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October 5, 1982

Mr. Harold R. Denton, Director
Office of Nuclear Reactor Regulation
U.S. Nuclear Regulatory Commission
Washington, DC 20555

Rec'd 8/25/83

Subject: Byron Station Units 1 and 2
Braidwood Station Units 1 and 2
Pipe Support Anchor Plates
NRC Docket Nos. 50-454, 50-455,
50-456, and 50-457

Reference (a): July 6, 1982, letter from
B. J. Youngblood to L. DelGeorge.

(b): August 9, 1982, letter from
T. R. Tramm to H. R. Denton.

(c): July 5, 1982, letter from
Cordell Reed to J. G. Keppler.

Dear Mr. Denton:

This is to provide additional information regarding the flexibility of baseplates for pipe supports at Byron and Braidwood. NRC review of this information should close Outstanding Item 5 of the Byron SER.

The response to FSAR question 110.71 which was transmitted in reference (b) discussed the amplification factor used in the design of the four-anchor plate. The load-displacement curve used originally in the computation of amplification factor was shown in Figure 3 of reference (c) and is enclosed with this letter. The four anchor plate assembly has been reanalyzed based on a conservative idealization of the load-displacement curve as plotted on the enclosed Figure 2.11. This reanalysis confirmed the 1.0 amplification factor of the four anchor assembly.

The response to FSAR question 110.72 contained anchor plate descriptive information which did not include edge distances of the anchor bolts. This information has been included on the enclosed revised Figure Q110.72-1.

A revised version of Table Q110.72-1 is also enclosed which contains corrections for Plate 1. This information will be incorporated into the FSAR at the earliest opportunity.

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1/1

One signed original and fifteen copies of this letter an the enclosures are provided for your review. Please direct further questions on this matter to this office.

Very truly yours,

T. R. Tramm

T. R. Tramm
Nuclear Licensing Administrator

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Enclosures

5138N

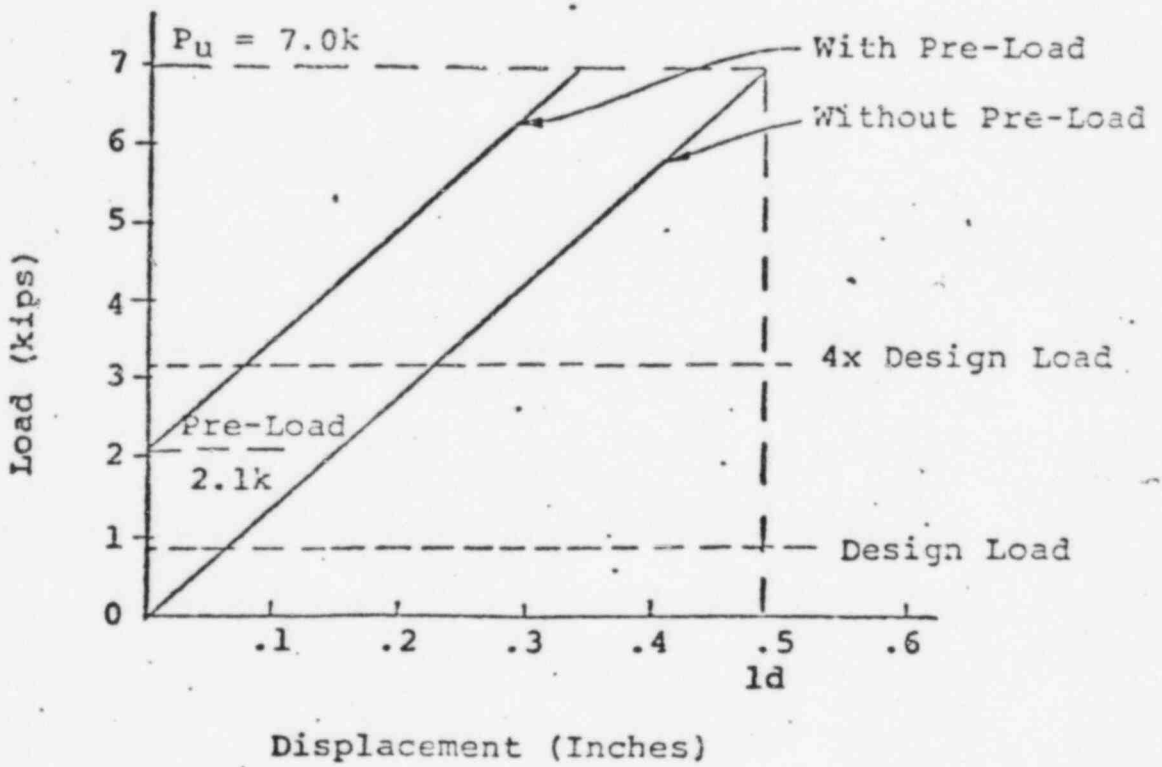

Figure 3

IDEALIZED LOAD-DISPLACEMENT CURVE FOR 1/2" DIAMETER EXPANSION ANCHORS

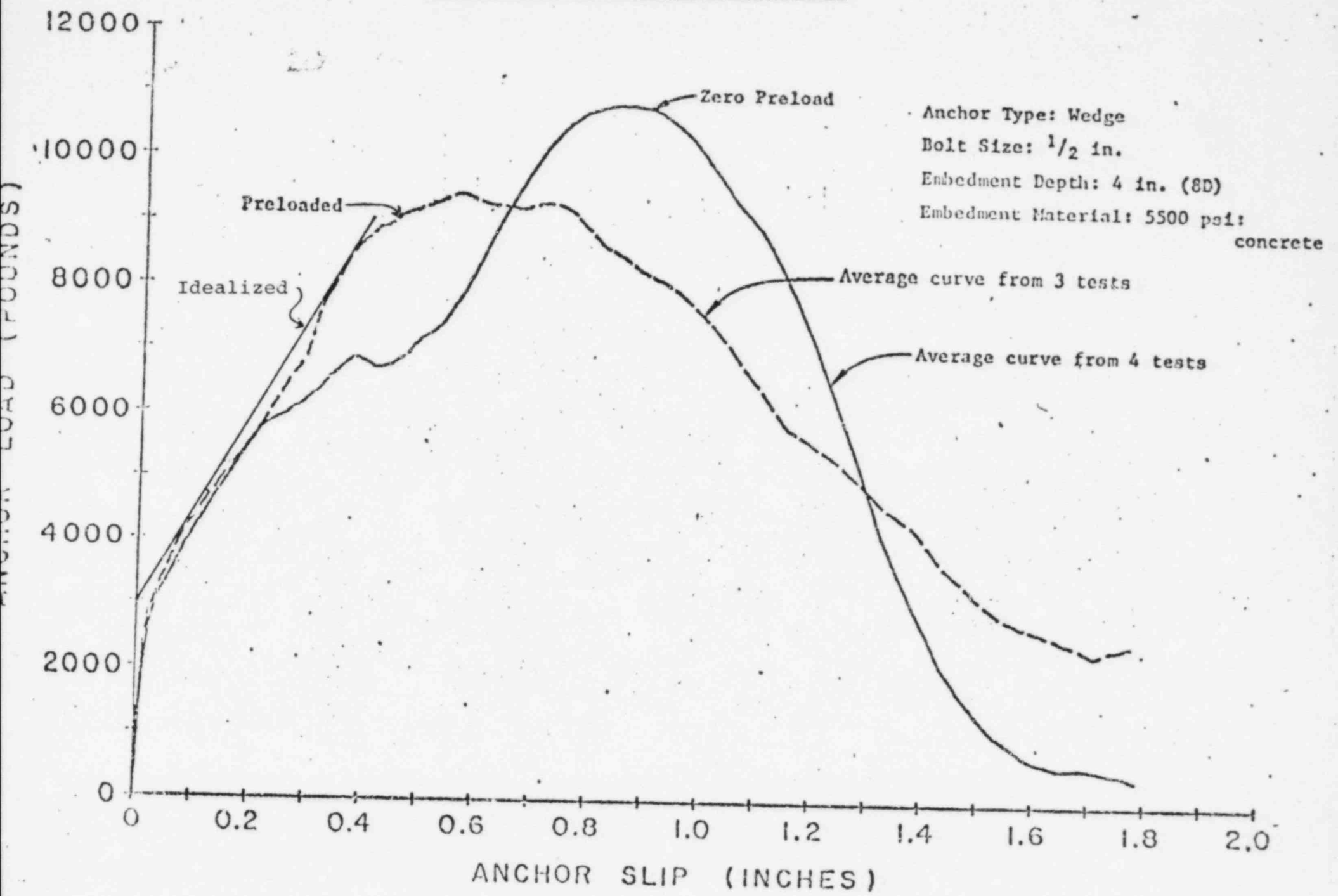

Fig. 2.11 Load Slip behavior of anchors tested with preload

ADDITIONAL INFORMATION REQUESTED ON RESPONSE
TO NRC QUESTIONS 110.71 AND 110.72

AMENDMENT (LATER)

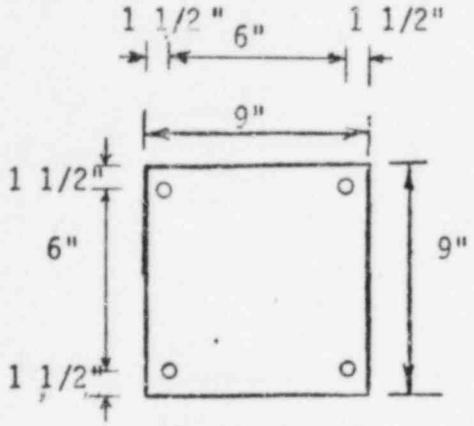

Plate No. 1
9x9x1/2 in
4 anchors - 1/2"

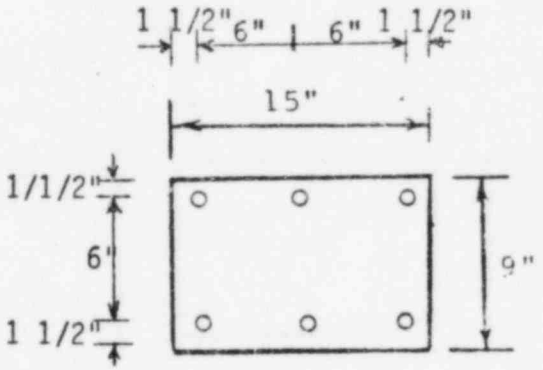

Plate No. 2
9x15x1/2 in.
6 anchors - 1/2"

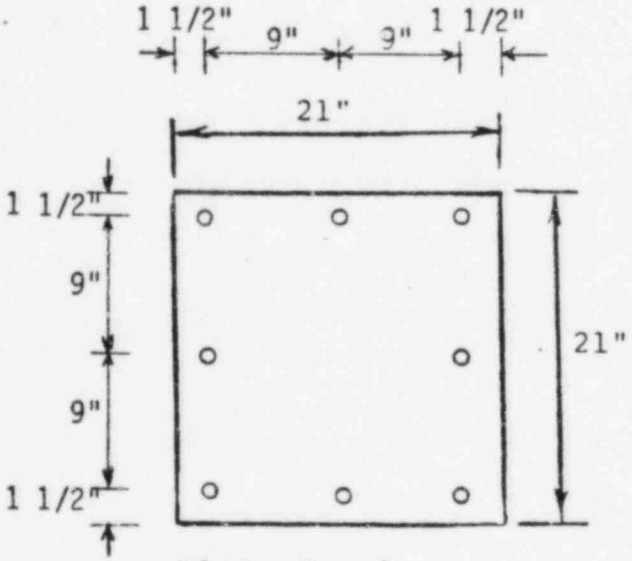

Plate No. 3
21x21x7/8 in.
8 anchors - 3/4"

BYRON/BRAIDWOOD STATIONS
FINAL SAFETY ANALYSIS REPORT
FIGURE Q110.72-1
EXPANSION ANCHOR PLATES

TABLE Q110.72-1

AMPLIFICATION FACTORS FOR TYPICAL EXPANSION ANCHOR BASE PLATES WITH WEDGE TYPE ANCHORS

PLATE NO.	ANCHOR ASSEMBLY	LOAD	MAX. ANCHOR REACTION (FLEXIBLE PLATE ANALYSIS)	MAX. ANCHOR REACTION (RIGID PLATE ANALYSIS)	AMPLIFICATION FACTOR
1	9x9 x1/2 in.	12.8 k (tension)	3.2	3.2	1.0
	4 anchors 1/2 in.	43.6 in-k (moment)	2.85	3.2	1.0
2	9x15x1/2 in.	33.7 k (tension)	7.0	5.62	1.25
	6 anchors 1/2 in.	199 in-k (moment)	7.0	6.62	1.06
3	21x21x7/8 in.	114 k (tension)	16.0	14.25	1.12
	8 anchors 3/4 in.	900 in-k (moment)	16.0	14.7	1.09

ADDITIONAL INFORMATION REQUESTED ON RESPONSE TO NRC QUESTIONS 110.71 AND 110.72