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December 12, 1979

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2-129-6

Mr. K. V. Seyfrit, Director
Office of Inspection & Enforcement
U. S. Nuclear Regulatory Commission
Region IV
611 Ryan Plaza Drive, Suite 1000
Arlington, Texas 76011

Subject: Arkansas Nuclear One - Units 1 & 2
Docket Nos. 50-313 & 50-368
License Nos. DPR-51 & NPF-6
IE Bulletin 79-02

(File: 1510.1, 2-1510.1)

Gentlemen:

The following is provided in response to IE Bulletin 79-02, Revision 2. Applicable portions of Items 5, 6 and 7 are addressed. All other items have been addressed previously.

Item 5(a)

Determine the extent that expansion anchor bolts were used in concrete block (masonry) walls to attach piping supports in Seismic Category 1 systems (or safety-related systems as defined by Revision 1 of IE Bulletin No. 79-02).
If expansion anchor bolts were used in concrete block walls:

Provide a list of the systems involved, with the number of supports, type of anchor bolt, line size, and whether these supports are accessible during normal plant operation.

Response

We have determined that certain field-related piping could have been supported from concrete block walls using concrete expansion anchors. Therefore, we have also concluded that only a field survey can adequately identify all the affected systems. We will conduct a field survey and provide results and a list of affected systems on February 10, 1980.

1774 055

Item 5(b)

Describe in detail any design consideration used to account for this type of installation.

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Response

In mid-1977, load tests were performed at Arkansas Nuclear One to establish load capacities of Phillips redhead anchors when installed in concrete block walls. A specification was produced and has been utilized for all concrete block wall installations of Phillips redheads. Additionally, Phillips redheads were designated as the standard expansion anchor at Arkansas Nuclear One for all installations.

Prior to the tests and specifications, several different types of expansion bolts were used. Load capacities and installation procedures were taken from manufacturer's published data for poured concrete installation with appropriate reductions for block wall applications.

Item 5(c)

Provide a detailed evaluation of the capability of the supports, including the anchor bolts, and block wall to meet the design loads. The evaluation must describe how the allowable loads on anchor bolts in concrete block walls were determined and also what analytical method was used to determine the integrity of the block walls under the imposed loads. Also describe the acceptance criteria, including the numerical values, used to perform this evaluation.

Response

Due to the time required to compile the list of supports involved and because of limited manpower available to work on this project in conjunction with previously scheduled work (i.e., IE Bulletin 79-14 & 79-02), we believe the earliest we can complete and submit the analysis results is March 24, 1980.

Item 5(d)

Describe the results of testing of anchor bolts in concrete block walls and your plans and schedule for any further action.

Response

As described in the response to Item 5(b), the result of testing at Arkansas Nuclear One is an installation specification for Phillips redhead anchors in conjunction with concrete block walls.

We will verify the adequacy of the installations prior to mid-1977 with a random sampling program similar to that described in earlier 79-02 responses. The results of this program will be provided on March 24, 1980.

Item 6

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Determine the extent that pipe supports with expansion anchor bolts used structural steel shapes instead of base plates.

Response

Pipe supports with expansion anchor bolts, which use structural steel shapes in lieu of baseplates, were included in the original analysis done under Bulletin 79-02, Rev. 0 and Rev. 1. Supports found to have less than the required safety factors are being modified at this time.

Item 7

Provide a schedule that details the completion dates for IE Bulletin 79-02, Rev. 2, Items 1, 2 and 4.

Response

The testing of accessible and inaccessible anchor bolts has been completed for Unit 1. For Unit 2, the testing and documentation done at the time of installation is considered adequate.

Pipe supports with safety factors of less than 4 (or 5 depending on the type of anchor bolt used) but greater than 2 identified under Bulletin 79-02 will be upgraded to meet Bulletin requirements by the next refueling outage as described in our July 6, 1979 letters numbered 1-079-1 and 2-179-1.

Very truly yours,

David C. Trimble

David C. Trimble
Manager, Licensing

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