

TEXAS UTILITIES GENERATING COMPANY

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June 26, 1979
TXX-3004

R. J. GARY
EXECUTIVE VICE PRESIDENT
AND GENERAL MANAGER

Mr. Karl V. Seyfrit, Director
U. S. Nuclear Regulatory Commission
Region IV
611 Ryan Plaza Dr., Suite 1000
Arlington, Texas 76012

RIV
Docket No. 50-445/IE Bulletin 79-02
50-446/IE Bulletin 79-02

COMANCHE PEAK STEAM ELECTRIC STATION
1981-83 2300 MW INSTALLATION
RESPONSE TO NRC
IE BULLETIN 79-02
FILE NO: 10115

Dear Mr. Seyfrit:

Attached is our response to IE Bulletin 79-02. We have received Revision 1 to IE Bulletin 79-02 and are evaluating it at this time. We will submit a supplemental response as deemed necessary within a 60-day period or advise you of our progress.

If you have any further questions, please advise.

Very truly yours,

R. J. Gary
R. J. Gary

RJG:dla

cc: U. S. Nuclear Regulatory Commission
Office of Inspection and Enforcement
Division of Reactor Operations Inspection
Washington, D. C. 20555

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In regard to IE Bulletin 79-02 we offer the following:

1. Two organizations have been involved in the design of pipe support base plates which use concrete expansion bolts in Seismic Category I systems.
 - a) ITT Grinnell's base plate designs consider the base plates to be flexible. Changes to these designs in the field are reviewed by the ITT Grinnell site representatives. All changes are then forwarded to the Grinnell home office for evaluation to assure compliance with the same engineering standards as the original design.
 - b) NPS Industries has designed approximately 157 supports utilizing expansion bolt and base plate designs. The base plates were assumed to be rigid.

In order to rectify this situation, NPS is conducting a finite element analysis which will incorporate base plate flexibility into their structural analysis techniques. The established techniques will be used on all supports remaining to be designed and to evaluate whether existing base plate designs are acceptable. Designs found unacceptable will be corrected and appropriate replacements made.

Changes to base plate designs in the field are reviewed by an NPS site representative. All changes are forwarded to the NPS home office for evaluation to assure compliance with the same engineering standards as the original design.

2. All concrete inserts utilized on Comanche Peak for pipe supports are Hilti wedge type anchor bolts. A factor of safety of 5 between the bolt design load and ultimate capacity is used.
3. Anchor bolts for pipe supports have been designed to transmit all loads from the piping systems to the building structures. The piping analysis which determines these loads, includes cyclic seismic loadings and operational loads, in accordance with ASME Section III. Seismic loads, although large in magnitude are of such rare occurrence that they are not a primary design consideration relative to fatigue failure. High cyclic operational loads are lower in magnitude but occur more frequently. A factor of safety of 5 is applied to the total load which provides for a very conservative safety margin existing relative to the plant operational loadings. In the unlikely event of the low cycle seismic loads occurring, joint slippage potential is minimal because of the applied factor of safety being higher than recommended.

4. a) A testing program was conducted on site with the assistance of Hilti Fastening Systems, Inc., to establish bolt torquing requirements to assure that the anchor bolts are preloaded above the design load. Documentation is available establishing proper torquing requirements of the bolts.

Since the initial testing, additional sizes of bolts have been used. Testing is being performed on these bolts to establish the necessary torque requirements. Installed bolts will be checked to assure compliance with these requirements or as an alternate, a review will be made to assure that worst case bolt loads will not exceed existing bolt preloads.

- b) The proper size, type, installation and embedment of the anchor bolts are verified and documented by QC on a random sampling basis in accordance with approved inspection procedures at the time of installation.