

December 22, 2006

Comments on Draft Regulatory Guide DG-1163

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1) The Reg. Guide suggests the use of strain gauges to obtain dynamic pressure measurements in piping. Strain gauges are difficult to install, typically result in large personnel radiation exposure, and the strains of interest are typically below the noise threshold, based on the large strains that exist in an operating high temperature piping system, so their accuracy is limited in this environment. Dynamic pressure transducers are the most effective means of obtaining accurate pressure measurements, however utilities have been hesitant to use them because the typically used double isolation can not be achieved when installing pressure transducers close to the header piping. The NRC should recognize that installing pressure transducers does not pose a safety threat from the potential failure of the transducer installation. This is because of the very small leakage that would result in the unlikely event of a failure. Allowing for at least a temporary exception to the double isolation requirement for pressure transducer test installations would result in significantly better data and would avoid unnecessary radiation exposure to the installers.

2) The draft regulations emphasize testing, however proven design techniques are available to reduce vortex shedding effects at side branches and avoid resonance. These design techniques, such as using larger branch openings with rounded edges and a smooth transition down the required branch size, along with keeping the branch line as short as possible, should be emphasized for new designs.

3) The ASME Operating and Maintenance Standard OM-3 already addresses piping vibration testing and it has been used for the preoperational and startup testing of numerous nuclear power plants. This document should be referenced and utilized as part the NRC guidance.

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