



# Construction Site Visits, GIS, & Mapping

July 2024



**James Skomp, Operations Manager**  
**Nick Lendy, PSD Engineer**

# Construction Inspections



## Agenda:

PHMSA Expectations of PSD  
170 IAC 5-3 Rule  
New Construction  
Items from construction Form  
Construction Connection to DIMP  
Construction Connection to GIS  
Questions and Comments





# PHMSA Expectation of PSD

20 % of PSD annual inspections must include construction site inspections 17-20 Construction Inspection per Engineer

- Robert Starkey, Senior Pipeline Safety Engineer
- Aaron Holeman, Senior Pipeline Safety Engineer
- Michael Hummel, Senior Pipeline Safety Engineer
- RJ Snyder, Pipeline Safety Engineer
- Josh Newton, Pipeline Safety Engineer
- Chris Krin, Pipeline Safety Engineer
- Nick Lendy, Pipeline Safety Engineer
- Brian Hensley, Pipeline Safety Engineer



# PHMSA Expectation of PSD



Management also performs Construction Inspections, on a more limited basis.

- Miranda Erich, Director of Pipeline Safety
- Mary Schneider, Data & Recording Manager
- James Skomp, Operations Manager of Pipeline Safety



# 170 IAC 5-3-4

## Reports to the division



(e) An operator shall submit the following reports to the division:

(4) Each operator shall submit to the division notification of construction that is significant to the operator, in a manner that facilitates unannounced Inspections. Examples may include:

- (A) new construction, replacement, or relocation of a jurisdictional:
  - (i) gas pipeline facility that is considered transmission by definition under 49 CFR192.3;
  - (ii) gas distribution main of a significant footage for a single project, including a cast iron or bare steel replacement project of any length;
  - (iii) gas purchase point, regardless of number of customers served;
  - (iv) gas distribution center station that is designed to serve at least one thousand (1,000) customers immediately or in the future; or
  - (v) hazardous liquid or carbon dioxide facility; or
- (B) significant gas service replacement project that encompasses at least twelve (12) city blocks or two hundred fifty (250) services for a single project.

(5) The notification required under subdivision (4) shall include the following:

- (A) A description and location of work.
- (B) The type of facility.
- (C) The estimated start date.
- (D) The name and address of the reporting company.
- (E) The name, address, and telephone number of the person to be contacted concerning the project.
- (F) All other significant information concerning the project.

# IAC 170 5-3-2.5



## Sec. 2.5.

At a construction site (as defined in section 4(e)(4) of this rule), the operator shall maintain on-site or have access to the following documentation and provide it to the division upon request:

- (1) Maps or drawing of the project, including both existing and proposed facility information.
- (2) Information regarding type, size, and length of pipe and appurtenances to be used for the installation.
- (3) Information sufficient to establish that the operator or its contractor appropriately notified Indiana 811 of the construction.
- (4) As-built drawings of the construction project for any section of facilities placed in service or facilities installed.
- (5) Installation location of valves and pertinent information to include but not be limited to:
  - (A) drawings with measurements;
  - (B) types of valves; or
  - (C) manufacturer of valves.
- (6) Construction scope of work, which may include:
  - (A) a project overview, with a brief statement describing the purpose of the project; or
  - (B) a project timeline, with the anticipated duration of the project, and proposed start date, if known.
- (7) Requirements and records for proposed and actual pressure tests, including maximum allowable operating pressure (MAOP) requirements.
- (8) Evidence that corrosion control impacts have been reviewed.
- (9) Upon request by the division, the operator shall provide evidence that the operator is complying with its distribution integrity management program (DIMP) plan in accordance with gaining information over time through normal activities conducted on a pipeline (49 CFR 192.1007(a)(3)).

# Most requested information for Construction Inspections



- List of employees onsite and contractors
- Work order #
- Indiana 811 dig ticket
- Address of jobsite
- Brief overview of this job (example:  $\frac{3}{4}$ " service electrofused to 4" main with  $\frac{3}{4}$ " efv)
- Operator qualifications for all covered tasks being performed during this dig site.
  - Who is performing the task
  - need their KNT & PEF dates

# New Construction Inspection Form



## Inspected Items:

- Work Order Packet Information
- General Construction
- Service Line Installation
- Steel/Plastic Main Installation
- Welding
- Corrosion
- Pressure Testing
- Operator Qualification Section

# 170 IAC 5-3-2.2 Calibration of Instruments



Sec. 2.2.

(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.



# 170 IAC 5-3-2.2 Calibration of Instruments

As mentioned earlier today... Calibration is KEY.

Example list of items that should be calibrated on the job site:

- Pressure Test gauges
- CGI's/Gas Detectors
- Fusion Equipment
- Pyrometers
- Multimeters



# CGI Calibration



# Fusion Equipment





# Major Points from the Inspection Form

## 49 CFR 192.3 Definitions

**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.

### **192.1007 What are the required elements of an integrity management plan?**

A written integrity management plan must contain procedures for developing and implementing the following elements:

- (a) Knowledge. An *operator* must demonstrate an understanding of its *gas* distribution system developed from reasonably available information.
  - (1) Identify the characteristics of the pipeline's design and operations and the environmental factors that are necessary to assess the applicable threats and risks to its gas distribution *pipeline*.
  - (2) Consider the information gained from past design, operations, and maintenance.
  - (3) Identify additional information needed and provide a plan for gaining that information over time through normal activities conducted on the pipeline (for example, design, construction, operations or maintenance activities).
  - (4) Develop and implement a process by which the *IM program* will be reviewed periodically and refined and improved as needed.
  - (5) Provide for the capture and retention of data on any new pipeline installed. The data must include, at a minimum, the location where the new pipeline is installed and the material of which it is constructed.



# Connection to DIMP

192.1007(a)(5):

Is operator capturing all information off pipe components?  
(Should have size and type of fitting, manufacture, ASTM standard, SDR value, manufacture date, lot number)

Coupling:

Tee:

EFV:

Pipe:

Valve:

Other:

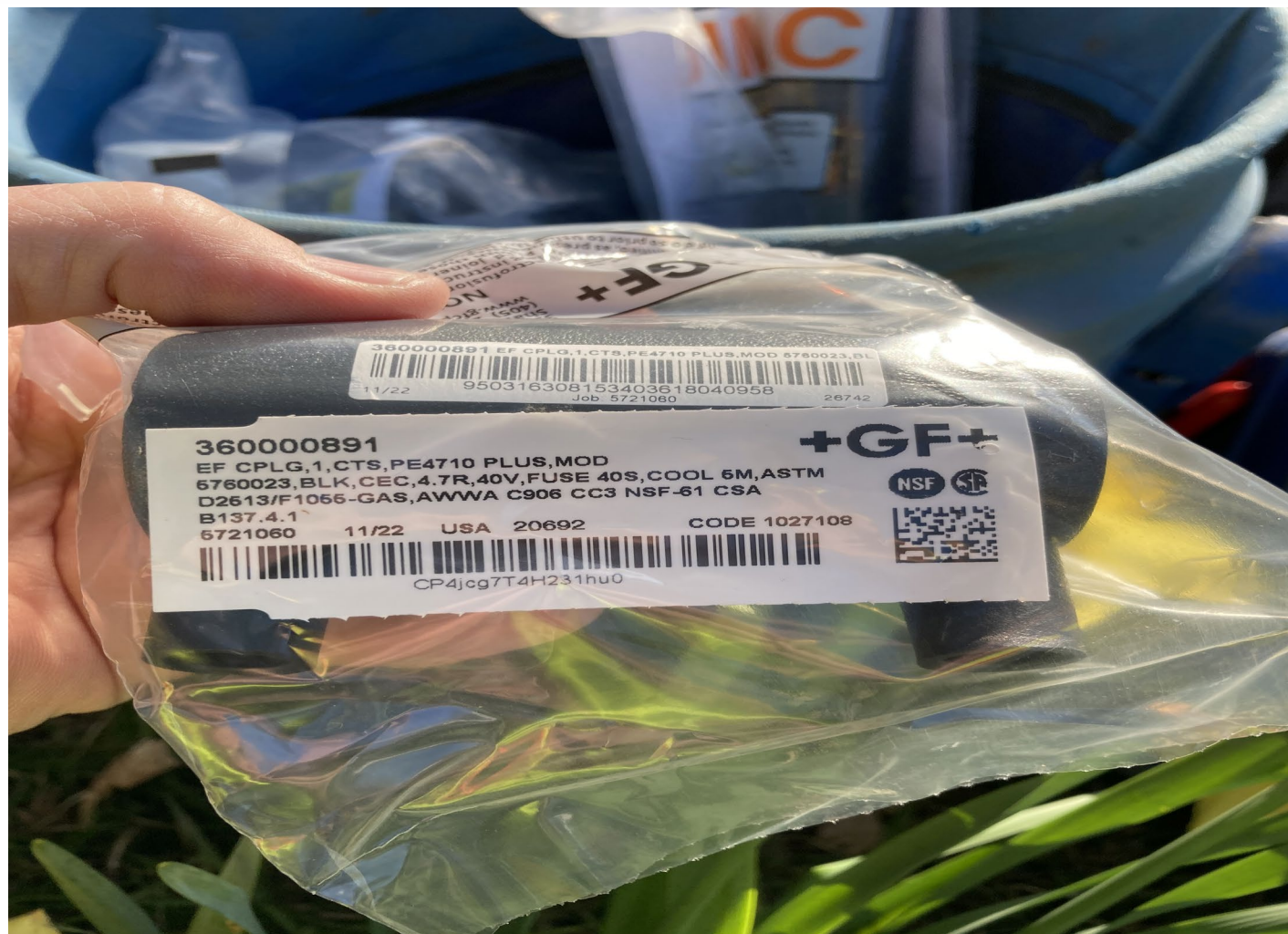
# Fittings



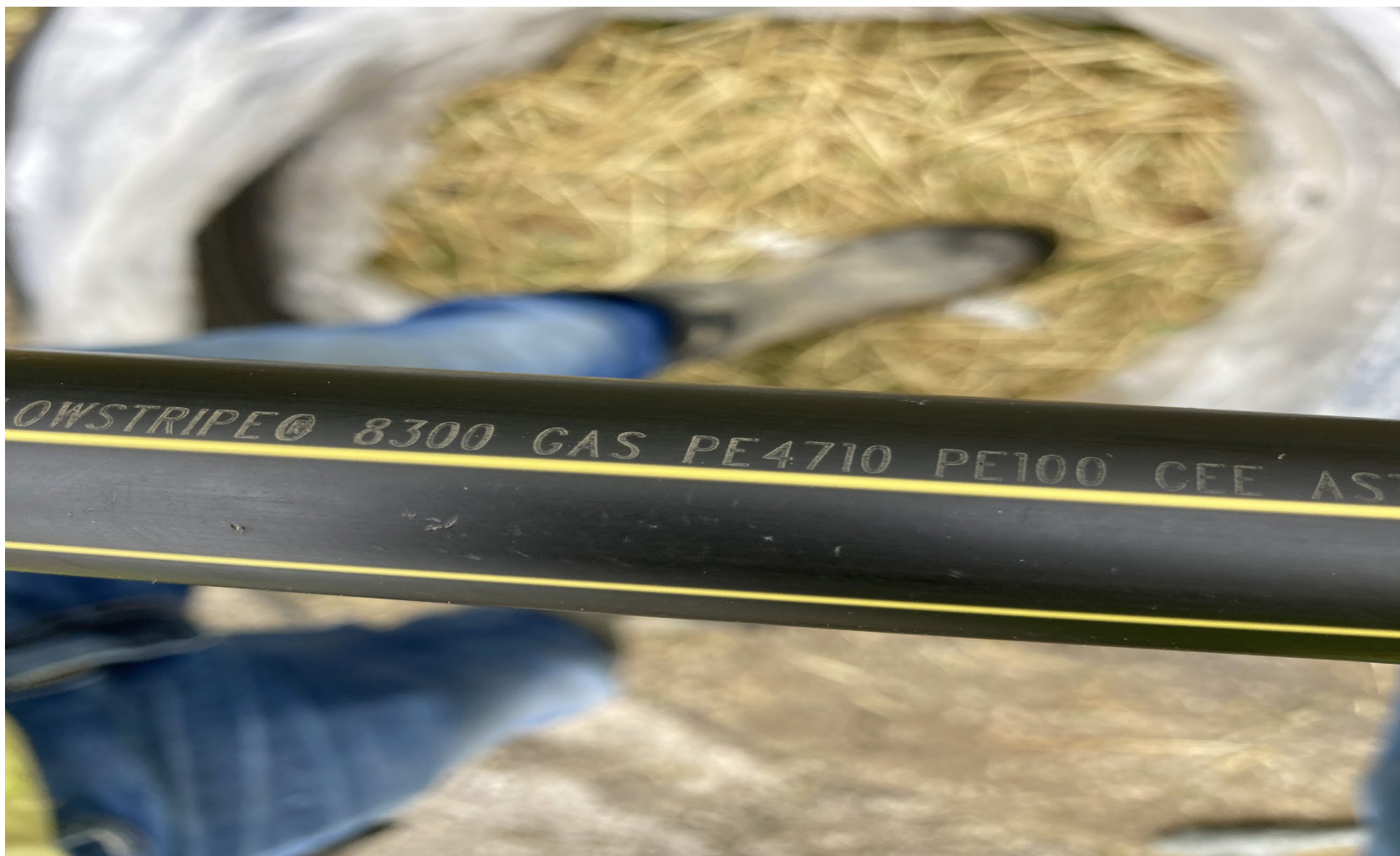
# Riser



# Coupling



# Pipe

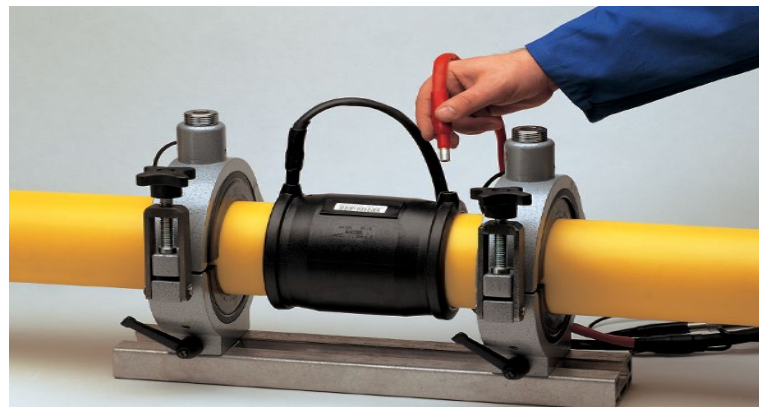




# Major Points from the Inspection Form

192.281(c): Plastic heating/fusing equipment in good condition?

- Last Calibration Date:
- Fusion machine manufacture and make:
- Serial Number:



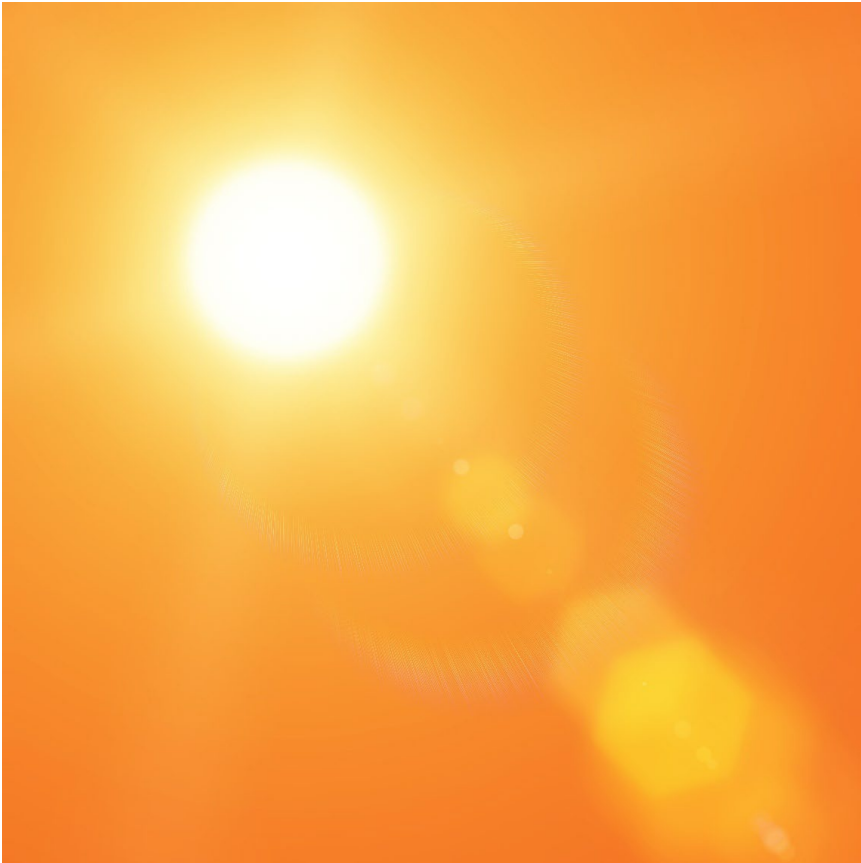
# Major Points from the Inspection Form



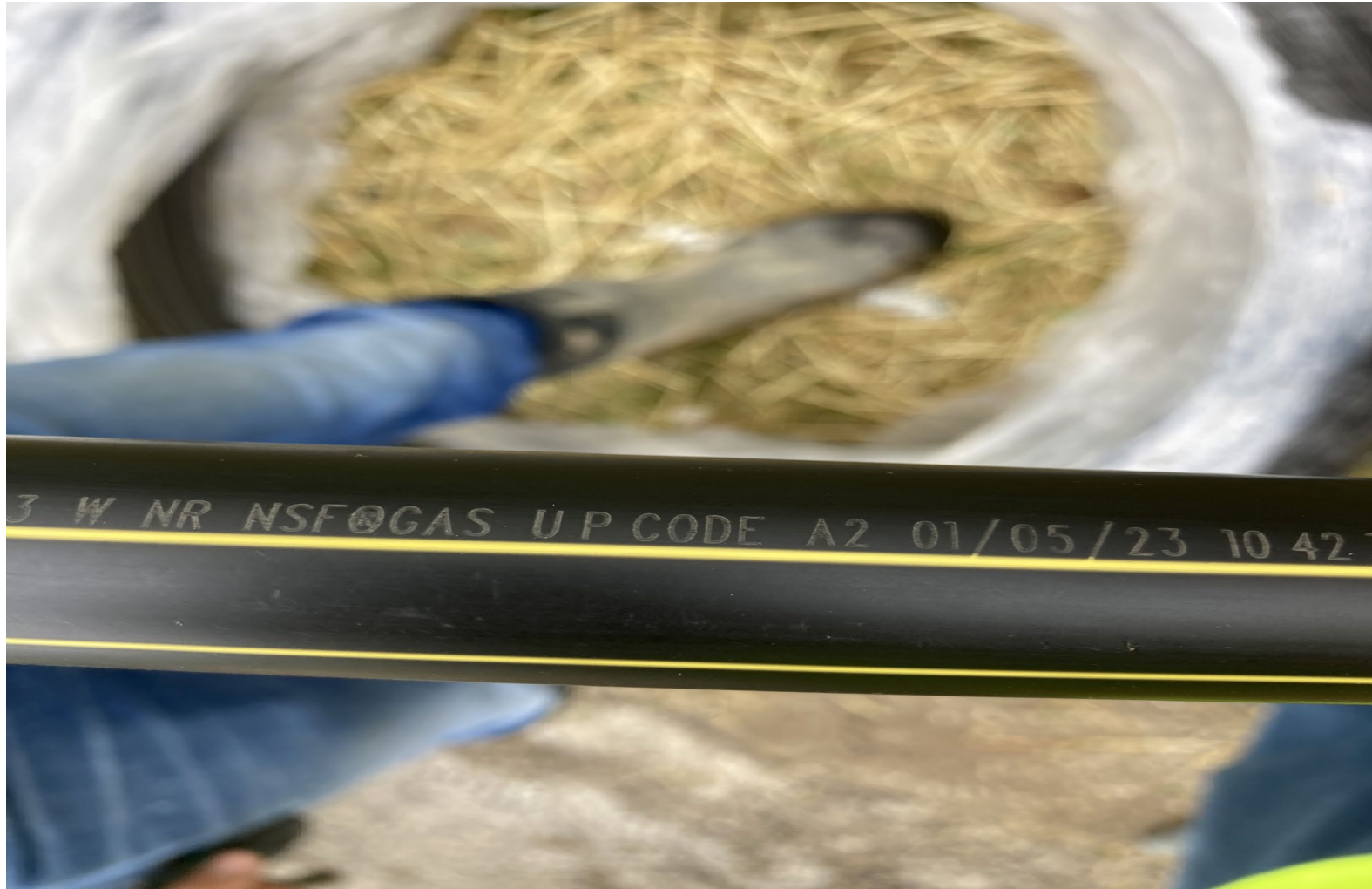
192.69 reference ASTM D2513.18  
section 4.10:

The Operator must be able to demonstrate that the cumulative UV exposure of the pipe does not exceed the manufacturer's recommended maximum period of exposure (3 years for all colors except black, 10 years for black).

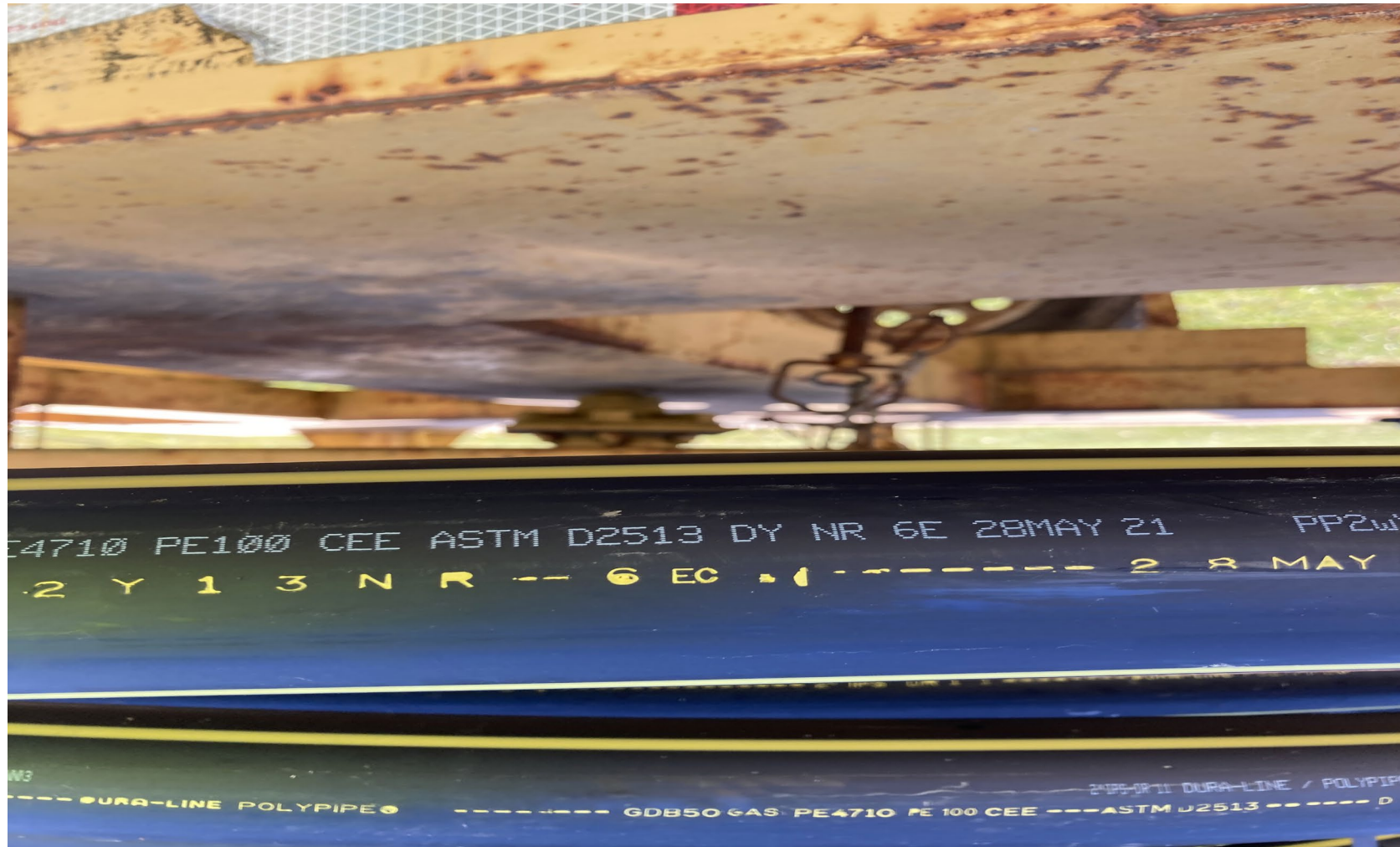
*(Check the date on the plastic pipe)*



# Pipe Manufacturer date



# Pipe Manufacturer date



# Major Points from the Inspection Form



Welding Procedure and Qualifications

Welding Procedure and Qualifications

Welding Procedure and Qualifications

Welding Procedure and Qualifications

Welding Procedure and Qualifications



# Which Welding Procedure?



Which welding procedure are you following?

- Welding procedure is a qualified welding procedure?
- Do you have the PDQR for the procedure?
- Do you have the welding speed ?
- Has the operator documented the welding direction?



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# 192.627: Tapping pipelines under pressure



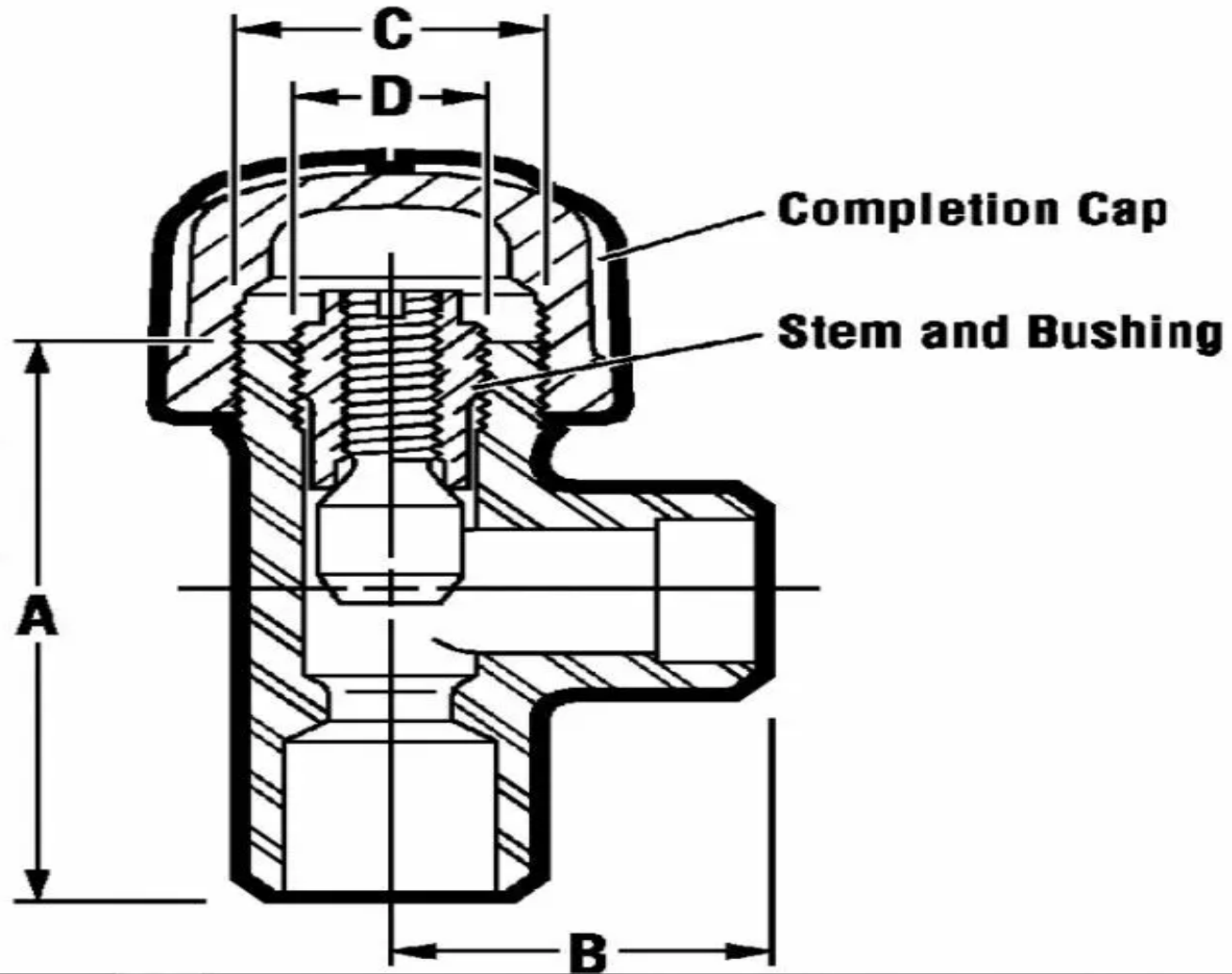
Each tap made on a *pipeline* under *pressure* must be performed by a crew qualified to make *hot taps*.

- Need to know who made the tap
- OQ for the person or persons making the tap

All taps on pipelines under pressure:

- Plastic saddle fusion taps (built in cutter)
- Small self tapping tees on steel
- Large taps (without built in cutter)
- Large plastic taps used in stoppering a pipeline

# Taps



# Taps



# Tapping Equipment



# Tapping Equipment



# Tapping Equipment



# Plastic Tapping Tees



# Plastic Tapping Tees



# Plastic Tapping Tees



# Plastic Taps & Equipment



# Pressure Testing



170 IAC 5-3-2

Please refer to Subparts J & K

192.517 Records:

- Operator Name
- Test Medium
- Test Pressure
- Test duration
- Pressure recording charts
- significant elevation variations
- leaks and failures

# 192.725: Test requirements for reinstating service lines



(a) Except as provided in paragraph (b) of this section, each disconnected service line must be tested in the same manner as a new service line, before being reinstated.

(b) Each service line temporarily disconnected from the main must be tested from the point of disconnection to the service line valve in the same manner as a new service line, before reconnecting. However, if provisions are made to maintain continuous service, such as by installation of a bypass, any part of the original service line used to maintain continuous service need not be tested.

# 170 IAC 5-3-2-2.1



An operator shall maintain a system of records of its physical plant. These shall include records and maps of its active physical plant in use and be in a form as to facilitate the operation and maintenance of the plant in a safe manner.

Included on the maps and records shall be the information and location, if applicable, regarding:

- (1) mains
- (2) services
- (3) sizes
- (4) materials
- (5) pressure ranges
- (6) mains emergency valves
- (7) regulator stations
- (8) rectifiers
- (9) farm taps
- (10) critical bonds



# 170 IAC 5-3-2.1



- (b) An operator that does not utilize geographic information systems (GIS) or electronic maps shall, at a minimum, review its maps and records once each calendar year at intervals not exceeding fifteen (15) months. Documentation shall be made available for review by the division.
- (c) An operator that utilizes GIS or electronic maps shall reflect changes to the maps on an on-going basis. An operator shall maintain documentation of electronic updates that occur within their GIS.

Expectation from PSD is 3 months or less.

# Final Thoughts on Construction



## General Construction Comments:

- **We are not there to interfere with construction!**
- Will observe construction activities.
- Will review documents as needed.
- May request OQ documentation and calibration records.
- Perform a brief exit interview to discuss findings.
- Any concerns or probable violations will be documented and sent in a letter.

# Most requested information for Construction Inspections



- **Calibration of all instruments:**

- CGI

- Pressure Gauge

- Fusion equipment

- Digital Multi Meter

- **Pipe and Components:**

- Size

- Type of fitting

- Manufacture

- ASTM standard

- SDR value

- Manufacture date

- Lot number

- **Operator Qualifications**

# Most common violations during construction inspections



**192.1007(a)** - Knowledge. An operator must demonstrate an understanding of its gas distribution system developed from reasonably available information.

(5) Provide for the capture and retention of data on any new pipeline installed. The data must include, at a minimum, the location where the new pipeline is installed and the material of which it is constructed.

**192.605** — Failure to Follow Procedures

**192.805** — Unqualified Individual



Pipeline Safety Division would like to see operators report upcoming construction, even if it does not fit the criteria of the code mentioned previously.

We are not there to stop construction or interfere with progress.

We want to partner with operators to observe the pipeline work being performed in the State of Indiana.



Questions

Answers

Depends

# Contact Us



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