ANSI N13.1 Stack Sampling Design Comparison

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ABSTRACT

US nuclear power plants were predominantly designed prior to 1999. Therefore the stack sampling systems were designed in accordance with ANSI N13.1-1969. Subsequently, the standard was revised as ANSI N13.1-1999 (re-affirmed in 2011). Currently US government facilities involved in the production and waste disposal of nuclear materials must meet the ANSI N13.1-1999 design criteria. The commercial nuclear power industry has been "grandfathered" for the use of the 1969 standard. However, three nuclear power plant stacks and ducts have been recently tested as required by the 1999 standard; the Columbia Generating Station Elevated Vent Stack, the Westinghouse AP`1000 Plant Vent and Control Room Ventilation Duct.

The design criteria for the two versions of ANSI N13.1 will be presented, a comparison of the sampling systems will be made, and examples of the stacks and duct tested in accordance with the 1999 version of the standard will be described. The results of the testing will be discussed.

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