



U.S. Department  
of Transportation

Pipeline and Hazardous Materials  
Safety Administration

1200 New Jersey Avenue SE  
Washington DC 20590

**MAR 11 2019**

Mr. Steve Cooper  
Director of Operations  
Enstar Natural Gas Company  
3000 Spenard Road  
P.O. Box 190288  
Anchorage, AK 99519-0288

Dear Mr. Cooper:

In a letter to the Pipeline and Hazardous Materials Safety Administration (PHMSA), you requested an interpretation of 49 Code of Federal Regulations (CFR) Part 192. Specifically, you requested interpretation for external corrosion control under § 192.467.

You stated that in cases where a casing is shorted with a pipeline, electrical isolation of the pipeline would not be practical, and as an alternative solution to compliance with the requirement, Enstar Natural Gas Co. (Enstar) has been performing increased interval leak surveys to ensure integrity of the pipeline system. You stated that the inspection process has been completed annually. You stated, in the past, PHMSA issued an interpretation (Interpretation PI-86-004) that allowed this compliance method. You asked PHMSA to provide Enstar a similar interpretation.

As to the referenced interpretation (PI-86-004) compliance alternative, the tests under § 192.465(a) is for a pipeline that is under cathodic protection and the test is conducted once each calendar year. Section 192.465 governs how often external corrosion must be monitored, whereas § 192.467 provides the requirements for achieving electrical isolation of buried or submerged pipelines. The § 192.467 requirements apply to pipelines that must be electrically isolated from other underground metallic structures (in this case, casing) and, therefore, each pipeline must be electrically isolated from metallic casings that are a part of the underground system. Therefore, an operator must comply with the monitoring requirements under § 192.465(a), as well as following the § 192.467 requirements for casings shorted to the pipelines.

As you know, a pipeline system is not cathodically protected if it is not protected in its entirety. As in this case, a pipeline inside a casing is not cathodically protected where the casing is shorted to the pipeline. Paragraph 192.467(c) states that “if isolation is not achieved because it is impractical, other measures must be taken to minimize corrosion of the pipeline inside the casing.”

The Pipeline and Hazardous Materials Safety Administration, Office of Pipeline Safety provides written clarifications of the Regulations (49 CFR Parts 190-199) in the form of interpretation letters. These letters reflect the agency's current application of the regulations to the specific facts presented by the person requesting the clarification. Interpretations do not create legally-enforceable rights or obligations and are provided to help the public understand how to comply with the regulations.

Performing annual leak surveys identifies where corrosion has already occurred to such a degree on Enstar's pipeline that it is leaking. Depending upon the pipeline maximum allowable operating pressures (MAOP), diameter, operating stress levels, gas odorization, and pipe material properties, leak detection may not be effective for maintaining safety. As such, Enstar's usage of annual leak surveys for casings shorted to the casing may not be an acceptable "other measure to minimize corrosion of the pipeline inside the casing" as required by § 192.467.

In the case of a casing shorted to the pipeline, Enstar must develop and implement procedures for performing inspections and tests, implementing remedial measures, and documenting the findings in accordance with § 192.467(c) and (d) to determine the adequacy of electrical isolation. If there is a short to the casing, Enstar must perform remedial actions to attempt to clear the short. PHMSA would expect Enstar, at a minimum, to clear any shorts that are practical to clear such as through the excavation of both ends of the casing, performing inspections, re-centering the carrier pipe inside the casing pipe, and removing or repairing materials that may cause the short such as: metallic shorts and damaged casing insulator spacers at the casing end points and any electrolytes between the casing and pipeline. If after attempting to clear the short, it is determined impractical to achieve electrical isolation, Enstar must take other preventive measures to mitigate corrosion of the pipeline inside the casing and to maintain safety.

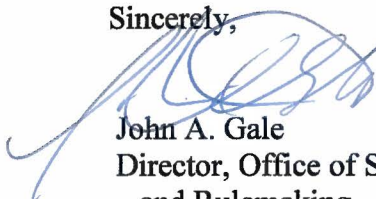
The following are examples of other preventive methods that may be used when isolation measures to clear the short are impractical, if the operator determines they will minimize corrosion of the pipeline inside the casing. These examples clarify and supersede the 1986 interpretation (PI-86-004) referenced by Enstar:

- 1) filling "high dielectric fill or corrosion inhibiting materials" between the casing/carrier pipe that the operator can demonstrate will minimize corrosion of the carrier pipe and monitoring of the dielectric fill or corrosion inhibiting materials at a minimum in accordance with the timing and during the patrolling and leakage surveys required in §§ 192.705(b) and 192.706;
- 2) monitoring corrosion with in-line inspection (ILI) tools that have demonstrated that they can properly detect and assess corrosion over the shorted locations and including concentrated pinhole corrosion areas along the carrier pipe. When assessing the shorted locations, the operator must use the proper application of ILI tool tolerance, class location safety factor in determining the safe operating pressure for any shorted corrosion area, and corrosion growth rate, and at intervals that meet either § 192.939 or at a more often reassessment interval if required based upon corrosion growth rate. If the shorted casing masks a proper inline inspection tool assessment, this would not be an applicable method;
- 3) utilizing leak detection monitoring and intervals in combination with Items 1 or 2 above, if leak monitoring can maintain safety based upon parameters such as assessments of risk and the consequences to the public. The risk assessment must be based upon the pipeline MAOP, diameter, operating stress levels, odorization of the gas, usage of remote or automatic closure valves for isolation, the pipeline material properties, whether the pipeline would only leak at operating pressures, and that leak detection monitoring (periodic or ongoing) would reduce the impact of an in-service leak to safety;

- 4) implementing remedial measures to maintain the carrier pipe MAOP based upon suitable remaining strength calculation methods (§ 192.933(d)(1)(i)) and using the class location design factor (§ 192.111) of the pipeline whether it is in a high consequence area or non-high consequence area for any assessment findings, and whether through findings in conducting Items 1, 2, or 3 above or other findings; or
- 5) applying for a special permit in accordance with § 191.341 that is applicable to the pipeline operating, safety, and environmental conditions.

In the case of casing shorted to the pipeline, Enstar must perform inspection, tests, and remediation with procedures that are in accordance with § 192.467. If we can be of further assistance, please contact Tewabe Asebe at 202-366-5523.

Sincerely,



John A. Gale  
Director, Office of Standards  
and Rulemaking





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November 14, 2016

U.S. DOT  
PHMSA Office of Hazardous Materials Standards  
Attn: PHH-10  
East Building  
1200 New Jersey Avenue, SE.  
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**RE: Interpretation Request, Title 49 Code of Federal Regulations §192.467**

Pipeline Safety Officer,

With this letter ENSTAR Natural Gas Company (ENSTAR) requests an interpretation of **§192.467 External corrosion control: electrical isolation (c)** as it pertains to the conditions present at specific locations on its natural gas system. In cases where a casing is shorted with a pipeline, electrical isolation of the pipeline as contemplated in 49 C.F.R. 192.467, and as strictly construed, would not be practical. Challenges posed by difficulty of construction in areas where maintaining continuity of service to end-of-the-road communities during the work have made resolving isolation issues difficult.

As an alternative solution to date ENSTAR has been performing increased interval leak surveys to ensure integrity of the system. This process has been completed annually in accordance with a previous PHMSA interpretation, PI-86-004, which was given to the Public Service Commission of Kentucky in 1986. ENSTAR requests that PHMSA grant the same guidance to ENSTAR as described in the interpretation PI-86-004, specifically *part 3. Reasonable time allowance and methods for operator correction of shorted casings*.

Should you have any questions regarding this request for interpretation, please feel free to call me at 907-334-7730 between 8:00 AM and 5:00 PM AST.

Sincerely  
ENSTAR Natural Gas Company

A handwritten signature in black ink, appearing to read "Steve Cooper", with a long horizontal flourish extending to the right.

Steve Cooper, P.E.  
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