

any local gas distribution companies or gathering systems will be taking advantage of the potential to use an alternative MAOP.

The rule mandates no action by gas transmission pipeline operators. Rather, it provides those operators with the option of using an alternative MAOP in certain circumstances, when certain conditions can be met. Consequently, it imposes no economic burden on the affected gas pipeline operators, large or small. Based on these facts, I certify that this rule will not have a substantial economic impact on a substantial number of small entities.

#### F.4. Executive Order 13175

PHMSA has analyzed this rulemaking according to Executive Order 13175, "Consultation and Coordination with Indian Tribal Governments." Because the rule does not significantly or uniquely affect the communities of the Indian tribal governments, nor impose substantial direct compliance costs, the funding and consultation requirements of Executive Order 13175 do not apply.

#### F.5. Paperwork Reduction Act

This rule adds notification paperwork requirements and record retention on pipeline operators voluntarily choosing an alternative MAOP for their pipelines. Based on analysis of the regulation, there will be an estimated nine total annual burden hours attributable to the notification and recordkeeping requirements in the first year. In following years, the annual burden is expected to decrease to one and one-half hours. The associated cost of these annual burden hours is \$720 in year one, and \$120 thereafter. No other burden hours and associated costs are expected. The Paperwork Reduction Act analysis in the docket has a more detailed explanation.

#### F.6. Unfunded Mandates Reform Act of 1995

This rule does not impose unfunded mandates under the Unfunded Mandates Reform Act of 1995. It does not result in costs of \$132 million or more in any one year to either State, local, or tribal governments, in the aggregate, or to the private sector, and is the least burdensome alternative that

achieves the objective of the rulemaking.

#### F.7. National Environmental Policy Act

PHMSA has analyzed the rulemaking for purposes of the National Environmental Policy Act (42 U.S.C. 4321 *et seq.*). The rulemaking will require limited physical change or other work that would disturb pipeline rights-of-way. In addition, the rule codifies the terms of special permits PHMSA has granted. Although PHMSA sought public comment on environmental impacts with respect to most requests for special permits to allow operation at pressures based on higher stress levels, no commenters addressed environmental impacts. Further, PHMSA did not receive any comment on the environmental assessment it had prepared in conjunction with the proposed rule. PHMSA has determined the rulemaking is unlikely to significantly affect the quality of the human environment. An environmental assessment document is available for review in the docket.

#### F.8. Executive Order 13132

PHMSA has analyzed the rulemaking according to Executive Order 13132 (64 FR 43255, Aug. 10, 1999) and concluded that no additional consultation with States, local governments or their representatives is mandated beyond the rulemaking process. The rule does not have a substantial direct effect on the States, the relationship between the national government and the States, or the distribution of power and responsibilities among the various levels of government. The rule does not impose substantial direct compliance costs on State or local governments.

Further, no consultation is needed to discuss the preemptive effect of the proposed rule. The pipeline safety law, specifically 49 U.S.C. 60104(c), prohibits State safety regulation of interstate pipelines. Under the pipeline safety law, States have the ability to augment pipeline safety requirements for intrastate pipelines PHMSA regulates, but may not approve safety requirements less stringent than those required by Federal law. And a State may regulate an intrastate pipeline facility PHMSA does not regulate. In

addition, 49 U.S.C. 60120(c) provides that the Federal pipeline safety law "does not affect the tort liability of any person." It is these statutory provisions, not the rule, that govern preemption of State law. Therefore, the consultation and funding requirements of Executive Order 13132 do not apply.

#### F.9. Executive Order 13211

This rulemaking is likely to increase the efficiency of gas transmission pipelines. A gas transmission pipeline operating at an increased MAOP will result in increased capacity, fuel savings, and flexibility in addressing supply demands. This is a positive rather than an adverse effect on the supply, distribution, and use of energy. Thus this rulemaking is not a "significant energy action" under Executive Order 13211. Further, the Administrator of the Office of Information and Regulatory Affairs has not identified this rule as a significant energy action.

#### List of Subjects in 49 CFR Part 192

Design pressure, Incorporation by reference, Maximum allowable operating pressure, and Pipeline safety.

■ For the reasons provided in the preamble, PHMSA amends 49 CFR part 192 as follows:

#### PART 192—TRANSPORTATION OF NATURAL AND OTHER GAS BY PIPELINE: MINIMUM FEDERAL SAFETY STANDARDS

■ 1. The authority citation for part 192 continues to read as follows:

**Authority:** 49 U.S.C. 5103, 60102, 60104, 60108, 60109, 60110, 60113, and 60118; and 49 CFR 1.53.

■ 2. In § 192.7, in paragraph (c)(2) amend the table of referenced material by revising item (B)(1), redesignating items (C)(6) through (C)(13) as (C)(7) through (C)(14), and adding a new item (C)(6) to read as follows:

#### § 192.7 What documents are incorporated by reference partly or wholly in this part?

*	*	*	*	*
(c)	*	*	*	
(2)	*	*	*	

Source and name of referenced material	49 CFR reference
B. * * * (1) API Specification 5L "Specification for Line Pipe," (43rd edition and errata), 2004	* * * §§ 192.55(e); 192.112; 192.113; Item I of Appendix B.
C. * * * (6) ASTM Designation: A 578/A578M-96 (Re-approved 2001) "Standard Specification for Straight-Beam Ultrasonic Examination of Plain and Clad Steel Plates for Special Applications".	§§ 192.112(c)(2)(iii).

■ 3. Add § 192.112 to subpart C to read as follows:

**§ 192.112 Additional design requirements for steel pipe using alternative maximum allowable operating pressure.**

For a new or existing pipeline segment to be eligible for operation at the alternative maximum allowable operating pressure (MAOP) calculated

under § 192.620, a segment must meet the following additional design requirements. Records for alternative MAOP must be maintained, for the useful life of the pipeline, demonstrating compliance with these requirements:

To address this design issue:	The pipeline segment must meet these additional requirements:
(a) General standards for the steel pipe.	(1) The plate, skelp, or coil used for the pipe must be micro-alloyed, fine grain, fully killed, continuously cast steel with calcium treatment. (2) The carbon equivalents of the steel used for pipe must not exceed 0.25 percent by weight, as calculated by the Ito-Bessyo formula (Pcm formula) or 0.43 percent by weight, as calculated by the International Institute of Welding (IIW) formula. (3) The ratio of the specified outside diameter of the pipe to the specified wall thickness must be less than 100. The wall thickness or other mitigative measures must prevent denting and ovality anomalies during construction, strength testing and anticipated operational stresses. (4) The pipe must be manufactured using API Specification 5L, product specification level 2 (incorporated by reference, see § 192.7) for maximum operating pressures and minimum and maximum operating temperatures and other requirements under this section.
(b) Fracture control	(1) The toughness properties for pipe must address the potential for initiation, propagation and arrest of fractures in accordance with: (i) API Specification 5L (incorporated by reference, see § 192.7); or (ii) American Society of Mechanical Engineers (ASME) B31.8 (incorporated by reference, see § 192.7); and (iii) Any correction factors needed to address pipe grades, pressures, temperatures, or gas compositions not expressly addressed in API Specification 5L, product specification level 2 or ASME B31.8 (incorporated by reference, see § 192.7). (2) Fracture control must: (i) Ensure resistance to fracture initiation while addressing the full range of operating temperatures, pressures, gas compositions, pipe grade and operating stress levels, including maximum pressures and minimum temperatures for shut-in conditions, that the pipeline is expected to experience. If these parameters change during operation of the pipeline such that they are outside the bounds of what was considered in the design evaluation, the evaluation must be reviewed and updated to assure continued resistance to fracture initiation over the operating life of the pipeline; (ii) Address adjustments to toughness of pipe for each grade used and the decompression behavior of the gas at operating parameters; (iii) Ensure at least 99 percent probability of fracture arrest within eight pipe lengths with a probability of not less than 90 percent within five pipe lengths; and (iv) Include fracture toughness testing that is equivalent to that described in supplementary requirements SR5A, SR5B, and SR6 of API Specification 5L (incorporated by reference, see § 192.7) and ensures ductile fracture and arrest with the following exceptions: (A) The results of the Charpy impact test prescribed in SR5A must indicate at least 80 percent minimum shear area for any single test on each heat of steel; and (B) The results of the drop weight test prescribed in SR6 must indicate 80 percent average shear area with a minimum single test result of 60 percent shear area for any steel test samples. The test results must ensure a ductile fracture and arrest. (3) If it is not physically possible to achieve the pipeline toughness properties of paragraphs (b)(1) and (2) of this section, additional design features, such as mechanical or composite crack arrestors and/or heavier walled pipe of proper design and spacing, must be used to ensure fracture arrest as described in paragraph (b)(2)(iii) of this section.
(c) Plate/coil quality control	(1) There must be an internal quality management program at all mills involved in producing steel, plate, coil, skelp, and/or rolling pipe to be operated at alternative MAOP. These programs must be structured to eliminate or detect defects and inclusions affecting pipe quality. (2) A mill inspection program or internal quality management program must include (i) and either (ii) or (iii): (i) An ultrasonic test of the ends and at least 35 percent of the surface of the plate/coil or pipe to identify imperfections that impair serviceability such as laminations, cracks, and inclusions. At least 95 percent of the lengths of pipe manufactured must be tested. For all pipelines designed after [the effective date of the final rule], the test must be done in accordance with ASTM A578/A578M Level B, or API 5L Paragraph 7.8.10 (incorporated by reference, see § 192.7) or equivalent method, and either

To address this design issue:	The pipeline segment must meet these additional requirements:
(d) Seam quality control .....	<p>(ii) A macro etch test or other equivalent method to identify inclusions that may form centerline segregation during the continuous casting process. Use of sulfur prints is not an equivalent method. The test must be carried out on the first or second slab of each sequence graded with an acceptance criteria of one or two on the Mannesmann scale or equivalent; or</p> <p>(iii) A quality assurance monitoring program implemented by the operator that includes audits of: (a) all steelmaking and casting facilities, (b) quality control plans and manufacturing procedure specifications, (c) equipment maintenance and records of conformance, (d) applicable casting superheat and speeds, and (e) centerline segregation monitoring records to ensure mitigation of centerline segregation during the continuous casting process.</p> <p>(1) There must be a quality assurance program for pipe seam welds to assure tensile strength provided in API Specification 5L (incorporated by reference, see § 192.7) for appropriate grades.</p> <p>(2) There must be a hardness test, using Vickers (Hv10) hardness test method or equivalent test method, to assure a maximum hardness of 280 Vickers of the following:</p> <p>(i) A cross section of the weld seam of one pipe from each heat plus one pipe from each welding line per day; and</p> <p>(ii) For each sample cross section, a minimum of 13 readings (three for each heat affected zone, three in the weld metal, and two in each section of pipe base metal).</p> <p>(3) All of the seams must be ultrasonically tested after cold expansion and mill hydrostatic testing.</p>
(e) Mill hydrostatic test .....	<p>(1) All pipe to be used in a new pipeline segment must be hydrostatically tested at the mill at a test pressure corresponding to a hoop stress of 95 percent SMYS for 10 seconds. The test pressure may include a combination of internal test pressure and the allowance for end loading stresses imposed by the pipe mill hydrostatic testing equipment as allowed by API Specification 5L, Appendix K (incorporated by reference, see § 192.7).</p> <p>(2) Pipe in operation prior to November 17, 2008, must have been hydrostatically tested at the mill at a test pressure corresponding to a hoop stress of 90 percent SMYS for 10 seconds.</p>
(f) Coating .....	<p>(1) The pipe must be protected against external corrosion by a non-shielding coating.</p> <p>(2) Coating on pipe used for trenchless installation must be non-shielding and resist abrasions and other damage possible during installation.</p> <p>(3) A quality assurance inspection and testing program for the coating must cover the surface quality of the bare pipe, surface cleanliness and chlorides, blast cleaning, application temperature control, adhesion, cathodic disbondment, moisture permeation, bending, coating thickness, holiday detection, and repair.</p>
(g) Fittings and flanges .....	<p>(1) There must be certification records of flanges, factory induction bends and factory welds. Certification must address material properties such as chemistry, minimum yield strength and minimum wall thickness to meet design conditions.</p> <p>(2) If the carbon equivalents of flanges, bends and welds are greater than 0.42 percent by weight, the qualified welding procedures must include a pre-heat procedure.</p> <p>(3) Valves, flanges and fittings must be rated based upon the required specification rating class for the alternative MAOP.</p>
(h) Compressor stations .....	<p>(1) A compressor station must be designed to limit the temperature of the nearest downstream segment operating at alternative MAOP to a maximum of 120 degrees Fahrenheit (49 degrees Celsius) or the higher temperature allowed in paragraph (h)(2) of this section unless a long-term coating integrity monitoring program is implemented in accordance with paragraph (h)(3) of this section.</p> <p>(2) If research, testing and field monitoring tests demonstrate that the coating type being used will withstand a higher temperature in long-term operations, the compressor station may be designed to limit downstream piping to that higher temperature. Test results and acceptance criteria addressing coating adhesion, cathodic disbondment, and coating condition must be provided to each PHMSA pipeline safety regional office where the pipeline is in service at least 60 days prior to operating above 120 degrees Fahrenheit (49 degrees Celsius). An operator must also notify a State pipeline safety authority when the pipeline is located in a State where PHMSA has an interstate agent agreement, or an intrastate pipeline is regulated by that State.</p> <p>(3) Pipeline segments operating at alternative MAOP may operate at temperatures above 120 degrees Fahrenheit (49 degrees Celsius) if the operator implements a long-term coating integrity monitoring program. The monitoring program must include examinations using direct current voltage gradient (DCVG), alternating current voltage gradient (ACVG), or an equivalent method of monitoring coating integrity. An operator must specify the periodicity at which these examinations occur and criteria for repairing identified indications. An operator must submit its long-term coating integrity monitoring program to each PHMSA pipeline safety regional office in which the pipeline is located for review before the pipeline segments may be operated at temperatures in excess of 120 degrees Fahrenheit (49 degrees Celsius). An operator must also notify a State pipeline safety authority when the pipeline is located in a State where PHMSA has an interstate agent agreement, or an intrastate pipeline is regulated by that State.</p>

■ 4. Add § 192.328 to subpart G to read as follows:

**§ 192.328 Additional construction requirements for steel pipe using alternative maximum allowable operating pressure.**

For a new or existing pipeline segment to be eligible for operation at

the alternative maximum allowable operating pressure calculated under § 192.620, a segment must meet the following additional construction requirements. Records must be maintained, for the useful life of the pipeline, demonstrating compliance with these requirements:

To address this construction issue:	The pipeline segment must meet this additional construction requirement:
(a) Quality assurance .....	(1) The construction of the pipeline segment must be done under a quality assurance plan addressing pipe inspection, hauling and stringing, field bending, welding, non-destructive examination of girth welds, applying and testing field applied coating, lowering of the pipeline into the ditch, padding and backfilling, and hydrostatic testing. (2) The quality assurance plan for applying and testing field applied coating to girth welds must be: (i) Equivalent to that required under § 192.112(f)(3) for pipe; and (ii) Performed by an individual with the knowledge, skills, and ability to assure effective coating application.
(b) Girth welds .....	(1) All girth welds on a new pipeline segment must be non-destructively examined in accordance with § 192.243(b) and (c).
(c) Depth of cover .....	(1) Notwithstanding any lesser depth of cover otherwise allowed in § 192.327, there must be at least 36 inches (914 millimeters) of cover or equivalent means to protect the pipeline from outside force damage. (2) In areas where deep tilling or other activities could threaten the pipeline, the top of the pipeline must be installed at least one foot below the deepest expected penetration of the soil.
(d) Initial strength testing .....	(1) The pipeline segment must not have experienced failures indicative of systemic material defects during strength testing, including initial hydrostatic testing. A root cause analysis, including metallurgical examination of the failed pipe, must be performed for any failure experienced to verify that it is not indicative of a systemic concern. The results of this root cause analysis must be reported to each PHMSA pipeline safety regional office where the pipe is in service at least 60 days prior to operating at the alternative MAOP. An operator must also notify a State pipeline safety authority when the pipeline is located in a State where PHMSA has an interstate agent agreement, or an intrastate pipeline is regulated by that State.
(e) Interference currents .....	(f) For a new pipeline segment, the construction must address the impacts of induced alternating current from parallel electric transmission lines and other known sources of potential interference with corrosion control.

■ 5. Amend § 192.611 by revising paragraph (a)(1) and (a)(3)(i) and (ii) and adding new paragraph (a)(3)(iii) to read as follows:

**§ 192.611 Change in class location: Confirmation or revision of maximum allowable operating pressure.**

(a) \* \* \*

(1) If the segment involved has been previously tested in place for a period of not less than 8 hours:

(i) The maximum allowable operating pressure is 0.8 times the test pressure in Class 2 locations, 0.667 times the test pressure in Class 3 locations, or 0.555 times the test pressure in Class 4 locations. The corresponding hoop stress may not exceed 72 percent of the SMYS of the pipe in Class 2 locations, 60 percent of SMYS in Class 3 locations, or 50 percent of SMYS in Class 4 locations.

(ii) The alternative maximum allowable operating pressure is 0.8 times the test pressure in Class 2 locations and 0.667 times the test pressure in Class 3 locations. For pipelines operating at alternative maximum allowable pressure per § 192.620, the corresponding hoop stress may not exceed 80 percent of the SMYS of the pipe in Class 2 locations and 67 percent of SMYS in Class 3 locations.

(3) \* \* \*

(i) The maximum allowable operating pressure after the requalification test is 0.8 times the test pressure for Class 2 locations, 0.667 times the test pressure for Class 3 locations, and 0.555 times the test pressure for Class 4 locations.

(ii) The corresponding hoop stress may not exceed 72 percent of the SMYS of the pipe in Class 2 locations, 60 percent of SMYS in Class 3 locations, or 50 percent of SMYS in Class 4 locations.

(iii) For pipeline operating at an alternative maximum allowable operating pressure per § 192.620, the alternative maximum allowable operating pressure after the requalification test is 0.8 times the test pressure for Class 2 locations and 0.667 times the test pressure for Class 3 locations. The corresponding hoop stress may not exceed 80 percent of the SMYS of the pipe in Class 2 locations and 67 percent of SMYS in Class 3 locations.

\* \* \* \* \*

■ 6. Amend § 192.619 by revising paragraph (a) introductory text and by adding paragraph (d) to read as follows:

**§ 192.619 Maximum allowable operating pressure: Steel or plastic pipelines.**

(a) No person may operate a segment of steel or plastic pipeline at a pressure that exceeds a maximum allowable operating pressure determined under paragraph (c) or (d) of this section, or the lowest of the following:

\* \* \* \* \*

(d) The operator of a pipeline segment of steel pipeline meeting the conditions prescribed in § 192.620(b) may elect to operate the segment at a maximum allowable operating pressure determined under § 192.620(a).

■ 7. Add § 192.620 to subpart L to read as follows:

**§ 192.620 Alternative maximum allowable operating pressure for certain steel pipelines.**

(a) How does an operator calculate the alternative maximum allowable operating pressure? An operator calculates the alternative maximum allowable operating pressure by using different factors in the same formulas used for calculating maximum allowable operating pressure under § 192.619(a) as follows:

(1) In determining the alternative design pressure under § 192.105, use a design factor determined in accordance with § 192.111(b), (c), or (d) or, if none of these paragraphs apply, in accordance with the following table:

Class location	Alternative design factor (F)
1 .....	0.80
2 .....	0.67
3 .....	0.56

(i) For facilities installed prior to November 17, 2008, for which § 192.111(b), (c), or (d) apply, use the following design factors as alternatives for the factors specified in those paragraphs: § 192.111(b)—0.67 or less; 192.111(c) and (d)—0.56 or less.

(ii) [Reserved]

(2) The alternative maximum allowable operating pressure is the lower of the following:

(i) The design pressure of the weakest element in the pipeline segment, determined under subparts C and D of this part.

(ii) The pressure obtained by dividing the pressure to which the pipeline segment was tested after construction by

a factor determined in the following table:

Class location	Alternative test factor
1 .....	1.25
2 .....	1.50
3 .....	1.50

<sup>1</sup> For Class 2 alternative maximum allowable operating pressure segments installed prior to November 17, 2008, the alternative test factor is 1.25.

(b) *When may an operator use the alternative maximum allowable operating pressure calculated under paragraph (a) of this section?* An operator may use an alternative maximum allowable operating pressure calculated under paragraph (a) of this section if the following conditions are met:

(1) The pipeline segment is in a Class 1, 2, or 3 location;

(2) The pipeline segment is constructed of steel pipe meeting the additional design requirements in § 192.112;

(3) A supervisory control and data acquisition system provides remote monitoring and control of the pipeline segment. The control provided must include monitoring of pressures and flows, monitoring compressor start-ups and shut-downs, and remote closure of valves;

(4) The pipeline segment meets the additional construction requirements described in § 192.328;

(5) The pipeline segment does not contain any mechanical couplings used in place of girth welds;

(6) If a pipeline segment has been previously operated, the segment has not experienced any failure during normal operations indicative of a systemic fault in material as determined by a root cause analysis, including metallurgical examination of the failed pipe. The results of this root cause analysis must be reported to each PHMSA pipeline safety regional office where the pipeline is in service at least 60 days prior to operation at the alternative MAOP. An operator must also notify a State pipeline safety authority when the pipeline is located

in a State where PHMSA has an interstate agent agreement, or an intrastate pipeline is regulated by that State; and

(7) At least 95 percent of girth welds on a segment that was constructed prior to November 17, 2008, must have been non-destructively examined in accordance with § 192.243(b) and (c).

(c) *What is an operator electing to use the alternative maximum allowable operating pressure required to do?* If an operator elects to use the alternative maximum allowable operating pressure calculated under paragraph (a) of this section for a pipeline segment, the operator must do each of the following:

(1) Notify each PHMSA pipeline safety regional office where the pipeline is in service of its election with respect to a segment at least 180 days before operating at the alternative maximum allowable operating pressure. An operator must also notify a State pipeline safety authority when the pipeline is located in a State where PHMSA has an interstate agent agreement, or an intrastate pipeline is regulated by that State.

(2) Certify, by signature of a senior executive officer of the company, as follows:

(i) The pipeline segment meets the conditions described in paragraph (b) of this section; and

(ii) The operating and maintenance procedures include the additional operating and maintenance requirements of paragraph (d) of this section; and

(iii) The review and any needed program upgrade of the damage prevention program required by paragraph (d)(4)(v) of this section has been completed.

(3) Send a copy of the certification required by paragraph (c)(2) of this section to each PHMSA pipeline safety regional office where the pipeline is in service 30 days prior to operating at the alternative MAOP. An operator must also send a copy to a State pipeline safety authority when the pipeline is located in a State where PHMSA has an interstate agent agreement, or an intrastate pipeline is regulated by that State.

(4) For each pipeline segment, do one of the following:

(i) Perform a strength test as described in § 192.505 at a test pressure calculated under paragraph (a) of this section or

(ii) For a pipeline segment in existence prior to November 17, 2008, certify, under paragraph (c)(2) of this section, that the strength test performed under § 192.505 was conducted at a test pressure calculated under paragraph (a) of this section, or conduct a new strength test in accordance with paragraph (c)(4)(i) of this section.

(5) Comply with the additional operation and maintenance requirements described in paragraph (d) of this section.

(6) If the performance of a construction task associated with implementing alternative MAOP can affect the integrity of the pipeline segment, treat that task as a "covered task", notwithstanding the definition in § 192.801(b) and implement the requirements of subpart N as appropriate.

(7) Maintain, for the useful life of the pipeline, records demonstrating compliance with paragraphs (b), (c)(6), and (d) of this section.

(8) A Class 1 and Class 2 pipeline location can be upgraded one class due to class changes per § 192.611(a)(3)(i). All class location changes from Class 1 to Class 2 and from Class 2 to Class 3 must have all anomalies evaluated and remediated per: The "original pipeline class grade" § 192.620(d)(11) anomaly repair requirements; and all anomalies with a wall loss equal to or greater than 40 percent must be excavated and remediated. Pipelines in Class 4 may not operate at an alternative MAOP.

(d) *What additional operation and maintenance requirements apply to operation at the alternative maximum allowable operating pressure?* In addition to compliance with other applicable safety standards in this part, if an operator establishes a maximum allowable operating pressure for a pipeline segment under paragraph (a) of this section, an operator must comply with the additional operation and maintenance requirements as follows:

To address increased risk of a maximum allowable operating pressure based on higher stress levels in the following areas:

Take the following additional step:

(1) Identifying and evaluating threats.

Develop a threat matrix consistent with § 192.917 to do the following:  
 (i) Identify and compare the increased risk of operating the pipeline at the increased stress level under this section with conventional operation; and  
 (ii) Describe and implement procedures used to mitigate the risk.

(2) Notifying the public .....

(i) Recalculate the potential impact circle as defined in § 192.903 to reflect use of the alternative maximum operating pressure calculated under paragraph (a) of this section and pipeline operating conditions; and  
 (ii) In implementing the public education program required under § 192.616, perform the following:

To address increased risk of a maximum allowable operating pressure based on higher stress levels in the following areas:	Take the following additional step:
(3) Responding to an emergency in an area defined as a high consequence area in § 192.903.	<p>(A) Include persons occupying property within 220 yards of the centerline and within the potential impact circle within the targeted audience; and</p> <p>(B) Include information about the integrity management activities performed under this section within the message provided to the audience.</p> <p>(i) Ensure that the identification of high consequence areas reflects the larger potential impact circle recalculated under paragraph (d)(1)(i) of this section.</p>
(4) Protecting the right-of-way .....	<p>(ii) If personnel response time to mainline valves on either side of the high consequence area exceeds one hour (under normal driving conditions and speed limits) from the time the event is identified in the control room, provide remote valve control through a supervisory control and data acquisition (SCADA) system, other leak detection system, or an alternative method of control.</p> <p>(iii) Remote valve control must include the ability to close and monitor the valve position (open or closed), and monitor pressure upstream and downstream.</p> <p>(iv) A line break valve control system using differential pressure, rate of pressure drop or other widely-accepted method is an acceptable alternative to remote valve control.</p> <p>(i) Patrol the right-of-way at intervals not exceeding 45 days, but at least 12 times each calendar year, to inspect for excavation activities, ground movement, wash outs, leakage, or other activities or conditions affecting the safety operation of the pipeline.</p> <p>(ii) Develop and implement a plan to monitor for and mitigate occurrences of unstable soil and ground movement.</p> <p>(iii) If observed conditions indicate the possible loss of cover, perform a depth of cover study and replace cover as necessary to restore the depth of cover or apply alternative means to provide protection equivalent to the originally-required depth of cover.</p> <p>(iv) Use line-of-sight line markers satisfying the requirements of § 192.707(d) except in agricultural areas, large water crossings or swamp, steep terrain, or where prohibited by Federal Energy Regulatory Commission orders, permits, or local law.</p> <p>(v) Review the damage prevention program under § 192.614(a) in light of national consensus practices, to ensure the program provides adequate protection of the right-of-way. Identify the standards or practices considered in the review, and meet or exceed those standards or practices by incorporating appropriate changes into the program.</p> <p>(vi) Develop and implement a right-of-way management plan to protect the pipeline segment from damage due to excavation activities.</p>
(5) Controlling internal corrosion ....	<p>(i) Develop and implement a program to monitor for and mitigate the presence of, deleterious gas stream constituents.</p> <p>(ii) At points where gas with potentially deleterious contaminants enters the pipeline, use filter separators or separators and gas quality monitoring equipment.</p> <p>(iii) Use gas quality monitoring equipment that includes a moisture analyzer, chromatograph, and periodic hydrogen sulfide sampling.</p> <p>(iv) Use cleaning pigs and inhibitors, and sample accumulated liquids when corrosive gas is present.</p> <p>(v) Address deleterious gas stream constituents as follows:</p> <p>(A) Limit carbon dioxide to 3 percent by volume;</p> <p>(B) Allow no free water and otherwise limit water to seven pounds per million cubic feet of gas; and</p> <p>(C) Limit hydrogen sulfide to 1.0 grain per hundred cubic feet (16 ppm) of gas, where the hydrogen sulfide is greater than 0.5 grain per hundred cubic feet (8 ppm) of gas, implement a pigging and inhibitor injection program to address deleterious gas stream constituents, including follow-up sampling and quality testing of liquids at receipt points.</p> <p>(vi) Review the program at least quarterly based on the gas stream experience and implement adjustments to monitor for, and mitigate the presence of, deleterious gas stream constituents.</p>
(6) Controlling interference that can impact external corrosion.	<p>(i) Prior to operating an existing pipeline segment at an alternate maximum allowable operating pressure calculated under this section, or within six months after placing a new pipeline segment in service at an alternate maximum allowable operating pressure calculated under this section, address any interference currents on the pipeline segment.</p> <p>(ii) To address interference currents, perform the following:</p> <p>(A) Conduct an interference survey to detect the presence and level of any electrical current that could impact external corrosion where interference is suspected;</p> <p>(B) Analyze the results of the survey; and</p> <p>(C) Take any remedial action needed within 6 months after completing the survey to protect the pipeline segment from deleterious current.</p>
(7) Confirming external corrosion control through indirect assessment.	<p>(i) Within six months after placing the cathodic protection of a new pipeline segment in operation, or within six months after certifying a segment under § 192.620(c)(1) of an existing pipeline segment under this section, assess the adequacy of the cathodic protection through an indirect method such as close-interval survey, and the integrity of the coating using direct current voltage gradient (DCVG) or alternating current voltage gradient (ACVG).</p> <p>(ii) Remediate any construction damaged coating with a voltage drop classified as moderate or severe (IR drop greater than 35% for DCVG or 50 dBµv for ACVG) under section 4 of NACE RP-0502-2002 (incorporated by reference, see § 192.7).</p> <p>(iii) Within six months after completing the baseline internal inspection required under paragraph (8) of this section, integrate the results of the indirect assessment required under paragraph (6)(i) of this section with the results of the baseline internal inspection and take any needed remedial actions.</p> <p>(iv) For all pipeline segments in high consequence areas, perform periodic assessments as follows:</p>

<p>To address increased risk of a maximum allowable operating pressure based on higher stress levels in the following areas:</p>	<p>Take the following additional step:</p>
<p>(8) Controlling external corrosion through cathodic protection.</p>	<p>(A) Conduct periodic close interval surveys with current interrupted to confirm voltage drops in association with periodic assessments under subpart O of this part.                  (B) Locate pipe-to-soil test stations at half-mile intervals within each high consequence area ensuring at least one station is within each high consequence area, if practicable.                  (C) Integrate the results with those of the baseline and periodic assessments for integrity done under paragraphs (d)(8) and (d)(9) of this section.                  (i) If an annual test station reading indicates cathodic protection below the level of protection required in subpart I of this part, complete remedial action within six months of the failed reading or notify each PHMSA pipeline safety regional office where the pipeline is in service demonstrating that the integrity of the pipeline is not compromised if the repair takes longer than 6 months. An operator must also notify a State pipeline safety authority when the pipeline is located in a State where PHMSA has an interstate agent agreement, or an intrastate pipeline is regulated by that State; and                  (ii) After remedial action to address a failed reading, confirm restoration of adequate corrosion control by a close interval survey on either side of the affected test station to the next test station.                  (iii) If the pipeline segment has been in operation, the cathodic protection system on the pipeline segment must have been operational within 12 months of the completion of construction.</p>
<p>(9) Conducting a baseline assessment of integrity.</p>	<p>(i) Except as provided in paragraph (d)(8)(iii) of this section, for a new pipeline segment operating at the new alternative maximum allowable operating pressure, perform a baseline internal inspection of the entire pipeline segment as follows:                  (A) Assess using a geometry tool after the initial hydrostatic test and backfill and within six months after placing the new pipeline segment in service; and                  (B) Assess using a high resolution magnetic flux tool within three years after placing the new pipeline segment in service at the alternative maximum allowable operating pressure.                  (ii) Except as provided in paragraph (d)(8)(iii) of this section, for an existing pipeline segment, perform a baseline internal assessment using a geometry tool and a high resolution magnetic flux tool before, but within two years prior to, raising pressure to the alternative maximum allowable operating pressure as allowed under this section.                  (iii) If headers, mainline valve by-passes, compressor station piping, meter station piping, or other short portion of a pipeline segment operating at alternative maximum allowable operating pressure cannot accommodate a geometry tool and a high resolution magnetic flux tool, use direct assessment (per § 192.925, § 192.927 and/or § 192.929) or pressure testing (per subpart J of this part) to assess that portion.</p>
<p>(10) Conducting periodic assessments of integrity.</p>	<p>(i) Determine a frequency for subsequent periodic integrity assessments as if all the alternative maximum allowable operating pressure pipeline segments were covered by subpart Q of this part and                  (ii) Conduct periodic internal inspections using a high resolution magnetic flux tool on the frequency determined under paragraph (d)(9)(i) of this section, or                  (iii) Use direct assessment (per § 192.925, § 192.927 and/or § 192.929) or pressure testing (per subpart J of this part) for periodic assessment of a portion of a segment to the extent permitted for a baseline assessment under paragraph (d)(8)(iii) of this section.</p>
<p>(11) Making repairs .....</p>	<p>(i) Perform the following when evaluating an anomaly:                  (A) Use the most conservative calculation for determining remaining strength or an alternative validated calculation based on pipe diameter, wall thickness, grade, operating pressure, operating stress level, and operating temperature: and                  (B) Take into account the tolerances of the tools used for the inspection.                  (ii) Repair a defect immediately if any of the following apply:                  (A) The defect is a dent discovered during the baseline assessment for integrity under paragraph (d)(8) of this section and the defect meets the criteria for immediate repair in § 192.309(b).                  (B) The defect meets the criteria for immediate repair in § 192.933(d).                  (C) The alternative maximum allowable operating pressure was based on a design factor of 0.67 under paragraph (a) of this section and the failure pressure is less than 1.25 times the alternative maximum allowable operating pressure.                  (D) The alternative maximum allowable operating pressure was based on a design factor of 0.56 under paragraph (a) of this section and the failure pressure is less than or equal to 1.4 times the alternative maximum allowable operating pressure.                  (iii) If paragraph (d)(10)(ii) of this section does not require immediate repair, repair a defect within one year if any of the following apply:                  (A) The defect meets the criteria for repair within one year in § 192.933(d).                  (B) The alternative maximum allowable operating pressure was based on a design factor of 0.80 under paragraph (a) of this section and the failure pressure is less than 1.25 times the alternative maximum allowable operating pressure.                  (C) The alternative maximum allowable operating pressure was based on a design factor of 0.67 under paragraph (a) of this section and the failure pressure is less than 1.50 times the alternative maximum allowable operating pressure.                  (D) The alternative maximum allowable operating pressure was based on a design factor of 0.56 under paragraph (a) of this section and the failure pressure is less than or equal to 1.80 times the alternative maximum allowable operating pressure.                  (iv) Evaluate any defect not required to be repaired under paragraph (d)(10)(ii) or (iii) of this section to determine its growth rate, set the maximum interval for repair or re-inspection, and repair or re-inspect within that interval.</p>

(e) *Is there any change in overpressure protection associated with operating at the alternative maximum allowable operating pressure?* Notwithstanding the required capacity of pressure relieving and limiting stations otherwise required by § 192.201, if an operator establishes a maximum allowable operating pressure for a pipeline

segment in accordance with paragraph (a) of this section, an operator must:

- (1) Provide overpressure protection that limits mainline pressure to a maximum of 104 percent of the maximum allowable operating pressure; and
- (2) Develop and follow a procedure for establishing and maintaining

accurate set points for the supervisory control and data acquisition system.

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**Carl T. Johnson,**  
*Administrator.*

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