
# Control Room Management

## API Annual Pipeline Conference

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# Background

- PHMSA has been examining Control Room operations for 10+ years
  - Three Advisory Notices on SCADA & Fatigue (1999, 2003, 2005)
  - SCADA System Check List Initiated (1998)
  - T&Q SCADA Training Class Developed (2001)
- Pipeline Safety Improvement Act of 2002 (Section 13b)
  - CCERT Study of control room operations to enhance pipeline safety (2003-2006)
  - Two CRM Workshops (2006, 2007)
  - OQ Report to Congress, Section 6 (Dec-2006)
- National Transportation Safety Board
  - SCADA Safety Study (2005)
  - 10 of 18 Hazardous Liquid accidents have potential CRM involvement (1998-2005)
- PIPES Act of 2006 (Sections 12, 19, 20)
  - Establish human factors management plan
  - NTSB Recommendations on Displays, Alarms and Training
  - Accident/incident form changes on Fatigue
  - Issue Regulations


# Objective

- Create an environment that helps assure controllers will be successful in maintaining pipeline safety

- Verify that procedures, systems and equipment are well thought out, and function as designed


# 49CFR : 192.631 & 195.446

- a) General
- b) Roles and Responsibilities
- c) Adequate Information
- d) Fatigue Mitigation
- e) Alarm Management
- f) Change Management
- g) Operating Experience
- h) Training
- i) Compliance Validation
- j) Compliance Deviation


# Impact on Operators

- Most pipeline operators are already performing the bulk of the new requirements
- For many, a large part of the effort is to create procedures for informal work practices
- Fatigue and alarm management requirements are likely to cause the most change
- New requirements do not change any established definitions or jurisdictional boundaries


# Operators and Controllers

| Operator Types | Final Rule | Limited* Inclusion, Controllers & Qualified Supervisors | Full Inclusion, Controllers & Qualified Supervisors |
|---|---|---|---|
| Master Meters & LPG | Excluded | | |
| Gas Distribution : < 100k services | Limited* | 1308 | |
| Gas Distribution : 100k to 250k services | Limited* | 488 | |
| Gas Distribution : > 250k services | Included | | 1068 |
| Gas-Trans without compressor station/s | Limited* | 1307 | |
| Gas-Trans with compressor station/s | Included | | 2354 |
| LNG Plants (est. 436 controllers) | Excluded | | |
| Haz-Liq : < 50 pipeline miles | Included | | 308 |
| Haz-Liq : 50 to 250 pipeline miles | Included | | 551 |
| Haz-Liq : > 250 pipeline miles | Included | | 1108 |
| Estimated Totals | | **3103** | **5389** |

*- Limited Inclusion refers to Fatigue Management and Compliance Deviation

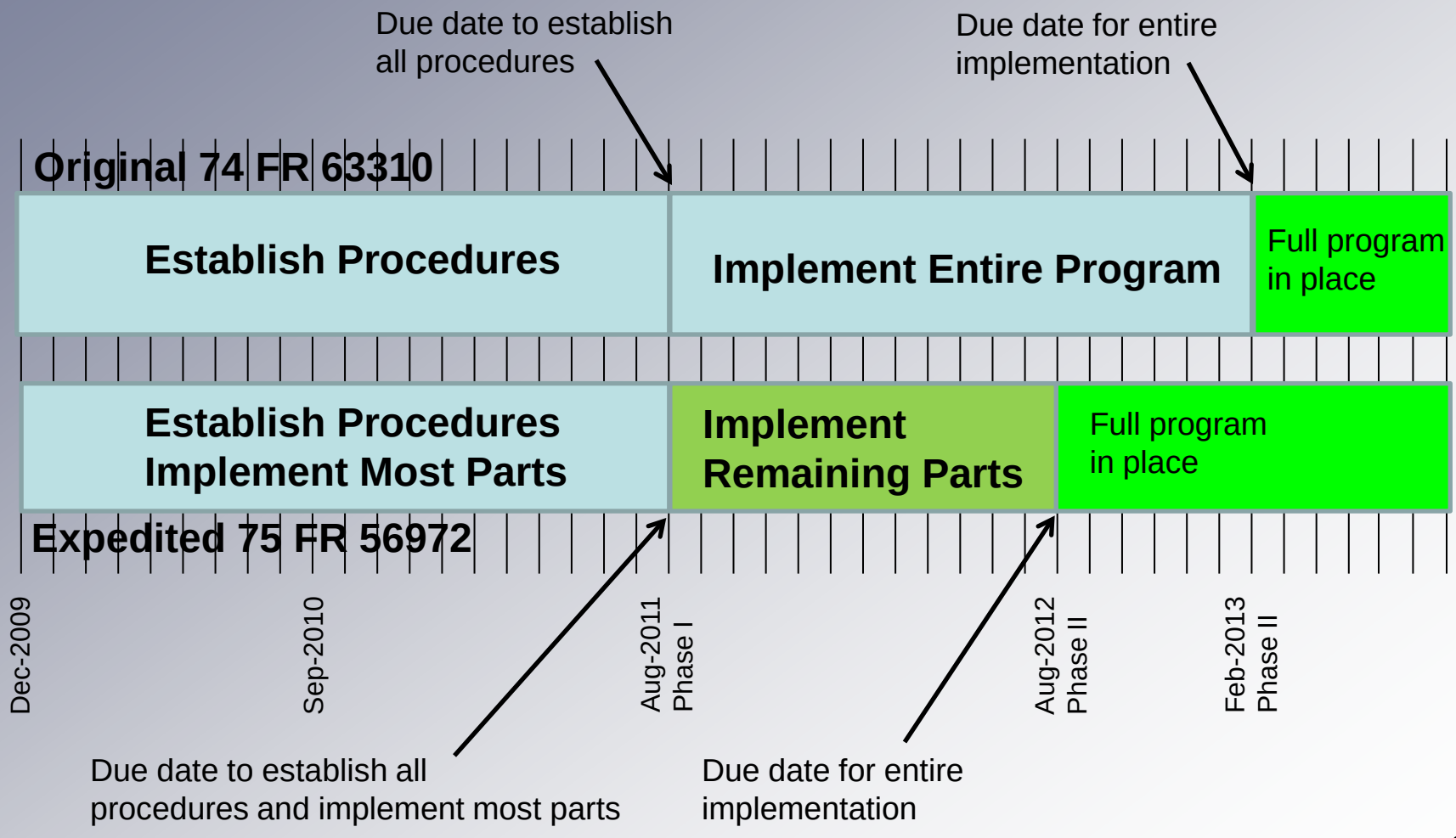

# 2010 – 2011 Milestones

- Original Final Rule Effective Date : Feb-2010
- NTSB Recommendation Closures : Feb/Apr-2010
- NPRM to expedite Deadlines : Sep-2010
- Public Workshop : Nov-2010
- Finalize Hours of Service Criteria : Feb-2011
- Post Draft FAQ's : Feb-2011
- Technical Advisory Committee : Mar-2011
- Pilot Inspections : Mar/Apr-2011
- Finalize FAQs & Inspection Guidance : Jun-2011
- Inspector Training Begins : Jun-2011
- Phase I Implementation Date : Aug-2011
- Phase I Inspections Begin : Sep-2011


# Pilot Program for Inspection Guidance Development

| Operator | Type | Scheduled Week |
|---|---|---|
| Colonial Pipeline | Large Haz Liquid | Feb 28 |
| Kern River Gas Transmission | Med Gas Trans | Mar 14 |
| Enterprise Products | Large Liq/Gas | Apr 04 |
| The Energy Cooperative | Small LDC | Apr 04 |
| Ameren Corporation | Large LDC/Trans | Cancelled |
| Portland Montreal Pipeline | Med Haz Liquid | Cancelled |
| City of Mesa | Med LDC | Apr 18 |
| Southern Natural Gas | Large Gas Trans | Apr 25 |

# NPRM Impact on Timeline




# Control Room Inspections

- Performed by inspectors from both PHMSA and our state partners, based on established federal or state jurisdiction
- Inspections will begin in Sep-2011, heavier in 2012
- Inspections will be based on control rooms
- Inspections may be parsed, dependent on the resolved timelines of the NPRM
- Inspection checklists made public at the end of May-2011
- After initial regulatory compliance is established, control room requirements will become a part of general regulatory review during traditional and specialized inspections in the future.
- Control Room regulations will become an important part of incident and accident investigations


# Frequently Asked Questions

- http://primis.phmsa.dot.gov/crm/index.htm
- Cover a broad range of topics
- First posted in mid February-2011
- A few more will be added
- Revised content made public at the end of May-2011
- New regulations are mostly performance-based


# A - Applicability FAQ's

- Controller – Control Room
- SCADA System
- Assigned Authority & Responsibility
- Monitor and Control
- Field Technicians and Maintenance Personnel


# C – Adequate Information FAQ's

- Safety-related Points
- Point-to-Point verification
- Test any back-up SCADA System
- Shift-change method (process) "B"
- Shift-change content (information) "C"


# D – Fatigue Management FAQ's

- Opportunity for (8) hours of continuous sleep
- Maximum limit on Hours-of-Service
- Based on 7 consecutive days, not weekly
- Probably can not use SCADA login's to tally hours
- Qualified Supervisors may have limited hours available


# CRM Workshop

**November 17, 2010**

- To foster an understanding of the Control Room Management Rule issued on December 3, 2009
- Workshop was in conjunction with the National Association of Pipeline Safety Representatives (NAPSR)
- Broad base of Stakeholders
- 500$^{+}$ attendees
- Panel discussions
- To provide input to further refine guidance material currently in development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**http://primis.phmsa.dot.gov/crm/index.htm**