

STATE OF IOWA  
DEPARTMENT OF COMMERCE  
UTILITIES BOARD

---

IN RE:  MIDAMERICAN ENERGY COMPANY	DOCKET NOS. PSA-07-1 WRU-06-35-156
--	---------------------------------------

---

**ORDER GRANTING WAIVER AND REQUIRING REPORTS**

(Issued August 15, 2007)

**PROCEDURAL BACKGROUND**

On December 27, 2006, MidAmerican Energy Company (MidAmerican) filed with the Utilities Board (Board) a request for a waiver of 199 IAC 19.5(2)"a"(2) and 49 CFR 192.321, which prohibit plastic natural gas pipe from being installed above ground except in certain specific and limited circumstances. The requirement is part of minimum federal safety standards established in 49 CFR Part 192 for natural gas pipelines by the U.S. Department of Transportation and adopted by the Board in 199 IAC 10.12(1)"b" and 19.5(2)"a"(d). The standards apply to natural gas pipelines owned and operated by MidAmerican and other Iowa gas utilities.

MidAmerican requested a waiver for existing and future anodeless risers at pressure recording and monitoring devices that are connected to gas mains and not located at metering or regulator stations. Anodeless risers that connect pressure recorders on gas distribution mains that are not in proximity to a regulator station are prohibited under federal standards. The waiver request was identified as Docket No. WRU-06-35-156.

On February 27, 2007, the Board issued an order holding the request for waiver in abeyance and opening a pipeline safety docket, Docket No. PSA-07-1. In that order, the Board indicated that its Safety and Engineering Section staff had raised no technical issues regarding the waiver request; however, staff indicated that MidAmerican had a history of installing anodeless risers in violation of safety standards and this history, in conjunction with the waiver request, raised concerns about MidAmerican's overall compliance with Board and federal natural gas safety standards. The Board stated that it needed more information about the anodeless risers at pressure recorders and MidAmerican's safety procedures to ensure compliance with safety standards before it could address the waiver request.

Also in its February 27, 2007, order, the Board directed MidAmerican to file a report with the additional information and a description of the steps MidAmerican is taking to ensure compliance with all federal and Board safety regulations. The Board also put MidAmerican on notice that it could be subject to civil penalties for violation of Board and federal safety regulations.

On April 2, 2007, MidAmerican filed the report. On April 4 and 5, 2007, Board staff inspected 31 locations identified by MidAmerican where the anodeless risers are installed in Des Moines, Iowa. On April 27, 2007, Board staff filed a report concerning the inspection. On June 4, 2007, the Board issued an order taking official notice of the staff report and directing MidAmerican to file a response to the Board staff report. On June 22, 2007, MidAmerican filed its response.

### **PIPELINE SAFETY DOCKET**

In the April 2, 2007, report, MidAmerican stated it had found 119 locations where anodeless risers serve mechanical and electronic charts installed on gas mains. These locations were not in compliance with federal regulations in 49 CFR 192.321. MidAmerican reported a total of 530 pressure recorders in service, which means 22.5 percent of MidAmerican's installations were noncompliant. The described locations were distributed widely around MidAmerican's service territory in Iowa and all, with one exception, were installed between 1987 and 2007. (The exception was installed in 1977).

MidAmerican stated that these installations occurred over many years and involved many individuals. In the Des Moines area, installers apparently mistakenly thought these lines were service lines and in other cases the anodeless risers may have been installed to avoid creating cathodically isolated zones. MidAmerican agreed that the anodeless risers were in violation of applicable standards, were contrary to MidAmerican's policies, and that failure to discover the non-complying installations by routine operation and maintenance was not acceptable.

MidAmerican described the steps it had taken to ensure compliance currently and in the future with safety regulations and indicated it had taken the following action regarding installation of anodeless risers:

1. MidAmerican surveyed all of its district regulator stations and town border stations to determine if there were other noncompliant facilities and replaced all known anodeless risers at the district regulator stations and town border stations.

2. MidAmerican surveyed all pressure recording devices that were tapped off mains for compliance with safety standards and submitted the waiver request for those installations that were not in compliance.

3. MidAmerican has installed new pressure recorder sensing lines in accordance with MidAmerican's current standards until such time as the waiver is approved.

4. MidAmerican has issued notices to employees and contractors and changed its regulator station inspection forms and is in the process of enhancing construction practices (including notes on drawings and standards designs, re-evaluating inspection requirements and practices, and formalizing inspection prior to placing facilities in operation).

MidAmerican states it has taken a number of steps to improve communications within the company to correct problems on a company-wide basis and it has initiated a program to review operating practices and processes to determine the root causes of why probable violations occur and make changes designed to stop probable violations from occurring. Included within these actions are increased senior management involvement in compliance and remedial actions and organizational changes to increase compliance visibility, including a new Compliance and Delivery Support department reporting directly to the Vice President, Delivery Services.

MidAmerican states that it should not be assessed civil penalties due to its prompt remedial action on deficiencies identified by Board inspection and its search

for and remedial action on additional instances of noncompliance following the 2005-2006 staff inspection report.

Board staff inspected 31 of the 119 sites identified by MidAmerican where anodeless risers were located at pressure recorders on gas mains. As a result of that examination, Board staff reported numerous examples of noncompliance with pipeline safety standards or imprudent installation methods at the 31 locations. These included 2 sites close to roadways and at risk of vehicular damage, 17 sites with corroded piping, 10 sites with missing or inadequate marker signs, and other sites with loose stainless steel tubing subject to damage by the public. Board staff also questioned whether the risers contained plastic pipe with a wall thickness adequate to comply with federal standards. By order issued June 4, 2007, the Board took official notice of the staff report and directed that MidAmerican respond to probable violations described in the report.

MidAmerican filed its response to the report on June 22, 2007, and stated that it had re-examined not just the anodeless risers located in the Des Moines area but all 119 sites. As a result MidAmerican removed 27 risers, relocated 13 risers, and took the required corrective action at the remaining 79 sites. MidAmerican also provided pressure information and copies of its company standards to demonstrate that the plastic pipe in these risers had adequate wall thickness for the pressures and temperatures that would be encountered at each site.

Subsequently, Board staff re-examined the 31 Des Moines area sites and filed a report on July 10, 2007. Board staff found that all of the noncompliant installation locations had been removed, relocated, or brought into compliance. Staff also

examined the pressure information provided by MidAmerican and concluded that the gas pressures listed would not exceed the pressure ratings of the anodeless risers.

### **BOARD DISCUSSION**

The Board opened this pipeline safety docket because of the number of installations that were not in compliance with federal and Board safety standards, including anodeless risers, that had occurred over all parts of MidAmerican's service territory. The installation of anodeless risers not in compliance had occurred and gone undetected by numerous individuals over a period of 20 years. The Board was concerned that apparently no supervisor or manager at MidAmerican realized that anodeless risers were being installed in violation of applicable regulations or, if the violation was known, no corrective action was taken. It appeared to indicate that MidAmerican management may not be properly concerned about safety code compliance or it exercised inadequate control over what was actually being installed in its gas systems.

The filing of the waiver for certain noncomplying anodeless risers heightened the Board's concern, since it was not satisfied that MidAmerican was addressing the other areas of noncompliance and instead was seeking after-the-fact approval of its actions. As a result of the pipeline safety docket and Board staff inspections, it now appears that MidAmerican has corrected the probable violations concerning the anodeless risers indicated in Board staff's reports.

In addition, responses filed by MidAmerican in this docket indicate that MidAmerican has taken other corrective actions to ensure compliance, including the

creation of a new Compliance and Delivery Support department that is charged with the responsibility to oversee regulatory compliance programs. The Board understands that some of the activities of the new department clearly are not yet completed, but creation of the department and increased management involvement in pipeline safety compliance is clearly a positive development. To monitor the activity of the Compliance and Delivery Support department, the Board will require MidAmerican to file quarterly progress reports on the activities of the department until all proposed regulatory requirement compliance programs are in place and functioning. The Board will also require MidAmerican to provide copies of any related changes made to its operating and maintenance plan or other gas standards.

Based upon the action taken by MidAmerican in response to the probable violations cited by Board staff and the reports in this docket, the Board will close Docket No. PSA-07-1. The Board expects that the corrective actions taken by MidAmerican and those planned for the future will ensure compliance with safety standards. The Board has determined that it will not impose any civil penalties on MidAmerican in this docket. MidAmerican responded appropriately to the additional infractions cited by Board staff and took action to follow-up on the 2006 inspection findings. MidAmerican also voluntarily reported additional violations to the Board. The Board does not wish to set a precedent that discourages utilities from investigating the extent of compliance problems, reporting those problems to the Board, or from involving the Board in seeking resolution of problems thus identified.

However, MidAmerican is put on notice that the Board expects continued compliance with federal and Board pipeline safety regulations and, should Board staff

inspections find additional instances of widespread or long-term noncompliance with any Board or federal regulation, the adequacy of MidAmerican's compliance improvement efforts, as described in its March 30, 2007, filing, will be brought into question. If this were to occur, MidAmerican could be subject to civil penalties for any future violations.

### **WAIVER REQUEST**

MidAmerican requested a waiver to allow existing and future anodeless risers at pressure recording and monitoring devices that are connected to gas mains and not located at metering or regulator stations. The pressure recording and monitoring devices affected are generally located in rights-of-way and at locations selected by MidAmerican for the purpose of monitoring system pressure and providing data used in system design. Pressure recording and monitoring devices at or adjacent to town border stations or regulator stations will not be affected. In these installations the line to the recorder cannot be classified as a service line, an exception to the prohibition against anodeless risers, because, as defined in 49 CFR 192.3, a service line transports gas to a customer.

MidAmerican points out that 49 CFR 192.321 provides that plastic pipe must be installed below ground, except for temporary installations or in a metallic sleeve on bridges, and 49 CFR 192.375 allows plastic service pipe to be installed above ground outside a building if it is protected against deterioration and external damage. MidAmerican points out that by interpretation, 49 CFR 192.375 allows installation of an anodeless riser to connect a pressure recording device to a steel or plastic service

pipe, but does not allow the installation of anodeless risers to connect a pressure recording device to steel or plastic mains.

Subrule 199 IAC 1.3 establishes four criteria that must be met by clear and convincing evidence for the Board to grant a waiver. The criteria are: (1) the application of the rule would pose an undue hardship on the person for whom the waiver is requested, (2) the waiver would not prejudice the substantial legal rights of any person, (3) the provisions of the rule are not specifically mandated by statute or another provision of law, and (4) substantially equal protection of public health, safety, and welfare will be afforded by means other than that prescribed in the rule. MidAmerican addressed the four standards in 199 IAC 1.3 for approving this waiver. The four standards and MidAmerican support for the waiver are addressed below.

MidAmerican states the cost of bringing existing pressure recording stations into compliance would be in excess of \$100,000 and there would be additional costs for maintaining and monitoring corrosion control on isolated steel risers if the waiver is not granted. MidAmerican states that these costs would pose an undue hardship for MidAmerican and the costs would not be offset by improved safety or efficiency.

MidAmerican states that it is not aware of any persons who may be adversely affected by granting this waiver and there is no statutory prohibition to waiving these standards. In fact, federal law provides for waiver based upon a review by the state, with the state action subject to review by the U.S. Department of Transportation. MidAmerican states that substantially equal protection of public health, safety, and welfare will be afforded since the waiver will not be granted if the installations cannot be operated safely.

MidAmerican indicates that anodeless risers are used extensively and safely on service lines at locations next to buildings. MidAmerican states that the anodeless risers located at remote locations are safer than at meter sets next to buildings and the same riser specifications as used at meter sets would be used for anodeless risers installed pursuant to the waiver. MidAmerican states that if the waiver is not granted, a steel pipe segment must be used to bring gas above ground from a plastic main, creating isolated protection zones with resultant monitoring costs and increased safety risk from potential corrosion.

MidAmerican argues that granting the waiver would be consistent with federal efforts to minimize isolated cathodic zones, as evidenced by the anodeless riser provision in the federal rules and recently-adopted regulations allowing the use of plastic pipe on bridges. The waiver would allow use of standardized design to simplify design and reduce construction errors and would allow pressure recording charts and monitors to be placed at the best locations. Finally, MidAmerican suggests that if the waiver is not granted, replacing existing anodeless risers would require construction near active gas facilities, creating a risk which, while minimal, is greater than leaving the existing riser in service.

### **BOARD DISCUSSION**

The Board enforces federal natural gas pipeline safety standards under a certificate granted by the U.S. Department of Transportation, Office of Pipeline Safety (OPS), pursuant to 49 U.S.C.A. § 60105. Pursuant to the certificate granted by OPS, the Board may grant a waiver of a federal pipeline safety regulation, however, a state

waiver must be submitted to OPS for review and OPS has 60 days to stay the waiver if it disagrees with the state.

Plastic pipe, primarily made from polyethylene, is widely used for natural gas distribution piping. Around 90 percent of distribution mains and service lines installed today will be plastic. Federal natural gas pipeline safety standards allow plastic pipe to be used at pressures up to 125 psig (pounds per square inch gauge), although most installations are at the more common distribution pressures of 60 psig or less. Plastic pipe has largely replaced steel pipe because it is less expensive, easier to join and install, and does not corrode.

However, plastic pipe is more easily physically damaged, ultraviolet light from sunlight can degrade plastic, and material strength may be affected by extremes of hot and cold temperatures. For these reasons, federal standards at 49 CFR 192.321(a) require plastic pipe be installed below ground, with a few specific exceptions where it has at least some protection from these limitations. Federal standard 49 CFR 192.375(a)(2) allows plastic service lines outside a building to terminate above ground if: 1) the above ground part is protected against deterioration and external damage and 2) the plastic pipe does not support external loads. A typical use of this exception would be to have the plastic pipe protected by a steel pipe as it rises out of the ground to the meter set. The steel outer pipe provides protection and carries any weight, while the plastic contains the gas pressure. Because the steel riser does not contain gas pressure, it need not be protected by a sacrificial anode against corrosion, hence the nomenclature "anodeless riser."

Based on the information in this record, there is no technical reason that the waiver should not be granted and MidAmerican has indicated that the cost would be substantial to replace existing anodeless risers, while prohibiting future installations would not increase the efficiency or safety of MidAmerican's system. There is no evidence that the substantial legal rights of any person would be adversely affected by granting the waiver and Board and federal regulations provide for a waiver of safety standards. Since a waiver is provided for in the regulations, there is no specific mandate that would be violated by granting the waiver. Any waiver of the safety standards requires the approval of both the Board and the OPS and substantially equal protection of the public health, safety, and welfare will be afforded by a means other than that prescribed in the rule.

Since MidAmerican has satisfied the four criteria in 199 IAC 1.3, the Board will grant the waiver of 49 CFR 192.321 as adopted by the Board in rules 199 IAC 19.5(2)"a"(2) and 199 IAC 10.12(1)"b" to allow MidAmerican to retain existing anodeless risers at pressure recording devices and to install anodeless risers in the future at these types of locations. The waiver will not become effective until reviewed, and not stayed, by the U.S. Department of Transportation, Office of Pipeline Safety, pursuant to 49 U.S.C.A. § 60118(d).

### **ORDERING CLAUSES**

#### **IT IS THEREFORE ORDERED:**

1. The waiver request filed on December 27, 2006, in Docket No. WRU-06-35-156 is granted. MidAmerican Energy Company is granted a waiver of 49 CFR

192.321, 199 IAC 10.12(1)"b," and 199 IAC 19.5(2)"a"(2) for existing and future anodeless risers at pressure recording and monitoring devices that are connected to gas mains and not located at metering or regulator stations.

2. The waiver granted in this order shall not become effective until review of the waiver has been performed by the U.S. Department of Transportation, Office of Pipeline Safety, pursuant to 49 U.S.C.A. § 60118(d), or the time for review has expired.

3. MidAmerican Energy Company shall file quarterly progress reports in Docket No. PSA-07-1 concerning the activities of the Compliance and Delivery Support department until all regulatory requirement programs are in place and functioning. The quarterly reports shall include copies of any changes to MidAmerican Energy Company's operations and maintenance manual or other gas pipeline safety standards.

**UTILITIES BOARD**

/s/ John R. Norris

/s/ Curtis W. Stamp

ATTEST:

/s/ Judi K. Cooper  
Executive Secretary

/s/ Krista K. Tanner

Dated at Des Moines, Iowa, this 15<sup>th</sup> day of August, 2007.