

PI-70-0111

December 2, 1970

Mr. W. P. Heineman
United Gas Pipe Line Company
P.O. Box 1407
Shreveport, Louisiana 71102

Dear Mr. Heineman:

This is in reply to your three letters of October 12, 1970, requesting interpretations of various sections of 49 CFR, Part 192.

In answer to your question concerning requirements for two-phase systems, the statement made in Houston that the most severe regulation (either gas or liquid) be complied within two-phase systems is still correct.

You state that most two-phase systems are designed to transport primarily natural gas. An examination of the "Gas Engineers Handbook", 1966 edition, page 8/11 on two-phase flow indicated that such systems range from gas bubbling in a solid stream of liquid to a fog of liquid in a gas stream. Therefore, to state that all two-phase systems follow either the gas or liquid regulation would not be wise.

You state that the B31.8 should be followed in the future as it has been the Code used in the past for two-phase flow. In the case of stress levels in other than Class 1 locations, the gas regulations would be more severe than the liquid, but in most instances the regulations would be similar for transmission type or trunkline type pipelines. Therefore, you should have no problem in following the most severe regulation, at least at present, with the knowledge we have on two-phase pipelines.

In answer to your question regarding transportation of pipe a change in the language of Section 192.65 is under consideration to apply only to pipe transported after the effective date of the regulations. We recognize that there is a problem with respect to application of our regulation to the original transportation of existing stock of pipe. Therefore, we suggest that you furnish all available information as to the transportation procedures used before RP5L1 was issued and the precise nature and magnitude of the problem.

With regard to your letter on the qualification of steel pipe presently in inventory, our recent amendment to Section 192.55 and Appendix B should have alleviated much, if not all of the problem. If you still find that you have a large inventory that does not qualify under a listed specification or Section 192.55 (d), you may wish to petition for a waiver. Should you elect to follow this course of action, I suggest that your petition contain the following information:

1. The magnitude of the problem in terms of quantity of pipe and its value.
2. The reasons why qualification of the pipe under Section 192.55(a)(2) is not appropriate.
3. The basis upon which the waiver could be found not inconsistent with pipeline safety.
4. A indication as to whether other companies might also be adversely affected (if the problem is widespread, an amendment might be more appropriate).
5. Suggested language for an amendment that would alleviate the problem while assuring an equivalent level of safety.

If we can be of further assistance, please do not hesitate to ask.

Sincerely,

Original signed by:

Joseph C. Caldwell

Director, Acting

Office of Pipeline Safety

United Gas Pipe Line Company
P.O. Box 1407
Shreveport, Louisiana 71102

October 12, 1970

Office of Pipeline Safety
Department of Transportation
400 Sixth Street, S.W.
Washington, D. C. 20590

Re: Transportation of Natural and Other Gas by Pipeline - Minimum
Safety Standards

Gentlemen:

It has been brought to our attention, as a result of the Office of Pipeline Safety seminar in Houston on October 6, 1970, that gas offshore pipelines to be operated as two-phase systems would be expected to comply with the most severe of either of the oil pipeline rules or gas pipeline rules. Offshore gas pipeline systems, prior to this date, have been designed, with respect to stress from internal pressure, on the same basis as inshore pipelines. This neglects, of course, consideration of laying stresses which are common to both oil or gas lines. It is recognized that a two-phase system, which is designed primarily to transport natural gas, can and does accumulate liquids; however, the liquids do not create surge problems since a liquid accumulation as it moves down the pipeline is cushioned by the preceding gas. Except for the liquid handling facilities required inshore to remove the liquids from a two-phase system, we do not feel that the operating stress problems are different from those in a dry gas system.

Most offshore gas systems, except for those close inshore, are two-phase systems. These have been designed to operate at stress levels prescribed in the B31.8 Code. We would recommend that the Office of Pipeline Safety consider the continuation of similar design criteria for offshore two-phase systems as has been used in prior years.

Yours very truly,
W. P. Heineman

United Gas Pipe Line Company
P.O. Box 1407
Shreveport, Louisiana 71102

October 12, 1970

Office of Pipeline Safety
Department of Transportation
400 Sixth Street, S.W.
Washington, D. C. 20590

Re: Transportation of Natural and Other Gas by Pipeline - Minimum
Safety Standards

Gentlemen:

The following is submitted to your office for clarification of Paragraph 192.65, "Transportation of Pipe", in the above referenced regulations.

This requirement implies that all pipe installed after the effective date of the regulations and with a diameter to wall thickness ratio of 70 to 1, or more, that is transported by railroad shall be transported in accordance with API RP5L1. United Gas Pipe Line Company currently has an inventory of line pipe in this category which is estimated to be valued at \$1.1 million. This pipe was purchased prior to the issuance of API RP5L1. It is common practice for large gas transmission companies to maintain adequate inventories of pipe for maintenance and emergency purposes. This inventory can become quite large, especially in a company such as United Gas Pipe Line Company where we have a very wide range of diameters, wall thicknesses and grades.

We do not believe it was the intent of your office to eliminate the use of new pipe that was shipped prior to the issuance of this regulation. We will appreciate your clarification of this rule to accommodate and permit the use of these pipe inventories.

Yours very truly,
W. P. Heineman

United Gas Pipe Line Company
P.O. Box 1407
Shreveport, Louisiana 71102

October 12, 1970

Office of Pipeline Safety
Department of Transportation
400 Sixth Street, S.W.
Washington, D. C. 20590

Re: Transportation of Natural and Other Gas by Pipeline - Minimum
Safety Standards

Gentlemen:

The following comment is submitted to your office in consideration of problems which could occur with reference to Subpart B - Materials.

Paragraph 192.55 indicates that new steel pipe would have to be qualified under a listed specification under Appendix B. Most major pipeline companies have large inventories of line pipe for both maintenance and emergency purposes. Appendix B would require that, for example, new pipe would have to be manufactured to API 5LX Standard, dated 1970. United Gas Pipe Line Company has a current inventory of new pipe of approximately \$1.6 million, which is pipe manufactured to API 5L or API 5LX specifications dated prior to 1970. A strict interpretation of this rule would, therefore, be burdensome to our company.

We do not believe that it was the intent of the rules to prohibit the use of new pipe simply because it was manufactured to a specification prior to the current edition. Such a requirement would be expensive and costly to the gas industry without any benefit to pipeline safety. We will appreciate your clarification of this requirement such that it will permit the use of pipe in current inventories.

Yours very truly,
W.P. Heineman