



Description To outline the minimum requirements for increasing the maximum allowable operating pressure (MAOP) in pipelines.

Regulatory Applicability

- Transmission Pipelines
- Regulated Gathering Pipelines (Type A)
- Regulated Gathering Pipelines (Type B)
- Distribution Pipelines

Frequency As needed

Reference

49 CFR 192.551	<i>Scope</i>
49 CFR 192.553	<i>General Requirement</i>
49 CFR 192.555	<i>Uprating to a Pressure that Will Produce a Hoop Stress of 30 Percent or More of SMYS in Steel Pipelines.</i>
49 CFR 192.557	<i>Uprating: Steel Pipelines to a Pressure that will Produce a Hoop Stress Less than 30 Percent of SMYS; Plastic, Cast Iron, and Ductile Iron Pipelines.</i>
49 CFR 192.619	<i>Maximum Allowable Operating Pressure: Steel and Plastic Pipelines</i>
LA Title 43 Part XIII 2501	<i>Scope</i>
LA Title 43 Part XIII 2503	<i>General Requirement</i>
LA Title 43 Part XIII 2505	<i>Uprating to a Pressure that Will Produce a Hoop Stress of 30 Percent or More of SMYS in Steel Pipelines.</i>
LA Title 43 Part XIII 2507	<i>Uprating: Steel Pipelines to a Pressure that will Produce a Hoop Stress Less than 30 Percent of SMYS; Plastic, Cast Iron, and Ductile Iron Pipelines.</i>
LA Title 43 Part XIII 2719	<i>Maximum Allowable Operating Pressure: Steel and Plastic Pipelines</i>

Forms / Record Retention None / Life of Pipeline System

Related Specifications None



OQ Covered Task	0381	<i>Spring Loaded Pressure Regulated Device – Inspection and Testing, Prevention and Corrective Maintenance</i>
	0391	<i>Pilot Operated Pressure Regulated Device – Inspection and Testing, Prevention and Corrective Maintenance</i>
	0401	<i>Controller Type Pressure Regulated Device – Inspection and Testing, Prevention and Corrective Maintenance</i>
	0221	<i>Inspect, test, and Maintain Sensing Devices</i>
	1311	<i>Inspect Pipeline Surface Conditions – Patrol Right – of – Way or Easement</i>
	1261	<i>Walking Gas Leakage Survey</i>
	1271	<i>Mobile Gas Leakage Survey</i>
	1281	<i>Mobile Gas Leakage Survey</i>

(In order to perform the tasks listed above; personnel must be qualified in accordance with West Texas Gas's Operator Qualification program or directly supervised by a qualified individual.)



Procedure Steps

Establish a written uprating plan that is in accordance with the requirements outlined in this procedure for each segment of pipeline to be uprated. The written uprating plan must be approved by Operations Manager or compliance Department or District Manager.

Uprating Requirements

1. No segment of pipeline may be subjected to an operating pressure that will produce a hoop stress of 30% or more of SMYS and that is above the established maximum allowable operating pressure unless it is in accordance with the following:
 - a) Before increasing operating pressure above the previously established maximum allowable operating pressure the operator shall:
 - i) Review the design, operating and maintenance history, and previous testing of the segment of pipeline and determine whether the proposed increase is safe and consistent with the requirements of this procedure.
 - ii) Perform a leakage survey and repair any leaks that are found, except that a leak determined not to be potentially hazardous need not be repaired, it is monitored during the pressure increase and it does not become potentially hazardous.
 - iii) Make any repairs, replacements, or alternations in the segment of pipeline that are necessary for safe operation at the increased pressure.
 - b) After complying with paragraph 1a above, the maximum allowable operating pressure of a segment of pipeline constructed before September 12, 1970 may be increased to the highest pressure permitted in P-192.619, using as a test pressure the highest pressure to which the segment of pipeline was previously subjected (either in a strength test or in actual operation).
 - c) After complying with paragraph 1a above, the maximum allowable operating pressure of a pipeline segment that does not qualify under paragraph 1b may be increase if at least one of the following requirements is met:
 - i) The segment of pipeline is successfully tested in accordance with the requirements of part 192 Subpart J for a new line of the same material in the same location.
 - ii) The maximum allowable operating pressure of a pipeline segment in a Class 1 location that has not been previously pressure tested may be increased if:
 - (1) It is impractical to test it in accordance with the requirements of this part;
 - (2) The new maximum operating pressure does not exceed 80 percent of that allowed for a new line of the same design in the same location; and
 - (3) The operator determines that the new maximum allowable operating pressure is consistent with the condition of the segment of pipeline and the design requirements of this procedure.
2. No segment of a steel pipeline may be subjected to an operating pressure that will produce a hoop stress of less than 30 percent of SMYS and that is above the established maximum allowable operating pressure unless it is in accordance with paragraphs a and b below.



Also, no segment of plastic pipeline may be subjected to an operating pressure that is above the established maximum allowable operating pressure unless it is in accordance with paragraph (a) below.

- a) Before increasing operating pressure above the previously established maximum allowable operating pressure, the operator shall:
 - i) Review the design, operating, and maintenance history of the segment of pipeline.
 - ii) Perform a leakage survey and repair any leaks that are found, except that a leak determined not to be potentially hazardous need not be repaired, it is monitored during the pressure increase and it does not become potentially hazardous.
 - iii) Make any repairs, replacement, or alterations in the segment of pipeline that are necessary for safe operation at the increase pressure.
 - iv) Reinforce or anchor offsets, bends and dead ends in pipe joined by compression couplings or bell and spigot joints to prevent failure of the pipe joint, if the offset, bend, or dead end is exposed in an excavation
 - v) Isolate the segment of pipeline in which the pressure is to be increased from any adjacent segment that will continue to be operated at a lower pressure.
 - vi) If the pressure in mains or service lines, or both, is to be higher than the pressure delivered to the customer, install a service regulator on each service line and test each regulator to determine that it is functioning. Pressure may be increased as necessary to test each regulator, after a regulator has been installed on each pipeline subject to the increased pressure.
3. Ensure that a new MAOP cannot be exceeded in operation.
4. Conduct a series of incremental pressure increases that comply with:
 - a) 10 psi gauge increases; or
 - b) 25% of the total pressure increase, whichever results in the fewer number of increments.
5. At the end of each incremental increase, the pressure must be held constant while the entire segment is checked for leaks.
6. Each leak detected must be repaired before a further pressure increase is made, except that a leak determined not to be potentially hazardous need not be repaired, if it is monitored during the pressure test conducted, in connection with the uprating.
7. A record of this uprating will be made and retained for the life of the pipeline segment. The mapping department will be notified of all changes of MAOP. These records must contain:
 - a) Copies of the design, operating and maintenance history records that were reviewed prior to testing.
 - b) All leak surveys and repairs made prior to testing.
 - c) Results of the incremental pressure tests conducted to uprate the pipeline and pressure recording charts or other records of pressure readings.
 - d) Elevation variations, whenever significant for the particular test.



- e) The name of the employee in charge of the test and the names of all who helped and what they did.
- f) All leak surveys made during the test.