

PI-05-0102

November 9, 2005

Mr. Gerald Paulus
Gas Division Director
City of Mesa
640 N. Mesa Drive
Mesa, AZ 85211-1466

Dear Mr. Paulus:

In your letter dated August 10, 2004, you requested an interpretation of 49 CFR 192.465(a) *External corrosion control: Monitoring*, regarding steel service risers installed on plastic service lines.

Section 192.465(a) states that each pipeline that is under cathodic protection 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 § 192.463. However, if tests at those intervals are impractical for separately protected short sections of mains or transmission lines, not in excess of 100 feet (30 meters), or separately protected service lines, these pipelines may be surveyed on a sampling basis. At least 10 percent of these protected structures distributed over the entire system must be surveyed each calendar year, with a different 10 percent checked each subsequent year, so that the entire system is tested in each 10-year period.

You asked for an interpretation of the term "separately protected service lines." The term, "separately protected service lines" refers to a buried or submerged service line that is electrically isolated and cathodically protected from other metallic structures.

You also asked if separate steel service risers are "separately protected service lines" when they are electrically interconnected by a tracer wire and protected by a common current source or distributed anodes. Separate steel service risers that are electrically interconnected and cathodically protected by a common source are not separately protected lines. Therefore, §192.463(a) requires an operator to monitor such pipelines at least once each calendar year, but with intervals not exceeding 15 months, to determine whether the cathodic protection meets the requirements of §192.463.

The regulations do not address the specific pipe material, e.g. tracer wire, that an operator may select to achieve an electrically interconnected pipeline system; however, operators are expected to rely on sound engineering design and select materials that allow them to determine whether the cathodic protection meets the requirements of §192.463.

If you have additional questions, please feel free to contact James Reynolds of my staff at (202) 366-2786.

Sincerely,

Florence L. Hamn
Director of Regulations
Office of Pipeline Safety

City of Mesa
640 North Mesa Drive
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August 10, 2004

Ms. Stacey Gerard
Associate Administrator
Pipeline Safety
U. S. Department of Transportation
400 Seventh Street, SW Room 7128
Washington, DC 20509

RE: REQUEST FOR WRITTEN INTERPRETATION.

Dear Ms. Gerard:

The City of Mesa respectfully requests an interpretation to 49 CFR 192.465 in regards to the monitoring of corrosion control on steel service risers, (non-anodeless) which are installed on plastic service lines.

BACKGROUND INFORMATION

The process of installing non-anodeless steel risers on plastic service lines was a common installation practices for the natural gas industry and the City of Mesa, Arizona, prior to the full-scale use of "anodeless risers." As a result systems have plastic pipelines with steel risers that require cathodic protection. These systems require corrosion protection in accordance with 49 CFR 192 Subpart I — Requirements for Corrosion Control. The corrosion control may be provided as individual separate cathodic protection such as a steel riser separately protected by one anode attached directly to the riser, or via a distributed cathodic protection system such as an anode or anodes that are electrically wired/interconnected and attached to multiple steel risers. In either case these systems must be monitored for cathodic protection in accordant with 49CFR192.465.

Another very common example is when a steel service line feeding from a steel gas main was renewed by inserting a plastic pipe and tracer wire through the existing steel service line and then electrically interconnecting the wire to the steel main and steel service riser (see Exhibit 2) in order to provide continuity of cathodic protection.

As written in, Part 192.465(a):

Each pipeline that is under cathodic protection 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 Part 192.463. However, if tests at those intervals are impractical for separately protected short sections of mains or transmission lines, not in excess of 100 feet (30 meters), or separately protected service lines, these pipelines may be surveyed on a sampling basis. At least 10 percent, of these protected structures, distributed over the entire system must be surveyed each calendar year, with a different 10 percent checked each subsequent year, so that the entire system is tested in each 10-year period.

It is believed by the City of Mesa, Arizona that the term "separately protected steel service lines" means those service lines that have a separate and individual cathodic protection system (a single anode for each riser) which is electrically isolated from other underground metallic structures and other cathodically protected systems.

However, when a natural gas pipeline is electrically interconnected and cathodically protected by a common current source as part of a cathodic protection district these pipelines are considered to be a distributed cathodic protection system. In other words, a pipeline which contains steel risers interconnected via a wire that is (cadmium) welded to the service riser creates a single electrically continuous unit, more commonly referred to as a cathodic protection system. The City of Mesa believes these systems are no longer separately protected short sections or separately protected

service lines as defined in 192.465. This would remain true for both natural gas systems comprised of steel, plastic pipe or a combination of the two materials (see Exhibit 1).

REQUEST FOR INTERPRETATION

Considering the background information and when an operator of a Natural Gas Distribution System has engineered their system to be electrically interconnected and cathodically protected via a distributed cathodic system:

1. Does the term "separately protected service lines" (as used in 49 CFR Part 192.465(a)) mean one service riser cathodically protected by a single anode and if so, would it also mean multiple service risers that are electrically interconnected by a tracer wire to a common current source within a continuous Cathodic Protection System?
2. If these separate steel service risers are electrically interconnected by a tracer wire and protected by a common current source or distributed anodes, can the operator monitor and test these pipeline systems at least once each calendar year, but with intervals not exceeding 15 months, to determine whether the cathodic protection meets the requirements of Part 192.463. Or under the circumstances must they be viewed as separately protected service lines, and surveyed on a sampling basis with at least 10 percent of these protected structures, distributed over the entire system, surveyed each calendar year, with a different 10 percent checked each subsequent year, so that every service line is tested in each 10-year period. (See Exhibit 1)

Your interpretation on these questions are very important to us and we would like to thank you in advance for your prompt consideration. If you have any questions please feel free to contact me at 480-644-2872 or by email at: Gerald.paulus@cityofmesa.org.

Sincerely,

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