Construction

- Why do you need a new pipeline?
- Design
- Specification for the construction
- Where is it starting..where is it going?
- ROW / Permits
- Who will build it? Who will perform the task.
- Bidding & Contracts
- Work Performance Bond
- Post Construction meetings
- Construction and inspection
- Testing of pipeline and components (document)
- Placing into operation.

Construction and Inspections

§192.3 Definitions: Pipeline and Pipeline Facilities

SubPart G - General Construction Requirements for Transmission Lines and Mains

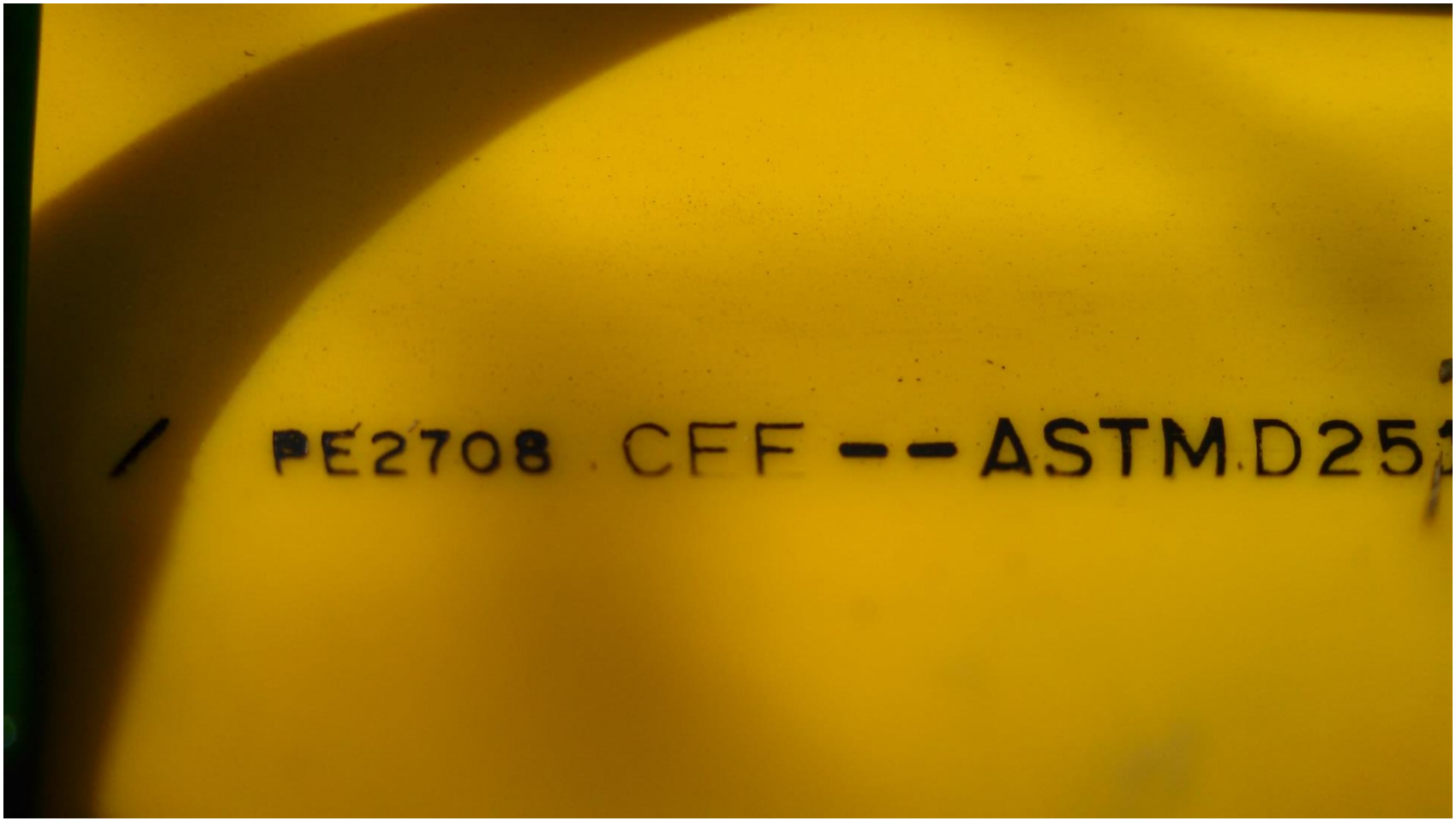
§192.303

- **Compliance with specifications or standards.**

- Each transmission line or main must be constructed in accordance with comprehensive written specifications or standards that are consistent with this part.

  – In addition you are required to follow your O&M for all other Part 192 requirements for tasks performed upon the pipeline.

CFF or CEE



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

- A written integrity management plan [(applicable only to Subpart P) - IM Plan means a written explanation of the mechanisms or procedures the operator will use to implement its integrity management program and to ensure compliance with this subpart] must contain procedures for developing and implementing the following elements:

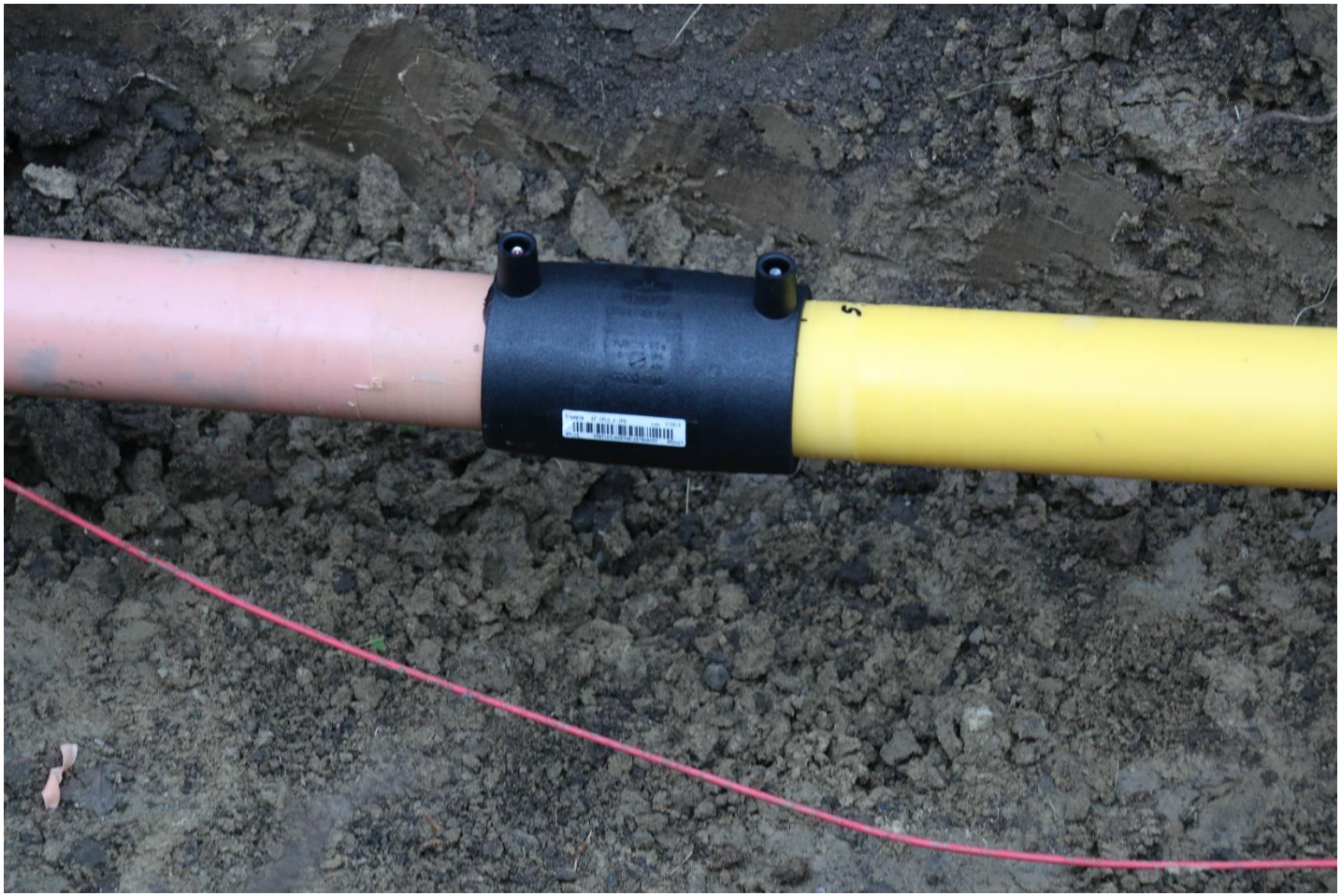
Live with it.

Knowledge of System

- (a) Knowledge. An operator must demonstrate an understanding of its 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.


2" IPS DR 11 DRISCOPLEX® 6500 GAS PE2406/2708 CEE ASTM D2513 PR Ø7 P NR NSF®GAS U.P.CODE Ø8/Ø9/16 Ø6:51 Made in the USA PE3r465

What is there



§192.305

- **Inspection: General.**

Each transmission line or main must be inspected to ensure that it is constructed in accordance with this part.

- Inspection personnel
  - knowledgeable by training or experience
  - ensure that all work conforms
  - have the authority to order the repair or the removal and replacement
  - Stop Work

What about the As-Built Map?

Maps help

Guide material

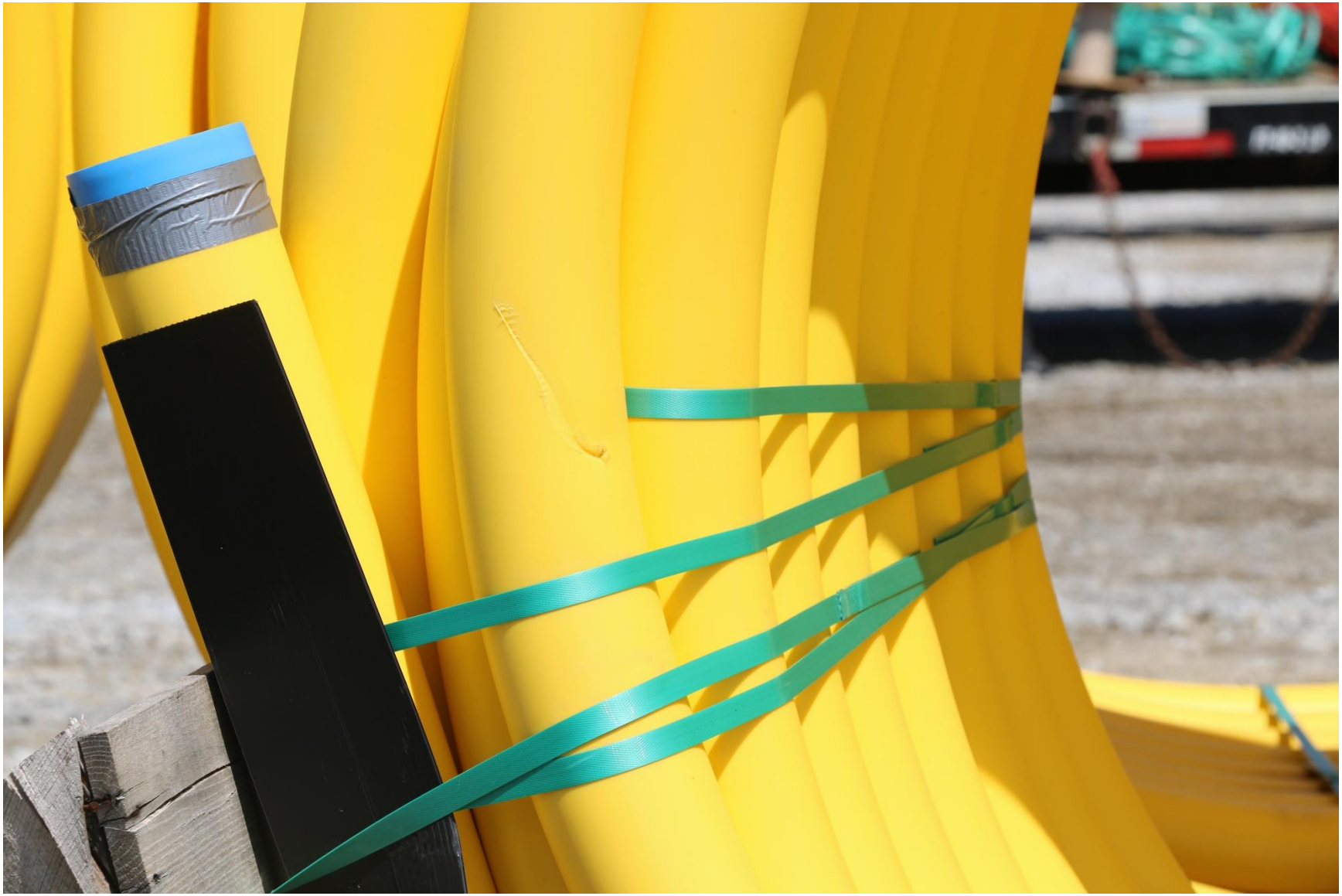
- **Each operator should provide inspection by personnel who are knowledgeable by training or experience.**
- **Inspection should ensure that all work conforms to the operator's specifications and to applicable federal, state, and local requirements.**
- **The inspector should have the authority to order the repair or the removal and replacement of any component that fails to meet the above requirements.**

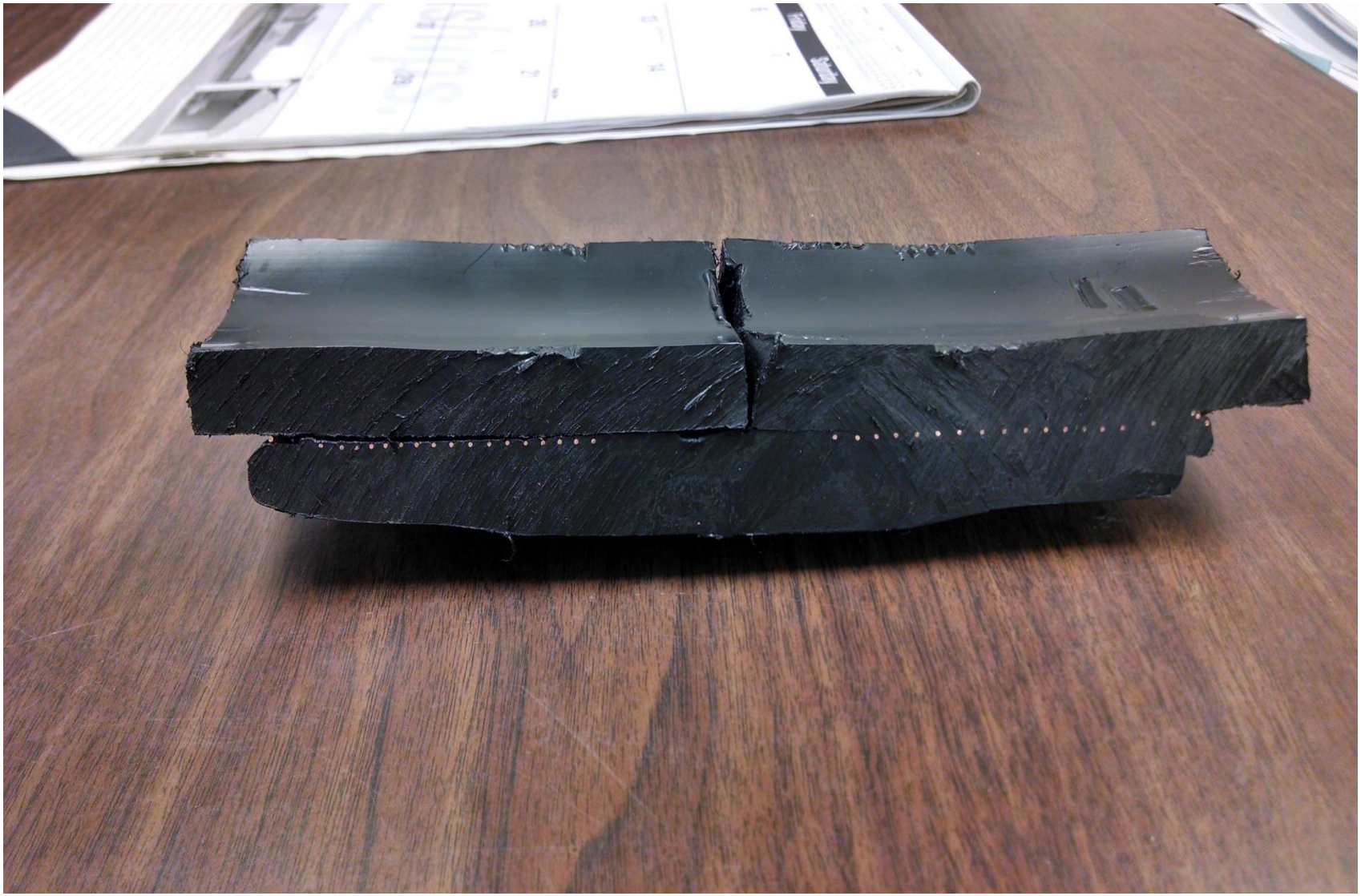
192.307 Inspection of Materials

Each length of pipe and each other component must be visually inspected at the site of installation to ensure that it has not sustained any visually determinable damage that could impair its serviceability.

- Accounting
- Compliance with specifications/Standards
- Workmanship
- Field Installation

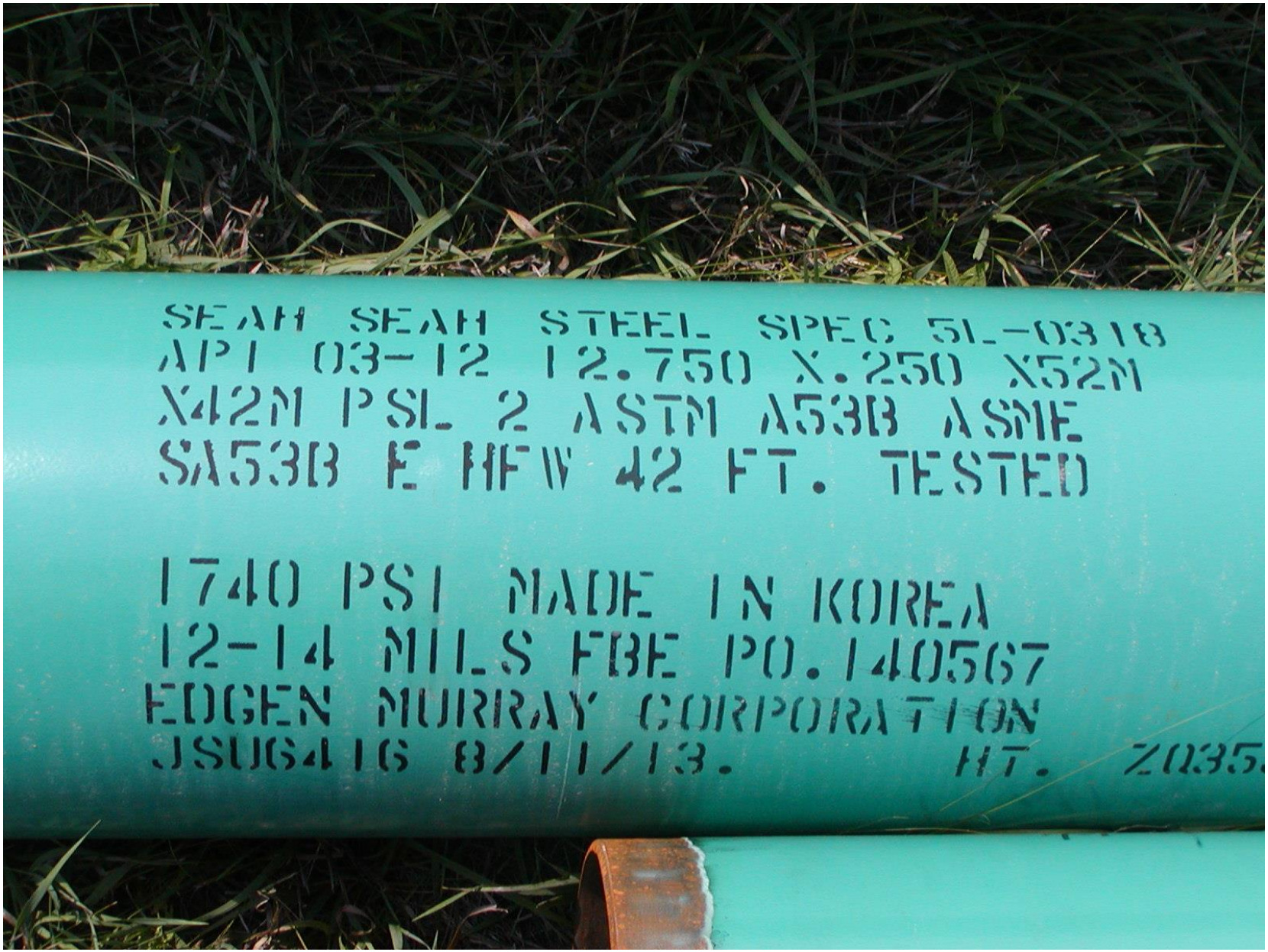

Vermeer





8STD
MADE IN USA

Crack in weld


SEAH SEAH STEEL SPEC 5L-0318
API 03-12 12.750 X.250 X52M
X42M PSL 2 ASTM A53B ASME
SA53B E HFW 42 FT. TESTED
1740 PSI MADE IN KOREA
12-14 MILS FBE PO.140567
EDGEN MURRAY CORPORATION
JSUG416 8/11/13. HT. Z035

Inspecting the pipeline construction

- How will this be accomplished
- Make sure all parties know what the rules are

- Make sure everyone knows who is in charge

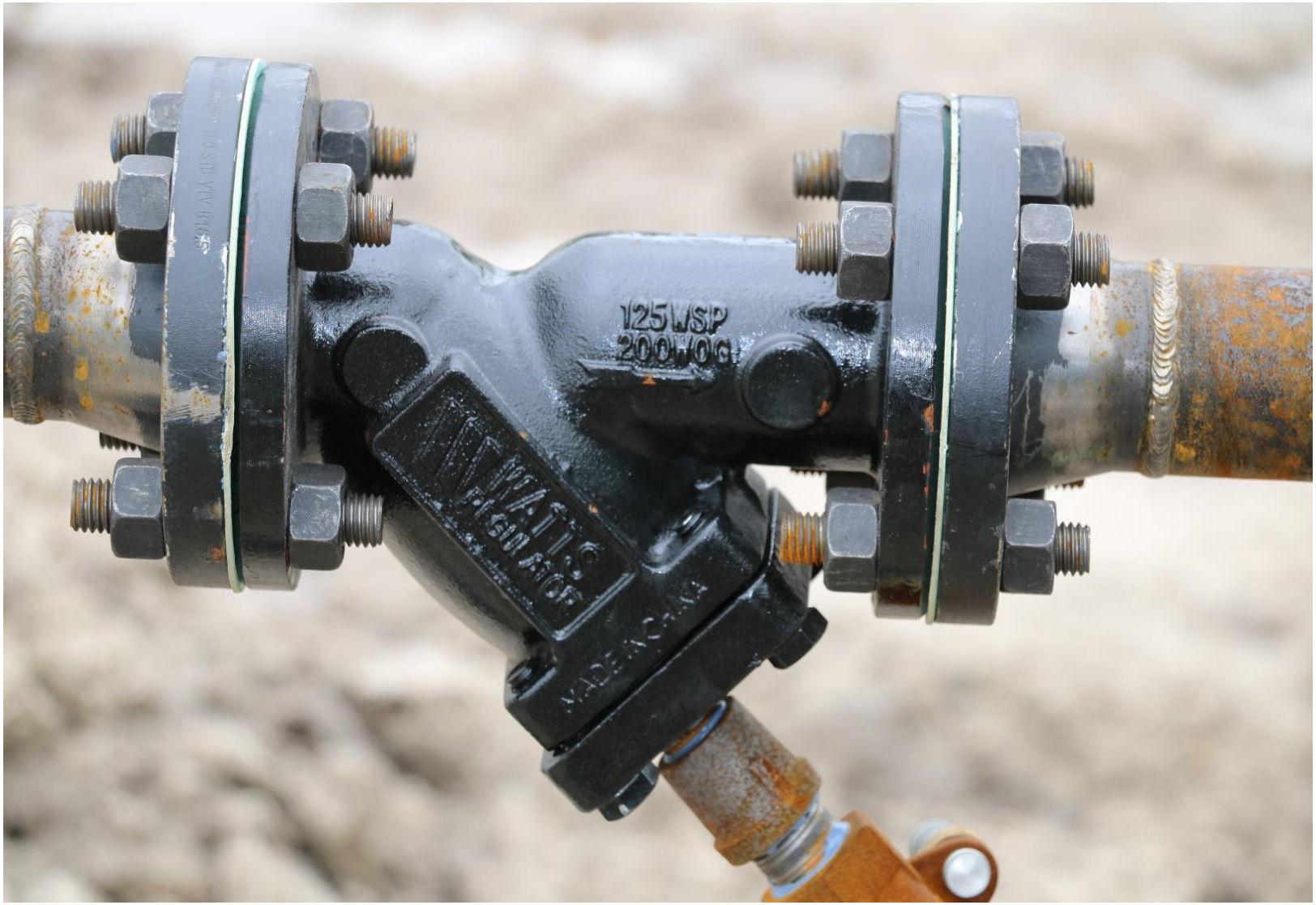
- Inspector should/must have the authority to make sure work and materials are compliant with 192, and the gas operator O&M in addition the ability to stop work if needed.

But that wasn’t in the contract?

- Stop work …. Resolve the issue
- Will it effect the operation or maintenance of the pipeline.
- What is the issue…..different component than what was specified.
- Is it a performance issue……(qualification)
- Is it an application issue…….(training)

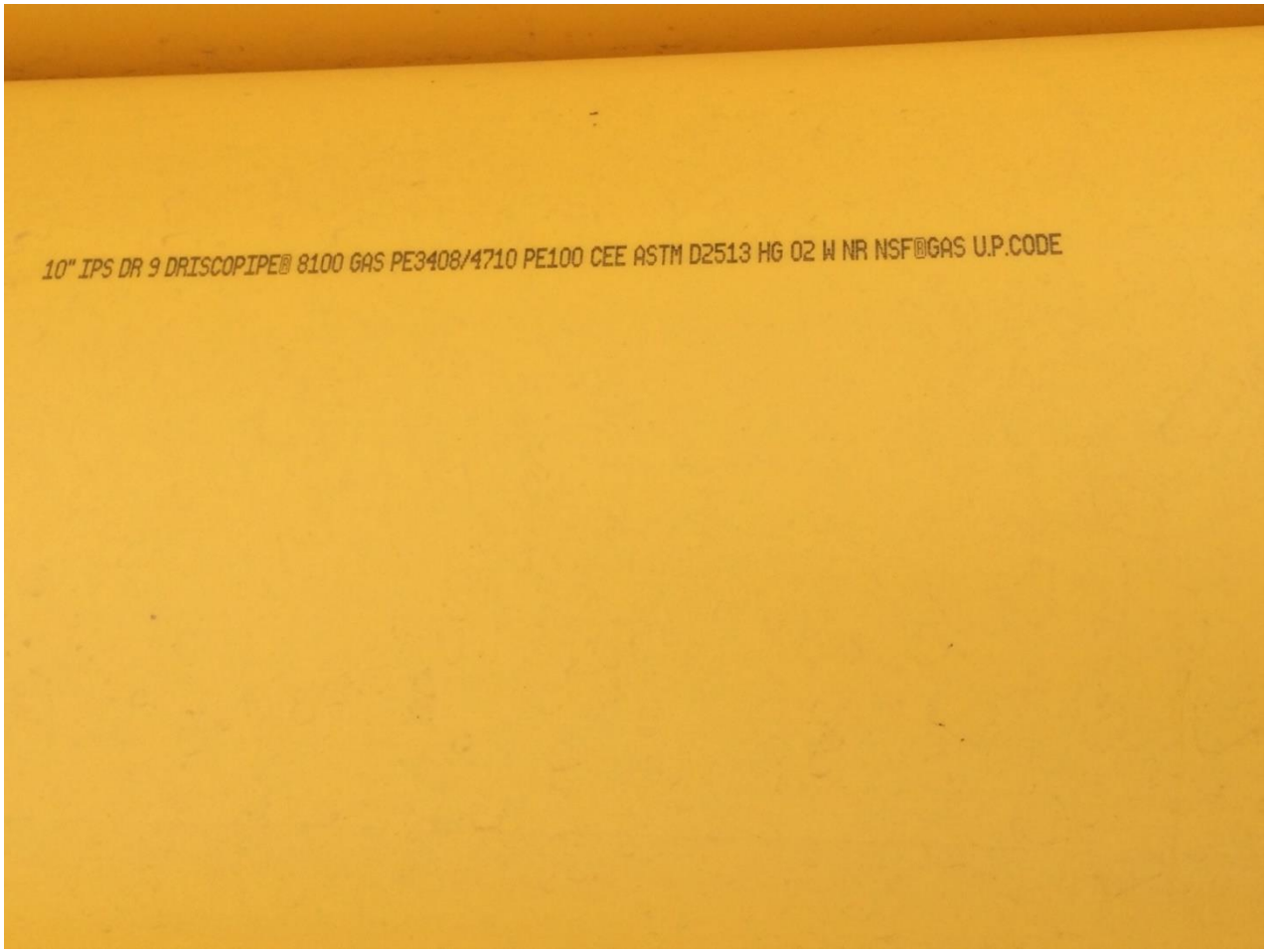
- Clean-up and restoration of ROW

2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21


125WSP
200WOG
WATTS
REGULATOR

§192.305

- This section also implies that the **operator** will
  - assemble and retain all necessary records to support compliance with Part 192
    - Construction documents
    - OQ documents
    - Compliance with D&A testing
    - Mapping


10" IPS DR 9 DRISCOPIPE® 8100 GAS PE3408/4710 PE100 CEE ASTM D2513 HG 02 W NR NSF®GAS U.P.CODE

Construction Documents

- List of materials used to construct pipeline.
  - Pipe:
  - Fittings:
  - Valves
  - Flanges
  - EFV
  - Tracer wire
  - Anodes
  - Test Stations
  - Pressure Regulating/Limiting devices

Tracer wire

- Are there checks to make sure the tracer wire is electrically continuous?
- Has it been installed.
- Steel pipe, coating check, visual & electronic

OQ Documentation

- OQ Program (Who's)
- Document supporting acceptance of another OQ Program
- Individual OQ document (for each Covered Task) including excavation
- Procedure for task

The individual needs to be qualified for the task or under direct supervision of a qualified individual.

Application of coatings

Coatings

Covered Task

- Want is the task?
- Is it a covered task? 4 part test
- Is there a procedure for the task

- 192.605(a) (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.

Repair

Operator Qualification Doc's

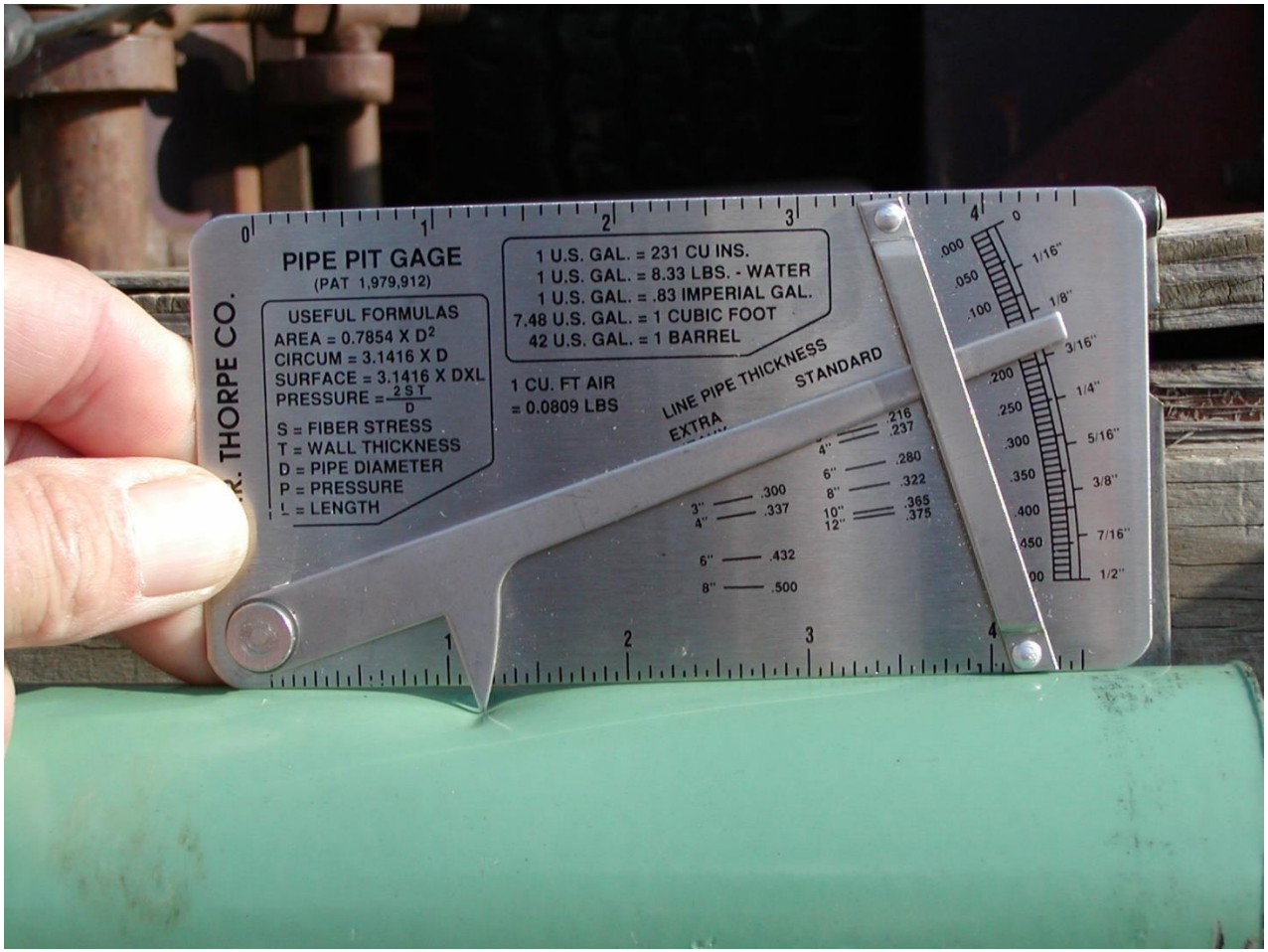
- Qualification records shall include:
- (1) Identification of qualified individual(s);
- (2) Identification of the covered tasks the individual is qualified to perform;
- (3) Date(s) of current qualification; and
- (4) Qualification method(s).

Repair of Pipe 309 & 311

- Each imperfection or damage that impairs the serviceability of a length of pipe must be repaired or removed. This would be any item that reduces:
- (1) The minimum thickness required by the tolerances in the specification to which the pipe was manufactured; or
- (2) the design pressure of the pipeline.
- Dent, dig, gouge, groove, arc burn or elongation

How big / how deep

requirements



Construction

- Permits
- One Call Tickets
- Excavation

Pressure testing

- Each segment main or service
- Each service tap (prior to tapping)
- Pre-tested pipe in stock
- Soap final tie in weld(s)

- **§192.503 General requirements.**
- (a) No person may operate a new segment of or return to service a segment of pipeline that has been relocated or replaced, until-
- (1) It has been tested in accordance with this subpart and §192.619 to substantiate the maximum allowable operating pressure and
- (2) Each potentially hazardous leak has been located and eliminated.

- Also see 192.505, through 192.513 and 192.619

Gauges & Documents

Pressure Testing

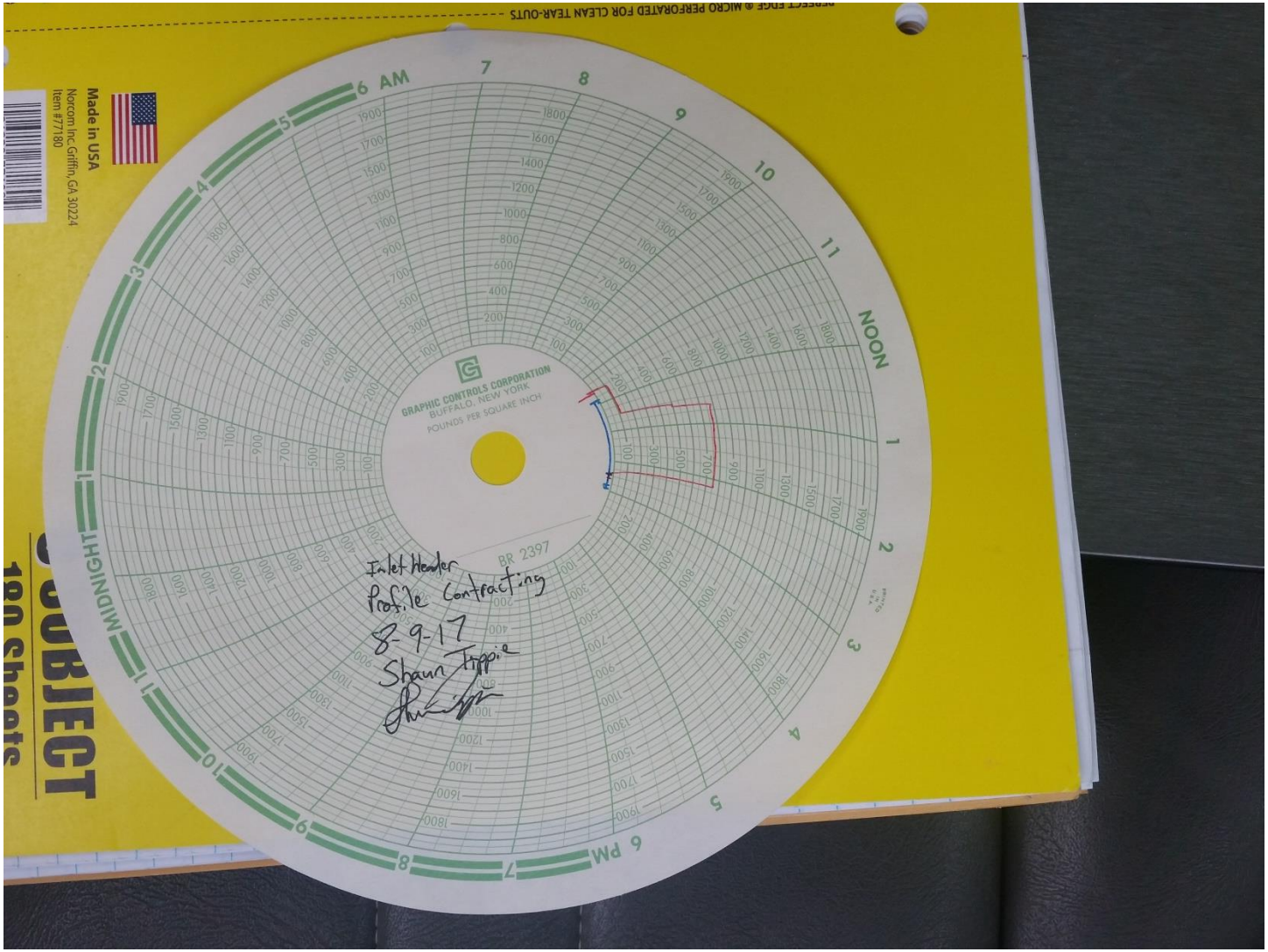
- **How much pressure and for what deration?**
- Procedures need to be in place……
- Is this a main or service?
- Is this a fabricated unit or short section of pipe, for which a post installation test is impractical. (pre-tested pipe for repairs)?
- What will be the operating pressure?
- What is the volume within the segment of pipe?

How Long?

- Duration determined by volumetric content of test section, test medium, test pressure, thermal effects, leak criteria, and instrumentation in order to ensure discovery of all potentially hazardous leaks. See 2 of the guide material under §192.509 and 4 of the guide material under §192.513.

Pressure test document

- **§192.517 Records.**
- (a) Each operator shall make, and retain for the useful life of the pipeline, a record of each test performed under §§ 192.505 and 192.507. The record must contain at least the following information:
- (1) The operator's name, the name of the operator's employee responsible for making the test, and the name of any test company used.
- (2) Test medium used.
- (3) Test pressure [(expressed in pounds per square inch above atmospheric pressure, i.e., gage, pressure (abbreviation psig), unless otherwise stated). See Maximum allowable test pressure, Overpressure protection, Pressure limiting station, Pressure regulating station, Pressure relief station, Standup pressure test. (Guide definition)].
- (4) Test duration.
- (5) Pressure recording charts, or other record of pressure readings.
- (6) Elevation variations, whenever significant for the particular test.
- (7) Leaks and failures noted and their disposition.
- (b) Each operator must maintain a record of each test required by §§192.509, 192.511, and 192.513 for at least 5 years.


Made in USA
Norcom Inc. Griffin, GA 30224
Item #77180
GRAPHIC CONTROLS CORPORATION
BUFFALO, NEW YORK
POUNDS PER SQUARE INCH
BR 2397
Inlet Header
Profile Contracting
8-9-17
Shaun Trippie
6 AM
NOON
6 PM
MIDNIGHT

Every Piece & Every Activity

- Is there a process document (Procedure)
- Is it a pipeline task?
- Your responsibility is make sure the pipeline is installed and placed into operation while being compliant with part 192.

- You will live with this pipeline for rest of it’s life!