

**U.S. DEPARTMENT OF TRANSPORTATION  
PIPELINE HAZARDOUS MATERIALS SAFETY ADMINISTRATION  
OFFICE OF PIPELINE SAFETY**

In the Matter of	)	
	)	
TC Oil Pipeline Operations Inc.,	)	CPF 4-2014-5016
	)	NOTICE OF PROBABLE VIOLATION
Respondent	)	
	)	<b>RESPONSE TO NOTICE OF</b>
	)	<b>PROBABLE VIOLATION</b>

**BACKGROUND**

On June 26, 2014, the Pipeline and Hazardous Materials Safety Administration's (PHMSA) Southwest Region issued TC Oil Pipeline Operations Inc. (TC Oil) a Notice of Probable Violation which included a Proposed Compliance Order that was received on July 1, 2014.

The NOPV contained one item of alleged probable violation that TC Oil's procedure for US onshore liquid pipeline construction (TES-PROJ-LPCS-US) "was inadequate in performance language" because it did not specifically mention that it applied to the spiral seam pipe used on the construction project. As a result, the NOPV alleges that the procedure's language "lacks the 'comprehensive specifications' directly addressing the use of spiral weld seam pipe joints."

Additionally, the NOPV alleges that PHMSA requested supportive engineering based documentation regarding the suitability of the use of spiral seam pipe for cold bending using the methods described in the procedure, but did not receive the requested documentation.

PHMSA also issued a two-part Proposed Compliance Order, one, requiring TC Oil to develop procedures to include a reference to spiral seam pipe in its construction procedure; and, two, requiring TC Oil to provide documentation of engineering supportive records allegedly needed to establish the suitability of applying the procedure to spiral seam pipe.

PHMSA issued the NOPV following its April 8-11, 2014 onsite inspection of the Houston Lateral construction project near Mont Belvieu, Texas. During the course of the inspection, the PHMSA inspector witnessed field bending of the spiral seam pipe used on the project and questioned field personnel regarding the specificity of section 10 ("Pipe Bending") of TC Oil's specification TES-PROJ-LPCS-US.

TC Oil has requested a hearing on the violations alleged in the NOPV and has concurrently submitted its Statement of Issues. TC Oil respectfully requests that the NOPV and Proposed Compliance Order be withdrawn based on the following and arguments to be submitted at the Hearing.

## RESPONSE TO NOPV

### **NOPV Item 1:** § 192.202 *Compliance with specifications or standards*

Each pipeline system must be constructed in accordance with comprehensive written specifications or standards that are consistent with the requirements of this part.

PHMSA alleges that TC Oil's specification TES-PROJ-LPCS-US Section 10 "is inadequate in performance language" specific to the spiral seam project pipe that the PHMSA inspector observed being bent in the field. PHMSA stated in the NOPV, "While the procedure satisfies the detailed manner in which to bend pipe containing a longitudinal weld, it is silent as to the type being bent and used in the construction project (spiral weld seam pipe)." PHMSA concluded that the procedure was not a "comprehensive specification" because the procedure did not expressly contain the words "spiral weld seam pipe."

#### **Issue 1:**

The NOPV should be withdrawn because section 10 of TC Oil's pipe bending specification is a comprehensive written specification which satisfies 49 C.F.R. § 195.202. The bending specification is an inclusive procedure that applies to all pipe seam types and specifically calls for one additional bending practice only for one exception - longitudinally welded pipe. Thus, the specification is generally applicable to all pipe, including spiral seam pipe. A "comprehensive" specification is one that covers "completely or broadly."<sup>1</sup> TC Oil's specification completely and broadly covers all pipe, including the one exception. Indeed, the fact that there is only one noted exception proves the generality of the specification's applicability to all other pipe seam types. "An exception confirms the general rule in those cases not excepted."<sup>2</sup> The specification's express exception as to the bending of longitudinal weld pipe indicates that there are no other exceptions under the procedure and that it is applicable to the spiral seam project pipe.

As for PHMSA's allegation that the specification does not have adequate "performance language," TC Oil's specification expressly states, "All bends shall be free from buckling, flattening, cracks or other evidence of mechanical damage." This is the same precise performance language as appears in 49 C.F.R. § 195.212(b)(2). Additionally, the specification contains several other requirements designed to ensure that the bends do not impair the serviceability of the pipe as is required by section 195.212(b)(1). The specification is generally applicable to all seam types, including spiral seam pipe. Therefore, the specification is not inadequate, particularly in light of the fact that PHMSA does not assert that the specification is substantively deficient or does not comply with section 195.212.

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<sup>1</sup> "Comprehensive." *Merriam-Webster.com*. Merriam-Webster, 2014. Web. July 25, 2014.

<sup>2</sup> As translated, the Latin phrase *exceptio firmat regulam in casibus non exceptis* recognizes this rule of interpretation.

## Issue 2:

Not only should the NOPV be withdrawn because it is a comprehensive specification as required by 49 C.F.R. § 195.202, but additionally or alternatively, the specification complies with section 192.202 because it is based on a standard that is consistent with the requirements of 49 C.F.R. § 195.212. Section 192.202 requires construction “in accordance with comprehensive written specifications **or standards that are consistent with the requirements of this part.**” (emphasis added). TC Oil’s bending specification is based on and is consistent with ASME B31.4, *Pipeline Transportation Systems for Liquid Hydrocarbons and Other Liquids* and B31.8, *Gas Transmission and Distribution Piping Systems*. Just as 49 C.F.R. § 195.212 is silent on pipe seam type other than longitudinal seams, neither standard specifies pipe seam types when providing requirements for cold bending limits.

TC Oil’s pipe bending specification is entirely compliant with 49 C.F.R. § 195.212. Notably, section 195.212 is silent on seam type (except for any adjustments required for longitudinal weld pipe). PHMSA does not assert that 49 C.F.R. § 195.212 does not apply to spiral seam pipe and has not alleged that TC Oil’s specification is not compliant in any way with section 195. 212 or unsuitable to be applied to spiral seam pipe.

TransCanada has been successfully field bending spiral seam pipe since 1969. PHMSA is aware that spiral seam pipe has been safely bent in the field for over thirty years. For instance, in 1975, the U.S. Department of Transportation’s Office of Pipeline Safety Office recognized that the industry had longstanding experience field bending spiral seam pipe when it reported, “[S]piral welded pipe with protruding welds has been regularly bent by industry without adverse safety consequences being caused by the unavoidable placement of the spiral weld inside bending shoes.” (40 F.R. 60076, 60078 (1975)). TC Oil and other operators have field bent spiral seam pipe in compliance with 49 C.F.R. § 195.212 without issue for decades.

TC Oil applies a rigorous process from pipe manufacturing through bending and final installation. During the pipe manufacturing process, destructive tests are conducted to bend the pipe and on the weld seam to confirm the pipe and seam’s ability to be bent in the field. TC Oil’s pipe manufacturing specification (TES-PIPE-SAW-US) prohibits the use of skelp ends because coil connecting welds could be more susceptible to failure during cold bending. TC Oil verifies the mechanical properties of the welds by root bend and transverse weld testing during pipe production and these results are documented on the material test records (MTRs). Construction and inspection personnel are trained on the project materials and how to identify quality issues. The specification requires bends to be made using the cold smooth method and “to be free from buckling, flattening, cracks or other evidence of mechanical damage.”<sup>3</sup> An internal bending mandrel is used and the contractor regularly changes out the padded bending shoes to minimize coating damage and to eliminate mechanical damage to the pipe and weld seams. More stringent than industry standard for pipe diameters of 20 inch (508 mm) and larger, which specifies a minimum radius of 30 inch diameter or a maximum extent of bending of 1.9 degrees per pipe diameter, TC Oil’s specification imposes bending limits of a minimum radius of 38 inch diameter, which equates to a maximum bending extent of 1.5 degrees per pipe diameter. All bends are visually inspected and TC Oil’s inspection records document the visual verification

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<sup>3</sup> TES-PROJ-LPCS-US Sections 10.1 and 10.2.

of the bent pipe. The inspection forms record the absence of wrinkles following the bending process. Over 600 cold bends were successfully completed on the project and each was ultimately subjected to the identified testing, hydrotesting, and high-resolution caliper inspection before being placed into service. PHMSA's field inspections included field bending and all bends inspected were found to be in compliance with the regulations and within TC Oil's specifications.

Because TC Oil's field bending specification follows standards that are consistent with the requirements of 49 C.F.R. § 195.212, no probable violation exists and, as a result, the NOPV should be withdrawn.

### **Issue 3:**

The evidence cited in the Pipeline Safety Violation Reports does not support the issuance of an NOPV under 49 C.F.R. §190.207 or a Compliance Order under 49 C.F.R. § 190.217. The NOPV asserts that TC Oil violated 49 C.F.R. § 195.202. However, under the facts at issue, any violation of 49 C.F.R. § 192.202 is predicated on a violation of 49 C.F.R. § 195.212 with respect to the field bending of pipe. As noted, PHMSA does not allege that TC Oil's specification fails to follow section 195.212 or that TC Oil did not actually follow its specification.

According to the Pipeline Safety Violation Report, the NOPV is based on three pieces of evidence: TC Oil's pipe bending specification; a photo of spiral seam project pipe prior to bending; and a photo of a spiral seam pipe being bent prior to installation. None of this identified evidence supports a finding that a probable violation of the regulations occurred. As previously discussed, TC Oil's specification is compliant with both 49 C.F.R. §§ 195.202 and 195.212. Additionally, the photograph of the pipe prior to bending and the photograph of pipe undergoing bending are not relevant as it is undisputed that TC Oil bent and installed spiral seam pipe on the project. If the pipe was bent in accordance with section 195.212 and TC Oil's specification (and there is no allegation that it was not), then the photographs likewise are not sufficient evidence that a probable violation of the regulations occurred.

The Pipeline Safety Violation Report also contains Interview Summaries with TC Oil's OQ Lead, its contractor's Bending Foreman, and its Third Party Inspector. To the extent that the NOPV is based on these field interviews, they are not relevant and do not establish any violation. None of the interviewed individuals were professional engineers and they were not in a position to, and would have not have reason to, know whether the specification should expressly state it applies to the project's spiral seam pipe. Rather, it is sufficient that these project personnel were provided information and training on the field bending of the spiral seam project pipe. TC Oil's specification was not required to expressly identify spiral seam pipe for the specification to nevertheless "cover the type of pipe being bent," as stated in the NOPV. Certainly, it is clear from the Interview Summaries that no confusion existed as to the use of spiral seam pipe on the project or whether TC Oil's pipe construction specification applied to the project pipe.<sup>4</sup> If the project personnel followed TC Oil's specification, the spiral seam project pipe would have been (and was) correctly and properly bent prior to installation.

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<sup>4</sup> Following discussions with the PHMSA inspector, TC Oil reaffirmed this by issuing an RFI to the contractor and inspection personnel reiterating the applicability of section 10 of the specification to the spiral seam pipe used on the project. TC Oil also re-reviewed the bending process with the field crew and inspection personnel.

The NOPV's assertion that TC Oil has "no procedure to address the bending of spiral weld seam" pipe is incorrect and the corresponding portion of the Proposed Compliance Order requiring TC Oil to "develop procedures to include needed language to address the use of spiral weld seam pipe" is unnecessary. TC Oil indisputably has a procedure that covers the bending of spiral weld seam pipe. The specification is generally applicable to all pipe seam types – including spiral seam pipe – and is compliant with 49 C.F.R. §§ 195.202 and 195.212. Nothing regarding the specification needs to change to specifically address spiral weld pipe.<sup>5</sup>

For a compliance order to be appropriate, first, there must be a violation, and also both the "nature of the violation" and the "public interest so warrant" the order (49 C.F.R. § 190.217). None of these prerequisites are present. TC Oil's regulatory-compliant specification used in the project does not violate the regulations. Additionally, neither the nature of the violation nor the public interest justifies the issuance of the Proposed Compliance Order. Enforcement actions are authorized to achieve and maintain pipeline safety and compliance (49 C.F.R. § 190.201). TC Oil's pipe bending procedure is compliant with the regulatory requirements and there is no allegation that it was unsafe to actually bend spiral seam pipe in accordance with the procedure. The inspection reports and MTRs demonstrate that the spiral seam pipe was safely bent by following the pipe bending specification. Therefore, in the absence of any safety implications from following TC Oil's specification, TC Oil requests that the Proposed Compliance Order be withdrawn.

#### **Issue 4:**

The portion of the Proposed Compliance Order requiring TC Oil to provide engineering supportive records regarding the suitability for bending spiral seam pipe in accordance with TC Oil's pipe bending specification should also be withdrawn.

Following its field visit to the project, PHMSA verbally requested additional information regarding the bendability of spiral seam pipe. TC Oil had already provided PHMSA the requested TES-PROJ-LPCS-US specification as well as MTRs showing the transverse weld and bend test results in February 2014. On June 16, 2014, TC Oil responded in writing regarding how the specification addressed the bending of spiral seam pipe and described certain other quality assurance measures. When TC Oil provided PHMSA with the additional information, TC Oil requested that PHMSA contact the company if it had any additional questions. TC Oil heard nothing further about the matter until it received the NOPV and Proposed Compliance Order. The NOPV alleges that "supportive engineering based documentation" was requested, but was not received.

The Proposed Compliance Order is not consistent with the regulations' requirements. 49 C.F.R. § 190.203(c) applies to inspections and investigation and states that "If the Associate Administrator or Regional Director believes that further information is needed to determine

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<sup>5</sup> TC Oil notes that the Proposed Compliance Order's requirement for TC Oil to "develop procedures" is worded nearly identically to the regulation's description of a Notice of Amendment which PHMSA issues if an operator's procedures are found inadequate to assure safe operations. 49 C.F.R. § 190.206. "The notice will specify the alleged inadequacies and the proposed revisions of the plans or procedures . . ." Thus, the Proposed Compliance Order purports to accomplish the same result as a Notice of Amendment. Unlike a compliance order, an NOA can be issued despite the lack of an NOPV/regulatory violation.

appropriate action, the Associate Administrator or Regional Director may notify the pipeline operator in writing that the operator is required to provide specific information within thirty (30) days from the time the notification is received. . . . The notification must provide a reasonable description of the specific information required.”

PHMSA’s post-inspection request for further information was made verbally, not in writing. Additionally, the verbal request did not provide a reasonable description of the information being requested. The request was not so specific and did not include the phrase “engineering based documentation.” TC Oil provided the information that it reasonably believed had been requested and had reason to think it had satisfied the request after PHMSA accepted the submitted information and did not present any more questions or requests.

The lack of formality or adherence to section 190.203(c) renders the Proposed Compliance Order unjust. Had the request been made in writing and provided a reasonable description of the requested information, the misunderstanding could have been avoided and the necessity for any enforcement action obviated. As a result, TC Oil respectfully requests that PHMSA withdraw this portion of the Proposed Compliance Order.

## **CONCLUSION**

For the reasons stated in this Response and in the accompanying Statement of Issues, TC Oil respectfully requests that PHMSA withdraw the NOPV and related Proposed Compliance Order.

Respectfully submitted,

TC OIL PIPELINE OPERATIONS INC.



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Ken Crowl

Director, Regulatory Compliance

Date: July 30, 2014