

July 8, 1976

Publication of Document in
the Federal Register

Certifying Officer, Office of
Pipeline Safety Operations, MTP-30

Office of the Federal Register

Attached is the original and two copies of a document to be published in the Federal Register
entitled, Corrosion Control Deadline.

Please do not make any changes without calling me, 118-62392.

Margaret E. Hammond

Attachment

FEDERAL REGISTER HIGHLIGHT

PIPELINE SAFETY - DOT/MTB explains corrosion control requirements.

DEPARTMENT OF TRANSPORTATION
Materials Transportation Bureau

TRANSPORTATION OF NATURAL AND OTHER GAS BY PIPELINE
Corrosion Control Section

On June 25, 1971, the Department of Transportation issued safety standards for the protection of metallic gas pipelines from external, internal, and atmospheric corrosion. The standards are contained in 49 CFR Part 192, Subpart I, and apply to operators of pipelines used in the transportation of gas in or affecting interstate or foreign commerce. Because operators needed time to prepare for protecting existing pipelines, certain provisions were incorporated in Subpart I to allow adequate lead time for operators to comply with the new standards. For example, Section 192.457(b) provides a 5-year lead time with respect to certain pipelines (except for cast or ductile iron) installed before August 1, 1971.

This notice serves as an aid to operators in meeting the August 1, 1976, deadline for compliance in Section 192.457(b) by explaining applicable requirements. It also states the policy of the Office of Pipeline Safety Operations (OPSO) with respect to enforcement of the standards.

Section 192.457(b) reads as follows:

(b) Except for cast iron or ductile iron, each of the following buried or submerged pipelines installed before August 1, 1971, must, not later than August 1, 1976, be cathodically protected in accordance with this subpart in areas in which active corrosion is found:

- (1) Bare or ineffectively coated transmission lines.
- (2) Bare or coated pipes at compressor, regulator, and measuring stations.
- (3) Bare or coated distribution lines. The operator shall determine the areas of active corrosion by electrical survey, or where electrical survey is impractical, by the study of corrosion and leak history records, by leak detection survey, or by other means.

Section 192.457(c) defines the term "active corrosion:"

(c) For the purpose of this subpart, active corrosion means continuing corrosion which, unless controlled, could result in a condition that is detrimental to public safety.

In response to problems and questions concerning the corrosion control requirements, a number of interpretations have been published in several monthly Advisory Bulletins. The following questions and answers, some of which have been previously published but are now restated for clarity, provide significant interpretations with regard to corrosion control under Section 192.457(b).

1. Question: Which methods of "electrical survey" may be used to comply with the requirements of 49 CFR 192.457(b)?

OPSO Interpretation: Under Section 192.457(b), an operator must use an electrical survey method which identifies all areas of continuing corrosion along a pipeline with enough detail so that the operator can determine whether a condition detrimental to public safety could result. This public safety determination is necessarily based, among other relevant factors, on the effect of any continuing corrosion on a pipeline. Therefore, to meet the requirements, an electrical survey method must provide accurate measurements, by direct or indirect techniques, of corrosion rate, loss of metal relative to pipe wall thickness, potential differences, and current flow, which are factors necessary to evaluate the effect of corrosion. There are many electrical survey methods that an operator can use to meet the requirements, but OPSO does not preferentially recommend one method over another.

2. Question: May leak surveys or corrosion leak records be used as a substitute method for determining areas of active corrosion under Part 192?

OPSO Interpretation: Under Section 192.457(b) an operator must determine the areas of active corrosion by electrical survey, except that where electrical survey is impractical, the study of corrosion and leak history records, leak detection surveys, or other means may be used to determine active corrosion areas. Thus, leak surveys or corrosion leak records may be substituted only in those instances where determination by electrical survey is impractical.

3. Question: When is an electrical survey impractical?

OPSO Interpretation: The phrase "where electrical survey is impractical" is used in subpart I to identify those instances or situations where, through no fault or shortcoming of the operator, it is unreasonable or inappropriate to perform an electrical survey due to the extreme hardship, trouble, or expense involved in the survey.

4. Question: What areas of a pipeline must be cathodically protected under Section 192.457(b)?

OPSO Interpretation: Section 192.457(b) requires that a pipeline be cathodically protected in areas in which "active corrosion" is found. The term "active corrosion" is defined as "continuing corrosion which, unless controlled, could result in a condition that is detrimental to public safety." Determining where cathodic protection is required by Section 192.457(b) is a two step process. First, an operator must find areas of active corrosion by electrical survey or other allowable methods. If active corrosion that is not detrimental to public safety can be demonstrated, cathodic protection is not required. Secondly, where active corrosion is found, the operator must determine whether a condition detrimental to public safety could result therefrom, taking into account the short and long range effect of the localized corrosion on the pipeline, the pipeline's proximity to people, and all other factors relevant to public safety. If after consideration of all relevant factors, it can reasonably be

concluded that a condition detrimental to public safety does not exist now or in the foreseeable future, localized cathodic protection is not required. If a pipeline remains unprotected, Section 192.465(e) requires that it be reevaluated every three years for the existence of "active corrosion."

Question: Is a pipeline which is located so that the bottom portion is buried and the top portion extends above the ground level subject to the cathodic protection requirements?

OPSO Interpretation: The same cathodic protection requirements applicable to a fully buried pipeline apply to a partially buried pipeline because electrochemical process which causes corrosion on underground pipelines are equally active with respect to a partially buried pipeline.

Question: How often must a pipeline that is cathodically protected only in areas of active corrosion be monitored under Section 192.465?

OPSO Interpretation: Such a pipeline may be divided into protected and unprotected sections. Section 192.465(a) requires that the protected sections must be tested at least once each calendar year, but with intervals not exceeding 15 months, to determine whether the cathodic protection meets the requirements of Section 192.463. **However, Section 192.465(a) further provides that if tests at those intervals are impractical for separately protected service lines and short sections of protected mains, not in excess of 100 feet, these service lines and mains may be surveyed on a sampling basis as set forth in the section.** (Note: The emphasized section [bolded], above, was originally marked to be omitted because it was felt the answer was not responsive to the question.) Section 192.465(e) requires that at intervals not exceeding 3 years, unprotected sections must be reevaluated and cathodically protected in areas in which active corrosion is found.

Compliance

In accordance with Section 9 of the Natural Gas Pipeline Safety Act of 1968 (49 USC 1678), any operator not under the jurisdiction of a certified State agency who violates the requirements of Section 192.457(b) shall be subject to a civil penalty of not more than \$1,000 for each such violation for each day of the violation, except that the maximum penalty may not exceed \$200,000 for any related series of violations. In determining the amount of such civil penalty and its appropriateness, OPSO will evaluate an operator's efforts towards compliance during the 5 years between August 1, 1971 and August 1, 1976. This evaluation includes the operator's corrosion control plan, past accomplishments, projected completion dates, and all relevant extenuating circumstances. If a civil penalty is considered appropriate, Section 9 of the Act further provides that in determining the amount of that penalty, or the amount to be agreed upon in compromise, the following factors are to be considered:

1. The appropriateness of the penalty to the size of the business of the person charged.
2. the gravity of the violation, and
3. the good faith of the person charged in attempting to achieve compliance after notification of a violation.

In addition to civil penalties, Section 10 of the Act provides for appropriate injunctive sanctions in the case of a violation of a safety standard.

Operators under the jurisdiction of a certified State agency are subject to substantially the same enforcement policy as operators under the direct enforcement jurisdiction of OPSO. This similarity is required by Section 5(a) of the Act in that each certified State agency must enforce the safety standards under a State law with "injunctive and monetary sanctions substantially the same as are provided under Sections 9 and 10."

Waivers

Section 3(b) of the Act provides that the Secretary of Transportation or a State agency participating under Section 5 of the Act may grant a waiver from compliance with any gas

pipeline safety standard. A waiver is necessary if a person proposes to operate a pipeline facility in a manner that varies from applicable standard, so that the operation will not violate the safety standard and subject the person to a civil penalty or injunctive sanction.

Waivers are intended only for those situations where a general safety standard is not appropriate for a particular situation or condition. A waiver is granted only after there has been a convincing demonstration of cogent reasons why a given standard should not be followed or an alternative safety measure is more appropriate. Waivers are not intended for those situations where a violation exists and the administering government agency defers imposition of a penalty or other sanction while an operator executes a plan of compliance. Both OPSO and State agency compliance efforts include this discretionary action.

(Sec. 3, Pub. L. 90-481, 82 Stat 721 (49 USC 1672); 40 FR 43901, 49 CFR 1.53).

Issued in Washington, D.C. on

Cesar DeLeon
Acting Director
Office of Pipeline
Safety Operations

MEMORANDUM

June 22, 1976

TO: Acting Director, Office of Pipeline Safety
Operations, MTP-1

FROM: Specialist Assistant to Director, Materials
Transportation Bureau

SUBJ: Critique of Corrosion Control Interpretation Summary

Attached is a marked up copy of the Corrosion Control Section that I
xeroxed Thursday, June 17, 1976.

As you can see there are many portions that I feel should be changed, clarified or
deleted.

Lance F. Heverly

Attachment