



U.S. Department
of Transportation
**Research and
Special Programs
Administration**

400 Seventh Street, S.W.
Washington, D.C. 20590

DEC - 3 2002

Mr. Alan C. Lukes
Vice President & Chief Operating Officer
Dakota Gasification Company
1600 East Interstate Avenue
Bismark, ND 58501

RE: CPF No. 3-2001-5014

Dear Mr. Lukes:

Enclosed is the Final Order issued by the Associate Administrator for Pipeline Safety in the above-referenced case. It makes findings of violation and assesses a civil penalty of \$20,000.00. The penalty payment and terms are set forth in the Final Order. This enforcement action closes automatically upon payment. Your receipt of the Final Order constitutes service of that document under 49 C.F.R. § 190.5.

Sincerely,

Gwendolyn M. Hill
Pipeline Compliance Registry
Office of Pipeline Safety

Enclosure

cc: Ivan Huntoon, Director, OPS Central Region
Mark D. Foss, Counsel for Dakota Gasification

CERTIFIED MAIL - RETURN RECEIPT REQUESTED

DEPARTMENT OF TRANSPORTATION
RESEARCH AND SPECIAL PROGRAMS ADMINISTRATION
WASHINGTON, DC 20590

In the Matter of)
Dakota Gasification Company,)
Respondent)
_____)

CPF No. 3-2001-5014

FINAL ORDER

On December 4, 2000, pursuant to 49 U.S.C. § 60117, representatives of the Office of Pipeline Safety (OPS) conducted an investigation into the release of carbon dioxide at Respondent's facilities in Tioga, North Dakota. As a result of this investigation, the Director, Central Region, OPS, issued to Respondent, by letter dated June 6, 2001, a Notice of Probable Violation and Proposed Civil Penalty (Notice). In accordance with 49 C.F.R. §190.207, the Notice proposed finding that Respondent had committed violations of 49 C.F.R. §§195.110(b), and 195.246 and proposed assessing a civil penalty of \$30,000 for the alleged violations.

In a letter dated June 21, 2001, Respondent submitted a Response to the Notice (Response). Respondent contested the allegations of violation and the proposed civil penalties. Respondent requested a hearing which was held on February 21, 2002 in Kansas City, MO. After this hearing, Respondent provided additional information on February 22 and 28, 2002.

FINDINGS OF VIOLATION

Item 1 of the Notice alleged violation of 49 C.F.R. §195.110(b) for failing to design a seven-foot valve extension for anticipated external loads and localized stresses that would be caused by inadequate support due to earth movement. Respondent agreed that an error was made and that localized stress and the design of the valve extension attached to the pipe were at issue. However, Respondent objected to the application of §195.110 on the grounds that 49 C.F.R. §195.116 was more applicable because the violations in question involve valves and the design of valves.

Respondent's argument that 49 C.F.R. §195.116 supplants 49 C.F.R. §195.110(b) is incorrect. Section 195.116 provides specific design requirements for valves but does not explicitly address external loads. The more general section 195.110(b) applies to all components including valves. Thus, section 195.110(b) was properly applied in this case.

Respondent's facility originally included five buried 2-inch valves. Respondent modified its facility by installing a seven-foot long valve actuator extension on one of the buried 2-inch valve. Less than two months later, a failure occurred resulting in the leak of carbon dioxide. Kiefner and Associates examined the failed valve and issued an investigative report. The report revealed that four cap screws were loose and three were elongated. This allowed the gear flange to separate from the body of the plug valve and vapor to leak from the gap between the gear flange and the valve body. The report concluded that a side load on the valve extension produced a bending moment on the gear support flange causing the cap screws to deform and elongate, resulting in the leak of carbon dioxide. The forces to which a pipeline may be subjected must be provided for in designing a pipeline. For instance, pipelines tend to expand or to contract as its temperature changes. The force exerted on the pipeline needs to be absorbed without creating an unstable subsurface. This valve assembly was not properly supported so that excess localized stresses could transfer to withstand the force exerted upon it. The analysis provided by the investigative report suggests that effect of the excess localized stress, from the valve extension to the deformed and elongated cap screws, indicate a design unable to accommodate or absorb the stress imposed. Accordingly, I find Respondent violated 49 C.F.R. §195.110(b).

Item 2 of the Notice alleged violation of 49 C.F.R. §195.246(a) for failing to provide installation of the pipe in a manner that minimizes the introduction of secondary stresses and the possibility of damage to the pipe. Respondent argued that it hired a reputable contractor to conduct several installation inspections to ensure compliance. Nevertheless, the Respondent is responsible for compliance with pipeline safety regulations. The seven-foot valve actuator extension was attached to the 2-inch valve body with the top plate as support (valve assembly). The extension was attached with machine screws that were much larger than the 5/16-inch cap screws holding the top plate to the body of the valve. The top plate also applied pressure to the packing, which seals the valve so that it confines the carbon dioxide. When external force was exerted on the valve assembly, the valve extension placed stresses on the smaller 5/16-inch cap screws sealing the top plate of the valve. The 5/16-inch cap screws were unable to resist the localized stresses. Once the gap was created and the packing compromised, the carbon dioxide escaped. The examination of the valve revealed that a side load on the valve actuator extension produced a bending momentum on the gear support flange that caused the cap screws to elongate. The valve assembly was unable to absorb or resist the introduction of secondary stresses on it without creating an unstable subsurface, damage to the pipe and release of carbon dioxide. Accordingly, I find Respondent violated 49 C.F.R. §195.246(a).

These findings of violation will be considered prior offenses in any subsequent enforcement action taken against Respondent.

ASSESSMENT OF PENALTY

Under 49 U.S.C. § 60122, Respondent is subject to a civil penalty not to exceed \$25,000 per violation for each day of the violation up to a maximum of \$500,000 for any related series of violations. The Notice proposed a total penalty assessment of \$30,000.

49 U.S.C. § 60122 and 49 C.F.R. § 190.225 require that, in determining the amount of the civil penalty, I consider the following criteria: nature, circumstances, and gravity of the violation, degree of Respondent's culpability, history of Respondent's prior offenses, Respondent's ability to pay the penalty, good faith by Respondent in attempting to achieve compliance, the effect on Respondent's ability to continue in business, and such other matters as justice may require.

The Notice proposed a civil penalty of \$30,000 for violation of 49 C.F.R. §195.110(b) and §195.246(a). Respondent argued that it should not be assessed a civil penalty because it made every effort to ensure that the valve assembly was properly designed and installed, as it hired experienced contractors to design, manufacture, and install the seven-foot valve actuator extension.

Respondent emphasized that the bidding documents for the contract contained language that carbon dioxide was used in the pipeline and explanation of the pressures involved. The contract made the contractor responsible for design, selection of materials and ensuring that the design was appropriate for this type of facility.

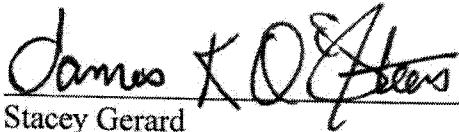
Ultimately, the Respondent is responsible for compliance with the pipeline safety regulations. The investigative report indicates that the valve assembly was not designed to resist the bending movement imposed by the seven-foot long valve actuator extension. The contractor obtained an extension from a supplier other than the valve manufacturer to enable them to install the valve actuator extension aboveground. The failed equipment was designed, recommended, and installed by contractors with significant experience in the pipeline industry. Overall, the Respondent acted responsibly by engaging an experienced contractor with the intention that all equipment would be properly constructed. After discovering the leak, the Respondent demonstrated concern for the safety of their system and those who may be affected by the system by taking immediate remedial action. Respondent held public meetings to provide information and explanations and made personal visits to residents along the right-of-way to allay their fears and concerns. Respondent immediately examined all of its 2-inch buried valves. Although there were no signs of stress on the other buried 2-inch valves, Respondent took steps to prevent a recurrence of this failure. All 2-inch buried valves and extensions were excavated, cut out, and replaced with new 2-inch valves aboveground.

Accordingly, having reviewed the record and considered the assessment criteria, I assess Respondent a total civil penalty of \$20,000. A determination has been made that Respondent has the ability to pay this penalty without adversely affecting its ability to continue business.

Payment of the civil penalty must be made within 20 days of service. Federal regulations (49 C.F.R. § 89.21(b)(3)) require this payment be made by wire transfer, through the Federal Reserve Communications System (Fedwire), to the account of the U.S. Treasury. Detailed instructions are contained in the enclosure. Questions concerning wire transfers should be directed to: Financial Operations Division (AMZ-120), Federal Aviation Administration, Mike Monroney Aeronautical Center, P.O. Box 25770, Oklahoma City, OK 73125; (405) 954-4719.

Failure to pay the \$20,000 civil penalty will result in accrual of interest at the current annual rate in accordance with 31 U.S.C. § 3717, 31 C.F.R. § 901.9 and 49 C.F.R. § 89.23. Pursuant to those same authorities, a late penalty charge of six percent (6%) per annum will be charged if payment is not made within 110 days of service. Furthermore, failure to pay the civil penalty may result in referral of the matter to the Attorney General for appropriate action in an United States District Court.

Under 49 C.F.R. § 190.215, Respondent has a right to petition for reconsideration of this Final Order. However, if the civil penalty is paid, the case closes automatically and Respondent waives the right to petition for reconsideration. The filing of the petition automatically stays the payment of any civil penalty assessed. The petition must be received within 20 days of Respondent's receipt of this Final Order and must contain a brief statement of the issue(s). The terms and conditions of this Final Order are effective on receipt.



for Stacey Gerard
Associate Administrator
for Pipeline Safety

DEC - 3 2002

Date Issued