

# Operations, Maintenance, and Emergency Requirements for JLP Operators

## 2021 Jurisdictional LP Pipeline Safety Seminar

Nathan Dore – Sean Watson – Gary Kenny



OFFICE OF THE

Maine Public  
Utilities Commission

STATE OF MAINE



# What inspections are planned?

MPUC Enforces federal and state pipeline safety regulations.

Program Guidelines – Inspect Programs every 4 years

Office Inspections – Procedures and Records

Currently Scheduling for final three months of 2021



# How will they work?

- Beginning October, 2021: 1-2 day inspections depending on complexity, number of JLP systems
- Using blank question set – forwarded to JLP operator list
- Questions may start conversations
- MPUC Inspectors will work with operators to discuss requirements, talk about processes, discuss hangups and problems.



OFFICE OF THE

Maine Public  
Utilities Commission

STATE OF MAINE



# What do the inspections cover?

- Operations, Maintenance, and Emergency (OM&E) Plans and Records
- Distribution Integrity Management Program (DIMP) Plans and Records
- Operator Qualification (OQ) Program Plan and Records
- All procedures, possibly a sample of systems for records



OFFICE OF THE

Maine Public  
Utilities Commission

STATE OF MAINE





# Schedule your inspections now!

- Email or call Sean Watson or Nathan Dore

[sean.watson@maine.gov](mailto:sean.watson@maine.gov);

[nathan.dore@maine.gov](mailto:nathan.dore@maine.gov)

- Suggest dates / groups of dates

# Post-Inspection Follow Ups

- Completed inspection form will be attached to compliance letter to JLP Company Officer
  
- 30-90 Day Follow-ups requested
  - Depending on seriousness of finding / complexity of issue
  
  - Follow-ups may be
    - Catch ups on OM&E activity
    - Field verifications
    - Field remediation
    - Plan Amendments
    - Path forward for serious or complex issues



OFFICE OF THE

Maine Public  
Utilities Commission

STATE OF MAINE



# Where are these requirements listed

- 49 C.F.R. Part 192
- 49 C.F.R. Part 191 (Reporting)

[ecfr.gov](http://ecfr.gov)

- MPUC Template O&M captures many requirements



OFFICE OF THE

Maine Public  
Utilities Commission

STATE OF MAINE



# More Information

Pipeline and Hazardous Materials Safety  
Administration (PHMSA)

[Small LP Gas Operator Guide](https://www.phmsa.dot.gov/training/pipeline/small-lp-gas-operator-guide-april-2017) (April 2017)

[https://www.phmsa.dot.gov/training/pipeline/  
small-lp-gas-operator-guide-april-2017](https://www.phmsa.dot.gov/training/pipeline/small-lp-gas-operator-guide-april-2017)



OFFICE OF THE

Maine Public  
Utilities Commission

STATE OF MAINE





# Inspection Question Set

Question Setup and Structure



OFFICE OF THE

Maine Public  
Utilities Commission

STATE OF MAINE



# Question Set Introduction

1. **Immediate Reporting: Incidents** *Is there a process to immediately report incidents to the National Response Center?*

(RPT.RR.IMMEDREPORT.P) 191.5(B) (191.7(a); 191.7(d))



OFFICE OF THE

Maine Public  
Utilities Commission

STATE OF MAINE



# Question Set Introduction

1. **Immediate Reporting: Incidents** *Is there a process to immediately report incidents to the National Response Center?*

(RPT.RR.IMMEDREPORT.P) 191.5(B) (191.7(a); 191.7(d))



OFFICE OF THE

Maine Public  
Utilities Commission

STATE OF MAINE



# Question Set Introduction

1. **Immediate Reporting: Incidents** *Is there a process to immediately report incidents to the National Response Center?*

(RPT.RR.IMMEDREPORT.P) 191.5(B) (191.7(a); 191.7(d))



OFFICE OF THE

Maine Public  
Utilities Commission

STATE OF MAINE



# Question Set References

1. **Immediate Reporting: Incidents** *Is there a process to immediately report incidents to the National Response Center?*

(RPT.RR.IMMEDREPORT.P) 191.5(B) (191.7(a); 191.7(d))



OFFICE OF THE

Maine Public  
Utilities Commission

STATE OF MAINE



# Question Set References

1. **Immediate Reporting: Incidents** *Is there a process to immediately report incidents to the National Response Center?*

(RPT.RR.IMMEDREPORT.P) 191.5(B) (191.7(a); 191.7(d))

[www.ecfr.gov](http://www.ecfr.gov)



OFFICE OF THE

Maine Public  
Utilities Commission

STATE OF MAINE



# Inspection Question Set

Specifics of 49 C.F.R. Part 192 Requirements



OFFICE OF THE

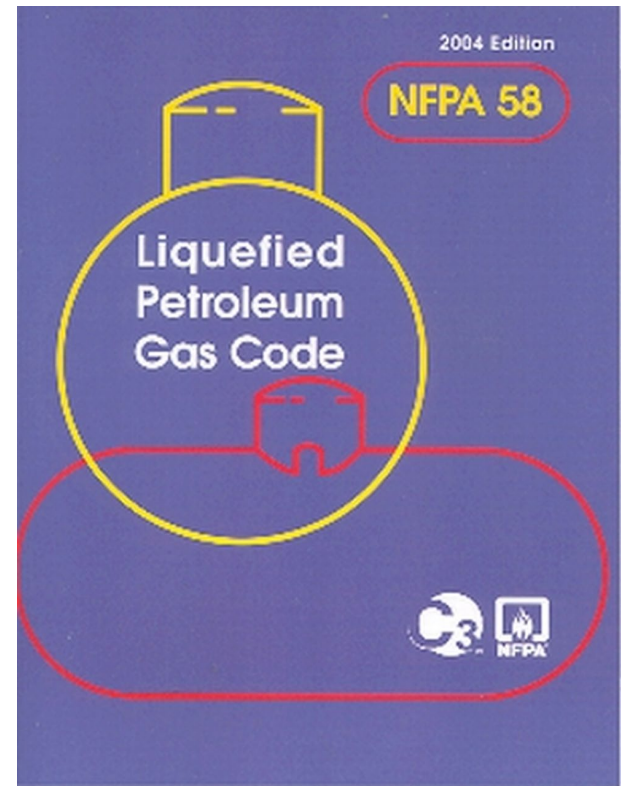
**Maine Public  
Utilities Commission**

STATE OF MAINE



# Procedures – Starting Off - Require NFPA 58/59 adherence?

- Not in question set!!
  - 192.11



OFFICE OF THE

Maine Public  
Utilities Commission

STATE OF MAINE





# Procedures - Reporting

- Procedures Covering Incident Reports – Operators Must Report Incidents within one hour that involves:
  - Death, personal injury necessitating in-patient hospitalization
  - Property Damage of \$122,000 or more, including cost of gas
  - An event that is significant in the judgment of the operator

To: State PUC

National Response Center



OFFICE OF THE

Maine Public  
Utilities Commission

STATE OF MAINE



# Reporting Procedures (Continued)

- Supplemental Incident Reports (As needed)
- Obtain OPID
- Safety Related Conditions
  - Generally, localized corrosion pitting that could cause leakage, or remaining metal insufficient for operating pressure
  - Material defect or physical damage that impairs the serviceability of pipe operating at over 20% SMYS
  - Not corrected by repair or replacement



OFFICE OF THE

Maine Public  
Utilities Commission

STATE OF MAINE



# Procedures – Customer Notification

- JLP Operators are responsible for operating all JLP piping unless other, qualified entity operates the piping.
  - Customer Notification required in cases where operator does not maintain customer piping for
    - Corrosion
    - Leak Survey
    - Locating



OFFICE OF THE

Maine Public  
Utilities Commission

STATE OF MAINE



# Procedures – EFV Program

- Excess Flow Valves Required for Service Lines
  - Single service line to SFR
  - Branched service line to SFR
  - Branches service to SFR off existing service w/o EFV
  - Multifamily residences not exceeding 1,000 SCFH
  - Single, small commercial customer known customer load not exceeding 1,000 SCFH, based on installed meter capacity
  - *Not applicable for service lines operating below 10 psig.*
  - Service line EFVs must meet technical requirements of 192.381.



OFFICE OF THE

Maine Public  
Utilities Commission

STATE OF MAINE



# Procedures – Normal Operations

- Review and update manual annually NTE 15 mos
- Making maps, records and operating history available to personnel
- Startup, shutdown *within MAOP limits*
- *Review work done by personnel to determine effectiveness and adequacy of procedures*



OFFICE OF THE

Maine Public  
Utilities Commission

STATE OF MAINE



# Procedures – Damage Prevention Program

- JLP Operators must have a damage prevention program in place, including
  - Participation in qualified one call system
  - Marking
  - Documentation
    - *Blasting near a pipeline requires leakage surveys*
- Third Party Damage continues to be the number one cause of distribution incidents in the US, based on incident reports to NRC / PHMSA
- Questions regarding follow-ups to TPD events



OFFICE OF THE

Maine Public  
Utilities Commission

STATE OF MAINE



# Procedures – Emergency

- Receiving, identifying *classifying* notices of events requiring immediate response
- Establishing and maintaining adequate means of communication with fire, police, other public officials
- Prompt and effective response to emergencies
- Availability of personnel, equipment and tools and materials



# Procedures – Emergency (Cont'd)

- Actions directed toward protecting people, then property
- Emergency shutdown or pressure reduction
- Making safe hazards
- Availability of personnel, equipment and tools and materials
- *Notifying public officials and coordinating with them*



OFFICE OF THE

Maine Public  
Utilities Commission

STATE OF MAINE





# Procedures – Emergency (Cont'd)

- Safely restoring outage
- Incident Investigations
- Emergency Response Training
- Emergency Response Performance (review)
- *Liaison with Public Officials*



OFFICE OF THE

Maine Public  
Utilities Commission

STATE OF MAINE



# Procedures – Public Awareness

- Twice annual message to customers *and/or persons who control the property*.
  - A description of the purpose and reliability of the pipeline
  - An overview of the hazards and prevention measures
  - Information about damage prevention
  - How to recognize and respond to a leak
  - How to get additional information



OFFICE OF THE

Maine Public  
Utilities Commission

STATE OF MAINE



# Procedures – MAOP

- How is MAOP determined for each segment? Is there a procedure?
  - Liquid piping
  - Manifolds that operate at tank pressure
  - First stage piping
  - Second, or inter-stage piping
  
- Do you have:
  - Material Records
  - Qualifying Pressure Test Records?



OFFICE OF THE

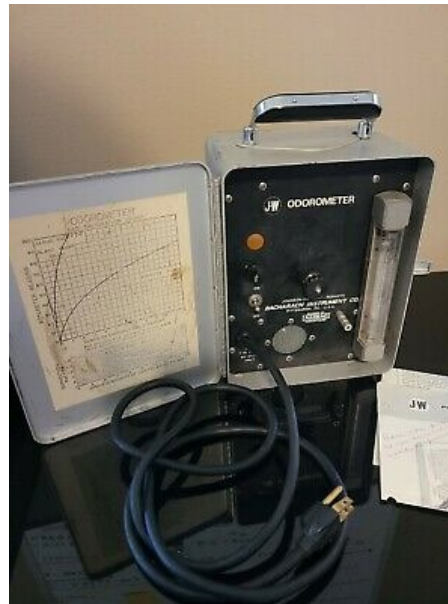
Maine Public  
Utilities Commission

STATE OF MAINE



# Procedures – Odorization of Gas

- Is there a documented process?



OFFICE OF THE

Maine Public  
Utilities Commission

STATE OF MAINE



# Procedures – Tapping Pipelines Under Pressure

- Is there a documented process?



OFFICE OF THE

Maine Public  
Utilities Commission

STATE OF MAINE



# Procedures – Pipeline Purging

- Is there a documented process?
  - Purging into service
  - Purging out of service



# Procedures – Line Markers

- Does your company use line markers?  
Is there a procedure for their use?



OFFICE OF THE

Maine Public  
Utilities Commission

STATE OF MAINE



# Procedures – System Patrols and Leak Surveys

- Patrols – *Frequency determined by the severity of the conditions which could cause failure or leakage, and consequent hazards...*
- Distribution *where anticipated physical movement or external loading could cause failure or leakage*
  - 4x annually business district NTE 4.5 months
  - 2x outside business districts NTE 7.5 months



OFFICE OF THE

Maine Public  
Utilities Commission

STATE OF MAINE





# Procedures – Leakage Surveys

- Leak surveys
  - Once annually in business districts, not to exceed 15 months
  - Outside business districts once each 5 years, not to exceed 63 months
  - *With leak detector equipment*
- OM&E Template, Appendix A



# Leak Surveys – Appendix A

- Documented (Map of system, show leaks)
- Areas to survey (below grade utilities, cracks in pavement, near entrance to building)
- Further instructions to investigate and either repair or classify leak, determine extent of gas migration



OFFICE OF THE

Maine Public  
Utilities Commission

STATE OF MAINE



# Leak Surveys – Appendix A (Types)

- Sub-surface gas detector survey (not recommended in all cases)
- Bubble leakage test
- Pressure drop test



OFFICE OF THE

Maine Public  
Utilities Commission

STATE OF MAINE



# Leak Surveys – Sub-surface gas detector

- With bar-hole or accessible below-grade utilities
- Confined spaces and available openings
- Sample points 20 feet or less apart
- Survey around perimeter of lowest point of substructures, or lowest point of bar holes
- Investigate even small readings



OFFICE OF THE

Maine Public  
Utilities Commission

STATE OF MAINE



# Leak Surveys – Bubble Leakage

- Testing above-grade, exposed, accessible systems
- Soap all exposed piping and components
- Testing joints, especially tie-ins or repairs that may not be pressure tested



OFFICE OF THE

Maine Public  
Utilities Commission

STATE OF MAINE



# Leak Surveys – Pressure Drop Test

- Isolated sections of line
- Pressure at least equal to operating pressure
- Method to detect leak location if leak detected during test.
- Method to establish test duration (volume of product in isolated section) / consider temperature stabilization



# Procedures - Leak Grading

- Does your company repair leaks immediately upon detection?
  - What is “immediately”? Is this defined in procedures?
  - Does your company need a leak grading/classification and action procedure?
  - Does your company have a leak grading/classification and action procedure?



OFFICE OF THE

Maine Public  
Utilities Commission

STATE OF MAINE



# Procedures – Valve Maintenance

- Inspection and partial operation of each distribution system valve that might be required in an emergency once annually (NTE 15 months)
  - Container Valve
  - Liquid/Vapor Line Shutoffs
  - Other Distribution System Valves



OFFICE OF THE

Maine Public  
Utilities Commission

STATE OF MAINE





# Procedures – Reinstatement/Abandonment

- Procedure for testing disconnected service lines
  
- Procedure for abandoning/deactivating old facilities
  - May tie into purging procedure



OFFICE OF THE

Maine Public  
Utilities Commission

STATE OF MAINE



# Procedures – Pressure Limiting and Regulating Station

## ■ Inspection *and* Testing

### Regulators:

- 1<sup>st</sup> Stage / High Pressure
- 2<sup>nd</sup> Stage / Service

### Relief Devices

- Except on containers

## ■ Capacity of Reliefs

- Procedure for ensuring capacity is correct



OFFICE OF THE

Maine Public  
Utilities Commission

STATE OF MAINE



# Procedures – Prevention of Accidental Ignition

- Workplace Safety *where gas constitutes a hazard of fire or explosion*
- Removal of Hazards and Ignition Sources
- Checklist?
- How is this documented?



OFFICE OF THE

Maine Public  
Utilities Commission

STATE OF MAINE



# Procedures – Welding

## ■ Welding Procedures

- Qualified* per API 1104 or ASME Section IX
- Results of tests qualifying procedures

## ■ Welder Qualifications

- Qualified per API 1104 or ASME Section IX
- Must be on qualified procedures
- Results of tests qualifying procedures
- Limitations / Requalifications



# Procedures – Welding (Continued)

- Surface Preparation and Weather Protection
- Inspection and Test of Welds
- Repair of Defects



# Procedures – NDE

- Specific procedures for NDE
  - Qualified Technicians



OFFICE OF THE

Maine Public  
Utilities Commission

STATE OF MAINE



# Procedures – Pipeline Joining

## ■ Plastic Pipe

### □ Specific Procedures For:

- Solvent Cement Joints
- Heat Fusion Joints
  - Butt Fusion
  - Socket Fusion
  - Electrofusion
- Adhesive Joints
- Mechanical Joints



OFFICE OF THE

Maine Public  
Utilities Commission

STATE OF MAINE



# Procedures – Joining Procedures

- Who qualifies your joining procedures?
  - The manufacturer? Is there a process for ensuring this?
  - The operator? Did you qualify the procedure in accordance with 192.283?
  - Is there an appropriately qualified procedure for each joint type of manufactured component?





# Procedures – Qualifying Joiners and Inspector

- Is each person making *and inspecting* joints qualified?
  - Did they do a hands-on performance evaluation once each year?
  - Do they have appropriate *training* and *experience*? Are these terms defined?
  
- What method is used to ensure qualification?



OFFICE OF THE

Maine Public  
Utilities Commission

STATE OF MAINE



# Procedures – Maintenance of equipment

- Procedure for maintaining equipment
- Manufacturer's recommended maintenance for specific equipment.
  - Is this information included in OM&E Appendix M?



# Procedures – Corrosion Control

- Pipe Coatings
  - Permitted Coatings
  - Process for choosing Coatings
  - Procedures must require coating
  
- Personnel qualification



OFFICE OF THE

Maine Public  
Utilities Commission

STATE OF MAINE



# Procedures – Corrosion Control

- Exposed sections of buried pipe
  
- Cathodic Protection
  - What criteria was chosen?
    - -850 mV? (steel)
    - -100 mV shift? (copper)
  - Annual testing Not To Exceed 15 months
  - Procedure requires testing over entire length of pipe / scope of facility



OFFICE OF THE

Maine Public  
Utilities Commission

STATE OF MAINE



# Procedures – Corrosion Control (other)

- Include if your company uses:
  - Impressed current system
  - Bonds, Diodes and Reverse Current Switches
  - Unprotected Steel
  - Electrical Isolation from Nearby/Adjacent Structures
  - AC Mitigation
  - Test Stations
  - Test Leads
  - Internal Corrosion
  - Corrosive Gas



OFFICE OF THE

Maine Public  
Utilities Commission

STATE OF MAINE



# Procedures – Atmospheric Corrosion

- Service Lines – Once Every 5 Years, NTE 63 months
  - Reverts to 3 years if corrosion is found
  
- Other than Service Lines – Once each 3 Years, NTE 39 months
  
- Special Attention at:
  - Soil-to-air interfaces (service risers)
  - Under insulation or supports
  - Wet/splash areas



# Records – Just Forms?

- Records can come in many different formats:
  - Manufacturer's data sheets for materials
  - Gas Quality reports from suppliers
  - Incident reports from emergency events
  - Records of Personnel Training and Attendance Records
  - Correspondence with public officials, including PUC
  - Attachments / Appendices / Industry Standards
  - Joining Procedures (Welding, plastic fusion, etc.)
  - Equipment calibration records
  - Process notes (choosing external coating, rationale behind engaging specific stakeholders for DP efforts)
  - Maps
  - System Operating Histories (maybe even someone else's)



# Records - Deficiencies

- Records show inadequate field conditions
- Records cannot be located for required activities
- *Be proactive with issues* – self report
- Path forward
  - Change Documentation or Activity Process
  - Get Field Data
  - Correct operational issues





# Records – Incidents / Administrative

- NRC / PUC Notification, and notification of other officials
  - Investigation
  - Root cause analysis
  - Laboratory results
  - Mechanical Fitting Failures
  - Follow-up with public officials
  
- Customer Notification – maintaining lines and installing EFV



# Records – Corrosion Control

- Personnel Qualifications
- Rectifier Records
- Maps
- Exposed Sections of Pipe – Inspection Report
- CP Monitoring
- Reverse Current Switches, Bonds, AC Mitigation, Etc.
- Correction of deficiencies
  - *Be proactive with deficiencies – self report*



# Records – Corrosion Control (Continued)

- Test locations and test leads
- Atmospheric corrosion monitoring
- Coating Application



OFFICE OF THE

Maine Public  
Utilities Commission

STATE OF MAINE



# Records – Pressure Test

- Records appropriate for ensuring correct test was performed.
- Reinstating disconnected services
- Are pressure tests used to complete MAOP paperwork?

*Pressure tests qualify maximum allowable operating pressure.*



# Records – Operations and Maintenance

- Review page in procedures manual?
- Copy of historical operating procedures?
- Periodic Review of Operator work Completed



OFFICE OF THE

Maine Public  
Utilities Commission

STATE OF MAINE



# Records – Emergency Plan

- Included in review – if separate plan
- Training Records
  - Attendance and Topics
- Outreach to Public Officials
- Review of Emergency Response Performance
- Incident Investigations



OFFICE OF THE

Maine Public  
Utilities Commission

STATE OF MAINE



# Records – Public Awareness

- Examples of messaging
- Verification of message delivery



OFFICE OF THE

**Maine Public  
Utilities Commission**

STATE OF MAINE



# Records – Public Awareness

- Examples of messaging
- Verification of message delivery
- Confirmation of target audience



OFFICE OF THE

Maine Public  
Utilities Commission

STATE OF MAINE





# Records – Damage Prevention Program

- Notification Tickets
- Documentation of Locates
- Positive response
- Surveys or inspections
- Outreach and trainings



OFFICE OF THE

Maine Public  
Utilities Commission

STATE OF MAINE



# Records – Normal O&M

- Patrolling
- Leakage Surveys
- Regulator Station / Relief Inspection and Maintenance
- Valve Maintenance
  
- MAOP Verification
- Pressure Testing Records



OFFICE OF THE

Maine Public  
Utilities Commission

STATE OF MAINE



# Records – Welding

- Procedures
- Procedure Qualification Records
- Welder Qualification Records
- NDE Qualification Records



OFFICE OF THE

Maine Public  
Utilities Commission

STATE OF MAINE



# Records – Plastic Fusion

- Procedures – For each type of joining
- Verification of Procedure Qualification
- Joiner Qualification Records
- Inspector Qualification Records
- Equipment Maintenance and Calibration



OFFICE OF THE

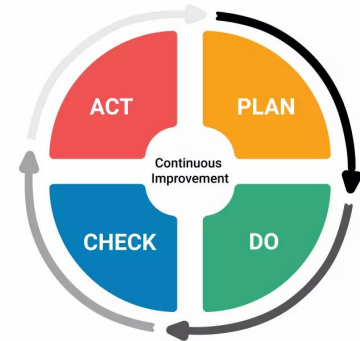
Maine Public  
Utilities Commission

STATE OF MAINE



# Records Process

- What is the workflow for records
- Who verifies records completion
  - Within allotted frequencies
- Check information on forms and records
- Follow-up for any field findings or issues identified on field reports



# Thank you!

## Questions and discussion



OFFICE OF THE

**Maine Public  
Utilities Commission**

STATE OF MAINE



# Contact Information

Nathan Dore: [nathan.dore@maine.gov](mailto:nathan.dore@maine.gov)

Office: (207) 287-1375, Cell: (207) 485-8634

Sean Watson: [sean.watson@maine.gov](mailto:sean.watson@maine.gov)

Office: (207) 287-1082, Cell: (207) 592-5086

Gary Kenny: [gary.Kenny@maine.gov](mailto:gary.Kenny@maine.gov)

Office: (207) 287-1364, Cell: (207) 232-5142

Hattie Trask: [hattie.trask@maine.gov](mailto:hattie.trask@maine.gov)

Office: (207) 287-6075



OFFICE OF THE

Maine Public  
Utilities Commission

STATE OF MAINE

