

STATE OF IOWA
DEPARTMENT OF COMMERCE
UTILITIES BOARD

IN RE: MIDAMERICAN ENERGY COMPANY	DOCKET NO. PSA-07-1 (WRU-06-35-156)
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**ORDER DIRECTING RESPONSE TO STAFF REPORT
AND TAKING OFFICIAL NOTICE**

(Issued June 4, 2007)

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 (US DOT) and adopted by the Board. The standards apply to natural gas pipelines owned and operated by MidAmerican and other Iowa gas utilities.

On February 27, 2007, the Board issued an order holding the waiver request in abeyance and opening a pipeline safety docket, Docket No. PSA-07-1, to review MidAmerican's compliance with federal and Board pipeline safety regulations. In the order, the Board directed MidAmerican to file a report listing the current locations of all known anodeless risers that are noncompliant, a description of the anodeless

risers, and the reason the risers were not constructed in compliance with safety standards.

On April 2, 2007, MidAmerican filed a report as required by the February 27, 2007, order. In the response, MidAmerican listed 119 locations where it had used anodeless risers at pressure recording equipment in Iowa. In the report, MidAmerican describes the actions it has taken to correct the deficiencies in addition to the filing of the waiver request. MidAmerican states that the construction of the anodeless risers was done over several years and involved many individuals. The primary reason that the installations did not comply with safety regulations was the individuals believed the line to the pressure recorder was a service line and the installers tried to avoid creating a cathodically isolated zone. The report also includes a description of the steps MidAmerican has taken to ensure compliance with federal and Board safety regulations in the future.

On April 4 and 5, 2007, Board staff inspected 31 locations indicated by MidAmerican where the anodeless risers are installed in Des Moines. On April 27, 2007, Board staff filed a report concerning the inspection. The staff report has been filed in the official file in this docket and is attached to this order and incorporated herein by reference. The Board is taking official notice of the report pursuant to Iowa Code § 17A.14(4).

The staff report indicates that a number of safety compliance issues with pressure recorder installations were found during the inspection. The areas of

concern with the pressure recorder installations include locations where:

(1) pressure recorders were installed close to a busy roadway, placing them at risk of vehicular damage; (2) corroded pipe attached the pressure recorder to the anodeless riser; (3) pressure recorder locations were either missing a pipeline marker or contained incomplete information; and (4) stainless steel tubing used between the pressure recorder and the anodeless risers was subject to damage by the public. In addition, Board staff could not verify in the field if the risers installed had the correct wall thickness for their operating pressure.

In the report, Board staff recommends the Board require that MidAmerican provide additional information that shows it is in compliance with 49 CFR 192.121 and 123 regarding designs of plastic pipe for existing and future installations of anodeless risers subject to the waiver request. Board staff recommends that the Board not grant the waiver in Docket No. WRU-06-35-156 until all safety code compliance issues with the pressure recorder installations are resolved.

The Board has reviewed MidAmerican's report and the staff inspection report. MidAmerican's report describes how it is ensuring compliance with federal and Board safety standards. However, the staff inspection report indicates that there are several issues regarding pressure recorder installations that need to be resolved. The Board will direct MidAmerican to respond to the report so these issues can be addressed before the Board finishes consideration of the waiver request. This is an opportunity for MidAmerican to bring the pressure recorder installations into

compliance and assure the Board that it has procedures in place to find and correct these types of problems in the future.

IT IS THEREFORE ORDERED:

1. MidAmerican Energy Company shall file a response to the April 27, 2007, staff inspection report on or before June 22, 2007.

2. The Board takes official notice of the April 27, 2007, staff inspection report pursuant to Iowa Code § 17A.14(4).

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 4th day of June, 2007.

FINDINGS

Board staff found that MEC used two types of designs for the installation of pressure records within the Des Moines Area. The first design was for pressure recorders installed in the 1990s. The second design (current design) was used for the design of pressure records installed starting in 2000 and continues to be used to date.

The 1990s design is shown in Photo # 1. In that design MEC used two steel I-beams with the pressure recorder mounted between them. The Anodeless gas riser was also installed between the I-beams. MEC used rigid schedule 40 screwed pipe to attach the riser to the pressure recorder. The current design, shown in Photo # 2 shows the pressure recorder mounted on a 2-inch galvanized pipe. Both the galvanized pipe and the anodeless riser are located in a concrete pad at the base of the recorder. The pressure recorder is connected to the anodeless riser using 3/8-inch stainless steel tubing.

Board staff found no areas of concern with the anodeless risers at these two locations. However, Board staff did find areas of concern with some of the other locations visited. Listed below are those areas of concern found during this investigation.

1. Two locations were found where pressure recorders were installed close to a busy roadway, placing them at risk of vehicular damage. 49 CFR Part 192.317(b) states: *Each aboveground transmission line or main, not located offshore or in inland navigable water areas, must be protected from accidental damage by vehicular traffic or other similar caused, either by being placed at a safe distance from the traffic or by installing barricades.* Photos # 3 at East 14th Street north of University, Des Moines and Photo # 4 at SE 14th Street and McKinley Ave. Des Moines show facilities installed close to a busy highway, requiring additional protection from vehicular damage.
2. The 17 pressure recorders installed in 1996 used schedule 40 screwed pipe to attach the pressure recorder to the anodeless riser. At each of those locations Board staff found the pipe was corroded. 49 CFR Part 192.479 and .481 require the operator to monitor aboveground piping for atmospheric corrosion and take corrective action when corrosion is found. Photo # 5 is an example representative of such locations.

3. MidAmerican Energy Company's Operations and Maintenance Plan Section G 60.20 requires pipeline markers be placed on all aboveground piping that is accessible to the public. During Board staff's investigation, staff found 10 pressure recorder locations where either the pipeline marker was missing or where only partial information was listed. This is a Probable Violation of 49 CFR Part 192.707(c) and .13(c). Photos # 6 through # 9 show both new and old locations where markers were missing.
4. At two specific locations, Board staff noted that the stainless steel tubing used between the pressure record and the Anodeless risers were subject to damage by the public. Those locations are shown in Photos #8 and # 9. MEC needs to take additional action to protect those lines for damage by the public.

In addition to the areas of concern listed above, MEC did not, in its report to the Board, provide the operating pressures that the 119 anodeless risers are subjected to or the design standards used when they were installed. 49 CFR 192.121 and .123 Design of Plastic Pipe requires an operator to consider the temperature the plastic pipe will be exposed to when determining the maximum operating pressure of the pipe. In Iowa, plastic pipe in an anodeless riser exposed to direct sunlight could see temperatures in excess of 100 degrees Fahrenheit. Using the design formula in 49 CFR 192.121 a standard SDR 11 anodeless riser would be allowed to operate at pressures up to 64 psig. Any pressures higher than that would require a larger wall thickness such as an SDR 7 or SDR 9 anodeless riser. Board staff could not verify in the field if the risers installed had the correct wall thickness for their operating pressure. MEC should be required to provide additional information that shows they are in compliance with 49 CFR 192.121 for both existing installations and future installations of anodeless risers covered by the waiver request.

CONCLUSIONS

Staff recommends that the Board require MidAmerican Energy Company to respond to the above findings. MEC's waiver request in Docket No. WRU-06-35-156 should not be ruled on until all safety code compliance issues with these pressure recorder installations are resolved.

PHOTO # 1



East 14th Street North of University Des Moines

This is the 1996 pressure recorder design.

PHOTO # 2



Colonial Parkway and Highway 28 Norwalk

This is MEC's new pressure record design.

PHOTO # 3



East 14th Street North of University Des Moines

This installation is subject to vehicular damage.

PHOTO # 4



SE 14th Street and McKinley Ave. Des Moines

This installation is subject to vehicular damage.

PHOTO # 5



East 29th Street and Ovid (Goodrell School) Des Moines

This installation shows atmospheric corrosion on the schedule 40 pipe from the Anodeless riser to the pressure recording gauge.

PHOTO # 6



NW School and West 1st Street Ankeny

This photo shows a lack of warning information on the recorder.

PHOTO # 7



Grand and Vine Streets West Des Moines

This photo shows a lack of warning information on the recorder and atmospheric corrosion on the schedule 40 pipe from the Anodeless riser to the pressure recording gauge.

PHOTO # 8



Maple Drive East of Hickory Blvd. Pleasant Hill

Missing Pipeline Marker and Stainless Steel Tubing subject to damage by the public.

PHOTO # 9



410 SW 17th Ave. Altoona

Missing Pipeline Marker and Stainless Steel Tubing subject to damage by the public.