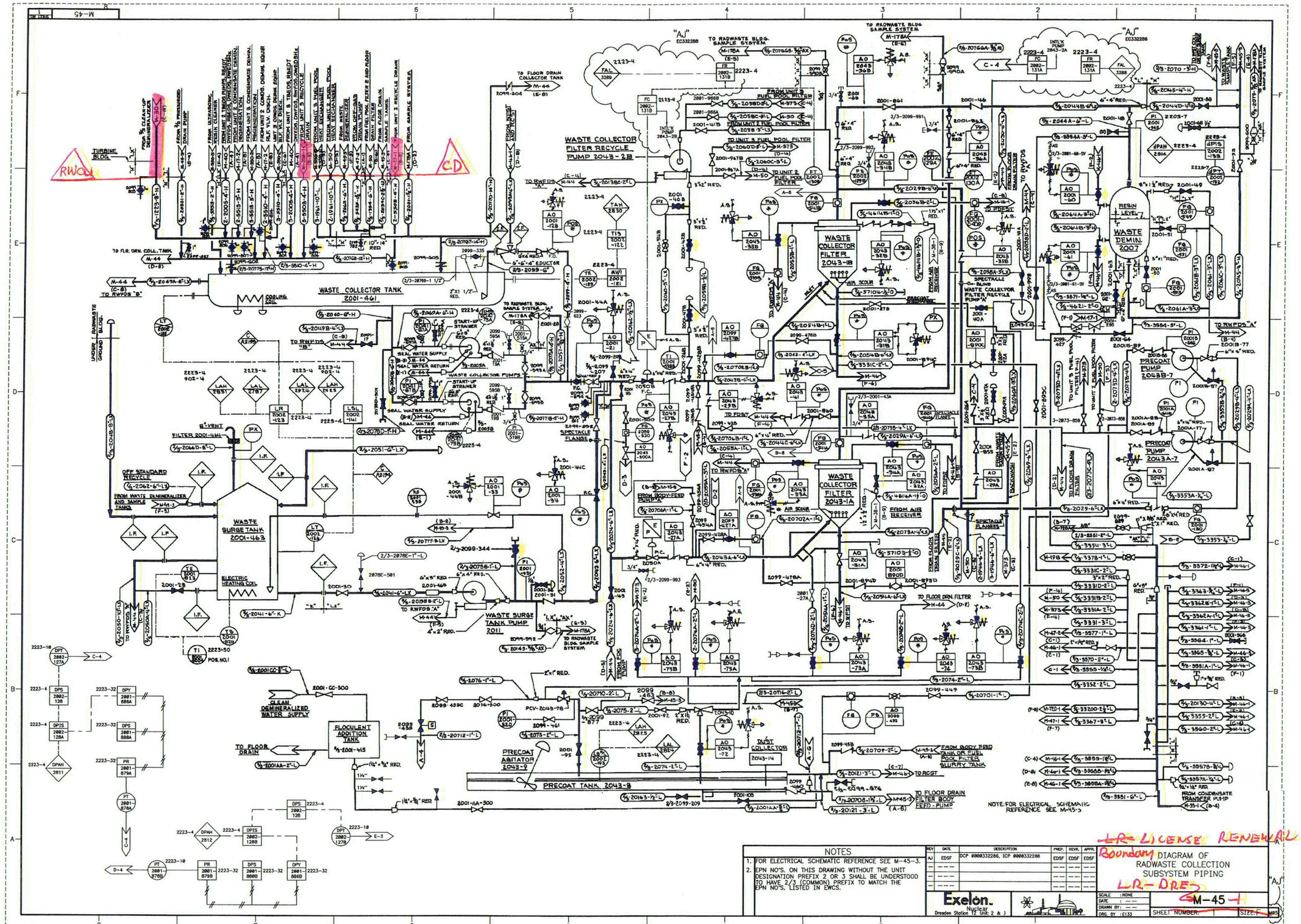


NOTES

1. FOR ELECTRICAL SCHEMATIC REFERENCE SEE M-45-3.
2. EPN NO'S. ON THIS DRAWING WITHOUT THE UNIT DESIGNATION PREFIX 2 OR 3 SHALL BE UNDERSTOOD TO HAVE 2/3 (COMMON) PREFIX TO MATCH THE EPN NO'S. LISTED IN EWCS.

REV	DATE	DESCRIPTION	PREP.	REVR.	APPR.
AJ	EDSF	DCP 0000332286, ICP 0000332288	EDSF	EDSF	EDSF
—	— — —		— —	— —	— —
—	— — —		— —	— —	— —
—	— — —		— —	— —	— —

~~LR~~ LICENSE RENEWAL Boundary DIAGRAM OF
RADWASTE COLLECTION
SUBSYSTEM PIPING
LR-DRES

Exelon Nuclear
Dresden Station 12 Unit: 2 & 3

SCALE : NONE
DATE : — —
DRAWN BY : — —
ORG. BY : E133

M-45 -1
SHEET NUMBER: ~~1~~
SIZE: F
M05

"AJ"

12 00 AJ EDSF A D

LR-DRE-M-48

RWCU AREA LEAK TEMPERATURE DETECTORS

PANEL 2202-77A

SEE S/D DWG 12E-2524A

SEE S/D DWG 12E-2524B

SEE S/D DWG 12E-2524A 12E-2524B

RWCU AREA LEAK TEMPERATURE DETECTORS

PANEL 2202-77B

SEE S/D DWG 12E-2524D

SEE S/D DWG 12E-2524E

SEE S/D DWG 12E-2524D 12E-2524E

CLEAN-UP FILTER BACKWASH SUPPLY TANK 2-1227

CONDENSATE SUPPLY

VENT

COL. H-42

FILTER AID TANK 2-1208

PRECOAT TANK 2-1209

PRECOAT AGITATOR 2-1214

FILTER AID PUMP 2-1211

STRAINER

EDUCTOR 3-1243 *

EDUCTOR 2-1239

TO CRD SONIC CLEANER

ABANDONED IN PLACE

CONDENSATE FLUSH CONNECTION OUTSIDE SHIELDING

CLEANUP DEMINERALIZER 2-1202-C

CLEANUP DEMINERALIZER 2-1202-B

CLEANUP DEMINERALIZER 2-1202-A

REACTOR WATER CLEAN-UP PIPING

S02-1201-102

S02-1247

S02-1245

S02-1254A

S02-1254B

S02-1248

S02-5509

S02-5510

AREA TEMPERATURE DETECTOR

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

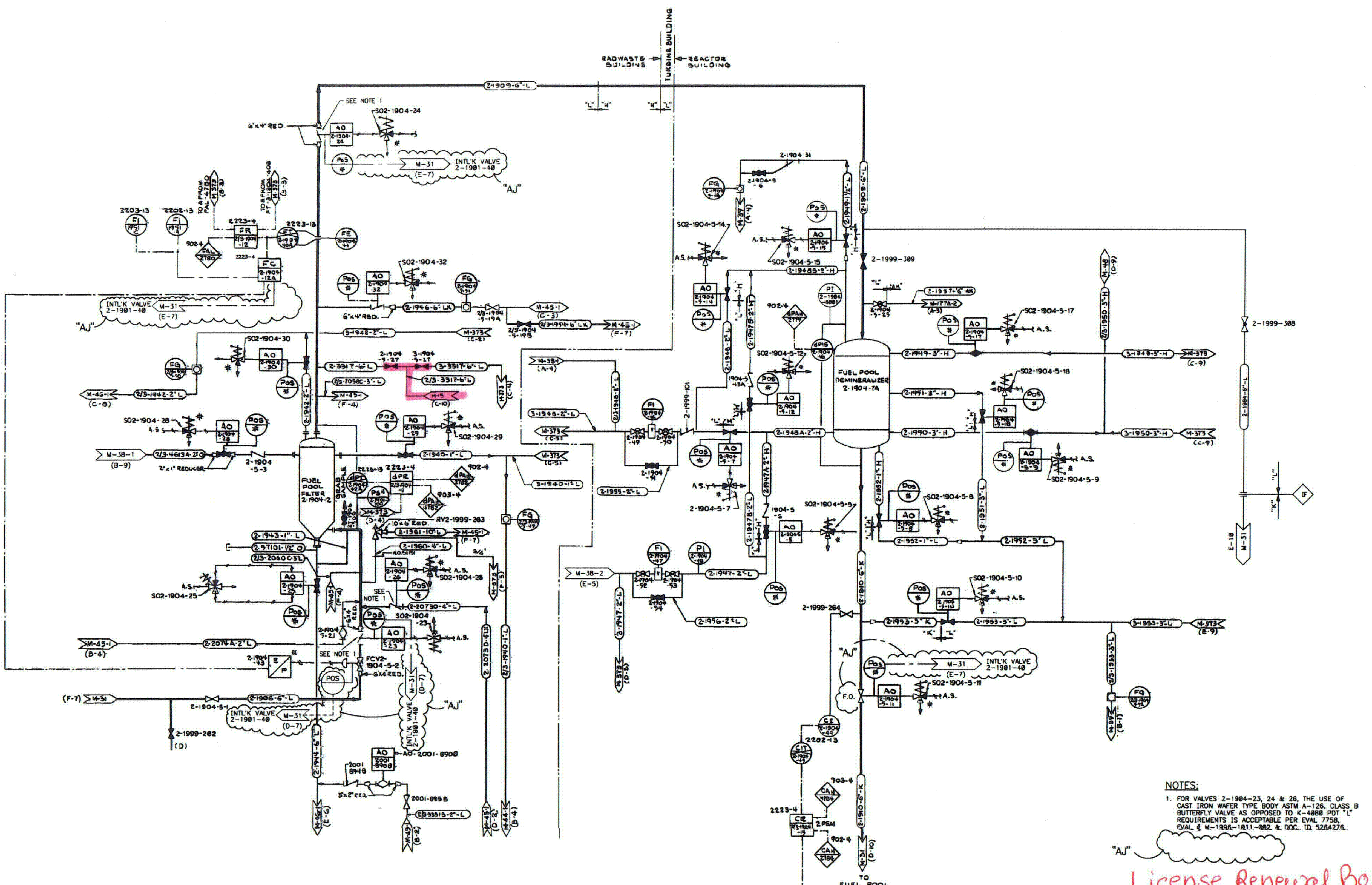
OUT OF SCOPE COMPONENTS

REV	DATE	DESCRIPTION	PREP.	REVR.	APPR.
0	09/04/02	INITIAL ISSUE	RMD	JSL	MAH

LICENSE RENEWAL BOUNDARY DIAGRAM OF REACTOR WATER CLEANUP PIPING

Exelon Nuclear
Dresden Station

LR-DRE-M-48



NOTES:

1. FOR VALVES 2-1904-23, 24 & 26, THE USE OF CAST IRON WAFER TYPE BODY ASTM A-126, CLASS B BUTTERFLY VALVE AS OPPOSED TO K-4080 PDT "L" REQUIREMENTS IS ACCEPTABLE PER EVAL 7758, EVAL & M-1996-1011-002 & DOC. ID 5264276.

"AJ"

License Renewal Boundary Diagram

REV	DATE	DESCRIPTION	PREP.	REVR.	APPR.
AJ	EDSF	DCR 000344585	EDSF	EDSF	EDSF
—	———		——	——	——
—	———		——	——	——
—	———		——	——	——

DIAGRAM OF FUEL POOL FILTER AND DEMINERALIZING PIPING

LR-DRE-M-50

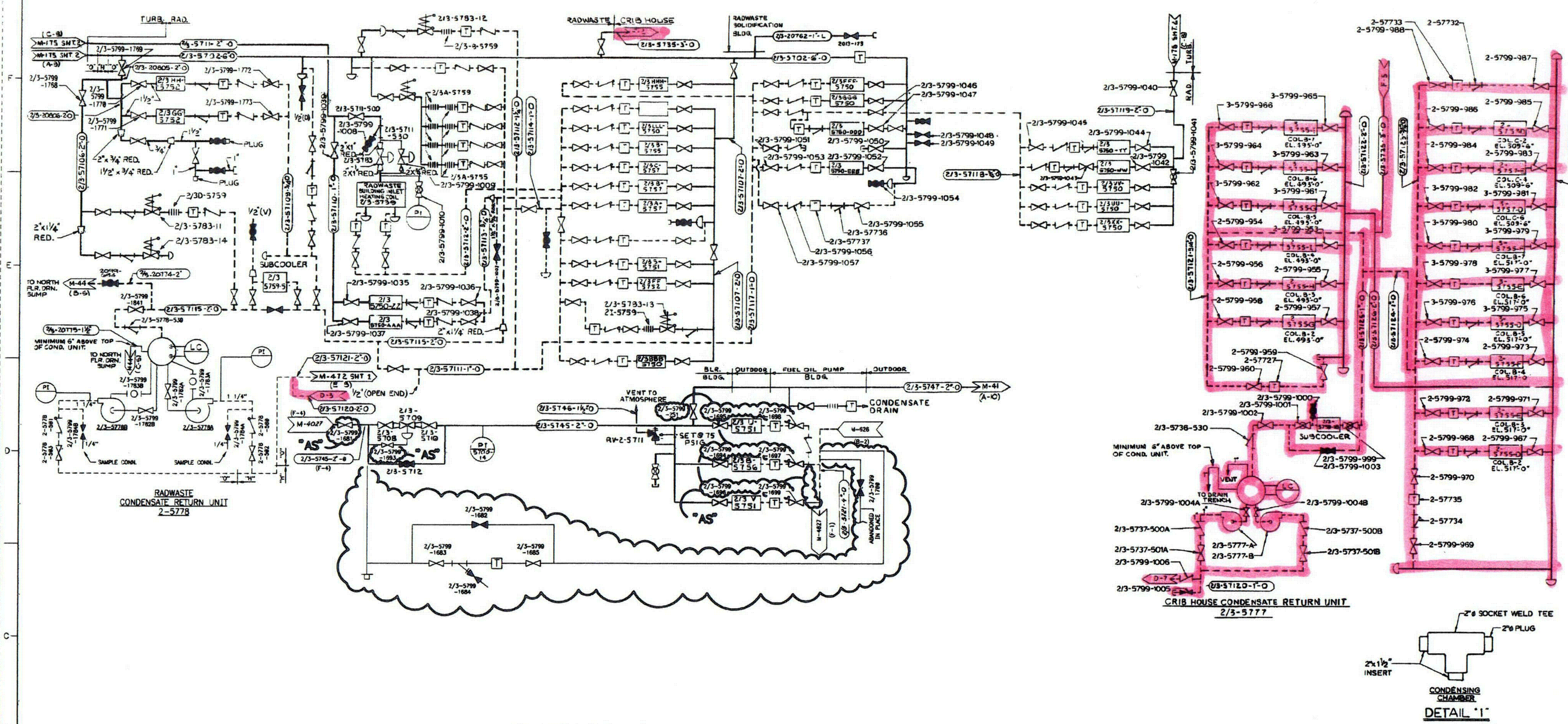
Exelon. Nuclear
Dresden Station 12 Unit: 2

SCALE : NONE
DATE : ——
DRAWN BY: ——
ORG. BY : E133

SHEET NUMBER: M-50

SIZE: F

12 02 AJ EDSF A D



LEGEND:
——— DENOTES STEAM
- - - - DENOTES CONDENSATE

1. UNIT HEATER STEAM SUPPLY HEADER TO BE 2" UNLESS NOTED.
2. UNIT HEATER CONDENSATE RETURN HEADER TO BE ¾" UNLESS NOTED.
3. ALL INSTRUMENT TUBING DESIGNATING ⟶ SHALL HAVE A MINIMUM SLOPE OF 1" PER FOOT SLOPING DOWNWARD IN DIRECTION OF ARROW.
4. ALL INSTRUMENT TUBING DENOTED BY ⫩ SHALL BE STAINLESS STEEL, CLASS 300, AND SIZED AS NECESSARY FOR INSTRUMENTATION.

LICENSE RENEWAL BOUNDARY

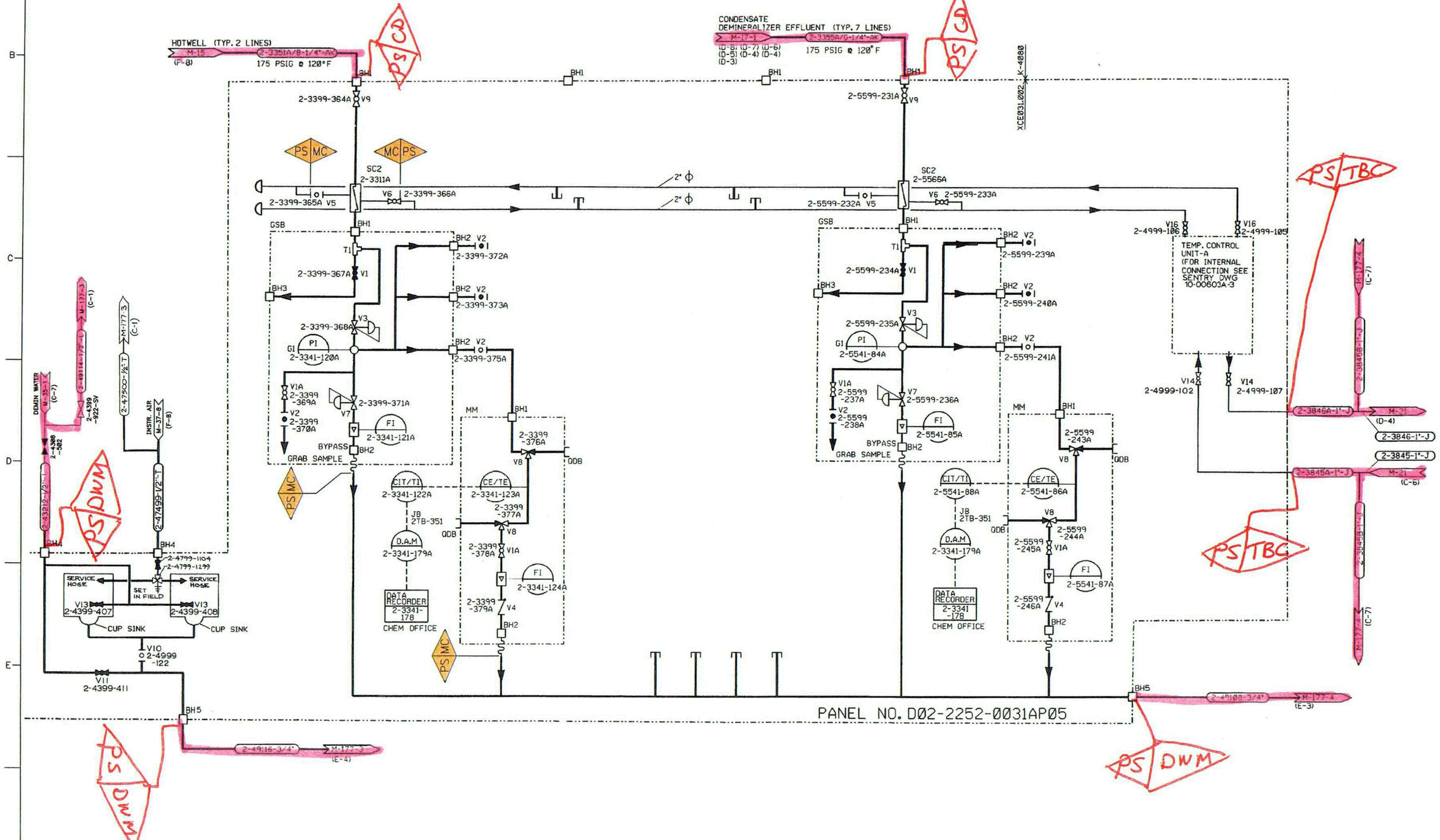
REV	DATE	DESCRIPTION	PREP.	REVW.	APPR.
AS	02/18/03	FOR RECORD PER EC DCR 00000339338	FMD	POS	DEM

Exelon. Nuclear
Dresden Station Unit: 2&3

DIAGRAM OF HEATING SYSTEM PIPING

SCALE: NONE
LR-DRE-M-175-1
SHEET NUMBER: 1
SIZE: F

12 32 AS 18FE03 A D



DWM = DEMINERALIZED WATER MAKEUP

CD = CONDENSATE AND CONDENSATE STORAGE

TBC = TBCCW

PS|MC LR SYSTEM BOUNDARY BREAKS

MC = MAIN CONDENSER

PS = PROCESS SAMPLING

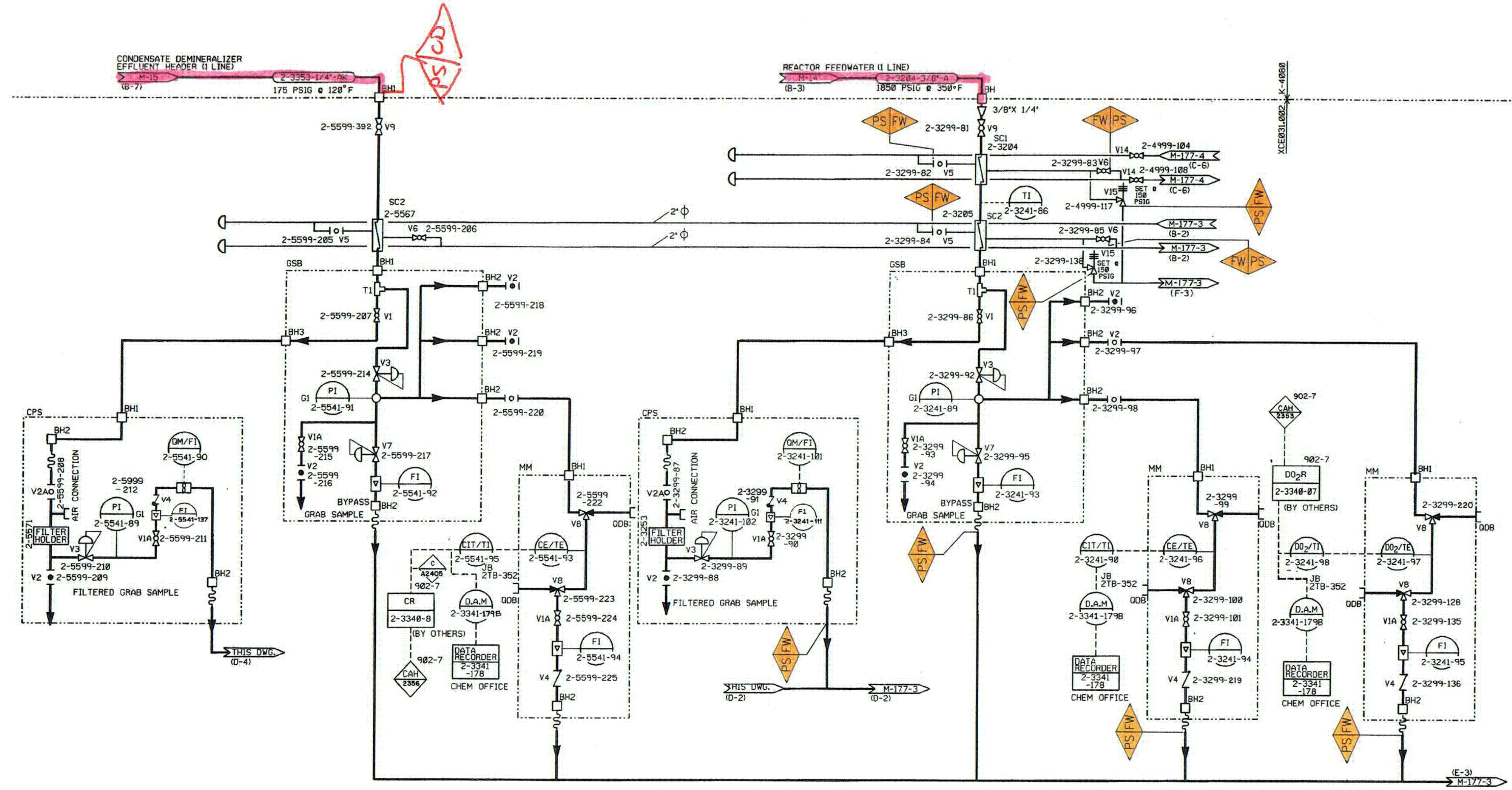
OUT OF SCOPE COMPONENTS

REV	DATE	DESCRIPTION	PREP.	REVR.	APPR.
0	09/23/02	INITIAL ISSUE	RMD	JSL	MAH

Exelon Nuclear
Dresden Station

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

LR-DRE-M-177-1



PANEL NO.
D02-2252-0031BP05

CD= CONDENSATE AND CONDENSATE STORAGE

PS|FW LR SYSTEM BOUNDARY BREAKS

FW = FEEDWATER

PS = PROCESS SAMPLING

OUT OF SCOPE COMPONENTS

REV	DATE	DESCRIPTION	PREP.	REVR.	APPR.
0	11/18/02	INITIAL ISSUE	RWD	JSL	MAH

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

Exelon. Nuclear
Dresden Station 1/2

LR-DRE-M-177-2

CONDENSATE PUMP DISCHARGE (1 LINE)
M-15 (B-8)
2-3352-1/4"-AK
175 PSIG @ 120°F

PS SD

BH1
2-3399-388 V9
XCE031.002 K-4000

M-177-2 (B-6)
SC2 2-3312
2-3399-381 V5
V6 2-3399-382
2" Φ
M-177-4 (B-1)

GSB
BH1
T1
2-3399-383 V1
BH3
BH2 V2 2-3399-393
BH2 V2 2-3399-394
BH2 V2 2-3399-395
2-3399-389 V3
PI 2-3341-130 GI
V1A 2-3399-390
V2 2-3399-391
GRAB SAMPLE
V7 2-3399-392
FI 2-3341-131
BYPASS
BH2

CPS
BH1
BH2
QM/FI 2-3341-128
2-3399-384
OV2A
AIR CONNECTION
FILTER HOLDER
PI 2-3341-129 GI
FI 2-3341-105
V4
V1A 2-3399-387
V3
2-3399-386
V2
FILTERED GRAB SAMPLE
2-3399-385
2-3316
BH2

MM
BH1
2-3399-396
V8
QDB
CIT/TI 2-3341-134
CE/TE 2-3341-132
902-7
JB 2TB-352
CR 2-3340-8
D.A.M 2-3341-179B
(BY OTHERS)
C A2483
CAH 2355
902-7
M-3658 SH 2
(C-2)
(SEE NOTES B & C)
DATA RECORDER 2-3341-178
CHEM OFFICE
2-3399-398 V1A
FI 2-3341-133
2-3399-399 V4
BH2

MM
BH1
2-3399-400
V8
QDB
O_2/TI 2-3341-137
JB 2TB-352
D.A.M 2-3341-179B
DATA RECORDER 2-3341-178
CHEM OFFICE
O_2/TE 2-3341-136
V8
2-3399-401
2-3399-402 V1A
FI 2-3341-139
2-3399-403 V4
BH2

M-177-2 (E-7)
M-177-4 (E-1)

DEMIN WATER M-177-1 (B-1)
2-49114-1/2"-L
PS DWM
BH4
2-47500-1/2"-L
INSTR. AIR M-177-1 (B-1)
2-4799-1106
2-4799-1300
SERVICE HOSE
SET FIELD
V13 2-4399-409
V13 2-4399-410
CUP SINK
CUP SINK
M-177-2 (D-5)
2-4999-181 V10
2-4999-114 V11

PANEL NO.
D02-2252-0031BP05

PS DWM
BH5
¾" X 1" RED.
NOTE 6
2-49116-¾" NOTE 6
M-177-1 (E-2)
2-49115-1"-L
M-40 (B-4) TBEDT
NOTE 6
2-49112-¾"
M-177-4 (B-5)
2-49109-1"-L
M-177-4 (F-4)
M-177-2 (B-6)
BH5 NOTE 6
2-49117-¾"
PS DWM

SAMPLING FROM COND. PRE FILTER TANK A
SAMPLING FROM COND. PRE FILTER TANK B
SAMPLE INLET FROM COND PREFILTER TANK A (SPARE)
SAMPLE INLET FROM COND PREFILTER TANK B (SPARE)
PS SD
M-15-2
PANEL
PRESSURE REDUCING VALVE (TYP)
2-3399-749
2-3399-747
2-3399-750
2-3399-748
2-3399-753
2-3399-751
2-3399-754
2-3399-752
DRAIN
TO DRAIN HEADER
SAMPLE SINK 2-3380

PS DWM LR SYSTEM BOUNDARY BREAKS
PS= PROCESS SAMPLING
DWM= DEMINERALIZER WATER MAKEUP
CD= CONDENSATE AND CONDENSATE STORAGE

NOTES:
A) FOR GENERAL NOTES AND REFERENCE DRAWINGS SEE M-177 SHEET 1.
B.) THIS CONNECTION CAN BE MADE ON ANY AVAILABLE NOZZLE.
C.) THE END OF THIS LINE IS A QUICK DISCONNECT FITTING THAT HAS A VALVE THAT SHUTS OFF WHEN UNCOUPLED.

LICENSE RENEWAL BOUNDARY

REV	DATE	DESCRIPTION	PREP.	REVR.	APPR.
E	11/27/02	FOR RECORD PER EC FCR 0000331050	EMB	POS	DEM

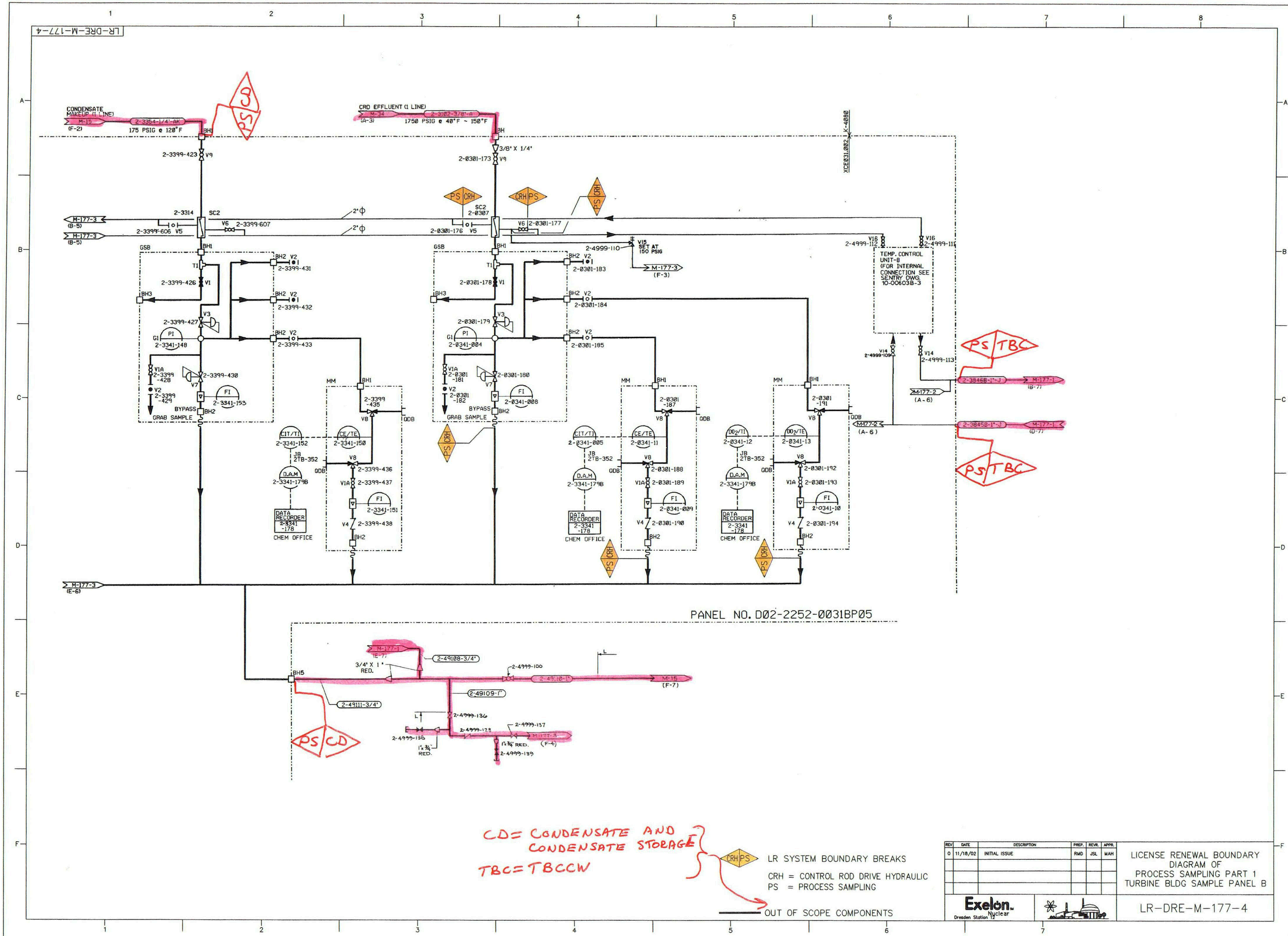
Exelon Nuclear
Dresden Station 12 Unit 2

DIAGRAM OF PROCESS SAMPLING PART 1
TURBINE BUILDING SAMPLE PANEL 'B'
LR-DRE2

M-177-3

SCALE: NONE
DRAWN BY:
ORG. BY: C502
SHEET NUMBER: 3
SIZE: D

12 02 E 27NO02 A D



LR-DRE-M-177-4
CONDENSATE MAKEUP (1 LINE)
M-15
(F-2)
2-3354-1/4"-AK
175 PSIG @ 120°F
PS CD
CRD EFFLUENT (1 LINE)
M-34
(A-3)
2-3102-3/8"-A
1750 PSIG @ 40°F ~ 150°F
XCE03L002 K-4080
2-3399-423 V9
2-0301-173 V9
3/8" X 1/4"
PS CRH
CRH PS
2-3314 SC2
SC2 2-0307
M-177-3 (B-5)
2-3399-606 V5
V6 2-3399-607
2"ϕ
2-0301-176 V5
V6 2-0301-177
GSB
BH1
BH2 V2 2-3399-431
BH2 V2 2-3399-432
BH2 V2 2-3399-433
2-3399-426 V1
BH3
2-3399-427 V3
PI G1 2-3341-148
V1A 2-3399-428
V2 2-3399-429
2-3399-430 V7
FI 2-3341-153
BYPASS BH2
GRAB SAMPLE
2-4999-110 V15 SET AT 150 PSIG
M-177-3 (F-3)
BH2 V2 2-0301-183
BH2 V2 2-0301-184
BH2 V2 2-0301-185
2-0301-178 V1
2-0301-179 V3
PI G1 2-0341-004
V1A 2-0301-181
V2 2-0301-182
2-0301-180 V7
FI 2-0341-008
2-4999-112 V16
V16 2-4999-111
TEMP. CONTROL UNIT-B (FOR INTERNAL CONNECTION SEE SENTRY DWG. 10-00603B-3
V14 2-4999-109
V14 2-4999-113
PS TBC
2-38468-1"-J
M-177-1 (B-7)
M-177-2 (A-6)
2-38458-1"-J
M-177-1 (D-7)
MM
2-3399-435 V8 QDB
CIT/TI 2-3341-152
CE/TE 2-3341-150
JB 2TB-352
D.A.M. 2-3341-179B
DATA RECORDER 2-3341-178
CHEM OFFICE
V8 2-3399-436
V1A 2-3399-437
FI 2-3341-151
V4 2-3399-438
2-0301-187
CIT/TI 2-0341-005
CE/TE 2-0341-11
2-0301-188
2-0301-189
FI 2-0341-009
2-0301-190
2-0301-191
DO2/TI 2-0341-12
DO2/TE 2-0341-13
2-0301-192
2-0301-193
FI 2-0341-10
2-0301-194
M-177-3 (E-6)
PANEL NO. D02-2252-0031BP05
M-177-1 (E-7)
2-49108-3/4"
3/4" X 1" RED.
BH5
2-4999-100
2-49110-1"
M-15 (F-7)
2-49111-3/4"
2-49109-1"
2-4999-136
2-4999-137
2-4999-123
2-4999-138
1"x 3/4" RED.
M-177-3 (F-4)
2-4999-139
PS CD
CD= CONDENSATE AND CONDENSATE STORAGE
TBC= TBCCW
CRH PS LR SYSTEM BOUNDARY BREAKS
CRH = CONTROL ROD DRIVE HYDRAULIC
PS = PROCESS SAMPLING
OUT OF SCOPE COMPONENTS
REV | DATE | DESCRIPTION | PREP. | REVR. | APPR.
0 | 11/18/02 | INITIAL ISSUE | RMD | JSL | MAH
Exelon. Nuclear
Dresden Station
LICENSE RENEWAL BOUNDARY DIAGRAM OF PROCESS SAMPLING PART 1 TURBINE BLDG SAMPLE PANEL B
LR-DRE-M-177-4

LR-DRE-M-178

No.	LOCATION	ELEV	VALVE 2507-	VALVE 2599-
1	VENT RETURN OPENING NEAR Rx BELL SEAL	588'	500	629
2	Rx VENT HEAD (≈33°- N30)	588'	501	630
3	NIB NOZZLE	546'	502	631
4	HPCI LINE NEAR STAIRWAY TO 588'	572'	503	632
5	ISO-CONDENSER VALVE 1301-2	572'	504	633
6	ELECTROMATIC RELIEF VALVES OVER STEAM LINES A/B	572'	505	634
7	165° NEAR N. CORESPRAY	572'	506	635
8	ELECTROMATIC RELIEF VALVES OVER STEAM LINES C/D	555'	507	636
9	MO-2-202-6A, REC., LOOP CROSSTIE NEAR VALVE BON.	534'	508	637
10	MO-2-202-6B, REC., LOOP CROSSTIE NEAR VALVE BON.	534'	509	638
11	MO-2-202-4A REC. PUMP SUCTION NEAR VALVE BON.	509'	510	639
12	MO-2-202-4B REC. PUMP SUCTION NEAR VALVE BON.	515'	511	640
13	REC. PUMP 2A, SHAFT SEAL	513'	512	641
14	REC. PUMP 2B, SHAFT SEAL	513'	513	642
15	MO-2-202-5A, RECIRC. PUMP DISCHARGE	513'	514	643
16	BIOSHIELD WALL 300° AZ.	518'	515	644
17	PRI. STM. ISOL. VALVES BETWEEN C/D	517'	516	645
18	PRI. STM. ISOL. VALVES BETWEEN D/A	517'	517	646
19	PRI. STM. ISOL. VALVES BETWEEN A/B	517'	518	647
20	CRD SUBPILE ROOM (≈90° ON WALL)	510'	519	648
21	BIOSHIELD WALL 285° AZ.	520'	520	649
22	BIOSHIELD WALL 120° AZ.	521'	521	650
23	TORUS		522	651
24	STEAM TUNNEL SAMPLE	518'-6"	523	652
25	2G DRYWELL COOLER INTAKE LOUVER		524	NONE
26	2E DRYWELL COOLER INTAKE LOUVER		525	654

PRIMARY CONTAINMENT AIR SAMPLE LOCATION TABULATION

LOCATION	APPROX. ELEV.	COL. ROW DESIG.
AIR EJECTOR COMPARTMENT "A" MIDDLE OF ROOM	568'-0"	37-D
AIR EJECTOR COMPARTMENT "B" MIDDLE OF ROOM	565'-0"	39-D
TURBINE BUILDING EXHAUST DUCT	558'-0"	40-C
TURBINE PEDESTAL NORTH OF MAIN STEAM STOP VALVES	550'-0"	41-F
CONCRETE BEAM OVER TURB. BY-PASS	550'-0"	41-G
TURBINE PEDESTAL SOUTH OF AND ON "B" LOW PRESS. CYLINDER	546'-0"	36-F
"D" HIGH PRESS. HTR. COMPARTMENT AT CEILING BETWEEN HTRS. 2-DI & 2	557'-0"	39-G
NORTH CONDENSATE DEMINERALIZER ROOM AND CEILING	531'-0"	41-C
SOUTH CONDENSATE DEMINERALIZER ROOM AND CEILING	531'-0"	41-D
CONDENSATE DEMINERALIZER REGENERATIVE ROOM AND CEILING	530'-6"	"D" BETWEEN 42 & 43
UNDER WEST END OF TURB. PEDESTAL BETWEEN HIGH PRESS. CYL. & MOIST. SEP.	551'-0"	42 AT TURB. ℄
NORTHWEST VERTICAL PEDESTAL SUPPORT "A" LOW PRESSURE TURBINE	525'-0"	40-E
NORTHWEST VERTICAL PEDESTAL SUPPORT "B" LOW PRESSURE TURBINE	525'-0"	39-E
NORTHWEST VERTICAL PEDESTAL SUPPORT "C" LOW PRESSURE TURBINE	525'-0"	37-E
UNDER CONDENSER HOTWELL IN CONDENSER PIT ROOM AT CENTER	481'-0	38-E
PITOT TUBE IN VENT DUCT UPSTREAM OF RADWASTE EXHAUST FAN	538'-0"	42-43
PITOT TUBE IN VENT DUCT DOWN-STREAM OF RADWASTE EXHAUST FAN	538'-0"	42-43
CEILING OF EAST HOPPER	541'-0"	42-C
CEILING OF WEST HOPPER	541'-0"	42-C
CEILING OF SOLID WASTE LOADING AREA BETWEEN MIX. STA. & DRUM EL.	528'-0"	41-C
PITOT TUBE IN EXHAUST DUCT FROM RADWASTE FILTER	A THRU E 528'-6"	BETWEEN 45 & 46
PITOT TUBE IN EXHAUST DUCT FROM SPENT RESIN TK. RM. & NEUT. TK. RM.	495'-0"	45-C
PITOT TUBE IN EXHAUST DUST FROM CONCENTRATOR FEED PREHEATER COMP.	528'-6"	BETWEEN 45 & 46

TURBINE BUILDING AIR PARTICULATE SAMPLE LOCATION TABULATION

(CONTINUED)

LOCATION	APPROX. ELEV.	COL. ROW DESIG.	LINE NO.	SAMPLE POINT NO.
OFF GAS CONDENSER 2A CUBICLE	605'-0"	38-D	2-9101A-½" AK	26
OFF GAS CONDENSER & CATALYTIC RECOMBINER 2B CUBICLE	586'-0"	39-D	2-9101B-½" AK	24
OFF GAS CATALYTIC RECOMBINER 2A CUBICLE	586'-0"	36-D	2-9101C-½" AK	25
SPARE				29
SPARE				30

OFF GAS SAMPLING SYSTEM
FILTER BUILDING OFF GAS VIAL SAMPLER 2-1798-04

TURBINE BUILDING AIR PARTICULATE SAMPLING SYSTEM 2252-46

PRIMARY CONTAINMENT OXYGEN SAMPLING SYSTEM
FURNISHED BY K-2267 & INSTALLED BY K-2202

PRIMARY CONTAINMENT PARTICULATE SAMPLING SYSTEM
(FURNISHED & INSTALLED BY K-2202)

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

OUT OF SCOPE COMPONENTS

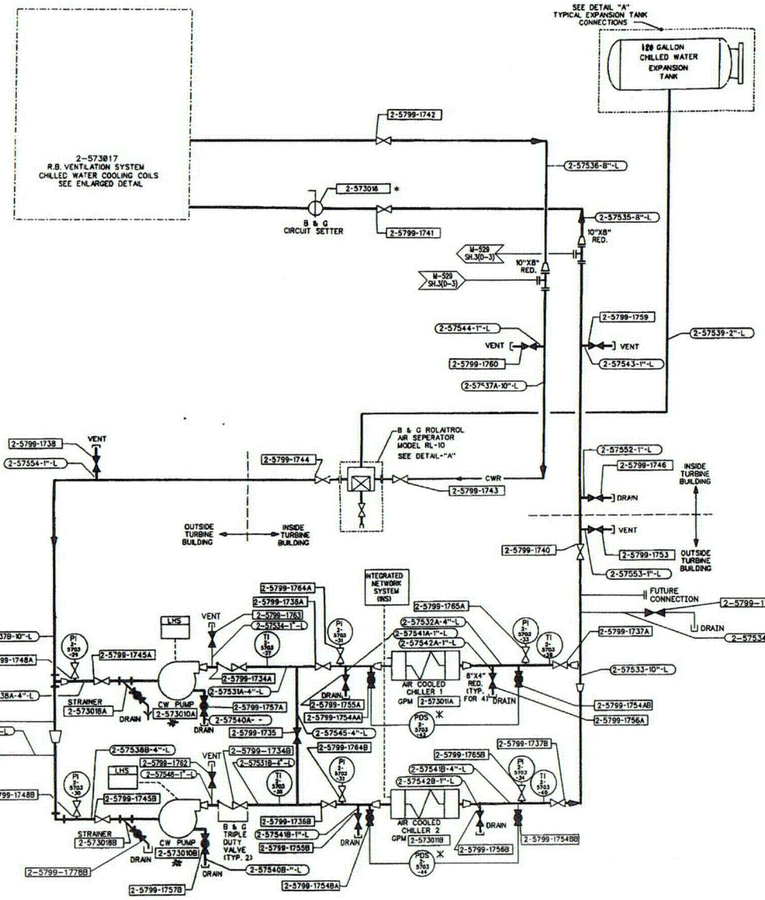
REV.	DATE	DESCRIPTION	PREP.	REVR.	APPR.
0	09/23/02	INITIAL ISSUE	RMD	JSL	MAH

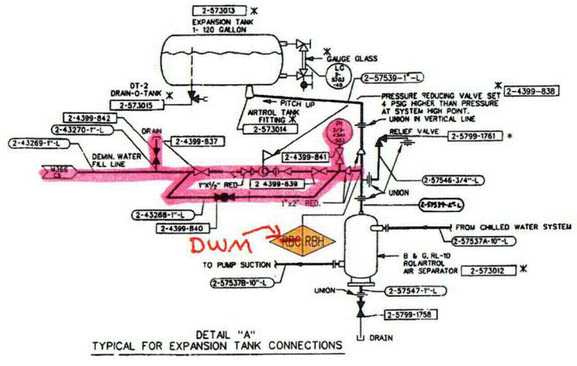
LICENSE RENEWAL BOUNDARY DIAGRAM OF PROCESS SAMPLING PART 2

Exelon. Nuclear
Dresden Station 12

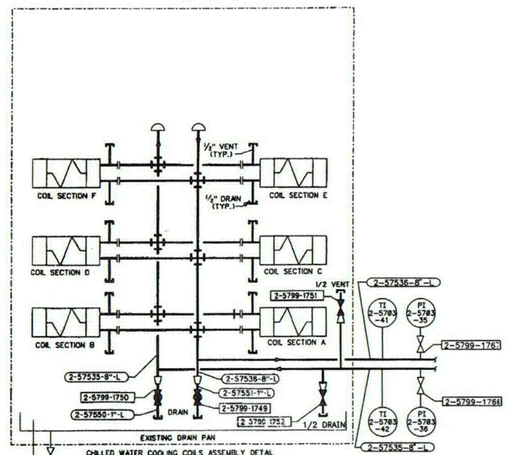
LR-DRE-M-178

LR-DRE-M-269-3





DETAIL "A"
TYPICAL FOR EXPANSION TANK CONNECTIONS



DWM RBC RBH

LR SYSTEM BOUNDARY BREAKS

DWM = DEMIN. WATER MAKEUP

~~RBC = REACTOR BUILDING CHILLED WATER~~

RBH = REACTOR BUILDING HVAC

OUT OF SCOPE COMPONENTS

REV	DATE	DESCRIPTION	PREP.	REVR.	APPR.
0	09/23/02	INITIAL ISSUE	RMD	JSL	MAH

Exelon. Nuclear
Dresden Station

LICENSE RENEWAL BOUNDARY
DIAGRAM OF
REACTOR BUILDING
CHILLED WATER SYSTEM

LR-DRE-M-269-3

LR-DRE-M-345-2

TYPICAL FOR VALVES 3-205-1A,1B,1C & 1D

ACCUMULATOR 3-220-83A

DETAIL "B"

STEAM JET AIR EJECTOR 3-5401B

STEAM JET AIR EJECTOR 3-5401A

EHC SYSTEM

MOISTURE SEPARATOR TANK 3-5605-C

MOISTURE SEPARATOR TANK 3-5605-D

MOISTURE SEPARATOR TANK 3-5605-A

MOISTURE SEPARATOR TANK 3-5605-B

COMBINED INTERMEDIATE VALVE

CONDENSER 3A-3301

CONDENSER 3B-3301

CONDENSER 3C-3301

MAIN STEAM BY-PASS VALVE *

CONDENSER SHELL

FEED WATER CONTROL SYSTEM I2E-3417

STEAM SEAL HEADER

SEAL STEAM REGULATOR

STEAM PACKING UNLOADING VALVE

OUTSIDE DRYWELL

FURN. BY G.E. INSTR. BY R.C.

(FOR SAFETY CLASSIFICATION SEE CLASSIFICATION CRITERIA DOCUMENT GQ-1.1).

ISO MS LR SYSTEM BOUNDARY BREAKS

ISO = ISOLATION CONDENSER
MS = MAIN STEAM
MT = MAIN TURBINE

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

IN SCOPE COMPONENTS PER 54.4(a)(2)

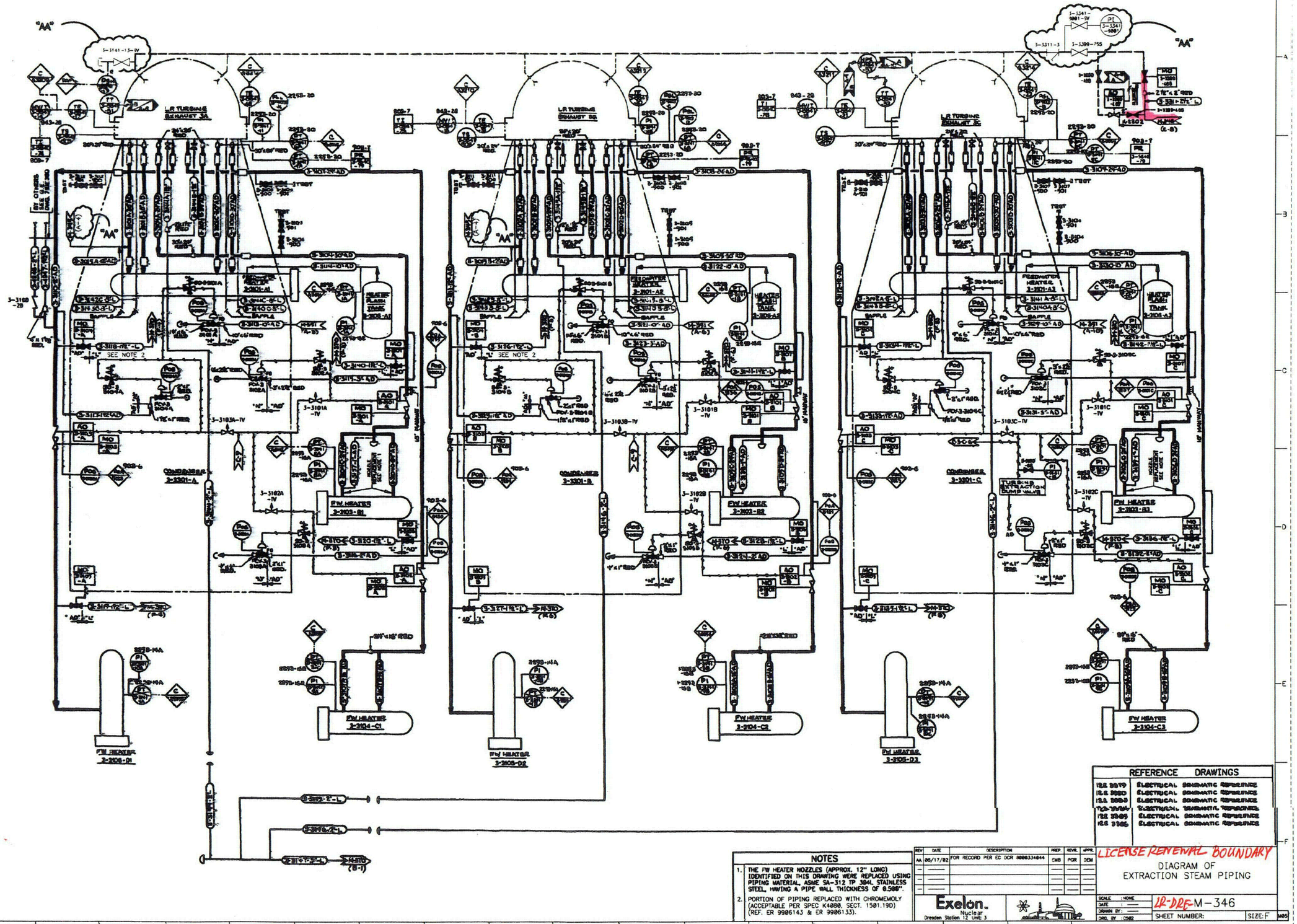
OUT OF SCOPE COMPONENTS

REV	DATE	DESCRIPTION	PREP.	REVR.	APPR.
0	09/25/02	INITIAL ISSUE	RMD	JSL	MAH

LICENSE RENEWAL BOUNDARY DIAGRAM OF MAIN STEAM PIPING

Exelon Nuclear
Dresden Station 12

LR-DRE-M-345-2



REFERENCE DRAWINGS

12E 3079	ELECTRICAL SCHEMATIC REFERENCE
12E 3080	ELECTRICAL SCHEMATIC REFERENCE
12E 3083	ELECTRICAL SCHEMATIC REFERENCE
12E 3084	ELECTRICAL SCHEMATIC REFERENCE
12E 3085	ELECTRICAL SCHEMATIC REFERENCE
12E 3086	ELECTRICAL SCHEMATIC REFERENCE

NOTES

1. THE FW HEATER NOZZLES (APPROX. 12" LONG) IDENTIFIED ON THIS DRAWING WERE REPLACED USING PIPING MATERIAL, ASME SA-312 TP 304L STAINLESS STEEL, HAVING A PIPE WALL THICKNESS OF 0.500".
2. PORTION OF PIPING REPLACED WITH CHROMEMOLY (ACCEPTABLE PER SPEC K4080, SECT. 1501.19D) (REF. ER 9906143 & ER 9906133).

REV	DATE	DESCRIPTION	PREP.	REVR.	APPR.
AA	06/17/02	FOR RECORD PER EC DCR 0000334044	EMB	PGR	DEM
—	——		——	——	——
—	——		——	——	——
—	——		——	——	——

Exelon. Nuclear
Dresden Station 12 Unit: 3

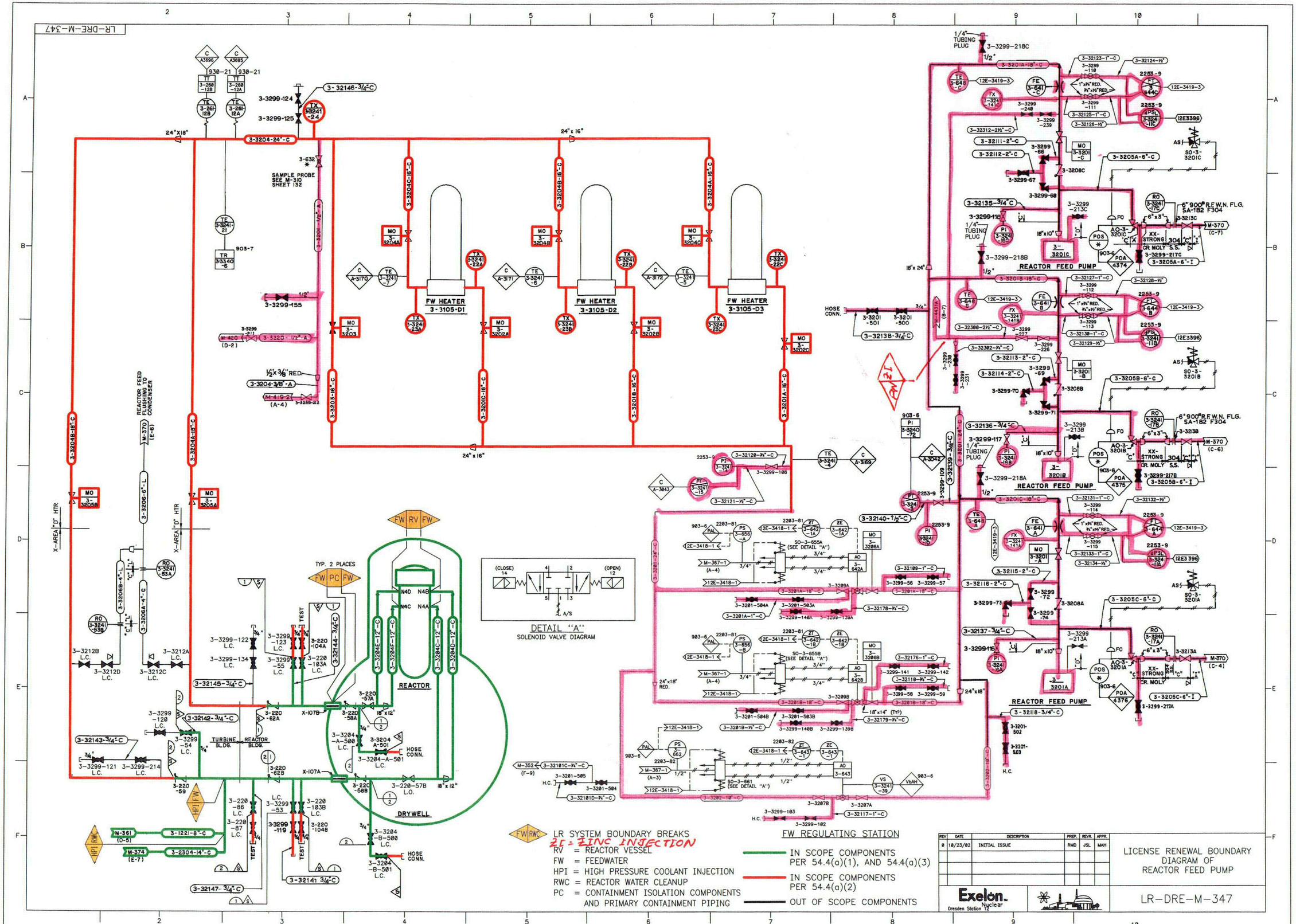
LICENSE RENEWAL BOUNDARY

DIAGRAM OF
EXTRACTION STEAM PIPING

SCALE : NONE
DATE : ——
DRAWN BY: ——
ORG. BY : C502

LR-DRE-M-346
SHEET NUMBER:
SIZE: F
M05

12 03 AA 17JU02 A D



FW|RWC LR SYSTEM BOUNDARY BREAKS

ZI = ZINC INJECTION

RV = REACTOR VESSEL

FW = FEEDWATER

HPI = HIGH PRESSURE COOLANT INJECTION

RWC = REACTOR WATER CLEANUP

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	10/23/02	INITIAL ISSUE	RMD	JSL	MAH

LICENSE RENEWAL BOUNDARY
DIAGRAM OF
REACTOR FEED PUMP

Exelon Nuclear
Dresden Station 1/2

LR-DRE-M-347

LR-DRE-M-348

CONDENSATE DEMINERALIZER

CONDENSATE BOOSTER PUMPS

CONDENSATE PUMPS

HOTWELL PUMPS

GLANDSTEAM CONDENSER 3A-5603

GLAND STEAM CONDENSER 3B-5603

STEAMJET AIR EJECTOR 3A-5401

STEAM JET AIR EJECTOR 3B-5401

TO EXHAUST HOOD SPRAY

TO SAMPLE STATION

CONDENSER EXHAUST 3A-3301

CONDENSER EXHAUST 3B-3301

CONDENSER EXHAUST 3C-3301

3A-3401 20'x16" RED.

3B-3401 20'x16" RED.

3C-3401 20'x16" RED.

3D-3401 20'x16" RED.

3A-3302

3B-3302

3C-3302

3D-3302

DETAIL A
SOLENOID VALVE DIAGRAM

CD MC LR SYSTEM BOUNDARY BREAKS

CD = CONDENSATE & CONDENSATE STORAGE

MC = MAIN CONDENSER

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

OUT OF SCOPE COMPONENTS

REV	DATE	DESCRIPTION	PREP.	REVR.	APPR.
0	09/04/02	INITIAL ISSUE	RMD	JSL	MAH

LICENSE RENEWAL BOUNDARY DIAGRAM OF CONDENSATE PIPING

Exelon. Nuclear
Dresden Station

LR-DRE-M-348

CONDENSATE BOOSTER PUMP 3-3401A

CONDENSATE BOOSTER PUMP 3-3401B

CONDENSATE BOOSTER PUMP 3-3401C

CONDENSATE BOOSTER PUMP 3-3401D

TO CONDENSATE RECIRCULATION

F.W. HEATER 3-3101-A1

F.W. HEATER 3-3101-A2

F.W. HEATER 3-3101-A3

DRAIN COOLER 3-3102-A1

DRAIN COOLER 3-3102-A2

DRAIN COOLER 3-3102-A3

F.W. HEATER 3-3101-B1

F.W. HEATER 3-3101-B2

F.W. HEATER 3-3101-B3

F.W. HEATER 3-3101-C1

F.W. HEATER 3-3101-C2

F.W. HEATER 3-3101-C3

PIPE CAP

PIPE CAP

ABANDONED IN PLACE

ABANDONED IN PLACE

REACTOR FEED PUMP SEAL COOLING CIRCUIT

REACTOR FEED PUMP 3-3201A

REACTOR FEED PUMP 3-3201B

REACTOR FEED PUMP 3-3201C

5'-7" LONG SPOOL PIECE FOR STRAINER

1'-7" LONG SPOOL PIECE FOR STRAINER

SEE NOTE 1

GE ZIP SYSTEM

CONDENSATE BOOSTER SYSTEM

CD | ZN LR SYSTEM BOUNDARY BREAKS

ZN = ZINC INJECTION

CD = CONDENSATE AND CONDENSATE STORAGE

NOTES:

1. PORTIONS OF LINE 3-3407-2" HAVE BEEN REPLACED W/CHROMEMOLY. (ACCEPTABLE PER SPEC. K-4080 SEC. 1501.19D) (REF. ER9906144).

REFERENCE DRAWINGS

18 E 3370	ELECTRICAL SCHEMATIC
18 E 3384	ELECTRICAL SCHEMATIC

REV	DATE	DESCRIPTION	PREP.	REVR.	APPR.
AJ	EDSF	DCP 345986	EDSF	EDSF	EDSF

Exelon. Nuclear
Dresden Station 12 Unit 3

LICENSE RENEWAL BOUNDARY

DIAGRAM OF CONDENSATE BOOSTER PIPING

LR-DRE-7

M-349

SCALE : NONE
DATE : --/--/--
DRAWN BY : ---
ORIG. BY : E133

SHEET NUMBER:

SIZE: F

12 03 AJ EDSF A D

2" TOP AIR TRANSFER INLET

CONDENSATE DEMINERALIZER 3-5501-E

CONDENSATE DEMINERALIZER 3-5501-F

CONDENSATE DEMINERALIZER 3-5501-G

CONDENSATE DEMINERALIZER 3-5501-A

CONDENSATE DEMINERALIZER 3-5501-B

CONDENSATE DEMINERALIZER 3-5501-C

CONDENSATE DEMINERALIZER 3-5501-D

3"BOTTOM TRANSFER INLET

3" VENT

3"x 2" REDUCER

3" FLUSH INLET HEADER

8" RECYCLE LINE

RECYCLE PUMP 3-5502

8"x6" REDUCER

RECYCLE DRAIN TO WASTE COLLECTOR TANK

12"x8" REDUCER

BY PURCHASER (TYP)

2" (TYP)

AIR COMPRESSOR 3-5512

AIR RECEIVER 3-5574

AFTERCOOLER 3-5577

MOISTURE SEPARATOR 3-5576

3-5573 CHARCOAL FILTER

1" REG. VALVE PRV 3-5599-317

BY OTHERS

3" RESIN TRANSFER OUTLET

3" RESIN TRANSFER INLET

TO FLOOR DRAIN

LICENSE RENEWAL BOUNDARY

REV	DATE	DESCRIPTION	PREP.	REVR.	APPR.
CM	02/28/03	FOR RECORD PER EC DCP 0000000002	POS	PGR	DEM

Exelon. Nuclear
Dresden Station 12 Unit 3

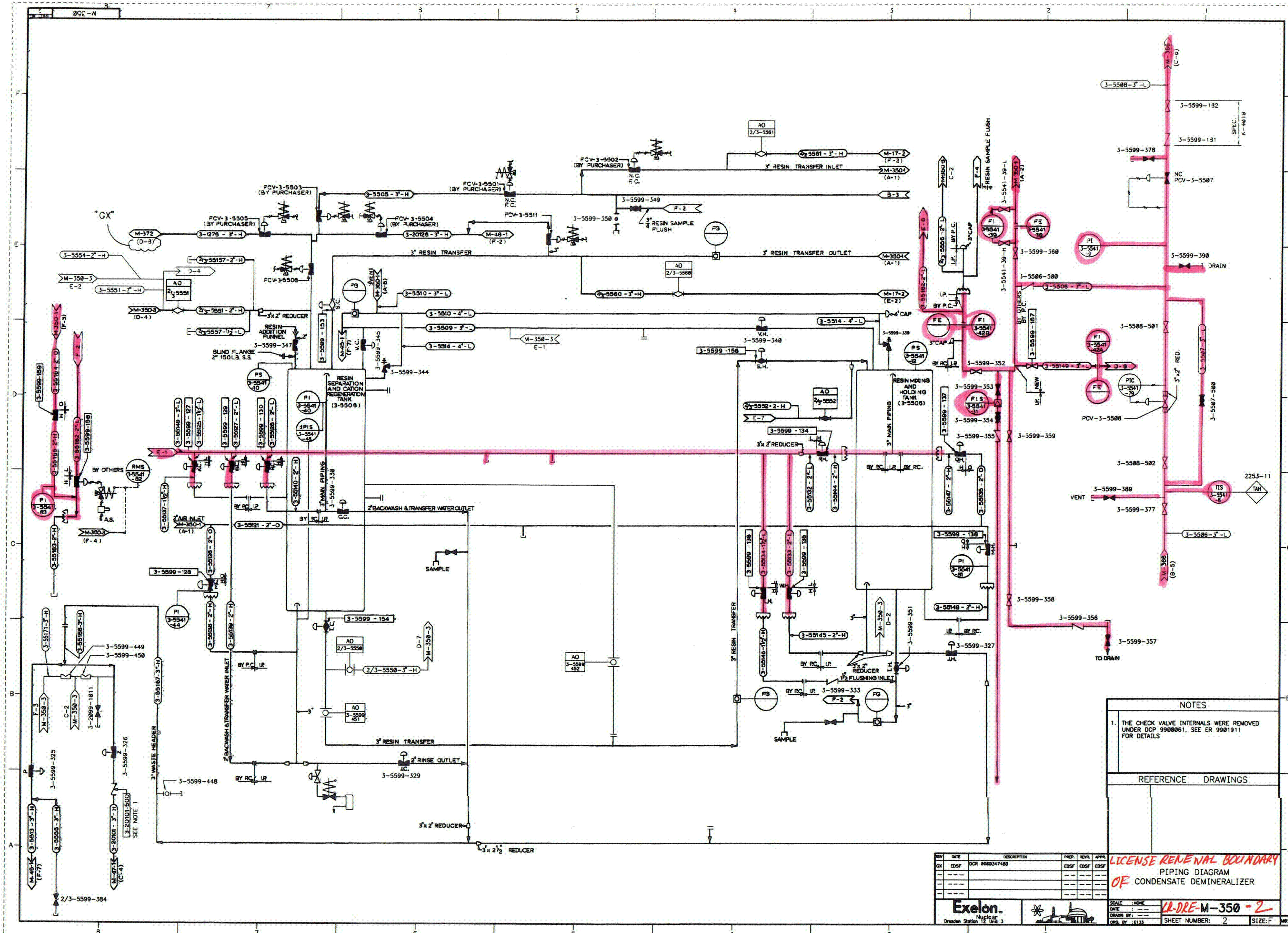
DIAGRAM OF CONDENSATE DEMINERALIZER PIPING

SCALE: NONE
DATE:
DRAWN BY: C5502
DRG. BY:

LR-DRE-M-350 -1

SHEET NUMBER: 1 SIZE: F

12 03 CM 20FE03 A D


"GX"
RESIN SEPARATION AND CATION REGENERATION TANK (3-5506)
RESIN MIXING AND HOLDING TANK (3-5506)
3" RESIN TRANSFER
3" RESIN TRANSFER INLET
3" RESIN TRANSFER OUTLET
RESIN SAMPLE FLUSH
RESIN ADDITION FUNNEL
BLIND FLANGE 2" 150LB. S.S.
FCV-3-5503 (BY PURCHASER)
FCV-3-5505 (BY PURCHASER)
FCV-3-5504 (BY PURCHASER)
FCV-3-5501 (BY PURCHASER)
FCV-3-5502 (BY PURCHASER)
FCV-3-5506
FCV-3-5511
3-5599-349
3-5599-350
3-5599-347
3-5599-344
3-5599-340
3-5599-352
3-5599-353
3-5599-354
3-5599-355
3-5599-359
3-5599-358
3-5599-356
3-5599-357
3-5599-327
3-5599-333
3-5599-329
3-5599-325
3-5599-326
3-5599-448
3-5599-449
3-5599-450
2/3-5599-384
3-5599-378
3-5599-390
3-5599-389
3-5599-377
3-5599-131
3-5599-132
NC PCV-3-5507
PCV-3-5508
3-5508-501
3-5508-502
3-5507-500
3-5506-500
DRAIN
VENT
TO DRAIN
2253-11
2" AIR INLET
2" BACKWASH & TRANSFER WATER OUTLET
2" BACKWASH & TRANSFER WATER INLET
2" RINSE OUTLET
3" WASTE HEADER
3" MAIN PIPING
3"x2" REDUCER
3" x 2½" REDUCER
1½" FLUSHING INLET
SAMPLE
BY OTHERS
BY P.C.
SEE NOTE 1

NOTES

1. THE CHECK VALVE INTERNALS WERE REMOVED UNDER DCP 9900061, SEE ER 9901911 FOR DETAILS

REFERENCE DRAWINGS

REV	DATE	DESCRIPTION	PREP.	REVW.	APPR.
GX	EDSF	DCR 000347480	EDSF	EDSF	EDSF

LICENSE RENEWAL BOUNDARY OF
PIPING DIAGRAM
CONDENSATE DEMINERALIZER

Exelon. Nuclear
Dresden Station Unit 3

LR-DRE-M-350 - 2
SHEET NUMBER: 2 SIZE: F

12 03 GX EDSF A D

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

DWM RBC LR SYSTEM BOUNDARY BREAKS

DWM = DEMINERALIZED WATER MAKEUP

PC = CONTAINMENT ISOLATION COMPONENTS AND PRIMARY CONTAINMENT PIPING

RWC = REACTOR WATER CLEANUP

RBC = REACTOR BUILDING CLOSED COOLING WATER

REV	DATE	DESCRIPTION	PREP.	REVR.	APPR.
0	09/23/02	INITIAL ISSUE	RMD	JSL	MAH

Exelon Nuclear
Dresden Station 1/2

LICENSE RENEWAL BOUNDARY
DIAGRAM OF
REACTOR BUILDING
COOLING WATER PIPING

LR-DRE-M-353

LR-DRE-M-354-1

TURBINE BUILDING COOLING WATER PUMPS

3A-3801

3B-3801

VENT

DRAIN

COOLING WATER EXPANSION TANK 3-3803

CHEMICAL FEEDER 3-3804

SAMPLE SINK

TO TIC 3-3941-20

COOLING WATER HEAT EXCHANGER 3-3802-B

COOLING WATER HEAT EXCHANGER 3-3802-A

GRAB SAMPLE

EHC OIL COOLER 3A-5615

EHC OIL COOLER 3B-5615

EHC OIL RESERVOIR

TURBINE BLDG & FILTER BLDG AIR MANIFOLD AIR PUMP

TURBINE BLDG PROCESS SAMPLE SYSTEM RACK NO. 2253-31

MAIN STEAM SAMPLE COOLER

FEEDWATER SAMPLE COOLER

HEAT EXCHANGER

AFTERCOOLER

RESIN TRANSFER AIR COMPRESSOR 3-5512

CIRCULATING WATER PUMPS 3A-4401, 3B-4401, 3C-4401

MECHANICAL SEAL HEAT EXCHANGER INNER

MECHANICAL SEAL HEAT EXCHANGER OUTER

3C-3203

3B-3203

3A-3202

HX TUBE-SIDE IN LR SCOPE FOR SW PRESSURE BOUNDRY

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

OUT OF SCOPE COMPONENTS

REV.	DATE	DESCRIPTION	PREP.	REVR.	APPR.
0	08/23/82	INITIAL ISSUE	SP	JSL	MAH

Exelon Nuclear
Dresden Station 12

LICENSE RENEWAL BOUNDARY DIAGRAM OF TURBINE BUILDING COOLING WATER PIPING

LR-DRE-M-354-1

LR-DRE-M-354-2

CONDENSATE & CONDENSATE BOOSTER PUMPS

CONTROL ROD DRIVE WATER PUMPS

3A INSTRUMENT AIR AFTER COOLER

3A INSTRUMENT AIR COMPRESSOR

3-4606 AFTER-COOLER

3-4601 UNIT 3 SERVICE AIR COMPRESSOR (2/3 B)

ALTERNATOR EXCITER COOLER

BUS DUCT COOLER 3A-7701

BUS DUCT COOLER 3B-7701

GRAB SAMPLE

JOB 5589

TO 3C INST AIR COMPRESSOR (E-4)

FROM 3C INST AIR COMPRESSOR (C-4)

DETAIL "1"

RESTRICTING ORIFICE FOR CONDENSATE PUMP DISCHARGE LINES (HOLE DIA. 0.1875")

TO 3B INSTRUMENT AIR COMPRESSOR (E-6)

FROM 3B INSTRUMENT AIR COMPRESSOR (C-7)

SW/TBC LR SYSTEM BOUNDARY BREAKS

SW = SERVICE WATER

TBC = TURBINE BUILDING CLOSED COOLING WATER

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

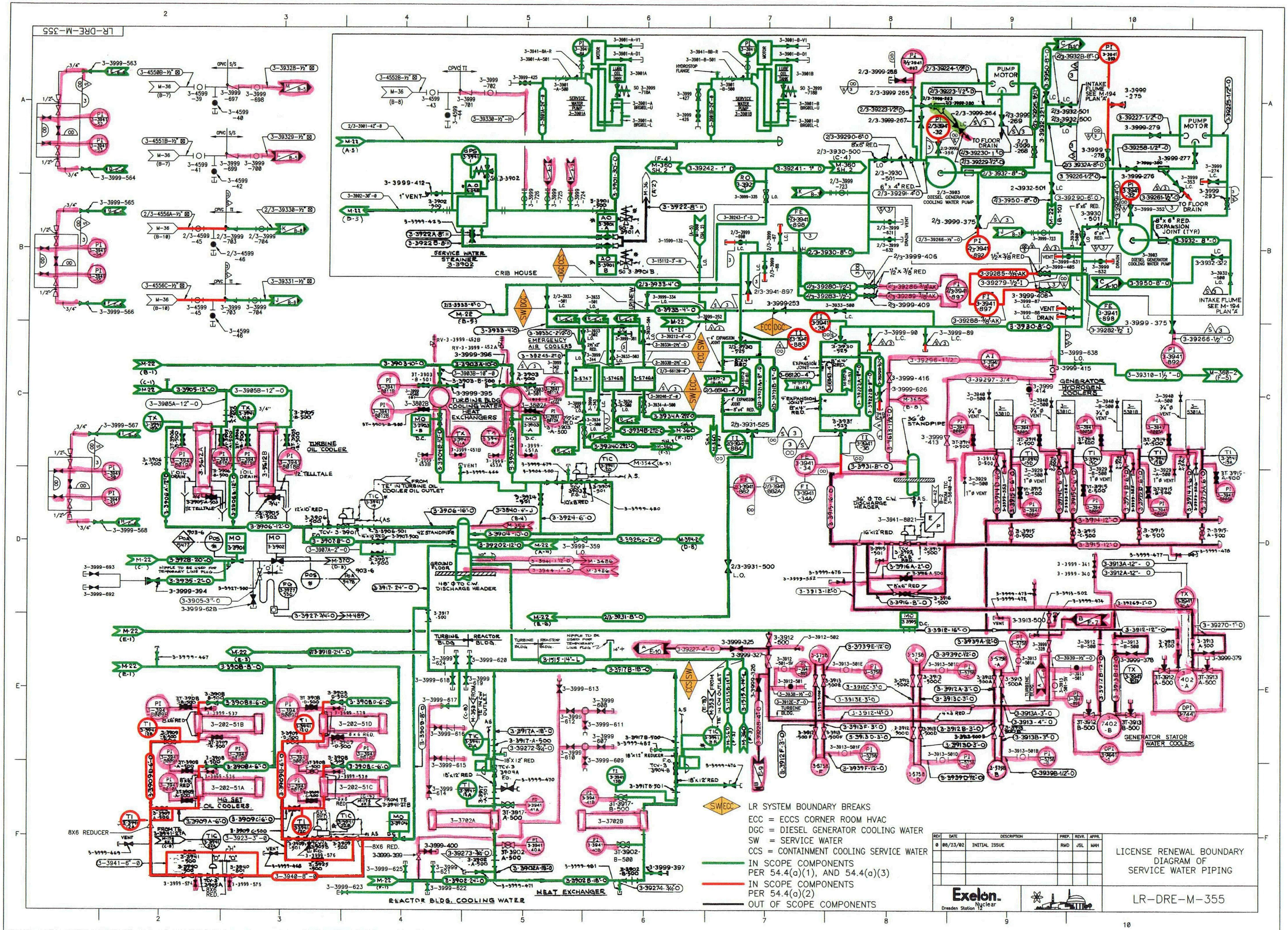
OUT OF SCOPE COMPONENTS

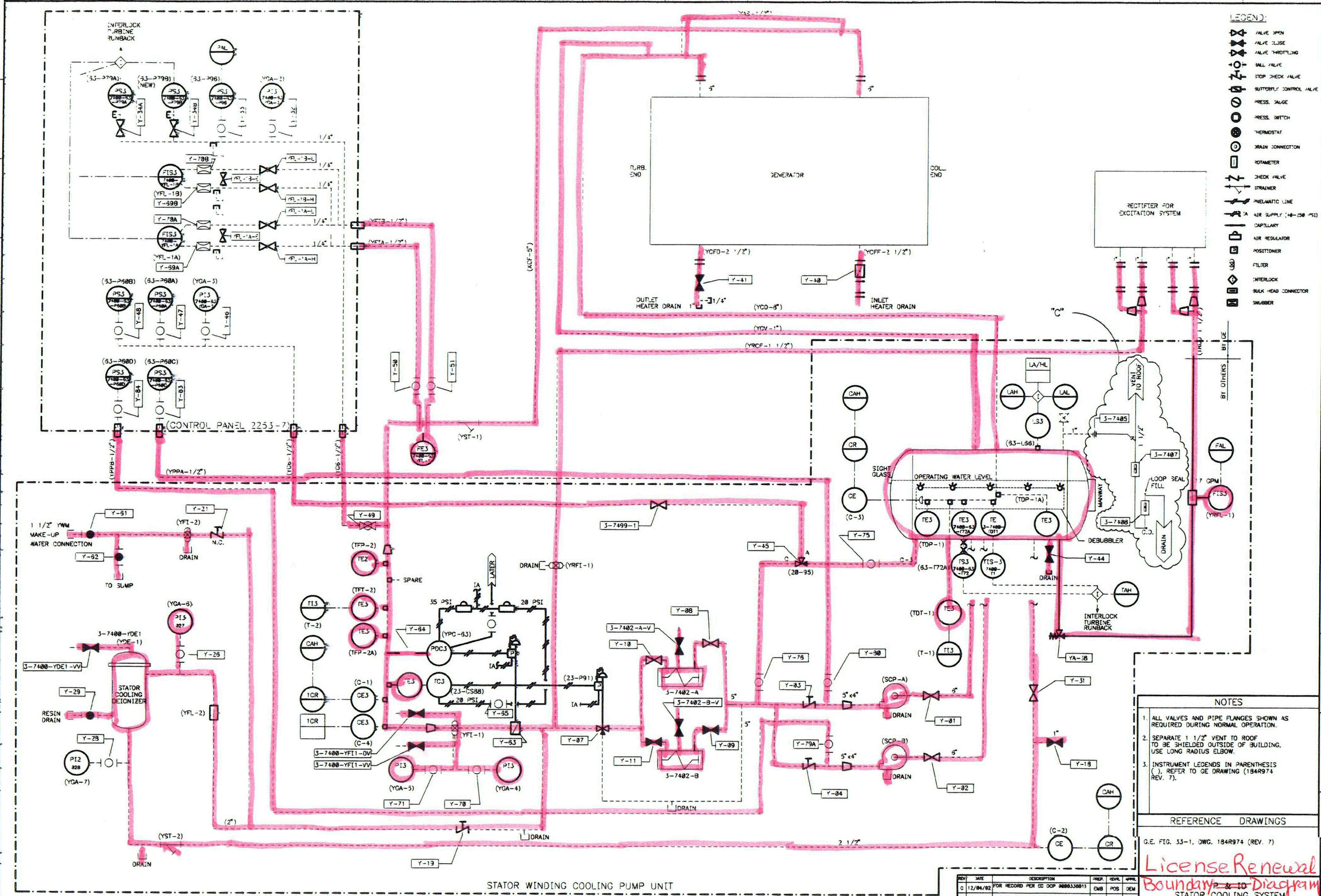
REV	DATE	DESCRIPTION	PREP.	REVR.	APPR.
0	08/26/02	INITIAL ISSUE	SP	JSL	MAH

LICENSE RENEWAL BOUNDARY DIAGRAM OF TURBINE BUILDING COOLING WATER PIPING

Exelon Nuclear — Dresden Station

LR-DRE-M-354-2


LR-DRE-M-355
SERVICE WATER STRAINER 3-3902
CRIB HOUSE
EMERGENCY AIR COOLERS
TURBINE BLDG. COOLING WATER HEAT EXCHANGERS
TURBINE OIL COOLER
GENERATOR HYDROGEN COOLERS
GENERATOR STATOR WATER COOLERS
MG SET OIL COOLERS
REACTOR BLDG. COOLING WATER
HEAT EXCHANGER
DIESEL GENERATOR COOLING WATER PUMP
PUMP MOTOR
LR SYSTEM BOUNDARY BREAKS
ECC = ECCS CORNER ROOM HVAC
DGC = DIESEL GENERATOR COOLING WATER
SW = SERVICE WATER
CCS = CONTAINMENT COOLING 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 08/23/02 INITIAL ISSUE RMO JSL MAH
LICENSE RENEWAL BOUNDARY DIAGRAM OF SERVICE WATER PIPING
Exelon. Nuclear
Dresden Station 1/2
LR-DRE-M-355



NOTES

1. ALL VALVES AND PIPE FLANGES SHOWN AS REQUIRED DURING NORMAL OPERATION.
2. SEPARATE 1 1/2" VENT TO ROOF TO BE SHIELDED OUTSIDE OF BUILDING, USE LONG RADIUS ELBOW.
3. INSTRUMENT LEGENDS IN PARENTHESIS ( ). REFER TO GE DRAWING (184R974 REV. 7).

REFERENCE DRAWINGS

G.E. FIG. 33-1, DWG. 184R974 (REV. 7)

License Renewal Boundary Diagram

STATOR COOLING SYSTEM

LR-DRE-M-355A

REV	DATE	DESCRIPTION	PREP.	REVR.	APPR.
C	12/04/02	FOR RECORD PER EC DCP	EMB	PDS	DEM

Exelon Nuclear Dresden Station Unit 3

M-355A

LR-DRE-M-362

DRYER SEPARATOR STORAGE PIT

REACTOR WELL

REACTOR WELL SEAL RUPTURE DRAIN

POOL LINER

FUEL POOL GATES

POOL CLEANUP RETURN DIFFUSER

3-1900-P

FUEL STORAGE POOL

REACTOR BUILDING REFUELING FLOOR EL. 613'-0"

ADJUSTABLE WEIR

SKIMMER SURGE TANK 3A

SKIMMER SURGE TANK 3B

2" CLEANING TAP (FOR HYDROLAZING)

TO FLOOR DRAIN

2" HYDROLAZING TAP

FUEL POOL COOLING PUMP 3-1902-A

FUEL POOL COOLING PUMP 3-1902-B

FUEL POOL HEAT EXCHANGER 3-1903-A

FUEL POOL HEAT EXCHANGER 3-1903-B

STRAINER

FLEXIBLE CONNECTION

SPEC T-3516

TURBINE BUILDING

RADWASTE BUILDING

REACTOR BUILDING

K-2202

FPC DWM — LR SYSTEM BOUNDARY BREAKS

FPC = FUEL POOL COOLING AND FILTER DEMINERALIZER
DWM = DEMINERALIZED WATER MAKEUP

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	10/23/02	INITIAL ISSUE	RMD	JSL	MAH

LICENSE RENEWAL BOUNDARY DIAGRAM OF FUEL POOL COOLING PIPING

Exelon Nuclear — Dresden Station

LR-DRE-M-362

LR-DRE-M-365-1

REACTOR BLDG. — TURBINE BLDG. — K-2202

ROD DRIVE WATER PUMP

ROD DRIVE WATER PUMP

CONTROL AIR M-367 SH.J (A-2)

TO HEAD COOLING SYSTEM M-357 SH.1 (E-7)

FLOW CONTROL STATION

EXHAUST WATER

COOLING WATER

DRIVE WATER

CHARGING WATER

REACTOR PRESSURE M-357 SH.1 (B-5)

SET @ 1775 PSIG RV 3-0399-600

M-357 SH.2 (B-7)

M-357 SH.2 (B-1)

INSIDE DRYWELL ENCLOSURE

STABILIZING VALVE 3-0302-13A

STABILIZING VALVE 3-0302-13B

COOLING WATER PRESSURE CONTROL STATION

DRIVE WATER PRESSURE CONTROL STATION

LEGEND

- DIAPHRAGM OPERATED WITH MANUAL OVERRIDE
- CHECK VALVE WITH ORIFICE
- SOLENOID OPERATED WITH BUILT-IN FLOW CONTROL
- SCREWED CAP FOR N_2 CHARGING
- 3-WAY SOLENOID VALVE CLOSED PORT IN OPPOSITE MODE

NBI CRH LR SYSTEM BOUNDARY BREAKS

CRH = CONTROL ROD DRIVE HYDRAULIC
NBI = NUCLEAR BOILER INSTRUMENTATION

- 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	08/28/02	INITIAL ISSUE	SP	JSL	MAH

LICENSE RENEWAL BOUNDARY DIAGRAM OF CONTROL ROD DRIVE HYDRAULIC PIPING

Exelon. Dresden Station Nuclear

LR-DRE-M-365-1

LR-DRE-M-366

TBC = TURBINE BUILDING CLOSE COOLING WATER

DWM/CRH LR SYSTEM BOUNDARY BREAKS

CD = CONDENSATE AND CONDENSATE BOOSTER

CRH = CONTROL ROD DRIVE HYDRAULIC

CS = CORE SPRAY

DWM = DEMINERALIZED WATER MAKEUP

ISC = ISOLATION CONDENSER

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	08/29/02	INITIAL ISSUE	RMD	JSL	MAH

LICENSE RENEWAL BOUNDARY DIAGRAM OF DIMINERALIZED WATER SYSTEM PIPING

Exelon. Dresden Station Nuclear

LR-DRE-M-366

M-367

DRYER COLUMN 3-4737A

DRYER COLUMN 3-4737B

INSTRUMENT AIR DRYER SKID

COL. H-54, EL. 538'-0"

INSTRUMENT AIR RECEIVER 3-4735

MOISTURE TRAP 3-4714-6

MOISTURE TRAP 3-47238

BALL VALVE SUPPLIED W/DRAIN TRAP

FILTER SKID

INSTRUMENT AIR COMPRESSOR 3C (3-47199) SEE NOTE 1

CONTROL PANEL ON COMPRESSOR 2203-67

COMPR CONTROL

OIL COOLER 3-47201

3-47202 AIR FILTER/SILENCER

AFTER COOLER 3-47208

INTER COOLER 3-47204

3-47205 INTER COOLER MOISTURE TRAP

3-4720 MOISTURE TRAP COOLER (AUTO)

BLEED OFF COOLER 3-47207

THERMOSTATIC WATER VALVE

UNLOADER VALVE

DRAIN

TO FLOOR DRAIN

TBC

TBC

LICENSE RENEWAL BOUNDARY

LR-DRE-

NOTES

* DENOTES FURNISHED WITH EQUIPMENT.
--- DENOTES PREPIPED BY EQUIPT. CONTRACTOR.
P.C. DENOTES PIPING CONTRACTOR.
1. SEE ATLAS COPCO DWG. NO. 1310737876 REV. 0
2. EMERGENCY BYPASS VALVE TO BE NORMALLY CLOSED.

REV	DATE	DESCRIPTION	PREP.	REVR.	APPR.
K	09/26/00	FOR RECORD PER DCR 988441	MS	JRL	RRP

ComEd Chicago, Illinois Dresden Station 12 Unit 3

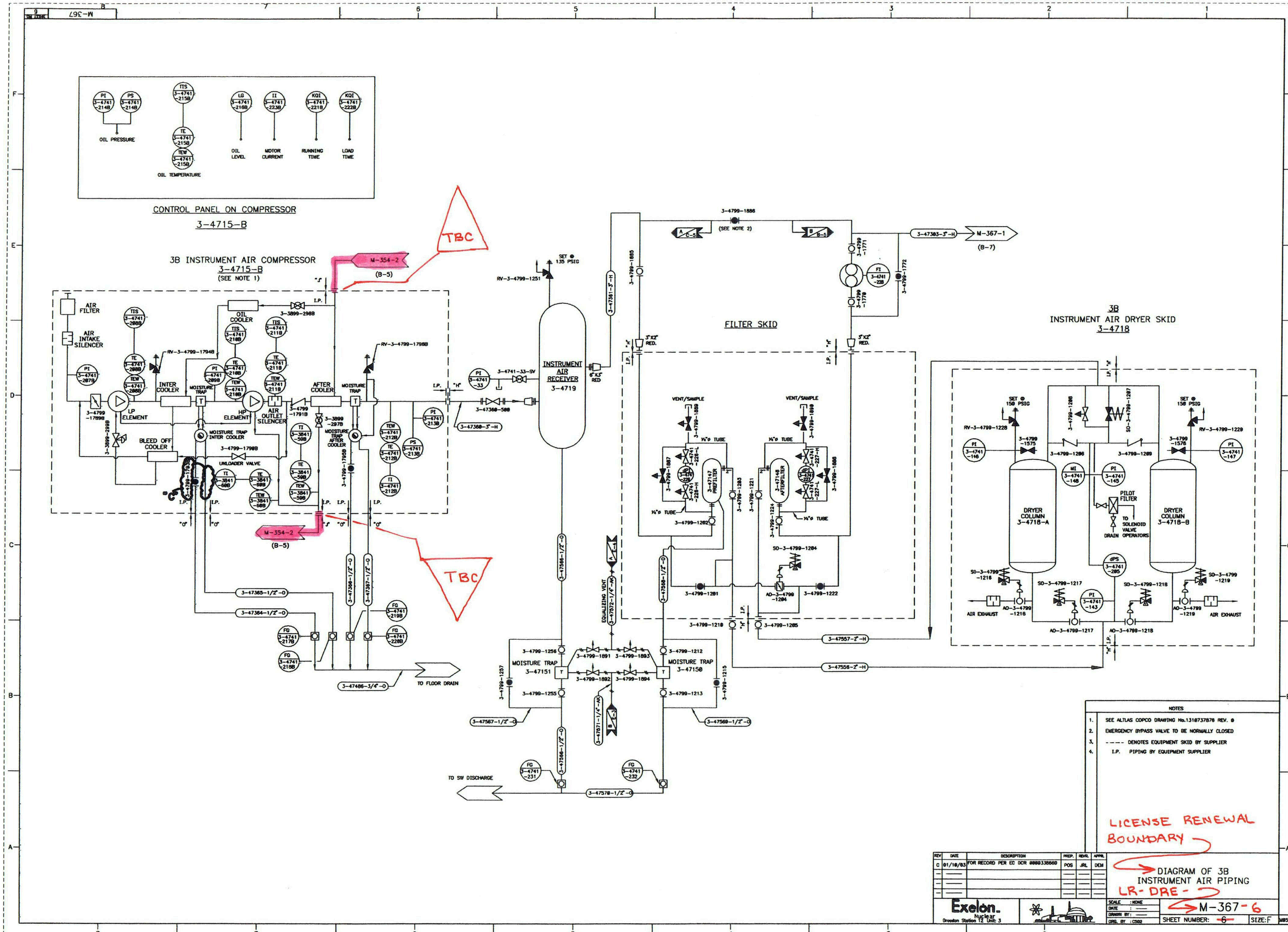
DIAGRAM OF 3C INSTRUMENT AIR PIPING

SCALE: NONE
DATE:
DRAWN BY:
ORIG. BY: CSMZ

M-367-4

SHEET NUMBER: 4 SIZE: F

12 03 K 26SE00 A D


CONTROL PANEL ON COMPRESSOR
3-4715-B
OIL PRESSURE
OIL TEMPERATURE
OIL LEVEL
MOTOR CURRENT
RUNNING TIME
LOAD TIME
3B INSTRUMENT AIR COMPRESSOR
3-4715-B
(SEE NOTE 1)
M-354-2
(B-5)
TBC
AIR FILTER
AIR INTAKE SILENCER
LP ELEMENT
INTER COOLER
HP ELEMENT
AIR OUTLET SILENCER
AFTER COOLER
MOISTURE TRAP
BLEED OFF COOLER
UNLOADER VALVE
OIL COOLER
TO FLOOR DRAIN
INSTRUMENT AIR RECEIVER
3-4719
EQUALIZING VENT
MOISTURE TRAP
3-47151
MOISTURE TRAP
3-47150
TO SW DISCHARGE
FILTER SKID
VENT/SAMPLE
PREFILTER
AFTERFILTER
M-367-1
(B-7)
3B
INSTRUMENT AIR DRYER SKID
3-4718
DRYER COLUMN
3-4718-A
DRYER COLUMN
3-4718-B
PILOT FILTER
AIR EXHAUST
NOTES
1. SEE ALTLAS COPCO DRAWING No.1310737876 REV. 0
2. EMERGENCY BYPASS VALVE TO BE NORMALLY CLOSED
3. ---- DENOTES EQUIPMENT SKID BY SUPPLIER
4. I.P. PIPING BY EQUIPMENT SUPPLIER
LICENSE RENEWAL BOUNDARY
DIAGRAM OF 3B
INSTRUMENT AIR PIPING
LR-DRE-
M-367-6
SHEET NUMBER: 6
SIZE:F
SCALE :NONE
ORG. BY :C502
PREP. POS
REVR. JRL
APPR. DEM
Exelon. Nuclear
Dresden Station Unit 3