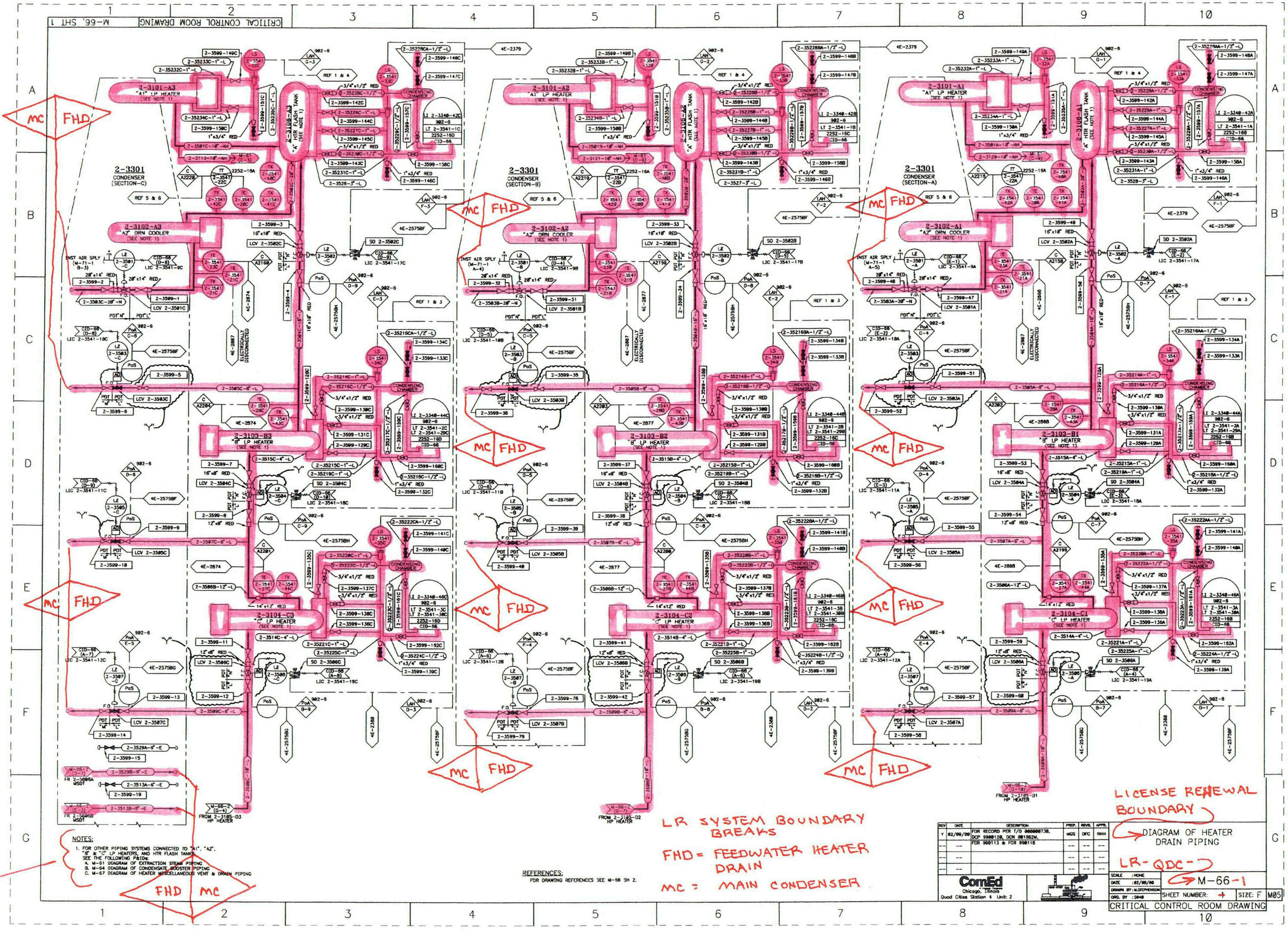

M-66, SHT 1
CRITICAL CONTROL ROOM DRAWING
2-3101-A3 "A1" LP HEATER (SEE NOTE 1)
2-3101-A2 "A1" LP HEATER (SEE NOTE 1)
2-3101-A1 "A1" LP HEATER (SEE NOTE 1)
2-3301 CONDENSER (SECTION-C)
2-3301 CONDENSER (SECTION-B)
2-3301 CONDENSER (SECTION-A)
2-3102-A3 "A2" DRN COOLER (SEE NOTE 1)
2-3102-A2 "A2" DRN COOLER (SEE NOTE 1)
2-3102-A1 "A2" DRN COOLER (SEE NOTE 1)
2-3103-B3 "B" LP HEATER (SEE NOTE 1)
2-3103-B2 "B" LP HEATER (SEE NOTE 1)
2-3103-B1 "B" LP HEATER (SEE NOTE 1)
2-3104-C3 "C" LP HEATER (SEE NOTE 1)
2-3104-C2 "C" LP HEATER (SEE NOTE 1)
2-3104-C1 "C" LP HEATER (SEE NOTE 1)
FROM 2-3105-D3 HP HEATER
FROM 2-3105-D2 HP HEATER
FROM 2-3105-D1 HP HEATER
NOTES:
1. FOR OTHER PIPING SYSTEMS CONNECTED TO "A1", "A2", "B" & "C" LP HEATERS, AND HTR FLASH TANKS SEE THE FOLLOWING P&IDs:
A. M-61 DIAGRAM OF EXTRACTION STEAM PIPING
B. M-64 DIAGRAM OF CONDENSATE BOOSTER PIPING
C. M-67 DIAGRAM OF HEATER MISCELLANEOUS VENT & DRAIN PIPING
REFERENCES:
FOR DRAWING REFERENCES SEE M-66 SH 2.
MC FHD
REMOVE NOTE
LR SYSTEM BOUNDARY BREAKS
FHD = FEEDWATER HEATER DRAIN
MC = MAIN CONDENSER
LICENSE RENEWAL BOUNDARY
REV | DATE | DESCRIPTION | PREP. | REVW. | APPR.
Y | 02/09/00 | FOR RECORD PER T/O 000000730, DCP 9900120, DCN 001862M, FCR 990113 & FCR 990118 | MGS | DFC | RHH
ComEd
Chicago, Illinois
Quad Cities Station 4 Unit: 2
DIAGRAM OF HEATER DRAIN PIPING
LR-QDC-
SCALE :NONE
DATE :02/08/00
DRAWN BY: M.STEPHENSON
ORG. BY :S040
M-66-1
SHEET NUMBER: 1
SIZE: F
M05
CRITICAL CONTROL ROOM DRAWING

NOTE:
1. NON-RUNNING TRAIN SHALL HAVE THE DISCHARGE VALVE NORMALLY CLOSED.

"AL"

FROM DEMIN. WATER TRANSFER PUMPS

CONDENSATE BOOSTER PUMPS

CONDENSATE

REACTOR FEED PUMP OIL COOLERS

REV	DATE	DESCRIPTION	PREP.	REVR.	APPR.
AL	EDSF	FOR RECORD PER EC DCP 338486	EDSF	EDSF	EDSF
--	--		--	--	--
--	--		--	--	--
--	--		--	--	--

Exelon Nuclear
Quad Cities Station 4 Unit 2

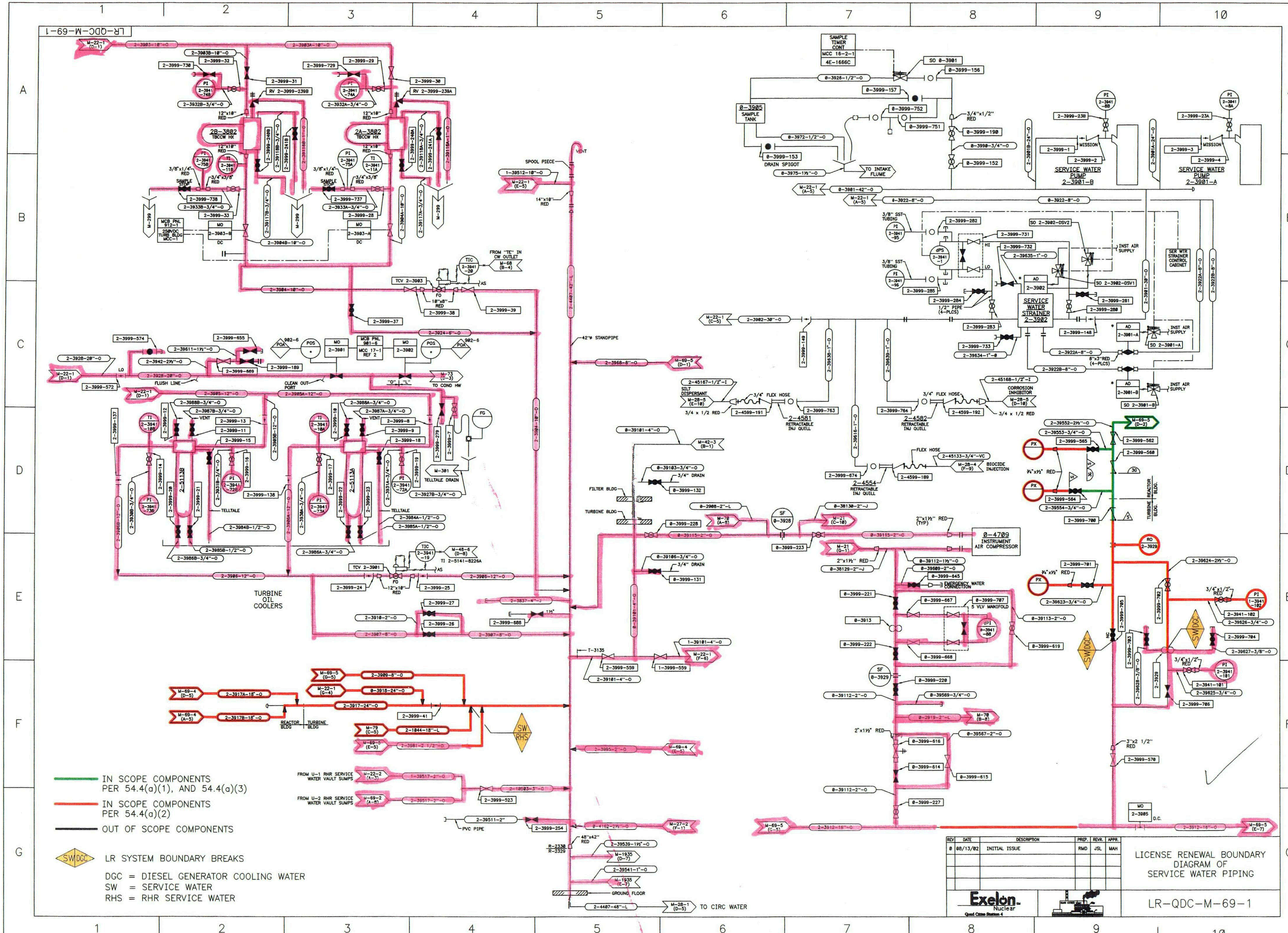
DIAGRAM OF TURBINE BUILDING COOLING WATER PIPING

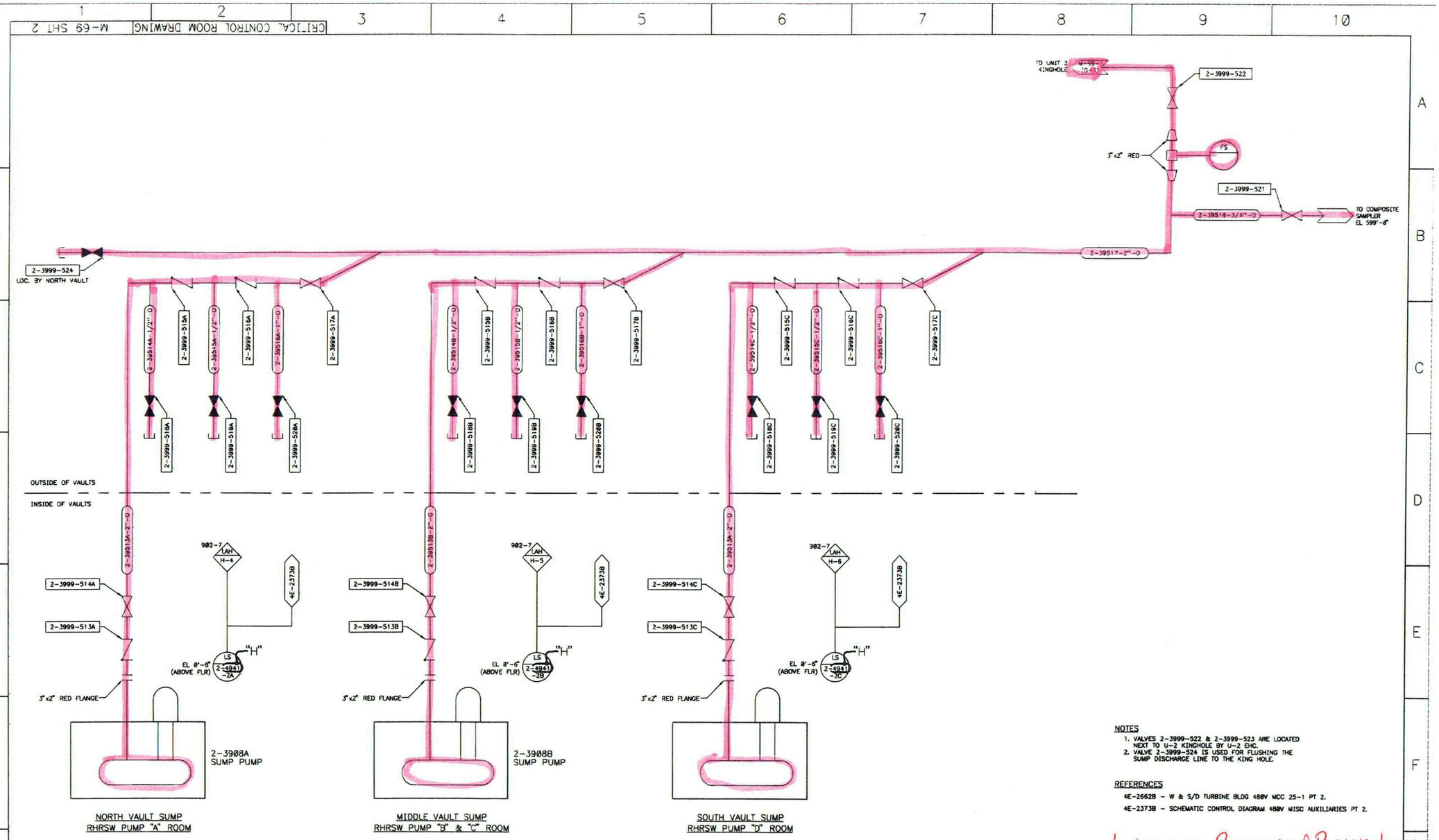
LR-QDC- M-68

LICENSE RENEWAL BOUNDARY

SCALE	NONE
DATE	11/83/83
DRAWN BY	STEPHENSON
ORG. BY	5848
SHEET NUMBER:	
SIZE:	F
	M05

CRITICAL CONTROL ROOM DRAWING


LR-QDC-M-69-1
2B-3802 TBCCW HX
2A-3802 TBCCW HX
2-3903-10"-O
2-3903A-10"-O
2-3903B-10"-O
2-3904-10"-O
2-3904A-10"-O
2-3904B-10"-O
RV 2-3999-239B
RV 2-3999-239A
MCB PNL 912-1 250VDC TURB BLDG MCC-1
MO 2-3903-B DC
MO 2-3903-A DC
SAMPLE STOP
M-299
TCV 2-3903
TIC 2-3941-20
FROM "TE" IN CW OUTLET M-68 (B-4)
2-3924-6"-O
MO 2-3901
MO 2-3902
MCB PNL 901-6 MCC 17-1 REF 2
POS
POA 902-6
2-3928-20"-O
FLUSH LINE
CLEAN OUT PORT
M-73 (D-3) TO COND HW
2-3905-12"-O
2-3905A-12"-O
2-5113B
2-5113A
TELLTALE
M-301 TELLTALE DRAIN
FG
2-3906-12"-O
TCV 2-3901
TIC 2-3941-19
M-48-6 (D-8)
TI 2-5141-8226A
TURBINE OIL COOLERS
2-3907-8"-O
2-3910-2"-O
SPOOL PIECE
VENT
1-39512-10"-O
M-22-1 (E-5)
14"x10" RED
2-4407-42"-L
42"ø STANDPIPE
2-3968-8"-O
M-69-5 (D-1)
2-3917A-18"-O
2-3917B-18"-O
M-69-4 (D-5)
M-69-4 (A-5)
REACTOR BLDG
TURBINE BLDG
2-3917-24"-O
2-3909-8"-O
0-3918-24"-O
M-79 (C-5)
2-1044-18"-L
M-69-5 (E-5)
2-3981-2 1/2"-O
SW RHS
2-3995-2"-O
FROM U-1 RHR SERVICE WATER VAULT SUMPS
FROM U-2 RHR SERVICE WATER VAULT SUMPS
1-39517-2"-O
2-39517-2"-O
2-10503-3"-O
2-39511-2"
PVC PIPE
0-4162-2½"-O
M-27-2 (F-1)
48"x42" RED
R-2330
R-2329
M-1935 (D-7)
M-1935 (E-7)
GROUND FLOOR
2-4407-48"-L
M-28-1 (D-5) TO CIRC WATER
SAMPLE TIMER CONT MCC 16-2-1 4E-1666C
0-3905 SAMPLE TANK
DRAIN SPIGOT
TO INTAKE FLUME
SO 0-3901
0-3901-42"-O
0-3922-8"-O
SERVICE WATER PUMP 2-3901-B
SERVICE WATER PUMP 2-3901-A
2-3901B-24"-O
2-3901A-24"-O
SERVICE WATER STRAINER 2-3902
SER WTR STRAINER CONTROL CABINET
SO 2-3902-DSV1
SO 2-3902-DSV2
INST AIR SUPPLY
AO 2-3901-A
AO 2-3901-B
2-3922A-8"-O
2-3922B-8"-O
2-3902-30"-O
SILT DISPERSANT M-28-5 (E-10)
2-4581 RETRACTABLE INJ QUILL
2-4582 RETRACTABLE INJ QUILL
CORROSION INHIBITOR M-28-5 (D-10)
2-4554 RETRACTABLE INJ QUILL
BIOCIDE INJECTION M-28-4 (F-9)
FLEX HOSE
M-42-3 (B-1)
FILTER BLDG
TURBINE BLDG
0-39101-4"-O
M-70 (A-8)
SF 0-3928
0-39115-2"-O
M-21 (C-10)
M-21 (G-1)
0-4709 INSTRUMENT AIR COMPRESSOR
EMERGENCY WATER CONNECTION
5 VLV MANIFOLD
dPI 0-3941-88
0-3913
SF 0-3929
0-2919-2"-L
M-70 (B-8)
M-22-1 (F-6)
T-3135
2-3912-16"-O
M-69-5 (G-5)
M-69-5 (E-7)
M-69-5 (D-2)
REACTOR BLDG.
TURBINE BLDG.
PX
RO 2-3929
SWDGC
MO 2-3905 D.C.
IN SCOPE COMPONENTS PER 54.4(a)(1), AND 54.4(a)(3)
IN SCOPE COMPONENTS PER 54.4(a)(2)
OUT OF SCOPE COMPONENTS
LR SYSTEM BOUNDARY BREAKS
DGC = DIESEL GENERATOR COOLING WATER
SW = SERVICE WATER
RHS = RHR SERVICE WATER
REV | DATE | DESCRIPTION | PREP. | REVR. | APPR.
0 | 08/13/02 | INITIAL ISSUE | RMD | JSL | MAH
LICENSE RENEWAL BOUNDARY DIAGRAM OF SERVICE WATER PIPING
Exelon Nuclear
Quad Cities Station 4
LR-QDC-M-69-1



NOTES

1. VALVES 2-3999-522 & 2-3999-523 ARE LOCATED NEXT TO U-2 KINGHOLE BY U-2 ENC.
2. VALVE 2-3999-524 IS USED FOR FLUSHING THE SUMP DISCHARGE LINE TO THE KING HOLE.

REFERENCES

4E-2662B - W & S/D TURBINE BLDG 480V MCC 25-1 PT 2.

4E-2373B - SCHEMATIC CONTROL DIAGRAM 480V MISC AUXILIARIES PT 2.

License Renewal Boundary Diagram

REV	DATE	DESCRIPTION	PREP.	REVR.	APPR.
H	08/18/99	FOR RECORD PER ASBT DCR 990597	MDH	JEJ	SWS
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--	--		--	--	--
--	--		--	--	--

ComEd
Chicago, Illinois
Quad Cities Station - Unit: 2

NUCLEAR SAFETY RELATED EQUIPMENT IS SHOWN ON THIS DRAWING

DIAGRAM OF
RHR SERVICE WATER
VAULT SUMP PIPING

LR-QDC)

M-69-2

SCALE : NONE
DATE : 03/15/99
DRAWN BY : D.DEBROCK
ORG. BY : SB40

SHEET NUMBER: 2 SIZE: D M05

CRITICAL CONTROL ROOM DRAWING

LR-QDC-M-69-3

2-6601 DIESEL GENERATOR

2-6666A ENGINE DRIVEN WATER COOLANT PUMP

2-6664 IMMERSION HEATER

2-6662 EXPANSION TANK

2-6654 LUBE OIL COOLER

2-6666B ENGINE DRIVEN WATER COOLANT PUMP

2-6665 ENGINE COOLING PIPE MANIFOLD

2-6663 TEMP REG VLV

2-6661B

2-6661A

DG COOLING WATER HEAT EXCHANGERS

2-3921 CORROSION COUPON HOLDER

2-5749 DG COOLING PUMP CUBICLE COOLER

2-3903 DIESEL GENERATOR COOLING WATER PUMP

TO OIL SEPARATOR

TO OIL SEPARATOR

DG HIGH TEMP TRIP

TO SUMP PIT

BEDPLATE DRAIN TO SUMP

DG UNIT 2 AUX CONT PANEL

WELL WATER TO PUMP GLAND SEAL CONNECTION

DRIP PAN DRAIN

DGCW DRAIN

DGCW VENT

1/4"ø SST TUBING

1/2"ø SST TUBING

1/8"ø COPPER TUBING

4" FLEX HOSE

DGC DG LR SYSTEM BOUNDARY BREAKS

DG = DIESEL GENERATOR
DGC = DIESEL GENERATOR COOLING WATER
RHS = RHR SERVICE WATER

IN SCOPE COMPONENTS PER 54.4(a)(1), AND 54.4(a)(3)

IN SCOPE COMPONENTS PER 54.4(a)(2)

OUT OF SCOPE COMPONENTS

REV	DATE	DESCRIPTION	PREP.	REVR.	APPR.
0	08/13/02	INITIAL ISSUE	SP	JSL	MAH

LICENSE RENEWAL BOUNDARY DIAGRAM OF SERVICE WATER PIPING DIESEL GENERATOR COOLING WATER

Exelon Nuclear
Quad Cities Station 4

LR-QDC-M-69-3

LR-QDC-M-69-4

INSTRUMENT AIR COMPRESSOR 2-4709

2-3702A
REACTOR BUILDING CLOSED COOLING WATER HEAT EXCHANGER

2-3702B
REACTOR BUILDING CLOSED COOLING WATER HEAT EXCHANGER

2-6000
UNIT 2 MAIN TURBINE GENERATOR

2-5301A ½ COOLER
2-5301B ½ COOLER
2-5301C ½ COOLER
2-5301D ½ COOLER

SW RBC

LR SYSTEM BOUNDARY BREAKS
RBC = REACTOR BUILDING CLOSED COOLING WATER
SW = SERVICE WATER

IN SCOPE COMPONENTS PER 54.4(a)(2)
OUT OF SCOPE COMPONENTS

REV	DATE	DESCRIPTION	PREP.	REVR.	APPR.
0	08/12/02	INITIAL ISSUE	SP	JSL	MAH

LICENSE RENEWAL BOUNDARY DIAGRAM OF SERVICE WATER PIPING

Exelon Nuclear
Quad Cities Station 4

LR-QDC-M-69-4

LR-QDC-M-69-5

DGC SW LR SYSTEM BOUNDARY BREAKS
DGC = DIESEL GENERATOR COOLING WATER
SW = SERVICE WATER
ECC = ECCS CORNER ROOM HVAC

IN SCOPE COMPONENTS PER 54.4(a)(1), AND 54.4(a)(3)

IN SCOPE COMPONENTS PER 54.4(a)(2)

OUT OF SCOPE COMPONENTS

MG SET OIL COOLERS

STEAM TUNNEL COOLERS

GENERATOR STATOR WATER COOLERS

REV	DATE	DESCRIPTION	PREP.	REVR.	APPR.
0	08/13/02	INITIAL ISSUE	RMD	JSL	MAH

LICENSE RENEWAL BOUNDARY DIAGRAM OF SERVICE WATER PIPING

Exelon Nuclear
Quad Cities Station 4

LR-QDC-M-69-5

LR-QDC-M-75-1

IN SCOPE COMPONENTS PER 54.4(a)(2)

OUT OF SCOPE COMPONENTS

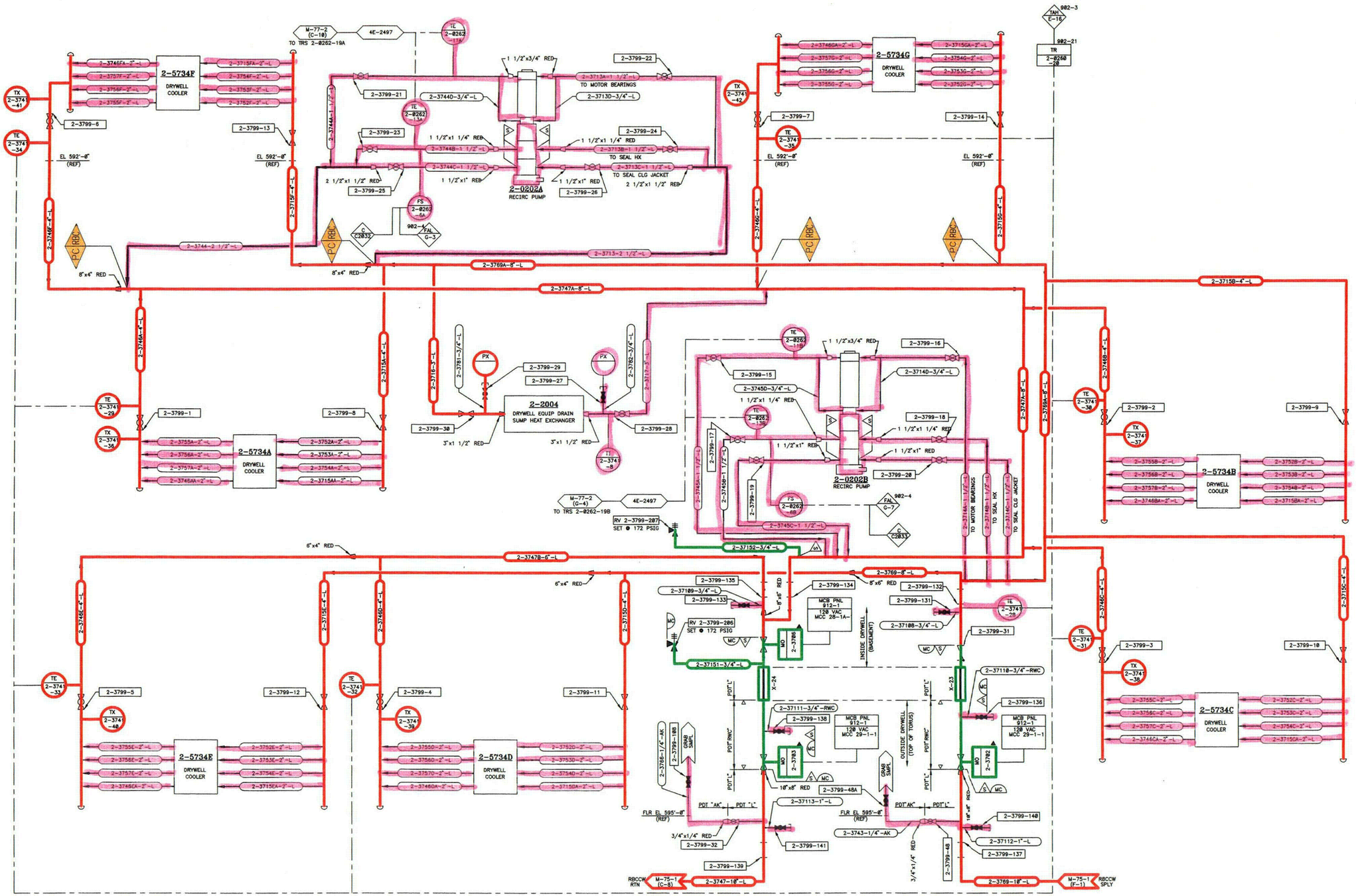
REV	DATE	DESCRIPTION	PREP.	REVR.	APPR.
0	08/03/02	INITIAL ISSUE	EMB	JSL	MAH

Exelon Nuclear
Quad Cities Station 4

LICENSE RENEWAL BOUNDARY DIAGRAM OF REACTOR BUILDING CLOSED COOLING WATER PIPING

LR-QDC-M-75-1

LR-QDC-M-75-2



PC RBC LR SYSTEM BOUNDARY BREAKS

RBC = REACTOR BUILDING CLOSED COOLING WATER
PC = CONTAINMENT ISOLATION COMPONENTS AND PRIMARY CONTAINMENT PIPING

IN SCOPE COMPONENTS PER 54.4(a)(1), AND 54.4(a)(3)

IN SCOPE COMPONENTS PER 54.4(a)(2)

OUT OF SCOPE COMPONENTS

REV	DATE	DESCRIPTION	PREP.	REVR.	APPR.
0	08/03/02	INITIAL ISSUE	EMB	JSL	MAH

Exelon Nuclear
Quad Cities Station 4

LICENSE RENEWAL BOUNDARY DIAGRAM OF REACTOR BUILDING CLOSED COOLING WATER PIPING

LR-QDC-M-75-2

LR-QDC-M-77-4

2B SWITCH PANEL ASSEMBLY

2A SWITCH PANEL ASSEMBLY

2-0202-35B

2-0202-35A

2-0202-28B OIL MIST ELIMINATOR ASSEMBLY

2-0202-28A OIL MIST ELIMINATOR ASSEMBLY

2-0202-51B 2B RECIRC MG SET GENERATOR

2-0202-51B 2B RECIRC MG SET FLUID DRIVE

2-0202-51B 2B RECIRC MG SET MOTOR

2-0202-51A 2A RECIRC MG SET GENERATOR

2-0202-51A 2A RECIRC MG SET FLUID DRIVE

2-0202-51A 2A RECIRC MG SET MOTOR

2-0202-44B DUAL OIL FILTERS

2-0202-44A DUAL OIL FILTERS

2-0202-47B RECIRC MG SET OIL PUMP

2-0202-49B RECIRC MG SET EMERGENCY OIL PUMP

2-0202-48B RECIRC MG SET OIL PUMP

2-0202-47A RECIRC MG SET OIL PUMP

2-0202-49A RECIRC MG SET EMERGENCY OIL PUMP

2-0202-48A RECIRC MG SET OIL PUMP

2-0202-50D RECIRC MG SET OIL COOLER

2-0202-50B RECIRC MG SET OIL COOLER

2-0202-50C RECIRC MG SET OIL COOLER

2-0202-50A RECIRC MG SET OIL COOLER

2-0202-48A DUPLEX 3-WAY VALVE

2-0202-48B DUPLEX 3-WAY VALVE

2B RECIRC MG SET OIL PUMPS (FLR EL 611'-6")

2A RECIRC MG SET OIL PUMPS (FLR EL 611'-6")

TO RR LR SYSTEM BOUNDARY BREAKS

RR = REACTOR RECIRCULATION-RECIRCULATION FLOW CONTROL AND MG SETS

TO = TURBINE OIL

IN SCOPE COMPONENTS PER 54.4(a)(2)

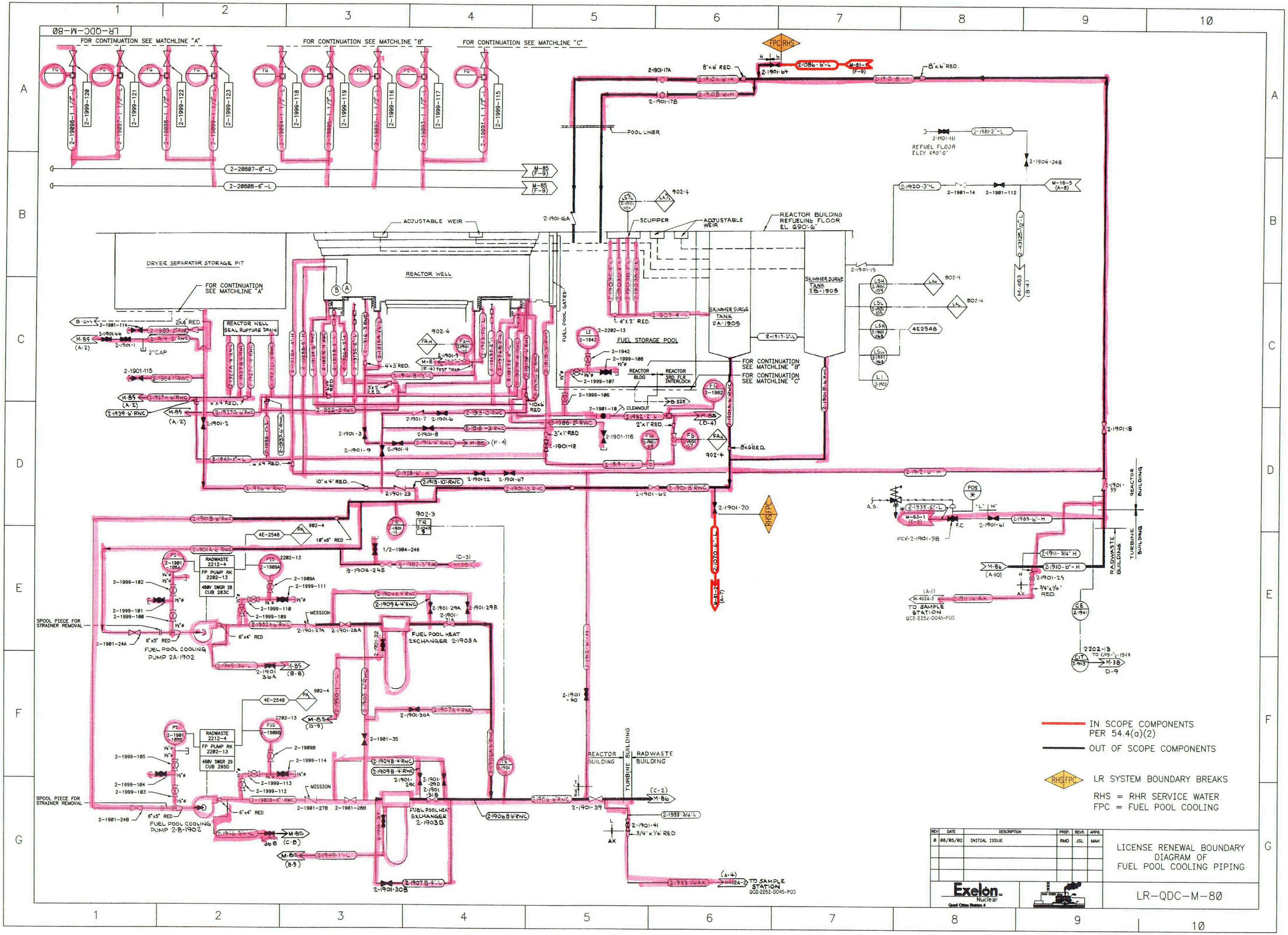
OUT OF SCOPE COMPONENTS

REV	DATE	DESCRIPTION	PREP.	REVR.	APPR.
0	09/19/02	INITIAL ISSUE	SP	JSL	MAH

LICENSE RENEWAL BOUNDARY DIAGRAM OF RECIRCULATION PUMP MOTOR GENERATOR (MG) SETS OIL PIPING

Exelon Nuclear
Quad Cities Station 4

LR-QDC-M-77-4



LR-QDC-M-80
FOR CONTINUATION SEE MATCHLINE "A"
FOR CONTINUATION SEE MATCHLINE "B"
FOR CONTINUATION SEE MATCHLINE "C"
2-19096-1 1/2"-L
2-1999-120
2-19097-1 1/2"-L
2-1999-121
2-19098-1 1/2"-L
2-1999-122
2-19099-1 1/2"-L
2-1999-123
2-19094-1 1/2"-L
2-1999-118
2-19095-1 1/2"-L
2-1999-119
2-19092-1 1/2"-L
2-1999-116
2-19093-1 1/2"-L
2-1999-117
2-19091-1 1/2"-L
2-1999-115
2-20807-6"-L
2-20808-6"-L
M-85 (F-9)
FPC RHS
2-1901-17A
8"x6" RED.
2-1910A-6"-H
2-1901-64
2-1086-6"-L
M-81-1 (F-9)
2-1910B-6"-H
2-1901-17B
2-1910-8"-H
POOL LINER
2-1981-2"-L
2-1901-111
REFUEL FLOOR ELEV 690'-0"
2-1904-248
2-1920-3"-L
2-1901-14
2-1901-112
M-16-5 (A-8)
2-43125-1/2"-L
M-463 (B-4)
2-1901-16A
SCUPPER
ADJUSTABLE WEIR
REACTOR BUILDING REFUELING FLOOR EL 690'-6"
DRYER SEPARATOR STORAGE PIT
REACTOR WELL
FUEL POOL GATES
SKIMMER SURGE TANK 2A-1905
SKIMMER SURGE TANK 2B-1905
2-1917-6"-L
2-1903-4"-L
4"X2" RED.
FUEL STORAGE POOL
2-1901-15
REACTOR WELL SEAL RUPTURE DRAIN
2-1983-2"RWC
2-1914-2"RWC
2-1984-1"RWC
2-1927H-6"RWC
2-1939-6"RWC
2-1927G-6"RWC
2-1926-3"RWC
2-1940-1"-L
2-1936-4"RWC
2-1938-1"-L
2-1937-6"RWC
2-1916IB-1 1/2"-L
2-1913-10"RWC
2-1918-3"RWC
2-1916-4"RWC
2-1986-2"RWC
2-1932-2"L
2-1919-1"L
2-1928-6"H
2-1912-6"H
2-1901-10"RWC
2-1901B-6"RWC
2-1901A-6"RWC
2-1901-20
RHS FPC
2-1070-6"-L
M-81-2 (A-7)
2-1901-18
2-1901-55
2-1935-6"-L
2-1935-6"-H
M-63-1 (E-2)
FCV-2-1901-58
2-1901-61
2-1911-3/4"H
2-1910-6"-H
M-86 (A-10)
2-1901-25
2-1911-1/4-AK
M-462A-3
TO SAMPLE STATION QC2-2252-0045-P05
2202-13
TO CRS-1/2-1944
M-38 D-9
FUEL POOL COOLING PUMP 2A-1902
FUEL POOL COOLING PUMP 2-B-1902
SPOOL PIECE FOR STRAINER REMOVAL
RADWASTE 2212-4
FP PUMP RK 2202-13
480V SWGR 28 CUB 283C
480V SWGR 29 CUB 295D
FUEL POOL HEAT EXCHANGER 2-1903A
FUEL POOL HEAT EXCHANGER 2-1903B
2-1902A-6"RWC
2-1902B-6"RWC
2-1904A-4"RWC
2-1909A-4"RWC
2-1904B-4"RWC
2-1909B-4"RWC
2-1905-6"RWC
2-1950-1"-L
2-1907A-4"RWC
2-1907B-4"-L
2-1906A-6"RWC
2-1906B-6"RWC
2-1906-6"RWC
2-1945-3/4"-L
2-1946-3/4"-L
2-1949-1"-L
2-1901-39
2-1901-40
2-1933-3/4"L
2-1933-1/4"AK
M-482A-2
TO SAMPLE STATION QC2-2252-0045-P05
REACTOR BUILDING
TURBINE BUILDING
RADWASTE BUILDING
M-86 (C-2)
IN SCOPE COMPONENTS PER 54.4(a)(2)
OUT OF SCOPE COMPONENTS
LR SYSTEM BOUNDARY BREAKS
RHS = RHR SERVICE WATER
FPC = FUEL POOL COOLING
REV | DATE | DESCRIPTION | PREP. | REVR. | APPR.
0 | 08/05/02 | INITIAL ISSUE | RMD | JSL | MAH
LICENSE RENEWAL BOUNDARY DIAGRAM OF FUEL POOL COOLING PIPING
Exelon Nuclear
Quad Cities Station 4
LR-QDC-M-80

LR-QDC-M-83-4

CONTROL ROD DRIVE FEED PUMPS & PIPING

DETAIL-B
(PUMP BEARINGS & LUBE OIL COOLER PIPING)

DETAIL-A
(PUMP BEARINGS & LUBE OIL COOLER PIPING)

TBC CRH — LR SYSTEM BOUNDARY BREAKS

CRH = CONTROL ROD DRIVE HYDRAULIC
TBC = TURBINE BUILDING CLOSED COOLING WATER

OUT OF SCOPE COMPONENTS

REV	DATE	DESCRIPTION	PREP.	REVR.	APPR.
0	11/12/02	INITIAL ISSUE	RMD	JSL	MAH

LICENSE RENEWAL BOUNDARY DIAGRAM OF CONTROL ROD DRIVE HYDRAULIC PIPING

Exelon Nuclear
Quad Cities Station 4

LR-QDC-M-83-4

NOTE:
1. RADIOGRAPH ALL WELDS (EXCEPT SOCKET WELDS) UNLESS OTHERWISE NOTED BY THE LEGEND SYMBOL △.
RADIOGRAPHS NOT REQUIRED ON THE FOLLOWING LINES.
A. 3300 SERIES
B. 3410 A THRU D
C. ANY "L" TABLE PIPING
D. 3408
2. PACKING AND BONNET SEAL AIR REQUIRED. SEE M-71, SHEET 3.
3. FOR SPDS COMPUTER INPUT TABULATION SEE DWG 4E-7830C

DETAIL "A"
TYP. GAS TRAP ASSEMBLY

TYPICAL SECTION - REHEAT SEAL TROUGHS

NOTES
1. CONTROL STATION PROVIDING INPUT TO E/P CONVERTER IS REMOVED. CABLE FROM MCB 982-7 TO E/P CONVERTER IS LEFT IN PLACE. THIS SYSTEM IS PARTIALLY ABANDONED.

CD = CONDENSATE AND CONDENSATE STORAGE
MC = MAIN CONDENSER
LR SYSTEM BOUNDARY BREAKS

REV	DATE	DESCRIPTION	PREP.	REVR.	APPR.
AY	EDSF	FOR RECORD PER EC DCP 24226	EDSF	EDSF	EDSF
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Exelon Nuclear
Quad Cities Station 4 Unit 2

NUCLEAR SAFETY RELATED EQUIPMENT IS SHOWN ON THIS DRAWING

LICENSE RENEWAL BOUNDARY
DIAGRAM OF OFF GAS PIPING
LR-QDC2
M-84-1

SCALE	NONE
DATE	11/08/99
DRAWN BY	C. BUSH
ORG. BY	C502
SHEET NUMBER	1
SIZE	F

M05

CRITICAL CONTROL ROOM DRAWING

CONDENSATE DEMINERALIZER EFFLUENT

PS / CD

PS / DWM

PS / TBC

PS / TBC

PS / CD

LR SYSTEM BOUNDARY BREAK

PS = PROCESS SAMPLING

CD = CONDENSATE AND CONDENSATE STORAGE

DWM = DEMINERALIZED WATER MAKEUP

TBC = TBCCW

LICENSE RENEWAL BOUNDARY

TEMPERATURE CONTROL UNIT-A
FOR INTERNAL CONNECTION SEE SENTRY DWG 10-00803K-5

SERVICE HOME
1-4999-128

SERVICE HOME
1-4999-130

CUP SINK

CUP SINK

HX DRIP PAN

PANEL NO.
D01-2251-0040AP05

XCE031.002 R4411

REFERENCE DRAWINGS:

4E-2848L SHT 1 - CONTROL LOOP SCHEMATIC CONDUCTIVITY INDICATION

4E-2848L SHT 2 - CONTROL LOOP SCHEMATIC DISSOLVE OXYGEN INDICATION

4E-2848L SHT 3 - CONTROL LOOP SCHEMATIC PH INDICATION

NOTES:

1) DESIGN PRESSURES AND TEMPERATURES
2) ALL PROCESS TUBING INTERNAL TO THE SAMPLE PANEL IS 0.25"O.D.x 0.15" BORE TYPE 304/316 WELDED OR SEAMLESS STAINLESS STEEL, UNLESS OTHERWISE NOTED.
3) VALVE #5 IS NORMALLY FULLY OPEN, NEVER THROTTLE AT THE INLET, ONLY AT THE COOLING WATER OUTLET.
4) ALL WORK SHALL BE PERFORMED IN ACCORDANCE WITH THE LATEST REVISIONS OF BID SPEC XCE031.002 AND DECO SPEC R4411, AS NOTED ON THE DRAWING, INCLUDING ALL ATTACHMENTS AND ADDENDA.
5) ☐ 3H DENOTES BULKHEAD FITTING
6) (DELETED)
7) TWO LOOP SEAL IS 3 FEET HIGH 3/4" O.D. LINE FROM PRESSURIZED TO UNPRESSURIZED COLLECTION HEADERS TURBINE BLDG. FLOOR DRAIN.

REV	DATE	DESCRIPTION	DESIGN	LEVEL	APPR
2	11/22/02	FOR RECORD PER ED 30P 24198.	MP	MP	MP
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---	---		---	---	---

Exelon Nuclear
Quad Cities Station 4 Unit 1

DIAGRAM OF PROCESS SAMPLING
PART 1
TURBINE BUILDING
SAMPLE PANEL

LR-Q-SSC-3

M-459-1

SCALE	NONE
DATE	07/10/90
DRAWN BY	R. ANDERSON
ENGR. BY	MAJID
SHEET NUMBER	1
SIZE	~~D~~ MOD

CRITICAL CONTROL ROOM DRAWING

CONDENSATE PUMP DISCHARGE 175 PSIG @ 120°F (1 LINE)

CONDENSATE DEMINERALIZER EFFLUENT HEADER 175 PSIG @ 120°F (1 LINE)

ACCESS LOOP M-441

PS CD

1-3399-471 V9

1-3360 SC2

1-3399-472 V5

V6 1-3399-473

2" Φ

2" Φ

1-5525 SC2

1-5599-184 V5

V6 1-5599-185

1-5599-183 V9

M-459-3 (B-2)

M-459-3 (B-2)

GSB

BH1

BH2

BH3

FI

1-3399-474 V1

V2 1-3399-479

V2 1-3399-480

V3 1-3399-475

PI GI 1-3341-146

V2 1-3399-481

V1A 1-3399-477

V2 1-3399-478

V7 1-3399-476

FI 1-3341-147

BYPASS

GRAB SAMPLE

MM

1-3399-487

V8

QDB

CIT/TE 1-3341-149

CIT/TI 1-3341-150

JB ITB-251

301-7

CR 1-3340-08

D.A.M 1-3341-1848

CAH A-12

CHEMISTRY LAB GAS B-2200

"G"

1-3399-488

V1A 1-3399-489

FI 1-3341-152

V4 1-3399-490

CPS

QM/FI 1-3341-153

1-3399-482

AIR CONNECTION

OV2A

1-3399-486

V4

PI GI 1-3341-148

FI 1-3341-185

V1A 1-3399-485

FILTER HOLDER

1-3363

V3

V2 1-3399-483

FILTERED GRAB SAMPLE

THIS DWG. (E-41)

M-459-3 (E-21)

1-5599-186 V1

V2 1-5599-191

V2 1-5599-192

1-5599-187 V3

PI GI 1-5541-26

V2 1-5599-193

V1A 1-5599-194

V2 1-5599-196

V7 1-5599-188

FI 1-5541-27

1-5599-199

1-5599-200

V1A 1-5599-201

FI 1-5541-31

V4 1-5599-202

1-5599-203

1-5599-204

V1A 1-5599-205

FI 1-5541-38

V4 1-5599-206

O_2/TI 1-5541-35

O_2/TE 1-5541-37

O_2R 1-3340-07

1-5599-208

V4

PI GI 1-5541-34

FI 1-5541-137

V3

1-5599-196

V4 1-5599-197

1-5599-195

1-5527

FILTER HOLDER

V2A

1-5599-194

QM/FI 1-5541-32

1-5541-28

FILTERED GRAB SAMPLE

THIS DWG. (E-21)

(E-3) M-459-3

NOTES:

1) FOR NOTES AND REFERENCE DRAWINGS SEE SHEET 1 OF THIS DRAWING.

PS CD LR SYSTEM BOUNDARY BREAK

CD = CONDENSATE AND CONDENSATE STORAGE

PS = PROCESS SAMPLING

LICENSE RENEWAL BOUNDARY

PANEL NO. Q01-2251-0040BP05

REV	DATE	DESCRIPTION	PREP	REVR	APPR
G	02/08/02	FOR RECORD PER DCR EC 333492	MGS	SDM	RHH
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Exelon Nuclear
Quad Cities Station Unit 1

DIAGRAM OF PROCESS SAMPLING PART 1
TURBINE BLDG SAMPLE PANEL

LR-QDC-M-459-2

SCALE NONE
DATE 11/23/82
DRAWN BY STEPHENSON
ORG. BY 2562
SHEET NUMBER 2 SIZE D M05

CRITICAL CONTROL ROOM DRAWING

LR-QDC-M-459-3

REACTOR FEED WATER 1850 PSIG @ 350°F (1 LINE)
M-15 (B-3) 1-3207A-3/8"-A

PS FW
FW PS
PS FW
FW PS
FW PS
FW PS
PS FW
PS DWM
PS FW
PS FW
PS TBC
PS TBC
PS MC

1-3299-81 V9 3/8"X1/4"
SC1 1-3250
1-3299-82 V5
V6 1-3299-83
TI 1-3241-94
SET @ 150 PSIG V15 1-3299-99
1-3251 SC2
M-459-2 (B-7)
1-3299-84 V5
V6 1-3299-85
M-459-2 (B-7)
1-4999-108 SET @ 150 PSIG
GSB BH1
(F-3) THIS DWG.
T1 BH2 V15 V2 1-3299-91
1-3299-86 V1 BH3
BH2 V2 1-3299-92
1-3299-87 V3
PI 1-3241-97 GI
BH2 V2 1-3299-93
V1A 1-3299-89
V2 1-3299-90
1-3299-88 V7
FI 1-3241-99
BYPASS
GRAB SAMPLE BH2

CPS BH1
BH2
1-3299-94
QM/FI 1-3241-102
AIR CONNECTION
PI 1-3241-98 GI
1-3299-108 V4
FI 1-3241-111
1-3254 FILTER HOLDER V3
V1A 1-3299-97
1-3299-96
V2 1-3299-95 BH2
FILTERED GRAB SAMPLE

MM BH1
1-3299-215 V8 QDB
QH2/NT 1-3241-124
QH2/NE 1-3241-123
QDB V8 1-3299-216
V1A 1-3299-217
FI 1-3241-125
V4 1-3299-218 BH2
CDT/TI 1-3241-183
JB 1TB-251
D.A.M. 1-3341-184B
CHEMISTRY LAB DAS 0-2200

MM BH1
1-3299-100 V8 QDB
CE/TE 1-3241-106
QDB V8 1-3299-101
V1A 1-3299-102
FI 1-3241-108
V4 1-3299-103 BH2
DO2/TI 1-3241-110
JB 1TB-251
D.A.M. 1-3341-184B
CHEMISTRY LAB DAS 0-2200

MM BH1
1-3299-104 V8 QDB
DO2/TE 1-3241-109
QDB V8 1-3299-105
V1A 1-3299-106
FI 1-3241-101
V4 1-3299-107 BH2

R441I
XCE031.002
2" ϕ
2" ϕ
V13 1-4999-102
V13 1-4999-101
TEMPERATURE CONTROL UNIT-B (FOR INTERNAL CONNECTION SEE SENTRY DWG 10-00603J-3)
V13 1-4999-104
V13 1-49 99-100
V13 1-4999-103
M-459-1 (C-7)
M-21 (D-5)
1-3856-1½"-J
1-3855B-1"-J
1-3855B-1"-J
1-3856-1½"-J
1-3855A-1"-J
M-21 (D-4)
1-4565-1"-J
(C-7)

1-4321-1½"-L
DEMIN WATER M-58-3 (D-3)
1-4747-1½"-T
INSTR AIR M-24-1 (E-10)
1-4548-1½"-T
1-4542-1½"-T
M-459-1 (C-1)
M-459-1 (C-1)
1-4548-1½"-T
1-4542-1½"-T
BH4 BH4
M-459-2 (E-2)
1-4999-105
1-4999-515
SERVICE HOSE
1-4999-133 V13
SET IN FIELD
SERVICE HOSE
1-4999-106 V13
CUP SINK
CUP SINK
HX DRIP PAN
V10 1-4999-113B
V10 1-4999-113A
V11 1-4999-107

M-459-2 (E-7)
1-49108-3/4"-L
1-49112-3/4"-L
BH5
1-4999-142
1½"x¾" RED
COND HW AREA
1-4999-139
1-49109-3/4"-L
1-49119-3/4"-L
1-49110-1½"-L
1-49110-3/4"-L
2"x1½" RED
2"x¾" RED
1-49116-3/4"-L
1½"x¾" RED
M-462-3 (F-4)
M-462-3 (F-4)
M-26 (A-3)
2-49116-3/4"-L
2-49115-3/4"-L
THIS DWG (B-4)
M-459-1 (E-6)
PX
1-4999-135
1-49112-1½"-L
1-49120-¾"-L
1-4999-134
1½"X1" RED (TYP)
1-49115-3/4"-L
M-459-1 (E-6)
1-5509-2"-L
M-16-1 (D-7)

PANEL NO.
Q01-2251-0040BP05

PS FW LR SYSTEM BOUNDARY BREAKS
PS = PROCESS SAMPLING
FW = FEEDWATER
DWM = DEMINERALIZED WATER MAKEUP
TBC = TBCCW

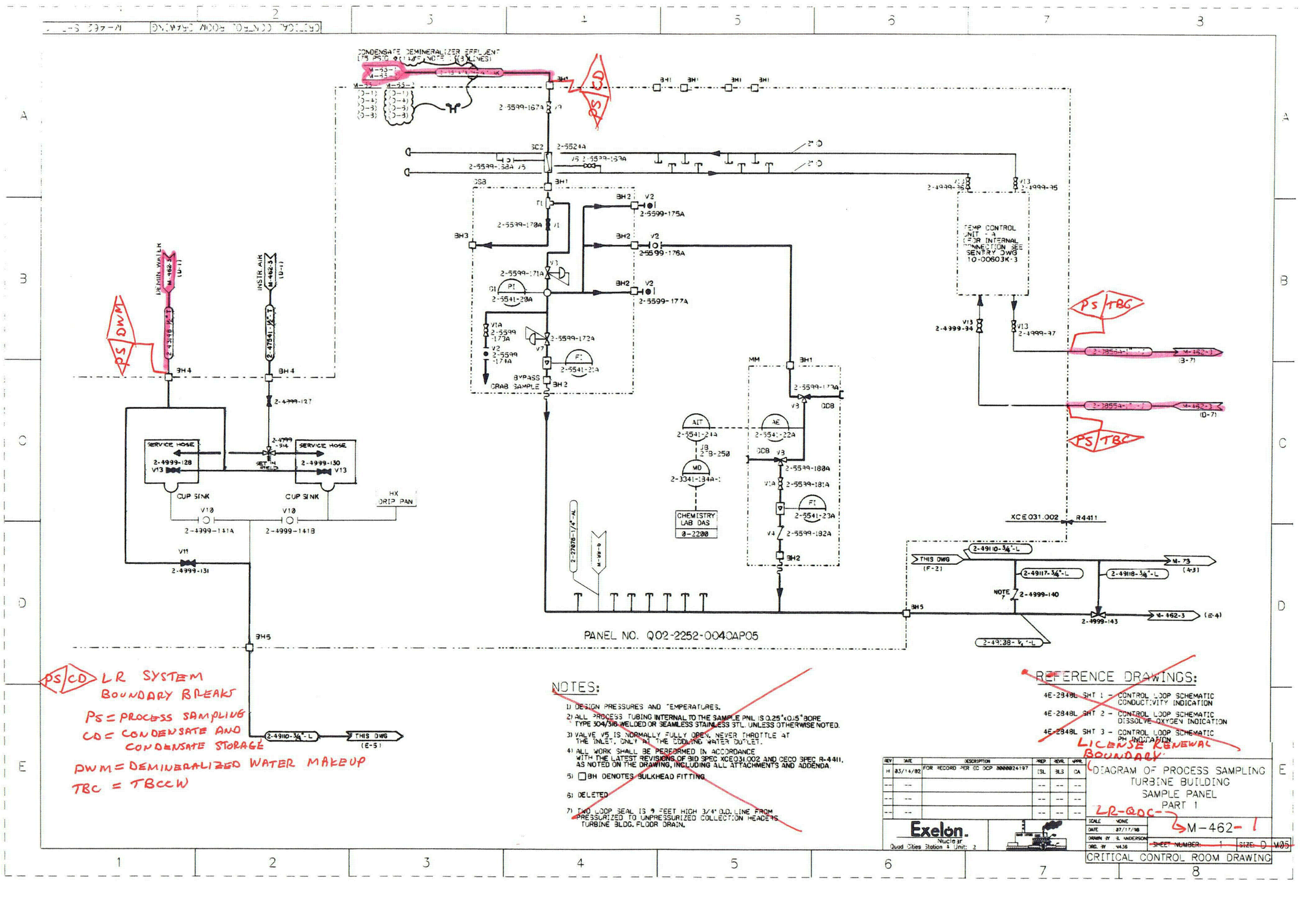
PS MC LR SYSTEM BOUNDARY BREAKS
PS = PROCESS SAMPLING
MC = MAIN CONDENSER
OUT OF SCOPE COMPONENTS

REV	DATE	DESCRIPTION	PREP.	REVR.	APPR.
0	09/30/02	INITIAL ISSUE	RMD	JSL	MAH

LICENSE RENEWAL BOUNDARY DIAGRAM OF PROCESS SAMPLING PART 1 TURBINE BUILDING SAMPLE PANEL

Exelon Nuclear
Quad Cities Station 4

LR-QDC-M-459-3



NOTES:

1) DESIGN PRESSURES AND TEMPERATURES.
2) ALL PROCESS TUBING INTERNAL TO THE SAMPLE PNL IS 0.25"x0.5" BORE TYPE 304/316 WELDED OR SEAMLESS STAINLESS STL. UNLESS OTHERWISE NOTED.
3) VALVE V5 IS NORMALLY FULLY OPEN, NEVER THROTTLE AT THE INLET, ONLY AT THE COOLING WATER OUTLET.
4) ALL WORK SHALL BE PERFORMED IN ACCORDANCE WITH THE LATEST REVISIONS OF SID SPEC XCE031.002 AND CECO SPEC R-4411, AS NOTED ON THE DRAWING, INCLUDING ALL ATTACHMENTS AND ADDENDA.
5) ☐ BH DENOTES BULKHEAD FITTING
6) DELETED
7) TWO LOOP SEAL IS 9 FEET HIGH 3/4" O.D. LINE FROM PRESSURIZED TO UNPRESSURIZED COLLECTION HEADERS TURBINE BLDG. FLOOR DRAIN.

REFERENCE DRAWINGS:

4E-2848L SHT 1 – CONTROL LOOP SCHEMATIC CONDUCTIVITY INDICATION
4E-2848L SHT 2 – CONTROL LOOP SCHEMATIC DISSOLVE OXYGEN INDICATION
4E-2848L SHT 3 – CONTROL LOOP SCHEMATIC PH INDICATION

LICENSE RENEWAL BOUNDARY

REV	DATE	DESCRIPTION	PREP	REVR	APPR
H	03/14/02	FOR RECORD PER EC DCP 3000024197	ISL	JLS	DA
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Exelon. Nuclear
Quad Cities Station 1 Unit: 2

DIAGRAM OF PROCESS SAMPLING TURBINE BUILDING SAMPLE PANEL PART 1

LR-QDC-M-462-1

SCALE	NONE
DATE	07/17/98
DRAWN BY	S. ANDERSON
DRD. BY	V4.16
SHEET NUMBER	1
SIZE	D

CRITICAL CONTROL ROOM DRAWING

CONDENSATE PUMP DISCHARGE
175 PSIG @ 120°F NOTE 1 (1 LINE)
M-63-2 (F-10)
2-3318-4"-AK

CONDENSATE DEMINERALIZER EFFLUENT HEADER
175 PSIG @ 120°F NOTE 1 (1 LINE)
M-64 (C-3)
2-34114-1/4"-AK

PS/CD

2-3399-471 V9
2-5599-183 V9

SC2 2-3368
V6 2-3399-473
2-3399-472 V5
2" ϕ
SC2 2-5525
V6 2-5599-185
2-5599-184 V5

M-462-3 (B-2)

GSB
BH1
T1
2-3399-474 V1
2-5599-186 V1
BH2
V2
2-3399-479
2-5599-191
2-3399-480
2-5599-192
2-3399-481
2-5599-193
BH3
V3
2-3399-475
2-5599-187
GI PI 2-3341-146
PI. 2-5541-26
V1A 2-3399-477
V2 2-3399-478
2-3399-476
V7
FI 2-3341-147
2-5599-188
FI 2-5541-27
BYPASS
GRAB SAMPLE
V1A 2-5599-189
V2 2-5599-198

MM
BH1
2-3399-487
2-5599-199
2-5599-283
V8
QD8

CPS
BH1
BH2
OM/FI 2-3341-153
2-3399-482
OV2A
AIR CONNECTION
FILTER HOLDER
PI 2-3341-148
GI
V4
FI 2-3341-485
V1A 2-3399-485
V3
2-3399-484
V2 2-3399-483
FILTERED GRAB SAMPLE

CIT/TI 2-3341-150
CE/TE 2-3341-149
902-7
CR 2-3348-8
JB 2TB-251
D.A.M 2-3341-1848
CHEMISTRY LAB DAS 0-2200
"G"
CAH G-12
V8
QD8
2-3399-488
V1A 2-3399-489
FI 2-3341-152
V4 2-3399-490

OM/FI 2-5541-32
2-5599-194
OV2A
AIR CONNECTION
2-5527
FILTER HOLDER
PI 2-5541-34
2-5599-208
GI
V4
FI 2-5541-137
V1A 2-5599-197
V3
2-5599-196
V2 2-5599-195
FILTERED GRAB SAMPLE
THIS DWG. (E-2)

CIT/TI 2-5541-28
CE/TE 2-5541-30
902-7
CR 2-3348-8
JB 2TB-251
D.A.M 2-3341-1848
CHEMISTRY LAB DAS 0-2200
"G"
CAH H-12
V8
QD8
2-5599-200
V1A 2-5599-201
FI 2-5541-31
V4 2-5599-202

DO_2/TI 2-5541-35
DO_2/TE 2-5541-37
DO_2R 2-3348-7
2-5599-284
2-5599-285
2-5599-286
2-5541-38

M-462-3 (E-2)
THIS DWG. (E-4)
M-462-3 (D-2)

PS/CD LR SYSTEM BOUNDARY BREAKS

CD = CONDENSATE AND CONDENSATE STORAGE

PS = PROCESS SAMPLING

PANEL NO.
Q02-2252-0040BP05

NOTES:
1) FOR NOTES AND REFERENCE DRAWINGS SEE SHEET 1 OF THIS DRAWING.

LICENSE RENEWAL BOUNDARY

REV	DATE	DESCRIPTION	PREP.	REVR.	APPR.
G	02/08/02	PER RECORD PER DCR EC 333492	MGS	SDM	RHH
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Exelon Nuclear

DIAGRAM OF PROCESS SAMPLING PART 1
TURBINE BUILDING SAMPLE PANEL

LR-QDC-

M-462-2

SCALE :NONE
DATE :01/24/01
DRAWN BY :STEPHENSON
DES. BY :HW3B
SHEET NUMBER: 2
SIZE: D M05

CRITICAL CONTROL ROOM DRAWING

XCE031.002 R4411

LR-QDC-M-462-3

REACTOR FEED WATER 1050 PSIG @ 350°F (1 LINE) M-62-1 (C-2) 2-3207A-3⅛"-A

BH

PS FW 2-3299-81 V9 ⅜"x¼"

FW PS

SC1 2-3250

V6 2-3299-83

2-3299-82 V5

PS FW 2-3251

TI 2-3241-94

SET @ 150 PSIG V15 2-3299-99

SC2

M-462-2 (A-7)

V6 2-3299-85

2-3299-84 V5

M-462-2 (A-7)

2" ϕ

2" ϕ

2-4999-108

SET @ 150 PSIG V15

(F-3) THIS DWG.

GSB, BH1

T1

BH2

V2 2-3299-91

2-3299-92 FW PS

2-3299-86 V1

BH3

BH2 V2

V3

2-3299-87

FW PS

G1 PI 2-3241-97

BH2 V2 2 3299-93

V1A 2-3299-89

V2 2-3299-90

2-3299-88 V7

FI 2-3241-99

BYPASS GRAB SAMPLE

BH2

PS FW

CPS

BH1

BH2

OM/FI 2-3241-102

2-3299-94

V2A AIR CONNECTION

2-3299-108

PI 2-3241-98 G1

FI 2-3241-111

V4

FILTER HOLDER

V1A 2-3299-108

V3 2-3299-96

V2 2-3299-95

FILTERED GRAB SAMPLE

BH2

PS FW

M-462-2 (E-2)

DOMIN. WTR M-58-1 (C-5)

2-4321-¾"-L

INSTR AIR M-24-1 (E-10)

2-47147-½"-L

2-47541-½"-L

2-47542-½"-L

(B-2) M-462-1

BH4

BH4

PS DWM

2-4999-105

SERVICE HOSE

2-4999-133 V13

SET IN FIELD

2-4799-55

SERVICE HOSE

2-4999-106 V13

CUP SINK

HX DRIP PAN

2-4999-113B

V10

2-4999-113A

2-4999-107 V11

PANEL NO. 002-2252-0040BP05

MM BH1

2-3299-215 V8 QDB

CH4/AIT 2-3241-124

CH4/AE 2-3241-123

QDB V8 2-3299-216

V1A 2-3299-217

FI 2-3241-125

V4 2-3299-218

BH2

CIT/TI 2-3241-103

JB 2TB-251

D.A.M 2-3341-184B

CHEMISTRY LAB DAS 0-2200

MM BH1

2-3299-100 V8 QDB

CE/TE 2-3241-106

QDB V8 2-3299-101

V1A 2-3299-102

FI 2-3241-100

V4 2-3299-103

BH2

O2/TI 2-3241-110

JB 2TB-251

D.A.M 2-3341-184B

CHEMISTRY LAB DAS 0-2200

MM BH1

2-3299-104 V8 QDB

O2/TE 2-3241-109

QDB V8 2-3299-105

V1A 2-3299-106

FI 2-3241-101

V4 1-3299-107

BH2

XCE 031.002 R4411

TEMPERATURE CONTROL UNIT-B (FOR INTERNAL CONNECTION SEE SENTRY DWG 10-00603J-3

V13 2-4999-102

V13 2-4999-101

V13 2-4999-100

V13 2-4999-99

V13 2-4999-103

V13 2-4999-104

PS TBC

2-38568-1¼"-J

2-38568-1¼"-J

PS TBC

2-38568-1¼"-J

2-38568-1¼"-J

M-462-1 (C-7)

M-458 (D-5)

M-462-1 (C-7)

M-458 (D-4)

M-462-2 (E-7)

2-4999-135

2-49120-¾"-L

1 1/2"x1" RED

2-49112-¾"-L

2-4999-142

2-49108-¾"-L

1 1/2"x¾" RED

2-49112-1½"-L

M-63-1 (D-7)

BH5

NOTE 7 2-49109-¾"-L

2-4999-139

1½"x ¾" RED

2-49119-¾"-L

2-49115-¾"-L

2-4999-134

PS MC

M-459-3 (F-4)

BH5

THIS DWG (B-4)

2-49116-¾"-L

BH5

M-459-3 (F-4)

DWM = DEMINERALIZED WATER MAKEUP

TBC = TBCCW

PS MC FW

LR SYSTEM BOUNDARY BREAKS

FW = FEEDWATER

PS = PROCESS SAMPLING

~~MC = MAIN CONDENSER~~

OUT OF SCOPE COMPONENTS

REV	DATE	DESCRIPTION	PREP.	REVR.	APPR.
0	09/30/02	INITIAL ISSUE	RMD	JSL	MAH

LICENSE RENEWAL BOUNDARY DIAGRAM OF PROCESS SAMPLING PART 1 TURBINE BUILDING SAMPLE PANEL

Exelon Nuclear Quad Cities Station 4

LR-QDC-M-462-3

LR-QDC-M-2020-1

SOUTHWEST BANK | NORTHWEST BANK | SOUTHEAST BANK | NORTHEAST BANK

1-6099-6 | 1-6099-5 | 1-6099-1 | 1-6099-2 | 1-6099-8 | 1-6099-7 | 1-6099-3 | 1-6099-4

DETAIL "A"

RECTIFIERS
1-6000
GENERATOR ALTERREX
RECTIFIERS
SEE DETAIL "A"
FLR EL 639'-8" (REF)

1-6000
MAIN TURBINE GENERATOR
STATOR WINDING
GENERATOR FRAME

VENT TO ATMOSPHERE
TURBINE BLDG ROOF (REF)

1-7449-5"
1-7458-1/2"
8"x6" RED
6"x5" RED
1-7423-5"
1-7424-8"
1-7425-1"
1-7426-2 1/2"
1-7427-2 1/2"
1-7409A-1 1/2"
1-7410A-1 1/2"
1-7408-1 1/2"
1-7418-1 1/2"
1-7409-1 1/2"

4E-1367
2251-7
TIS 1-7441-2
C A1141
TT 1-7441-SCT2
TE 1-7441-TFT2
TE 1-7441-TFT1
TE 1-7441-TFT3
FE 1-7441-8282
1-7428-1/2"
1/4"ø SST TUBING
1-7488
1-7499-8
1-7499-137
PI 1-7441-8284
1-7499-Y58
1-7499-Y51
1-7499-Y49
6"x5" RED
3/4" PIPE

1-7499-Y41
1-7499-Y40
1/4" PIPE PLUG
2 1/2"x3/4" RED

1-7406 FILTER (YF1-1)
PI 1-7441-9
PI 1-7441-8
1-7499-Y72
1/4" PIPE
1-7499-Y73
1/4" PIPE
1-7451-1 1/2"

1-7421-1/4"
1-7499-Y64
3/8"ø SST TUBING
1-7499-Y70
1/4" PIPE
INST AIR SPLY
PC 1-7441-8280
1-7403 GENERATOR FILTER (YF1-1)
PI 1-7441-4
PI 1-7441-5
1-7499-Y71
1/4" PIPE
1-7422-6"
6"x5" RED
PCV 1-7499-Y63
1-7422B-1 1/4"
1-7422A-1¼"
1-7423-6"

1-7405B-5"
1-7499-Y9
1-7499-Y11
1-7406B-5"
1-7405B-5"
1-7406B-5"
1-7402B
STATOR WATER HEAT EXCHANGER
1-7405A-5"
1-7499-Y8
1-7499-Y10
1-7406A-5"
1-7405A-5"
1-7406A-5"
1-7402A
STATOR WATER HEAT EXCHANGER

TIC 1-7400-3
INST AIR SPLY
TZ 1-7499-Y67
TCV 1-7499-Y7
1-7407-5"
C A1142
TIS 1-7441-1
2251-7
TE 1-744-TDP1
TE 1-744-TDT
TT 1-744-SCT1
TE 1-744-TDP1A
4E-1367
CE 1-744-4
1-7499-C3
1-7446-1 1/4"
LS 1-7441-8283
1" PIPE
3/4" PIPE
1-7499-1
PI 1-7441-1
1"x1/2" RED
SIGHT GLASS
1-7438-1"
1-7499-Y77
RV 1-7499-Y78 SET @ 14" H2O
PRV 1-7499-Y79 VACUUM BKR SET @ 1" HG VAC
1-7433-1"
1-7432-1"
1-7431-1"
AIT 1-7441-CDM2
1 1/2"x1/2" RED
1-7499-Y88

1-7400
STATOR WATER EXPANSION TANK
MANHOLE COVER
OPERATING LEVEL
DEBUBBLER

1-7402-2"
AIT 1-7441-CDM4
CE 1-7441-1
1-7499-C1
1-7499-Y19
1-7499-C4
CE 1-744-4
C17 1-7441-CDM1
2251-7
C A1401
PI 1-7441-6
1/4"ø SST TUBING
1-7499-Y26
FT 1-7441-8285
1-7445-1/4"
1-7438-2"
1-7404 STATOR WATER DEMINERALIZER (YDE-1)
1-7499-Y29
1-7439-2"

1-7405 FILTER (YF1-2)
1-7444-1/4"
1-7499-3
CR 1-7441-CDR1
4E-1367
2"x1 1/2" RED
1½"x¾" RED
1-7435-1 1/2"
1-7499-Y62
N.C.
1-7437-1 1/2"
1-7436-1 1/2"
1-7499-Y21
1-7499-Y61
FLR EL 615'-6" (REF)
1-4352-1 1/2"-H
M-58-3 (C-8) STATOR CLG WTR MAKE UP SPLY
PDIT 1-4" BY OTHERS

1-7499-Y31
2 1/2"x2" RED
1-7499-C2
1-7441-1 1/4"
1-7499-Y28
1-7442-1/4"
1-7429-2"
1-7407
2 1/2"x2" RED
1-7448-1"
1-7499-Y18
1-7499-7
1-7499-Y88
1/4"ø SST TUBING
PI 1-7441-7
CE 1-744-2

1-7499-Y2
1-7499-Y75
1-7499-Y1
5"x4" RED
1-7401B STATOR WATER COOLING PUMP (SCP-B)
1-7401A STATOR WATER COOLING PUMP (SCP-A)
1-7412-1/2"
1-7401B-6"
1-7401A-6"
1-7499-Y82
1-7499-Y4
1-7499-Y3
TEST
SO 1-7499-Y45
1-7413-1/2"
1-7499-Y76
1-7402A-5"
1-7402B-5"
1-7499-Y81
5"x4" RED
1-7415-1/2"
1-7414-1/2"
1-7416-1/2"

FCV 1-7499-YA38 SET @ 20 GPM
1-7408-1 1/2"
1/2" PIPE
1-7403-5"
1-7404-5"
1/2" PIPE
4E-1367
FIS 1-744-8281
1/2" PIPE
A 901-7 B-1@
C C1008
MCB PNL 901-7 480 VAC MCC 16-3 4E-1365
MCB PNL 901-7 480 VAC MCC 15-1 4E-1365
A 901-7 B-1@
C C1008

1-7434-1 1/2"
1-7419-1/2"
1-7417-1/2"
1-7418-1/2"
A 901-7 D-4
C C1311

PS 1-7441-79
PS 1-7441-60A
PI 1-7441-3
1-7499-68
1-7499-6A
1-7499-6
PS 1-7441-82
1-7499-Y34
1-7499-Y42
1-7499-Y55
1-7499-Y54
PS 1-7441-95
PS 1-7441-60B
PI 1-7441-2
1-7499-Y46
1-7499-Y68
1-7499-Y69
1-7499-Y67
PS 1-7441-60C
PS 1-7441-60D
1-7499-Y83
1-7499-Y84
1-7499-Y33
1-7499-Y32
4E-1367
4E-1367
4E-1367
1/4" O.D. 1/2" SST CU TUBING PIPE

PANEL 2251-7
STATOR WINDING COOLING WATER CONTROL CABINET

IN SCOPE COMPONENTS PER 54.4(a)(2)
OUT OF SCOPE COMPONENTS

REV	DATE	DESCRIPTION	PREP.	REVR.	APPR.
0	07/17/02	INITIAL ISSUE	SP	JSL	MAH

Exelon Nuclear
Quad Cities Station 4

LICENSE RENEWAL BOUNDARY DIAGRAM OF STATOR WINDING COOLING WATER PIPING

LR-QDC-M-2020-1

LR-QDC-M-2020-2

VENT TO ATMOSPHERE

TURBINE BLDG ROOF (REF)

2-7450-1/2"

2-7449-5"

8"x6" RED

6"x5" RED

STATOR WINDINGS

GENERATOR FRAME

2-6000
MAIN TURBINE GENERATOR

2-7423-5"

RECTIFIERS

2-6000
GENERATOR ALTERREX

RECTIFIERS

SEE DETAIL "A"

FLR EL 639'-8" (REF)

SOUTHWEST BANK

NORTHWEST BANK

2-6099-6

2-6099-5

2-6099-1

2-6099-2

SOUTHEAST BANK

NORTHEAST BANK

2-6099-8

2-6099-7

2-6099-3

2-6099-4

DETAIL "A"

2-7428-1/2"

1/4"ø SST TUBING

2-7499-8

PI 2-7441-8284

2-7499-Y37

2-7408

FE 2-7441-8282

2-7499-Y51

2-7499-Y50

4E-2367

2252-7

TIS 2-7441-2

2-7427-2 1/2"

2-7426-2 1/2"

C A2141

TT 2-7441-2

2-7499-Y40

2-7499-Y41

1/4" PIPE PLUG

2 1/2"x3/4" RED

2-7426-4"

2-7424-6"

2-7418-1 1/2"

2-7410A-1 1/2"

2-7409A-1 1/2"

2-7409-1 1/2"

TE 2-7441-TE2

TE 2-7441-TE1

TE 2-7441-TE2A

2-7499-Y49

2-7421-1/4"

2-7499-Y64

3/8"ø SST TUBING

3/4" PIPE

2-7499-Y78

1/4" PIPE

INST AIR SPLY

PI 2-7441-4

1/4" O.D. CU TUBING

2-7403
GENERATOR FILTER (YFI-1)

PE 2-7441-8286

PI 2-7441-5

2-7499-Y71

1/4" PIPE

2-7403-6"

2-7499-Y72

1/4" PIPE

2-7406
FILTER (YRFT-1)

PI 2-7441-6

PE 2-7441-9

2-7499-Y73

1/4" PIPE

2-7451-1 1/2"

INST AIR SPLY

TIC 2-7499-3

TZ 2-7499-Y07

TCV 2-7499-Y7

2-7499-Y11

2-7405B-5"

2-7405B-5"

2-7405B-5"

2-7402B
STATOR WATER HEAT EXCHANGER

2-7405A-5"

2-7499-Y10

2-7499-Y8

2-7406A-5"

2-7405A-5"

2-7402A
STATOR WATER HEAT EXCHANGER

2-7404-5"

2-7403-5"

4E-2367

FIS 2-7441-8201

3/4" PIPE

2-7422-6"

6"x5" RED

PCV 2-7499-Y63

2-7422A-1 1/4"

2-7499-Y19

2-7422B-1 1/4"

2-7499-C1

2-7499-C4

AE 2-7441-4

2252-7

AIT 2-7441-CDM1

C A2481

PT 2-7441-4

2-7499-Y26

2-7445-1/4"

2-7438-2"

PI 2-7441-8285

AE 2-7441-1

2-7499-Y29

2-7404
STATOR WATER DEMINERALIZER (YDE-1)

2-7439-2"

2-7420-2"

2-7444-1/4"

2-7499-3

AIT 2-7441-CDM4

AR 2-7441-CDR1

4E-2367

2-7443-3/4"

2-7499-2

2-7405
FILTER (YFI-2)

2-7435-1 1/2"

2-7499-Y62

2"x1 1/2" RED

2-7437-1 1/2"

N.C.

2-7436-1 1/2"

2-7499-Y61

2-7499-Y21

FLR EL 615'-6" (REF)

BY OTHERS

PDT "H"

PI 2-7441-1

2-7499-1

1"x1/2" RED

2-7446-1 1/4"

STATOR CLG WTR MAKE UP SPLY

M-58-3 (B-1)

2-4352-1 1/2"-H

2-7499-Y77

2-7438-1"

SIGHT GLASS

PRV 2-7499-Y79 VACUUM BKR SET @ 1" HG VAC

RV 2-7499-Y78 SET @ 14" H20

2-7433-1"

2-7431-1"

2-7432-1"

OPERATING LEVEL

MANHOLE COVER

DEBUBBLER

2-7400
STATOR WATER EXPANSION TANK

AIT 2-7441-CDM2

1 1/2"x3/4" RED

2-7499-Y80

1/4"ø SST TUBING

PI 2-7441-7

2-7499-7

2-7442-1/4"

AE 2-7441-2

2-7499-C2

2-7441-1 1/4"

2-7499-Y31

2 1/2"x2" RED

2-7411-1"

2-7499-Y44

2-7499-Y75

2-7499-Y1

2-7401A-5"

2-7429-2"

2-7407

2 1/2"x2" RED

2-7440-1"

2-7499-Y18

LE

C C2888

A 902-7 B-19

MCB PNL 902-7 480 VAC MCC 25-1 4E-2365

2-7401A
STATOR WATER COOLING PUMP (SCP-A)

2-7401B-6"

2-7499-Y2

2-7401B
STATOR WATER COOLING PUMP (SCP-B)

5"x4" RED

5"x4" RED

2-7412-1/2"

MCB PNL 902-7 480 VAC MCC 26-3 4E-2365

C A2142

TE 2-7441-TDP1

TE 2-7441-TDP1A

TE 2-7441-TDT1

TIS 2-7441-1

2252-7

TRIP

4E-2367

TRIP

4E-2367

2-7441-72

AIT 2-7441-CDM3

AE 2-7441-3

2-7499-C3

3/4" PIPE

AH

LS 2-7441-8283

1" PIPE

FCV 2-7499-YA38 SET @ 20 GPM

2-7408-1 1/2"

902-7 B-18

C C2888

2-7499-Y82

2-7499-Y4

2-7402B-5"

TEST

SO 2-7499-Y45

2-7413-1/2"

2-7499-Y76

2-7499-Y81

2-7402A-5"

2-7499-Y3

2-7414-1/2"

2-7416-1/2"

2-7415-1/2"

1/2" SST PIPE

1/4" OD CU TUBING

PANEL 2252-7
STATOR WINDING COOLING WATER CONTROL CABINET

2-7499-Y54A

2-7499-Y56A

HI LO

FIS 2-7441-1A

2-7499-Y55A

2-7499-Y54B

2-7499-Y56B

HI LO

FIS 2-7441-1B

2-7499-Y55B

PS 2-7441-60A

2-7499-Y47

PS 2-7441-75A

PS 2-7441-79B

2-7499-Y34A

2-7499-Y34B

PI 2-7441-3

PS 2-7441-60D

PS 2-7441-60C

PS 2-7441-60B

2-7499-Y46

PS 2-7441-96

PI 2-7441-2

2-7499-Y32

2-7499-Y33

2-7499-Y58

2-7499-Y46

2-7499-Y57A

2-7499-Y68A

2-7499-Y67A

2-7499-Y68B

2-7499-Y67B

2-7499-Y53

2-7499-Y54

4E-2367

4E-2367

4E-2367

4E-2367

IN SCOPE COMPONENTS PER 54.4(a)(2)

OUT OF SCOPE COMPONENTS

REV	DATE	DESCRIPTION	PREP.	REVR.	APPR.
0	07/25/02	INITIAL ISSUE	RMD	JSL	MAH

Exelon Nuclear
Quad Cities Station 4

LICENSE RENEWAL BOUNDARY DIAGRAM OF STATOR WINDING COOLING WATER PIPING

LR-QDC-M-2020-2

CRITICAL CONTROL ROOM DRAWING M-2022 SHT 1

EHC POWER UNIT GAGE PANEL INSTRUMENTATION
(INSTRUMENT LINES ARE 3/8"ø SST. TUBING UNLESS OTHERWISE NOTED)

REACTOR PROTECTION SYSTEM INSTRUMENTATION
(INSTRUMENT LINES ARE 1/4"ø SS TUBING)
(REF. M-225 SH. 129 FOR DETAILS)

NOTES:
1) PIPING WAS SUPPLIED AND INSTALLED BY THE GENERAL ELECTRIC CO.
2) ALL LINES ARE TYPE 304 SST. TUBING UNLESS NOTED. PIPE MATERIAL IS TYPE 304 SST. PIPING UNLESS A "PDI" IS INDICATED.
3) 1-5659-FV37 SELECTOR VALVE POSITION
1. ALL PORTS CLOSED
2. CONNECTS PORT 1 TO PORT 2
3. CONNECTS PORT 1 TO PORT 3
4. CONNECTS PORT 1 TO PORT 4
4) SEE M-2022 SHT. 2 FOR KEY TO PIPING SYMBOLS.
5) FHS LINES ABANDONED IN PLACE.

VENDOR AND DWG. REFERENCES:
1) M-2022 SHT 5 THRU 9, TURBINE CONTROL DIAGRAM.
2) 730E826, HYDRAULIC POWER UNIT ARRANGEMENT
3) 873D354, HYDRAULIC POWER UNIT PIPING DIAGRAM
4) 730E394 & 737E611, H.P. HYDRAULIC FLUID PIPING
5) IE INSTRUCTIONS, GEK-17978, GEK-46355E, GEK-63396, GEY-445, GEY-447 AND GEY-448.
6) 730E922, TURBINE END STANDARD PIPING.
7) 730E418, EMER. TRIP SOL. VALVE ASSEMBLY.
8) INSTRUMENT INSTALLATION DETAILS
PI 1-5650-280 & PI 1-5650-8283, DWG. #M-325 SH. 303

ELECTRICAL DWG. REFERENCES:
1) 4E-1382, SCHEMATIC CONTROL DIAGRAM - TURB. AUX. EQUIPMENT - PART 1
2) 4E-1465, SCHEMATIC DIAGRAM REACTOR PROTECTION SYSTEM CHANNEL "A" SCRAMS & AUX. TRIP RELAYS
3) 4E-1466, SHT. 1 THRU 3, SCHEMATIC DIAGRAM REACTOR PROTECTION SYSTEM CHANNEL "B" SCRAMS, & AUX. TRIP RELAYS
4) 4E-1633, WIRING DIAGRAM - ELECTRO HYDRAULIC CONTROL
5) 4E-5828A THRU 5829T, ELECTRO-HYD CONTROL SYSTEM
6) 4E-1583, WINDOW ENGRAVING MAIN CONTROL RM. ANNL PNLS 901-7, 901-8 & 912-5
7) 4E-1659A, WIRING DIAGRAM 480V SWGR BUS 17 SECTION 172 & 173
8) 4E-1657B, WIRING DIAGRAM 480V SWGR BUS 15 SECTION 154, 155 & 156
9) 4E-1469, SCHEMATIC DIAGRAM REACTOR PROTECTION SYSTEM ALARMS & COMPUTER INPUTS
10) 4E-1629, WIRING DIAGRAM TURBINE ELECTRO-HYDRAULIC CONTROL PRESS SWITCHES
11) 4E-1578F, WIRING & SCHEMATIC DIAGRAM TURBINE BLDG. 480V MCC 17-1
12) 4E-1575BB, SCHEMATIC DIAGRAM MAIN CONTROL ROOM ANNUNCIATOR PANEL 901-7
13) 4E-1359B, SCHEMATIC DIAGRAM ELECT.-HYDR. CONT. SYSTEM PT 4 ALARM & TRIP.

LEGEND:
@ INSTRUMENT CALIBRATION POINT

LICENSE RENEWAL BOUNDARY

REV	DATE	DESCRIPTION	PREP.	REVIL	APPR.
P	11/21/02	FOR RECORD PER DCP EC 24569	MGS	DFC	RHH
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Exelon Nuclear
Quad Cities Station 4 Unit: 1

NUCLEAR SAFETY RELATED EQUIPMENT IS SHOWN ON THIS DRAWING

DIAGRAM OF EHC HYDRAULIC POWER UNIT PIPING

LR-QDC-7

M-2022 -1

SCALE : NONE
DATE : 12/14/90
DRAWN BY : R. ANDERSON
DRG. BY : CS02
SHEET NUMBER: 1 SIZE: F M05

CRITICAL CONTROL ROOM DRAWING

LR-QDC-M-2022-2

1-5658 10 GALLON ACCUMULATOR CHARGED TO 900 PSIG

1-5659A 7.5 GALLON ACCUMULATOR CHARGED TO 900 PSIG

1-5659B 7.5 GALLON ACCUMULATOR CHARGED TO 900 PSIG

1-5660 4 GALLON DRAIN POT

#1 BPV HO 1-5699-BPV1 | #4 BPV HO 1-5699-BPV4 | #7 BPV HO 1-5699-BPV7 | #3 BPV HO 1-5699-BPV3 | #6 BPV HO 1-5699-BPV6 | #9 BPV HO 1-5699-BPV9 | #2 BPV HO 1-5699-BPV2 | #5 BPV HO 1-5699-BPV5 | #8 BPV HO 1-5699-BPV8

HO 1-5699-MSV4 (#4 MSV, #4 CV, 1-5672BM-1", 1-5650-208, 1-5699-524)

HO 1-5699-MSV3 (#3 MSV, #3 CV, 1-5672BL-1", 1-5650-207, 1-5699-523)

HO 1-5699-MSV2 (#2 MSV, #2 CV, 1-5672BK-1", 1-5650-206, 1-5699-522)

HO 1-5699-MSV1 (#1 MSV, #1 CV, 1-5672BJ-1", 1-5650-205, 1-5699-521)

HO 1-5699-CV4 | HO 1-5699-CV3 | HO 1-5699-CV2 | HO 1-5699-CV1

HO 1-5699-CIV3 (#3 CIV, ISV, IV) | HO 1-5699-CIV2 (#2 CIV, ISV, IV) | HO 1-5699-CIV1 (#1 CIV, ISV, IV)

HO 1-5699-CIV4 (#4 CIV, ISV, IV) | HO 1-5699-CIV5 (#5 CIV, ISV, IV) | HO 1-5699-CIV6 (#6 CIV, ISV, IV)

1-5661 EMERGENCY TRIP SOLENOID VALVE ASSEMBLY

1-5662 EXTRACTION RELAY DUMP VALVE

1-5663 ACCUMULATOR CHARGED TO 800 PSIG

PS 1-5650-100A | PS 1-5650-100B

TRIP SYSTEM IN FRONT STANDARD
(MAIN TURBINE FLOOR)

ACCUMULATOR
2-5672-V1 THRU V4

ADR 9/16-18 (SAE-6)

FV-1 | FV-2 | FV-3 | FV-4 | CV-1

FAS
1" CODE 61
SAE 4 BOLT TUBE FLANGE

DETAIL "A"

COMPONENT SYMBOLS

MSV – MAIN STOP VALVE
CV – CONTROL VALVE
BPV – BY-PASS CONTROL VALVE
CIV – COMBINED INTERMEDIATE VALVE
ISV – INTERMEDIATE STOP VALVE
IV – INTERCEPT VALVE

KEY TO PIPING SYMBOLS

FTS – FLUID TRIP SYSTEM SUPPLY
TSV – TRIP SYSTEM VENT
TSD – TRIP SYSTEM DRAIN
ETS – 1600 PSI HYDRAULIC FLUID EMERGENCY TRIP SYSTEM
FJS – 1600 PSI HYDRAULIC FLUID JET SUPPLY
FAS – 1600 PSI HYDRAULIC FLUID ACTUATOR SUPPLY
FCD – 0-50 PSI HYDRAULIC FLUID DRAIN TO COOLER
FDV – HYDRAULIC FLUID DRAIN VENT
FASTC – 1600 PSI HYDRAULIC FLUID ACTUATOR SUPPLY TRIP CONTROL
FPLD – HYDRAULIC FLUID PACKING LEAKOFF DRAIN

IN SCOPE COMPONENTS PER 54.4(a)(2)

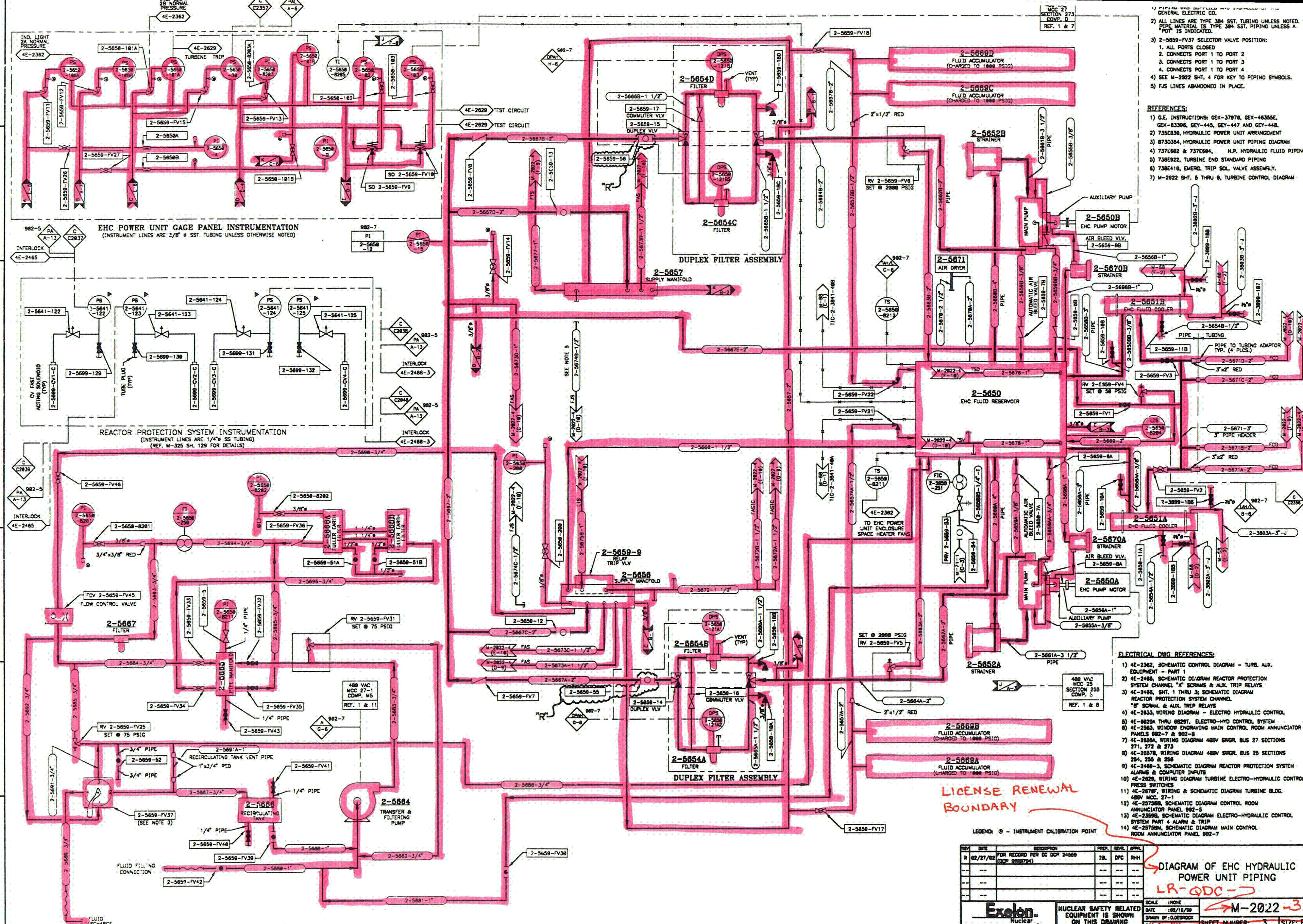
OUT OF SCOPE COMPONENTS

REV	DATE	DESCRIPTION	PREP.	REVR.	APPR.
0	07/22/02	INITIAL ISSUE	RMD	JSL	MAH

Exelon Nuclear
Quad Cities Station 4

LICENSE RENEWAL BOUNDARY DIAGRAM OF EHC HYDRAULIC POWER UNIT PIPING

LR-QDC-M-2022-2



NOTES:

1) PIPING WAS SUPPLIED AND INSTALLED BY THE GENERAL ELECTRIC CO.
2) ALL LINES ARE TYPE 304 SST. TUBING UNLESS NOTED. PIPE MATERIAL IS TYPE 304 SST. PIPING UNLESS A "PDT" IS INDICATED.
3) 2-5659-FV37 SELECTOR VALVE POSITION:
   1. ALL PORTS CLOSED
   2. CONNECTS PORT 1 TO PORT 2
   3. CONNECTS PORT 1 TO PORT 3
   4. CONNECTS PORT 1 TO PORT 4
4) SEE M-2022 SHT. 4 FOR KEY TO PIPING SYMBOLS.
5) FJS LINES ABANDONED IN PLACE.

REFERENCES:

1) G.E. INSTRUCTIONS: GEK-37970, GEK-46355E, GEK-63306, GEY-445, GEY-447 AND GEY-448.
2) 735E830, HYDRAULIC POWER UNIT ARRANGEMENT
3) 873D354, HYDRAULIC POWER UNIT PIPING DIAGRAM
4) 737E602 & 737E604, H.P. HYDRAULIC FLUID PIPING
5) 738E922, TURBINE END STANDARD PIPING
6) 738E410, EMERG. TRIP SOL. VALVE ASSEMBLY.
7) M-2022 SHT. 5 THRU 9, TURBINE CONTROL DIAGRAM

ELECTRICAL DWG REFERENCES:

1) 4E-2362, SCHEMATIC CONTROL DIAGRAM - TURB. AUX. EQUIPMENT - PART 1
2) 4E-2465, SCHEMATIC DIAGRAM REACTOR PROTECTION SYSTEM CHANNEL "A" SCRAMS & AUX. TRIP RELAYS
3) 4E-2466, SHT. 1 THRU 3; SCHEMATIC DIAGRAM REACTOR PROTECTION SYSTEM CHANNEL "B" SCRAM, & AUX. TRIP RELAYS
4) 4E-2633, WIRING DIAGRAM - ELECTRO HYDRAULIC CONTROL
5) 4E-6820A THRU 6829T, ELECTRO-HYD CONTROL SYSTEM
6) 4E-2583, WINDOW ENGRAVING MAIN CONTROL ROOM ANNUNCIATOR PANELS 902-7 & 902-8
7) 4E-2656A, WIRING DIAGRAM 480V SWGR. BUS 27 SECTIONS 271, 272 & 273
8) 4E-2657B, WIRING DIAGRAM 480V SWGR. BUS 25 SECTIONS 254, 256 & 256
9) 4E-2469-3, SCHEMATIC DIAGRAM REACTOR PROTECTION SYSTEM ALARMS & COMPUTER INPUTS
10) 4E-2629, WIRING DIAGRAM TURBINE ELECTRO-HYDRAULIC CONTROL PRESS SWITCHES
11) 4E-2676F, WIRING & SCHEMATIC DIAGRAM TURBINE BLDG. 480V MCC. 27-1
12) 4E-2575BB, SCHEMATIC DIAGRAM CONTROL ROOM ANNUNCIATOR PANEL 902-5
13) 4E-2359B, SCHEMATIC DIAGRAM ELECTRO-HYDRAULIC CONTROL SYSTEM PART 4 ALARM & TRIP
14) 4E-2575BM, SCHEMATIC DIAGRAM MAIN CONTROL ROOM ANNUNCIATOR PANEL 902-7

LICENSE RENEWAL BOUNDARY

REV	DATE	DESCRIPTION	PREP.	REVW.	APPR.
R	02/27/02	FOR RECORD PER EC DCP 24389 (DCP 9900794)	ISL	DFC	RHH
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Exelon Nuclear

NUCLEAR SAFETY RELATED EQUIPMENT IS SHOWN ON THIS DRAWING

DIAGRAM OF EHC HYDRAULIC POWER UNIT PIPING

LR-QDC-M-2022-3

SCALE : NONE
DATE : 02/10/00
DRAWN BY : D.DEBROCK
ORG. BY : C502

M-2022

SHEET NUMBER: 3 SIZE: F M05

CRITICAL CONTROL ROOM DRAWING

LR-QDC-M-2022-4

ACCUMULATOR
2-5672-V1 THRU V4

ADR
9/16-18
(SAE-6)

FV-3
CV-1
FV-4
FV-1
FV-2

PRESSURE TRANSMITTER
(ONE ASSEMBLY ONLY)

FAS
1" CODE 61
SAE 4 BOLT TUBE FLANGE

DETAIL "A"
(REF. GE TIL 1123-3)

#8 BPV HO 2-5699-BPV8
#5 BPV HO 2-5699-BPV5
#2 BPV HO 2-5699-BPV2
#9 BPV HO 2-5699-BPV9
#6 BPV HO 2-5699-BPV6
#3 BPV HO 2-5699-BPV3
#7 BPV HO 2-5699-BPV7
#4 BPV HO 2-5699-BPV4
#1 BPV HO 2-5699-BPV1

2-5699-591 2-5699-590 2-5699-589 2-5699-588 2-5699-587 2-5699-586 2-5699-585 2-5699-584 2-5699-583 2-5699-592

2"x1 1/4" RED
3/4"x3/8" RED
2"x1 1/4" RED

CHARGED TO 900 PSIG
ACCUMULATOR 7.5 GALLON 2-5659B
ACCUMULATOR 7.5 GALLON 2-5659A
10 GALLON ACCUMULATOR 2-5658

FAS 2-5673E-2"
FAS 2-5673F-2"
FPLD 2-5679-3/4"
FCD 2-5671F-2"
FCD 2-5671E-2"

2-5660
4 GALLON DRAIN POT

2-5659-4
2-5659-3
2-5659-2
2-5659-1
FDV

1 1/2"x1" RED

FTS FJS FAS FCD

HO 2-5699-MSV4 #4 MSV
HO 2-5699-MSV3 #3 MSV
HO 2-5699-MSV2 #2 MSV
HO 2-5699-MSV1 #1 MSV

HO 2-5699-CV4 #4 CV
HO 2-5699-CV3 #3 CV
HO 2-5699-CV2 #2 CV
HO 2-5699-CV1 #1 CV

SEE DETAIL "A" ACCUMULATOR

PT

FJS FCD ETS FJS FAS FCD FASTC

HO 2-5699-CIV6 #6 CIV ISV IV
HO 2-5699-CIV5 #5 CIV ISV IV
HO 2-5699-CIV4 #4 CIV ISV IV
HO 2-5699-CIV1 #1 CIV ISV IV
HO 2-5699-CIV2 #2 CIV ISV IV
HO 2-5699-CIV3 #3 CIV ISV IV

1 1/2"x1" RED

2-5661
EMERGENCY TRIP SOLENOID VALVE ASSEMBLY

2-5662
EXTRACTION RELAY DUMP VALVE

2-5663
ACCUMULATOR CHARGED TO 800 PSIG

2-5675DA-3/4"
2-5676C-3/8"
2-5676B-3/8"
2-5676A-3/8"
2-5675DC-3/8"
2-5675DB-3/8"
2-5650-100A
2-5650-100B
PS 2-5650-100A
PS 2-5650-100B

C C2306
PAN F-4
902-7

TRIP SYSTEM IN FRONT STANDARD
(MAIN TURBINE FLOOR)

2-5675D-1"
2-5675A-1"
2-5678A-1"
2-5677-1"
2-5676-1"
TSV TSD ETS

2-5674A-1/2" FJS
2-5673A-1 1/2" FAS
2-5671A-2" FCD
2-5672A-1 1/2" FASTC

M-2022-3 (D-5) FJS
M-2022-3 (D-5) FAS
M-2022-3 (D-5) TSV
M-2022-3 (C-10) FCD
M-2022-3 (D-5) ETS
M-2022-3 (D-4) FJS
M-2022-3 (E-4) FAS
M-2022-3 (C-10) FCD
M-2022-3 (D-6) FASTC
M-2022-3 (B-4) FTS
M-2022-3 (C-8) TSD

COMPONENT SYMBOLS

MSV – MAIN STOP VALVE
CV – CONTROL VALVE
BPV – BY-PASS CONTROL VALVE
CIV – COMBINED INTERMEDIATE VALVE
ISV – INTERMEDIATE STOP VALVE
IV – INTERCEPT VALVE
FV – FLUID VALVE

KEY TO PIPING SYMBOLS

FTS – FLUID TRIP SYSTEM SUPPLY
TSV – TRIP SYSTEM VENT
TSD – TRIP SYSTEM DRAIN
ETS – 1600 PSI HYDRAULIC FLUID EMERGENCY TRIP SYSTEM
FJS – 1600 PSI HYDRAULIC FLUID JET SUPPLY
FAS – 1600 PSI HYDRAULIC FLUID ACTUATOR SUPPLY
FCD – 0-50 PSI HYDRAULIC FLUID DRAIN TO COOLER
FDV – HYDRAULIC FLUID DRAIN VENT
FASTC – 1600 PSI HYDRAULIC FLUID ACTUATOR SUPPLY TRIP CONTROL
FPLD – HYDRAULIC FLUID PACKING LEAKOFF DRAIN

IN SCOPE COMPONENTS PER 54.4(a)(2)

OUT OF SCOPE COMPONENTS

REV	DATE	DESCRIPTION	PREP.	REVR.	APPR.
0	07/17/02	INITIAL ISSUE	RMD	JSL	MAH

LICENSE RENEWAL BOUNDARY DIAGRAM OF EHC HYDRAULIC POWER UNIT PIPING

Exelon Nuclear
Quad Cities Station 4

LR-QDC-M-2022-4