

MATERIALS LICENSE

Amendment No. 21
CORRECTED COPY

Pursuant to the Atomic Energy Act of 1954, as amended, the Energy Reorganization Act of 1974 (Public Law 93-438), and Title 10, Code of Federal Regulations, Chapter I, Parts 30, 31, 32, 33, 34, 35, 36, 39, 40, and 70, and in reliance on statements and representations heretofore made by the licensee, a license is hereby issued authorizing the licensee to receive, acquire, possess, and transfer byproduct, source, and special nuclear material designated below; to use such material for the purpose(s) and at the place(s) designated below; to deliver or transfer such material to persons authorized to receive it in accordance with the regulations of the applicable Part(s). This license shall be deemed to contain the conditions specified in Section 183 of the Atomic Energy Act of 1954, as amended, and is subject to all applicable rules, regulations, and orders of the Nuclear Regulatory Commission now or hereafter in effect and to any conditions specified below.

Licensee		In accordance with letter dated December 7, 1993
1. ABB Industrial Systems, Inc.		3. License Number 34-00255-06G is amended in its entirety to read as follows:
2. 650 Ackerman Road P.O. Box 02248 Columbus, OH 43202		4. Expiration Date April 30, 1995
		5. Docket or Reference No. 030-05611
6. Byproduct, Source, and/or Special Nuclear Material	7. Chemical and/or Physical Form	8. Maximum Amount that Licensee May Possess at Any One Time Under This License
A. As specified in Item 9.A.	A. As specified in Item 9.A.	A. Not Applicable

9. Authorized Use:

- A. Pursuant to Section 32.51 of 10 CFR Part 32, the licensee is authorized to distribute ABB Process Automation, Inc. devices containing sealed sources that have been registered pursuant to Section 32.310 of 10 CFR Part 32 or an Agreement State. These devices and sealed sources shall be distributed to persons generally licensed pursuant to Section 31.5, 10 CFR Part 31 or equivalent provisions of the regulations of any Agreement State.

CONDITIONS

10. The licensee shall insure that all devices and sealed sources distributed have been registered with the NRC Sealed Source and Device Registry and that the registration information is current and available for NRC inspection.
11. This license does not authorized possession or use of licensed material.
12. No generally licensed device shall be installed by the licensee in such a manner or in such a location that any person could receive more than 0.5 rem in a calendar year under ordinary circumstances of use.
13. The licensee shall furnish to each general licensee to whom he transfers a device pursuant to this license, a copy of Section 31.5, 10 CFR 31; Sections 30.34 and 30.51 through 30.63, 10 CFR 30; Sections 20.402 and 20.403, 10 CFR 20, and Appendix D, 10 CFR 20.

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PDR ADOCK 03005611
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COPY

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JMC
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SD

**MATERIALS LICENSE
SUPPLEMENTARY SHEET**

License Number
34-00255-066

Docket or Reference Number
030-05611

Amendment No. 21

CORRECTED COPY

14. After installation by the licensee of each device distributed to persons generally licensed pursuant to Section 31.5 of 10 CFR, Part 31, the licensee shall conduct a radiation survey and shall assure that the levels of radiation do not exceed those specified in the license authorizing the manufacturing or distribution of the installed gauge. The licensee shall furnish the general licensee a copy of the radiation survey report.
15. A. Each device distributed under this license shall bear a durable, clearly visible and legible label or labels containing the following or substantially similar statements:
1. "Receipt, possession, use and transfer of this device are subject to a general license or equivalent and regulations of the U.S. Nuclear Regulatory Commission or an Agreement State."
 2. "Abandonment or disposal prohibited unless transferred to persons specifically licensed by the U.S. Nuclear Regulatory Commission or an Agreement State."
 3. "Operation prohibited if there is indication of failure of or damage to shielding, source containment or on-off mechanism."
 4. "Installation, dismantling, relocation, maintenance, repair and testing involving the radioactive material, its shielding or containment shall be performed by persons specifically licensed by the U.S. Nuclear Regulatory Commission or an Agreement State."
 5. The device shall be tested for radioactive leakage and proper functioning of on-off mechanism and indicator, if any, at installation, at source replacement, and thereafter at no longer than six (6) month intervals."
 6. "Loss, theft, or transfer of this device and failure of or damage to the shielding, the source containment or the on-off mechanism must be reported to the U.S. Nuclear Regulatory Commission or an Agreement State."
 7. "This label shall be maintained on the device in a legible condition."
- B. Each device distributed under this license shall bear a durable, clearly visible and legible label or labels containing the device model and serial number, the radiation symbol in colors magenta or purple on a yellow background, the words "CAUTION, RADIOACTIVE MATERIAL" or "DANGER, RADIOACTIVE MATERIAL," the quantity identity and date of measurement of the radioactive material, and the name of the distributor of the device.
- C. Each label required by this condition shall bear the statement, "Removal of this label is prohibited."

COPY

MATERIALS LICENSE
SUPPLEMENTARY SHEET

License Number

34-00255-06G

Docket or Reference Number

030-05611

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16. The licensee shall report to the Material Licensing Branch, Division of Fuel Cycle and Material Safety, U.S. Nuclear Regulatory Commission, all transfers of devices distributed under this license to persons generally licensed under Section 31.5, 10 CFR 31. Such report shall identify each general licensee by name and address, the type of device transferred, the quantity and type of licensed material contained in the device, and the specific location where each device is installed. The report shall be submitted within thirty (30) days after the end of the each calendar quarter in which any such device is transferred to a generally licensed person.
17. The licensee shall test each device distributed under this license for leakage or contamination of radioactive material and proper operation of the "on-off" mechanism and indicator, if any, at the time of installation of the device.
18. Except as specifically provided otherwise in this license, the licensee shall conduct its program in accordance with the statements, representations, and procedures contained in the documents, including any enclosures, listed below. The U.S. Nuclear Regulatory Commission's regulations shall govern unless the statements, representations, and procedures in the licensee's application and correspondence are more restrictive than the regulations.
- A. Application received April 11, 1977 (with attachments);
- B. Letters with attachments dated June 25, 1981, April 23, 1982, May 26, 1983, and July 23, 1991 (Item 1. only); and
- C. Applicable statements and representations listed in Condition 17. of NRC License Number 34-00255-03.

FOR THE U.S. NUCLEAR REGULATORY COMMISSION

Date November 14, 1994

By

Leticia J. LeDre
Nuclear Materials Licensing Branch, Region III

COPY

Class 1

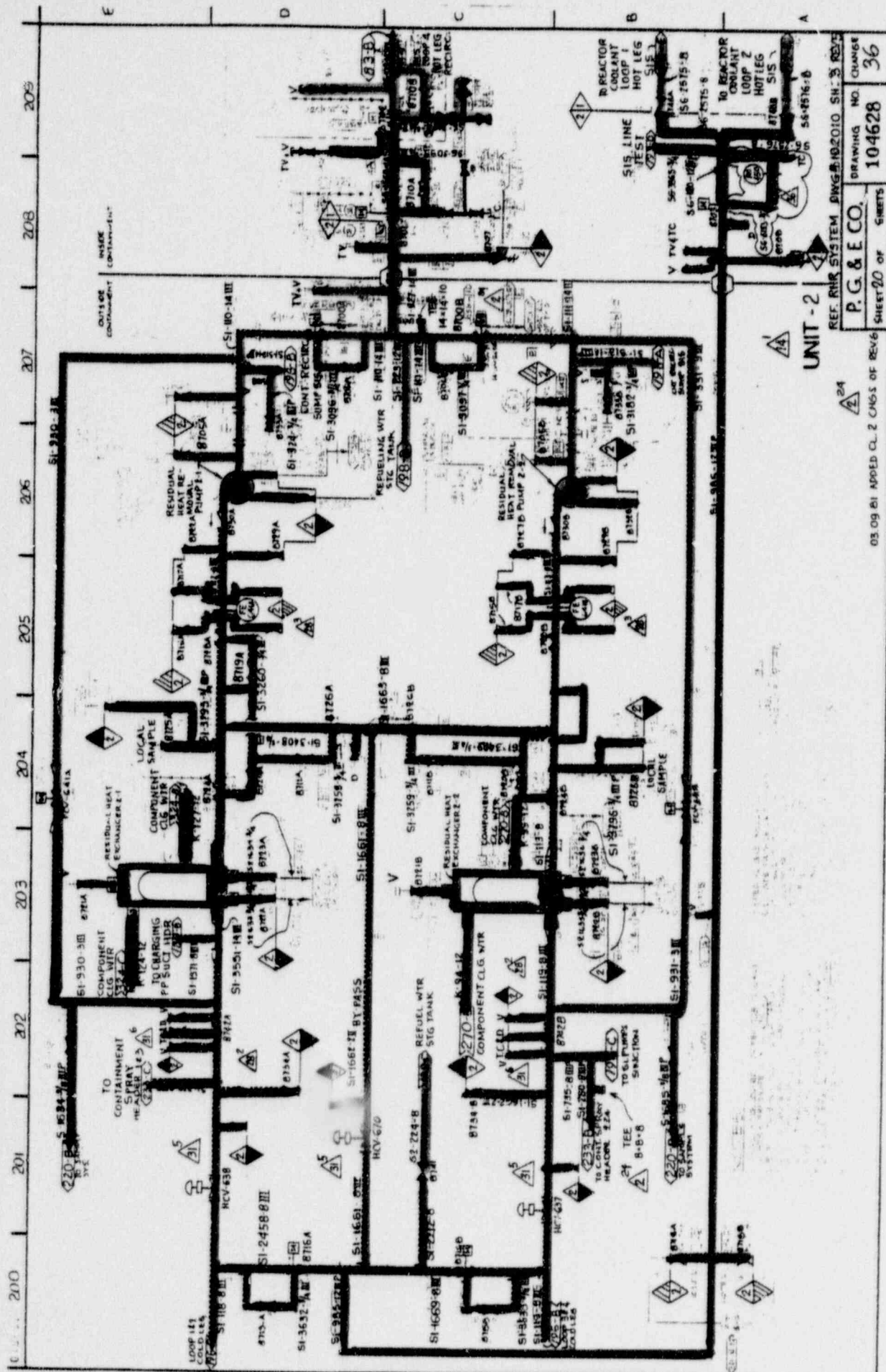
Class 2

Class 3

#1 #2 #8

#19 #23 #24

#5



35 M/M NEG

UNIT - 2

REF. RMR SYSTEM DWG. 102010 SH. 3 REV. 3
P.G. & E.CO.
DRAWING NO. 104628
SHEET 20 OF 36

03.09.81 ADDED CL. 2 CHGS. OF REV. 6
24
CHANGE

QMAN 26 10 36 1



UNIT 2
COAST VALLEYS DIVISION

BILL OF MATERIAL
DRAWING LIST
SUPERSEDED BY
SUPERSEDED BY
SHEET NO. 1 OF 52 SHEETS
104628 42
PARTIAL ISSUE

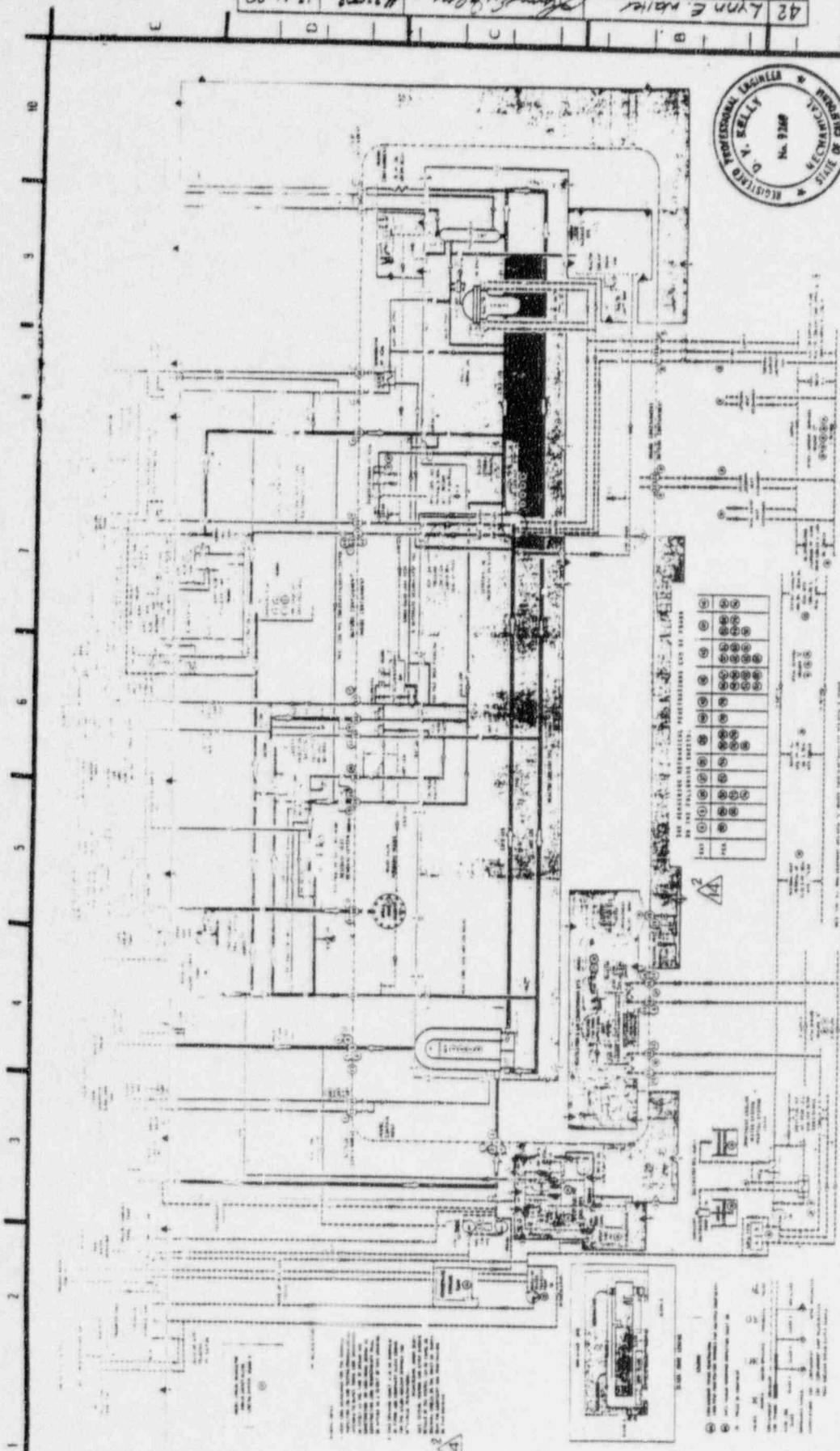
ASME CODE BOUNDARIES FOR
INSERVICE INSPECTION AND
TESTING PROGRAM-ISITP
DIABLO CANYON
DEPARTMENT OF ENGINEERING
PACIFIC GAS AND ELECTRIC COMPANY
SAN FRANCISCO, CALIFORNIA

APPROVED BY: [Signature]
DATE: 9-10-79
SCALE: NONE
GM: 189972
SUPER: S. S. 189972
DESIGN: S. S. 189972
CHK: CMV
DATE: 9-10-79
SCALE: NONE

REVISIONS
DATE
DESCRIPTION
BY
10-1-79
APPROVED FOR CONSTRUCTION
CMV
10-1-79

TABLE OF CHANGES

NO.	DATE	DESCRIPTION
1	10-1-79	APPROVED FOR CONSTRUCTION



CHANGE NUMBER & ENGINEER

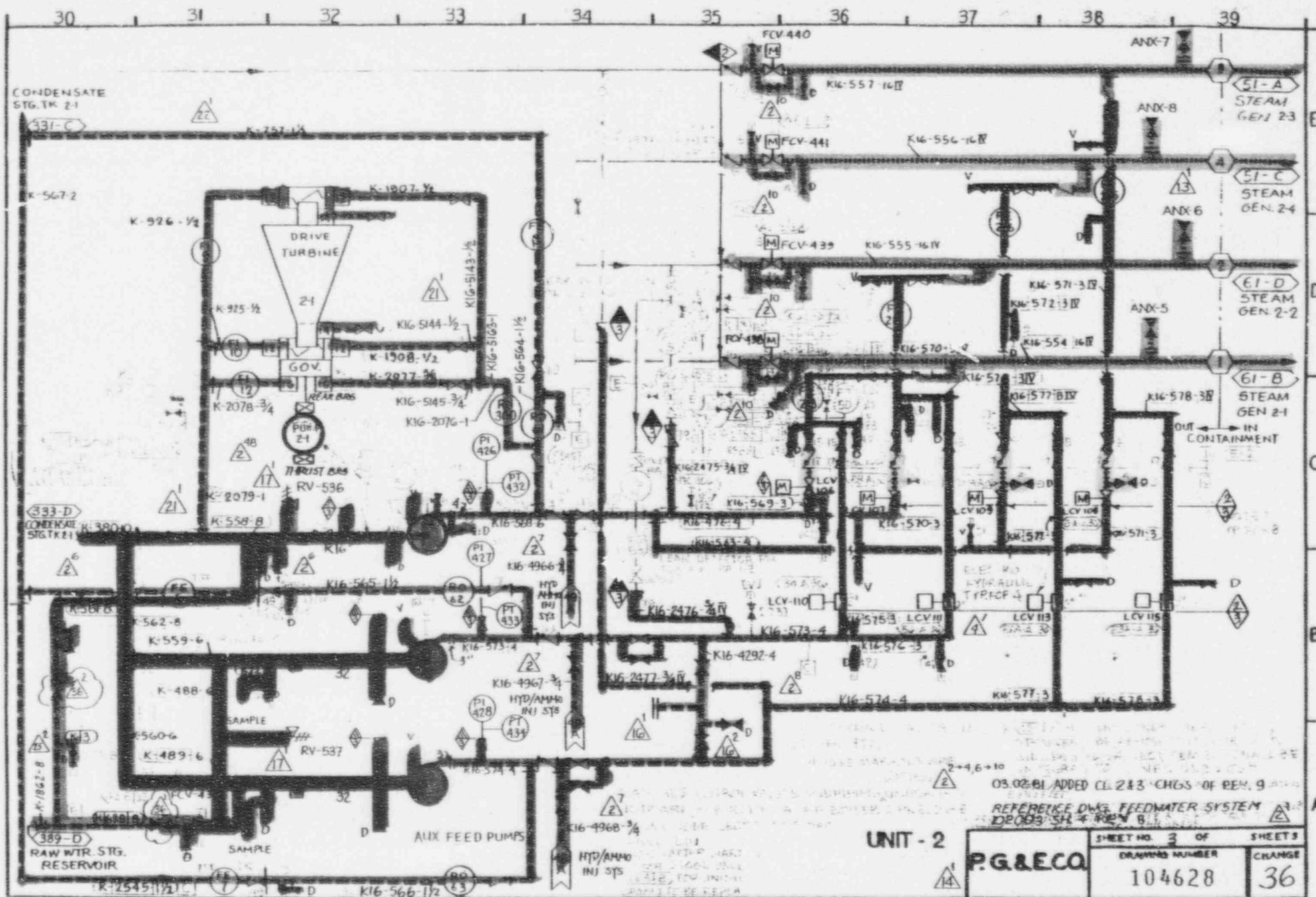
CHANGE NUMBER	ENGINEER
1	LYNN E. WHITE

20	21	22	23	24	25	26	27	28	29
SYMBOL				INDEX					
LINE DESIGNATION	DESCRIPTION		BOUNDARY SYMBOL	SYSTEM DESCRIPTION	SHEET NO. (THIS DWG.)	PIPING SCHEMATIC REFERENCE			
	ASME CLASSIFICATION FOR INSERVICE INSPECTION AND TESTING PROGRAM (ISITP)			FEEDWATER	3, 4	102003	4, 4A		
				TURBINE STEAM	5, 6, 7	102004	3, 5, 7		
				REACTOR COOLANT	8, 9, 10, 11	102007	3, 7, 4, 5		
	CLASS 1		1	CHEM & VOLUME CONTROL	12, 13, 14, 15, 16	102008	3, 4, 4B, 5B, 8		
	CLASS 2		2	SAFETY INJECTION	17, 18, 19	102009	3, 4, 5		
	CLASS 3		3	RESIDUAL HEAT REMOVAL	20, 21	102010	3, 4		
GHOSTED LINES	NON-ISI SYSTEMS/COMPONENTS			NUCLEAR STEAM SUPPLY SAMPLING	22	102011	2		
GHOSTED LINES	NON-ISI INSTRUMENTATION			CONTAINMENT SPRAY	23	102012	3		
				SPENT FUEL PIT COOLING	24	102013	2		
LINE INTERFACE TO OTHER SHEET (THIS DWG.)				COMPONENT COOL. WTR.	25, 26, 27, 28, 29, 30, 31, 32	102014	5, 5A, 6, 6A, 7, 8, 9, 10		
203-D				MAKE-UP WATER	33, 34	102016	7, 8		
				SALTWATER (CIRC. WTR.)	35	102017	3		
				FIRE PROTECTION	36	102018	3		
				DIESEL ENGINE-GEN.	37	102021	8		
				MAKE-UP WATER	38, 39	102016	9A, 9B		
				AUXILIARY STEAM	40	102006	4		
				FIRE PROTECTION	41	102018	7		
				LIQUID RADWASTE	42	102019	3		
				VENTILATION & A/C	43, 44	102023	3, 4		
				COMPRESSED AIR	45	102025	4 UNIT - 2		
GENERAL NOTES									
1. THESE DRAWINGS ARE INTENDED FOR USE IN IMPLEMENTING ASME SECTION XI INSERVICE INSPECTION AND TESTING REQUIREMENTS ONLY. THEY HAVE NO RELEVANCE TO THE DESIGN AND CONSTRUCTION OF THE COMPONENTS.									
2. PORTIONS SHOWN IN GHOSTED LINES ARE FOR INFORMATION ONLY. FOR SPECIFIC DETAILS IN THOSE SYSTEMS SEE CORRESPONDING REFERENCE SCHEMATIC DWG. & SHEET NO. ON THE RIGHT SIDE OF THIS DWG.									
3. NDE EXEMPTION COLOR CODING IS ADDED AFTER DRAWING APPROVAL. THE LEGEND FOR COLOR CODING IS CONTAINED ON SHEET 46.									
4. UNLESS IT IS INTEGRAL WITH THE PIPING SYSTEM, INSTRUMENT PIPING/TUBING BEYOND THE FIRST ROOT VALVE (FROM THE PROCESS CONNECTION) IS OUTSIDE THE ISI BOUNDARY, UNLESS SPECIFICALLY SHOWN OTHERWISE ON THESE DRAWINGS.									
				P&H CO. 104628 14					
				SHEET 2 OF 14					
				MICROFILM 9/14					

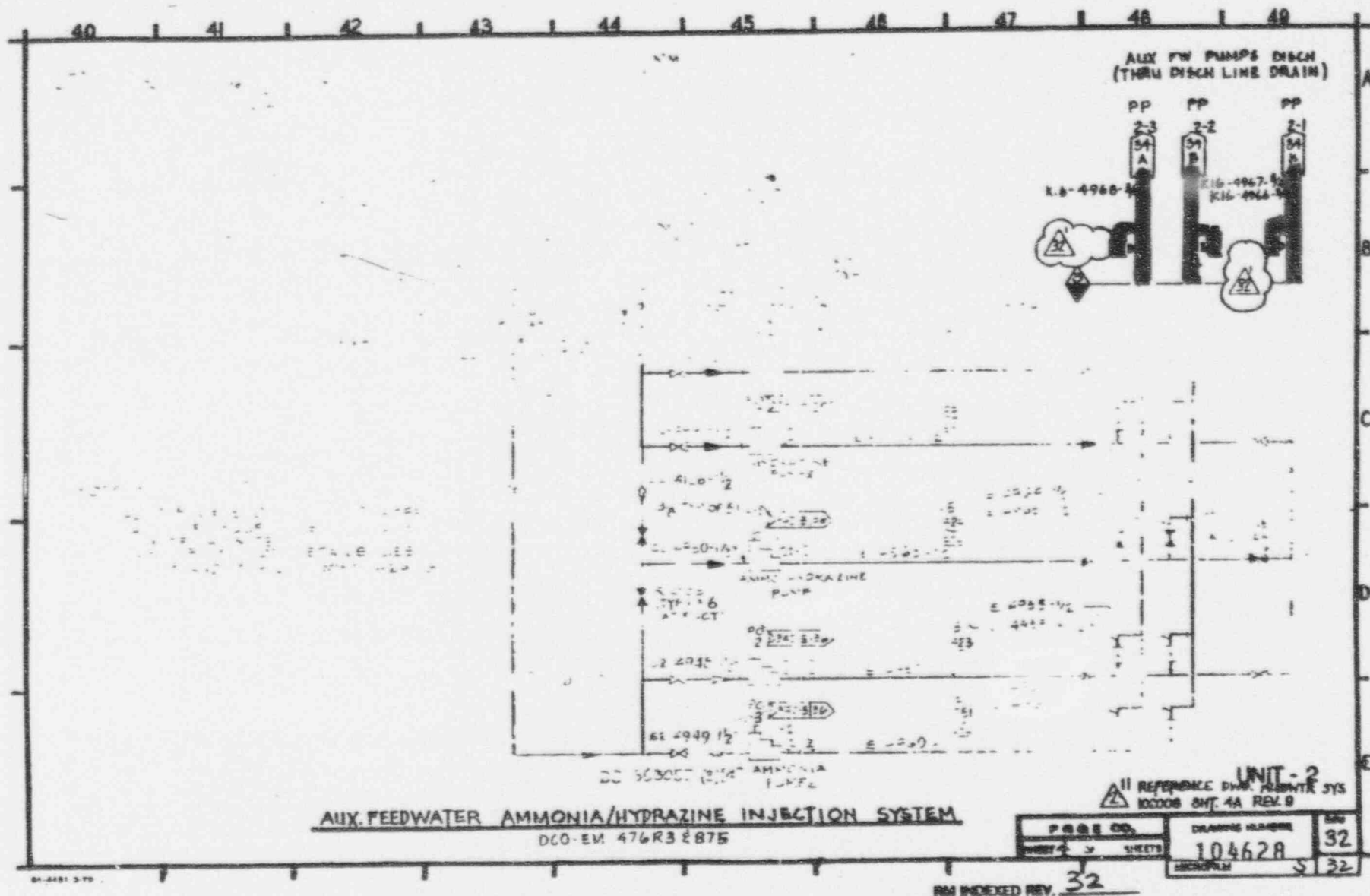
RM INDEXED REV 14

Class 3

#1 #1A #2 #3 #12 #13

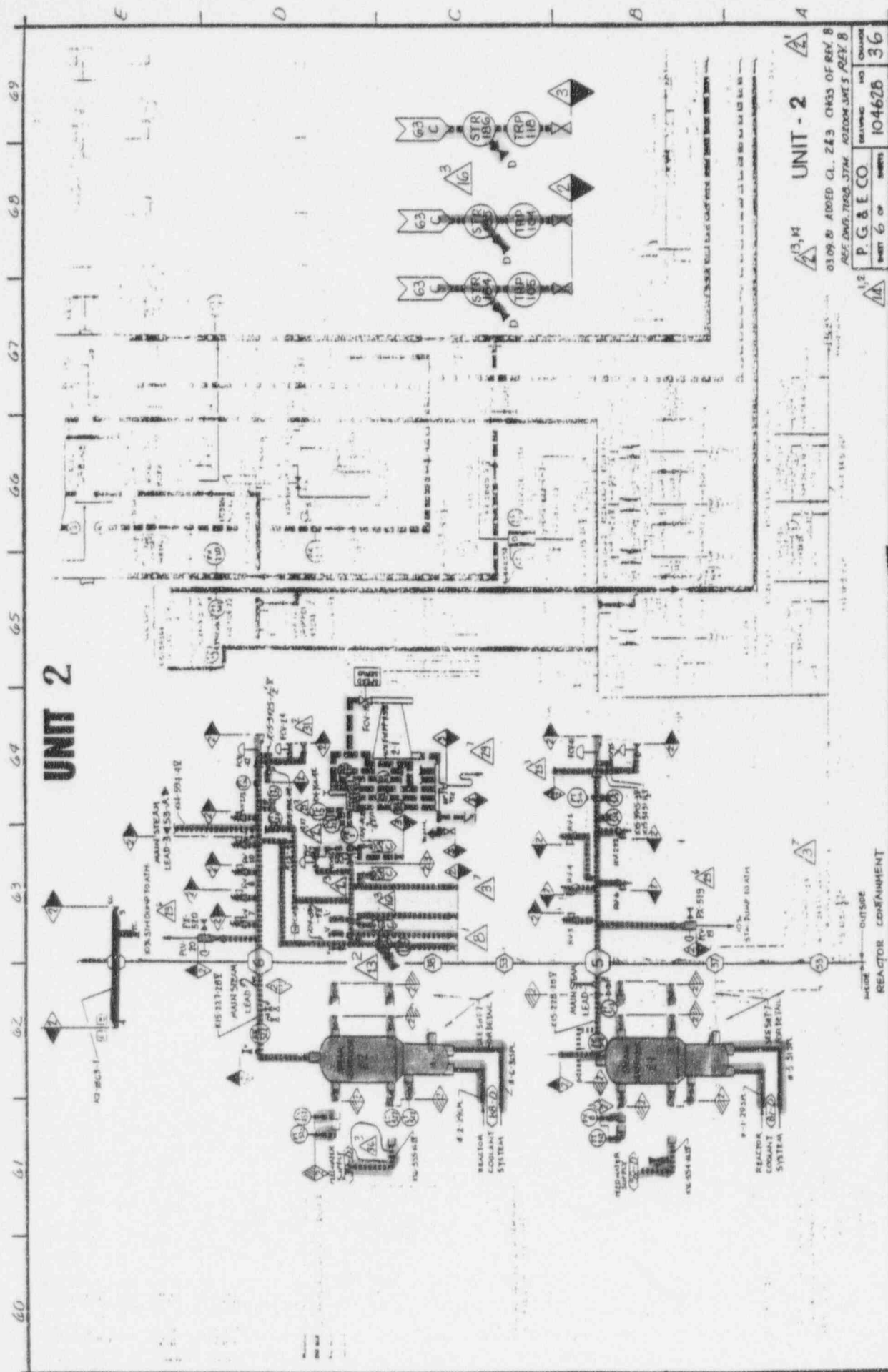


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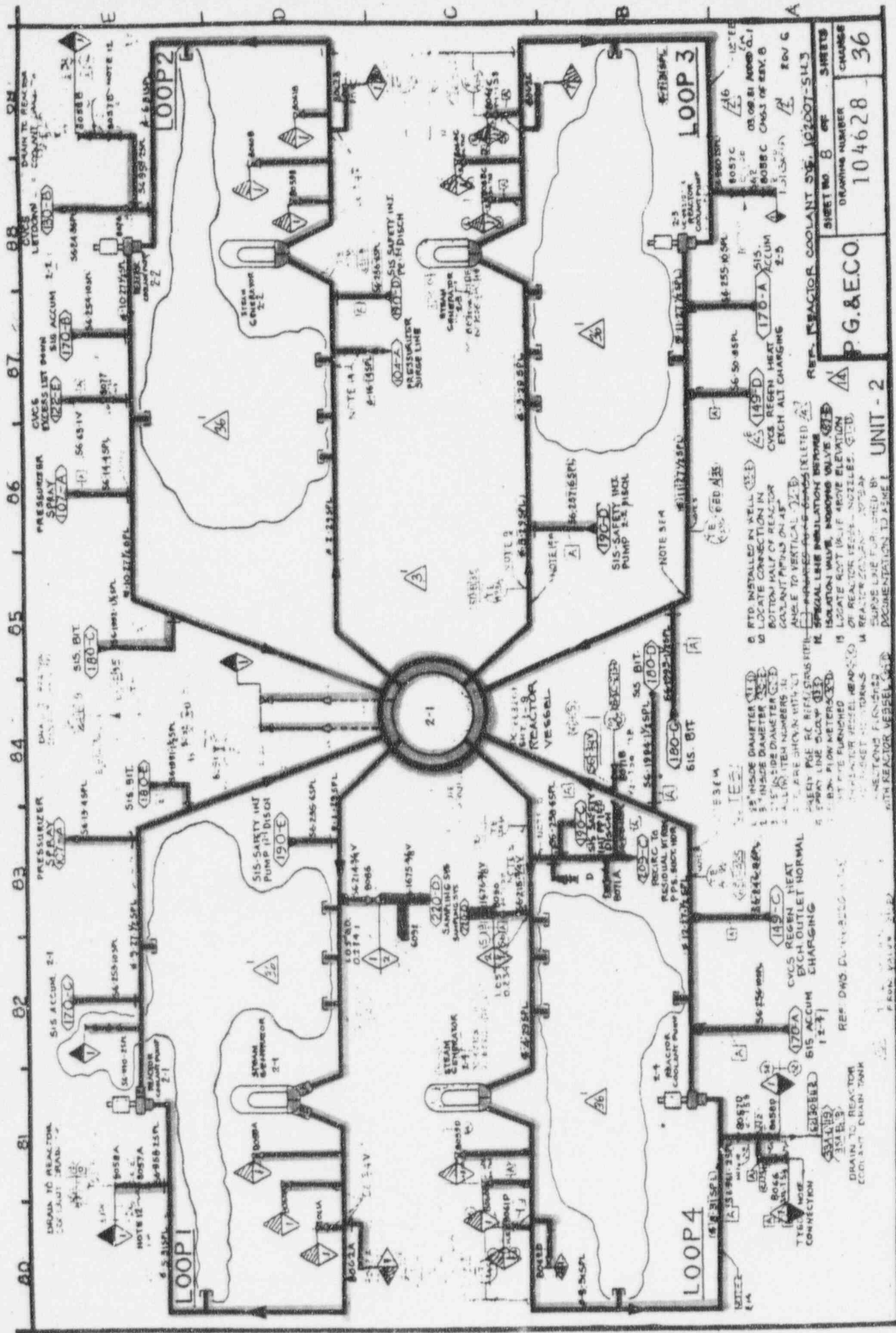


Class 3

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35	M/M	NEG	36
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Class 1

Class 2

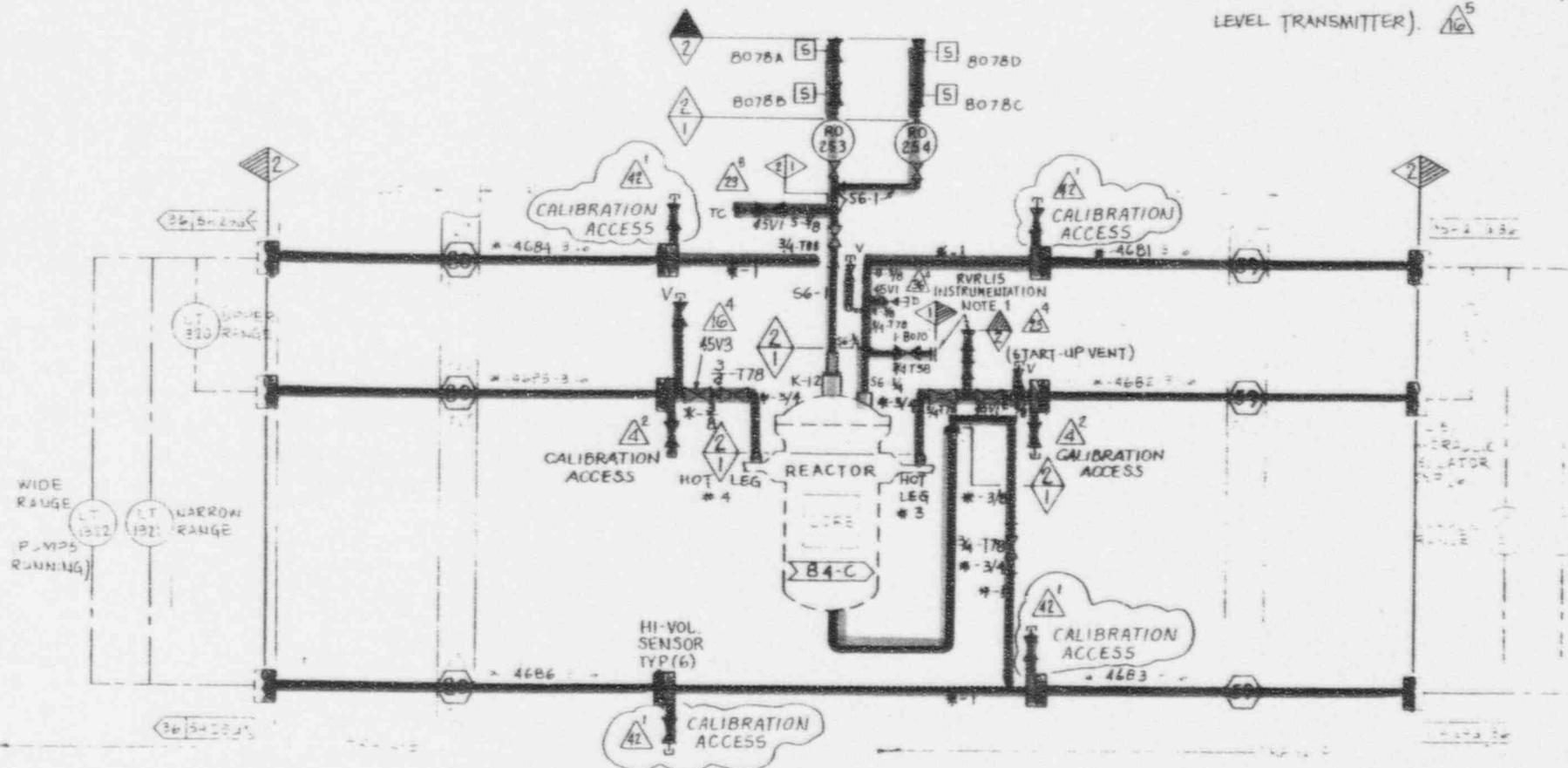
#1

#32 exempt

VENTING

NOTES:

1. RVRLIS PROVISIONS FOR TEMPORARY CONNECTIONS OF LT-57 (NARROW RANGE RV REFUELING LEVEL TRANSMITTER). ⁵△16



REACTOR VESSEL LEVEL INSTRUMENTATION & VENT SYSTEMS

UNIT - 2

REF. ONE - REACTOR COOLANT SYS. - 10007 SH. 2, REV 9

P & E CO.

SHEET 9

104628

42

MICROFILM

SCAN 42 IC 42

1

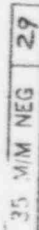
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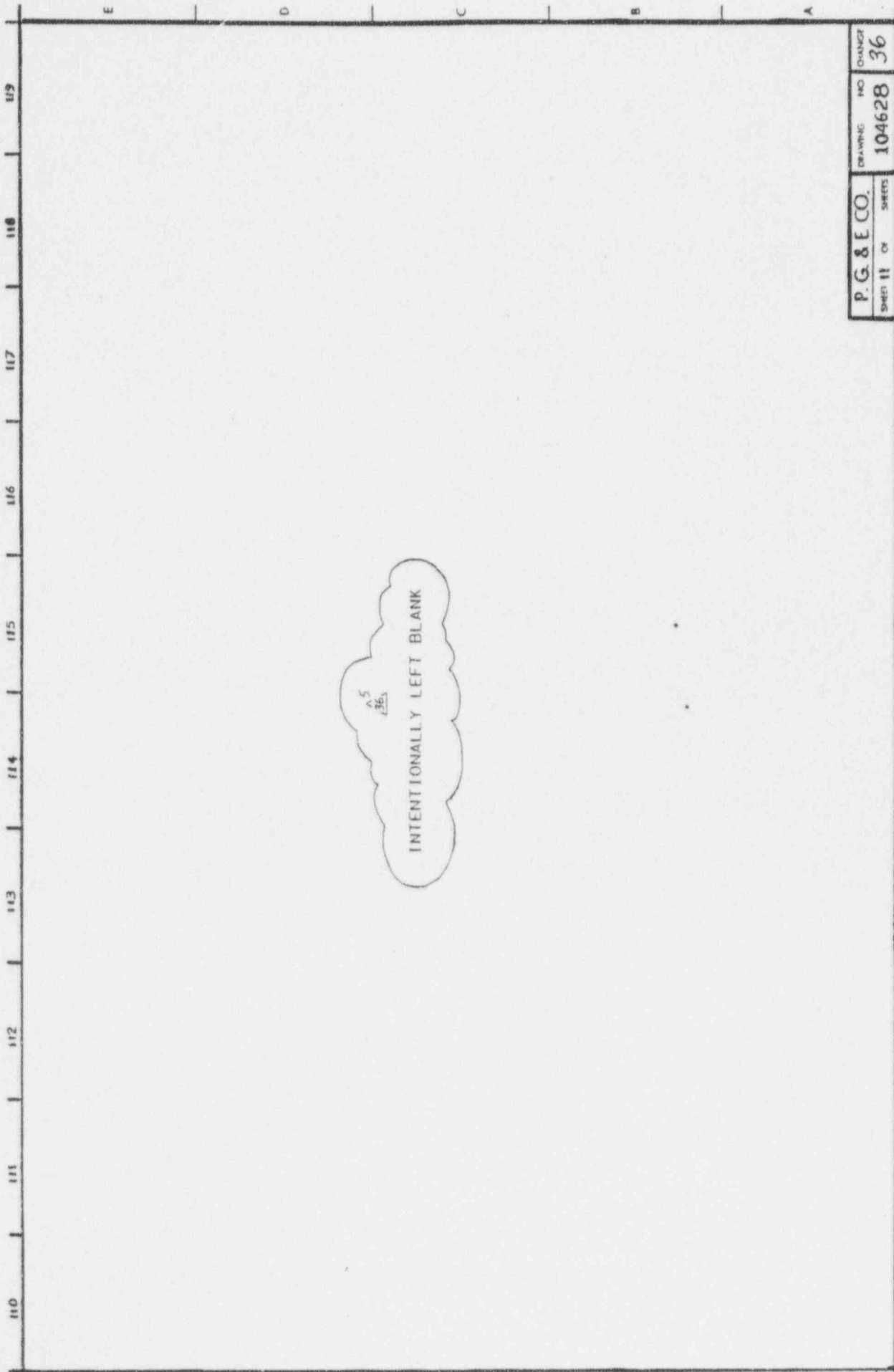
#33

#34

#35

abandoned in place





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P. G. & E. CO.		DRAWING NO.	QUANTITY
SHEET 11 OF		104628	36

Class 1

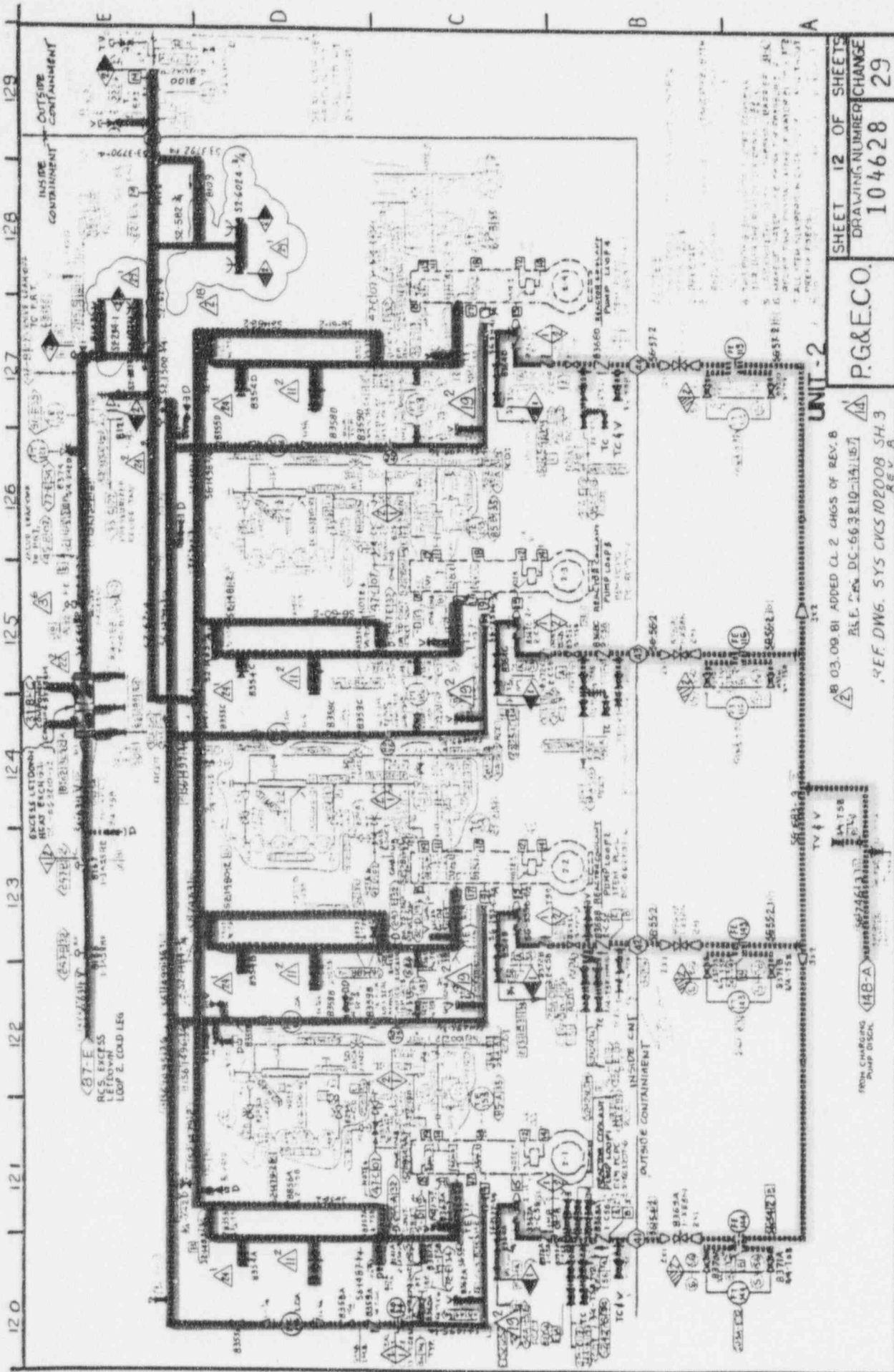
Class 2

Class 3

#1 #2

#6 #7 #8

#5



SHEET 12 OF SHEETS
DRAWING NUMBER CHANGE
104628 29

P.G.&E.CO.

UNIT - 2
B 03.09 B1 ADDED CL 2 CHGS OF REV. B
REV. DC-663219-14.157
REF. DWG. SYS CVC5102008 SH.3
REV. A

FROM CHARTER
PUMP DISC.
(148-A)
50724613
104628

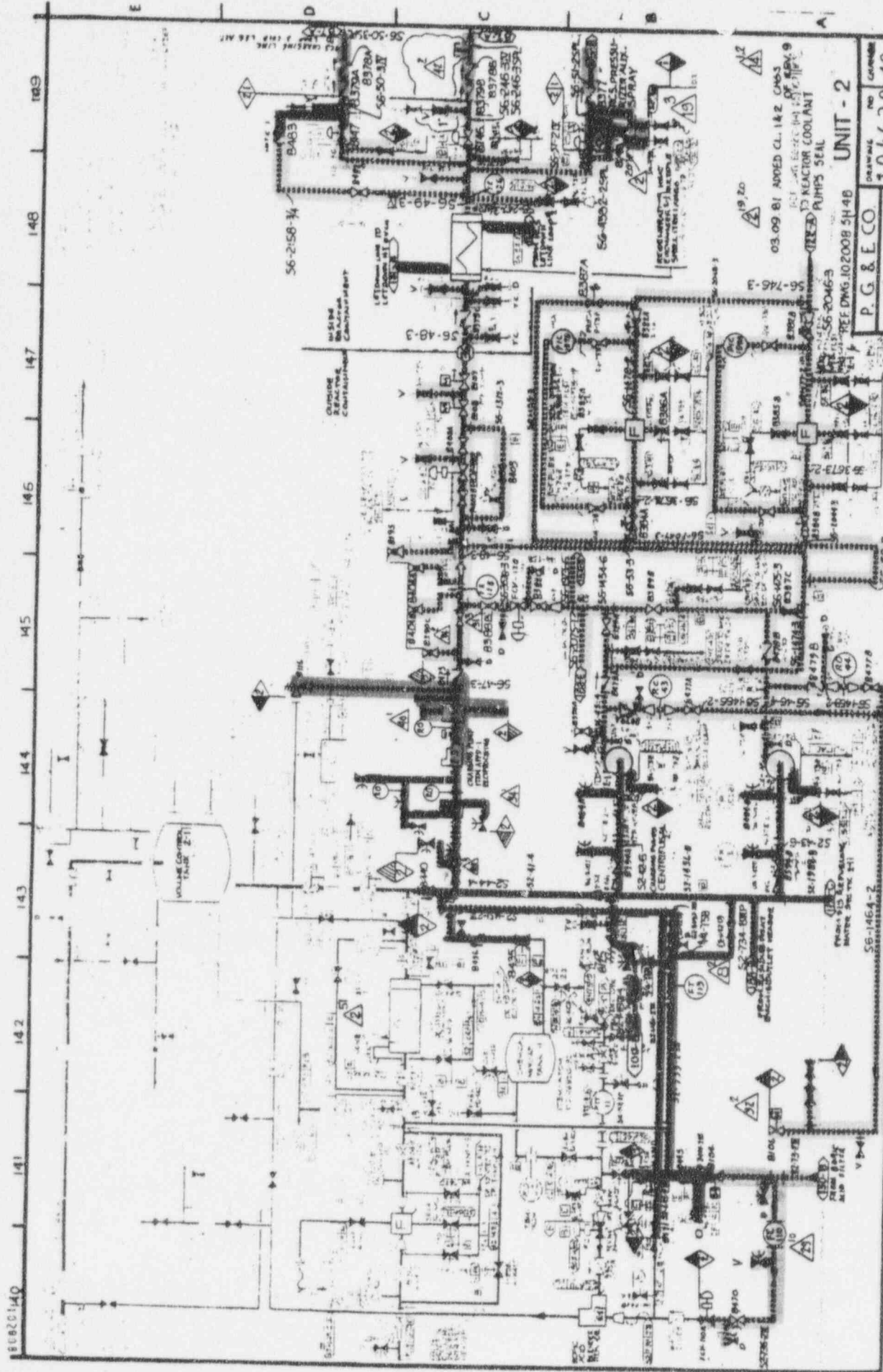
REV. 10/20/08 29

Class 1

Class 2

#1 #3 #4

#8 #9 #10 #13 #14 #15 #15A #33



03.09.81 APPROV CL 14.2 CMAS
 REACTOR COOLANT
 PUMPS SEAL
 UNIT - 2

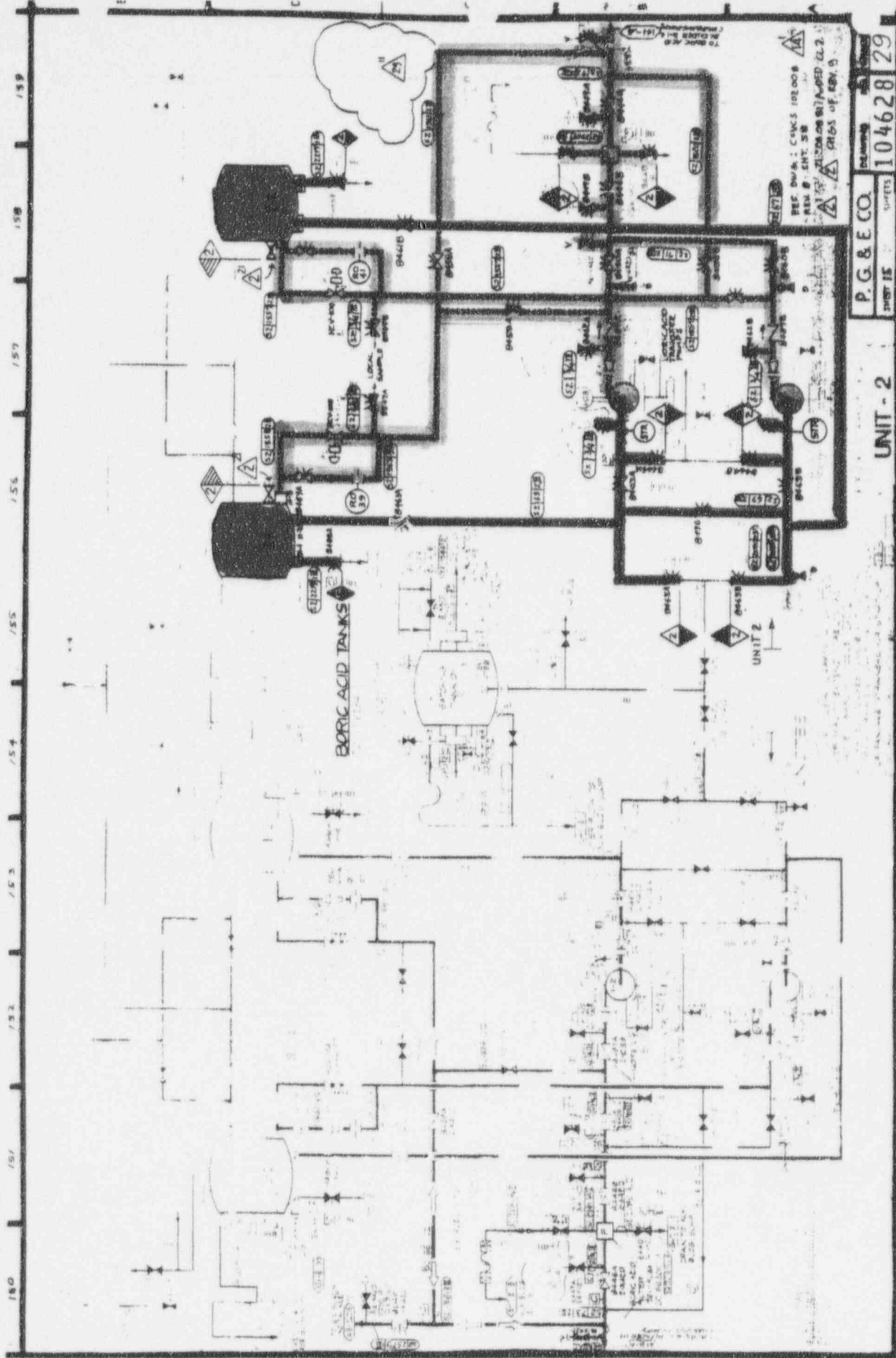
P. G. & E. CO.
 SHEET 14 OF 14
 10462842

SCAN 42 IC 42

35 M/M NEG

Class 2

#15 #16



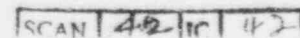
UNIT - 2

P. G. & E. CO.

104628 29

SCAN 29 IC 29

#5

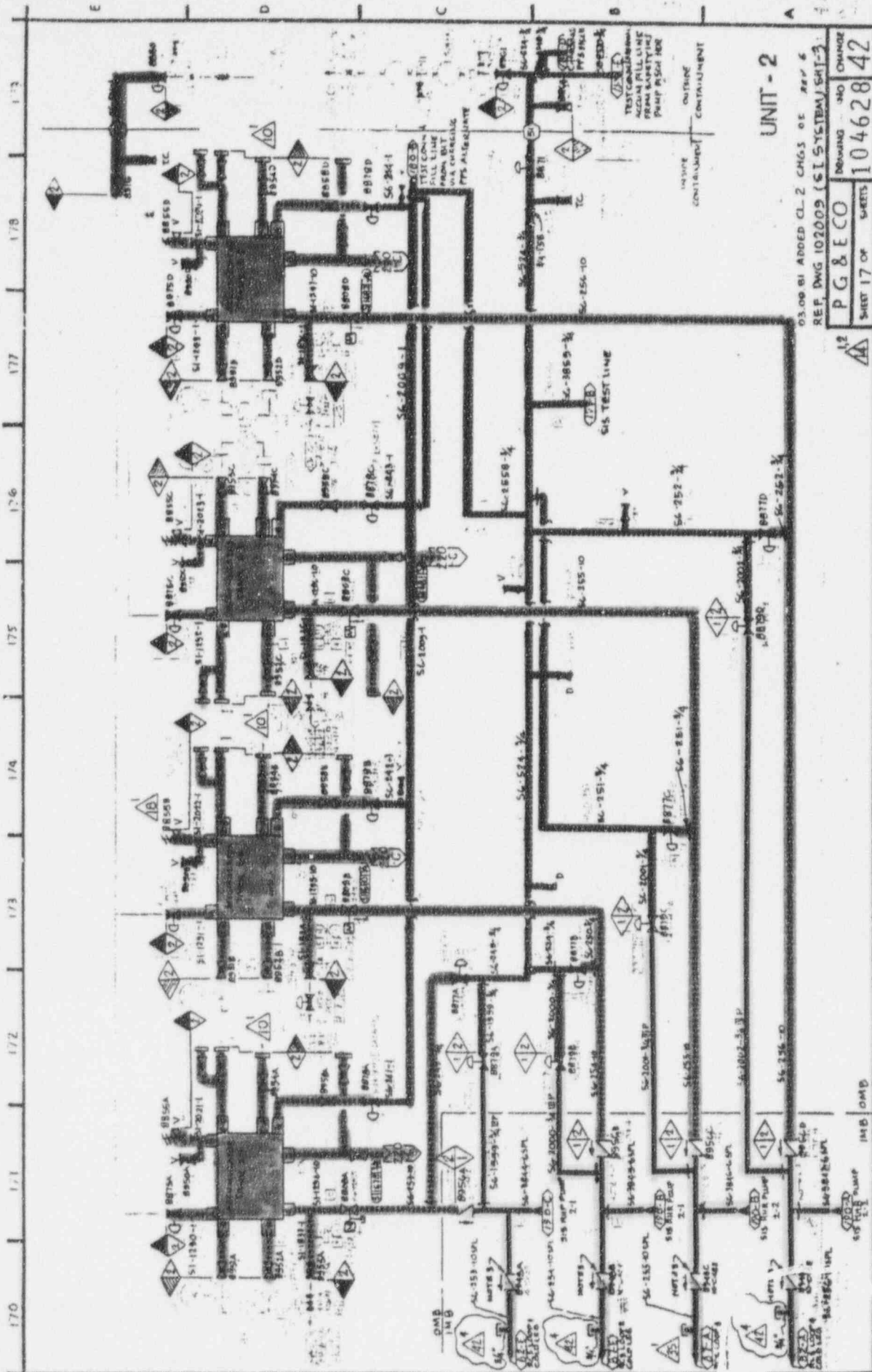


Class 1

#1 #5

Class 2

#17 #18 #36



Class 1

Class 2

#1 #6

#8 #11 #12 #13 #18 #19 #20 #23



NOTES:

1. CHECK CONNECTIONS TO TANK (S)
2. CHECK FOR LEAKS IN PIPING AND TANKS
3. CHECK FOR OPERATIONAL TESTING
4. CHECK TANKS AND ALL THE WAY TO TANK (S)
5. RE-VALUED PUMP TO CHECK
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100. RE-VALUED PUMP TO CHECK

Class 1

#1 #5 #7

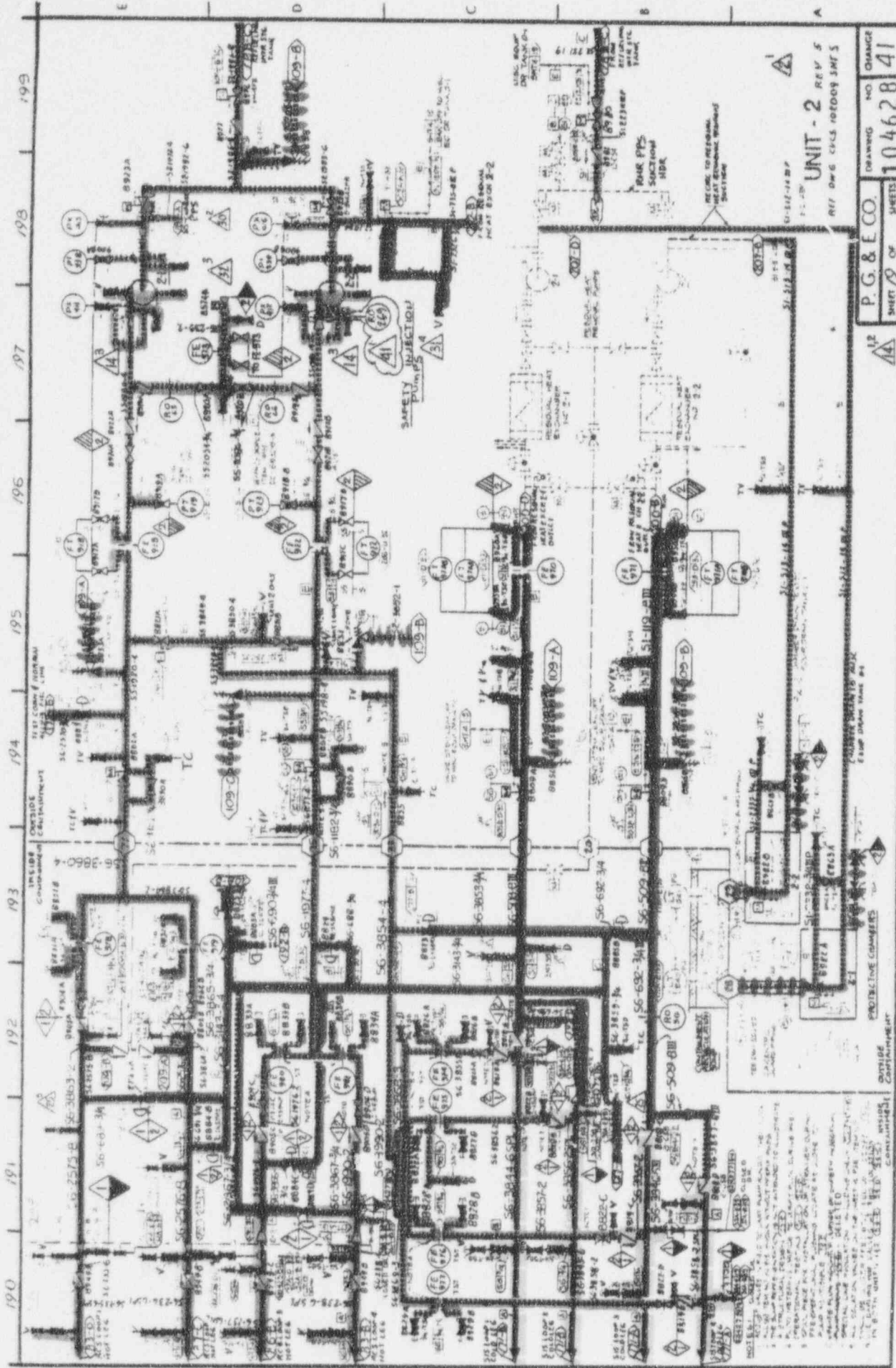


Class 2

#18 #19 #21 #22 #23 #24 #33



exempt



P.G. & E. CO.
SHEET 19 OF 41
DRAWING NO. 104628
CHANGE 41

35 MIN NEG

UNIT - 2 REV 5
REV DWG CDS 10004 JMS

Class 2

Class 3

#23

#5

210

211

212

213

214

215

216

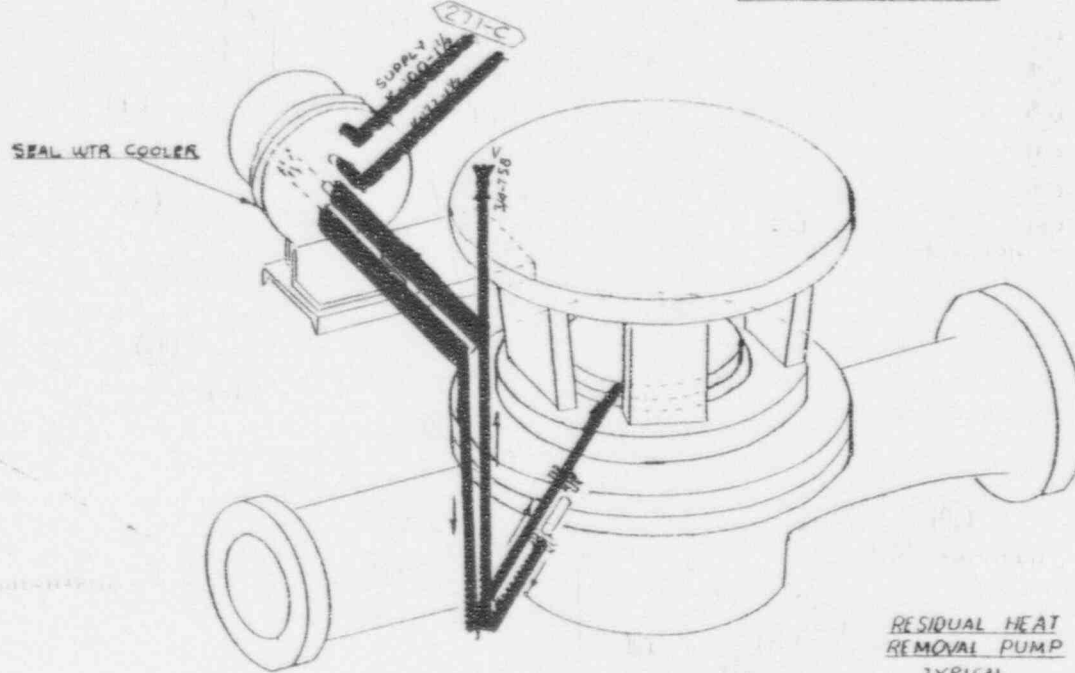
217

218

219

		RHR PP 2-1 SEAL WTR CLK	RHR PP 2-2 SEAL WTR CLK
SUPPLY	COOL	325-C	271-C
RETURN	COOL	325-C	271-C

COMPONENT COOLING
WATER SUPPLY &
RETURN HEADER



RESIDUAL HEAT
REMOVAL PUMP
TYPICAL

35 M/M NEG 3

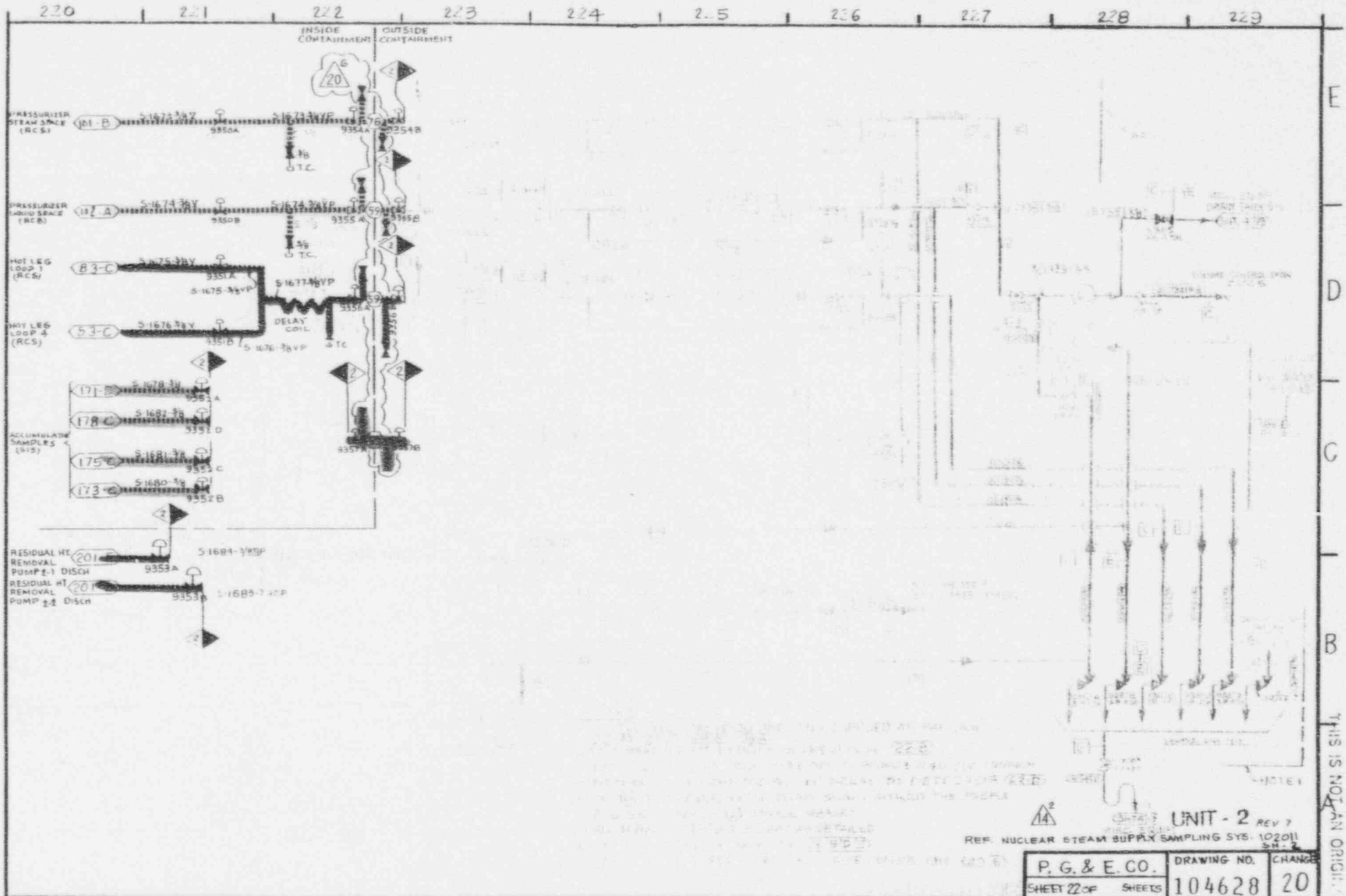
REV 3
REF DWG: RHR, SYST. 102010 SHT. 4

UNIT - 2
RM INDEXED REV 3

P G & E CO. DRAWING NO. CHANGE
SHEET 2 OF SHEETS 104628 13

Class 2

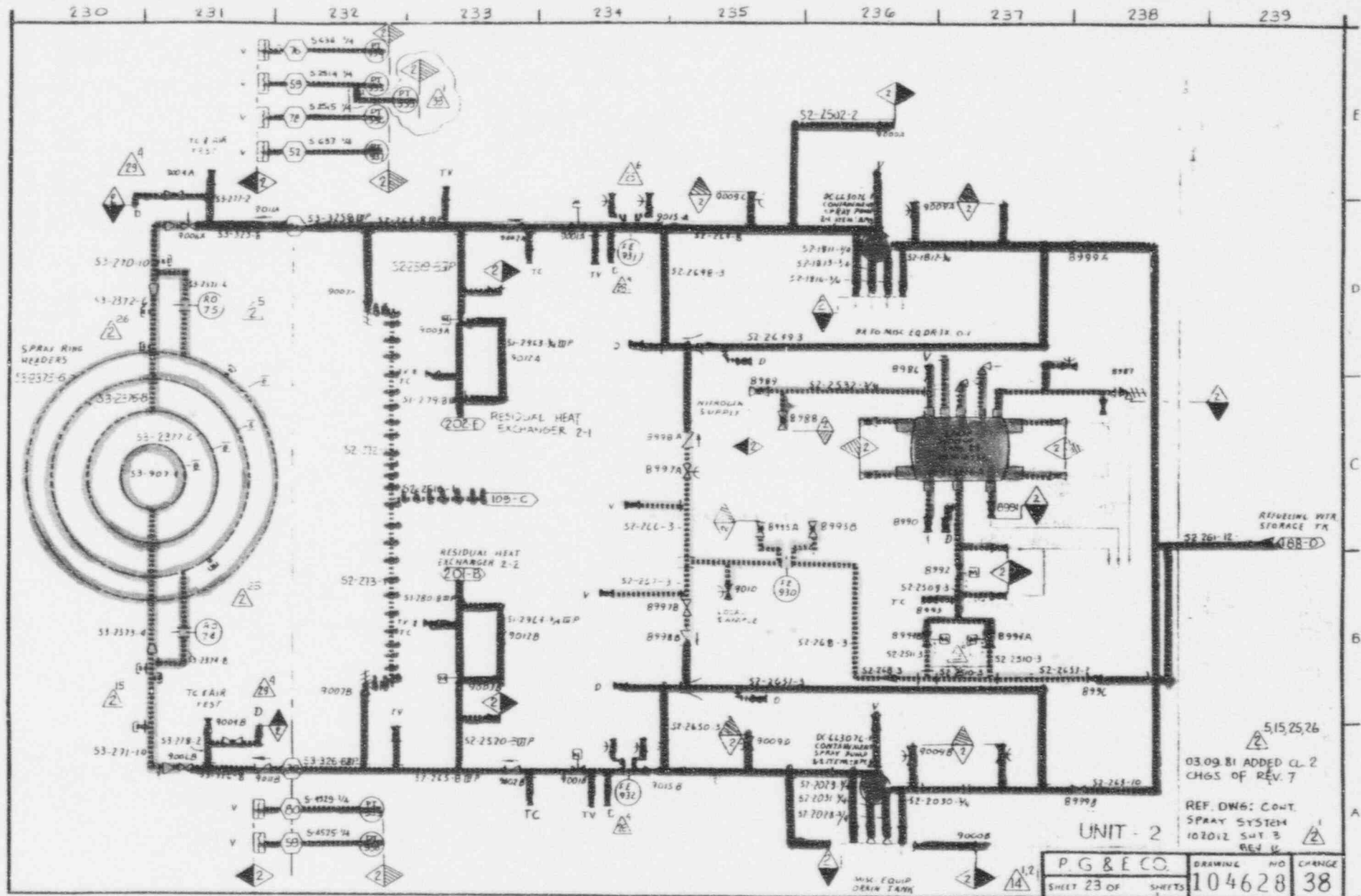
#4 #5 #17 #23 #37



35 M/M NEG 22

Class 2

#19 #23 #25 #26 #27 #28 #29 #33 exempt



35 M/M NEG

515,2526
03.09.81 ADDED CL 2
CHGS OF REV. 7

REF. DWG: CONT.
SPRAY SYSTEM
102012 SUT 3
REV. 11

UNIT - 2

P. G. & E. CO.	DRAWING NO.	CHANGE
SHEET 23 OF 31	104628	38

Class 2

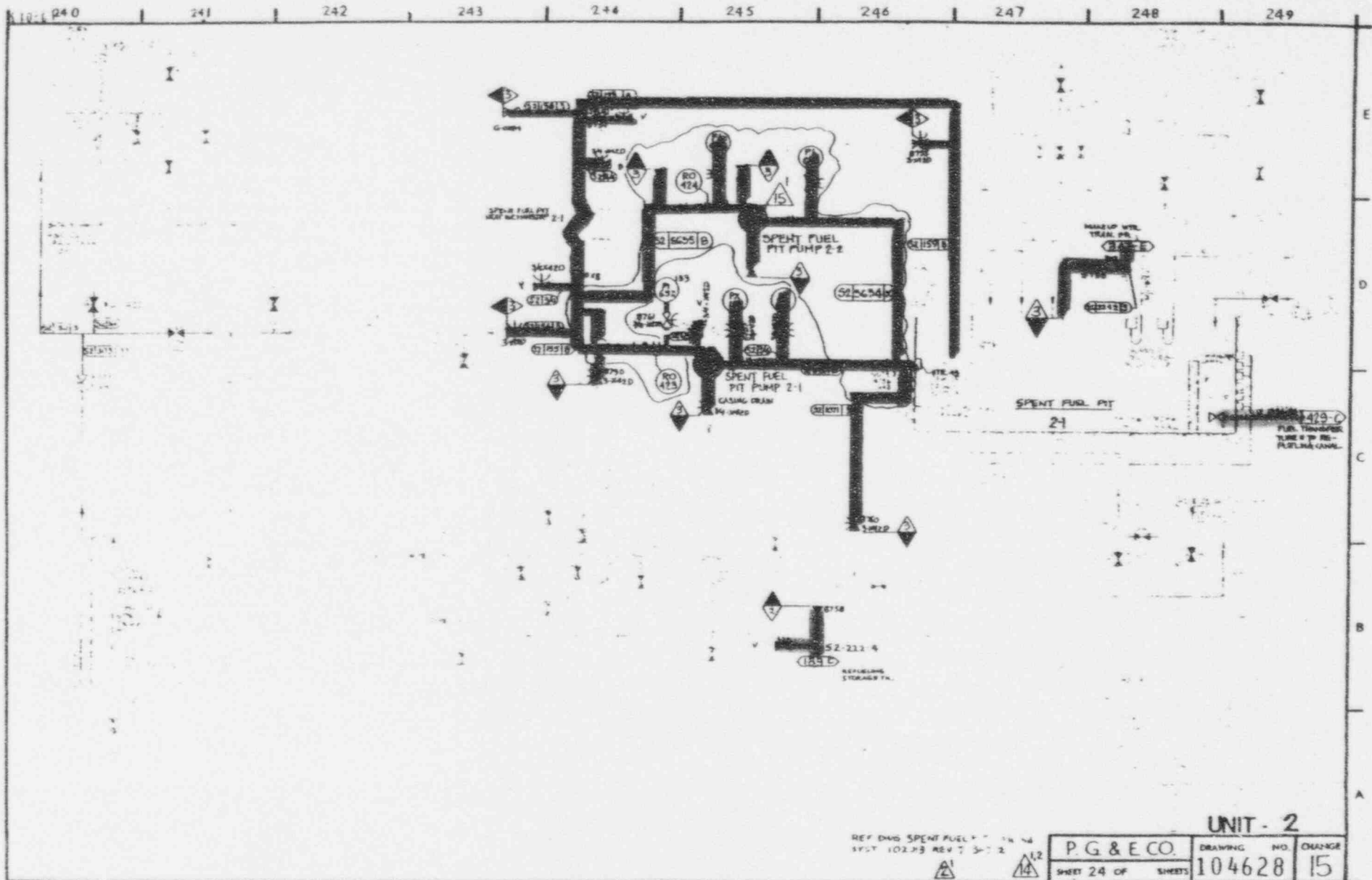
Class 3

#19

RR #4

#8A

#11



REF. DNG SPENT FUEL PIT
SYST 102.18 REV 7 3-7-2

1/2

1/2

P.G. & E.CO.
SHEET 24 OF SHEETS

UNIT - 2

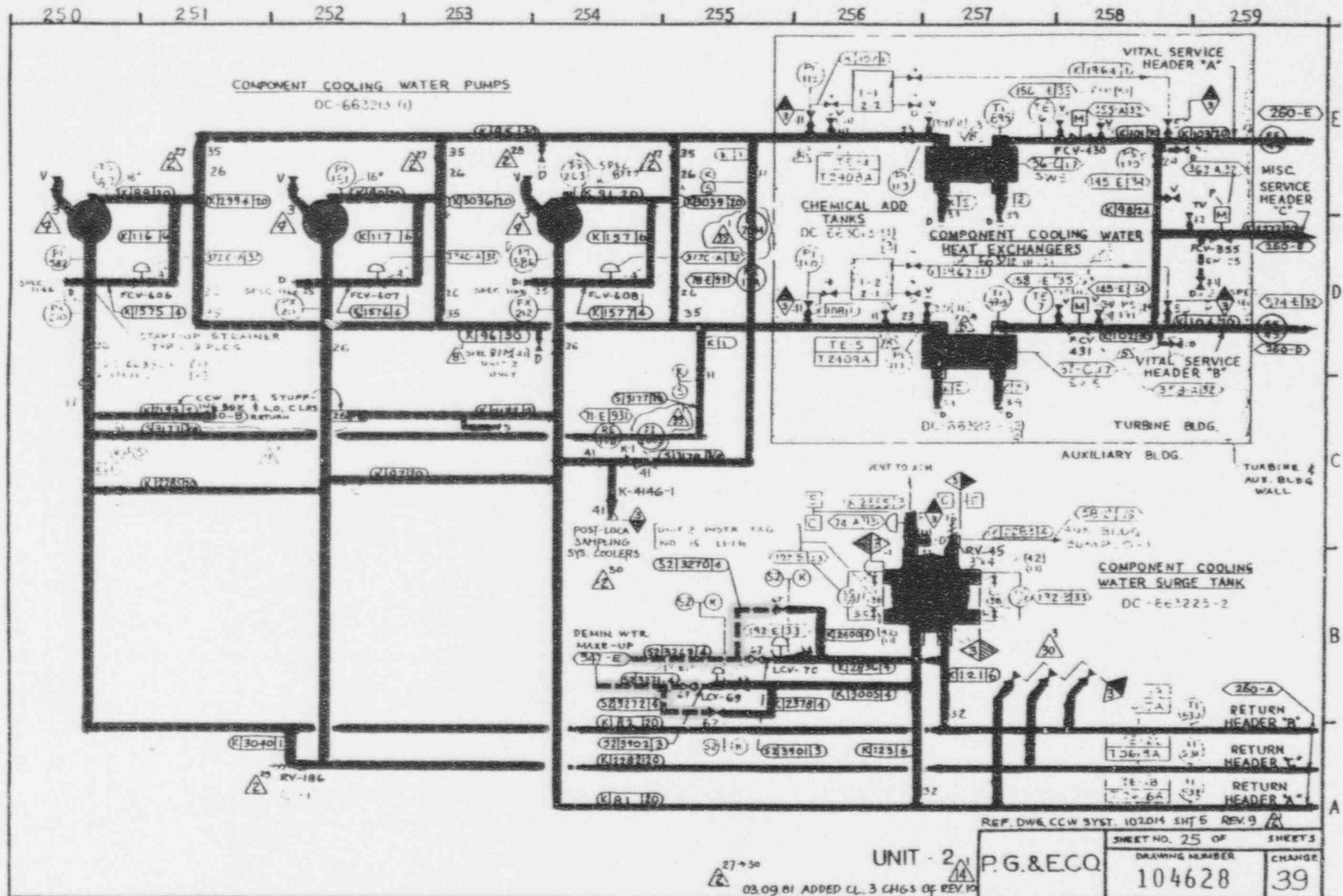
DRAWING NO. 104628
CHANGE 15

BRIDGE 15

SCAN 15 10 15

Class 3

#5 #8

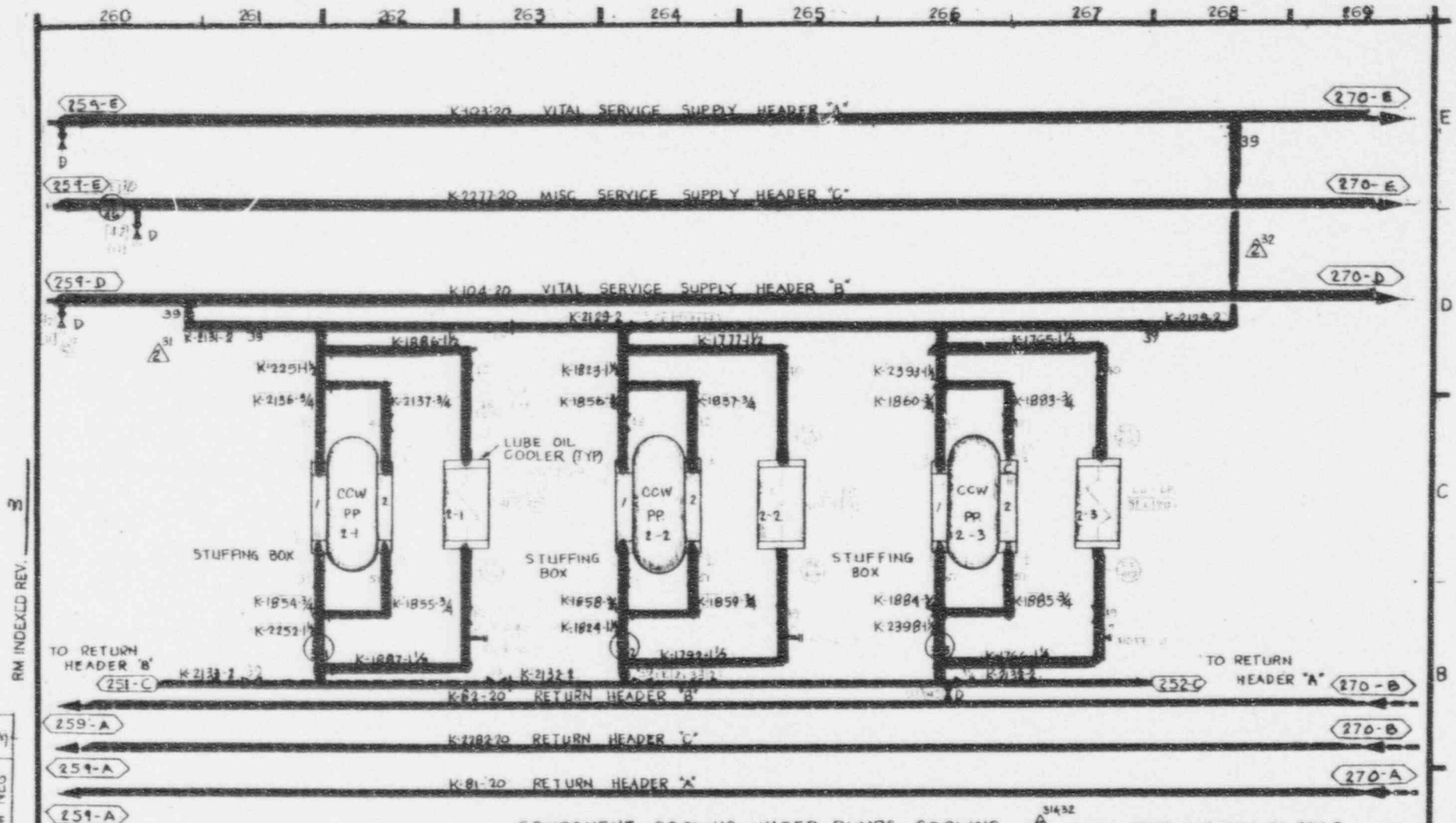


SCAN 34 IC 39

35 M LINES

Class 3

#5



RM INDEXED REV. 3

COMPONENT COOLING WATER PUMPS COOLING REQUIREMENTS

- NOTES:
1. PXS TO BE LOCATED WITHIN 4' OF HEAT EXCHANGER (K-334-20)
 2. LOCATE FLANGE FOR EASY CONNECTION OF THERMOCOUPLE VALVE AND PRESSURE TEST GAGE. REPLACE WITH BLIND FLANGE AFTER TEST (K-334-20)
 3. GAGE IS NON-CLASS 1. 2" BALL VALVE WITH 2" FLANGE AT ONE END AND 1/2" BALL VALVE WITH 1/2" FLANGE AT OTHER END. ONE GAGE WILL BE USED AT A GIVEN TIME.

03.09.81 ADDED CL. 3 CHGS OF REV. 9
 UNIT - 2 REV. 9
 REF DWG 102014 SH-5A (CW SYSTEM)

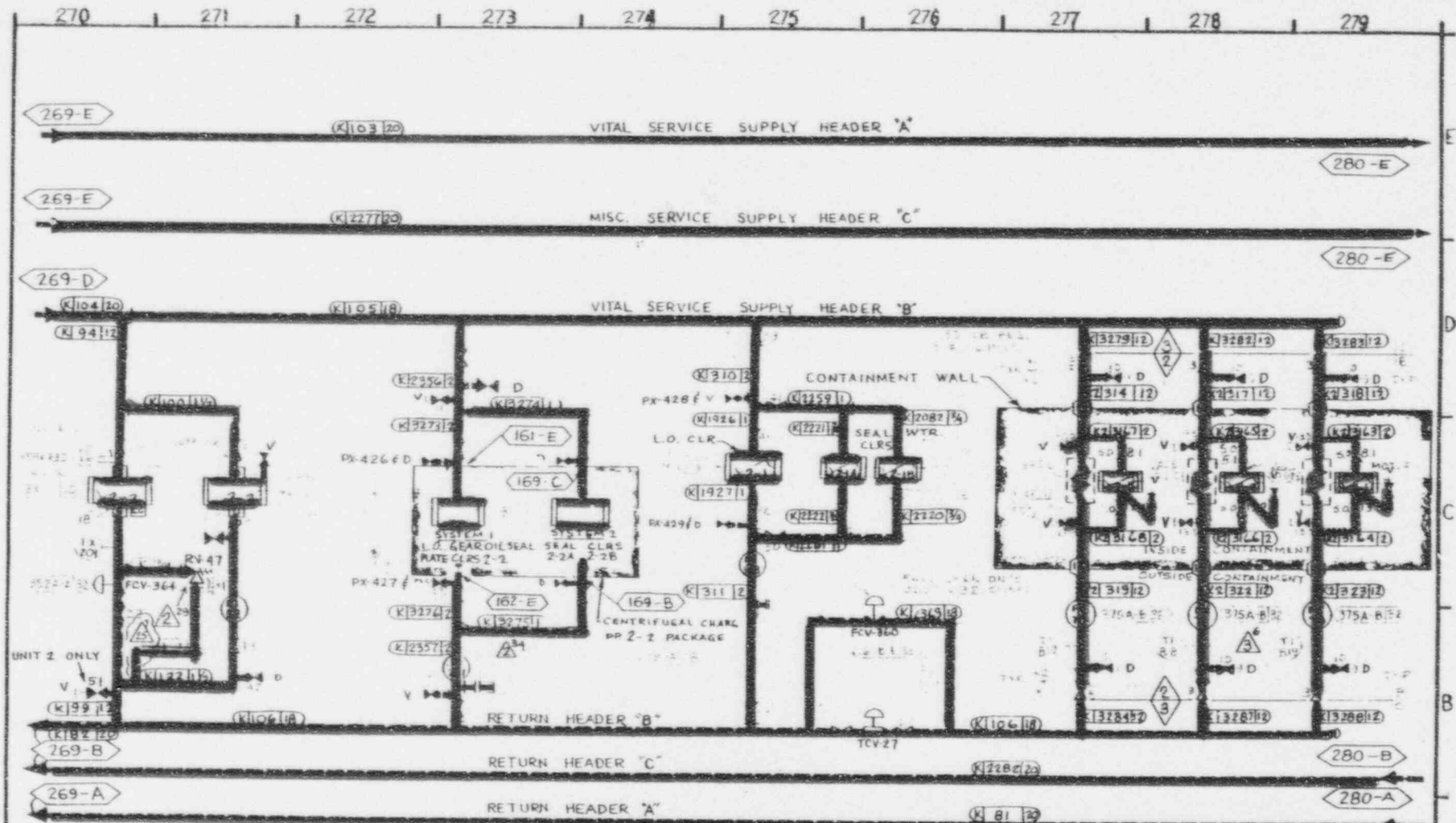
SHEET NO 26 OF SHEETS	
P.G.&ECO	CHANGE
DRAWING NUMBER	104628
	3

Class 2

Class 3

#2

#5



RESIDUAL H.X. 2-2

RES. HEAT REM.
PP 2-2 SEAL
WTR. CLR.CENTRIFUGAL CHARGING
PUMP 2-2 PACKAGE CLRSSAFETY INJECTION PP 2-1
COOLER

REACTOR CONTAINMENT FAN COOLERS

HEADER "B" COMPONENTS

UNIT - 2

03.09.81 ADDED CL. 3 CHGS OF REV. 9 & 10
REF DWS.: CEW SYST. 102014 REV. 9 SHT. 6

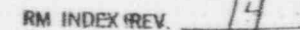
P.G. & E.C.O.

SHEET NO 27 OF	SHEETS
DRAWING NUMBER	CHANGE
104628	25

REV. INDEXED REV. 25

25

#5



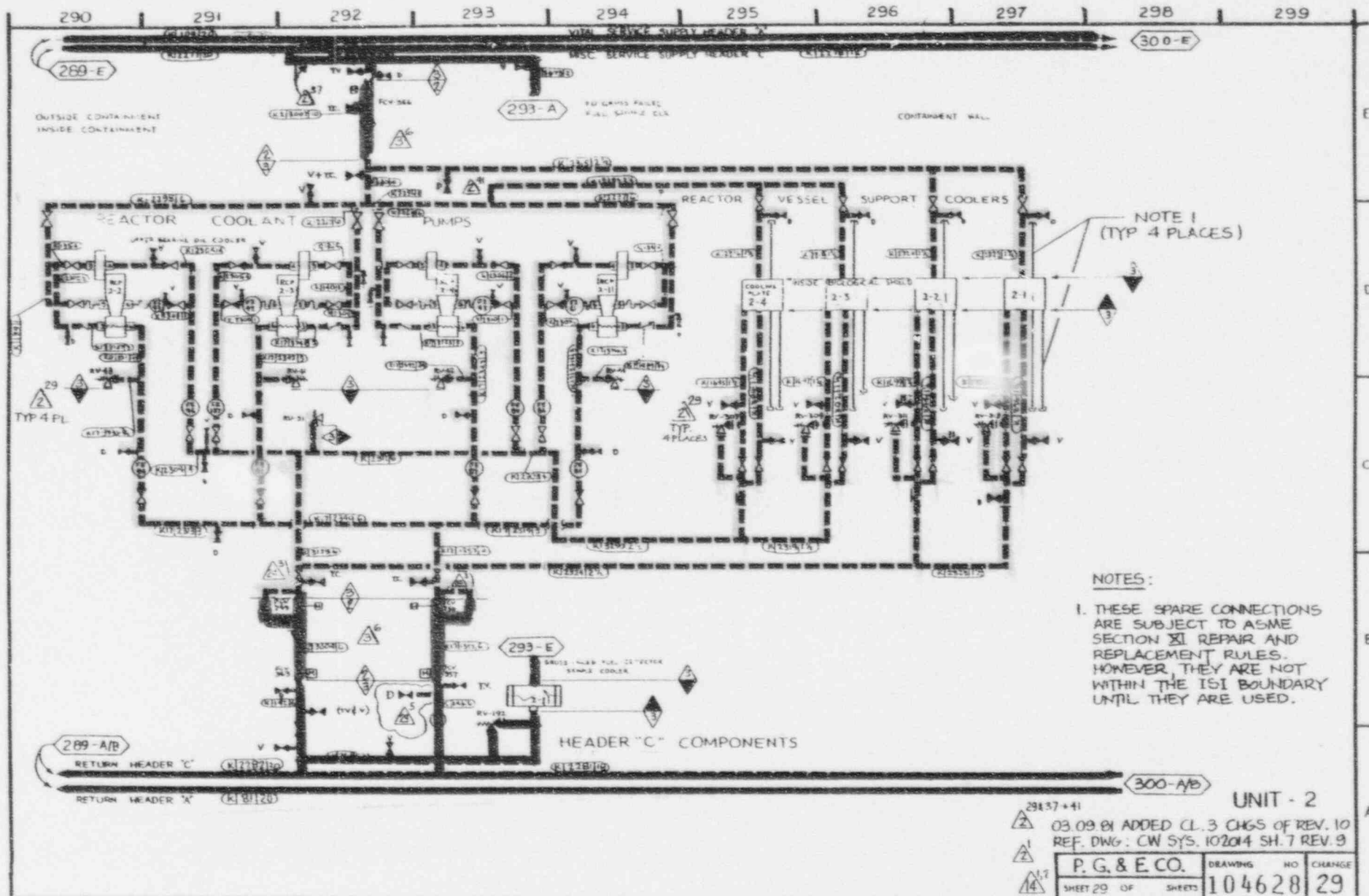
Class 2

Class 3

#30

#5

#6

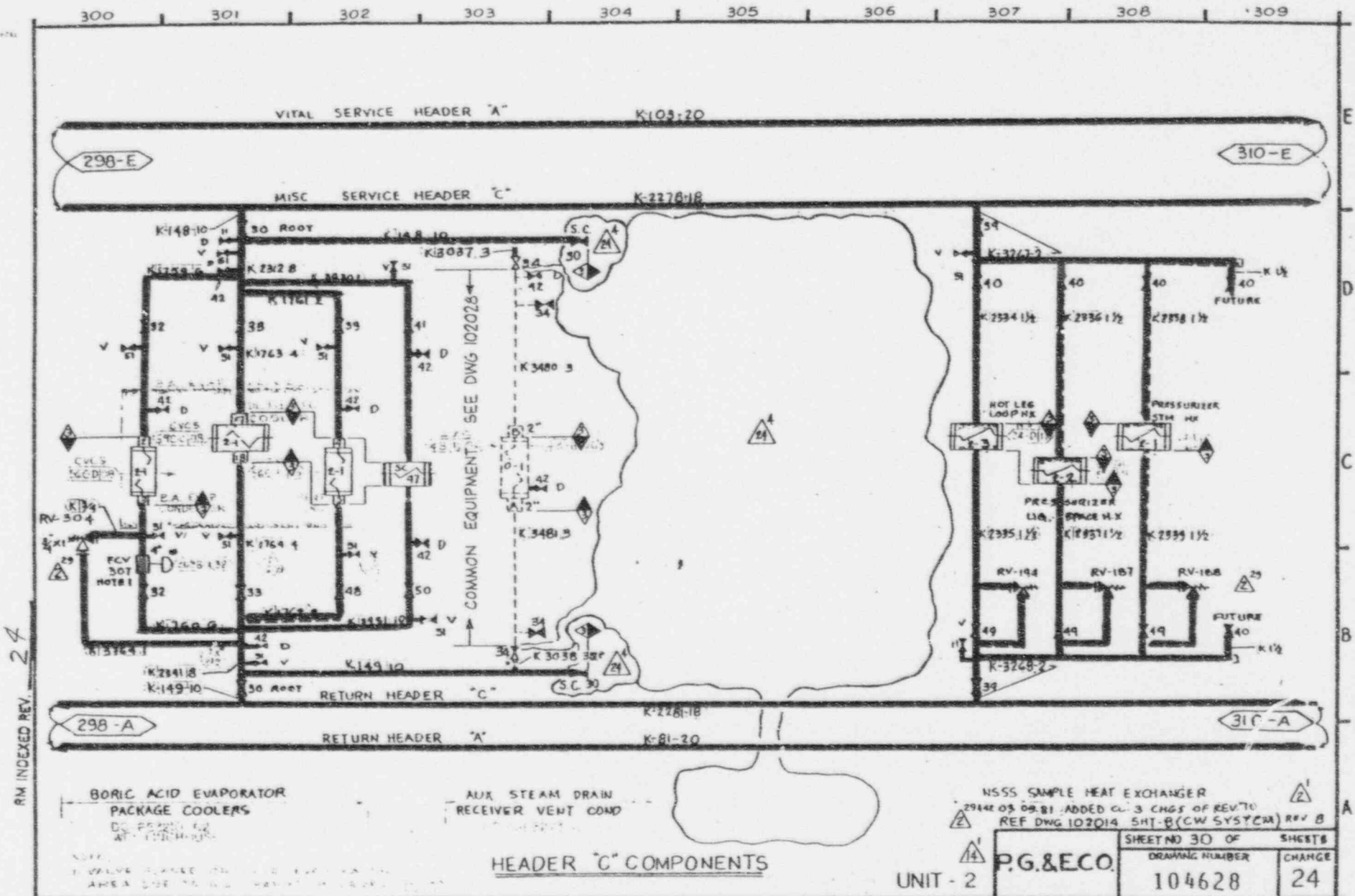


35 14/M NEG

29

RM INDEXED REV. 29

#5

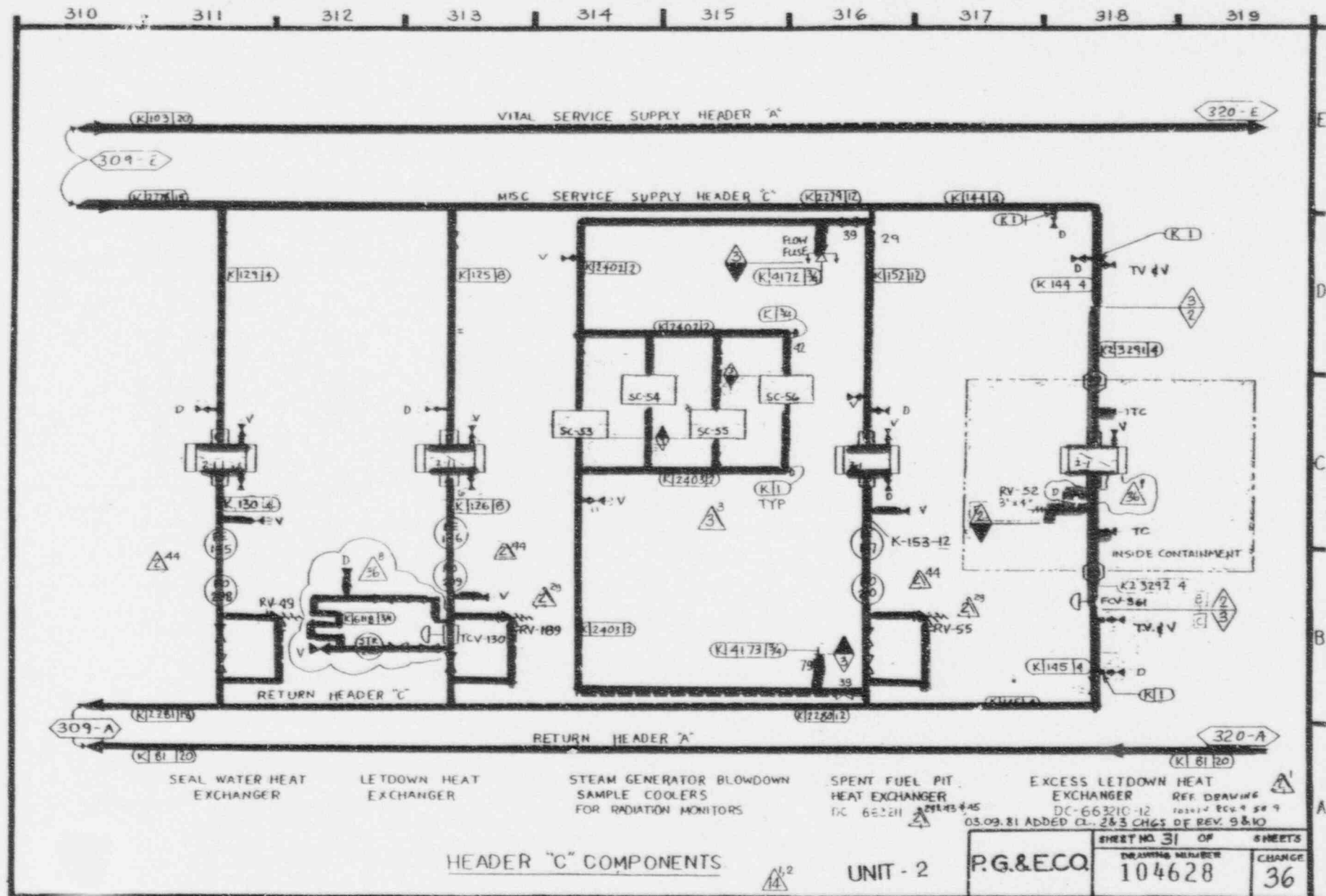


Class 2

Class 3

#30

#5



HEADER "C" COMPONENTS

UNIT - 2

P.G.&ECO

SHEET NO. 31 OF SHEETS

DRAWING NUMBER
104628

CHANGE
36

03.09.81 ADDED CL. 263 CHGS DE REV. 9&10

DC-663210-12

103-1-1 REV. 9 & 10

REF. DRAWING

EXCESS LETDOWN HEAT EXCHANGER

SPENT FUEL PIT HEAT EXCHANGER

STEAM GENERATOR BLOWDOWN SAMPLE COOLERS FOR RADIATION MONITORS

LETDOWN HEAT EXCHANGER

SEAL WATER HEAT EXCHANGER

RETURN HEADER "A"

RETURN HEADER "C"

MISC SERVICE SUPPLY HEADER "C"

VITAL SERVICE SUPPLY HEADER "A"

UNIT - 2

P.G.&ECO

35 MIN. NEG

36

Class 2

Class 3

#30

#5

320

321

322

323

324

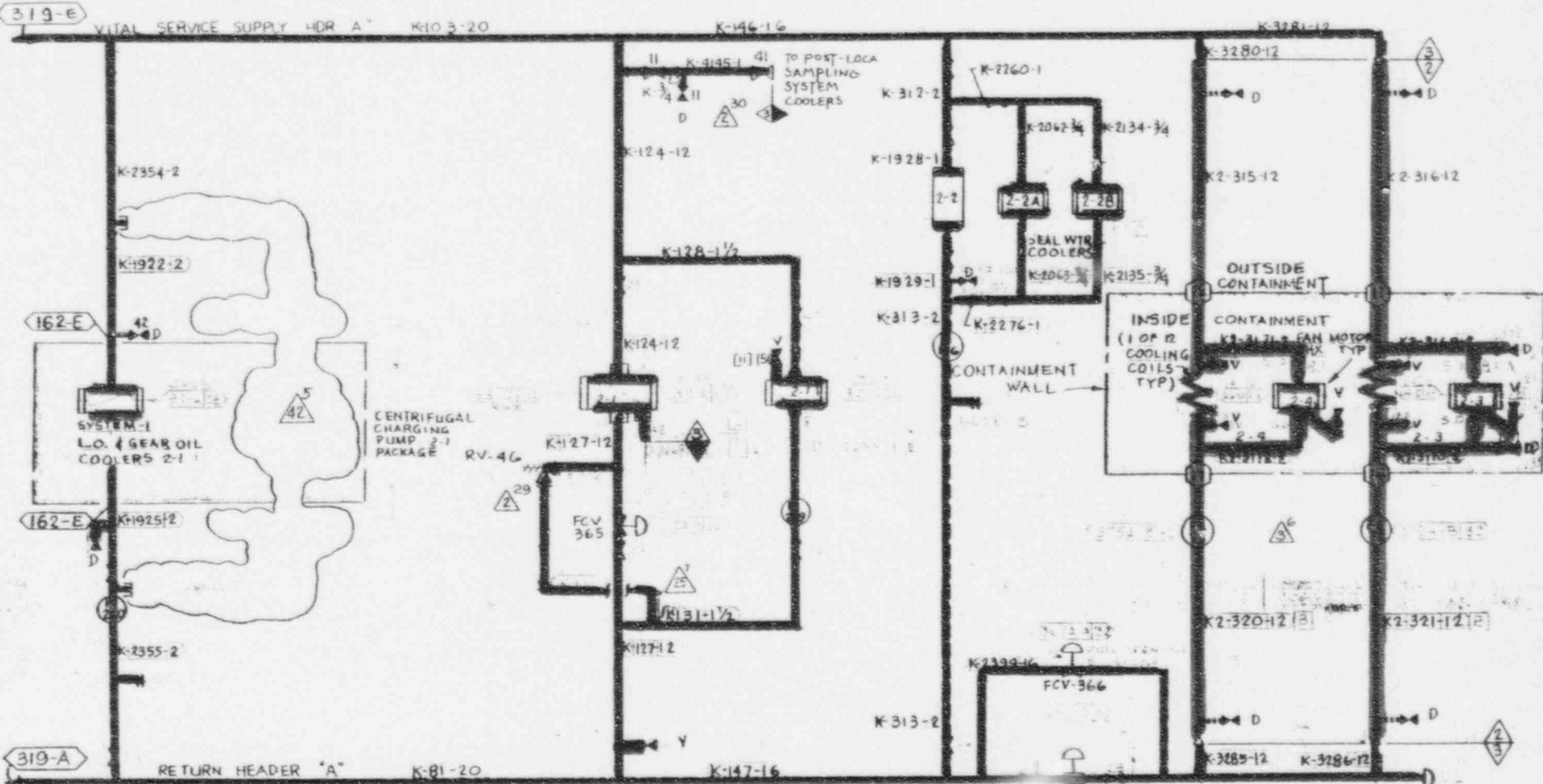
325

326

327

328

329

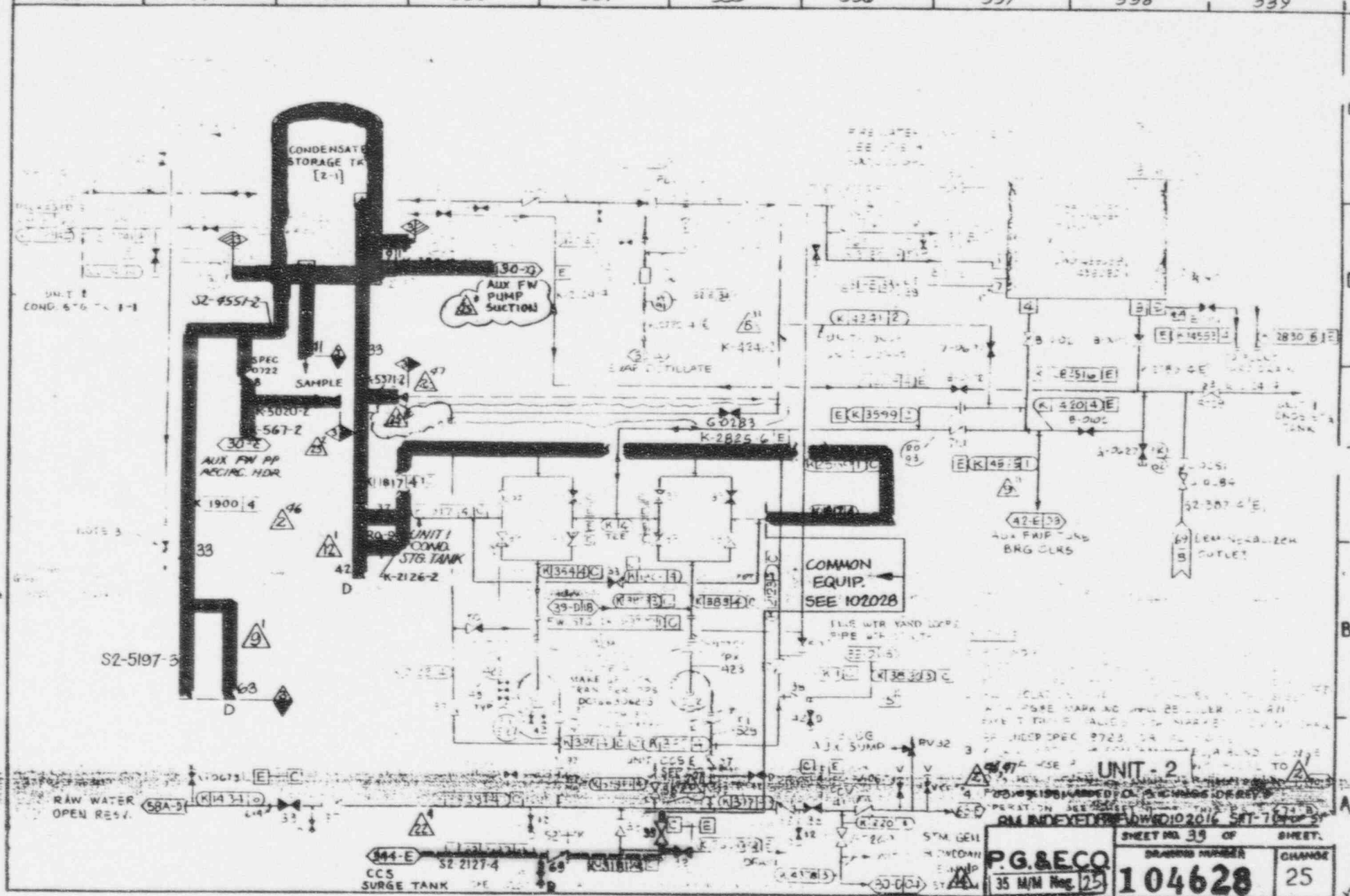


HEADER "A" COMPONENTS UNIT-2

03.09.81 ADDED CLASS 3 CHGS OF REV. 10
 REF DWG 102014 SH-10 (CV SYSTEM) REV. 8

SHEET NO		OF		SHEETS	
DR	NUMBER	CHANGE			
P.G.&E.CO	104628	42			

SCAN 25 10 25

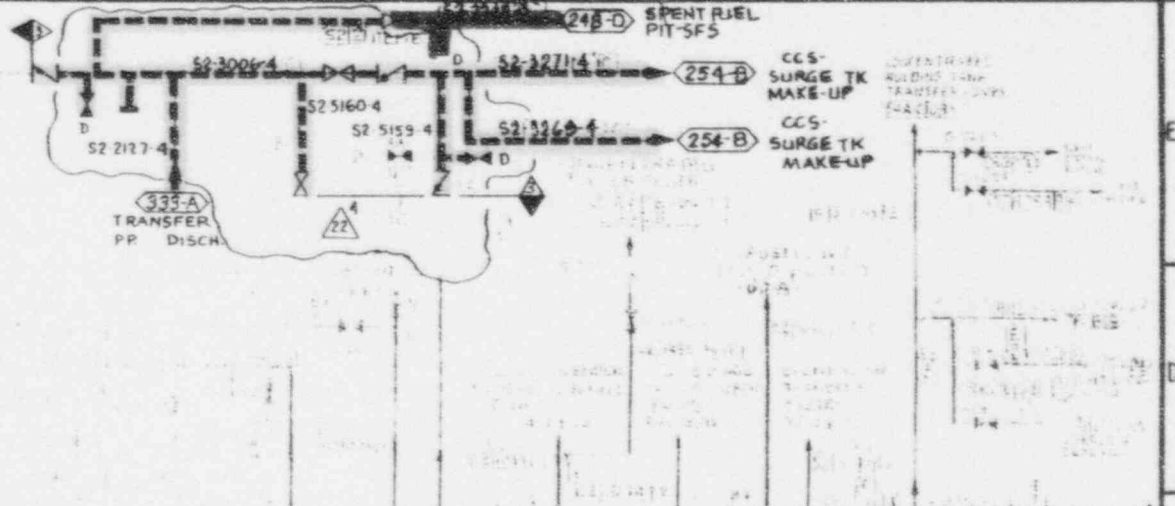


Class 3

#8 #8A



340 341 342 343 344 345 346 347 348 349



2-1

2-1

2-1

2-2

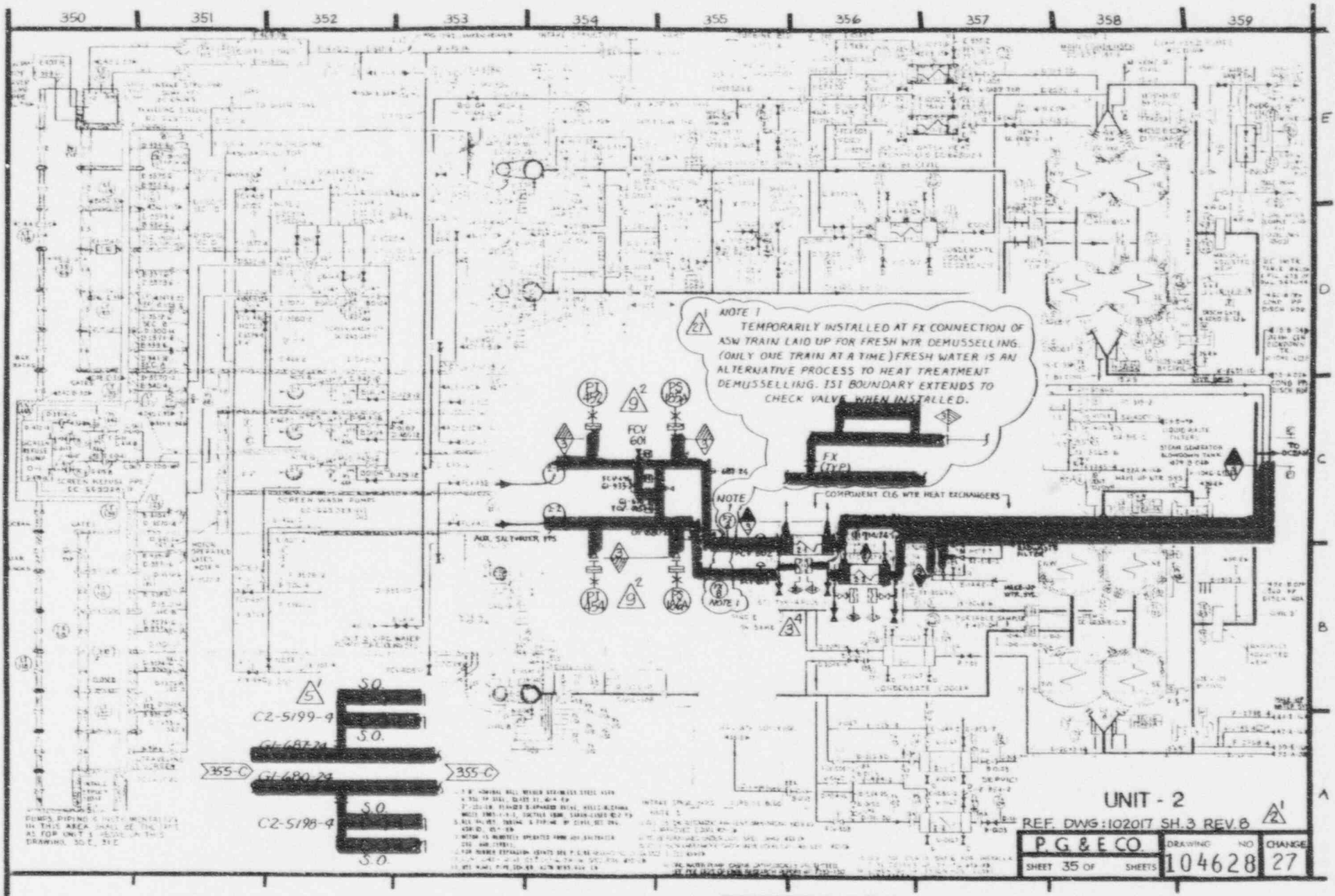
2-3

35 MIN NEG 22 RM INDEXED REV. 22

REF DWG		UNIT - 2	
102016 SHI-8 (MAKE-UP WTR SYS)		REV A	
SHEET NO. 34 OF		SHEETS	
DRAWING NUMBER		CHANGE	
P.G.&ECO		104628 22	

Class 3

#9

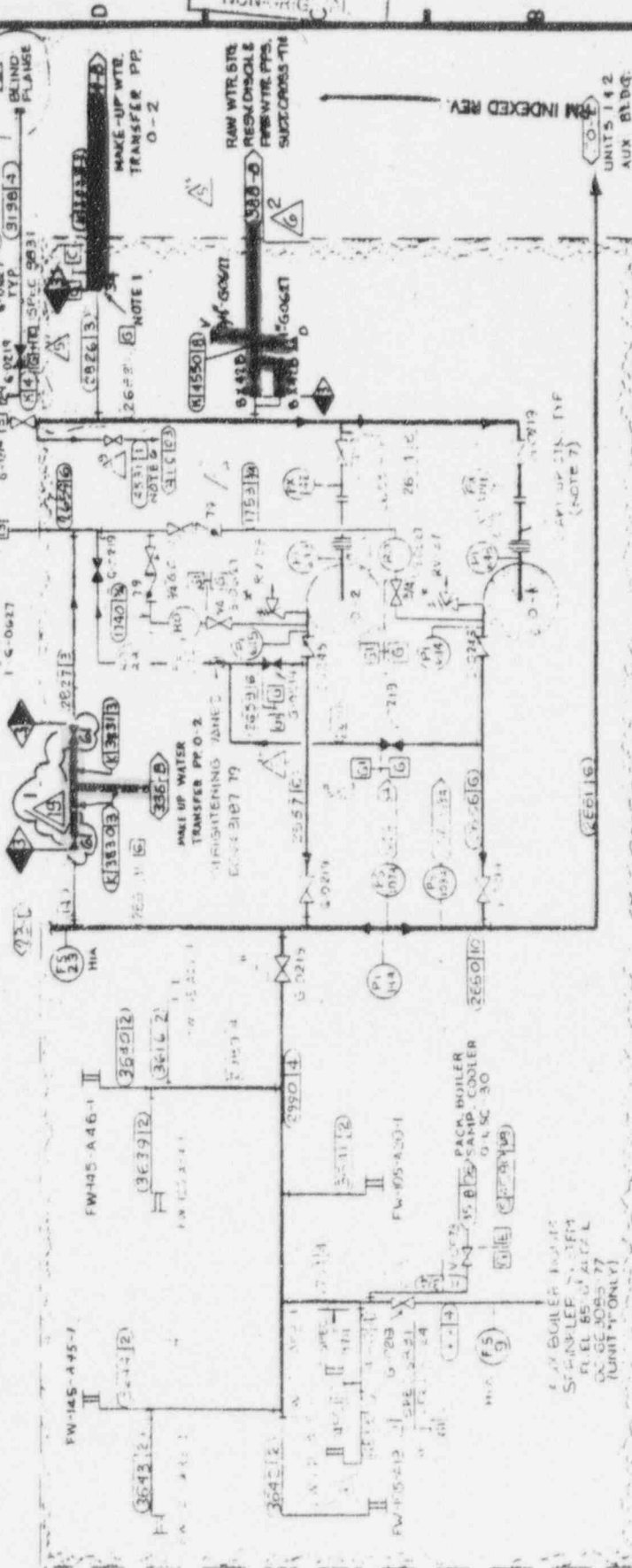


35 M/M NEG 27

RM INDEXED REV. 27

360 361 362 363 364 365 366 367 368 369

IDENTICAL DWG OF COMMON EQUIPMENT & PIPING
SHOWN ON UNIT 1 DWG (102028) IS
DUPLICATED HERE TO MAKE UNIT 2 DWG
COMPLETE AND INDEPENDENT OF UNIT 1 DWG.



NOTES:

1. VALVE H-10 (SHEET 102028) IS NOT INSTALLED UNDER SP-1 (38-B).
2. ALL PIPING WITH PLEASURE AIR ARE UNDER AIR EXCEPT AS NOTED.
3. ALL PIPING WITH PLEASURE AIR ARE UNDER AIR EXCEPT AS NOTED.
4. ALL PIPING WITH PLEASURE AIR ARE UNDER AIR EXCEPT AS NOTED.
5. ALL PIPING WITH PLEASURE AIR ARE UNDER AIR EXCEPT AS NOTED.
6. ALL PIPING WITH PLEASURE AIR ARE UNDER AIR EXCEPT AS NOTED.
7. THIS DWG SHALL BE REPLACED BY EXPANSION UNIT (102028) 3.
8. SEE DWG-FILE PROTECTION ROOM FOR UNIT 3.
9. SHEET NO. 36 OF 12 SHEETS.
10. DRAWING NUMBER 104628.
11. CLASS 35 MM N/A.
12. 19.

UNIT 1 FUEL HANDLING BLDG

UNIT - 2

PG&ECO	104628	19
SHEET NO. 36 OF 12 SHEETS		
DRAWING NUMBER		
CLASS		
35 MM N/A		
19		

THIS IS NOT AN ORIGINAL

MICROFILMED FROM NON-REPRODUCIBLE ORIGINAL

FIREWATER PUMP
DC-663551

APU UP IN TYP
(NOTE 7)

(266116)

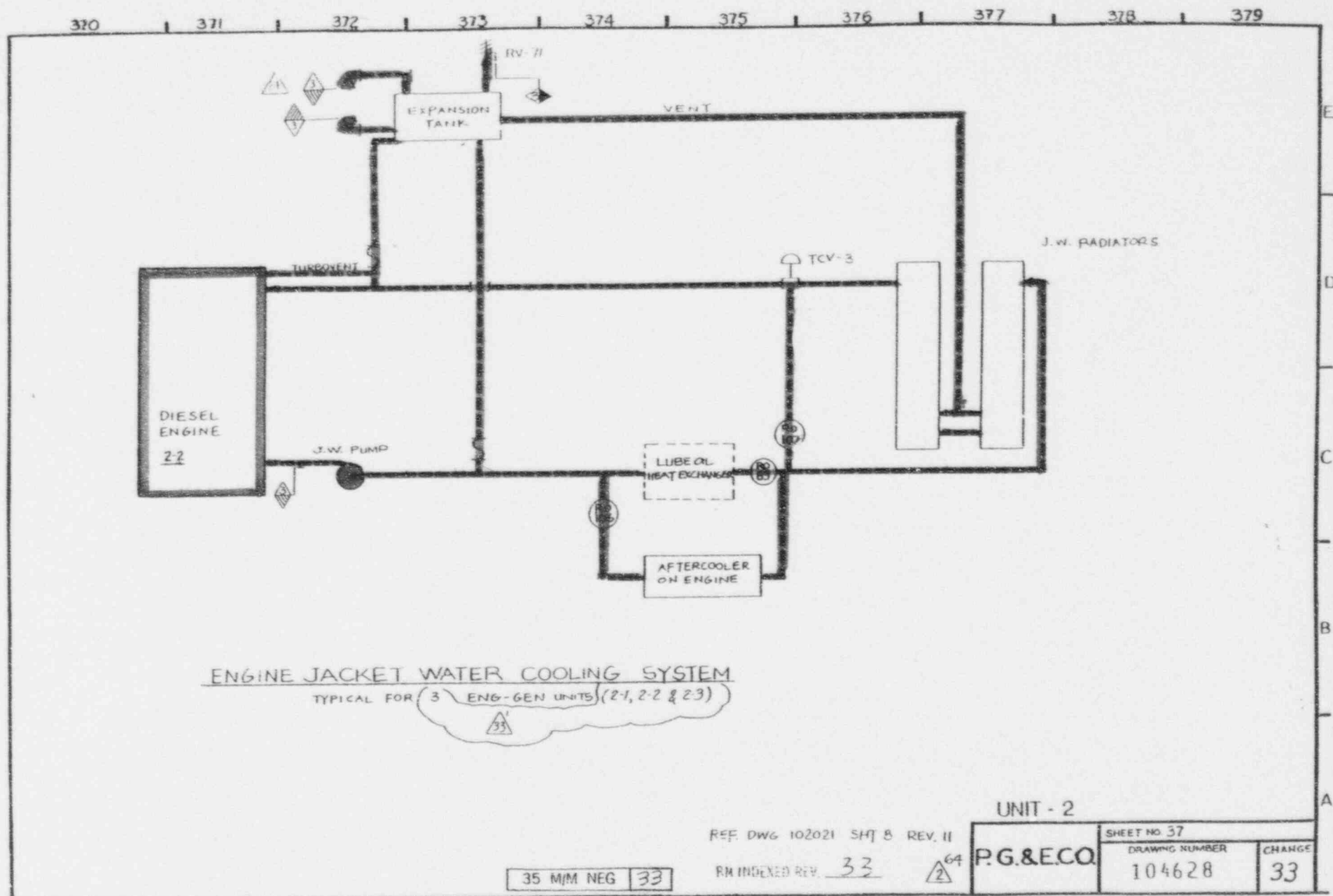
UNITS 142
AUX BLDG

RM INDEXED REV

RM INDEX REV

Class 3

#10



ENGINE JACKET WATER COOLING SYSTEM

TYPICAL FOR 3 ENG-GEN UNITS (2.1, 2.2 & 2.3)

33

UNIT - 2

REF. DWG 102021 SH 8 REV. II

RM INDEXED REV. 33

64

P.G.&E.CO

SHEET NO. 37	
DRAWING NUMBER	CHANGE
104628	33

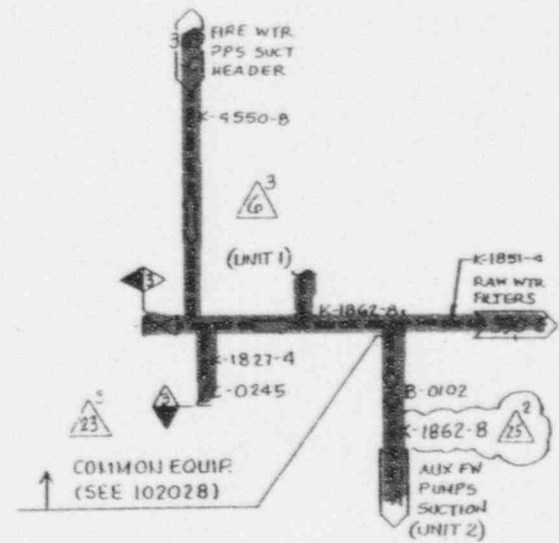
35 M/M NEG 33

Class 3

#12

380 381 382 383 384 385 386 387 388 389

A
B
C
D
E



REF. DWG. 102016 SH. 5A
(MAKE-UP WTR. SYS.) REV. 19

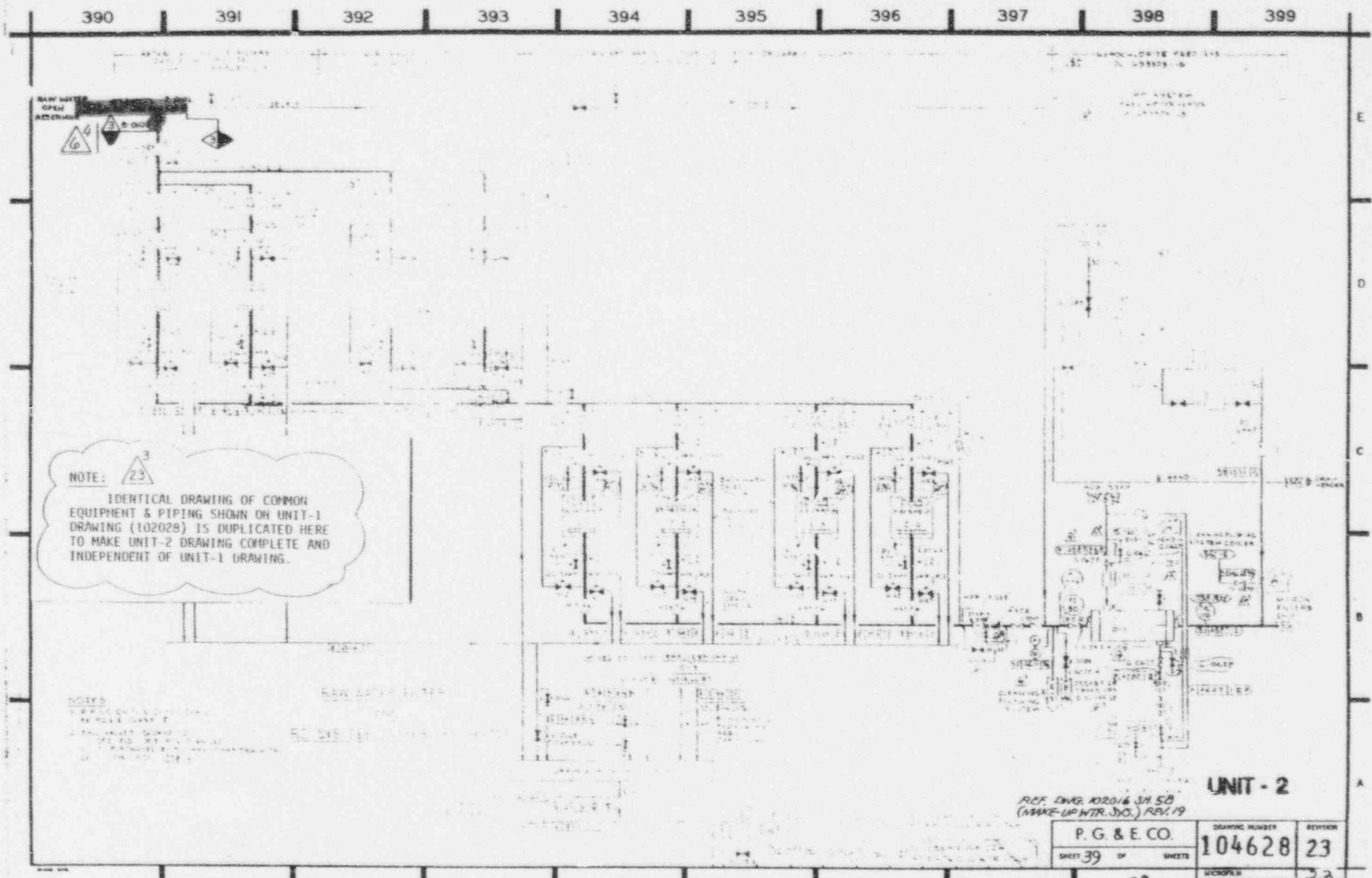
UNIT - 2

PG & E CO.		104628	REV 25
SHEET 38	OF SHEETS		
		MICROFILM	25

RM INDEXED Rev. 25

Class 3

#12



NOTE: ³/₂₃
 IDENTICAL DRAWING OF COMMON
 EQUIPMENT & PIPING SHOWN ON UNIT-1
 DRAWING (102028) IS DUPLICATED HERE
 TO MAKE UNIT-2 DRAWING COMPLETE AND
 INDEPENDENT OF UNIT-1 DRAWING.

NOTES:
 1. SEE UNIT 1 DRAWING FOR
 2. SEE UNIT 1 DRAWING FOR
 3. SEE UNIT 1 DRAWING FOR
 4. SEE UNIT 1 DRAWING FOR
 5. SEE UNIT 1 DRAWING FOR

REF. DWG. 102016 SH 50
 (MAKE-UP WTR. SYS.) REV. 19

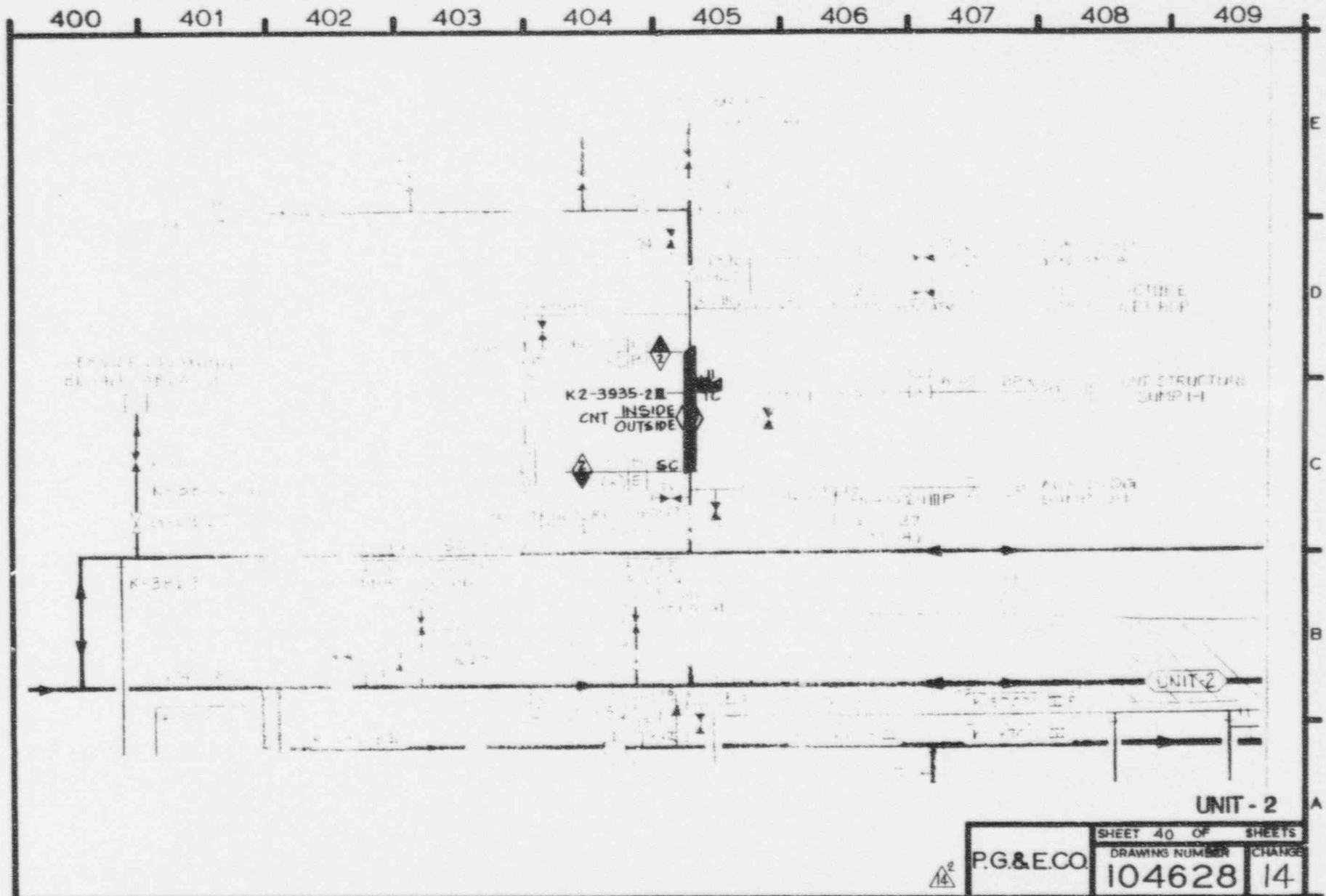
UNIT - 2

P. G. & E. CO.		DRAWING NUMBER	REVISION
SHEET 39	OF SHEETS	104628	23
MICROFILM			23

RM INDEXED REV. 23

Class 2

#39



RM INDEX REV

14

35 M/M NEG

14

P.G.&E.CO.

SHEET 40 OF SHEETS
DRAWING NUMBER
104628
CHANGE
14

#40

410 411 412 413 414 415 416 417 418 419

FW-96-AMU
MOI LAB

UNIT - 2

SHEET 41 OF SHEETS

DRAWING NUMBER	CHANGE
104628	14

RM INDEX REV.

35 M/M NEG

14

Class 2

#33 #41 #42 #43

RR #4

420 421 422 423 424 425 426 427 428 429

UNIT - 2



P. G. & E. CO.

SHEET 42 OF 104

DRAWING NO.

104628

CHANGE

14

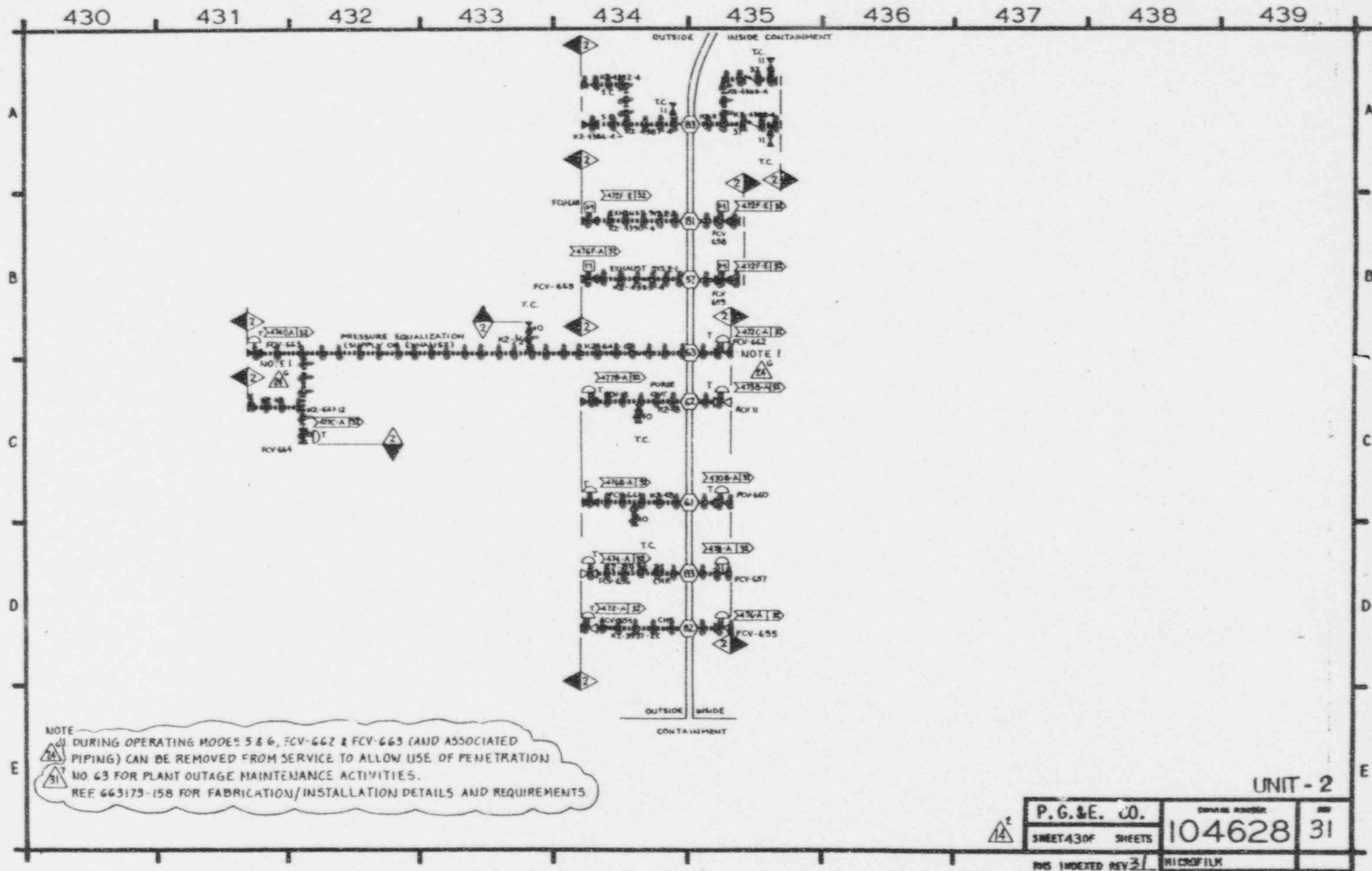
SEE INDEX FOR

14



Class 2

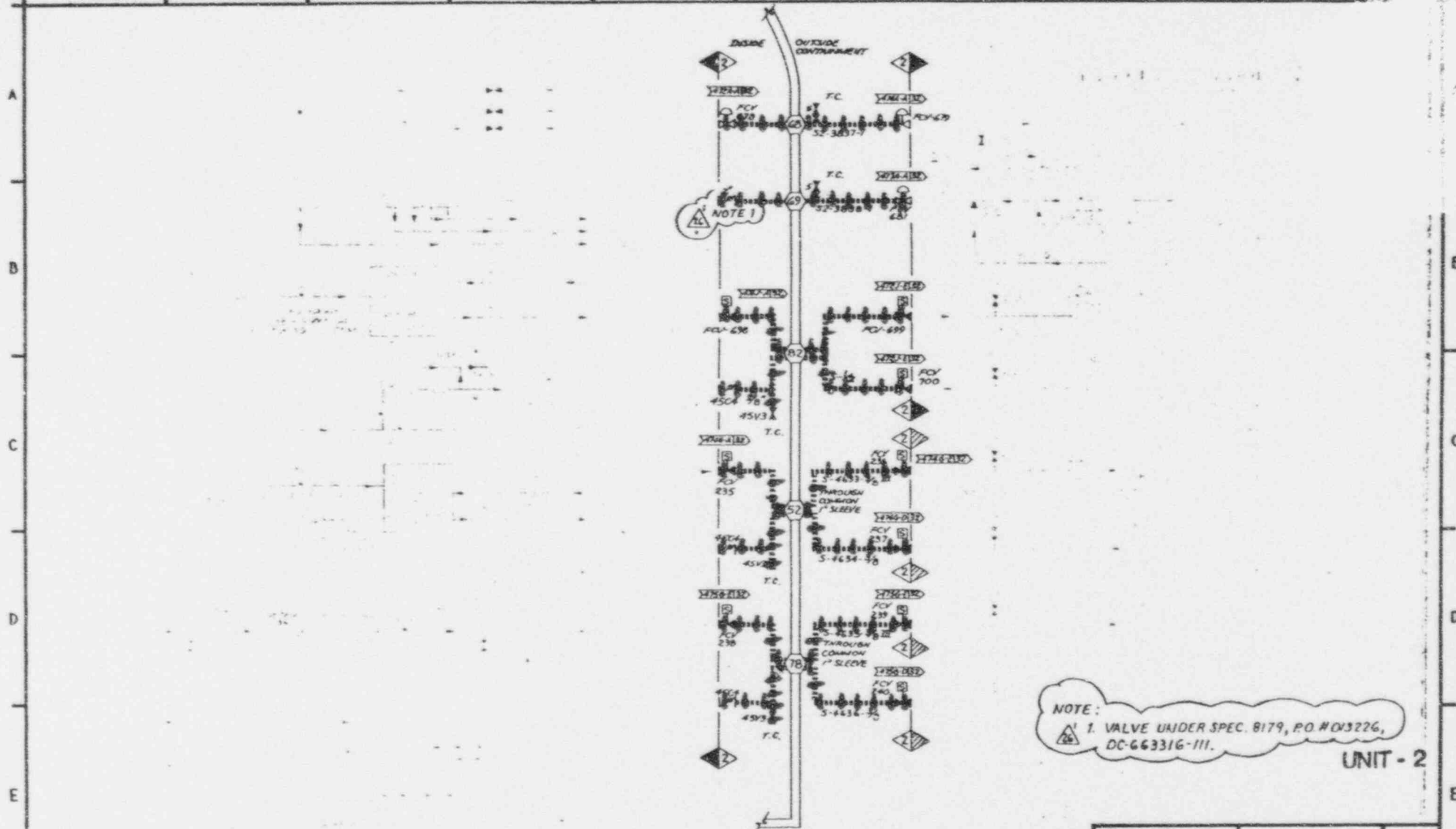
#33



Class 2

#33
|||||

440 | 441 | 442 | 443 | 444 | 445 | 446 | 447 | 448 | 449



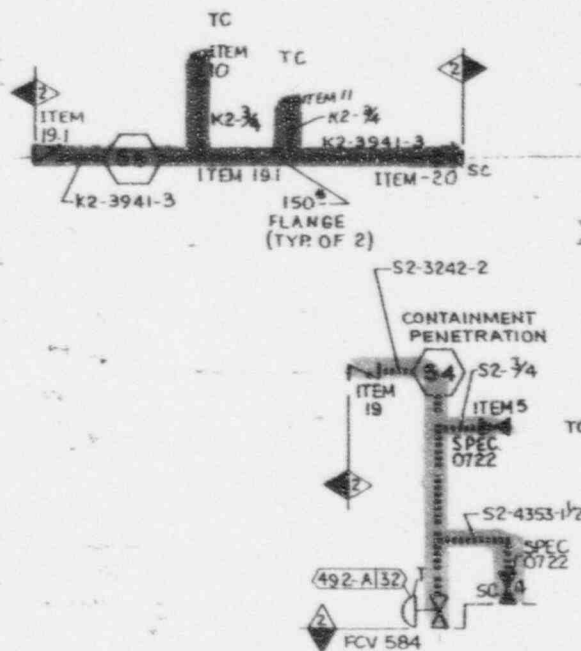
NOTE:
1. VALVE UNDER SPEC. 8179, P.O. #03226,
DC-663316-III.

UNIT - 2

14	P.G.&E. CO.	DRAWING NUMBER	REV
	SHEET 44 OF SHEETS	104628	26
	RHS INDEXED REV 26	MICROFILM	

#43 #44

CONTAINMENT STRUCTURE



P.G.&E.CO

DRAWING NUMBER

104628

COLA 500

14

460 | 461 | 462 | 463 | 464 | 465 | 466 | 467 | 468 | 469

LEGEND FOR NDE EXEMPTION COLOR CODING

1. COLOR CODING USED IN IDENTIFYING COMPONENTS EXEMPT FROM NDE

A. CLASS 1 EXEMPTION CRITERIA:

(BLUE) COMPONENT CONNECTIONS, PIPING, AND ASSOCIATED VALVES (AND THEIR SUPPORTS) ARE ONE-INCH NOMINAL PIPE SIZE AND SMALLER.

B. CLASS 2 EXEMPTION CRITERIA:

(GREEN) [1] COMPONENTS OF SYSTEMS OR PORTIONS OF SYSTEMS THAT DURING NORMAL PLANT OPERATING CONDITIONS (1) ARE NOT REQUIRED TO OPERATE OR PERFORM A SYSTEM FUNCTION BUT REMAIN FLOODED UNDER STATIC CONDITIONS AT A PRESSURE OF AT LEAST 80% OF THE PRESSURE THAT THE COMPONENT OR SYSTEM WILL BE SUBJECTED TO WHEN REQUIRED TO OPERATE; OR

(RED) [2] COMPONENTS OF SYSTEMS OR PORTIONS OF SYSTEMS, OTHER THAN RESIDUAL HEAT REMOVAL SYSTEMS AND EMERGENCY CORE COOLING SYSTEMS, THAT ARE NOT REQUIRED TO OPERATE ABOVE A PRESSURE OF 275 PSIG (1900kPa) OR ABOVE A TEMPERATURE OF 200°F (93°C); OR

(YELLOW) [3] COMPONENT CONNECTIONS (INCLUDING NOZZLES IN VESSELS AND PUMPS), PIPING AND ASSOCIATED VALVES, AND VESSELS (AND THEIR SUPPORTS) THAT ARE FOUR INCH NOMINAL PIPE SIZE AND SMALLER.

C. CLASS 3 EXEMPTION CRITERIA:

(MAGENTA) COMPONENT CONNECTIONS, PIPING AND ASSOCIATED VALVES (AND THEIR SUPPORTS) THAT ARE FOUR INCH NOMINAL PIPE SIZE AND SMALLER.

- (1) NORMAL CONDITIONS INCLUDE OPERATING CONDITIONS DURING REACTOR STARTUP, OPERATION AT POWER, HOT STANDBY, AND REACTOR COOLDOWN TO COLD SHUTDOWN CONDITIONS. TEST CONDITIONS ARE EXCLUDED.

35 M/M NEG

RM INDEXED REV. 14

UNIT - 2

14

P.G.&ECO

SHEET NO. 46 OF	SHEETS
DRAWING NUMBER	CHANGE
104628	14

[illegible]

EQUIPMENT OR SYSTEM					DESCRIPTION					COORDINATES				
CHANGE 7 - MAY 10, 1985					BY: J. BYCZYNSKI / T. ORTUA / W. ELLIS					CHANGE 10 - JAN 29, 1986				
SPENT FUEL PIT COOLING SYSTEM					ADDED - SPENT FUEL PIT COOLING LOOP TO INCLUDE LINES: 154, 155, 159, 1071, 1070, 2885, 1068, 156, 1069, 158 & 1067 TO THE ISI PROGRAM (PER DC2-EM-14210 OF 8-25-83)					ACCUMULATOR ADDED - WIDE RANGE LEVEL INDICATION LOOP PIPING TO THE ISI PROGRAM (PER DC2-EJ-18998 R6 OF 3-10-85)				
TABLE OF CHANGES					ADDED - NEW SHEET 42					BY: J. BYCZYNSKI / T. ORTUA / W. ELLIS				
CHANGE 8 - JULY 5, 1985					BY: J. BYCZYNSKI / T. ORTUA / W. ELLIS					CHANGE 11 - APRIL 11, 1986				
AUX. FW HP 2-1 TURB. MAIN STEAM SUPPLY					DELETED - ISOLATION VALVES DOWNSTREAM OF TRAPS TRP-109, 105 & 106. REVISED - ASME CLASS 2 CODE BOUNDARY TO STEAM TRAPS TRP-109, 105 & 106. (PER DC2-SP-24467 REV. 1 OF 8-10-84, FCT-H-9559 OF 3-5-85 AND FCT-5503 OF 9-24-84)					REVISED - VARIOUS LEAKOFF CONNECTIONS (PER DC2-SM-28427 R1 OF 3-20-85)				
EMERGENCY BORATE PIPING					ADDED - NEW LINE 5092, ISOLATING VALVES ON LINES 733 AND 5092, VENT AND DRAIN VALVES. (PER DC2-EM-16477 OF 10-7-83)					DELETED - FLOW INDICATING TRANSMITTERS, ADDED - TEST CONNECTIONS AND VALVES FOR FLOW ELEMENTS CALIBRATION. (PER DC2-EM-32956 R2 OF 12-3-85)				
CHANGE 9 - AUG. 15, 1985					BY: J. BYCZYNSKI / T. ORTUA / W. ELLIS					CHANGE 12 - MAY 15, 1986				
CONDENSATE STORAGE TK 2-1					ADDED - NEW CLASS 3 LINE 52-5197-3 WITH CHECK VALVE AND ITEM 63 DRAIN VALVE TO THE ISI PROGRAM (PER DC2-EM-12184 R1 OF 7-12-83)					BY: J. BYCZYNSKI / T. ORTUA / W. ELLIS				
AUX. SALT WTR. PPS DISCHARGE					REVISED - ASME CODE BOUNDARIES ON ROOT VALVES OF PI-952, PI-954, PI-185A & PI-186A. (PER DC2-EJ-14733 OF 8-13-83)					ADDED - ITEM 42 DRAIN VALVE TO LINE K-2126-2. (PER DC2-EM-18328 OF 1-10-84)				
CHANGE 13 - JUNE 4, 1986					BY: J. BYCZYNSKI / T. ORTUA / W. ELLIS					ADDED - SODIUM TRACER PROBES AW-5, 6, 7 & 8 (PER DC2-EJ-10928 OF 7-21-84)				
STEAM GENERATORS FEEDWATER LINES					ADDED - STRAINER STR-164 WITH BLOW-OFF VALVE UPSTREAM OF TRP-106 (PER DC2-EM-34485 R1 OF 12-16-85)					AUX. FEEDWATER PUMP TURBINE STEAM SUPPLY				

UNIT - 2

SHEET NO 48	OF	SHEETS
DRAWING NUMBER		
104628		
CHANGE		
14		

RM INDEXED REV. 14

35 MIN 1.14

EQUIPMENT OR SYSTEM	DESCRIPTION	COORDINATES
MISCELLANEOUS	CHANGE 14 - MARCH 3, 1987 BY: J. BYCZYNSKI, T. OKTUA, W. ELLIS REVISED - SHEETS 1, 2, 3, 5, 6, 8, 9, 10, 11, 12, 14, 15, 17, 18, 19, 20, 23, 24, 25, 27, 28, 29, 30, 31, 32, 33 AND FORMER SHEET 40 (NOW 46) TO CORRECT, UPDATE AND IMPROVE ISI PROGRAM IDENTIFICATION. (PER DC2-EM-34779 OF 2-13-86)	1 16
	REVISED - SHEETS 1, 6, 9, 10, 14, 17, 19, 22, 23, 24, 27, 29, 31, 32 AND ADDED - NEW SHEETS 40, 41, 42, 43, 44, 45 TO INCLUDE ALL MECHANICAL PENETRATIONS IN ISI PROGRAM. (PER DC2-EM-36271 OF 4-23-86)	2 16
SAFETY INJECTION PUMPS	REVISED - PI-938, PI-939, PX-411 AND PX-412 CONNECTIONS FROM PROCESS LINES (PUMP SUCTION AND DISCHARGE) TO DRAIN LINES. (PER AS-BUILT DWG. 108009, SH.5 REV. 9)	197-D/E 3 16
LEGEND FOR NDE EXEMPTION COLOR CODING AND TABLE OF CHANGES	REVISED - SHEET NUMBERING AS FOLLOWS: OLD 10 11 42 NEW 46 47 48 ADDED - NEW TABLE OF CHANGES SHEET 49	4 16 5 16
SPENT FUEL PIT	CHANGE 15 - AUGUST 28, 1987 BY: J. BYCZYNSKI, L. TONGSON, W. ELLIS DELETED - LINES 52-1069-4 & 52-1070-4 ADDED - NEW PUMP 2-2, PIPING, VALVES AND ASSOCIATED INSTRUMENTS. REVISED - LINE 52-1068-3 TO DOWNSTREAM OF LINE 52-156-3. - LINE 52-156-3 TO DOWNSTREAM OF VALVE 8762 AND - LINE 52-1071-3 TO UPSTREAM OF NEW LINE 52-5634-10. - RO-823 AND CHECK VALVE UPSTREAM OF RELOCATED VALVE 8762. ADDED - (PER EC2-EM-34785 OF 9-26-86, FCT-H-7905 OF 2-27-87 AND FCT-H-7906 OF 3-03-87)	244/246-C/E 15
	CHANGE 16 - OCT. 20, 1987 BY: J. BYCZYNSKI, T. OKTUA, W. ELLIS ADDED - BLIND FLANGED CONNECTION FOR S.G. RAPID DRAIN IN LINE K16-4292-4. (PER DC2-EM-36027 OF 7-16-86) ADDED - DRAIN VALVE OFF LINE K16-4292-4. (REF. FCT-5772 OF 12-7-84) ADDED - STRAINERS AND DRAIN CONNECTIONS TO STEAM TRAPS TRP-104, 105 & 118. (PER DC2-EM-36029 OF 12-24-86 AND FCT-0-1213 OF 6-29-87) ADDED - SECOND TSOI - VALVES (45V3 ON HOT LEG NO. 4 AND 45V1 ON HOT LEG NO. 3) IN UPPER RANGE LEVEL TRANSMITTER SENSING LINES. (PER FCT-0-1130A OF 5-19-87) ADDED - NOTE 1 (PER DC2-SM-38841 OF 4-29-87 AND DC2-SJ-38841 OF 4-30-87)	35-B 16 35-A 16 63-C 67/69-C 16 94-C 96-C 16 97-A 96-C 16
	CHANGE 17 - DEC. 15, 1987 BY: J. BYCZYNSKI, L. TONGSON, W. ELLIS ADDED - PRESSURE RELIEF VALVES RV-536 & RV-537 TO THE SUCTION PIPING. (PER DC2-EM-4037 OF 10-30-85) ADDED - PRESSURE RELIEF VALVE RV-596, ASSOCIATED VALVES AND PIPING TO TANK DRAIN LINE 56-3/4. (PER DC2-EM-40247 OF 10-7-87 AND FCT-0-1360 OF 10-12-87)	31/32 - A/C 17 183/184 - B 17 18
	CHANGE 18 - JANUARY 29, 1988 BY: J. BYCZYNSKI, L. TONGSON, W. ELLIS REVISED - RELIEF VALVE ID NO. TO 88558 (WAS 88538) (PER DC2-EM-34620 OF 1-13-86) NOTE: OTHER REVISIONS REQUESTED BY ABOVE DCN WERE INCORPORATED PREVIOUSLY PER DC2-EM-34779 (SEE 15)	174-E 18

UNIT - 2





















RM INDEX REV. 19


















P & G E CO. SHEET 49 OF 19

104628

REV. 19

MICROFILM

EQUIPMENT OR SYSTEM	DESCRIPTION	COORDINATES	EQUIPMENT OR SYSTEM	DESCRIPTION	COORDINATES
CHANGE 19 - SEPTEMBER 27, 1988 BY: J. BYCZYNSKI, L. TIONGSON, W. ELLIS			CHANGE 21 - APRIL 21, 1989 BY: J. BYCZYNSKI, L. TIONGSON, W. ELLIS		
UNIT 1 FUEL HANDLING BLDG	REVISED - ISOLATION VALVES IN LINES 3830 AND 3831 TO ITEM 61 (WERE V-0269) (PER DC0-EM-23700R1 OF 5-15-87)	365-D 	AUX FW PP DRIVE TURB	REVISED - TURBINE BRG. COOLING WATER PIPING TO REFLECT AS-BUILT CONDITIONS, ALSO ADDED RO-300 IN LINE 2076. (PER FCT-0-1866B OF 2-7-89)	31-C  33-C/D
RCP WATER SEAL 1 BYPASS	REVISED - VENT LINES OFF LINES 1495 THRU 1498 TO CLASS 1 (WERE CLASS 2) (PER FCT-0-1704B OF 8-8-88)	120-C  122-C 124-C 127-C	CHANGE 22 - NOV. 30, 1989 BY: J. BYCZYNSKI, L. TIONGSON, W. ELLIS		
PRESSURIZER SPRAY LINE 51	DELETED - PRESSURIZER SPRAY LINE 51 DRAIN TO RCDT SECOND ISOLATION VALVES FROM ISITP SCOPE (WERE CLASS 1) (PER FCT-0-1704B OF 8-8-88)	149-B 	AUX FW PP 1 RECIRC	DELETED - ITEM 49 THROTTLED VALVE IN LINE K-757-15. (PER FCT-10348 OF 9-11-89)	31-E 
TABLE OF CHANGES	ADDED - NEW TABLE OF CHANGES SHEET 50		EXCESS LETDOWN HEAT EXCH. 1	REVISED - COMPONENT COOLING LINES TO CLASS 2; WERE CLASS 3. (PER FCT-10256 OF 8-3-89)	125-E 
CHANGE 20 - JANUARY 4, 1989 BY: J. BYCZYNSKI, L. TIONGSON, W. ELLIS			SAFETY INJ. PUMPS SUCTION HEADER	REVISED - CROSS REFERENCE FLAG ON LINE S2-1986-8. (PER FCT-10347 OF 9-11-89)	188-C 
PRESSURIZER SPRAY CONTROL	REVISED - PCV-455A&B CONTROL VALVES TO AIR OPERATED MODULATING VALVES. (WERE AIR OPERATED GLOBE VALVES WITH POSITIONERS) (PER DC2-EM-40053R1 OF 8-3-88)	105-A 	MAKE-UP WTR TRANSFER PPS DISCHARGE	REVISED - TRANSFER PUMPS DISCHARGE LINES TO CCS SURGE TANK MAKE-UP TO REFLECT AS-BUILT CONFIGURATION. (PER FCT-10261 OF 7-28-89)	333-A  344/346-E 
BIT BYPASS	ADDED - SECOND BIT BYPASS LINE ISOLATION VALVE AND P1-155 ROOT VALVE WITH UPSTREAM PIPING. (PER DC2-EM-42166 OF 9-8-88)	182-E 	CHANGE 23 - FEB. 27, 1990 BY: E.O. BROAS, J. BYCZYNSKI, W. ELLIS		
SI PUMPS	REVISED - FIRST BIT BYPASS LINE ISOLATION VALVE TO 8969. (WAS 8369) (PER FCT-0-1800B OF 11-12-88)	182-D 	BORON INJ. TANK 2-1	DELETED - BYPASS LINES ON TK INLET & OUTLET ISOL. VLVs: 8803A & B AND 8801A & B, RESPECTIVELY. (PER FCT-10697 OF 12-6-89)	182/183-D/C  185-B/C
	ADDED - FLOW ELEMENT FE-973 AND FLOW INDICATOR ROOT VALVES WITH UPSTREAM PIPING ON LINE 239. (PER DC2-SM-40535 OF 9-9-88)	197-D 	COND. STORAGE TANK 2-1	ADDED - AUX FEED WTR RECIRC. LINE 5020 WITH ISOL VLV TO AUX FW PPS RECIRC HEADER 567. (PER FCT-10782 OF 12-15-89)	332-C 
	ADDED - RO-269 IN SI PUMP 2-2 DISCHARGE NOZZLE FLANGE JOINT. (PER DC2-SM-42438 OF 11-16-88)	197-D 	RAW WTR STOR. RESV DISCH HDR	ADDED - BOUNDARY TO CLARIFY COMMON EQUIP. SHOWN ON UNIT 2 DRAWING. (PER FCT-10699 OF 11-30-89)	388-D  390-C
NSS SAMPLING SYSTEM	ADDED - TEST VENTS INSIDE CONTAINMENT AND TEST DRAINS OUTSIDE CONTAINMENT AT PENETRATIONS 76A, 59A, 59B & 59C. (PER DC2-SM-40817 OF 5-11-88)	222-C/E 	UNIT-2 		
			PG & E CO. 104628 REV. 24 SHEET 50 OF SHEETS MICROFILM		

0	1	2	3	4	5	6	7	8	9	
SYSTEM OR EQUIPMENT					SYSTEM OR EQUIPMENT					
DESCRIPTION					DESCRIPTION					
COORDINATES					COORDINATES					
CHANGE 24, MAY 10, 1990 BY: E.O. BROAS/J.Z. BYCZYNSKI/W. ELLIS					CHANGE 26, SEPT. 14, 1990 BY: E.O. BROAS/J.Z. BYCZYNSKI/W. ELLIS					
RCP SEAL #1 WATER OUTLETS	REVISED	- 151 CLASS 2 BOUNDARIES. NOW AT VALVES B354A, B, C & D; WERE AT BLIND FLANGES DOWNSTREAM OF THESE VALVES. (PER DC2-SM-42667 OF 5/27/89)	120/122/ 124/127- D		SI & RHR PPS DISCH LINES INSIDE CONT.	REVISED	- GRAPHIC REPRESENTATION OF LINES, VALVE AND LINE NUMBERS TO CORRECT MINOR DRAWING DISCREPANCIES. (PER FCT-10590 OF 11-19-89)	191-E, D, B		A
SEAL WATER RETURN LINES	ADDED	- SPECTACLE PLATES & FLANGES ON LINES 62, 234 & 1500. (PER DC2-SM-42615 OF 5/27/89)	126/127-E		SPRAY ADDITIVE TANK 2-1	REVISED	- LINES 2510 & 2511 ORIENTATION TO REFLECT ACTUAL CONDITIONS.	237-B 234-D		
RCP CCM RETURN HEADERS	ADDED	- NEW BOUNDARY VALVES UPSTREAM OF FCV-749 IN LINE 3179 & UPSTREAM OF FCV-750 IN LINE 1357. (PER DC2-SM-42583 OF 6/12/89)	292/293-B		RESIDUAL HEAT EXCHG 2-2 & 2-1	REVISED	- RV-47 DISCHARGE LINE CONNECTION TO LINE 122 (WAS TO LINE 99) AND RV-46 DISCHARGE LINE CONNECTION TO LINE 131 (WAS TO LINE 127) (PER FCT-11348 OF 4-29-90)	270-B 324-B		B
HEADER "C" COMPONENTS	DELETED	- WASTE CONCENTRATOR PACKAGE COOLERS WITH ASSOCIATED PIPING AND VALVES. ADDED	304/306-B/D		CONDENSATE STORAGE TANK 2-1	REVISED	- "AUX FW PUMP SUCTION" WORDING LOCATION TO LINE 380 (WAS AT LINE 5371) (PER FCT-10590 OF 11-19-89)	333-C/D		
DIESEL ENGINE JACKET EXPANSION TANK	ADDED	- LEVEL INDICATOR GAUGE GLASS VALVES AND PIPING TO TANK. (PER DC2-SJ-427 R1 OF 6/1/89)	372-E		CHANGE 27, AUG. 05, 1991 BY: E.O. BROAS/J.Z. BYCZYNSKI/W. ELLIS					
CONTAINMENT PRESSURE EQUALIZATION	ADDED	- NOTE 1 TO FCV-662 AND FCV-663. (PER DC2-SM-42670 OF 5/30/89)	431 & 435-C 430-E		CONTAINMENT AIR SAMPLE (INSIDE CONTAINMENT)	REVISED	- CHECK VALVE ITEM NO. 19 TO NOTE 1 (PER FCT-11713 OF 4-23-90)	444-B		C
TABLE OF CHANGES	ADDED	- NEW SHEET 51			CHANGE 25, JUNE 29, 1990 BY: E.O. BROAS/J.Z. BYCZYNSKI/W. ELLIS					
CHANGE 25, JUNE 29, 1990 BY: E.O. BROAS/J.Z. BYCZYNSKI/W. ELLIS					AUX. SALTWATER PPS 1 & 2 DISCH.					
(NOT USED)					ADDED	- DETAIL AND NOTE 1 RE: TEMPORARY INSTALLATIONS TO FX-2 & FX-8. (PER DCO-EM-43429 OF 11-27-89)	355/357-D/G			
AFW PUMPS RAW WATER SUCT HDR	REVISED	- LOCATION OF BOUNDARY BETWEEN LINE K-1862-B AND LINE K-638-B; WAS ON SHEET 38. (PER FCT-10823 OF 1-4-90)	30-A 389-D		UNIT-2 					
MAIN STEAM ISOL. VALVES	ADDED	- INSPECTION PORTS TO FCV-41, FCV-42, FCV-43 AND FCV-44. (PER DC2-EP-44028 OF 6-26-89)	54-D, B 64-D, B		P & H CO. 104628					
REACT VESSEL LEVEL INSTR.	REVISED	- PROVISIONS FOR RYRLIS INSTRUMENTATION, NOTE 1. (PER DC2-SM-44962 OF 2-8-90)	95/96-C 97-A		SHEET 51 OF SHEETS					
					REV. 28					

INSERVICE INSPECTION (ISI) RELIEF REQUEST #NDE-1

System/Component for Which Relief is Requested

Reactor vessel shell to bottom head weld.

ASME Section XI Code Requirements

1989 Edition, Table IWB-2500-1, Category B-A, Item B1.10, requires that the reactor vessel shell to bottom head weld (Unit 1 weld number 10-442; Unit 2 weld number 10-201) be volumetrically examined once at or near the end of the interval. Essentially, 100 percent of the weld volume is required to be examined by shear and longitudinal beams from both sides and along the weld axis, as shown in Figure IWB-2500-1, using the acceptance standard of IWB-3510.

Code Requirement from Which Relief is Requested

Relief is requested from performing a portion of the volumetric examination where access is restricted by core support lugs and the bottom head taper.

Basis for Relief Request

Design of the vessel shell to bottom head weld precludes a portion of the required examination due to the presence of the 12 core support lugs. The core support lugs and bottom head taper prohibit access by the vendor's reactor vessel examination tool to a portion of the examination volume. Approximately 57 percent of the weld is accessible for Code volumetric examination and all accessible areas will be examined as required.

Proposed Alternative

All accessible areas (approximately 57 percent of the required volume) will be completely examined as required.

INSERVICE INSPECTION (ISI) RELIEF REQUEST #NDE-1

Justification for Granting of Relief

A portion of the weld is physically inaccessible due to the core support lug design. All areas accessible to the vendor's examination tool will be completely examined as required. In addition to the volumetric examination, visual examination of the vessel interior is performed per Code Category B-N-1 and visual examination is conducted during pressure test per Code Category B-P. This partial volumetric examination combined with the visual examinations provide continued assurance of weld integrity.

Implementation Schedule

This relief request will be implemented during Units 1 and 2 second ISI intervals. The examinations are expected to be performed during the second half of the intervals.

This request is essentially the same as NDE-001 from the first ISI interval and was approved in NRC letter dated December 14, 1988.

INSERVICE INSPECTION (ISI) RELIEF REQUEST #NDE-2

System/Component for Which Relief is Requested

Reactor Vessel Circumferential Head Welds.

ASME Section XI Code Requirements

1989 Edition, Table IWB-2500-1, Category B-A, Item B1.21, requires that the reactor vessel circumferential head welds (Unit 1 bottom head weld number 4-443 and closure head weld number 6-446B; Unit 2 bottom head weld number 4-202 and closure head weld number 6-205B) be volumetrically examined once at or near the end of the interval. Essentially, 100 percent of the weld volume is required to be examined by shear and longitudinal beams from both sides and along the weld axis as shown in Figure IWB-2500-3, with acceptance standard of IWB-3510.

Code Requirement from Which Relief is Requested

Relief is requested from performing the volumetric examination on these inaccessible welds.

Basis for Relief Request

Design of the reactor vessel circumferential head welds precludes the required examination due to the presence of the bottom head instrument penetrations which prohibit access by the vendor's reactor vessel inspection tool, and the control rod drive mechanism penetrations and cooling duct shroud on the closure head, which prevent access for manual or automated examination.

Proposed Alternative

None.

INSERVICE INSPECTION (ISI) RELIEF REQUEST #NDE-2

System/Component for Which Relief is Requested

Reactor Vessel Circumferential Head Welds.

ASME Section XI Code Requirements

1989 Edition, Table IWB-2500-1, Category B-A, Item B1.21, requires that the reactor vessel circumferential head welds (Unit 1 bottom head weld number 4-443 and closure head weld number 6-446B; Unit 2 bottom head weld number 4-202 and closure head weld number 6-205B) be volumetrically examined once at or near the end of the interval. Essentially, 100 percent of the weld volume is required to be examined by shear and longitudinal beams from both sides and along the weld axis as shown in Figure IWB-2500-3, with acceptance standard of IWB-3510.

Code Requirement from Which Relief is Requested

Relief is requested from performing the volumetric examination on these inaccessible welds.

Basis for Relief Request

Design of the reactor vessel circumferential head welds precludes the required examination due to the presence of the bottom head instrument penetrations which prohibit access by the vendor's reactor vessel inspection tool, and the control rod drive mechanism penetrations and cooling duct shroud on the closure head, which prevent access for manual or automated examination.

Proposed Alternative

None.

INSERVICE INSPECTION (ISI) RELIEF REQUEST #NDE-2

Justification for Granting of Relief

The head circumferential welds are completely inaccessible for volumetric examination due to the vessel penetrations design. The welds are farthest from the "beltline" region of the shell; therefore, see the least neutron fluence. The bottom head weld area is visually examined as required by Code Category N-1 and all welds are subject to visual examination conducted during pressure test per Code Category B-P. These visual examinations and the volumetric examination of all other accessible weld areas on the reactor vessel provide continued assurance of weld integrity.

Implementation Schedule

This relief request will be implemented during Units 1 and 2 second ISI intervals.

This request is essentially the same as a portion of NDE-002 from the first ISI interval and was approved in NRC letter dated December 14, 1988.

INSERVICE INSPECTION (ISI) RELIEF REQUEST #NDE-3

System/Component for Which Relief is Requested

Reactor vessel meridional head welds.

ASME Section XI Code Requirements

1989 Edition, Table IWB-2500-1, Category B-A, Item B1.22, requires that the reactor vessel meridional head welds (Unit 1 bottom head weld numbers 1-443A through F and closure head weld numbers 1-446A through F; Unit 2 bottom head weld numbers 1-202A through F and closure head weld numbers 1-205A through F) be volumetrically examined once during the interval. Essentially, 100 percent of the weld volume is required to be examined by shear and longitudinal beams from both sides and along the weld axis as shown in Figure IWB-2500-3, with acceptance standard of IWB-3510.

Code Requirement from Which Relief is Requested

Relief is requested from performing a portion of the volumetric examination where access is restricted by bottom head instrument penetrations or closure head control rod drive mechanism (CRDM) penetrations and the closure head cooling duct shroud.

Basis for Relief Request

Design of the reactor vessel meridional head welds precludes a portion of the required examinations due to the presence of the bottom head instrument penetrations, which limit the vendor's reactor vessel inspection tool to a portion of the examination volume. The CRDM penetrations and cooling duct shroud on the closure head which limit access for manual or automated examination to the section of weld below the shroud. Approximately 39 percent of the bottom head welds are accessible and approximately 50 percent of the closure head welds are accessible for Code volumetric examination. All accessible areas will be examined as required.

INSERVICE INSPECTION (ISI) RELIEF REQUEST #NDE-3

Proposed Alternative

All accessible areas (approximately 39 percent of the required volume for the bottom head meridional welds and approximately 50 percent of the required volume for the closure head meridional welds) will be completely examined as required.

Justification for Granting of Relief

Access to portions of these welds is physically limited. All areas of the bottom head welds accessible to the vendor's examination tool will be completely examined as required. All accessible areas below the closure head cooling duct shroud will be completely examined as required. In addition to the volumetric examination, visual examination of the vessel interior is performed per Code Category B-N-1 and visual examination is conducted during pressure test per Code Category B-P. This partial volumetric examination combined with the visual examinations provide continued assurance of the welds integrity.

Implementation Schedule

This relief request will be implemented during Units 1 and 2 second ISI intervals. The examinations of the bottom head welds are expected to be performed during the second half of the intervals. The examinations of the closure head welds are distributed evenly throughout the intervals.

This request is essentially the same as a portion of NDE-002 from the first ISI interval and was approved in NRC letter dated December 14, 1988.

INSERVICE INSPECTION (ISI) RELIEF REQUEST #NDE-4

System/Component for Which Relief is Requested

Reactor vessel shell to flange weld.

ASME Section XI Code Requirements

1989 Edition, Table IWB-2500-1, Category B-A, Item B1.30, requires that the reactor vessel shell to flange weld (Unit 1 weld number 7-442; Unit 2 weld number 7-201) be volumetrically examined once during the interval. Essentially, 100 percent of the weld volume is required to be examined by shear and longitudinal beams from both sides and along the weld axis as shown in Figure IWB-2500-4, with acceptance standard of IWB-3510.

Code Requirement from Which Relief is Requested

Relief is requested from performing a portion of the volumetric examination where access is restricted due to taper of the shell adjacent to the weld. This restriction affects a portion of the parallel scan from the vessel flange forging.

Basis for Relief Request

Design of the reactor vessel shell to flange weld precludes a portion of the required examination due to the presence of an abrupt taper in the flange forging immediately adjacent to the weld. This taper causes lift-off of the transducer shoe of the vendor's reactor vessel inspection tool during the parallel scan from the vessel surface. All of the weld is accessible for perpendicular scans (done from the flange surface) and approximately 32 percent of the weld is accessible for parallel scans. Overall weld coverage is approximately 66 percent. All accessible areas will be examined as required.

Proposed Alternative

All accessible areas (approximately 66 percent of the required volume) will be completely examined as required.

INSERVICE INSPECTION (ISI) RELIEF REQUEST #NDE-4

Justification for Granting of Relief

The taper adjacent to the weld physically limits access for a portion of the required examination. All areas of the shell to flange weld accessible to the vendor's examination tool for the parallel scans will be completely examined as required. Additionally, 100 percent of the required examination from the flange surface is completed using manual scanning techniques. In addition to the volumetric examination, visual examination of the vessel interior is performed per Code Category B-N-1 and visual examination is conducted during pressure test per Code Category B-P. This partial volumetric examination combined with the visual examinations provide continued assurance of the weld integrity.

Implementation Schedule

This relief request will be implemented during Units 1 and 2 second ISI intervals. The parallel scan examination of the shell to flange weld is expected to be performed during the second half of the intervals.

INSERVICE INSPECTION (ISI) RELIEF REQUEST #NDE-5

System/Component for Which Relief is Requested

Reactor vessel head to flange weld.

ASME Section XI Code Requirements

1989 Edition, Table IWB-2500-1, Category B-A, Item B1.40, requires that the reactor vessel head to flange weld (Unit 1 weld number 6-446A; Unit 2 weld number 6-205A) be volumetrically examined once during the interval. Essentially, 100 percent of the weld volume is required to be examined by shear and longitudinal beams from both sides and along the weld axis, as shown in Figure IWB-2500-5, with acceptance standard of IWB-3510.

Code Requirement from Which Relief is Requested

Relief is requested from performing a portion of the volumetric examination where access is restricted due to the blend radius of the flange and flange bolt holes adjacent to the weld. This restriction affects scans from the flange side. Additionally, the three closure head lifting lugs limit full access from the head side.

Basis for Relief Request

Design of the reactor vessel head to flange weld precludes a portion of the required volumetric examination due to the blend radius of the flange and the flange bolt holes immediately adjacent to the weld. The radius causes lift-off of the transducer shoe and redirection of the sound beam during examination from the flange side, and the holes prevent general access. The three closure head lifting lugs also limit access from the head side. Approximately 68 percent of the weld is accessible. All accessible areas will be examined as required.

Proposed Alternative

All accessible areas (approximately 68 percent of the required volume) will be completely examined as required.

INSERVICE INSPECTION (ISI) RELIEF REQUEST #NDE-5

Justification for Granting of Relief

The head to flange blend radius and lifting lugs limit access for a portion of the required examination volume. All accessible areas of the head to flange weld will be completely examined as required. In addition to the volumetric examination, a surface examination is performed, and visual examination is conducted during pressure test per Code Category B-P. This partial volumetric examination combined with the surface and visual examinations provides continued assurance of the welds integrity.

Implementation Schedule

This relief request will be implemented during the Units 1 and 2 second ISI intervals. The examination of the head to flange weld is performed in sections apportioned evenly throughout the intervals.

This request is essentially the same as NDE-003 from the first ISI interval and was approved in NRC letter dated December 14, 1988.

INSERVICE INSPECTION (ISI) RELIEF REQUEST #NDE-6, R1

System/Component for Which Relief is Requested

Reactor vessel nozzle to vessel welds.

ASME Section XI Code Requirements

1989 Edition, Table IWB-2500-1, Category B-D, Item B3.90, requires that the reactor vessel nozzle-to-vessel welds (four each 29 inch nominal pipe diameter outlet nozzles and 27.5 inch nominal pipe diameter inlet nozzles) be volumetrically examined once during the interval. Essentially, 100 percent of the weld volume is required to be examined by shear and longitudinal beams from inside the nozzle and from the vessel shell as shown in Figures IWB-2500-7(a), with acceptance standard of IWB-3512. At least 25 percent of the nozzle welds are required to be examined in the first inspection period. Partial deferral is conditionally permitted by Code Footnote 3.

Code Requirement from Which Relief is Requested

Relief is requested from performing a portion of the volumetric examination from the vessel shell (parallel to the weld) where access is restricted due to the outlet nozzle reinforcement, the adjacent nozzle opening, and the vessel closure flange transition; and from performing period one examinations, including the deferral conditions of the shell side exam required by Code Footnotes 2 and 3 and coincident nozzle-to-safe end exams.

NOTE: this request influences safe end weld schedule per Code Category B-F, footnote 2, automatically. It is intended that the safe end welds be examined on the same schedule as the nozzle welds.

INSERVICE INSPECTION (ISI) RELIEF REQUEST #NDE-6, R1

Basis for Relief Request

Design of the reactor vessel and nozzles precludes a portion of the required examination from the vessel shell side due to the reinforcement on the outlet nozzles which break the plane of the vessel shell, the presence of the adjacent nozzles which limit scan travel, and the closure flange transition which presents a ramp on the scanning surface causing transducer liftoff. Overall, approximately 90 percent of each inlet nozzle weld and 80 percent of each outlet nozzle weld is accessible. All accessible areas will be examined.

Performing partial examination of two nozzles in period one cost over a quarter million dollars per Unit in direct vendor billing, not counting local support or any costs associated with radiation exposure. There has never been a failure of nozzle welds in a pressurized water reactor, and the welds will be fully examined (with the minor limitations noted above) at or near the end of the interval at minor incremental cost as part of the full vessel examination. The large cost associated solely with early schedule of the examination constitutes an extreme burden with no compensating benefit to safety.

Proposed Alternative

All accessible areas, approximately 86 percent of the required volume of inlet nozzles and 66 percent of the required volume for outlet nozzles (in both cases coverage from inside the bore is approximately 100 percent) will be completely examined as required at or near the end of the inspection interval.

Justification for Granting of Relief

Access to a portion of the examination area is physically limited from the vessel shell side. All accessible areas of the nozzle-to-vessel weld will be completely examined, including full coverage from inside the nozzle bore. In addition to the partial volumetric examination, visual examination of the vessel interior is performed per Code Category B-N-1 and visual examination is conducted during pressure test per Code Category B-P. This partial volumetric examination combined with the visual examinations provide continued assurance of weld integrity. The high cost of early partial examination of two nozzles is not justified by any increase in quality or safety.

INSERVICE INSPECTION (ISI) RELIEF REQUEST #NDE-6, R1

Implementation Schedule

This relief request will be implemented during the Units 1 and 2 second ISI intervals. The examinations of the nozzle-to-vessel welds are planned for the second half of the intervals.

The portion of this request involving physical limits is essentially the same as NDE-004 from the first ISI interval and was approved in NRC letter dated December 14, 1988. The portion dealing with examination schedule is a new request based on first interval experience and related to NDE-7 which follows.

INSERVICE INSPECTION (ISI) RELIEF REQUEST #NDE-7

System/Component for Which Relief is Requested

Reactor vessel nozzle inside radius section (schedule).

ASME Section XI Code Requirements

1989 Edition, Table IWB-2500-1, Category B-D, Item B3.100, requires that the reactor vessel nozzle inside radius section (four each 29 inch nominal pipe diameter outlet nozzles and 27.5 inch nominal pipe diameter inlet nozzles) be volumetrically examined. Essentially, 100 percent of the nozzles inside radius section is required to be examined using near surface ultrasonic techniques from the nozzle radius as shown in Figure IWB-2500-7(a), with acceptance standard of IWB-3512. Deferral of the examination of two of the inside radius sections to the end of the inspection interval is not permitted, according to Code Footnote 2.

Code Requirement from Which Relief is Requested

Relief is requested from the distributed schedule requirement which does not permit deferral of examination of 25 percent (two) of the nozzles inside radius section to the end of the inspection interval, as stated in Code Footnote 2.

Basis for Relief Request

Relief from the schedule requirement is necessary because performing examinations of the nozzle inside radius section requires use of a vendor inspection tool and is not cost effective to perform separately from the rest of the vessel examinations. A separate examination of the two nozzles, including the inside radius section, cost over a quarter million dollars in direct vendor billing in the first interval, and constitutes an extreme burden with no compensating increase in safety. The same examinations can be performed at or near the end of the interval together with the remainder of the vessel examinations at minor incremental cost.

INSERVICE INSPECTION (ISI) RELIEF REQUEST #NDE-7

Proposed Alternative

All of the required nozzles inside radius section will be completely examined at or near the end of the inspection interval, concurrently with the examination of the rest of the reactor vessel.

Justification for Granting of Relief

All of the nozzles inside radius section will be completely examined to provide continued assurance of integrity; however, the burden of additional scheduled examination is not justified by any benefit derived from performing the examinations of two nozzles inside radius section on a distributed schedule before the end of the inspection interval. Interim assurance of the integrity of the two nozzles inside radius section is provided by the demonstrated adequacy of the remaining nozzles as shown by the examinations performed in the first interval, third period. There have been no documented failures in the inside radius section of pressurized water reactor nozzles.

Implementation Schedule

This relief request will be implemented during the Units 1 and 2 second ISI intervals. The examinations of the two nozzles inside radius section are planned for the second half of the intervals, concurrently with the balance of the reactor vessel examinations.

This is a new request and is related to a portion of the preceding NDE-6.

INSERVICE INSPECTION (ISI) RELIEF REQUEST #NDE-8

System/Component for Which Relief is Requested

Pressurizer nozzle inside radius section.

ASME Section XI Code Requirements

1989 Edition, Table IWB-2500-1, Category B-D, Item B3.120, requires that the pressurizer nozzle inside radius section (four each 6 inch nominal pipe diameter relief nozzles, one four inch nominal pipe diameter spray nozzle and one 14 inch nominal pipe diameter surge nozzle) be volumetrically examined once during the interval. Essentially, 100 percent of the nozzle inside radius section is required to be examined as shown in Figure IWB-2500-7(b) for Unit 1 and IWB-2500-7(d) for Unit 2, with acceptance standard of IWB-3512.

Code Requirement from Which Relief is Requested

Relief is requested from performing the volumetric examination of the pressurizer nozzles inside radius section due to adverse surface conditions which make meaningful examination impossible.

Basis for Relief Request

Design of the pressurizer and nozzles precludes performance of any meaningful examination of the inside radius section. The surge line nozzle is surrounded by heater penetrations which prohibit access to scan the inside radius area. On the top head, the compound curvature of the head combined with continuously variable orientation of the 6-inch nozzles, the short radii of all the nozzles and the irregularity of the surface make meaningful examination impossible. On Unit 2, the nozzles are welded and the weld crown presents an additional limitation.

Proposed Alternative

None.

INSERVICE INSPECTION (ISI) RELIEF REQUEST #NDE-8

Justification for Granting of Relief

The vessel design and access limitations make meaningful nozzle inside radius section examination impossible. Visual examination is conducted during pressure test per Code Category B-P. For Unit 2, the nozzle to vessel welds on the top head are volumetrically examined from the head side. The visual examination together with the volumetric examination of a portion of the areas adjacent to the nozzle inside radius sections provides continued assurance of integrity.

Implementation Schedule

This relief request will be implemented during the Units 1 and 2 second ISI intervals.

This request is essentially the same as a portion of NDE-012A from the first ISI interval and was approved in NRC letter dated December 14, 1988.

INSERVICE INSPECTION (ISI) RELIEF REQUEST #NDE-9

System/Component for Which Relief is Requested

Steam generators (SG) (primary side) nozzle inside radius section.

ASME Section XI Code Requirements

1989 Edition, Table IWB-2500-1, Category B-D, Item B3.140, requires that the SGs primary side nozzle inside radius section (29 inch nominal pipe diameter inlet nozzle, 31 inch nominal pipe diameter outlet nozzle) be volumetrically examined once during the interval. Essentially, 100 percent of the nozzle inside radius section is required to be examined as shown in Figure IWB-2500-7(d), with acceptance standard IWB-3512.

Code Requirement from Which Relief is Requested

Relief is requested from performing the volumetric examination of the SG nozzles inside radius section.

Basis for Relief Request

Design of the SG and nozzles precludes performance of any meaningful examination of the inside radius section. Compound curvature of the head combined with continuously variable orientation of the nozzle inside radius section and the irregularity of the surface make meaningful examination impossible. Inside the vessel, the nozzle dam rings are installed over the inside radius section, precluding access from that side.

Proposed Alternative

None.

INSERVICE INSPECTION (ISI) RELIEF REQUEST #NDE-9

Justification for Granting of Relief

The vessel design and access limitations make meaningful examination of the nozzle inside radius section impossible. Visual examination is conducted during pressure tests per Code Category B-P. This visual examination provides continued assurance of integrity.

Implementation Schedule

This relief request will be implemented during the Units 1 and 2 second ISI intervals.

This request is essentially the same as a portion of NDE-012B from the first ISI interval and was approved in NRC letter dated December 14, 1988.

INSERVICE INSPECTION (ISI) RELIEF REQUEST #NDE-10

System/Component for Which Relief is Requested

Reactor vessel NPS 4 or larger nozzle-to-safe end butt welds.

ASME Section XI Code Requirements

1989 Edition, Table IWB-2500-1, Category B-F, Item B5.10, requires that the reactor vessel nozzle-to-safe end welds (four each 29 inch nominal diameter outlet nozzles, four each 27.5 inch nominal diameter inlet nozzles) be examined once during the interval. Essentially, 100 percent of the nozzle-to-safe end weld is required to be examined using volumetric and surface methods as shown in Figure IWB-2500-8(c), with acceptance criteria of IWB-3514.

Code Requirement from Which Relief is Requested

Relief is requested from performing a portion of the volumetric examination of the reactor vessel inlet nozzle-to-safe end welds where access is restricted due to non-removable reactor vessel insulation.

Basis for Relief Request

Design of the reactor vessel insulation at the inlet nozzles limits access for ultrasonic examination of the nozzle to safe end weld (316 stainless steel nozzle end pup sections are welded directly to the nozzles) due to the proximity of the non-removable insulation to the weld which restricts scan lengths from the vessel side. Approximate accessible portions of each weld volume are described below:

<u>Unit 1 Weld</u>	<u>Line</u>	<u>NPS</u>	<u>Limitation</u>	<u>% Accessible</u>
WIB-RC-1-18SE	9	27.5	RPV insulation	40
WIB-RC-2-20SE	10	27.5	RPV insulation	75
WIB-RC-3-18SE	11	27.5	RPV insulation	75
WIB-RC-4-18SE	12	27.5	RPV insulation	75

INSERVICE INSPECTION (ISI) RELIEF REQUEST #NDE-10

<u>Unit 2 Weld</u>	<u>Line</u>	<u>NPS</u>	<u>Limitation</u>	<u>% Accessible</u>
WIB-RC-1-16SE	9	27.5	RPV insulation	75
WIB-RC-2-16SE	10	27.5	RPV insulation	75
WIB-RC-3-16SE	11	27.5	RPV insulation	75
WIB-RC-4-16SE	12	27.5	RPV insulation	75

Proposed Alternative

All accessible areas of the nozzle-to-safe end welds will be completely examined as required, using refracted longitudinal beam and shear wave techniques with a combination of automated and manual scanning methods. In addition to the volumetric examination, the welds receive full surface examination. Visual examination conducted on the area underneath the nozzles during pressure tests per Code Category B-P provides additional assurance of weld integrity.

Justification for Granting of Relief

The reactor vessel insulation at the inlet nozzles is not designed to be removed and it limits full volumetric examination of the nozzle-to-safe end welds. Volumetric examination will be conducted as required for the accessible portion of the weld volume. Surface examination is performed as required and visual examination is conducted during pressure tests per Code Category B-P. This partial volumetric examination combined with the surface and visual examinations provides continued assurance of the welds integrity.

Implementation Schedule

This relief request will be implemented during the Units 1 and 2 second ISI intervals. The safe end examinations are apportioned evenly throughout the intervals.

This request is essentially the same as NDE-009 (U2) from the first ISI interval and was approved in NRC letter dated October 25, 1989. Differences in noted coverages may occur due to use of automated scanners which provide a higher quality examination, but may experience somewhat more limited coverage.

INSERVICE INSPECTION (ISI) RELIEF REQUEST #NDE-11

System/Component for Which Relief is Requested

Pressurizer NPS 4 or larger nozzle-to-safe end butt welds.

ASME Section XI Code Requirements

1989 Edition, Table IWB-2500-1, Category B-F, Item B5.40, requires that the pressurizer nozzle-to-safe end welds (4 inch nominal diameter spray nozzle, four 6 inch nominal diameter safety/relief nozzles, 14 inch nominal diameter surge nozzle) be volumetrically examined once during the interval. Essentially, 100 percent of the nozzle-to-safe end weld is required to be examined using volumetric and surface methods as shown in Figure IWB-2500-8(c), with acceptance criteria of IWB-3514.

Code Requirement from Which Relief is Requested

Relief is requested from performing a portion of the volumetric examination of all of the pressurizer nozzle-to-safe end welds.

Basis for Relief Request

Design of the pressurizer nozzles and safe ends (316 stainless steel nozzle end reducing sections are welded directly to the nozzles) limits access for ultrasonic examination due to compound curvatures and abrupt contours of the short multi-step reducing sections and weld crown geometry. These conditions restrict scan lengths, change the refracted sound beam angle, and cause transducer liftoff. Approximate accessible portions of each weld volume are described below:

<u>Unit 1 Weld</u>	<u>Line</u>	<u>NPS</u>	<u>Limitation</u>	<u>% Accessible</u>
WIB-374SE	15	4	OD surface contour	75
WIB-71SE	16	14	OD surface contour	70
WIB-331SE	727	6	OD surface contour	55

INSERVICE INSPECTION (ISI) RELIEF REQUEST #NDE-11

<u>Unit 1 Weld</u>	<u>Line</u>	<u>NPS</u>	<u>Limitation</u>	<u>% Accessible</u>
WIB-322SE	728	6	OD surface contour	50
WIB-313SE	729	6	OD surface contour	60
WIB-340SE	730	6	OD surface contour	75

<u>Unit 2 Weld</u>	<u>Line</u>	<u>NPS</u>	<u>Limitation</u>	<u>% Accessible</u>
WIB-345SE	15	4	OD surface contour	80
WIB-439SE	16	14	OD surface contour	70
WIB-359SE	727	6	OD surface contour	75
WIB-423SE	728	6	OD surface contour	70
WIB-369SE	729	6	OD surface contour	70
WIB-380SE	730	6	OD surface contour	70

Proposed Alternative

All accessible areas of the nozzle-to-safe end welds will be completely examined as required, using a combination of shear and refracted longitudinal beam techniques, with manual scanning methods supplemented by automated or partially automated scanning. In addition to the volumetric examination, the welds receive full surface examination and visual examination is conducted during pressure test per Code Category B-P.

Justification for Granting of Relief

The pressurizer nozzle and safe end designs limit full volumetric examination of the nozzle-to-safe end welds due to compound curvature, abrupt contours, weld crown geometry, and surface roughness. Volumetric examination will be conducted as required for the accessible portion of the weld volume. Surface examination is performed as required and visual examination is conducted during pressure test per Code Category B-P. This partial volumetric examination combined with the surface and visual examinations provides continued assurance of the welds integrity.

INSERVICE INSPECTION (ISI) RELIEF REQUEST #NDE-11

Implementation Schedule

This relief request will be implemented during the Units 1 and 2 second ISI intervals. The nozzle-to-safe end weld examinations are apportioned evenly throughout the intervals.

This request is essentially the same as NDE-008A from the first ISI interval and was approved in NRC letter dated December 14, 1988. Differences in noted coverages may occur due to use of automated scanners which provide a higher quality examination, but may experience somewhat more limited coverage.

INSERVICE INSPECTION (ISI) RELIEF REQUEST #NDE-12

System/Component for Which Relief is Requested

Steam generator (SG) NPS 4 or larger nozzle-to-safe end butt welds.

ASME Section XI Code Requirements

1989 Edition, Table IWB-2500-1, Category B-F, Item B5.70, requires that the SG nozzle-to-safe end welds (29 inch nominal diameter inlet nozzle, 31 inch nominal diameter outlet nozzle) be examined once during the interval. Essentially, 100 percent of the nozzle-to-safe end weld is required to be examined using volumetric and surface methods as shown in Figure IWB-2500-8, with acceptance standard IWB-3514.

Code Requirement from Which Relief is Requested

Relief is requested from performing a portion of the volumetric examination of the SG nozzle-to-safe end welds where access is limited by surface configuration.

Basis for Relief Request

Design of the SG nozzles and safe ends (stainless steel piping is welded directly to the nozzles) limits access for ultrasonic examination due to abrupt machined bevel geometry adjacent to the welds. These conditions restrict scan lengths and cause transducer liftoff. Approximate accessible portions of each weld volume are described below:

INSERVICE INSPECTION (ISI) RELIEF REQUEST #NDE-12

<u>Unit 1 Weld</u>	<u>Line</u>	<u>NPS</u>	<u>Limitation</u>	<u>% Accessible</u>
WIB-RC-1-5SE	1	29	OD surface contour	60
WIB-RC-1-6SE	5	31	OD surface contour	75
WIB-RC-2-6SE	2	29	OD surface contour	65
WIB-RC-2-7SE	6	31	OD surface contour	50
WIB-RC-3-5SE	3	29	OD surface contour	70
WIB-RC-3-6SE	7	31	OD surface contour	40
WIB-RC-4-5SE	4	29	OD surface contour	70
WIB-RC-4-6SE	3	31	OD surface contour	70

<u>Unit 2 Weld</u>	<u>Line</u>	<u>NPS</u>	<u>Limitation</u>	<u>% Accessible</u>
WIB-RC-1-5SE	1	29	OD surface contour	75
WIB-RC-1-6SE	5	31	OD surface contour	75
WIB-RC-2-5SE	2	29	OD surface contour	75
WIB-RC-2-6SE	6	31	OD surface contour	75
WIB-RC-3-5SE	3	29	OD surface contour	75
WIB-RC-3-6SE	7	31	OD surface contour	75
WIB-RC-4-5SE	4	29	OD surface contour	75
WIB-RC-4-6SE	8	31	OD surface contour	75

NOTE: Actual examination percentage may be less than the 75 percent credited on previous examinations and noted above. The early examinations were performed with water delay refracted longitudinal or shear wave techniques, which provided quality less than the current state of the art. Current technology uses contact refracted longitudinal methods which provide superior examination data; however, the large footprint of the transducers with the automated scanner reduces the actual coverage due to adverse surface contours. The net result is a high quality examination of a somewhat smaller portion of the required volume. In all cases, the maximum possible area will be covered.

INSERVICE INSPECTION (ISI) RELIEF REQUEST #NDE-12

Proposed Alternative

All accessible areas of the nozzle-to-safe end welds will be completely examined as required, using refracted longitudinal wave techniques with automated scanning supplemented by manual scanning methods. In addition to the volumetric examination, the welds receive full surface examination and visual examination is conducted during pressure test per Code Category B-P.

Justification for Granting of Relief

The SG nozzle and safe end designs limit full volumetric examination of the nozzle-to-safe end welds due to the sharply angled machined surface bevels adjacent to the welds. Volumetric examination will be conducted as required for the accessible portion of the weld volume. Surface examination is performed as required and visual examination is conducted during pressure test per Code Category B-P. This partial volumetric examination combined with the surface and visual examinations provides continued assurance of the welds integrity.

Implementation Schedule

This relief request will be implemented during the Units 1 and 2 second ISI intervals. The nozzle-to-safe end weld examinations are apportioned equally throughout the intervals.

This request is essentially the same as NDE-008B from the first ISI interval and was approved in NRC letter dated December 14, 1988. Differences in noted coverages may occur due to use of automated scanners which provide a higher quality examination, but may experience somewhat more limited coverage.

INSERVICE INSPECTION (ISI) RELIEF REQUEST #NDE-13, R1

System/Component for Which Relief is Requested

Class 1 pipe welds (NPS 4 or larger).

ASME Section XI Code Requirements

1989 Edition, Table IWB-2500-1, Category B-J, Items B9.11 and B9.12, require that circumferential and longitudinal pipe welds NPS 4 or larger be examined. Essentially, 100 percent of each scheduled circumferential weld and 12 inches of each adjoining longitudinal weld is required to be examined using volumetric and surface methods as shown in Figure IWB-2500-8, with acceptance standard IWB-3514.

Code Requirement from Which Relief is Requested

Relief is requested from performing a portion of the volumetric (and surface where noted) examination of certain pipe welds as detailed below where access is limited by surface configuration or adjacent structure.

Basis for Relief Request

Design of certain pipe welds limits access for ultrasonic (and occasionally surface) examination due to various geometric conditions on or adjacent to the welds, or due to the presence of physical obstructions such as welded supports, Code nameplates, adjacent piping or structures, and penetrations. These conditions or combination of conditions may restrict scan lengths, cause transducer liftoff, or physically prevent access to portions of the required examination area. Approximate accessible portions of each weld volume and the specific limitations are described below:

<u>Unit 1 Weld</u>	<u>Line</u>	<u>NPS</u>	<u>Limitation</u>	<u>% Accessible</u>
WIB-RC-1-12	5	31	Pump body contour	40
WIB-RC-1-13	9	27.5	Pump & surface contour	25
WIB-RC-2-15	10	27.5	Pump & surface contour	25
WIB-RC-2-20	10	27.5	Abrupt surface taper	75

INSERVICE INSPECTION (ISI) RELIEF REQUEST #NDE-13, R1

<u>Unit 1 Weld</u>	<u>Line</u>	<u>NPS</u>	<u>Limitation</u>	<u>% Accessible</u>
WIB-RC-3-13	11	27.5	Pump & surface contour	25
WIB-RC-4-13	12	27.5	Pump & surface contour	25
WIB-400	15	4	Tee & elbow contour	75
WIB-67	16	14	Rupture restraint crush boxes	60
WIB-210	255	10	Valve body and tee contour	65
WIB-207	255	10	Welded restraint adjacent	60
WIB-271	256	10	Valve body contour	50
WIB-334	727	6	Code nameplate; contour	50/Surface 65
WIB-RC-2-14	6	31	Pump & elbow contour	40

<u>Unit 2 Weld</u>	<u>Line</u>	<u>NPS</u>	<u>Limitation</u>	<u>% Accessible</u>
WIB-RC-1-11	5	31	Pump & surface contour	75
WIB-RC-2-11	6	31	Pump & surface contour	75
WIB-RC-3-11	7	31	Pump & surface contour	75
WIB-RC-4-11	8	31	Pump & surface contour	75
WIB-RC-1-12	9	27.5	Pump & surface contour	75
WIB-RC-2-12	10	27.5	Pump & surface contour	75
WIB-RC-2-15	10	27.5	Weld crown photo machined	75
WIB-RC-3-10LS	7	31	Circ weld prep bevel	65
WIB-RC-4-10LS	8	31	Circ weld prep bevel	65
WIB-265	238	6	Branch connection	60
WIB-RC-3-12	11	27.5	Pump & surface contour	75
WIB-RC-4-12	12	27.5	Pump & surface contour	75
WIB-362	727	6	Code nameplate adjacent	Surface 80
WIB-56	13	4	Branch connection contour	70
WIB-752	1994	2	Support & lugs adjacent	Surface 63

Proposed Alternative

All accessible areas of each of the welds will be completely examined as required. In addition to the partial volumetric examination, the welds receive full surface examination (unless specifically noted) and visual examination is conducted during pressure test per Code Category B-P.

INSERVICE INSPECTION (ISI) RELIEF REQUEST #NDE-13, R1

Justification for Granting of Relief

The design of the surface configuration or access provisions for the welds listed above limit full volumetric examination (and surface examination where specifically noted) of the welds. Volumetric examination will be conducted as required for the accessible portion of the weld volume. Surface examination is performed as required (unless limited as specifically noted) and visual examination is conducted during pressure test per Code Category B-P. This partial volumetric examination combined with the surface examination (or partial surface examination) and visual examinations provides continued assurance of weld integrity.

Implementation Schedule

This relief request will be implemented during the Units 1 and 2 second ISI intervals. The pipe weld examinations are apportioned equally throughout the intervals.

This request is essentially the same as a portion of NDE-008 (with supplements) from the first ISI interval and was approved in NRC letter dated October 25, 1989 (typical). Differences in noted coverages may occur due to use of automated scanners which provide a higher quality examination, but may experience somewhat more limited coverage.

INSERVICE INSPECTION (ISI) RELIEF REQUEST #NDE-14, R1

System/Component for Which Relief is Requested

Class 1 branch pipe connection welds

ASME Section XI Code Requirements

1989 Edition, Table IWB-2500-1, Category B-J, Item B9.31, requires that branch pipe connection welds NPS 4 or larger be examined once during the interval. Essentially, 100 percent of each scheduled branch pipe connection weld is required to be examined using volumetric and surface methods as shown in Figure IWB-2500-11 (Unit 1) and IWB-2500-10 (Unit 2), with acceptance standard IWB-3514.

Code Requirement from Which Relief is Requested

Relief is requested from performing a portion of the volumetric examination of certain branch pipe connection welds as detailed below where access is limited by surface configuration.

Basis for Relief Request

Design of certain branch pipe connection welds limits access for ultrasonic examination due to various geometric conditions on or adjacent to the welds such as compound curvature or weld crowns; or due to the presence of physical obstructions such as welded supports, Code nameplates, adjacent piping or structures. These conditions or combination of conditions may restrict scan lengths, cause transducer liftoff or soundbeam redirection, or physically prevent access to portions of the required examination area. Approximate accessible portions of each weld volume, and the specific limitations are described below:

<u>Unit 1 Weld</u>	<u>Line</u>	<u>NPS</u>	<u>Limitation</u>	<u>% Accessible</u>
WIB-RC-2-16	254	10	Branch connection contour	50
WIB-RC-2-3	16	14	Branch connection contour	50
WIB-RC-2-4	236	6	Branch connection contour	50
WIB-RC-1-15	13	4	Branch connection contour	50

INSERVICE INSPECTION (ISI) RELIEF REQUEST #NDE-14, R1

<u>Unit 2 Weld</u>	<u>Line</u>	<u>NPS</u>	<u>Limitation</u>	<u>% Accessible</u>
WIB-55	13	4	Branch connection contour	65
WIB-432	16	14	Branch connection contour	50
WIB-105	236	6	Branch connection contour	50
WIB-37	253	10	Branch connection contour	50

Proposed Alternative

All accessible areas of each of the welds will be completely examined as required. This generally consists of axial scans from one side for 50% coverage. In addition to the partial volumetric examination, the welds receive full surface examination and visual examination is conducted during pressure test per Code Category B-P.

Justification for Granting of Relief

The design of the surface configuration or access provisions for the welds listed above limit full volumetric examination of the welds. Volumetric examination will be conducted as required for the accessible portion of the weld volume. Surface examination is performed as required and visual examination is conducted during pressure test per Code Category B-P. This partial volumetric examination combined with the surface examination and visual examinations provides continued assurance of the welds integrity.

INSERVICE INSPECTION (ISI) RELIEF REQUEST #NDE-14, R1

Implementation Schedule

This relief request will be implemented during the Units 1 and 2 second ISI intervals. The branch pipe connection weld examinations are apportioned equally throughout the intervals.

This request is essentially the same as a portion of NDE-008 (with supplements) from the first ISI interval and was approved in NRC letter dated October 25, 1989 (typical). Differences in noted coverages may occur due to use of automated scanners which provide a higher quality examination, but may experience somewhat more limited coverage.

INSERVICE INSPECTION (ISI) RELIEF REQUEST #NDE-15

System/Component for Which Relief is Requested

Class 1 pipe socket welds

ASME Section XI Code Requirements

1989 Edition, Table IWB-2500-1, Category B-J, Item B9.40, requires that socket welds (larger than NPS 1) be examined. Essentially, 100 percent of each scheduled socket weld is required to be examined using surface methods as shown in Figure IWB-2500-8, with acceptance standard IWB-3514.

Code Requirement from Which Relief is Requested

Relief is requested from performing a portion of the surface examination of certain socket welds as detailed below where access is limited by adjacent structure.

Basis for Relief Request

Design of certain socket welds limits access for surface examination due to the presence of physical obstructions such as welded supports, Code nameplates, adjacent piping, or structures. These conditions or combination of conditions may physically prevent access to portions of the required examination area. Approximate accessible portions of each weld surface, and the specific limitations are described below:

<u>Unit 1 Weld</u>	<u>Line</u>	<u>NPS</u>	<u>Limitation</u>	<u>% Accessible</u>
WIB-302D	1993	1.5	Welded support adjacent	75

<u>Unit 2 Weld</u>	<u>Line</u>	<u>NPS</u>	<u>Limitation</u>	<u>% Accessible</u>
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None

INSERVICE INSPECTION (ISI) RELIEF REQUEST #NDE-15

Proposed Alternative

All accessible areas of each of the welds will be completely examined as required. In addition to the partial surface examination, the welds receive visual examination conducted during pressure test per Code Category B-P.

Justification for Granting of Relief

The design of the access provisions for the welds listed above limit full surface examination of the welds. Surface examination will be conducted as required for the accessible portion of the weld. Additionally, visual examination is conducted during pressure test per Code Category B-P. This partial surface examination combined with the visual examinations provides continued assurance of the welds integrity.

Implementation Schedule

This relief request will be implemented during the Units 1 and 2 second ISI intervals. The socket weld examinations are apportioned equally throughout the intervals.

This request is essentially the same as a portion of NDE-008 (with supplements) from the first ISI interval and was approved in NRC letter dated October 25, 1989 (typical). Differences in noted coverages may occur due to use of automated scanners which provide a higher quality examination, but may experience somewhat more limited coverage.

INSERVICE INSPECTION (ISI) RELIEF REQUEST #NDE-16

System/Component for Which Relief is Requested

Pumps integrally welded attachments (reactor coolant pumps)

ASME Section XI Code Requirements

1989 Edition, Table IWB-2500-1, Category B-K-1, Item B10.20, requires that pumps integrally welded attachments be examined once during the interval. Essentially, 100 percent of each scheduled attachment weld (three each on one pump) is required to be examined using surface methods as shown in Figure IWB-2500-15, with acceptance standard IWB-3516.

Code Requirement from Which Relief is Requested

Relief is requested from performing a portion of the surface examination of the reactor coolant pump (RCP) integrally welded attachments where access is limited by adjacent structure.

Basis for Relief Request

Design of the RCP integrally welded attachments limits access for surface examination due to the support base directly under the integrally welded attachment and the pump anchorage design. The attachments are U shape members welded around their perimeter that sit directly on the supporting structure. Inside the U, the anchorage is installed immediately adjacent to the weld. The supporting structure and anchorages together limit access to approximately 70 percent of the required examination area.

Proposed Alternative

All accessible areas of each of the welds will be completely examined as required. In addition to the partial surface examination, the welds and support structure receive visual examination per Code Category F-A.

INSERVICE INSPECTION (ISI) RELIEF REQUEST #NDE-16

Justification for Granting of Relief

The design of the RCP integrally welded attachments limit full surface examination of the welds. Surface examination will be conducted as required for the accessible portion of the welds. Additionally, visual examination of the support structure is conducted per Code Category F-A. This partial surface examination combined with the visual examinations provides continued assurance of the welds integrity.

Implementation Schedule

This relief request will be implemented during the Units 1 and 2 second ISI intervals. The RCP integrally welded attachments examinations are apportioned equally throughout the intervals.

RCP "feet" were previously examined "100 percent as accessible," which is as stated above.

INSERVICE INSPECTION (ISI) RELIEF REQUEST #NDE-17

System/Component for Which Relief is Requested

Class 2 vessel shell circumferential welds.

ASME Section XI Code Requirements

1989 Edition, Table IWC-2500-1, Category C-A, Item C1.10, C1.20, and C1.30, require that vessel shell circumferential welds at structural discontinuities on the steam generators (SG), seal injection filters, excess letdown heat exchanger, regenerative heat exchanger and residual heat removal heat (RHR) exchangers be volumetrically examined once during the interval. Essentially, 100 percent of the weld volume is required to be examined by shear and longitudinal beams from both sides and along the weld axis as shown in Figure IWC-2500-1, with acceptance standard of IWC-3510. For multiple similar vessels, the requirement may be applied to one vessel among the group or distributed among the vessels.

Code Requirement from Which Relief is Requested

Relief is requested from performing the volumetric examination on the seal injection filters, excess letdown heat exchanger, regenerative heat exchanger and RHR heat exchanger; and from performing a portion of the volumetric examination on the Unit 1 SGs where access is restricted as discussed below for each individual case.

Basis for Relief Request

SGs (applies to Unit 1 only): Design of the vessel insulation conformed to the 1974 ASME Code with Summer 1975 Addenda, which required that only 20 percent of each subject weld be examined. As a result, removable insulation windows are only provided to access 20 percent of each weld. The windows are spaced approximately evenly (120°) around the vessel circumference, except for the top head to shell weld on which windows are spaced adjacent to the personnel access platform which extends around one side of the shell.

INSERVICE INSPECTION (ISI) RELIEF REQUEST #NDE-17

Basis for Relief Request (continued)

(SG's, Unit 1) Provision of additional access would impose a significant burden with no compensating gain in plant or public safety. Note: For Unit 2, all welds are accessible as required.

Seal injection filters: The filters are located in a filter bank with interconnected vaults for shielding. The filters are 61 inches long with 22 inch maximum diameter and the vaults are 63 inches tall by 36 inches on each side. Access to each filter is through a 21-1/2 inch diameter removable hatch on the top of the vault which exposes the filter for cartridge replacement. However, access to the welds from this side is restricted by the filter flange and cover plate assembly and cover plate lifting fixtures. Alternate access is provided by an unshielded crawl space behind the filter bank. This space is obstructed by remote valve operators and instrument cables. Radiation levels are expected to exceed 10 rads per hour in this area. A liquid penetrant examination takes 45 minutes, not counting the time to negotiate the obstructed crawl space. The combination of limited access, high radiation levels, and small size (2" diameter) of the lines to/from the filters poses an unjustified hazard to the examination personnel.

Excess letdown heat exchanger: This is a vertical vessel supported by steel feet and braces welded directly to the shell. The feet sit on concrete piers immediately adjacent to the vessel. On the vessel shell, at 90 degrees to each support foot, the nozzle penetrations further limit access to the shell welds. The shell-to-flange weld cannot be scanned from the flange side due to the flange configuration. The head-to-shell weld is limited from the head side due to curvature of the head. Approximately 15 percent of the shell-to-flange weld and 10 percent of the head-to-shell weld is accessible from the shell side. The vessel is also in a high radiation area (regenerative heat exchanger room). The lack of access for volumetric examination makes it impractical for use in this application. The welds are generally accessible for an alternative surface examination.

INSERVICE INSPECTION (ISI) RELIEF REQUEST #NDE-17

Basis for Relief Request (continued)

Regenerative heat exchanger: Volumetric examination by ultrasonics would be of limited value due to the materials of construction which are ASTM A351 Grade CF8 centrifugally cast stainless steel. This material has a large grain structure which disperses the ultrasonic beam, requiring large low frequency transducers which are not sensitive to small flaws. This poor sensitivity combined with the access restrictions described below render the ultrasonic method ineffective for this application. This conclusion is supported by EPRI report NP-5173 (April 1987).

The head-to-shell welds are partly accessible from the shell side (approximately 60 percent at the tube sheet end and 80 percent at the shell end) due to the nozzles. The welds are not accessible from the from the head side due to curvature of the heads.

Regenerative heat exchanger: The tubesheet-to-shell welds are partly accessible from the shell sides (approximately 30 percent from the tube inlet side and 45 percent from the shell side) due to nozzle and vessel support obstructions. The welds are not accessible from the tubesheet side due to welded support structure. Even if the welds were accessible, examination is not practical due to the complex tubesheet geometry. Volumetric examination by radiography is not practicable due to the high background radiation levels, complex tubesheet geometry, including the tubes themselves and the fact that the vessel is filled with water. Due to the support and nozzle configuration, the tubesheet-to-shell welds are each approximately 50 percent accessible for an alternative surface examination. The similar welds on the other heat exchanger shells will be examined to provide a composite examination equivalent to 100 percent of the welds on one shell.

INSERVICE INSPECTION (ISI) RELIEF REQUEST #NDE-17

Basis for Relief Request (continued)

RHR heat exchanger: These are vertical vessels supported by legs welded to pads which are in turn welded to the vessel shell. The legs sit on concrete piers immediately adjacent to the vessel. On the vessel shell, at 90 degrees to each support foot, the nozzle penetrations further limit access to the shell welds. The shell-to-flange weld cannot be scanned from the flange side due to the flange configuration, and the head-to-shell weld is limited from the head side due to curvature of the head. Approximately 10 percent of the shell-to-flange weld and 15 percent of the head-to-shell weld is accessible from the shell side. The accessible portion is insufficient for any meaningful examination to be performed. Both welds are approximately 80 percent accessible for an alternative surface examination due to the supports.

Proposed Alternative

SG (applies to Unit 1 only): The accessible 20 percent of each weld will be fully examined as required. Note: Unit 2 welds are fully accessible.

Seal injection filters: None.

Excess letdown heat exchanger: Surface examination of the accessible 80 percent of each weld.

Regenerative heat exchanger: Surface examination of the head-to-shell welds; surface examination of accessible portions of each tubesheet-to-shell weld on the three shells to equal 100 percent of each weld in composite.

RHR heat exchangers: Surface examination of the accessible portion of each weld (Approximately 80 percent each, limited by the vessel supports).

INSERVICE INSPECTION (ISI) RELIEF REQUEST #NDE-17

Justification for Granting of Relief

Access to portions (or all, in the case of the seal injection filters) of these welds is physically limited. For the regenerative heat exchanger, the cast stainless steel material poses an additional restriction. In addition to the proposed alternative examinations detailed above, visual examination is conducted during pressure test per Code Category C-H. On the SGs, additional visual examinations are performed from inside the vessel at the upper transition cone weld and the head-to-shell weld as part of the secondary side inspections. The proposed alternative examinations combined with the visual examinations provide continued assurance of weld integrity.

Implementation Schedule

This relief request will be implemented during Units 1 and 2 second ISI intervals. The alternative examinations of the vessels welds are distributed evenly throughout the intervals.

This request is essentially the same as a portion of NDE-006 (with supplements) from the first ISI interval and was approved in NRC letter dated October 25, 1989. At that time, PG&E committed to volumetrically examine the small portions (less than 15 percent overall) of the RHR and excess letdown heat exchanger shell welds that are accessible for volumetric examination. Those examinations were indeed performed; however, PG&E has found the severely limited data obtained to be of no practical value. Therefore, relief is again requested.

INSERVICE INSPECTION (ISI) RELIEF REQUEST #NDE-18, R1

System/Component for Which Relief is Requested

Class 2 vessel nozzle welds (without reinforcing plate in vessels >1/2 inch nominal thickness).

ASME Section XI Code Requirements

1989 Edition, Table IWC-2500-1, Category C-B, Item C2.21, requires that vessel nozzle welds on the steam generators (SG), residual heat removal (RHR) heat exchangers, and seal injection filters be surface and volumetrically examined once during the interval. Essentially, 100 percent of the weld volume is required to be examined by shear and longitudinal beams from both sides and along the weld axis as shown in Figure IWC-2500-4(a) and (b), or Figure IWC-2500-3(a), with acceptance standard of IWC-3511. For multiple similar vessels, the requirement may be applied to one vessel among the group, or distributed among the vessels.

Note: Seal injection filters have NPS2 nozzles and are included here because they are not automatically isolable from the "high pressure safety injection" system (ref. Code Category C-F-1).

Code Requirement from Which Relief is Requested

Relief is requested from performing a portion of the volumetric examination on the SG feedwater nozzle weld and RHR heat exchanger nozzle welds where access is restricted as discussed below, and from examining the seal injection filter nozzles.

Basis for Relief Request

SG: The feedwater nozzle configuration limits access for scanning from the nozzle side. Approximately 70 percent of the required volume is accessible. The nozzle weld is not accessible from the nozzle bore due to a welded thermal sleeve (feeding connection) and support structure inside the vessel. The weld is accessible for surface examination.

INSERVICE INSPECTION (ISI) RELIEF REQUEST #NDE-18, R1

Basis for Relief Request, cont'd

RHR Heat Exchanger: The nozzle weld configuration limits scans from the nozzle side. From the shell side, the vessel support pads, vessel flange and head-to-shell weld obstruct scans. Approximately 10 percent of each weld is accessible for volumetric examination; however, this amount is insufficient to provide any meaningful examination result. The welds are accessible for surface examination.

Seal Injection Filter: The filters are located in a filter bank with interconnected vaults for shielding. The filters are 61 inches long with 22 inch maximum diameter and the vaults are 63 inches tall by 36 inches on each side. Access to each filter is through a 21-1/2 inch diameter removable hatch on the top of the vault which exposes the filter for cartridge replacement. However, access to the welds from this side is restricted by the filter flange and cover plate assembly and cover plate lifting fixtures. Alternate access is provided by an unshielded crawl space behind the filter bank. This space is obstructed by remote valve operators and instrument cables. Even if ultrasonic examination were possible, it would be extensively limited by the nozzle configuration. Radiation levels are expected to exceed 10 rads per hour in this area. A liquid penetrant examination takes 45 minutes, not counting the time to negotiate the obstructed crawl space. The combination of limited access, high radiation levels, and small size (2" diameter) of the lines to/from the filters poses an unjustified hazard to the examination personnel.

Proposed Alternative

SG: The accessible portion (approximately 70 percent) of the weld will be volumetrically examined as required. Full surface examination.

RHR heat exchanger: Surface examination only, as required.

Seal Injection Filter: None.

INSERVICE INSPECTION (ISI) RELIEF REQUEST #NDE-18, R1

Justification for Granting of Relief

Access to portions of these welds is physically limited. In addition to the partial volumetric examination of the feedwater nozzle, all nozzle welds except the seal injection filter receive surface examination as required, and visual examination is conducted during pressure test per Code Category C-H. For the seal injection filter, the VT-2 consists of checking areas where leakage may be channeled. The proposed alternative examinations combined with the visual examinations provide continued assurance of weld integrity.

Implementation Schedule

This relief request will be implemented during Units 1 and 2 second ISI intervals. The examinations of the Steam Generator and RHR heat exchanger nozzle welds are distributed evenly throughout the intervals.

This request is essentially the same as a portion of NDE-006 and NDE-006A from the first ISI interval and was approved in NRC letters dated October 25, 1989, and September 21, 1992. At that time, PG&E committed to volumetrically examine the small portions (less than 10 percent overall, distributed at four locations) of the RHR heat exchanger nozzle welds that are accessible for volumetric examination. Those examinations were indeed performed; however, PG&E has found the severely limited data obtained to be of no practical value. Therefore, relief is again requested.

For the Seal Injection Filters, this is a new request due to the new Code requirement to examine small diameter pipe in the "high pressure safety injection" system. While these filters are not required for high pressure safety injection per se, the seal injection piping and filters are not automatically isolable from the high pressure safety injection system.

INSERVICE INSPECTION (ISI) RELIEF REQUEST #NDE-19, R1

System/Component for Which Relief is Requested

Class 2 vessel nozzle (without reinforcing plate in vessels > 1/2 inch nominal thickness) inside radius section.

ASME Section XI Code Requirements

1989 Edition, Table IWC-2500-1, Category C-B, Item C2.22, requires that vessel nozzle inside radius sections on the residual heat removal (RHR) heat exchangers, and seal injection filters be volumetrically examined once during the interval. Essentially, 100 percent of the nozzle inside radius section is required to be examined as shown in Figure IWC-2500-4(b) for the RHR heat exchanger, with acceptance standard of IWC-3511. There is no Code Figure applicable to the seal injection filters which have NPS2 pipe set into the vessel so there is no inner radius. For multiple similar vessels, the requirement may be applied to one vessel among the group, or distributed among the vessels.

Code Requirement from Which Relief is Requested

Relief is requested from performing the volumetric examination on RHR heat exchanger nozzle inside radius section due to inaccessibility. Relief is requested for the seal injection filter because there is no inner radius due to the configuration of the nozzle (NPS2 pipe set into the vessel shell).

Basis for Relief Request

The RHR nozzle configuration limits scans from the nozzle side and the radial orientation of a postulated flaw is parallel to this scan direction. From the shell side the vessel support pads, vessel flange, head-to-shell weld, and short nozzle weld reinforcement make access for meaningful nozzle inside radius scans impossible.

The seal injection filter does not have an inner radius due to configuration.

INSERVICE INSPECTION (ISI) RELIEF REQUEST #NDE-19, R1

Proposed Alternative

None.

Justification for Granting of Relief

Access for scanning the RHR nozzle inside radius sections is physically limited. The adjacent nozzle welds receive a surface examination and visual examination is conducted during pressure test per Code Category C-H. The examinations of the adjacent nozzle areas combined with the visual examinations provide continued assurance of the nozzle inside radius sections integrity. The seal injection filters have no radius to examine.

Implementation Schedule

This relief request will be implemented during Units 1 and 2 second ISI intervals. The examinations of the adjacent RHR vessel nozzle welds are distributed evenly throughout the intervals. No examination is made on the seal injection filters due to access limitations discussed in request number NDE-18.

This is a new request, based on the 1989 Code requirement.

INSERVICE INSPECTION (ISI) RELIEF REQUEST #NDE-20, R1

System/Component for Which Relief is Requested

Class 2 pressure vessels, piping, and pumps integrally welded attachments

ASME Section XI Code Requirements

1989 Edition, Table IWC-2500-1, Category C-C, Items C3.10, C3.20, and C3.30, require that integrally welded support attachments to pressure vessels, piping systems, and pumps be examined once during the interval. Essentially, 100 percent of each subject attachment weld is required to be examined using surface methods as shown in Figure IWC-2500-5, with acceptance standard IWC-3512.

Code Requirement from Which Relief is Requested

Relief is requested from performing a portion of the surface examination of certain pressure vessel, piping, or pump support integrally welded attachments as detailed below, where access is limited by surface configuration or adjacent structure.

Basis for Relief Request

Design of certain pressure vessel, piping or pump supports limits access for surface examination due to various geometric conditions on or adjacent to the welds, or due to the presence of physical obstructions such as the welded support, Code nameplates, adjacent piping, or structures. These conditions or combination of conditions may physically prevent access to portions of the required examination area. Approximate accessible portions of each weld area and the specific limitations are described below:

INSERVICE INSPECTION (ISI) RELIEF REQUEST #NDE-20, R1

<u>Unit 1 Weld</u>	<u>Line</u>	<u>NPS</u>	<u>Limitation</u>	<u>% Accessible</u>
Cent'l Charging Pp Legs			Support structure under legs	77
<u>Unit 2 Weld</u>	<u>Line</u>	<u>NPS</u>	<u>Limitation</u>	<u>% Accessible</u>
Cent'l Charging Pp Legs			Support structure under legs	77

Proposed Alternative

All accessible areas of each of the integrally welded attachments will be completely examined as required. In addition to the partial surface examination, the welds receive visual examination conducted per Code Subsection IWF.

Justification for Granting of Relief

The design of the surface configuration or access provisions for the integrally welded attachments listed above, limit full surface examination of the welds. Examination will be conducted as required for the accessible portion of the weld area. Additionally, visual examination is conducted per Code Subsection IWF. This partial surface examination combined with the visual examination provides continued assurance of the welds integrity.

INSERVICE INSPECTION (ISI) RELIEF REQUEST #NDE-20, R1

Implementation Schedule

This relief request will be implemented during Units 1 and 2 second ISI intervals. The integrally welded attachment examinations are apportioned equally throughout the intervals.

The pump and heat exchangers supports were previously examined "100 percent as accessible," which is as stated above.

INSERVICE INSPECTION (ISI) RELIEF REQUEST #NDE-21

This relief request is no longer necessary and is withdrawn.

INSERVICE INSPECTION (ISI) RELIEF REQUEST #NDE-22

System/Component for Which Relief is Requested

Class 2 pipe welds in carbon or low alloy steel piping

ASME Section XI Code Requirements

1989 Edition, Table IWC-2500-1, Category C-F-2, Item C5.51, requires that welds in piping systems be examined. Essentially, 100 percent of each scheduled weld is required to be examined once during the interval using surface and volumetric methods as shown in Figure IWC-2500-7, with acceptance standard IWC-3514.

Code Requirement from Which Relief is Requested

Relief is requested from performing a portion of the volumetric examination of certain pipe welds as detailed below where access is limited by surface configuration or adjacent structure.

Basis for Relief Request

Design of certain pipe welds limits access for volumetric examination due to various geometric conditions on or adjacent to the welds, or due to the presence of physical obstructions such as welded supports, Code nameplates, adjacent piping, structures, or penetrations. These conditions or combination of conditions may physically prevent access to portions of the required examination volume. Approximate accessible portions of each weld volume and the specific limitations are described below:

<u>Unit 1 Weld</u>	<u>Line</u>	<u>NPS</u>	<u>Limitation</u>	<u>% Accessible</u>
None				

INSERVICE INSPECTION (ISI) RELIEF REQUEST #NDE-22

<u>Unit 2 Weld</u>	<u>Line</u>	<u>NPS</u>	<u>Limitation</u>	<u>% Accessible</u>
WIC-1357B	1357	6	Ventilation duct across pipe	75
WIC-1357C	1357	6	Ventilation duct across pipe	80

Proposed Alternative

All accessible areas of each weld will be completely examined as required. In addition to the partial volumetric examination, the welds receive >90 percent surface examination and visual examination is conducted per Code Category C-H.

Justification for Granting of Relief

The design of the surface configuration or access provisions for the welds listed above, limit full volumetric examination. Examination will be conducted as required for the accessible portion of the weld area. Additionally, surface examination is conducted and visual examination is performed during pressure test per Code Category C-H. This partial volumetric examination combined with the surface and visual examination provides continued assurance of weld integrity.

Implementation Schedule

This relief request will be implemented during Units 1 and 2 second ISI intervals. The pipe weld examinations are apportioned equally throughout the intervals.

This request is essentially the same as a portion of NDE-008 (with supplements) from the first ISI interval and was approved in NRC letter dated October 25, 1989 (typical).

INSERVICE INSPECTION (ISI) RELIEF REQUEST #NDE-23

System/Component for Which Relief is Requested

All systems and components, general requirements.

ASME Section XI Code Requirements

1989 Edition, Paragraph IWA-2430(d), requires that for components inspected under Program B (this includes all Diablo Canyon Power Plant examinations), each of the inspection intervals may be extended or decreased by as much as one year. Adjustments shall not cause successive intervals to be altered by more than one year from the original pattern of intervals. Paragraph IWB-2412(b) requires that the inspection period may be decreased or extended by as much as one year to enable an inspection to coincide with a plant outage, within the limitations of IWA-2430(d). Table IWB-2412-1 requires that the maximum examinations credited in the first period be 34 percent and in the second period be 67 percent of the requirement for the interval.

Code Requirements from Which Relief is Requested

Relief is requested from performing the required examinations within an interval or period extended or decreased by up to one year from the original pattern of intervals, and from the percentage limits in IWB-2412-1.

Basis for Relief Request

The Code requirement to permit extending or decreasing an inspection interval or period from a rigid ten year calendar schedule has had the stated purpose of enabling examinations to be performed during scheduled refueling outages (Ref. IS-111 in Section XI, 1970 Edition). This Code requirement has never materially changed, having appeared in nearly its current form since the 1974 Edition (Ref. IWA-2400(a) in Section XI, 1974 Edition), and it was adequate at that time when twelve month refueling cycles were the industry standard. Improvements in quality of operations in the industry since 1974 have resulted in longer refueling cycles and made this provision obsolete.

INSERVICE INSPECTION (ISI) RELIEF REQUEST #NDE-23

Basis for Relief Request (continued)

For several years, refueling cycles have routinely averaged 18 months, and DCPD units are expected to extend this to 24 month cycles during this inspection interval. The one year allowance is no longer adequate to enable examinations to be performed during scheduled refueling outages and still comply with the ten calendar year basis of the inspection interval. Similarly, the required percentages, originally intended to distribute examinations equally across an interval, are insufficient to evenly distribute the examinations when one-fifth of the interval requirement is completed each outage. This results from 24 month cycles with five outages in ten years.

Proposed Alternative

The second and subsequent ISI intervals may be extended or decreased by as much as two years. Adjustments shall not cause successive intervals to be altered by more than two years from the original pattern of intervals. The specified inspection period may be decreased or extended by as much as two years to enable an inspection to coincide with a plant outage, within these limits. The percentage of examinations completed in the first period may be up to 40 percent, and in the second period up to 80 percent of the examinations required for the interval.

Justification for Granting of Relief

The one year schedule adjustment allowed by Section XI dates prior to 1974 and was intended to accommodate the one year refueling cycles then standard in the industry. Improved plant performance in the interim has resulted in refueling cycles of 18 to 24 months duration. These longer cycles have made the existing one year allowance obsolete. Similarly the required percentages, for an interval having 24 month cycles with two outages in the first period, two in the second period and one in the third period, would force the examinations to be unequally distributed, or be technically in violation of the requirement. This request enables examinations to be performed during the currently established refueling outage schedule, consistent with the ten calendar year interval basis and equal apportionment of examinations, as intended by Section XI.

INSERVICE INSPECTION (ISI) RELIEF REQUEST #NDE-23

Implementation Schedule

This relief request will be implemented during Units 1 and 2 second ISI intervals.

This is a new request that was not required in the first interval.

INSERVICE INSPECTION (ISI) RELIEF REQUEST #NDE-24

System/Component for Which Relief is Requested

All systems and components, general requirements

ASME Section XI Code Requirements

1989 Edition, Paragraphs IWB-2420(a), IWC-2420(a), and IWF-2420(a), requires that the sequence of component inspections established during the first inspection interval shall be repeated during each successive inspection interval, to the extent practical.

Code Requirements from Which Relief is Requested

Relief is requested from repeating the sequence of component inspections established during the first inspection interval during the second interval.

Basis for Relief Request

The Code requirement to repeat the sequence of examinations established during the first inspection interval to the extent practical appears to allow for differences in the scheduling basis between the 1977 Edition with Summer 1978 Addenda and the current 1989 Edition. For example, Class 2 pipe weld examinations were formerly based on a once in 40 year schedule, while the 1989 Edition uses a recurring 10 year schedule for a smaller selection of welds. Other conditions may also require deviation from the originally established sequence. For example, from time to time the plant maintenance requirements may be such that localized radiation levels, access provisions, or other similar conditions for a given examination make it inadvisable to perform the particular examination during that outage; even though the area is normally accessible during other refueling outages.

INSERVICE INSPECTION (ISI) RELIEF REQUEST #NDE-24

Proposed Alternative

Reasonable effort shall be made to repeat the sequence of examinations established in the first inspection interval. Exceptions shall be permitted for differences in schedule requirements between the 1977 Edition with Summer 1978 Addenda and the 1989 Edition. Exceptions shall also be permitted when plant conditions or maintenance requirements limit availability of the subject component during a given outage, however another similar component shall be substituted for the original component whenever practical, or the original component shall be examined during the next refueling outage.

Justification for Granting of Relief

The intent of the Code is that reasonable effort be made to repeat the sequence of examinations established during the first interval within the limits of differences between the various Editions. This request assures that the intent is met while maximizing ALARA and accommodating occasional schedule changes due to unforeseen plant conditions or maintenance needs. The request requires that the examination be performed on a substitute component during the current outage, or the original component be examined during the next outage whenever practical, as required by the Code.

Implementation Schedule

This relief request will be implemented during Units 1 and 2 second ISI intervals.

This is a new request that was not applicable in the first interval.

INSERVICE INSPECTION (ISI) RELIEF REQUEST #NDE-25

System/Component for Which Relief is Requested

Unit 2 pressurizer surge line nozzle-to-vessel weld

ASME Section XI Code Requirements

1989 Edition, Table IWB-2500-1, Category B-D (Program B), Item B3.110, requires that pressurizer nozzle-to-vessel welds be volumetrically examined once during the inspection interval. Essentially 100 percent of the weld is required to be examined as shown in Figure IWB-2500-7(b), with acceptance standard of IWB-3512, using ultrasonic beams oriented normal and parallel to the weld.

Code Requirements from Which Relief is Requested

Relief is requested from performing a portion of the volumetric examination of the pressurizer surge line nozzle-to-vessel weld, using ultrasonic beams directed normal (perpendicular) to the weld. This request applies to Unit 2 only as Unit 1 has a cast nozzle which does not require examination.

Basis for Relief Request

The pressurizer surge line nozzle-to-vessel weld is not accessible for examination from the nozzle side due to the nozzle transition radius immediately adjacent to the weld. From the vessel bottom head side, the weld is obstructed by the heater penetrations which again render it inaccessible for volumetric examination. The weld surface is accessible for circumferential scans (ultrasonic beams oriented parallel to the weld), which will be performed.

Proposed Alternative

The weld surface is accessible for circumferential scans, which will be performed. These scans constitute 50% of the Code required examination.

INSERVICE INSPECTION (ISI) RELIEF REQUEST #NDE-25

Justification for Granting of Relief

Design of the pressurizer surge line nozzle-to-vessel weld precludes access for examination with the ultrasonic beam directed normal to the weld due to the nozzle radius and the pressurizer heater penetrations immediately adjacent to the weld. Assurance of continued integrity is provided by the required ultrasonic examination with the beam oriented parallel to the weld, and the visual examination during pressure test per Code Category B-P.

Implementation Schedule

This relief request will be implemented during the Unit 2 second ISI interval, and is the same as a portion of Request for Relief NDE-005, approved for the Unit 2 first interval.

INSERVICE INSPECTION (ISI) RELIEF REQUEST #NDE-26

System/Component for Which Relief is Requested

Unit 2 Pressurizer Integral Attachment Weld.

ASME Section XI Code Requirements

1989 Edition, Table IWB-2500-1, Category B-H, Item B8.20, requires the pressurizer support skirt weld to receive surface examination from both sides as shown in Figure IWB-2500-13, with acceptance criteria of IWB-3516.

Code Requirements from Which Relief is Requested

Relief is requested from performing surface examination from inside the support skirt, surface examination area C-D as shown on Figure IWB-2500-13. This constitutes 50% of the examination requirement for this weld. This request does not apply to Unit 1, which has a different support configuration and examination requirement.

Basis for Relief Request

The actual angle of the skirt-to-vessel intersection is even sharper than shown in Code Figure IWB-2500-13, preventing access for the magnetic particle inspection yoke and precluding meaningful examination from inside the support skirt. The pressurizer heater penetrations adjacent to the skirt, with their electrical harness connections and vessel insulation constitute further limitations for access from inside the skirt.

INSERVICE INSPECTION (ISI) RELIEF REQUEST #NDE-26

Proposed Alternative

The outside of the weld surface, examination surface A-B in Figure IWB-2500-13, is accessible and will be examined as required. Approximately 50% of the Code required total weld surface area can thus be examined.

Justification for Granting of Relief

Design of the vessel support makes access for meaningful examination of 50% of the required surface impossible from inside the vessel skirt. The 50% of the required surface that can be examined from outside the skirt provides assurance of the continued structural integrity of the weld.

Implementation Schedule

This relief request will be implemented during the Unit 2 second ISI interval. This is a new request due to the Code requirement being changed from the first inspection interval.

INSERVICE INSPECTION (ISI) RELIEF REQUEST #NDE-27

System/Component for Which Relief is Requested

Reactor Vessel Shell-to-Flange Weld; and Threads in Flange.

ASME Section XI Code Requirements

1989 Edition, Table IWB-2500-1, Category B-A, Item B1.30 and Category B-G-1, Item B6.40; examination schedule requirement.

Code Requirements from Which Relief is Requested

The Code requires that volumetric examination of the shell-to-flange weld from the flange face be performed on a distributed schedule (deferral of this portion is not permitted as a requisite for deferral of the portion of the examination conducted from the shell side at Code footnote 3). Similarly, the volumetric examination of the flange threads (also called ligaments) is required to be performed on a distributed schedule. Relief is requested from performing these examinations on the distributed schedule.

Basis for Relief Request

The Code requirement to perform these examinations on a distributed schedule is arbitrary and not consistent with ALARA or maximized quality. Deferral of these examinations to allow them to be done at the same time as the remainder of the reactor vessel examinations would permit them to be done remotely with the vendor reactor vessel inspection device. This would enhance examination quality by providing automated data acquisition and recording. ALARA would be improved by eliminating two series of entries to the refueling cavity involved in performing manual examinations to meet the distributed schedule (one in each of two inspection periods). 100% of the Code required examinations would be conducted, only the schedule would be changed.

INSERVICE INSPECTION (ISI) RELIEF REQUEST #NDE-27

Proposed Alternative

100% of the Code required examinations will be conducted. These will be performed at or near the end of the inspection interval concurrently with examinations of the remainder of the reactor vessel.

Justification for Granting of Relief

Improvement in examination quality could result from performing examinations using automated data acquisition and recording equipment. ALARA would be enhanced due to elimination of two series of entries to the refueling cavity to perform manual examinations. The complete Code required examination volume will be covered, only the schedule would be changed.

Implementation Schedule

This relief request will be implemented during Units 1 and 2 second ISI intervals. This is a new request based on experience gained in the first inspection intervals.

INSERVICE INSPECTION (ISI) RELIEF REQUEST #NDE-28

System/Component for Which Relief is Requested

Seal Injection Filter 1-1 and 2-1 supports.

ASME Section XI Code Requirements

1989 Edition, Table IWF-2500-1, Category F-A, Item F1.20 and F1.30; requires visual examination (VT-3) of the component support for the seal injection filters.

Code Requirements from Which Relief is Requested

Relief is requested from performing the visual examination of the seal injection filter supports.

Basis for Relief Request:

The filter supports are three angle steel legs welded to the shell and to a plate embedded in the deck. The welds to the shell do not require examination under Code Category C-C since the material thickness is less than 3/4 inch. There are no intermediate structural elements and no portion of the support is movable or requires any clearance or setting. The legs support the filter in compression. The inlet and outlet lines for the filters are NPS2, and although the filters themselves are not required for the high pressure safety injection system (called charging injection at DCP), they are not automatically isolable from it. The filters are located in a filter bank with interconnected vaults for shielding. The filters are 61 inches long with 22 inch maximum diameter and the vaults are 63 inches tall by 36 inches on each side. Access to each filter is through a 21-1/2 inch diameter removable hatch on the top of the vault which exposes the filter for cartridge replacement. However, access to the supports from this side is restricted by the filter flange and cover plate assembly and cover plate lifting fixtures. Alternate access is provided by an unshielded crawl space behind the filter bank. This space is obstructed by remote valve operators and instrument cables. Radiation levels are expected to exceed 10 rads per hour in this area. The combination of limited access, high radiation levels, and small size of the lines to/from the filters poses an unjustified hazard to the examination personnel.

INSERVICE INSPECTION (ISI) RELIEF REQUEST #NDE-28

Proposed Alternative

None.

Justification for Granting of Relief

The filter supports have no moving parts, require no clearances or settings and support the filter in compression. The filter vault protects the structure from damage, but limits access for visual inspection. The burden of performing the examination has no compensating increase in quality or safety.

Implementation Schedule

This relief request will be implemented during Units 1 and 2 second ISI intervals. This is a new request based on the 1989 Code requirement. This is a new request due to the new Code requirement to examine small diameter pipe in the "high pressure safety injection" system. While these filters are not required for high pressure safety injection per se, the seal injection piping and filters are not automatically isolable from the high pressure safety injection system.

INSERVICE INSPECTION (ISI) RELIEF REQUEST #PRS-1, R1

Pressure Test Requirement for Which Relief is Requested

Removal of insulation at bolted connections, and removal of stainless steel bolting from joints exhibiting minor leakage.

ASME Section XI Code Requirements

1989 Edition, Article IWA-5000, Paragraph IWA-5242, requires that for insulated systems borated for the purpose of controlling reactivity the insulation shall be removed from pressure retaining bolted connections for visual examination VT-2. IWA-5250(a)(2) requires removal of bolting and VT-3 examination for corrosion when leakage is detected at a bolted connection.

Code Requirement from Which Relief is Requested

Relief is requested from removal of insulation at bolted connections for visual examination VT-2. Relief is also requested from removing bolting and performing VT-3 examination for corrosion when the bolt material is stainless steel.

Basis for Relief Request

The Code requirement to remove insulation is based on the presumption that damage to carbon steel components could occur and not be noticed unless the insulation were removed. At Diablo Canyon Power Plant (DCPP), all piping in systems borated for the purpose of controlling reactivity is constructed of stainless steel, and nearly all the carbon steel bolting originally in joints in these systems has been replaced with stainless steel at considerable expense. These stainless steel materials are impervious to damage from boric acid and minor leakage from mechanical joints cannot cause degradation even if such leakage was not detected during the examination. Certain insulated component joints, notably the reactor head; steam generator and pressurizer manways; and valves 8701, 8702, and 8703 (RHR suction and discharge valves to the reactor coolant system); still contain carbon steel bolting. Except for valve 8703, these are all Class 1 components which are examined every refueling outage. Valve 8703 is examined every 40 months.

INSERVICE INSPECTION (ISI) RELIEF REQUEST #PRS-1, R1

Basis for Relief Request (continued)

In each case where carbon steel bolting is still installed, these joints have been historically leak free, and the pressure tests involve maintaining full system pressure for a minimum of four hours prior to the VT-2 examination to allow leakage to become visible outside the insulation. All Class 1 systems are insulated with reflective mirror insulation which does not tend to trap hot borated coolant at the joint as other insulation types might.

Also, the concentration of boric acid in the systems has been reduced from 12 percent to a maximum of 4 percent in any system, which reduces the possibility of damage from leakage, should it contact carbon steel parts and not be detected.

Another consideration is that the reactor coolant pump main flange joints, which have been occasionally subject to leakage at other facilities, are not covered by insulation at DCP, but remain fully exposed for visual examination. Also, the reactor head joint is equipped with a built-in leakage detection system which assures that any leakage that might occur during operation would be readily detected.

Proposed Alternative

All connections containing carbon steel bolting in systems borated for the purpose of controlling reactivity shall be subject to a 4 hour hold time at the test pressure prior to the visual examination in order to assure that any leakage from the mechanical connections would be detectable. Insulation will not be removed for the examination. Connections containing stainless steel bolting shall be examined after the nominal Code required holding time with the insulation left in place during the examination. Leakage from joints having stainless steel bolting may be corrected by retorquing the bolts without removal of the bolts or VT-3 examination.

Justification for Granting of Relief

The 4 hour hold time at the test pressure is adequate to assure leakage from mechanical connections would be detectable without removal of the insulation, and the vast majority of such joints have stainless steel bolting which is not subject to corrosion from boric acid.

INSERVICE INSPECTION (ISI) RELIEF REQUEST #PRS-1, R1

Justification for Granting of Relief (continued)

Additionally, since pressure tests are conducted at normal system pressure in accordance with Code Cases N-498-1 and N-416-1, the mechanical joints in systems are not subjected to excessively high pressures formerly associated with hydrostatic tests, and thus are not susceptible to leakage initiated from stress to the joint caused by the abnormally high hydrostatic test pressures. Another consideration is the reduction in concentration of boric acid in systems from 12 percent to 4 percent since the Code rules for insulation removal became effective, thus reducing the potential for corrosion damage from the formerly more highly concentrated boric acid.

With these considerations, the burden of insulation removal with the associated critical path time to replace the insulation after the test and increased personnel radiation exposure, far exceeds any marginal benefit from the removal.

PG&E has incurred significant expense to replace virtually all of the original carbon steel bolting in systems designed for boric acid service with stainless steel to eliminate the possibility of corrosion. Removing stainless steel bolts which are not subject to corrosion from joints exhibiting minor leakage for the purpose of VT-3 examination to detect corrosion would be counterproductive and adverse to ALARA.

Implementation Schedule

This relief request will be implemented during Units 1 and 2 second ISI intervals. The pressure tests of systems borated for purposes of controlling reactivity are apportioned throughout the intervals.

This is a new request based on the new 1989 Code requirement.

INSERVICE INSPECTION (ISI) RELIEF REQUEST #PRS-2

Pressure Test Requirement for Which Relief is Requested

Class 2 containment penetrations for non-safety related lines.

ASME Section XI Code Requirements

1989 Edition, Table IWC-2500-1, Category C-H, Items C7.30 and C7.40 and Code Case N-498-1, requires that piping systems be subject to IWC-5221 and IWC-5222 tests at normal operating pressure once each inspection period, during which visual examination VT-2 is conducted.

Code Requirement from Which Relief is Requested

Relief is requested from performing the IWC-5221 and IWC-5222 tests and associated visual examination VT-2 for certain lines as described below.

Basis for Relief Request

For non-safety related lines that are classified as Class 2 solely because of the containment isolation function, and that normally operate at a pressure of less than 50 psi, the local leak rate test (LLRT) that is performed at 50 psi to meet 10 CFR 50 Appendix J, containment integrity requirements serves to demonstrate the pressure retaining integrity of the line at a higher pressure than Section XI would otherwise require.

Proposed Alternative

The non-safety related lines detailed below are classified as Class 2 solely for the containment integrity function. The lines all operate at a pressure of less than 50 psi, which is imposed during the LLRT. These lines will be tested under the conditions, acceptance criteria, and at the frequency required for the LLRT.

INSERVICE INSPECTION (ISI) RELIEF REQUEST #PRS-2

<u>Line</u>	<u>Description</u>	<u>Size</u>	<u>Normal Pressure</u>
1163	Pzr Quench Tk Gas Analyzer	3/8	20
2572	SI Pp 1-2 Disch Line RV	1	0
2518	Cnt Spray Pps Disch RV Out PRT	1	3
1459	Chg Pps Suct RV Disch	1	0
2999	SIS RV Outlet Hdr to PRT	4	3
2998	SIS RV Outlet Hdr to PRT	4	3
2061	SI Pps Suct RV Out	1	0
2004	RHR Ht Exchr 2 Out RV	3	0
2003	RHR Ht Exchr 1 Out RV	3	0
3851	SIS Pp 1-1 Disch Line RV	1	0
3852	SIS Pps Recirc Disch Line RV	1	0
525	React Cool Drn Tk Vent	3/4	1.5
526	React Cool Drn Tk Gas Anal	1/2	1.5
4382	CHPS Air Sup Fans 1&2 Disch Pene 83 In	4	3
4386	CHPS Air Sup Fans 1&2 Disch Pene 83 In	4	3
4388	CHPS Air Sup Fans 1&2 Disch Pene 83 In	4	3
4389	CHPS Air Sup Fans 1&2 Disch Pene 83 In	4	3
4387	CHPS Air Sup Fans 1&2 Disch Pene 83 In	4	3
4390	CHPS Exh Air Filt 2 Inlet	4	5
4395	CHPS Exh Air Filt 2 Inlet	4	5
647	Containment Vacuum Relief	12	0
K2-	Containment Purge Out	48	<50
K2-	Containment Purge In	48	<50
3936	Incore Chiller Water Rtn	2	25
3937	Incore Chiller Water Supply	2	25
3837	Containment Air Sample Inlet	1	3
3838	Containment Air Sample Return	1	0
5190	Post-LOCA Samp Cnt Air Rtn	3/8	<50
S-	Post LOCA Samp Cnt Air Sup	3/8	<50
4633	Hyd Mon Cel 82 Cnt Air Sup	3/8	<50
4634	Hyd Mon Cel 82 Cnt Air Ret	3/8	<50
4635	Hyd Mon Cel 83 Cnt Air Sup	3/8	<50
4636	Hyd Mon Cel 83 Cnt Air Ret	3/8	<50
749	Cont Str Sump Pps Disch	2	27
2993	Refueling Canal Water Return	4	7
4663	Post LOCA Sample & R & Cavity Sump	1/4	<50

INSERVICE INSPECTION (ISI) RELIEF REQUEST #PRS-2

Justification for Granting of Relief

The LLRT performed at 50 psi to meet 10 CFR 50, Appendix J, fully demonstrates the pressure retaining integrity of these lines at a pressure exceeding the Section XI test requirement. The LLRT is an instrumented test measuring leakage throughout the entire test boundary including the penetration valves and the pipe segment inside the penetration itself. The VT-2 examination would only check the accessible external surfaces of the pipe (or floors underneath) for evidence of leakage that is visually apparent. The LLRT schedule is similar to that required by Section XI. Performing a set of essentially duplicate tests at a lower pressure as would be needed to meet the Section XI requirement, imposes a burden that is not compensated by any increase in safety.

Implementation Schedule

This relief request will be implemented during Units 1 and 2 second ISI intervals. The LLRT tests are normally performed at intervals not exceeding 60 months.

This request is essentially identical to pressure test relief 8 in the first ISI interval, approved in NRC letter dated October 25, 1989.

INSERVICE INSPECTION (ISI) RELIEF REQUEST #PRS-3

Pressure Test Requirement for Which Relief is Requested

Eight ASME Code Class 1 closed end drain line segments, 25 ASME Code Class 1 open end tail pipes, and four ASME Code Class 2 open end tail pipes between first and second off manual isolation valves or between first off valve and blind flange or connection.

ASME Section XI Code Requirements

1989 Edition, Table IWB-2500-1, Category B-P, Item B15.51; Table IWC-2500-1, Category C-H, Item C7.40, and Code Case N-498-1, requires that piping systems be subject to IWB-5222 tests or IWC-5222 tests at normal operating pressure once each inspection interval, during which visual examination VT-2 is conducted.

Code Requirement from Which Relief is Requested

Relief is requested from performing the IWB-5222 and IWC-5222 tests for certain line segments as described below.

Basis for Relief Request

These line segments between the manual isolation valves (or between the manual isolation valve and blind flange) serve as open or closed end drains, fill, vent, or test lines. All of the segments are short, the closed end drains less than 18 inches and the open end segments less than 12 inches on average; and small diameter, being 3/4 inch NPS except for two at 1 inch NPS and four at 2 inch NPS. None of the isolation valves are capable of automatic closure. The line segments are not normally pressurized. Line pressure may exist due to first off valve leakby and thermal effects. The Code 10-year pressure test (as required by Code Case N-498-1) is impractical, and relief is requested for the following reasons:

INSERVICE INSPECTION (ISI) RELIEF REQUEST #PRS-3

Basis for Relief Request (continued)

- a) Using system pressure to test these line segments would require opening the first off manual valve in Mode 3 (Hot Standby) to pressurize between the two valves or valve and blind flange. However pressure testing in this manner would result in violation of the Class 1 system requirement for double isolation valve protection.
- b) For the closed end drains, costly system modifications would be required to break the system and install test connections with open ended isolation valves at each location, with the concurrent unnecessary radiation exposure to personnel, in order to permit pressurization during Mode 6 (Refueling). Testing these closed end drain segments without modification would require defueling the reactor, reclosing and repressurizing the primary system, and extending the outage critical path by approximately ten days. Both these options constitute extreme hardships with no compensating increase in safety.
- c) For the open ended line segments, testing in Mode 6 without modification is possible because the lines are provided with test connections and isolation. However, pressurizing each line segment to the nominal reactor coolant system operating pressure would require use of a hydro pump at each of the locations. This would result in unnecessary radiation exposure to plant personnel and increase the risk of contaminated liquid spill. All of these locations are in high radiation areas. Staging the hydro pump, providing access, removing the pipe cap, opening the second off valve, filling and pressurizing the line segment, inspecting, depressurizing and restoring the system, securing the equipment, and disposing of the effluent is estimated by PG&E to require one manrem at each location.

INSERVICE INSPECTION (ISI) RELIEF REQUEST #PRS-3

Proposed Alternative

Each line segment below will be visually inspected once during the 10-year system test; however, the line segments will not be pressurized to full system pressure. Pressure may exist due to first off valve leakby and thermal effects. The Class 1 line segments are also observed each refueling outage during the system leakage test and the Class 2 line segments are also observed once each inspection period during the system inservice test.

Note: Line numbers given refer to the main line that the subject segment is joined to. The small segments do not have individual line numbers.

<u>Class</u>	<u>Size</u>	<u>Location</u>	<u>Description</u>
1	3/4	line 2527 betwn vlvs 8364A & 283	RCP Lp 1 Seal Inj Drn RCDT
1	3/4	line 2534 betwn vlvs 8364B & 294	RCP Lp 2 Seal Inj Drn RCDT
1	3/4	line 2536 betwn vlvs 8364C & 303	RCP Lp 3 Seal Inj Drn RCDT
1	3/4	line 2541 betwn vlvs 8364D & 308	RCP Lp 4 Seal Inj Drn RCDT
1	3/4	segment between vlvs 513 & 514	Pzr Spray Drn to RCDT
1	2	segment betwn vlvs 8057A & 8058A	RCP Lp 1 Cld Lg Drn RCDT
1	2	segment betwn vlvs 8057B & 8058B	RCP Lp 2 Cld Lg Drn RCDT
1	2	segment betwn vlvs 8057C & 8058C	RCP Lp 3 Cld Lg Drn RCDT
1	3/4	line 109 betwn vlvs 579 & 570	Hot Leg Recirc Vent
1	2	line 961 betw vlvs 8057D & 8066, 8058D	Lp 4 Cld Lg Drn (to 3/4")
1	3/4	RVRLIS connection between valve 8070 & blind flange	
1	3/4	line 14 Loop 2 spray line vent between valve 517 & 518	
1	3/4	line 14 Loop 2 spray line drain to RCDT between valve 515 & 516	
1	3/4	line 14 Loop 2 spray line drain to RCDT between valve 519 & 520	
1	3/4	line 13 Loop 1 spray line vent between valve 521 & 522	
1	3/4	line 13 Loop 1 spray line drain between valve 523 & 524	
1	3/4	line 1195 Pressurizer PORV vent betwn valve 8056 & blind flange	
1	3/4	line 1469 Pzr lp seal vent betwn valve 8052 & 8064A, 8064B, 8064C	
1	3/4	line 1495 RCP 1 seal bypass vent betwn valve 8362A & blind flng	
1	3/4	line 1496 RCP 2 seal bypass vent betwn valve 8362B & blind flng	
1	3/4	line 1497 RCP 3 seal bypass vent betwn valve 8362C & blind flng	
1	3/4	line 1498 RCP 4 seal bypass vent betwn valve 8362D & blind flng	

INSERVICE INSPECTION (ISI) RELIEF REQUEST #PRS-3

Proposed Alternative (continued)

<u>Class</u>	<u>Size</u>	<u>Location</u>	<u>Description</u>
1	3/4	U2 In 246	Charging line loop 4 vent between valve 100 & 572
1	3/4	U2 In 253	Accumulator inject loop 1 vent between valve 138 & 139
1	3/4	U2 In 254	Accumulator inject loop 2 vent between valve 140 & 141
1	3/4	U2 In 256	Accumulator inject loop 4 vent between valve 144 & 145
1	3/4	line 235	Safety inject loop 1 hot leg vent between valve 50 & 51
1	3/4	U2 In 236	Safety inject loop 2 hot leg vent between valve 54 & 55
1	3/4	line 237	Safety inject loop 3 hot leg vent between valve 58 & 59
1	3/4	U2 In 238	Safety inject loop 4 hot leg vent between valve 62 & 63
1	3/4	line 109	Hot leg recirc vent between valve 6 & 935
1	3/4	line 109	RHR loop 4 vlv 8702 thermal expn drain betw vlv 3, 4 & 7
2	1		Reactor vessel head vent between valve 8078B & 8078A
2	1		Reactor vessel head vent between valve 8078C & 8078D
2	3/4		RVRLIS hot leg instrument connection between valve 617 & 616
2	3/4		React vessel head vent valve test conn betw test conn & valve 661

Justification for Granting of Relief

The relief request is justified in accordance with 10 CFR 50.55a(a)(3) because:

- a) The proposed alternative provides a reasonable assurance of continued structural integrity. These small, short line segments are normally not pressurized, except for any valve leakby and thermal effects that may cause pressurization. The proposed alternative visual examination will confirm the structural integrity of the line segments. During the 10-year system test, the line segments are expected to remain depressurized. If, however, the line segments pressurize due to valve leakby and thermal effects, the proposed alternate visual examination will essentially be identical to the Code-required VT-2 examination.

INSERVICE INSPECTION (ISI) RELIEF REQUEST #PRS-3

Justification for Granting of Relief (continued)

- b) Compliance with the Code requirements would result in hardship and unusual difficulties without a compensating increase in the level of quality and safety. For the closed end drain line segments, PG&E would have to either (i) pressurize in Mode 3 (Hot Standby), which would involve an unreviewed safety question by defeating RCS double isolation, resulting in operation in a less conservative manner, (ii) add costly test connections with concurrent increase in potential failure points and unnecessary radiation exposure to plant personnel, or (iii) test with the reactor defueled and reclosed, which would significantly increase outage critical path time to repressurize the reactor and would impose an unnecessary thermal cycle on the system.

For the open ended line segments, the possibility of testing in Mode 6 exists; however, multiple applications of hydro pumps would be required in high radiation areas with increased personnel exposure and the potential for contaminated liquid spill and increased radwaste generation.

- c) The public health and safety is not compromised by this relief because the alternative visual examination provides an acceptable level of quality and safety.

Implementation Schedule

This relief request will be implemented during Units 1 and 2 second ISI intervals. The alternate visual examination is scheduled at or near the end of the interval, coincident with the 10-year system pressure test.

This request is essentially identical to pressure test reliefs 10, 11A, 11B and 12 in the first ISI interval, approved in NRC letter dated September 21, 1992. Certain vent or drain lines have subsequently been removed and capped, and are not included in this request.

INSERVICE INSPECTION (ISI) RELIEF REQUEST #PRS-4

Pressure Test Requirement for Which Relief is Requested

Fuel transfer tube to refueling canal.

ASME Section XI Code Requirements

1989 Edition, Table IWB-2500-1, Category B-P, Item B15.51, and Code Case N-498-1 requires that the system be pressurized to normal operating pressure for the periodic system functional tests and the 10-year system test during which the visual examination VT-2 is conducted.

Code Requirement from Which Relief is Requested

Relief is requested from pressurization and performance of the visual examination VT-2.

Basis for Relief Request

The fuel transfer tube is not safety related except for the containment isolation function, and it is not in service except in Mode 6 (Refueling). It is normally isolated by a flange cover which is the containment isolation point. Most of the tube is inside the containment penetration and inaccessible for examination.

Proposed Alternative

The flange O-ring seal will be inspected for integrity at least once every 3 1/3 years.

Justification for Granting of Relief

The flange cover and seal are the containment isolation points. Inspection of these components will assure leak tight integrity. Since the penetration is flanged off during Modes 1-5, performance of the Code examination with the tube flooded would not serve to provide any assurance of the integrity of the penetration.

INSERVICE INSPECTION (ISI) RELIEF REQUEST #PRS-4

Implementation Schedule

This relief request will be implemented during Units 1 and 2 second ISI intervals. The alternative examination will be conducted at least once every inspection period.

This request is essentially identical to pressure test relief 9 in the first ISI interval, approved in NRC letter dated October 25, 1989.

INSERVICE INSPECTION (ISI) RELIEF REQUEST #PRS-5

System/Component for Which Relief is Requested

Containment spray ring discharge headers.

ASME Section XI Code Requirements

1989 Edition, Table IWC-2500-1, Category C-H, and paragraph IWC-5222(d) requires that the containment spray ring headers be demonstrated to have an open flowpath once each inspection period.

Code Requirements for Which Relief is Requested

Relief is requested from performing this examination on a periodic basis.

Basis for Relief Request

Diablo Canyon Power Plant License Amendments (LAs) 102 (Unit 1) and 101 (Unit 2) have been issued by the NRC in accordance with Generic Letter 93-05, "Line-Item Technical Specification Improvements to Reduce Surveillance Requirements for Testing During Power Operation." These LAs change the frequency of the smoke test which verifies open flowpath in the containment spray ring discharge headers to once in ten years.

Proposed Alternative

The open flowpath test of the containment spray ring discharge headers shall be performed by the methods and schedule specified in the Technical Specifications (once in ten years). The actual method used may involve use of smoke, pressurized air and flags, or other similar means of demonstrating availability of the flowpath. This test is typically performed by the system engineers.

INSERVICE INSPECTION (ISI) RELIEF REQUEST #PRS-5

Justification for Granting of Relief

The previous surveillance interval (5 years) was identified in NUREG-1366 as being excessive in maintaining equipment readiness to support safety functions. The proposed ten year scheduled is consistent with safety and efficiency, and is as required by the Technical Specifications.

Implementation Schedule

This relief will be implemented during the Units 1 and 2 second ISI intervals;

This is a new request consistent with recent License Amendments.

INSERVICE INSPECTION (ISI) RELIEF REQUEST #CNT-1

System/Component for Which Relief is Requested

Containment structure, including concrete shell and metal liner.

ASME Section XI Code Requirements

1992 Edition, Subsections IWE and IWL, require that repairs and replacements to the containment be made to the 1992 Edition requirements. Additionally, the definitions of visual examination methods VT-1 and VT-3, and visual examiner and authorized inspector qualifications are required to comply with Subsection IWA in the 1992 Edition. Table IWF-2500-1, Category E-F, Item E7.10, requires surface examination of dissimilar metal welds.

Code Requirements for Which Relief is Requested

Relief is requested from use of the repair and replacement provisions, definitions of VT-1 and VT-3, and visual examiner and authorized inspector qualification requirements in the 1992 Edition. Relief is also requested from performing surface examination of dissimilar metal welds.

Basis for Relief Request

The DCCP ISI program for Class 1, 2, and 3 components and their supports is based on the 1989 Edition without addenda. This program defines the VT-1 and VT-3 examinations and includes all factors necessary to qualify the examiners and assure the examinations are performed at the highest quality levels. The imposition of 1992 Code requirements for containment would necessitate a separate administrative program including procedures, certification tests and recordkeeping requirements, which would merely parallel the existing program with no benefit to quality. The existing program is the same as used on the reactor and other Class 1 components, and continues to prove effective. Maintaining two separate programs for the same thing is a significant burden that has no benefit to quality or safety.

INSERVICE INSPECTION (ISI) RELIEF REQUEST #CNT-1

Basis for Relief Request (continued)

Similarly, the repair and replacement program for Class 1, 2, and 3 components is based on the 1989 Edition and has proven effective. Use of the 1992 Code for containment would require a separate set of procedures with 1992 references, parallel welder qualifications and parallel recordkeeping. This is a significant burden with no compensating increase in quality or safety.

For the dissimilar metal weld surface examination, there has never been any problem associated with these welds in the industry, and performing surface examination would require significant resources that would have no benefit for quality and safety.

For authorized inspection, the third party inspection agency (Hartford) does not currently have inspectors qualified for concrete inspection. PG&E understands that this is an industry-wide situation.

Proposed Alternative

The VT-1 and VT-3 examination rules in Subsection IWA, including examiner qualification details, will conform to the 1989 Edition. Repair and replacement rules will also conform to the 1989 Edition. These are the same requirements that apply for all other components in the ISI program. Examination extent and all other requirements will conform to the 1992 Edition except for surface examination of dissimilar metal welds, which may instead be included in the general surface visual examinations.

The authorized inspector assigned to DCPD will be considered acceptable for inspection of containment examinations, repairs and replacements, until the inspection agency can qualify the individual specifically for concrete inspection.

Justification for Granting of Relief

Requiring redundant administrative programs for visual examination, repair and replacement of containment in parallel with the existing programs for all other ISI components is a significant burden that has no benefit to quality and safety. For the dissimilar metal welds, there has never been a problem with containment welds. The alternate visual examination assures continued weld integrity.

INSERVICE INSPECTION (ISI) RELIEF REQUEST #CNT-1

Justification for Granting of Relief (continued)

Qualification of the authorized inspector is of course solely the responsibility of the authorized inspection agency. PG&E has encouraged Hartford to obtain any additional qualification that would be required to implement Subsections IWE and IWL, and believes that this can be expected in the near future.

Implementation Schedule

This relief will be implemented during the Units 1 and 2 second ISI intervals.

PG&E believes that the authorized inspector will fully meet all requirements for IWE/IWL inspection within a reasonable period.

INSERVICE INSPECTION (ISI) RELIEF REQUEST #DOC-1

Requirement for Which Relief is Requested

ISI summary report licensing submittals.

ASME Section XI Code Requirements

1989 Edition, Article IWA-6000, Paragraphs IWA-6220 and IWA-6230, requires that an ISI summary report, including Owner's Report for Inservice Inspections, Form NIS-1, and Owner's Report for Repair or Replacements, Form NIS-2, be prepared and submitted to the NRC within 90 days of completion of the ISI conducted during each refueling outage.

Code Requirement from Which Relief is Requested

Relief is requested from completing and submitting the reports described in IWA-6220 and IWA-6230.

Basis for Relief Request

PG&E perceives no added value either to PG&E or to the NRC from preparing and submitting these reports. The time necessary to prepare and submit the reports constitutes a considerable administrative burden with no benefit whatsoever to safety. PG&E records of ISI and repair and replacement are all reviewed by the Authorized Nuclear Inservice Inspection Agency and are maintained as life-of-component or life-of-plant records, which are stored in our records management system and available for review and audit at any time.

INSERVICE INSPECTION (ISI) RELIEF REQUEST #DOC-1

Proposed Alternative

PG&E will continue to perform all required ISI activities in conformance with our approved ISI program plan, and Section XI repair and replacement program; however, PG&E will not generate or submit summary reports of ISI activities. All such required ISI activities are subject to review by the Authorized Nuclear Inspection Agency, and all records of ISI repair and replacement are stored as lifetime records, which are available for audit at the plant site at any time.

Justification for Granting of Relief

The preparation and submittal of ISI summary reports is an administrative burden with no compensating increase in safety. PG&E has not been able to ascertain any benefit to any involved organization from the preparation and submittal of these reports. All original records pertaining to ISI repair and replacement are available at the site for review and audit at any time. The summary report provides no additional value to these records; conversely, it diverts resources from more significant activities.

Implementation Schedule

This relief request will be implemented during Units 1 and 2 second ISI intervals.

This is a new request not to prepare and submit reports of no perceived value.