Alabama Public Service Commission, Gas Pipeline Safety, 38th Annual Pipeline Safety Seminar Dec 1, 2025

Impacts of the RMV Regulation on Control Room Operations & Impacts of Recent PHMSA Enforcement Priorities

Objective

- RMV impacts to CRM operations
- Where we've been as of July 2025 (2012 – 2025)
- What areas of 446-631 have been focused on/found lacking?
- What is their intention going forward?
  - As stated by PHMSA

ENTRUST SOLUTIONS GROUP

New Valve Regulations: Impacting Team Training

Based on specific operating characteristics, the adoption of new Valve requirements will expand or may not change the participants in an Operator's CRM Team Training Program.

ENTRUST SOLUTIONS GROUP

New Valve Regulations: Impacting Team Training

§ 192.3, 195.2

Rupture-mitigation valve (RMV) means an automatic shut-off valve (ASV) or a remote-control valve (RCV) that a pipeline operator uses to minimize the volume of material released from the pipeline and to mitigate the consequences of a rupture. Does not apply to gathering lines.

§ 192.634, 195.418/419

Transmission lines: Onshore valve shut-off for rupture mitigation. Identifies which pipelines and under what circumstances require RMVs or ASVs. Delineates maximum spacing between valves, shut off segment, laterals, and crossovers.

ENTRUST SOLUTIONS GROUP

New Valve Regulations: Impacting Team Training

§ 192.636 Transmission lines: Response to a rupture; capabilities of RMVs or alternative equivalent technologies (AET.)

§ 195.419 Valve capabilities

- Rupture identification and valve shut-off time; *As soon as practicable*
- Open valves; *to maintain safety*
- Valve monitoring and operational capabilities; *Remote or onsite personnel*
- Monitoring of valve shut-off response status; *Operational information*
- Flow modeling for automatic shut-off valves; *Pressure, flow volumes, etc.*
- Manual valves in non-HCA, Class 1 locations; *Possible exemption, Non-HCA*
- Manual operation upon identification of a rupture; *Procedure to ensure*

ENTRUST SOLUTIONS GROUP

New Valve Regulations: Impacting Team Training

- Rupture identification and valve shut-off time. *as soon as practicable but within 30 minutes of rupture identification*
  - When monitored by SCADA, the procedure needs to identify the personnel and processes required to meet the shut-off time.
  - Each person (job title) involved must be in the Team Training program

ENTRUST SOLUTIONS GROUP

New Valve Regulations: Impacting Team Training

- Valve monitoring and operational capabilities (RMV)
  - When monitored by SCADA, the procedure needs to identify the personnel and processes required to monitor the operating capabilities.
    - Operated during normal, abnormal, and emergency operating conditions
    - Know the valve status
    - Back-up power and those that maintain it
  - Each person involved must be in the Team Training program

ENTRUST SOLUTIONS GROUP

New Valve Regulations: Impacting Team Training

- Monitoring of valve shut-off response status
  - Position and operational status of an RMV must be appropriately monitored through electronic communication with remote instrumentation or other equivalent means (operational conditions)
  - If flow and pressures can be monitored, the ASV position need not be monitored
  - Each person involved must be in the Team Training program

ENTRUST SOLUTIONS GROUP

New Valve Regulations: Impacting Team Training

- Flow modeling for automatic shut-off valves
  - Prior to using an ASV as an RMV, an operator must conduct flow modeling for the shut-off segment and any laterals that feed the shut-off segment, so that the valve will close within 30 minutes or less following rupture identification, *consistent with the operator's procedures*, and in accordance with § 192.3 / 195.2

→ Each/any person involved in the operation of an ASV must be in the Team Training program

ENTRUST SOLUTIONS GROUP

New Valve Regulations: Impacting Team Training

- Operation of a manual valve as an AET requires procedures to be deployed that appropriately designate nearby personnel to ensure valve shutoff
- If the procedures for remote control RMV or ASVs infer a role for local personnel, then those personnel need Team Training
- Each such person must be in the Team Training program…….. if there is an operating SCADA system with a controller in a control room monitoring the pipeline operation

ENTRUST SOLUTIONS GROUP

PHMSA NOTICE (MEMO)

- DOT has released a memo (dated 7/17/2025) announcing new and re-affirmed topics informing PHMSA's inspection and enforcement priorities. Please note priority #3 titled "Control Room Management and Leak Detection".
- *3 Control Room Management and Leak Detection*
  - *Ensure robust SCADA systems and emergency procedures, including cyber incident response.*
  - *Focus on written procedures for operations, maintenance, and emergencies.*

ENTRUST SOLUTIONS GROUP

The MEMO

Summary:

……. separate leak detection regulations under 49 CFR §§ 192.703(c), 192.706, 192.717, 192.723, and 195.444 support incident prevention and mitigation. To protect public safety and the environment, *OPS staff should focus on ensuring compliance with these regulations, with particular attention to operators' procedures for operations, maintenance, and emergency response—especially regarding restoration after incidents, including cyber events, per §§ 192.605 and 195.402.*

ENTRUST SOLUTIONS GROUP

PHMSA Enforcement History

- PHMSA has issued 86 compliance actions on natural gas (192) control room programs
- PHMSA has issued 175 compliance actions on liquid (195) control room programs
- The scope of the compliance actions have covered the regulatory requirements from parts (a) through (j)

ENTRUST SOLUTIONS GROUP

By Regions

Gas

- Central Region – 25 cases
- Eastern Region – 16 cases
- Southern Region – 3 cases
- Southwest Region – 17 cases
- Western Region – 25 cases

Liquid

- Central Region – 58 Cases
- Eastern Region – 31 Cases
- Southern Region – 6 Cases
- Southwest Region – 31 cases
- Western Region – 48 cases

ENTRUST SOLUTIONS GROUP

Enforcement

- 192.631(a)(i)(ii) gas operators, insufficient determination of applicability,
  - catch all for inadequate procedures: ….. *Each operator must have and follow written control room management procedures that implement the requirements of this section,*
- Section (b) clearly defined roles and responsibilities for N, ABN, EMR
- Section (c) API 1165 audit and implementation, naming conventions, consistency
- Section (d) Fatigue, HOS, Shift Staffing (crew size), deviations, recordkeeping

ENTRUST SOLUTIONS GROUP

Enforcement

- Section (e) effectiveness review, insufficient detail, what is reviewed, what does right look like, what was deficient, how was it addressed
  - Leak detection alarms, tank levels, valves for isolation, identification and remediation of false alarms, points taken off scan, alarm descriptors, setpoints, review process and documentation of the actions
  - Monthly reviews, deficiencies found, remediation and verification of issues found
- Section (f) MOC, sufficient procedure, documentation, having an effective MOC process, following the MOC process

ENTRUST SOLUTIONS GROUP

Enforcement

- Section (g) a detailed process for reviewing operating experience, who does the review, how is it determined if the control room/controller contributed, corrective measures, deficiencies identified
- Section (h) training must address the requirements of Section (b) roles and responsibilities, address the results of the review 1ECY NTE 15 months, gaps resolved, and retraining completed
- Section (i) address how documentation of compliance with requests will be responded to and in what time period and who the responsible individual is carrying out the requests.
- Section (j) procedures to demonstrate and provide a documented record that every deviation from any CRM rule requirement is necessary for safe operation.

ENTRUST SOLUTIONS GROUP

Cybersecurity

- Cyber Incident Response Plan, containment, segregation, secure access, data integrity, isolation of IT and OT systems
- System segmentation, critical systems from less secure networks
- Access control, particularly for Control Room access
- MFA for all systems
- Full focus cybersecurity assessment and effectiveness program, full loop
- TSA and CISA

ENTRUST SOLUTIONS GROUP

49 CFR § 192.703(c), 192.706, 192.717, 192.723, and 195.444

- 192.703(c) Hazardous leaks must be repaired promptly. Inadequate or lacking prompt repair of hazardous leaks discovered from valve inspection of emergency valves
- 192.706 transmission line leakage surveys. Failure to perform leakage surveys within the specified frequency with a method appropriate to identify leaks and a follow-up process to correct findings
- 192.717 Transmission lines: Permanent field repair of leaks
- 192.723 Distribution systems: Leakage surveys

ENTRUST SOLUTIONS GROUP

195.134, 195.444, 195.452(i)(3)

- .134 – Leak Detection
  - Prior to Oct. 1, 2019, must have leak detection IAW 195.444 by oct.1, 2024
  - After Oct 1, 2019, must have leak detection IAW 195.444 by Oct. 1, 2020
- .444 – Leak Detection
  - Except for offshore gathering and regulated rural gathering, applies to all hazardous liquid pipelines
  - Leak detection system in compliance with 195.132 or 195.452
  - If a CPM system, in compliance with API RP 1130

ENTRUST SOLUTIONS GROUP

Thank you!

Wallace B McGaughey
wallace.mcgaughey@entrustsol.com
405-820-1304