

# Operations and Maintenance Manual

ICC Conference

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Effingham

# Operations and Maintenance Manual

- 192.605
- Performance Based Language
  - Who Writes an O&M?
  - What is a procedure?
  - Procedure example
- When to change procedures
  - Referencing procedures

# Why Do We Need Procedures?

- Operator- We know what we are doing.
- Operator- We have done this before.
- Operator- We have never had a major problem.
- Operator- The procedures are too burdensome.

# The Reason for Procedures?

- Procedures should be tested and determined to be the correct way to complete a task.
- If the procedures are followed then there should not be an issue.
  - If the procedures are adequate.
- Being lucky regarding no major issues (Incidents) is not an excuse to disregard following procedures.

# Part 192.605

- §192.605 (a) General. Each operator shall **prepare** and **follow** for each pipeline, a manual of written **procedures** for conducting operations and maintenance activities and for emergency response.

## Part 192.605 Cont'd

- This manual must be reviewed and updated by the operator at intervals not exceeding 15 months, but at least one each calendar year.

# Part 192.605 Cont'd

- Prepare the manual before operations of a pipeline system commence.

## Part 192.605 Cont'd

- Appropriate parts of the manual must be kept at locations where operations and maintenance activities are conducted.

## Part 192.605 Cont'd

- (b) (8) Periodically reviewing the work done by operator personnel to determine the effectiveness and adequacy of the procedures used in normal operation and maintenance and modifying the procedure when deficiencies are found.

# O&M



# Performance Based Language

- The operator writes the procedure to meet the requirement.
  - Example- 192.625 (f)
    - Periodic sampling
    - Using an instrument
  - Operator
    - Weekly Testing
    - Step by step instructions

# Who writes an O&M?

- Operator
- Consultant
- Security and Integrity Foundation (SIF)
  - Procedures (ONLY)

# ICC does not write an O&M

- Review O&M
  - Is there a procedure?
  - Is the operator aware of the procedure?
  - Is the operator following the procedure?
- ICC **does not** approve an O&M.
- Operator is ultimately responsible
- Notify if deficiencies are found
  - Notice of Amendment

# What is a Procedure?

- Procedure- means a fixed, step-by-step sequence of activities or course of action (with definite start and end points) that must be followed in the same order to correctly perform a task.
- Who, what, when, where, and how.
- Detailed enough that a person who typically conducts this type of work can complete the task using your procedures.

# Mock Procedure Steps

- Procedure to change a light bulb.
- Step 1- Turn the power off to the light.
- Step 2- Set up a 6' ladder under the light fixture.
- Step 3- Remove the light bulb from the fixture.
- Step 4- Discard the light bulb in a waste receptacle. (or HAZMAT receptacle if compact florescent)
- Step 5- Walk around the ladder three times.
- Step 6- Install the new light bulb

# Procedure Steps

- ICC audit
  - Were the steps followed in order?
  - Was a 6' ladder used? (generic use of ladder or specific)
  - Did the individual walk around the ladder three times?
  - NOPV
  - Were the steps adequate?
  - NOA

# Procedure Steps

- The steps must be followed as stipulated.
- O&M (procedures) on-site.
- Memorization is not a requirement.
- Refer to O&M as needed.

# Test the Procedure

- Prior to implementing a procedure
- Are the steps adequate
- Can the steps be followed and completed
- Are the tools adequate
- Test several employees

# Generic Statements

- Pressure testing at 1.5 times MAOP
  - What is the MAOP?
    - Do the employees know the MAOP?

# Generic Statements

- 192.325 (c)
- Sufficient clearance
- Define sufficient clearance in O&M
  - Do not just repeat the code language.

# Generic Statements

- §192.723 Distribution systems: Leakage surveys.
- Business District- 1 per calendar year not to exceed 15 months.
- Outside Business District- 1 per 5 calendar years not to exceed 63 months.
  - Define a business district
  - Leak survey equipment procedure
  - Procedure for walking survey
    - Procedure including sewer manholes, etc.

# When to change procedures?

- O&M Review
- 192.605 (b) (8)
- ICC Field Audit

# ICC Field Audit Example #1

- Locating
  - The initial procedure appeared adequate.
  - Observation of the procedure determined to be inadequate.
    - Employees were unable to follow the steps.
    - More information for each step.
  - Changes requested
  - Additional observations
  - Additional changes

# ICC Field Audit Example #2

- Pipe to soil monitoring
  - Does the O&M state a procedure for obtaining c/p readings?
    - Remote from anode location

# Procedure Awareness

- Example- Regulator Station lock-up
  - Operator is not aware how to conduct lock-up
  - O&M specifies the procedure
  - Operator was not aware of the procedure
  - Is the O&M being reviewed?

# Reference a Procedure

- Examples: Odor intensity tests, locating, and leak survey.
- Procedure needs to be available.
  - Appendix
  - With the Requirement
  - Another Manual with a reference (Training Manual)
    - Training Manual must be available
  - Procedure can be with the equipment

# O&M Forms

- Forms located in the O&M.
- Are the forms that you use match what is stipulated in the O&M?
  - If not, NOPV.
- These are your forms.
  - You may change the forms if you desire.
  - As long as the required information is being captured.

# What is the O&M used for?

- Not as a general guide!!!
- Not as a wheel chock!!!
- Not to set on a shelf!!!
- Accessible to all who conduct O&M activities
- Reviewed by the operator
- Followed when conducting O&M activities

**QUESTIONS?**