# MASTER METER SEMINAR

MAY 2024

# IURC MISSION STATEMENT

The Indiana Utility Regulatory Commission (Commission) is an administrative agency that hears evidence in cases filed before it and makes decisions based on the evidence presented in those cases.

An advocate of neither the public nor the utilities, the Commission is required by state statute to make decisions in the public interest to ensure the utilities provide safe and reliable service at just and reasonable rates.

# IURC RESPONSIBILITY

The Commission receives its authority from Title 8 of the Indiana Code and oversees more than 600 utilities that operate in Indiana.

The Commission regulates certain utilities in the following sectors:

- Electric
- Natural Gas
- Steam
- Water
- Wastewater
- Telecommunications

# IURC REGULATORY AUTHORITY

The Commission regulates various aspects of Indiana jurisdictional public utilities' business, including:

- Rates & Charges
- Financing & Bonding
- Environmental Compliance Plans
- Service Territories
- Customer Terms & Conditions of Service
- Ensuring Safe and Reliable Service & Adequate Resources

The Commission also monitors and submits comments on regional and federal issues affecting Indiana.

# THE COMMISSIONERS

**Jim Huston**
*Commission Chair*

**Wesley R. Bennett**
*Commissioner*

**Sarah Freeman**
*Commissioner*

**David Veleta**
*Commissioner*

**David Ziegner**
*Commissioner*

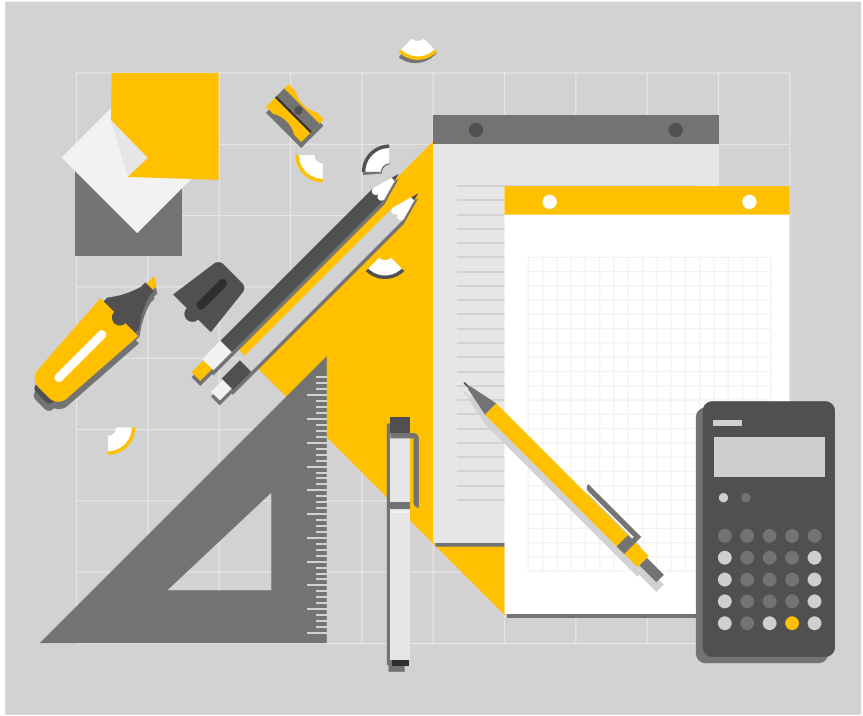

# PIPELINE SAFETY DIVISION

# ABOUT PIPELINE SAFETY DIVISION

The PSD team consists of nine engineers, with three managers and two contractors who also inspect.

The team has a combined **200 years** of experience in the gas industry.

Our mission is to ensure safety of the public.



# GROUP INTRODUCTIONS

- Your name.
- Who you work for / what property?
- How many years of master meter experience.
- Favorite food.
- Any gas-related questions you may have.


# CHECKLIST OVERVIEW

# CHECKLIST OVERVIEW

***Annual Review & Update***

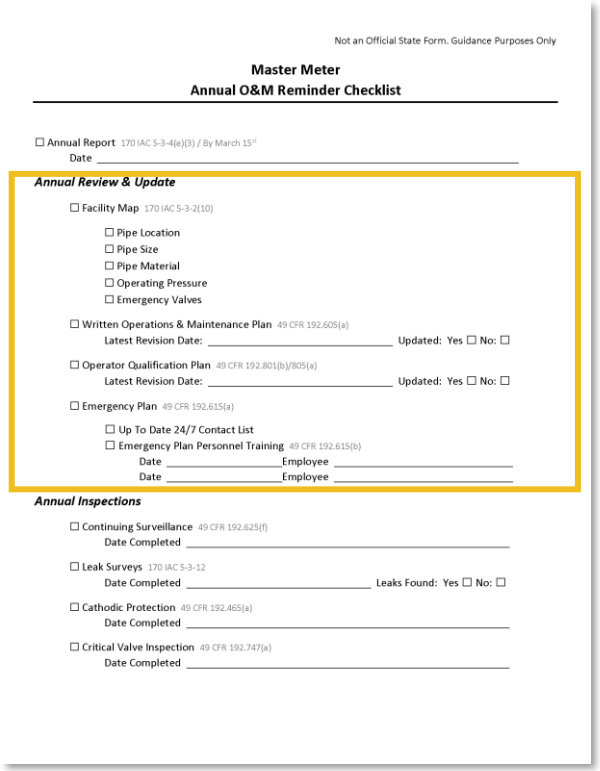
- □ Facility Map 170 IAC 5-3-2(10)
  - □ Pipe Location
  - □ Pipe Size
  - □ Pipe Material
  - □ Operating Pressure
  - □ Emergency Valves
- □ Written Operations & Maintenance Plan 49 CFR 192.605(a)

  Latest Revision Date: _____ Updated: Yes □ No: □
- □ Operator Qualification Plan 49 CFR 192.801(b)/805(a)

  Latest Revision Date: _____ Updated: Yes □ No: □
- □ Emergency Plan 49 CFR 192.615(a)
  - □ Up To Date 24/7 Contact List
  - □ Emergency Plan Personnel Training 49 CFR 192.615(b)

    Date _____Employee _____

    Date _____Employee _____



Not an Official State Form. Guidance Purposes Only

**Master Meter**
**Annual O&M Reminder Checklist**

☐ Annual Report 170 IAC 5-3-4(e)(3) / By March 15th
Date _____

***Annual Review & Update***

☐ Facility Map 170 IAC 5-3-2(10)
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☐ Emergency Valves

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Date _____Employee _____
Date _____Employee _____

***Annual Inspections***

☐ Continuing Surveillance 49 CFR 192.625(f)
Date Completed _____

☐ Leak Surveys 170 IAC 5-3-12
Date Completed _____ Leaks Found: Yes ☐ No: ☐

☐ Cathodic Protection 49 CFR 192.465(a)
Date Completed _____

☐ Critical Valve Inspection 49 CFR 192.747(a)
Date Completed _____

# CHECKLIST OVERVIEW

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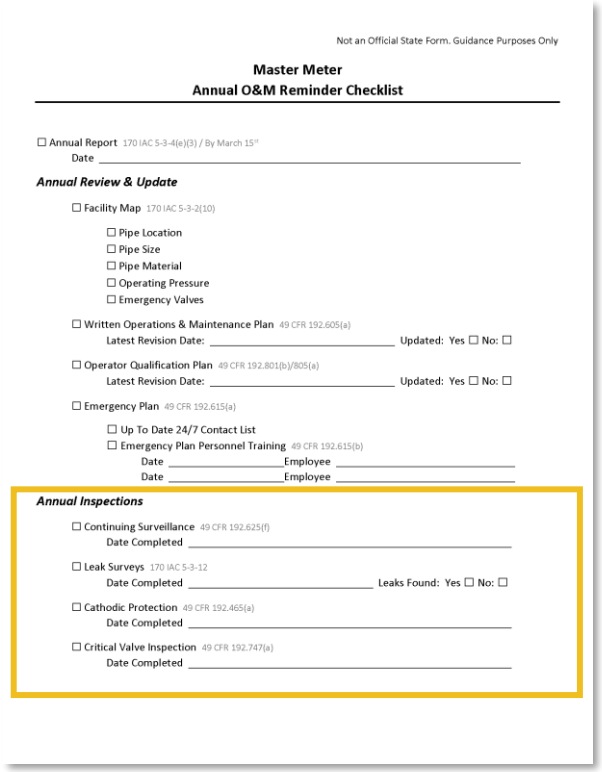

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Date Completed _____

# CHECKLIST OVERVIEW

## *Odorization*

□ Odorant Letter from Supplier 49 CFR 192.625(f)(1)
□ Periodic Sniff Tests 49 CFR 192.625(f)(2)
Sniff Test (Date/Location) _____
Sniff Test (Date/Location) _____
Sniff Test (Date/Location) _____
Sniff Test (Date/Location) _____

## *Public Awareness Distribution* 49 CFR 192.616(j)

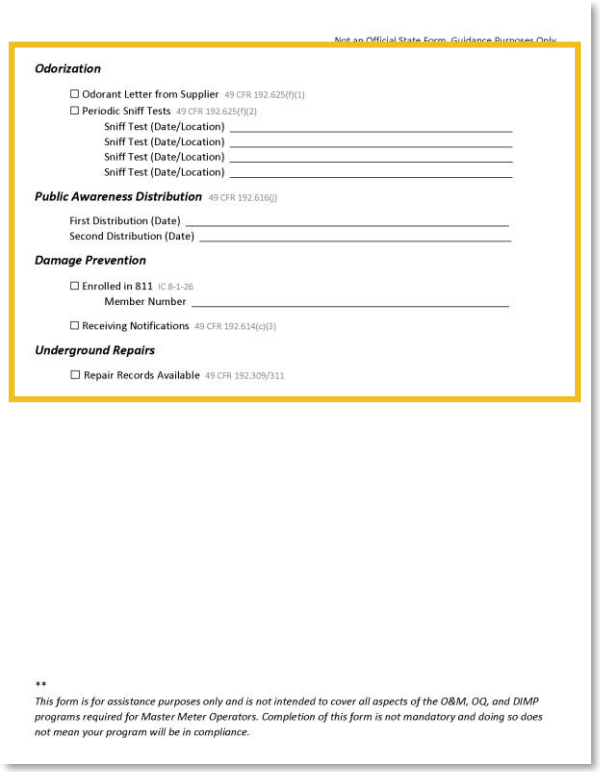
First Distribution (Date) _____
Second Distribution (Date)_____

## *Damage Prevention*

□ Enrolled in 811 IC 8-1-26
Member Number _____
□ Receiving Notifications 49 CFR 192.614(c)(3)

## *Underground Repairs*

□ Repair Records Available 49 CFR 192.309/311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*Odorization*

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**
*This form is for assistance purposes only and is not intended to cover all aspects of the O&M, OQ, and DIMP programs required for Master Meter Operators. Completion of this form is not mandatory and doing so does not mean your program will be in compliance.*

# CHECKLIST OVERVIEW

***Operator Qualifications***

Employee(s) qualified 49 CFR 192.805

Employee: _____ Date of Qualification: _____

Employee: _____ Date of Qualification: _____

Employee: _____ Date of Qualification: _____

# THANK YOU

**Miranda Erich**
Indiana Utility Regulatory Commission | Director, Pipeline Safety Division
Cell: 317-502-2966 | Email: merich@urc.in.gov| Incident Line: 317-232-2707

# STANDARD O&M & RECORDS INSPECTION

# ANNUAL REPORT

The Annual Report needs to be filed by **March 15** for the previous year.[1]

The Annual Report needs to include:

- Leak Survey
- Cathodic Protection Survey
- Valve inspection information
- Number of leaks reported, repaired, unrepaired

Email the report to:
pipelineinspections@urc.in.gov

Download the Annual Report form by visiting the Pipeline Safety website:
www.in.gov/iurc/2335.htm

*Source: [1]170 IAC 5-3-4(e)(3)*

# ANNUAL REPORT – COMMON MISTAKES

## Leaks that need to be **REPORTED**

- Leaks to include:
  - Those discovered up to the building wall of each unit.
  - Those leaks discovered during normal operations and the Annual Leak Survey.

## Leaks that need to be **RECORDED**

- All leaks need to be recorded including customer/residents reporting gas odor.

## Operator Identification Number (OpID)

- Not understanding who is on the PHMSA OPID and failing to update them.

# REPORTING REQUIREMENTS

## Telephonic Incident Reports made to the National Response Center

**National Response Center**
**1-800-424-8802**
Report to the NRC hotline at the earliest possible opportunity.

**Pipeline Safety Division**
**317-232-2707**
Report to the Pipeline Safety Division **WITHIN ONE HOUR**.

## Written Incident Reports

Written reports specific to incidents shall be submitted to the division within 20 days.[1]
The operator **SHALL** keep a record and report of any unintentional interruption of service.

*Source: [1]170 IAC 5-3-4*

# MAPS OF PIPELINE FACILITIES

Each operator **SHALL** maintain a system of records of its physical plant to be reviewed each calendar year not exceeding 15 months.[1]

Facility maps to include:

- Main location, material, and size
- Pressure
- Critical valve location
- Regulators

*Source: [1]170 IAC 5-3-2.1*

# COMMON PROBLEMS WITH MAPS

## Operators are not including all of the required components on their maps.

- Include:
  - Mains/services: sizes and pressure
  - Materials: plastic, steel, and manufacturing details
  - Valve locations

## Documentation is not available to verify maps are being reviewed and/or updated.

- Records:
  - Form indicating map review: who, when, what, updates
  - On map

- During Pipeline Exposure:
  - Pictures
  - Verify locations

# OPERATIONS, MAINTENANCE, AND EMERGENCY PROCEDURES

Every natural gas operator shall prepare and follow a manual of written procedures for conducting operations and maintenance activities and for emergency response.

This manual must be reviewed and updated by the operator at intervals not exceeding 15 months, but at least one each calendar year.[1]

49 CFR 192.605 is augmented to include an additional paragraph (f).[2]

*Sources: [1]49 CFR 192.605(a) | [2]170 IAC 5-3-2(o)*

# O&M CONTENT

## The O&M manual is required to include procedures for the following:

- Operating, maintaining, and repairing a pipeline[1]
- Corrosion control[2]
- Record keeping
- Gathering data/Incident reporting[3]
- Review work done by personnel
- Procedure to respond to gas odor calls
- Annual employee training

*Sources: [1]49 CFR Part 192 subpart M | [2]49 CFR Part 192 subpart I | [3]49 CFR Part 191*

# EMERGENCY PLAN – WRITTEN PROCEDURES

Each operator **SHALL** establish emergency procedures to minimize the hazard resulting from a gas pipeline emergency:

- Receive, identify, classify notices of events – during and afterhours
- Prompt and effective response:
  - Gas detected inside/near building
  - Fire located near/involving facility
  - Natural disaster

# EMERGENCY PLAN – WRITTEN PROCEDURES

- **MUST** complete and document annual plan review.
- **MUST** provide and document annual required training for employees.
- Combustible gas indicator that provides the percentage of gas.
- Notifying police, fire, and other public officials.
- Restoring service.

# COMMON PROBLEMS WITH O&M AND EMERGENCY RESPONSE PLANS

- O&M and emergency plans are not updated to meet current state and federal regulations.
- 24/7 contact list needs to be **CURRENT**.
- Not training appropriate employees annually.

While consultants often create these plans, the **OPERATOR** is **ultimately** responsible for knowing and implementing procedures within these manuals.

# ODORANT

Master Meter Operators are required to:

Obtain written verification from their gas supplier(s) that the gas has a proper concentration of odorant.

Must be done **ANNUALLY**.

Conduct periodic ‘sniff’ tests at the extremities of their system to confirm their gas contains odorant.[1]

Must be done **QUARTERLY.**

*Source: [1]49 CFR 192.625(f)*

# PUBLIC AWARENESS

## Public awareness messages to contain the following:

- A description of the purpose and reliability of the pipeline.
- An overview of the hazards.
- Information about damage prevention.
- How to recognize and respond to a leak.
- How to get additional information.
- Keep a record of distribution.

This must be distributed **TWICE ANNUALLY**.

# LEAK SURVEYS AND REPORTS

A leak survey using gas detection equipment shall be conducted once each calendar year at intervals not exceeding fifteen (15) months.[1]

All leaks reported, regardless of the origin of the reports, **shall be recorded on SUITABLE REPORT FORMS**.[2]

- These report forms should provide space for all pertinent information.
- Each leak reported shall be accounted for, and actions taken in response to leaks shall be documented and filed in a systematic manner.

*Sources: [1]170 IAC 5-3-2(r)(b)(4) | [2]170 IAC 5-3-2(r)(e)*

# LEAK SURVEYS AND REPORTS

- All leaks reported **SHALL** be investigated promptly and classified in accordance with procedures outlined in the operator's operations and maintenance plan.

- The procedures **SHALL** include acceptable response times and shall ensure that gas leakage that is hazardous to life or property shall receive immediate attention for repairs.

- Leak indications where repairs are not completed shall be rechecked on subsequent surveys, depending on the operator's classification, in accordance with the operator's procedures, and federal and state code.

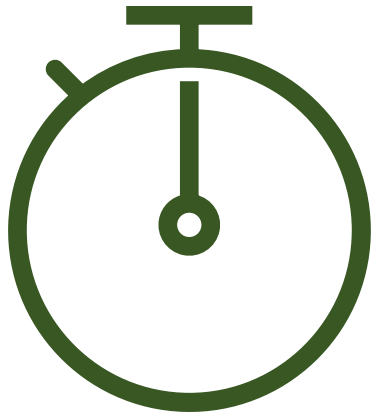
# COMMON PROBLEMS WITH LEAK SURVEYS & REPORTS

- Leaks are not recorded on suitable leak report and leak repair forms. This includes leaks discovered outside of the annual leak detection survey.
- Operators are not following their leak classification procedures to repair and/or monitor leaks as required.
- Is additional training required to understand leak classification procedures?
- Non-qualified employees repairing leaks.

# VALVE MAINTENANCE

Each valve, the use of which may be necessary for the safe operation of a distribution system, **MUST BE** checked and serviced at intervals not exceeding 15 months, but at least once each calendar year.[1]

- Prompt remedial action to correct any valve found inoperable, unless the operator designates an alternative valve.



*Source: [1]49 CFR 192.747(a)*

# COMMON PROBLEMS FOUND WITH VALVE MAINTENANCE

- Operators have not clearly identified emergency valves and placed them on their maps as required.

- Operators are claiming upstream gas supplier's valves as their emergency valves. *This is **NOT** acceptable.*
  - The operator is unable to perform routine valve maintenance as prescribed by **49 CFR 192.747**.

- Operators should identify emergency valves on *their* piping system.

# COMMON PROBLEMS FOUND WITH VALVE MAINTENANCE

**Master meter served from the gas supplier.**

**Master meter piping going into the customers residence.**

# REPAIR OF STEEL / PLASTIC PIPE

- Each imperfection or damage that impairs the serviceability of a length of pipeline of **steel** pipe must be repaired or removed.[1]
- Each imperfection or damage that would impair the serviceability of **plastic** pipe must be repaired or removed.[2]
- Each repaired segment must be pressure tested.

*Sources: [1]49 CFR 192.309 | [2]49 CFR 192.311*

# COMMON PROBLEMS WITH REPAIRS

The operator has not included repair procedures in O&M.

- If a contractor makes your repairs, you must still have your own procedures or adopt the contractors' procedures.

The qualification for individuals making repairs must be verified prior to making repair.

- Includes contractor personnel making repairs.
- Operator must keep and maintain qualification records.
  - Qualified employee, dates & tasks qualified.

Operators fail to obtain all required repair and inspection documents when contractor performs repair (e.g., test records, pipe exams, repair records, etc.).

# UPDATES

- Calibration[1]
- Annual Reports
  The annual report form was updated in 2022 and now includes OPID, Indiana 811 member ID, and number of qualified employees. It's downloadable at: www.in.gov/iurc/pipeline-safety-division/regulation-of-gas-operators/#Forms.
- Record keeping[2]
- Revised 170 IAC 5 nomenclature
- Indiana 811 Law

*Sources: [1]170 IAC 5-3-2.2 | [2]170 IAC 5-3-1(b)*

# THANK YOU

**RJ Snyder**
Indiana Utility Regulatory Commission | Pipeline Safety Engineer, Pipeline Safety Division
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# CALIBRATION OF INSTRUMENTS

# CALIBRATION

## What are the Indiana PS regulatory requirements?

170 IAC 5-3-2.2 Calibration of instruments:

(a) An instrument or tool, the use of which is necessary to comply with this rule, shall be calibrated according to the manufacturer's specifications and at intervals recommended by the manufacturer.

(b) Records of instrument calibration shall include the instrument serial number or unique identifier, date of calibration, the name and signature of the individual or third-party vendor performing the calibration, the process and calibration standard used for the calibration, as-found and as-left data, and the due date for the next calibration.

*Source: Indiana Utility Regulatory Commission; 170 IAC 5-3-2.2; filed Mar 17, 2022, 12:34 p.m.: 20220413-IR-170210213FRA*

# CALIBRATION

## What is calibration?

Calibration is the act of comparing a device under test (DUT) of an unknown value with a reference standard of a known value.

A calibration is performed to determine the error or verify the accuracy of the DUT's unknown value.

A calibration is a snapshot in time, **NOT** a guarantee!

# CALIBRATION

## What is a reference (calibration) standard?

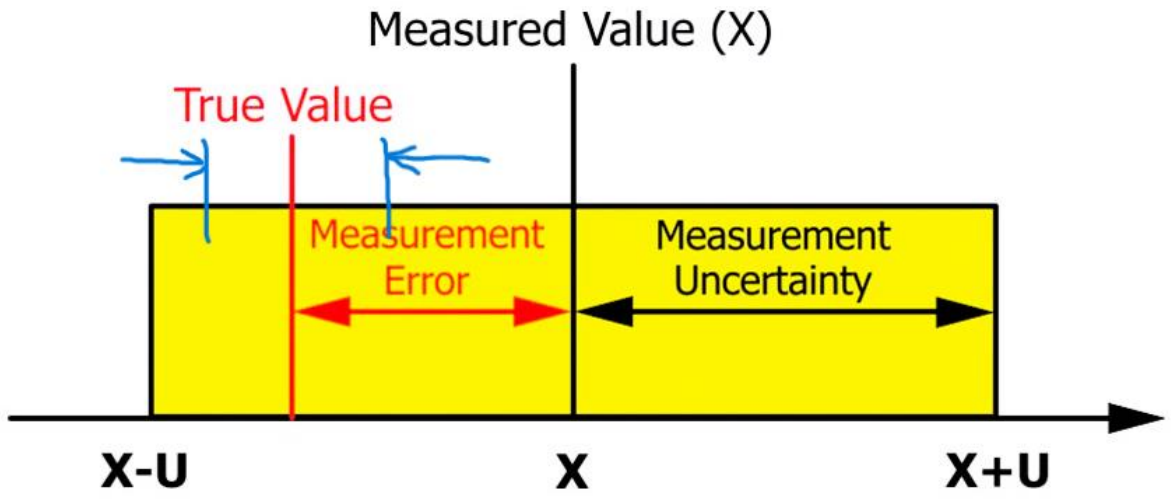
Calibration standards are devices that are compared against less accurate devices (DUT) to verify the performance of the less accurate devices. The standard's accuracy varies depending on what is being calibrated; most professionals recommend using a calibration standard that is at least four times less uncertainty (4:1) than the device being calibrated. This is called the Test Uncertainty Ratio (TUR).

A 4:1 TUR is the desired ratio that most high-quality calibration labs strive.

# CALIBRATION

## What is measurement uncertainty?

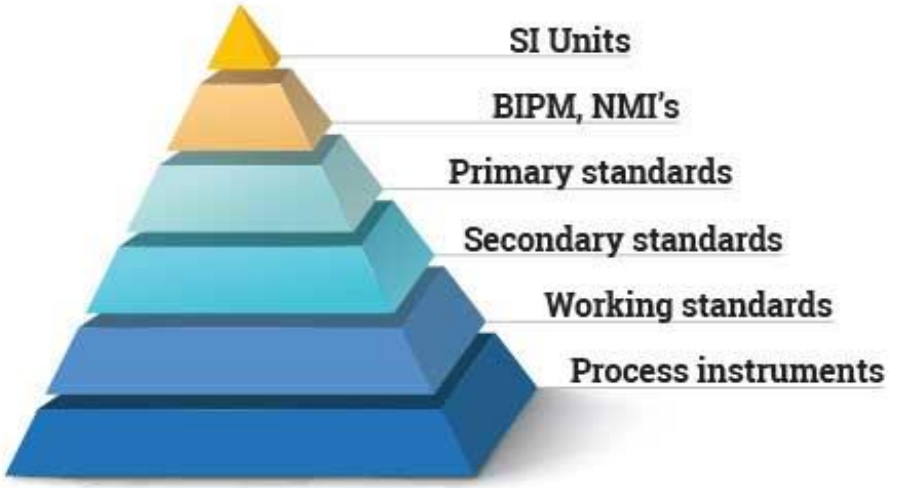
Measurement uncertainties arise from various sources that impact the reliability of measurements. The known value must have a clearly understood uncertainty to help the instrument owner or user determine if the measurement uncertainty is appropriate for the calibration.



# CALIBRATION

## Are the calibration standards also calibrated?

Yes, the calibration standards are themselves calibrated by standards that are part of a traceable chain back to International System of Units (SI) standards – the top level of known measurement standards. Just below the SI level, the Bureau International des Poids et Measures (BIPM) works directly with the National Metrology Institutes (NMIs) of member states or countries to facilitate the SI. In the U.S., the NMI is the National Institute of Standards and Technology (NIST).



# CALIBRATION

## Why was this rule established?

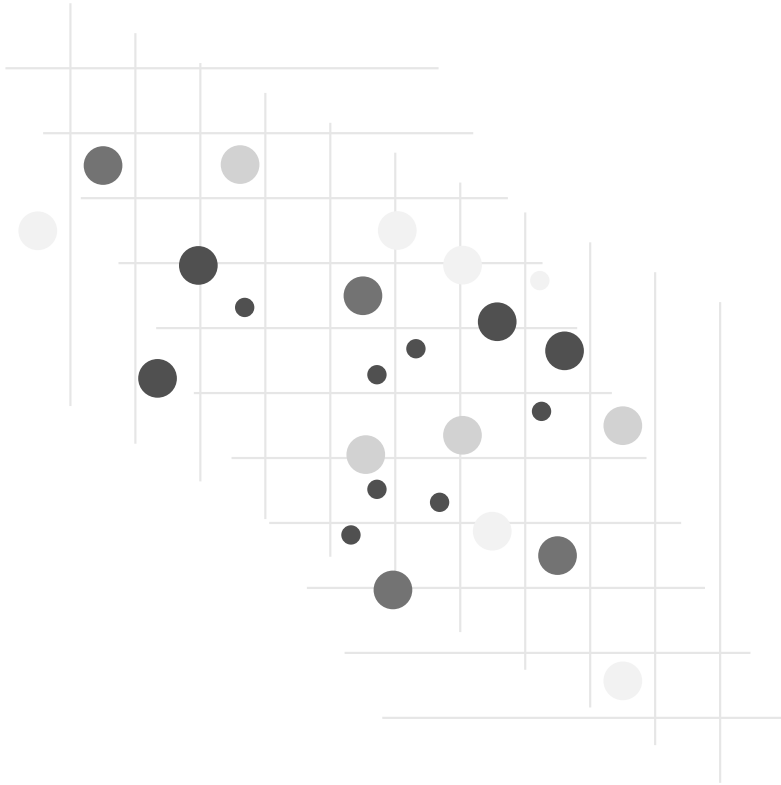
Instruments over time tend to lose their calibration. If calibration is lost, a reading from an instrument (pressure gage, multimeter, etc.) may appear to show compliance when, in fact, a true reading would show a non-compliant state. These reading could have a detrimental effect on a pipeline.

Calibration compliments OQ. We are all familiar with the OQ process that requires knowledge, skills and abilities for people to qualify to perform covered tasks, but what about the instruments used to demonstrate compliance? These instruments now are required to be calibrated as often as the manufacturer recommends.

# CALIBRATION

## Examples of Instruments that need calibration:

- Pressure gauges
- Digital Multimeters (DMM)
- Pipeline locators
- Leak Survey equipment
- Combustible Gas Indicators (CGI)



# CALIBRATION

## Questions you have been waiting to ask:

- What if my company does not own any instruments used for pipeline safety compliance?
- Can I use a new 1.5 V or 9 V battery to calibrate a multi-meter?
- Can I use a new calibrated gauge to calibrate a field gauge?
- How often should my equipment be calibrated?
- A calibration is like a guarantee of accuracy, correct?
- Other questions?

# THANK YOU

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Indiana Utility Regulatory Commission | IURC Chief Engineer
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# OPERATOR QUALIFICATIONS

# QUALIFIED EMPLOYEE

## What does “qualified” mean?

Qualified means that an individual has been evaluated and can:

- Perform assigned **COVERED TASKS** that they are qualified for through testing, training, and evaluation.
- Recognize and react to abnormal operating conditions.

# OPERATOR QUALIFICATIONS 192.805

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

- Identify covered tasks. – **DOCUMENT**
- Ensure through evaluation that individuals performing covered tasks are qualified. – **DOCUMENT**
- 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 **(span of control).**
- 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.
- Evaluate an individual if the operator has reason to believe that the individual is no longer qualified to perform a covered task.

# OPERATOR QUALIFICATIONS 192.805

- Communicate changes that affect covered tasks to individuals performing those covered tasks
- Identify those covered tasks and the intervals at which evaluation of the individual's qualifications is needed.
- Provide training, as appropriate, to ensure that individuals performing covered tasks have the necessary knowledge and skills to perform the tasks in a manner that ensures the safe operation of pipeline facilities.
- Notify the Pipeline Safety Division of the IURC if the operator significantly modifies the program after the state agency has verified that it complies with this section.

How to Notify the IURC:
pipelineinspections@urc.in.gov

# OPERATOR QUALIFICATIONS

## What is considered a covered task?

**49 CFR 192.801**

(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 integrity of the pipeline.

This is also known as the **4-Part Test**.

# OQ RECORDKEEPING 192.807

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

- Qualification records shall include:
  - Identification of qualified individual(s)
  - Identification of the covered tasks the individual is qualified to perform;
  - Date(s) of current qualification
  - Qualification method(s).

- 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**.

- Indiana Code Update: IAC 170 5-3-1- part b: 7-year record retention.

# PAST FIVE YEAR MOST COMMON VIOLATIONS

- Employee OQ records retention (current and previous).
- Identification of qualified employees and covered tasks.
- Qualification evaluation (two evaluations per year per employee is common).
- New employee first time qualification – additional training/tooling.
- Failure to have a qualified employee on staff.
- Failure to review & verify contractor personnel's OQs.

# THANK YOU

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# MASTER METER PUBLIC AWARENESS

# PUBLIC AWARENESS

## 49 CFR 192.616 (J)

(j) Unless the operator transports gas as a primary activity, the operator of a master meter or petroleum gas system is not required to develop a public awareness program as prescribed in paragraphs (a) through (g) of this section. **Instead the operator must develop and implement a written procedure to provide its customers public awareness messages twice annually.** If the master meter or petroleum gas system is located on property the operator does not control, the operator must provide similar messages twice annually to persons controlling the property.

To view 49 CFR 192.616 (J), click the link below:
www.ecfr.gov/current/title-49/subtitle-B/chapter-I/subchapter-D/part-192/subpart-L/section-192.616#p-192.616(j)

# PUBLIC AWARENESS

## Required Information:

1. A description of the purpose and reliability of the pipeline;
2. An overview of the hazards of the pipeline and prevention measures used;
3. Information about damage prevention;
4. How to recognize and respond to a leak; and
5. How to get additional information.

Operator must develop and implement a written procedure to provide its customers public awareness messages **TWICE ANNUALLY**.

*Example: April and October*

# PUBLIC AWARENESS

## Type of Delivery

- Public awareness letter/flyer (x2)
- Monthly letter
- Quarterly letter

Letter placed on the front door of the office – *This doesn't meet code*

## Records

- Public awareness letter/flyer
- Date on the letter/flyer
- Number of letters/flyers
- Hand-delivered or building/apartment mailbox


# Q&A

# THANK YOU FOR ATTENDING!


**Indiana Utility Regulatory Commission**
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www.in.gov/iurc