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50-287 Oconee Nuclear Station, Unit 3, Duke Power Co. 05000287
AUTH.NAME AUTHOR AFFILIATION
PARKER,W.O. Duke Power Co.
RECIP.NAME RECIPIENT AFFILIATION
DENTON,H.R. Office of Nuclear Reactor Regulation, Director
REID,R.W. Operating Reactors Branch 4

SUBJECT: Forwards request for relief from ASME Code Section XI requirements re main feedwater sys check valves. Approval requested by 810114.

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DUKE POWER COMPANY
POWER BUILDING
422 SOUTH CHURCH STREET, CHARLOTTE, N. C. 28242

WILLIAM O. PARKER, JR.
VICE PRESIDENT
STEAM PRODUCTION

TELEPHONE AREA 704
373-4083

January 13, 1981

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

Attention: Mr. R. W. Reid, Chief
Operating Reactors Branch No. 4

Re: Oconee Nuclear Station
Docket Nos. 50-269, -270, -287

Dear Sir:

Pursuant to 10CFR 50, §50.55a, please find attached a request for relief from the current Inservice Inspection requirements following valve replacement. The attached request concerns the main feedwater system check valves which are scheduled to be replaced during the current Oconee 3 refueling outage and the next refueling outage for each of the other Oconee units. It is urgently requested that this request be approved by January 14, 1981 in order that the Oconee 3 check valves may be replaced during the current refueling outage, without delaying the restart of the unit. Replacement time is expected to take about three weeks.

Pursuant to 10CFR 170, §170.27 please find attached a check in the amount of $4,800. This amount represents one Class III license fee for Oconee 3 and two Class I license fees for Oconee 1, 2. Your prompt review and approval of this request will enable this modification to be accomplished during the current Oconee 3 outage.

Very truly yours,

William O. Parker, Jr.

RLG:scs
Attachment

A001
S
1/1
w/check:
$4800.00

8101190385

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DUKE POWER COMPANY
OCONEE NUCLEAR STATION

REQUEST FOR RELIEF FROM ASME CODE SECTION XI REQUIREMENT
DETERMINED TO BE IMPRACTICAL

1. Component for which relief is requested:

   a. Name and Number

      Units 1, 2 & 3 Main Feedwater Check Valves are to be replaced; Valve Numbers FDW 37 and FDW 46

   b. Function

      The Main Feedwater System supplies water to the Steam Generators where it removes heat from the Reactor Coolant System. The check valves to be replaced act as containment isolation valves for the Main Feedwater System and to prevent Steam Generator blowdown upon loss of feedwater discharge pressure.

   c. ASME Section III Code Class

      Equivalent Class 2

   d. Valve Category

      Check

2. ASME Section XI requirement that has been determined to be impractical:

   ASME Boiler and Pressure Vessel Code Section XI, 1980 Edition. Article IWC 5000, System Pressure Tests.

3. Basis for requesting relief:

   There are no isolation valves downstream of these check valves in the feedwater system. Performing a hydrostatic test would require one of two approaches for line isolation.

   The first approach would pressurize the entire secondary side of the Steam Generator, the Main Feedwater lines, and the Main Steam lines. Isolation could possibly be accomplished by the Turbine Stop Valves in the Main Steam lines and the Feedwater Control and/or Isolation Valves in the Feedwater Lines; however, the potential for adequate leaktightness of these valves is not good due to the designed application and size of these valves. The potential for damage to the Main Steam System exists due to the heavier static loads created by a water solid system.

   A second approach for performing a hydrostatic test involves removing all 32 four inch risers from each feedwater header on each of the two Steam Generators. Blank flanges would then have to be installed on the header. Radiation exposure to personnel would be high and additional potential for leaks would be created. While this method of isolation would be

superior from a leaktightness standpoint, isolation at the other end of the line with the Feedwater Control and/or Isolation Valves again may prove unattainable.

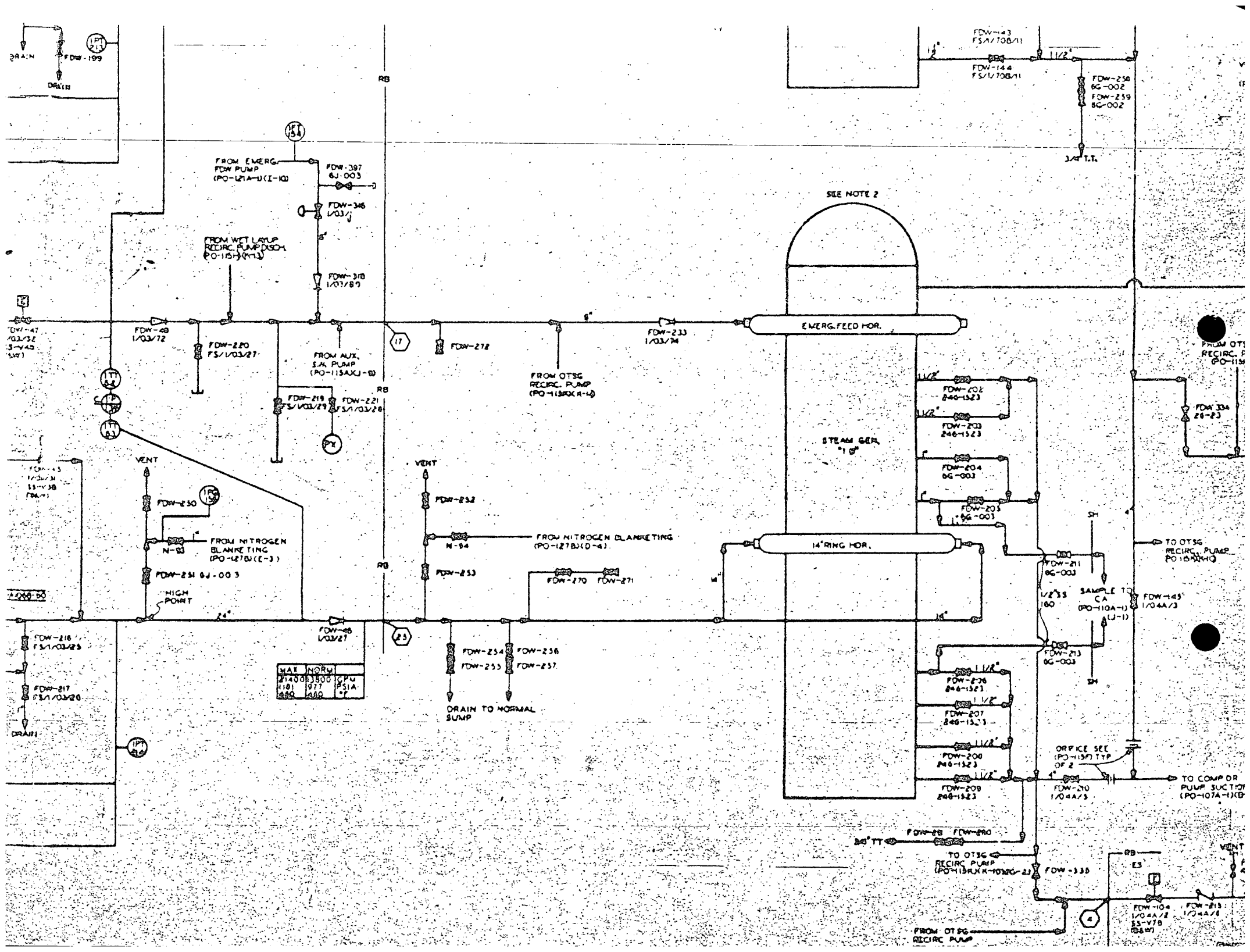
A hydrostatic test is generally performed to assure leaktightness of welds and to indicate gross flaws or incomplete work. While hydrostatic tests are valuable for initial assurance of leaktightness, they often cannot offer insight into future weld failure due to the propagation of internal weld defects. For this reason, it is felt that a 100% radiograph of a weld offers a superior assurance of a qualified weld.

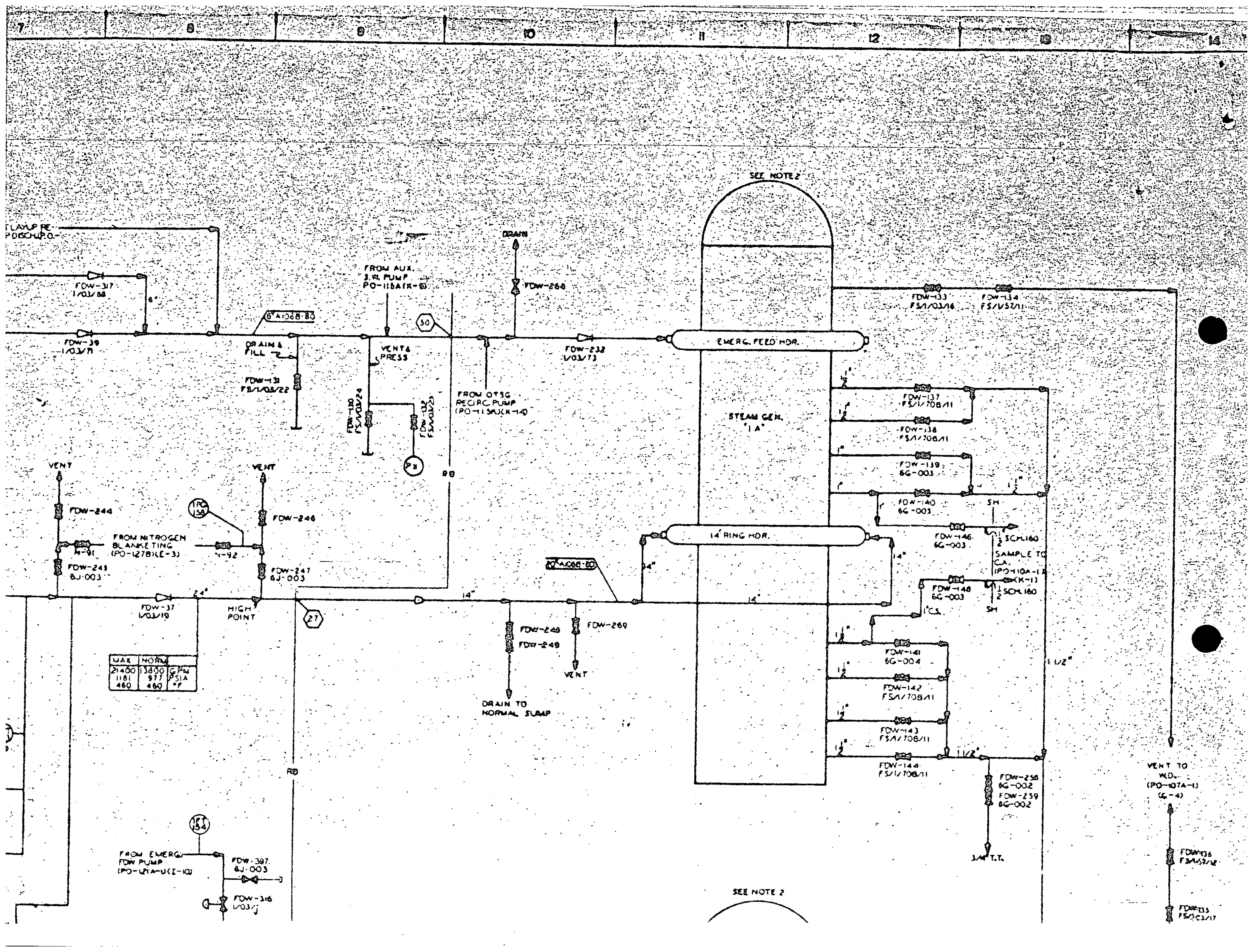
4. Alternate examinations:

A 100% radiographic examination of both welds on each valve would be performed and an inservice leak test at operating pressure and temperature will be conducted. An appropriate surface examination will also be completed.

5. Implementation:

These examinations will be carried out at the time of valve replacement during the 1981 refueling outage on each unit.


DRAIN
FDW-199
DRAIN
RB
FROM EMERG. FDW PUMP (PO-121A-U)(I-10)
FDW-397 6J-003
FDW-345 1/03/j
FROM WET LAYUP RECIRC. PUMP DISCH. (PO-115H)(K-3)
FDW-378 1/03/B9
FDW-47 1/03/32
FDW-48 1/03/72
FDW-220 FS/1/03/27
FROM AUX. S.W. PUMP (PO-115AUX)(J-8)
FDW-219 FS/1/03/29
FDW-221 FS/1/03/28
17
FDW-278
FROM OTSG RECIRC. PUMP (PO-115BOX A-4)
FDW-233 1/03/34
SEE NOTE 2
EMERG. FEED HDR.
STEAM GEN. "1 B"
FDW-602 8G-1523
FDW-203 8G-1523
FDW-604 8G-003
FDW-205 8G-003
14" RING HDR.
FDW-211 8G-003
SAMPLE TO CA (PO-110A-1)(J-1)
FDW-145 1/04A/3
FDW-213 8G-003
FDW-206 8G-1523
FDW-207 8G-1523
FDW-208 8G-1523
FDW-209 8G-1523
ORIFICE SEE (PO-115F) TYP OF 2
FDW-210 1/04A/5
TO COMPONENT PUMP SUCTION (PO-107A-1)(B-1)
FDW-334 2G-003
FROM OTSG RECIRC. PUMP (PO-115B
TO OTSG RECIRC. PUMP (PO-115B
VENT
FDW-230
FROM NITROGEN BLANKETING (PO-127B)(E-3)
N-93
FDW-251 8J-003
HIGH POINT
FDW-48 1/03/27
FDW-232
FROM NITROGEN BLANKETING (PO-127B)(D-4)
N-94
FDW-253
FDW-270
FDW-271
23
FDW-254
FDW-255
FDW-256
FDW-257
DRAIN TO NORMAL SUMP
MAX 1400 1181 680
NORM 1300 977 680
CPU PSIA °F
FDW-218 FS/1/03/25
FDW-217 FS/1/03/26
DRAIN
FDW-28
FDW-280
TO OTSG RECIRC. PUMP (PO-115BOX A-1)(G-2)
FDW-338
FROM OTSG RECIRC. PUMP
FDW-104 1/04A/2
FDW-213 1/04A/8
FDW-143 FS/1/108/11
FDW-144 FS/1/108/11
FDW-258 8G-002
FDW-259 8G-002
3/4" T.T.



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11
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13
14
SEE NOTE 2
EMERG. FEED HDR.
STEAM GEN. "1 A"
14" RING HDR.
FROM AUX. S.W. PUMP PO-118A(K-8)
DRAIN
FDW-268
FDW-317 1/03/88
FDW-39 1/03/71
DRAIN & FILL
FDW-131 FS/1/03/22
VENT & PRESS
FDW-130 FS/1/03/24
FDW-132 FS/1/03/23
FROM OTSG RECIRC. PUMP (PO-115A)(K-14)
FDW-232 1/03/73
FDW-133 FS/1/03/16
FDW-134 FS/1/32/11
FDW-137 FS/1/708/11
FDW-138 FS/1/708/11
FDW-139 6G-003
FDW-140 6G-003
FDW-146 6G-003
SCH.160
SAMPLE TO C.A.
FDW-148 6G-003
FDW-141 6G-004
FDW-142 FS/1/708/11
FDW-143 FS/1/708/11
FDW-144 FS/1/708/11
FDW-258 6G-002
FDW-259 6G-002
3/4" T.T.
VENT TO W.D. (PO-107A-1) (G-4)
VENT
FDW-244
FROM NITROGEN BLANKETING (PO-127B)(E-3)
N-91
N-92
FDW-243 6J-003
FDW-246
FDW-247 6J-003
FDW-37 1/03/19
HIGH POINT
14"
24"
RB
FDW-249
FDW-248
FDW-269
DRAIN TO NORMAL SUMP
MAX | NORM
21400 | 13800 | GPM
1181 | 977 | PSIA
460 | 460 | °F
FROM EMERG. FDW PUMP (PO-121A-U)(E-10)
FDW-397 6J-003
FDW-316 1/03/J