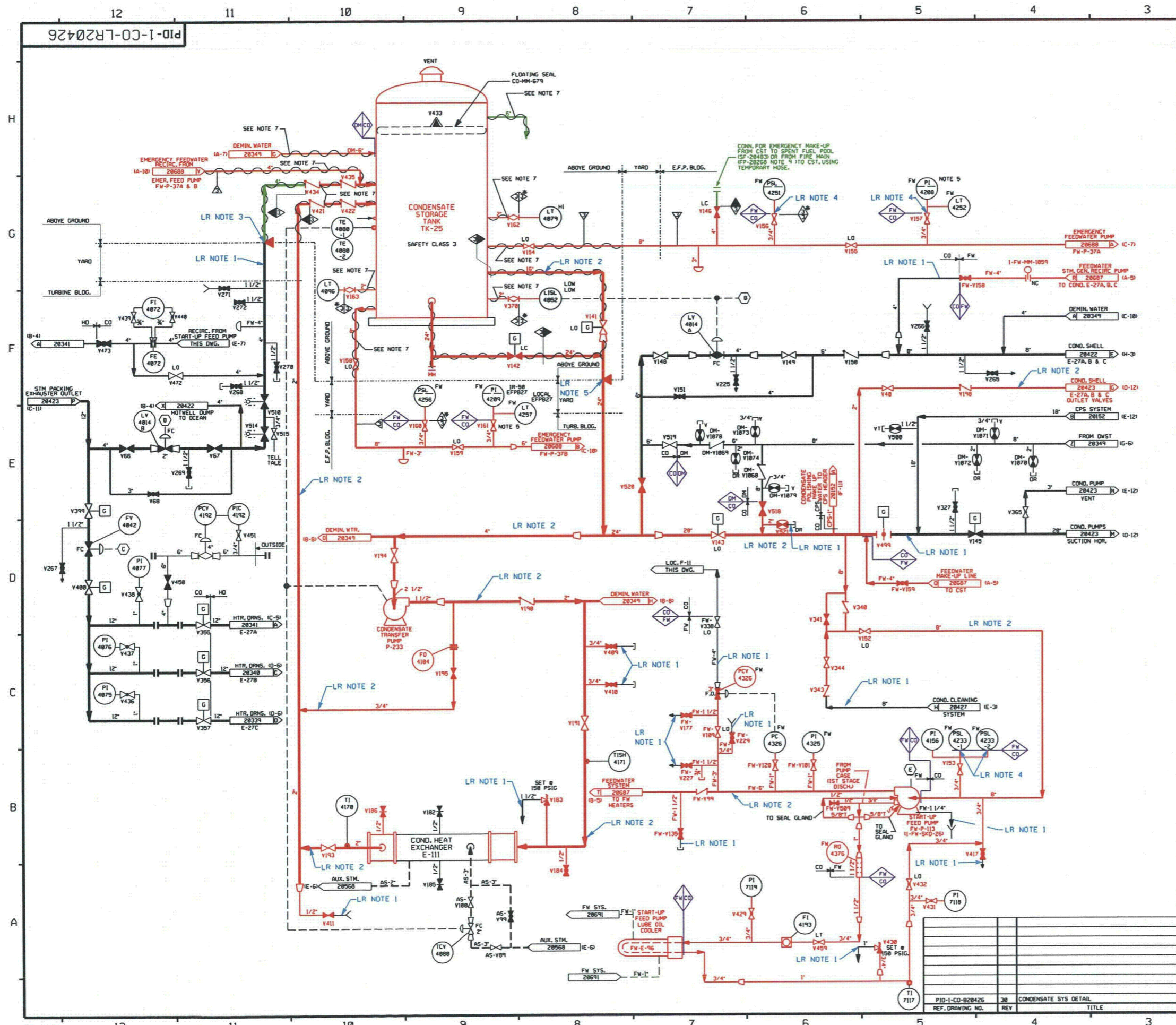


PID-1-CO-LR20426



FOR P&ID REFERENCE DRAWINGS, SYMBOLS AND ABBREVIATIONS REFER TO DRAWINGS P&ID - LRLEGEND 1 AND P&ID - LRLEGEND 2

- LR NOTES:
- COMPONENTS SHOWN IN BLACK, LOCATED IN THE YARD OR TURBINE BUILDING, HAVE NO LICENSE RENEWAL INTENDED FUNCTION THEREFORE THEY ARE NOT IN SCOPE FOR LICENSE RENEWAL(LR).
  - THE NON-SAFETY RELATED COMPONENTS SHOWN IN RED ARE IN SCOPE FOR (a)(3), FIRE PROTECTION (FP).
  - EQUIVALENT ANCHOR LOCATION UPSTREAM OF CO-V434 IS LOCATED AT THE POINT WHERE THE PIPE BECOMES EMBEDDED IN THE CONCRETE OF THE CST BUILDING (REF ISO NO 1-CO-4053-01).
  - FEEDWATER (FW) INSTRUMENTS ON THIS DRAWING ARE SCOPED WITH THE FW SYSTEM.
  - THE ANCHOR POINT ON THIS LINE IS WHERE THE PIPE BECOMES EMBEDDED IN THE CONCRETE OF THE CST BUILDING. THIS IS THE TERMINATION OF THE CRITERION (a)(2), NSAS PIPING. COMPONENTS BETWEEN THIS POINT AND THE START-UP FEED PUMP REMAIN IN SCOPE FOR (a)(3), FIRE PROTECTION.

COMPONENTS SUBJECT TO AMR  
**RED** INDICATES COMPONENTS IN SCOPE PER 10CFR 54.4(a)(1) AND/OR (a)(3) AND SUBJECT TO AMR PER 10CFR 54.21.  
**BLACK** INDICATES COMPONENTS NOT SUBJECT TO AMR.  
**GREEN** INDICATES COMPONENTS IN SCOPE PER 10CFR 54.4(a)(2) AND SUBJECT TO AMR PER 10CFR 54.21.

- ▲ PIPE ANCHOR
- ◇ XXXX INDICATES SYSTEM BOUNDARY INTERFACE  
 FW - FEEDWATER SYSTEM  
 CO - CONDENSATE SYSTEM  
 DM - DEMINERALIZED WATER SYSTEM

- NOTES:
- WORK THIS DRAWING WITH DRAWINGS 20426, 20422, 20423, 20424, 20425 & 20427.
  - ALL LINES, VALVES, EQUIPMENT, COMPONENTS AND INSTRUMENTATION HAVE SYSTEM PREFIX UNLESS NOTED OTHERWISE.
  - ALL LINES, EQUIPMENT, COMPONENTS AND INSTRUMENTS ARE SAFETY CLASS NMS, UNLESS NOTED OTHERWISE.
  - INSTRUMENTATION REFERENCES:  
 (D) TO COND HOTWELL, I-CO-LT-4018, 4011, 4012 DWG 20422.  
 (C) TO STEAM PACKING EXHAUSTER VENTURI, I-CO-FT-4042 ON DWG 20423.  
 (E) LUBE OIL PIPING FROM FW-P-161
  - REF TEST LOOP DIAGRAM FOR VALVE I.D.
  - △ - INDICATES REVISION LEVEL.
  - HEAT TRACING HAS BEEN DISCONNECTED AND IS NONFUNCTIONAL.

PORTIONS OF THIS DRAWING ARE  
**NUCLEAR SAFETY RELATED**

REV	DATE	DSGN	CHKD	CE	DESCRIPTION

ORIGINAL ISSUE

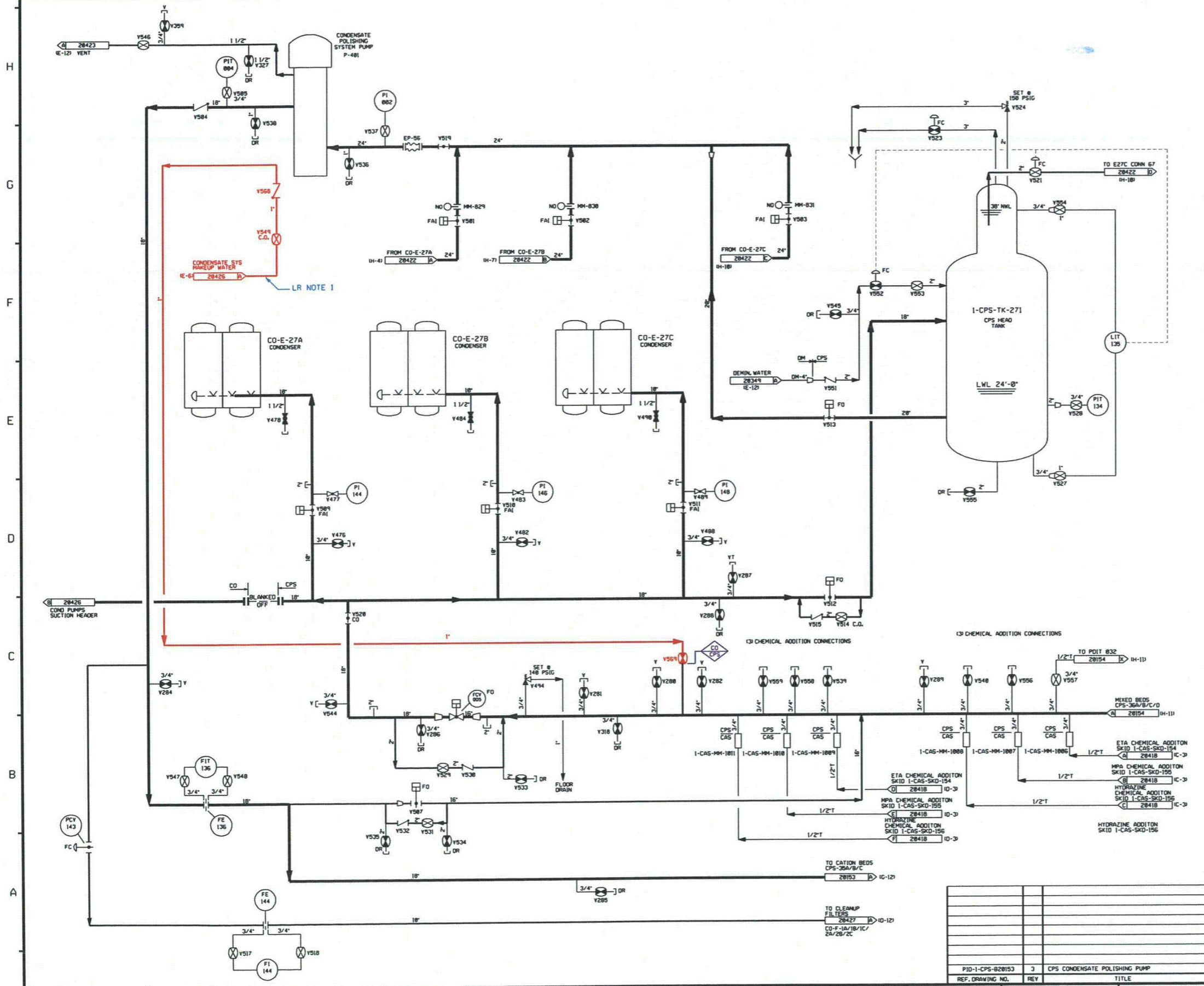
**NEXTERA ENERGY**  
SEABROOK

CONDENSATE SYSTEM  
 DETAIL  
 LICENSE RENEWAL P&ID

PID-1-CO-LR20426

SEABROOK STATION

PID-1-CO-820426	38	CONDENSATE SYS DETAIL
REF. DRAWING NO.	REV	TITLE



LR NOTES:  
 1. COMPONENTS IN RED ARE IN FOR CRITERION (a)(3) FIRE PROTECTION AND ALL OTHER COMPONENTS ON THIS DRAWING HAVE NO LICENSE RENEWAL INTENDED FUNCTION SO THEY ARE NOT IN SCOPE.

COMPONENTS SUBJECT TO AMR  
 RED INDICATES COMPONENTS IN SCOPE PER 10CFR 54.4(a)(1) AND/OR (a)(3) AND SUBJECT TO AMR PER 10CFR 54.21.  
 BLACK INDICATES COMPONENTS NOT SUBJECT TO AMR.  
 GREEN INDICATES COMPONENTS IN SCOPE PER 10CFR 54.4(a)(2) AND SUBJECT TO AMR PER 10CFR 54.21.

▲ PIPE ANCHOR  
 ◆ INDICATES SYSTEM BOUNDARY INTERFACE  
 CO - CONDENSATE SYSTEM  
 CPS - CONDENSATE POLISHING SYSTEM

NOTES:  
 1. WORK THIS DRAWING WITH DRAWINGS 20150, 20153 THRU 20159.  
 2. ALL LINES, EQUIPMENT, COMPONENTS, VALVES AND INSTRUMENTS HAVE SYSTEM PREFIX "1-CPS-", UNLESS NOTED OTHERWISE.  
 3. ALL LINES, EQUIPMENT, COMPONENTS, VALVES AND INSTRUMENTS ARE SAFETY CLASS MNS, UNLESS NOTED OTHERWISE.  
 4. △ - INDICATES REVISION LEVEL.  
 5. ALL 3 DIGIT NUMERICAL INSTRUMENT TAG NAMES ARE PREFIXED WITH "20".  
 EXAMPLE:  
 (FIT 014 0) = 1-CPS-FIT-20014-A

REV	DATE	DSGN	CHKD	CE	DESCRIPTION

ORIGINAL ISSUE

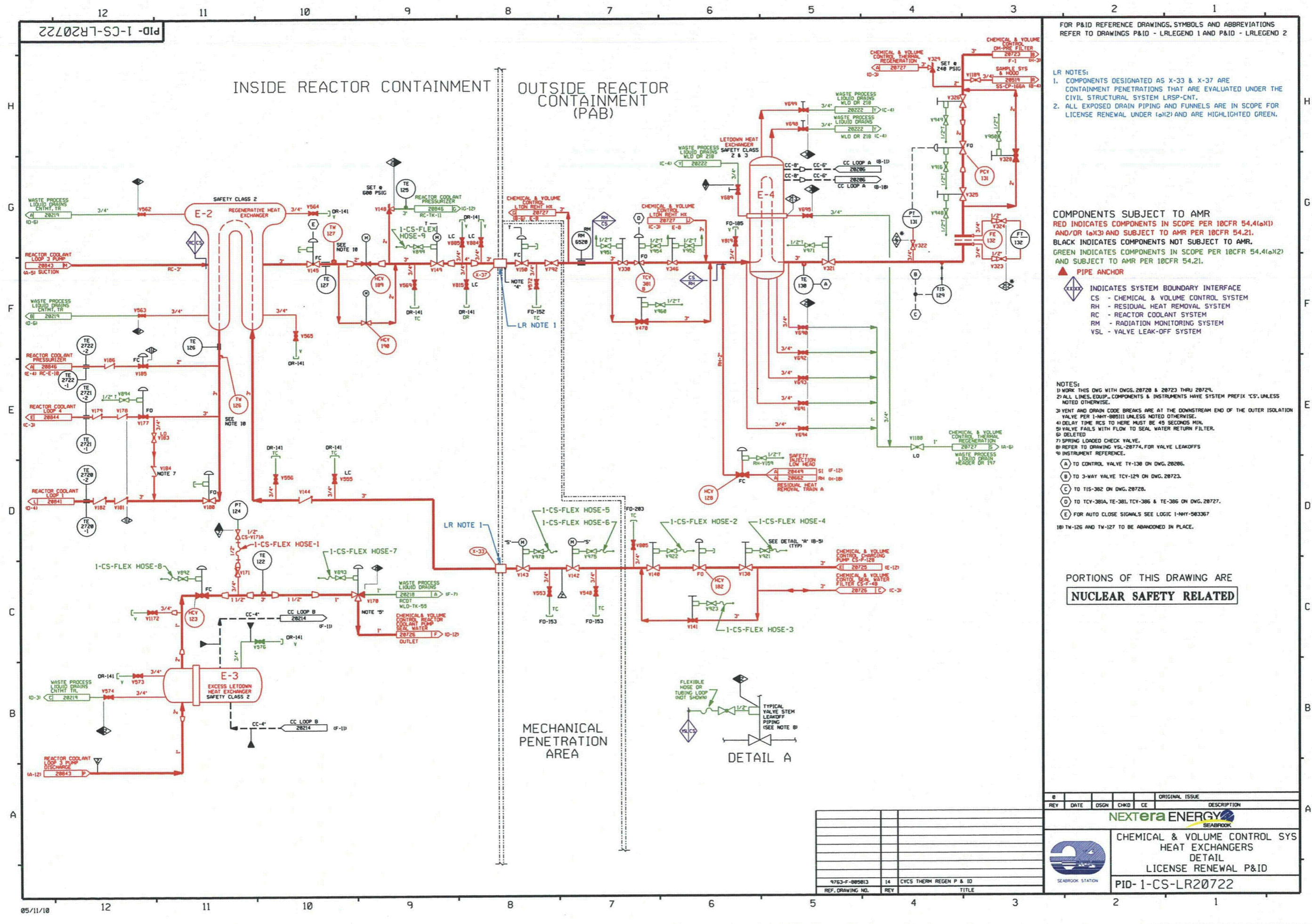
**NEXTERA ENERGY**  
SEABROOK

CONDENSATE POLISHING SYSTEM  
CONDENSATE POLISHING PUMP  
LICENSE RENEWAL P&ID

PID-1-CPS-LR20152

PID-1-CPS-820153	3	CPS CONDENSATE POLISHING PUMP
REF. DRAWING NO.	REV	TITLE

PID-1-CS-LR20722



FOR P&ID REFERENCE DRAWINGS, SYMBOLS AND ABBREVIATIONS REFER TO DRAWINGS P&ID - LRLEGEND 1 AND P&ID - LRLEGEND 2

- LR NOTES:
- COMPONENTS DESIGNATED AS X-33 & X-37 ARE CONTAINMENT PENETRATIONS THAT ARE EVALUATED UNDER THE CIVIL STRUCTURAL SYSTEM LRSP-CNT.
  - ALL EXPOSED DRAIN PIPING AND FUNNELS ARE IN SCOPE FOR LICENSE RENEWAL UNDER 1012 AND ARE HIGHLIGHTED GREEN.

**COMPONENTS SUBJECT TO AMR**

RED INDICATES COMPONENTS IN SCOPE PER 10CFR 54.4(a)(1) AND/OR (a)(3) AND SUBJECT TO AMR PER 10CFR 54.21.

BLACK INDICATES COMPONENTS NOT SUBJECT TO AMR.



GREEN INDICATES COMPONENTS IN SCOPE PER 10CFR 54.4(a)(2) AND SUBJECT TO AMR PER 10CFR 54.21.


- ▲ PIPE ANCHOR
- ◇ INDICATES SYSTEM BOUNDARY INTERFACE
- CS - CHEMICAL & VOLUME CONTROL SYSTEM
  - RH - RESIDUAL HEAT REMOVAL SYSTEM
  - RC - REACTOR COOLANT SYSTEM
  - RM - RADIATION MONITORING SYSTEM
  - VSL - VALVE LEAK-OFF SYSTEM

- NOTES:
- WORK THIS DWG WITH DWGS. 20720 & 20723 THRU 20724.
  - ALL LINES, EQUIP., COMPONENTS & INSTRUMENTS HAVE SYSTEM PREFIX 'CS', UNLESS NOTED OTHERWISE.
  - VENT AND DRAIN CODE BREAKS ARE AT THE DOWNSTREAM END OF THE OUTER ISOLATION VALVE PER 1-NHY-000111 UNLESS NOTED OTHERWISE.
  - DELAY TIME RCS TO HERE MUST BE 45 SECONDS MIN.
  - VALVE FAILS WITH FLOW TO SEAL WATER RETURN FILTER.
  - DELETED.
  - SPRING LOADED CHECK VALVE.
  - REFER TO DRAWING YSL-20774, FOR VALVE LEAKOFFS.
  - INSTRUMENT REFERENCE.
  - TO CONTROL VALVE TV-130 ON DWG. 20206.
  - TO 3-WAY VALVE TCY-129 ON DWG. 20723.
  - TO TIS-302 ON DWG. 20728.
  - TO TCY-301A, TE-301, TCY-306 & TE-306 ON DWG. 20727.
  - FOR AUTO CLOSE SIGNALS SEE LOGIC 1-NHY-003367.
  - TM-126 AND TM-127 TO BE ABANDONED IN PLACE.

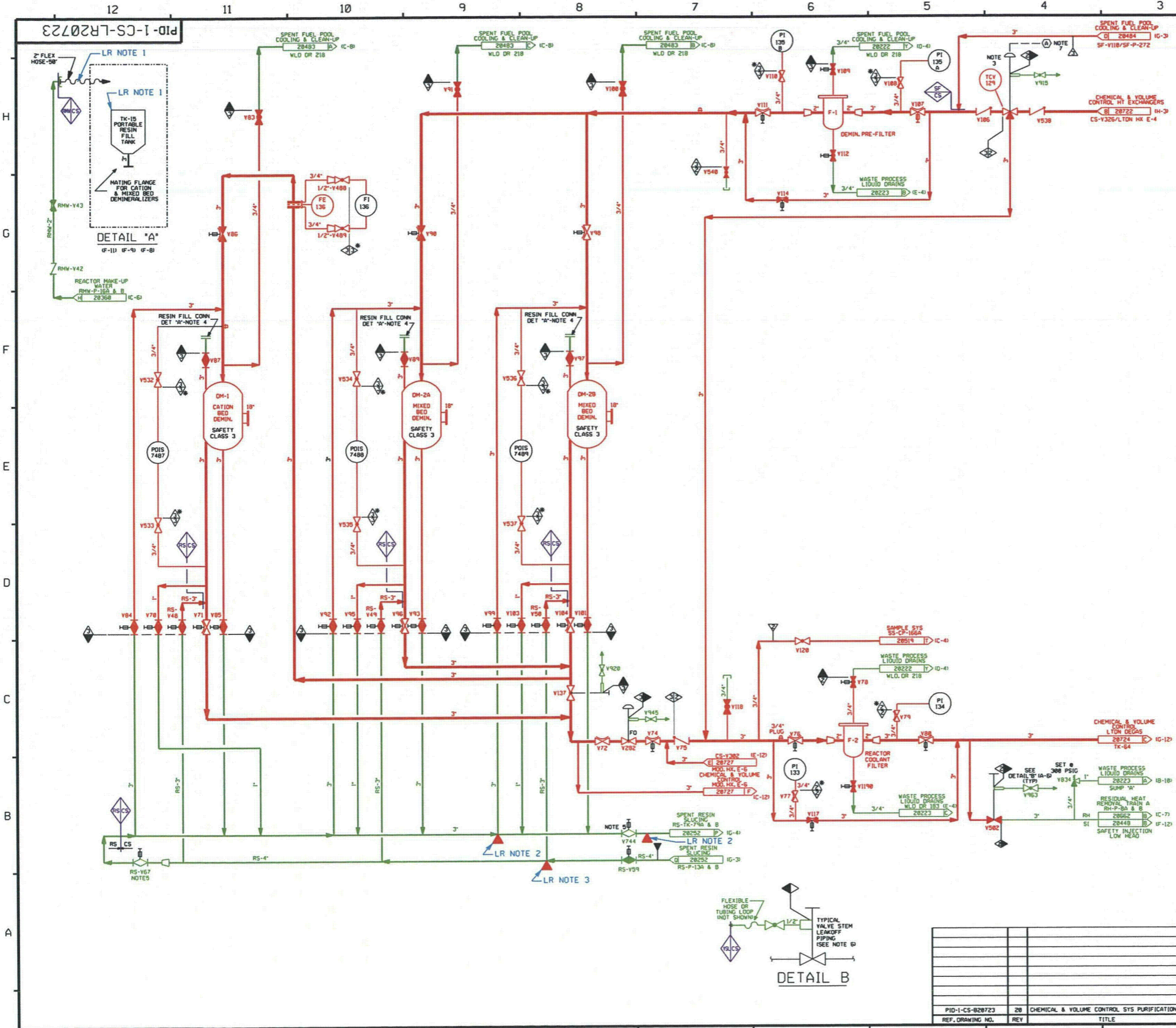
PORTIONS OF THIS DRAWING ARE  
**NUCLEAR SAFETY RELATED**

REV	DATE	DSGN	CHKD	CE	ORIGINAL ISSUE	DESCRIPTION


  
**CHEMICAL & VOLUME CONTROL SYS**  
**HEAT EXCHANGERS**  
**DETAIL**  
**LICENSE RENEWAL P&ID**  
**PID-1-CS-LR20722**

9763-F-005013	14	CVCS THERM REGEN P & ID
REF. DRAWING NO.	REV	TITLE



FOR P&ID REFERENCE DRAWINGS, SYMBOLS AND ABBREVIATIONS REFER TO DRAWINGS P&ID - LRLEGEND 1 AND P&ID - LRLEGEND 2

- LR NOTES:
1. THE TUBING AND TANK ARE NOT INSTALLED EQUIPMENT IN THE PLANT SO THEREFORE THEY HAVE NO LICENSE RENEWAL FUNCTION AND ARE NOT IN SCOPE.
  2. PIPE SUPPORT EQUIVALENT ANCHORS ISO NO. 9763-D-800495, 9763-D-800498-523.30, AND RS-2505-01. HANGERS 495-A-03 & 495-SG-04 ARE INDICATED ON THIS P&ID-1-CS-LR20723. HANGERS 2505-SG-200 & 1736-SG-201A ARE INDICATED ON P&ID-1-RS-LR20252.
  3. PIPE SUPPORT EQUIVALENT ANCHOR ISO NO. 9763-D-802516-523.30 HANGER NO. 2516-A-04

COMPONENTS SUBJECT TO AMR  
**RED INDICATES COMPONENTS IN SCOPE PER 10CFR 54.4(a)(1) AND/OR (a)(3) AND SUBJECT TO AMR PER 10CFR 54.21.**  
**BLACK INDICATES COMPONENTS NOT SUBJECT TO AMR.**  
**GREEN INDICATES COMPONENTS IN SCOPE PER 10CFR 54.4(a)(2) AND SUBJECT TO AMR PER 10CFR 54.21.**

- ▲ PIPE ANCHOR
- ◇◇◇◇ INDICATES SYSTEM BOUNDARY INTERFACE
- CS - CHEMICAL & VOLUME CONTROL SYSTEM  
 RS - RESIN SLUICING SYSTEM  
 SF - SPENT FUEL POOL COOLING SYSTEM  
 VSL - VALVE LEAK-OFF SYSTEM  
 RMW - REACTOR MAKE-UP WATER SYSTEM

- NOTES:
1. WORK THIS DWG WITH DWGS. 20720, 20722, & 20724 THRU 20729.
  2. ALL LINES, EQUIPMENT, COMPONENTS & INSTRUMENTS HAVE SYSTEM PREFIX 'CS' UNLESS NOTED OTHERWISE.
  3. VALVE FAILS WITH FLOW BY-PASSING THE DEMINERALIZERS & GOING TO CS-F-2
  4. BLIND FLGS, INSTALLED WITHOUT GASKET
  5. THIS VALVE TO BE CLOSED PRIOR TO ANY RESIN SLUICING OPERATIONS.
  6. REFER TO DRAWING VSL-20774 FOR VALVE LEAKOFFS.
  7. INSTRUMENT REFERENCE (A) LETDOWN EXCHANGER CS-E-4 & CS-E-8 OUTLET TEMP. TIS-119 & TIS-302 ON DWG. 20722
  8. VENTS, DRAINS AND TEST CONNECTION CODE BREAKS ARE AT THE DOWNSTREAM END OF THE OUTER ISOLATION VALVE PER I-WY-805111, UNLESS NOTED OTHERWISE.
  9. △ INDICATES REVISION LEVEL.
  10. DELETED
  11. DELETED

PORTIONS OF THIS DRAWING ARE  
**NUCLEAR SAFETY RELATED**

REV	DATE	DSGN	CHKD	CE	DESCRIPTION

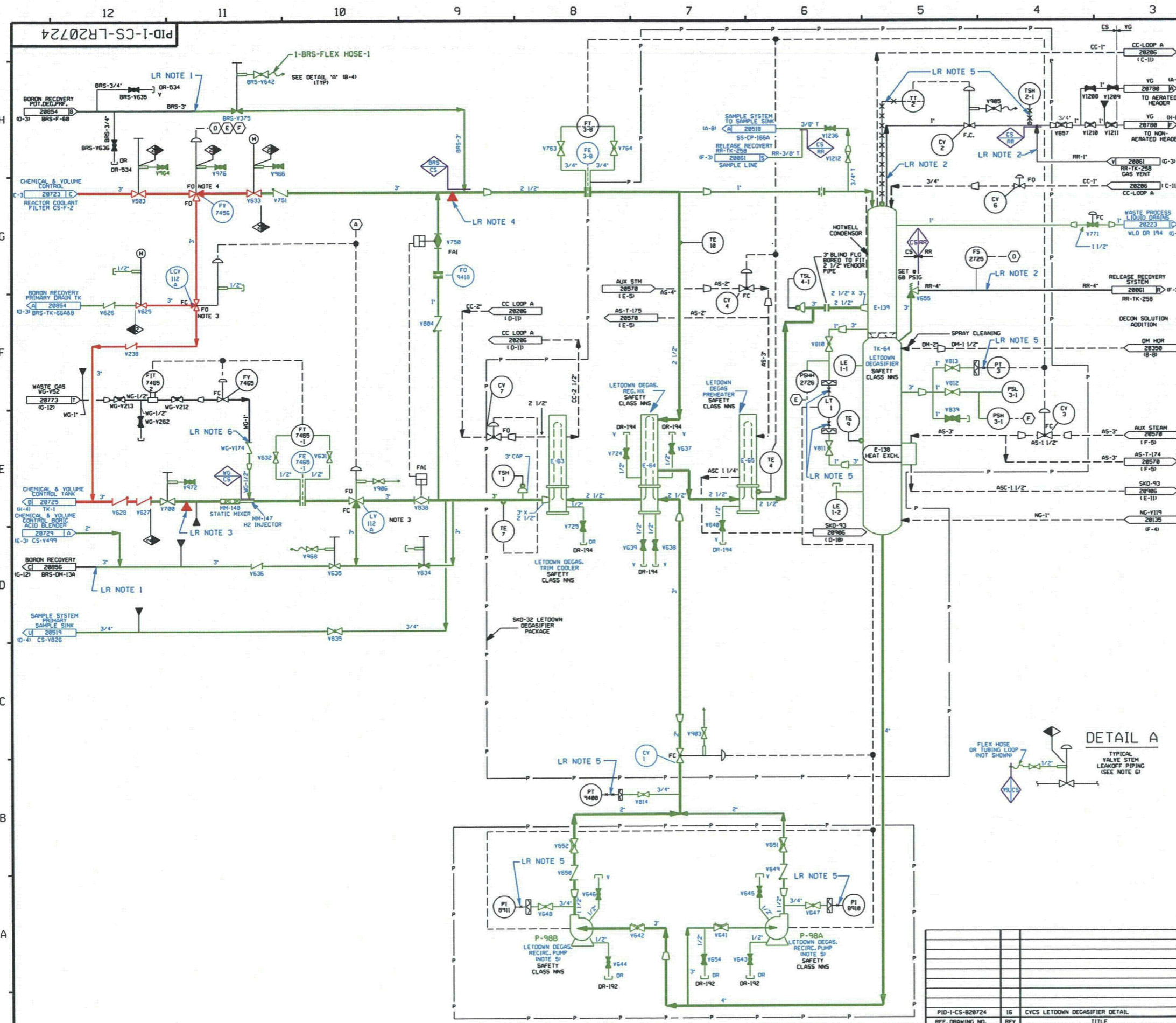
ORIGINAL ISSUE

**NEXTERA ENERGY**  
SEABROOK

CHEMICAL & VOLUME CONTROL SYS.  
PURIFICATION  
DETAIL  
LICENSE RENEWAL P&ID

PID-1-CS-LR20723

REF. DRAWING NO.	REV	TITLE
PID-1-CS-820723	20	CHEMICAL & VOLUME CONTROL SYS PURIFICATION DET



FOR P&ID REFERENCE DRAWINGS, SYMBOLS AND ABBREVIATIONS REFER TO DRAWINGS P&ID - LRLEGEND 1 AND P&ID - LRLEGEND 2

LR NOTES:

- ONLY PIPING LOCATED IN THE PRIMARY AUXILIARY BUILDING AND TANK FARM AREA ARE IN LICENSE RENEWAL SCOPE. WHEN PIPING ENTERS THE WASTE PROCESS BUILDING IT IS NO LONGER IN SCOPE.
- THESE COMPONENTS HAVE AN INTERNAL ENVIRONMENT OF AIR/GAS AND HAVE NO LR INTENDED FUNCTION SO THEY ARE NOT IN SCOPE.
- PIPE SUPPORT ANCHOR  
ISO NO.: 9763-D-800303-520.638  
HANGER NO.: 303-A-01
- PIPE SUPPORT ANCHOR  
ISO NO.: 9763-D-800302-520.35  
HANGER NO.: 302-A-20
- CAPILLARY TUBING IS PART OF THE INSTRUMENT AND CONSIDERED AN ACTIVE COMPONENT PER NEI 95-10.
- COMPONENTS UPSTREAM OF CHECK VALVE HAVE AN INTERNAL ENVIRONMENT OF AIR/GAS SO THEY HAVE NO LR INTENDED FUNCTION AND THEY ARE NOT IN SCOPE.

COMPONENTS SUBJECT TO AMR  
 RED INDICATES COMPONENTS IN SCOPE PER 10CFR 54.4(a)(1) AND/OR (a)(3) AND SUBJECT TO AMR PER 10CFR 54.21.  
 BLACK INDICATES COMPONENTS NOT SUBJECT TO AMR.  
 GREEN INDICATES COMPONENTS IN SCOPE PER 10CFR 54.4(a)(2) AND SUBJECT TO AMR PER 10CFR 54.21.

▲ PIPE ANCHOR

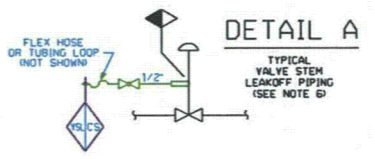
◇ INDICATES SYSTEM BOUNDARY INTERFACE

CS - CHEMICAL & VOLUME CONTROL SYSTEM  
 BRS - BORON RECOVERY SYSTEM  
 WG - WASTE GAS SYSTEM  
 RR - RELEASE RECOVERY SYSTEM  
 VSL - VALVE LEAK-OFF SYSTEM

NOTES:

- WORK THIS DWG WITH DWGS 28726, 28722, 28723 & 28725 THRU 28729.
- ALL PIPING, VALVES, EQUIP & INSTRUMENTS HAVE SYSTEM PREFIX 'CS', UNLESS NOTED OTHERWISE.
- VALVE FAILS WITH FLOW TO CYCT
- VALVE FAILS WITH FLOW TO LCV-112A
- SEE DWG 28354 FOR WATER SUPPLY TO PUMP DOUBLE MECHANICAL SEALS. SUPERIOR TO DWG VSL-28774 FOR VALVE LEAKOFFS.
- INSTRUMENTATION REFERENCES  
 (A) CHEM VOL CONTROL TK ICS-TK-1 LEVEL LT-112E & LT-105 ON DWG CS-28725  
 (D/E/F) TO 1-CS-CY-3, 1-CS-CY-4 (AS-28578), 1-DM-V285 (DM-28358) AND 1-CS-FY-7456 (CS-28724).
- △ INDICATES REVISION LEVEL

PORTIONS OF THIS DRAWING ARE  
**NUCLEAR SAFETY RELATED**

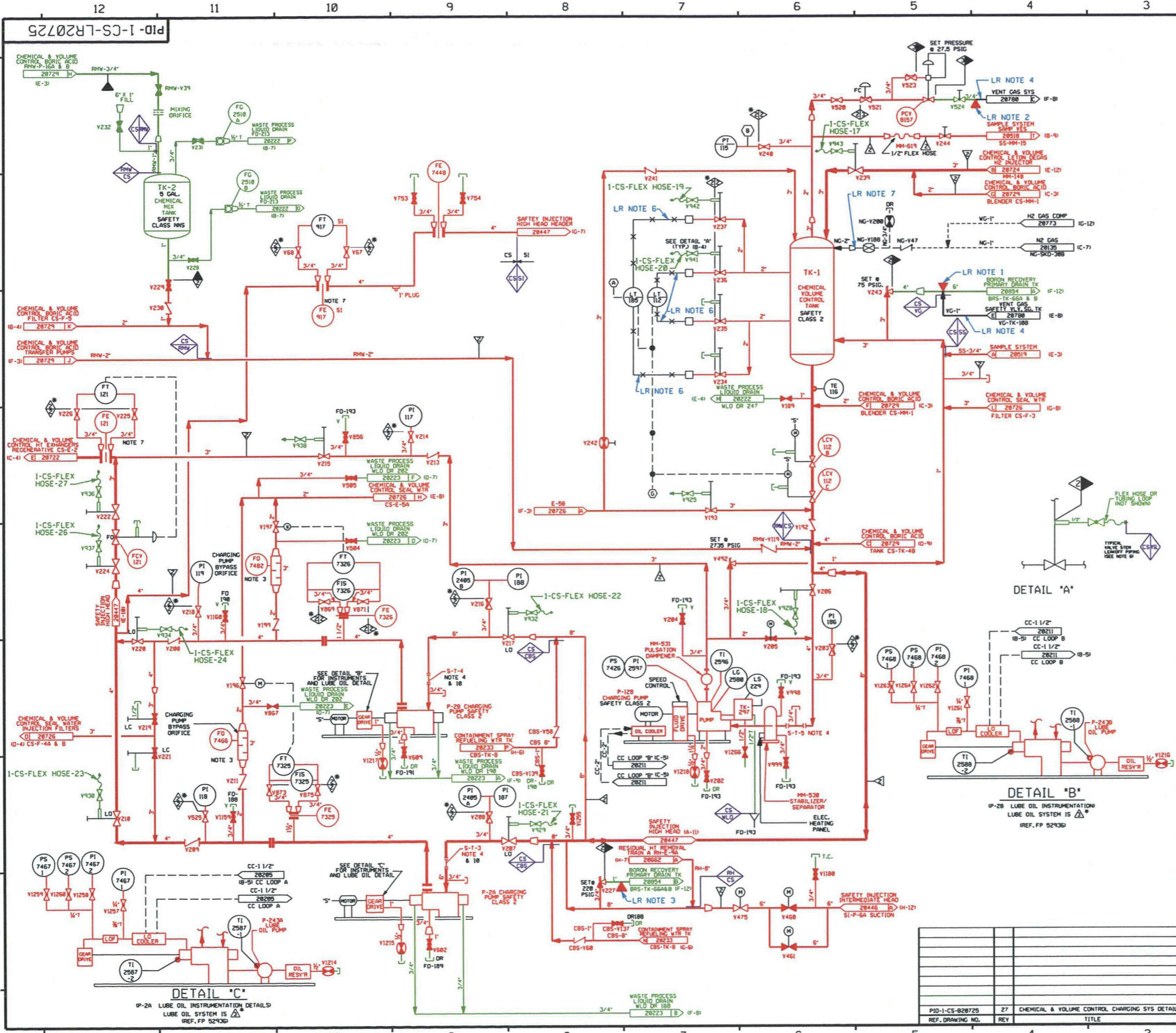


REV	DATE	DSGN	CHRD	CE	DESCRIPTION
0					ORIGINAL ISSUE

CHEMICAL & VOLUME CONTROL SYS.  
 LETDOWN DEGASIFIER  
 DETAIL  
 LICENSE RENEWAL P&ID

PID-1-CS-LR20724

PID-1-CS-828724	16	CYCS LETDOWN DEGASIFIER DETAIL
REF. DRAWING NO.	REV	TITLE



FOR P&ID REFERENCE DRAWINGS, SYMBOLS AND ABBREVIATIONS REFER TO DRAWINGS P&ID - LRLEGEND 1 AND P&ID - LRLEGEND 2

- LR NOTES:
- PIPE SUPPORT ANCHOR  
ISO NO.: 9763-D-800388-520.43A  
HANGER NO.: 1-CS-388-A-05.
  - PIPE SUPPORT ANCHOR  
ISO NO.: 9763-D-800381-526.80  
HANGER NO.: 1-CS-381-A-14.
  - PIPE SUPPORT ANCHOR  
ISO NO.: 9763-D-800373-10373  
HANGER NO.: 1-CS-373-A-02.
  - COMPONENTS HAVE AN INTERNAL ENVIRONMENT OF AIR/GAS SO THEY HAVE NO LICENSE RENEWAL (LRI) INTENDED FUNCTION AND ARE NOT IN SCOPE.
  - ALL EXPOSED DRAIN PIPING AND FUNNELS ARE IN SCOPE FOR LICENSE RENEWAL.
  - CAPILLARY TUBING IS PART OF THE INSTRUMENT AND CONSIDERED AN ACTIVE COMPONENT PER NEI 95-10.
  - COMPONENTS ARE SCOPED AND SCREEN ON PID-1-NG-LR20135.

COMPONENTS SUBJECT TO AMR  
**RED** INDICATES COMPONENTS IN SCOPE PER 10CFR 54.4(a)(1) AND/OR (a)(3) AND SUBJECT TO AMR PER 10CFR 54.21.  
**BLACK** INDICATES COMPONENTS NOT SUBJECT TO AMR.  
**GREEN** INDICATES COMPONENTS IN SCOPE PER 10CFR 54.4(a)(2) AND SUBJECT TO AMR PER 10CFR 54.21.

- ▲ PIPE ANCHOR
- ◇◇◇◇ INDICATES SYSTEM BOUNDARY INTERFACE
  - CBS - CONTAINMENT SPRAY SYSTEM
  - CS - CHEMICAL & VOLUME CONTROL SYSTEM
  - VG - VENT GAS SYSTEM
  - SS - SAMPLE SYSTEM
  - RH - RESIDUAL HEAT REMOVAL SYSTEM
  - RMW - REACTOR MAKE-UP WATER SYSTEM
  - SI - SAFETY INJECTION SYSTEM
  - WLD - WASTE PROCESSING LIQUID DRAIN SYSTEM
  - VSL - VALVE LEAK-OFF SYSTEM

- NOTES:
- WORK THIS DWG WITH 20720 THRU 20724 & 20726 THRU 20729. PORTIONS OF THIS DRAWING ARE DUPLICATED ON DRAWING SI-20447 DUE TO DUAL SYSTEM FUNCTIONS.
  - ALL LINES, EQUIPMENT, COMPONENTS & INSTRUMENTS HAVE SYSTEM PREFIX 'CS', UNLESS NOTED OTHERWISE.
  - MIN OF 5' OF STRAIGHT RUN AFTER MIN.FLOW DRIFICE.
  - PERMANENT SPOOL PIECE INSTALLATION SHOWN TEMP. SPOOL PIECE WITH STRAINER, PRESSURE INSTRUMENTS, VENTS & DRAINS INSTALLED ONLY DURING FLUSHING OPERATIONS & IS REMOVED BEFORE START-UP.
  - VENT AND DRAIN CODE BREAKS ARE AT THE DOWNSTREAM END OF THE OUTER ISOLATION VALVE PER I-WY-805113 UNLESS NOTED OTHERWISE.
  - REFER TO DRAWING YSL-20774 FOR VALVE LEAKOFFS.
  - ORFICE PLATE NON-ASME
  - INSTRUMENT REFERENCE
    - (A) TO LCY-112A & LY-112A ON DWG. 20724.
    - (B) TO WG-PIC-8156 ON P&ID WG-20773
    - (C) TO LCY-112E & LY-112D ON DWG. 20233.
  - △ INDICATES REVISION LEVEL.
  - CONNECTION USED FOR PRE-PLANNED MAKEUP STRATEGY. SEE FP59989.

PORTIONS OF THIS DRAWING ARE  
**NUCLEAR SAFETY RELATED**

DETAIL 'A'

DETAIL 'B'

DETAIL 'C'

REV	DATE	DSGN	CHKD	CE	DESCRIPTION

ORIGINAL ISSUE

**NEXTERA ENERGY**  
SEABROOK

CHEMICAL & VOLUME CONTROL CHARGING SYSTEM  
 DETAIL  
 LICENSE RENEWAL P&ID  
 PID-1-CS-LR20725

PID-1-CS-B20725	27	CHEMICAL & VOLUME CONTROL CHARGING SYS DETAIL
REF. DRAWING NO.	REV	TITLE

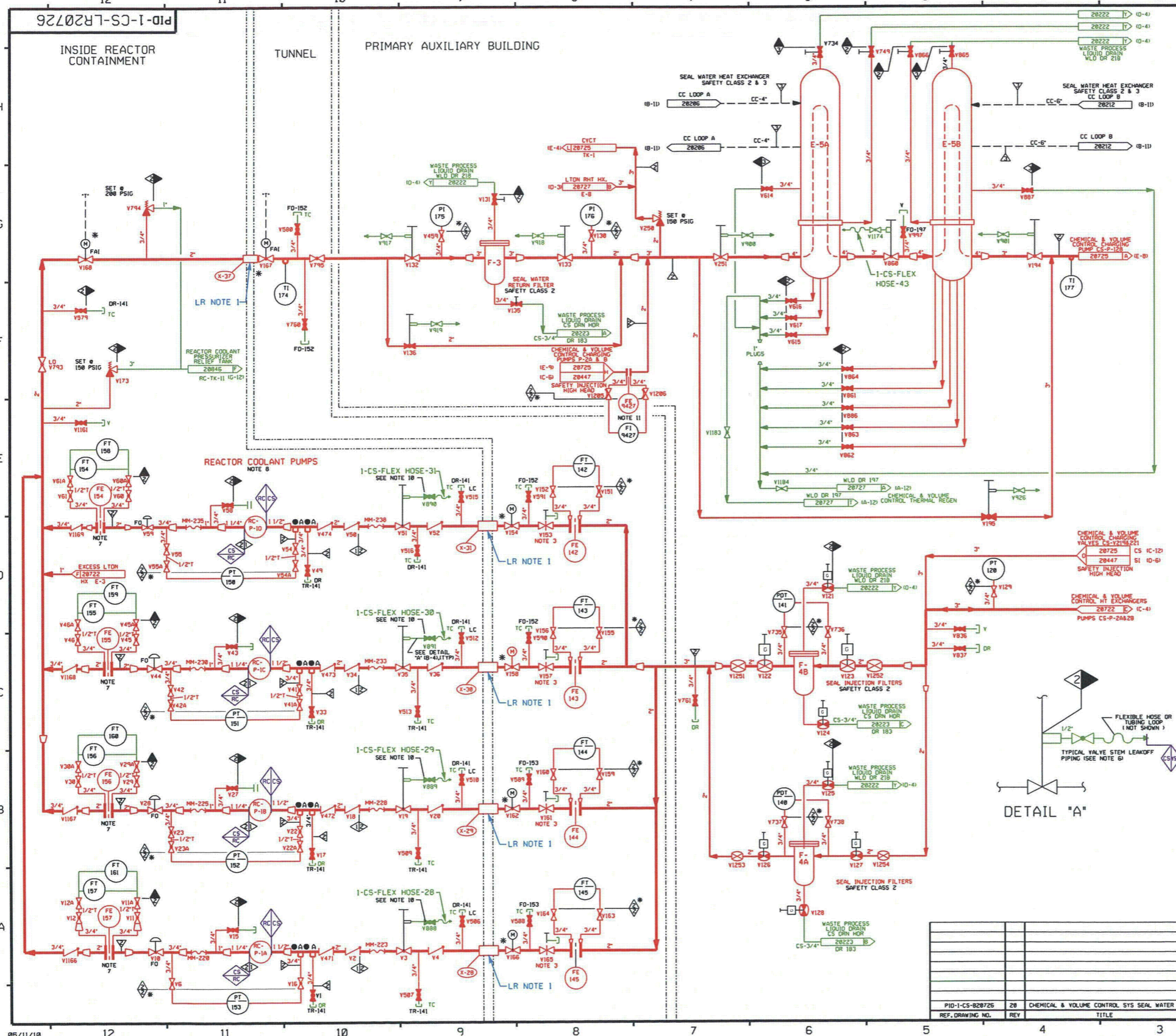
9270287-1-01-010

INSIDE REACTOR CONTAINMENT

TUNNEL

PRIMARY AUXILIARY BUILDING

H  
G  
F  
E  
D  
C  
B  
A



FOR P&ID REFERENCE DRAWINGS, SYMBOLS AND ABBREVIATIONS REFER TO DRAWINGS P&ID - LRLEGEND 1 AND P&ID - LRLEGEND 2

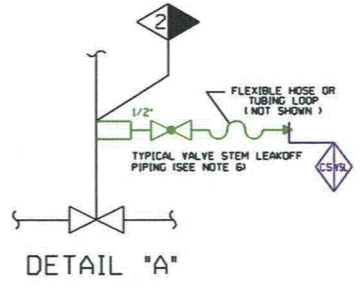
LR NOTES:  
1. COMPONENTS DESIGNATED AS X-28, X-29, X-30, X-31 & X-37 ARE CONTAINMENT PENETRATIONS THAT ARE EVALUATED UNDER THE CIVIL STRUCTURAL SYSTEM LRSP-CNT.

COMPONENTS SUBJECT TO AMR  
RED INDICATES COMPONENTS IN SCOPE PER 10CFR 54.4(a)(1) AND/OR (a)(3) AND SUBJECT TO AMR PER 10CFR 54.21.  
BLACK INDICATES COMPONENTS NOT SUBJECT TO AMR.  
GREEN INDICATES COMPONENTS IN SCOPE PER 10CFR 54.4(a)(2) AND SUBJECT TO AMR PER 10CFR 54.21.

▲ PIPE ANCHOR  
◇◇◇◇ INDICATES SYSTEM BOUNDARY INTERFACE  
CS - CHEMICAL & VOLUME CONTROL SYSTEM  
RC - REACTOR COOLANT SYSTEM  
VSL - VALVE LEAK-OFF SYSTEM

- NOTES:
- WORK THIS DWG WITH DWGS. 20720, 20722 THRU 20725 & 20727 THRU 20729.
  - ALL PIPING, VALVES, EQUIP., & INSTRUMENTS HAVE SYSTEM PREFIX 'CS', UNLESS NOTED OTHERWISE.
  - NEEDLE VALVE WITH 1" INTERNALS.
  - ⊙ INDICATES 3/8" FLOW RESTRICTOR INSTALLED. SEE APPLICABLE DETAIL ON DWG RC-2084B.
  - VENTS, DRAINS & TEST CONN. CODE BREAKS ARE AT THE DOWNSTREAM END OF THE OUTER ISOLATION VALVE PER 1-NH-805111, UNLESS NOTED OTHERWISE.
  - REFER TO DRAWING VSL-20774 FOR VALVE LEAKOFFS.
  - ORIFICE PLATE IS NON-ASME.
  - REACTOR COOLANT PUMPS SHOWN ON DWG'S:  
RC P-1A-20841  
RC P-1B-20842  
RC P-1C-20843  
RC P-1D-20844
  - △ INDICATES REVISION LEVEL.
  - VALVE STEM LEAK-OFF ISOLATION VALVES V888, V889, V890 & V891 ARE TO BE MAINTAINED CLOSED. VALVE STEM LEAK-OFF TO BE CONSIDERED INOPERABLE.
  - NON-ASME FLOW ELEMENT.

PORTIONS OF THIS DRAWING ARE  
**NUCLEAR SAFETY RELATED**



REV	DATE	DSGN	CHKD	CE	ORIGINAL ISSUE	DESCRIPTION

**NEXTERA ENERGY**  
SEABROOK

CHEMICAL & VOLUME CONTROL SYS.  
SEAL WATER  
DETAIL  
LICENSE RENEWAL P&ID

PID-1-CS-LR20726

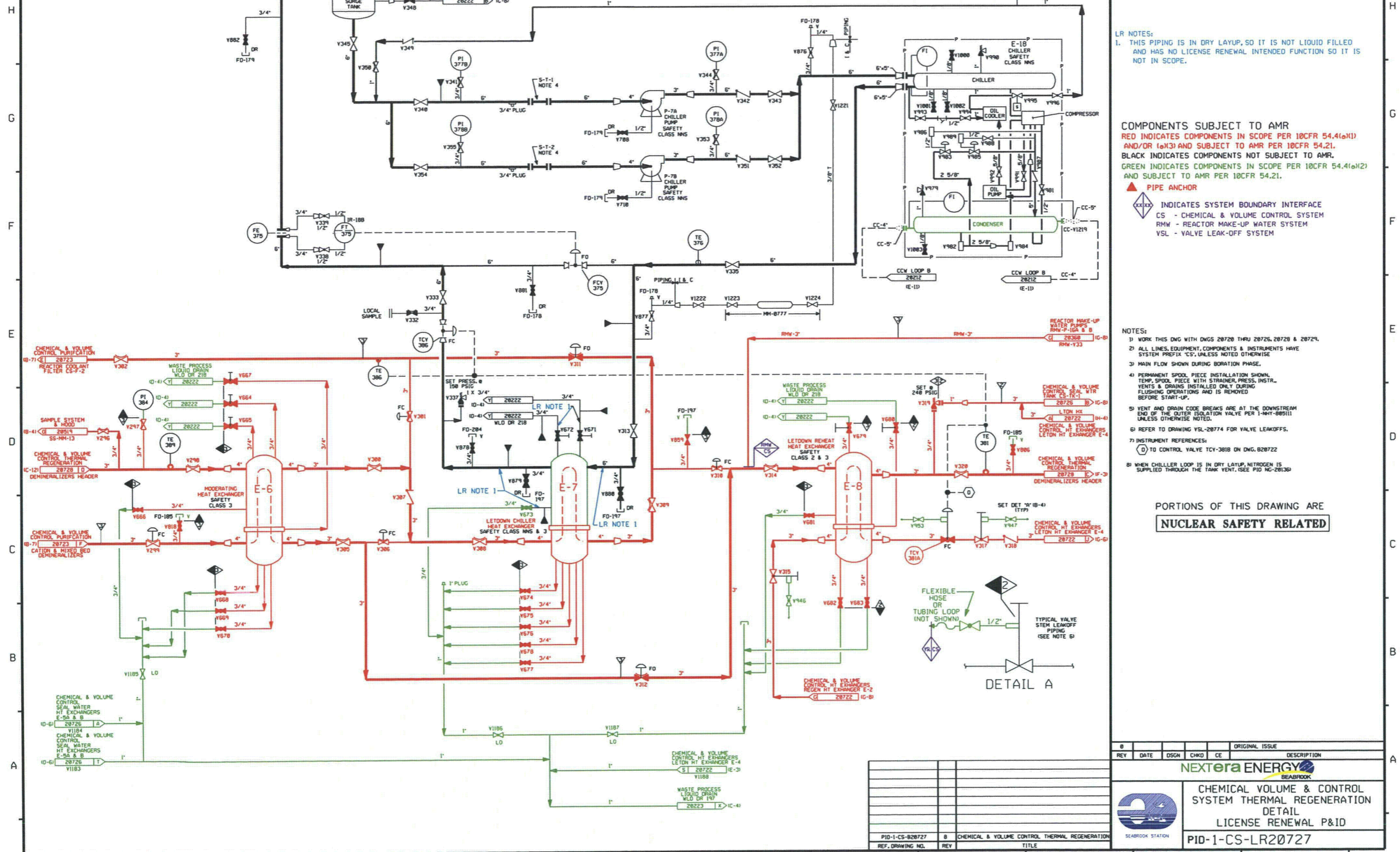


05/11/10

12 11 10 9 8 7 6 5 4 3 2 1

PID-1-CS-LR20727

FOR P&ID REFERENCE DRAWINGS, SYMBOLS AND ABBREVIATIONS REFER TO DRAWINGS P&ID - LRLEGEND 1 AND P&ID - LRLEGEND 2



LR NOTES:  
1. THIS PIPING IS IN DRY LAYUP, SO IT IS NOT LIQUID FILLED AND HAS NO LICENSE RENEWAL INTENDED FUNCTION SO IT IS NOT IN SCOPE.

COMPONENTS SUBJECT TO AMR  
RED INDICATES COMPONENTS IN SCOPE PER 10CFR 54.4(a)(1) AND/OR (a)(3) AND SUBJECT TO AMR PER 10CFR 54.21.  
BLACK INDICATES COMPONENTS NOT SUBJECT TO AMR.  
GREEN INDICATES COMPONENTS IN SCOPE PER 10CFR 54.4(a)(2) AND SUBJECT TO AMR PER 10CFR 54.21.

▲ PIPE ANCHOR  
◇◇◇◇ INDICATES SYSTEM BOUNDARY INTERFACE  
CS - CHEMICAL & VOLUME CONTROL SYSTEM  
RMW - REACTOR MAKE-UP WATER SYSTEM  
VSL - VALVE LEAK-OFF SYSTEM

- NOTES:
- 1) WORK THIS DNG WITH DNGS 20720 THRU 20726, 20728 & 20729.
  - 2) ALL LINES, EQUIPMENT, COMPONENTS & INSTRUMENTS HAVE SYSTEM PREFIX 'CS', UNLESS NOTED OTHERWISE.
  - 3) MAIN FLOW SHOWN DURING BORATION PHASE.
  - 4) PERMANENT SPOOL PIECE INSTALLATION SHOWN. TEMP. SPOOL PIECE WITH STRAINER, PRESS. INSTR., VENTS & DRAINS INSTALLED ONLY DURING FLUSHING OPERATIONS AND IS REMOVED BEFORE START-UP.
  - 5) VENT AND DRAIN CODE BREAKS ARE AT THE DOWNSTREAM END OF THE OUTER ISOLATION VALVE PER 1-NHT-88511 UNLESS OTHERWISE NOTED.
  - 6) REFER TO DRAWING VSL-20774 FOR VALVE LEAKOFFS.
  - 7) INSTRUMENT REFERENCES:  
◇ TO CONTROL VALVE TCY-3818 ON DNG. B20722
  - 8) WHEN CHILLER LOOP IS IN DRY LAYUP, NITROGEN IS SUPPLIED THROUGH THE TANK VENT. (SEE PID NG-20136)

PORTIONS OF THIS DRAWING ARE  
**NUCLEAR SAFETY RELATED**

DETAIL A

REV	DATE	DSGN	CHKD	CE	ORIGINAL ISSUE	DESCRIPTION
0						

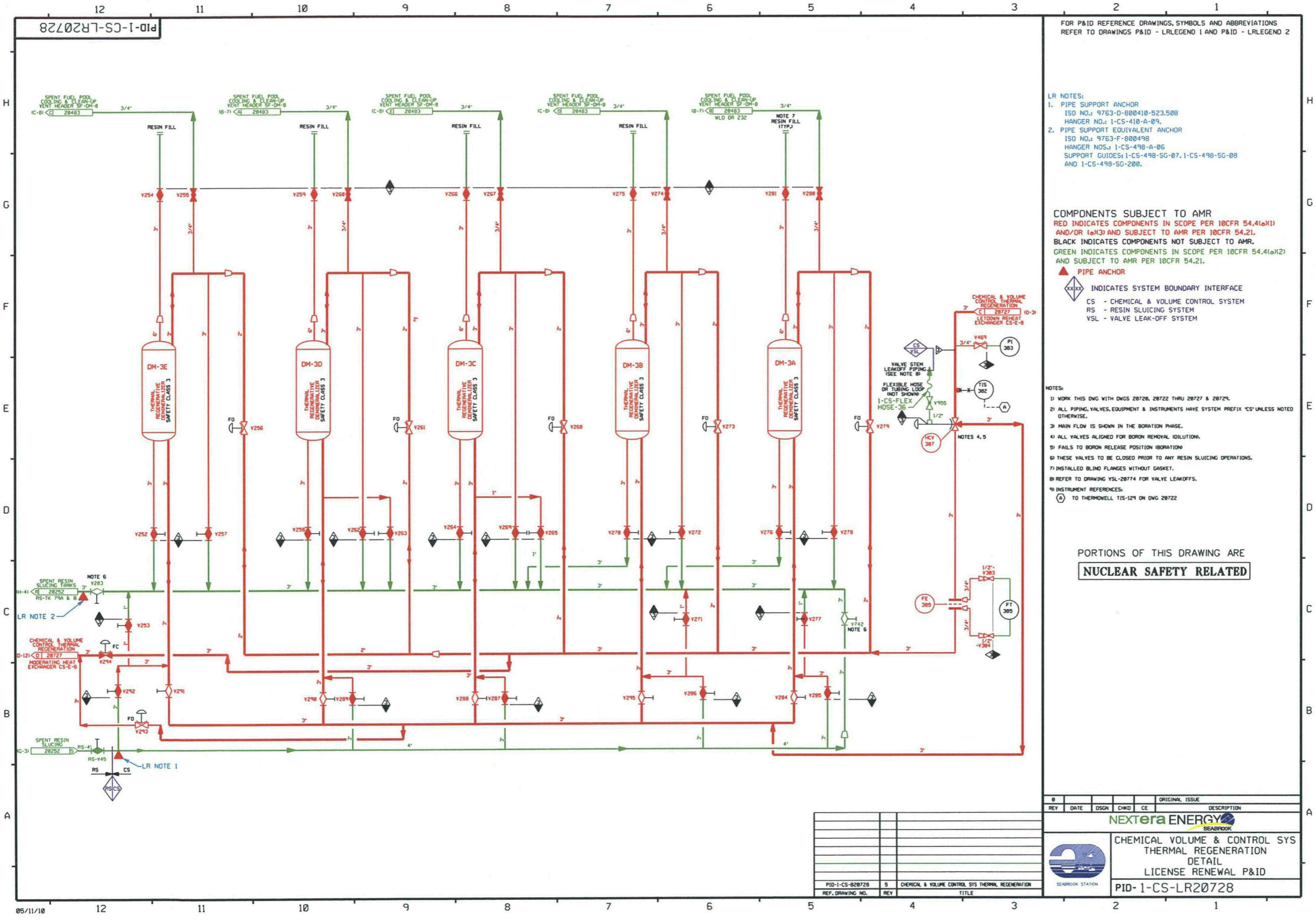
**NEXTERA ENERGY**  
SEABROOK

CHEMICAL VOLUME & CONTROL SYSTEM THERMAL REGENERATION  
DETAIL  
LICENSE RENEWAL P&ID

PID-1-CS-LR20727



PID-1-CS-LR20728



FOR P&ID REFERENCE DRAWINGS, SYMBOLS AND ABBREVIATIONS REFER TO DRAWINGS P&ID - LRLEGEND 1 AND P&ID - LRLEGEND 2

- LR NOTES:
- PIPE SUPPORT ANCHOR  
ISO NO.: 9763-0-800410-523.508  
HANGER NO.: 1-CS-410-A-09.
  - PIPE SUPPORT EQUIVALENT ANCHOR  
ISO NO.: 9763-F-800498  
HANGER NOS.: 1-CS-498-A-06  
SUPPORT GUIDES: 1-CS-498-SG-07, 1-CS-498-SG-08 AND 1-CS-498-SG-200.

COMPONENTS SUBJECT TO AMR  
RED INDICATES COMPONENTS IN SCOPE PER 10CFR 54.4(a)(1) AND/OR (a)(3) AND SUBJECT TO AMR PER 10CFR 54.21.  
BLACK INDICATES COMPONENTS NOT SUBJECT TO AMR.  
GREEN INDICATES COMPONENTS IN SCOPE PER 10CFR 54.4(a)(2) AND SUBJECT TO AMR PER 10CFR 54.21.

- ▲ PIPE ANCHOR
- ◇ INDICATES SYSTEM BOUNDARY INTERFACE
- CS - CHEMICAL & VOLUME CONTROL SYSTEM
- RS - RESIN SLUICING SYSTEM
- VSL - VALVE LEAK-OFF SYSTEM

- NOTES:
- WORK THIS DNG WITH DNGS 20726, 20722 THRU 20727 & 20729.
  - ALL PIPING, VALVES, EQUIPMENT & INSTRUMENTS HAVE SYSTEM PREFIX 'CS' UNLESS NOTED OTHERWISE.
  - MAIN FLOW IS SHOWN IN THE BORATION PHASE.
  - ALL VALVES ALIGNED FOR BORON REMOVAL DILUTION.
  - FAILS TO BORON RELEASE POSITION (BORATION).
  - THESE VALVES TO BE CLOSED PRIOR TO ANY RESIN SLUICING OPERATIONS.
  - INSTALLED BLIND FLANGES WITHOUT GASKET.
  - REFER TO DRAWING YSL-20774 FOR VALVE LEAKOFFS.
  - INSTRUMENT REFERENCES:  
A TO THERMOWELL T15-129 ON DNG 20722

PORTIONS OF THIS DRAWING ARE  
**NUCLEAR SAFETY RELATED**

REV	DATE	OSDN	CHD	CE	ORIGINAL ISSUE	DESCRIPTION

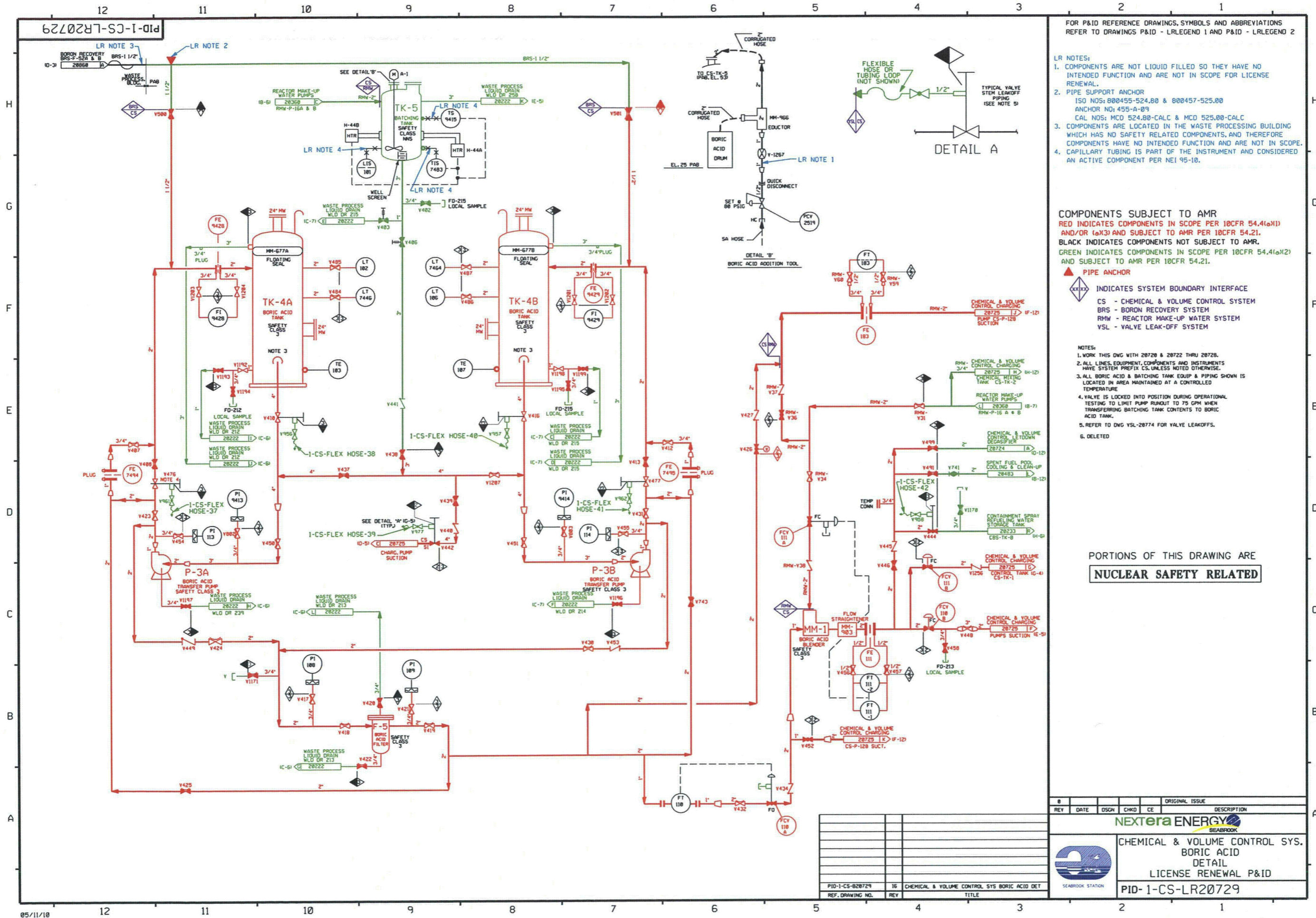
**NEXTERA ENERGY**  
SEABROOK

CHEMICAL VOLUME & CONTROL SYS  
THERMAL REGENERATION  
DETAIL  
LICENSE RENEWAL P&ID  
PID-1-CS-LR20728

REF. DRAWING NO.	REV	TITLE
PID-1-CS-020728	5	CHEMICAL & VOLUME CONTROL SYS THERMAL REGENERATION



620729-1-CS-LR20729



FOR P&ID REFERENCE DRAWINGS, SYMBOLS AND ABBREVIATIONS REFER TO DRAWINGS P&ID - LRLEGEND 1 AND P&ID - LRLEGEND 2

- LR NOTES:
- COMPONENTS ARE NOT LIQUID FILLED SO THEY HAVE NO INTENDED FUNCTION AND ARE NOT IN SCOPE FOR LICENSE RENEWAL.
  - PIPE SUPPORT ANCHOR  
ISO NOS: 800455-524.80 & 800457-525.00  
ANCHOR NO: 455-A-09  
CAL NOS: MCO 524.80-CALC & MCO 525.00-CALC
  - COMPONENTS ARE LOCATED IN THE WASTE PROCESSING BUILDING WHICH HAS NO SAFETY RELATED COMPONENTS, AND THEREFORE COMPONENTS HAVE NO INTENDED FUNCTION AND ARE NOT IN SCOPE.
  - CAPILLARY TUBING IS PART OF THE INSTRUMENT AND CONSIDERED AN ACTIVE COMPONENT PER NEI 95-10.

COMPONENTS SUBJECT TO AMR  
**RED INDICATES COMPONENTS IN SCOPE PER 10CFR 54.4(a)(1) AND/OR (a)(3) AND SUBJECT TO AMR PER 10CFR 54.21.**  
**BLACK INDICATES COMPONENTS NOT SUBJECT TO AMR.**  
**GREEN INDICATES COMPONENTS IN SCOPE PER 10CFR 54.4(a)(2) AND SUBJECT TO AMR PER 10CFR 54.21.**

- ▲ PIPE ANCHOR**  
**◇** INDICATES SYSTEM BOUNDARY INTERFACE  
 CS - CHEMICAL & VOLUME CONTROL SYSTEM  
 BRS - BORON RECOVERY SYSTEM  
 RMW - REACTOR MAKE-UP WATER SYSTEM  
 VSL - VALVE LEAK-OFF SYSTEM

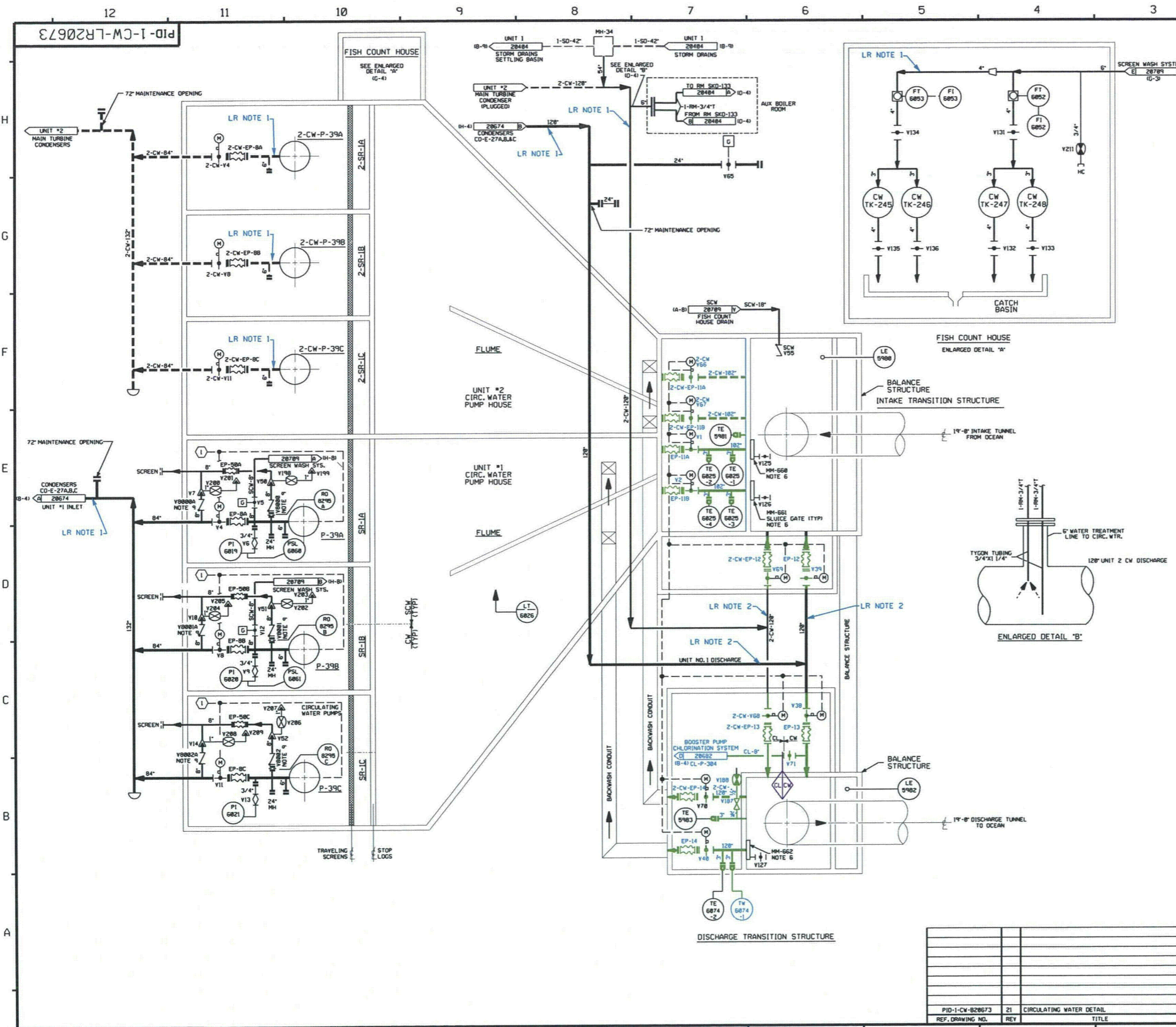
- NOTES:
- WORK THIS DWG WITH 20720 & 20722 THRU 20726.
  - ALL LINES, EQUIPMENT, COMPONENTS AND INSTRUMENTS HAVE SYSTEM PREFIX CS, UNLESS NOTED OTHERWISE.
  - ALL BORIC ACID & BATCHING TANK EQUIP & PIPING SHOWN IS LOCATED IN AREA MAINTAINED AT A CONTROLLED TEMPERATURE.
  - VALVE IS LOCKED INTO POSITION DURING OPERATIONAL TESTING TO LIMIT PUMP RUNOUT TO 75 GPM WHEN TRANSFERRING BATCHING TANK CONTENTS TO BORIC ACID TANK.
  - REFER TO DWG YSL-20774 FOR VALVE LEAKOFFS.
  - DELETED

PORTIONS OF THIS DRAWING ARE  
**NUCLEAR SAFETY RELATED**

REV	DATE	DSGN	CHKD	CE	ORIGINAL ISSUE	DESCRIPTION

**CHEMICAL & VOLUME CONTROL SYS.**  
**BORIC ACID**  
**DETAIL**  
**LICENSE RENEWAL P&ID**  
**PID-1-CS-LR20729**





FOR P&ID REFERENCE DRAWINGS, SYMBOLS AND ABBREVIATIONS REFER TO DRAWINGS P&ID - LRLEGEND 1 AND P&ID - LRLEGEND 2



- LR NOTES:
1. THE LICENSE RENEWAL (LR) BOUNDARY FOR CW COMPONENTS IS LIMITED TO THE INTAKE AND DISCHARGE STRUCTURES (ITS/DTS) DRY WELL AREAS.
  2. THE ITS AND DTS SHAFT AREAS AND 'BALANCE STRUCTURE' CONTAIN NO SAFETY RELATED COMPONENTS AND ARE NOT IN THE LR BOUNDARY.
  3. UNIT 2 EXPANSION JOINT 2-CW-EP-11A, 2-CW-EP-11B AND 2-CW-EP-14 ARE IN SCOPE PER (a)(2) BECAUSE OF THE LIKELIHOOD OF GROUND WATER / VALVE LEAKAGE FILLING THE PIPING DOWNSTREAM OF THESE COMPONENTS.

COMPONENTS SUBJECT TO AMR  
**RED** INDICATES COMPONENTS IN SCOPE PER 10CFR 54.4(a)(1) AND/OR (a)(3) AND SUBJECT TO AMR PER 10CFR 54.21.  
**BLACK** INDICATES COMPONENTS NOT SUBJECT TO AMR.  
**GREEN** INDICATES COMPONENTS IN SCOPE PER 10CFR 54.4(a)(2) AND SUBJECT TO AMR PER 10CFR 54.21.

- ▲ PIPE ANCHOR
- ◊ INDICATES SYSTEM BOUNDARY INTERFACE  
 CW - CIRCULATING WATER SYSTEM  
 CL - CHLORINATION SYSTEM

- NOTES:
- 1) WORK THIS DRAWING WITH DRAWINGS 20672, 20674 & 20675.
  - 2) ALL LINES, EQUIPMENT, COMPONENTS AND INSTRUMENTS HAVE SYSTEM PREFIX 1-CW, UNLESS NOTED OTHERWISE.
  - 3) ALL LINES, EQUIPMENT, COMPONENTS AND INSTRUMENTS ARE SAFETY CLASS NNS, UNLESS NOTED OTHERWISE.
  - 4) DELETED.
  - 5) ① LUBE WATER FLOW NORMAL, SCREEN DIFFERENTIAL NORMAL AND CONDENSER WATER BOX VACUUM BREAKER VALVES CLOSED.
  - 6) SLUICE GATES ARE DESIGNED TO BE USED INTERCHANGEABLY IN ANY SET OF GUIDES OF THE SPECIFIED SIZE.
  - 7) DASH LINES DESIGNATE UNIT #2 PIPING.
  - 8) △ - INDICATES REVISION LEVEL
  - 9) THE DUAL FUNCTION OF THESE SURGE CHECK VALVES IS TO LET AIR BE RELEASED FREELY FROM THE CW SYSTEM THROUGH THE VENT, BUT CLOSE WHEN SEAWATER RAPIDLY ENTERS THE VALVE AFTER VENTING IS COMPLETE.
  - 10) VALVE V187 IS ON A COUPLING WELDED TO THE THERMOWELL SLEEVE. REF. SPEC. 252-B SH. 41

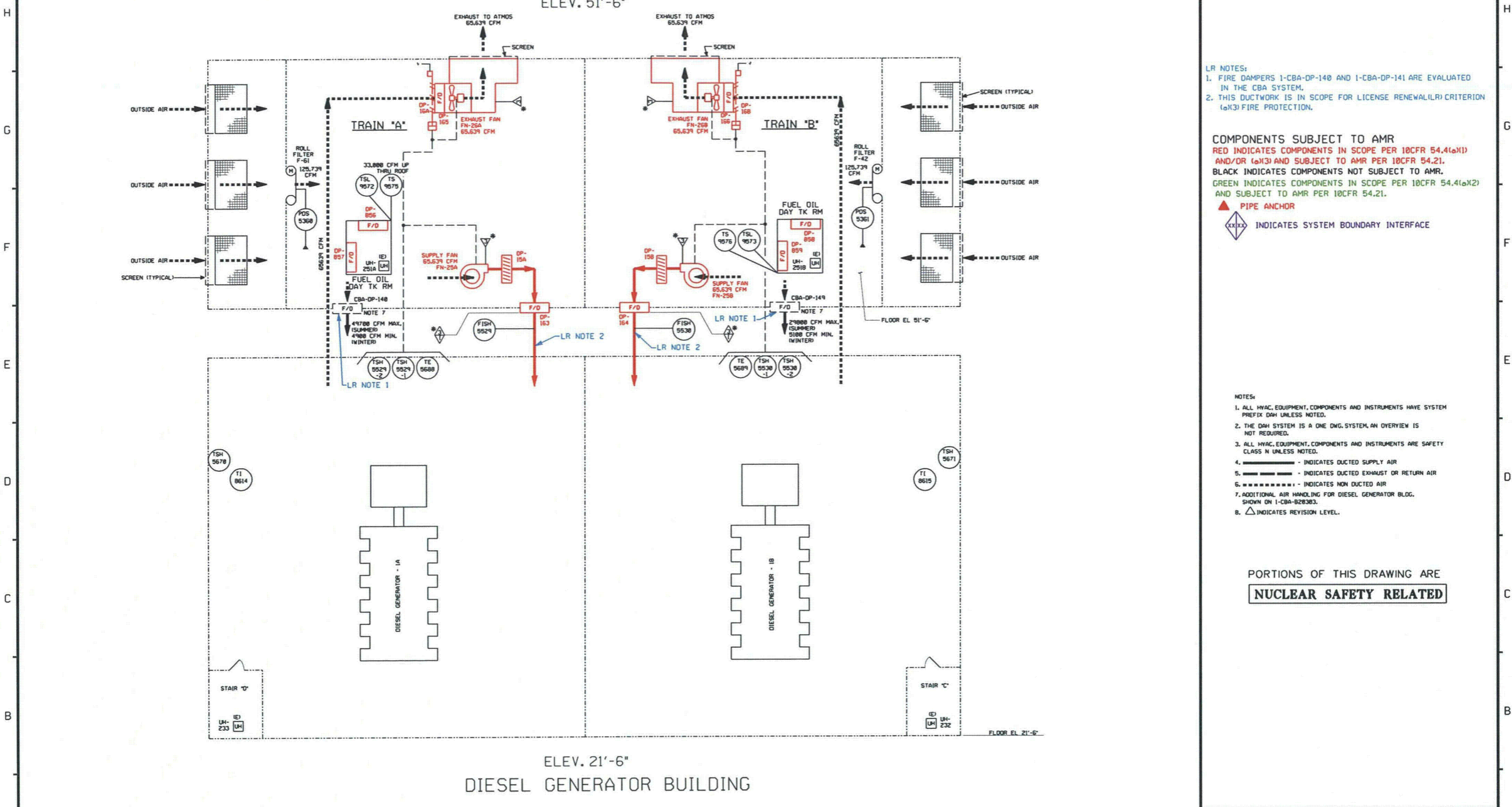
REV	DATE	DSGN	CHKD	CE	DESCRIPTION

  
  
**CIRCULATING WATER  
 DETAIL  
 LICENSE RENEWAL P&ID**  
 PID-1-CW-LR20673

PID-1-CW-20673	Z1	CIRCULATING WATER DETAIL
REF. DRAWING NO.	REV	TITLE

PID-1-DAH-LR20624

FOR P&ID REFERENCE DRAWINGS, SYMBOLS AND ABBREVIATIONS REFER TO DRAWINGS P&ID - LRLEGEND 1 AND P&ID - LRLEGEND 2



LR NOTES:  
 1. FIRE DAMPERS 1-CBA-DP-140 AND 1-CBA-DP-141 ARE EVALUATED IN THE CBA SYSTEM.  
 2. THIS DUCTWORK IS IN SCOPE FOR LICENSE RENEWAL(LR) CRITERION (a)(3) FIRE PROTECTION.

COMPONENTS SUBJECT TO AMR  
 RED INDICATES COMPONENTS IN SCOPE PER 10CFR 54.4(a)(1) AND/OR (a)(3) AND SUBJECT TO AMR PER 10CFR 54.21.  
 BLACK INDICATES COMPONENTS NOT SUBJECT TO AMR.  
 GREEN INDICATES COMPONENTS IN SCOPE PER 10CFR 54.4(a)(2) AND SUBJECT TO AMR PER 10CFR 54.21.  
 ▲ PIPE ANCHOR  
 ◊(XX) INDICATES SYSTEM BOUNDARY INTERFACE

- NOTES:
1. ALL HVAC, EQUIPMENT, COMPONENTS AND INSTRUMENTS HAVE SYSTEM PREFIX DAH UNLESS NOTED.
  2. THE DAH SYSTEM IS A ONE DWG. SYSTEM, AN OVERVIEW IS NOT REQUIRED.
  3. ALL HVAC, EQUIPMENT, COMPONENTS AND INSTRUMENTS ARE SAFETY CLASS N UNLESS NOTED.
  4. ——— INDICATES DUCTED SUPPLY AIR
  5. - - - - - INDICATES DUCTED EXHAUST OR RETURN AIR
  6. ······ INDICATES NON DUCTED AIR
  7. ADDITIONAL AIR HANDLING FOR DIESEL GENERATOR BLDG. SHOWN ON 1-CBA-828303.
  8. ▲ INDICATES REVISION LEVEL.

PORTIONS OF THIS DRAWING ARE  
**NUCLEAR SAFETY RELATED**

REV	DATE	DSGN	CHKD	CE	DESCRIPTION
6					ORIGINAL ISSUE
DIESEL GENERATOR BUILDING AIR HANDLING LICENSE RENEWAL P&ID					
PID-1-DAH-LR20624					

REF. DRAWING NO.	REV	TITLE
PID-1-DAH-828624	6	DIESEL GENERATOR BUILDING AIR HANDLING



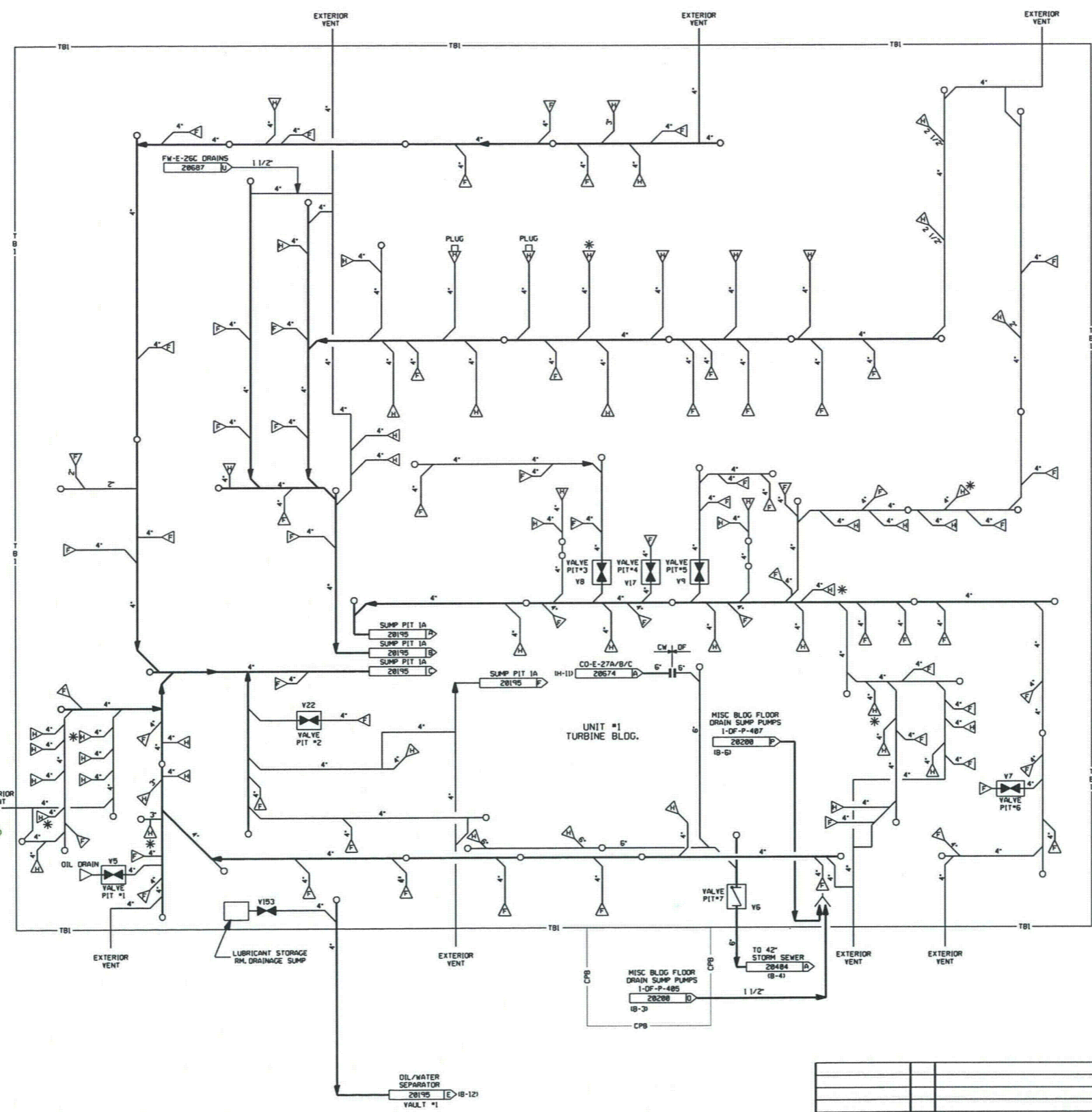
05/11/10

PID-1-DF-LR20194

FOR P&ID REFERENCE DRAWINGS, SYMBOLS AND ABBREVIATIONS REFER TO DRAWINGS P&ID - LRLEGEND 1 AND P&ID - LRLEGEND 2

H  
G  
F  
E  
D  
C  
B  
A

H  
G  
F  
E  
D  
C  
B  
A



LR NOTES:  
1. ONLY THE PIPING IN THE EMERGENCY FEEDWATER PUMP BUILDING AND THE FLOW PATH TO THE OIL/WATER SEPARATOR HAVE A LICENSE RENEWAL (LR) INTENDED FUNCTION. ALL OTHER COMPONENTS ON THIS DRAWING ARE LOCATED IN BUILDINGS THAT DO NOT HAVE LR INTENDED FUNCTION AND ARE NOT IN SCOPE.

COMPONENTS SUBJECT TO AMR  
**RED** INDICATES COMPONENTS IN SCOPE PER 10CFR 54.4(a)(1) AND/OR (a)(3) AND SUBJECT TO AMR PER 10CFR 54.21.  
**BLACK** INDICATES COMPONENTS NOT SUBJECT TO AMR.  
**GREEN** INDICATES COMPONENTS IN SCOPE PER 10CFR 54.4(a)(2) AND SUBJECT TO AMR PER 10CFR 54.21.  
**▲** PIPE ANCHOR  
**◇** INDICATES SYSTEM BOUNDARY INTERFACE  
 DF - PLANT FLOOR DRAIN SYSTEM  
 MSD - MAIN STEAM DRAINS SYSTEM

NOTES:  
1. WORK THIS DRAWING WITH DRAWINGS B20192, B20195 THRU B20199.  
2. ALL LINES, EQUIPMENT, COMPONENTS AND INSTRUMENTS HAVE SYSTEM PREFIX OF UNLESS NOTED OTHERWISE.  
3. ALL LINES, EQUIPMENT, COMPONENTS AND INSTRUMENTS ARE SAFETY CLASS N, UNLESS NOTED OTHERWISE.  
4. ▽ INDICATES FLOOR DRAIN  
5. ▽ INDICATES HUB DRAIN  
6. □ INDICATES CLEANOUT  
7. ○ INDICATES VENT  
8. \* INDICATES DRAIN CUT FLUSH WITH FLOOR AND PLUGGED

REV	DATE	DSGN	CHKD	CE	DESCRIPTION

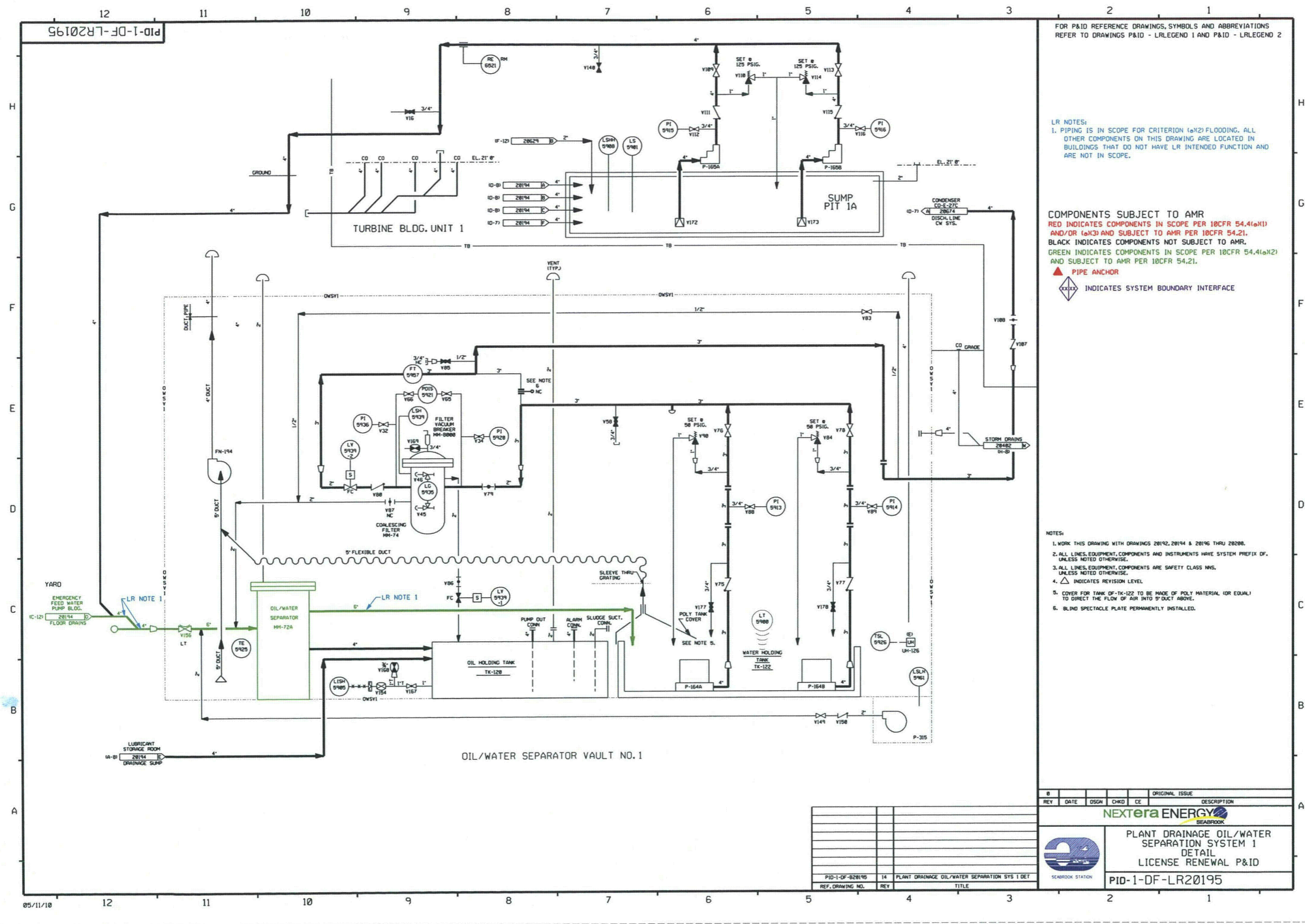
**NEXTERA ENERGY**  
SEABROOK

PLANT DRAINAGE OIL/WATER SEPARATION SYSTEM 1  
DETAIL  
LICENSE RENEWAL P&ID

SEABROOK STATION  
PID-1-DF-LR20194

PID-1-DF-820194	6	PLANT DRAINAGE OIL/WTR SEPARATION SYS 1 DET
REF. DRAWING NO.	REV	TITLE

PID-1-DF-LR20195



FOR P&ID REFERENCE DRAWINGS, SYMBOLS AND ABBREVIATIONS REFER TO DRAWINGS P&ID - LRLEGEND 1 AND P&ID - LRLEGEND 2

LR NOTES:  
 1. PIPING IS IN SCOPE FOR CRITERION (a)(2) FLOODING. ALL OTHER COMPONENTS ON THIS DRAWING ARE LOCATED IN BUILDINGS THAT DO NOT HAVE LR INTENDED FUNCTION AND ARE NOT IN SCOPE.

COMPONENTS SUBJECT TO AMR  
 RED INDICATES COMPONENTS IN SCOPE PER 10CFR 54.4(a)(1) AND/OR (a)(3) AND SUBJECT TO AMR PER 10CFR 54.21.  
 BLACK INDICATES COMPONENTS NOT SUBJECT TO AMR.  
 GREEN INDICATES COMPONENTS IN SCOPE PER 10CFR 54.4(a)(2) AND SUBJECT TO AMR PER 10CFR 54.21.  
 ▲ PIPE ANCHOR  
 ◆ INDICATES SYSTEM BOUNDARY INTERFACE

NOTES:  
 1. WORK THIS DRAWING WITH DRAWINGS 28192, 28194 & 28196 THRU 28208.  
 2. ALL LINES, EQUIPMENT, COMPONENTS AND INSTRUMENTS HAVE SYSTEM PREFIX DF, UNLESS NOTED OTHERWISE.  
 3. ALL LINES, EQUIPMENT, COMPONENTS ARE SAFETY CLASS NNS, UNLESS NOTED OTHERWISE.  
 4. ▲ INDICATES REVISION LEVEL  
 5. COVER FOR TANK DF-TK-122 TO BE MADE OF POLY MATERIAL (OR EQUAL) TO DIRECT THE FLOW OF AIR INTO 5" DUCT ABOVE.  
 6. BLIND SPECTACLE PLATE PERMANENTLY INSTALLED.

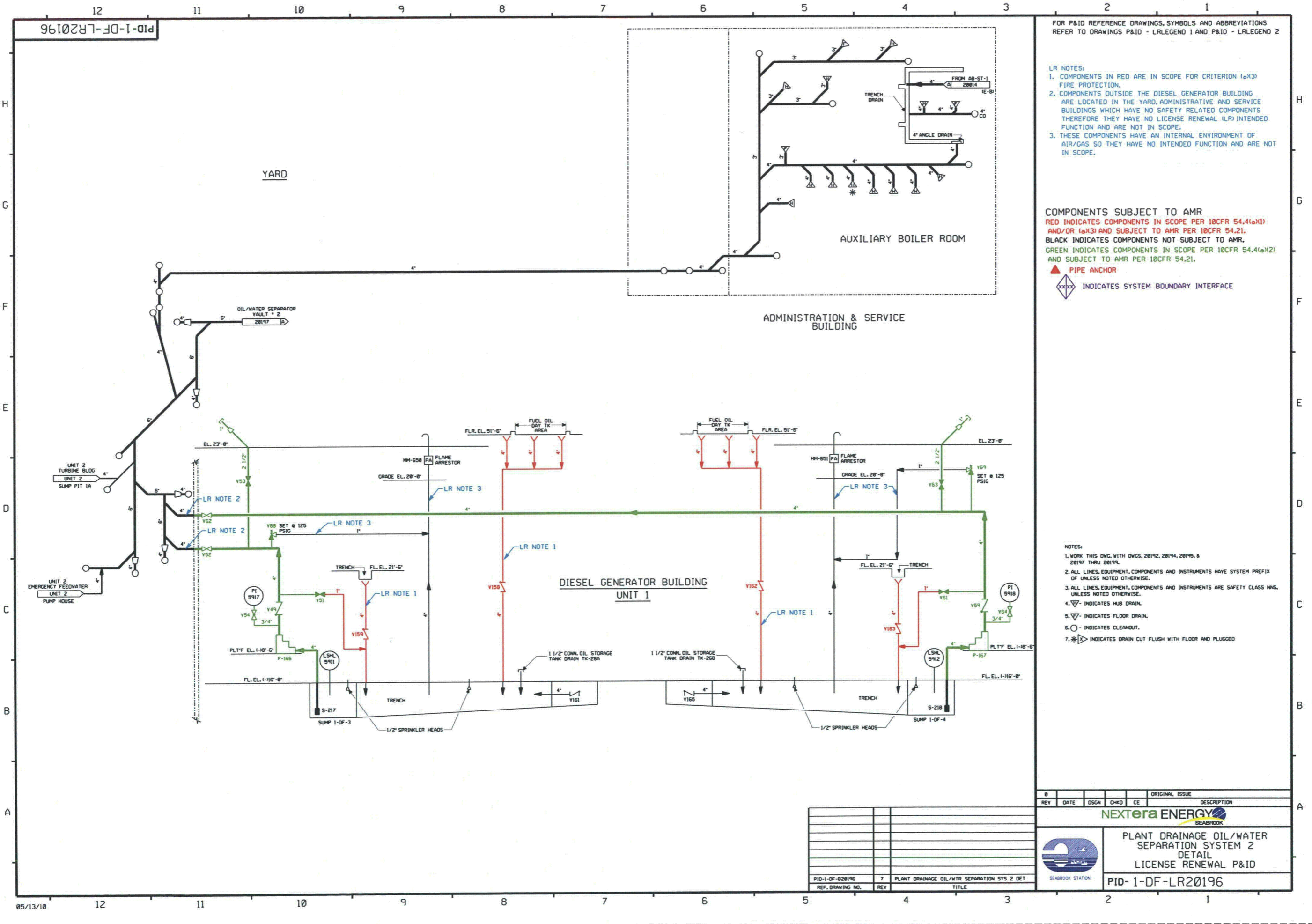
REV	DATE	DSGN	CHKD	CE	ORIGINAL ISSUE	DESCRIPTION



PLANT DRAINAGE OIL/WATER SEPARATION SYSTEM 1  
 DETAIL  
 LICENSE RENEWAL P&ID

PID-1-DF-LR20195

9610ZRL-DF-1-01d



FOR P&ID REFERENCE DRAWINGS, SYMBOLS AND ABBREVIATIONS REFER TO DRAWINGS P&ID - LRLEGEND 1 AND P&ID - LRLEGEND 2

- LR NOTES:
- COMPONENTS IN RED ARE IN SCOPE FOR CRITERION (a)(3) FIRE PROTECTION.
  - COMPONENTS OUTSIDE THE DIESEL GENERATOR BUILDING ARE LOCATED IN THE YARD, ADMINISTRATIVE AND SERVICE BUILDINGS WHICH HAVE NO SAFETY RELATED COMPONENTS THEREFORE THEY HAVE NO LICENSE RENEWAL (LR) INTENDED FUNCTION AND ARE NOT IN SCOPE.
  - THESE COMPONENTS HAVE AN INTERNAL ENVIRONMENT OF AIR/GAS SO THEY HAVE NO INTENDED FUNCTION AND ARE NOT IN SCOPE.

COMPONENTS SUBJECT TO AMR  
 RED INDICATES COMPONENTS IN SCOPE PER 10CFR 54.4(a)(1) AND/OR (a)(3) AND SUBJECT TO AMR PER 10CFR 54.21.  
 BLACK INDICATES COMPONENTS NOT SUBJECT TO AMR.  
 GREEN INDICATES COMPONENTS IN SCOPE PER 10CFR 54.4(a)(2) AND SUBJECT TO AMR PER 10CFR 54.21.

▲ PIPE ANCHOR  
 □□□□ INDICATES SYSTEM BOUNDARY INTERFACE

- NOTES:
- WORK THIS DWG. WITH DWGS. 20192, 20194, 20195, & 20197 THRU 20199.
  - ALL LINES, EQUIPMENT, COMPONENTS AND INSTRUMENTS HAVE SYSTEM PREFIX UNLESS NOTED OTHERWISE.
  - ALL LINES, EQUIPMENT, COMPONENTS AND INSTRUMENTS ARE SAFETY CLASS NMS, UNLESS NOTED OTHERWISE.
  - ▽ INDICATES HUB DRAIN.
  - ▽ INDICATES FLOOR DRAIN.
  - INDICATES CLEANOUT.
  - \* INDICATES DRAIN CUT FLUSH WITH FLOOR AND PLUGGED

REV	DATE	DSGN	CHKD	CE	ORIGINAL ISSUE	DESCRIPTION



PLANT DRAINAGE OIL/WATER SEPARATION SYSTEM 2 DETAIL  
 LICENSE RENEWAL P&ID  
 PID-1-DF-LR20196

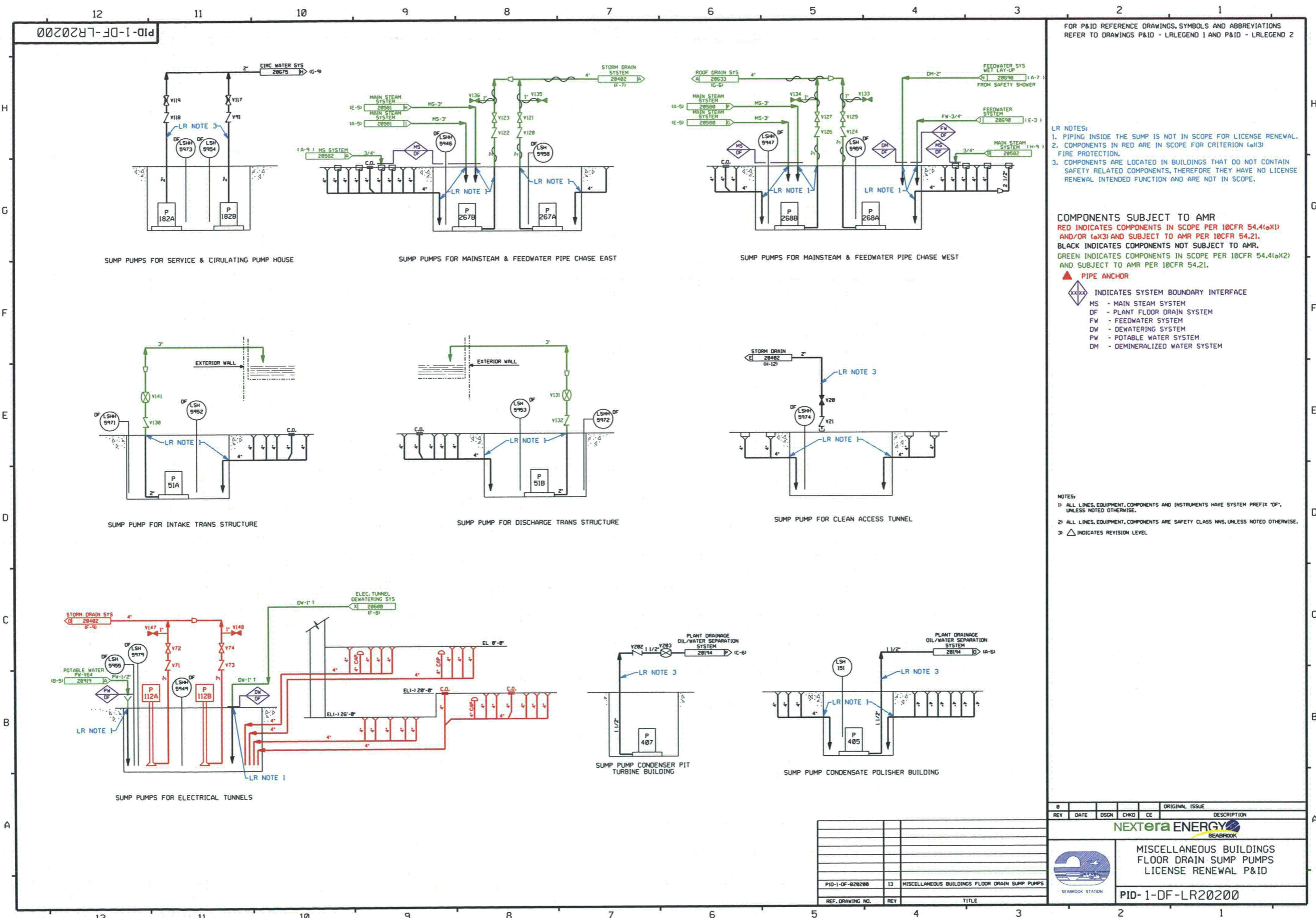
REV	DATE	DSGN	CHKD	CE	DESCRIPTION
7	05/13/10				PLANT DRAINAGE OIL/WTR SEPARATION SYS 2 DET



SEABROOK STATION

05/13/10

00702R7-DF-LR20200



FOR P&ID REFERENCE DRAWINGS, SYMBOLS AND ABBREVIATIONS REFER TO DRAWINGS P&ID - LRLEGEND 1 AND P&ID - LRLEGEND 2

- LR NOTES:
1. PIPING INSIDE THE SUMP IS NOT IN SCOPE FOR LICENSE RENEWAL.
  2. COMPONENTS IN RED ARE IN SCOPE FOR CRITERION (a)(3) FIRE PROTECTION.
  3. COMPONENTS ARE LOCATED IN BUILDINGS THAT DO NOT CONTAIN SAFETY RELATED COMPONENTS, THEREFORE THEY HAVE NO LICENSE RENEWAL INTENDED FUNCTION AND ARE NOT IN SCOPE.

COMPONENTS SUBJECT TO AMR  
 RED INDICATES COMPONENTS IN SCOPE PER 10CFR 54.4(a)(1) AND/OR (a)(3) AND SUBJECT TO AMR PER 10CFR 54.21.  
 BLACK INDICATES COMPONENTS NOT SUBJECT TO AMR.  
 GREEN INDICATES COMPONENTS IN SCOPE PER 10CFR 54.4(a)(2) AND SUBJECT TO AMR PER 10CFR 54.21.

- ▲ PIPE ANCHOR
- ◊ INDICATES SYSTEM BOUNDARY INTERFACE
- MS - MAIN STEAM SYSTEM
- DF - PLANT FLOOR DRAIN SYSTEM
- FW - FEEDWATER SYSTEM
- DM - DEWATERING SYSTEM
- PW - POTABLE WATER SYSTEM
- DM - DEMINERALIZED WATER SYSTEM

- NOTES:
- 1) ALL LINES, EQUIPMENT, COMPONENTS AND INSTRUMENTS HAVE SYSTEM PREFIX 'DF', UNLESS NOTED OTHERWISE.
  - 2) ALL LINES, EQUIPMENT, COMPONENTS ARE SAFETY CLASS MMS, UNLESS NOTED OTHERWISE.
  - 3) △ INDICATES REVISION LEVEL.

REV	DATE	DSGN	CHKD	CE	ORIGINAL ISSUE	DESCRIPTION



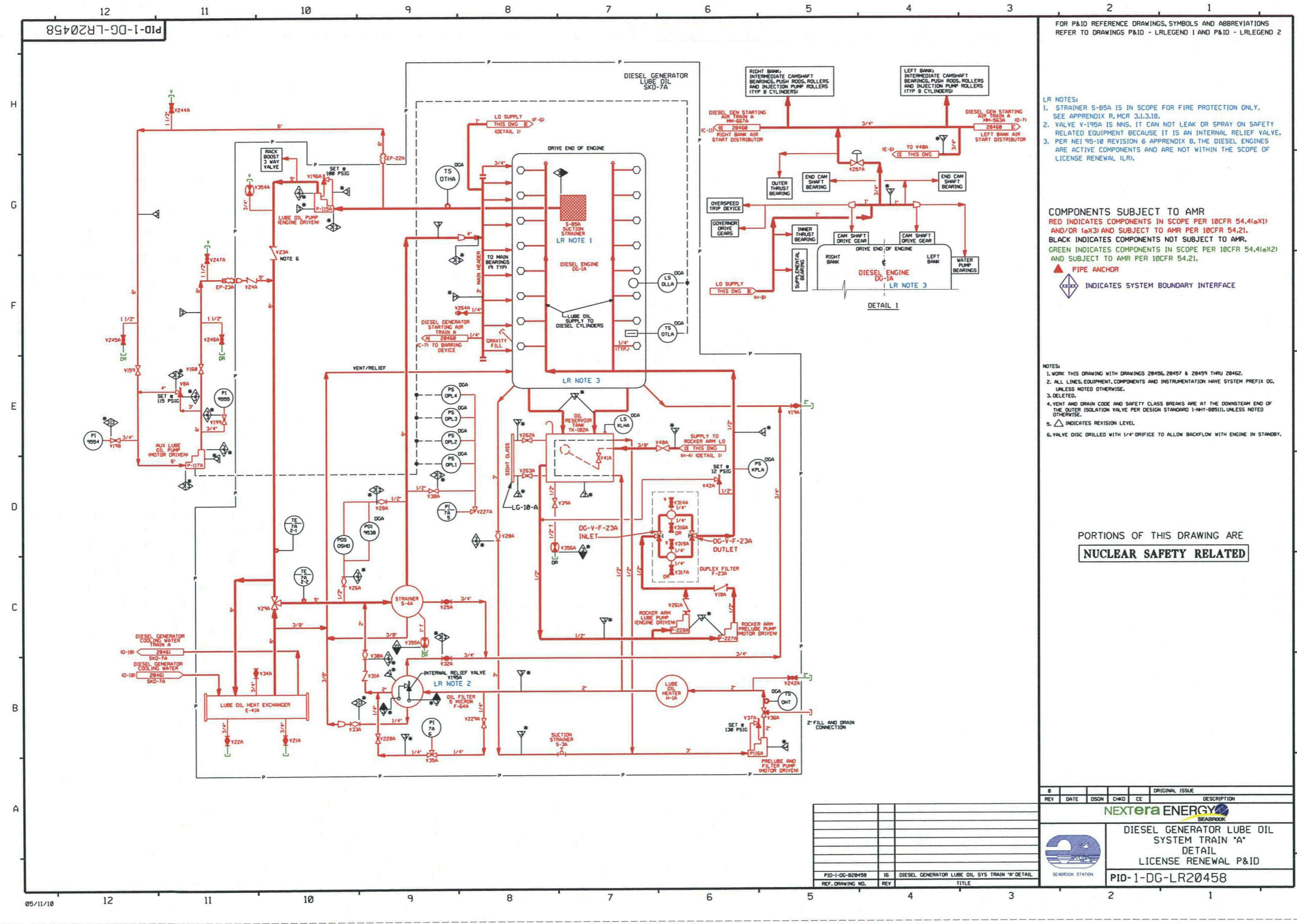
MISCELLANEOUS BUILDINGS FLOOR DRAIN SUMP PUMPS LICENSE RENEWAL P&ID  
 PID-1-DF-LR20200



REF. DRAWING NO.	REV	TITLE
PID-1-DF-020200	13	MISCELLANEOUS BUILDINGS FLOOR DRAIN SUMP PUMPS



PID-1-DG-LR20458



FOR P&ID REFERENCE DRAWINGS, SYMBOLS AND ABBREVIATIONS REFER TO DRAWINGS P&ID - LRLEGEND 1 AND P&ID - LRLEGEND 2

LR NOTES:  
 1. STRAINER S-85A IS IN SCOPE FOR FIRE PROTECTION ONLY. SEE APPENDIX R, MCR 3.1.3.18.  
 2. VALVE Y-195A IS MNS. IT CAN NOT LEAK OR SPRAY ON SAFETY RELATED EQUIPMENT BECAUSE IT IS AN INTERNAL RELIEF VALVE.  
 3. PER NEI 95-10 REVISION 6 APPENDIX B, THE DIESEL ENGINES ARE ACTIVE COMPONENTS AND ARE NOT WITHIN THE SCOPE OF LICENSE RENEWAL (LR).

COMPONENTS SUBJECT TO AMR  
 RED INDICATES COMPONENTS IN SCOPE PER 10CFR 54.4(a)(1) AND/OR (a)(3) AND SUBJECT TO AMR PER 10CFR 54.21.  
 BLACK INDICATES COMPONENTS NOT SUBJECT TO AMR.  
 GREEN INDICATES COMPONENTS IN SCOPE PER 10CFR 54.4(a)(2) AND SUBJECT TO AMR PER 10CFR 54.21.  
 ▲ PIPE ANCHOR  
 ◆◆◆◆ INDICATES SYSTEM BOUNDARY INTERFACE

NOTES:  
 1. WORK THIS DRAWING WITH DRAWINGS 20456, 20457 & 20459 THRU 20462.  
 2. ALL LINES, EQUIPMENT, COMPONENTS AND INSTRUMENTATION HAVE SYSTEM PREFIX DG, UNLESS NOTED OTHERWISE.  
 3. DELETED.  
 4. VENT AND DRAIN CODE AND SAFETY CLASS BREAKS ARE AT THE DOWNSTREAM END OF THE OUTER ISOLATION VALVE PER DESIGN STANDARD 1-NH-805111, UNLESS NOTED OTHERWISE.  
 5. ▲ INDICATES REVISION LEVEL  
 6. VALVE DISC DRILLED WITH 1/4" ORIFICE TO ALLOW BACKFLOW WITH ENGINE IN STANDBY.

PORTIONS OF THIS DRAWING ARE  
**NUCLEAR SAFETY RELATED**

REV	DATE	DSGN	CHKD	CE	DESCRIPTION

ORIGINAL ISSUE

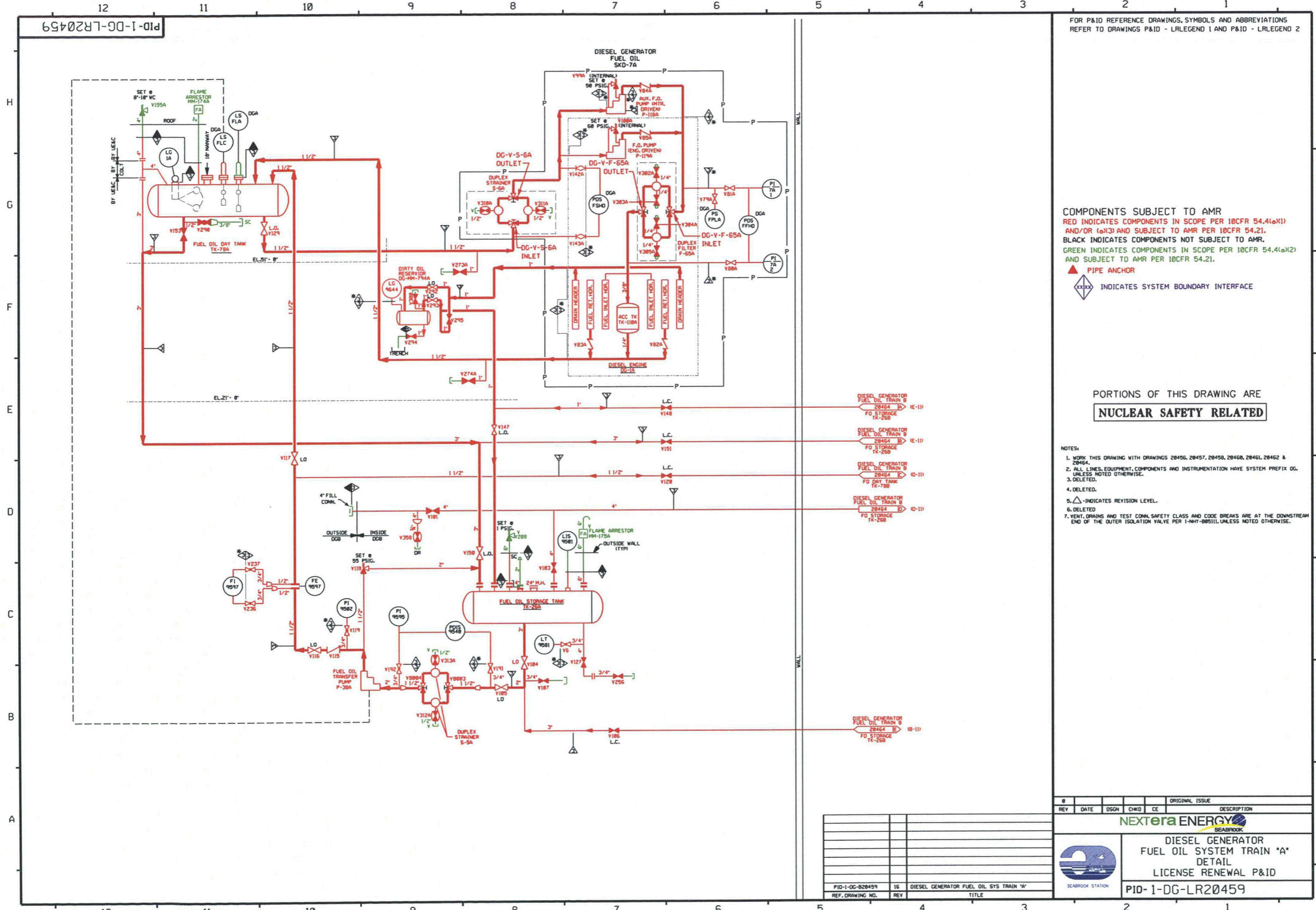
**NEXTERA ENERGY**  
SEABROOK

DIESEL GENERATOR LUBE OIL SYSTEM TRAIN 'A' DETAIL  
 LICENSE RENEWAL P&ID

PID-1-DG-LR20458

PID-1-DG-820458	16	DIESEL GENERATOR LUBE OIL SYS TRAIN 'A' DETAIL
REF. DRAWING NO.	REV	TITLE

PIID-1-DG-LR20459



FOR P&ID REFERENCE DRAWINGS, SYMBOLS AND ABBREVIATIONS REFER TO DRAWINGS P&ID - LRLEGEND 1 AND P&ID - LRLEGEND 2

COMPONENTS SUBJECT TO AMR  
 RED INDICATES COMPONENTS IN SCOPE PER 10CFR 54.4(a)(1) AND/OR (a)(3) AND SUBJECT TO AMR PER 10CFR 54.21.  
 BLACK INDICATES COMPONENTS NOT SUBJECT TO AMR.  
 GREEN INDICATES COMPONENTS IN SCOPE PER 10CFR 54.4(a)(2) AND SUBJECT TO AMR PER 10CFR 54.21.  
 ▲ PIPE ANCHOR  
 ◆ INDICATES SYSTEM BOUNDARY INTERFACE

PORTIONS OF THIS DRAWING ARE  
**NUCLEAR SAFETY RELATED**

- NOTES:
1. WORK THIS DRAWING WITH DRAWINGS 20456, 20457, 20458, 20460, 20461, 20462 & 20464.
  2. ALL LINES, EQUIPMENT, COMPONENTS AND INSTRUMENTATION HAVE SYSTEM PREFIX DG, UNLESS NOTED OTHERWISE.
  3. DELETED.
  4. DELETED.
  5. ▲ INDICATES REVISION LEVEL.
  6. DELETED.
  7. VENT, DRAINS AND TEST CONN. SAFETY CLASS AND CODE BREAKS ARE AT THE DOWNSTREAM END OF THE OUTER ISOLATION VALVE PER 1-NH7-805111, UNLESS NOTED OTHERWISE.

REV	DATE	DSGN	CHKD	CE	DESCRIPTION

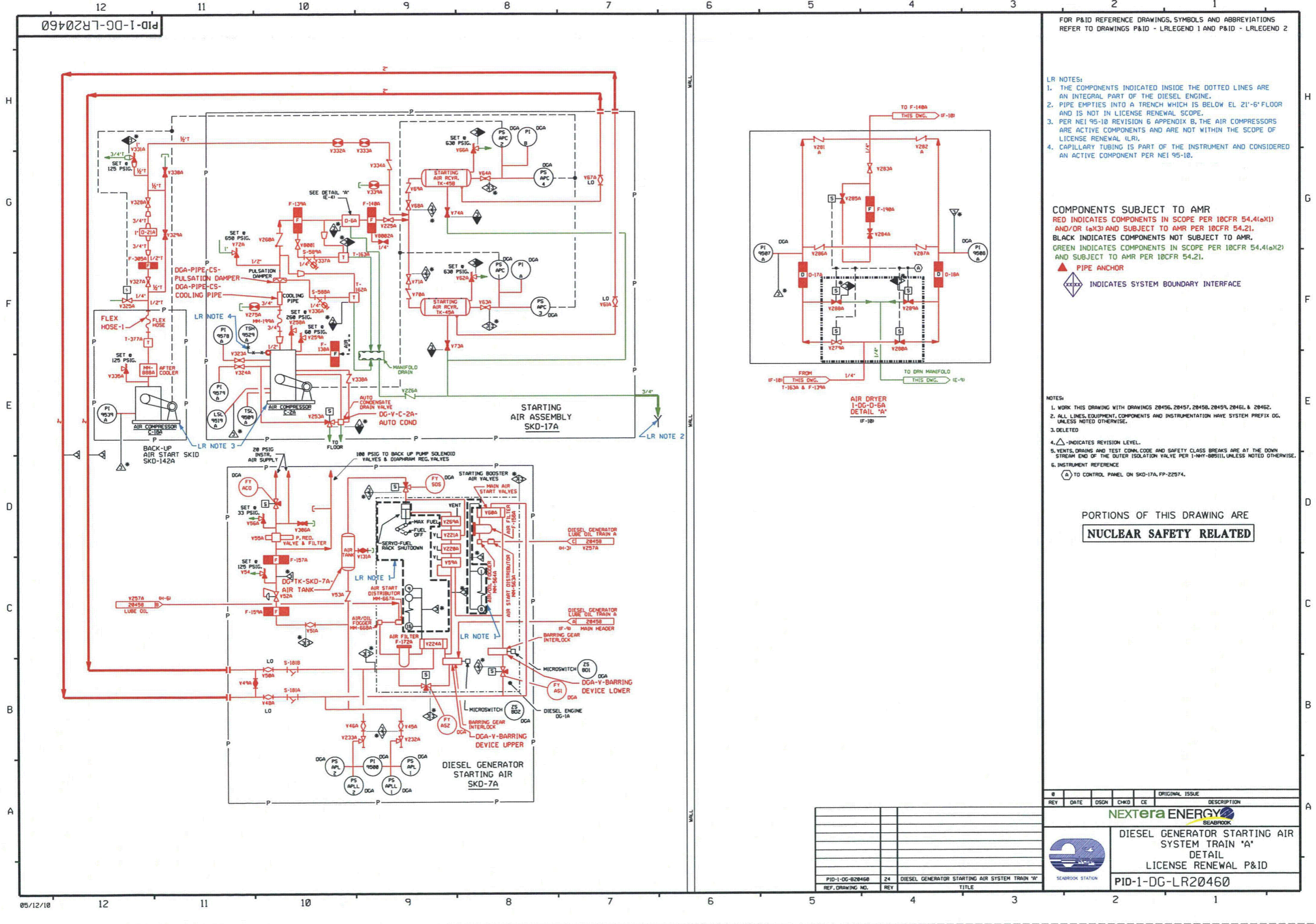
ORIGINAL ISSUE

**NEXTERA ENERGY**  
SEABROOK

DIESEL GENERATOR FUEL OIL SYSTEM TRAIN 'A' DETAIL  
 LICENSE RENEWAL P&ID

PIID-1-DG-LR20459

REF. DRAWING NO.	REV	TITLE
PIID-1-DG-820459	16	DIESEL GENERATOR FUEL OIL SYS TRAIN 'A'



FOR P&ID REFERENCE DRAWINGS, SYMBOLS AND ABBREVIATIONS REFER TO DRAWINGS P&ID - LRLEGEND 1 AND P&ID - LRLEGEND 2

- LR NOTES:
1. THE COMPONENTS INDICATED INSIDE THE DOTTED LINES ARE AN INTEGRAL PART OF THE DIESEL ENGINE.
  2. PIPE EMPTIES INTO A TRENCH WHICH IS BELOW EL 21'-6" FLOOR AND IS NOT IN LICENSE RENEWAL SCOPE.
  3. PER NEI 95-10 REVISION 6 APPENDIX B, THE AIR COMPRESSORS ARE ACTIVE COMPONENTS AND ARE NOT WITHIN THE SCOPE OF LICENSE RENEWAL (LR).
  4. CAPILLARY TUBING IS PART OF THE INSTRUMENT AND CONSIDERED AN ACTIVE COMPONENT PER NEI 95-10.

COMPONENTS SUBJECT TO AMR  
 RED INDICATES COMPONENTS IN SCOPE PER 10CFR 54.4(a)(1) AND/OR (a)(3) AND SUBJECT TO AMR PER 10CFR 54.21.  
 BLACK INDICATES COMPONENTS NOT SUBJECT TO AMR.  
 GREEN INDICATES COMPONENTS IN SCOPE PER 10CFR 54.4(a)(2) AND SUBJECT TO AMR PER 10CFR 54.21.

▲ PIPE ANCHOR  
 ◆ INDICATES SYSTEM BOUNDARY INTERFACE

- NOTES:
1. WORK THIS DRAWING WITH DRAWINGS 20456, 20457, 20458, 20459, 20461, & 20462.
  2. ALL LINES, EQUIPMENT, COMPONENTS AND INSTRUMENTATION HAVE SYSTEM PREFIX DGA, UNLESS NOTED OTHERWISE.
  3. DELETED
  4. △ INDICATES REVISION LEVEL.
  5. YENTS, DRAINS AND TEST CONN. CODE AND SAFETY CLASS BREAKS ARE AT THE DOWN STREAM END OF THE OUTER ISOLATION VALVE PER 1-NHY-885111, UNLESS NOTED OTHERWISE.
  6. INSTRUMENT REFERENCE (A) TO CONTROL PANEL ON SKD-17A, FP-22574.

PORTIONS OF THIS DRAWING ARE  
**NUCLEAR SAFETY RELATED**

REV	DATE	DSGN	CHKD	CE	ORIGINAL ISSUE	DESCRIPTION

**NEXTERA ENERGY**  
SEABROOK

**DIESEL GENERATOR STARTING AIR SYSTEM TRAIN 'A'  
 DETAIL  
 LICENSE RENEWAL P&ID**

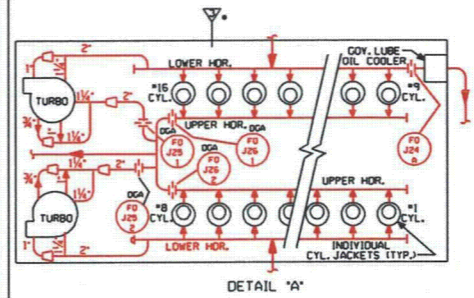
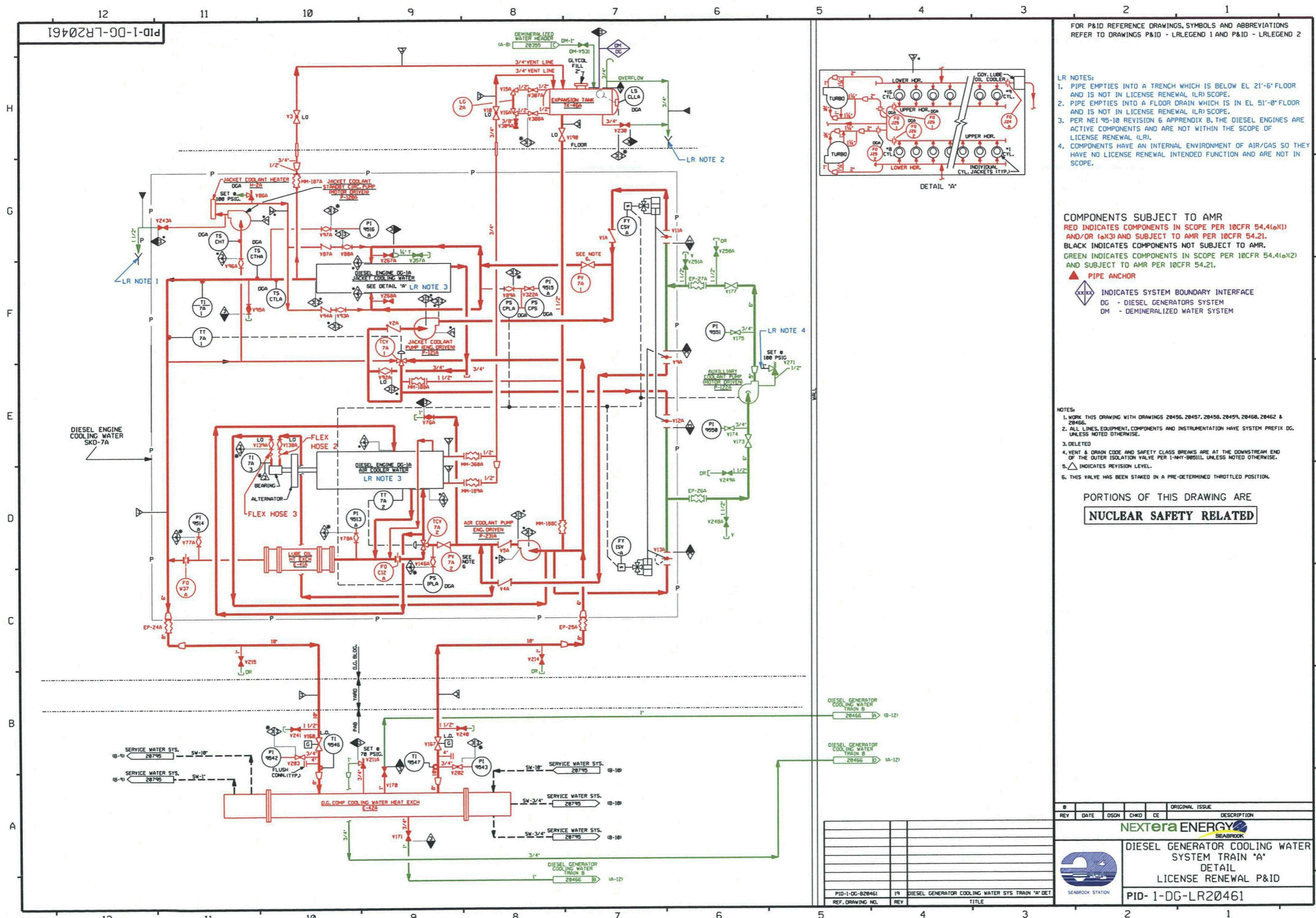
PID-1-DG-LR20460



SEABROOK STATION

PID-1-DG-820460	24	DIESEL GENERATOR STARTING AIR SYSTEM TRAIN 'A'
REF. DRAWING NO.	REV	TITLE

PID-1-DG-LR20461



FOR P&ID REFERENCE DRAWINGS, SYMBOLS AND ABBREVIATIONS REFER TO DRAWINGS P&ID - LRLEGEND 1 AND P&ID - LRLEGEND 2

LR NOTES:

- PIPE EMPTIES INTO A TRENCH WHICH IS BELOW EL 21'-6" FLOOR AND IS NOT IN LICENSE RENEWAL (LR) SCOPE.
- PIPE EMPTIES INTO A FLOOR DRAIN WHICH IS IN EL 51'-8" FLOOR AND IS NOT IN LICENSE RENEWAL (LR) SCOPE.
- PER NEI '95-10 REVISION 6 APPENDIX B, THE DIESEL ENGINES ARE ACTIVE COMPONENTS AND ARE NOT WITHIN THE SCOPE OF LICENSE RENEWAL (LR).
- COMPONENTS HAVE AN INTERNAL ENVIRONMENT OF AIR/GAS SO THEY HAVE NO LICENSE RENEWAL INTENDED FUNCTION AND ARE NOT IN SCOPE.

COMPONENTS SUBJECT TO AMR

RED INDICATES COMPONENTS IN SCOPE PER 10CFR 54.41(a)(1) AND/OR (a)(3) AND SUBJECT TO AMR PER 10CFR 54.21.

BLACK INDICATES COMPONENTS NOT SUBJECT TO AMR.

GREEN INDICATES COMPONENTS IN SCOPE PER 10CFR 54.41(a)(2) AND SUBJECT TO AMR PER 10CFR 54.21.

▲ PIPE ANCHOR

◇ INDICATES SYSTEM BOUNDARY INTERFACE

DC - DIESEL GENERATORS SYSTEM

DM - DEMINERALIZED WATER SYSTEM

NOTES:

- WORK THIS DRAWING WITH DRAWINGS 20456, 20457, 20458, 20459, 20460, 20462 & 20466.
- ALL LINES, EQUIPMENT, COMPONENTS AND INSTRUMENTATION HAVE SYSTEM PREFIX DC, UNLESS NOTED OTHERWISE.
- DELETED
- VENT & DRAIN CODE AND SAFETY CLASS BREAKS ARE AT THE DOWNSTREAM END OF THE OUTER ISOLATION VALVE PER 1-NHY-080111, UNLESS NOTED OTHERWISE.
- △ INDICATES REVISION LEVEL.
- THIS VALVE HAS BEEN STAKED IN A PRE-DETERMINED THROTTLED POSITION.

PORTIONS OF THIS DRAWING ARE

**NUCLEAR SAFETY RELATED**

REV	DATE	DSGN	CHKD	CE	DESCRIPTION
0					ORIGINAL ISSUE

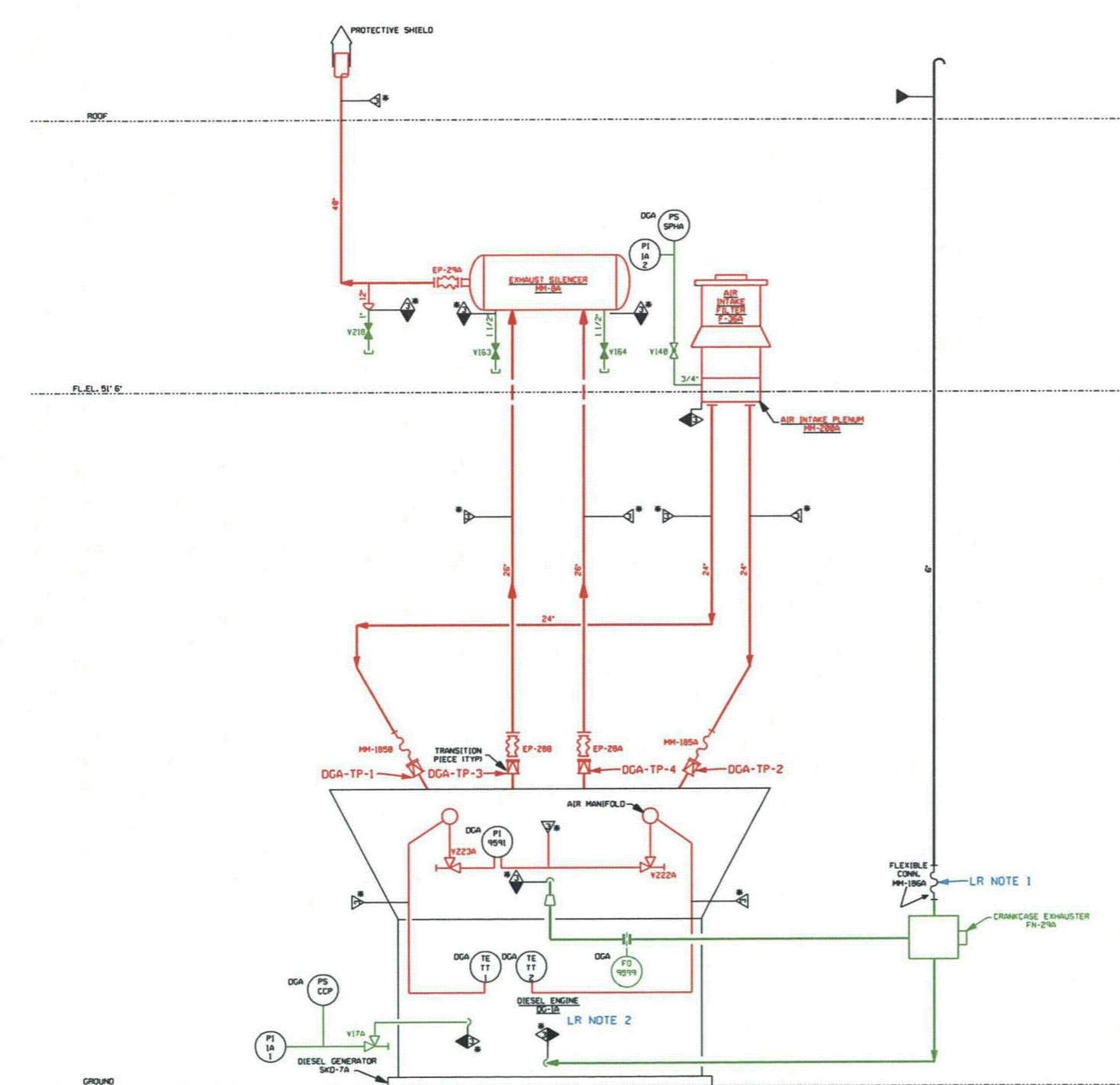
**DIESEL GENERATOR COOLING WATER SYSTEM TRAIN 'A'**  
 DETAIL  
 LICENSE RENEWAL P&ID  
 PID-1-DG-LR20461

PID-1-DG-LR20462

FOR P&ID REFERENCE DRAWINGS, SYMBOLS AND ABBREVIATIONS REFER TO DRAWINGS P&ID - LRLEGEND 1 AND P&ID - LRLEGEND 2

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- LR NOTES:
1. THE PIPE IS NOT IN LICENSE RENEWAL (LR) SCOPE BECAUSE IT IS DECOUPLED FROM THE SYSTEM BY THE FLEXIBLE CONNECTION.
  2. PER NEI 95-10 REVISION 6 APPENDIX B, THE DIESEL ENGINES ARE ACTIVE COMPONENTS AND ARE NOT WITHIN THE SCOPE OF LICENSE RENEWAL (LR).

**COMPONENTS SUBJECT TO AMR**  
 RED INDICATES COMPONENTS IN SCOPE PER 10CFR 54.4(a)(1) AND/OR (a)(3) AND SUBJECT TO AMR PER 10CFR 54.21.  
 BLACK INDICATES COMPONENTS NOT SUBJECT TO AMR.  
 GREEN INDICATES COMPONENTS IN SCOPE PER 10CFR 54.4(a)(2) AND SUBJECT TO AMR PER 10CFR 54.21.

▲ PIPE ANCHOR  
 ◆ INDICATES SYSTEM BOUNDARY INTERFACE

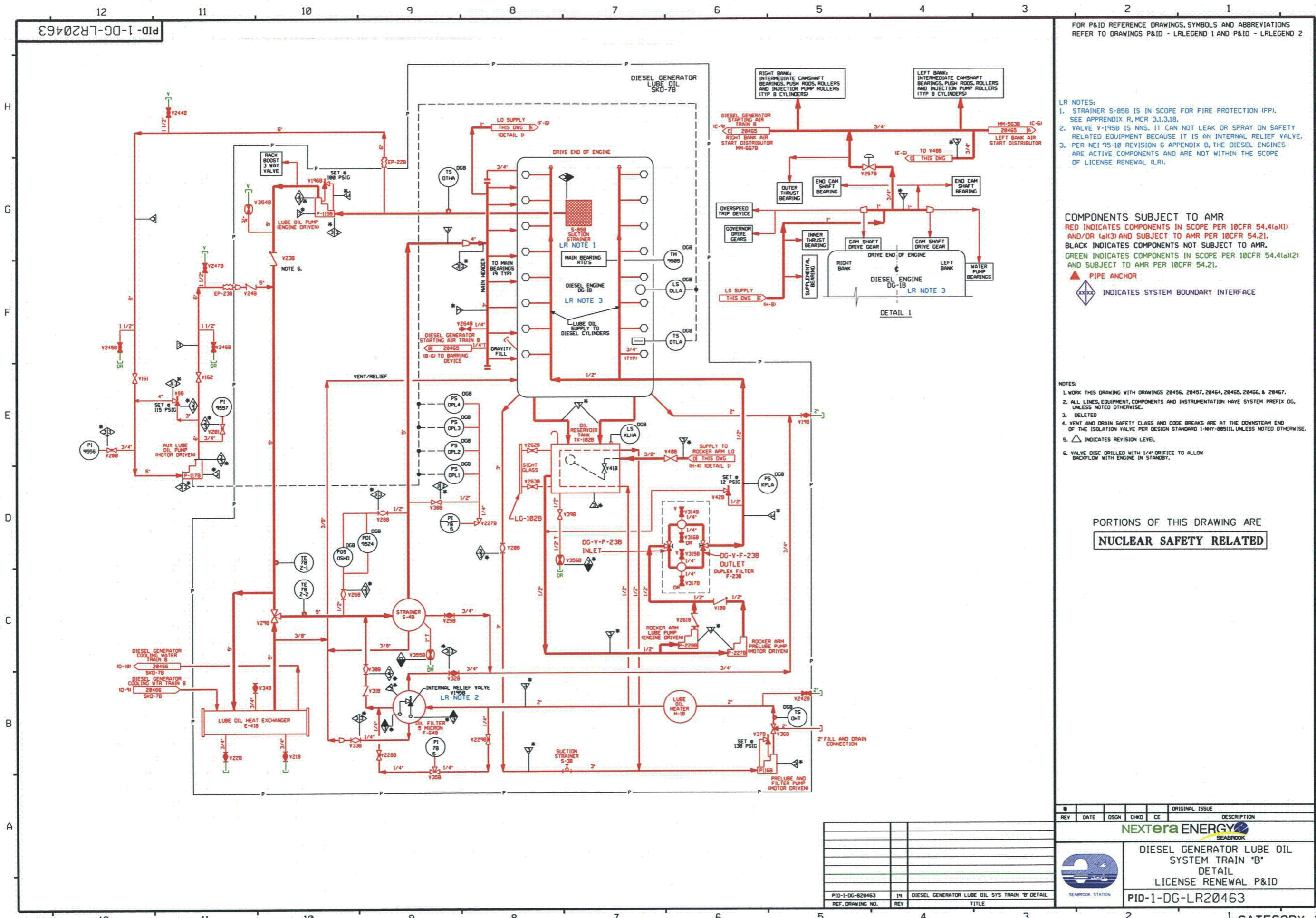
PORTIONS OF THIS DRAWING ARE  
**NUCLEAR SAFETY RELATED**

- NOTES:
1. WORK THIS DRAWING WITH DRAWINGS 20456, 20457, 20458, 20459, 20468, & 20461.
  2. ALL LINES, EQUIPMENT, COMPONENTS AND INSTRUMENTATION HAVE SYSTEM PREFIX DG, UNLESS OTHERWISE NOTED.
  3. DELETED
  4. VENT AND DRAIN CODE AND SAFETY CLASS BREAKS ARE AT THE DOWNSTREAM END OF THE OUTER ISOLATION VALVE PER DESIGN STANDARD I-NH-885111, UNLESS NOTED OTHERWISE.
  5. △ INDICATES REVISION LEVEL

REV	DATE	DSGN	CHKD	CE	DESCRIPTION
0					ORIGINAL ISSUE
<b>DIESEL GENERATOR INTAKE, EXHAUST &amp; CRANKCASE VACUUM SYSTEM TRAIN "A" DETAIL</b> LICENSE RENEWAL P&ID					
PID-1-DG-LR20462					

REF. DRAWING NO.	REV	TITLE
PID-1-DG-820462	6	DIESEL GEN INTK, EXHST & CRANKCASE VAC SYS TRAIN A

PID-1-DG-LR20463



FOR P&ID REFERENCE DRAWINGS, SYMBOLS AND ABBREVIATIONS REFER TO DRAWINGS P&ID - LRLEGEND 1 AND P&ID - LRLEGEND 2

LR NOTES:  
 1. STRAINER S-85B IS IN SCOPE FOR FIRE PROTECTION (FP). SEE APPENDIX R, MCR 3.1.3.18.  
 2. VALVE V-195B IS NNS. IT CAN NOT LEAK OR SPRAY ON SAFETY RELATED EQUIPMENT BECAUSE IT IS AN INTERNAL RELIEF VALVE.  
 3. PER NEI 95-10 REVISION 6 APPENDIX B, THE DIESEL ENGINES ARE ACTIVE COMPONENTS AND ARE NOT WITHIN THE SCOPE OF LICENSE RENEWAL (LR).

COMPONENTS SUBJECT TO AMR  
 RED INDICATES COMPONENTS IN SCOPE PER 10CFR 54.4(a)(1) AND/OR (a)(3) AND SUBJECT TO AMR PER 10CFR 54.21.  
 BLACK INDICATES COMPONENTS NOT SUBJECT TO AMR.  
 GREEN INDICATES COMPONENTS IN SCOPE PER 10CFR 54.4(a)(2) AND SUBJECT TO AMR PER 10CFR 54.21.

▲ PIPE ANCHOR  
 ◊ INDICATES SYSTEM BOUNDARY INTERFACE

NOTES:  
 1. WORK THIS DRAWING WITH DRAWINGS 20456, 20457, 20464, 20465, 20466, & 20467.  
 2. ALL LINES, EQUIPMENT, COMPONENTS AND INSTRUMENTATION HAVE SYSTEM PREFIX DG, UNLESS NOTED OTHERWISE.  
 3. DELETED  
 4. VENT AND DRAIN SAFETY CLASS AND CODE BREAKS ARE AT THE DOWNSTREAM END OF THE ISOLATION VALVE PER DESIGN STANDARD I-WM-885111 UNLESS NOTED OTHERWISE.  
 5. △ INDICATES REVISION LEVEL  
 6. VALVE DISC DRILLED WITH 1/4" DRIFTE TO ALLOW BACKFLOW WITH ENGINE IN STANDBY.

PORTIONS OF THIS DRAWING ARE  
**NUCLEAR SAFETY RELATED**

REV	DATE	DSGN	CHKD	CE	DESCRIPTION

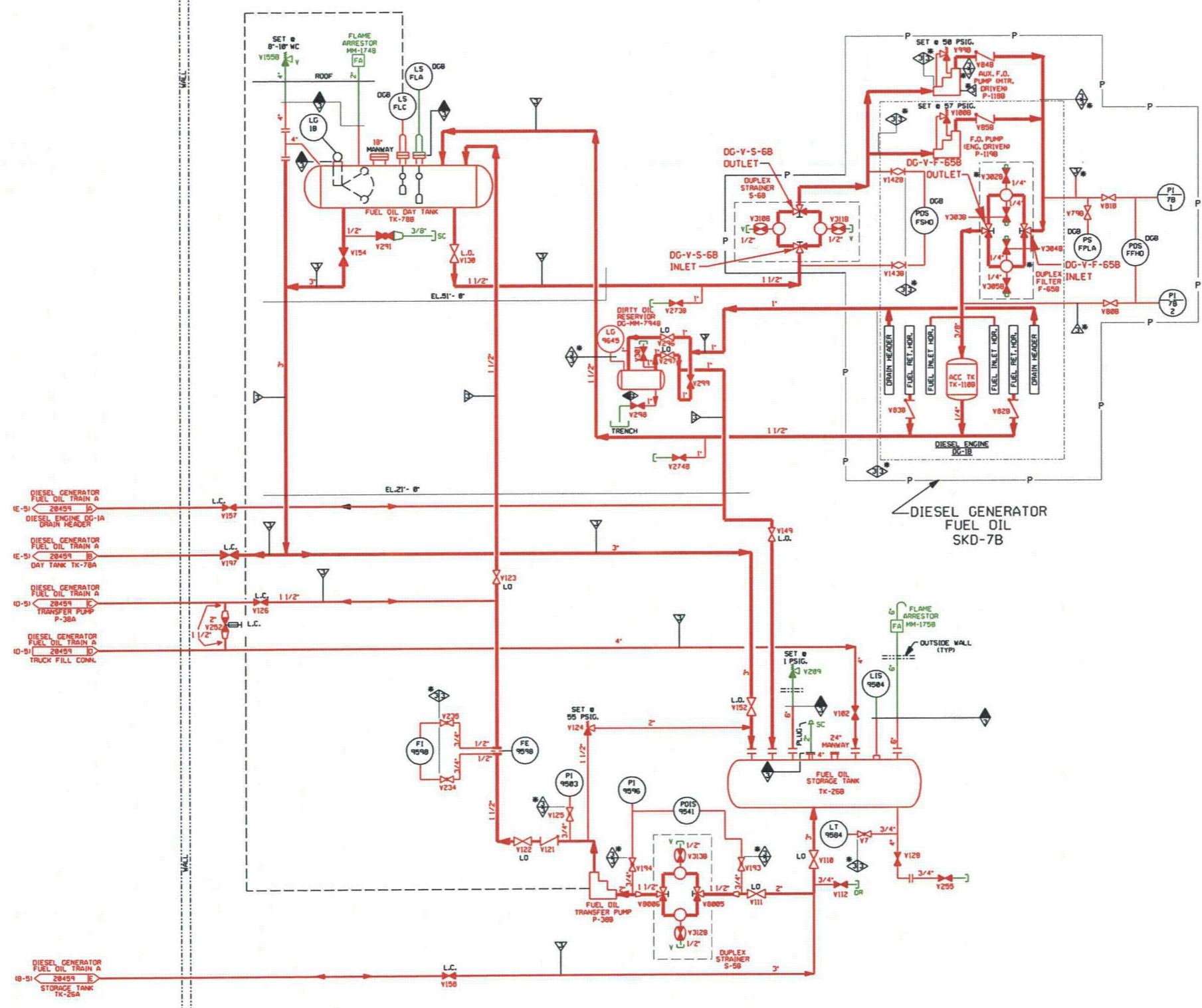
**NEXTERA ENERGY**  
SEABROOK

**DIESEL GENERATOR LUBE OIL SYSTEM TRAIN 'B' DETAIL LICENSE RENEWAL P&ID**

PID-1-DG-LR20463

REF. DRAWING NO.	REV	TITLE
PID-1-DG-S20463	19	DIESEL GENERATOR LUBE OIL SYS TRAIN 'B' DETAIL

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COMPONENTS SUBJECT TO AMR  
 RED INDICATES COMPONENTS IN SCOPE PER 10CFR 54.4(a)(1) AND/OR (a)(3) AND SUBJECT TO AMR PER 10CFR 54.21.  
 BLACK INDICATES COMPONENTS NOT SUBJECT TO AMR.  
 GREEN INDICATES COMPONENTS IN SCOPE PER 10CFR 54.4(a)(2) AND SUBJECT TO AMR PER 10CFR 54.21.  
 ▲ PIPE ANCHOR  
 ◊ INDICATES SYSTEM BOUNDARY INTERFACE

PORTIONS OF THIS DRAWING ARE  
**NUCLEAR SAFETY RELATED**

- NOTES:  
 1. WORK THIS DRAWING WITH DRAWINGS 20456, 20457, 20459, 20463, 20465, 20466 & 20467.  
 2. ALL LINES, EQUIPMENT, COMPONENTS AND INSTRUMENTATION HAVE SYSTEM PREFIX DG, UNLESS NOTED OTHERWISE.  
 3. DELETED.  
 4. DELETED.  
 5. ▲ INDICATES REVISION LEVEL.  
 6. VENT, DRAINS AND TEST CONNECTION SAFETY CLASS AND CODE BREAKS ARE AT THE DOWNSTREAM END OF THE OUTER ISOLATION VALVE PER I-NM-985111, UNLESS NOTED OTHERWISE.

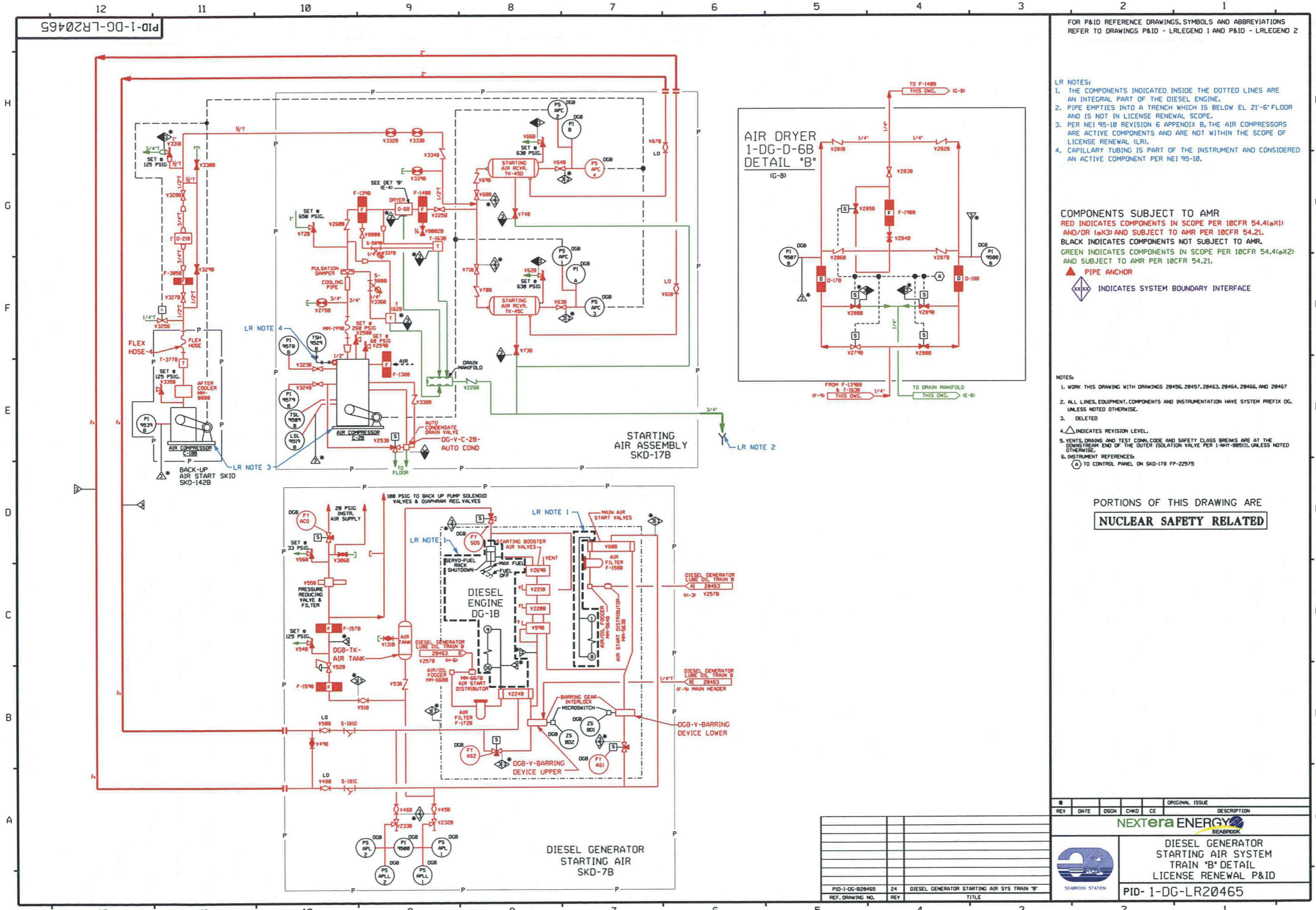
REV	DATE	DSGN	CHKD	CE	ORIGINAL ISSUE	DESCRIPTION

**NEXTERA ENERGY**  
SEABROOK

**DIESEL GENERATOR FUEL OIL SYSTEM 'B' DETAIL**  
LICENSE RENEWAL P&ID

PID-1-DG-LR20464

PID-1-DG-B20464	18	DIESEL GENERATOR FUEL OIL SYS TRAIN 'B'
REF. DRAWING NO.	REV	TITLE



FOR P&ID REFERENCE DRAWINGS, SYMBOLS AND ABBREVIATIONS REFER TO DRAWINGS P&ID - LRLEGEND 1 AND P&ID - LRLEGEND 2

- LR NOTES:
1. THE COMPONENTS INDICATED INSIDE THE DOTTED LINES ARE AN INTEGRAL PART OF THE DIESEL ENGINE.
  2. PIPE EMPTIES INTO A TRENCH WHICH IS BELOW EL 21'-6" FLOOR AND IS NOT IN LICENSE RENEWAL SCOPE.
  3. PER NEI 95-10 REVISION 6 APPENDIX B, THE AIR COMPRESSORS ARE ACTIVE COMPONENTS AND ARE NOT WITHIN THE SCOPE OF LICENSE RENEWAL (LR).
  4. CAPILLARY TUBING IS PART OF THE INSTRUMENT AND CONSIDERED AN ACTIVE COMPONENT PER NEI 95-10.

COMPONENTS SUBJECT TO AMR  
 RED INDICATES COMPONENTS IN SCOPE PER 10CFR 54.4(a)(1) AND/OR (a)(3) AND SUBJECT TO AMR PER 10CFR 54.21.  
 BLACK INDICATES COMPONENTS NOT SUBJECT TO AMR.  
 GREEN INDICATES COMPONENTS IN SCOPE PER 10CFR 54.4(a)(2) AND SUBJECT TO AMR PER 10CFR 54.21.

▲ PIPE ANCHOR  
 ◆◆◆◆ INDICATES SYSTEM BOUNDARY INTERFACE

- NOTES:
1. WORK THIS DRAWING WITH DRAWINGS 20456, 20457, 20453, 20464, 20466, AND 20467
  2. ALL LINES, EQUIPMENT, COMPONENTS AND INSTRUMENTATION HAVE SYSTEM PREFIX DG, UNLESS NOTED OTHERWISE.
  3. DELETED
  4. △ INDICATES REVISION LEVEL.
  5. VENTS, DRAINS AND TEST CONNECTIONS AND SAFETY CLASS BREAKS ARE AT THE DOWNSTREAM END OF THE OUTER ISOLATION VALVE PER 1-MHY-005111, UNLESS NOTED OTHERWISE.
  6. INSTRUMENT REFERENCES:  
 (A) TO CONTROL PANEL ON SKD-17B FP-22575

PORTIONS OF THIS DRAWING ARE  
**NUCLEAR SAFETY RELATED**

REV	DATE	DSGN	CHKD	CE	DESCRIPTION

ORIGINAL ISSUE

**NEXTERA ENERGY**  
SEABROOK

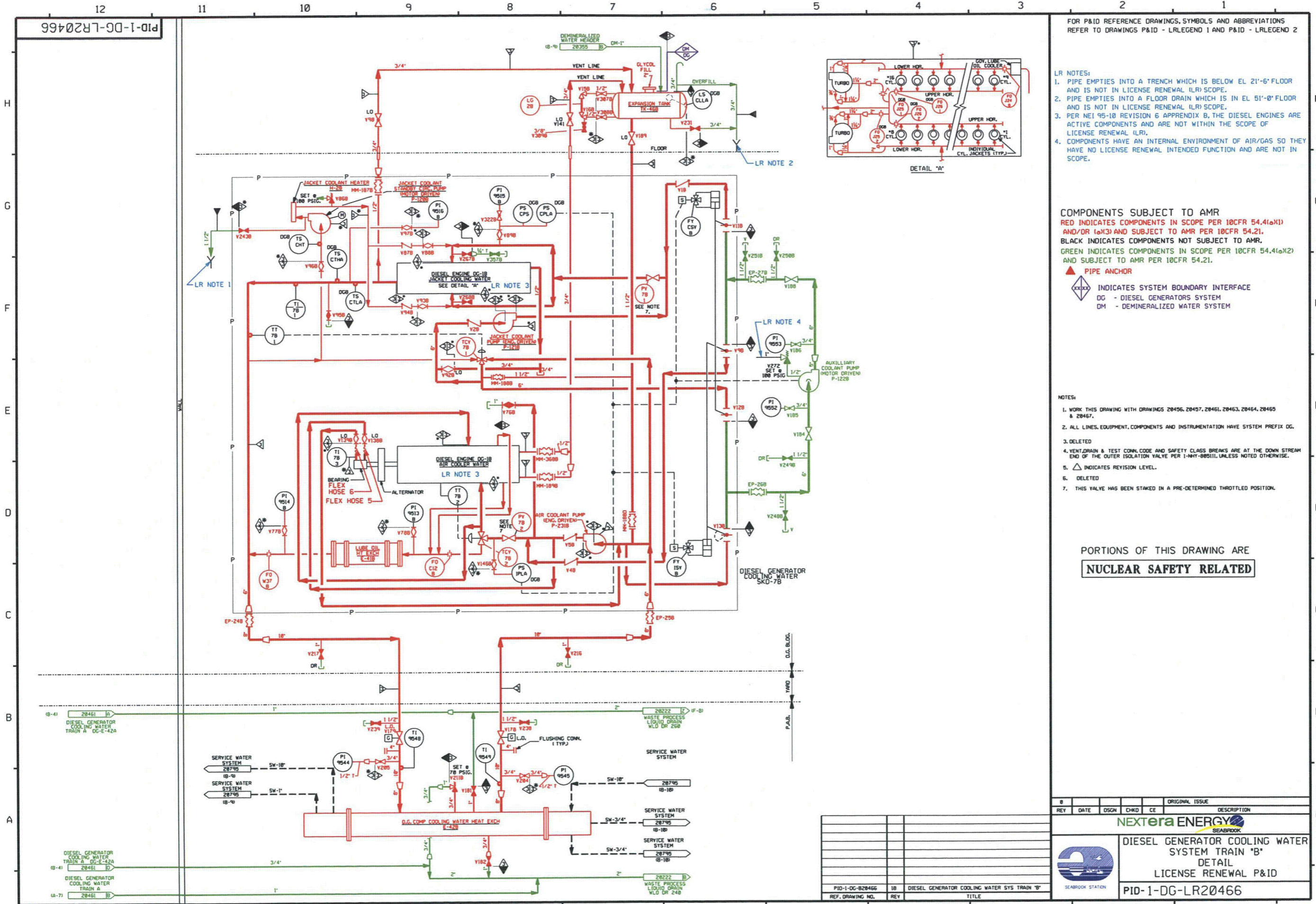
DIESEL GENERATOR STARTING AIR SYSTEM TRAIN "B" DETAIL LICENSE RENEWAL P&ID

PID-1-DG-LR20465

REF. DRAWING NO.	REV	TITLE
PID-1-DG-20465	24	DIESEL GENERATOR STARTING AIR SYS TRAIN "B"







FOR P&ID REFERENCE DRAWINGS, SYMBOLS AND ABBREVIATIONS REFER TO DRAWINGS P&ID - LRLEGEND 1 AND P&ID - LRLEGEND 2

- LR NOTES:
1. PIPE EMPTIES INTO A TRENCH WHICH IS BELOW EL 21'-6" FLOOR AND IS NOT IN LICENSE RENEWAL (LR) SCOPE.
  2. PIPE EMPTIES INTO A FLOOR DRAIN WHICH IS IN EL 51'-0" FLOOR AND IS NOT IN LICENSE RENEWAL (LR) SCOPE.
  3. PER NEI 95-10 REVISION 6 APPENDIX B, THE DIESEL ENGINES ARE ACTIVE COMPONENTS AND ARE NOT WITHIN THE SCOPE OF LICENSE RENEWAL (LR).
  4. COMPONENTS HAVE AN INTERNAL ENVIRONMENT OF AIR/GAS SO THEY HAVE NO LICENSE RENEWAL INTENDED FUNCTION AND ARE NOT IN SCOPE.

**COMPONENTS SUBJECT TO AMR**  
 RED INDICATES COMPONENTS IN SCOPE PER 10CFR 54.4(a)(1) AND/OR (a)(3) AND SUBJECT TO AMR PER 10CFR 54.21.  
 BLACK INDICATES COMPONENTS NOT SUBJECT TO AMR.  
 GREEN INDICATES COMPONENTS IN SCOPE PER 10CFR 54.4(a)(2) AND SUBJECT TO AMR PER 10CFR 54.21.

- ▲ PIPE ANCHOR  
 ◆ INDICATES SYSTEM BOUNDARY INTERFACE  
 DG - DIESEL GENERATORS SYSTEM  
 DM - DEMINERALIZED WATER SYSTEM

- NOTES:
1. WORK THIS DRAWING WITH DRAWINGS 20456, 20457, 20461, 20463, 20464, 20465 & 20467.
  2. ALL LINES, EQUIPMENT, COMPONENTS AND INSTRUMENTATION HAVE SYSTEM PREFIX DG.
  3. DELETED
  4. VENT, DRAIN & TEST CONN. CODE AND SAFETY CLASS BREAKS ARE AT THE DOWN STREAM END OF THE OUTER ISOLATION VALVE PER I-MY-000111, UNLESS NOTED OTHERWISE.
  5. △ INDICATES REVISION LEVEL.
  6. DELETED
  7. THIS VALVE HAS BEEN STAKED IN A PRE-DETERMINED THROTTLED POSITION.

PORTIONS OF THIS DRAWING ARE  
**NUCLEAR SAFETY RELATED**

REV	DATE	DSGN	CHKD	CE	ORIGINAL ISSUE	DESCRIPTION

**SEABROOK STATION**  
**NEXTERA ENERGY SEABROOK**  
 DIESEL GENERATOR COOLING WATER SYSTEM TRAIN 'B'  
 DETAIL  
 LICENSE RENEWAL P&ID  
 PID-1-DG-LR20466

PID-1-DG-LR20467

FOR P&ID REFERENCE DRAWINGS, SYMBOLS AND ABBREVIATIONS REFER TO DRAWINGS P&ID - LRLEGEND 1 AND P&ID - LRLEGEND 2

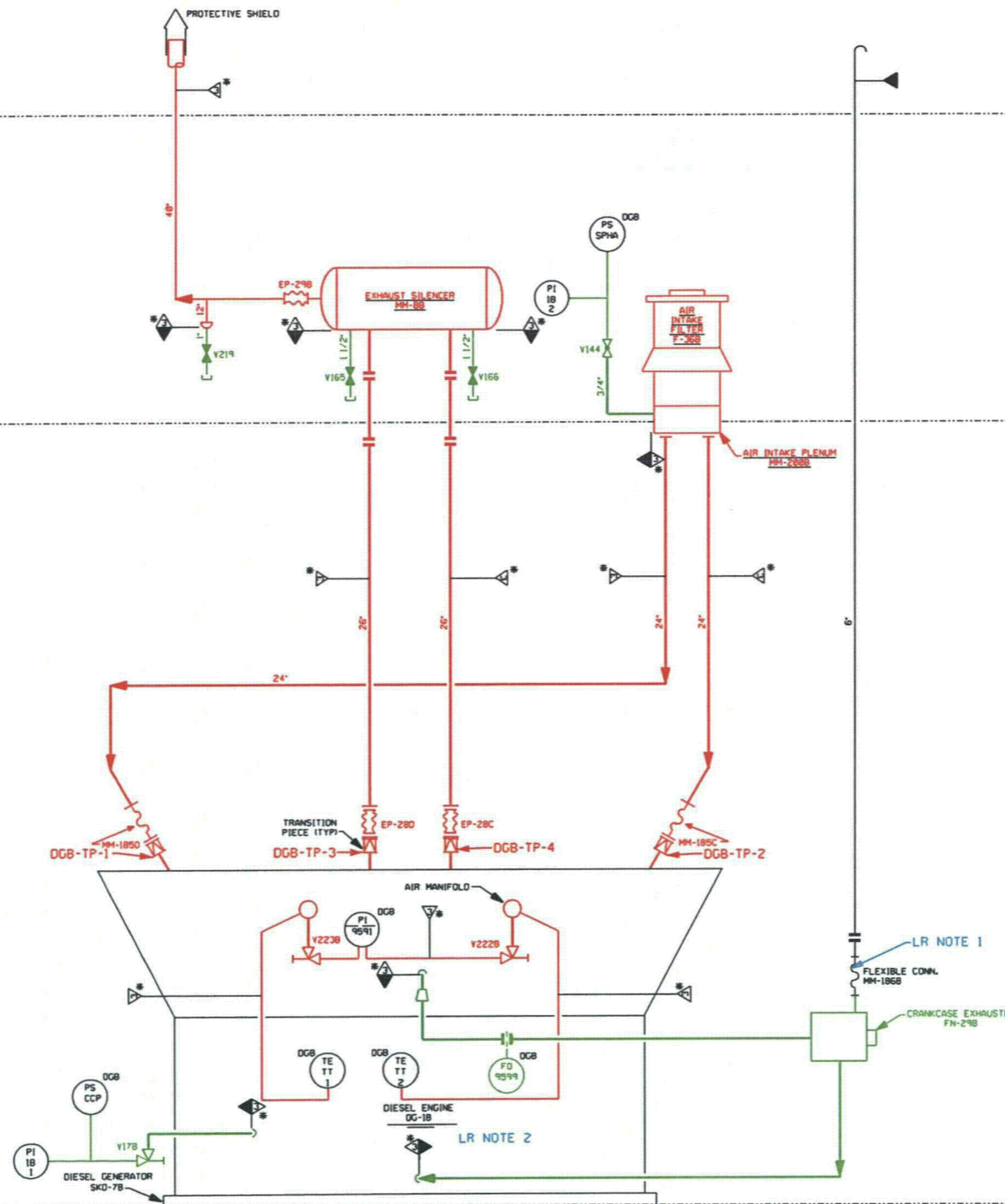
- LR NOTES:
1. THE PIPE IS NOT IN LICENSE RENEWAL (LR) SCOPE BECAUSE IT IS DECOUPLED FROM THE SYSTEM BY THE FLEXIBLE CONNECTION.
  2. PER NEI 95-10 REVISION 6 APPENDIX B, THE DIESEL ENGINES ARE ACTIVE COMPONENTS AND ARE NOT WITHIN THE SCOPE OF LICENSE RENEWAL (LR).

COMPONENTS SUBJECT TO AMR  
 RED INDICATES COMPONENTS IN SCOPE PER 10CFR 54.4(a)(1) AND/OR (a)(3) AND SUBJECT TO AMR PER 10CFR 54.21.  
 BLACK INDICATES COMPONENTS NOT SUBJECT TO AMR.  
 GREEN INDICATES COMPONENTS IN SCOPE PER 10CFR 54.4(a)(2) AND SUBJECT TO AMR PER 10CFR 54.21.

- ▲ PIPE ANCHOR
- ◊ INDICATES SYSTEM BOUNDARY INTERFACE

PORTIONS OF THIS DRAWING ARE  
**NUCLEAR SAFETY RELATED**


- NOTES:
1. WORK THIS DRAWING WITH DRAWINGS 20456, 20457, 20463, 20464, 20465, & 20466.
  2. ALL LINES, EQUIPMENT, COMPONENTS, AND INSTRUMENTS HAVE SYSTEM PREFIX DG, UNLESS NOTED OTHERWISE.
  3. DELETED.
  4. △ INDICATES REVISION LEVEL
  5. VENT AND DRAIN CODE AND SAFETY CLASS BREAKS ARE AT THE DOWNSTREAM END OF THE OUTER ISOLATION VALVE PER DESIGN STANDARD 1-MY-885111, UNLESS NOTED OTHERWISE.



LR NOTE 1

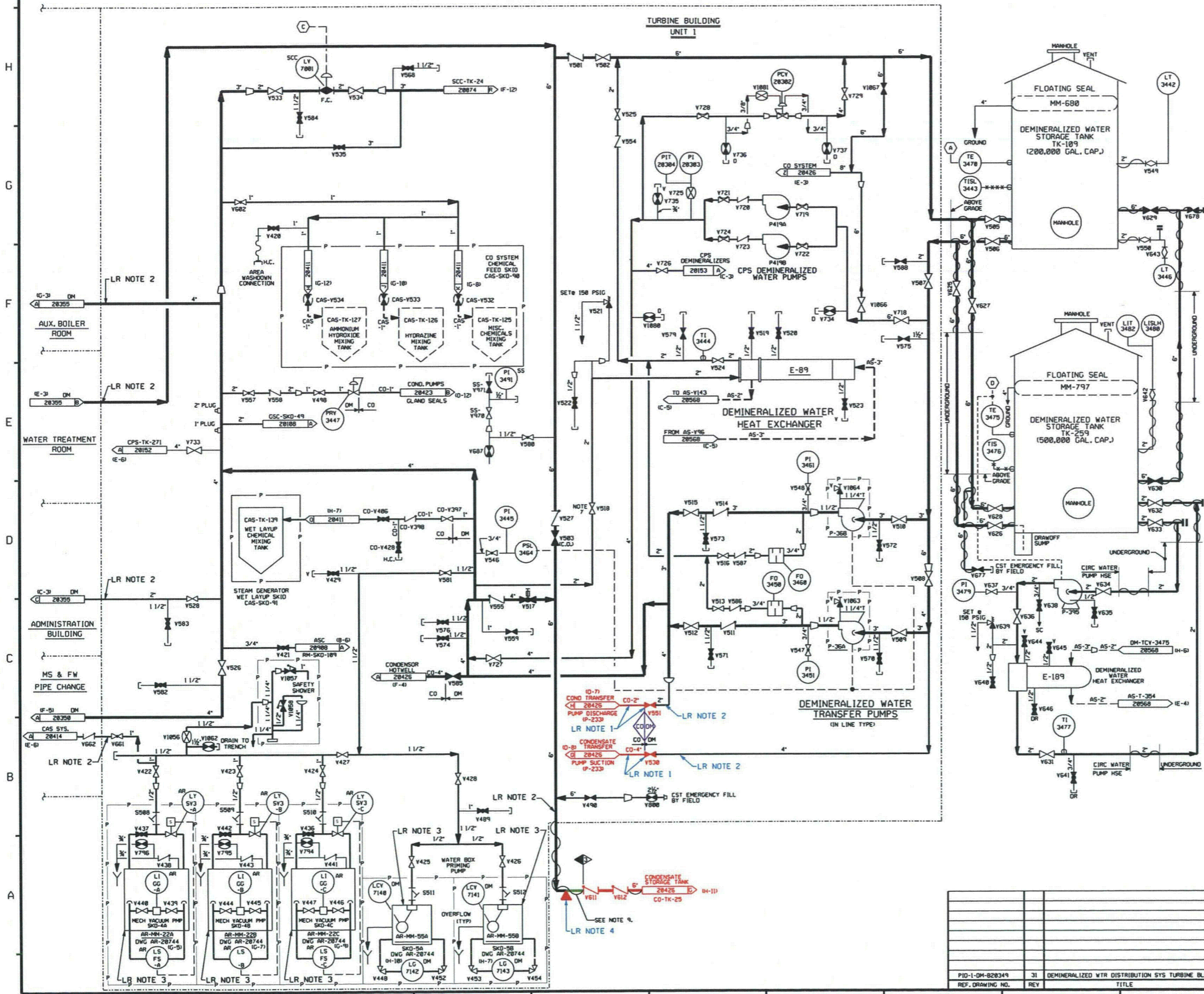
CRANKCASE EXHAUSTER FN-219

LR NOTE 2

REV	DATE	DSGN	CHKD	CE	DESCRIPTION
0					ORIGINAL ISSUE
 <b>SEABROOK</b>					
<b>DIESEL GENERATOR INTAKE, EXHAUST &amp; CRANKCASE VACUUM SYSTEM, TRAIN 'B' DETAIL LICENSE RENEWAL P&amp;ID</b>					
<b>PID- 1-DG-LR20467</b>					

REF. DRAWING NO.	REV	TITLE
PID-1-DG-B20467	8	DIESEL GEN INTK, EXHST & CRANKCASE VAC TRAIN 'B'

PID-1-DM-LR20349



FOR P&ID REFERENCE DRAWINGS, SYMBOLS AND ABBREVIATIONS REFER TO DRAWINGS P&ID - LRLEGEND 1 AND P&ID - LRLEGEND 2

- LR NOTES:
1. COMPONENT IS IN SCOPE FOR CRITERION (a)(3) FIRE PROTECTION.
  2. ALL OTHER COMPONENTS THAT ARE BLACK ARE NOT IN SCOPE SINCE THEY HAVE NO LICENSE RENEWAL INTENDED FUNCTION.
  3. COMPONENTS 1-AR-MM-22A, 1-AR-MM-22B, 1-AR-MM-22C, 1-AR-MM-55A AND 1-AR-MM-55B ARE EVALUATED IN THE AR SYSTEM.
  4. PIPE SUPPORT EQUIVALENT ANCHOR IS THE CONCRETE AT ELEVATION 23'-0".

COMPONENTS SUBJECT TO AMR

RED INDICATES COMPONENTS IN SCOPE PER 10CFR 54.4(a)(1) AND/OR (a)(3) AND SUBJECT TO AMR PER 10CFR 54.21.

BLACK INDICATES COMPONENTS NOT SUBJECT TO AMR.

GREEN INDICATES COMPONENTS IN SCOPE PER 10CFR 54.4(a)(2) AND SUBJECT TO AMR PER 10CFR 54.21.

- ▲ PIPE ANCHOR
- ◇ INDICATES SYSTEM BOUNDARY INTERFACE
- DM - DEMINERALIZED WATER SYSTEM
- CO - CONDENSATE SYSTEM

- NOTES:
1. WORK THIS DRAWING WITH DRAWINGS 20348 & 20350 THROUGH 20356.
  2. ALL LINES, EQUIPMENT, COMPONENTS & INSTR. ARE SYSTEM PREFIX 'DM' UNLESS OTHERWISE NOTED.
  3. ALL LINES, EQUIPMENT, COMPONENTS & INSTR. ARE SAFETY CLASS NMS, UNLESS NOTED OTHERWISE.
  4. △ DENOTES REVISION LEVEL.
  5. DELETED
  6. INSTRUMENT REFERENCES
    - (A) TO AS-TCV-3478 ON DWG. 20568.
    - (C) TO SCC-LC-7001 ON DWG. 20074.
    - (D) TO DM-TCV-3475 ON DWG. 20568.
  7. CAUTION TO BE EXERCISED WHEN THROTTLING THIS VALVE TO REDUCE THE CONTINUOUS RECIRC FLOW IF STEAM IS AVAILABLE FOR HEAT EXCHANGER E-89. THERMAL CONDITIONS TO BE MONITORED TO ASSURE NO ADVERSE CONDITIONS EXIST.
  8. PIPE CAPS MAY BE INSTALLED AT DEMIN WATER HOSE STATIONS AS DEEMED NECESSARY BY STATION STAFF TO PREVENT LEAKAGE.
  9. THIS HEAT TRACING IS NONFUNCTIONAL.

PORTIONS OF THIS DRAWING ARE  
**NUCLEAR SAFETY RELATED**

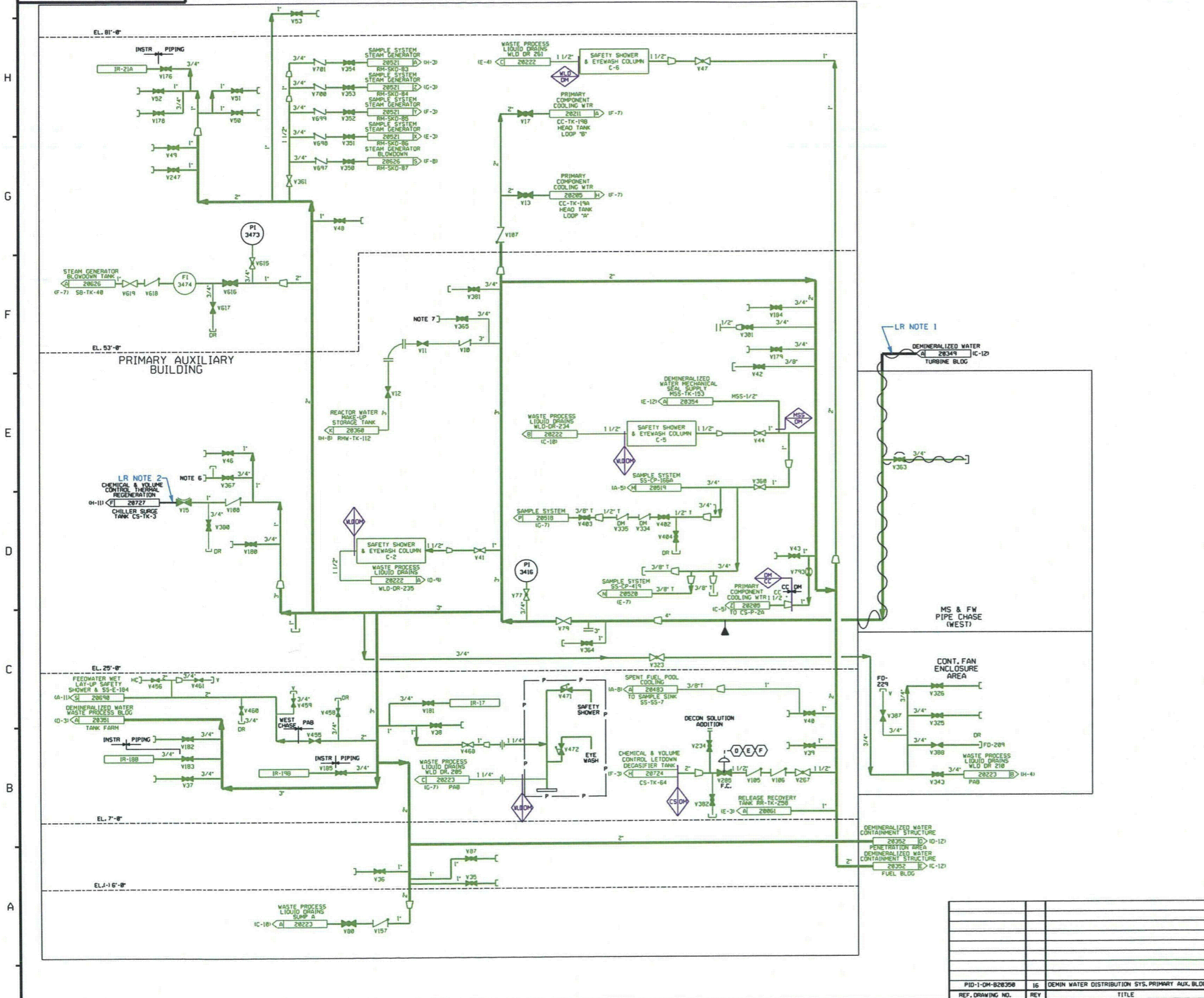
REV	DATE	DSGN	CHKD	CE	ORIGINAL ISSUE	DESCRIPTION



DEMINERALIZED WATER DISTRIBUTION SYSTEM  
TURBINE BUILDING  
LICENSE RENEWAL P&ID

PID-1-DM-LR20349

PID-1-DM-LR20350



FOR P&ID REFERENCE DRAWINGS, SYMBOLS AND ABBREVIATIONS REFER TO DRAWINGS P&ID - LRLEGEND 1 AND P&ID - LRLEGEND 2

- LR NOTES:
- COMPONENTS IN THE TURBINE BUILDING ARE NOT IN SCOPE SINCE THEY HAVE NO LICENSE RENEWAL FUNCTION.
  - PIPING IS IN DRY LAY UP AND IS NOT LIQUID FILLED SO THIS PIPING HAS NO LICENSE RENEWAL INTENDED FUNCTION AND NOT IN SCOPE.
  - ONLY EXPOSED (M2) FUNNELS AND DRAIN PIPING IS IN SCOPE FOR LICENSE RENEWAL.

COMPONENTS SUBJECT TO AMR  
**RED** INDICATES COMPONENTS IN SCOPE PER 10CFR 54.4(a)(1) AND/OR (a)(3) AND SUBJECT TO AMR PER 10CFR 54.21.  
**BLACK** INDICATES COMPONENTS NOT SUBJECT TO AMR.  
**GREEN** INDICATES COMPONENTS IN SCOPE PER 10CFR 54.4(a)(2) AND SUBJECT TO AMR PER 10CFR 54.21.

- ▲ PIPE ANCHOR
- ◇ INDICATES SYSTEM BOUNDARY INTERFACE
- MSS - MECHANICAL SEAL SUPPLY SYSTEM
  - DM - DEMINERALIZED WATER SYSTEM
  - CS - CHEMICAL & VOLUME CONTROL SYSTEM
  - CC - PRIMARY COMPONENT COOLING SYSTEM
  - WLD - WASTE PROCESSING LIQUID DRAINS SYSTEM

- NOTES:
- WORK THIS DRAWING WITH DRAWINGS 28348, 28349 & 28351 THROUGH 28356.
  - ALL LINES, EQUIPMENT, COMPONENTS AND INSTRUMENTS ARE SYSTEM PREFIX 'DM' UNLESS OTHERWISE NOTED.
  - ALL LINES, EQUIPMENT, COMPONENTS, AND INSTRUMENTS ARE SAFETY CLASS MMS, UNLESS NOTED OTHERWISE.
  - △ - INDICATES REVISION LEVEL.
  - DELETED
  - CONNECTION TO BE USED FOR FLUSHING OF RM-SKO-81 ON DWG. 28211.
  - CONNECTION TO BE USED FOR FLUSHING OF RM-SKO-82 ON DWG. 28285.
  - DELETED
  - INSTRUMENT REFERENCE
    - (A) TO PUMP FW-P-293 ON DWG 28687.
    - (D) FROM 1-CS-FS-2725 ICS-28724)
    - (E) FROM 1-CS-PSH-2726 ICS-28724)
    - (F) FROM 1-CS-PSH-3-1 ICS-28724)
  - PIPE CAP MAY BE INSTALLED AT DEMIN WATER HOSE STATIONS AS DEEMED NECESSARY BY STATION STAFF TO PREVENT LEAKAGE.

REV	DATE	DSGN	CHKD	CE	ORIGINAL ISSUE	DESCRIPTION

**NEXTERA ENERGY**  
SEABROOK

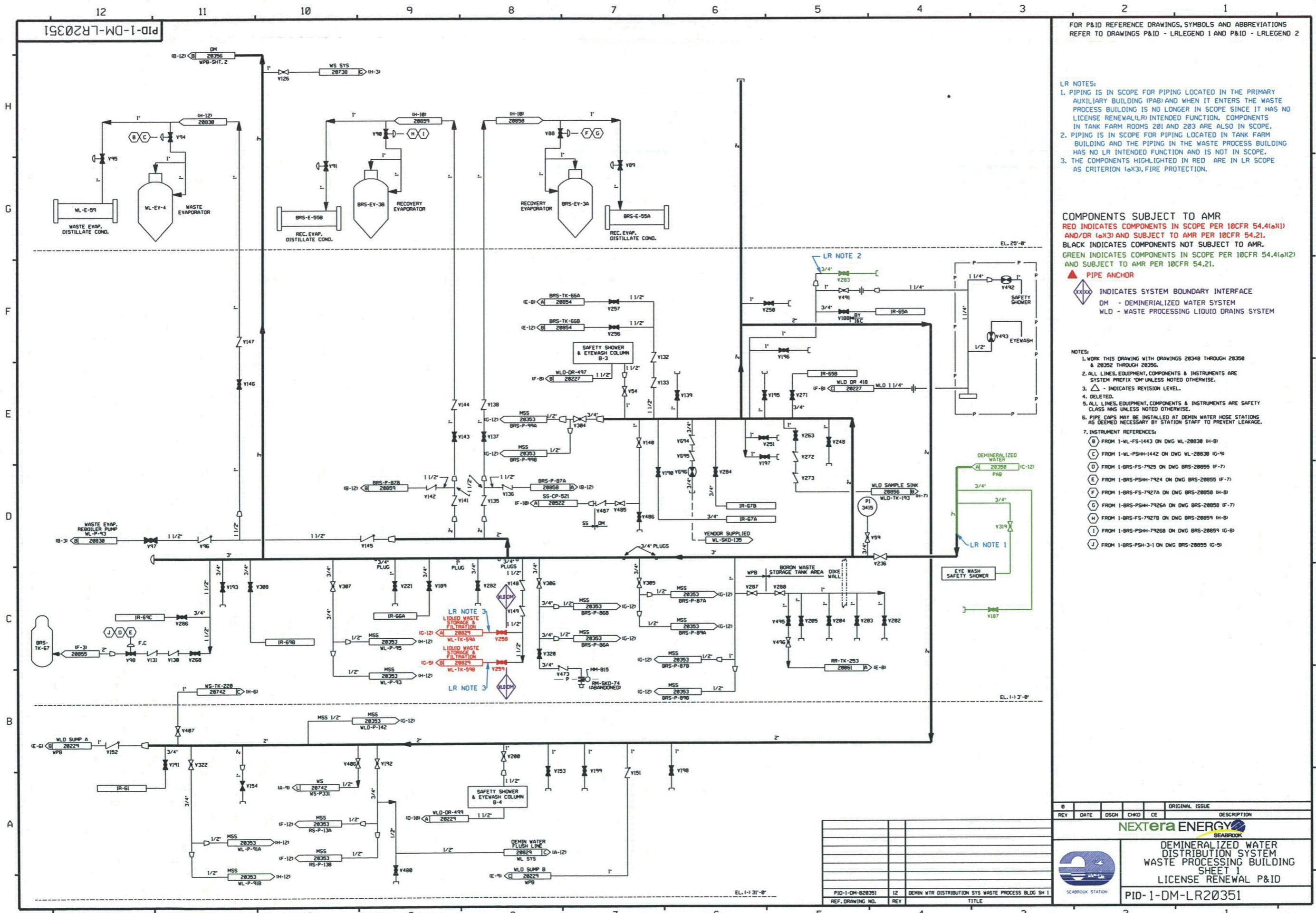
DEMINERALIZED WATER DISTRIBUTION SYSTEM  
PRIMARY AUXILIARY BUILDING  
LICENSE RENEWAL P&ID

**PID-1-DM-LR20350**

REF. DRAWING NO.	REV	TITLE
PID-1-DM-B20350	16	DEMIN WATER DISTRIBUTION SYS, PRIMARY AUX. BLDG



PID-1-DM-LR20351



FOR P&ID REFERENCE DRAWINGS, SYMBOLS AND ABBREVIATIONS REFER TO DRAWINGS P&ID - LRLEGEND 1 AND P&ID - LRLEGEND 2

- LR NOTES:
1. PIPING IS IN SCOPE FOR PIPING LOCATED IN THE PRIMARY AUXILIARY BUILDING (PAB) AND WHEN IT ENTERS THE WASTE PROCESS BUILDING IS NO LONGER IN SCOPE SINCE IT HAS NO LICENSE RENEWAL INTENDED FUNCTION. COMPONENTS IN TANK FARM ROOMS 201 AND 203 ARE ALSO IN SCOPE.
  2. PIPING IS IN SCOPE FOR PIPING LOCATED IN TANK FARM BUILDING AND THE PIPING IN THE WASTE PROCESS BUILDING HAS NO LR INTENDED FUNCTION AND IS NOT IN SCOPE.
  3. THE COMPONENTS HIGHLIGHTED IN RED ARE IN LR SCOPE AS CRITERION (a)(3), FIRE PROTECTION.

COMPONENTS SUBJECT TO AMR  
 RED INDICATES COMPONENTS IN SCOPE PER 10CFR 54.41(a)(1) AND/OR (a)(3) AND SUBJECT TO AMR PER 10CFR 54.21.  
 BLACK INDICATES COMPONENTS NOT SUBJECT TO AMR.  
 GREEN INDICATES COMPONENTS IN SCOPE PER 10CFR 54.41(a)(2) AND SUBJECT TO AMR PER 10CFR 54.21.

- ▲ PIPE ANCHOR  
 ◆ INDICATES SYSTEM BOUNDARY INTERFACE  
 DM - DEMINERALIZED WATER SYSTEM  
 WLD - WASTE PROCESSING LIQUID DRAINS SYSTEM

- NOTES:
1. WORK THIS DRAWING WITH DRAWINGS 28348 THROUGH 28358 & 28352 THROUGH 28356.
  2. ALL LINES, EQUIPMENT, COMPONENTS & INSTRUMENTS ARE SYSTEM PREFIX "DM" UNLESS NOTED OTHERWISE.
  3. ▲ - INDICATES REVISION LEVEL.
  4. DELETED.
  5. ALL LINES, EQUIPMENT, COMPONENTS & INSTRUMENTS ARE SAFETY CLASS MNS UNLESS NOTED OTHERWISE.
  6. PIPE CAPS MAY BE INSTALLED AT DEMIN WATER HOSE STATIONS AS DEEMED NECESSARY BY STATION STAFF TO PREVENT LEAKAGE.
  7. INSTRUMENT REFERENCES:  
 (B) FROM 1-WL-FS-1443 ON DWG WL-28838 (H-8)  
 (C) FROM 1-WL-PSH-1442 ON DWG WL-28838 (G-9)  
 (D) FROM 1-BRS-FS-7925 ON DWG BRS-28855 (F-7)  
 (E) FROM 1-BRS-PSH-7924 ON DWG BRS-28855 (F-7)  
 (F) FROM 1-BRS-FS-7927A ON DWG BRS-28858 (H-8)  
 (G) FROM 1-BRS-PSH-7926A ON DWG BRS-28858 (F-7)  
 (H) FROM 1-BRS-FS-7927B ON DWG BRS-28859 (H-8)  
 (I) FROM 1-BRS-PSH-7926B ON DWG BRS-28859 (G-8)  
 (J) FROM 1-BRS-PSH-3-1 ON DWG BRS-28855 (G-5)

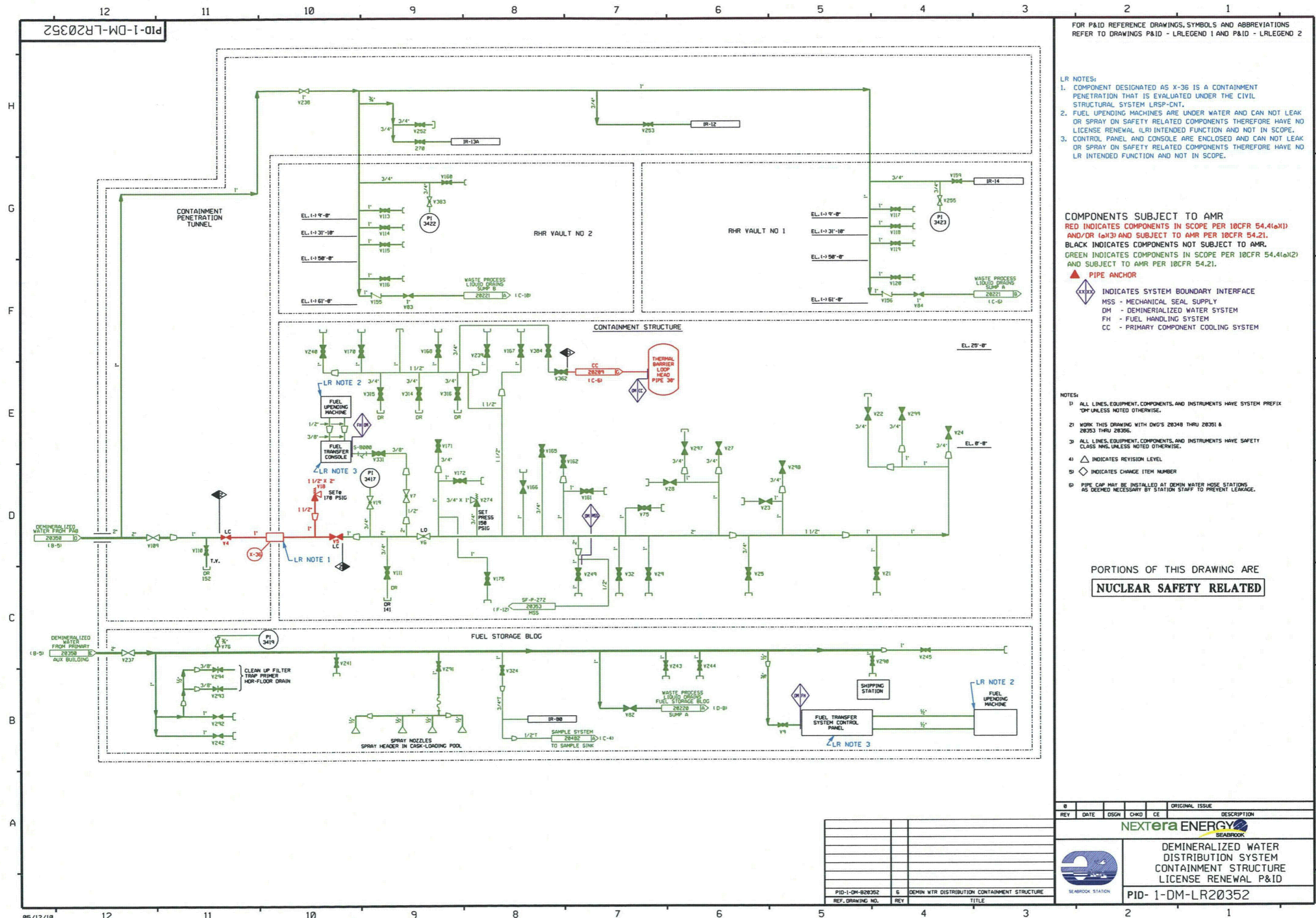
REV	DATE	DSGN	CHKD	CE	DESCRIPTION

**NEXTERA ENERGY**  
 SEABROOK

DEMINERALIZED WATER DISTRIBUTION SYSTEM  
 WASTE PROCESSING BUILDING  
 SHEET 1  
 LICENSE RENEWAL P&ID

PID-1-DM-LR20351

PID-1-DM-LR20352



FOR P&ID REFERENCE DRAWINGS, SYMBOLS AND ABBREVIATIONS REFER TO DRAWINGS P&ID - LRLEGEND 1 AND P&ID - LRLEGEND 2

- LR NOTES:
1. COMPONENT DESIGNATED AS X-36 IS A CONTAINMENT PENETRATION THAT IS EVALUATED UNDER THE CIVIL STRUCTURAL SYSTEM LRSP-CNT.
  2. FUEL UPENDING MACHINES ARE UNDER WATER AND CAN NOT LEAK OR SPRAY ON SAFETY RELATED COMPONENTS THEREFORE HAVE NO LICENSE RENEWAL (LR) INTENDED FUNCTION AND NOT IN SCOPE.
  3. CONTROL PANEL AND CONSOLE ARE ENCLOSED AND CAN NOT LEAK OR SPRAY ON SAFETY RELATED COMPONENTS THEREFORE HAVE NO LR INTENDED FUNCTION AND NOT IN SCOPE.

COMPONENTS SUBJECT TO AMR  
**RED** INDICATES COMPONENTS IN SCOPE PER 10CFR 54.4(a)(1) AND/OR (a)(3) AND SUBJECT TO AMR PER 10CFR 54.21.  
**BLACK** INDICATES COMPONENTS NOT SUBJECT TO AMR.  
**GREEN** INDICATES COMPONENTS IN SCOPE PER 10CFR 54.4(a)(2) AND SUBJECT TO AMR PER 10CFR 54.21.

- ▲ PIPE ANCHOR
- ◇ INDICATES SYSTEM BOUNDARY INTERFACE
- MSS - MECHANICAL SEAL SUPPLY
- DM - DEMINERALIZED WATER SYSTEM
- FH - FUEL HANDLING SYSTEM
- CC - PRIMARY COMPONENT COOLING SYSTEM

- NOTES:
- 1) ALL LINES, EQUIPMENT, COMPONENTS, AND INSTRUMENTS HAVE SYSTEM PREFIX 'DM' UNLESS NOTED OTHERWISE.
  - 2) WORK THIS DRAWING WITH DWD'S 20348 THRU 20351 & 20353 THRU 20356.
  - 3) ALL LINES, EQUIPMENT, COMPONENTS, AND INSTRUMENTS HAVE SAFETY CLASS NMS, UNLESS NOTED OTHERWISE.
  - 4) △ INDICATES REVISION LEVEL
  - 5) ◇ INDICATES CHANGE ITEM NUMBER
  - 6) PIPE CAP MAY BE INSTALLED AT DEMIN WATER HOSE STATIONS AS DEEMED NECESSARY BY STATION STAFF TO PREVENT LEAKAGE.

PORTIONS OF THIS DRAWING ARE  
**NUCLEAR SAFETY RELATED**

REV	DATE	DSGN	CHKD	CE	DESCRIPTION

**NEXTERA ENERGY**  
SEABROOK

DEMINERALIZED WATER DISTRIBUTION SYSTEM  
CONTAINMENT STRUCTURE LICENSE RENEWAL P&ID

PID-1-DM-LR20352

PID-1-DM-820352	S	DEMIN WTR DISTRIBUTION CONTAINMENT STRUCTURE
REF. DRAWING NO.	REV	TITLE

**ONCE THROUGH FLUSH SYSTEM FOR DOUBLE MECH SEALS: TABLE 1**

PUMP NO	PUMP NAME	SYSTEM DRAWING NO	DEMIN WTR SUP SYSTEM DWG NO	5	6	6A	7	8	9	10	11	12	13	14	15	16	17	18
ML-P-91A	FLOOR DRAIN TANK PUMP	28629 1A-1B1	28351	1/2"	1/4"	1/4"	1/2" MSS-Y27	PCY 7747	1/2" MSS-Y28	F1-7667	F1-7666	FY-7727	1/2" MSS-Y29	PSL-7668	PI-7777	1/2" MSS-Y30	28229 A	DR515
ML-P-91B	FLOOR DRAIN TANK PUMP	28629 1A-1B1	28351	1/2"	1/4"	1/4"	1/2" MSS-Y31	PCY 7748	1/2" MSS-Y32	F1-7678	F1-7669	FY-7728	1/2" MSS-Y33	PSL-7671	PI-7778	1/2" MSS-Y34	28229 B	DR515
ML-P-93	WASTE EVAP REBOILER PMP	28838 1C-7H	28351	1/2"	1/4"	1/4"	1/2" MSS-Y35	PCY 7749	1/2" MSS-Y36	F1-7673	F1-7672	FY-7729	1/2" MSS-Y37	PSL-7674	PI-7662	1/2" MSS-Y38	28226 C	DR433
ML-P-95	WASTE EVAP BOTTOMS PMP	28838 1C-7H	28351	1/2"	1/4"	1/4"	1/2" MSS-Y39	PCY 7750	1/2" MSS-Y40	F1-7676	F1-7675	FY-7730	1/2" MSS-Y41	PSL-7677	PI-7663	1/2" MSS-Y42	28226 D	DR433
BRS-P-99A	POT TRANSFER PUMP	28854 1E-8I	28351	1/2"	1/4"	1/4"	1/2" MSS-Y43	PCY 7751	1/2" MSS-Y44	F1-7680	F1-7679	FY-7731	1/2" MSS-Y45	PSL-7681	PI-7664	1/2" MSS-Y46	28227 E	DR427
BRS-P-99B	POT TRANSFER PUMP	28854 1E-8I	28351	1/2"	1/4"	1/4"	1/2" MSS-Y47	PCY 7752	1/2" MSS-Y48	F1-7683	F1-7682	FY-7732	1/2" MSS-Y49	PSL-7684	PI-7665	1/2" MSS-Y50	28227 F	DR427
BRS-P-99A	RECOY EVAP FEED PUMP	28857 1C-7I	28351	1/2"	1/4"	1/4"	1/2" MSS-Y51	PCY 7753	1/2" MSS-Y52	F1-7686	F1-7685	FY-7733	1/2" MSS-Y53	PSL-7687	PI-7779	1/2" MSS-Y54	28226 G	DR437
BRS-P-99B	RECOY EVAP FEED PUMP	28857 1C-7I	28351	1/2"	1/4"	1/4"	1/2" MSS-Y55	PCY 7754	1/2" MSS-Y56	F1-7689	F1-7688	FY-7734	1/2" MSS-Y57	PSL-7690	PI-7780	1/2" MSS-Y58	28226 H	DR437
BRS-P-97A	RECOY EVAP REBOILER PMP	28859 1C-7I	28351	1/2"	1/4"	1/4"	1/2" MSS-Y59	PCY 7755	1/2" MSS-Y60	F1-7692	F1-7691	FY-7735	1/2" MSS-Y61	PSL-7693	PI-7781	1/2" MSS-Y62	28226 I	DR431
BRS-P-97B	RECOY EVAP REBOILER PMP	28859 1C-7I	28351	1/2"	1/4"	1/4"	1/2" MSS-Y63	PCY 7756	1/2" MSS-Y64	F1-7695	F1-7694	FY-7736	1/2" MSS-Y65	PSL-7696	PI-7782	1/2" MSS-Y66	28226 J	DR429
BRS-P-97A	RECOY EVAP BOTTOMS PMP	28859 1C-7I	28351	1/2"	1/4"	1/4"	1/2" MSS-Y67	PCY 7757	1/2" MSS-Y68	F1-7698	F1-7697	FY-7737	1/2" MSS-Y69	PSL-7699	PI-7767	1/2" MSS-Y70	28226 K	DR431
BRS-P-97B	RECOY EVAP BOTTOMS PMP	28859 1C-7I	28351	1/2"	1/4"	1/4"	1/2" MSS-Y71	PCY 7758	1/2" MSS-Y72	F1-7701	F1-7700	FY-7738	1/2" MSS-Y73	PSL-7702	PI-7768	1/2" MSS-Y74	28226 L	DR429
SB-P-188A	BLOWDOWN EVAP BTMS PMP	28629 1B-1B1	28356	1/2"	1/4"	1/4"	1/2" MSS-Y75	PCY 7759	1/2" MSS-Y76	F1-7704	F1-7703	FY-7739	1/2" MSS-Y77	PSL-7705	PI-7769	1/2" MSS-Y78	28225 M	DR536
SB-P-188B	BLOWDOWN EVAP BTMS PMP	28629 1B-1B1	28356	1/2"	1/4"	1/4"	1/2" MSS-Y79	PCY 7760	1/2" MSS-Y80	F1-7707	F1-7706	FY-7740	1/2" MSS-Y81	PSL-7708	PI-7770	1/2" MSS-Y82	28225 N	DR537
SB-P-188C	BLOWDOWN EVAP BTMS PMP	28631 1B-5I	28356	1/2"	1/4"	1/4"	1/2" MSS-Y83	PCY 7761	1/2" MSS-Y84	F1-7710	F1-7709	FY-7741	1/2" MSS-Y85	PSL-7711	PI-7771	1/2" MSS-Y86	28225 O	DR538
WLD-P-141	CHEM DRAIN TRANSF PMP	28359 1D-5I	28359	1/2"	1/4"	1/4"	1/2" MSS-Y87	PCY 7762	1/2" MSS-Y88	F1-7713	F1-7712	FY-7742	1/2" MSS-Y89	PSL-7714	PI-7772	1/2" MSS-Y90	28224 P	CHM.DR.SP.
WLD-P-142	CHEM DRAIN TRTMT PMP	28228 1B-9I	28351	1/2"	1/4"	1/4"	1/2" MSS-Y91	PCY 7763	1/2" MSS-Y92	F1-7715	F1-7714	FY-7743	1/2" MSS-Y93	PSL-7717	PI-7773	1/2" MSS-Y94	28224 Q	DR487
RS-P-13A	SPENT RESIN SLUICE PMP	28252 1A-1B1	28351	1/2"	3/8"	1/2"	1/2" MSS-Y95	PCY 7764	1/2" MSS-Y96	F1-7719	F1-7718	FY-7744	1/2" MSS-Y97	PSL-7720	PI-7774	1/2" MSS-Y98	28224 R	DR412
RS-P-13B	SPENT RESIN SLUICE PMP	28252 1A-1B1	28351	1/2"	3/8"	1/2"	1/2" MSS-Y99	PCY 7765	1/2" MSS-Y100	F1-7722	F1-7721	FY-7745	1/2" MSS-Y101	PSL-7723	PI-7775	1/2" MSS-Y102	28224 S	DR412
SF-P-272	REFUELING CANAL SKIM PMP	28484 1B-8I	28352 1C-8I	1/2"	1/4"	3/8"	1/2" MSS-Y103	PCY 7766	1/2" MSS-Y104	F1-7725	F1-7724	FY-7746	1/2" MSS-Y105	PSL-7726	PI-7776	1/2" MSS-Y106	28219 T	TR
SB-P-289	SOBD BOOSTER PUMP	28627 1A-1B1	28356	1/2"	1/4"	1/4"	1/2" MSS-Y117	PCY-7783	1/2" MSS-Y118	F1-7784	F1-7785	FY-7786	1/2" MSS-Y120	PSL-7787	PI-7788	1/2" MSS-Y119	28627 U	
2-SB-P-289	SOBD BOOSTER PUMP	N/A	28351	1/2"	1/4"	1/4"	2 1/2" MSS-Y117	2-PCY-7783	2 1/2" MSS-Y118	N.I.	N.I.	2-FY-7786	2 1/2" MSS-Y120	N.I.	N.I.	2 1/2" MSS-Y119	28227 Y	DR544

\* DENOTES THAT A REDUCER IS NOT REQUIRED

LR NOTE 1

LR NOTES:  
 1. PUMP SF-P-272 IS THE ONLY COMPONENT ON THIS TABLE THAT IS IN LICENSE RENEWAL (LR) SCOPE. ALL OTHER PUMPS ARE LOCATED IN THE WASTE PROCESSING BUILDING, WHICH HAS NO SAFETY RELATED COMPONENTS THEREFORE NO LR INTENDED FUNCTION AND ARE NOT IN SCOPE.  
 2. SEE TABLE 1 ITEM NO. 1 FOR PUMP COLOR REPRESENTATION.  
 3. DEMINERALIZED WATER (DM) GOES TO PUMP SEAL WHICH IS SHORT LIVED AND IS NOT IN SCOPE FOR LICENSE RENEWAL.

COMPONENTS SUBJECT TO AMR  
 RED INDICATES COMPONENTS IN SCOPE PER 10CFR 54.4(a)(1) AND/OR (a)(3) AND SUBJECT TO AMR PER 10CFR 54.21.  
 BLACK INDICATES COMPONENTS NOT SUBJECT TO AMR.  
 GREEN INDICATES COMPONENTS IN SCOPE PER 10CFR 54.4(a)(2) AND SUBJECT TO AMR PER 10CFR 54.21.

▲ PIPE ANCHOR  
 □ INDICATES SYSTEM BOUNDARY INTERFACE

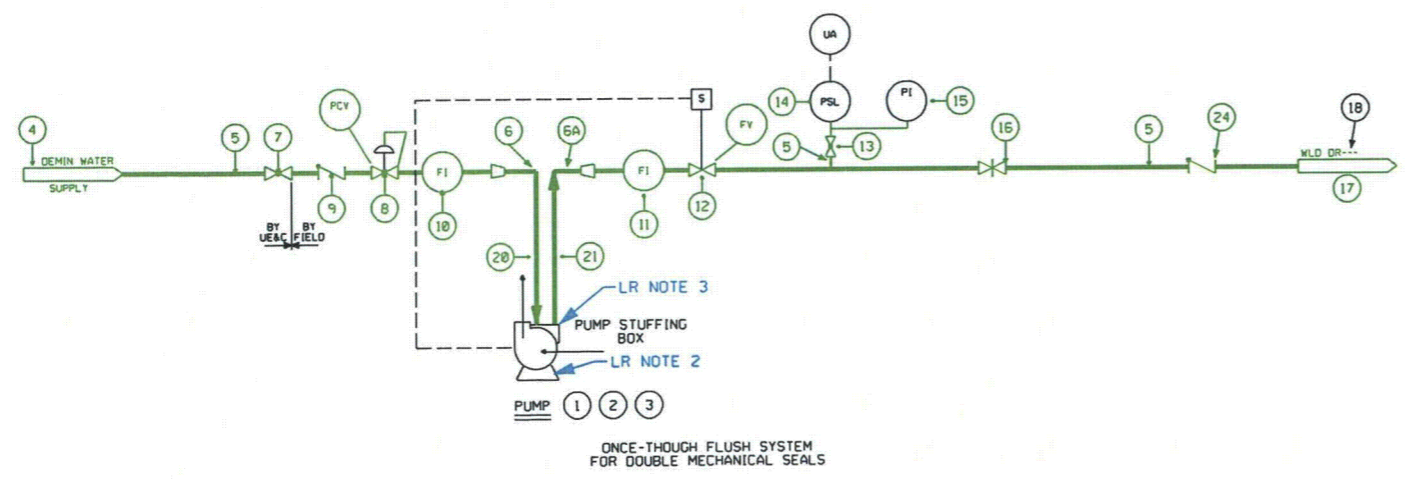
NOTE:  
 1) ALL LINES, EQUIPMENT, COMPONENTS AND INSTRUMENTS HAVE SYSTEM PREFIX UNLESS NOTED OTHERWISE  
 2) WORK THIS DRAWING WITH DWG 28354  
 3) THIS INSTRUMENTATION AND VALVES TO BE OUTSIDE SHIELDED AREAS FOR PUMPS HANDLING RADIOACTIVE LIQUID.  
 4) ALL LINES, EQUIPMENT, COMPONENTS AND INSTRUMENTS ARE SAFETY CLASS 'MS' UNLESS NOTED OTHERWISE  
 5) Δ INDICATES REVISION LEVEL

CONT. FROM ABOVE

1	24
SB-P-289	1/2" MSS-Y121

**TABLE 2**  
 PUMPS WITH SINGLE MECHANICAL SEALS  
 (PUMPS SUPPLIED WITH SELF-CONTAINED MECH. SEAL PIPING)

PUMP NUMBER	PUMP NAME	SYSTEM DRAWING NO
ML-P-94	WASTE EVAP DISTILLATE PUMP	28838
ML-P-96A	WASTE TEST TANK PUMP	28831
ML-P-96B	WASTE TEST TANK PUMP	28831
BRS-P-88A	RECOVERY EVAP DISTILLATE PUMP	28858
BRS-P-88B	RECOVERY EVAP DISTILLATE PUMP	28859
BRS-P-98A	RECOVERY TEST TANK PUMP	28861
BRS-P-98B	RECOVERY TEST TANK PUMP	28861
SB-P-171A	FLASH TANK DISTILLATE PUMP	28626
SB-P-171B	FLASH TANK DISTILLATE PUMP	28626
SB-P-179A	EVAPORATOR DISTILLATE PUMP	28629
SB-P-179B	EVAPORATOR DISTILLATE PUMP	28630
SB-P-179C	EVAPORATOR DISTILLATE PUMP	28631
WLD-P-33A	REACTOR COOLANT DRAIN TX PUMP	28218
WLD-P-33B	REACTOR COOLANT DRAIN TX PUMP	28218
RC-P-271	PRESSURE RELIEF TANK PUMP	28846
RHW-P-16A	REACTOR MAKE UP WATER PUMP	28368
RHW-P-16B	REACTOR MAKE UP WATER PUMP	28368
SF-P-12	SPENT FUEL POOL SKIMMER PUMP	28483
ASC-P-248A	CONDENSATE PUMP	28986
ASC-P-248B	CONDENSATE PUMP	28986
ASC-P-249A	CONDENSATE PUMP	28984
ASC-P-249B	CONDENSATE PUMP	28984



REV	DATE	DSGN	CHKD	CE	DESCRIPTION

**NEXTERA ENERGY**  
SEABROOK

**DEMINERALIZED WATER DISTRIBUTION SYSTEM MECHANICAL SEAL SUPPLY SYSTEM LICENSE RENEWAL P&ID**

PID-1-DM-B20353 2 DEMIN WATER DISTRIBUTION SYS MECH SEAL SUPPLY  
 REF. DRAWING NO. REV TITLE

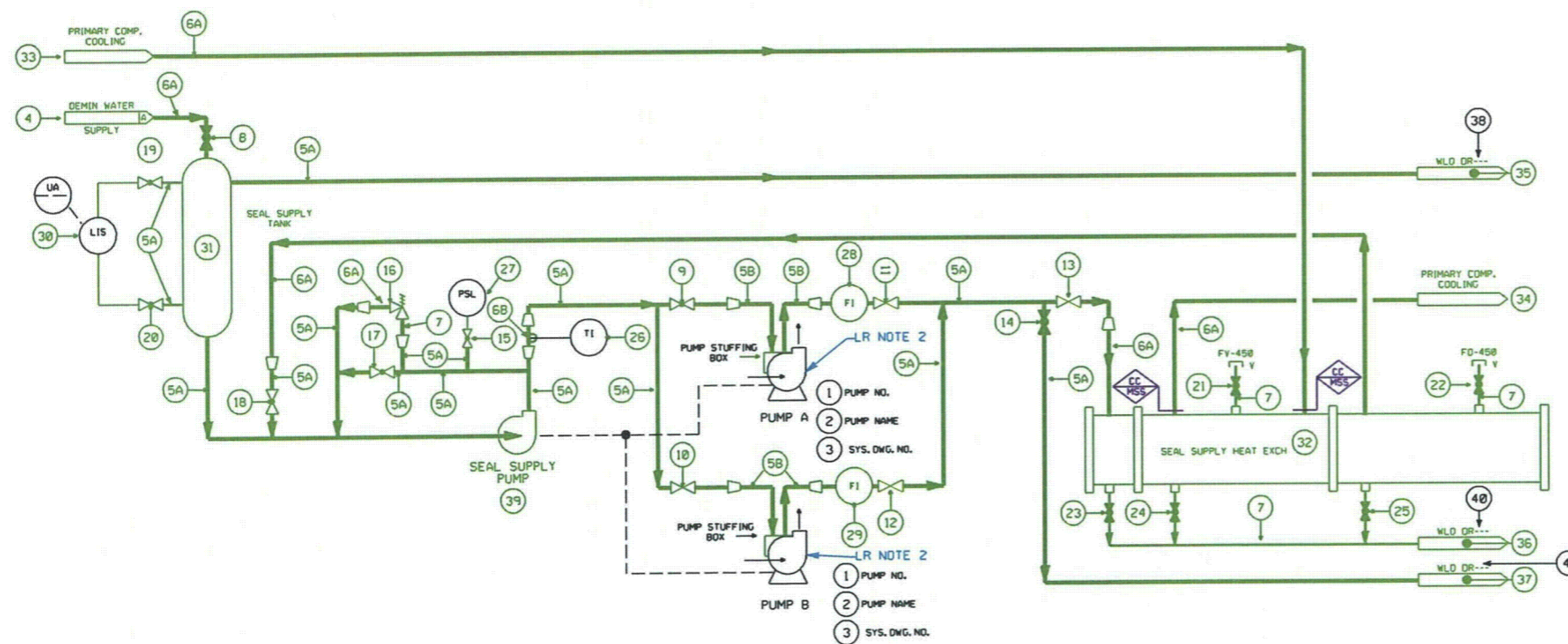
**PID- 1-DM-LR20353**

④ CLOSED LOOP FLUSH SYSTEM FOR DOUBLE MECH. SEALS																				
PUMP NO	PUMP NAME	SYSTEM DWG NUMBER	DEMIN WTR SUP SYS DRAWING NO	5A	5B	6A	6B	7	8	9	10	11	12	13	14	15	16	17	18	19
CS-P-98A	LETOODN DEGAS RECIRC PUMP	28724 1A-B1	28358 1E-71	1/2"	1/4"	1"	2"	3/4"	1/2" MSS Y-1	1/2" MSS Y-7	1/2" MSS Y-10	1/2" MSS Y-8	1/2" MSS Y-11	1/2" MSS Y-9	1/2" MSS Y-12	1/2" MSS Y-6	3/4" MSS Y-5 SET @ 148 PSIG	1/2" MSS Y-4	1/2" MSS Y-13	1/2" MSS Y-2
CS-P-98B	LETOODN DEGAS RECIRC PUMP	28724 1A-61	28358 1E-71						1/2" MSS Y-14	1/2" MSS Y-20	1/2" MSS Y-23	1/2" MSS Y-21	1/2" MSS Y-24	1/2" MSS Y-22	1/2" MSS Y-25	1/2" MSS Y-19	3/4" MSS Y-18 SET @ 158 PSIG	1/2" MSS Y-17	1/2" MSS Y-26	1/2" MSS Y-15
BRS-P-100A	POT DEGASIFIER RECIRC PMP	28055	28351																	
BRS-P-100B	POT DEGASIFIER RECIRC PMP	28055	28351																	

LR NOTE 1

20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41
1/2" MSS Y-3	3/4" MSS Y-116	3/4" MSS Y-115	3/4" MSS Y-114	3/4" MSS Y-113	3/4" MSS Y-112	TI-7658	PSL-7660	FI-7658	FI-7652	LIS-7654	MSS TK-153	MSS E-130	28206 IC-111 LOOP A	28206 IC-101 LOOP A	28222 A IC-51	28222 B IC-51	28222 C IC-51	DR-238	MSS-P-277	DR-238	DR-238
1/2" MSS Y-16	3/4" MSS Y-111	3/4" MSS Y-110	3/4" MSS Y-109	3/4" MSS Y-108	3/4" MSS Y-107	TI-7659	PSL-7661	FI-7651	FI-7653	LIS-7655	MSS TK-154	MSS E-131	28213 LOOP B	28213 LOOP B	28226 C	28226 D	28226 E	DR-533	MSS-P-278	DR-533	DR-423

LR NOTE 1



DETAIL 1  
MECHANICAL SEAL SUPPLY SYSTEM

FOR P&ID REFERENCE DRAWINGS, SYMBOLS AND ABBREVIATIONS REFER TO DRAWINGS P&ID - LRLEGEND 1 AND P&ID - LRLEGEND 2

LR NOTES:

- COMPONENTS ARE LOCATED IN THE WASTE PROCESSING BUILDING, WHICH HAS NO SAFETY RELATED COMPONENTS THEREFORE NO LICENSE RENEWAL INTENDED FUNCTION AND ARE NOT IN SCOPE.
- SEE TABLE ITEM NO.1 FOR PUMP COLOR REPRESENTATION.

COMPONENTS SUBJECT TO AMR

RED INDICATES COMPONENTS IN SCOPE PER 10CFR 54.4(a)(1) AND/OR (a)(3) AND SUBJECT TO AMR PER 10CFR 54.21.  
BLACK INDICATES COMPONENTS NOT SUBJECT TO AMR.  
GREEN INDICATES COMPONENTS IN SCOPE PER 10CFR 54.4(a)(2) AND SUBJECT TO AMR PER 10CFR 54.21.

▲ PIPE ANCHOR



INDICATES SYSTEM BOUNDARY INTERFACE  
MSS - MECHANICAL SEAL SUPPLY SYSTEM  
CC - PRIMARY COMPONENT COOLING WATER

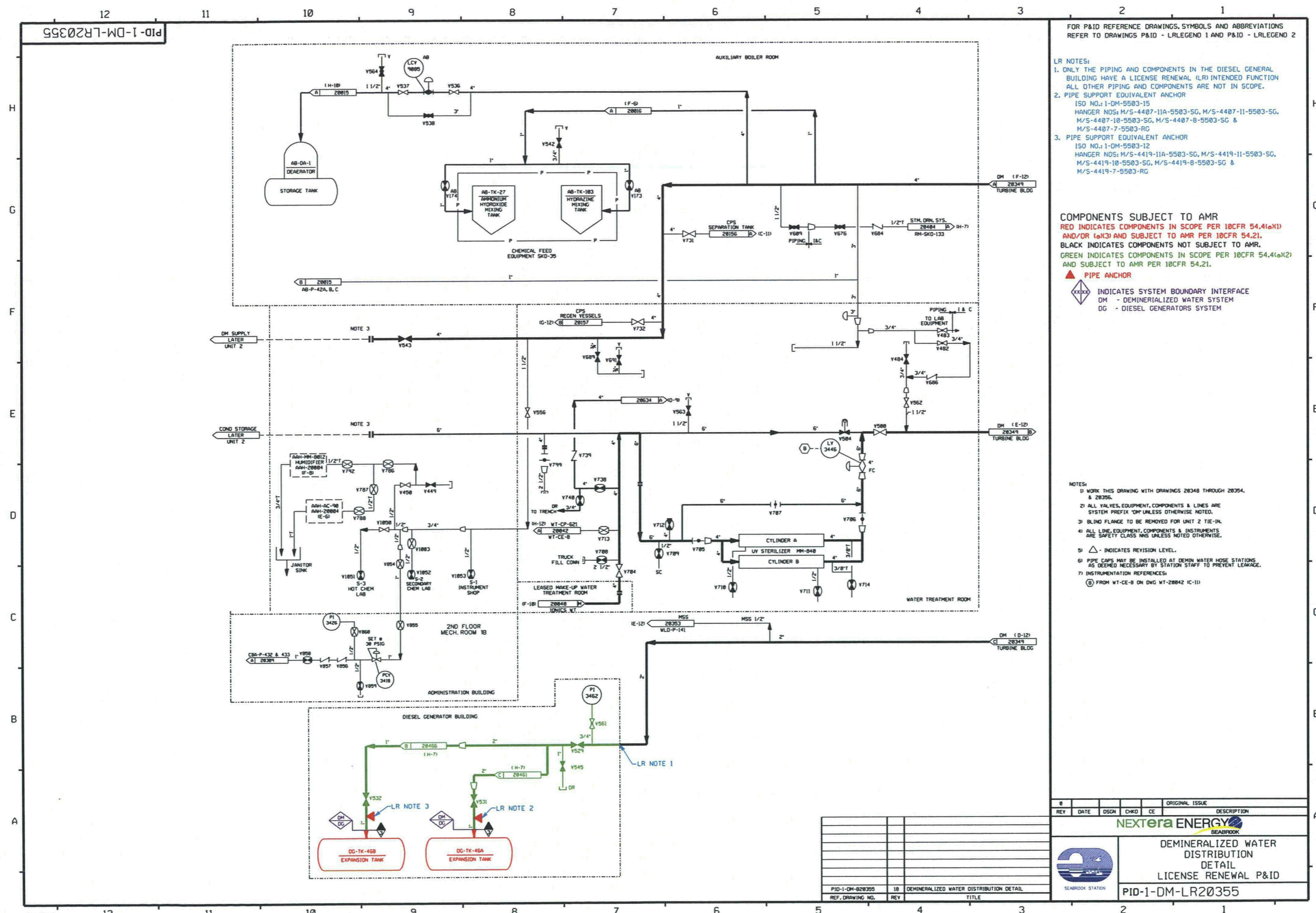
NOTES:

- ALL LINES, EQUIPMENT, COMPONENTS, AND INSTRUMENTS HAVE SYSTEM PREFIX 'DM' UNLESS NOTED OTHERWISE.
- WORK THIS DRAWING WITH DWG 28353.
- THE INSTRUMENTATION AND VALVES TO BE OUTSIDE SHIELDED AREAS FOR PUMPS HANDLING RADIOACTIVE LIQUID.
- ALL PIPING AND COMPONENTS ARE 'MSS' UNLESS NOTED OTHERWISE.

REV	DATE	DSGN	CHKD	CE	DESCRIPTION
0					ORIGINAL ISSUE
DEMINERALIZED WATER DISTRIBUTION SYSTEM MECHANICAL SEAL SUPPLY SYSTEM LICENSE RENEWAL P&ID					
PID-1-DM-828354 REF. DRAWING NO.					PID-1-DM-LR20354



PID-1-DM-LR20355



FOR P&ID REFERENCE DRAWINGS, SYMBOLS AND ABBREVIATIONS REFER TO DRAWINGS P&ID - LRLEGEND 1 AND P&ID - LRLEGEND 2

- LR NOTES:
1. ONLY THE PIPING AND COMPONENTS IN THE DIESEL GENERAL BUILDING HAVE A LICENSE RENEWAL (LR) INTENDED FUNCTION ALL OTHER PIPING AND COMPONENTS ARE NOT IN SCOPE.
  2. PIPE SUPPORT EQUIVALENT ANCHOR  
ISO NO.: 1-DM-5503-15  
HANGER NOS: M/S-4407-11A-5503-SG, M/S-4407-11-5503-SG, M/S-4407-10-5503-SG, M/S-4407-8-5503-SG & M/S-4407-7-5503-SG
  3. PIPE SUPPORT EQUIVALENT ANCHOR  
ISO NO.: 1-DM-5503-12  
HANGER NOS: M/S-4419-11A-5503-SG, M/S-4419-11-5503-SG, M/S-4419-10-5503-SG, M/S-4419-8-5503-SG & M/S-4419-7-5503-SG

COMPONENTS SUBJECT TO AMR  
**RED** INDICATES COMPONENTS IN SCOPE PER 10CFR 54.4(a)(1) AND/OR (a)(3) AND SUBJECT TO AMR PER 10CFR 54.21.  
**BLACK** INDICATES COMPONENTS NOT SUBJECT TO AMR.  
**GREEN** INDICATES COMPONENTS IN SCOPE PER 10CFR 54.4(a)(2) AND SUBJECT TO AMR PER 10CFR 54.21.

- ▲ PIPE ANCHOR  
 ◆ INDICATES SYSTEM BOUNDARY INTERFACE  
 DM - DEMINERALIZED WATER SYSTEM  
 DG - DIESEL GENERATORS SYSTEM

- NOTES:
- 1) WORK THIS DRAWING WITH DRAWINGS 28348 THROUGH 28354, & 28355.
  - 2) ALL VALVES, EQUIPMENT, COMPONENTS & LINES ARE SYSTEM PREFIX 'DM' UNLESS OTHERWISE NOTED.
  - 3) BLIND FLANGE TO BE REMOVED FOR UNIT 2 TIE-IN.
  - 4) ALL LINE EQUIPMENT, COMPONENTS & INSTRUMENTS ARE SAFETY CLASS MNS UNLESS NOTED OTHERWISE.
  - 5) △ - INDICATES REVISION LEVEL.
  - 6) PIPE CAPS MAY BE INSTALLED AT DEMIN WATER HOSE STATIONS AS DEEMED NECESSARY BY STATION STAFF TO PREVENT LEAKAGE.
  - 7) INSTRUMENTATION REFERENCES:  
 (B) FROM WT-CE-8 ON DNG WT-28042 IC-111

REV	DATE	DSGN	CHKD	CE	DESCRIPTION

ORIGINAL ISSUE

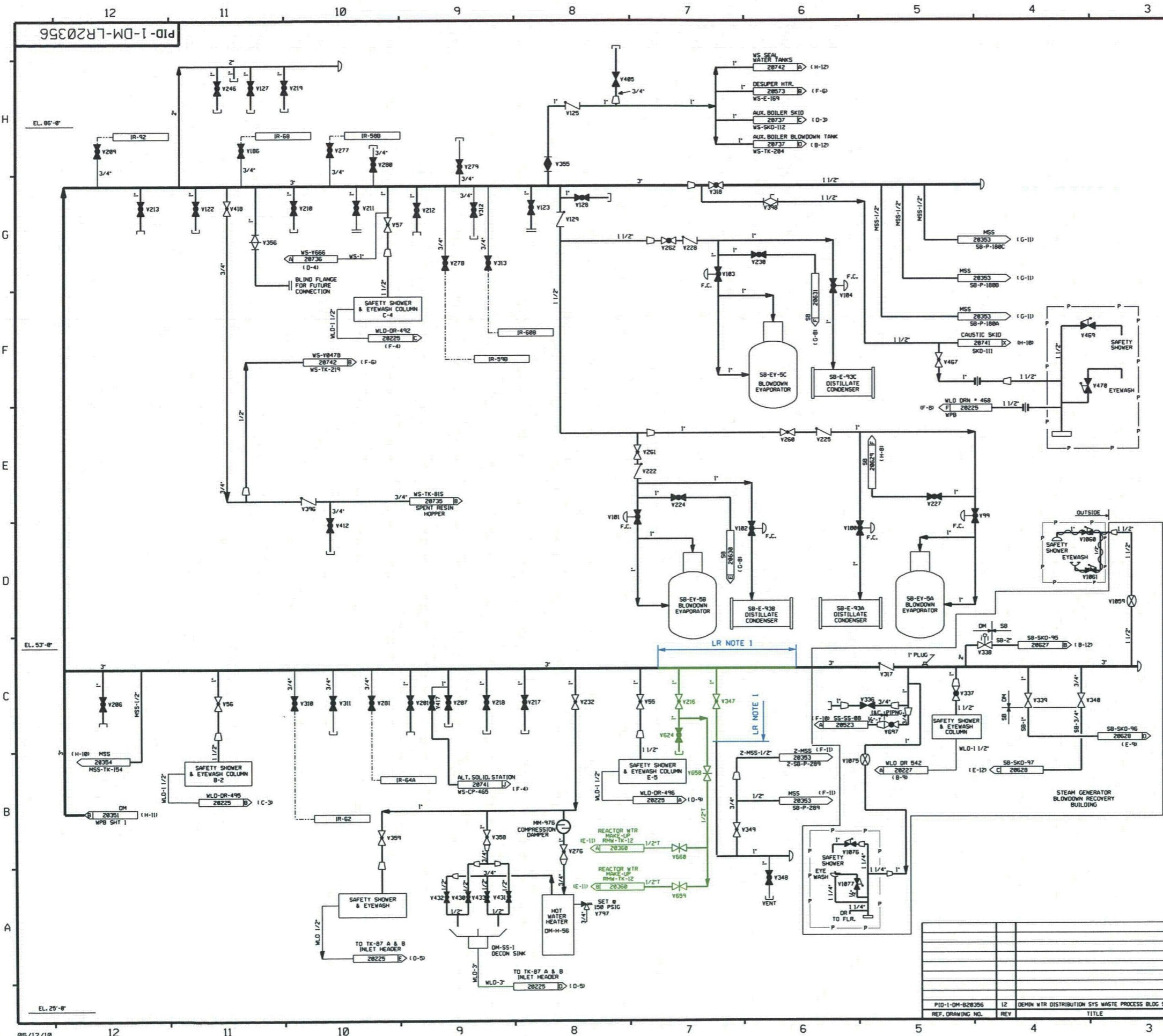
**NEXTERA ENERGY**  
SEABROOK

DEMINERALIZED WATER DISTRIBUTION  
DETAIL  
LICENSE RENEWAL P&ID

PID-1-DM-LR20355

SEABROOK STATION

PID-1-DM-28355	18	DEMINERALIZED WATER DISTRIBUTION DETAIL
REF. DRAWING NO.	REV	TITLE



FOR P&ID REFERENCE DRAWINGS, SYMBOLS AND ABBREVIATIONS REFER TO DRAWINGS P&ID - LRLEGEND 1 AND P&ID - LRLEGEND 2

LR NOTES:  
 1. THE ONLY COMPONENTS IN SCOPE ARE THE COMPONENTS LOCATED IN TANK FARM ROOM 2833. ALL OTHER COMPONENTS ARE LOCATED IN WASTE PROCESSING BUILDING AND IN THE STEAM GENERATOR BLOWDOWN RECOVERY ROOM, WHICH HAVE NO SAFETY RELATED COMPONENTS IN THEM, THEREFORE HAVE NO LICENSE RENEWAL (LR) INTENDED FUNCTION AND ARE NOT IN SCOPE.

COMPONENTS SUBJECT TO AMR  
 RED INDICATES COMPONENTS IN SCOPE PER 10CFR 54.4(a)(1) AND/OR (a)(3) AND SUBJECT TO AMR PER 10CFR 54.21.  
 BLACK INDICATES COMPONENTS NOT SUBJECT TO AMR.  
 GREEN INDICATES COMPONENTS IN SCOPE PER 10CFR 54.4(a)(2) AND SUBJECT TO AMR PER 10CFR 54.21.  
 ▲ PIPE ANCHOR  
 ◆◆◆◆ INDICATES SYSTEM BOUNDARY INTERFACE

NOTES:  
 1) WORK THIS DRAWING WITH DRAWINGS 28348 THROUGH 28355.  
 2) ALL LINES, EQUIPMENT, COMPONENTS & INSTRUMENTS ARE SYSTEM PREFIX 'DM' UNLESS OTHERWISE NOTED.  
 3) ▲ INDICATES REVISION LEVEL.  
 4) DELETED  
 5) ALL LINES, EQUIPMENT, COMPONENTS & INSTRUMENTS ARE SAFETY CLASS UNLESS NOTED.  
 6) PIPE CAP MAY BE INSTALLED AT DEMIN WATER HOSE STATIONS AS DEEMED NECESSARY BY STATION STAFF TO PREVENT LEAKAGE.

REV	DATE	DSGN	CHNG	CE	ORIGINAL ISSUE	DESCRIPTION

**DEMINERALIZED WATER DISTRIBUTION SYSTEM**  
**WASTE PROCESSING BLDG SHEET 2**  
**LICENSE RENEWAL P&ID**

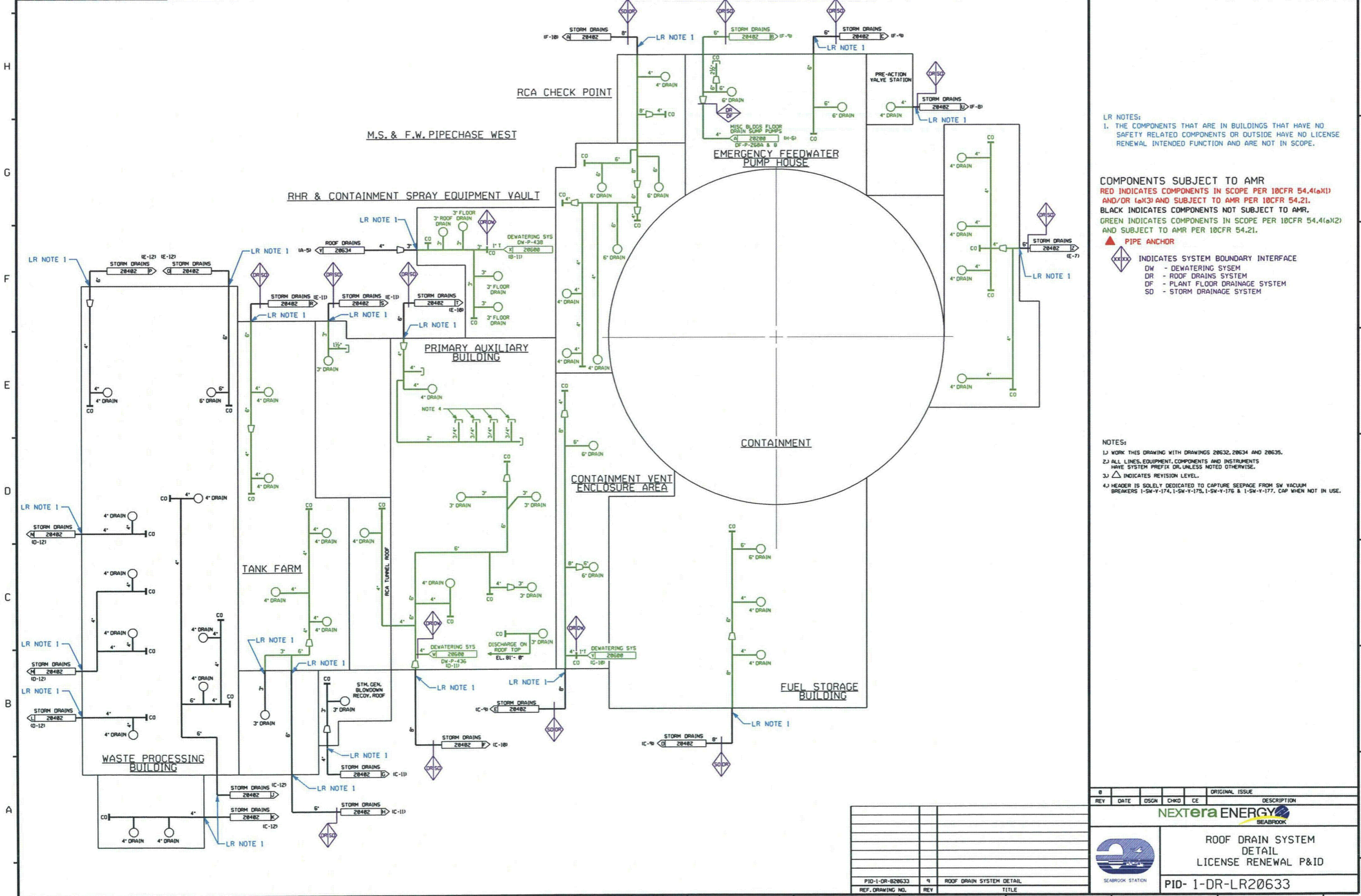
PID-1-DM-LR20356

PID-1-DR-LR20633

FOR P&ID REFERENCE DRAWINGS, SYMBOLS AND ABBREVIATIONS REFER TO DRAWINGS P&ID - LRLEGEND 1 AND P&ID - LRLEGEND 2

H  
G  
F  
E  
D  
C  
B  
A

H  
G  
F  
E  
D  
C  
B  
A



LR NOTES:  
 1. THE COMPONENTS THAT ARE IN BUILDINGS THAT HAVE NO SAFETY RELATED COMPONENTS OR OUTSIDE HAVE NO LICENSE RENEWAL INTENDED FUNCTION AND ARE NOT IN SCOPE.

COMPONENTS SUBJECT TO AMR  
 RED INDICATES COMPONENTS IN SCOPE PER 10CFR 54.4(a)(1) AND/OR (a)(3) AND SUBJECT TO AMR PER 10CFR 54.21.  
 BLACK INDICATES COMPONENTS NOT SUBJECT TO AMR.  
 GREEN INDICATES COMPONENTS IN SCOPE PER 10CFR 54.4(a)(2) AND SUBJECT TO AMR PER 10CFR 54.21.

▲ PIPE ANCHOR  
 □□□□ INDICATES SYSTEM BOUNDARY INTERFACE  
 DW - DEWATERING SYSTEM  
 DR - ROOF DRAINS SYSTEM  
 DF - PLANT FLOOR DRAINAGE SYSTEM  
 SD - STORM DRAINAGE SYSTEM

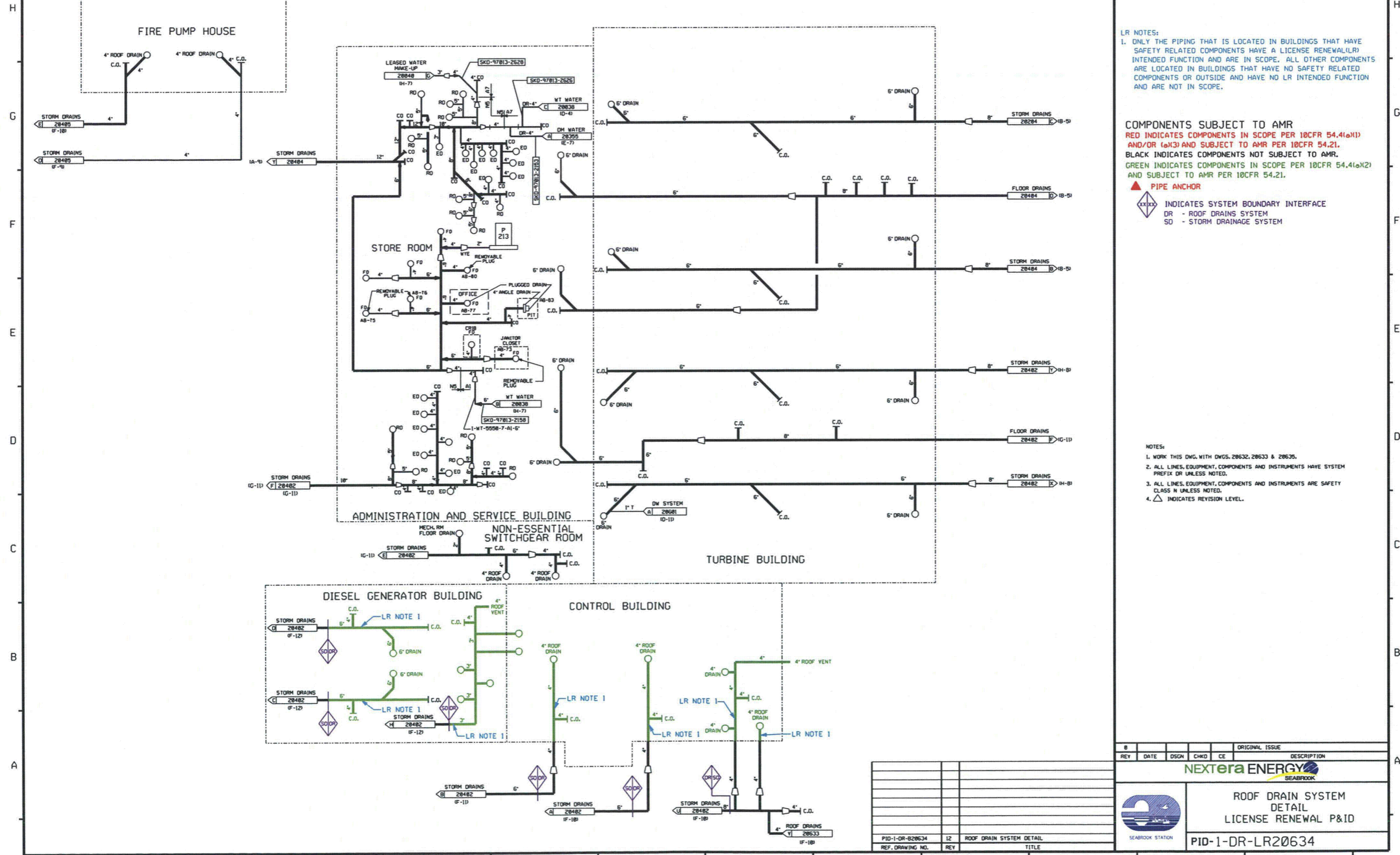
NOTES:  
 1) WORK THIS DRAWING WITH DRAWINGS 20632, 20634 AND 20635.  
 2) ALL LINES, EQUIPMENT, COMPONENTS AND INSTRUMENTS HAVE SYSTEM PREFIX OR, UNLESS NOTED OTHERWISE.  
 3) △ INDICATES REVISION LEVEL.  
 4) HEADER IS SOLELY DEDICATED TO CAPTURE SEEPAGE FROM SW VACUUM BREAKERS 1-SW-Y-174, 1-SW-Y-175, 1-SW-Y-176 & 1-SW-Y-177, CAP WHEN NOT IN USE.

REV	DATE	OSGN	CHKD	CE	DESCRIPTION
					ORIGINAL ISSUE

 	ROOF DRAIN SYSTEM DETAIL LICENSE RENEWAL P&ID
	PID- 1-DR-LR20633

PID-1-DR-20633	9	ROOF DRAIN SYSTEM DETAIL
REF. DRAWING NO.	REV	TITLE

PID-1-DR-LR20634



FOR P&ID REFERENCE DRAWINGS, SYMBOLS AND ABBREVIATIONS REFER TO DRAWINGS P&ID - LRLEGEND 1 AND P&ID - LRLEGEND 2

LR NOTES:  
1. ONLY THE PIPING THAT IS LOCATED IN BUILDINGS THAT HAVE SAFETY RELATED COMPONENTS HAVE A LICENSE RENEWAL(LR) INTENDED FUNCTION AND ARE IN SCOPE. ALL OTHER COMPONENTS ARE LOCATED IN BUILDINGS THAT HAVE NO SAFETY RELATED COMPONENTS OR OUTSIDE AND HAVE NO LR INTENDED FUNCTION AND ARE NOT IN SCOPE.

COMPONENTS SUBJECT TO AMR  
**RED** INDICATES COMPONENTS IN SCOPE PER 10CFR 54.41(a)(1) AND/OR (a)(3) AND SUBJECT TO AMR PER 10CFR 54.21.  
**BLACK** INDICATES COMPONENTS NOT SUBJECT TO AMR.  
**GREEN** INDICATES COMPONENTS IN SCOPE PER 10CFR 54.41(a)(2) AND SUBJECT TO AMR PER 10CFR 54.21.  
▲ PIPE ANCHOR  
◆ INDICATES SYSTEM BOUNDARY INTERFACE  
DR - ROOF DRAINS SYSTEM  
SD - STORM DRAINAGE SYSTEM

NOTES:  
1. WORK THIS DWG. WITH DWGS. 20632, 20633 & 20635.  
2. ALL LINES, EQUIPMENT, COMPONENTS AND INSTRUMENTS HAVE SYSTEM PREFIX DR UNLESS NOTED.  
3. ALL LINES, EQUIPMENT, COMPONENTS AND INSTRUMENTS ARE SAFETY CLASS N UNLESS NOTED.  
4. △ INDICATES REVISION LEVEL.

REV	DATE	DSGN	CHKD	CE	ORIGINAL ISSUE	DESCRIPTION

**NEXTera ENERGY**  
SEABROOK

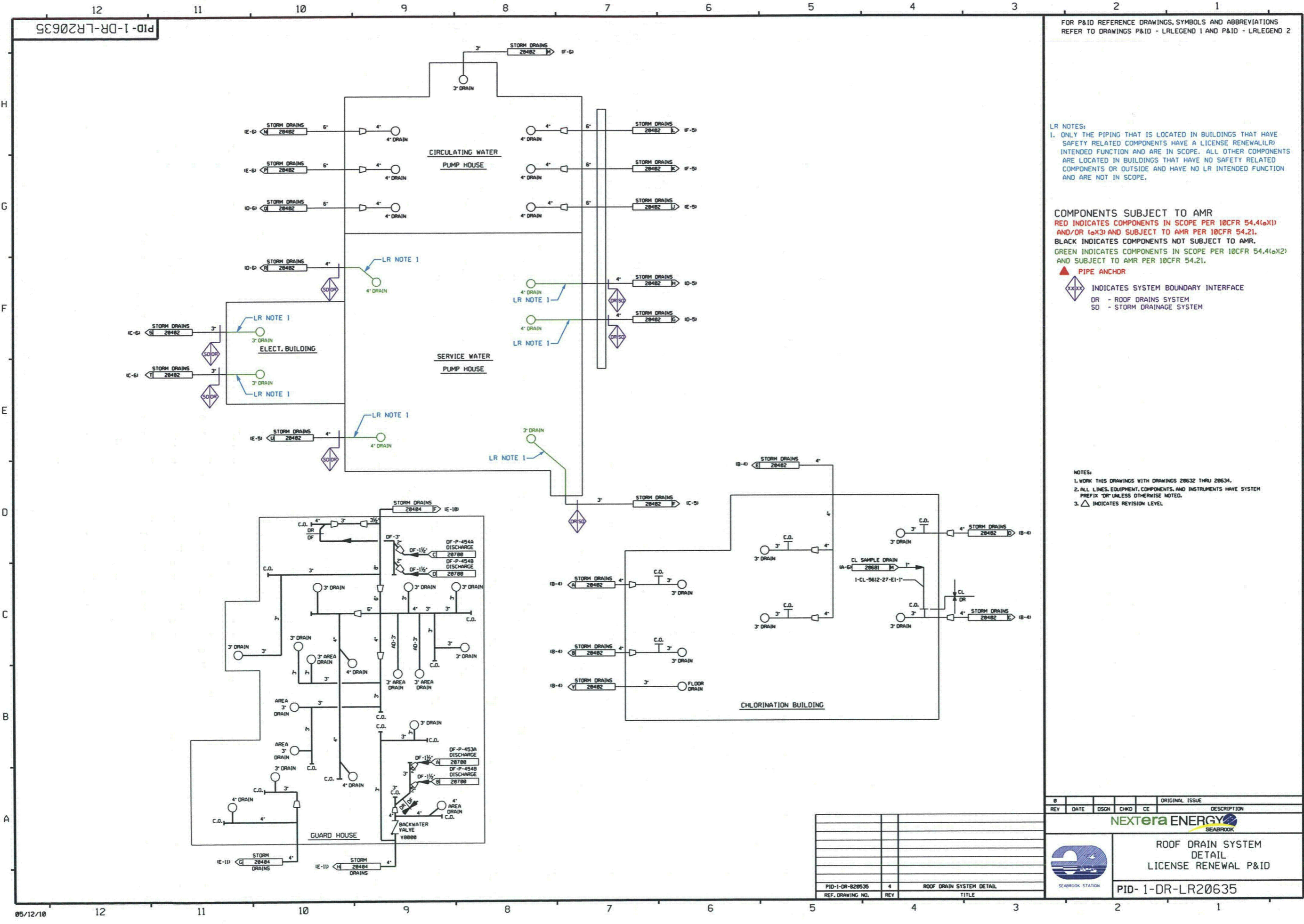
**SEABROOK STATION**

ROOF DRAIN SYSTEM  
DETAIL  
LICENSE RENEWAL P&ID  
PID-1-DR-LR20634

REF. DRAWING NO.	REV	TITLE
PID-1-DR-B20634	12	ROOF DRAIN SYSTEM DETAIL

05/12/10

PID-1-DR-LR20635



FOR P&ID REFERENCE DRAWINGS, SYMBOLS AND ABBREVIATIONS REFER TO DRAWINGS P&ID - LRLEGEND 1 AND P&ID - LRLEGEND 2

LR NOTES:  
 1. ONLY THE PIPING THAT IS LOCATED IN BUILDINGS THAT HAVE SAFETY RELATED COMPONENTS HAVE A LICENSE RENEWAL(LR) INTENDED FUNCTION AND ARE IN SCOPE. ALL OTHER COMPONENTS ARE LOCATED IN BUILDINGS THAT HAVE NO SAFETY RELATED COMPONENTS OR OUTSIDE AND HAVE NO LR INTENDED FUNCTION AND ARE NOT IN SCOPE.

COMPONENTS SUBJECT TO AMR  
 RED INDICATES COMPONENTS IN SCOPE PER 10CFR 54.4(a)(1) AND/OR (a)(3) AND SUBJECT TO AMR PER 10CFR 54.21.  
 BLACK INDICATES COMPONENTS NOT SUBJECT TO AMR.  
 GREEN INDICATES COMPONENTS IN SCOPE PER 10CFR 54.4(a)(2) AND SUBJECT TO AMR PER 10CFR 54.21.

▲ PIPE ANCHOR  
 ◆ INDICATES SYSTEM BOUNDARY INTERFACE  
 DR - ROOF DRAINS SYSTEM  
 SD - STORM DRAINAGE SYSTEM

NOTES:  
 1. WORK THIS DRAWINGS WITH DRAWINGS 20632 THRU 20634.  
 2. ALL LINES, EQUIPMENT, COMPONENTS, AND INSTRUMENTS HAVE SYSTEM PREFIX 'DR' UNLESS OTHERWISE NOTED.  
 3. △ INDICATES REVISION LEVEL

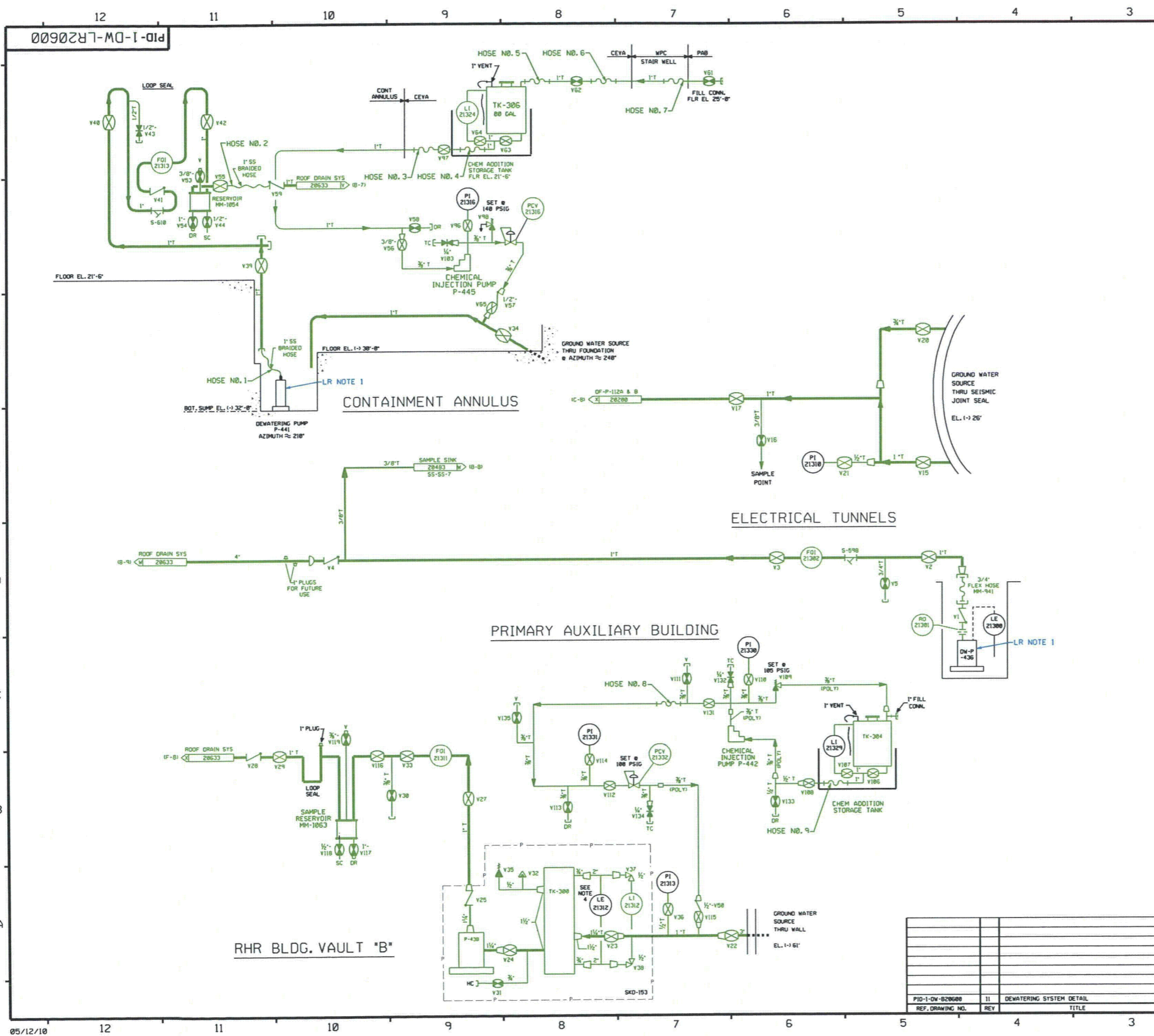
REV	DATE	DSGN	CHKD	CE	ORIGINAL ISSUE	DESCRIPTION

**NEXTERA ENERGY**  
SEABROOK

ROOF DRAIN SYSTEM  
DETAIL  
LICENSE RENEWAL P&ID

PID-1-DR-LR20635

PID-1-DR-20635	4	ROOF DRAIN SYSTEM DETAIL
REF. DRAWING NO.	REV	TITLE



FOR P&ID REFERENCE DRAWINGS, SYMBOLS AND ABBREVIATIONS REFER TO DRAWINGS P&ID - LRLEGEND 1 AND P&ID - LRLEGEND 2

LR NOTES:  
 1. PUMPS ARE SUBMERGED SO THEY HAVE NO LICENSE RENEWAL (LR) INTENDED FUNCTION AND ARE NOT IN SCOPE.

COMPONENTS SUBJECT TO AMR  
 RED INDICATES COMPONENTS IN SCOPE PER 10CFR 54.4(a)(1) AND/OR (a)(3) AND SUBJECT TO AMR PER 10CFR 54.21.  
 BLACK INDICATES COMPONENTS NOT SUBJECT TO AMR.  
 GREEN INDICATES COMPONENTS IN SCOPE PER 10CFR 54.4(a)(2) AND SUBJECT TO AMR PER 10CFR 54.21.

▲ PIPE ANCHOR  
 ◊ INDICATES SYSTEM BOUNDARY INTERFACE

NOTES:  
 1.) WORK THIS DRAWING WITH DRAWINGS 20601.  
 2.) ALL LINES, EQUIPMENT, COMPONENTS AND INSTRUMENTS HAVE SYSTEM PREFIX DW, UNLESS NOTED OTHERWISE.  
 3.) △ INDICATES REVISION LEVEL.  
 4.) LE-21312 CONSISTS OF LE-21312-1 THRU LE-21312-6 (REF. 1-NWT-586459)

REV	DATE	DSGN	CHKD	CE	ORIGINAL ISSUE	DESCRIPTION

**NEXTERA ENERGY**  
SEABROOK

DEWATERING SYSTEM  
DETAIL  
LICENSE RENEWAL P&ID

PID-1-DW-LR20600

REV	DATE	TITLE