UNITED STATES
NUCLEAR REGULATORY COMMISSION
WASHINGTON, D. C. 20555

DEC 2 1 1979

MEB TECHNICAL NOTE 3.1-79

SUBJECT: PIPE SUPPORT BASE PLATE DESIGN USING CONCRETE EXPANSION ANCHOR BOLTS

References: (a) Rev. 2 of IE Bulletin 79-02
(b) IE Information Notice No. 79-28

The review of responses to IEB 79-02 (and its Revision 1) from Construction Permit Holders and Licensees brought to light some additional items which needed clarification. Reference (a) clarifies and amplifies these items in conjunction with the previous versions of IEB 79-02.

Additional technical issues in MEB area of responsibility which require review to prepare the Safety Evaluation Reports are:

(a) Proper consideration of plate flexibility and adequate factors of safety when expansion anchor bolts are installed in concrete block walls.

(b) Adequacy of expansion anchor bolt design when installed in concrete through rolled shapes rather than plates.

A limited amount of static tests were performed at the Hanford Engineering Development Laboratories (for FFTF) on expansion anchor bolts in concrete block walls. The test results indicate that the ultimate capacity of the same type and size of bolt in concrete block wall can be appreciably lower than that in cast-in-place concrete. Also, it is expected that under dynamic loading associated with an SSE or a tornado, the ultimate capacity may be further reduced. Construction Permit Holders will be required to demonstrate the adequacy of such installations.

Generally, anchoring through rolled shapes (WF, Angles, Channels, etc) will not necessitate additional design work for the respondents. However, they will be required to assure proper installation.

In conjunction with the review of design adequacy of the support anchors which utilize expansion anchor bolts, applicants will be asked to appropriately consider support reactions on the affected structures in accordance with Reference (b).

As discussed in MEB TECHNICAL NOTE 3-79, the review covering these issues will commence with I&E. Depending on the applicant's submission, the review will be: a) completed by I&E and the results furnished to DSS; or b) partially completed by I&E and the status furnished to DSS with a request for this division to complete the review. For each review you will receive a written report from I&E which either describes the results of the review which has been completed or provides a status of what you must complete, so that you may prepare the Safety Evaluation.

R. J. Bosnak, Chief
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Enclosures:
1. Reference (a)
2. Reference (b)

cc:
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MEB Members
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