

# Gas Operations and Maintenance Manual

### P-192.634

## Rupture Mitigation Valves (RMV)

Description	The purpose of this procedure to comply with regulations concerning RMV's.		
Regulatory Applicability	Pipelines converted to service regulated by 49 CFR Part 192.  ☐ Regulated Transmission Pipelines ☐ Regulated Gathering Pipelines (Type A) ☐ New or entirely replaced pipelines that meet the follow criteria; greater than or equal to 6" diameter that presides in the following locations: HCA, Class 4, Class 3, and Class 1 or 2 with a PIR greater than 150 feet.		
Frequency	N/A		
Reference	192.3 192.9 192.18 192.179 192.610 192.615 192.634 192.635 192.635 192.636	Definitions What requirements Apply to Gathering Lines? How to Notify PHMSA Transmission Line Valves Change in Class Location Emergency Plan Investigation of Failures and Incidents Transmission Lines: Onshore Valve Shut-off for Rupture Mitigation Notification of potential rupture Response to a Rupture; Capabilities of RMVs or Alternative Equivalent Technologies Valve Maintenance: Transmission Lines What Additional Preventive and Mitigative Measures Must an Operator Take?	
Forms / Record Retention			
Related	WTG's Emergency Plan		
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### Rupture Mitigation Valves (RMV)

Specifications	P-192.61	WTG's O&M P-192.617 WTG's TIMP	
OQ Covered Task	0331 0431 1341	Visual Inspection and Partial Operation Valve Preventative Maintenance Provide or Assure Adequate Pipeline Support During Operator	

**Initiated Excavation Activities** 

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#### Rupture Mitigation Valves (RMV)

#### **Definitions**

Entirely replaced onshore transmission pipeline segments means, for the purposes of valve spacing found in192.179 and 192.634, when 2 or more miles of transmission pipeline have been replaced within any 5 continuous miles of pipeline within any 24-month period.

Notification of potential rupture means the notification to, or observation by, the public, emergency notification center or a WTG employee (on-site or SCADA alarms) with indications of a potential unintentional or uncontrolled release of a large volume of gas from a pipeline. Rupture identification is when the previous defined release is confirmed. Conformation can be gained with SCADA or visually.

The following is in addition to the definition of "Notification of Potential Rupture." When an unanticipated or unscheduled change of pressure greater than ~10% occurs and continues to occur within a time interval of 15 minutes or less, SCADA alarms will be sent out automatically to the District Manager or appropriate designee. Some SCADA alarms will be adjusted if documentation in written procedures show operational need for a greater pressure-change threshold due to pipeline flow dynamics that are caused by fluctuations in gas demand, gas receipts, or gas deliveries.

Rupture-mitigation valve (RMV) means an automatic shut-off valve (ASV) or a remote- control valve (RCV) that WTG uses to minimize the volume of gas released from the pipeline and to mitigate the consequences of a rupture. For the purpose of this Definition, PHMSA approved Alternative equivalent technology could be substituted for a RMV in this procedure.

#### Change in class location

In the event a class location changes on a transmission pipeline or type A gathering occurs after October 5, 2022, the following requirement must be met;

For pipeline replacement that results in 1,000 feet or more of pipeline within the class location within any 24-month period, RMV or alternative equivalent technologies must be installed.

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#### **Procedure Steps**

#### WTG will comply with the following procedures to install RMV's when applicable.

RMV's will be installed to completely isolate the applicable segment, which includes upstream supply source, downstream piping, and any laterals or crossover lines. The intent is to completely isolate the gas supply to the ruptured pipeline segment.

#### <u>Installation Requirements</u>

RMV's must be installed and operational within 14 days of placing the new or replaced pipeline segment into service after March 10, 2023 (check date). If needed, an extension may be requested to PHMSA per CFR 192.18

#### Shut-off segment valve spacing

RMV's are required not to exceed the following spacing requirements

- (i) 8 miles for any Class 4 location,
- (ii) 15 miles for any Class 3 location, or
- (iii) 20 miles for all other locations.

#### **Laterals**

Laterals connected to the ruptured pipeline segment may have RMV's installed at locations other than at the mainline if the contributing gas volumes are less than 5% of the total gas volume. If the above criteria are not met, the RMV must be installed at the mainline.

Laterals that are 12 inches or less may use check valve as an RMV, however the check valve is considered as an alternative equivalent technology and must be approved by PHMSA prior to use.

#### Crossovers

Manual valves can be used as a RMV for crossover connections, if during normal operations the valve is closed to prevent the flow of gas. An operating procedure must be implemented to document that the valve is closed and locked to prevent the flow of gas. Manual valves are considered as an alternative equivalent technology and must be approved by PHMSA prior to use.

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#### Manual Operation Upon Identification of a Rupture

If a PHMSA approved manual valve is being used and can be operated within 30 minutes at all times, an operating procedure must be implemented that includes consideration of the following.

- a) Response time for designate personnel to ensure valve shut-off
- b) Acquisition of necessary tools and equipment
- c) Driving time under heavy or inclement traffic conditions and at the posted speed limit
- d) Walking time to access the valve
- e) Time to physically shut off all valves manually

#### Response to a rupture

#### Valve Shut-off Time

WTG must, as soon as practicable but within 30 minutes of rupture identification, fully close any RMVs or alternative equivalent technologies necessary to minimize the volume of gas released from a pipeline and mitigate the consequences of a rupture.

#### **RMV Valve Operations**

WTG will take every action necessary to **protect life first and property second from danger!** In the rare occurrence, by operating the RMV posses a greater safety risk to the public than the venting gas at the ruptured pipeline segment, the RMV can be left open greater than the 30-minute time frame. WTG will develop operating procedures and gain approval from PHMSA prior to taking this action.

#### Valve Monitoring and Operation Capabilities

During normal operations, abnormal operating, and emergency operating conditions, the SCADA system monitors downstream, pressure, and flow rates. Theses SCADA points and SCADA computers have the capability to monitor rate of change. In the event a SCADA point fluctuates outside of normal operating parameters, an alarm is sent to district personal. WTG SCADA alarms includes low, critical low, high, and critical high. Any SCADA communication failure results in an alarm and district management is notified. At such time the district management will assign a WTG employee to be within 20 minutes of the RMV to manually operate. Until such time the communication failure is repaired.

#### Flow modeling

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At this time, WTG's infrastructure does not have ASV installed and negates the need for flow modeling simulations of the effected areas. In the event WTG chooses to install any ASV's, this section will be reviewed and revised.

#### Manual Valves in non-HCA, Class 1 Locations

When using a manual valve for a RMV, WTG must receive PHMSA's approval. When submitting a request to PHMSA the requirements of 192.636(b) must be followed.

#### **RMV** maintenance

For valve maintenance see procedure p-192.745 Valve Maintenance.

#### Additional Preventive & Mitigative Measures

The Installation of RMV will follow Procedure P-192.634. For additional preventive and mitigative measures, see WTG's TIMP plan.

#### Notification to PHMSA

In the event WTG has the intent to use other technology methods or compliance timeline that differs from regulations, prior notification (90 day minimum) to PHMSA will be made following 192.18. If other technology methods include the use of a manual valve in place of a RMV, the notification to PHMSA must also including the demonstration that installation of a RMV would be economically, technically, or operationally infeasible.

#### **Emergency Plan**

WTG's Emergency Plan is a stand-alone plan that can be found by contacting WTG's Compliance Department.

#### **Incident Investigation**

For Incident Investigations, See P-192.617

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