**Lewis Sumner**
Vice President
Hatch Project Support

**Southern Nuclear**
**Operating Company, Inc.**
40 Inverness Parkway
Post Office Box 1295
Birmingham, Alabama 35201

Tel 205.992.7279
Fax 205.992.0341

SOUTHERN COMPANY
*Energy to Serve Your World℠*

May 7, 1997

Docket No. 50-366

HL-5389

U. S. Nuclear Regulatory Commission
ATTN: Document Control Desk
Washington, D. C. 20555

Edwin I. Hatch Nuclear Plant - Unit 2
Supplemental Information Regarding the
Inservice Inspection of Feedwater Sparger

Gentlemen:

By letter dated April 4, 1997, Southern Nuclear Operating Company (SNC) provided a description of examinations of the reactor pressure vessel feedwater spargers and feedwater sparger thermal sleeve. The examinations identified indications associated with the 'A' feedwater sparger thermal sleeve to tee weld and with tack welds on two bolt locations on the end brackets. The indications on the sparger and end bracket were evaluated and determined to be acceptable for at least one cycle of operation.

During a telephone conference call on April 28, 1997, the Nuclear Regulatory Commission (NRC) staff requested supplemental information regarding the characterization of the indications on the thermal sleeve and the potential for loose parts.

In response, Figure 1 provides additional details for the location of the indications on the 'A' sparger thermal sleeve. The indications are located on the bottom of the pipe and are predominately axial in orientation. A review of the examinations shows that the indications are characterized as four primary indications with minor branching. One indication is approximately four inches long and appears to traverse the sleeve to the tee weld. Another indication is approximately two inches long within the sparger tee next to the tee weld. The two remaining indications are approximately one and one-half inches long within the thermal sleeve next to the tee weld.

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The predominately axial orientation of the indications, along with very low pressure and forces transmitted to the area of the indications, supports the determination that fatigue is the likely mechanism of the cracking. The relatively straight segments of the indications going through the tee weld are not characteristic of intergranular stress corrosion cracking (IGSCC). Additionally, the cracking at the observed locations would be expected to be circumferentially oriented rather than axial for causes other than fatigue.

Figures 2 and 3 provide additional details of the orientation of the feedwater spargers. Each of the four feedwater nozzles (N4A through N4D) are equipped with a separate sparger.

In response to the NRC staff's comments relative to the potential for loose parts, SNC's evaluation that the likelihood of the indications on the sparger thermal sleeve and on the tack welds on the two nuts on the end bracket to result in loose parts is extremely remote. The indication on the end bracket is located on the tack weld of the nut to the end bracket for each of the two bolt locations. However, there are additional tack welds on the nut to the end of the bolt. These tack welds were visually inspected and showed no indications. Further, the end plate is welded to the bracket and eliminates any structural need for the bolts. The bolts were originally installed as a fit-up aid during installation of the sparger and are not required for sparger support. Additionally, the end bracket is connected to the reactor pressure vessel (RPV) and transmits the structural loads to the (RPV). Visual examinations of the end bracket connection welds to the RPV were performed and no indications were identified. Also, the sparger thermal sleeve to tee weld was conservatively assumed to be cracked through wall for 360 degrees and consequently providing no support for the sparger. An evaluation of this conservative assumption shows that the sparger supports will adequately support the sparger. Based on the above, the potential for the described indications to result in loose parts is considered as extremely remote.

Should you have any questions in this regard, please contact this office.

Sincerely,

H. L. Sumner, Jr.

JKB/ld

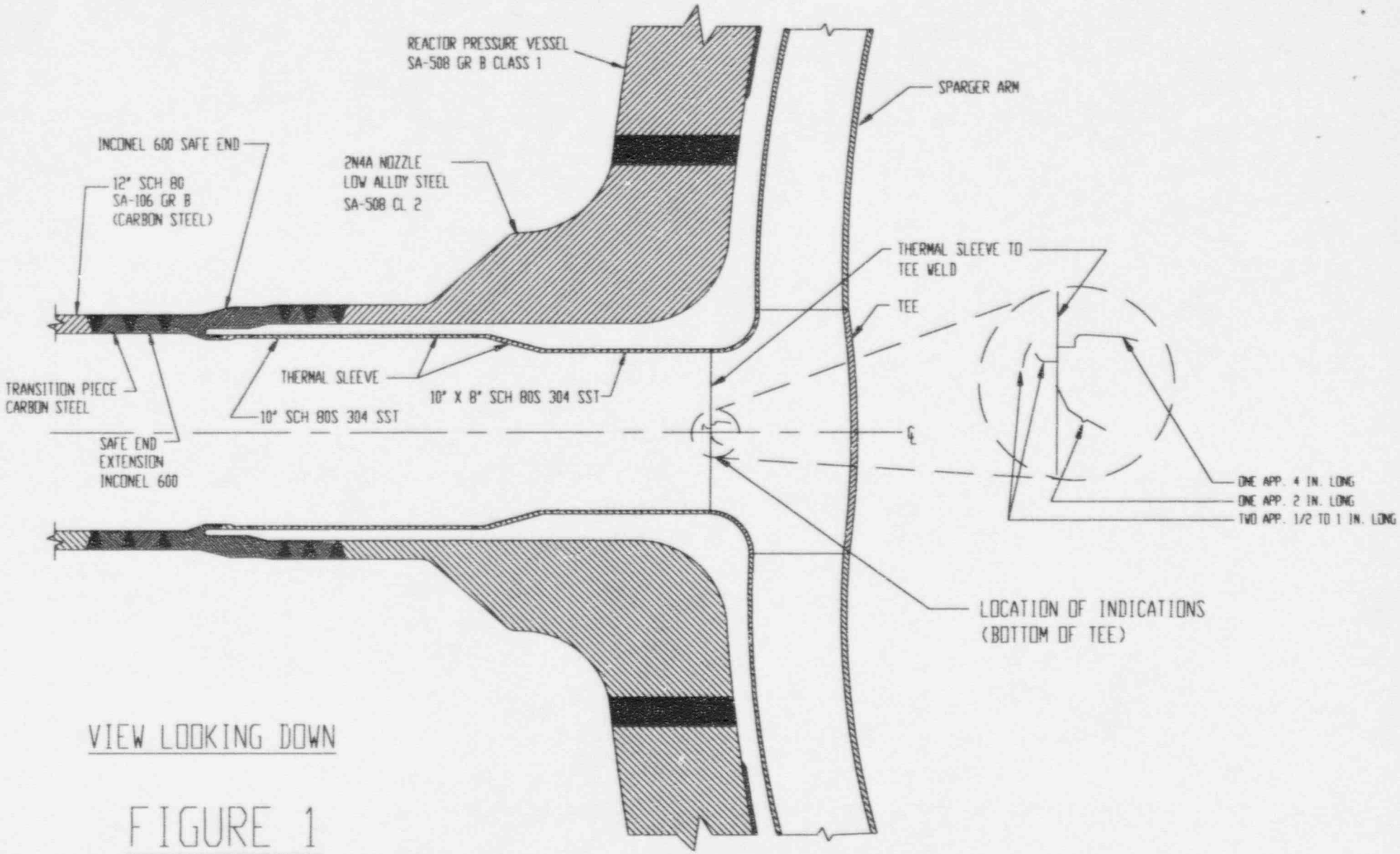
Enclosures:
1. Figure 1
2. Figure 2
3. Figure 3

cc: (See next page.)

cc: *Southern Nuclear Operating Company*
Mr. P. H. Wells, Nuclear Plant General Manager
NORMS

*U.S. Nuclear Regulatory Commission, Washington, D.C.*
Mr. K. Jabbour, Licensing Project Manager - Hatch

*U.S. Nuclear Regulatory Commission, Region II*
Mr. L. A. Reyes, Regional Administrator
Mr. B. L. Holbrook, Senior Resident Inspector - Hatch




VIEW LOOKING DOWN

FIGURE 1

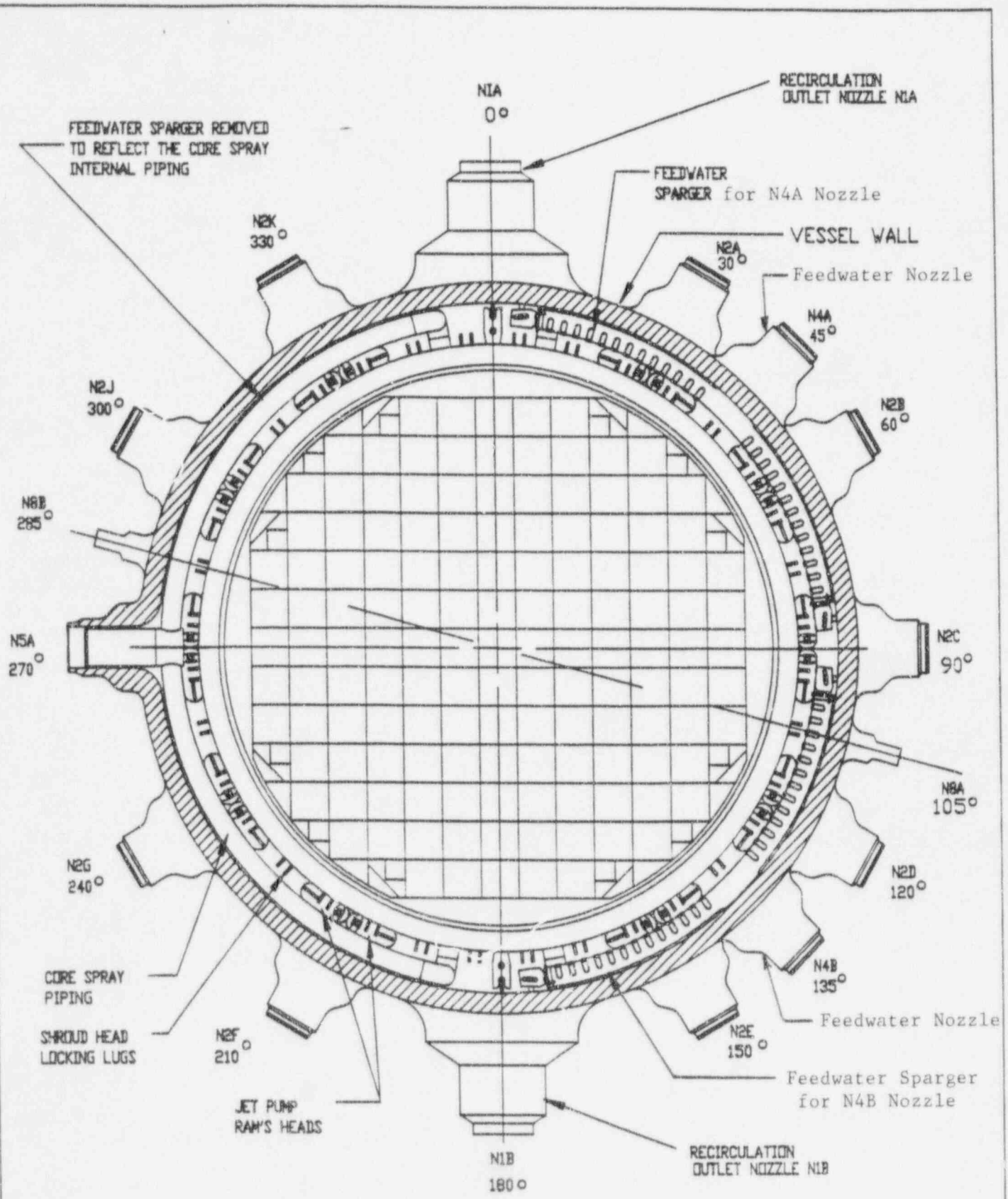



Figure 2

| | | | | | | |
|---|---|---|---|---|---|---|
| DATE 12-15-92 | | PROJECT E I HATCH UNIT 1 | | TITLE RPV ASSEMBLY - INSIDE TOP VIEW | | |
| REV 0 | | | | | | |
| SOUTHERN NUCLEAR COMPANY | REFERENCE DRAWINGS GE-197R589 REV 6 | ITS REVIEW K F White | ITS APPL. W F Cole | DRAWN BY R J DILL 03-06-92 | SKETCH NUMBER 1-BN-3-1 | |

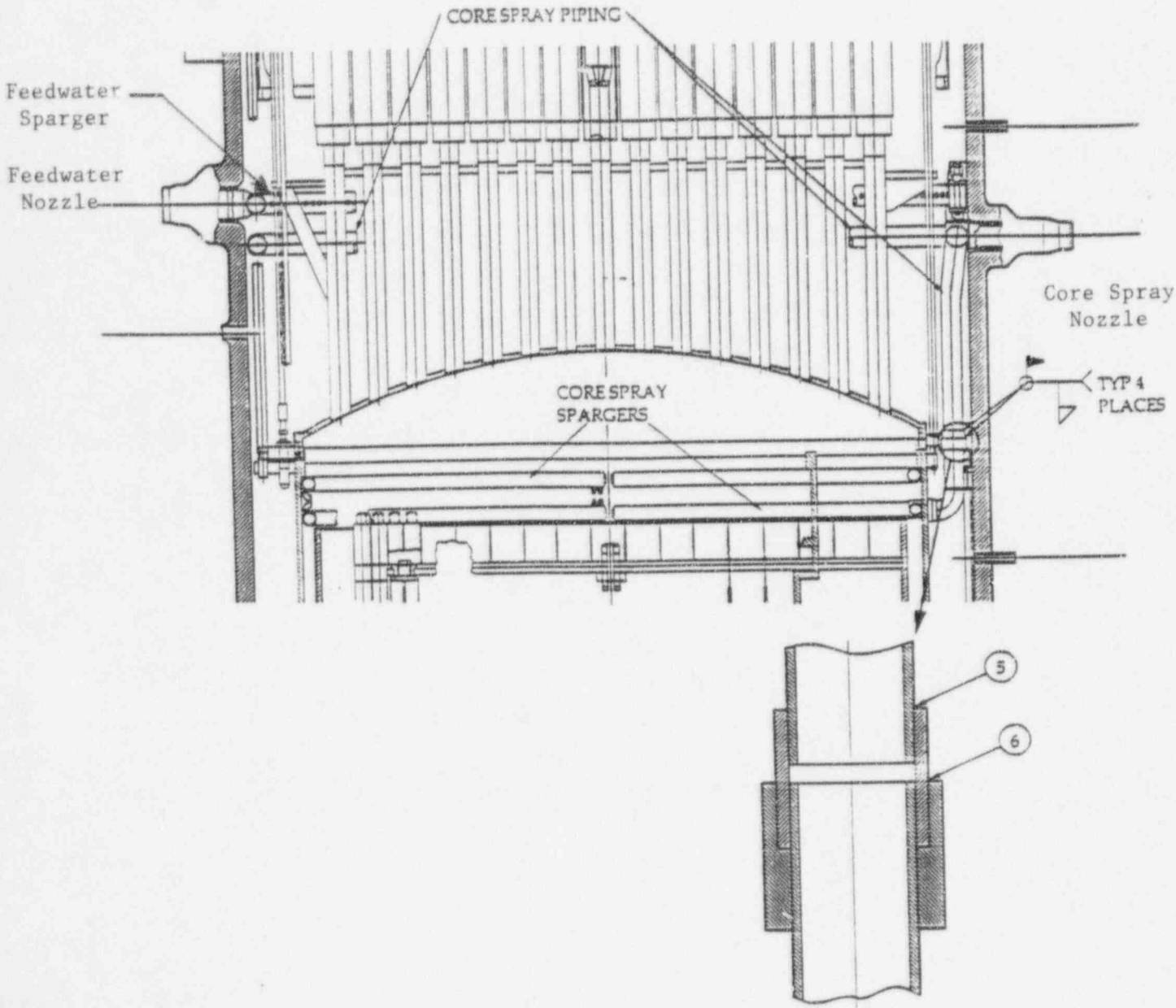

CORE SPRAY PIPING
Feedwater Sparger
Feedwater Nozzle
Core Spray Nozzle
TYP 4 PLACES
CORE SPRAY SPARGERS
5
6

FIGURE 3