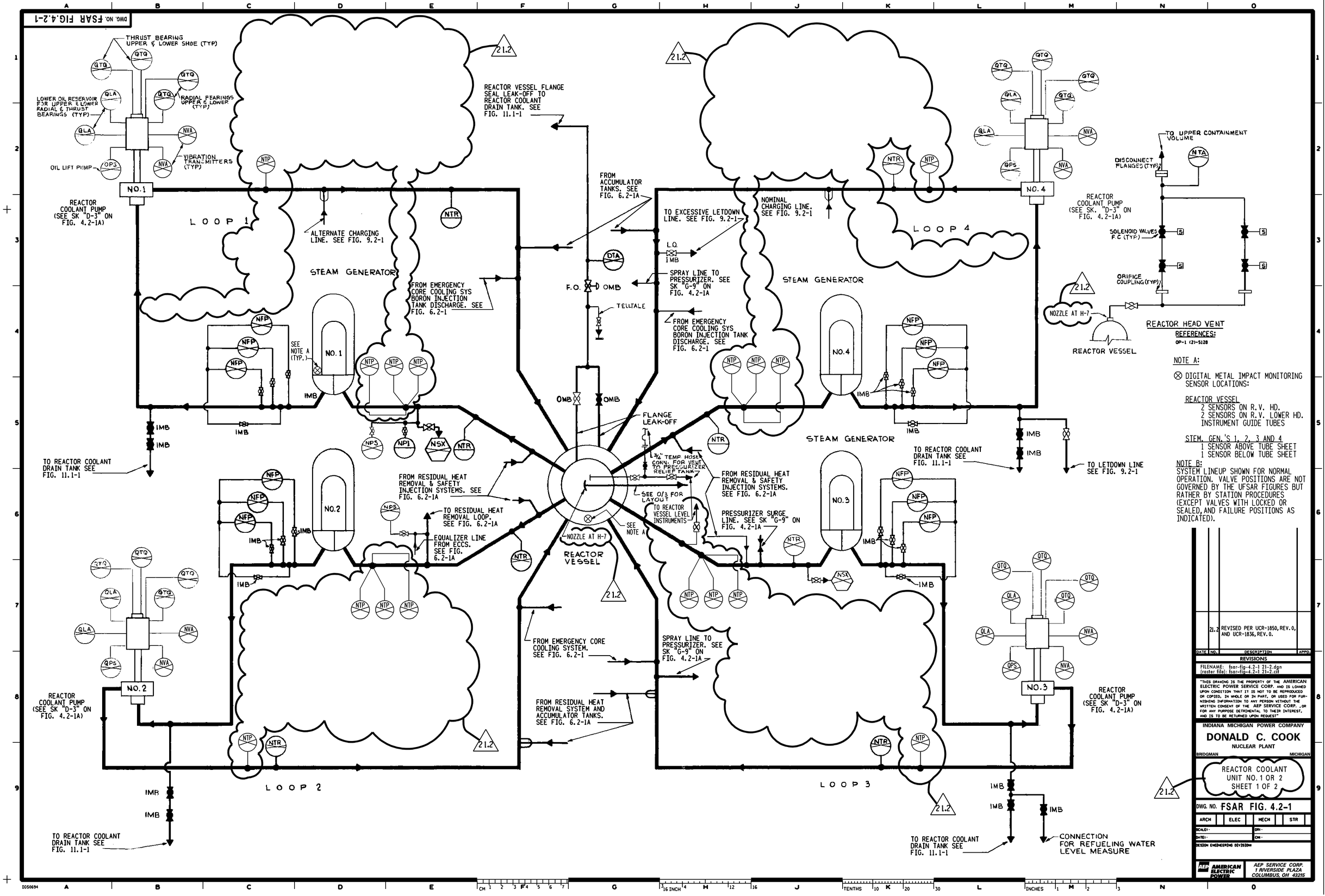
DWG. NO. FSAR FIG.4.2-1
THRUST BEARING UPPER & LOWER SHOE (TYP)
LOWER OIL RESERVOIR FOR UPPER & LOWER RADIAL & THRUST BEARINGS (TYP)
RADIAL BEARINGS UPPER & LOWER (TYP)
OIL LIFT PUMP
VIBRATION TRANSMITTERS (TYP)
REACTOR COOLANT PUMP (SEE SK "D-3" ON FIG. 4.2-1A)
NO.1
NO.2
NO.3
NO.4
LOOP 1
LOOP 2
LOOP 3
LOOP 4
STEAM GENERATOR
REACTOR VESSEL FLANGE SEAL LEAK-OFF TO REACTOR COOLANT DRAIN TANK. SEE FIG. 11.1-1
ALTERNATE CHARGING LINE. SEE FIG. 9.2-1
FROM ACCUMULATOR TANKS. SEE FIG. 6.2-1A
TO EXCESSIVE LETDOWN LINE. SEE FIG. 9.2-1
NOMINAL CHARGING LINE. SEE FIG. 9.2-1
SPRAY LINE TO PRESSURIZER. SEE SK "G-9" ON FIG. 4.2-1A
FROM EMERGENCY CORE COOLING SYS BORON INJECTION TANK DISCHARGE. SEE FIG. 6.2-1
TELLTALE
FLANGE LEAK-OFF
1¾" TEMP HOSE CONN. FOR VENT TO PRESSURIZER RELIEF TANK
SEE O/3 FOR LAYOUT
TO REACTOR VESSEL LEVEL INSTRUMENTS
FROM RESIDUAL HEAT REMOVAL & SAFETY INJECTION SYSTEMS. SEE FIG. 6.2-1A
PRESSURIZER SURGE LINE. SEE SK "G-9" ON FIG. 4.2-1A
TO RESIDUAL HEAT REMOVAL LOOP. SEE FIG. 6.2-1A
EQUALIZER LINE FROM ECCS. SEE FIG. 6.2-1A
FROM RESIDUAL HEAT REMOVAL SYSTEM AND ACCUMULATOR TANKS. SEE FIG. 6.2-1A
FROM EMERGENCY CORE COOLING SYSTEM. SEE FIG. 6.2-1
TO REACTOR COOLANT DRAIN TANK SEE FIG. 11.1-1
TO LETDOWN LINE SEE FIG. 9.2-1
CONNECTION FOR REFUELING WATER LEVEL MEASURE
TO UPPER CONTAINMENT VOLUME
DISCONNECT FLANGES (TYP)
SOLENOID VALVES F.C (TYP)
ORIFICE COUPLING (TYP)
NOZZLE AT H-7
REACTOR VESSEL
REACTOR HEAD VENT
REFERENCES:
OP-1 (2)-5128
NOTE A:
⊗ DIGITAL METAL IMPACT MONITORING SENSOR LOCATIONS:
REACTOR VESSEL
2 SENSORS ON R.V. HD.
2 SENSORS ON R.V. LOWER HD.
INSTRUMENT GUIDE TUBES
STEM. GEN.'S 1, 2, 3 AND 4
1 SENSOR ABOVE TUBE SHEET
1 SENSOR BELOW TUBE SHEET
NOTE B:
SYSTEM LINEUP SHOWN FOR NORMAL OPERATION. VALVE POSITIONS ARE NOT GOVERNED BY THE UFSAR FIGURES BUT RATHER BY STATION PROCEDURES (EXCEPT VALVES WITH LOCKED OR SEALED, AND FAILURE POSITIONS AS INDICATED).
21.2 REVISED PER UCR-1850, REV.0, AND UCR-1836, REV.0.
DATE NO. DESCRIPTION APPD.
REVISIONS
FILENAME: fsar-fig-4.2-1 21-2.dgn
(raster file): fsar-fig-4.2-1 21-2.cit
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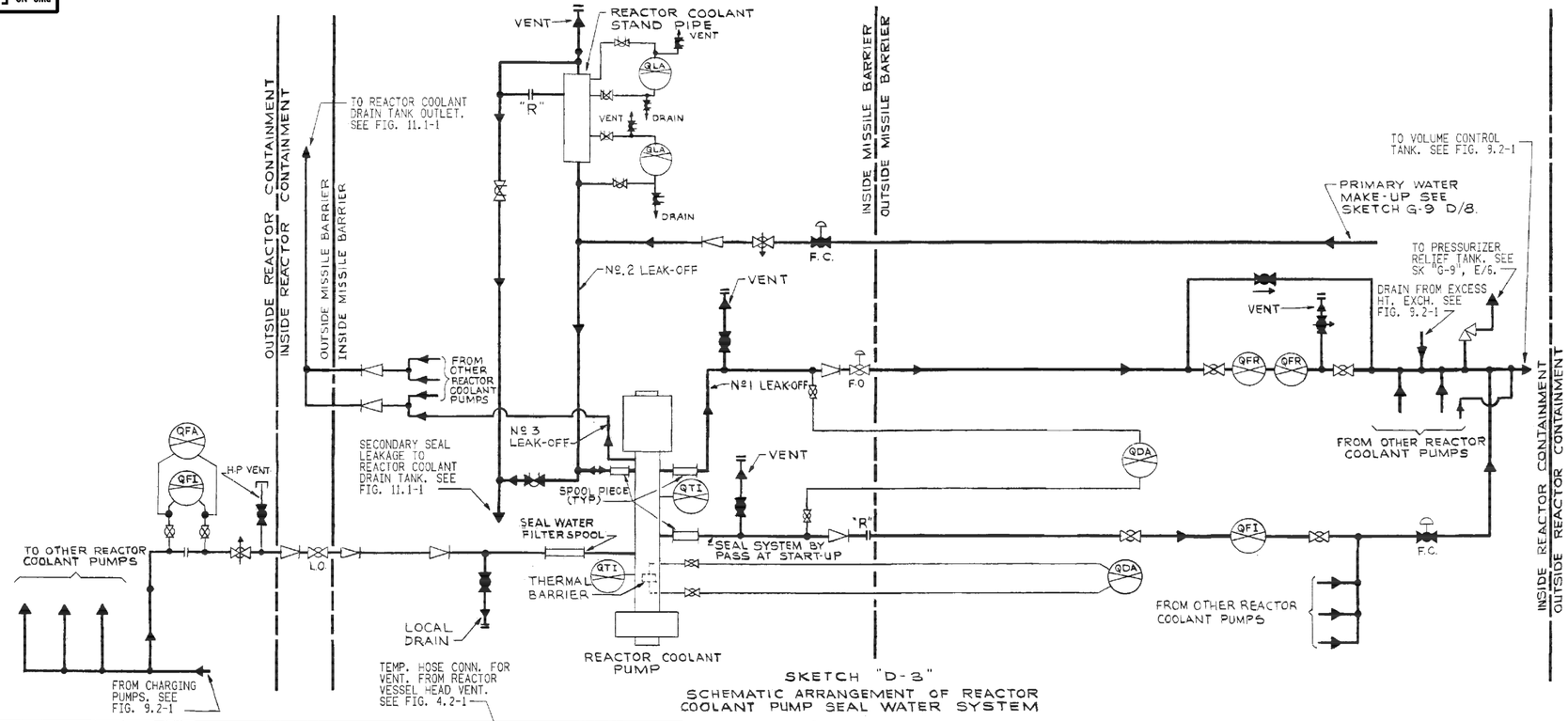
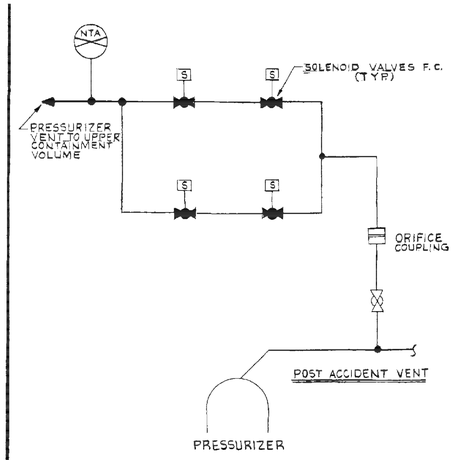
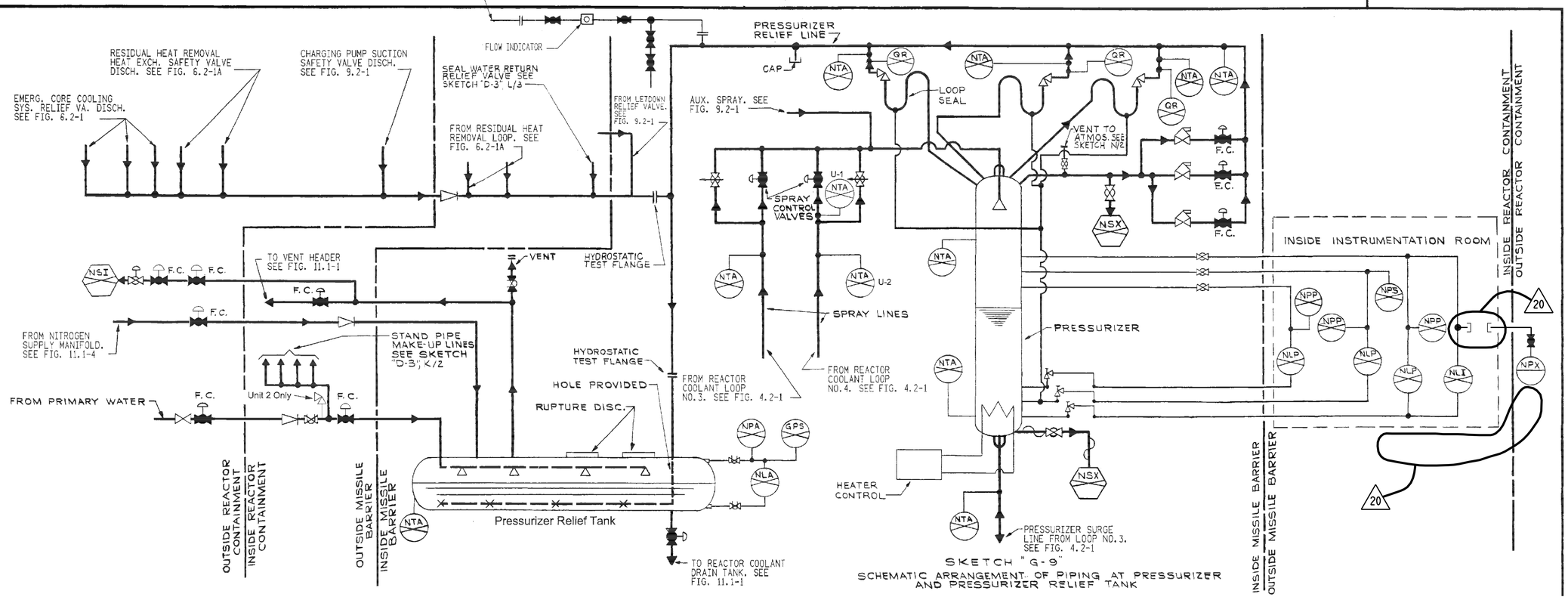
INDIANA MICHIGAN POWER COMPANY
DONALD C. COOK
NUCLEAR PLANT
BRIDGMAN MICHIGAN
REACTOR COOLANT UNIT NO. 1 OR 2 SHEET 1 OF 2
DWG. NO. FSAR FIG. 4.2-1
ARCH ELEC MECH STR
SCALE:- DRN:-
DATE:- CHK:-
DESIGN ENGINEERING DIVISION
AMERICAN ELECTRIC POWER
AEP SERVICE CORP. 1 RIVERSIDE PLAZA COLUMBUS, OH 43215

DWG. NO. FSAR FIG.4.2-1A





REFERENCES:
OP-1 (2)-5128A



NOTE
SYSTEM LINEUP SHOWN FOR NORMAL OPERATION.

VALVE POSITIONS ARE NOT GOVERNED BY THE UFSAR FIGURES BUT RATHER BY STATION PROCEDURES (EXCEPT VALVES WITH LOCKED OR SEALED, AND FAILURE POSITIONS AS INDICATED).

DATE	NO.	DESCRIPTION	APPD.
	20	REVISED PER UCR-1712.	

REVISIONS

FILENAME: fsar-fig-4-2-1a 20.dgn
(raster file): fsar-fig-4-2-1a 20.tif

INDIANA MICHIGAN POWER COMPANY
DONALD C. COOK
NUCLEAR PLANT
BRIDGMAN MICHIGAN

REACTOR COOLANT
UNIT NO. 1 OR 2
SHEET 2 OF 2

DWG. NO. FSAR FIG. 4.2-1A

ARCH	ELEC	MECH	STR

SCALE:
DR:
DATE:
CH:
DESIGN ENGINEERING DIVISION

AEP AMERICAN ELECTRIC POWER
AEP SERVICE CORP.
1 RIVERSIDE PLAZA
COLUMBUS, OH 43215

IGS0694

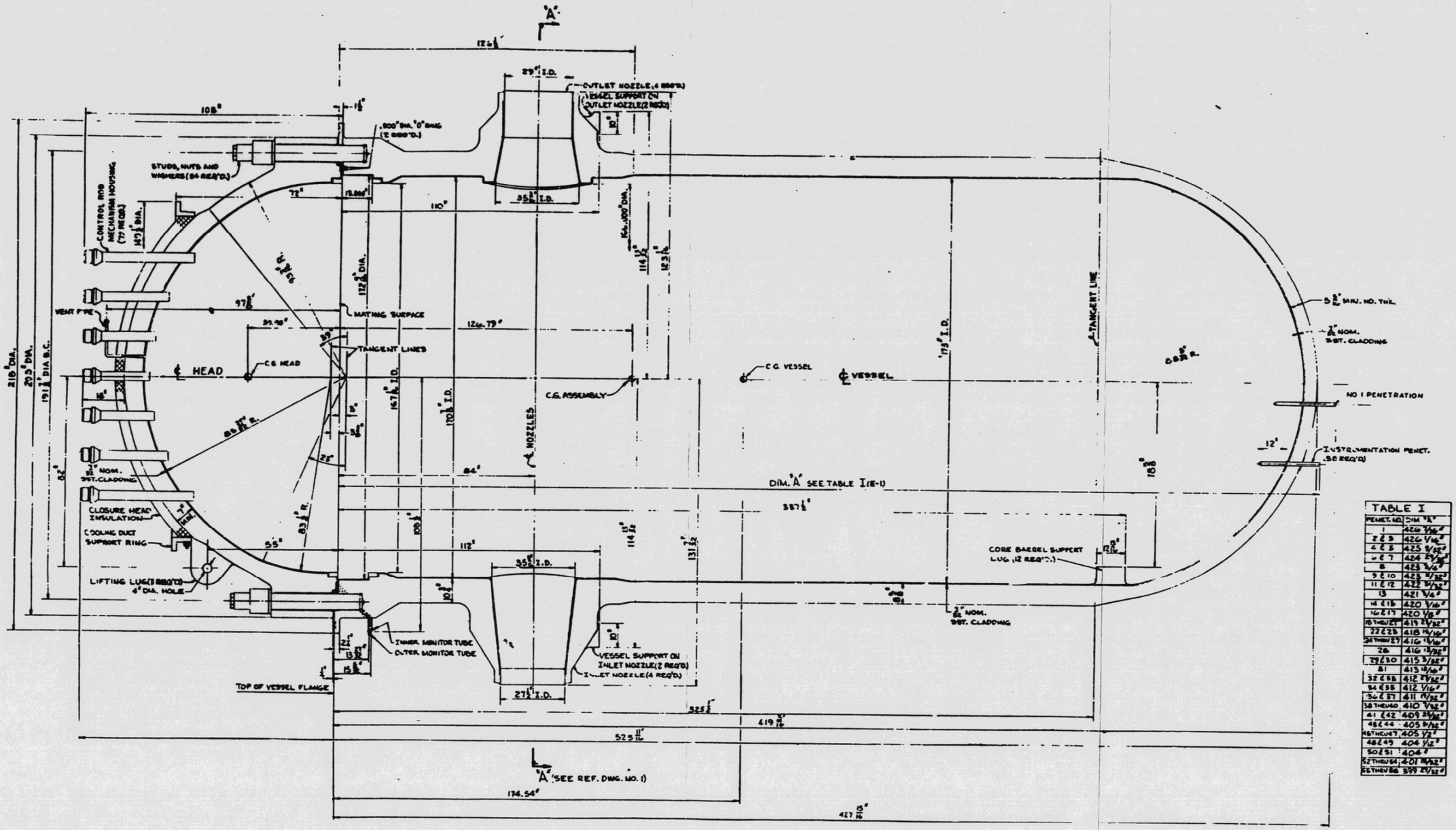


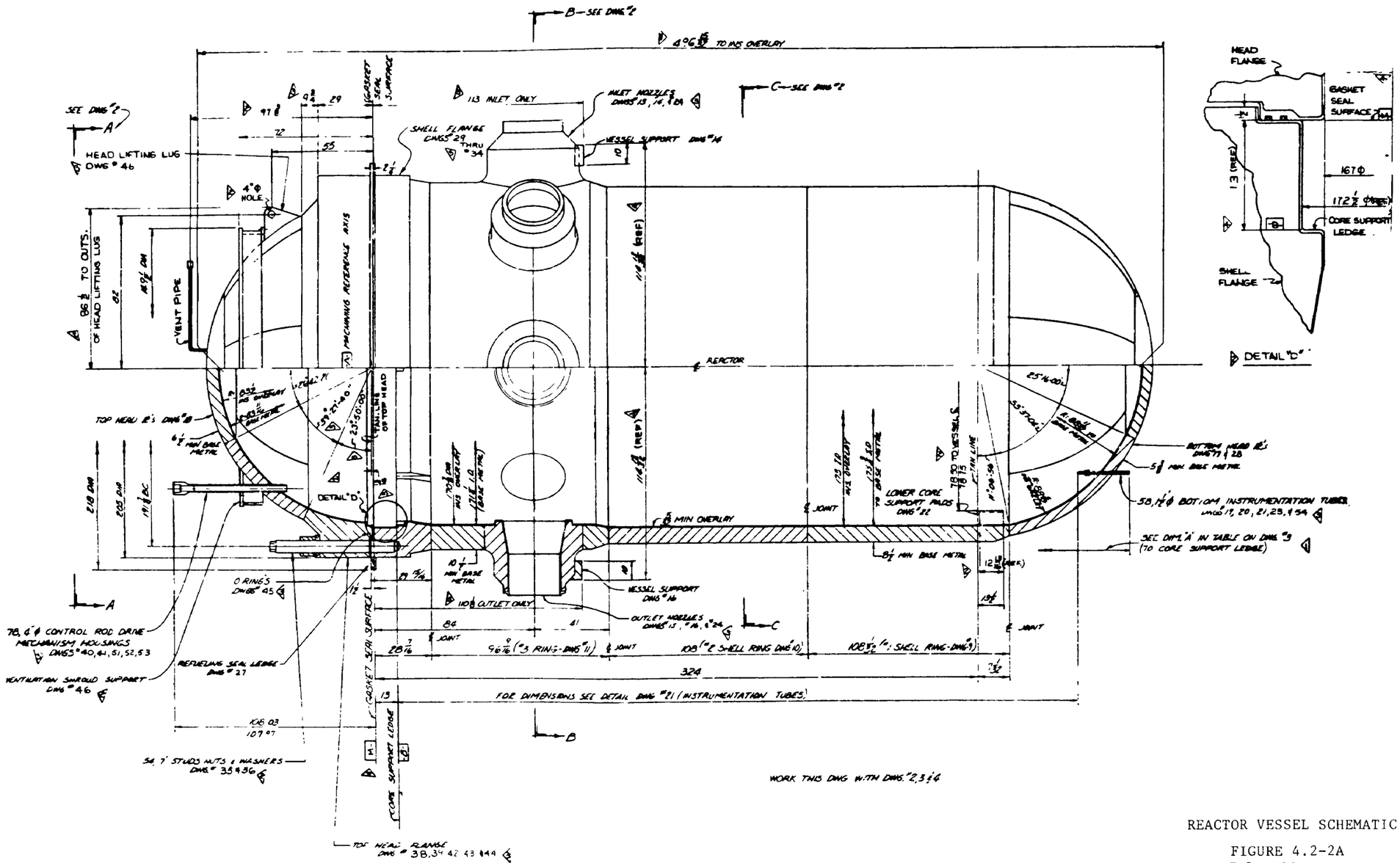
TABLE I	
PENET. NO.	DIM "A"
1	426 3/16"
2 & 3	426 1/16"
4 & 5	425 9/16"
6 & 7	424 5/16"
8	423 3/4"
9 & 10	423 11/16"
11 & 12	422 5/16"
13	421 1/4"
14 & 15	420 3/16"
16 & 17	420 1/8"
18 THRU 22	419 13/16"
22 & 23	418 15/16"
24 THRU 27	416 13/16"
28	416 13/16"
29 & 30	415 3/16"
31	413 15/16"
32 & 33	412 13/16"
34 & 35	412 1/16"
36 & 37	411 11/16"
38 THRU 40	410 1/16"
41 & 42	409 3/16"
43 & 44	408 3/16"
45 THRU 47	405 1/2"
48 & 49	404 1/2"
50 & 51	404"
52 THRU 64	401 11/16"
65 THRU 86	399 13/16"

COMPONENT	WEIGHT POUNDS
VESSEL	678,587#
CLOSURE HEAD	133,905#
STUD, NUT & WASHER	30,950#
TOTAL	843,812#

REACTOR VESSEL SCHEMATIC

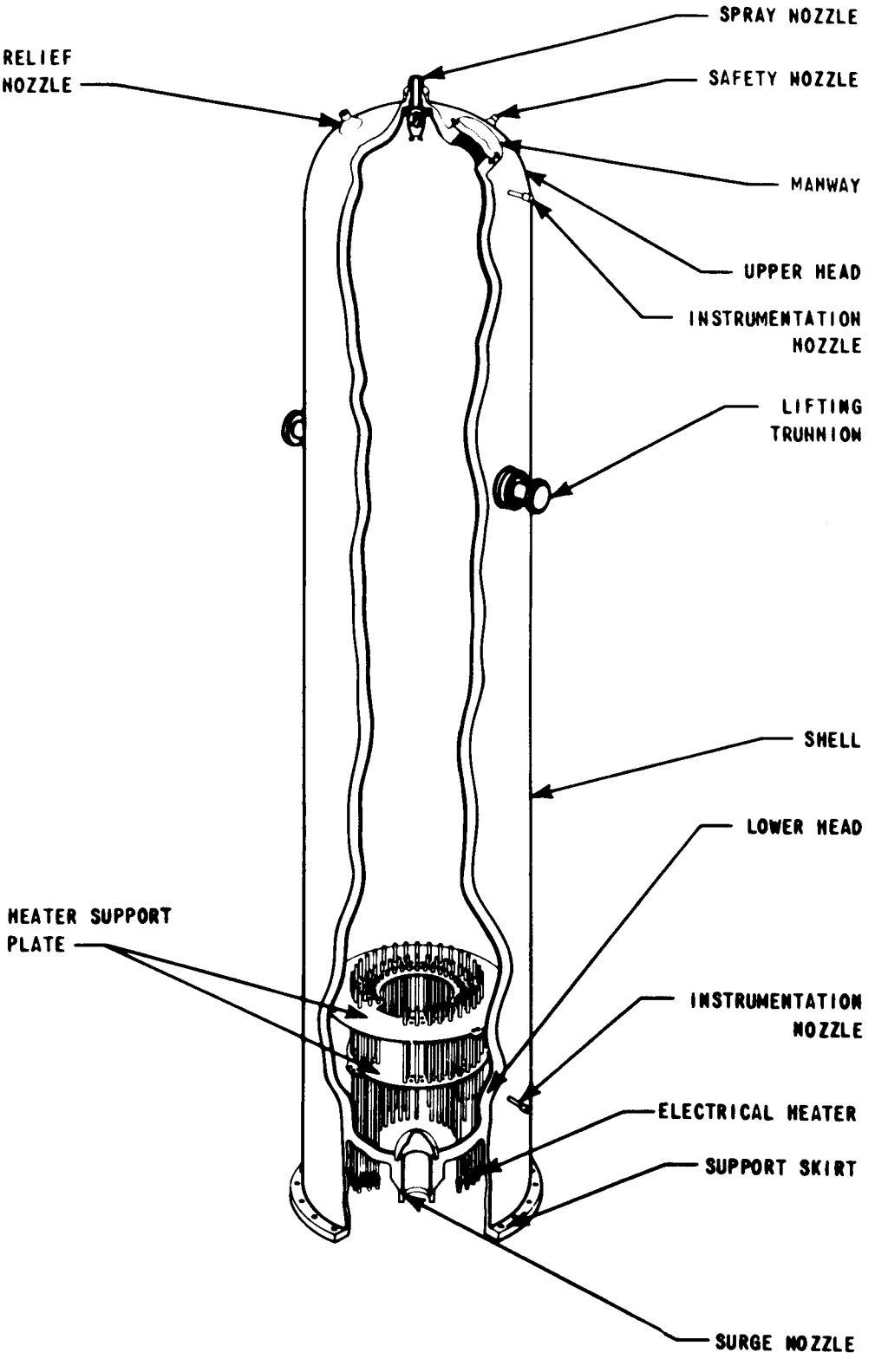
FIGURE 4.2-2

July, 1982

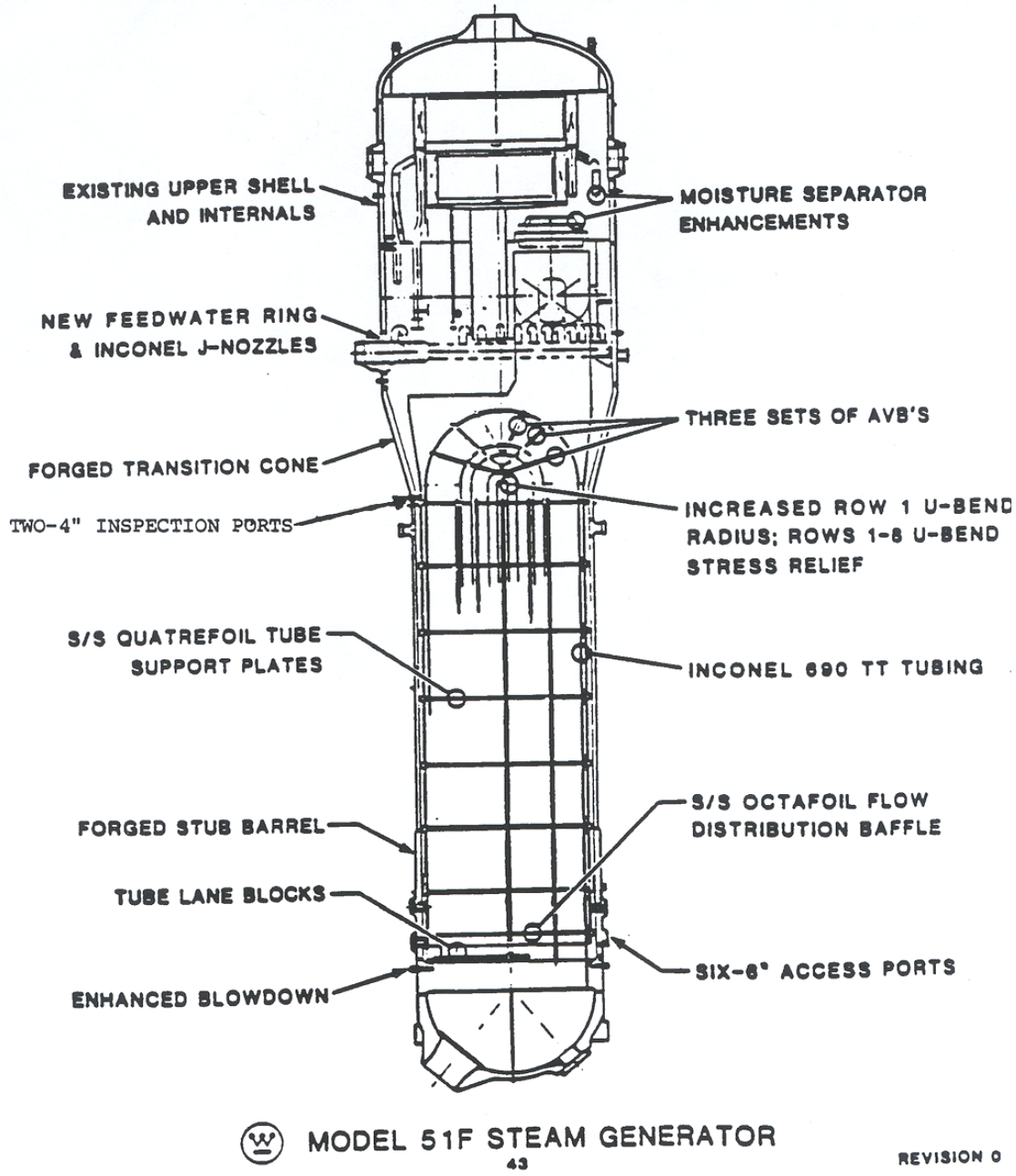


REACTOR VESSEL SCHEMATIC

FIGURE 4.2-2A
July, 1982

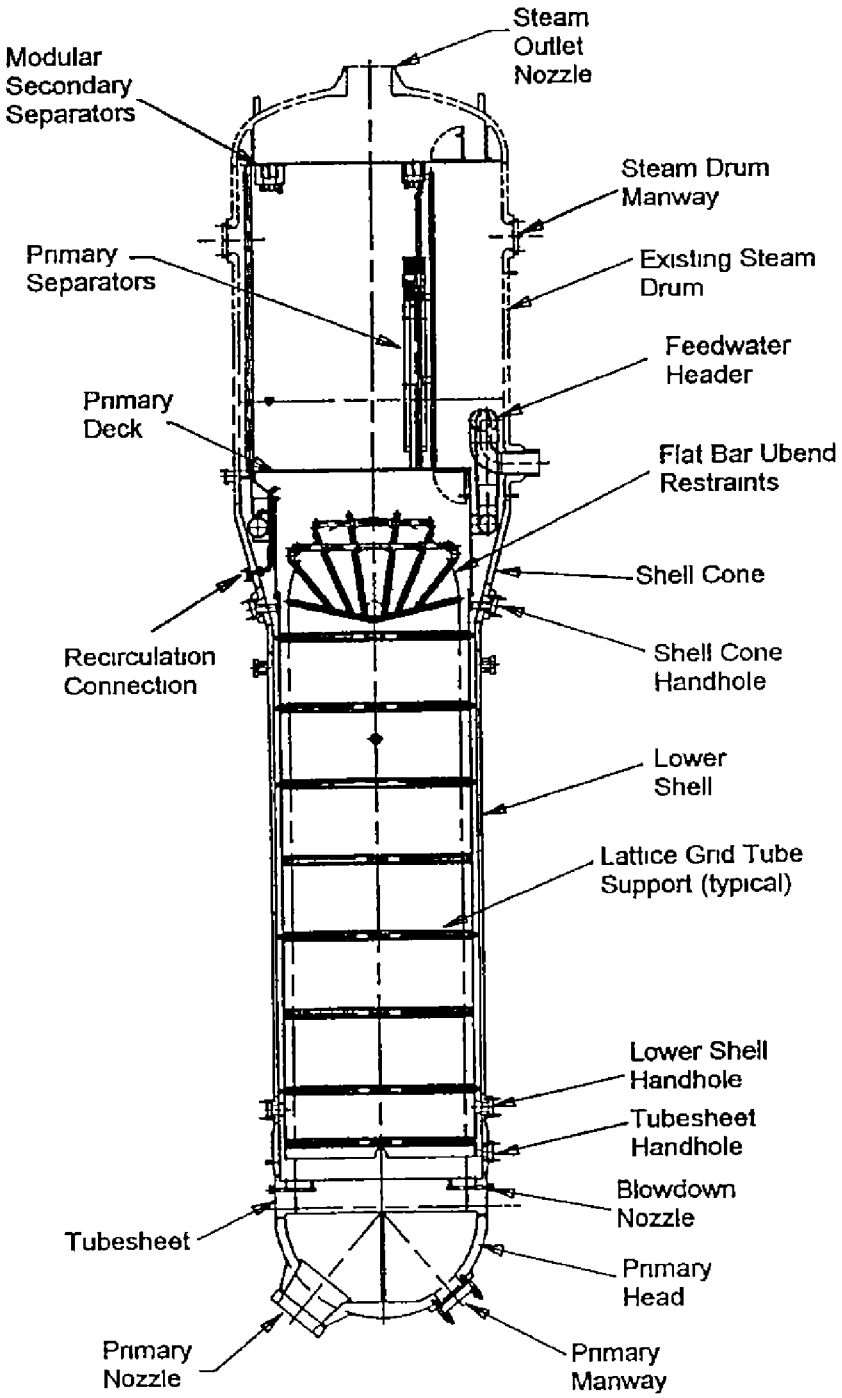


PRESSURIZER
FIGURE 4.2-3
July, 1982



Revision: **18**	Change Description: **UCR-1649**

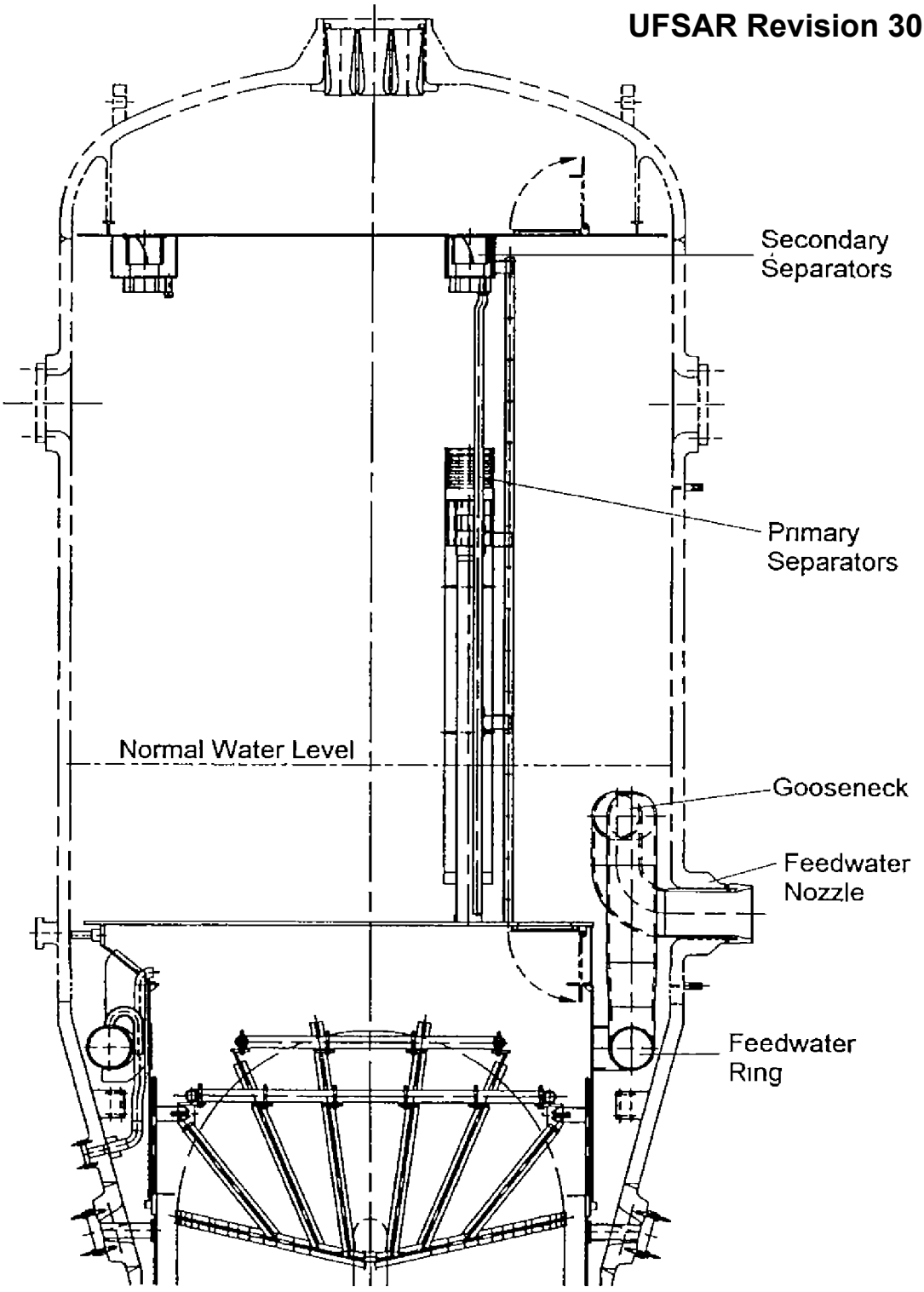
AMERICAN ELECTRIC POWER COOK NUCLEAR PLANT NUCLEAR GENERATION GROUP BRIDGMAN, MICHIGAN	Title: **Cook Unit 2 Repaired Steam Generator General Arrangement**	
	UFSAR Figure: **4.2-4**	Sheet 1 of 1



16.6	REVISED PER 99-UFSAR-1226
REV. NO.	**DESCRIPTION**

REVISIONS

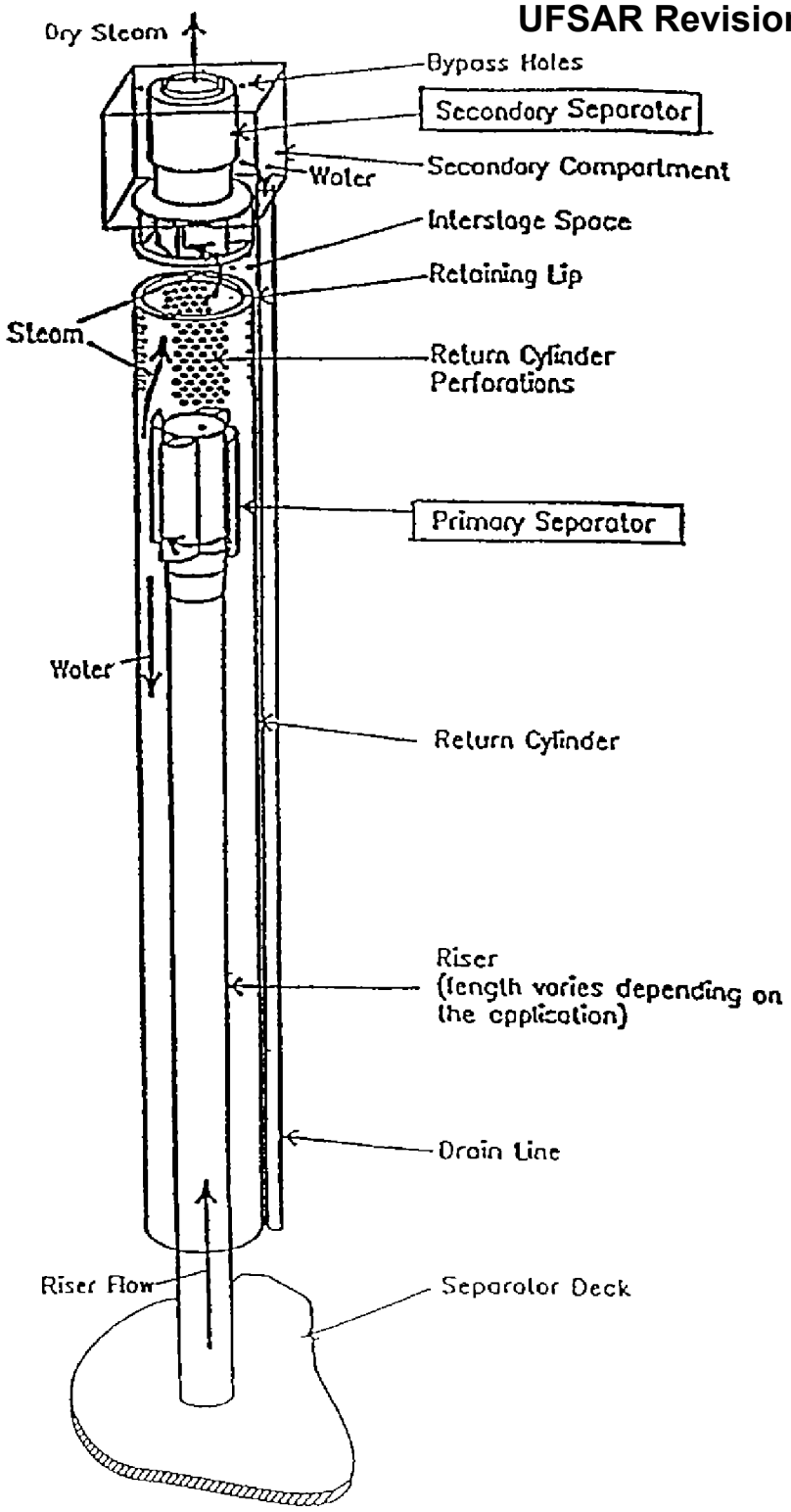
AMERICAN ELECTRIC POWER COOK NUCLEAR PLANT NUCLEAR GENERATION GROUP BRIDGMAN, MICHIGAN	**TITLE** **UNIT 1 MODEL 51R REPLACEMENT STEAM GENERATOR, GENERAL CONFIGURATION**	
	DWG. NO. **FSAR FIG. 4.2 - 4A**	SH 1 of 1



16.6	REVISED PER 99-UFSAR-1226
REV. NO.	**DESCRIPTION**

REVISIONS

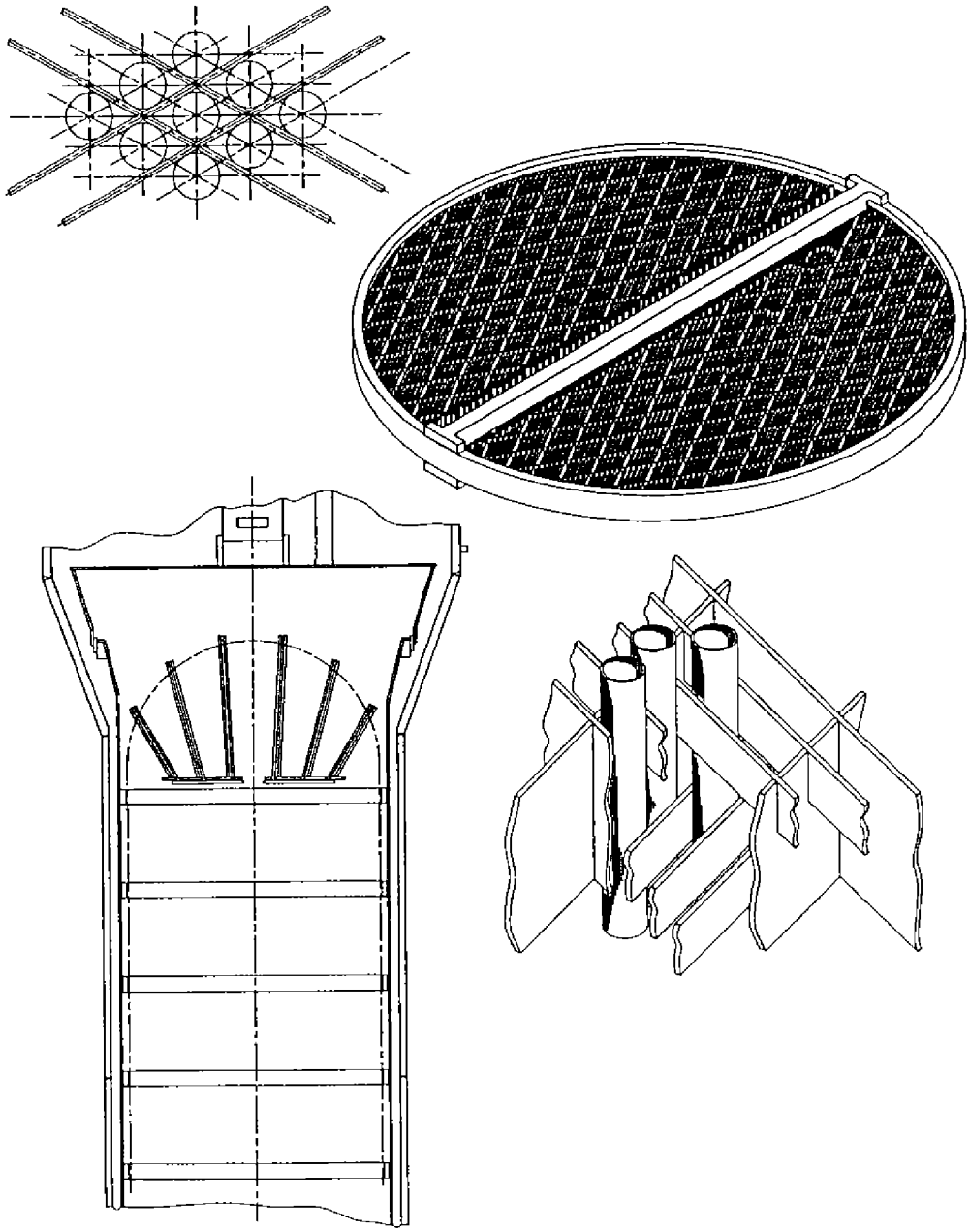
AMERICAN ELECTRIC POWER COOK NUCLEAR PLANT NUCLEAR GENERATION GROUP BRIDGMAN, MICHIGAN	**TITLE** UNIT 1 MODEL 51R REPLACEMENT STEAM GENERATOR, STEAM DRUM ARRANGEMENT	
	DWG. NO. FSAR FIG. 4.2-4B	SH 1 of 1



16.6	REVISED PER 99-UFSAR-1226
REV. NO.	**DESCRIPTION**

REVISIONS

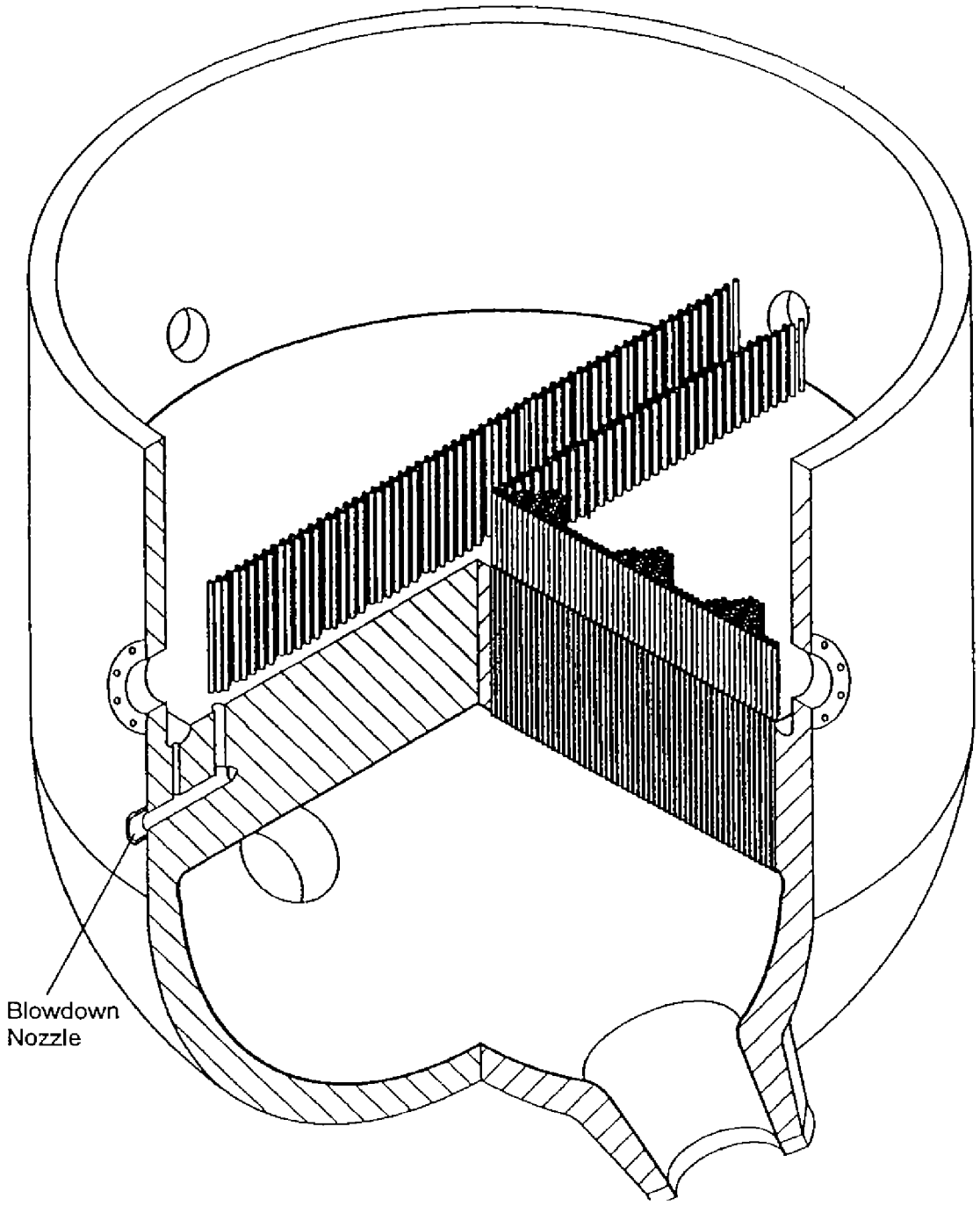
AMERICAN ELECTRIC POWER COOK NUCLEAR PLANT NUCLEAR GENERATION GROUP BRIDGMAN, MICHIGAN	**TITLE** UNIT 1 MODEL 51R REPLACEMENT STEAM GENERATOR, PRIMARY AND SECONDARY SEPARATORS	
	DWG. NO. **FSAR FIG. 4.2-4C**	SH 1 of 1



16.6	REVISED PER 99-UFSAR-1226
REV. NO.	**DESCRIPTION**

REVISIONS

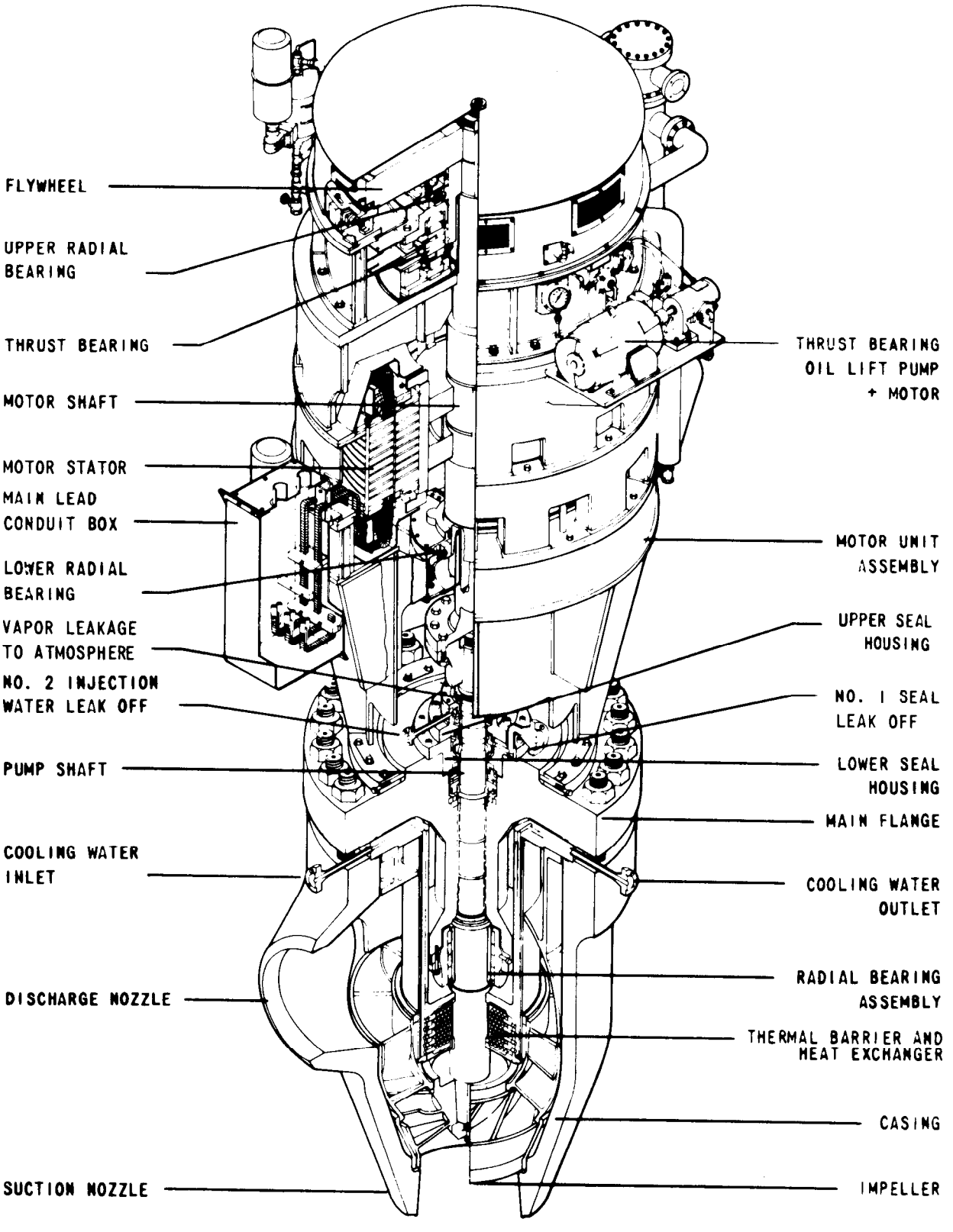
AMERICAN ELECTRIC POWER **COOK NUCLEAR PLANT** **NUCLEAR GENERATION GROUP** **BRIDGMAN, MICHIGAN**	**TITLE** **UNIT 1 MODEL 51R REPLACEMENT STEAM GENERATOR, B&W LATTICE GRID TUBE SUPPORT**
	DWG. NO. **FSAR FIG. 4.2 - 4D** — SH 1 of 1



REV. NO.	DESCRIPTION
16.6	REVISED PER 99-UFSAR-1226

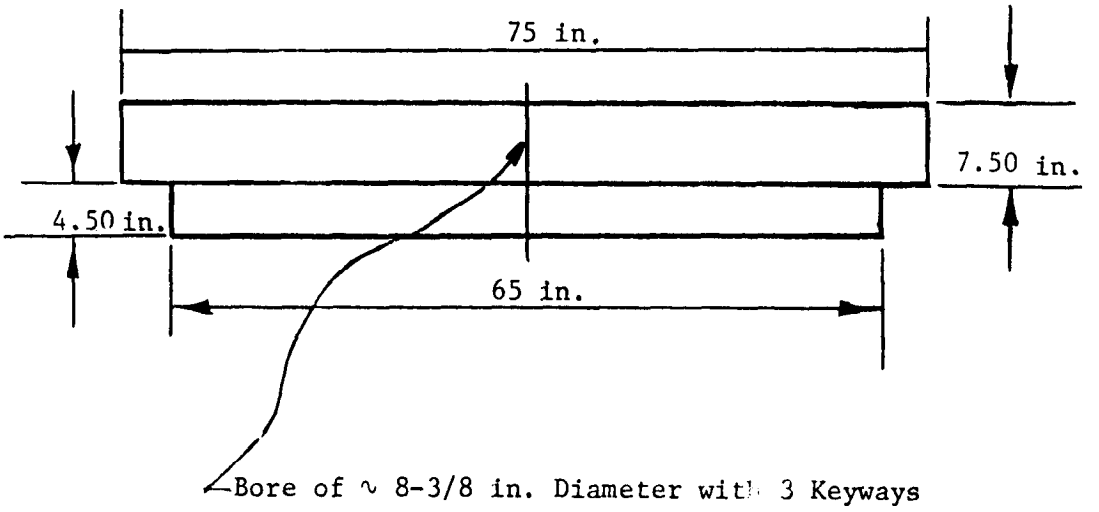
REVISIONS

AMERICAN ELECTRIC POWER COOK NUCLEAR PLANT NUCLEAR GENERATION GROUP BRIDGMAN, MICHIGAN	**TITLE** **UNIT 1 MODEL 51R REPLACEMENT STEAM GENERATOR, TUBESHEET BLOWDOWN CONFIGURATION**	
	DWG. NO. **FSAR FIG. 4.2 - 4E**	SH 1 of 1



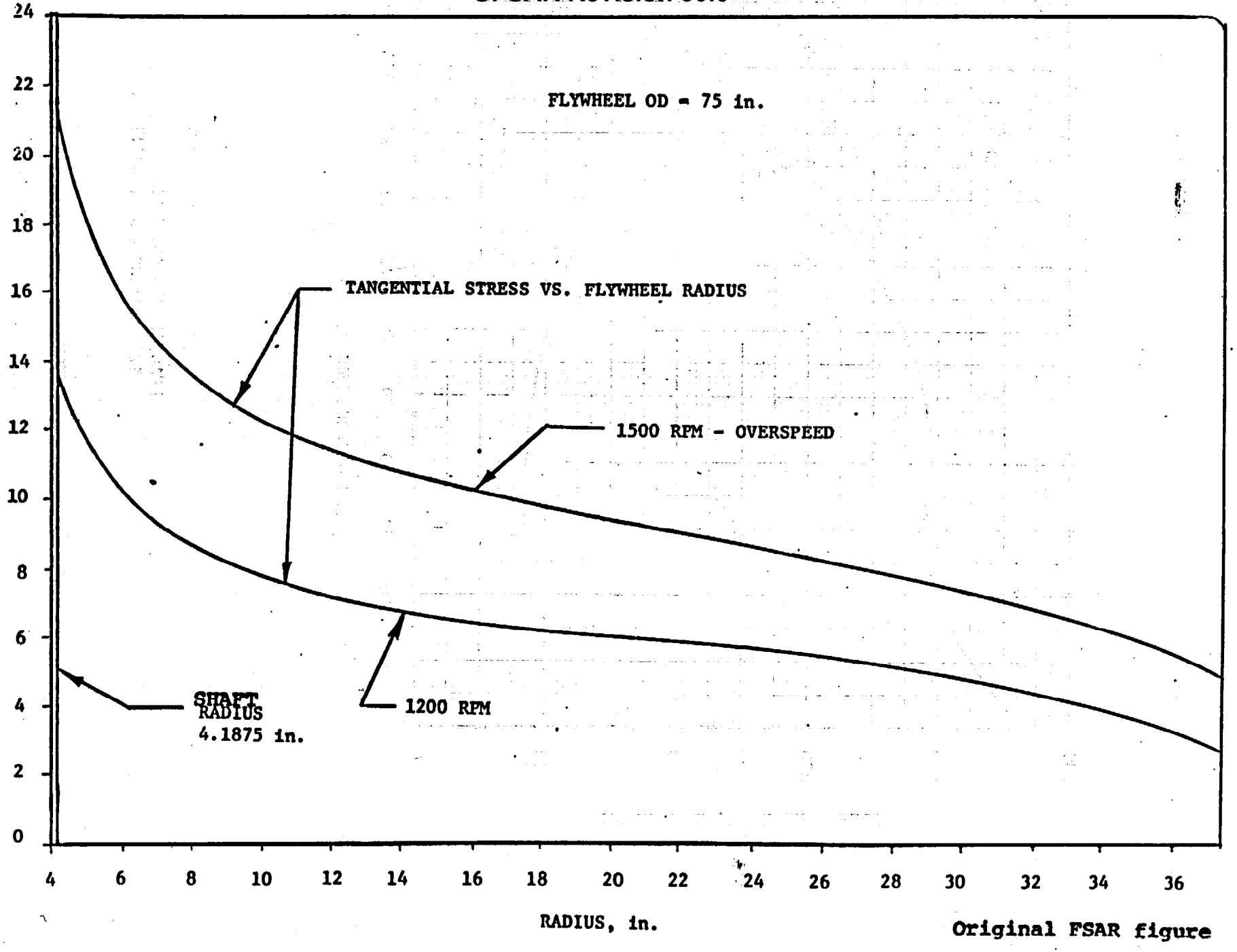
REACTOR COOLANT PUMP
FIGURE 4.2-5

REACTOR COOLANT PUMP FLYWHEEL



NOTE: The plates are bolted together with the bolts aligned perpendicular to the planes of the plates.

FIGURE 4.2-6

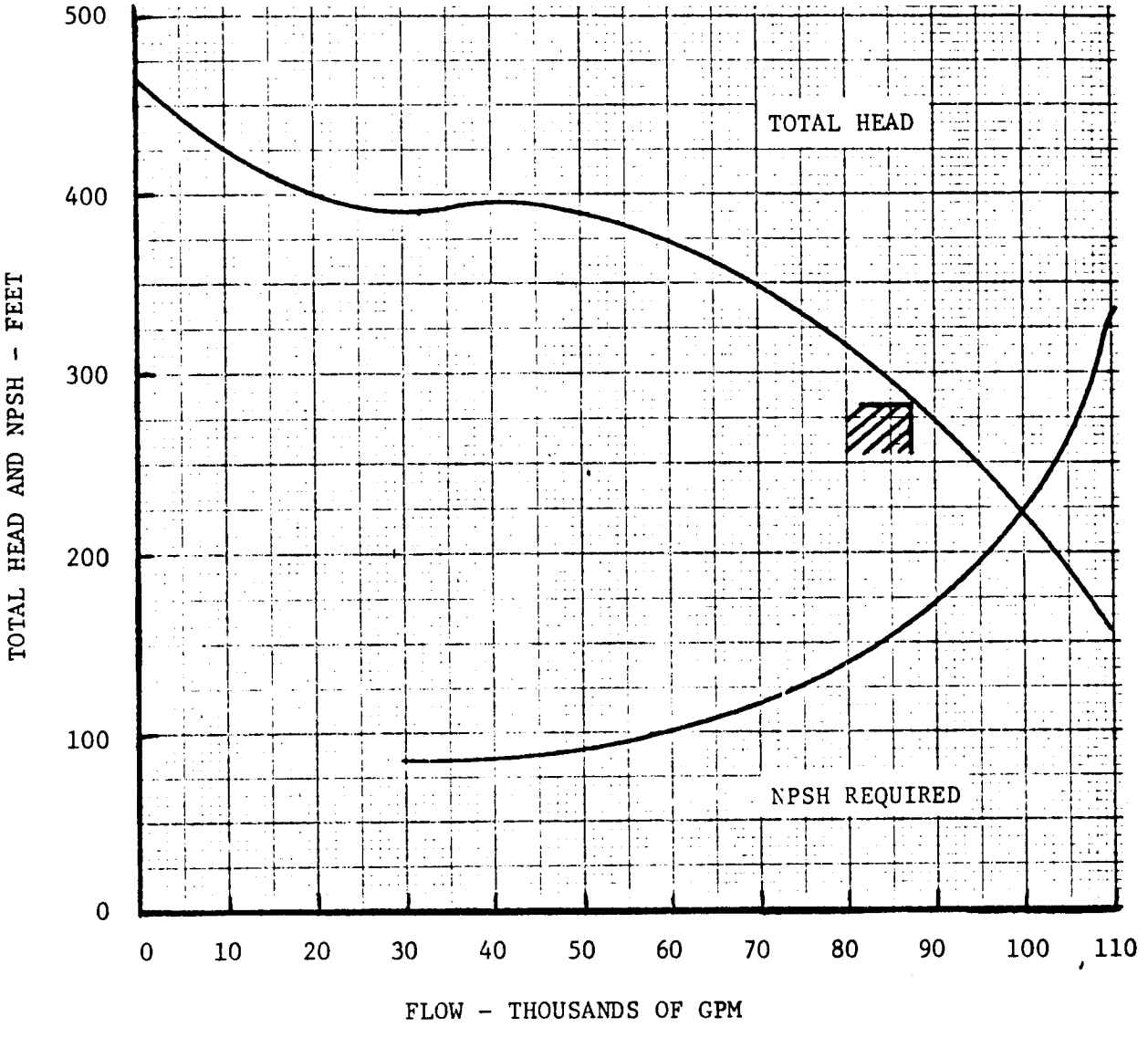


FLYWHEEL CHARACTERISTICS CURVE

FIGURE 4.2-7

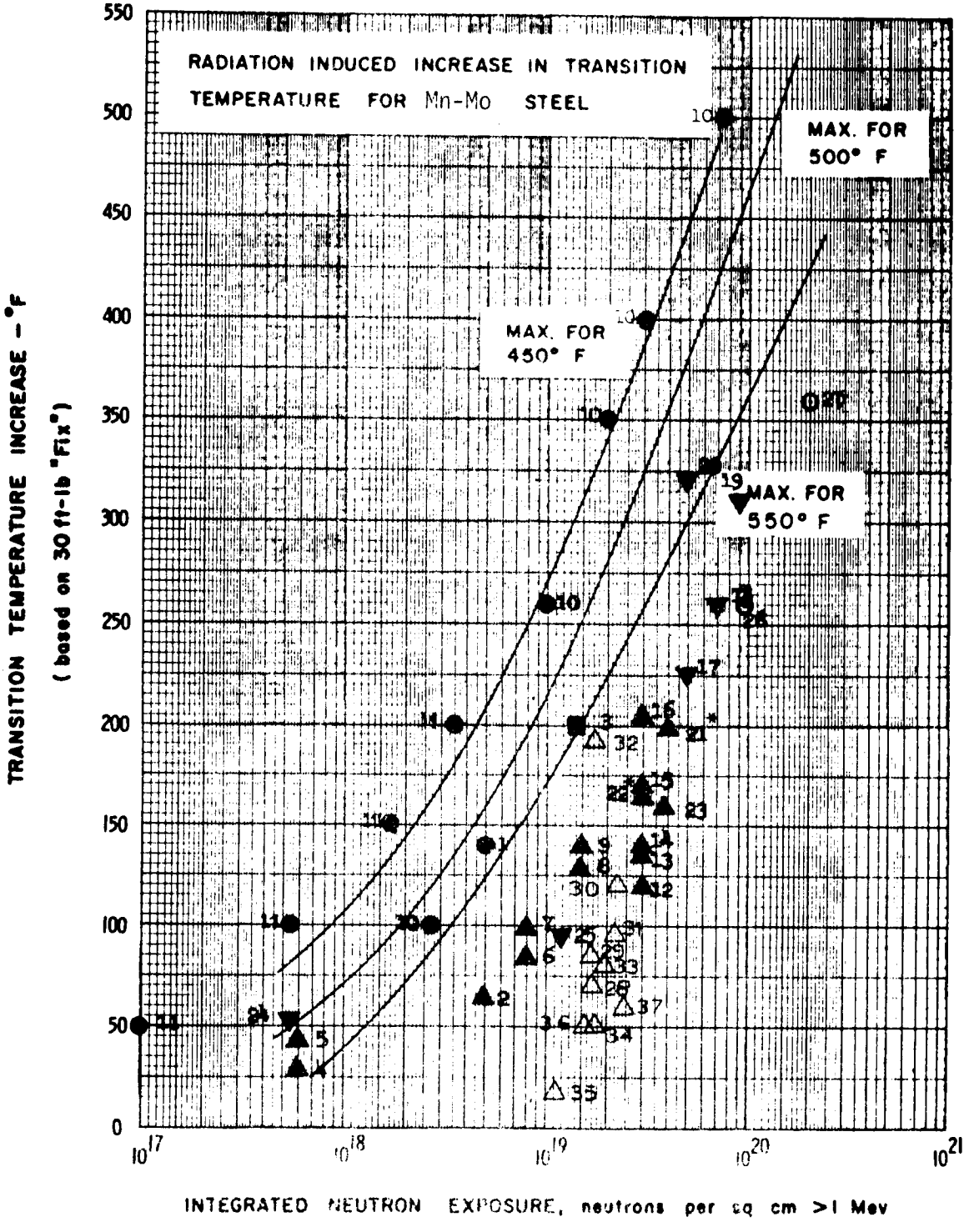
July, 1982

Original FSAR figure



REACTOR COOLANT PUMP
PERFORMANCE CHARACTERISTICS

FIGURE 4.2-8



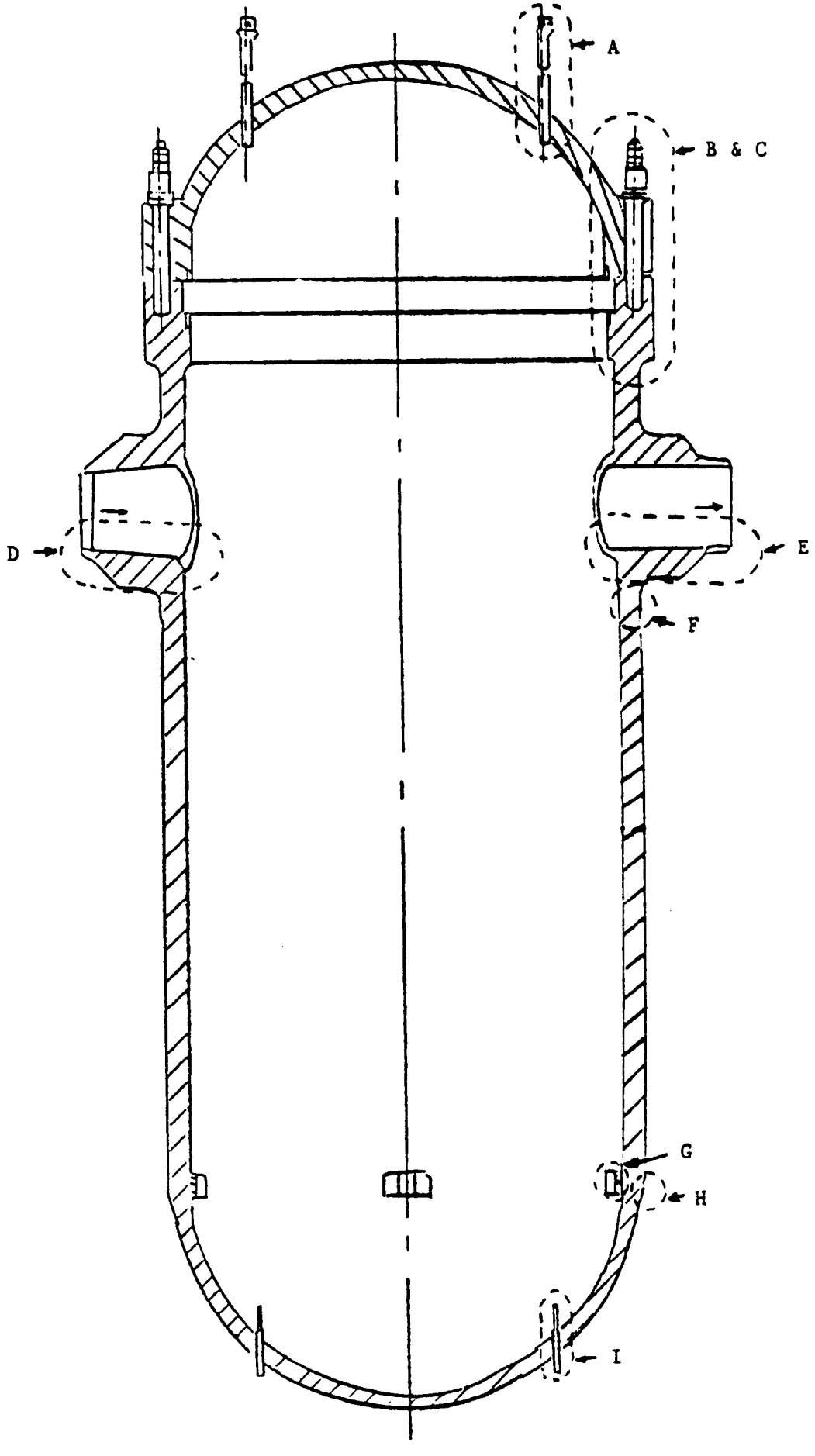
Code Temp., ^{o}F

- ● 450
- ■ 490
- ▲ 550
- △ 550 A533B, Class 1
- ▼ 475 to 540
- ⊙ 600 A302B

Numbers 1 through 37 (SEE ATTACHED SHEETS)

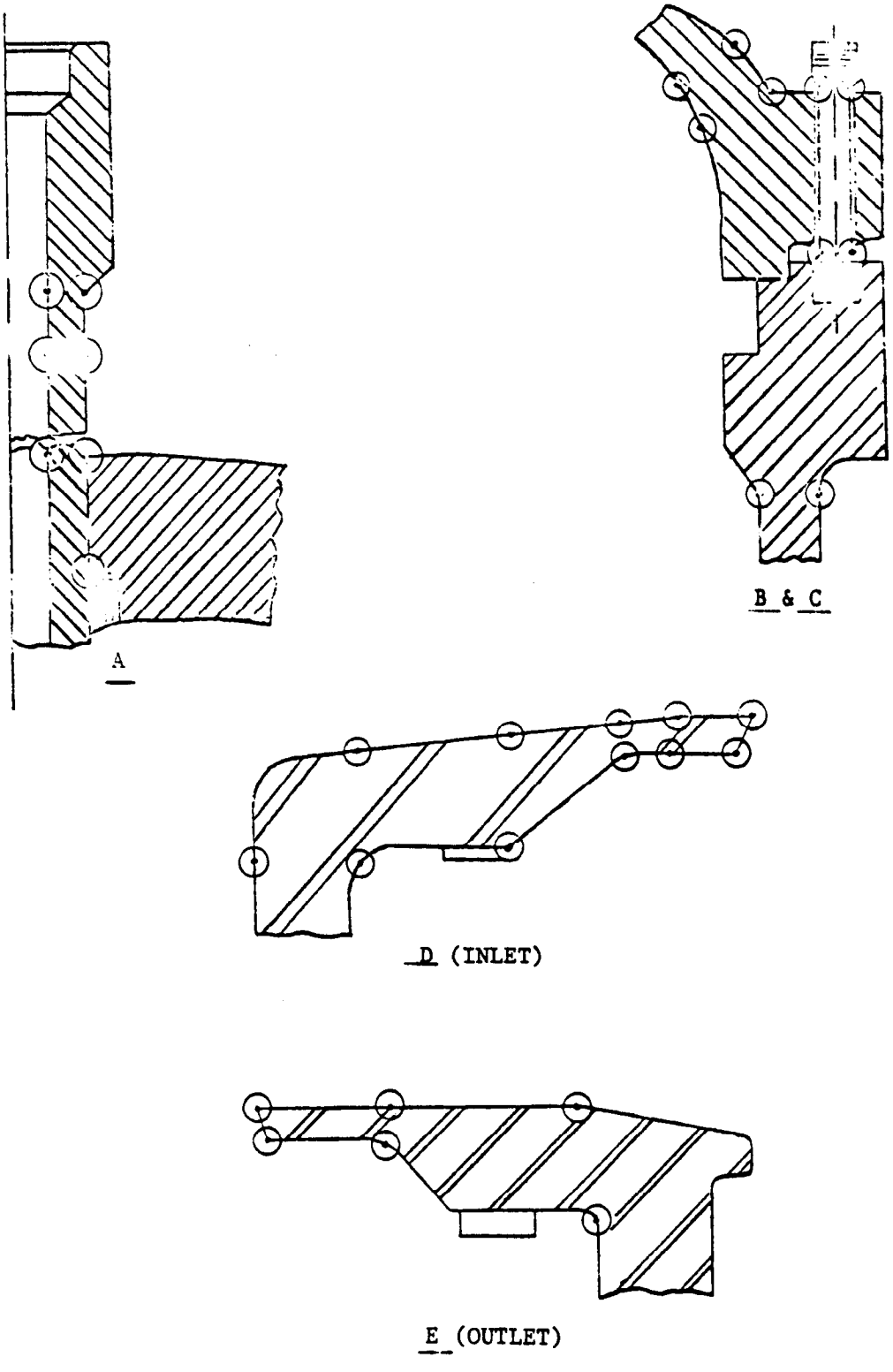
RADIATION INDUCED INCREASE IN TRANSITION TEMPERATURE FOR Mn-Mo STEEL FIGURE 4.2-9

July, 1982



Unit 1 Reactor Vessel Stress Analysis: Areas Examined

FIGURE 4.3-1

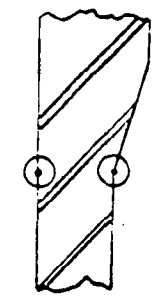


Unit 1 Reactor Vessel Stress Analysis:

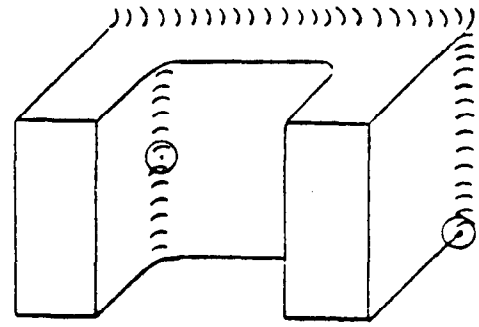
Details - Upper

FIGURE 4.3-2

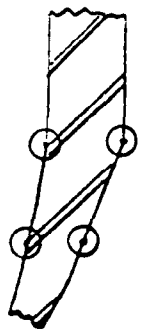
July, 1982



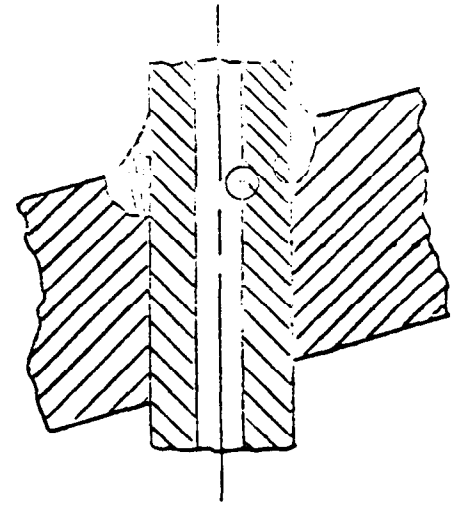
F



G



H



I

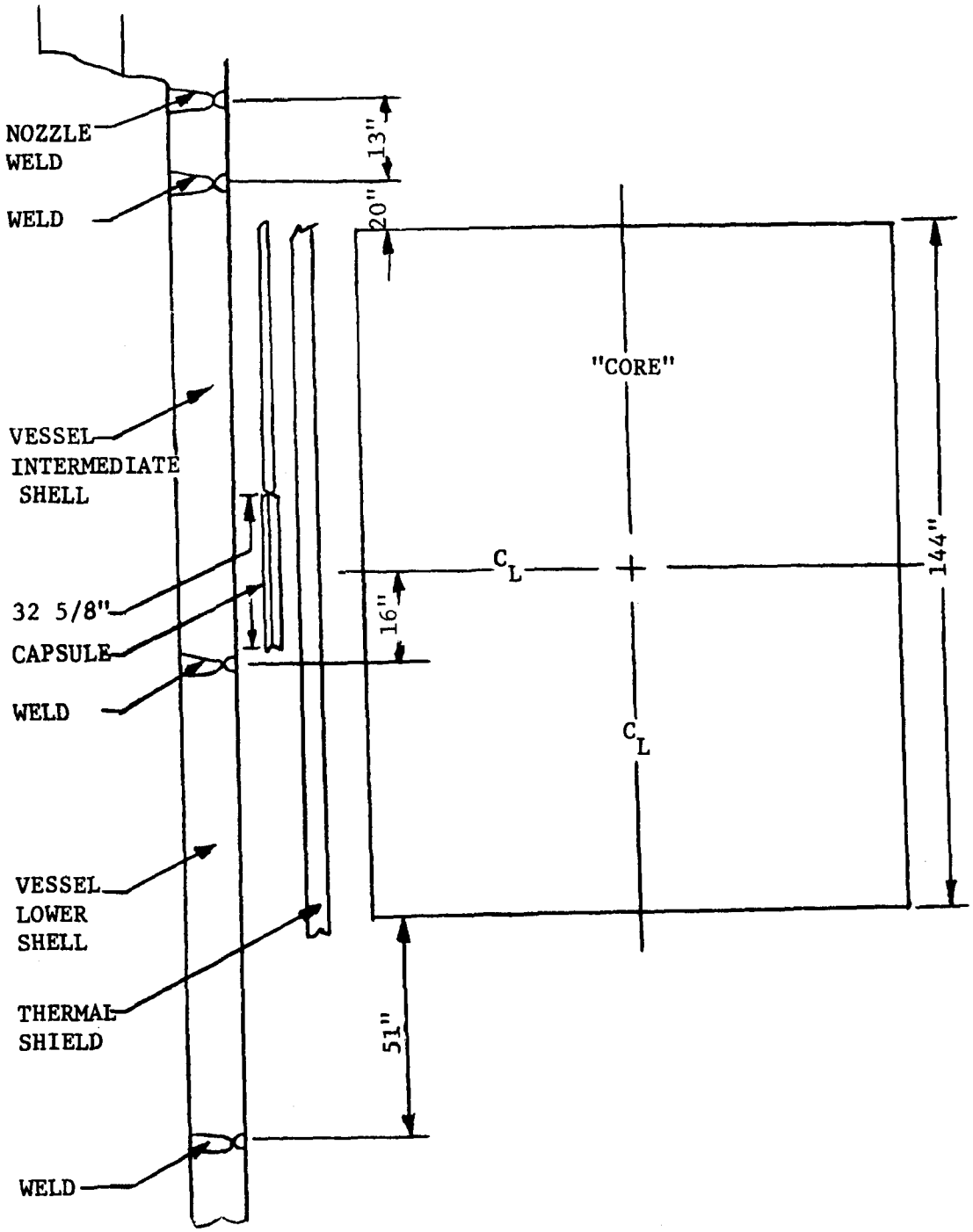
NOTE:

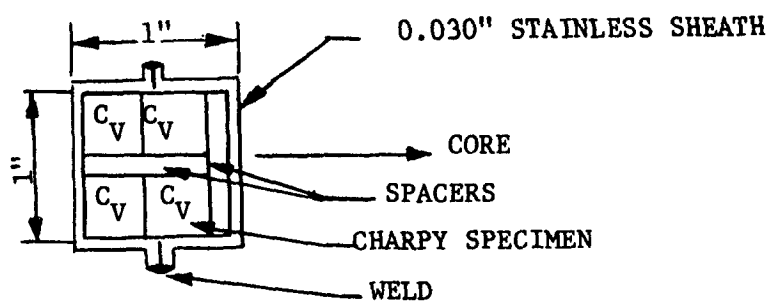
THE POINTS CIRCLED IN THE SKETCHES REPRESENT THE GENERAL LOCATION AND GEOMETRY OF THE AREAS OF DISCONTINUITY AND/OR STRESS CONCENTRATION.

Unit 1 Reactor Vessel Stress Analysis: Details - Lower

FIGURE 4.3-3

July, 1982

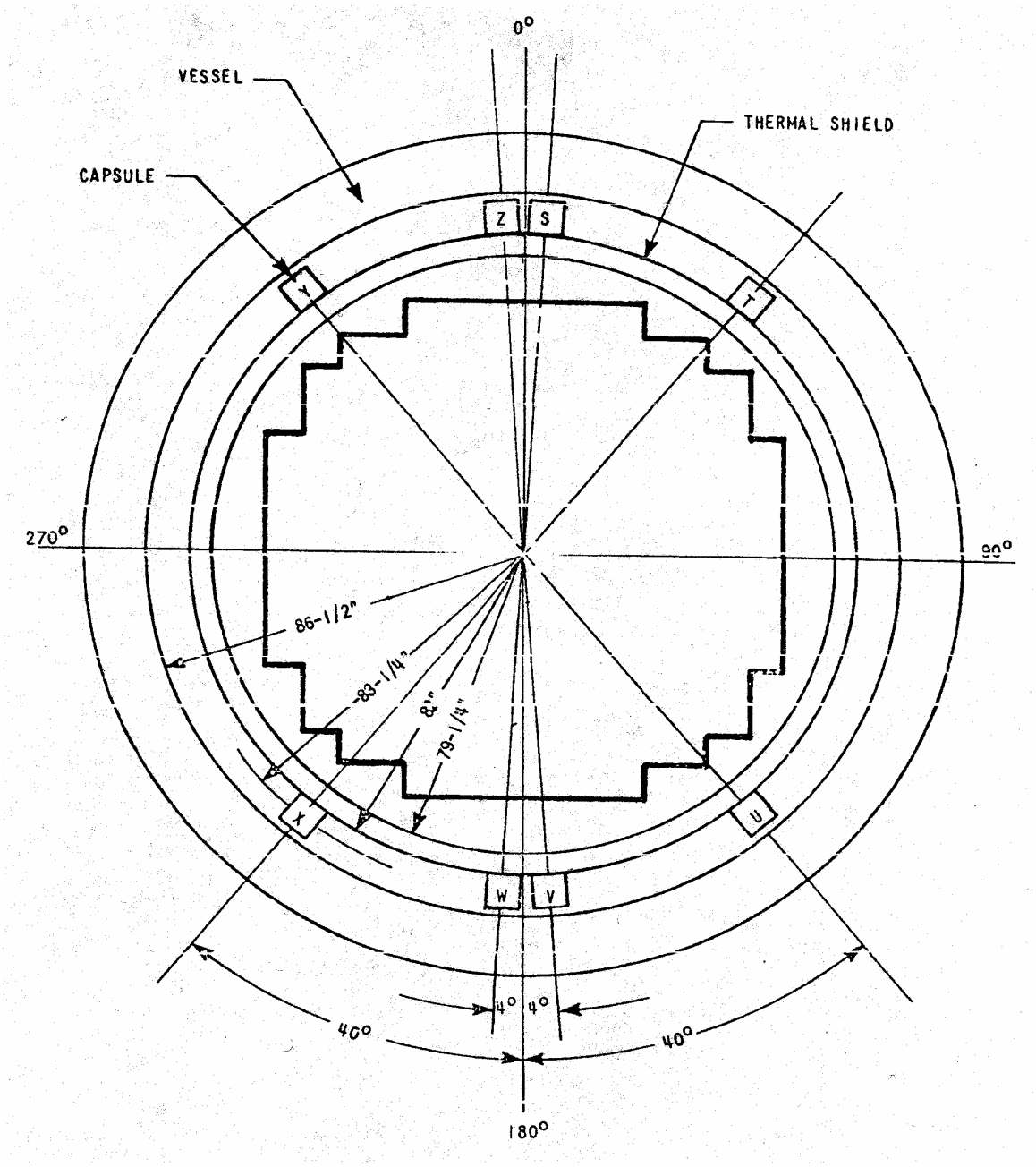




SURVEILLANCE CAPSULE
ELEVATION VIEW

July, 1982

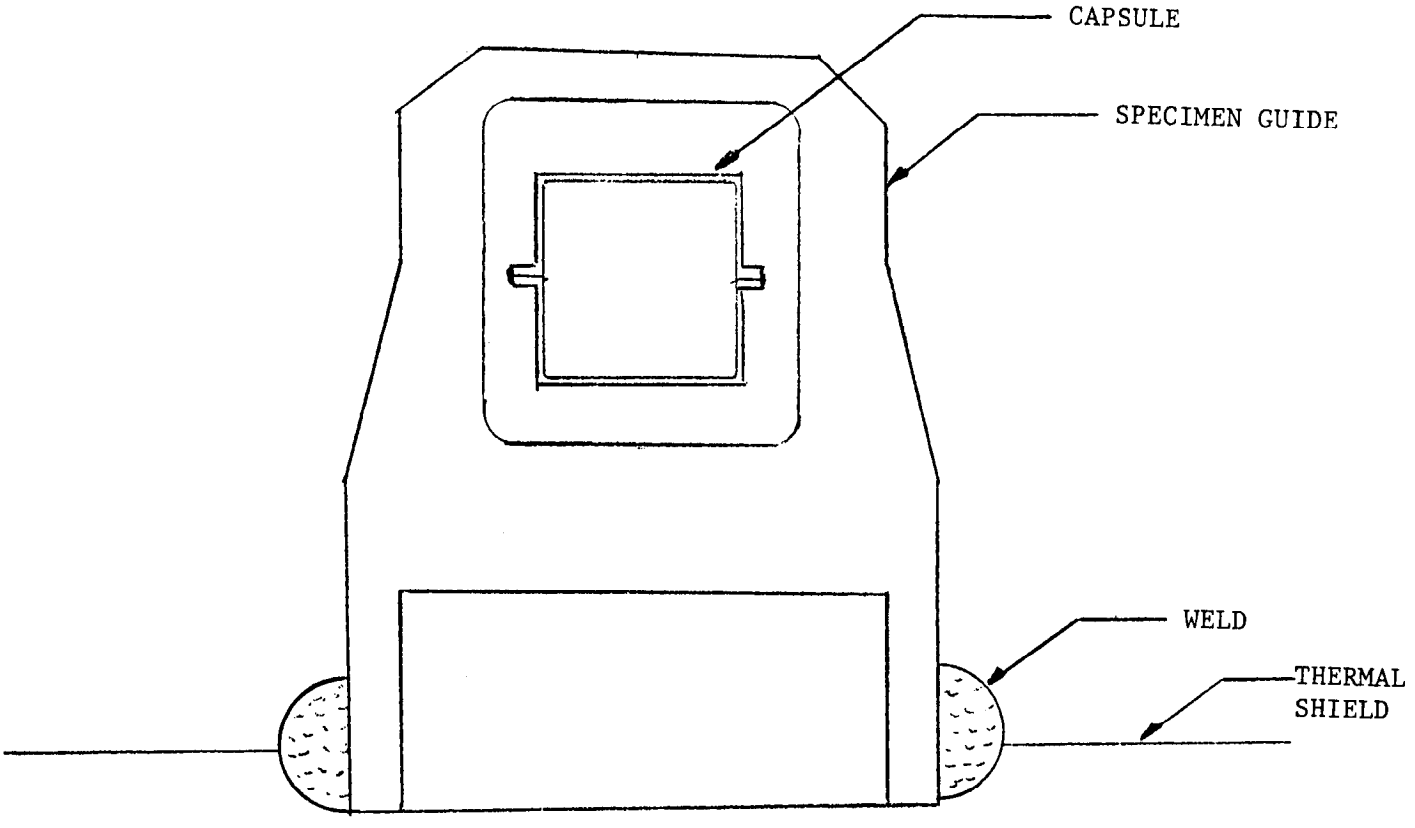
Figure 4.5-1



Notes: Capsule "W" was moved back to the 4 degree location and renamed as "S" in March 2010 (U1C23).
Capsule "S" was renamed as "W" at the 184 degree location.
Figure 4.5-2 is current as of March 2010. Figure 4.5-2A is superseded.

Revision: **23**	Change Description**: UCR-1968**

AMERICAN ELECTRIC POWER COOK NUCLEAR PLANT NUCLEAR GENERATION GROUP BRIDGMAN, MICHIGAN	Title: **Surveillance Capsule Plan View**	
	UFSAR Figure: **4.5-2**	Sheet 1 of 1



SPECIMEN GUIDE TO THERMAL SHIELD ATTACHMENT

Figure 4,5-3