



Brian Kretz

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December 18, 2017

Corey Firzlaff
City of Dubuque
Building Services
50 W. 13th St.
Dubuque, IA 52001

Dear Mr. Firzlaff:

This correspondence is in response to your letter dated November 29, 2017 requesting answers to frequently asked questions surrounding the bonding of CSST. Below, please find the restated questions and associated answers.

1. Where to bond?

- Per NFPA 54 A.7.13.2, *"The required bonding connection may be made from the piping to the electrical service equipment enclosure, to the grounded conductor at the electrical service, to the grounding electrode conductor (where of sufficient size), or directly to the grounding electrode. The bond may also be made to a lightning protection system grounding electrode (but not to down conductors) if the resulting length of the bonding conductor is shorter. Lightning protection grounding systems are bonded to the electrical service grounding electrodes in accordance with NFPA 780, Standard for the Installation of Lightning Protection Systems, using a method to minimize impedance between the systems."*
- Per NFPA 54 7.13.2.1, *"The bonding jumper shall connect to a metallic pipe, pipe fitting, or CSST fitting."*

2. What size wire to bond with?

- Per NFPA 54 7.13.2.2, *"The bonding jumper shall not be smaller than 6 AWG copper wire or equivalent."*

3. Are there limitations on the length of the bonding jumper?

- Per NFPA 54 7.13.2.3, *"The length of the jumper between the connection to the gas piping system and the grounding electrode system shall not exceed 75 ft (22 m)."*

4. Do you have any acceptable sources of information on this issue?

- NFPA 54-2015

5. Can anyone perform the bonding of CSST or does it need to be a licensed contractor?

- Per NFPA 54 A.7.13.2, *"State and local laws can limit who can attach the bonding connection to the building grounding system."*

6. Do you have names, numbers and email of anyone local from Black Hills that can answer any other questions that may arise?
 - Questions related to Corporate policy can be directed to me:
 - Brian Kretz, 402-221-2023, brian.kretz@blackhillscorp.com
 - Questions related to specific applications can be directed to either:
 - Jeff Welty, Operations Supervisor – Dubuque, IA, 563-585-4028, jeff.welty@blackhillscorp.com
 - Tony Engling, Senior Compliance Coordinator, 563-585-4014, tony.engling@blackhillscorp.com

Should you or any of your colleagues have any further questions or concerns regarding the information provided above, please do not hesitate to reach out to me or the other contacts listed herein. Black Hills Energy greatly appreciates your cooperation in our combined efforts to help ensure the safety of our mutual customers and the general public.

Sincerely,

Brian Kretz
Director – Pipeline Safety & Compliance Support