EXHIBIT B

WEYERHAEUSER LONGVIEW MILL NATURAL GAS PIPELINE:
Notice of Change Form

Date of Change: 10/04/05

Task(s) Impacted		O&M Procedure(s) Impacted		Regulations Impacted		Incidents, For Cause, Near Miss		Industry Accidents	
Yes	No	Yes	No	Yes	No	Yes	No	Yes	No
	X		X		X		X		X

What Communicated: (Attach any supporting documentation.)

Revisions to Division 1, sections 8, 11, 13, 14, 16 - added and deleted some minor language at the request of the WUTC.
Corrected typos througout
How Communicated:
Via email

Tasks Impacted: See above

Individuals Impacted:

Name of Individual(s) receiving the changes associated with the performance of covered tasks.	Place an "X" in the boxes below when communication is completed for that individual
Ron Kosloski	X
Ted Boehl	X

Name and Position of Person Processing the Change:

Steven E Oxford, IGS Pipeline Operations Manager

w/ ATTACHMENTS FOR INFORMATION & REFERENCE

* WEYERHAEUSER LONGVIEW MILL GAS PIPELINE
O&M MANUAL and/or OPERATOR QUALIFICATION PLAN
REVIEW FORM

Date(s) of Review?: _____

What was reviewed? _____

Reviewer(s): _____

Reason(s) for Review? _____

Change(s) Made: _____

(Also use Notice of Change form to Communicate any Changes made to the OQ Plan)

* THIS FORM IS IN THE LONGVIEW MILL NATURAL GAS PIPELINE SYSTEM OPERATIONS AND MAINTENANCE MANUAL

* FOR YOUR INFORMATION & REFERENCE ONLY

THIS DISPLAYS THE CHANGES TO THE OQ PLAN AS FOLLOW-UP TO THE MEETING IN OLYMPIA ON MONDAY, 10/3/05 AND THE MEMO FROM SONDRA WALSH DATED 10/4/05.

Kosloski, Ron

From: Steve Oxford [seoxford@att.net]
Sent: Wednesday, October 05, 2005 12:31 AM
To: Kosloski, Ron
Cc: tboehl@yahoo.com
Subject: OQ Plan changes made per 10_3 WUTC mtg
Attachments: APP_1_XREF.pdf; NOTICE OF CHANGE.pdf; DIV_1_INTRO.pdf; F-20 O&M REVIEW.pdf

"REVIEWED/REVISED 10/04/05"

Ron - See attached files for changes made to the OQ Plan, as noted below:

CRITICAL
1. Page 1-8, Section 1.1, 2nd paragraph , the 2nd sentence starts with "Work Performance history review. . ." is incorrect. This statement should be removed. Page 1-11, Section 1.3 Outside Contractors is correct

COMMENT: For simplicity, please remove this 2nd paragraph.

Status: ***DONE***

2. Page 1-11 Section 1.3 should include the wording contractors "and subcontractors"

Comment: Your suggestion to use "contract personnel" in place of "contractor" appears to resolve his.

Status: ***DONE***

3. Page 1-13 Section 1.9 the last paragraph says (I think) that the Plan Administrator has to approve that an individual has to be requalified however it sounds like it is saying the Plan Administrator instead of an evaluator will be doing the re-evaluation

COMMENT: Please remove the "1" footnote indication at the end of paragraph #1 (a typo). For the 2nd paragraph, I suggest changing the wording to use "and/or" as follows: "...individual will have to be requalified by hands-on and/or written and/or oral examination....". Change "an" to "a" in front of near-miss. Strike the end of this 2nd paragraph that says "or any other evidence the individual may need to be re-evaluated and re-qualified." For the 3rd paragraph simply say: "Re-Qualification will be determined by the Plan Administrator."

Status: ***DONE***

4. Page 1-14, Section 1.10 Notice of Change does not include communication from the field to management even though Division 5 has the feed back form.

COMMENT: Add another paragraph that states something like: The "FEEDBACK FORM" in Division 5 will be used to provide response to "Notice of Change" that are distributed or to suggest future OQ Program changes."

Status: ***DONE***

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5. Page 1-16, Section 1.16 add explanation that this will be used for contractors to become familiar with Weyerhaeuser's AOCs and required by Weyerhaeuser for some of it's employees. This would be a good place to include Weyerhaeuser's properties of Natural Gas questionnaire that will be used for contractors.

COMMENT: Please incorporate some wording that Division "7.1 Abnormal Operating Conditions/Longview Natural Gas Pipeline" will be used to familiarize "contract personnel" with Longview's pipeline-specific AOC's. "Division 6.1 Properties of Natural Gas Questionnaire may also be used to verify that "contract personnel" are familiar with natural gas.

Status: ***DONE***

6. Page A1-3 Remove footnote #1 or add the footnote

COMMENT: Yes.

Status: ***DONE - 12 incidences removed***

NONCRITICAL
7. Page 1-11, Section 1.4 should include retest time frames

COMMENT: Let's pass on this. (This is already clearly covered in Divisions 3 and 4. Redundancy will probably cause confusion rather than clarification.)

Status: ***No change made***

8. Page 1-11 Section 1.3 the last sentence of the third paragraph says list evaluations , it should also direct the reader to division 5, the competency/skill tests.

COMMENT: I suggest this last paragraph read something like: "The Plan Administrator will make sure that evaluations are documented, e.g. test questions are written and Hands-On Evaluations include performance steps. Divisions 5, 6 and 7 of this OQ Plan include examples of these evaluations and documentation."

Status: ***DONE***

9.Page 1-16 Section 1-17 Include how the annual review will be documented

COMMENT: Please include the "Annual Review Form" per your suggestion.

Status: ***DONE - the O&M Manual annual review form has been modified to be used for either an O&M Manual Review or an OQ Plan review or both.***

10. Page 1-16 Section 1.16 use the word pipeline facility instead of pipeline right-of-way

COMMENT: Yes please.

Status: ***DONE***

CRITICAL

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WEYERHAEUSER LONGVIEW MILL NATURAL GAS PIPELINE:
Notice of Change Form

Date of Change: 9/26-30/05

Task(s) Impacted		O&M Procedure(s) Impacted		Regulations Impacted		Incidents, For Cause, Near Miss		Industry Accidents	
Yes	No	Yes	No	Yes	No	Yes	No	Yes	No
X			X		X		X		X

DATE: CHANGED TO: "ADOPTED OCTOBER, 2001"

What Communicated: (Attach any supporting documentation.)

1. Div 1: Update table of contents, delete 1.7, revise 1.16 to reflect new AOC training document and addition of AOCs to all covered tasks, revise 1.17, correct misc typos. ELIMINATED 9/15
2. Div 2: Added 13.1, general AOC requirement to all covered tasks, P1 revised to require Skill and Knowledge Competencies 1.1-1.2 only, revised all other covered tasks except P3 & P7 to include 1.1-1.3 only, correct misc typos.
3. Div 3, 4, 8, App 2: Correct misc typos only
4. Div 5: Added back in previously deleted Feedback Form, added 12.1 Hands-On Valve Operation, remove "ID" and "Participant Signature" lines from forms, correct misc typos
5. Div 6: Added 6.1 Properties of Natural Gas Questionnaire
6. Div 7: Added 7.1 Abnormal Operating Conditions training, correct misc typos
7. App 1: Remove Sec 13 & re-number Sec 14 to 13, revise 13.1 training reference to remove "emergency shut down procedures", revise OQforAll training ref for 1.1-1.2 to remove AOC module, correct misc typos
8. App 3: Added "5 Part Test Applied to RCP Task List"

How Communicated:
Via email

Tasks Impacted: See above

Individuals Impacted:

Name of Individual(s) receiving the changes associated with the performance of covered tasks.	Place an "X" in the boxes below when communication is completed for that individual
Ron Kosloski	X
Ted Boehl	X

Name and Position of Person Processing the Change:

Steven E Oxford, IGS Pipeline Operations Manager

WEYERHAEUSER LONGVIEW MILL NATURAL GAS PIPELINE:
Notice of Change Form

Date of Change: 8/10/05

Task(s) Impacted		O&M Procedure(s) Impacted		Regulations Impacted		Incidents, For Cause, Near Miss		Industry Accidents	
Yes	No	Yes	No	Yes	No	Yes	No	Yes	No
X			X		X		X		X

What Communicated: (Attach any supporting documentation.)

1. Added task "P-18 Inspection of 3rd Party Construction Near Pipeline" to Index of Division 1
2. Corrected typo Div's 3 and 4, skill/competency 10.6, changed "and" to "or"

How Communicated:
Via email

Tasks Impacted: none

Individuals Impacted:

Name of Individual(s) receiving the changes associated with the performance of covered tasks.	Place an "X" in the boxes below when communication is completed for that individual
Ron Kosloski	X
Ted Boehl	X

Name and Position of Person Processing the Change:

Steven E Oxford, IGS Pipeline Operations Manager

WEYERHAEUSER LONGVIEW MILL NATURAL GAS PIPELINE:
Notice of Change Form

Date of Change: 7/25/05

Task(s) Impacted		O&M Procedure(s) Impacted		Regulations Impacted		Incidents, For Cause, Near Miss		Industry Accidents	
Yes	No	Yes	No	Yes	No	Yes	No	Yes	No
X			X		X		X		X

What Communicated: (Attach any supporting documentation.)

Added task P-18 Inspection of 3rd Party Construction Near Pipeline

How Communicated:
Via email

Tasks Impacted: New task added

Individuals Impacted:

Name of Individual(s) receiving the changes associated with the performance of covered tasks.	Place an "X" in the boxes below when communication is completed for that individual
Ron Kosloski	X
Ted Boehl	X

Name and Position of Person Processing the Change:

Steven E Oxford, IGS Pipeline Operations Manager

WEYERHAEUSER LONGVIEW MILL NATURAL GAS PIPELINE:
Notice of Change Form

Date of Change: 5/16/05

Task(s) Impacted		O&M Procedure(s) Impacted		Regulations Impacted		Incidents, For Cause, Near Miss		Industry Accidents	
Yes	No	Yes	No	Yes	No	Yes	No	Yes	No
	X		X		X		X		X

What Communicated: (Attach any supporting documentation.)

Hands-on evaluation form 10.1 added for evaluation of cathodic protection measurement, using half-cell and voltmeter to take cathodic protection "pipe-to-soil" measurements. The form was added to Div 5 and the index in Div 1 was modified.

How Communicated:
Via email

Tasks Impacted: None – no change to tasks, only addition of an evaluation form.

Individuals Impacted:

Name of Individual(s) receiving the changes associated with the performance of covered tasks.	Place an "X" in the boxes below when communication is completed for that individual
Ron Kosloski	X
Frank Busch	X
Paula Stoppler	X
Mick McCourt	X

Name and Position of Person Processing the Change:

Steven E Oxford, IGS Pipeline Operations Manager

WEYERHAEUSER LONGVIEW MILL NATURAL GAS PIPELINE:
Notice of Change Form

Date of Change: 5/12 & 13/05

Task(s) Impacted		O&M Procedure(s) Impacted		Regulations Impacted		Incidents, For Cause, Near Miss		Industry Accidents	
Yes	No	Yes	No	Yes	No	Yes	No	Yes	No
X			X		X		X		X

What Communicated: (Attach any supporting documentation.)
Changes were made to the entire document, originally published and adopted on 3/1/05 - to deal with inconsistencies between the covered task lists and the qualification summaries. Minor changes were made to all covered tasks – in order to get the covered tasks and required consequences and skills to match the O&M manual and work that is actually being done on a daily basis.

How Communicated:
Via email

Tasks Impacted: All tasks had minor modifications. For the 5/12 version, a Task 14 for Abnormal Operating Conditions was added. For the 5/13 version, Task 13 was eliminated and Task 14 was renumbered to Task 13

Individuals Impacted:

Name of Individual(s) receiving the changes associated with the performance of covered tasks.	Place an "X" in the boxes below when communication is completed for that individual
Ron Kosloski	X
Frank Busch	X
Paula Stoppler	X
Mick McCourt	X

Name and Position of Person Processing the Change:

Steven E Oxford, IGS Pipeline Operations Manager

Weyerhaeuser Longview Mill Natural Gas Pipeline

Weyerhaeuser Pipeline Operations Manager

(see Section 4, Operations & Maintenance Manual
Plan Administrator (Protocol 3.01 192.805)

NATURAL GAS OPERATOR QUALIFICATION PROGRAM

Adopted October, 2001

NATURAL GAS OPERATOR QUALIFICATION PROGRAM
TABLE OF CONTENTS

DIVISION 3 – REQUIRED COMPETENCIES AND SKILLS

DIVISION 4 – RECORD KEEPING

DIVISION 5 – HANDS-ON PERFORMANCE QUALIFICATION (Forms)

INTRODUCTION

The gas operator qualification program is governed by the regulations of the U.S. DOT. Those regulations are found in 49-CFR-191 and 192.

Format of this Program

This program is separated into eight divisions:

Division 1. PURPOSE AND SCOPE

The first part of the program explains the purpose and scope of the program. It explains the different methods for qualification, re-evaluation, notices of changes, training, record keeping, mutual aid, and also the time frames for re-qualification.

Division 2. COVERED TASKS

This division explains the procedures required of the gas operator, and the covered tasks associated with the procedure.

Division 3. REQUIRED COMPETENCIES AND SKILLS

In this division is an outline of the required competencies and skills, the method for qualification, the time frames for re-qualification, and suggested training references, these are suggested training references, if other training material is used, the operator should list it, and give an outline of it in Division 7.

Division 4. RECORD KEEPING

This division contains the individual summary of qualifications.

Division 5. HANDS-ON PERFORMANCE QUALIFICATION (Forms)

Division five contains evaluation forms used in the evaluation of the hands-on skills and other documentation processes.

Division 6. WRITTEN EVALUATION OF COMPETENCIES AND SKILLS

In this division is a copy of the written evaluations used to help determine knowledge retention.

Division 7. TRAINING MATERIALS

This division is a list of training materials that operators use other than those found in Division 8 that are used in the qualification process.

Division 8. COURSE DESCRIPTIONS

The eighth division contains an outline of Midwest Energy Association's (MEA) training modules, which is reproduced by the Iowa Association of Municipal Utilities (IAMU) through an Agreement by the two parties.

PROTOCOLS/RULE REQUIREMENTS

The tables below reference divisions of the IAMU plan where the DOT OQ Inspection protocols are addressed.

PROTOCOL	RULE REQUIREMENT	SECTION ADDRESSED IN
1.01	192.805	Preface, 1.15, Divisions 2, 3
1.02	192.803 192.805	1.3
1.03	192.803	1.14
1.04	192.803 192.805	1.9, 1.11, 1.14 Division 7
1.05	192.809 Amdt 192-90, 8-20-01	Division 3
2.01	192.801 192.805	1.2, 1.10, 1.15, Division 2
2.02	192.803 192.805	Division 3
3.01	192.805 192.807	Cover page, 1.3, 1.12, Divisions 4a, 4b
3.02	192.805	1.8, Division 5
4.01	192.803, 192.805, 192.809	1.1, 1.7, Divisions 3, 5
4.02	192.803	1.3, 1.9, 1.11, 1.16, Division 8
5.01	192.805 Incident 191	1.9
5.02	192.805	1.15, Division 3
6.01	192.805	1.17, Division 5
7.01	192.807	1.3, 1.12
8.01	192.805	1.10, Division 5 & 7

NATURAL GAS OPERATOR QUALIFICATION PROGRAM

1.1 PURPOSE. This program is intended to meet the requirements, effective April 27, 2001, of the Office of Pipeline Safety, U.S. Department of Transportation, for natural gas operators (Reprinted below). By following the provisions in this written program, individuals will be able to meet the October 28, 2002 requirements as specified in 192.809.

Work performance history may not be used as the sole evaluation after October 28, 2002. (Protocol 4.01 192.809)

QUALIFICATION OF PIPELINE PERSONNEL
49CFR PART 192 Subpart N

192.801 SCOPE.

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

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

1. Is performed on a pipeline facility;
2. Is an operations or maintenance task;
3. Is performed as a requirement of this part; and
4. Affects the operation or the integrity of the pipeline.

192.803 DEFINITIONS.

Abnormal operating condition (AOC) 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
(b) Result in a hazard(s) to persons, property, or the environment.

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
    1. Performance on the job
    2. On the job training
    3. Simulations
(e) Other forms of assessment.

Qualified means that an individual has been evaluated and can:

(a) Perform assigned covered tasks
(b) Recognize and react to abnormal operating conditions.

192.805 QUALIFICATION.

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

(a) Identify covered tasks
(b) Ensure through evaluation that individuals performing covered tasks are qualified
(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
(d) Evaluate an individual if the operator has reason to believe that the individual's performance of a covered task contributed to an incident as defined in part 191
(e) Evaluate an individual if the operator has reason to believe that the individual is no longer qualified to perform a covered task
(f) Communicate changes that affect covered tasks to individuals performing those tasks
(g) Identify those covered tasks and the intervals at which evaluation of the individual's qualifications is needed.

192.807 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.

192.809 GENERAL.

Operators must have a written qualification program by April 27, 2001. Operators must complete the qualification of individuals performing covered tasks by October 28, 2002. 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.

After October 28, 2002, work performance history may not be used as a sole evaluation method.

1.2 COVERED TASKS, COMPETENCIES AND SKILLS.

This qualification program is divided into specific covered tasks. There are several required competencies and skills for each covered task. Any person performing a covered task must be qualified in the competencies and skills required for that task. In addition, all affected persons, regardless of their performance of specific covered tasks, shall be required to demonstrate knowledge of the Fundamentals of Natural Gas.

(Protocol 2.01, 192.805)

METHOD USED FOR DETERMINING COVERED TASK LIST

The covered task list was developed from a review of past and present operations on the Weyerhaeuser Longview Mill Natural Gas Pipeline and after a review of the material contained in the Iowa Association of Municipal

Utilities (IAMU) model natural gas operator qualification program. The four part test detailed in 192.801 was applied to each task.

Additionally, after a review of the OQ plan by Regulatory Compliance Partners, a 4 part test was applied to an RCP list of possible covered tasks, and specifically for the State of Washington, a fifth test of whether the task was "new construction" was also applied to the RCP list.. Appendix 3 of this OQ plan contains the RCP task list and the results of the 5 part test.

1.3 OUTSIDE CONTRACTORS.

Contract personnel performing a covered task shall qualify by one of the following methods:

1. May qualify through this program.
2. Shall perform the covered tasks under the direct supervision of a qualified individual.
3. Shall submit proof, prior to performing the task acceptable to the operator demonstrating acceptable qualification for the covered tasks by obtaining copies, as described in Section 1.12 of this Division, of the contractor's evaluations and ensure they address the same knowledge' skills' abilities and AOC's as your evaluations for the same tasks.

Contract personnel must be able to recognize AOCs as described in Section 1.16 of this Division.

The Plan Administrator will make sure the evaluations are documented (e.g. test questions are written and Hands-On Evaluations include performance steps). Divisions 5, 6, and 7 of this Plan includes examples of these type of evaluations and documentation of these evaluations.

(Protocols 1.02, 3.01, 4.02, 7.01, 192.803, 192.805, 192.807)

1.4 QUALIFICATION BY WRITTEN / ORAL AND/OR HANDS-ON EVALUATION.

A written/oral and/or hands-on evaluation is required in each competency or skill. One hundred percent of all specified critical questions and not less than seventy percent of all other questions must be answered correctly to pass the evaluation (written evaluation). All of the required competencies or skills must be passed or re-training and successful evaluation must be completed on those that are not passed.

1.5 QUALIFICATION BY PRE-TEST.

A general pre-test may be offered to establish specific knowledge areas. If the test is passed in all areas, at least seventy percent in each competency, then demonstration of proficiency through hands-on exercises may be used to establish qualification.

1.6 RE-QUALIFICATION.

Examinations for re-qualification must be passed and documented within the time frames specified in Division 3.

1.7 (NOT IN USE)

1.8 PERFORMING COVERED TASK UNDER DIRECT OBSERVATION OF QUALIFIED PERSON.

In the event that an employee is not qualified to perform a certain covered task, that person may perform the covered task if under direct observation of a person that is qualified.

Direct observation means: The observer must be in close enough proximity in the immediate area, to be able to recognize and react to an action that may create an abnormal operating condition or by not following proper practices, and take immediate action, to prevent it from occurring. When performing direct observation the observer must appropriately document the observation. Form "Direct Observation of Unqualified Person Performing Covered Task Under Direct Supervision of Qualified Individual" in Division 5 can be used to document the observation.

On-the-job training may not be used for fusion, welding, and tapping. Qualification for these covered tasks must be completed prior to performance on a system.

(PROTOCOL 3.02, 192.805)

1.9 RE-EVALUATION FOR CAUSE.

Re-evaluation of a person's qualification must be undertaken when his/her performance has created an unsafe environment, been the direct cause of personal injury, or if the Plan Administrator has reason to believe the person's performance of a covered task contributed to an *incident* defined in Part 191.

Incident means any of the following events:

1. An event that involves a release of gas from a pipeline or liquefied natural gas *(LNG)* or gas from an LNG facility and (i) A death, or personal injury necessitating in-patient hospitalization; or (ii) Estimated property damage, including cost of gas lost, of the operator or others, or both, of $50,000 or more.
2. An event that results in an emergency shutdown of an LNG facility.
3. An event that is significant, in the judgment of the operator, even though it did not meet the criteria of paragraphs 1) or 2).

If at anytime the Plan Administrator has reason to believe that an individual is no longer qualified to perform a covered task, then that individual will have to be re-qualified by hands-on and/or written and/or oral examination (to same criteria as initial qualifications.) Reasons an individual may no longer be qualified may include: injury or physical limitation, procedures seldom or rarely performed, observation of an error or incorrect procedure, a near-miss incident, evidence of an error or incorrect procedure.

(Protocols 1.04, 4.02, 5.01, 192.803, 192.805)

Re-Qualification will be determined by the Plan Administrator.

1.10 NOTICE OF CHANGES.

Plan Administrator will communicate (via phone, fax, email, or other appropriate means) with all affected individuals and contractors to make them aware of any material change, or changes made on the system that require a change of procedures, including changes in the O&M and/or the Emergency Procedures.

This communication will occur as soon after such changes are made as practical, and documented as to the context and recipients using Form "Notice of Change" in Division 5. This may include qualification and re-qualification procedures, equipment change and upgrades, new material specifications, O&M activity and new tasks and evaluations.

The "FEEDBACK FORM" in Division 5 will be used to provide response to a "NOTICE OF CHANGE" form or to otherwise suggest OQ Plan changes.

(Protocol 2.01, 8.01, 192.801, 192.805)

1.11 TRAINING.

The above requirements are accomplished through an on-going training program. This program includes workshops, classroom activities, and various other training methods that are designed to address the different covered tasks performed by each individual.

All training and evaluation shall be conducted by or be in accordance with this training and qualification program.

All hands-on activities will be conducted at the operator's gas facility, a gas facility of similar design, or at a workshop designated for the specific competencies and skills identified as covered tasks.

Any new or amended tasks addressed in Section 1.10 shall have appropriate training materials outlined in Division 7.

Retraining if qualifications are questioned will be conducted as per 1.9 of this Division "Re-evaluation For Cause."

(Protocol 1.04, 4.02, 192.803, 192.805)

1.12 PROGRAM RECORDKEEPING.

Section 4 of this manual contains an Individual Qualification Summary. This form will identify each of the qualified individuals, the covered tasks that each individual is qualified to perform, the dates of current qualification for each task, and the qualification methods.

Records of individual qualification method, completion of workshop evaluation training records that support qualified person qualifications shall be maintained while the individual is performing the covered task. Prior qualifications and of persons that are no longer performing covered tasks, shall be retained for the time period of five years after the qualification expires.

(Protocols 3.01, 7.01, 192.807)

1.13 NEW CONSTRUCTION.

Will be regarded as an O&M activity i.e. pipe replacement, main additions regulator station upgrades

1.14 MUTUAL AID.

Both covered by this program, or onsite training will be given on assigned covered tasks, prior to performing these tasks, and individuals will be listed.

Individuals from other entities performing covered tasks on behalf of the operator must be evaluated and qualified consistent with the operator's qualification program requirements prior to being allowed to perform covered tasks on the operator's system.

(Protocols 1.03, 1.04, 192.803)

(Mutual Aid agencies are not expected to perform any covered tasks at this time)

1.15 QUALIFICATION METHODS.

Qualification methods and time frames required were established by the Weyerhaeuser Pipeline Operations Manager and other Weyerhaeuser and pipeline operations personnel and a steering committee of system operators and regulatory personnel located in Iowa and Minnesota. Due to the complexities and uniqueness of the tasks, some are knowledge based, and others are accomplished by performance.

Time frames used were determined in part by the frequencies the tasks are performed, the extent of AOC's that may be involved, and the difficulties in performing the tasks. The covered task list was partially derived from MEA training materials and IAMU and MMUA steering committees.

(Protocols 1.01, 2.01, 5.02, 192.801, 192.805)

1.16 ABNORMAL OPERATING CONDITIONS (AOCs)

AOCs are included in the training materials for each covered task.

AOCs and the appropriate response to those AOCs are included as Section 2 of the Weyerhaeuser Longview Mill Gas Pipeline Operating and Maintenance Manual.

A training document, with an associated questionnaire, has been prepared to address general AOCs that may be encountered on the pipeline facilities or during the performance of covered tasks. That material is included in Division 7 of this OQ Plan and the questionnaires will be included in training documentation for individuals for which that material is used for AOC training. This material is designed to be used to familiarize contract personnel with this pipeline's specific AOCs. The Division 6 questionnaire on "Properties of Natural Gas" (6.1) may also be used to verify that contract personnel are familiar with the properties of natural gas.

(Protocol 4.02, 192.803)

1.17 PROGRAM PERFORMANCE, EFFECTIVENESS AND IMPROVEMENT

This Operator Qualification plan should be reviewed at least once annually, at an interval not to exceed 15 months, to evaluate the program as to performance, effectiveness and improvement.

At each review, the effectiveness and completeness of written training materials and on-the-job training methods should also be evaluated.

The dual purpose O&M Manual/OQ Plan review form F-20 from the O&M Manual will be used to document the annual review.

(Protocol 6.01, 192.805)

DIVISION 2

PROCEDURES WITH COVERED TASKS

The following activities would be considered "tasks" under 49 CFR 192. The competencies and/or skills listed as sections or subsections under each task are those identified in the operator qualification requirements of Division 3 of this program. Competency in fundamentals of natural gas is required for all covered tasks. (Protocols 1.01, 2.01, 192.805)

P-1 OPERATE VALVES

Tasks:

Operating valves (open/close)

Required Competencies and Skills:

1.1-1.2	Fundamentals of natural gas
12.1	Operating valves
13.1	Recognizing abnormal operating conditions – specifically related to valve position and abnormal operation

P-2 OPERATE AND MAINTAIN REGULATOR STATIONS

Tasks:

a. Conducting shut down/start up procedures
b. Operating by-pass
c. Performing lock-up
d. Stroking to full open
e. Adjusting to desired operating pressure
f. Inspecting gauges
g. Inspecting for atmospheric corrosion
h. Inspection of regulator relief valve, orifices, and seats

Required Competencies and Skills:

1.1-1.2	Fundamentals of natural gas
12.1	Operating valves
12.2	Inspecting and maintaining pressure regulating and limiting stations
13.1	Recognizing abnormal operating conditions, specifically related to abnormal valve operating or improper pressure setting

P-3 CONDUCT LEAK SURVEYS

Tasks:

a. Operating combustible gas indicator
b. Operating electronic gas detector
c. Knowing the different leak classifications (distinguish the difference)
d. Conducting bar-hole leak investigation

Required Competencies and Skills:

1.1-1.4	Fundamentals of natural gas
5.1	Leak Classification
5.2	Procedures for Leak Surveys and Patrols
5.3	Combustible gas indicators
5.4	Electronic gas detectors
5.6	Bar Hole Testing and Purging
13.1	Recognizing abnormal operating conditions, particularly with regard to unusual vegetation condition or odor where there should be no odor

P-4 OPERATE LINE LOCATOR

Tasks:

a. Locating inductively
b. Locating conductively
c. Proper placement of ground
d. Proper marking of facilities

Required Competencies and Skills:

1.1-1.3	Fundamentals of natural gas
3.1, 3.2	Operating line locator
13.1	Recognizing abnormal operating conditions on the pipeline right-of-way

P-5 CONDUCT LEAK INVESTIGATIONS

Tasks:
Procedures specified in Operating and Maintenance Plan

Required Competencies and Skills:

1.1-1.3	Fundamentals of natural gas
5.1	Leak classification.
5.2	Procedures for leak surveys and patrols.
5.3	Combustible gas indicators
5.4	Electronic gas detectors
5.6	Bar hole testing and purging
13.1	Recognizing abnormal operating conditions, specifically the role that an abnormal operating condition might have had in causing a leak.

P-6 OPERATE ODORANT LEVEL TESTING EQUIPMENT

Tasks:
Selecting appropriate location

Required Competencies and Skills:

1.1-1.3	Fundamentals of natural gas
11.3	Testing odorant level
13.1	Recognizing abnormal operating conditions related to odorant detection level

P-7 PERFORM LEAK SURVEYS AND PIPELINE PATROLS

Tasks:
a. Identifying building or construction near line
b. Identifying soil subsidence
c. Identifying abnormalities in vegetation growth

Required Competencies and Skills:

1.1-1.4	Fundamentals of natural gas
4.5	Soil Subsidence
5.2	Procedures for Leak Surveys and Patrols
13.1	Recognizing abnormal operating conditions detected during routine leak surveys and/or pipeline patrols and responding appropriately to those AOCs

P-8 FILL ODORANT SYSTEM

Tasks:

a. Closing valves to isolate system
b. De-pressurizing tank
c. Filling according to procedures (differential type or injector)
d. Recording amount of odorant used
e. Closing valves to atmosphere
f. Opening proper valves to restore to use

Required Competencies and Skills:

1.1-1.3	Fundamentals of natural gas
11.2	Operating and maintaining injection odorant system
13.1	Recognizing abnormal operating conditions related to the odorant filling equipment.

P-9 INSPECT FOR INTERNAL CORROSION

Tasks:

Inspecting open ends

Required Competencies and Skills:

1.1-1.3	Fundamentals of natural gas
10.2	Internal corrosion
13.1	Recognizing abnormal operating conditions related to internal pipe corrosion

P-10 INSPECT FOR EXTERNAL CORROSION

Tasks:

a. Examining exposed pipelines
b. Examining coating for damage
c. Examining for pitting or scaling

Required Competencies and Skills:

1.1-1.3	Fundamentals of natural gas
10.3	External corrosion
13.1	Recognizing abnormal operating conditions related to the external pipe corrosion

P-11 INSPECT FOR ATMOSPHERIC CORROSION

Tasks:

a. Inspecting paint coverage
b. Inspecting for physical damage

Required Competencies and Skills:

1.1-1.3	Fundamentals of natural gas
10.4	Atmospheric corrosion
13.1	Recognizing abnormal operating conditions related to atmospheric pipe corrosion

P-12 DETERMINE TYPE OF CORROSION (Localized Or Generalized)

Tasks:

a. Inspecting for pitting
b. Inspecting for flaking or scaling

Required Competencies and Skills:

1.1-1.3	Fundamentals of natural gas
10.1	Cathodic protection
10.5	Coatings
10.6	Holiday detection (coating inspection)
10.7	Painting and jacketing above ground facilities
13.1	Recognizing abnormal operating conditions related to corrosion

P-13 TAKE PIPE-TO-SOIL READINGS

Tasks:

a. Properly placing half-cell
b. Using voltmeter

Required Competencies and Skills:

1.1-1.3	Fundamentals of natural gas
10.1	Cathodic protection
13.1	Recognizing abnormal operating conditions related to cathodic protection reading values

P-14 VISUALLY INSPECT CATHODIC PROTECTION SYSTEM

Tasks:

a. Looking at test stations for physical damage
b. Looking at dielectric fittings
c. Looking for broken wires
d. Looking at rectifier units for damage

Required Competencies and Skills:

1.1-1.3	Fundamentals of natural gas
10.10	Inspection, monitoring cathodic protection system
13.1	Recognizing abnormal operating conditions related to cathodic protection equipment

P-15 MONITOR CATHODIC PROTECTION SYSTEM

Tasks:

a. Recording pipe-to-soil readings
b. Testing for AC Drain
c. Inspecting dielectric spacers
d. Inspecting DC Interference bond
e. Testing soil resistivity
f. Establishing current requirements
g. Inspecting reverse current switch diodes
h. Recording IR Drops
i. Testing casings – (100 mv)

Required Competencies and Skills:

1.1-1.3	Fundamentals of natural gas
10.10	Inspection, monitoring cathodic protection system
13.1	Recognizing an abnormal operating condition, specifically with regard to unusual cathodic protection readings

P-16 MAINTAINING CATHODIC PROTECTION SYSTEM

Tasks:
Remediating abnormalities found through visual inspection and monitoring

Required Competencies and Skills:

1.1-1.3	Fundamentals of natural gas
10.10	Inspection, monitoring cathodic protection
13.1	Recognizing abnormal operating conditions, specifically with regards to the results of cathodic protection inspection and measurements

P-17 MAINTAIN VALVES

Tasks:

a. Closing and opening valve
b. Lubricating valve gearbox (determine correct amount required)
c. Valve location
d. Maintaining accessibility of valves

Required Competencies and Skills:

1.1-1.3	Fundamentals of natural gas
12.1	Operating valves
12.3	Inspecting and maintaining valves
13.1	Recognizing abnormal operating conditions, specifically with regards to improper valve position or improper gear operator operation

P-18 INSPECTION OF 3RD PARTY CONSTRUCTION NEAR PIPELINE

Tasks:

e. Monitoring construction activity to prevent damage to pipe and coating.
f. Inspection of pipe and coating before backfill if pipe has been exposed.
g. Monitoring backfill material and compaction to ensure settling of the ditch line does not occur.

Required Competencies and Skills:

1.1-1.3	Fundamentals of natural gas
4.5	Soil subsidence
7.16	Damage prevention
7.17	Application of padding and shielding
8.4	Ditch and backfill inspection
10.6	Holiday Inspection
13.1	Recognizing abnormal operating conditions, specifically with regards to possible damage to the pipe or coating due to impact to the pipe or improper padding/backfill

REQUIRED COMPETENCIES AND SKILLS

(Protocols 1.05, 2.02, 4.01, 5.02, 192.803, 192.805, 192.809)

	Competencies and Skills	Original Qual. Method	Re-Qual. Method	Re-Qual. Period	Original Date Qualified	Date Re-Qualified
Sec. 1	**Fundamentals of Natural Gas**					
1.1	Characteristics and hazards of natural gas	Wk hist rvw, oral, hands-on, written	Oral, written, hands-on	60 mos not to exceed 60 months		
1.2	Potential ignition sources: indoor and outdoor	Wk hist rvw, oral, hands-on, written	Oral, written, hands-on	60 mos not to exceed 60 months		
1.3	Recognizing emergency conditions & abnormal operating conditions (AOCs)	Wk hist rvw, oral, hands-on, written	Oral, written, hands-on	60 mos not to exceed 60 months		
1.4	Recognizing and reporting natural gas leaks	Wk hist rvw, oral, hands-on, written	Oral, written, hands-on	60 mos not to exceed 60 months		
Sec. 2	**Record keeping**					
2.1	Documenting materials and installation records	Wk hist rvw, oral, hands-on, written	Written or hands-on eval.	60 mos not to exceed 60 months		
2.2	Documenting maximum allowable operating pressure (MAOP)	Written evaluation	Written or hands-on eval.	60 mos not to exceed 60 months		
2.3	System up-rating	Written evaluation	Written or hands-on eval.	60 mos not to exceed 60 months		
2.4	Investigating and documenting line failure	Written evaluation	Written or hands-on eval.	60 mos not to exceed 60 months		
2.5	Accident reporting	Oral or Written evaluation	Written evaluation	60 mos not to exceed 60 months		
2.6	Regulatory records, including valve inspection, cathodic protection inspection, odorant level, partrolling, and leak testing	Wk hist rvw, oral or written	Oral, written, hands-on eval	60 mos not to exceed 60 months		

	Competencies and Skills	Original Qual. Method	Re-Qual. Method	Re-Qual. Period	Original Date Qualified	Date Re-Qualified
Sec. 3	**Marking and Mapping Facilities**					
3.1	Locating facilities using the conductive method	Wk hist rvw or written or hands-on	Written or hands-on eval., manuf. training	60 mos not to exceed 60 months		
3.2	Locating facilities using the inductive method	Wk hist rvw or written or hands-on	Written or hands-on eval., manuf. training	60 mos not to exceed 60 months		
3.3	Locating facilities using the inductive method (two persons)	Wk hist rvw or written or hands-on	Written or hands-on eval., manuf. training	60 mos not to exceed 60 months		
3.4	Determining depth through triangulation	Wk hist rvw or written or hands-on	Written or hands-on eval., manuf. training	60 mos not to exceed 60 months		
3.5	System mapping	Written evaluation	Written or hands-on eval., manuf. training	60 mos not to exceed 60 months		
Sec. 4	**Fundamentals of Field Safety in Construction, Operation, and Maintenance**					
4.1	Personal protective equipment	Wk hist rvw, oral or written, hands-on	Oral or written or hands-on eval.	36 months, not to exceed 39 months		
4.2	Power tool safety	Wk hist rvw, oral or written, hands-on	Oral or written or hands-on eval.	36 months, not to exceed 39 months		
4.3	Proper firefighting techniques	Written evaluation	Written or hands-on eval.	36 months, not to exceed 39 months		
4.4	Controlling the accidental release of gas	Wk hist rvw, oral or written, hands-on	Oral or written or hands-on eval.	36 months, not to exceed 39 months		
4.5	Soil subsidence	Wk hist rvw, oral or written, hands-on	Oral or written or hands-on eval.	36 months, not to exceed 39 months		
4.6	Atmospheric corrosion	Wk hist rvw, oral or written, hands-on	Oral or written or hands-on eval.	36 months, not to exceed 39 months		

	Competencies and Skills	Original Qual. Method	Re-Qual. Method	Re-Qual. Period	Original Date Qualified	Date Re-Qualified
4.7	Recognizing unsafe meter sets	Written evaluation	Written or hands-on eval.	36 months, not to exceed 39 months		
4.8	Confined space entry (vaults, etc.)	Written evaluation	Written or hands-on eval.	Initial, then 12 months, not to exceed 15 months		
4.9	Job site protection	Wk hist rvw, oral or written, hands-on	Oral, written or hands-on eval.	36 months, not to exceed 39 months		
4.10	Purging safety	Wk hist rvw, oral or written, hands-on	Oral, written or hands-on eval.	36 months, not to exceed 39 months		
4.11	Pressure testing steel and plastic pipeline	Wk hist rvw, oral or written, hands-on	Oral, written or hands-on eval.	36 months, not to exceed 39 months		
4.12	Abandoning facilities	Wk hist rvw, oral or written, hands-on	Oral, written or hands-on eval.	36 months, not to exceed 39 months		
4.13	Excavation safety	Wk hist rvw, oral or written, hands-on	Oral, written or hands-on eval.	Initial, then 12 months, not to exceed 15 months		
Sec. 5	**Fundamentals of Gas Leaks - Survey and Response**					
5.1	Leak classification	Wk hist rvw, oral or written, hands-on	Oral or written, hands-on	60 months, not to exceed 60 months		
5.2	Procedures for leak surveys and patrols	Wk hist rvw, oral or written, hands-on	Oral or written, hands-on.	60 months, not to exceed 60 months		
5.3	Combustible gas indicators	Wk hist rvw, oral or written, hands-on	Oral or written, hands-on	60 months, not to exceed 60 months (or new equip.)		

	Competencies and Skills	Original Qual. Method	Re-Qual. Method	Re-Qual. Period	Original Date Qualified	Date Re-Qualified
5.4	Electronic gas detectors	Wk hist rvw, oral or written, hands-on	Oral or written, hands-on	60 months, not to exceed 60 months (or new equip.)		
5.5	Flame ionization	Written or Hands-on evaluation	Written or hands-on eval.	60 months, not to exceed 60 months (or new equip.)		
5.6	Bar hole testing and purging	Wk hist rvw, oral or written, hands-on	Oral or written, hands-on	60 months, not to exceed 60 months		
Sec. 6	**Fundamentals of Customer Service**					
6.1	Carbon monoxide (CO) testing	Written evaluation	Written or hands-on eval.	60 months, not to exceed 60 months		
6.2	Investigating leaks	Wk hist rvw, oral or written, hands-on	Oral, written or hands-on eval.	60 months, not to exceed 60 months		
6.3	Combustion and ventilation air requirements	Written evaluation	Written or hands-on eval.	60 months, not to exceed 60 months		
6.4	Pilot light operation	Written evaluation	Written or hands-on eval.	60 months, not to exceed 60 months		
6.5	Gas-air adjustment	Written evaluation	Written or hands-on eval.	60 months, not to exceed 60 months		
6.6	Appliance venting	Written evaluation	Written or hands-on eval.	60 months, not to exceed 60 months		
6.7	Pressure checks to establish gas service	Written evaluation	Written or hands-on eval.	60 months, not to exceed 60 months		
6.8	Establishing and disconnecting gas	Written evaluation	Written or hands-on eval.	60 months, not to excd 60 months		

	Competencies and Skills	Original Qual. Method	Re-Qual. Method	Re-Qual. Period	Original Date Qualified	Date Re-Qualified
Sec. 7	**Fundamentals of Construction**					
7.1	Pressure testing steel and plastic pipeline	Written evaluation	Written or hands-on eval.	36 months, not to exceed 39 months		
7.2	Procedures for abandoning facilities	Written evaluation	Written or hands-on eval.	36 months, not to exceed 39 months		
7.3	Cathodic protection (general)	Wk hist rvw, oral or written, hands-on	Oral, written or hands-on eval.	36 months, not to exceed 39 months		
7.4	Constructing facilities across streets, railroads, and waterways	Written evaluation	Written or hands-on eval.	36 months, not to exceed 39 months		
7.5	Operating thermite welder	Written and hands-on evaluation	Written or hands-on eval.	36 months, not to exceed 39 months		
7.6	Installing tracer wire	Written Evaluation	Written or hands-on eval.	36 months, not to exceed 39 months		
7.7	Installing valves	Written Evaluation	Written or hands-on eval.	36 months, not to exceed 39 months		
7.8	Steel and cast iron repair fittings	Written and hands-on evaluation	Written or hands-on eval.	60 months, not to exceed 60 months		
7.9	Maintaining steel and cast iron Mains	Written Evaluation	Written or hands-on eval.	60 months, not to exceed 60 months		
7.10	Reinforcing steel and plastic mains	Written Evaluation	Written or hands-on eval.	60 months, not to exceed 60 months		
7.11	Plastic pipe joining (fusion)	Hands-on evaluation	Hands-on evaluation	12 months, not to exceed 15 months		

	Competencies and Skills	Original Qual. Method	Re-Qual. Method	Re-Qual. Period	Original Date Qualified	Date Re-Qualified
7.12	Plastic pipe joining (mechanical couplings)	Hands-on evaluation	Hands-on evaluation	36 months, not to exceed 39 months		
7.13	Recognition of defective material	Written evaluation	Written or hands-on eval.	36 months, not to exceed 39 months		
7.14	Steel pipe joining by welding	Per approved welding procedures	Per approved welding procedures	12 months, not to exceed 12 months		
7.15	Steel pipe joining by mechanical couplings	Written and hands-on evaluation	Written or hands-on eval.	36 months, not to exceed 39 months		
7.16	Damage prevention	Written evaluation	Written or hands-on eval.	36 months, not to exceed 39 months		
7.17	Application of padding and shielding	Written evaluation	Written or hands-on eval.	36 months, not to exceed 39 months		
7.18	Replacing emergency valves	Written evaluation	Written or hands-on eval.	60 mos, not to exceed 60 months		
7.19	Installing meter sets	Written evaluation	Written or hands-on eval.	60 months, not to exceed 60 months		
7.20	Tapping and stopping steel pipe 1" through 4"	Hands-on evaluation	Hands-on evaluation	36 months, not to exceed 39 months		
7.21	Tapping and stopping steel pipe 6" through 8"	Hands-on evaluation	Hands-on evaluation	36 months, not to exceed 39 months		
7.22	Tapping and stopping polyethylene pipe	Hands-on evaluation	Hands-on evaluation	60 months, not to exceed 60 months		
7.23	Vault abandonment	Written evaluation	Written or hands-on eval.	36 months, not to exceed 39 months		

	Competencies and Skills	Original Qual. Method	Re-Qual. Method	Re-Qual. Period	Original Date Qualified	Date Re-Qualified
Sec. 8	**Fundamentals of Construction – Heavy Equipment Operation**					
8.1	Operating backhoe	Written and hands-on evaluation	Written or hands-on eval.	36 mos, not to exceed 39 months		
8.2	Operating trencher	Hands-on evaluation	Hands-on evaluation	36 months, not to exceed 39 months		
8.3	Operating boring equipment	Hands-on evaluation	Hands-on evaluation	36 months, not to exceed 39 months		
8.4	Ditch and backfill inspection	Wk hist rvw, oral, or written	Written, oral or hands-on eval.	36 months, not to exceed 39 months		
Sec. 9	**Fundamentals of Measurement and Control**					
9.1	Metering	Wk hist rvw, oral, or written	Written, oral or hands-on eval.	60 months, not to exceed 60 months		
9.2	Odorization measurement and control	Wk hist rvw, oral, or written	Written, oral or hands-on eval.	60 months, not to exceed 60 months		
Sec. 10	**Corrosion Control**					
10.1	Cathodic protection	Wk hist rvw, oral, written, or hands-on	Written or hands-on eval.	36 months, not to exceed 39 months		
10.2	Internal corrosion	Written evaluation	Written or hands-on eval.	36 months, not to exceed 39 months		
10.3	External corrosion	Wk hist rvw, oral, written, or hands-on	Written, oral or hands-on eval.	36 months, not to exceed 39 months		
10.4	Atmospheric corrosion	Wk hist rvw, oral, written, or hands-on	Written, oral or hands-on eval.	36 months, not to exceed 39 months		

	Competencies and Skills	Original Qual. Method	Re-Qual. Method	Re-Qual. Period	Original Date Qualified	Date Re-Qualified
10.5	Coatings	Written evaluation	Written or hands-on eval.	36 months, not to exceed 39 months		
10.6	Holiday detection (coating inspection)	Written or hands-on evaluation	Written or hands-on eval.	36 months, not to exceed 39 months		
10.7	Painting and jacketing above ground facilities	Wk hist rvw, oral, written, or hands-on	Oral, written, or hands-on evaluation	36 months, not to exceed 39 months		
10.8	Installation of cathodic protection (sacrificial anode system)	Written evaluation	Written or hands-on eval.	36 months, not to exceed 39 months		
10.9	Installation of impressed current system	Written evaluation	Written or hands-on eval.	36 months, not to exceed 39 months		
10.10	Inspection, monitoring cathodic protection system	Wk hist rvw, oral, written, or hands-on	Written or hands-on eval.	36 months, not to exceed 39 months		
Sec. 11	**Odorization**					
11.1	Operating and maintaining differential odorant system	Written and hand-on evaluation	Written or hands-on eval.	60 months, not to exceed 60 months		
11.2	Operating and maintaining injection odorant system	Wk hist rvw, oral, written, or hands-on	Written, oral or hands-on eval.	60 months, not to exceed 60 months		
11.3	Testing odorant level	Wk hist rvw, oral, written, or hands-on	Written, oral or hands-on eval.	60 months, not to exceed 60 months		

	Competencies and Skills	Original Qual. Method	Re-Qual. Method	Re-Qual. Period	Original Date Qualified	Date Re-Qualified
Sec. 12	**Other Operating and Maintenance Skills**					
12.1	Operating valves	Wk hist rvw, oral, written, or hands-on	Written, oral or hands-on eval.	60 months, not to exceed 60 months		
12.2	Inspecting and maintaining pressure regulating and limiting stations	Wk hist rvw, oral, written, or hands-on	Written, oral or hands-on eval.	60 months, not to exceed 60 months		
12.3	Inspecting and maintaining valves	Wk hist rvw, oral, written, or hands-on	Written, oral or hands-on eval.	60 months, not to exceed 60 months		
12.4	System uprating	Written evaluation	Written or hands-on eval.	60 months, not to exceed 60 months		
Sec. 13	**Abnormal Operating Conditions**					
13.1	Recognize and respond to Abnormal Operating Conditions (DIVISION 7.1 AOC / LONGVIEW NATURAL GAS PIPELINE)	Wk hist rvw, oral, written, or hands-on	Oral, written, or hands-on	60 months, not to exceed 60 months		

Employee Name: _____

This table is used to record the progress of an individual in successfully demonstrating qualification in a competency or skill required to perform tasks necessary for the operation of a natural gas system.
(Protocol 3.01, 192.807)

INDIVIDUAL QUALIFICATION SUMMARY

For

_____
(Employee Name)

	Competencies and Skills	Original Qual. Method	Re-Qual. Method	Re-Qual. Period	Original Date Qualified	Date Re-Qualified
Sec. 1	**Fundamentals of Natural Gas**					
1.1	Characteristics and hazards of natural gas	Wk hist rvw, oral, hands-on, written	Oral, written, hands-on	60 mos not to exceed 60 months		
1.2	Potential ignition sources: indoor and outdoor	Wk hist rvw, oral, hands-on, written	Oral, written, hands-on	60 mos not to exceed 60 months		
1.3	Recognizing emergency conditions & abnormal operating conditions (AOCs)	Wk hist rvw, oral, hands-on, written	Oral, written, hands-on	60 mos not to exceed 60 months		
1.4	Recognizing and reporting natural gas leaks	Wk hist rvw, oral, hands-on, written	Oral, written, hands-on	60 mos not to exceed 60 months		
Sec. 2	**Record keeping**					
2.1	Documenting materials and installation records	Wk hist rvw, oral, hands-on, written	Written or hands-on eval.	60 mos not to exceed 60 months		
2.2	Documenting maximum allowable operating pressure (MAOP)	Written evaluation	Written or hands-on eval.	60 mos not to exceed 60 months		
2.3	System up-rating	Written evaluation	Written or hands-on eval.	60 mos not to exceed 60 months		
2.4	Investigating and documenting line failure	Written evaluation	Written or hands-on eval.	60 mos not to exceed 60 months		
2.5	Accident reporting	Oral or Written evaluation	Written evaluation	60 mos not to exceed 60 months		
2.6	Regulatory records, including valve inspection, cathodic protection inspection, odorant level, partrolling, and leak testing	Wk hist rvw, oral or written	Oral, written, hands-on eval	60 mos not to exceed 60 months		

Employee Name: _____

	Competencies and Skills	Original Qual. Method	Re-Qual. Method	Re-Qual. Period	Original Date Qualified	Date Re-Qualified
Sec. 3	**Marking and Mapping Facilities**					
3.1	Locating facilities using the conductive method	Wk hist rvw or written or hands-on	Written or hands-on eval., manuf. training	60 mos not to exceed 60 months		
3.2	Locating facilities using the inductive method	Wk hist rvw or written or hands-on	Written or hands-on eval., manuf. training	60 mos not to exceed 60 months		
3.3	Locating facilities using the inductive method (two persons)	Wk hist rvw or written or hands-on	Written or hands-on eval., manuf. training	60 mos not to exceed 60 months		
3.4	Determining depth through triangulation	Wk hist rvw or written or hands-on	Written or hands-on eval., manuf. training	60 mos not to exceed 60 months		
3.5	System mapping	Written evaluation	Written or hands-on eval., manuf. training	60 mos not to exceed 60 months		
Sec. 4	**Fundamentals of Field Safety in Construction, Operation, and Maintenance**					
4.1	Personal protective equipment	Wk hist rvw, oral or written, hands-on	Oral or written or hands-on eval.	36 months, not to exceed 39 months		
4.2	Power tool safety	Wk hist rvw, oral or written, hands-on	Oral or written or hands-on eval.	36 months, not to exceed 39 months		
4.3	Proper firefighting techniques	Written evaluation	Written or hands-on eval.	36 months, not to exceed 39 months		
4.4	Controlling the accidental release of gas	Wk hist rvw, oral or written, hands-on	Oral or written or hands-on eval.	36 months, not to exceed 39 months		
4.5	Soil subsidence	Wk hist rvw, oral or written, hands-on	Oral or written or hands-on eval.	36 months, not to exceed 39 months		
4.6	Atmospheric corrosion	Wk hist rvw, oral or written, hands-on	Oral or written or hands-on eval.	36 months, not to exceed 39 months		

Employee Name: _____

	Competencies and Skills	Original Qual. Method	Re-Qual. Method	Re-Qual. Period	Original Date Qualified	Date Re-Qualified
4.7	Recognizing unsafe meter sets	Written evaluation	Written or hands-on eval.	36 months, not to exceed 39 months		
4.8	Confined space entry (vaults, etc.)	Written evaluation	Written or hands-on eval.	Initial, then 12 months, not to exceed 15 months		
4.9	Job site protection	Wk hist rvw, oral or written, hands-on	Oral, written or hands-on eval.	36 months, not to exceed 39 months		
4.10	Purging safety	Wk hist rvw, oral or written, hands-on	Oral, written or hands-on eval.	36 months, not to exceed 39 months		
4.11	Pressure testing steel and plastic pipeline	Wk hist rvw, oral or written, hands-on	Oral, written or hands-on eval.	36 months, not to exceed 39 months		
4.12	Abandoning facilities	Wk hist rvw, oral or written, hands-on	Oral, written or hands-on eval.	36 months, not to exceed 39 months		
4.13	Excavation safety	Wk hist rvw, oral or written, hands-on	Oral, written or hands-on eval.	Initial, then 12 months, not to exceed 15 months		
Sec. 5	**Fundamentals of Gas Leaks - Survey and Response**					
5.1	Leak classification	Wk hist rvw, oral or written, hands-on	Oral or written, hands-on	60 months, not to exceed 60 months		
5.2	Procedures for leak surveys and patrols	Wk hist rvw, oral or written, hands-on	Oral or written, hands-on.	60 months, not to exceed 60 months		
5.3	Combustible gas indicators	Wk hist rvw, oral or written, hands-on	Oral or written, hands-on	60 months, not to exceed 60 months (or new equip.)		

Employee Name: _____

	Competencies and Skills	Original Qual. Method	Re-Qual. Method	Re-Qual. Period	Original Date Qualified	Date Re-Qualified
5.4	Electronic gas detectors	Wk hist rvw, oral or written, hands-on	Oral or written, hands-on	60 months, not to exceed 60 months (or new equip.)		
5.5	Flame ionization	Written or Hands-on evaluation	Written or hands-on eval.	60 months, not to exceed 60 months (or new equip.)		
5.6	Bar hole testing and purging	Wk hist rvw, oral or written, hands-on	Oral or written, hands-on	60 months, not to exceed 60 months		
Sec. 6	**Fundamentals of Customer Service**					
6.1	Carbon monoxide (CO) testing	Written evaluation	Written or hands-on eval.	60 months, not to exceed 60 months		
6.2	Investigating leaks	Wk hist rvw, oral or written, hands-on	Oral, written or hands-on eval.	60 months, not to exceed 60 months		
6.3	Combustion and ventilation air requirements	Written evaluation	Written or hands-on eval.	60 months, not to exceed 60 months		
6.4	Pilot light operation	Written evaluation	Written or hands-on eval.	60 months, not to exceed 60 months		
6.5	Gas-air adjustment	Written evaluation	Written or hands-on eval.	60 months, not to exceed 60 months		
6.6	Appliance venting	Written evaluation	Written or hands-on eval.	60 months, not to exceed 60 months		
6.7	Pressure checks to establish gas service	Written evaluation	Written or hands-on eval.	60 months, not to exceed 60 months		
6.8	Establishing and disconnecting gas	Written evaluation	Written or hands-on eval.	60 months, not to excd 60 months		

Employee Name: _____

	Competencies and Skills	Original Qual. Method	Re-Qual. Method	Re-Qual. Period	Original Date Qualified	Date Re-Qualified
Sec. 7	**Fundamentals of Construction**					
7.1	Pressure testing steel and plastic pipeline	Written evaluation	Written or hands-on eval.	36 months, not to exceed 39 months		
7.2	Procedures for abandoning facilities	Written evaluation	Written or hands-on eval.	36 months, not to exceed 39 months		
7.3	Cathodic protection (general)	Wk hist rvw, oral or written, hands-on	Oral, written or hands-on eval.	36 months, not to exceed 39 months		
7.4	Constructing facilities across streets, railroads, and waterways	Written evaluation	Written or hands-on eval.	36 months, not to exceed 39 months		
7.5	Operating thermite welder	Written and hands-on evaluation	Written or hands-on eval.	36 months, not to exceed 39 months		
7.6	Installing tracer wire	Written Evaluation	Written or hands-on eval.	36 months, not to exceed 39 months		
7.7	Installing valves	Written Evaluation	Written or hands-on eval.	36 months, not to exceed 39 months		
7.8	Steel and cast iron repair fittings	Written and hands-on evaluation	Written or hands-on eval.	60 months, not to exceed 60 months		
7.9	Maintaining steel and cast iron Mains	Written Evaluation	Written or hands-on eval.	60 months, not to exceed 60 months		
7.10	Reinforcing steel and plastic mains	Written Evaluation	Written or hands-on eval.	60 months, not to exceed 60 months		
7.11	Plastic pipe joining (fusion)	Hands-on evaluation	Hands-on evaluation	12 months, not to exceed 15 months		

Employee Name: _____

	Competencies and Skills	Original Qual. Method	Re-Qual. Method	Re-Qual. Period	Original Date Qualified	Date Re-Qualified
7.12	Plastic pipe joining (mechanical couplings)	Hands-on evaluation	Hands-on evaluation	36 months, not to exceed 39 months		
7.13	Recognition of defective material	Written evaluation	Written or hands-on eval.	36 months, not to exceed 39 months		
7.14	Steel pipe joining by welding	Per approved welding procedures	Per approved welding procedures	12 months, not to exceed 12 months		
7.15	Steel pipe joining by mechanical couplings	Written and hands-on evaluation	Written or hands-on eval.	36 months, not to exceed 39 months		
7.16	Damage prevention	Written evaluation	Written or hands-on eval.	36 months, not to exceed 39 months		
7.17	Application of padding and shielding	Written evaluation	Written or hands-on eval.	36 months, not to exceed 39 months		
7.18	Replacing emergency valves	Written evaluation	Written or hands-on eval.	60 mos, not to exceed 60 months		
7.19	Installing meter sets	Written evaluation	Written or hands-on eval.	60 months, not to exceed 60 months		
7.20	Tapping and stopping steel pipe 1" through 4"	Hands-on evaluation	Hands-on evaluation	36 months, not to exceed 39 months		
7.21	Tapping and stopping steel pipe 6" through 8"	Hands-on evaluation	Hands-on evaluation	36 months, not to exceed 39 months		
7.22	Tapping and stopping polyethylene pipe	Hands-on evaluation	Hands-on evaluation	60 months, not to exceed 60 months		
7.23	Vault abandonment	Written evaluation	Written or hands-on eval.	36 months, not to exceed 39 months		

Employee Name: _____

	Competencies and Skills	Original Qual. Method	Re-Qual. Method	Re-Qual. Period	Original Date Qualified	Date Re-Qualified
Sec. 8	**Fundamentals of Construction – Heavy Equipment Operation**					
8.1	Operating backhoe	Written and hands-on evaluation	Written or hands-on eval.	36 mos, not to exceed 39 months		
8.2	Operating trencher	Hands-on evaluation	Hands-on evaluation	36 months, not to exceed 39 months		
8.3	Operating boring equipment	Hands-on evaluation	Hands-on evaluation	36 months, not to exceed 39 months		
8.4	Ditch and backfill inspection	Wk hist rvw, oral, or written	Written, oral or hands-on eval.	36 months, not to exceed 39 months		
Sec. 9	**Fundamentals of Measurement and Control**					
9.1	Metering	Wk hist rvw, oral, or written	Written, oral or hands-on eval.	60 months, not to exceed 60 months		
9.2	Odorization measurement and control	Wk hist rvw, oral, or written	Written, oral or hands-on eval.	60 months, not to exceed 60 months		
Sec. 10	**Corrosion Control**					
10.1	Cathodic protection	Wk hist rvw, oral, written, or hands-on	Written or hands-on eval.	36 months, not to exceed 39 months		
10.2	Internal corrosion	Written evaluation	Written or hands-on eval.	36 months, not to exceed 39 months		
10.3	External corrosion	Wk hist rvw, oral, written, or hands-on	Written, oral or hands-on eval.	36 months, not to exceed 39 months		
10.4	Atmospheric corrosion	Wk hist rvw, oral, written, or hands-on	Written, oral or hands-on eval.	36 months, not to exceed 39 months		

Employee Name: _____

	Competencies and Skills	Original Qual. Method	Re-Qual. Method	Re-Qual. Period	Original Date Qualified	Date Re-Qualified
10.5	Coatings	Written evaluation	Written or hands-on eval.	36 months, not to exceed 39 months		
10.6	Holiday detection (coating inspection)	Written or hands-on evaluation	Written or hands-on eval.	36 months, not to exceed 39 months		
10.7	Painting and jacketing above ground facilities	Wk hist rvw, oral, written, or hands-on	Oral, written, or hands-on evaluation	36 months, not to exceed 39 months		
10.8	Installation of cathodic protection (sacrificial anode system)	Written evaluation	Written or hands-on eval.	36 months, not to exceed 39 months		
10.9	Installation of impressed current system	Written evaluation	Written or hands-on eval.	36 months, not to exceed 39 months		
10.10	Inspection, monitoring cathodic protection system	Wk hist rvw, oral, written, or hands-on	Written or hands-on eval.	36 months, not to exceed 39 months		
Sec. 11	**Odorization**					
11.1	Operating and maintaining differential odorant system	Written and hand-on evaluation	Written or hands-on eval.	60 months, not to exceed 60 months		
11.2	Operating and maintaining injection odorant system	Wk hist rvw, oral, written, or hands-on	Written, oral or hands-on eval.	60 months, not to exceed 60 months		
11.3	Testing odorant level	Wk hist rvw, oral, written, or hands-on	Written, oral or hands-on eval.	60 months, not to exceed 60 months		

Employee Name: _____

	Competencies and Skills	Original Qual. Method	Re-Qual. Method	Re-Qual. Period	Original Date Qualified	Date Re-Qualified
Sec. 12	**Other Operating and Maintenance Skills**					
12.1	Operating valves	Wk hist rvw, oral, written, or hands-on	Written, oral or hands-on eval.	60 months, not to exceed 60 months		
12.2	Inspecting and maintaining pressure regulating and limiting stations	Wk hist rvw, oral, written, or hands-on	Written, oral or hands-on eval.	60 months, not to exceed 60 months		
12.3	Inspecting and maintaining valves	Wk hist rvw, oral, written, or hands-on	Written, oral or hands-on eval.	60 months, not to exceed 60 months		
12.4	System uprating	Written evaluation	Written or hands-on eval.	60 months, not to exceed 60 months		
Sec. 13	**Abnormal Operating Conditions**					
13.1	Recognize and respond to Abnormal Operating Conditions	Wk hist rvw, oral, written, or hands-on	Oral, written, or hands-on	60 months, not to exceed 60 months		

Employee Name: _____

Certification of Competencies and Skills:

Method of Certification of Competencies and Skills:

Tasks Qualified to Perform:

Certificate Completed By:

EVALUATION OF HANDS-ON SKILLS

Division 5 of the Operator Qualification Program contains evaluating and qualifying hands-on demonstrations of skills necessary to perform tasks on gas systems. Operators may use the forms in Division 5 or attend appropriate workshops in obtaining qualification or re-evaluation. Appropriate documentation forms, attendance records, or manufacturer's procedures maybe used in lieu of the forms supplied in Division 5.

When performing direct observation the observer must appropriately document the observation, form "Direct Observation of Unqualified Person Performing Covered Task Under Direct Supervision of Qualified Individual" in Division 5 can be used to document the observation.

When communication of notice of change use form "Notice of Change."

When communicating a request for change and/or additions to this plan use form "Feedback Form."

(PROTOCOLS 3.02, 4.01, 8.01, 1.17, 192.805, 192.803)

WEYERHAEUSER LONGVIEW MILL NATURAL GAS PIPELINE:
Notice of Change Form

Date of Change: _____

Task(s) Impacted		O&M Procedure(s) Impacted		Regulations Impacted		Incidents, For Cause, Near Miss		Industry Accidents	
Yes	No	Yes	No	Yes	No	Yes	No	Yes	No

What Communicated: (Attach any supporting documentation.)

_____
_____
_____
_____

How Communicated:

_____
_____
_____

Tasks Impacted:

_____
_____
_____

Individuals Impacted:

Name of Individual(s) receiving the changes associated with the performance of covered tasks.	Place an "X" in the boxes below when communication is completed for that individual

Name and Position of Person Processing the Change:

_____

FEEDBACK FORM

Weyerhaeuser Longview Natural Gas Pipeline
Longview, Washington Operator Qualification Plan

Date: _____

Change or Addition Requested:

_____
_____
_____
_____
_____
_____
_____
_____
_____
_____

Person Requesting Change: _____

When form completed, return to Plan Administrator for action. Copy to be filed with OQ Plan documents.

Weyerhaeuser Response:

_____
_____
_____
_____
_____
_____
_____
_____
_____
_____

Weyerhaeuser representative and date:

_____

Competency/skill: Direct Observation of Unqualified Person Performing Covered Task Under Direct Supervision of Qualified Individual

DATE: _____

LOCATION:

_____

_____

_____

_____

(Address and/or GPS Location)

TASK BEING PERFORMED:

_____

_____

_____

_____

_____

_____

_____

PROCEDURES USED:

_____

_____

_____

_____

_____

_____

_____

_____

_____

_____

Unqualified Individuals Name: _____
(Print)

Number of unqualified persons being observed at one time: _____

_____ _____

Qualified Observer Signature **Unqualified Individual Signature**

Competency/skill: 3.1 Locate facilities using the conductive method

Qualified observer instructions:

1. For the performance steps below, observe the participant and check "Go" for successful completion of the step **or** "No Go" if remediation of the step is required.
2. A "No Go" rating on any of the steps constitutes a "No Go" for the entire performance skill. Performance skills must be completed with 100% accuracy.
3. Both the individual taking the performance evaluation and the qualified observer must sign this form upon completion of the evaluation.

Performance Step Analysis		Go	No Go
Connect the Transmitter			
1	Connect the transmitter cable to a metal riser pipe or locator wire, with the transmitter as far from the connection as the cable will allow.		
2	Insert the ground rod/plate to one side and away from the pipe, as far from the transmitter as the other connecting cable will allow.		
3	Pour a small amount of water at the ground site to increase conductivity.		
Locate the Pipe			
4	Set the receiver sensitivity control to the low range.		
5	Hold the receiver parallel with the pipe and in a vertical position.		
6	Sweep the receiver close to the ground using short, smooth moves without swinging or rocking.		
7	Find and mark the general location of the pipe by listening for the loudest signal.		
8	Hold the receiver face-up in a horizontal position.		
9	Adjust the sensitivity control to **medium** or **high**.		
10	Sweep the receiver back and forth over the general location, perpendicular to the pipe.		
11	Find the null and mark its location according to Company policy.		
Comments:			

Participant Name: _____

Test Date: _____ **Location:** _____

Evaluation: ☐ **Qualified** ☐ **Not Qualified**

_____

Qualified Observer Signature

Competency/skill: 3.2 Locate facilities using the inductive method (one person)

Qualified observer instructions:

1. For the performance steps below, observe the participant and check "Go" for successful completion of the step **or** "No Go" if remediation of the step is required.
2. A "No Go" rating on any of the steps constitutes a "No Go" for the entire performance skill. Performance skills must be completed with 100% accuracy.
3. Both the individual taking the performance evaluation and the qualified observer must sign this form upon completion of the evaluation.

Performance Step Analysis		Go	No
Position the Transmitter			
1	Place the transmitter over the pipe at a 450 angle to its length.		
2	Set the receiver range switch and start with the receiver and transmitter at least 30' apart.		
3	Holding the receiver parallel with the pipe and in a vertical position, walk toward the pipe from one side.		
4	When the **maximum signal** occurs, stop and mark the spot on the ground directly below the receiver.		
5	Move the transmitter and place it on the mark in a vertical position, parallel to and directly above the pipe.		
6	Take the receiver back down the pipeline at least 30 feet away from the transmitter.		
7	Sweep the receiver back and forth over the pipe close to the ground, using short, smooth moves with receiver parallel to transmitter and vertical.		
8	Move the transmitter to the second mark and return to the first mark.		
Locate the Pipe			
9	Sweep the receiver loose to the ground using short, smooth moves.		
10	Listen for the maximum signal to find the general location of the pipe.		
Pinpoint and Mark the Pipe			
11	Hold the receiver face-up in a horizontal position.		
12	Adjust the sensitivity control to **medium** or **high**.		
13	Sweep the receiver back and forth over the general location, perpendicular to the pipe.		
14	Find the null and mark its location according to Company policy.		
Comments: (see reverse)			

Participant Name: _____

Test Date: _____ **Location:** _____

Evaluation: ☐ **Qualified** ☐ **Not Qualified**

_____
Qualified Observer Signature

Competency/skill: 5.3 Combustible gas indicators

Qualified observer instructions:

1. For the performance steps below, observe the participant and check "Go" for successful completion of the step **or** "No Go" if remediation of the step is required.
2. A "No Go" rating on any of the steps constitutes a "No Go" for the entire performance skill. Performance skills must be completed with 100% accuracy.
3. Both the individual taking the performance evaluation and the qualified observer must sign this form upon completion of the evaluation.

Performance Step Analysis		Go	No Go
1	Turn on power		
2	Warm up battery check		
3	Set zero in fresh air		
4	Test gas in L.E.L. mode		
5	Test gas in U.E.L. mode		
6	Clear machine in fresh air		
7	Shut down		
8	Store in proper manner		
9			
Comments:			

Participant Name: _____

Test Date: _____ **Location:** _____

Evaluation: ☐ **Qualified** ☐ **Not Qualified**

_____
Qualified Observer Signature

Competency/skill: 5.4 Electronic gas detectors

Qualified observer instructions:

1. For the performance steps below, observe the participant and check "Go" for successful completion of the step **or** "No Go" if remediation of the step is required.
2. A "No Go" rating on any of the steps constitutes a "No Go" for the entire performance skill. Performance skills must be completed with 100% accuracy.
3. Both the individual taking the performance evaluation and the qualified observer must sign this form upon completion of the evaluation.

Performance Step Analysis		Go	No Go
Start Up / Shut Down			
1	Turn on power / Allow for warm up		
2	Check battery power		
3	Set zero in fresh air		
4	Test gas in L.E.L. mode		
5	Test gas in U.E.L. mode		
6	Purge in fresh air		
7	Shut down		
8	Store in proper containment		
9			
Comments:			

Participant Name: _____

Test Date: _____ **Location:** _____

Evaluation: ☐ **Qualified** ☐ **Not Qualified**

_____
Qualified Observer Signature

Competency/skill: 5.6 Bar hole testing and purging

Qualified observer instructions:

1. For the performance steps below, observe the participant and check "Go" for successful completion of the step **or** "No Go" if remediation of the step is required.
2. A "No Go" rating on any of the steps constitutes a "No Go" for the entire performance skill. Performance skills must be completed with 100% accuracy.
3. Both the individual taking the performance evaluation and the qualified observer must sign this form upon completion of the evaluation.

Performance Step Analysis		Go	No Go
1	Make bar holes at 10' intervals		
2	Establish extent of leak		
3	Establish strongest reading		
4	Allow to vent / Re-test		
5	Locate approximate location of leak		
6	Document prior to digging		
7	Classify leak		
8			
9			
Comments:			

Participant Name: _____

Test Date: _____ **Location:** _____

Evaluation: ☐ **Qualified** ☐ **Not Qualified**

_____

Qualified Observer Signature

Competency/skill: 7.8 Steel and cast iron repair fittings

Qualified observer instructions:

1. For the performance steps below, observe the participant and check "Go" for successful completion of the step **or** "No Go" if remediation of the step is required.
2. A "No Go" rating on any of the steps constitutes a "No Go" for the entire performance skill. Performance skills must be completed with 100% accuracy.
3. Both the individual taking the performance evaluation and the qualified observer must sign this form upon completion of the evaluation.

Performance Step Analysis		Go	No Go
1	Check atmosphere in bell hole.		
2	Check pipe condition for replacement.		
3	Clean coating and other foreign material adequately.		
4	Lubricate gasket material.		
5	Torque bolts in proper sequence.		
6	Check for leaks/other damage.		
7	Properly coat before backfilling.		
Comments:			

Participant Name: _____

Test Date: _____ **Location:** _____

Evaluation: ☐ **Qualified** ☐ **Not Qualified**

_____
Qualified Observer Signature

Competency/skill: 7.11 Plastic pipe joining (fusion)

Qualified observer instructions:

1. For the performance steps below, observe the participant and check "Go" for successful completion of the step **or** "No Go" if remediation of the step is required.
2. A "No Go" rating on any of the steps constitutes a "No Go" for the entire performance skill. Performance skills must be completed with 100% accuracy.
3. Both the individual taking the performance evaluation and the qualified observer must sign this form upon completion of the evaluation.

Performance Step Analysis		Go	No Go
1	Butt fusion / visual		
2	Side wall fusion / visual		
3	Butt fusion / strap test		
4	Sidewall fusion / strap test		
5			
6			
7			
8			
9			
Comments:			

Participant Name: _____

Test Date: _____ **Location:** _____

Evaluation: ☐ **Qualified** ☐ **Not Qualified**

_____
Qualified Observer Signature

Competency/skill: 7.12 Plastic pipe joining (mechanical couplings)

Qualified observer instructions:

1. For the performance steps below, observe the participant and check "Go" for successful completion of the step **or** "No Go" if remediation of the step is required.
2. A "No Go" rating on any of the steps constitutes a "No Go" for the entire performance skill. Performance skills must be completed with 100% accuracy.
3. Both the individual taking the performance evaluation and the qualified observer must sign this form upon completion of the evaluation.

Performance Step Analysis		Go	No Go
1	Cut ends of pipe square		
2	Clean ends of pipe		
3	Measure ends of pipe for insertion		
4	Install locking collar and insert		
5	Install locking collar over insert		
6	Repeat steps 1 through 5		
7			
8			
9			
Comments:			

Participant Name: _____

Test Date: _____ **Location:** _____

Evaluation: ☐ **Qualified** ☐ **Not Qualified**

_____

Qualified Observer Signature

Competency/skill: 7.15 Steel pipe joining by mechanical couplings

Qualified observer instructions:

1. For the performance steps below, observe the participant and check "Go" for successful completion of the step **or** "No Go" if remediation of the step is required.
2. A "No Go" rating on any of the steps constitutes a "No Go" for the entire performance skill. Performance skills must be completed with 100% accuracy.
3. Both the individual taking the performance evaluation and the qualified observer must sign this form upon completion of the evaluation.

Performance Step Analysis		Go	No Go
Prepare coupling and pipe			
1	Disassemble, if necessary, and soap gaskets and pipe ends.		
2	Clean the pipe ends thoroughly. (Remove all wrapping, oil, loose scale, rust, cutter burrs and anything else that could prevent gasket seating.)		
3	Place end nuts, retainer cups, and soapy gaskets on the pipe ends. (Line up the pipe ends, leaving at least 1/4 " gap.)		
Install coupling			
4	Measure the coupling body to manufacturer's specifications. (Mark the measurement on one pipe end.)		
5	Place the coupling on pipe with the end of coupling body at the mark. (Make sure that the coupling body is clean.)		
6	Slide gaskets and retainer cups into place. (Slide the retainer cups against the gaskets.)		
7	Slide end nuts or caps into place. (Gradually tighten and torque to specification. If the coupling is hydraulic, inject grease or hydraulic fluid.)		
8	Check electrical continuity. (If using a non-insulated coupling, be sure there is continuity. If using an insulated coupling, be sure there is electrical isolation.)		
9	Clean away soap and other foreign material.		
10	Wrap the exposed coupling and pipe to ensure corrosion protection.		
Comments: (see reverse)			

Participant Name: _____

Test Date: _____ **Location:** _____

Evaluation: ☐ **Qualified** ☐ **Not Qualified**

_____

Qualified Observer Signature

Competency/skill: 7.20 Tapping and stopping steel pipe 1" through 4"

Qualified observer instructions:

1. For the performance steps below, observe the participant and check "Go" for successful completion of the step **or** "No Go" if remediation of the step is required.
2. A "No Go" rating on any of the steps constitutes a "No Go" for the entire performance skill. Performance skills must be completed with 100% accuracy.
3. Both the individual taking the performance evaluation and the qualified observer must sign this form upon completion of the evaluation.

Performance Step Analysis		Go	No Go
1	Install fitting to pipe		
2	Set up tapping machine		
3	Install valve / tapping machine		
4	Make tap through pipe		
5	Remove machine / close valve		
6	Set up and install stop in machine		
7	Perform stop in pipe		
8	Remove stop		
9	Install completion plug and wrap pipe		
Comments:			

Participant Name: _____

Test Date: _____ **Location:** _____

Evaluation: ☐ **Qualified** ☐ **Not Qualified**

_____
Qualified Observer Signature

Competency/skill: 7.21 Tapping and stopping steel pipe 6" through 8"

Qualified observer instructions:

1. For the performance steps below, observe the participant and check "Go" for successful completion of the step **or** "No Go" if remediation of the step is required.
2. A "No Go" rating on any of the steps constitutes a "No Go" for the entire performance skill. Performance skills must be completed with 100% accuracy.
3. Both the individual taking the performance evaluation and the qualified observer must sign this form upon completion of the evaluation.

Performance Step Analysis		Go	No Go
1	Install fitting to pipe		
2	Set up tapping machine		
3	Install valve / tapping machine		
4	Make tap through pipe		
5	Remove machine / close valve		
6	Set up and install stop in machine		
7	Perform stop in pipe		
8	Remove stop		
9	Install completion plug and wrap pipe		
Comments:			

Participant Name: _____

Test Date: _____ **Location:** _____

Evaluation: ☐ **Qualified** ☐ **Not Qualified**

_____
Qualified Observer Signature

Competency/skill: 7.22 Tapping and stopping polyethylene pipe

Qualified observer instructions:

1. For the performance steps below, observe the participant and check "Go" for successful completion of the step **or** "No Go" if remediation of the step is required.
2. A "No Go" rating on any of the steps constitutes a "No Go" for the entire performance skill. Performance skills must be completed with 100% accuracy.
3. Both the individual taking the performance evaluation and the qualified observer must sign this form upon completion of the evaluation.

Performance Step Analysis		Go	No Go
1	Sidewall fusion		
2	Remove cap		
3	Turn Allen lead clockwise till bottoms out		
4	Turn counter-clockwise till 1 thread end from the top		
5	Replace cap on top of tee		
6	Test to manufacturers procedure		
7			
8			
9			
Comments:			

Participant Name: _____

Test Date: _____ **Location:** _____

Evaluation: ☐ **Qualified** ☐ **Not Qualified**

_____
Qualified Observer Signature

Competency/skill: 8.1 Operating backhoe

Qualified observer instructions:

1. For the performance steps below, observe the participant and check "Go" for successful completion of the step **or** "No Go" if remediation of the step is required.
2. A "No Go" rating on any of the steps constitutes a "No Go" for the entire performance skill. Performance skills must be completed with 100% accuracy.
3. Both the individual taking the performance evaluation and the qualified observer must sign this form upon completion of the evaluation.

Performance Step Analysis		Go	No Go
1	Check fluid levels		
2	Visual check of tires		
3	Visual check of outriggers		
4	Visual check of levers / controls		
5	Start up procedures		
6	Proper positioning of machine		
7	Operate control levers		
8	Proper placement of dirt		
9	Shut down procedures		
Comments:			

Participant Name: _____

Test Date: _____ **Location:** _____

Evaluation: ☐ **Qualified** ☐ **Not Qualified**

_____
Qualified Observer Signature

Competency/skill: 8.2 Operating trenchers

Qualified observer instructions:

1. For the performance steps below, observe the participant and check "Go" for successful completion of the step **or** "No Go" if remediation of the step is required.
2. A "No Go" rating on any of the steps constitutes a "No Go" for the entire performance skill. Performance skills must be completed with 100% accuracy.
3. Both the individual taking the performance evaluation and the qualified observer must sign this form upon completion of the evaluation.

Performance Step Analysis		Go	No Go
1	Visual inspection		
2	Check fluid levels		
3	Check safety locks		
4	Start up procedures		
5	Proper placement of trencher		
6	Engage digger chain		
7	Lower boom to proper depth		
8	Engage forward motion		
9	Shut down procedures		
Comments:			

Participant Name: _____

Test Date: _____ **Location:** _____

Evaluation: ☐ **Qualified** ☐ **Not Qualified**

_____

Qualified Observer Signature

Competency/skill: 8.3 Operating boring equipment

Qualified observer instructions:

1. For the performance steps below, observe the participant and check "Go" for successful completion of the step **or** "No Go" if remediation of the step is required.
2. A "No Go" rating on any of the steps constitutes a "No Go" for the entire performance skill. Performance skills must be completed with 100% accuracy.
3. Both the individual taking the performance evaluation and the qualified observer must sign this form upon completion of the evaluation.

Performance Step Analysis		Go	No Go
1	Visual inspection		
2	Check fluid levels		
3	Start up procedures		
4	Engage boring rod		
5	Proper angle of machine		
6	Proper rotation of bore rod		
7	Travel speed of bore rod		
8	Check rotational speed of rod		
9	Check location of bore rod		
10			
11			
Comments:			

Participant Name: _____

Test Date: _____ **Location:** _____

Evaluation: ☐ **Qualified** ☐ **Not Qualified**

_____
Qualified Observer Signature

Competency/skill: 10.1 Cathodic Protection

Qualified observer instructions:

1. For the performance steps below, observe the participant and check "Go" for successful completion of the step **or** "No Go" if remediation of the step is required.
2. A "No Go" rating on any of the steps constitutes a "No Go" for the entire performance skill. Performance skills must be completed with 100% accuracy.
3. Both the individual taking the performance evaluation and the qualified observer must sign this form upon completion of the evaluation.

Performance Step Analysis		Go	No Go
1	Identify test station location		
2	Uncap end of test cell, check for damage and fluid		
3	Turn on voltmeter & choose correct type voltage and scale		
4	Choose location on ground for placement of test cell. Describe method of obtaining readings if ground is rocky and/or dry		
5	Attach test leads and obtain measurement of pipe to soil potential		
6	Attach test leads and obtain measurement of casing to soil potential (if casing is present)		
7	Disconnect test leads and properly store equipment		
8	Describe the desired cathodic protection reading values		
9	Explain how the measurements comply with the desired measurements or how the measurements indicate a current or potential problem.		
10			
Comments:			

Participant Name: _____

Test Date: _____ **Location:** _____

Evaluation: ____ **Qualified** ☐ **Not Qualified**

_____

Qualified Observer Signature

Competency/skill: 10.6 Holiday detection (coating inspection)

Qualified observer instructions:

1. For the performance steps below, observe the participant and check "Go" for successful completion of the step **or** "No Go" if remediation of the step is required.
2. A "No Go" rating on any of the steps constitutes a "No Go" for the entire performance skill. Performance skills must be completed with 100% accuracy.
3. Both the individual taking the performance evaluation and the qualified observer must sign this form upon completion of the evaluation.

Performance Step Analysis		Go	No Go
1	Visual inspection of machine		
2	Check voltage settings		
3	Install proper spring collar		
4	Pipe properly grounded		
5	Placement of transmitter ground		
6	Turn machine on		
7	Travel speed		
8	Recognition of defects		
9			
Comments:			

Participant Name: _____

Test Date: _____ **Location:** _____

Evaluation: ☐ **Qualified** ☐ **Not Qualified**

_____
Qualified Observer Signature

Competency/skill: 10.7 Painting and jacketing above ground facilities

Qualified observer instructions:

1. For the performance steps below, observe the participant and check "Go" for successful completion of the step **or** "No Go" if remediation of the step is required.
2. A "No Go" rating on any of the steps constitutes a "No Go" for the entire performance skill. Performance skills must be completed with 100% accuracy.
3. Both the individual taking the performance evaluation and the qualified observer must sign this form upon completion of the evaluation.

Performance Step Analysis		Go	No Go
1	Remove all loose paint and particles.		
2	Mask all regulator vents.		
3	Mask all di-electric fittings.		
4	Mask index glass.		
5	Mask all required identification tags.		
6	Paint all exposed metal.		
Comments:			

Participant Name: _____

Test Date: _____ **Location:** _____

Evaluation: ☐ **Qualified** ☐ **Not Qualified**

_____

Qualified Observer Signature

Competency/skill: 11.2 Operating and maintaining an injection odorant system

Qualified observer instructions:

1. For the performance steps below, observe the participant and check "Go" for successful completion of the step **or** "No Go" if remediation of the step is required.
2. A "No Go" rating on any of the steps constitutes a "No Go" for the entire performance skill. Performance skills must be completed with 100% accuracy.
3. Both the individual taking the performance evaluation and the qualified observer must sign this form upon completion of the evaluation.

Performance Step Analysis		Go	No Go
1	Close/open valves in proper sequence.		
2	Refill odorant tank properly.		
3	Reopen/close valves in proper sequence.		
4	Check for air/lock, proper pump stroke.		
5	Accurately document amount of odorant used.		
6			
Comments:			

Participant Name: _____

Test Date: _____ **Location:** _____

Evaluation: ☐ **Qualified** ☐ **Not Qualified**

_____

Qualified Observer Signature

Competency/skill: 11.3 Testing odorant level

Qualified observer instructions:

1. For the performance steps below, observe the participant and check "Go" for successful completion of the step **or** "No Go" if remediation of the step is required.
2. A "No Go" rating on any of the steps constitutes a "No Go" for the entire performance skill. Performance skills must be completed with 100% accuracy.
3. Both the individual taking the performance evaluation and the qualified observer must sign this form upon completion of the evaluation.

Performance Step Analysis		Go	No Go
1	Select appropriate test sites.		
2	Purge machine before use.		
3	Season machine.		
4	Test for odorant level.		
5	Record readings accurately.		
6	Purge machine before turning off.		
Comments:			

Participant Name: _____

Test Date: _____ **Location:** _____

Evaluation: ☐ **Qualified** ☐ **Not Qualified**

_____

Qualified Observer Signature

Competency/skill: 12.1 Valve Operation

Qualified observer instructions:

1. For the performance steps below, observe the participant and check "Go" for successful completion of the step **or** "No Go" if remediation of the step is required.
2. A "No Go" rating on any of the steps constitutes a "No Go" for the entire performance skill. Performance skills must be completed with 100% accuracy.
3. Both the individual taking the performance evaluation and the qualified observer must sign this form upon completion of the evaluation.

Performance Step Analysis		Go	No Go
1	Locate the physical location of the emergency valves, either by using a pipeline system map or by physically traveling to each valve.		
2	Describe the size and type of the emergency valves.		
3	Describe how to tell if the valve is fully open or closed.		
4	Demonstrate or explain how to close an emergency valve.		
5	Describe the number of turns required to fully close an emergency valve.		
6			
7			
8			
9			
Comments:			

Participant Name: _____

Test Date: _____ **Location:** _____

Evaluation: ☐ **Qualified** ☐ **Not Qualified**

_____

Qualified Observer Signature

Competency/skill: 12.2 Inspecting pressure regulating and limiting stations

Qualified observer instructions:

4. For the performance steps below, observe the participant and check "Go" for successful completion of the step **or** "No Go" if remediation of the step is required.
5. A "No Go" rating on any of the steps constitutes a "No Go" for the entire performance skill. Performance skills must be completed with 100% accuracy.
6. Both the individual taking the performance evaluation and the qualified observer must sign this form upon completion of the evaluation.

Performance Step Analysis		Go	No Go
1	Visually inspect regulator/relief/piping.		
2	Ensure all valves are operating properly.		
3	Test diaphragm assembly vent and all other pipes for leaks.		
4	Inspect all filters.		
5	Test to determine if regulator will lockup. (If lock-up is not achieved; physical inspection of orifice and seat will have to be performed and replaced if needed.)		
6	Test to ensure regulator will open full.		
7	If there is a monitor regulator check, set pressure. Check for		
8	If there is a relief valve, check for set pressure and test for operating performance.		
9	Ensure all valves are returned to normal operating positions.		
Comments:			

Participant Name: _____

Test Date: _____ **Location:** _____

Evaluation: ☐ **Qualified** ☐ **Not Qualified**

_____

Qualified Observer Signature

Competency/skill: 12.3 Inspecting and maintaining valves

Qualified observer instructions:

1. For the performance steps below, observe the participant and check "Go" for successful completion of the step **or** "No Go" if remediation of the step is required.
2. A "No Go" rating on any of the steps constitutes a "No Go" for the entire performance skill. Performance skills must be completed with 100% accuracy.
3. Both the individual taking the performance evaluation and the qualified observer must sign this form upon completion of the evaluation.

Performance Step Analysis		Go	No Go
Lubricating valves			
1	Correctly attach lubricating device to the valve.		
2	Apply lubrication without over lubricating.		
3	Correctly detach the lubricating device and clean the lubrication point.		
Operating valves			
4	Check to see if valve is open or closed.		
5	Aware of section valve controls.		
6	Check size of valve.		
7	Correctly attach wrench to valve.		
8	Turn valve correctly.		
9	Return valve to normal operating position.		
Comments:			

Participant Name: _____

Test Date: _____ **Location:** _____

Evaluation: ☐ **Qualified** ☐ **Not Qualified**

_____
Qualified Observer Signature

Competency/skill: _____

Qualified observer instructions:

1. For the performance steps below, observe the participant and check "Go" for successful completion of the step **or** "No Go" if remediation of the step is required.
2. A "No Go" rating on any of the steps constitutes a "No Go" for the entire performance skill. Performance skills must be completed with 100% accuracy.
3. Both the individual taking the performance evaluation and the qualified observer must sign this form upon completion of the evaluation.

Performance Step Analysis		Go	No Go
1			
2			
3			
4			
5			
6			
7			
8			
9			
Comments:			

Participant Name: _____

Test Date: _____ **Location:** _____

Evaluation: ☐ **Qualified** ☐ **Not Qualified**

_____
Qualified Observer Signature

WRITTEN EVALUATION OF COMPETENCIES AND SKILLS

Division 6 of the Operator Qualification Program may contain copies of tests used in the written evaluation and qualification competencies and skills necessary to perform tasks on gas systems. Copies of examination instruments are generally not included, where qualification is certified by an outside training organization.

Properties of Natural Gas Questionnaire:

1. Is natural gas A) lighter than air? or B) heavier than air (circle best answer)

2. Which of the following is not a physical property of natural gas?: A) colorless B) odorless C) tasteless D) non-toxic (circle best answer)

3. What is the primary chemical component of natural gas?

   _____

4. Describe what is meant by the term "lower explosive limit"?

   _____

5. Describe what is meant by the term "upper explosive limit"?:

   _____

6. What is the approximate value of the "lower explosive limit"?:

   _____

7. What is the approximate value of the "upper explosive limit"?

   _____

8. What is the purpose of adding "mercaptan" to the natural gas at the Ostrander meter site?:

   _____

9. Describe the odor of mercaptan:

   _____

10. When is smoking allowed inside a meter/regulator building or while working on the pipeline right-of-way?::A) whenever natural gas is present B) whenever the wind is blowing hard C) whenever a nicotine urge strikes D) Never (circle best answer)

Name: _____ Date: _____

TRAINING MATERIALS

Division 7 of the Operator Qualification Program may contain attachments describing course descriptions or outlines, lesson plans, and other materials used to prepare personnel for qualification through this program. For example, a brochure describing a welder qualification workshop could be retained in this division to document the operator's efforts to provide training in required competencies and skills.

(Protocol 1.04, 8.01, 192.803, 192.805)

Weyerhaeuser Longview Mill Natural Gas Pipeline
Abnormal Operating Conditions Training

7.1 **Abnormal Operating Conditions that may be encountered on the pipeline route:** / LONGVIEW NATURAL GAS PIPELINE

- Block valve position incorrect.
- Relief valve at Ostrander meter site blowing gas.
- Dead vegetation on right-of-way.
- Hissing sound or dirt blowing in air.
- Strong skunk odor.
- Fire or explosion on right-of-way.
- Unexpected construction equipment located or working on right-of-way.
- Damaged above-ground piping.
- No power at cathodic protection rectifier power.
- Pipe cathodic protection readings too low.
- Casing cathodic protection readings too high.
- Red light at Ostrander meter station.
- Earth subsidence or other evidence of movement.
- Train derailment.

Abnormal Operating Conditions that may be encountered when pipe is exposed:

- Pipe coating damaged or missing.
- Dented/gouged pipe.
- Buckled/wrinkled pipe.

Abnormal Operating Conditions that may be reported by the Comm Center (via the alarm system):

- Gas flow rate too high or too low.
- Gas pressure too high or too low.
- Gas temperature too high.
- Loss of communications.
- Odorant detected in odorant injection/storage building at Ostrander meter site.
- Odorant injection system alarm.

Note: The above lists are not intended to be comprehensive. Other conditions could be considered "abnormal". Contact the Weyerhaeuser Pipeline Operations Manager if there is any question about whether an observed condition should be considered "abnormal".

Proper response to take upon detection of an Abnormal Operating Condition:

- Take necessary measures to protect life first!
- If an emergency situation exists that could immediately endanger life or property, contact 911 then the Weyerhaeuser Comm Center.
- If an emergency situation does not exist, investigate the situation and report your findings to the Weyerhaeuser Pipeline Operations Manager. Depending on the results of your investigation and in accordance with the pipeline Operations and Maintenance manual, additional reporting to the Washington Utilities and Transportation Commission and the Office of Pipeline Safety may be necessary.

Abnormal Operating Conditions Questionnaire:

1. Which of the following is considered an abnormal operating condition?: A) Earth subsidence. B) Car parked on pipeline right-of-way. C) Trash piled on the pipeline right-of-way. (circle best answer)

2. What might dead vegetation on the pipeline right-of-way indicate?

   _____

3. What should you do if you see unexpected construction activity or construction equipment on the pipeline right-of-way?

   _____

4. What should you do if you see a fire or explosion on the pipeline right-of-way? _____

5. If you have any question about whether something that you observe on the pipeline right-of-way is "abnormal", who should you contact?:

   _____

6. What might dirt blowing in the air on the pipeline right-of-way indicate?:

   _____

7. Would a train derailment be considered an abnormal operating condition? Why or why not?

   _____

8. What is the most important thing to protect in the event of an emergency condition detected on the pipeline right-of-way?:

   _____

9. What sort of odor does the natural gas in the Weyerhaeuser pipeline have?: _____

10. Who should you contact first in the case of an emergency condition detected on the pipeline right-of-way?: A) Weyerhaeuser Pipeline Operations Manager B) Weyerhaeuser Comm Center C) 911 (circle best answer)

Name: _____ Date: _____

COURSE DESCRIPTIONS AND PREREQUISITES FOR MIDWEST ENERGY TRAINING MODULES

The following is a copy of Appendix B of the Midwest Energy Association's (A.K.A. Midwest Gas Association) *Operator Qualification Training Program Course Management Plan.* The appendix describes many of the training modules offered by Midwest Energy Association. The Iowa Association of Municipal Utilities through an agreement with Midwest Energy Association reproduces the copyrighted material.

(Protocol 4.02, §192.803)

Module Number: 101 **Title:** Characteristics and Hazards of Natural Gas
Prerequisite: None
Description: General introduction to natural gas. Topics include: composition of natural gas; hydrocarbon chemistry; physical properties of natural gas; combustion of natural gas; the fire triangle and tetrahedron; upper and lower explosive limits of natural gas; carbon monoxide.

Module Number: 102 **Title:** Potential Ignition Sources: Indoor and Outdoor
Prerequisite: 101
Description: Introduction to ignition sources. Topics include: open flame ignition sources; electric spark sources - arcing and static electricity; sources resulting from work on piping.

Module Number: 103 **Title:** Recognizing Emergency Conditions
Prerequisite: 101, 102
Description: Recognizing conditions that could lead to emergency failure of the natural gas system or equipment. Topics include: potential consequences of failures; potential failure conditions including construction defects, corrosion, damage, line stress, mechanical failure, human error, and pipeline obstructions; corrective action.

Module Number: 104 **Title:** Recognizing and Reporting Natural Gas Leaks
Prerequisite: 101, l02, 103
Description: Recognizing and reporting leaks and potential leaks encountered during the normal course of daily activity. Topics include: recognizing leaks by sight, sound, and smell; recognizing leak conditions such as tampering and meter damage; reporting leaks according to whether or not they constitute an immediate danger; ensuring customer and employee safety.

Module Number: 111 **Title:** Personal Protective Equipment
Prerequisites: 101, 102, 103, 104
Description: Use retardant clothing and PPE. Topics include: requirements and procedures for wearing flame retardant clothing; fresh air breathing equipment and components; proper use and maintenance of breathing equipment.

Module Number: 121 **Title:** Power Tool Safety
Prerequisite: 101, 102, 103, 104, 111
Description: Basic safety practices for working with the five basic types of power tools. Topics include: personal protective equipment; safety principles for using and maintaining power tools; safety practices for electric, liquid-fuel, hydraulic, pneumatic, and powder-actuated power tools.

Module Number: 122 **Title:** Proper Firefighting Techniques
Prerequisite: 101, 102, 103, 104, 111
Description: Selection of firefighting equipment and proper methods of fighting natural gas fires. Topics include: review of the fire triangle and tetrahedron; classes of fires; types and selection of dry chemical fire extinguishers; fire extinguisher inspection and maintenance; fire fighting procedures.

Module Number: 131 **Title:** Controlling the Accidental Release of Gas
Prerequisite: 101, 102, 103, 104, 122
Description: Introduction to accidental natural gas release. Topics include: definition of accidental release; causes of accidental release; corrective actions; examples of accidental release situations outdoors including damage to above grade facilities serving customers, damage to one-way and two-way feed transmission/distribution lines, damage to above grade district regulator stations with multiple and isolated feeds, and mechanical failure of relief valve; accidental release of natural gas indoors.

Module Number: 201 **Title:** Soil Subsidence
Prerequisites: 101, 102, 103, 104
Description: Soil subsidence as a possible cause of pipeline leaks or failure. Topics include: causes of soil subsidence including settling, shifting, and erosion; recognition and analysis of soil subsidence using visible signs, company and other records; documentation.

Module Number: 202 **Title:** Atmospheric Corrosion
Prerequisites: 101, 102, 103, 104
Description: Atmospheric corrosion as a possible cause of pipeline leaks or failure. Topics include: definition, types, and causes of atmospheric corrosion; atmospheric corrosion surveys; corrective action.

Module Number: 211 **Title:** Recognizing Unsafe Meter Sets
Prerequisites: 101, 102, 103, 104, 201, 202
Description: Unsafe meter sets as a possible cause of leaks or failure. Topics include misaligned meter sets; improper location; burial and overbuilding; corrosion; physical damage.

Module Number: 221 **Title**: Leak Classification
Prerequisites: 101, 102, 103, 104
Description: DOT leak classification requirements. Topics include: definitions of Grade 1, 2, and 3 leaks; guidelines for assigning leak grades; response to leaks; follow-up; documentation.

Module Number: 231 **Title:** Operating the Combustible Gas Indicator
Prerequisite: 101, 102, 103, 104, 221
Description: Introduction to operation and maintenance of the CGI. Topics include: CGI unit parts and function; pre-operation tests of the CGI unit; operation of the CGI unit in the field; documentation.

Module Number: 232 **Title:** Operating the Flame Ionization Unit
Prerequisite: 101, 102, 103, 104, 221
Description: Introduction to operation and maintenance of the FI unit. Topics include FI unit parts and function; pre-operation inspection and testing of the FI unit; field operation of the FI unit for walking and mobile surveys; documentation.

Module Number: 241 **Title:** Carbon Monoxide (CO) Testing
Prerequisites: 101, 102, 103, 104
Description: Introduction to CO testing. Topics include: recognizing the effects of CO gas on human beings; identifying situations that require CO testing; CO testing using indicator tubes and electronic CO monitors; actions to take when CO is detected; documentation.

Module Number: 244 **Title:** Emergency Response and Restoration of Service
Prerequisites: 101, 102, 103, 104, 131, 221
Description: Basic responses to emergency situations and information about restoration of service. Topics include: Identifying company procedures for reporting to state/federal authorities. Identify components of an effective repair plan, system mapping and isolation points, repair plan, and methods for reestablishing service after shut down.

Module Number: 251 **Title:** Odorization
Prerequisites: 101, 102, 103, 104
Description: Requirements and procedures for odorizing gas and testing odorant levels. Topics include: factors affecting sufficient odorization; odorization equipment testing; odorization equipment maintenance; testing for odorization levels; documentation.

Module Number: 261 **Title:** Bar Hole Testing and Purging
Prerequisite: 101, 102, 103, 104, 231
Description: Use of bar test equipment and CGI to identify gas migration, pinpoint underground leaks, and exhaust underground gas. Topics include: natural gas migration; factors affecting migration patterns and rates; safety hazards of gas migration; determining the spread area of underground leaks; finding the leak source; exhausting gas.

Module Number: 271 **Title:** Leak Surveys and Patrols
Prerequisite: 101, 102, 103, 104, 201, 202, 232, 251
Description: Requirements and procedures for systematic leak survey of the natural gas system. Topics include: causes of leaks; leak detection equipment; kinds of surveys; kinds of facilities that require surveys; DOT survey requirements; procedures for walking, mobile, and business district surveys; patrols; documentation.

Module Number: 272 **Title:** Customer Leak Investigation
Prerequisite: 101, 102, 103, 104, 241, 251, 261
Description: Responding to customer reports of leaks. Topics include: arrival and entry procedures; indoor and outdoor leak detection and location; identifying and responding to hazardous conditions; documentation.

Module Number: 301 **Title:** Combustion and Ventilation Air
Prerequisite: 101, 102, 103, 104
Description: Introduction to air requirements for combustion of natural gas. Topics include: combustion terminology; complete and incomplete combustion; problems that result from incomplete combustion; conditions allowing for adequate combustion air.

Module Number: 311 **Title:** Pilot Lights
Prerequisite: 101, 102, 103, 104, 301
Description: Introduction to pilot lights and other appliance ignition systems. Topics include: automatic and non-automatic pilots; flame sensors and safety shutoffs including thermocouples, bimetal and hydraulic or mercury vaporization sensors; electronic ignition systems; inspection procedures for electronic ignition systems.

Module Number: 312 **Title:** Gas-Air Adjustment
Prerequisite: 101, 102, 103, 104, 301
Description: Introduction to gas burners and adjustment. Topics include: types of gas burners including yellow flame and blue flame burners; typical burner components; flame characteristics and factors affecting them; burner problems caused by improper gas-air mixture including lifting, flashback, extinction pop, yellow tipping, floating, and rollout.

Module Number: 313 **Title:** Venting
Prerequisite: 101, 102, 103, 104, 301
Description: Introduction to the purpose of venting and recognizing proper and improper venting conditions. Topics include: purpose of venting; factors affecting venting system design and operation; types of vents; code requirements for venting; recognizing proper vent and connector installation; testing vents for establishment of gas.

Module Number: 321 **Title:** Pressure Checks to Establish Gas Service
Prerequisites: 101, 102, 103, 104
Description: Establishing proper gas inlet pressure. Topics include: pressure measurement instruments, including bourdon tubes, manometers, and electronic gauges; procedure for checking inlet pressure; problems associated with under pressurization and over-pressurization; calculating desired and actual gas flow.

Module Number: 322 **Title:** Establishing and Disconnecting Gas
Prerequisites: 101, 102, 103, 104, 272, 311, 312, 313, 321
Description: Requirements and procedures for establishing and disconnecting customer gas service. Topics include: verification of requesting location; piping and appliance checks; meter and regulator checks including low-flow and shut-in tests; purging and light-up procedures; disconnection of service; read over or succession; meter removal; documentation.

Module Number: 324 **Title:** Lighting Appliances
Prerequisites: 101, 102, 103, 104, 311, 312, 313, 321
Description: Performing purging and lighting on all types of residential gas appliances. Topics include: purging process and conditions requiring its use; identifying the three types of purging methods.

Module Number: 401 **Title:** Job Site Protection
Prerequisites: 101, 102, 103, 104
Description: Protection of job site for public and employee safety. Topics include: types of traffic control and protection devices and signs; placement of job site protection devices.

Module Number: 402 **Title:** Locating and Marking Facilities
Prerequisite: 101, 102, 103, 104, 401
Description: Use of the pipe locator to find and mark underground facilities. Topics include: pipe locator parts and operation; equipment check-out; direct requests and the one-call system; field markings of gas and other facilities; conductive locating procedure: inductive locating procedure; pinpoint centering of pipe; triangulation of pipe depth; permanent and temporary signs and markers.

Module Number: 403 **Title:** Backhoe Safety
Prerequisite: 101, 102, 103, 104, 401
Description: Basic safety principles for working with or around backhoes. Topics include: safe back hoe service and maintenance; procedure for loading and unloading back hoe on or off trailer; safety procedures for working with backhoes at the job site.

Module Number: 404 **Title:** Excavation and Shoring Safety
Prerequisites: 101, 102, 103, 104, 402, 403
Description: Techniques and protection for safe excavation. Topics include: cave-in causes and results; cave-in prevention factors including soil classification, water, and other factors; cave-in protection measures including support systems, sloping, and shielding; additional excavation precautions.

Module Number: 411 **Title:** Plastic Pipe Fusion
Prerequisite: 101, 102, 103, 104, 121
Description: Methods and procedures for fusing plastic pipe. Topics include: minimizing hazards of static electricity; equipment and procedure for butt, sidewall, and socket fusion; butt end and sidewall electrofusion.

Module Number: 412 **Title:** Joining Steel Pipe
Prerequisite: 101, 102, 103, 104, 121
Description: Methods and procedures for joining steel pipe. Topics include: overview of welding; when to use compression couplings; kinds of compression couplings; flange types; flange installation procedure.

Module Number: 421 **Title:** Pressure Testing Steel and Plastic Pipeline
Prerequisites: 101, 102, 103, 104, 411, 412
Description: Requirements, equipment, and procedures for pressure testing steel and plastic pipe. Topics include: facilities requiring pressure testing; DOT pressure testing requirements for transmission and distribution lines; pressure testing equipment; pressure testing procedure; documentation.

Module Number: 422 **Title:** Purging Safety
Prerequisite: 101, 102, 103, 104, 421
Description: Requirements and procedures for purging gas pipelines. Topics include: purging safety; purging with air; purging with natural gas; discharge venting; testing for complete purge.

Module Number: 431 **Title:** Cathodic Protection
Prerequisite: 101, 102, 103, 104, 422
Description: Introduction to corrosion prevention by cathodic protection. Topics include: fundamentals of corrosion; corrosion prevention measures; purpose and types of anodes; selection of anodes using soil resistivity; pipe-to-soil voltage measurement; anode installation; rectifiers; test stations; thermite welding procedures.

Module Number: 441 **Title:** Tapping/Stopping: 1.25" - 4" Pipe
Prerequisite: 101, 102, 103, 104, 404
Description: Operation of general and specialized tapping and stopping equipment Topics include: operation of bagging and stopping equipment; operation of T. D. Williamson and Mueller tapping equipment; operation of Rockford-Eclipse and Qualitech-Eclipse stopping equipment.

Module Number: 444 **Title:** Plastic Pipe Repair
Prerequisites: 101, 102, 103, 104, 111, 131, 401, 403, 404, 411, 422, 441
Description: Methods and procedures for repair of plastic pipe. Topics include: temporary repairs, squeeze tools, making permanent repairs, remove and replace damaged pipe.

Module Number: 451 **Title:** Installing Mains
Prerequisites: 101, 102, 103, 104, 431, 441
Description: Methods and procedures for installing steel and plastic pipe. Topics include: pipe handling and storage, trenching procedure, installing new mains by direct burial, plastic pipe insertion.

Module Number: 452 **Title:** Installing Service
Prerequisite: 101, 102, 103, 104, 451
Description: Methods and procedures for installing service lines. Topics include: review of service line terminology; service line materials; trenching; installing steel service lines; installing plastic service lines.

Module Number: 453 **Title:** Crossings
Prerequisite: 101, 102, 103, 104, 452
Description: Specific procedures for installing pipe across highway, rail, bridge, creek, and ravine crossings. Topics include: highway and railroad crossing procedures including licenses and permits, casings, boring, and depth of crossing; bridge crossing procedures including pipe expansion, support, and anchors; creek and ravine crossing procedures including trenching and protection.

Module Number: 461 **Title:** Steel and Cast Iron Repair Fittings
Prerequisite: 101, 102, 103, 104, 431
Description: Selecting and installing fittings. Topics include: selecting repair fittings for steel, cast iron, and plastic pipe; selecting main fittings for steel, cast iron, and plastic pipe; service fittings and techniques for connecting steel service to steel mains, steel service to cast iron mains, steel service to plastic mains, plastic service to plastic mains, plastic service to steel mains.

Module Number: 462 **Title:** Maintaining Steel & Cast Iron Mains
Prerequisites: 101, 102, 103, 104, 261, 453, 461
Description: Requirements and procedures for maintaining, repairing, and replacing steel or cast iron mains. Topics include: identifying areas of greatest potential hazard; repair and replacement criteria; pressure reduction and shutdown prior to repair; inspection procedures for exposed steel mains; steel pipe repair methods; cast iron pipe repair methods; cast iron pipe protection.

Module Number: 463 **Title:** Reinforcing Steel & Plastic Mains
Prerequisite: 101, 102, 103, 104, 461
Description: Requirements and procedures for reinforcing mains. Topics include: identifying situations where reinforcement is required; kinds of reinforcement; procedures for reinforcing steel mains and plastic tie-ins to steel, cast iron, and plastic mains.

Module Number: 471 **Title:** Abandoning Facilities
Prerequisite: 101, 102, 103, 104, 462
Description: Procedures for deactivation of natural gas facilities. Topics include: reasons for deactivation; procedure for deactivating mains or service lines; discontinuing service; documentation.

Module Number: 501 **Title:** Safe Vault Entry
Prerequisite: 101, 102, 103, 104, 122
Description: Procedures for entering and working safely in vaults. Topics include: actions to take before entry; atmospheric testing; vault entry PPE; vault entry procedures; required rescue equipment and procedures.

Module Number: 511 **Title:** Inspecting and Maintaining Valves
Prerequisites: 101, 102, 103, 104
Description: Introduction to valves, and to the requirements and procedures for their inspection and maintenance. Topics include: valve designs and components; emergency and non-emergency valves; DOT inspection and maintenance requirements; valve inspection and maintenance procedure; documentation.

Module Number: 512 **Title:** Inspecting Pressure Regulating & Limiting Stations
Prerequisites: 101, 102, 103, 104, 131, 501, 511
Description: DOT requirements for inspecting pressure regulating and limiting stations, and vaults that house them. Topics include: MAOP; kinds of regulators and over pressure protection devices (OPPD); inspection requirements and procedures for regulators and OPPDs; vault inspection requirements and procedures; documentation.

Module Number: 521 **Title:** System Uprating
Prerequisites: 101, 102, 103, 104, 261, 271, 463, 512
Description: Requirements and procedures for increasing system operating pressure Topics include: Uprating terminology including MAOP and SMYS; pipe and components; uprating decision factors; field uprating procedures; documentation.

Appendix 1

The following training material cross-reference guide is to assist operators in referencing Midwest Energy Association (MEA) training materials that are available. MEA training materials are not required by this OQ program but rather are used as a reference and/or an example. If other training material is used, that material should be documented in Division 7.

MEA is a consortium of energy industry organizations that pursue operational excellence by providing training and information resources for themselves and other organizations to enhance employee safety, productivity, and positive customer relations. MEA accomplishes this by:

1. Seeking opportunities that leverage the power of association.
2. Connecting members so needs are expressed, information is shared, and problems are solved.
3. Pooling expertise and dollars to create unique, high value services.
4. Sponsoring major operating conferences, workshops and classes.
5. Creating "distance" or packaged training and certification services such as computer, video and workbook programs; tests and evaluations.
6. Developing compliance tools to meet OSHA, EPA, and DOT regulations.

VIDEOS *This program is no longer distributed as of Jan 2003.*
The OQTP was developed to help natural gas operators and other users train and re-qualify their employees in basic safety subjects.

This qualification training is designed to comply with U. S. Department of Transportation (DOT) standards mandated by the Pipeline Safety Act of 1992. Minimum Federal safety standards for natural gas pipelines are published by DOT in Title 49 of the Code of Federal Regulations, part 192 (49 CFR §192).

The OQTP is a "generic" training course that serves many audiences. The core of the program covers common procedures and requirements for complying with Federal regulations and maintaining safe work conditions. The modular structure of the program allows individual Companies to add information to tailor the instruction to their own regional, State, or corporate policies.

OQforAll
More than eight years of development and testing have produced OQ for all, OQ for all is designed to complement your current training program and apprenticeship practices, providing everything you need to successfully meet the DOT Operator Qualification (OQ) Regulation.

Q41

The Q41 evaluation materials were developed using a process to ensure the reliability and validity of the materials. The development process relied on input from subject matter experts. The materials are designed to evaluate an individual's ability to perform covered tasks in accordance with the requirements in Title 49, Code of Federal Regulations, Part 192. In addition, the materials are designed to evaluate an indiv idual's ability to recognize and react to abnormal operating conditions as required by the 49 CFR 192, Subpart N, Qualification of Pipeline Personnel.

MEA TRAINING MATERIAL CROSS-REFERENCE GUIDE

REQUIRED COMPETENCIES AND SKILLS

	Competencies and Skills	Suggested Training Reference	Q41 References	OQforAll References
Sec. 1	**Fundamentals of Natural Gas**			
1.1	Characteristics and hazards of natural gas	Gas Fundamentals Training, MEA-101	Abnormal Operating Conditions Test	192-0101 Characteristics and Hazards of Natural Gas
1.2	Potential ignition sources: indoor and outdoor	Gas Fundamentals Training, MEA-102	Abnormal Operating Conditions Test	192-0101 Characteristics and Hazards of Natural Gas
1.3	Recognizing emergency conditions	Gas Fundamentals Training, MEA-103	CTS-2011 Prevention of Accidental Ignition	192-0101 Characteristics and Hazards of Natural Gas, Abnormal Operating Conditions Module
1.4	Recognizing and reporting natural gas leaks	Gas Fundamentals Training, MEA-104	CTS-1201 Leakage Survey: Distribution & Transmission	192-1202 Outside Gas Leakage Investigation, Pinpointing, and Grading 192-1203 Inside Gas Leakage Investigation

	Competencies and Skills	Suggested Training Reference	Q41 References	OQforAll References
Sec. 2	**Record keeping**			
2.1	Documenting materials and installation records	Operator's workshop, O&M Manual MEA-402	N/A	N/A
2.2	Documenting maximum allowable operating pressure (MAOP)	Operator's Workshop, O&M Manual MEA-421	CTS 1301 Leak and Strength Test – Service Lines, Mains, and Transmission Lines CTS 1422 Segment Repair, Replacement, Etc. (Service Lines, Mains and Transmission Lines) CTS 1803 Pressure Regulating, Limiting, and Relief Device – Operation and Maintenance CTS-2301 Uprating Steel Pipelines to a Pressure that will Produce a Hoop Stress 30% or More of SMYS CTS-2302 Uprating Steel Pipelines to a Pressure that will Produce a Hoop Stress Less than 30% SMYS	192-2301 Uprating Steel Pipelines to a Pressure that will Produce a Hoop Stress 30% or More of SMYS 192-2302 Uprating Pipelines to a Pressure that will Produce a Hoop Stress Less than 30% SMYS
2.3	System up-rating	Operator's Workshop, MEA-521	CTS-1419 Uprating: Reinforce or Anchor Offsets, Bends, and Dead Ends CTS-2301 Uprating Steel Pipelines to a Pressure that will Produce a Hoop Stress 30% or More of SMYS CTS-2302 Uprating Steel Pipelines to a Pressure that will Produce a Hoop Stress Less than 30% SMYS	192-1419 Uprating: Reinforce or Anchor Offsets, Bends, and Dead-ends 192-2301 Uprating Steel Pipelines to a Pressure that will Produce a Hoop Stress 30% or More of SMYS 192-2302 Uprating Pipelines to a Pressure that will Produce a Hoop Stress Less than 30% SMYS
2.4	Investigating and documenting line failure	Operator's Workshop, MEA-462	N/A	Abnormal Operating Conditions Module
2.5	Accident reporting	Operator's Workshop, O&M Manual, MEA-103	N/A	Abnormal Operating Conditions Module

	Competencies and Skills	Suggested Training Reference	Q41 References	OQforAll References
Sec. 3	**Marking and Mapping Facilities**			
3.1	Locating facilities using the conductive method	Operator's Workshop, Manufacturer's Procedures, MEA-402	CTS 0801 Locating Pipelines	192-0801 Locating Pipelines
3.2	Locating facilities using the inductive method	Operator's Workshop, Manufacturer's Procedures, MEA-402	CTS 0801 Locating Pipelines	192-0801 Locating Pipelines
3.3	Locating facilities using the inductive method (two persons)	Operator's Workshop, Manufacturer's Procedures, MEA-402	CTS 0801 Locating Pipelines	192-0801 Locating Pipelines
3.4	Determining depth through triangulation	Operator's Workshop, Manufacturer's Procedures, MEA-402	CTS 0801 Locating Pipelines CTS 1417 Protection When Minimum Cover Not Met	192-0801 Locating Pipelines 192-1417 Protection when Minimum Cover not Met
3.5	System mapping	Operator's Workshop MEA-402	CTS 0901 System Patrolling	192-0901 System Patrolling
Sec. 4	**Fundamentals of Field Safety in Construction, Operation, and Maintenance**			
4.1	Personal protective equipment	OSHA compliance manual and training, MEA-111	N/A	N/A
4.2	Power tool safety	OSHA compliance manual and training, MEA-121	N/A	N/A
4.3	Proper firefighting techniques	Emergency Procedures Training, MEA-122	N/A	N/A
4.4	Controlling the accidental release of gas	Emergency Procedures Training, MEA-131	Abnormal Operating Conditions Test	Abnormal Operating Conditions Module
4.5	Soil subsidence	OSHA compliance manual and training, MEA-201	CTS 1402 Backfilling	192-1402 Backfilling
4.6	Atmospheric corrosion	Operator's Workshop, MEA-202	CTS 0401 Corrosion Monitoring – Atmospheric, External, and Internal	192-0401 Corrosion Monitoring - Atmospheric, External, and Internal

	Competencies and Skills	Suggested Training Reference	Q41 References	OQforAll References
4.7	Recognizing unsafe meter sets	MEA-211	CTS 1422 Segment Repair, Replacement, Etc. (Service Lines, Mains and Transmission Lines)	192-1422 Segment Repair, Replacement, Etc. (Service Lines, Mains and Transmission Lines)
4.8	Confined space entry (vaults, etc.)	OSHA compliance manual and training, MEA-501	CTS 1802 Vault Maintenance	192-1802 Vault Maintenance
4.9	Job site protection	Compliance manual and training, MEA-MEA-401	N/A	N/A
4.10	Purging safety	Operator's Workshop, MEA-422	CTS 1418 Purging	192-1418 Purging
4.12	Abandoning facilities	Operator's Workshop, MEA-471	CTS 1401 Abandonment or Inactivation of Facilities	192-1401 Abandonment or Inactivation of Facilities
4.13	Excavation safety	OSHA compliance manual and training, MEA-404	New CTS 12/03	N/A
Sec. 5	**Fundamentals of Gas Leaks - Survey and Response**			
5.1	Leak classification	Emergency Procedures Training, Gas Fundamentals Training, MEA-221	CTS 1201 Leakage Survey: Distribution & Transmission CTS 1202 Outside Leakage Investigation, Pinpointing, and Grading CTS 1203 Inside Gas Leakage Investigation	192-1201 Leakage Survey: Distribution and Transmission 192-1202 Outside Gas Leakage Investigation, Pinpointing, and Grading 192-1203 Inside Gas Leakage Investigation
5.2	Procedures for leak surveys and patrols	Operator's Workshop, MEA-271	CTS 1201 Leakage Survey: Distribution & Transmission CTS 1202 Outside Leakage Investigation, Pinpointing, and Grading CTS 1203 Inside Gas Leakage Investigation	192-1201 Leakage Survey: Distribution and Transmission 192-1202 Outside Gas Leakage Investigation, Pinpointing, and Grading 192-1203 Inside Gas Leakage Investigation

	Competencies and Skills	Suggested Training Reference	Q41 References	OQforAll References
5.3	Combustible gas indicators	Operator's Workshop, Manufacturer's Procedures MEA-231	CTS 1201 Leakage Survey: Distribution & Transmission CTS 1202 Outside Leakage Investigation, Pinpointing, and Grading CTS 1203 Inside Gas Leakage Investigation	192-1201 Leakage Survey: Distribution and Transmission 192-1202 Outside Gas Leakage Investigation, Pinpointing, and Grading 192-1203 Inside Gas Leakage Investigation
5.4	Electronic gas detectors	Operator's Workshop, Manufacturer's Procedures, MEA-231	CTS 1201 Leakage Survey: Distribution & Transmission CTS 1202 Outside Leakage Investigation, Pinpointing, and Grading CTS 1203 Inside Gas Leakage Investigation	192-1201 Leakage Survey: Distribution and Transmission 192-1202 Outside Gas Leakage Investigation, Pinpointing, and Grading 192-1203 Inside Gas Leakage Investigation
5.5	Flame ionization	Operator's Workshop, Manufacturer's Procedures MEA-232	CTS 1201 Leakage Survey: Distribution & Transmission CTS 1202 Outside Leakage Investigation, Pinpointing, and Grading CTS 1203 Inside Gas Leakage Investigation	192-1201 Leakage Survey: Distribution and Transmission 192-1202 Outside Gas Leakage Investigation, Pinpointing, and Grading 192-1203 Inside Gas Leakage Investigation
5.6	Bar hole testing and purging	Operator's Workshop, MEA-261	CTS 1202 Outside Leakage Investigation, Pinpointing, and Grading CTS 1803 Pressure Regulating, Limiting, and Relief Device – Operation and Maintenance	192-1201 Leakage Survey: Distribution and Transmission 192-1202 Outside Gas Leakage Investigation, Pinpointing, and Grading 192-1203 Inside Gas Leakage Investigation

	Competencies and Skills	Suggested Training Reference	Q41 References	OQforAll References
Sec. 6	**Fundamentals of Customer Service**			
6.1	Carbon monoxide (CO) testing	Operator's Workshop, MEA-241	N/A	192-0101 Characteristics and Hazards of Natural Gas
6.2	Investigating leaks	Operator's Workshop, MEA-272	CTS 1201 Leakage Survey: Distribution & Transmission CTS 1202 Outside Leakage Investigation, Pinpointing, and Grading CTS 1203 Inside Gas Leakage Investigation	192-1201 Leakage Survey: Distribution and Transmission 192-1202 Outside Gas Leakage Investigation, Pinpointing, and Grading 192-1203 Inside Gas Leakage Investigation
6.3	Combustion and ventilation air requirements	Operator's Workshop, MEA-301	N/A	N/A
6.4	Pilot light operation	Operator's Workshop, MEA-311, 324	N/A	N/A
6.5	Gas-air adjustment	Operator's Workshop, MEA-312	N/A	N/A
6.6	Appliance venting	Operator's Workshop, MEA-313	N/A	N/A
6.7	Pressure checks to establish gas service	Operator's Workshop, MEA-321	CTS 1301 Leak and Strength Test – Service Lines, Mains, and Transmission Lines	192-1301 Leak and Strength Test – Service Lines, Mains, and Transmission Lines
6.8	Establishing and disconnecting gas	Operator's Workshop, MEA-322	CTS 1301 Leak and Strength Test – Service Lines, Mains, and Transmission Lines CTS 2014 Service Lines Not In Use and Service Discontinuance	192-1301 Leak and Strength Test – Service Lines, Mains, and Transmission Lines 192-2014 Service Lines Not In Use and Service Discontinuance

	Competencies and Skills	Suggested Training Reference	Q41 References	OQforAll References
Sec. 7	**Fundamentals of Construction**			
7.1	Pressure testing steel and plastic pipeline	Operator's Workshop, MEA-421	CTS 1301 Leak and Strength Test – Service Lines, Mains, and Transmission Lines	192-1301 Leak and Strength Test – Service Lines, Mains, and Transmission Lines
7.2	Procedures for abandoning facilities	Operator's Workshop, MEA-471	CTS 1401 Abandonment or Inactivation of Facilities	192-1401 Abandonment or Inactivation of Facilities
7.3	Cathodic protection (general)	Operator's Workshop, MEA-431	CTS 0501 Cathodic Protection System Maintenance CTS 0503 Cathodic Protection Systems - Electrical Connections CTS 0505 Cathodic Protection System Testing	192-0501 Cathodic Protection System Maintenance 192-0503 Cathodic Protection Systems - Electrical Connections 192-0505 Cathodic Protection System Testing
7.4	Constructing facilities across streets, railroads, and waterways	Operator's Workshop, MEA-453	CTS 1404 Casing Vents and Seals	192-1404 Casing Vents and Seals
7.5	Operating thermite welder	Operator's Workshop, Manufacturer's Procedures, MEA-431	CTS 0401 Corrosion Monitoring – Atmospheric, External, and Internal	192-0401 Corrosion Monitoring - Atmospheric, External, and Internal
7.6	Installing tracer wire	Operator's Workshop, DOT Small Gas Operators Manual MEA-451, 452	CTS 1408 Installation of Plastic Pipe CTS 1409 Installation of Steel Pipe	192-1408 Installation of plastic pipe 192-1409 Installation of Steel Pipe
7.7	Installing valves	Operator's Workshop, MEA-451	CTS 1427 Valve Maintenance	192-1427 Valve Maintenance

	Competencies and Skills	Suggested Training Reference	Q41 References	OQforAll References
7.8	Steel and cast iron repair fittings	Operator's Workshop, Manufacturer's Procedures, MEA-461	CTS 1001 Cast Iron Joints - Sealing CTS 1422 Segment Repair, Replacement, Etc. (Service Lines, Mains and Transmission Lines) CTS 1430 Internal Sealing - Cast Iron and Ductile Iron Segments	192-1001 Cast Iron Joints – Sealing 192-1422 Segment Repair, Replacement, Etc. (Service Lines, Mains and Transmission Lines) 192-1430 Internal Sealing - Cast Iron and Ductile Iron Segments
7.9	Maintaining steel and cast iron mains	Operator's Workshop, MEA-462	CTS 1422 Segment Repair, Replacement, Etc. (Service Lines, Mains and Transmission Lines	192-1422 Segment Repair, Replacement, Etc. (Service Lines, Mains and Transmission Lines)
7.10	Reinforcing steel and plastic mains	Fusion Workshop, MEA-463	CTS 1424 Support, Expansion Joints and Anchor Maintenance - Exposed Pipeline	192-1424 Support and Anchor Maintenance - Exposed Pipeline
7.11	Plastic pipe joining (fusion)	Fusion Workshop, MEA-411	CTS 1001 Cast Iron Joints - Sealing CTS 1002 Plastic Pipe – Electrofusion CTS 1003 Plastic Pipe - Butt Heat Fusion CTS 1004 Plastic Pipe – Sidewall Heat Fusion	192-1001 Cast Iron Joints– Sealing 192-1002 Plastic Pipe – Electrofusion 192-1003 Plastic Pipe - Butt Heat Fusion 192-1004 Plastic Pipe - Sidewall Heat Fusion
7.12	Plastic pipe joining (mechanical couplings)	Operator's Workshop, MEA-463	CTS 0803 Inspection for Damage	192-0803 Inspection for Damage
7.13	Recognition of defective material	Operator's Workshop, MEA-411, 412, 421	CTS 1411 Inspection	192-1411 Inspection
7.14	Steel pipe joining by welding	Pipeline Welding Workshop, Qualified Welding Procedures	CTS 2401 Welding	192-2401 Welding
7.15	Steel pipe joining by mechanical couplings	Operator's Workshop, Operator's Workshop, MEA-412	CTS 1005 Mechanical Joints	192-1005 Mechanical Joints

	Competencies and Skills	Suggested Training Reference	Q41 References	OQforAll References
7.16	Damage prevention	Operator's Workshop, MEA-462	CTS 0803 Inspection for Damage	192-0803 Inspection for Damage
7.17	Application of padding and shielding	Operator's Workshop, MEA-453	CTS 1402 Backfilling	192-1402 Backfilling
7.18	Replacing emergency valves	Operator's Workshop, MEA-441, 511	N/A	N/A
7.19	Installing meter sets	Operator's Workshop, MEA-211, 322, 452	CTS 1803 Pressure Regulating, Limiting, and Relief Device – Operation and Maintenance	192-1803 Pressure Regulating, Limiting, and Relief Device -Operation and Maintenance
7.20	Tapping and stopping steel pipe 1" through 4"	Operator's Workshop, MEA-441	CTS 1426 Tapping Steel and Plastic Pipe	192-1426 Tapping Steel and Plastic Pipe
7.21	Tapping and stopping steel pipe 6" through 8"	Operator's Workshop, Manufacture's Procedures	CTS 1426 Tapping Steel and Plastic Pipe	192-1426 Tapping Steel and Plastic Pipe
7.22	Tapping and stopping polyethylene pipe	Operator's Workshop, MEA-451, 452	CTS 1426 Tapping Steel and Plastic Pipe	192-1426 Tapping Steel and Plastic Pipe
7.23	Vault abandonment	Operator's Workshop, MEA-471, 501	CTS 1802 Vault Maintenance	192-1802 Vault Maintenance
Sec. 8	**Fundamentals of Construction – Heavy Equipment Operation**			
8.1	Operating backhoe	Operator's Workshop, MEA-403	N/A	N/A
8.2	Operating trencher	Operator's Workshop, Manufacturer's Procedures, MEA-403	N/A	N/A
8.3	Operating boring equipment	Operator's Workshop, Manufacturer's Procedures	N/A	N/A
8.4	Ditch and backfill inspection	Operator's Workshop, MEA-404	CTS 1402 Backfilling	192-1402 Backfilling

	Competencies and Skills	Suggested Training Reference	Q41 References	OQforAll References
Sec. 9	**Fundamentals of Measurement and Control**			
9.1	Metering	Metering Workshop	N/A	N/A
9.2	Odorization measurement and control	Operator's Workshop, MEA-251	CTS 1501 Odorization – Mains and Transmission Lines	192-1501 Odorization - Mains and Transmission Lines
Sec. 10	**Corrosion Control**			
10.1	Cathodic protection	Corrosion control workshop, MEA-431	CTS 0501 Cathodic Protection System Maintenance	192-0501 Cathodic Protection System Maintenance
10.2	Internal corrosion	Corrosion control workshop, MEA-431	CTS 0401 Corrosion Monitoring – Atmospheric, External, and Internal	192-0401 Corrosion Monitoring - Atmospheric, External, and Internal
10.3	External corrosion	Corrosion control workshop, MEA-431	CTS 0401 Corrosion Monitoring – Atmospheric, External, and Internal	192-0401 Corrosion Monitoring - Atmospheric, External, and Internal
10.4	Atmospheric corrosion	Corrosion control workshop, MEA-202	CTS 0401 Corrosion Monitoring – Atmospheric, External, and Internal	192-0401 Corrosion Monitoring - Atmospheric, External, and Internal
10.5	Coatings	Corrosion control workshop, MEA-431	CTS 0402 Coating Maintenance	192-0402 Coating Maintenance
10.6	Holiday detection (coating inspection)	Corrosion control workshop, MEA-431	CTS 0402 Coating Maintenance	192-0402 Coating Maintenance
10.7	Painting and jacketing above ground facilities	Corrosion control workshop, MEA-202	CTS 0402 Coating Maintenance	192-0402 Coating Maintenance

	Competencies and Skills	Suggested Training Reference	Q41 References	OQforAll References
10.8	Installation of cathodic protection (sacrificial anode system)	Corrosion control workshop, MEA-431	CTS 0501 Cathodic Protection System Maintenance CTS 0503 Cathodic Protection Systems - Electrical Connections CTS 0505 Cathodic Protection System Testing	192-0501 Cathodic Protection System Maintenance 192-0503 Cathodic Protection Systems - Electrical Connections 192-0505 Cathodic Protection System Testing
10.9	Installation of impressed current system	Corrosion control workshop, MEA-431	CTS 0501 Cathodic Protection System Maintenance CTS 0503 Cathodic Protection Systems - Electrical Connections CTS 0505 Cathodic Protection System Testing	192-0501 Cathodic Protection System Maintenance 192-0503 Cathodic Protection Systems - Electrical Connections 192-0505 Cathodic Protection System Testing
10.10	Inspection, monitoring cathodic protection system	Corrosion control workshop, MEA-431	CTS 0501 Cathodic Protection System Maintenance CTS 0503 Cathodic Protection Systems - Electrical Connections CTS 0505 Cathodic Protection System Testing	192-0501 Cathodic Protection System Maintenance 192-0503 Cathodic Protection Systems - Electrical Connections 192-0505 Cathodic Protection System Testing
Sec. 11	**Odorization**			
11.1	Operating and maintaining differential odorant system	Operator's Workshop, O&M Manual, MEA-251	CTS 0501 Cathodic Protection System Maintenance	192-0501 Cathodic Protection System Maintenance
11.2	Operating and maintaining injection odorant system	Operator's Workshop, O&M Manual, MEA-251	CTS 1501 Odorization – Mains and Transmission Lines	192-1501 Odorization - Mains and Transmission Lines

	Competencies and Skills	Suggested Training Reference	Q41 References	OQforAll References
11.3	Testing odorant level	Operator's Workshop, O&M Manual, MEA-251	CTS 1501 Odorization – Mains and Transmission Lines	192-1501 Odorization - Mains and Transmission Lines
Sec. 12	**Other Operating and Maintenance Skills**			
12.1	Operating valves (including emergency valves), regulators, and relief valves	Operator's Workshop, O&M Manual, MEA-244, 511, 512	CTS 0701 Locating, Installing, and Protecting Customer Meters and Regulators CTS 0702 Customer Pressure Regulating, Limiting, and Relief Device – Operation and Maintenance	192-0701 Locating, Installing, and Protecting Customer Meters and Regulators 192-0702 Customer Pressure Regulating, Limiting, and Relief Devices - Operation and Maintenance
12.2	Inspecting pressure regulating and limiting stations	Operator's Workshop, O&M Manual, MEA-512	CTS 0701 Locating, Installing, and Protecting Customer Meters and Regulators CTS 0702 Customer Pressure Regulating, Limiting, and Relief Device – Operation and Maintenance	192-0701 Locating, Installing, and Protecting Customer Meters and Regulators 192-0702 Customer Pressure Regulating, Limiting, and Relief Devices - Operation and Maintenance
12.3	Inspecting and maintaining key valves	Operator's Workshop, O&M Manual, MEA-511	CTS 1427 Valve Maintenance	192-1427 Valve Maintenance
12.4	System up-rating	Operator's Workshop, O&M Manual, MEA-521	CTS 1419 Uprating: Reinforce or Anchor Offsets, Bends, and Dead Ends	192-1419 Uprating: Reinforce or Anchor Offsets, Bends, and Dead-ends
Sec. 13	**Recognizing Abnormal Operating Conditions**			
13.1	Recognize and respond to Abnormal Operating Conditions	See Div 7 materials on site specific AOC training	N/A	192-AOC Abnormal Operating Conditions

(Protocols 1.05, 2.02, 4.01, 5.02 192.803, 192.805, 192.809 Amdt 192-90, 8-20-01)

Appendix 2
Definitions

Ability
The capacity to do or act, physically and/or mentally.

Abnormal Operating Condition (AOC)
As defined in §§ 192.803, *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.

Activity
A specific deed, action, function, or sphere of action.
Affects the Operation or Integrity of the Pipeline
Any activity, or omission of an activity, that could directly or indirectly result in a hazard to persons, property or the environment. As used in the safety context of the OQ rule, the phrase indicates activities that could result in an AOC that in turn could result in an unsafe operating condition.

Benchmark
A standard of measurement or evaluation.

Communicate
To convey information about; make known; to reveal clearly.

Compliance
Activity(ies) in accordance with a rule.

Contributed
Determined to be a factor.

Contributed to
A judgment by designated operator personnel, that the action or inaction of an individual(s) was a factor in the occurrence of an incident/accident.

Covered Task
As defined in 192.801, a *covered task* is an activity, identified by the operator, that:

(1) Is performed on a pipeline facility;
(2) Is an operations or maintenance task;
(3) Is performed as a requirement of this part; and
(4) Affects the operation or integrity of the pipeline.

And, as defined in WAC 480-93-013, a covered task:

(5) Is a task performed as part of new construction.

Criterion
A standard upon which a judgment is based.

Current
Belonging to the present time; now in progress.

Demonstrate
Provide tangible evidence.

Determine
To conclude after consideration, investigation, or calculation.

Direct
To take authoritative charge of or supervise; to control, order or command.

Direct Observation
Observation of an unqualified individual(s) during the performance of a covered task by an individual who is qualified to perform the task at hand. The observer must be in direct visual and verbal contact with the individual(s) and must be able to take immediate and effective corrective action if incorrect procedures or AOCs are observed.

Document
Prepare a retrievable record.

Emergency Response
(1) OQ requirements for emergency response are limited to that portion of the response performed on the pipeline facility, rather than at offsite locations remote from the facility (e.g., deploying booms miles away is not a "covered task").
(2) Fire departments and other public responders are not required to be qualified and *(if not qualified)* must not perform covered operations or maintenance tasks on the pipeline facility.
(3) All other individuals employed by the operator shall be qualified to perform their assigned covered tasks or shall be under the direct observation of a qualified individual.
(4) Covered emergency response tasks are those tasks listed in §§ 192.615(a) that meet the four-part test specified in §§ 192.801.

Evaluation
As defined in 192.803, *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:
    (1) Performance on the job,
    (2) On-the-job training, or
    (3) Simulations.
(e) Other forms of assessment.

Evaluator
Persons performing evaluations should possess the required knowledge (1) to ascertain an individual's ability to perform the covered tasks, and (2) to substantiate an individual's ability to recognize and react to AOCs that might surface while performing those activities. This does not necessarily mean that the person performing the evaluations should be physically able to perform the covered tasks themselves.

Excavation within a Pipeline Facility
Qualification for this covered task does not require the operator's employee or contractor employee to be proficient in the operation of excavation equipment. Covered tasks requiring qualification shall include

- Verification of line location and depth
- One-call and underground facility owner/operator notifications
- Sloping/shoring
- Water removal
- Inspection

Third-party excavations that take place on the operator's pipeline facility shall be handled in accordance with the operator's damage prevention program requirements.

Identify
To establish the identity of; to ascertain the origin, nature, or definitive characteristics of.

Immediate Corrective Action
Taking steps to correct mistakes or abnormal or hazardous conditions without delay.

Incident
As defined in 191.3, *incident* means any of the following events:

(1) An event that involves a release of gas from a pipeline or of liquefied natural gas or gas from an LNG facility and

(i) A death, or personal injury necessitating in-patient hospitalization; or

(ii) Estimated property damage, including cost of gas lost, of the operator or others, or both, of $50,000 or more.

(2) An event that results in an emergency shutdown of an LNG facility.

(3) An event that is significant, in the judgment of the operator, even though it did not meet the criteria of paragraphs (1) or (2).

Individual
A person who, on behalf of the operator, performs one or more covered tasks on a pipeline facility operated by the operator. This includes contractors, subcontractors, and operator employees.

Integrity
The ability of a pipeline to operate safely and to withstand the stresses imposed during operations.

Interval
The amount of time between two specified instants, events, or states.

Knowledge
Understanding gained through experience or study.

Knowledge, Skills, and Abilities (KSAs)
An appropriate combination of information, craftsmanship, and proficiency that allows an individual to perform covered tasks in a competent manner.

Maintain
To keep in a condition of good repair or efficiency.

Maintenance
The act of maintaining or the state of being maintained; the work of keeping something in proper condition; upkeep.

Observe
The act of watching; to watch or perceive. For purposes of conducting qualification evaluations using on-the-job (OTJ) performance, observations must include the interaction of the evaluator and qualification candidate to ensure that the candidate's knowledge of the procedures (and the reasons for the key steps therein) is adequate to ensure the continued safe performance of the task.

Operate
Starting, stopping and/or monitoring a device or system.

Operation
Actions taken to facilitate storage or movement of product through a regulated pipeline.

Operator
As defined in 192.3, *operator* means a person who engages in the transportation of gas.

Perform
To begin and carry through to completion; to demonstrate in accordance with the requirements of; to accomplish (a covered task) in the proper, customary or established manner.

Person
As defined in 192.3, *person* means any individual, firm, joint venture, partnership, corporation, association, State, municipality, cooperative association, or joint stock association, and includes any trustee, receiver, assignee, or personal representative thereof.

Pipeline
As defined in 192.3, *pipeline* means all parts of those physical facilities through which gas moves in transportation, including pipe, valves, and other appurtenance attached to pipe, compressor units, metering stations, regulator stations, delivery stations, holders, and fabricated assemblies.

Pipeline Facility
As defined in 192.3, *pipeline facility* means new and existing pipeline, rights-of-way, and any equipment, facility, or building used in the transportation of gas or in the treatment of gas during the course of transportation.

Prior
Preceding in time or order.

Process
A systematic series of actions directed to some end.

Program
A written description of processes to be followed; a clear delineation of authorities and responsibilities there under and the specific results expected to be achieved for the implementing organization.

Protocol
A standard methodology used to conduct inspections of regulated entities to determine conformance to specific or implied requirements prescribed by regulation.

Provision
The written description of the element(s) or approach employed by an operator to satisfy the requirements of the OQ Rule in 192.805.

Pursuant
In accordance with (or) as a follow-up.

Qualified
As defined in 192.803, *qualified* means that an individual has been evaluated and can:

(a) Perform assigned covered tasks; and
(b) Recognize and react to abnormal operating conditions.

Records
Recorded information or data on a particular subject, collected and preserved to demonstrate compliance with a rule or process requirement.

Regulation Construction
The regulatory structure consists, sequentially, of Title, Part, Subpart, Section, Paragraph, and Subparagraph.

Retain
To keep possession of, in a retrievable and useable condition.

Skill
A demonstrable competency to perform a given task well, arising from talent, training or practice.

Subject Matter Expert (SME)
An individual recognized as having a special skill or specialized knowledge of a process in a particular field, or of a piece of equipment.

Standard
A written document which is commonly used and accepted as a basis for judging acceptability of performance in the areas addressed.

Task
A piece of work assigned to or expected of an individual(s).

Training
An educational or instructional process (e.g., classroom, computer-based, or on-the-job) by which an individual's KSA level is improved. While not currently required by the OQ Rule, training is nonetheless fundamental to implementing many of the OQ Rule's requirements.

Work Performance History Review (WPHR)
A process established by the operator to ascertain the previously demonstrated competency of an individual to perform a covered task. Evaluation parameters should include:

- A search of existing records for documentation of an individual's satisfactory performance of the covered task in the past.
- Verification that the individual's WPH contains no indications of substandard work or involvement in an incident or accident to which the individual may have contributed by committing an error in the performance of a covered task.
- Verification and documentation that the individual has satisfactorily performed the covered task on a regular basis prior to October 26, 1999.

Written
To set down in writing.

5 Part Review of Regulatory Compliance Partner Task List for Weyerhaeuser/Longview Natural Gas Transmission Pipeline

"Task", "Name", and "Description" taken directly from the August 5, 2005 RCP report

Task	Name	Description	Perf. on the pipeline?	O&M Task?	Req. by Part 192?	Affects oper or integ of pipe?	Covered task?	New const?	Routinely perf on pipeline?*	Comments
1	Conduct Annual Surveys	Annual surveys are conducted each calendar year for each operator's pipeline system that is under cathodic protectio to ensure that the protection is adequate. This task is related to the collection of data and does not include analysis. This task includes: close interval survey 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, and measurement of tank bottom-to-soil potentials.	Yes	Yes	Yes	Yes	Yes - P13	No	Yes	The description of this task goes way beyond what is explicitely required by Part 192. Task P13 covers the physical tasks necessary to comply with Part 192. The items marked in red are performed by an outside contractor on an as-needed basis. The items marked in blue are not applicable to the Weyco/Longview pipeline.
2	Install and Maintain Cathodic Protection Test Leads	Test leads required for cathodic protection must be maintained to ensure that accurate measurements can be obtained. This task includes: Recognizing electrical discontinuity, replace broken test lead; and repair broken test lead.	Yes	Yes	Yes	Yes	Yes - P14	Could be	No	"Installing" could be a new construction task. Repairing could possibly be an O&M task, depending on where the problem is. If the problem is in the test lead head, then we would repair. If the problem is a disconnected lead on the pipeline, then we would have a contractor perform the repair.
3	Inspect Rectifiers	Pipeline operators are required to inspect each of its cathodic protection rectifiers at least six times each calendar yea Inspection activities may include Obtaining a voltage and current output readings from a rectifier, Checking for proper operation and visual inspection of components.	Yes	Yes	Yes	Yes	Yes - P14	No	Yes	
4	Maintain Rectifier	Impressed current type cathodic protection systems depend on the rectifier or other power sources for proper operation. Rectifier maintenance activities may include: repair/replace defective components (for example: switches, diodes, etc.); check/repair rectifier connections (bonds); and adjustment/calibration of rectifier.	Yes	Yes	Yes	Yes	Yes - P15/P16	No	No	This task would be performed by an outside contractor on an as-needed basis.
5	Inspect Buried Pipe When Exposed	Any time buried pipe is exposed; pipeline operators must examine the pipe for evidence of external corrosion.	Yes	Yes	Yes	Yes	Yes - P10	No	No	This task is only performed on an as-needed basis.
7	Prevention of Atmospheric Corrosion	Each component in the pipe 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.	Yes	Yes	Yes	Yes	Yes - P11	No	Yes	This task really should be named "Inspection and Prevention of Atmospheric Corrosion"
8	Measure Wall Thickness of Pipe -	Elements of this task may include: Using pit depth gauge, Using ultrasonic thickness tester; and measuring the affected corroded area.	Yes	Yes	Yes	Yes	Yes - P16	No	No	This task would be performed by an outside contractor on an as-needed basis.
9	Remediate External Corrosion	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 and clear, fill or monitor shorted casings.	Yes	Yes	Yes	Yes	Yes - P16	No	No	This task would be performed by an outside contractor on an as-needed basis.
10	Monitor Internal Corrosion Do you have coupons or some other monitoring device on the line?	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 f coupons; Monitoring probes.	Yes	Yes	Yes	Yes	Yes	No	No	Not applicable, there are no internal corrosion inspection coupons or any other direct means of measuring internal corrosion available on the Weyco/Longview pipeline
11	Remediate Internal Corrosion	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.	Yes	Yes	Yes	Yes	Yes	No	No	Not applicable to the Weyco/Longview pipeline this task would only be applicable if corrosive material were being transported in the Weyco/Longview pipeline
12	Inspect Internal Pipe Surface	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 that adjacent pipe to determine the extent of corrosion.	Yes	Yes	Yes	Yes	Yes - P9	No	No	This task is only performed on an as-needed basis.
13	Application and Repair of External Coating.	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 disbanded, 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.	Yes	Yes	Yes	Yes	Yes - P16	Could be	No	This task would be performed by an outside contractor on an as-needed basis.
14	Place and Maintain Line Markers	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 and install marker.	Yes	Yes	Yes	Yes	Yes - Part of the duties of P7	Could be	Yes	
15	Inspect Surface Conditions of Right-of-Way	This task involves the visual inspection of the surface of the ROW for indications of leaks, construction activity, and other factors affecting safety and operation; report inspection results per protocol. Air patrol pilots are performing this covered task when they fly the right-of-way.	Yes	Yes	Yes	Yes	Yes - Part of the duties of P7	No	Yes	
17	Provide Temporary Marking of Buried Pipelines Prior to Excavation	This task involves identification of the location of the pipeline and the installation of the appropriate temporary marker	Yes	Yes	Yes	Yes	Yes - P4	Could be	Yes	

* "Routine" is defined as a task that is performed on the Weyco/Longview pipeline as a requirement of WAC 480-93 or 49CFR 192 regs or the Oper. and Maint. manual.

5 Part Review of Regulatory Compliance Partner Task List for Weyerhaeuser/Longview Natural Gas Transmission Pipeline

"Task", "Name", and "Description" taken directly from the August 5, 2005 RCP report

Task	Name	Description	Perf. on the pipeline?	O&M Task?	Req. by Part 192?	Affects oper or integ of pipe?	Covered task?	New const?	Routinely perf on pipeline?*	Comments
18	Inspection Following Excavation Activities and Leak Survey After Blasting	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 o mechanical means, or other earth moving operations. In the case of blasting, any inspection must include leakage surveys. Elements of this task may include: Utilize leak survey techniques, monitor for pressure loss; inspect for physical damage; inspect for corrosion and inspect for condition of coating.	Yes	Yes	Yes	Yes	Yes - P18	Could be	No	This task is only performed on an as-needed basis.
19	Maintain Mainline Valves	This task consists of winterizing the valve body (inhibit corrosion); lubricating the valves; sealing the valve seats; maintaining the valve stem packing; adjusting the actuator/operator; performing program preventive maintenance; and troubleshooting the valve actuator/operator.	Yes	Yes	Yes	Yes	Yes - P17	No	Yes	
20	Inspect Mainline Valves	This task involves the conduct of walk-around inspections; the conduct of external integrity inspections; the conduct of valve functionality tests; and leak	Yes	Yes	Yes	Yes	Yes - P17	No	Yes	
21	Repair Mainline Valves	This task consists of reworking the valve actuator/operator; disassembling the valve; identifying failure conditions; testing worm gear for wear; using troubleshooting techniques; and re-assembling the valve.	Yes	Yes	Yes	Yes	Yes	No	No	This is not a currently listed task. This task, if required, would be performed by an outside contractor on an as-needed basis
22	Inspect, Test, and Calibrate Relief Valves	This task involves inspecting the relief valves for leaks; conducting valve functionality test; changing setpoints; and documenting the results of inspection	Yes	Yes	Yes	Yes	Yes	Could be	No	Not applicable to the Weyco/Longview pipeline no relief valves
23	Maintain and Repair Relief Valves	This task involves disassembly of the valve; inspection of the valve internal components; cleaning of the valve internal components; repair of failed/worn components; replacement of failed/worn components; re-assembly of the valve; repair/adjustment/calibration of sensing or control devices; documenting repair activities.	Yes	Yes	Yes	Yes	Yes	No	No	Not applicable to the Weyco/Longview pipeline no relief valves
24	Inspect, Test, Calibrate, Repair and Reinstall Pressure Limiting Devices	This task consist of inspecting, testing and calibrating, repairing and reinstalling pilot operated devices, control valve positioning or sensing devices, and rupture discs. It does NOT involve inspection, testing, or calibration of relief valves pressure switches and transmitters.	Yes	Yes	Yes	Yes	Yes - P2 for regulators only	Could be	No	No control valve positioning or sensing devices or rupture disks on the Weyco/Longview pipeline.
25	Inspect, Test, Calibrate, Repair and Replace Switches and Transmitters	This task involves the inspection and testing of switches and transmitters, including the process control loops, gas detectors, and alarms. This task also consists of the calibration, repair, and replacement functions performed on a pressure or control to verify that it is functioning properly. This task also identifies functions required to repair or replace inoperable switches. Also included is the test, inspection, and repair activities related to servicing pipeline	Yes	Yes	No - these items are not required on a pipeline	Yes	No	Could be	No	The Weyco/Longview pipeline has no automatic control devices attached to the pipeline. Calibration of pipeline instrumentation is not a covered task and is done incidental to the operation of the pipeline and on an as-needed basis.
26	Verify or Set Protection Parameters for Programmable Controllers and/or Other Instrumentation Control Loops	This task consists of (1) adjusting zero, span, and differentials, (2) adjusting pressure set points, (3) adjusting timers or sequence events, (4) completing onsite changes or corrections to ladder logic; (5) implementing new/revised programming (software); documenting activities.	Yes	Yes	No - these items are not required on a pipeline	Yes	No	Could be	No	The Weyco/Longview pipeline has no programmable controllers or instrumentation control loops - other than the 4-20 ma loop feeding info to the odorant system
28	Provide Pipeline Security	This task involves the inspection of perimeter fencing and signs; monitoring by remote sensing devices; maintaining the integrity of facility fencing or security barriers; and testing facility equipment (i.e., alarms, cameras, intrusion devices,	No	Sort of	No - these items are not required on a pipeline	Maybe	No	No	No	One might argue that this is a pipeline patrol task - that's the only way any of this stuff could be considered a covered task
33	Move In-Service Pipe	This task consists of the activities required to move or reposition (raise, lower, lateral) a section of the pipeline while it is in operation.	Yes	Yes	Yes	Yes	Yes - but not directly applicable to normal operations	Could be	No	This task would be performed by an outside contractor, and only after a detailed procedure were written to cover the specific task required to be performed.
34	Inspect Pipe for Damage After Movement	This task consists of the observation and awareness activities required when moving a section of pipe in a ditch (trench)	Yes	Yes	Yes	Yes	Yes - but not directly applicable to normal operations	Could be	No	This task would be performed by an outside contractor, and only after a detailed procedure were written to cover the specific task required to be performed.
35	Inspection of Clearance of Existing Pipe to Underground Structures	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 structure.	Yes	Yes	Yes	Yes	Yes - P18 if for 3rd party construction	Could be	No	This task would only be performed on an as-needed basis.
36	Abandoning, Safe Disconnect, Purging and Sealing of Pipeline Facilities.	This task consists of decommissioning or removing a pipeline facility from service, permanently or temporarily	Yes	Yes	Yes	Yes	Yes	No	No	This task might be performed by an outside contractor, but in any case, not until detailed instructions were prepared for the specific task
37	Installation or Repair of Support Structures on Existing Aboveground Components	This task consists of the activities required to fit or mount additional or revised support elements to existing aboveground structures.	Yes	Yes	Yes	Yes	Yes	No	No	This task would be performed by an outside contractor on an as-needed basis.
38	Inspection Activities for Tie-ins & Pipe Replacements or Other Components Connecting to an Existing Pipeline	This task consists of inspection activities required during the various removal and installation activities performed as maintenance on a pipeline system.	Yes	Yes	Yes	Yes	Yes	Could be	No	This task is covered by existing written procedures, but not an explicitly "P" task - and would be performed by an outside contractor

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