion	195.238
8	Measure Wall Thickness of Pipe	195.416 (h)
9	Cathodic Protection Remediation	195.242
10	Monitoring For Internal Corrosion	195.418 (a) 195.418 (b) 195.242
11	Internal Corrosion Remediation	195.418 (b)
12	Inspect Internal Pipe Surfaces	195.418 (d)
13	Application and Repair Of External Coatings	195.238 (a)
14	Place and Maintain Line Markers	195.410 (a) 195.410 (c)
15	Inspect Surface Conditions Of Right Of Way	195.412 (a)
16	Inspect Navigable Waterway Crossing	195.412 (b)
17	Provide Temporary Marking Of Buried Pipeline Prior To Excavation	195.442
18	Inspection Following Excavation Activities And Leak Survey After Blasting	195.442 (c) 6
19	Maintain Valves	195.420 (a)
20	Inspect Valves	195.420
21	Repair Valves	195.420
22	Inspect, Test, And Calibrate Relief Valves	195.428
23	Maintain/Repair Relief Valves	195.428
24	Inspect, Test, And Calibrate Pressure Limiting Devices	195.428
25	Inspect, Test, And Calibrate Pressure Switches And Transmitters	195.428
26	Verify Or Set Protection Parameters For Programmable Controllers And/Or Instrumentation Control Loops	195.428
27	Inspect And Repair Breakout Tanks	195.432

Task ID From Appendix D	Covered Task Name	Regulatory Citation
28	Provide Security For Pipeline Facilities	195.436
29	Protect Breakout Tanks From Static Electricity, Lightning, And Stray Electrical Currents	195.405
30	Test Overfill Protective Devices	195.428
31	Inspect And Calibrate Overfill Protective Devices	195.428
32	Repair Overfill Protective Devices	195.428
33	Moving In-Service Pipe	195.424
34	Inspect Existing Pipe Following Movement	195.246 195.252
35	Inspection Of Clearance Of Existing Pipe To Underground Structures	195.250
36	Abandoning, Safe Disconnect, Purging, And Sealing Of Pipeline Facilities	195.402 (c) (10)
37	Installation Or Repair Of Support Structures On Existing Aboveground Components	195.254 195.422
38	Inspection Activities For Tie-Ins, Pipe Replacements, Or Other Components Connecting To An Existing Pipeline	195.204 195.206 195.422
39	Backfilling A Trench Following Maintenance	195.252 195.422
40	Perform General Pipeline Repair Activities	195.422
41	Conduct Pressure Tests	195 Subpart E 195.406
42	Welding On Existing Pipeline Systems	195.214 195.226 195.230
43	Operations Of Pipeline System	195.402 195.406
44	CPM Leak Detection	195.444
45	Operate Pressure Relieving Devices For Launching And Receiving Facilities	195.426

APPENDIX D – EXPANDED COVERED TASK LIST FOR LIQUID PIPELINES

NOTE: The tasks in this document are intended to be a **guideline** for developing an Operator's Covered Task List. Some of the items in this list are categories that contain several tasks. For each category, an Operator must determine what tasks are performed as part of that category. Some Covered Tasks may not be included on this list and some items may not be a covered task in all situations. Each Operator must evaluate its specific situations for performing a task and determine if it meets the four-part test.

Task ID:

1

Covered Task Name:

Conduct Annual Surveys

Description:

Annual surveys are conducted each calendar year for each operator's pipeline system that is under cathodic protection to ensure that the protection is adequate. This task is related to the collection of data and does not include analysis.

Elements of this task may include:

- Measurement of pipe-to-soil potentials
- Measurement of casing-to-soil potentials
- Testing to detect interference and/or to ensure electrical isolation from foreign structures
- Inspection and electrical test of bonds
- Measurement of tank bottom-to-soil potentials

Four-Part Test for the Covered Task:

Is task performed on the pipeline?

Yes

Is the task an Operations or Maintenance Task?

Yes

Is the task required by Part 195 (or 192)?

Yes – 195.416 (a)

Does task affect the operation or integrity of the pipeline?

Yes

Notes:

The majority of liquid pipelines are under cathodic protection; this is a standard O&M task in corrosion control. A close interval survey may be used as an annual survey but is not required.

Abnormal Operating Conditions and Examples:

Abnormal facility condition

CP reading outside of expected ranges

Fire/Explosion

Ignition of hydrocarbons

Unexpected hazardous liquid or carbon dioxide encountered

Employee could discover a leak while performing this task

Task ID:

2

Covered Task Name:

Maintain Test Leads

Description:

Test leads required for cathodic protection must be maintained to ensure that accurate measurements can be obtained.

Elements of this task may include:

- Recognize electrical discontinuity
- Replace broken test lead
- Repair broken test lead

Four-Part Test for the Covered Task:

Is task performed on the pipeline?

Yes

Is the task an Operations or Maintenance Task?

Yes

Is the task required by Part 195 (or 192)?

Yes – 195.416 (b), 195.244

Does task affect the operation or integrity of the pipeline?

Yes

Notes:

The majority of liquid pipelines are under cathodic protection; this is a standard O&M task in corrosion control.

Abnormal Operating Conditions and Examples:

Component failure

Discover broken leads

Fire/Explosion

Burn through during cadweld, ignition of vapor

Pipeline System damage

Burn through during cadweld, dents, and gouges

Unexpected hazardous liquid or carbon dioxide encountered

Employee could discover a leak while performing this task

Task ID:	3
Covered Task Name:	Inspect Rectifier
Description:	<p>Pipeline operators are required to inspect each of its cathodic protection rectifiers at least six times each calendar year.</p> <p>Inspection activities may include:</p> <ul style="list-style-type: none"> • Obtaining a voltage and current output readings from a rectifier • Checking for proper operation • Visual inspection of components
Four-Part Test for the Covered Task:	<p><i>Is task performed on the pipeline?</i> Yes</p> <p><i>Is the task an Operations or Maintenance Task?</i> Yes</p> <p><i>Is the task required by Part 195 (or 192)?</i> Yes – 195.416 (c), 195.242</p> <p><i>Does task affect the operation or integrity of the pipeline?</i> Yes</p>
Notes:	None applicable.
Abnormal Operating Conditions and Examples:	<p>Abnormal facility condition Abnormal rectifier output</p> <p>Communications, Control System or Power interruption or failure Power failure</p> <p>Component failure Broken leads, failed rectifier</p>

Task ID:	4
Covered Task Name:	Maintain Rectifier
Description:	<p>Impressed current type cathodic protection systems depend on the rectifier or other power sources for proper operation.</p> <p>Rectifier maintenance activities may include:</p> <ul style="list-style-type: none"> • Repair/replace defective components (for example: switches, diodes, etc.) • Check/repair rectifier connections (bonds) • Adjustment/calibration of rectifier
Four-Part Test for the Covered Task:	<p><i>Is task performed on the pipeline?</i> Yes</p> <p><i>Is the task an Operations or Maintenance Task?</i> Yes</p> <p><i>Is the task required by Part 195 (or 192)?</i> Yes – 195.416 (c), 195.242</p> <p><i>Does task affect the operation or integrity of the pipeline?</i> Yes</p>
Notes:	None applicable.
Abnormal Operating Conditions and Examples:	<p>Abnormal facility condition Abnormal rectifier output</p> <p>Communications, Control System or Power interruption or failure Power failure</p> <p>Component failure Broken leads, failed rectifier</p>

Task ID:	5
Covered Task Name:	Inspect Buried Pipe When Exposed
Description:	<p>Any time buried pipe is exposed, pipeline operators must examine the pipe for evidence of external corrosion.</p> <p>Elements of this task may include:</p> <ul style="list-style-type: none"> • Inspect for physical damage • Inspect for corrosion • Inspect the condition of coating
Four-Part Test for the Covered Task:	<p><i>Is task performed on the pipeline?</i> Yes</p> <p><i>Is the task an Operations or Maintenance Task?</i> Yes</p> <p><i>Is the task required by Part 195 (or 192)?</i> Yes – 195.416 (e), 195.242</p> <p><i>Does task affect the operation or integrity of the pipeline?</i> Yes</p>
Notes:	<p>This task takes place when the opportunity to visually inspect normally buried pipe for external corrosion and/or for the condition of the pipe coating occurs. This does not apply to abandoned pipelines.</p>
Abnormal Operating Conditions and Examples:	<p>Abnormal facility condition Corrosion</p> <p>Fire/Explosion Ignition of hydrocarbon</p> <p>Pipeline system damage Dent or gouge in pipe, damaged coating</p> <p>Unexpected hazardous liquid or carbon dioxide encountered Leak from exposed pipeline</p>

Task ID:**6****Covered Task Name:****Electrically Inspect Bare Pipe****Description:**

Pipeline operators must electrically inspect bare pipe in its pipeline systems that is not cathodically protected at intervals not exceeding 5 years.

Elements of this task may include:

- Measure soil resistivity
- Perform soil-to-soil surveys

Four-Part Test for the Covered Task:***Is task performed on the pipeline?*****Yes*****Is the task an Operations or Maintenance Task?*****Yes*****Is the task required by Part 195 (or 192)?*****Yes – 195.416(d), 195.242*****Does task affect the operation or integrity of the pipeline?*****Yes****Notes:**

A close interval survey may be used but is not required.

Abnormal Operating Conditions and Examples:**Abnormal facility condition**

Out of spec resistivity or low potential readings

Fire/Explosion

Ignition of hydrocarbons

Unexpected hazardous liquid or carbon dioxide encountered

Employee could discover a leak while performing this task

Task ID:**7****Covered Task Name:****Prevention of Atmospheric Corrosion****Description:**

Each component in the pipeline system that is exposed to the atmosphere must be cleaned and coated with a suitable material to prevent atmospheric corrosion, and this protection must be maintained.

Elements of this task may include:

- Sandblasting and/or surface preparation
- Application of coating
- Inspection of coatings
- Inspection of insulation

Four-Part Test for the Covered Task:

Is task performed on the pipeline?

Yes

Is the task an Operations or Maintenance Task?

Yes

Is the task required by Part 195 (or 192)?

Yes – 195.238

Does task affect the operation or integrity of the pipeline?

Yes

Notes:

This is a standard O&M task and is normally considered as painting. “Coating” is used in the regulations, which emphasize corrosion control as opposed to painting for cosmetic reasons. This will include the inspection of spans, elevated sections of pipe, or other areas subject to atmospheric corrosion. Special attention to the inspection of pipeline systems that have insulation installed may be necessary to detect corrosion under the insulation.

Abnormal Operating Conditions and Examples:**Abnormal facility condition**

Presence of atmospheric corrosion, pitting, etc.

Fire/Explosion

Ignition of hydrocarbons

Unexpected hazardous liquid or carbon dioxide encountered

Preparing surfaces for coating

Task ID:	8
Covered Task Name:	Measure Wall Thickness of Pipe
Description:	<p>Elements of this task may include:</p> <ul style="list-style-type: none"> • Using pit depth gauge • Using ultrasonic thickness tester • Measuring the affected corroded area
Four-Part Test for the Covered Task:	<p><i>Is task performed on the pipeline?</i> Yes</p> <p><i>Is the task an Operations or Maintenance Task?</i> Yes</p> <p><i>Is the task required by Part 195 (or 192)?</i> Yes – 195.416 (h)</p> <p><i>Does task affect the operation or integrity of the pipeline?</i> Yes</p>
Notes:	<p>Pipe strength analysis and/or other engineering evaluations conducted off-site are not covered tasks. However, activities to obtain pit depth or wall thickness measurements are covered tasks.</p> <p>Any pipe that is found to be corroded/pitted so that the remaining wall thickness is less than the minimum thickness required by the pipe specification tolerances must be replaced or repaired. Based on actual remaining wall thickness, operating pressures may be reduced in lieu of pipe repair or replacement.</p> <p>The strength of the pipe, based on actual remaining wall thickness measurements described above, may be determined by using the procedure in ASME B31G manual for Determining the Remaining Strength of Corroded Pipelines. The procedure developed by AGA/Batelle—A Modified Criterion for Evaluating the Remaining Strength of Corroded Pipe (with RSTRENG disk) may also be used.</p>
Abnormal Operating Conditions and Examples:	<p>Abnormal facility condition Internal or external corrosion</p> <p>Fire/Explosion Ignition of hydrocarbon</p> <p>Pipeline System damage Line hit, gouges</p> <p>Unexpected hazardous liquid or carbon dioxide encountered Insufficient wall thickness</p>

Task ID:**9****Covered Task Name:****Cathodic Protection Remediation****Description:**

Cathodic protection systems installed on pipeline facilities must be tested and maintained to ensure adequate protection. As a result of annual surveys and other tests, remedial measures must be taken to correct changing conditions on the pipeline system. Retrofitting cathodic protection in these circumstances is a covered task.

Elements of this task may include:

- Install bonds and/or bond interface
- Install anodes
- Install rectifiers
- Install groundbeds
- Install test leads
- Conduct electrolyte resistivity measurements
- Clear, fill or monitor shorted casings

Four-Part Test for the Covered Task:

Is task performed on the pipeline?

Yes

Is the task an Operations or Maintenance Task?

Yes

Is the task required by Part 195 (or 192)?

Yes – 195.242

Does task affect the operation or integrity of the pipeline?

Yes

Notes:

Rectifiers may break down and need to be replaced or additional rectifiers may be required. Operators also replace anodes that have exceeded their useful lives. Installing an anode in these circumstances is a covered task. Installing test leads (test stations), checking soil resistivity and installing groundbeds are also covered tasks in these situations. Clearing a shorted casing, while not specifically addressed in Part 195, is considered a covered task. Failure to correct a shorted casing can seriously impair the cathodic protection system and produce accelerated localized corrosion.

Abnormal Operating Conditions and Examples:**Abnormal facility condition**

Low CP levels

Component failure

Failure of rectifiers, coating, anodes, leads, etc.

Fire/Explosion

Burn through during cadveld, ignition of vapors

Pipeline System damage

Burn through during cadveld, dents, and gouges

Unexpected hazardous liquid or carbon dioxide encountered

Leak within casings

Task ID:**10****Covered Task Name:****Monitoring for Internal Corrosion****Description:**

Pipeline operators must take adequate steps to ensure that any corrosive effect of the transported liquid is mitigated. At least twice a year operators must examine coupons or other types of monitoring equipment to determine the effectiveness of the inhibitors or the extent of corrosion.

Elements of this task may include:

- Insertion and removal of coupons
- Monitor probes

Four-Part Test for the Covered Task:

Is task performed on the pipeline?
Yes

Is the task an Operations or Maintenance Task?
Yes

Is the task required by Part 195 (or 192)?
Yes – 196.418 (a) & (b), 195.242

Does task affect the operation or integrity of the pipeline?
Yes

Notes:

If the transported liquid is identified as corrosive to the pipe or other components of the pipeline system, the operator must take adequate steps to mitigate or control the corrosion. The analysis of a coupon at an off site laboratory would not be considered part of this task.

Abnormal Operating Conditions and Examples:**Abnormal facility condition**

Discovery of internal corrosion

Fire/Explosion

Ignition of hydrocarbon

Unexpected hazardous liquid or carbon dioxide encountered

Leak from coupon holder

Task ID:**11****Covered Task Name:****Internal Corrosion Remediation****Description:**

If corrosion inhibitors are used to mitigate internal corrosion, the operator must inject the inhibitor in sufficient quantities to ensure design coverage of the inhibitor. This task has the associated activities of starting, stopping or controlling inhibitor injection.

Elements of this task may include:

- Controlling the injection rate of the inhibitor
- Monitoring the injection rate of the inhibitor

Four-Part Test for the Covered Task:***Is task performed on the pipeline?*****Yes*****Is the task an Operations or Maintenance Task?*****Yes*****Is the task required by Part 195 (or 192)?*****Yes – 195.418 (b)*****Does task affect the operation or integrity of the pipeline?*****Yes****Notes:**

If the transported liquid is identified as corrosive to the pipe or other components of the pipeline system, the operator must take adequate steps to mitigate or control the corrosion.

Abnormal Operating Conditions and Examples:**Component failure**

Malfunction of pump, meters, connecting lines of corrosion inhibitor

Task ID:**12****Covered Task Name:****Inspect Internal Pipe Surfaces****Description:**

The operator must inspect the internal surface for evidence of corrosion whenever any pipe is removed from the pipeline system. If the pipe is corroded such that the remaining wall thickness is less than minimum requirements, the operator must investigate and inspect the adjacent pipe to determine the extent of corrosion.

Elements of this task may include:

- Visual inspection of the internal surface
- Measurement of wall thickness

Four-Part Test for the Covered Task:

Is task performed on the pipeline?

Yes

Is the task an Operations or Maintenance Task?

Yes

Is the task required by Part 195 (or 192)?

Yes – 195.418 (d)

Does task affect the operation or integrity of the pipeline?

Yes

Notes:

Pipe strength analysis and/or other engineering evaluations conducted off-site are not covered tasks. However, activities to obtain pit depth or wall thickness measurements are covered tasks. Any pipe that is found to be corroded or pitted so that the remaining wall thickness is less than the minimum thickness required by the pipe specification tolerances must be replaced. Based on actual remaining wall thickness, operating pressures may be reduced in lieu of pipe repair or replacement.

Abnormal Operating Conditions and Examples:

Abnormal facility condition

Inadequate wall thickness

Fire/Explosion

Ignition of hydrocarbons

Unexpected hazardous liquid or carbon dioxide encountered

Failure of isolation

Task ID:**13****Covered Task Name:****Application and Repair of External Coatings****Description:**

This task is performed when the external protective coating on in-service pipe is found to be damaged or defective (i.e. contains a "holiday", has disbonded, or deteriorated for any reason, etc.). This task includes field application and re-coating procedures. Coating application or repairs made off-site or prior to the pipeline being put into service (during construction) are not covered tasks.

Elements of this task may include:

- Removal of pipe coating in area of defect
- Cleaning and preparation of pipe to accept coating repair
- Preparation of coating material to be applied
- Application of new coating to defective area

Four-Part Test for the Covered Task:

Is task performed on the pipeline?

Yes

Is the task an Operations or Maintenance Task?

Yes

Is the task required by Part 195 (or 192)?

Yes – 195.238 (a)

Does task affect the operation or integrity of the pipeline?

Yes

Notes:

Applying or repairing coating as part of maintenance of an existing line is a covered task. Applying coating at a mill, coating facility or other location away from the pipeline facility is not a covered task. Re-coating an existing pipeline because the coating has deteriorated or applying coating to an existing uncoated line are maintenance tasks performed on the pipeline facility and are covered tasks. Applying coating patches after coating has been removed to allow repairs is also a covered task.

Field application of external coating is considered a construction task if performed on a new pipeline segment that is not tied to an active line. This includes applying coating at joints after construction-related welding.

Abnormal Operating Conditions and Examples:

Component failure

Damaged coating

Fire / Explosion

Fire from use of torches, etc.

Pipeline System damage

Dents, gouges, etc.

Unexpected hazardous liquid or carbon dioxide encountered

Employee could discover a leak while performing this task

Task ID:

14

Covered Task Name:

Place and Maintain Line Markers

Description:

Each operator is required to place and maintain line markers over each buried pipeline so that the pipeline location is accurately communicated.

Elements of this task may include:

- Locate line
- Install marker

Four-Part Test for the Covered Task:

Is task performed on the pipeline?

Yes

Is the task an Operations or Maintenance Task?

Yes

Is the task required by Part 195 (or 192)?

Yes – 195.410 (a) & (c)

Does task affect the operation or integrity of the pipeline?

Yes

Notes:

Line markers must meet the specifications outlined in Part 195.410 (a).

Abnormal Operating Conditions and Examples:

Abnormal facility condition

Line marker is missing or installed in wrong location

Pipeline System damage

Damaging the pipe/coating while installing the marker

Task ID:**15****Covered Task Name:****Inspect Surface Conditions of Right-of-Way****Description:**

Each operator is required to inspect the surface conditions of the pipeline Right Of Way (ROW) and adjacent areas at least 26 times each year, with the intervals not exceeding three weeks. Walking, driving, flying or other appropriate means of traversing the right-of-way are methods of performing this task. Air patrol pilots (line flyers) are performing this covered task when they fly the right-of-way.

Elements of this task may include:

- Visual inspection of the surface
- Reporting protocols

Four-Part Test for the Covered Task:***Is task performed on the pipeline?*****Yes*****Is the task an Operations or Maintenance Task?*****Yes*****Is the task required by Part 195 (or 192)?*****Yes – 195.412 (a)*****Does task affect the operation or integrity of the pipeline?*****Yes****Notes:****None Applicable****Abnormal Operating Conditions and Examples:****Abnormal facility condition**

Wash out, construction on ROW, equipment on ROW

Fire/Explosion

Ignition of released hydrocarbon

Pipeline system damage

Vandalism, support damage

Unexpected hazardous liquid or carbon dioxide encountered

Dead vegetation, product on water

Task ID:	16
Covered Task Name:	Inspect Navigable Waterway Crossing
Description:	<p>At least every five years, operators are required to inspect each crossing under a navigable waterway to determine the condition of the crossing.</p> <p>Elements of this task may include:</p> <ul style="list-style-type: none"> • Use of probing equipment • Use of sonar equipment • Reporting protocols
Four-Part Test for the Covered Task:	<p><i>Is task performed on the pipeline?</i> Yes</p> <p><i>Is the task an Operations or Maintenance Task?</i> Yes</p> <p><i>Is the task required by Part 195 (or 192)?</i> Yes – 195.412 (b)</p> <p><i>Does task affect the operation or integrity of the pipeline?</i> Yes</p>
Notes:	Offshore pipelines are exempt from this task.
Abnormal Operating Conditions and Examples:	<p>Abnormal facility condition Exposed/undercut pipe, inadequate pipeline support</p> <p>Pipeline System damage Coating anomalies, pipe damage</p> <p>Unexpected hazardous liquid or carbon dioxide encountered Employee could discover a leak while performing this task</p>

Task ID:	17
Covered Task Name:	Provide Temporary Marking of Buried Pipeline Prior to Excavation
Description:	<p>Pipeline operators are required to provide temporary marking of all buried pipelines in the areas of excavation activity as far in advance of the actual excavation work as practical. Monitoring and inspection during the excavation must also be provided to verify the integrity of the pipeline.</p> <p>Elements of this task may include:</p> <ul style="list-style-type: none">• Locate line• Install appropriate temporary markers• Determine depth of pipeline
Four-Part Test for the Covered Task:	<p><i>Is task performed on the pipeline?</i> Yes</p> <p><i>Is the task an Operations or Maintenance Task?</i> Yes</p> <p><i>Is the task required by Part 195 (or 192)?</i> Yes – 195.442</p> <p><i>Does task affect the operation or integrity of the pipeline?</i> Yes</p>
Notes:	<p>Persons who perform this task need to follow the local and state requirements. This may include permitting, one-call systems, etc. Offshore pipelines are exempt from this task.</p>
Abnormal Operating Conditions and Examples:	<p>Abnormal facility condition Line marker is missing or installed in the wrong location</p>

Task ID:	18
Covered Task Name:	Inspection Following Excavation Activities and Leak Survey After Blasting
Description:	<p>Inspection after excavation activities must be performed to verify the integrity of the pipeline. Excavation activities include excavation, blasting, boring, tunneling, backfilling, the removal of aboveground structures by either explosive or mechanical means, and other earth moving operations. In the case of blasting, any inspection must include leakage surveys.</p> <p>Elements of this task may include:</p> <ul style="list-style-type: none"> • Utilize leak survey techniques • Monitor for pressure loss • Inspect for physical damage • Inspect for corrosion • Inspect for condition of coating
Four-Part Test for the Covered Task:	<p><i>Is task performed on the pipeline?</i> Yes</p> <p><i>Is the task an Operations or Maintenance Task?</i> Yes</p> <p><i>Is the task required by Part 195 (or 192)?</i> Yes – 195.442 (c) 6</p> <p><i>Does task affect the operation or integrity of the pipeline?</i> Yes</p>
Notes:	The leakage survey is typically a visual inspection of the right-of-way or area closest to the blasting impact to check for any evidence of leaks or damage to the pipeline. The monitoring for pressure loss is often performed by Pipeline Controllers.
Abnormal Operating Conditions and Examples:	<p>Abnormal facility condition Corrosion</p> <p>Fire/Explosion Ignition of released hydrocarbon</p> <p>Pipeline System damage Damaged pipe, unexpected soil movement</p> <p>Unexpected hazardous liquid or carbon dioxide encountered Employee could discover a leak while performing this task</p>

Task ID:**19****Covered Task Name:****Maintain Valves****Description:**

This task consists of the maintenance activities performed on each valve that is necessary for safe operation of a pipeline. This applies to block valves, manifold valves, tank valves, pump suction/discharge valves, check valves, pressure control valves and any other valves (except relief valves) that are in service and physically connected to the pipeline system.

Elements of this task may include:

- Maintenance or adjustment of the valve actuator
- Winterization of valve
- Lubrication and/or packing
- Drain valve body

Four-Part Test for the Covered Task:

Is task performed on the pipeline?

Yes

Is the task an Operations or Maintenance Task?

Yes

Is the task required by Part 195 (or 192)?

Yes – 195.420 (a)

Does task affect the operation or integrity of the pipeline?

Yes

Notes:

Mechanical Technicians, Electrical Technicians and/or Craftsmen normally perform this task. Pipeliners, Pipeline Maintenance Foremen, contract valve service companies, or contractor maintenance personnel could also perform this task.

Abnormal Operating Conditions and Examples:**Component failure**

Grease button failure, bevel gear operator

Fire/Explosion

Ignition of released hydrocarbon

Unexpected hazardous liquid or carbon dioxide encountered

Packing leaks, seat may not reseal

Task ID:**20****Covered Task Name:****Inspect Valves****Description:**

This task consists of the inspection activities performed on each valve that is necessary for safe operation of a pipeline. This applies to block valves, manifold valves, tank valves, pump suction/discharge valves, check valves, pressure control valves and any other valves (except relief valves) that are in service and physically connected to the pipeline system.

Elements of this task may include:

- Verify location of valve to be inspected
- Check the accessibility of the valve
- Verify the valve number and nameplate data
- Verify valve type and manufacturer
- Check for leaks, damage or corrosion
- Operate the valve to verify that it operates properly
- Return valve to original position
- Re-lock in proper position or provide security as appropriate
- Document results

Four-Part Test for the Covered Task:

Is task performed on the pipeline?

Yes

Is the task an Operations or Maintenance Task?

Yes

Is the task required by Part 195 (or 192)?

Yes – 195.420

Does task affect the operation or integrity of the pipeline?

Yes

Notes:

Mechanical Technicians, Pipeliners, Pipeline Maintenance Foremen, or contractor personnel normally perform this task.

Abnormal Operating Conditions and Examples:

Activation of a safety device

System overpressure

Communications, control system or power interruption or failure

Interruption while operating valve

Component failure

Valve stem damage, operator failure

Fire/Explosion

Ignition of released hydrocarbon

Unexpected hazardous liquid or carbon dioxide encountered

Gasket failure, seal failure, thermal relief leaking

Task ID:**21****Covered Task Name:****Repair Valves****Description:**

This task consists of the repair activities performed on each valve that is necessary for safe operation of a pipeline. This applies to block valves, manifold valves, tank valves, pump suction/discharge valves, check valves, pressure control valves and any other valves (except relief valves) that are in service and physically connected to the pipeline system.

Elements of this task may include:

- Disassembly of valve
- Cleaning and inspection of valve's internal components
- Repair or replacement of failed or worn components
- Re-assembly of valve and return to operating condition
- Repair or adjustment of the valve actuator
- Document results

Four-Part Test for the Covered Task:

Is task performed on the pipeline?

Yes

Is the task an Operations or Maintenance Task?

Yes

Is the task required by Part 195 (or 192)?

Yes – 195.420

Does task affect the operation or integrity of the pipeline?

Yes

Notes:

Mechanical Technicians and/or Electrical Technicians normally perform this task. Pipeliners, Pipeline Maintenance Foremen, contract valve service companies, or contractor maintenance personnel could also perform this task.

Abnormal Operating Conditions and Examples:**Activation of a safety device**

During isolation process, after repair, resetting limits, etc.

Communications, control system or power interruption or failure

After repair, potential communication or control system problems

Component failure

Stem or operator failure, worn, defective components

Fire/Explosion

Ignition of released hydrocarbon

Unexpected hazardous liquid or carbon dioxide encountered

Pressurized trapped hydrocarbons within valve body, failure of isolation

Task ID:**22****Covered Task Name:****Inspect, Test, and Calibrate Relief Valves****Description:**

This task consists of the activities performed on a relief valve to verify that it is functioning properly, in good mechanical condition, and is adequate for the application.

Elements of this task may include:

- Verify location of valve to be inspected
- Verify the valve number and nameplate data
- Verify valve type and manufacturer
- Test and calibrate valve
- Visually inspect valve for leaks or corrosion
- Apply security seal to valve as required by procedures
- Document results

Four-Part Test for the Covered Task:

Is task performed on the pipeline?

Yes

Is the task an Operations or Maintenance Task?

Yes

Is the task required by Part 195 (or 192)?

Yes – 195.428

Does task affect the operation or integrity of the pipeline?

Yes

Notes:

Mechanical Technicians or Electrical Technicians normally perform this task. Pipeliners, Pipeline Maintenance Foremen, contract valve service companies, or contractor maintenance personnel could also perform this task.

Abnormal Operating Conditions and Examples:**Component failure**

Exceed maximum design pressure

Fire/Explosion

Ignition of released hydrocarbon

Unexpected hazardous liquid or carbon dioxide encountered

Leaking isolation valve, trapped pressurized hydrocarbons within valve body

Task ID:**23****Covered Task Name:****Maintain / Repair Relief Valves****Description:**

This task consists of the repair and maintenance activities performed on a relief valve in service on an existing pipeline system. This applies to maintaining or restoring design function.

Elements of this task may include:

- Disassembly of valve
- Cleaning and inspection of valve's internal components
- Repair or replacement of failed or worn components
- Re-assembly of valve and return to operating condition
- Repair, adjustment, or calibration of relief valve sensing or control devices
- Document results

Four-Part Test for the Covered Task:

Is task performed on the pipeline?

Yes

Is the task an Operations or Maintenance Task?

Yes

Is the task required by Part 195 (or 192)?

Yes – 195.428

Does task affect the operation or integrity of the pipeline?

Yes

Notes:

Mechanical Technicians or Electrical Technicians normally perform this task. Pipeliners, Pipeline Maintenance Foremen, contract valve service companies, or contractor maintenance personnel may also perform this task.

Abnormal Operating Conditions and Examples:

Component failure

Incorrect re-assembly of valve

Fire/Explosion

Ignition of released hydrocarbon

Unexpected hazardous liquid or carbon dioxide encountered

Leaking isolation valve

Task ID:**24****Covered Task Name:****Inspect, Test and Calibrate Pressure Limiting Devices****Description:**

This task consists of the inspection, testing and calibration activities performed on an overpressure safety device to verify that it is functioning properly, in good operating condition, and is adequate for the application. This does not include relief valves.

Elements of this task may include:

- Inspect and test pilot operated devices
- Inspect and test control valve positioner or sensing device
- Inspect and replace rupture discs
- Document results

Four-Part Test for the Covered Task:

Is task performed on the pipeline?

Yes

Is the task an Operations or Maintenance Task?

Yes

Is the task required by Part 195 (or 192)?

Yes – 195.428

Does task affect the operation or integrity of the pipeline?

Yes

Notes:

Electrical Technicians, Instrument Technicians, or Mechanical Technicians normally perform this task. Contract valve service companies or contractor maintenance personnel could also carry out this task.

Abnormal Operating Conditions and Examples:**Activation of a safety device**

Improper sizing of rupture disc, improper parameter settings of components

Component failure

Isolation valve malfunction, mechanical malfunctions of device

Fire/Explosion

Ignition of released hydrocarbon

Unexpected hazardous liquid or carbon dioxide encountered

Leaking isolation valve, leaking valve stem

Task ID:**25****Covered Task Name:****Inspect, Test and Calibrate Pressure Switches and Transmitters****Description:**

This task consists of the inspection, testing and calibration activities performed on a pressure measurement or control device to verify that it is functioning properly, in good operating condition, and is adequate for the application.

Elements of this task may include:

- Inspect, test, and calibrate pressure switches
- Inspect, test, and calibrate pressure transmitters
- Document results

Four-Part Test for the Covered Task:

Is task performed on the pipeline?

Yes

Is the task an Operations or Maintenance Task?

Yes

Is the task required by Part 195 (or 192)?

Yes – 195.428

Does task affect the operation or integrity of the pipeline?

Yes

Notes:

None applicable

Abnormal Operating Conditions and Examples:

Abnormal facility condition

Station lock-out; unit lock-out

Activation of a safety device

Improper calibration.

Communications, Control System or Power interruption or failure

Fire/Explosion

Ignition of released hydrocarbon

Unexpected hazardous liquid or carbon dioxide encountered

Failure to close or plug bleeder valve

Unexplained status change

Unit starts/stops unintentionally

Task ID:**26****Covered Task Name:****Verify or Set Protection Parameters for Programmable Controllers and/or Other Instrumentation Control Loops****Description:**

This task consists of the inspection, testing and calibration activities performed on a Programmable Logic Controller (PLC), process controller, or other instrumentation control loop to verify that it is functioning properly, in good operating condition, and is adequate for the application.

Elements of this task may include:

- Zero, span, and differential adjustments
- Adjusting pressure set point
- Adjusting timers or sequence events
- On-site changes or corrections to ladder logic
- Implementation of new or revised programming (software)
- Document results

Four-Part Test for the Covered Task:

Is task performed on the pipeline?

Yes

Is the task an Operations or Maintenance Task?

Yes

Is the task required by Part 195 (or 192)?

Yes – 195.428

Does task affect the operation or integrity of the pipeline?

Yes

Notes:

Engineers, Programmers, Electrical Technicians, Instrument Technicians, or Electronics Technicians normally perform this task. Contract instrument service companies or contract control equipment personnel could also carry out this task.

Abnormal Operating Conditions and Examples:

Activation of a safety device

Activate relief valve.

Communications, control system or power interruption of failure

Unexplained status change

Unintentional station shutdown

Task ID:**27****Covered Task Name:****Inspect and Repair Breakout Tanks****Description:**

This task consists of the following referenced maintenance, inspection, and repair activities.

Elements of this task:

- Reference section 4 of API Standard 653, "Tank Inspection, Repair, Alteration, and Reconstruction"
- Reference section 6 of API Standard 510, "Pressure Vessel Inspection Code: Maintenance Inspection, Rating, Repair, and Alteration"

Four-Part Test for the Covered Task:

Is task performed on the pipeline?

Yes

Is the task an Operations or Maintenance Task?

Yes

Is the task required by Part 195 (or 192)?

Yes – 195.432

Does task affect the operation or integrity of the pipeline?

Yes

Notes:

Tank Coordinators, Pipeliners, Pipeline Maintenance Foremen, and Operations Personnel normally perform this task. Contract tankage service companies and contract maintenance personnel could also carry out this task.

Abnormal Operating Conditions and Examples:**Abnormal facility condition**

Shell integrity (corrosion), foundation failure

Activation of a safety device

Alarm systems, activation of relief valve

Component failure

Manway gasket leak, seals, vents, roof failures (damaged or sunk)

Fire/Explosion

Ignition of hydrocarbon

Unexpected hazardous liquid or carbon dioxide encountered

Roof drain failures, shell integrity (corrosion)

Task ID:	28
Covered Task Name:	Provide Protection for Pipeline Facilities
Description:	<p>This task consists of the practices necessary to prevent vandalism and unauthorized entry into a breakout tank area, pumping station or other exposed facility.</p> <p>Elements of this task may include:</p> <ul style="list-style-type: none"> • Inspect perimeter fencing and signs • Monitoring by remote security devices • Maintain integrity of fence
Four-Part Test for the Covered Task:	<p><i>Is task performed on the pipeline?</i> Yes</p> <p><i>Is the task an Operations or Maintenance Task?</i> Yes</p> <p><i>Is the task required by Part 195 (or 192)?</i> Yes – 195.436</p> <p><i>Does task affect the operation or integrity of the pipeline?</i> Yes</p>
Notes:	<p>Tank Coordinators, Pipeliners, Pipeline Maintenance Foremen, and Operations Personnel normally perform this task. Contract tankage service companies and contract maintenance personnel could also carry out this task. This is a combination task of ensuring that safeguards are in place (gates, locks, barriers, etc.) and also a task of awareness for unauthorized personnel.</p>
Abnormal Operating Conditions and Examples:	<p>Abnormal facility condition Vandalism or other breach of security</p>

Task ID:	29
Covered Task Name:	Protect Breakout Tanks from Static Electricity, Lightning, and Stray Electrical Currents
Description:	<p>This task consists of the activities necessary to protect breakout tanks from the hazards of static electricity, lightning, and stray electrical currents.</p> <p>Elements of this task:</p> <ul style="list-style-type: none"> Reference API Recommended Practice 2003, "Protection Against Ignitions Arising Out of Static, Lightning, and Stray Currents."
Four-Part Test for the Covered Task:	<p><i>Is task performed on the pipeline?</i> Yes</p> <p><i>Is the task an Operations or Maintenance Task?</i> Yes</p> <p><i>Is the task required by Part 195 (or 192)?</i> Yes – 195.405</p> <p><i>Does task affect the operation or integrity of the pipeline?</i> Yes</p>
Notes:	Tank Coordinators, Pipeliners, Pipeline Maintenance Foremen, and Operations Personnel normally perform this task. Contract tankage service companies and contract maintenance personnel may also perform this task.
Abnormal Operating Conditions and Examples:	None Assigned

Task ID:**30****Covered Task Name:****Test Overfill Protective Devices****Description:**

This task consists of the inspection, testing, and adjustment activities performed on a breakout tank overfill protective device to ensure that it is functioning properly, is in good operating condition, and is adequate from the standpoint of reliability for its intended purpose.

Elements of this task may include:

- Liquid level/oil height adjustments
- Verifying alarm parameters
- Adjusting timers or sequence events
- On-site changes or corrections to ladder logic
- Implementation of new or revised programming (software)
- Document results

Four-Part Test for the Covered Task:

Is task performed on the pipeline?

Yes

Is the task an Operations or Maintenance Task?

Yes

Is the task required by Part 195 (or 192)?

Yes – 195.428

Does task affect the operation or integrity of the pipeline?

Yes

Notes:

Electrical Technicians, Instrument Technicians, Operations Personnel, or Communication Technicians normally perform this task. Contract instrument service companies or contract control equipment personnel could also carry out this task.

Abnormal Operating Conditions and Examples:**Component failure**

Seals, faulty monitoring devices

Fire/Explosion

Ignition of released hydrocarbon

Unexpected hazardous liquid or carbon dioxide encountered

Free product in casing vent pipe

Task ID:	31
Covered Task Name:	Inspect and Calibrate Overfill Protective Devices
Description:	<p>This task consists of the inspection, testing and adjustment activities performed on a breakout tank overfill protective device to ensure that it is functioning properly, is in good operating condition, and is adequate for the application.</p> <p>Elements of this task may include:</p> <ul style="list-style-type: none"> • Liquid level/oil height adjustments • Verifying alarm parameters • Verify operation of relief flow and indication devices • Adjusting timers or sequence events • On-site changes or corrections to ladder logic • Implementation of new or revised programming (software)
Four-Part Test for the Covered Task:	<p><i>Is task performed on the pipeline?</i> Yes</p> <p><i>Is the task an Operations or Maintenance Task?</i> Yes</p> <p><i>Is the task required by Part 195 (or 192)?</i> Yes – 195.428</p> <p><i>Does task affect the operation or integrity of the pipeline?</i> Yes</p>
Notes:	Electrical Technicians, Instrument Technicians, Operations Personnel, or Communication Technicians normally perform this task. Contract instrument service companies or contract control equipment personnel could also carry out this task.
Abnormal Operating Conditions and Examples:	<p>Component failure Seals, faulty monitoring devices</p> <p>Fire/Explosion Ignition of released hydrocarbon</p> <p>Unexpected hazardous liquid or carbon dioxide encountered Free product in standpipe</p>

Task ID:**32****Covered Task Name:****Repair Overfill Protective Devices****Description:**

This task consists of the repair activities performed on a breakout tank overfill protection device to ensure that it is functioning properly and is adequate for the application.

Elements of this task may include:

- Replacement of device
- Liquid level/oil height adjustments
- Verifying alarm parameters
- Adjusting timers or sequence events

Four-Part Test for the Covered Task:

Is task performed on the pipeline?

Yes

Is the task an Operations or Maintenance Task?

Yes

Is the task required by Part 195 (or 192)?

Yes – 195.428

Does task affect the operation or integrity of the pipeline?

Yes

Notes:

Not Applicable

Abnormal Operating Conditions and Examples:

Component failure

Seals, faulty monitoring devices

Fire/Explosion

Ignition of released hydrocarbon

Unexpected hazardous liquid or carbon dioxide encountered

Free product in standpipe

Task ID:	33
Covered Task Name:	Moving In-Service Pipe
Description:	<p>This task consists of the activities required to move or reposition (raise, lower, lateral) a section of the pipeline while it is in operation.</p> <p>Elements of this task may include:</p> <ul style="list-style-type: none"> • Determine the product type (consideration for HVL) • Determine allowable line pressure • Pipe lifting • Support pipe
Four-Part Test for the Covered Task:	<p><i>Is task performed on the pipeline?</i> Yes</p> <p><i>Is the task an Operations or Maintenance Task?</i> Yes</p> <p><i>Is the task required by Part 195 (or 192)?</i> Yes – 195.424</p> <p><i>Does task affect the operation or integrity of the pipeline?</i> Yes</p>
Notes:	<p>This task is normally performed or supervised by Pipeline Maintenance Foremen, Pipeliners, Project Engineers, or designated inspectors. Contract pipeline construction companies and contract pipeline maintenance personnel also commonly carry out this task.</p>
Abnormal Operating Conditions and Examples:	<p>Abnormal facility condition Corrosion</p> <p>Component failure Valve failure, weld/seam failure, flange, joint</p> <p>Fire/Explosion Ignition of released hydrocarbon</p> <p>Pipeline System damage Wrinkle, buckle, over-stress, gouge, dent, unexpected movement of pipe, damage of coating</p> <p>Unexpected hazardous liquid or carbon dioxide encountered Failure of pipe, discovery of previous leak</p>

Task ID:**34****Covered Task Name:****Inspect Existing Pipe Following Movement****Description:**

This task consists of the observation and awareness activities required when moving a section of pipe in a ditch (trench).

Elements of this task may include:

- Ensure that secondary stresses are minimized
- Ensure that pipe or coating is not damaged

Four-Part Test for the Covered Task:***Is task performed on the pipeline?*****Yes*****Is the task an Operations or Maintenance Task?*****Yes*****Is the task required by Part 195 (or 192)?*****Yes – 195.246; 195.252*****Does task affect the operation or integrity of the pipeline?*****Yes****Notes:**

This task is normally performed or supervised by Pipeline Maintenance Foremen, Pipeliners, Project Engineers, or designated inspectors. Contract pipeline construction companies and contract pipeline maintenance personnel also commonly perform this task.

Abnormal Operating Conditions and Examples:**Component failure**

Valve failure, weld/seam failure, flange, joint

Fire/Explosion

Ignition of released hydrocarbon

Pipeline System damage

Wrinkle, buckle, over-stress, gouge, dent

Unexpected hazardous liquid or carbon dioxide encountered

Task ID:	35
Covered Task Name:	Inspection of Clearance of Existing Pipe to Underground Structures
Description:	<p>This task consists of the inspection activities required to ensure that adequate clearance is provided between the outside of the pipe and the extremity of any other underground structures.</p> <p>Elements of this task may include:</p> <ul style="list-style-type: none"> • Foreign crossing inspections • Inspection/testing for proper corrosion control • Conducting interference tests
Four-Part Test for the Covered Task:	<p><i>Is task performed on the pipeline?</i> Yes</p> <p><i>Is the task an Operations or Maintenance Task?</i> Yes</p> <p><i>Is the task required by Part 195 (or 192)?</i> Yes – 195.250</p> <p><i>Does task affect the operation or integrity of the pipeline?</i> Yes</p>
Notes:	<p>This task is normally performed or supervised by Pipeline Maintenance Foremen, Corrosion Technicians, Pipeliners, Project Engineers, or designated inspectors. Contract pipeline construction companies and contract pipeline maintenance personnel also carry out this task.</p>
Abnormal Operating Conditions and Examples:	<p>Abnormal facility condition Corrosion</p> <p>Fire/Explosion Ignition of released hydrocarbon</p> <p>Pipeline system damage Corrosion, coating damage</p> <p>Unexpected hazardous liquid or carbon dioxide encountered Leak from exposed pipeline</p>

Task ID:**36****Covered Task Name:****Abandoning, Safe Disconnect, Purging and Sealing
of Pipeline Facilities****Description:**

This task consists of decommissioning or removing a pipeline facility from service, permanently or temporarily.

Elements of this task may include:

- safe disconnect
- purging
- sealing

**Four-Part Test for the
Covered Task:**

Is task performed on the pipeline?

Yes

Is the task an Operations or Maintenance Task?

Yes

Is the task required by Part 195 (or 192)?

Yes – 195.402 (c)(10)

Does task affect the operation or integrity of the pipeline?

Yes

Notes:

Not Applicable

**Abnormal Operating
Conditions and Examples:**

Fire/Explosion

Ignition of released hydrocarbon

Unexpected hazardous liquid or carbon dioxide encountered

Release during purging.

Task ID:**37****Covered Task Name:****Installation or Repair of Support Structures on Existing Aboveground Components****Description:**

This task consists of the activities required to fit or mount additional or revised support elements to existing aboveground structures, such as:

- Overhead crossings of highways, railroads, or a body of water
- Spans over ditches and gullies
- Scraper traps or block valves
- Manifold valves and piping

Elements of this task may include:

- Proper installation techniques to protect the pipe and coating from damage
- Inspection of support and pipe to ensure that pipe is protected against stress

Four-Part Test for the Covered Task:

Is task performed on the pipeline?

Yes

Is the task an Operations or Maintenance Task?

Yes

Is the task required by Part 195 (or 192)?

Yes – 195.254, 195.422

Does task affect the operation or integrity of the pipeline?

Yes

Notes:

This task is normally performed or supervised by Pipeline Maintenance Foremen, Pipeliners, Project Engineers, or designated inspectors. Contract pipeline construction companies and contract pipeline maintenance personnel also commonly carry out this task. Support for each aboveground structure must provide protection from the forces exerted by the anticipated loads.

Abnormal Operating Conditions and Examples:**Component failure**

Valve failure, weld/seam failure, flange, joint

Fire/Explosion

Ignition of released hydrocarbon

Pipeline System damage

Wrinkle, buckle, over-stress, gouge, dent

Unexpected hazardous liquid or carbon dioxide encountered

Task ID:**38****Covered Task Name:****Inspection Activities for Tie-Ins, Pipe Replacements, or Other Components Connecting to an Existing Pipeline****Description:**

This task consists of inspection activities required during the various removal and installation activities performed as maintenance on a pipeline system.

Elements of this task may include:

- Ensure proper installation
- Ensure that pipe, coating, or component is not damaged
- Ensure that material meets specifications
- Visual inspection and/or non-destructive testing

Four-Part Test for the Covered Task:

Is task performed on the pipeline?

Yes

Is the task an Operations or Maintenance Task?

Yes

Is the task required by Part 195 (or 192)?

Yes – 195.204, 195.206, 195.422

Does task affect the operation or integrity of the pipeline?

Yes

Notes:

This task is normally performed or supervised by Pipeline Maintenance Foremen, Pipeliners, Project Engineers, or designated inspectors. Contract pipeline construction companies and contract pipeline maintenance personnel may also carry out this task.

Abnormal Operating Conditions and Examples:**Abnormal facility condition**

Material does not meet specifications

Component failure

Valve failure, weld/seam failure, flange, joint

Fire/Explosion

Ignition of released hydrocarbon

Pipeline System damage

Wrinkle, buckle, over-stress, gouge, dent

Unexpected hazardous liquid or carbon dioxide encountered

Failure of isolation device

Task ID:	39
Covered Task Name:	Backfilling a Trench Following Maintenance
Description:	<p>This task consists of backfilling or replacing the soil back into the ditch and over the pipeline after maintenance or repairs.</p> <p>Elements of this task may include:</p> <ul style="list-style-type: none">• Inspection of backfill for damaging materials• Protect pipe coating• Provide adequate support for the pipe
Four-Part Test for the Covered Task:	<p><i>Is task performed on the pipeline?</i> Yes</p> <p><i>Is the task an Operations or Maintenance Task?</i> Yes</p> <p><i>Is the task required by Part 195 (or 192)?</i> Yes – 195.252, 195.422</p> <p><i>Does task affect the operation or integrity of the pipeline?</i> Yes</p>
Notes:	<p>This task is normally performed or supervised by Pipeline Maintenance Foremen, Pipeliners, Project Engineers, or designated inspectors. Contract pipeline construction companies and contract pipeline maintenance personnel also commonly carry out this task.</p>
Abnormal Operating Conditions and Examples:	<p>Pipeline system damage Coating damage from coarse backfill materials.</p>

Task ID:**40****Covered Task Name:****Perform General Pipeline Repair Activities****Description:**

This task encompasses the general maintenance and repair activities that are involved in the safeguarding and prudent operation of a pipeline system.

Typical activities may include but are not limited to:

- Installing pipe repair sleeves (Weld+Ends™, Clocksprings™, full encirclements, etc.)
- Pipe or pipeline component replacement
- Installing stopple fittings or stoppling devices
- Hot tapping
- Venting and/or blow-down of inert gases or entrained air

Four-Part Test for the Covered Task:

Is task performed on the pipeline?

Yes

Is the task an Operations or Maintenance Task?

Yes

Is the task required by Part 195 (or 192)?

Yes – 195.422

Does task affect the operation or integrity of the pipeline?

Yes

Notes:

This task is normally performed or supervised by Pipeline Maintenance Foremen, Pipeliners, Project Engineers, or designated inspectors. Contract pipeline construction companies and contract pipeline maintenance personnel also commonly carry out this task.

Abnormal Operating Conditions and Examples:**Abnormal facility condition**

Corrosion or pipe defect in area to be welded

Component failure**Fire/Explosion**

Ignition of released hydrocarbon

Pipeline system damage**Unexpected hazardous liquid or carbon dioxide encountered**

Task ID:**41****Covered Task Name:****Conduct Pressure Tests****Description:**

This task consists of the activities required for the pressure testing of the pipeline and components of the pipeline system, such as:

- Pressure testing for MOP certification or upgrade
- Pressure testing of pipe at tie-ins

Elements of this task may include:

- Performing pressure test
- Recording pressure test results

Four-Part Test for the Covered Task:***Is task performed on the pipeline?*****Yes**

Testing of components that are tested off of the pipeline facility are not covered tasks

Is the task an Operations or Maintenance Task?**Yes*****Is the task required by Part 195 (or 192)?*****Yes – 195 Subpart E and 195.406*****Does task affect the operation or integrity of the pipeline?*****Yes****Notes:**

This task is normally performed or supervised by Pipeline Maintenance Foremen, Pipeliners, Project Engineers, Mechanical Technicians, Electrical Technicians, Instrument Technicians, or designated inspectors. Contract pipeline construction companies, contract inspection service companies, and contract pipeline maintenance personnel may also carry out this task.

Abnormal Operating Conditions and Examples:**Component failure**

Valve failures, piping failure

Fire/Explosion

Ignition of released hydrocarbon

Unexpected hazardous liquid or carbon dioxide encountered

Hydrocarbons trapped in system during test are released due to component failure.

Unexplained pressure deviations

Pipe failure during test.

Task ID:**42****Covered Task Name:****Welding on Existing Pipelines****Description:**

This task includes all activities and procedures that are required for maintenance welding jobs; i.e., any welding performed on an existing, in-service pipeline.

Elements of this task may include:

- Repair and/or removal of arc burns
- Repair and/or removal of defective welds
- Tie in welds
- Fittings

Four-Part Test for the Covered Task:

Is task performed on the pipeline?

Yes

Is the task an Operations or Maintenance Task?

Yes

Is the task required by Part 195 (or 192)?

Yes – 195.214, 195.226, 195.230

Does task affect the operation or integrity of the pipeline?

Yes

Notes:

This task is normally a supervision or inspection task performed by Pipeline Maintenance Foremen, Pipeliners, Project Engineers, or designated inspectors. Contract pipeline construction companies, contract inspection service companies, and contract pipeline maintenance personnel may also carry out this task. Whether the pipeline operator's own welders or contract welders perform this task, welding on an existing, in-service pipeline system is a covered task. The qualification of welders is covered under 49 CFR 195.222 in accordance with section 3 of API Standard 1104 or section IX of the ASME Boiler and Pressure Vessel Code.

Abnormal Operating Conditions and Examples:**Abnormal facility condition**

Corrosion

Fire/Explosion

Ignition of released hydrocarbon

Pipeline System damage

Pipe defect in area to be welded, arc burn

Unexpected hazardous liquid or carbon dioxide encountered

Failure of isolation device, burn through

Task ID:**43****Covered Task Name:****Operations of Pipeline System****Description:**

This task includes activities and procedures that are required for safe and prudent operation of the pipeline.

Elements of this task may include:

- Start-up/Shutdown
- Maintain pressure within allowable limits
- Manually or remotely open or close valves or other equipment
- Monitor and operate control devices
- Monitor flow rates
- Monitor communications
- Monitor leak detection and line integrity

Four-Part Test for the Covered Task:

Is task performed on the pipeline?

Yes

Is the task an Operations or Maintenance Task?

Yes

Is the task required by Part 195 (or 192)?

Yes – 195.402, 195.406

Does task affect the operation or integrity of the pipeline?

Yes

Notes:

Pipeline controllers, control centers, or field operations personnel normally perform the tasks in this group of covered tasks. In some instances contract personnel could perform some types of pipeline operations covered tasks. Control centers, although usually remote from the pipeline, are connected to the components that they monitor and/or operate and are therefore considered part of the pipeline facility.

Abnormal Operating Conditions and Examples:

Abnormal facility condition
Activation of a safety device
Communications, control system or power interruption or failure
Fire/Explosion
Pipeline system damage
Unexpected hazardous liquid or carbon dioxide encountered
Unexplained flow rate deviation
Unexplained pressure deviations
Unexplained status change

Task ID:**44****Covered Task Name:****CPM Leak Detection****Description:**

If this system is utilized, this task consists of the inspection, testing, and adjustment activities performed on a leak detection or line integrity system to verify that it is functioning properly, in good operating condition, and to verify that the leak detection system meets its design parameters.

Four-Part Test for the Covered Task:***Is task performed on the pipeline facility?*****Yes*****Is the task an Operations or Maintenance Task?*****Yes*****Is the task required by Part 195 (or 192)?*****Yes – 195.444*****Does task affect the operation or integrity of the pipeline?*****Yes****Notes:**

Engineers, Programmers, Electrical Technicians, Instrument Technicians, Communications Technicians, or Electronics Technicians normally perform this task. Contract instrumentation service companies or contract control equipment personnel could also carry out this task.

Abnormal Operating Conditions and Examples:**Communications, control system or power interruption or failure****Unexplained flow rate deviation****Unexplained pressure deviations**

Sudden pressure loss

Unexplained status change

Equipment failure

Task ID:	45
Covered Task Name:	Operate Pressure-Relieving Devices for Launching and Receiving Facilities
Description:	This task consists of the activities required to relieve pressure and verify the absence of pressure prior to opening the launching/receiving device.
Four-Part Test for the Covered Task:	<p><i>Is task performed on the pipeline?</i> Yes</p> <p><i>Is the task an Operations or Maintenance Task?</i> Yes</p> <p><i>Is the task required by Part 195 (or 192)?</i> Yes – 195.426</p> <p><i>Does task affect the operation or integrity of the pipeline?</i> Yes</p>
Notes:	Electrical Technicians, Instrument Technicians, Communications Technicians, or Electronics Technicians normally perform this task. Contract instrumentation service companies, or contract control equipment personnel could also carry out this task.
Abnormal Operating Conditions and Examples:	<p>Component failure Relief valve failure, launch pin failure, stuck pig</p> <p>Fire/Explosion Ignition of released hydrocarbon</p> <p>Unexpected hazardous liquid or carbon dioxide encountered Trap o-ring leak</p> <p>Unexplained pressure deviations Pressure still in launch/receive barrel</p>

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APPENDIX E – ACCEPTABLE EVALUATION METHODS

Evaluation method	"Transitional" qualification ¹	"Initial" qualification ²	"Subsequent" qualification ³
Written Exam	Yes	Yes	Yes
Oral Exam	Yes	Yes	Yes
Work Performance History Review	Yes	May not be used as the sole evaluation method.	May not be used as the sole evaluation method after the three-year compliance date.
Performance On the Job	Yes	Yes	Yes
On-the-Job Training	Yes	Yes	Yes
Simulation	Yes	Yes	Yes
Other	Yes	Yes	Yes

Notes:

- 1 "Transitional" qualification means qualification completed by October 28, 2002, of individuals who have been performing a covered task on a regular basis prior to August 27, 1999.
- 2 "Initial" qualification means qualification, at any time, of individuals who were not performing a covered task on a regular basis prior to the effective date of the rule.
- 3 "Subsequent" qualification means evaluation of an individual's qualification, after "transitional" or "initial" qualification, at the interval established by the operator.

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APPENDIX F – EFFECTIVE USE OF EVALUATION METHODS

Note: It may appear that creation of evaluations can be easy, but a background in instructional design is necessary to create any valid evaluation method.

Method	Evaluates	Strengths	Weaknesses	Description / Comments
Written Exam	Knowledge	Easy to administer. Person administering the test does not need to know the subject. Can provide objective measurement of knowledge if multiple choice, true/false, or matching questions are used.	Unable to evaluate skills or performance. Poorly written questions may not provide accurate measurement.	A written test utilizes a series of questions typically requiring a specific answer. A variety of questions may be used including True/False, Multiple Choice, Matching, Fill-in-the-Blank, and Short Answer. A written test may be performed using pen and paper or electronic formats like those in computer-based or web-based training.
Oral Exam	Knowledge	Preparation is similar to written exam. More difficult to administer than written exam. Good for probing individual's depth of knowledge.	Person administering needs to have detailed understanding of subject. Scoring is subjective.	Oral exams involve an experienced individual asking questions of the person being evaluated. A line of questioning should be prepared prior to the exam. This is necessary to ensure the knowledge items are adequately covered. It is best to use open-ended questions.

Method	Evaluates	Strengths	Weaknesses	Description / Comments
Work Performance History Review	Past Responsibilities	Indicator of past responsibility. Relatively little preparation time required and simple to administer.	Very subjective and lacks ability to truly measure knowledge or skills. Can be difficult to document unless extensive written procedures were used. Does not measure whether task was performed correctly, only that no accident occurred.	The Work Performance History Review will typically involve reviewing an individual's personnel records, performance appraisals, and other job-related documents to identify performance weaknesses. This may also involve employee interviews or a review of training records to determine past experience.
Observation during On-the-Job Training (OJT) and during job performance	Knowledge, Skills	Measures ability to perform the skills required for the job. Can be effectively administered as actual or simulated performance.	Can be difficult to create if accurate procedures do not exist. Is subjective but can be more objective if critical steps and standards are identified in advance. Low trainee to evaluator ratio makes this method expensive.	Usually involves the use of a checklist (Job Performance Measure – See Appendix H for example) of tasks that have been performed. The checklist is completed following training and practice of the tasks under supervision of an experienced individual.

Method	Evaluates	Strengths	Weaknesses	Description / Comments
Lab or mock-up simulation	Knowledge, Skills	Allows evaluation to take place in controlled conditions. No danger to facility equipment and no effect on operation.	Requires high level of preparation. Care must be taken to duplicate actual conditions as close as possible.	Simulations involve evaluating an individual in a setting that represents the actual work conditions. This may include use of computer programs or workshop mock-ups. This often involves using checklists (Job Performance Measures) to assess the performance.
Other: Self-Assessment with Supervisor Review	Knowledge	Easy to administer.	Moderate amount of preparation required. Poor method to evaluate actual performance or knowledge. Difficult to defend to regulators.	This method involves an individual rating their ability to perform a task based on established criteria. The individual's supervisor then performs a comparison evaluation using the same criteria. The supervisor and employee then meet to discuss any differences and come to an agreement on the individual's ability.

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APPENDIX G – EXAMPLE QUALIFICATION RECORD SHEET

Employee/Contractor Number: _____

[illegible]

*** Attach documentation if necessary.**

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EVALUATOR'S INSTRUCTIONS

NOTE

Questions asked by the evaluator will be limited to the information contained in the Objectives section of the Progression Guide and associated operating procedures pertaining to this JPM.

1. Use the Objectives in the Progression Guide to develop questions to be discussed prior to performance of this JPM.
2. Knowledge Questions will be documented in the appropriate section of this JPM.
3. Attach any supporting documentation used during the performance of this JPM.
4. Sign the appropriate section of the JPM.
5. If evaluation is satisfactory (SAT), Initial & Date the applicable items in the Operator's Progression Guide.
6. Forward JPM evaluation to the Operations Manager for review.

THE EVALUATOR SHALL REVIEW THE FOLLOWING WITH THE TRAINEE:

1. The evaluator shall explain the JPM initial conditions and clarify as required.
2. The trainee may use any references that are normally available.
3. The trainee shall indicate all required log entries, status board updates, chart recorder annotations, and communications.
4. The trainee shall make oral reports for annunciators and any abnormal indications observed. The examiner will act as the Controller or other operators for communications purposes if the JPM is to be simulated.
5. The trainee shall verbally inform the evaluator of all actions performed during the performance of this JPM to ensure knowledge and understanding.

EVALUATION QUESTIONS AND RESPONSE

Evaluator Instructions:

Prior to starting the skills portion of the JPM, the evaluator shall ask questions, based on the Objectives as defined in the Progression Guide, that are specific to the tasks being performed. The evaluator will document the questions and answers below.

Question 1:

Response:

Question 2:

Response:

Question 3:

Response:

Example Job Performance Measure (JPM)

Step	Element	Action P = Perform S = Simulate	SATISFACTORY / UNSATISFACTORY	COMMENTS (Required for UNSAT)
1.8	Isolate <u>AND</u> Tag hydraulic supply to Valve actuators: <ul style="list-style-type: none"> Trap Bypass Valve Trap Isolation Valve Trap Block Valve 	P P P	SAT / UNSAT	
1.9	Depressurize <u>AND</u> Drain Trap as follows:		-----	
1.9.1	Open Vent Valve to Sump	P	SAT / UNSAT	
1.9.2	Open Trap Drain Valve	P	SAT / UNSAT	
1.9.3	Open Atmospheric Vent Valve	P	SAT / UNSAT	
1.10	Monitor Booster Station Sump to ensure that trap stops draining.	P	SAT / UNSAT	
1.11	Place STOP signs on driveway	P	SAT / UNSAT	
1.11	ENSURE Safety vent indicates no pressure	P	SAT / UNSAT	
1.13	<u>When</u> trap is drained LOOSEN safety clasp nut on top of Trap Door	P	SAT / UNSAT	
CAUTION				

Water must be running on concrete pad before tray is pulled out of trap to prevent pad from becoming saturated with product.

STANDARD: Trap is DEPRESSURIZED and OPEN

Job Performance Measure

Task: Receive PIG(s) in Main Line #1.

Method of Accomplishment: Perform

Associated Task ID: C-XXX-XX-XXX-XX

Approved for Independent Performance?: Yes

Trainee Name: _____ **Social Security Number:** _____

Knowledge check complete: _____
Trainer Name _____ Date _____

SAT / UNSAT

Training complete: _____
Trainer Name _____ Date _____

Successful Completion of this JPM Evaluation consists of
Satisfactory Performance of ALL Critical Step Items defined within.

Evaluation complete: _____
Trainer Name _____ Date _____

SAT / UNSAT

Comments: _____

Concurrence: _____
Trainee Signature _____ Date _____

INDEX

Activity	31
Abnormal Operating Conditions	22, 23, 32
Accident, In Response to	9, 27
Affected Personnel	2
Affects Operation or Integrity	31
Annual Surveys, Conduct	
(Covered Task)	37
Atmospheric Corrosion, Prevention of	
(Covered Task)	43
Background	1
Backfilling a Trench Following Maintenance	
(Covered Task)	75
Bare Pipe, Electrically Inspect	
(Covered Task)	42
Buried Pipe, Temporary Marking	
(Covered Task)	53
Breakout Tanks, Inspect and Repair	
(Covered Task)	63
Breakout Tanks, Protect From Static	
Electricity, Lightning and Stray	
Electrical Currents (Covered Task)	65
Buried Pipe, Inspect When Exposed	
(Covered Task)	41
Cathodic Protection Remediation	
(Covered Task)	45
Communicating Changes in Covered	
Task Procedures	10, 28
Contractor Personnel	11, 26
Control Equipment – Pressure	60, 61
Covered Task(s)	
Communicating Changes	10
Definition (API)	31
Employee No Longer Able to Perform	10
Examples Using the Criteria	20, 21
Expanded List	37-81
Identification of	6, 16, 19
Operators are Responsible for	
Identifying	15
Quick Reference List	35-36

Deadlines, Regulatory	1, 29
Definitions	22
Developing the Written Program	4
Directed and Observed by a	
Qualified Person	11, 27
Emergency Response Training	14
Employee No Longer Able to Perform	
Covered Task	10, 27
External Coating, Application/Repair	
(Covered Task)	49
Evaluation	8, 24, 31
Evaluation Methods	8, 85
Federal Register	1
Format	4
Four-Part Test	5, 6, 7
General (195.509)	29
In Response to an Accident	9
In-Service Pipe, Moving (Covered Task)	69
Individual	32
Internal Corrosion, Monitoring	
(Covered Task)	46
Internal Corrosion Remediation	
(Covered Task)	47
Internal Pipe Surfaces, Inspect	
(Covered Task)	48
Initial Qualification	24, 83
Instrumentation Control Loops, Verify	
or Set Parameters (Covered Task)	62
Introduction	3, 13
Identification of Covered Tasks	6
Job Performance Measure (JPM)	91
Launching and Receiving Facilities,	
Operate Pressure-Relieving Devices	
(Covered Task)	81
Leak Detection, CPM (Covered Task)	80
Leak Survey, Inspect After Blasting	
(Covered Task)	54
Line Markers	50
Maximum Operating Pressure	19, 22
Meter Reading	21
Navigable Waterway Crossing, Inspect	
(Covered Task)	52
Non-Qualified Individuals	11, 27

On-the-Job Observation, Performance	24, 86	Record Keeping	12, 29, 89
On-the-Job Training	24, 86	Rectifier, Inspect (Covered Task).....	39
Operate	32	Rectifier, Maintain (Covered Task).....	40
Operations of Pipeline System (Covered Task)	79	Re-evaluation	9, 10
Operations or Maintenance Task.....	17, 31	Regulatory Deadlines	1, 29
Overfill Protection Devices, Repair (Covered Task)	68	Relief Valves, Inspect, Test, Calibrate (Covered Task).....	58
Oral Exam	24, 85	Relief Valves, Maintain/Repair (Covered Task).....	59
Pipe, Inspect Existing Following Movement (Covered Task)	70	Removed From the System	31
Pipe, Inspect Clearance to Underground Structures (Covered Task)	71	Required by 49 CFR Part 195.....	18, 31
Pipeline.....	31	Right-of-Way, Inspect (Covered Task)	51
Pipeline Facility.....	31	Scope (195.501).....	15-19
Pipeline Facilities, Abandoning, Safe Disconnect, Purging and Sealing (Covered Task)	72	Self-Assessment with Supervisor Review	87
Pipeline facilities, Provide Protection (Covered Task)	64	Seven Required Elements	3, 26
Pipeline Repairs, Perform (Covered Task)	76	Simulation	24, 87
Pipeline System	31	Subsequent Evaluation.....	9
Pipe-to-Soil Potentials (Covered Task)	20	Subsequent Qualification	24, 83
Performed on a Pipeline Facility	31	Suggested Program.....	4
Premises and Definitions.....	5	Support Structures, Repair (Covered Task).....	73
Pressure Switches and Transmitters, Inspect, Test, Calibrate (Covered Task)	61	Tasks Affecting the Operation or Integrity of the Pipeline.....	18
Pressure Limiting/Relief Devices, Inspect, Test, Calibrate (Covered Task).....	60	Task Identification and Analysis.....	5
Pressure Testing, Conduct (Covered Task)	77	Tasks Performed Pursuant to Requirement in 49 CFR Part 195	18, 31
Program Maintenance.....	12	Test Leads, Maintain (Covered Task)	38
Programmable Controllers, Verify or Set Parameters (Covered Task)	62	Tie-Ins and Pipe Replacements, Inspect (Covered Task).....	74
Qualification	13	Time Interval	9
Initial	83	Transitional Qualification	24, 83
Subsequent.....	83	Valves, Inspect (Covered Task).....	56
Transitional	83	Valves, Maintain (Covered Task).....	55
Qualified	25, 32	Valves, Repair (Covered Task).....	57
		Wall Thickness, Measurement of (Covered Task).....	44
		Welders.....	17
		Welding on Existing Pipelines (Covered Task).....	78
		Work Performance History Review	24, 25, 29, 83, 86
		Written Exam.....	24, 83, 85
		Written (Qualification) Program.....	3, 4, 13, 26

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