



November 30, 2005

Dave Charbonnel,  
LPI Master Installer  
Blue Sky Lightning  
Colorado Springs, Colorado

Subject: Questions About Lightning Protection- Bonding of Metallic Gas Lines

Dear Mr. Charbonnel,

This letter responds to your 11/24/05 e-mail to Keith Williams regarding the bonding of metallic gas lines in a lightning protection system.

Based on previous discussions with you in person and on the phone, you are well aware of the bonding requirement in NFPA 780, section 4.14, NFPA 70, 250.104B and UL96A, paragraph 10.4.1, but there appears to be some confusion or misunderstanding with this requirement that the gas utility, your customers or others may have that should be clarified.

In no case shall the underground gas piping be used as a grounding electrode for electrical systems. However, this does not preclude the bonding of this underground piping to the lightning protection grounding system as required by NFPA 780 & UL96A in those cases where lightning protection is provided for the structure.

Where lightning protection is provided for a structure, NFPA 780, 4.14 & UL96A 10.4.1 require that all grounding media including underground metallic gas piping systems be interconnected to provide a common ground potential. These underground piping systems are not permitted to be substituted for grounding electrodes but must be bonded to the lightning protection grounding system. Where galvanic corrosion is of concern, this bond may be made via a spark gap.

Removal of the bonds required by NFPA 780 & UL96A due to confusion over the purpose of the required bond should be avoided as this could create a potential for fire and other damage to a protected structure. As such, it may be necessary to explain to either the authority having jurisdiction, utilities or customers that the bond is required, must not be removed and is not intended to serve as an additional grounding electrode but instead to provide potential equalization.

Additionally, we understand that proposals are planned by several NFPA Code Panels to clarify bonding of metallic piping, including gas.

We appreciate your interest regarding this subject and hopefully this letter will satisfy your concerns. Should you have any further questions or wish to discuss this subject in more detail, please contact us.

Sincerely,

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