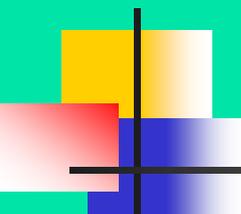


# OO Inspection Protocols, Applications & Results

For the Operator Qualification Rules  
49 CFR Part 192 (Subpart N)





# Why is OQ so Important???

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*Recent Headlines:*

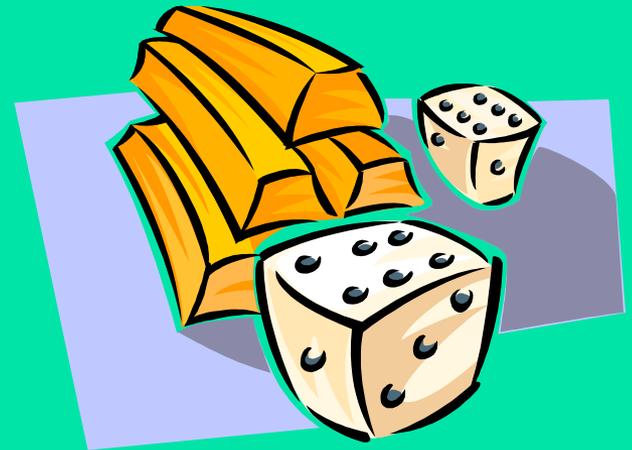
**“Supervisors sentenced for  
deadly 1999 pipeline blast”**

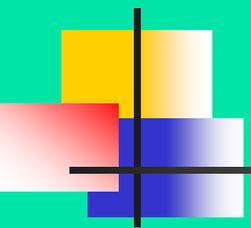
*[relating to the Bellingham, WA liquid Pipeline Accident]*



**“Rescue Workers Sue Gas**

**Company”** *relating to the  
Carlsbad, NM natural gas  
Pipeline Incident]*

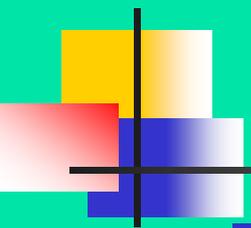




# Why is OQ so Important???

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- The National Transportation Safety Board and Congress are Requiring both Operators and OPS to Achieve a Higher Level of Safety Performance –
- Structured Inspection Protocols permit OPS to Evaluate and Compare Operator's OQ Programs Fairly and Impartially

- 
- You've carefully thought out all the angles.
- 

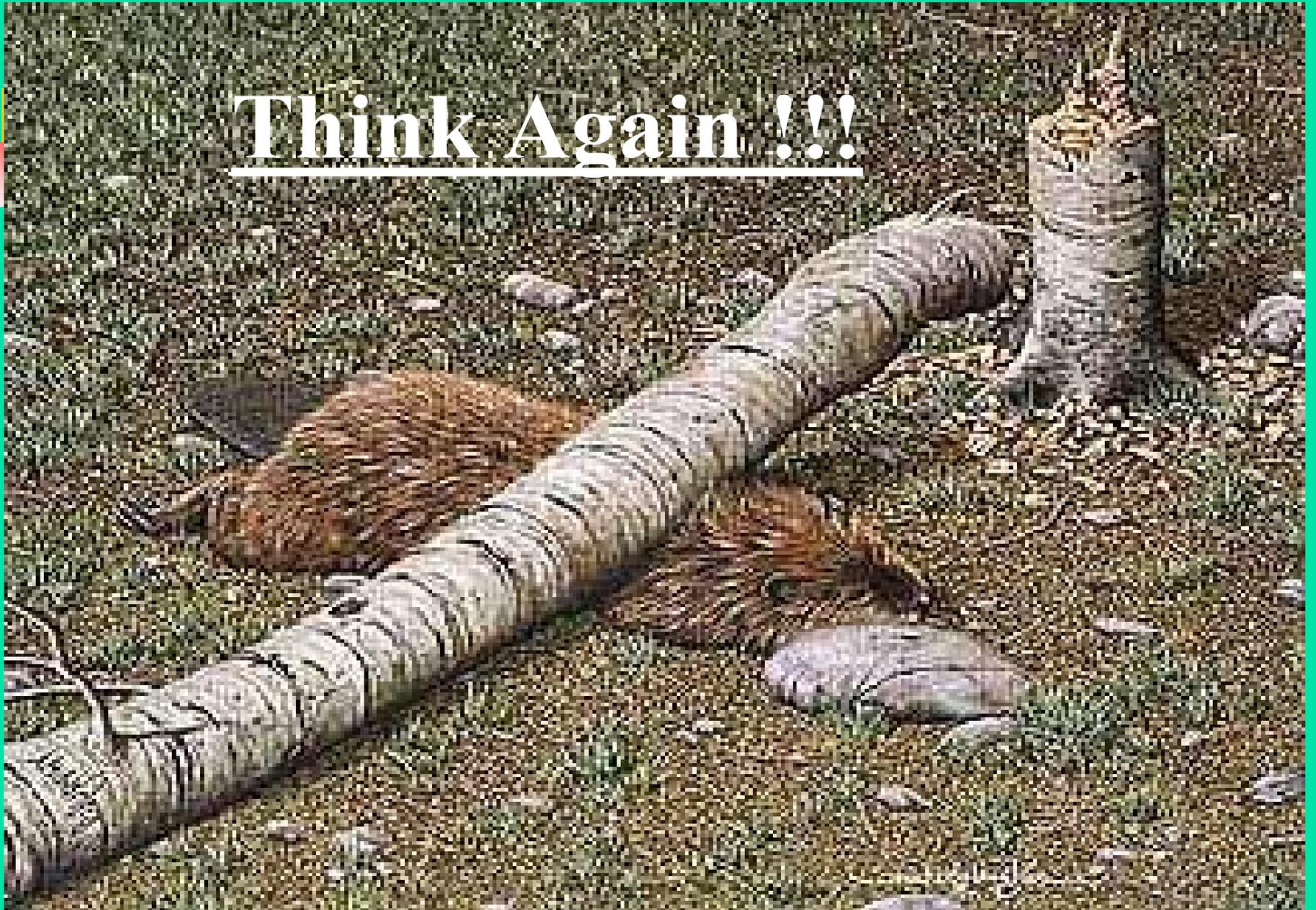
- You've done it a thousand times.

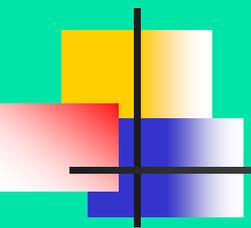
- It comes naturally to you.

- You know what you're doing, its what you've been trained to do your whole life.

- Nothing could possibly go wrong, right ?

Think Again !!!

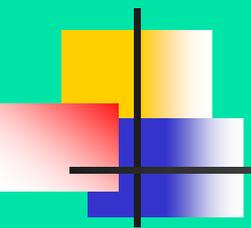




# Presentation Outline

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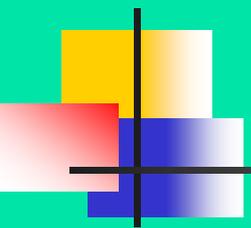
- Review History ~ Anticipate Future
- Approach to Initial Inspections
- Discuss Protocols Approach
- Summarize Findings from Initial Inspections



# "OQ-1" History

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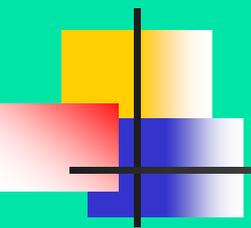
- **Negotiated Rulemaking** Produced Rules
- Rules Published **08/27/99** (Required all Individuals Performing **Covered Tasks** to be Qualified by **10/28/02**)
- NTSB Announced that Rule was **Insufficient** to Support Satisfactory Closure of OQ Issue
- OPS Initiated **"OQ-2"**



# "OQ-2" History

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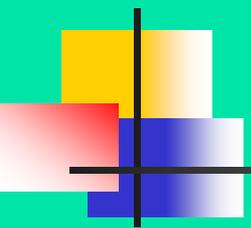
- **OQ-2** Included:
  - Revisiting OQ Expectations
  - Preparation of Inspection Protocols
  - Development of FAQ's
  - Communication through Web Site



# OQ-2 History (Cont'd)

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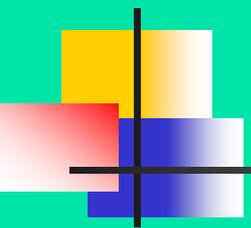
- **OQ-2** Led to:
  - Industry Concerns Re: Expansion of the Rule
  - Clarification of Related Issues
  - Series of Public Meetings to Identify and Discuss Issues



# OQ-2 History (Cont'd)

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- Congress Weighs-In (PSIA-2002)
  - OQ Standards and Criteria Must be in Place by **12/17/03**
  - Regulators Must Complete Initial Inspections of all Operators by **12/17/05**
  - Pilot Program for Certification of Pipeline Controllers must be Completed by **12/17/05**



# OQ-2 History (Cont'd)

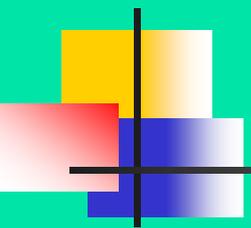
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- Congress Weighs-In (PSIA-2002)
  - Operators must provide **TRAINING**, as appropriate, to provide individuals with necessary knowledge and skills
  - Failure of OPS to act does not excuse Operators from requirement to comply
  - **"Significant"** modifications to the Operator's OQ program must be communicated to OPS

# Public Meetings Conducted OQ-2 History (Cont'd)

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- January 2003  
San Antonio
- February 2003  
Houston
- March 2003  
Phoenix
- April 2003  
Atlanta
- Industry raised some concerns in 1<sup>st</sup> meeting that have been collected into "Thirteen OQ Implementation Issues"
- Subsequent meetings have resolved most; rest to be addressed in a new consensus "standard"

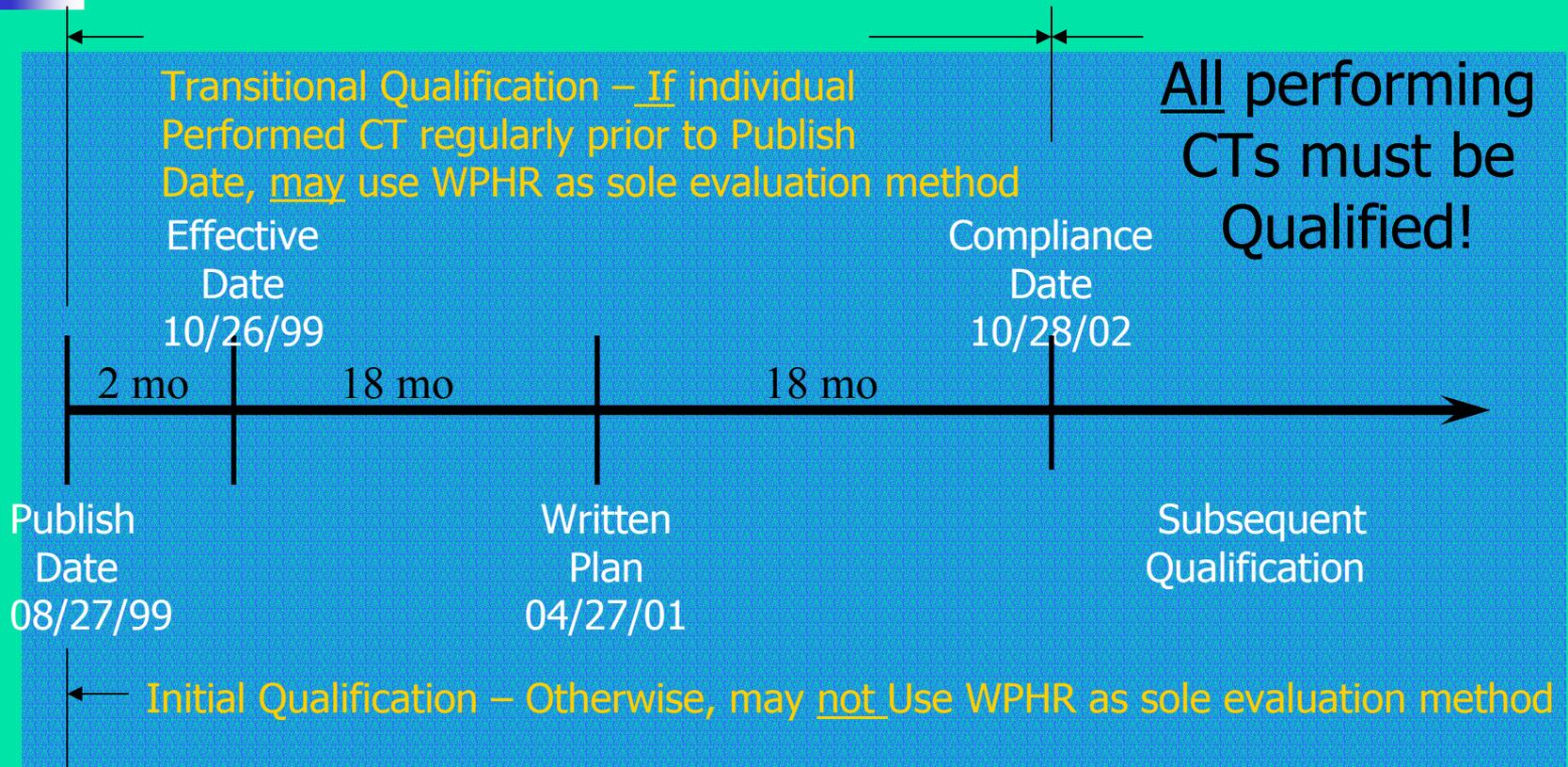


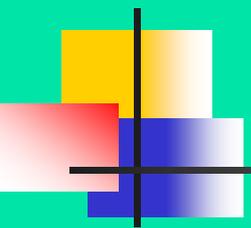
# OQ-2 History (Cont'd)

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- Post-Public Meeting Events
  - ASME B31Q Initiated
  - Inspections Resumed Based on Updated Protocols (Reflecting Resolution of Issues)

# Qualification Timeline





# Problem: Word Definitions

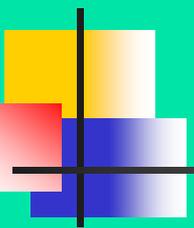
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## 49 CFR Part 192 Subpart N Qualification of Pipeline Personnel

Sec. 192.801 Scope. (a) This subpart prescribes the minimum requirements for **operator** qualification of **individuals performing** on a **pipeline facility**.

(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**.



# Problem: Word Definitions

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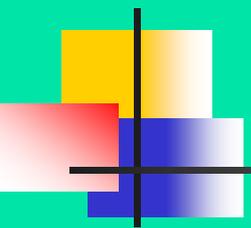
## Sec. 192.803 Definitions.

***Abnormal operating condition*** means a condition identified by the **operator** that may indicate a malfunction of a component or deviation from normal **operations** that may:

- (a) Indicate a condition exceeding design limits; or
- (b) Result in a hazard(s) to **persons**, property, or the environment.

***Evaluation*** means a **process**, established and documented by the **operator**, to **determine** an **individual's ability** to **perform** a **covered task** by any of the following:

- (a) **Written** examination;
- (b) Oral examination;
- (c) Work **performance** history review;
- (d) **Observation** during:
  - (1) **Performance** on the job,
  - (2) On the job **training**, or
  - (3) Simulations;
- (e) Other forms of assessment.

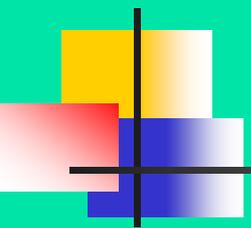


# Problem: Word Definitions

---

**Qualified** means that an **individual** has been evaluated and can:

- (a) **Perform** assigned **covered tasks**; and
- (b) Recognize and react to **abnormal operating conditions**.

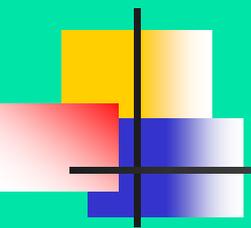


# Problem: Word Definitions

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Sec. 192.805 Qualification **program**. Each **operator** shall have and follow a **written qualification program**. The **program** shall include **provisions** to:

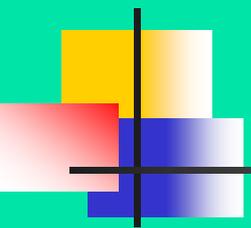
- (a) **Identify covered tasks;**
- (b) **Ensure through evaluation that individuals performing covered tasks are qualified;**
- (c) **Allow individuals that are not qualified pursuant to this subpart to perform a covered task if directed and observed by an individual that is qualified;**



# Problem: Word Definitions

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- (d) Evaluate an **individual** if the **operator** has reason to believe that the **individual's performance** of a **covered task contributed to an accident** as defined in Part 195;
- (e) Evaluate an **individual** if the **operator** has reason to believe that the **individual** is no longer **qualified to perform a covered task**;
- (f) **Communicate** changes that affect **covered tasks** to **individuals performing those covered tasks**; and
- (g) **Identify** those **covered tasks** and the intervals at which **evaluation** of the **individual's** qualifications is needed.



# Problem: Word Definitions

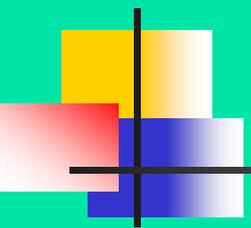
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Sec. 192.807 Recordkeeping. Each **operator** shall **maintain records** that **demonstrate compliance** with this subpart.

(a) 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).

(b) **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.

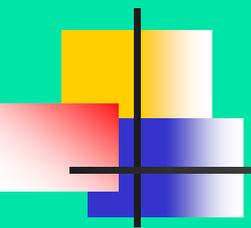


# Problem: Word Definitions

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## Sec. 192.809 General.

- (a) **Operators** must have a **written** qualification **program** by April 27, 2001.
- (b) **Operators** must complete the qualification of **individuals performing covered tasks** by October 28, 2002.
- (c) **Work performance history review** may be used as a sole **evaluation** method for **individuals** who were **performing a covered task** prior to October 26, 1999.
- (d) After October 28, 2002, work **performance** history may not be used as a sole **evaluation** method.

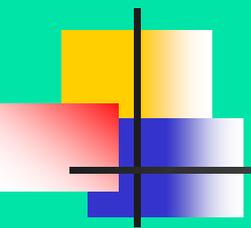


# Key Areas Addressed by Rule

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**Relative importance of “key” words:**

- **INDIVIDUAL(S) Used 19 times**
- **PERFORM (variations) Used 19 times**
- **COVERED TASK(S) Used 16 times**
- **OPERATOR(S) Used 10 times**



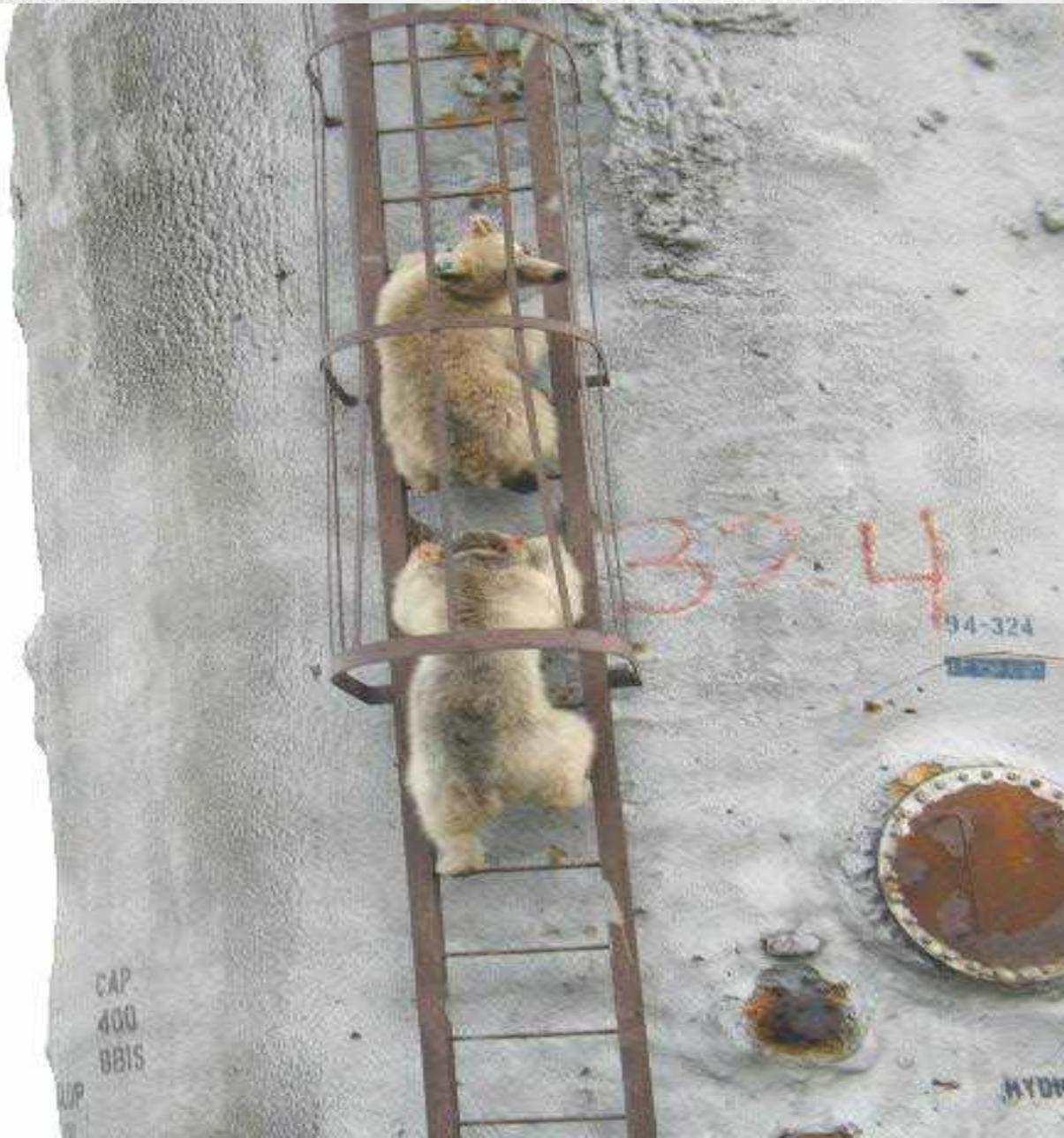
# Persons Covered by OQ Rule

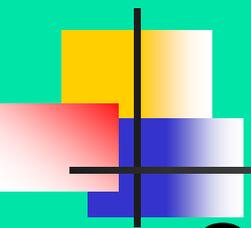
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## **Individuals Who Perform Covered Tasks:**

- **Operator Employees**
- **Contractor Employees**
- **Sub-Contractor Employees**
- **“Other Entities” Performing CT’s**

# “Other Entities” Performing Covered Tasks

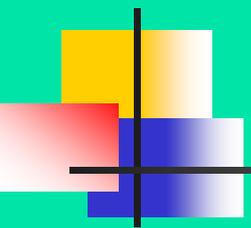




# HQ Inspection Approach

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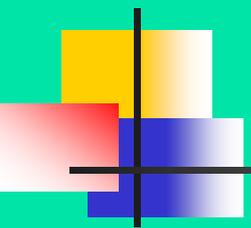
- Operators Submitted **Program** and **Covered Task List** for Review Prior to Inspections
- Inspections (typically) began with Operator Presenting its **OQ Program**
- Regulators Worked Through Inspection Protocols and Follow-up Questions



# HQ Inspection Approach

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- Regulators Provided Comments on Plan Wording, Structure, etc.
- Regulators **Caucused** to Identify Additional Questions and “Findings”
- Operators Provided Responses to Additional Questions
- Regulators Led Exit Discussion on Findings

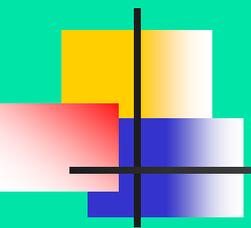


# Follow-Up to HQ Inspections (Field Verification)

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- **Field Verifications** are Conducted to verify Findings of Headquarters Program Inspection (most have been delayed beyond HQ Inspection)
- Depending on HQ Findings, Regulators will Plan more or less Extensive Field Verifications

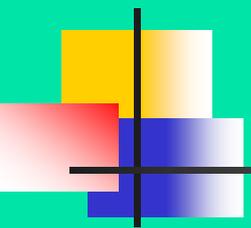
# Follow-Up to HQ Inspections (Field Verifications)



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- Field Verifications are Focused on
  - Reviewing Qualification Documentation (for both Employees and Contractors)
  - Observing Employee Performance of Covered Tasks According to Operator's Approved Procedures, and Verifying Qualifications and Knowledge of AOC's
- Field Verifications may be Integrated with Standard Inspections

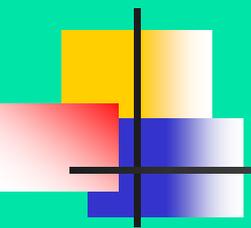
# Observations from Initial Inspections: Process



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- Initial, **Thorough**, Presentation by Operator of its OQ Program Helped to Focus Inspection
- Use of **Flow Diagrams** (Showing how OQ Processes Work) Contributed to Regulator's Understanding of Program

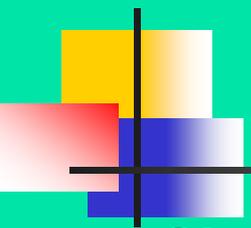
# Observations from Initial Inspections: Process



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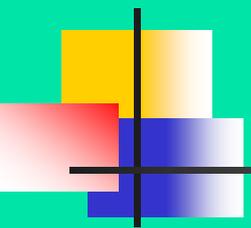
- Easy Access to Supporting Documentation and Evidence of Program Implementation **Expedited** Inspection
- Operator **Attitude** Set the Tone for the Inspection

# Enforcement of the OQ Rule



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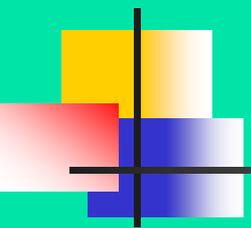
- Significant Efforts Underway to Ensure **Consistency** of Inspections
- Enforcement of Rule may Vary among Federal and State Authorities
- OPS will Utilize all Available Enforcement Tools to Address Inadequate Plans, Records, and Compliance with the Rule, Including:
  - Notice of Amendment (NOA)
  - Notice of Probable Violation (NOPV)
    - Proposed Compliance Order (PCO)
    - Proposed Civil Penalty (PCP)



# Statement on the Role of OQ Protocols

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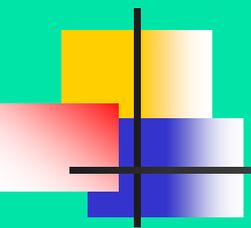
- Nature of the Rule
- OQ Rule is Performance-Based,  
which Implies a Need for
  - Management Practices & Procedures
  - Measurement of Program Effectiveness



# Statement on the Use of OQ Protocols

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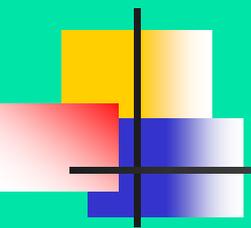
- Nature of the Rule – Cont'd
  - Inspectors Will Evaluate Compliance with the Rule's Prescriptive Provisions - and
  - Will Evaluate the Completeness and Anticipated/Apparent Effectiveness of the Documented Approaches Taken to Qualify Individuals



# Statement on the Use of OQ Protocols

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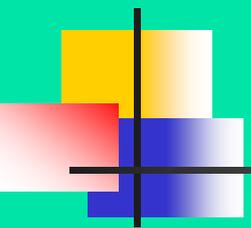
- The Role of Protocols
  - Used to Support Inspectors & Provide Consistency in Evaluating OQ Programs
  - Structured into “Protocol Questions”, which are paired directly with prescriptive and non-prescriptive requirements of the rule



# Statement on the Use of OQ Protocols

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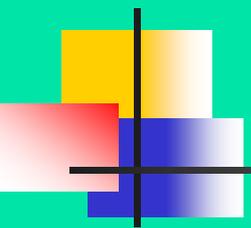
- The Role of Protocols – Cont'd
  - “Enforceable” and “Non-Enforceable” Indicators (Only Prescriptive Requirements are Enforceable)
  - “Guidance Topics”
    - Expected Characteristics of an Effective OQ Program
    - Guidance Topics are Consistent with the Intent of the Rule



# Observations from Initial Inspections: Findings (1)

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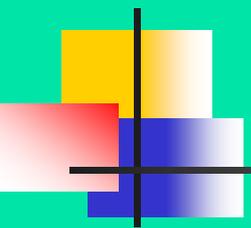
- Programs Varied Considerably in **Maturity**
- Significant Differences in Number of Covered Tasks (**Use of Sub-Tasks**)
- Significant Differences in Tasks Deemed to be “Covered” (**Definition Issue**)



# Observations from Initial Inspections: Findings (2)

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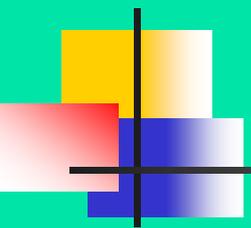
- Significant Differences in Degree of Integration of OQ Program with Other Management Systems Already in Place
- Program “Performance Measures” are Typically Non-Existent
- Many Written Programs tended to “parrot” rule Requirements without thinking through Procedures to Implement Program



# Observations from Initial Inspections: Findings (3)

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- Operators Place Significant Responsibilities on Front-Line Supervisors for Success of OQ Program
- Absence of Evaluation Criteria, Qualification Documentation and Related Methodologies in Programs  
“set up” Supervisors for Failure

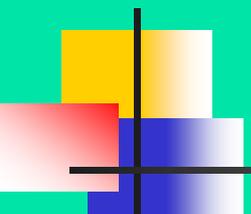


# Observations from Initial Inspections: Findings (3)

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## Operators Differed in Treatment of Some "Outstanding Issues":

- O&M Activities vs. "New Construction" (A "Definition" Problem...)
- Excavation over Loaded Pipelines
- Inclusion of Emergency Response Tasks
- Integration of **Training** documentation into the OQ Program

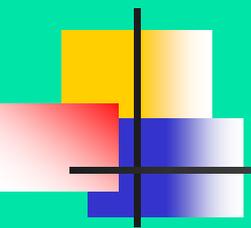


# Observations from Initial Inspections: Findings (4)

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## Operators Differed in Treatment of Some "Outstanding Issues":

- AOCs (Task-Specific often Integrated into Individual Tasks & Evaluations; Generic AOCs then Treated Separately – or Not Addressed in some cases)
- Virtually No Formalized and Documented Methodology to Identify new AOCs from "near-miss" Reporting, where such Existed

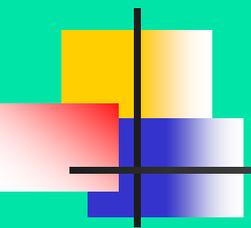


# Observations from Initial Inspections: Findings (5)

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## Operators Differed in Treatment of Some “Outstanding Issues”:

- Specific Guidance on Span-of-Control (for Use of **Non-Qualified** Individuals)
- Identifying Persons Contributing to Incident/Accident:
  - **Immediate** Contribution (easier)
  - **Delayed** Contribution (harder)

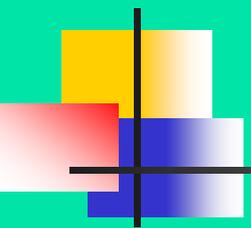


# Observations from Initial Inspections: Findings (6)

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Most Operators Have Treated Some “Outstanding Issues” Similarly:

- KSA's (**Knowledge, Skills, and Abilities**) usually Addressed - either in Evaluation or in “Pre-Qualification” for Evaluation

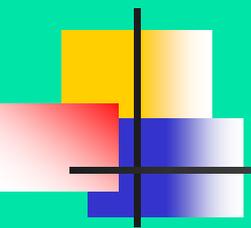


# Observations from Initial Inspections: Findings (7)

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## Most Operators Treated Some “Outstanding Issues” Similarly:

- Justification for **Reevaluation Intervals** was “Subjective” (No Evidence Provided tying Quantitative Performance Measures to the Established Intervals)
- Tendency to (Try to) Place the Compliance Burden on **Contractors** (by Contract)

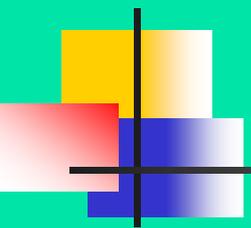


# Observations from Initial Inspections: Findings (8)

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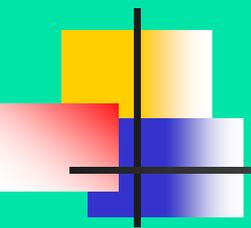
- Discomforting use of “WPHR”  
(*Work Performance History Review*)  
to “Pre-Qualify” Individuals – OPS calls this practice “Evaluation Light”

# Observations from Initial Inspections: Findings (9)



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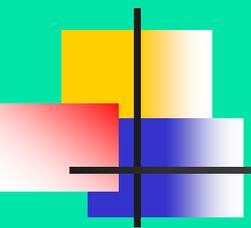
- Rigor of **Contractor Qualification** Varied Considerably, Leading to Strong Concern about Adequacy of Operator's Contractor Qualification Procedures (Will Assess Impact in Field Verification)
- Many Operators did not Consider **Replacement** of "out-of-service" Pipelines as O&M (a "Pipeline Facility" definition problem)



# Observations from Initial Inspections: Findings (10)

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- Rigor of **Evaluator Credentialing** (or Selection) has Varied Considerably  
A Significant Issue when Evaluation Depends on Expertise of Evaluator (e.g., Evaluation of Performance)
- Insufficient Level of Detail in **Evaluation Process** - Leads to Questionable Qualifications



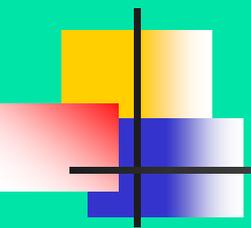
# Observations from Initial Inspections: Findings (11)

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- Management of Change:

Guidance is Needed (and Often Provided) on defining

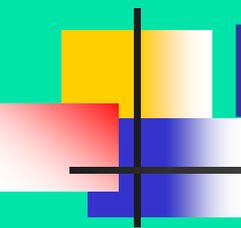
- Significance of Change
- Corresponding Impact on Qualification
- Required Action to Retain Qualification



# Observations from Initial Inspections: Findings (12)

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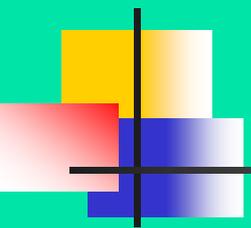
- Large Variations in Plans to **Evaluate** Program Effectiveness, Ranging from:
  - No Specific Plan to Review Program
  - Formally Review Program “as needed” and Assignment of Responsibility for Periodic Program Review



# Likely Future Events (OQ-3)

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- Near-Term Issuance of Focused Supplementary Rule
  - Documentation of Role of Training
  - Support for Reevaluation Interval
  - Reporting of “Significant Changes”
- Publication of B31Q
- 2<sup>nd</sup> Supplementary Rulemaking Based on Adoption of Standard



# Staying Current

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- <http://primis.rspa.dot.gov/oq/index.htm>
- <http://www.tsi.dot.gov/divisions/pipeline/pipeline.htm>