2016 Michigan Seminar

Mt. Pleasant, Michigan

September, 2016

Contact Information

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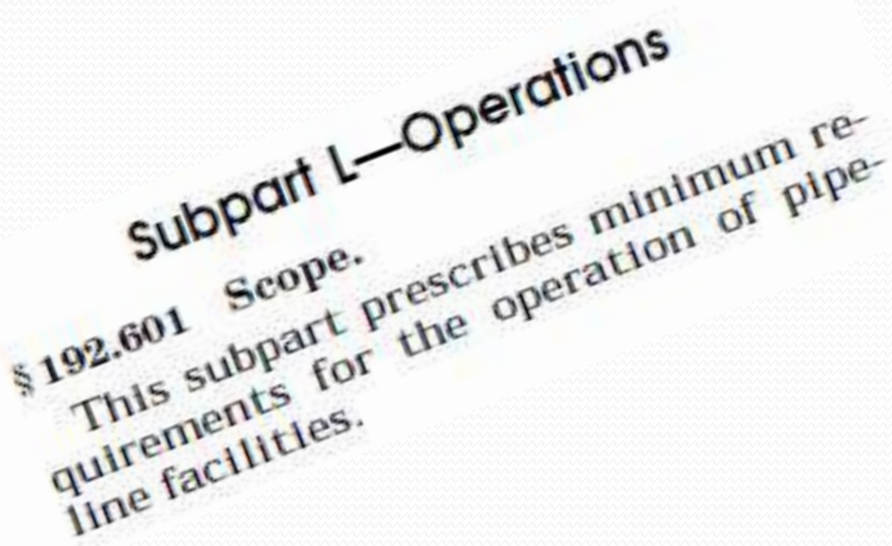
Subpart L Operations

General Provisions

Each pipeline must be operated according to this *SUBPART*



Subpart L—Operations

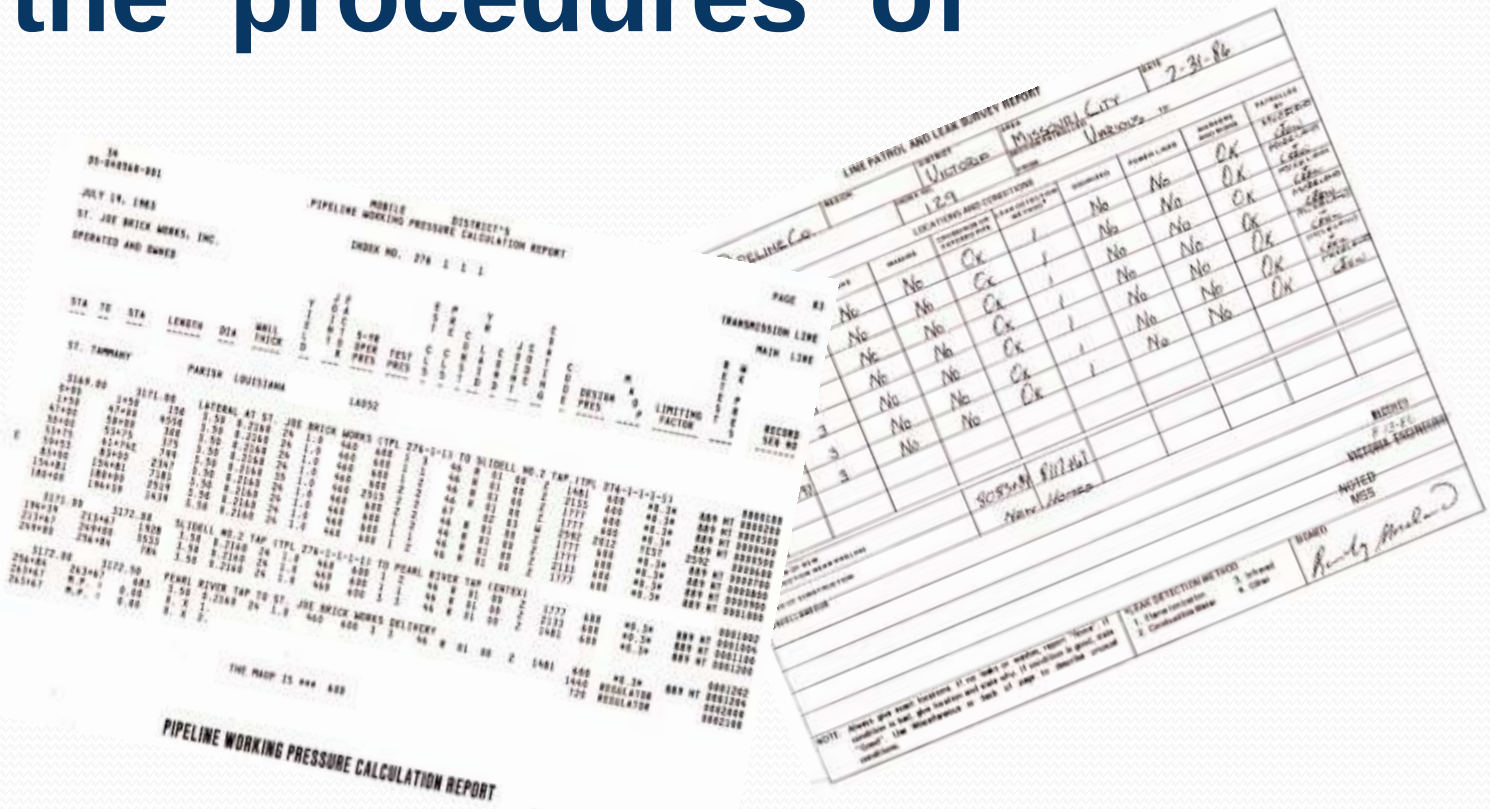
§ 192.601 Scope.

This subpart prescribes minimum requirements for the operation of pipeline facilities.

§192.603(a)

Records

Keep records necessary to administer the procedures of §192.605



§192.603(b)

Records

- **Life of Facility**
  - **Includes construction, materials, repairs, MAOP information and most corrosion records**
  - **Retained for active life of facility**
- **Other Records**
  - **Includes tests, inspections, patrols, surveys and procedure reviews which prove compliance with 49 CFR 192**
  - **Retained for at least 5 years**

Notice of Amendment

The ADMINISTRATOR of PHMSA or a STATE AGENCY with a USC 60105 Certification may require modifications to an *INADEQUATE PLAN*

§192.603(c)

NOTICE OF AMENDMENT

CERTIFIED MAIL - RETURN RECEIPT REQUESTED

October 25, 2011

Tater Pipeline Company
Anywhere, USA

CPF 2011-XXXM

Dear Sirs :

One day, a representative of the Pipeline and Hazardous Materials Safety Administration (PHMSA) pursuant to Chapter 601 of 49 United States Code inspected Tater Pipeline Company procedures for Operations and Maintenance in Anywhere, USA.

On the basis of the inspection, PHMSA has identified the apparent inadequacies found within plans or procedures, as described below:

1. [cite the regulation and title]

[quote the regulation]

- **Program - overall approach by an operator**
  - **Public Awareness, OQ or Integrity Management Program**
  - **May include multiple plans**
- **Plan - written explanation of the mechanisms or procedures the operator will use to implement a program and to ensure compliance with this Part.**

§192.605

Procedure Manual for Operations, Maintenance and Emergencies

General Requirements

- Each operator shall prepare and follow for each pipeline

A manual of written procedures for O&M activities and Emergency Response

§192.605(a)

General Requirements

- The manual must be reviewed and updated at intervals not to exceed 15 months, but at least once each calendar year

- Manual prepared before operations start

§192.605(a)

General Requirements

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

§192.605(a)

Procedures Required

Maintenance and normal operations

- If applicable, the manual must include procedures for the following to provide safety during maintenance and operations:

§192.605(b)

Operating, Maintaining and Repairing

(1) Operating, maintaining and repairing the pipeline in accordance with each of the requirements of this subpart and subpart M of this part

§192.605(b)

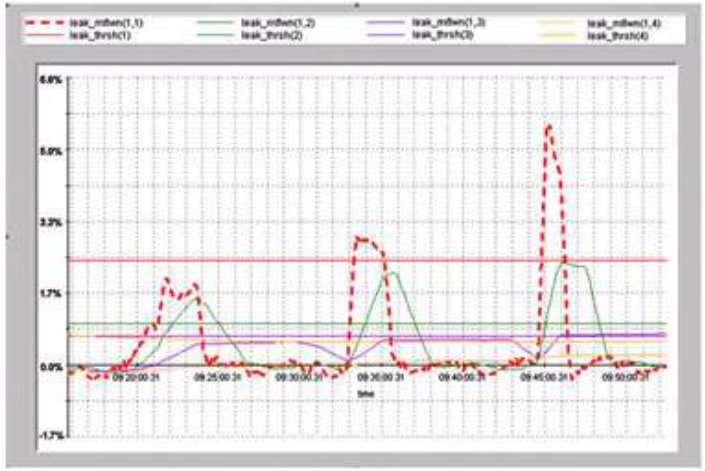
Corrosion

(2) Controlling corrosion in accordance with the operations and maintenance requirements of subpart I of this part

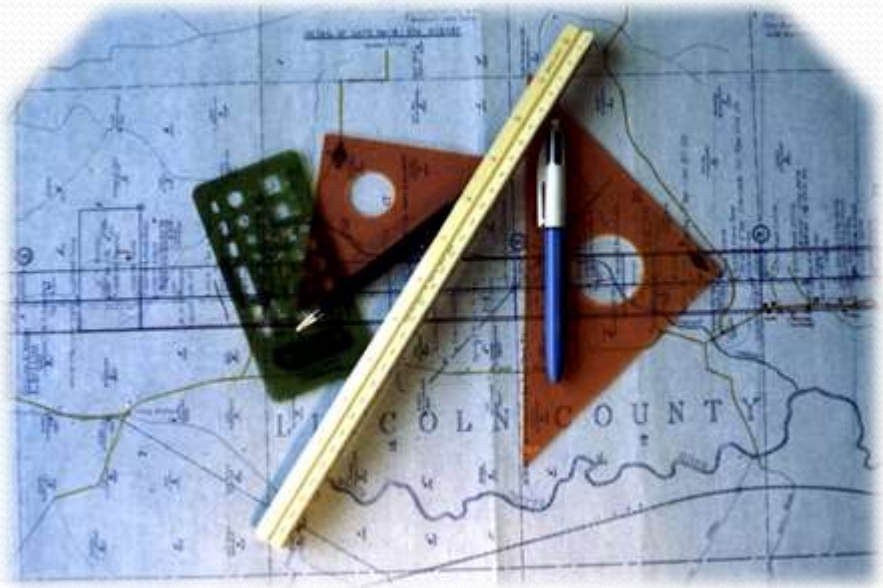
§192.605(b)

Records and History

(3) Making construction records, maps and operating history available to appropriate operating personnel



§192.605(b)



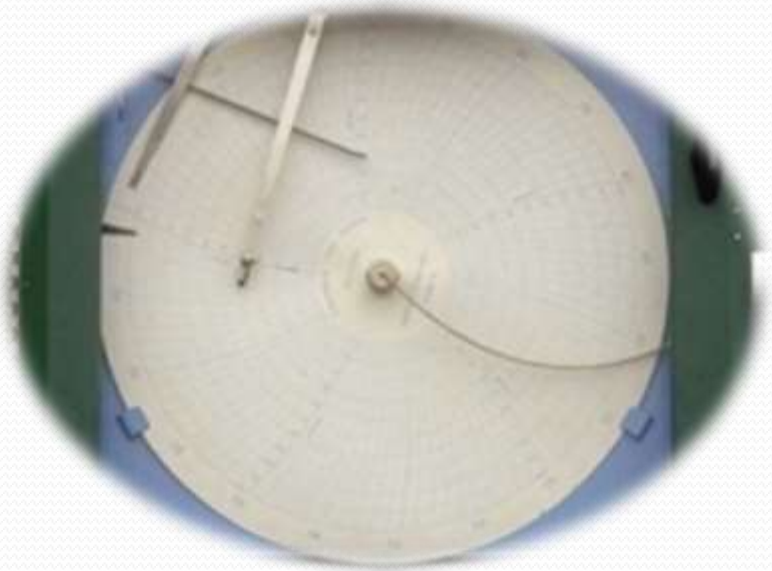
Data for Incidents

(4) Gathering of data needed for reporting incidents under Part 191 of this chapter in a timely and effective manner

§192.605(b)

Starting and Shutting Down a Pipeline

(5) Starting up and shutting down any part of the pipeline in a manner designed to assure operation within the MAOP limits prescribed by this part, plus the build-up allowed



§192.605(b)

Compressor Stations - Maintenance

(6) Maintaining compressor stations, including provisions for isolating units or sections of pipe and for purging before returning to service

§192.605(b)

Compressor Stations - Operations

(7) Starting, operating & shutting down gas compressor units

§192.605(b)

START PROCEDURE FOR 305
FROM UNIT HMI

1. TURN ON FUEL GAS VALVE IN FUEL SKID
2. CLOSE SEAL OIL DRAIN VAIVE (located west side of skid above compres
3. TURN SWITCH ON PANEL TO LOCAL MANUAL
4. PUSH START BUTTON ON PANEL

STOP PROCEDURE FOR 305
FROM UNIT HMI

1. TURN SWITCH ON PANEL TO LOCAL MANUAL
2. PUSH STOP BUTTON ON PANEL
3. CLOSE FUEL GAS VALVE IN FUEL SKIDAFTER UNIT STOPS
   OPEN SEAL OIL DRAIN VALVE AFTER UNIT BLOWS DOWN (located west side
   above compressor)

Procedure Review

(8) Periodically reviewing the work done by operator personnel and modifying the procedures when deficiencies are found

§192.605(b)

Unsafe Vapors

(9) Procedures about precautions to follow regarding unsafe accumulations of vapors or gas in excavated trenches

- **If needed, provide breathing apparatus, rescue harness and line**

§192.605(b)

Holders

(10) Develop plan to test and inspect pipe - type or bottle - type holders

§192.605(b)

Gas Reports

(11) Respond promptly to a report of gas odor in or near a building, unless covered by emergency plan

§192.605(b)

Control Room Management

(12) Implement applicable control room management procedures required by §192.631

§192.605(b)

System Integrity

(2) Checking at sufficient critical locations in the system to determine continued integrity and safe operation

§192.605(c)

Notification

(3) Notifying responsible operator personnel when notice of an abnormal operation is received

§192.605(c)

Safety - Related Condition Reports

Instructions for personnel to identify and report conditions that potentially may be safety - related conditions subject to reporting requirements of §191.23

§192.605(d)

Additional Procedures

The procedures required by

- **§192.613(a), Continuing Surveillance**
- **§192.615, Emergency Response**
- **§192.617, Failure Investigation**

must be included in the manual

§192.605(e)

§192.613 Continuing Surveillance

- **Each operator shall have procedures for continuing surveillance to determine and take appropriate actions for the following:**

Leakage History

§192.613 Continuing Surveillance

- **Each operator shall have procedures for continuing surveillance to determine and take appropriate actions for the following:**

Failures

§ 192.613 Continuing Surveillance

- **Each operator shall have procedures for continuing surveillance to determine and take appropriate actions for the following:**

Corrosion

§192.613 Continuing Surveillance

- **Each operator shall have procedures for continuing surveillance to determine and take appropriate actions for the following:**

Substantial changes in cathodic protection requirements

§192.613 Continuing Surveillance

- **Each operator shall have procedures for continuing surveillance to determine and take appropriate actions for the following:**

  Other unusual operating and maintenance conditions

§192.613 Continuing Surveillance

- **If a segment is determined to be unsatisfactory, but no immediate hazard exists,**

  Initiate a program to recondition or phase out the segment involved, or

§192.613 Continuing Surveillance

- **If a segment is determined to be unsatisfactory, but no immediate hazard exists,**

  Reduce the MAOP in accordance with §192.619

§192.614 Damage Prevention Program

(a) Except as provided in (d) & (e) each operator must carry out a written program to prevent damage to that pipeline from excavation activities.

§192.614 Damage Prevention Program

(b) An operator may comply with any of the requirements of (c) through participation in a one-call, but this does not relieve the operator of responsibility for compliance.

§192.614 Damage Prevention Program

(b) Operator **must** perform duties of paragraph (c)(3) **through** a qualified one-call.

- Where multiple one-calls exist, may join only 1 if,
- Central telephone number
- One-call systems communicate

Qualified One-Call

1. The State has adopted a One-call program under §198.37, or
2. The one-call system:
   - Is operated in accordance with §198.39;
   - Provides operators an opportunity to similar to voluntary participant to have part in management responsibilities; and
   - Charges an appropriate fee.

Damage Prevention Minimums

- Must identify, on a current basis, persons who normally engage in excavation activities

Damage Prevention Minimums

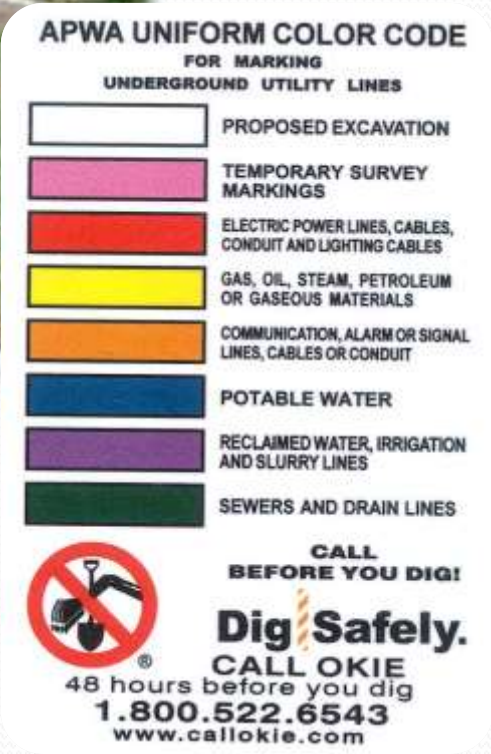
- Provide for notification of the public and excavators as often as needed about the damage prevention program
  - Program's existence and purpose, and
  - How to learn of a pipeline's location

Damage Prevention Minimums

- **Means of receiving and recording notices of excavation**

Damage Prevention Minimums

- Provide markings before excavation activities begin
- How to identify the markings



Damage Prevention Minimums

- **Provide for follow-up inspections;**
  - **Inspection during and after as necessary; and**
  - **Leak surveys after blasting (GPTC Appendix G-16)**

Exceptions

- **Damage Prevention Program is not required;**
  - **Pipelines located offshore**
  - **Access controlled by the operator**

Partial Exceptions

(e) Pipelines operated by persons other than municipalities whose primary activity does not include the transportation of gas need not comply with the following:

- **Written program**
- **Identifying excavators**
- **Notification process**

§192.615 Emergency Plans

- §192.615 (a) Each operator shall establish written procedures to *minimize the hazard* resulting from a gas pipeline emergency.

PEMEX – Reynosa, MX


Xidomega

§192.615 (a)(1) Emergency

- Procedures for receiving, identifying, and classifying notices of events which require an immediate response*

§192.615 (a)(1) Emergency Plans

- Receiving Notices:
  - 24 hour telephone number
    - ???
  - How is it answered?
    - ???

§192.615 (a)(1) Emergency Plans

- Instructions for Callers:
  - Safety instructions for someone reporting a natural gas pipeline event
  - Do the instructions provide information for the safety of people first

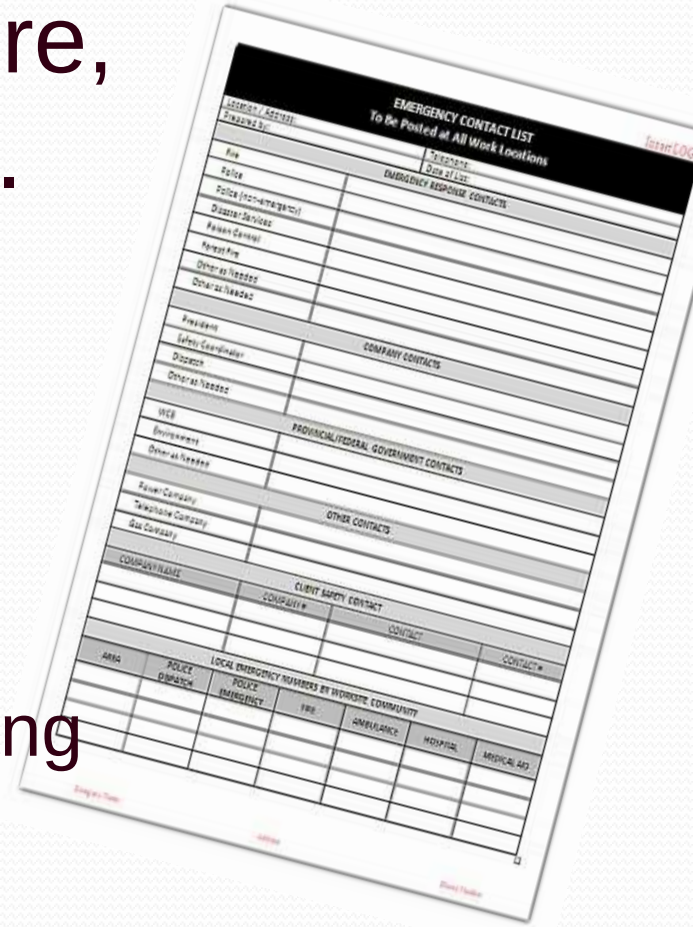
§192.615 (a)(1) Emergency Plans

- Classifying Notices:
  - How do you classify events?
    - Priority 1 = Immediate response
    - Priority 2 = Next available person
    - Priority 3 = Someone within 2 hours

- Person receiving calls - trained to understand and make decisions

§192.615 (a)(2) Emergency Plans

- Establishing and maintaining adequate means of communication with fire, police, and other public officials.
  - Current list of emergency contact numbers,
  - update the list at regular intervals
    - Field and call center
    - ADB-2012-09 – Communication during Emergency Situations



§192.615 (a)(2) Emergency

- How do you respond to these notifications?
  - Additional telephone trunk lines, switchboard facilities, or personnel
  - Back-up power supply
- ADB-2010-08

§192.615 (a)(3) Emergency Plans

- Prompt and effective response to a notice of each type of emergency:
  - Gas detected inside or near a building
  - Fire located near or directly involving a pipeline facility

§192.615 (a)(3) Emergency Plans

- Explosion occurring near or directly involving a pipeline facility

§192.615 (a)(3) Emergency Plans

- Natural disasters

§192.615 (a)(4) Emergency Plans

Emergency Contacts

Name	Position	Number
Miller	Fitter	333-1234
Friend	Laborer	333-5678
Santos	Crew Leader	333-9012
West	BH-Operator	333-3456
Wa-Le	Line Tech	333-7890
Kichler	Locator	333-5555

- Availability of personnel, equipment, tools, and materials, as needed at the scene of an emergency
  - Current
    - personnel contact lists, numbers, and responsibilities
    - lists of equipment, tools, and materials,
    - contractor contact list, capabilities, and equipment, available to respond to an emergency

§192.615 (a)(4) Emergency Plans

- Responsibility for overall coordination of personnel and execution of the emergency response plan
- Incident command system (ICS)

§192.615 (a)(5) Emergency Plans

- Actions directed toward protecting people first and then property.
  - Determine the scope of the emergency.
  - Evacuate and prevent access to premises that are or may be affected.
  - Prevent accidental ignition.
  - Report to the appropriate supervisor on the situation, and request further instructions or assistance if needed.

§192.615 (a)(6) Emergency Plans

- Emergency shutdown and pressure reduction necessary to minimize hazards to life or property
  - Should consider:
    - ✓Responsibility for shutdown
    - ✓Identification of critical valves, access to and operability of valves

§192.615 (a)(6) Emergency Plans

- Plans to shut down or reduce pressure should consider:
  - ✓Provisions for confirming effectiveness
  - ✓Other facilities required for shutdown

§192.615 (a)(7) Emergency Plans

- Making safe any actual or potential hazard to life or property
  - Eliminating potential sources of ignition
  - Determining the full extent of the hazardous area, including areas of gas migration and secondary or auxiliary damage
  - Monitoring for a change in the extent of the hazardous area or other conditions

§192.615 (a)(8) Emergency Plans

- Notifying appropriate fire, police, and other public officials of gas pipeline emergencies …
  - Contacting and coordinating with public officials, the actions to be taken
  - Maintaining ongoing communication to ensure that information is:
    - pertinent to emergency response
    - shared in a timely manner.
  - Notifying response personnel when the emergency has been made safe.
  - ADB-2012-09

§192.615 (a)(9) Emergency Plans

- Safely restoring any service outage
  - Re-survey of the area involved in an incident to locate any additional damages
  - Communication with control room
  - Purging and re-pressuring of pipeline facilities
  - Monitoring of facilities after service is restored

§192.615 (a)(10) Emergency Plans

- Procedures for initiating investigation of failures in accordance with §192.617
  - Log of significant events and of actions taken
  - Preservation of failed facilities or equipment for analysis.
  - Obtaining and submitting information required by regulatory bodies

§192.615 (a)(11) Emergency Plans

- Actions required to be taken by a controller

§192.615 (b) Emergency Plans

- Each operator shall:
  - Provide supervisors who are responsible for emergency action a copy of that portion of the latest edition of the emergency procedures

§192.615 (b) Emergency Plans

- Each operator shall:
  - Train the appropriate operating personnel
  - Review employee activities

§192.615 (c) Emergency Plans

- Shall establish and maintain liaison with fire, police, and other public officials to:
  - Learn their responsibilities and resources
  - Acquaint them with your abilities in responding to a gas pipeline emergency

§192.615 (c) Emergency Plans

- Identify the types of gas pipeline emergencies which may require notification
- Plan how you and the public officials can engage in mutual assistance to minimize hazards to life or property

§192.616 Public Education

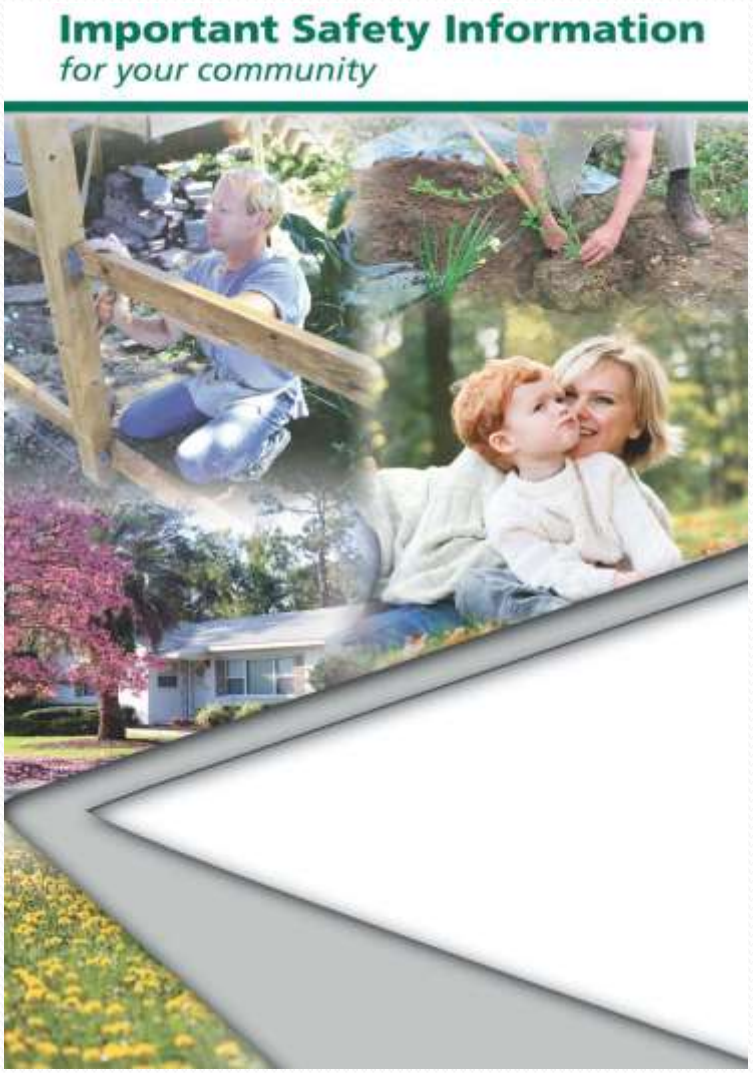
- Operator must develop and implement a written continuing public education program that follows the guidance of API RP 1162
  - Provisions to educate the four identified stakeholder audiences, as well as appropriate government organizations, excavators, affected municipalities, school districts, businesses, and residents of pipeline locations

§192.616 Public Education

- Educated regarding:
  - One call notification systems
  - Other damage prevention activities
  - Hazards associated with unintended releases
  - Physical indications of such a release
  - Steps for public safety
  - Reporting procedures
- Program conducted in languages commonly understood by significant number and concentrations of public

Master meter or petroleum gas systems exempt from requirements of API RP1162

§192.616 Public Education



- Require
  - Annual review of the program
  - Four year effectiveness evaluations

§192.617 Investigation of Failures

- Establish procedures for analyzing accidents and failures
- Include sample collections
- Minimize possibility of recurrence

§192.627 Tapping Pipelines under Pressure

Each tap must be performed by a crew qualified to make hot taps

§192.629 Purging of Pipelines

MUST prevent formation of hazardous mixtures

Other Subpart L Sections

§192.609 – Change in class location: Required study

§192.611 – Change in class location: Confirmation or revision of MAOP

§192.615 – Emergency plans

§192.619 – MAOP

§192.621 – MAOP: High-pressures distribution

§192.623 – Maximum and minimum allowable operating pressures: Low-pressure distribution

§192.625 – Odorization of gas

Other Subpart L Sections

§192.620 – Alternative maximum allowable operating pressures for certain steel pipelines

- **Additional construction, operations and maintenance requirements**

§192.631 – Control room management

- **Fatigue management, alarm managements, roles and responsibilities for control rooms**

Evidence

- Copies of procedures
  - Inadequate
  - Not following
- Records of procedure reviews
- Records of inspection, tests or surveys

???????

Natural Gas Maintenance

Part §192 Subpart M

§192.703 General

- Each segment must be maintained in accordance with this Subpart.
- Each unsafe segment must be repaired, replaced or removed.
- Hazardous leaks must be repaired promptly.

Line Markers for Mains and Transmission Lines

§192.707(a)

- Marker must be Placed & Maintained as close as practical;
  - At each crossing of public road & railroad; and

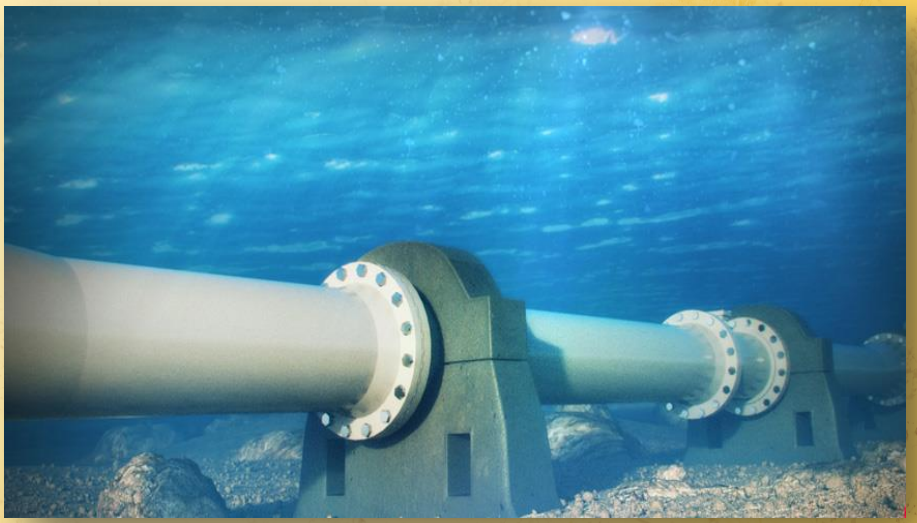
Line Markers for Mains and Transmission Lines

- Wherever necessary to identify location to reduce possibility of damage or interference

§192.707(a)

Line Markers for Mains and Transmission Lines

- Exceptions: §192.707(b)
  - Lines located offshore, at crossings of or under waterways or bodies of water.
  - Mains in class 3 & 4 locations where a damage prevention program is in effect;



Line Markers for Mains and Transmission Lines

- Exceptions continued;
  - Transmission lines in class 3 & 4 areas where placement of a line marker is impractical.

§192.707(b)

Line Markers for Mains and Transmission Lines

- Pipelines Above ground
  - Markers must be installed and maintained in areas accessible to the public.

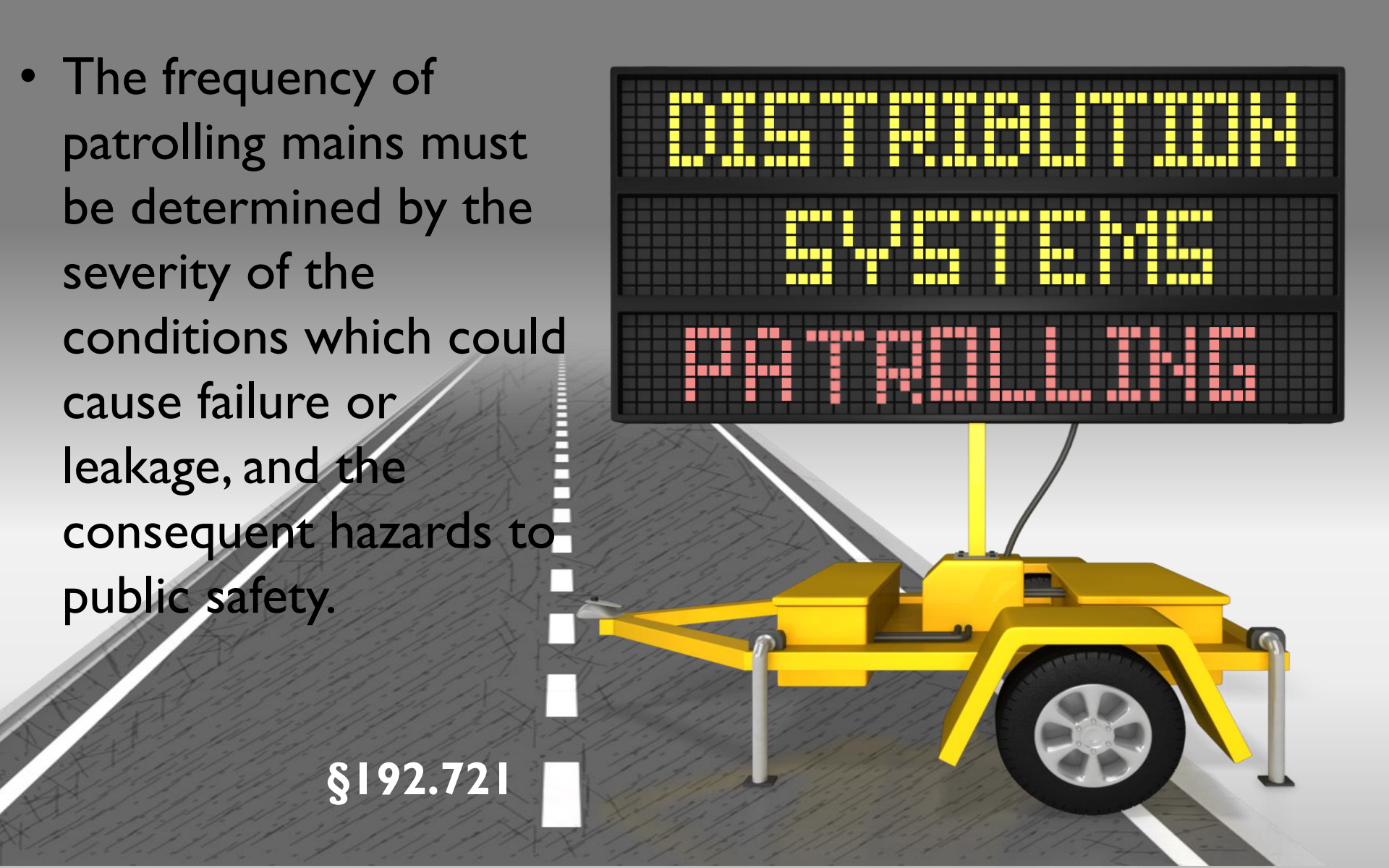
§192.707(c)

Line Markers for Mains and Transmission Lines

§192.707(d)

- Must Have the word Warning, Caution, or Danger
- Followed by "Gas (or name of gas) Pipeline"
- Letters must be at least 1" high with ¼" stroke.
- Must have Operator name and 24 hr. phone number.

- The frequency of patrolling mains must be determined by the severity of the conditions which could cause failure or leakage, and the consequent hazards to public safety.



§192.721

- **Mains in places or on structures where anticipated physical movement or external loading could cause failure or leakage must be patrolled –**
  - **In business districts, at intervals not exceeding 4 1/2 months, but at least four times each calendar year; and**
  - **Outside business districts, at intervals not exceeding 7 1/2 months, but at least twice each calendar year.**

- **Each operator of a distribution system *SHALL* conduct periodic leakage surveys in accordance with this section.**
- **The type and scope must be determined by the type of operations and local conditions, but it must meet the following minimum requirements:**

- **Business Districts – Once each calendar year not to exceed 15 months.**
  - **Must check:**
    - **Manholes**
    - **Pavement & sidewalk cracks; and**
    - **Other potential venting locations.**
- **Must use leak detection equipment.**

§192.723(b)(1)

§192.723(b)(2)

- Outside of business district as frequent as necessary, but at least once every 5 calendar years at intervals not to exceed 63 months; or

- Pipe that is not cathodically protected and subject to 192.465 (e) must be surveyed at least once every 3 calendar years at intervals not to exceed 39 months

Test Requirements For Re-instating Service Lines

- Each disconnected service must be tested in the same manner as a new service.
- Each temporarily disconnected service must be tested from the point of disconnection to the service line valve.

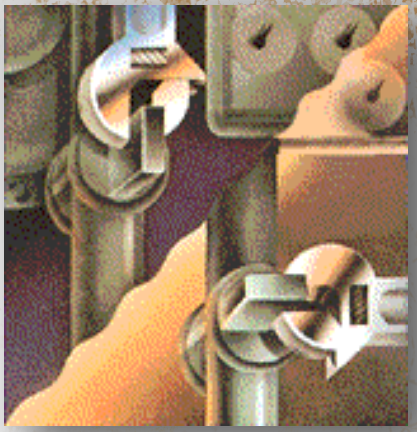
§192.725

Abandonment

§192.727(b)

- Each pipeline abandoned IN PLACE must be;
  - Disconnected from all sources of gas, purged, and sealed.
  - Offshore must be filled with water or inert materials and sealed at the ends.
  - Purging is not required if the volume of gas is so small that it does not present a hazard.

§192.727(d)(e) Abandonment



- When SERVICE TO A CUSTOMER is disconnected, the operator must do one of the following;
  - Close and lock the valve.
  - Install a mechanical device or fitting in the service line or meter to prevent the flow of gas.
  - The customers piping must be physically disconnect from the gas supply and the ends sealed.
  - If purged with air, insure a combustible mixture is not present after purging.

Abandonment

§192.727(f)

- Each abandoned vault must be filled with compacted materials.

Valve Maintenance: Distribution

- Each valve, necessary for safe operation of a distribution system, must be checked and serviced once each calendar year, not to exceed 15 months.
- Prompt remedial action is required to correct any valve found inoperable, unless an alternative valve is designated.

§192.747(a)(b)

Vault Maintenance

§192.749

- Vaults containing pressure regulating or limiting equipment, greater than 200 cubic ft. must be inspected each calendar year not to exceed 15 months for physical condition and ventilation

Vault Maintenance

- If gas is detected, inspect for and repair leaks.
- Inspect ventilating equipment.
- Inspect integrity of vault covers.

§192.749 (b)(c)(d)

Prevention of Accidental Ignition

- Each operator must minimize danger of accidental ignition.
  - Remove ignition sources
  - Provide fire extinguishers
  - Post Warnings
  - Don't weld around combustible mixtures.

§192.751

Cast Iron: Caulked Bell And Spigot Joints

- Each cast iron caulked bell and spigot joint that is subject to pressures of more than 25 psig must be sealed with:
  - A mechanical leak clamp; or
  - A material or device which:
    - Does not reduce the flexibility of the joint;
    - Permanently bonds, either chemically or mechanically, or both, with the bell and spigot metal surfaces or adjacent pipe metal surfaces.

§192.753 (a)

Cast Iron: Caulked Bell And Spigot Joints

- Each cast iron caulked bell and spigot joint that is subject to pressures of 25 psig or less and is exposed for any reason must be sealed by a means other than caulking.

§192.753 (b)

Protecting Cast Iron Pipelines §192.755 (b)

- When an operator has knowledge that the support for a segment of a buried cast-iron pipeline is disturbed:
  - That segment of the pipeline must be protected, as necessary, against damage during the disturbance.
- As soon as feasible, appropriate steps must be taken to provide permanent protection for the disturbed segment from damage that might result from external loads.


WHEN?
WHY?
HOW?