



Visual inspection of Category I piping system supports for compliance with drawings and for signs of physical degradation was being performed by Bechtel Power Corporation as part of a program to verify operability in accordance with IE Bulletin 79-02, Rev. 01. After the discrepancy was recorded on the standard inspection sheet, a speed memo, with the inspection sheet attached, was hand carried to the Northeast Utilities pipe stress and support engineering group, located at the plant site, for seismic evaluation.

After reviewing the design information available, it was determined that a more in depth and time consuming seismic analysis would be necessary to verify whether or not the need for a support of the design shown on the piping drawing was required. According to the Stone & Webster "Summary of Primary Auxiliary Piping Flexibility and Earthquake Analysis" and the Stone & Webster "List of Systems and Items for Which The Design has been Checked Under Seismic Criteria", this portion of the Service Water System was seismically analyzed by inspection methods of 0.17g ground acceleration.

Based on the unknown consequences of an inadequate seismic support in a Category I system, the existing support was assumed inadequate and was replaced with a seismically design support within 72 hours of this decision. The existing support remained installed while work was proceeding to avoid further reducing system operability. The seismic support design (WS-RES-1) shown on the piping drawing (16103-20124, Rev. 07) could not be installed without modifying other existing piping and would have required welding to the pipe while it was in operation.

The new seismic piping support design was provided by Bechtel using an existing Northeast Utilities computer program analysis method and utilizing the loads specified on the piping drawing.

The 72 hour limit for continued operation was based on Section 3.19 of the Safety Technical Specifications which applies directly to hydraulic snubbers. The applicability to supports was based on the similarity of function with regards to operability of Category I systems, as stated in the Basis of this section.

It has since been our determination, based on Engineering inspection and further review of the Stone & Webster information on file, that the existing support was not capable of providing the seismic loading specified on the piping drawing. Probable consequences of the existing support remaining as found can only be fully determined by a computer analysis of the effects of attached piping, and other local supports under the seismic design conditions specified by Stone & Webster. With our continuing Systematic Evaluation Program (SEP) these lines will be eventually totally reanalyzed to reverify the capability of the existing supports.

A more thorough method of Quality Control during construction of the plant might have prevented the oversight of this nonconformance with the drawing. It is felt that the present Quality Assurance and Control methods presently employed at the plant are capable of significantly lowering the likelihood of this type of nonconformance occurring again on Category I systems.

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