

Mr. Greg J. Palmer
President
Viking Gas Transmission
825 Rice Street
St. Paul, MN 55117

Re: CPF No. 32102

Dear Mr. Palmer:

Enclosed is the Final Order issued by the Associate Administrator for Pipeline Safety in the above-referenced case. It makes a finding of violation and requires certain corrective action applicable to future pipe replacements.

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 Mr. Ron Wiest
Minnesota Office of Pipeline Safety
175 Aurora Avenue
St. Paul, MN 55103-2356

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DEPARTMENT OF TRANSPORTATION
RESEARCH AND SPECIAL PROGRAMS ADMINISTRATION
WASHINGTON, DC

In the Matter of)
)
Viking Gas Transmission,) CPF No. 32102
)
Respondent.)

FINAL ORDER

On August 10, 1991, pursuant to 49 U.S.C. § 60117, a representative of the Minnesota Office of Pipeline Safety, as agent for the Office of Pipeline Safety (OPS), conducted an on-site pipeline safety inspection of Respondent's facilities near Perham, Minnesota. As a result of the inspection, the Director, Central Region, OPS issued to Respondent, by letter dated March 13, 1992, a Notice of Probable Violation and Proposed Compliance Order (Notice). In accordance with 49 C.F.R. § 190.207, the Notice proposed finding that Respondent had violated 49 C.F.R. §§ 192.13(b) and 192.179 and proposed that Respondent take certain measures to correct the alleged violations.

Respondent responded to the Notice by letter dated April 8, 1992. Respondent contested the allegations and requested a hearing that was held on April 27, 1993.¹ After the hearing, Respondent submitted additional information on May 19 and 21, 1993.

FINDING OF VIOLATION

The Notice alleged that Respondent had violated 49 C.F.R. §§ 192.13(b) and 192.179, because it was operating a segment of pipeline in which it had replaced pipe without complying with the Part 192 pipeline safety regulations. Specifically, Respondent had not installed a valve within four miles of a class 3 location when Respondent replaced 2000 feet of pipe following a class location change from class 1 to class 3.

¹ An official transcript, dated April 27, 1993, was made of this hearing.

Respondent said that it disagreed with OPS's interpretation of the relationship between §§ 192.13(b) and 192.179. Respondent said that it had replaced the pipe segment in accordance with Part 192, because the replacement had only to comply with the operations and maintenance requirements in subparts L and M, not with the design requirements in subpart D.

Respondent argued that OPS's interpretation that valve spacing requirements apply to a pipe replacement is contrary to the intent of the pipeline safety enabling statute and implementing regulations, the scope of Part 192's subparts, and industry practice. Respondent also argued that applying OPS's interpretation leads to endless inconsistencies, results in costly remediation, and does not contribute to damage mitigation or pipeline safety.

Legislative and regulatory intent

Respondent maintained that a pipe replacement need only comply with the operations and maintenance requirements (subparts L & M). Valve spacing requirements would not apply because they are design (subpart D) requirements not applicable to an existing pipeline. Respondent contended that its position was supported by the history of the gas pipeline safety statute and regulatory standards.

Respondent explained that the Natural Gas Pipeline Safety Act (NGPSA)² intended that design standards not apply to a pipeline in existence prior to gas pipeline safety regulations being adopted. Respondent's pipeline existed before the gas pipeline safety regulations were issued in 1970. Respondent referred to language in the NGPSA that -

standards affecting the design, installation, construction, initial inspection, and initial testing shall not be applicable to pipeline facilities in existence on the date such standards are adopted. NGPSA, § 3(a)(1).

Moreover, Respondent said OPS's own statements reinforced this interpretation. Respondent explained that when the final pipeline safety regulations implementing the NGPSA were published in the Federal Register, OPS said in the Preamble that "[e]xisting pipelines are subject to the maintenance, repair and

² When the Notice was issued, Respondent was cited under the Natural Gas Pipeline Safety Act of 1968, 49 U.S.C. app. § 1671 et seq. In 1994, the NGPSA was repealed and recodified at 49 U.S.C. § 60101 et seq.

operations requirements." 35 Fed. Reg. 13248; Aug. 19, 1970.

Neither the legislative history of the pipeline safety statute nor RSPA's statements when it issued the regulations support Respondent's interpretation that a replacement to a pipeline that existed when the regulations were issued need only comply with the operations and maintenance provisions in Part 192.

When the NGPSA was passed, Congress discussed the application of safety standards to existing pipeline facilities. H.R. Rep. No. 90-1390, (1968), reprinted in 1968 U.S. Code Cong. & Ad. News 3223, 3236. Congress said that standards affecting the design, installation, construction, initial inspection, and initial testing would not apply to pipelines existing on the date the Secretary of Transportation issued standards.³ Congress further said -

In other words, any Federal standard leading to inspection and testing (other than initial inspection and testing), extension, operation, replacement, and maintenance may be applied to existing pipe as well as new pipe.

U.S. Code Cong. & Ad. News at 3236.

The legislative history shows Congress did not intend to exempt pre-existing pipelines from all pipeline standards. Rather, Congress recognized that design and construction standards could apply to changes or replacements to existing pipelines.

In the Preamble to the final rule establishing the gas pipeline regulations, OPS noted industry's concern about the retroactive effect of the new regulations on existing pipelines. OPS discussed the language in the NGPSA that -

Standards affecting the design, installation, construction, initial inspection, and initial testing shall not be applicable to pipeline facilities in existence on the date such standards are adopted.

As Respondent noted, OPS explained that existing pipelines would be subject to the maintenance, repair, and operations requirements. However, OPS also explained that it was adding § 192.13 to clarify the applicability of the regulations to new and existing pipelines, and to avoid confusion as to their

³ The authority given to the Secretary of Transportation was delegated to the Office of Pipeline Safety (OPS), which has responsibility for pipeline safety matters.

retroactive effect. OPS said that "[w]ith respect to existing pipelines, all changes made after November 12, 1970, must comply with Part 192." 35 Fed. Reg. at 13,251.

This discussion shows that when OPS issued the implementing regulations, OPS intended that a change to an existing pipeline, such as a replacement, would have to comply with **all** of Part 192.

Scope of Subparts

By its reading of Part 192, Respondent said the pipe replacement complied with the applicable subpart. Respondent maintained that its reading was consistent with the scope statements of Part 192 and with the rules of regulatory construction.

Respondent explained that its understanding came from examining each of Part 192's subparts and their differences in scope. Respondent maintained that the rules of regulatory construction acknowledge a subdivision with a separate title may reflect a difference in scope.

Respondent explained that each subpart's language sets out its scope beginning with § 192.13(b), which provides the general scope.

No person may operate a segment of pipeline that is replaced, relocated or otherwise changed after November 12, 1970 ... unless that replacement, relocation or change has been made in accordance with this part.

Respondent said this language means that one then has to look to see which subparts are implicated.

Respondent explained that subparts L and M prescribe the requirements for operating and maintaining an existing pipeline system. Because a class location change appears within the context of maintenance, Respondent argued that the context limited the application to an existing pipeline system.

Respondent further explained that the design subparts (subparts C and D) prescribe minimum requirements for design of pipe, and the design and installation of pipeline components and facilities. Respondent said neither design subpart has any statement similar to the statements in L & M that a pipeline cannot be operated unless it meets its requirements. Respondent maintained that because these subparts state that the requirements apply to new pipeline facilities, they were not meant to apply retroactively to existing systems.

Respondent said that each subpart's language, when interpreted according to the rules of regulatory construction, implied that the valve spacing requirements in the design subpart did not apply to its pipe replacement. Respondent said this was further supported by the lack of evidence showing OPS's intent to apply design standards to the maintenance provisions for a class location change.

I am not persuaded by Respondent's narrow reading of the scope of the subparts. Section 192.13 states that a person may not operate a segment of pipeline that is replaced, relocated, or otherwise changed unless such activities are accomplished in accordance with Part 192. It does not state that a replacement or other change should be made according to the applicable subpart.

Furthermore, the design subpart is implicated in a pipe replacement. When there is a change in class location, § 192.609(b) requires that an operator evaluate the design, construction and testing procedures followed in the original construction and compare those procedures with those required for the present class location. This evaluation would have alerted Respondent to the need to consider the valve spacing requirements.

Moreover, the narrow interpretation Respondent urged would mean that an operator would not have to use the welding requirements (subpart E) or corrosion control requirements (subpart I) because neither subpart states that a pipeline may not be operated unless it complies with the subpart. Although Respondent said welding and corrosion standards were prospective (as it classified design requirements), Respondent admitted that it applied the welding requirements and corrosion protection standards. (Transcript at 78-79). If Respondent only relied on the scope statements it would not be applying these standards to a pipe replacement.

Maintenance or Repair

Respondent maintained that a pipe replacement because of a change in class location is a maintenance function (subpart M) brought about by an operating requirement (subpart L). Respondent argued that if class location changes were to affect the location and installation of valves, the block valve requirement should have appeared in these subparts.

Respondent said that a change in class location falls under subpart L for operations. Respondent explained that § 192.613 refers to a change in class location as an unusual operating and

maintenance condition, and requires compliance with §§ 192.609 and 192.611.

Respondent further explained that a pipe replacement falls within subpart M, which covers the maintenance of transmission lines and the permanent field repair of imperfections and damage to transmission lines. Respondent said that because § 192.611(a)(3) called for a reduction in maximum allowable operating pressure (MAOP), Respondent determined pursuant to § 192.613(b), that the existing segment of pipe was in unsatisfactory condition. Respondent further said that to repair what it considered an unsatisfactory condition, Respondent replaced the segment of pipe by following the field repair requirements of § 192.713.

A motel had been built within 100 yards of Respondent's pipeline changing the pipeline's class location. Under § 192.611, a reduction in MAOP was necessary. Rather than reduce MAOP Respondent replaced a segment of the pipeline. The Part 192 regulations consider a pipeline repair to be a leak, imperfection, or damage that impairs a line's serviceability. (§ 192.711(a)(1)). Respondent's pipeline did not have a leak or minor damage necessitating repair. Rather than reduce MAOP, Respondent chose to replace pipe of 72% specified minimum yield strength (SMYS) with pipe of 50% SMYS at the same MAOP. A replacement is not a repair; therefore, § 192.713 does not apply.

Section 192.613 requires a procedure for continuing surveillance to detect changes in class location, failures, and corrosion among other unusual operating and maintenance conditions. This reflects that an operator must be alert to changing conditions along its pipeline, not whether a particular design requirement is necessary because of a pipe replacement.

As previously discussed, subpart M implicates the design requirements in subpart D. When a class location change affects a segment of pipeline, § 192.609(b) requires that an operator evaluate the design, construction and testing procedures followed in the original construction and compare those procedures with those required for the present class location. Coupled with the provision in § 192.13 that a replacement be made in accordance with Part 192, Respondent should have been alerted to the necessity for evaluating the valve spacing requirements in § 192.179 when it replaced the pipe segment at issue.

ASME B31.8 Code

Respondent contended that its interpretation was consistent with the ASME Code for Pressure Piping - Gas Transmission and

Distribution Piping Systems, USAS B31.8-1968 edition (B31.8-1968 Code). At the hearing, Respondent's pipeline safety technical consultant explained that he was involved in formulating the ASME B31.8 requirements and their subsequent translation into Part 192. He explained that Part 192 is based in large part on the B31.8-1968 Code and that it is contrary to Code's intent to apply provisions to existing pipelines that were developed exclusively for new pipeline systems.

The consultant said that B31.8-1968 standards for valve spacing are design standards and that if the B31.8 Committee had intended valve spacing requirements for new pipelines to apply when a class location changed, it would have said so.⁴ Moreover, as a member of the task group that developed the class location change provisions, the consultant said this group never considered that a class change would affect the valve locations on the pipeline, whether or not pipe was replaced.

Respondent's consultant further explained that he was a member of a task group that advised OPS's technical advisory group on the gas pipeline regulations OPS had proposed. Again, he said this task group never considered that OPS intended pipe replacement would trigger the valve spacing requirements. Rather, he believed the group considered pipe replacement a maintenance function that requires operators to comply with operating requirements.

I do not dispute Respondent's consultant's memory of what the B31.8 Committee intended when it developed the industry standards. Although the consultant admitted that the present situation was not discussed (Transcript at 67), I do not doubt the consultant's assertions about the Committee's intent.

Whatever the B31.8 Committee intended, its intent is not relevant to OPS's intent when it developed the regulations. Congress saw the need for the NGPSA because it recognized that the industry code had shortcomings and that comprehensive federal pipeline safety standards were needed to assure pipeline safety. U.S. Code Cong. & Ad. News at 3230-32. As previously discussed, Congress did not limit OPS's authority to apply its regulatory standards to pipeline replacements. OPS used the B31.8-1968 industry standard as a guide in developing the regulations. It did not adopt the discussions and intent that went into the industry code. OPS's intent when it developed the gas pipeline

⁴ The B31.8 Code has since been revised to include consideration of valve spacing when pipe is replaced because of a class location change.

regulations was that a replacement to a pipeline comply with all of Part 192. This intent was expressed in the Preamble to the Part 192 regulations OPS issued in 1970.

Valve spacing

Respondent asserted that even if the valve requirements apply to the replaced segment, they should only apply to the replaced segment, and not to the surrounding pipe or facilities. Thus, Respondent would not need to install valves on the segment it replaced since the replaced segment is shorter than the four-mile spacing requirement for a class 3 area.

Contrary to Respondent's assertion, the regulations do not require four-mile valve spacing. Rather, § 192.179(a)(2) requires that "[e]ach point on the pipeline in a class 3 location be within 4 miles of a valve." Respondent replaced 2,000 feet of pipe. In making the replacement, Respondent should have installed a valve within the replaced segment. The requirement applied to the replaced segment, not to the surrounding segments.

Industry Consensus and OPS's Acquiescence

Respondent argued that industry generally believed that repair and replacement standards are maintenance standards unrelated to the design standards for a new pipeline. At the hearing, Respondent referred to two surveys: one it had made of pipeline operators, which found that the majority of those polled agreed with Respondent's interpretation; the other, a survey INGAA made, which had a similar outcome. (Transcript at 24). Moreover, Respondent contended that OPS's inaction in enforcing the valve spacing requirement on replacements was an acquiescence to Respondent's (and industry's) interpretation.

The surveys were done informally. Respondent did not present any written product. (Transcript at 27). There was also some overlap between the operators Respondent and INGAA polled. Reliable surveys are based on scientific polling criteria and techniques. Without knowing whether those Respondent (and INGAA) polled were a representative sample of the gas pipeline industry, what questions were asked and how they were phrased, I am not able to determine if Respondent's characterization of industry's understanding represents industry's consensus.

The lack of previous enforcement action is not an acquiescence. A valve is not required on a pipe replacement unless the class location change renders the previous valve spacing inadequate.

Such a situation is infrequent and difficult for enforcement staff to detect. Respondent even acknowledged at the hearing that this situation may not often arise because of where an operator operates its pipeline and the diameter of pipe used. (Transcript at 34).

Cost

Respondent maintained that OPS's interpretation would result in a \$42 million remediation program, and up to \$1.6 million in annual class location change costs. Respondent estimated that cost of a valve at \$1,500 per diameter inch, excluding freight, labor crew, and other associated installation and procurement costs. Respondent stated that the cost to implement OPS's interpretation on all its pipelines would be \$2 million for 200 locations in its systems, and another \$1.6 million annually for additional class location changes.

I question Respondent's estimated costs to retrofit its pipelines. As already noted, Respondent has acknowledged the rarity of this type of replacement. Moreover, in the present case, Respondent had the opportunity to install the valve when it shut down the pipeline to make the replacement, and avoid retrofit costs. It is not clear whether Respondent's estimate accounts for this.

Effect on safety

Respondent argued that OPS's interpretation is contrary to the interests of pipeline safety and results in irrational inconsistencies.

Respondent maintained that adding block valves where location class change occurs adds little to damage mitigation. Respondent said studies have shown that due to the immediacy of damage caused by a rupture, even with automatic valves, safety is not significantly increased. Rather, Respondent maintained that the most effective method to mitigate the effects of a rupture is to reduce the probability that a rupture will occur. By replacing pipe that had a hoop stress of 72% SMYS with pipe having a hoop stress of 50% SMYS at the same MAOP, Respondent said it lowered the stress level and reduced the probability of a rupture.

Respondent gave examples of what it considered inconsistent application of the valve spacing requirement to class location changes. Among these -

- C An operator would not need to install a valve if it lowered MAOP instead of replacing the pipe.
- C A class location change might affect only one of several parallel pipelines. Valve spacing would only have to be considered for the affected line, which would not help if one of the other lines ruptured.
- C If an operator had anticipated a class change and installed stronger pipe to accommodate the class change, valve spacing need not be considered.
- C If an operator converted its pipeline to a service not covered by Part 192, replaced the line and then converted the pipeline back to a service covered by Part 192, the valve spacing requirements would not apply.

I agree with Respondent that valves may not be the only, or even the best, means of ensuring safety. I disagree that the examples outlined indicate inconsistent requirements for valves. Rather, a minimum level of protection is being provided. Part 192 sets minimum standards, which provide flexibility for an operator to exceed to provide an enhanced level of safety. However, even if there were inconsistent applications, that does not mean that OPS should not enforce compliance with the minimum pipeline safety regulations. Perhaps, as risk management becomes part of the pipeline safety regulations and allows even more flexibility than the current standards, an operator can present alternative methods to assure superior safety.

A valve may not prevent an accident but it does have other safety benefits. A valve will control an accident through more rapid pressure reduction and shorter blowdown times, and it can reduce the size of a resulting fire.

Accordingly, I find that Respondent violated 49 C.F.R. §§ 192.13 and 192.179 by not installing a sectionalizing block valve when it replaced the 2,000-foot pipeline segment

This finding of violation will be considered a prior offense in any subsequent enforcement action taken against Respondent.

COMPLIANCE ORDER

The Notice proposed a compliance order. The Notice proposed that Respondent install a sectionalizing block valve in the segment it had replaced.

I recognize the substantial costs to retrofit the pipeline segment. Thus, I will not require Respondent to retrofit any of its pipelines with sectionalizing block valves. However, Respondent must ensure that any future pipeline replacements comply with 49 C.F.R. § 192.179.⁵

Under 49 U.S.C. § 60118(a), each person who engages in the transportation of gas or who owns or operates a pipeline facility is required to comply with the applicable safety standards established under chapter 601. Pursuant to the authority of 49 U.S.C. § 60118(b) and 49 C.F.R. § 190.217, Respondent is hereby ordered to take the following actions to ensure that future pipe replacements comply with the pipeline safety regulations applicable to its operations.

1. Prepare operations and maintenance procedures addressing that pipe replacements are to comply with the valve spacing requirements in 49 C.F.R. Part 192, subpart D.

2. Complete the above Item within 60 days following receipt of a Final Order, unless the Central Regional Director, upon request, grants an extension.

3. Send the completed procedures to the Central Regional Director, OPS at 1100 Main Street, Room 1120, Kansas City, MO 64105.

Failure to comply with this Final Order may result in the assessment of civil penalties of up to \$25,000 per violation per day, or in the referral of the case for judicial enforcement.

Under 49 C.F.R. § 190.215, Respondent has a right to petition for reconsideration of this Final Order. 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 filing of the petition automatically stays the payment of any civil penalty assessed. All other terms of the order, including any required corrective action, shall remain in full effect

⁵ If a future replacement requires that a valve be installed, yet Respondent believes that it can take equivalent steps to assure the pipeline's integrity and the public's safety, § 192.179 allows Respondent to petition the Administrator for such a finding.

unless the Associate Administrator, upon request, grants a stay. The terms and conditions of this Final Order are effective upon receipt.

/s/ Richard B. Felder

Richard B. Felder
Associate Administrator
for Pipeline Safety

Date: __05/01/98_____