

EXHIBIT A

7908200 308

ATTACHMENT A

Previous Method of obtaining bolt loads (CSF = 1.94)

The forces and moments are transmitted by the pipe to the slab through the 1" plate (Item 10) to the 6" angles (Items 2, 3, 4) and the 1/2" plate (Item 6) and to the bolts. The loads and moments are transferred to the bolts through the weld connection item 10 to items 2, 3, 4, 6.

For this method, the loads on the weld connecting item 10 to items 2, 3, 4, 6 are determined by calculating the weld force/unit length along the outer edges of item 10. The loads are transmitted along the edge in pullout and shear per unit length. The bolt loads are determined based upon a contributory length approach; i.e. it is assumed that any bolt takes half the force on total length between adjacent bolts.

Revised Method of obtaining bolt loads (CSF = 2.2 min)

In the revised method, the force on the weld connecting item 10 to 2, 3, 4, 6 are determined in the same way. However, the total force in pullout and shear is distributed evenly between the bolts depending on whether they are loaded in shear or pullout.

This is based upon the fact that:

1. The size of the item 10 is small (23" x 20") and it is welded all around making the uniform load distribution assumption reasonable.
2. The support structure (in conjunction with the pipe welded to it) becomes fairly rigid and the load is assumed to be uniformly transferred.

This approach would probably give a more reasonable approximation to the bolt loads.

RECORD

CALCULATION SHEET

Reportable Occurrence 50-368/79-058

DATE _____

DESIGN BY _____

DATE _____

CHECKED BY _____

SHEET NO _____

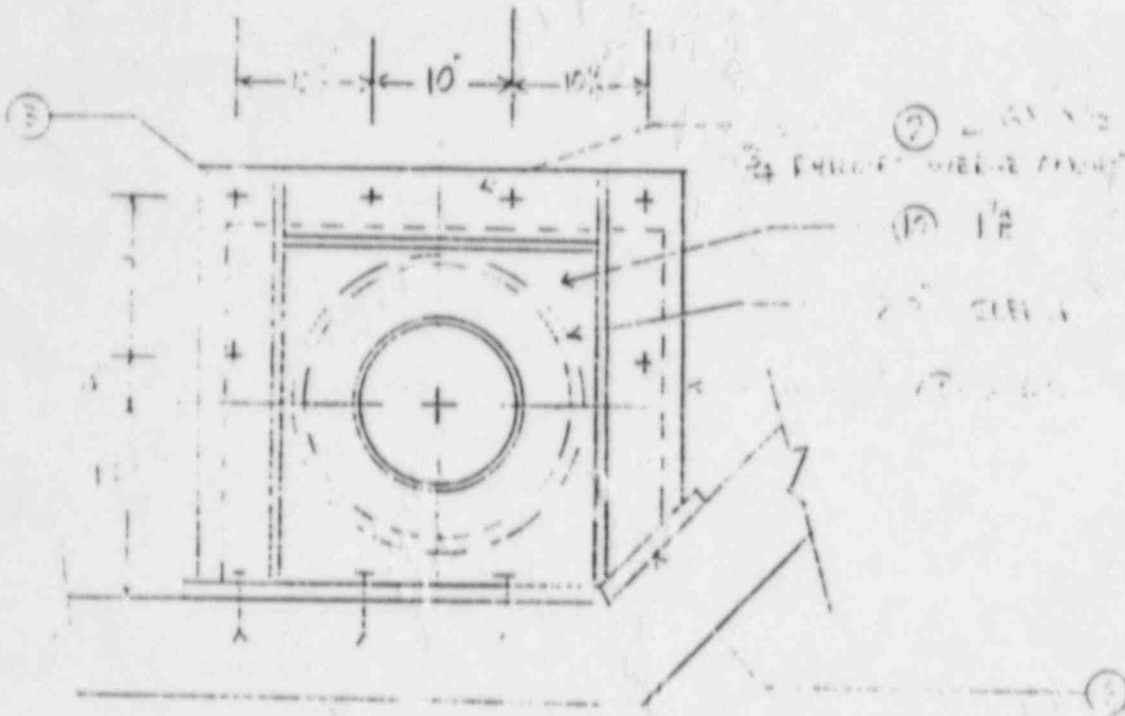
PROJECT _____

JOB NO _____

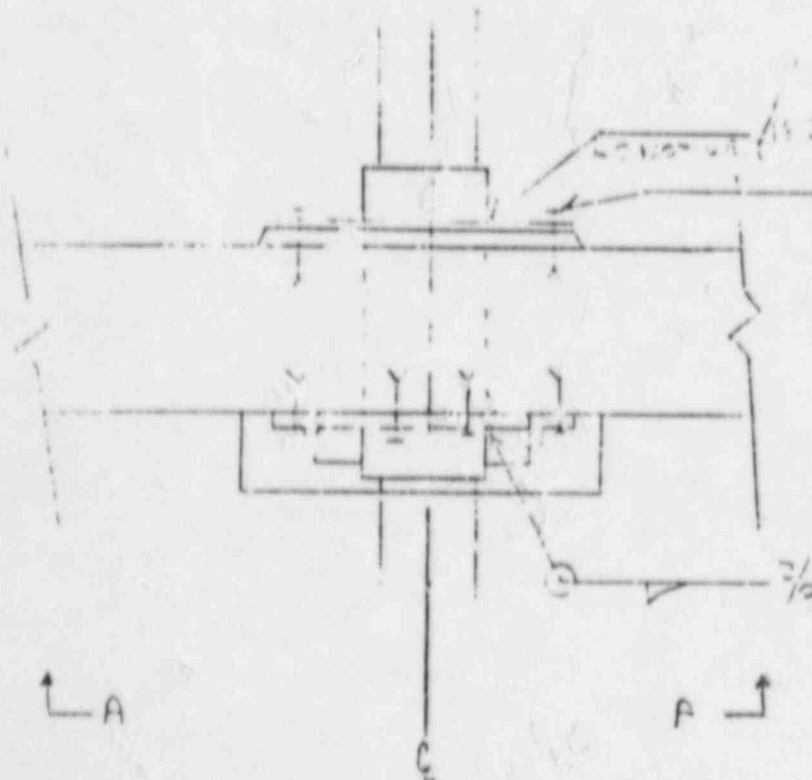
SUBJECT ANCHOR 2 FCC-1-H17

CALCULATION NO _____

FILE NO _____



SECTION A-A



ELEVATION

POOR ORIGINAL

ATTACHMENT B

RESTRAINT NUMBER	LOCATION	CURRENT SAFETY FACTOR	COMMENT
2GCB-5-H2	Reactor Aux. Bldg.	> 2	Modification Complete 7/24/79
2HCB-35-H1	Reactor Aux. Bldg.	> 2	Modification Complete 7/24/79
2HCB-2-H4	Reactor Aux. Bldg.	> 2	Modification Complete 7/24/79
2HCB-34-H7	Reactor Aux. Bldg.	< 2	Modification Complete 7/25/79
2HCB-13-H7	Reactor Aux. Bldg.	< 2	Modification Complete 7/25/79
2HCB-241-H6	Reactor Aux. Bldg.	< 2	Not Tech Spec'ed. Modifica- tion Complete 7/25/79.
2FCC-1-H17	Reactor Bldg.	> 2	Modification planned at next outage.

As a result of investigations into baseplate flexibility required by IE Bulletin 79-02, we have identified seven (7) restraints which have a safety factor of less than 2. AP&L reviewed these seven to determine the possible affect on plant operation. ANO-2 is presently at 50% power performing Power Escalation Testing. On July 23, we identified that portions of redundant systems were involved. Action was taken on July 23 to upgrade all restraints on one train of the plant systems to a safety factor of greater than 2. This was accomplished by 8 A.M. on July 24. At 1500 on July 24, we were informed by our Resident Inspector, Bob Spangler, that the NRC considered all systems which contained baseplates with a safety factor less than 2, as inoperable. Our review of the remaining four hangers identified one restraint which fell into a 12 hour action statement and two restraints which fell into a 72 hour action statement. The remaining hanger is on a system not covered by Technical Specifications.

A re-analysis was performed on the one hanger falling in the 12 hour requirement. This re-analysis resulted in a safety factor greater than 2. This re-analysis was performed in accordance with the method of calculation described in Attachment A. This restraint is located inside the reactor building and is not normally accessible.

Revised designs have been prepared for all of the restraints and installation is complete, except for the one inside the reactor building.

The restraint modification in the reactor building will be implemented at the next plant outage. AP&L will prepare the design and assemble all of the required material in preparation for this outage should an unplanned reactor trip occur.

A listing of the seven restraints involved and the planned corrective action is presented in Attachment B.

No restraints with a safety factor of less than 1 have been identified.