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2025 Railroad Commission of Texas Regulatory Conference CRM, Team Training, and Rupture Mitigation Valves

Recap ...

- Original CRM Reg's of 2011-2012 were initiated by the Bellingham, WA accident in 1999.
- The only addition to the CRM Reg's occurred in 2017, initiated by the Marshall, MI accident in 2010.
- Among other items, the NTSB Report PAR-12/01 contained recommendations to add :
 - 1) Operator qualification for all those involved in pipeline operational decisions [became - b5]
 - 2) Team training for all those involved in control room operations [became - h6]



Regulatory Requirements

(b5) an operator must define ...

The roles, responsibilities and qualifications of others who have the authority to direct or supersede the specific technical actions of controllers.

- *Be clear about who, if any, are authorized*
- *Insure they are OQ'd and work-hours are being tallied*
- *Consider posting a placard in the Control Room*



Regulatory Requirements

(h6) Control Room Team Training & Exercises...

that include both controllers and other individuals, defined by the operator, who would reasonably be expected to operationally collaborate with controllers (control room personnel) during normal, abnormal, or emergency situations.



Team Training Expectations

- Clear statement about scope and frequency
- Listing of associated Job Titles
- Training Materials (retain materials used in each cycle)
- Records for intended participants, with Job Titles
- Provisions for absentees and new Team Members
- Guidance in CRM FAQs : H.05, H.06, H.07, H.08, H.09
 - <https://www.phmsa.dot.gov/pipeline/control-room-management/control-room-management-faqs>



Team Training, a collaborative effort

- A structured training program that accounts for:
 - Realistic situations
 - Effective communication and protocols
 - Decision-making
 - Collaboration across different departments
 - Include individuals that interact with controllers remotely and face-to-face inside the control room
 - Include individuals (if any) with the authority to direct or supersede the specific technical actions of a controller
 - OPA Drill is NOT a substitute for Team Training



Potential Collaborative Team Members (to be defined by the Operator)

- Control Room
- Engineering
- Environmental
- Compliance
- Leak Detection
- Safety & Integrity
- Customer Call Center
- Maintenance
- Operations
- SCADA
- Instrumentation and Electrical
- Scheduling
- Administration



Team Training Focus

- Safety Protocols
 - Effective Communication
 - Operations & Logistics
 - Pipeline Monitoring
 - Leak Detection
 - Emergency Response
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- Covered Modes
 - ***Normal Operations***
 - ***Abnormal Operations***
 - ***Emergency Operations***



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 Team Training Program.



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.



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 it is 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*



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



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



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



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



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



Thank you for your attention, are there any questions?

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