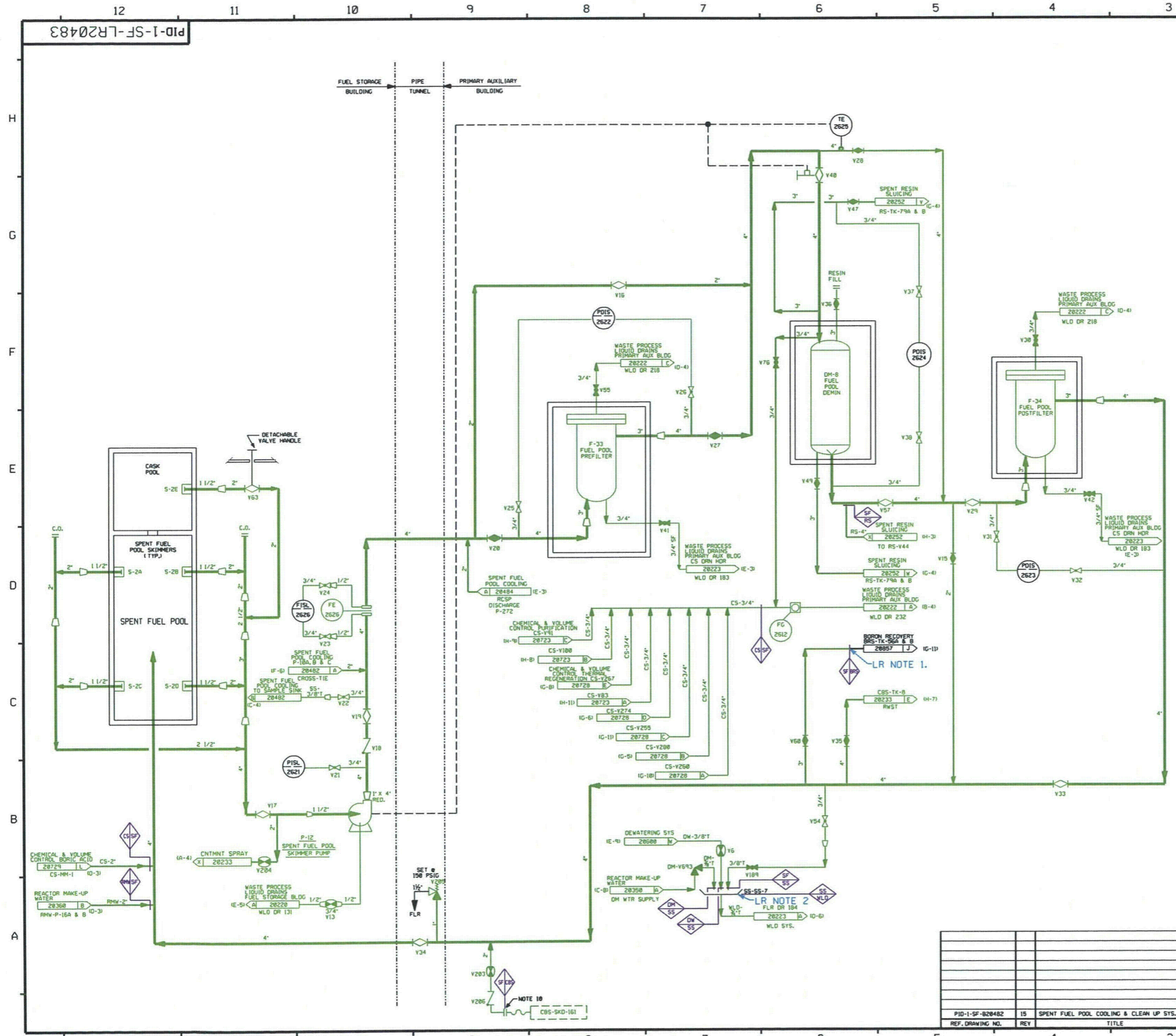


PID-1-SF-LR20483



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

- LR NOTES:
1. PORTIONS OF THIS SYSTEM ARE IN SCOPE FOR LICENSE RENEWAL (a)(2). PORTIONS OF THIS SYSTEM THAT TRANSITION INTO THE WASTE PROCESSING BUILDING ARE NOT IN SCOPE.
 2. SAMPLE SINK IS NORMALLY DRAINED AND DOES NOT HAVE A CONTINUOUS FLOW, THEREFORE HAS NO LICENSE RENEWAL INTENDED FUNCTION AND IS 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
- SF - SPENT FUEL POOL COOLING & CLEANUP
 - CS - CHEMICAL & VOLUME CONTROL SYSTEM
 - WLD - WASTE PROCESSING LIQUID DRAINS
 - BRS - BORON RECOVERY SYSTEM
 - RMW - REACTOR MAKE-UP WATER
 - DW - DEWATERING SYSTEM
 - CBS - CONTAINMENT SPRAY SYSTEM
 - DM - DEMINERALIZED WATER SYSTEM
 - SS - SAMPLE SYSTEM
 - RS - RESIN SLUICING SYSTEM

- NOTES:
1. WORK THIS DRAWING WITH 20480, 20482 & 20484.
 2. ALL LINES, VALVES, EQUIPMENT, COMPONENTS AND INSTRUMENTS HAVE SYSTEM PREFIX 1-SF, UNLESS NOTED OTHERWISE.
 3. ALL LINES, VALVES, EQUIPMENT, COMPONENTS AND INSTRUMENTS ARE SAFETY CLASS NMS, UNLESS NOTED OTHERWISE.
 4. VENT LINES FROM FILTERS ARE MANIFOLDED AND RUN THROUGH A COMMON SIGHT GLASS. VALVES ARE LOCATED NEAR MANIFOLD.
 5. SPECIAL TRANSITION PIECE.
 6. RETURN TERMINATES 11 FT ABOVE SPENT FUEL ASSEMBLIES.
 7. DELETED
 8. △ INDICATES REVISION LEVEL
 9. DELETED

REV	DATE	DSGN	CHKD	CE	DESCRIPTION

ORIGINAL ISSUE

NEXTERA ENERGY
SEABROOK

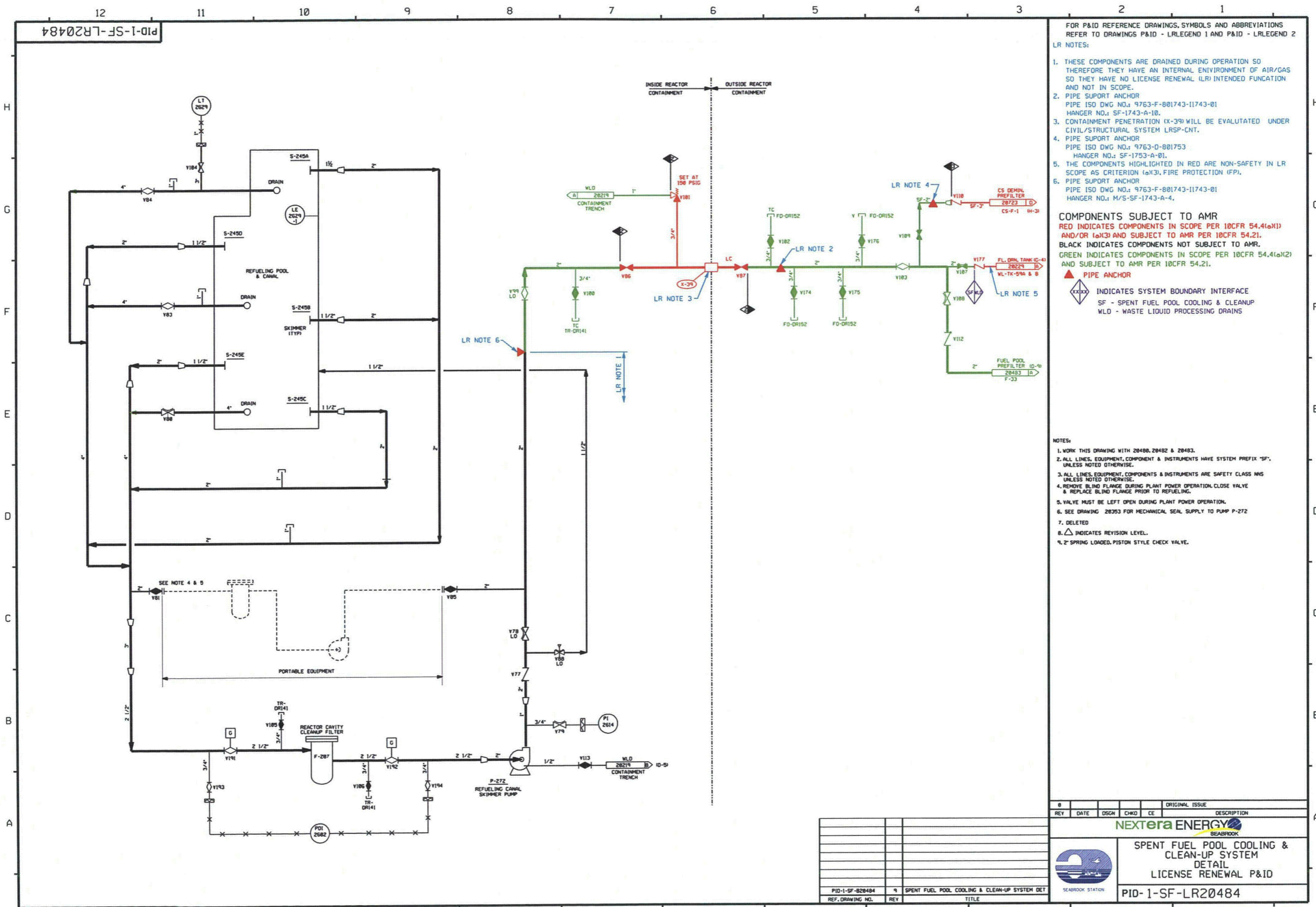
SEABROOK STATION

SPENT FUEL POOL COOLING AND CLEAN-UP SYSTEM
 DETAIL
 LICENSE RENEWAL P&ID

PID-1-SF-LR20483

REF. DRAWING NO.	REV	TITLE
PID-1-SF-20482	15	SPENT FUEL POOL COOLING & CLEAN UP SYS. P&ID

PID-1-SF-LR20484



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

1. THESE COMPONENTS ARE DRAINED DURING OPERATION SO THEREFORE THEY HAVE AN INTERNAL ENVIRONMENT OF AIR/GAS SO THEY HAVE NO LICENSE RENEWAL (LR) INTENDED FUNCTION AND NOT IN SCOPE.
2. PIPE SUPPORT ANCHOR
PIPE ISO DWG NO.: 9763-F-801743-11743-01
HANGER NO.: SF-1743-A-10.
3. CONTAINMENT PENETRATION (X-39) WILL BE EVALUTATED UNDER CIVIL/STRUCTURAL SYSTEM LRSP-CNT.
4. PIPE SUPORT ANCHOR
PIPE ISO DWG NO.: 9763-0-801753
HANGER NO.: SF-1753-A-01.
5. THE COMPONENTS HIGHLIGHTED IN RED ARE NON-SAFETY IN LR SCOPE AS CRITERION (a)(3), FIRE PROTECTION (FP).
6. PIPE SUPPORT ANCHOR
PIPE ISO DWG NO.: 9763-F-801743-11743-01
HANGER NO.: M/S-SF-1743-A-4.

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
SF - SPENT FUEL POOL COOLING & CLEANUP
WLD - WASTE LIQUID PROCESSING DRAINS

- NOTES:
1. WORK THIS DRAWING WITH 20480, 20482 & 20483.
 2. ALL LINES, EQUIPMENT, COMPONENT & INSTRUMENTS HAVE SYSTEM PREFIX 'SF', UNLESS NOTED OTHERWISE.
 3. ALL LINES, EQUIPMENT, COMPONENTS & INSTRUMENTS ARE SAFETY CLASS M/S UNLESS NOTED OTHERWISE.
 4. REMOVE BLIND FLANGE DURING PLANT POWER OPERATION, CLOSE VALVE & REPLACE BLIND FLANGE PRIOR TO REFUELING.
 5. VALVE MUST BE LEFT OPEN DURING PLANT POWER OPERATION.
 6. SEE DRAWING 20293 FOR MECHANICAL SEAL SUPPLY TO PUMP P-272
 7. DELETED
 8. △ INDICATES REVISION LEVEL.
 9. 2" SPRING LOADED, PISTON STYLE CHECK VALVE.

REV	DATE	DSGN	CHKD	CE	DESCRIPTION

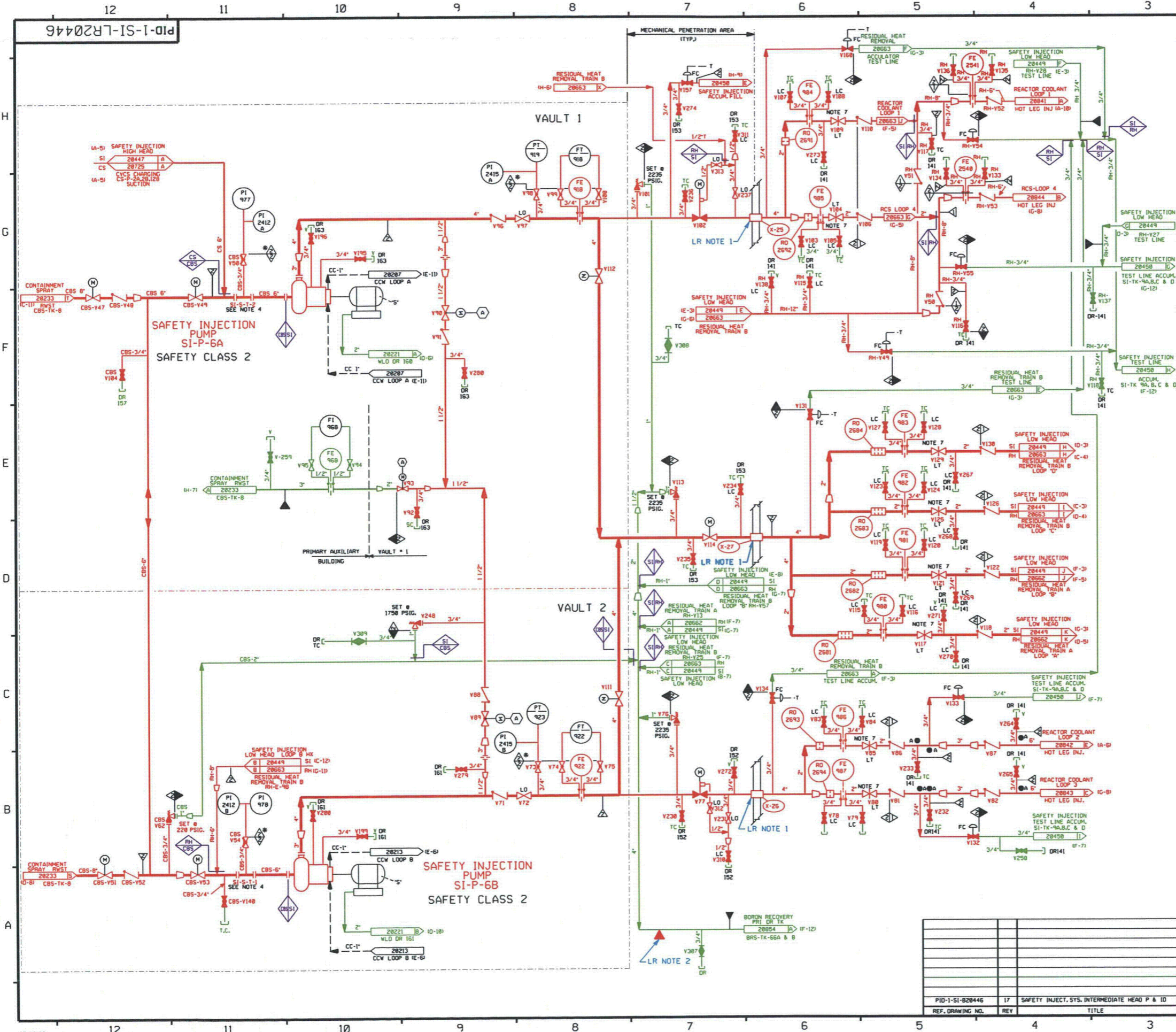
ORIGINAL ISSUE

NEXTERA ENERGY
SEABROOK

SPENT FUEL POOL COOLING & CLEAN-UP SYSTEM DETAIL LICENSE RENEWAL P&ID

PID-1-SF-LR20484

PID-1-SI-LR20446



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-25, X-26, & X-27 ARE CONTAINMENT PENETRATIONS THAT ARE EVALUATED UNDER THE CIVIL STRUCTURAL SYSTEM LRSP-CNT.
 - PIPE SUPPORT ANCHOR
ISO NO.: 800253-541.50
HANGER NO.: 253-A-9
CALC. NO.: MCD 541.50-CALC

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
- CS - CHEMICAL & VOLUME CONTROL SYS
- RH - RESIDUAL HEAT REMOVAL
- SI - SAFETY INJECTION

- NOTES:
- WORK THIS DRAWING WITH DRAWINGS 20445, 20447 THRU 20458. PORTIONS OF RH SYSTEM DUPLICATED ON THIS DRAWING ARE DETAILED ON RH-20663 DUE TO DUAL SYSTEM FUNCTIONS.
 - ALL PIPES, VALVES, EQUIPMENT, COMPONENTS, AND INSTRUMENTS HAVE SYSTEM PREFIX UNLESS NOTED OTHERWISE.
 - ▲ = VALVE INTERLOCK FROM RH-Y35, RH-Y36 IDWG. 20444.
 - PERMANENT SPOOL PIECE INSTALLATION SHOWN. TEMPORARY STRAINER IS USED IN PLACE OF SPOOL PIECE DURING INITIAL FLUSHING OPERATION. STRAINER TO BE REMOVED BEFORE PLANT START UP CONNECTION USED FOR PRE-PLANNED MAKEUP STRATEGY. SEE PFD948.
 - VENT DRAIN TEST COMPS AND ORIFICE. TAP PIPING CODE BREAKS ARE AT THE DOWNSTREAM END OF THE OUTER ISOLATION VALVE PER 1-NHT-88511 UNLESS NOTED OTHERWISE.
 - DELETED
 - ADJUST VALVES IN FIELD TO LIMIT PUMP RUN OUT THEN LOCK.
 - MINIMUM FLOW ORIFICE SUPPLIED WITH PUMP.
 - ▲ - INDICATES REVISION LEVEL
 - - INDICATES 3/8" FLOW RESTRICTOR INSTALLED. SEE APPLICABLE DETAIL ON DWG RC-20648.

PORTIONS OF THIS DRAWING ARE
NUCLEAR SAFETY RELATED

REV	DATE	DSGN	CHKD	CE	DESCRIPTION

ORIGINAL ISSUE

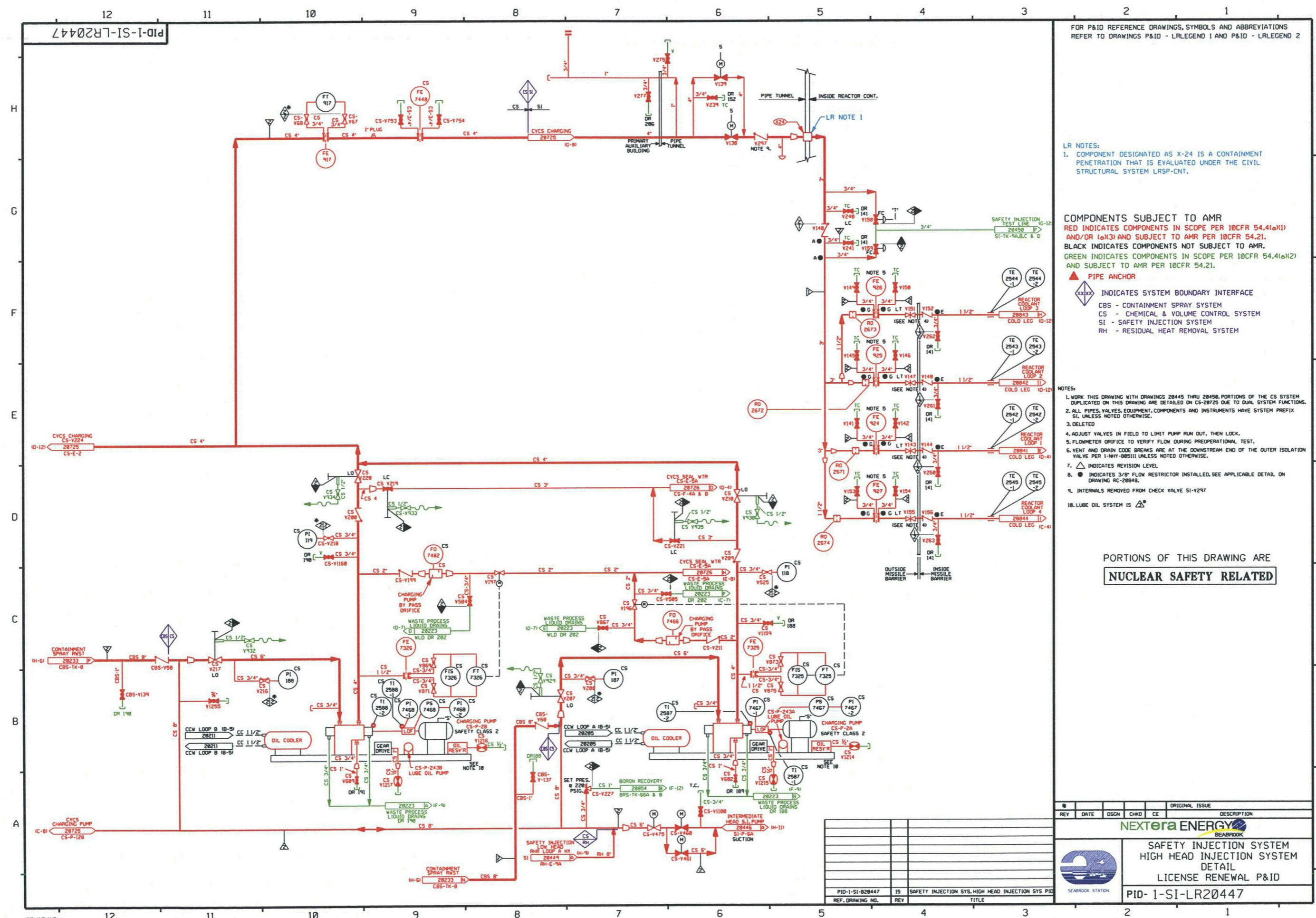
Nextera ENERGY
SEABROOK

SEABROOK STATION

SAFETY INJECTION SYSTEM
 INTERMEDIATE HEAD INJECTION
 SYSTEM DETAIL
 LICENSE RENEWAL P&ID

PID-1-SI-LR20446

PID-1-SI-LR20447



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-24 IS A CONTAINMENT PENETRATION THAT IS EVALUATED UNDER THE CIVIL STRUCTURAL SYSTEM LRSP-CNT.

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
- CBS - CONTAINMENT SPRAY SYSTEM
- CS - CHEMICAL & VOLUME CONTROL SYSTEM
- SI - SAFETY INJECTION SYSTEM
- RH - RESIDUAL HEAT REMOVAL SYSTEM

- NOTES:
1. WORK THIS DRAWING WITH DRAWINGS 28445 THRU 28456. PORTIONS OF THE CS SYSTEM DUPLICATED ON THIS DRAWING ARE DETAILED ON CS-28725 DUE TO DUAL SYSTEM FUNCTIONS.
 2. ALL PIPES, VALVES, EQUIPMENT, COMPONENTS AND INSTRUMENTS HAVE SYSTEM PREFIX SI, UNLESS NOTED OTHERWISE.
 3. DELETED
 4. ADJUST VALVES IN FIELD TO LIMIT PUMP RUN OUT, THEN LOCK.
 5. FLOWMETER ORIFICE TO VERIFY FLOW DURING PREOPERATIONAL TEST.
 6. VENT AND DRAIN CODE BREAKS ARE AT THE DOWNSTREAM END OF THE OUTER ISOLATION VALVE PER 1-NHY-885111 UNLESS NOTED OTHERWISE.
 7. △ INDICATES REVISION LEVEL
 8. ● INDICATES 3/8" FLOW RESTRICTOR INSTALLED, SEE APPLICABLE DETAIL ON DRAWING RC-28848.
 9. INTERNALS REMOVED FROM CHECK VALVE SI-Y297
 10. LUBE OIL SYSTEM IS △

PORTIONS OF THIS DRAWING ARE
NUCLEAR SAFETY RELATED

REV	DATE	DSGN	CHKD	CE	ORIGINAL ISSUE	DESCRIPTION

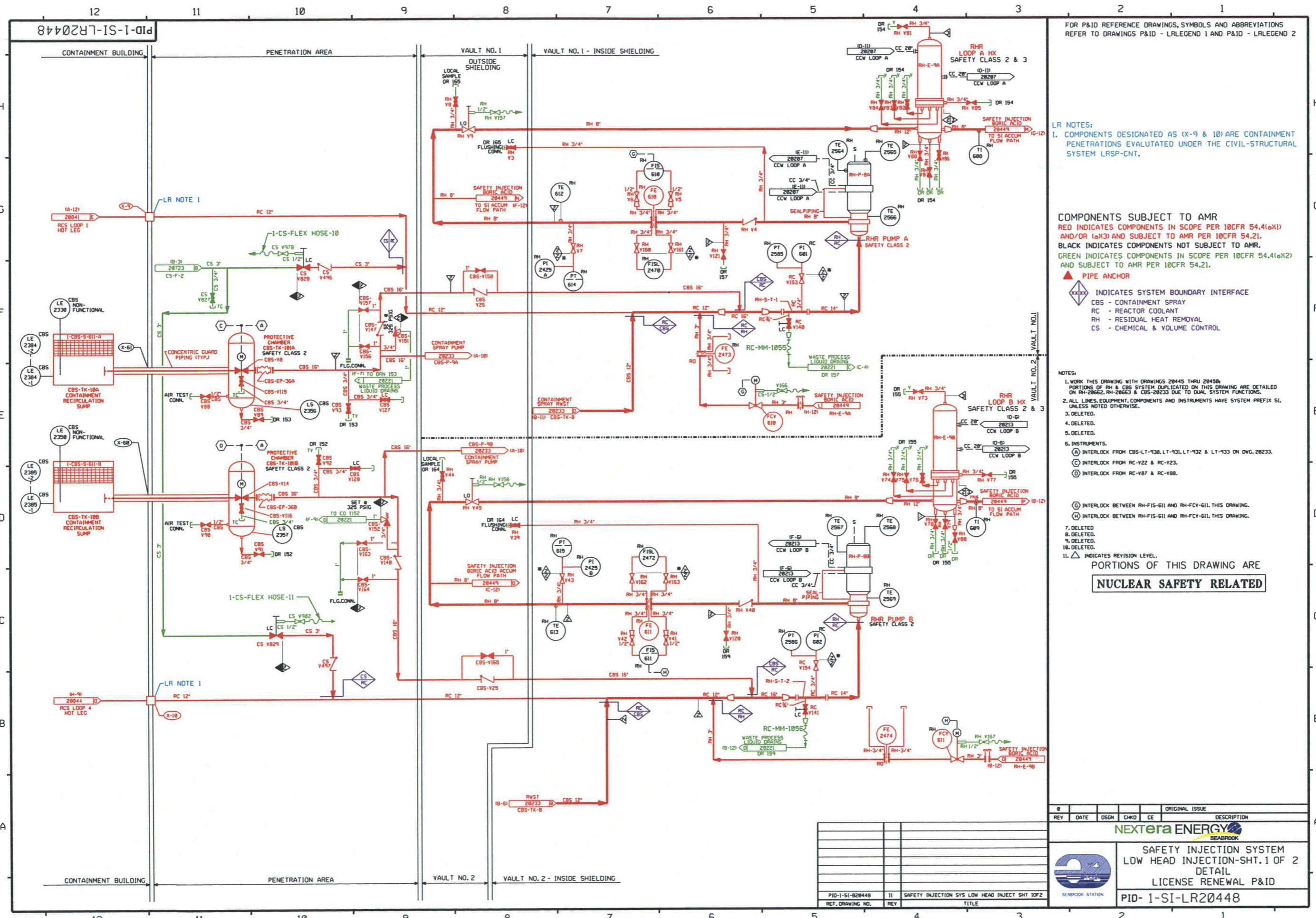
NEXTERA ENERGY
SEABROOK

**SAFETY INJECTION SYSTEM
HIGH HEAD INJECTION SYSTEM
DETAIL
LICENSE RENEWAL P&ID**

PID-1-SI-LR20447

REF. DRAWING NO.	REV	TITLE	
PID-1-SI-B28447	18	SAFETY INJECTION SYS, HIGH HEAD INJECTION SYS PID	

PID-1-SI-LR20448



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-9 & 10) ARE CONTAINMENT PENETRATIONS EVALUTATED 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
 CBS - CONTAINMENT SPRAY
 RC - REACTOR COOLANT
 RH - RESIDUAL HEAT REMOVAL
 CS - CHEMICAL & VOLUME CONTROL

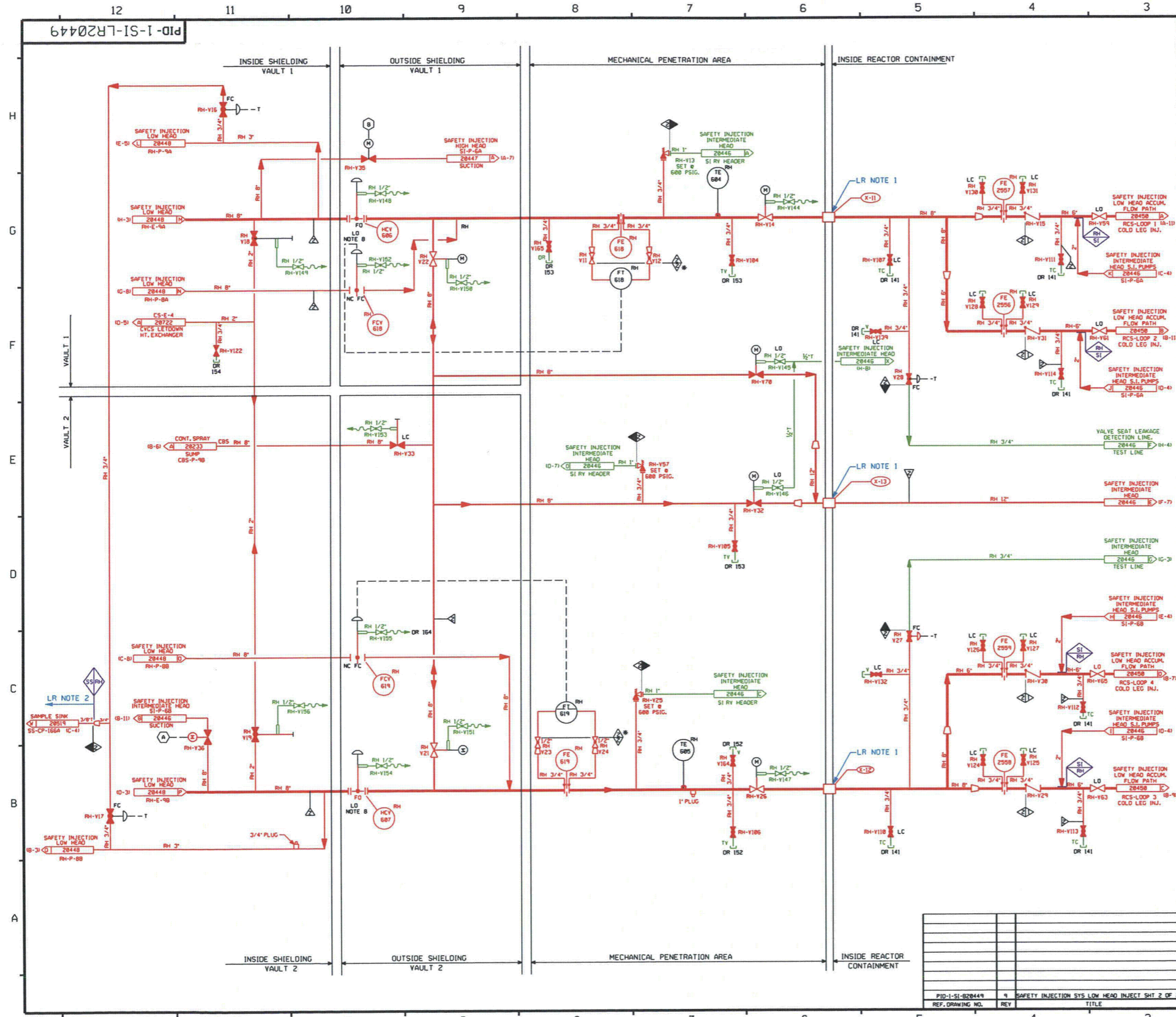
NOTES:
 1. WORK THIS DRAWING WITH DRAWINGS 20445 THRU 20450. PORTIONS OF RH & CBS SYSTEM DUPLICATED ON THIS DRAWING ARE DETAILED ON RH-20662, RH-20663 & CBS-20233 DUE TO DUAL SYSTEM FUNCTIONS.
 2. ALL LINES, EQUIPMENT, COMPONENTS AND INSTRUMENTS HAVE SYSTEM PREFIX SI, UNLESS NOTED OTHERWISE.
 3. DELETED.
 4. DELETED.
 5. DELETED.
 6. INSTRUMENTS:
 (A) INTERLOCK FROM CBS-LT-930, LT-931, LT-932 & LT-933 ON DWG. 20233.
 (C) INTERLOCK FROM RC-Y22 & RC-Y23.
 (D) INTERLOCK FROM RC-Y87 & RC-Y88.
 (E) INTERLOCK BETWEEN RH-FIS-611 AND RH-FCY-611 THIS DRAWING.
 (H) INTERLOCK BETWEEN RH-FIS-611 AND RH-FCY-611 THIS DRAWING.
 7. DELETED.
 8. DELETED.
 9. DELETED.
 10. DELETED.
 11. △ INDICATES REVISION LEVEL.

PORTIONS OF THIS DRAWING ARE
NUCLEAR SAFETY RELATED

REV	DATE	DSGN	CHKD	CE	DESCRIPTION
0					ORIGINAL ISSUE

SAFETY INJECTION SYSTEM
 LOW HEAD INJECTION-SHT. 1 OF 2
 DETAIL
 LICENSE RENEWAL P&ID
PID-1-SI-LR20448

PID-1-SI-LR20449



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-11, X-12 & X-13) ARE CONTAINMENT PENETRATIONS THAT ARE EVALUTATED UNDER THE CIVIL/STRUCTURAL SYSTEM LRSP-CNT.
 - COMPONENTS ARE IN LICENSE RENEWAL SCOPE FOR CRITERION (a)(3) FIRE PROTECTION(FP).

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
 RH - RESIDUAL HEAT REMOVAL SYSTEM
 SI - SAFETY INJECTION SYSTEM
 SS - SAMPLE SYSTEM

- NOTES:
- WORK THIS DRAWING WITH DRAWINGS 20445 THRU 20450. PORTIONS OF RH SYSTEM DUPLICATED ON THIS DRAWING ARE DETAILED ON RH-20662 & 3 DUE TO DUAL SYSTEM FUNCTIONS.
 - ALL LINES, EQUIPMENT, COMPONENTS AND INSTRUMENTS HAVE SYSTEM PREFIX SI, UNLESS NOTED OTHERWISE.
 - INSTRUMENTS
 - (A) INTERLOCKED WITH SI-Y09, SI-Y08, SI-Y03, DRG. 20446; CBS-Y14 I.D.W.G. 20448; RC-Y07 & RC-Y08 I.D.W.G. 20449
 - (B) INTERLOCKED WITH SI-Y09, SI-Y08, SI-Y03, DRG. 20446; CBS-Y08 I.D.W.G. 20448; RC-Y22 & RC-Y23 I.D.W.G. 20441
 - DELETED
 - △ - INDICATES REVISION LEVEL.
 - DELETED
 - DELETED
 - HANDJACK HANDWHEEL LOCKED OPEN EXCEPT DURING MIDLOOP.

PORTIONS OF THIS DRAWING ARE
NUCLEAR SAFETY RELATED

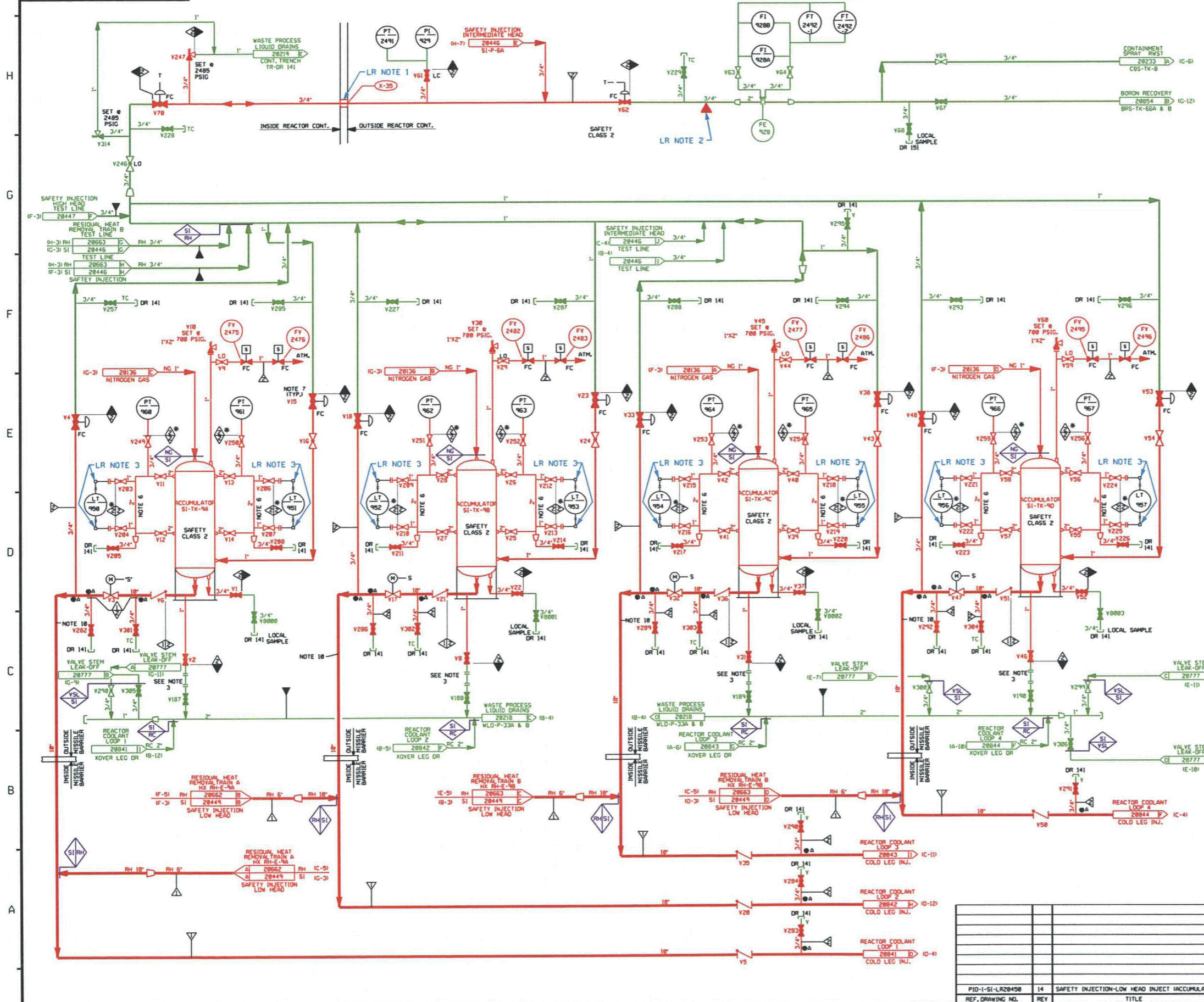
REV	DATE	DSGN	CHKD	CE	DESCRIPTION
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NEXTERA ENERGY
 SEABROOK

**SAFETY INJECTION SYSTEM
 LOW HEAD INJECTION
 SHEET 2 OF 2 DETAIL
 LICENSE RENEWAL P&ID**

PID-1-SI-LR20449

PID-1-SI-LR20450



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

- LR NOTES:
- COMPONENT DESIGNATED AS X-35 IS A CONTAINMENT PENETRATION THAT IS EVALUATED UNDER THE CIVIL STRUCTURAL SYSTEM LRSP-CNT.
 - PIPE SUPPORT EQUIVALENT ANACHOR ISO NO.: 800248-10248 HANGER NOS.: 248-SG-1, 248-RG-4, 248-SG-2 & 248-RG-3A CALC NO.: MCD 10248-CALC
 - 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
- SI - SAFETY INJECTION SYSTEM
 - NG - NITROGEN GAS SYSTEM
 - RC - REACTOR COOLANT SYSTEM
 - RH - RESIDUAL HEAT REMOVAL SYSTEM
 - VSL - VALVE STEM LEAK OFF SYSTEM

- NOTES:
- ALL LINES, EQUIPMENT, COMPONENTS, AND INSTRUMENTS HAVE SYSTEM PREFIX UNLESS NOTED OTHERWISE.
 - WORK THIS DRAWING WITH DRAWINGS 20445 THRU 20449.
 - ACCUMULATOR DRAIN TO BE PROVIDED WITH BLIND FLANGE, SPOOL PIECE TO BE INSTALLED ONLY WHEN ACCUMULATOR IS TO BE DRAINED.
 - DELETED
 - DELETED
 - 66" MINIMUM STANDPIPE TO BE PROVIDED BY A/E WITH MARK INDICATING NORMAL WATER LEVEL AS DEFINED IN THE PLANT SETPOINT DOCUMENT. LEVEL TRANSMITTER TAPS ARE LOCATED 8 INCHES ABOVE AND BELOW THE SCRIBE MARK.
 - DELETED
 - 8" INDICATES 3/8" FLOW RESTRICTOR INSTALLED. SEE APPLICABLE DETAIL ON DWG RC-28848.
 - DELETED
 - PIPING SCHEDULE 148 MUST BE ADHERED TO DUE TO SAFETY ANALYSIS FLOW REQUIREMENTS.
 - DELETED
 - DELETED
 - △ INDICATES REVISION LEVEL
 - VENT, DRAIN & TEST CONN. CODE BREAKS ARE AT THE DOWNSTREAM END OF THE OUTER ISOLATION VALVE PER 1-MHT-005111 UNLESS NOTED OTHERWISE.

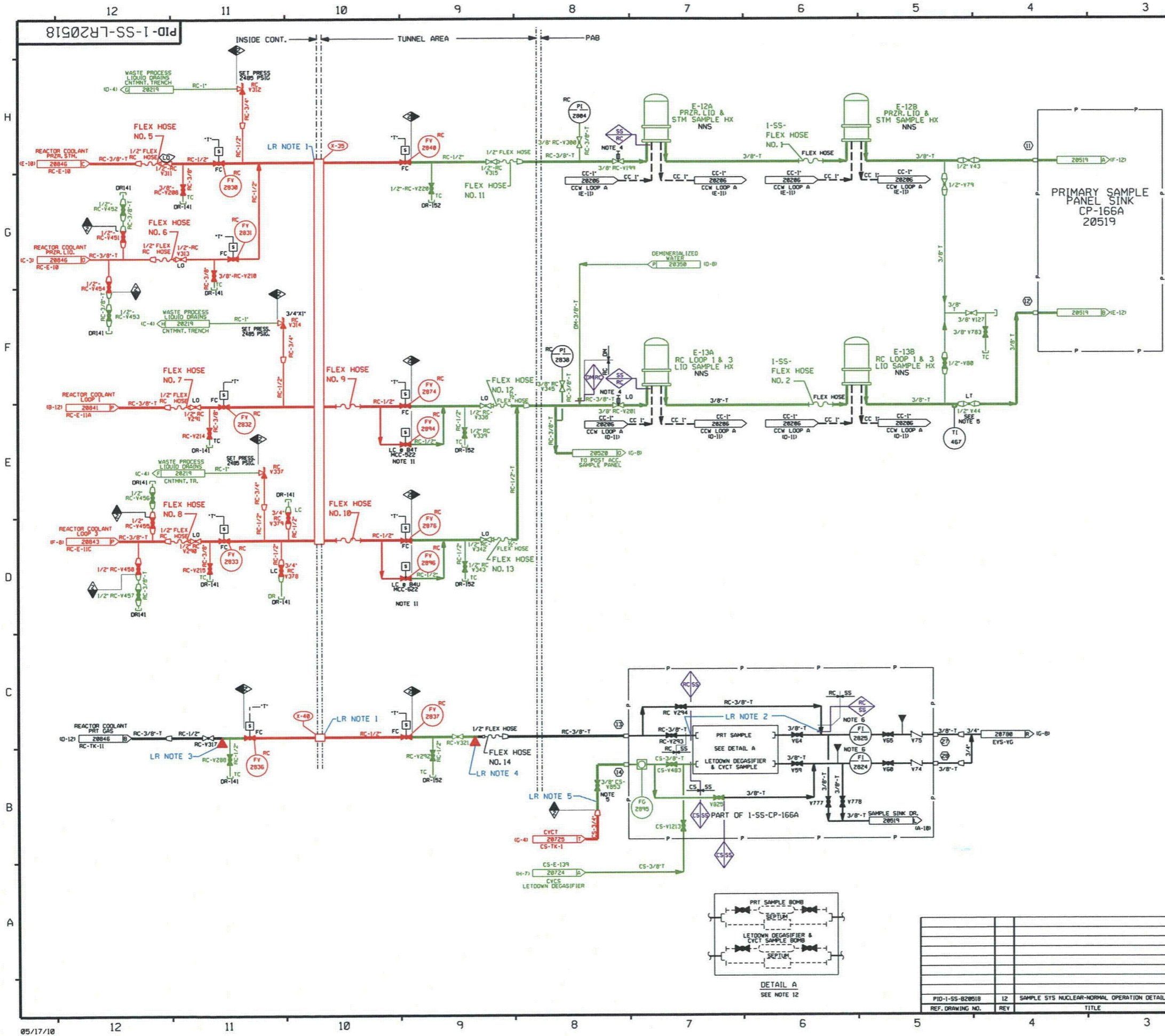
PORTIONS OF THIS DRAWING ARE
NUCLEAR SAFETY RELATED

REV	DATE	DSGN	CHKD	CE	ORIGINAL ISSUE	DESCRIPTION

SAFETY INJECTION SYSTEM
LOW HEAD INJECTION (ACCUMULATORS)
DETAIL
LICENSE RENEWAL P&ID
PID-1-SI-LR20450



PID-1-SS-LR20518



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

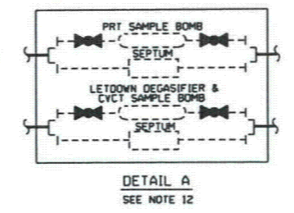
- LR NOTES:
- COMPONENTS DESIGNATED AS (X-35 & 40) ARE CONTAINMENT PENETRATIONS THAT ARE EVALUATED UNDER CIVIL/STRUCTURAL SYSTEM LRSP-CNT.
 - THIS PORTION OF THE SAMPLE SYSTEM IS NOT IN SCOPE BECAUSE THE INTERNAL ENVIRONMENT IS AIR/GAS.
 - PIPE SUPPORT ANCHOR
ISO NO.: 800129-492.10A
HANGER NO.: 129-A-9
CALC. NO.: MCD 492.10A-CALC
 - PIPE SUPPORT EQUIVALENT ANCHOR
ISO NO.: 800129-10129
HANGER NOS.: M/S 129-SG-4A & M/S 129-4A/129-RG-4B
CALC. NO.: MCD 10129-CALC
 - PER NEI 95-10 APPENDIX F SECTION 4.4F THE SMALLER TUBING DOES NOT IMPOSE LOADS ON THE LARGER PIPING AND DOES NOT SUPPORT THE PIPING.

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
 SS - SAMPLE SYSTEM
 RC - REACTOR COOLANT SYSTEM
 DM - DEMINERALIZED WATER SYSTEM
 CS - CHEMICAL & VOLUME CONTROL SYSTEM

- NOTES:
- WORK THIS DRAWING WITH DRAWINGS 20516, 20519 THRU 20522.
 - ALL LINES, EQUIPMENT, COMPONENTS AND INSTRUMENTS HAVE SYSTEM PREFIX SS, UNLESS NOTED OTHERWISE.
 - ALL SAMPLE INSTRUMENTATION INDICATION SHALL BE LOCATED ON A PANEL AT THE SAMPLE SINK.
 - REACH ROD OPERATED FROM THE SAMPLE ROOM SIDE OF THE SAMPLE ROOM-SAMPLE WALL.
 - THIS VALVE SHALL BE ADJUSTED AND SET TO GIVE A 0.8 GPM SAMPLE FLOW FROM RPV LOOP 1 OR 3.
 - ALL FLOW INDICATORS ON SS-CP-166A & B HAVE INTEGRAL NEEDLE VALVES WHICH ARE NOT SHOWN ON THE P&ID.
 - TYPICAL CONNECTION IDENTIFICATION FOR SS-CP-166A & B
 - DELETED
 - △ INDICATES REVISION LEVEL
 - VENTS, DRAINS AND TEST CONNECTION CODEBREAKS ARE AT THE DOWNSTREAM END OF THE OUTER ISOLATION VALVE PER I-NHY-880111 UNLESS OTHERWISE NOTED.
 - VALVE DISABLED IN THE LOCKED CLOSED POSITION BY LOCKING BREAKERS B4T & B4U OPEN
 - SAMPLE BOMBS AND SEPTUMS ARE INSTALLED DURING SAMPLING FUNCTIONS, EITHER THE SAMPLE BOMB OR THE SAMPLE SEPTUM MAY BE USED, SEE DETAIL A (A-10).

PORTIONS OF THIS DRAWING ARE
NUCLEAR SAFETY RELATED

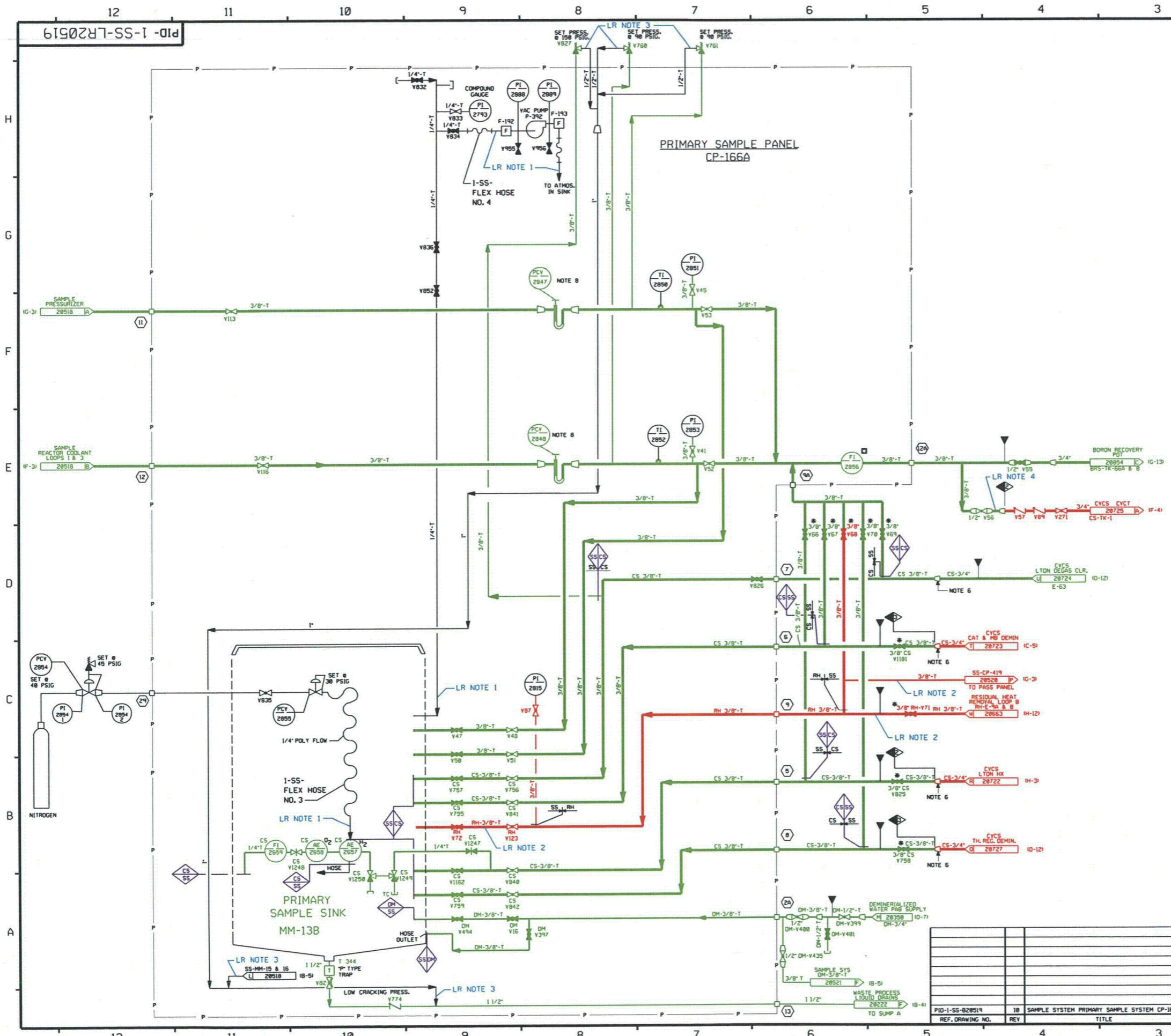


REV	DATE	DSGN	CHKD	CE	DESCRIPTION

REV	DATE	DSGN	CHKD	CE	DESCRIPTION

SAMPLE SYSTEM (NUCLEAR-NORMAL OPERATION) DETAIL
 LICENSE RENEWAL P&ID
PID-1-SS-LR20518

PID-1-SS-LR20519



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

- LR NOTES:
1. THIS PORTION OF THE SAMPLE SYSTEM IS NOT IN SCOPE BECAUSE THE INTERNAL ENVIRONMENT IS AIR/GAS.
 2. PIPING IS IN SCOPE FOR CRITERION (a)(3) FIRE PROTECTION.
 3. PIPING HAS INTERNAL ENVIRONMENT OF AIR/GAS THEREFORE IS NOT IN SCOPE FOR LICENSE RENEWAL.
 4. THE TRANSITION TO TUBING DOES NOT NEED AN EQUIVALENT ANCHOR TO ISOLATE THE CLASS BREAK AT VALVE SS-Y-57 REFERENCE CALCULATIONS ARE MCD 565.80-CALC, MCD 10248-CALC AND MCD 503.20-CALC.

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

SS - SAMPLE SYSTEM
 DM - DEMINERALIZED WATER SYSTEM
 CS - CHEMICAL & VOLUME CONTROL SYSTEM

- NOTES:
1. WORK THIS DRAWING WITH DRAWING 20516, 20518, 20520 THRU 20522.
 2. ALL LINES, EQUIPMENT, COMPONENTS AND INSTRUMENTS HAVE SYSTEM PREFIX "SS" UNLESS OTHERWISE NOTED.
 3. ALL TUBING 3/8" T AND MAT'L 2500 UNLESS OTHERWISE NOTED.
 4. DELETED
 5. DELETED
 6. THESE REDUCERS ARE TO BE AS CLOSE AS POSSIBLE TO ROOT VALVE.
 7. * THIS VALVE TO BE REACH ROD OPERATED FROM THE SAMPLE RM SIDE OF THE SAMPLE RX ROOM - SAMPLE WALL.
 8. THIS EQUIPMENT HAS 1/4" TUBING CONNECTORS.
 9. △ INDICATES REVISION LEVEL.
 10. DELETED.
 11. ○ CONTINUATION CONNECTION SEE FP-74882.

PORTIONS OF THIS DRAWING ARE
NUCLEAR SAFETY RELATED

REV	DATE	DSGN	CHKD	CE	DESCRIPTION

ORIGINAL ISSUE

NEXTERA ENERGY
SEABROOK

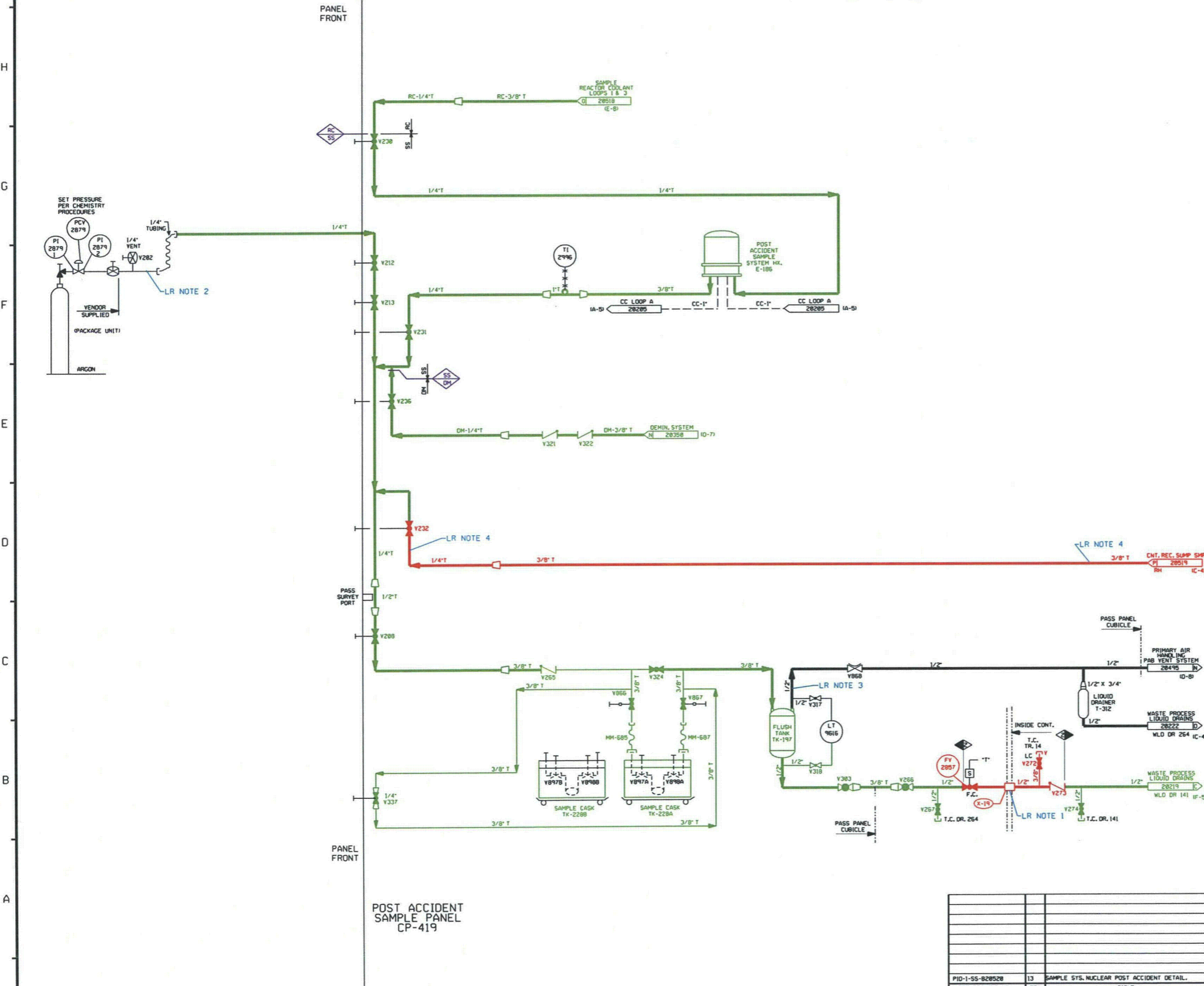
SAMPLE SYSTEM
 PRIMARY SAMPLE PANEL
 CP-166A
 LICENSE RENEWAL P&ID

PID-1-SS-LR20519

SEABROOK STATION

REF. DRAWING NO.	REV	TITLE
PID-1-SS-B20519	10	SAMPLE SYSTEM PRIMARY SAMPLE SYSTEM CP-166A

PID-1-SS-LR20520



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-19) IS A CONTAINMENT PENETRATION THAT WILL BE EVALUATED UNDER CIVIL/STRUCTURAL SYSTEM LRSP-CNT.
 2. THE ARGON SUPPLY SYSTEM IS NOT IN SCOPE BECAUSE THE COMPONENTS ARE NOT SAFETY RELATED AND HAVE NO INTERNAL AGING AND NO SPECIAL AFFECTS.
 3. THIS PORTION OF THE SAMPLE SYSTEM IS NOT IN SCOPE BECAUSE THE INTERNAL ENVIRONMENT IS AIR/GAS.
 4. RED PIPING IS IN SCOPE FOR CRITERIOR (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
 ◊ INDICATES SYSTEM BOUNDARY INTERFACE
 SS - SAMPLE SYSTEM
 RC - REACTOR COOLANT SYSTEM
 DM - DEMINERALIZED WATER SYSTEM

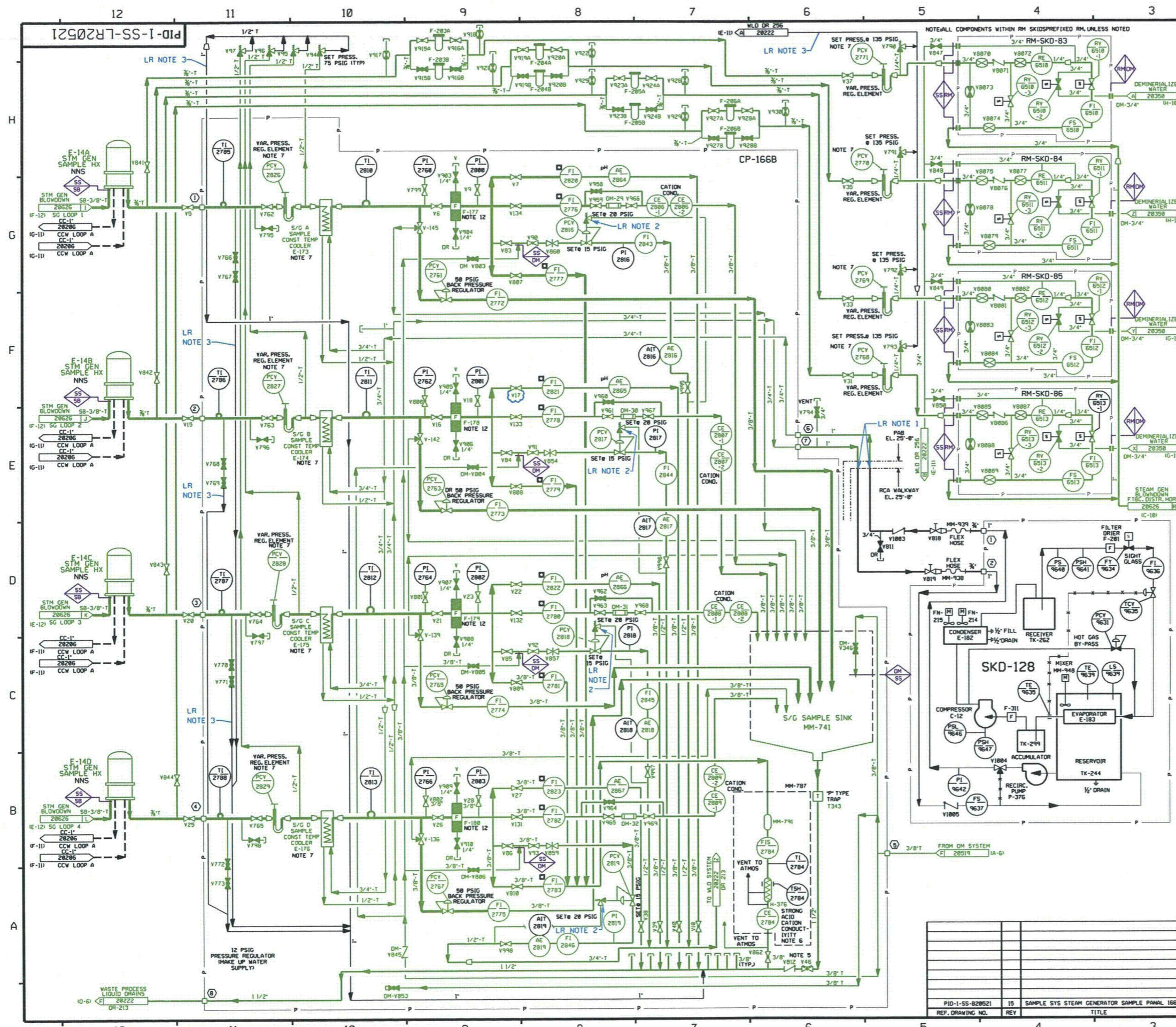
- NOTES:
1. WORK THIS DRAWING WITH DRAWINGS 28516, 28518, 28519, 28521 AND 28522.
 2. ALL PIPING, VALVES, EQUIPMENT, AND INSTRUMENTS HAVE SYSTEM PREFIX SS, UNLESS NOTED OTHERWISE.
 3. VENT AND DRAIN CODE BREAKS ARE AT THE DOWNSTREAM END OF THE OUTER ISOLATION VALVE PER 1-NHT-885111, UNLESS NOTED OTHERWISE.
 4. ▲ INDICATES REVISION LEVEL.
 5. MAINTAIN LEVEL OF DEMIN. WATER IN REFERENCE LEG.
 6. ALL LINES, EQUIPMENT, COMPONENTS AND INSTRUMENTS ARE SAFETY CLASS MNS, UNLESS NOTED OTHERWISE.
 7. QUICK DISCONNECT COUPLINGS.

PORTIONS OF THIS DRAWING ARE
NUCLEAR SAFETY RELATED

POST ACCIDENT
 SAMPLE PANEL
 CP-419

ORIGINAL ISSUE				
REV	DATE	DSGN	CHKD	CE
SAMPLE SYSTEM (NUCLEAR-POST ACCIDENT) DETAIL LICENSE RENEWAL P&ID				
PID-1-SS-LR20520				

REF. DRAWING NO.	REV	TITLE
PID-1-SS-828528	13	SAMPLE SYS. NUCLEAR POST ACCIDENT DETAIL.



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

- LR NOTES:
- SKID SKD-128 AND ASSOCIATED EQUIPMENT IS NOT IN THE P&B AND NOT IN AN AREA WITH SAFETY RELATED EQUIPMENT.
 - THE RELIEF VALVES SHOWN ASSOCIATED WITH PCV-2815, PCV-2817, PCV-2818 AND PCV-2819 ARE CONSIDERED PART OF THE COMMODITY I-SS-INSTR VALVE-SS-AMR.
 - THESE LINES CONTAIN AN AIR/GAS INTERNAL ENVIRONMENT 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
- SB - STEAM GENERATOR BLOWDOWN SYSTEM
 - SS - SAMPLE SYSTEM
 - DM - DEMINERALIZED WATER SYSTEM
 - RM - RADIATION MONITORING SYSTEM

- NOTES:
- WORK THIS DRAWING WITH DRAWINGS 28916, 28918, 28919, 28920 & 28922.
 - ALL LINES, EQUIPMENT COMPONENTS AND INSTRUMENTS HAVE SYSTEM PREFIX SS, UNLESS NOTED OTHERWISE.
 - ALL TUBING 3/8" T AND MATL CLASS 2888 UNLESS NOTED OTHERWISE.
 - SEE DWG 28918 FOR ADDITIONAL NOTES.
 - LOW CRACKING PRESSURE VALVE.
 - ONLY ONE S/G AT A TIME IS LINED UP TO THE SACC ANALYZER
 - THIS EQUIPMENT HAS 1/4" TUBING CONNECTIONS.
 - DISPOSE OF COOLANT IN A PROPER CONTAINER FOR OFF SITE DISPOSAL, DO NOT DIRECT TO FLOOR DRAINS.
 - DRAINS ARE SLOPED TO OUTLET CONNECTION 1"Ø.
 - ALL LINES, EQUIPMENT, COMPONENTS AND INSTRUMENTS ARE SAFETY CLASS NMS UNLESS NOTED OTHERWISE.
 - △ INDICATES REVISION LEVEL.
 - FILTER ELEMENTS OF THE FOLLOWING FILTERS MAY BE OPTIONALLY INSTALLED PER THE DIRECTION OF CHEMISTRY: I-SS-F-177, 178, 179, 180

REV	DATE	DSGN	CHKD	CE	DESCRIPTION

ORIGINAL ISSUE

NEXTERA ENERGY
SEABROOK

SAMPLE SYSTEM
STEAM GENERATOR
SAMPLE PANEL 166B P&ID
LICENSE RENEWAL P&ID

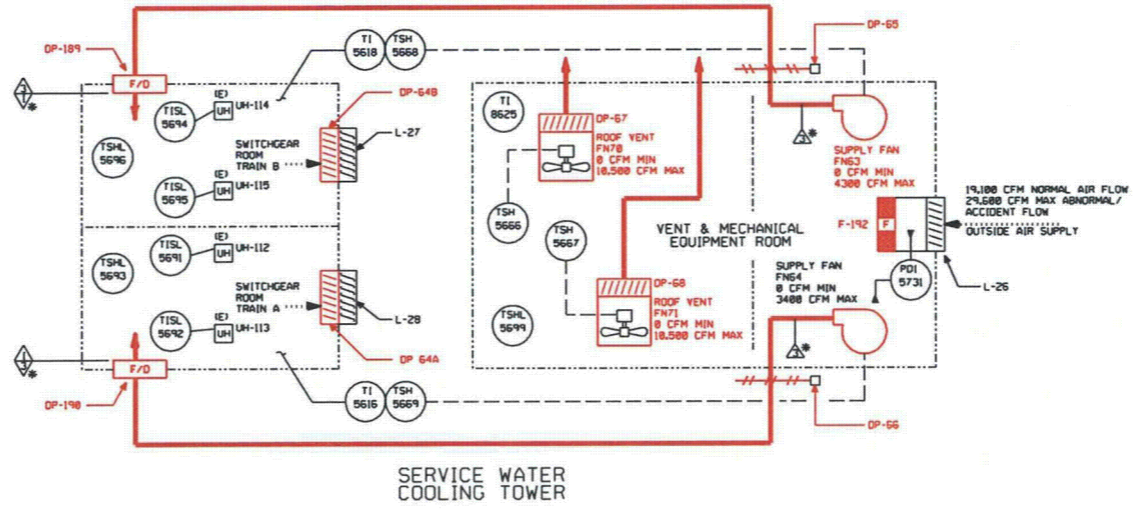
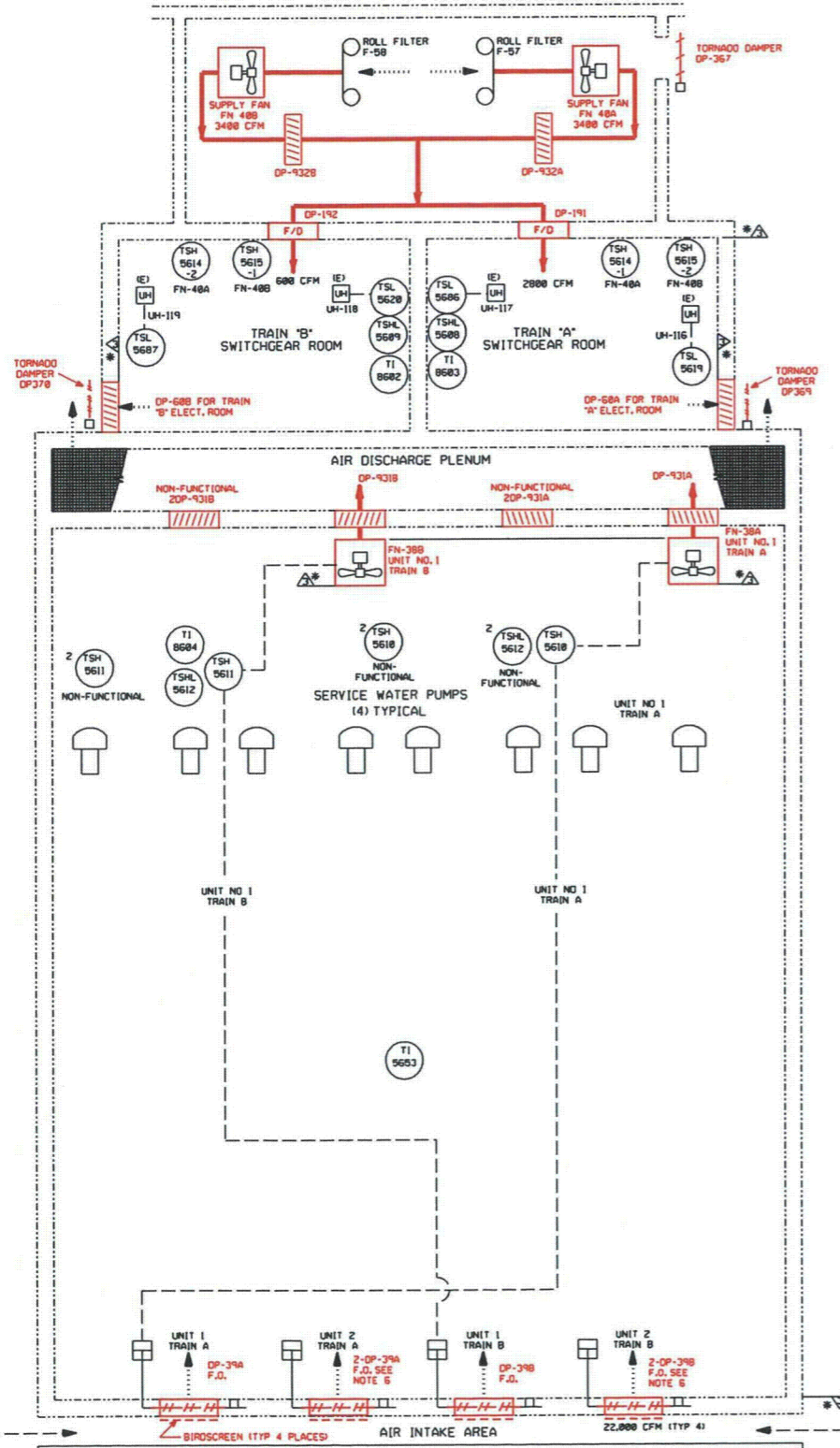
PID-1-SS-LR20521

PID-1-SWA-LR20372

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. LOUVERS HAVE NO LICENSE RENEWAL/INTENDED FUNCTION SO THEY ARE NOT IN LR 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. ALL EQUIPMENT, COMPONENTS, & INSTRUMENTS HAVE SYSTEM PREFIX SWA UNLESS OTHERWISE NOTED.
 2. THE SWA SYSTEM IS A ONE ID DRAWING SYSTEM, AN OVERVIEW IS NOT REQUIRED.
 3. ▲ ALL DUCTWORK, UNLESS NOTED.
 4. ALL EQUIPMENT, COMPONENTS, & INSTRUMENTS ARE SAFETY CLASS NMS UNLESS OTHERWISE NOTED.
 5. ▲ INDICATES REVISION LEVEL.
 6. THIS UNIT 2 EQUIPMENT IS NEEDED FOR UNIT 1 OPERATION.

PORTIONS OF THIS DRAWING ARE
NUCLEAR SAFETY RELATED

REV	DATE	DSGN	CHKD	CE	DESCRIPTION

NEXTERA ENERGY
SEABROOK

AIR HANDLING SYSTEM FOR SERVICE WATER PUMPHOUSE AND SERVICE WATER COOLING TOWER LICENSE RENEWAL P&ID

PID-1-SWA-LR20372

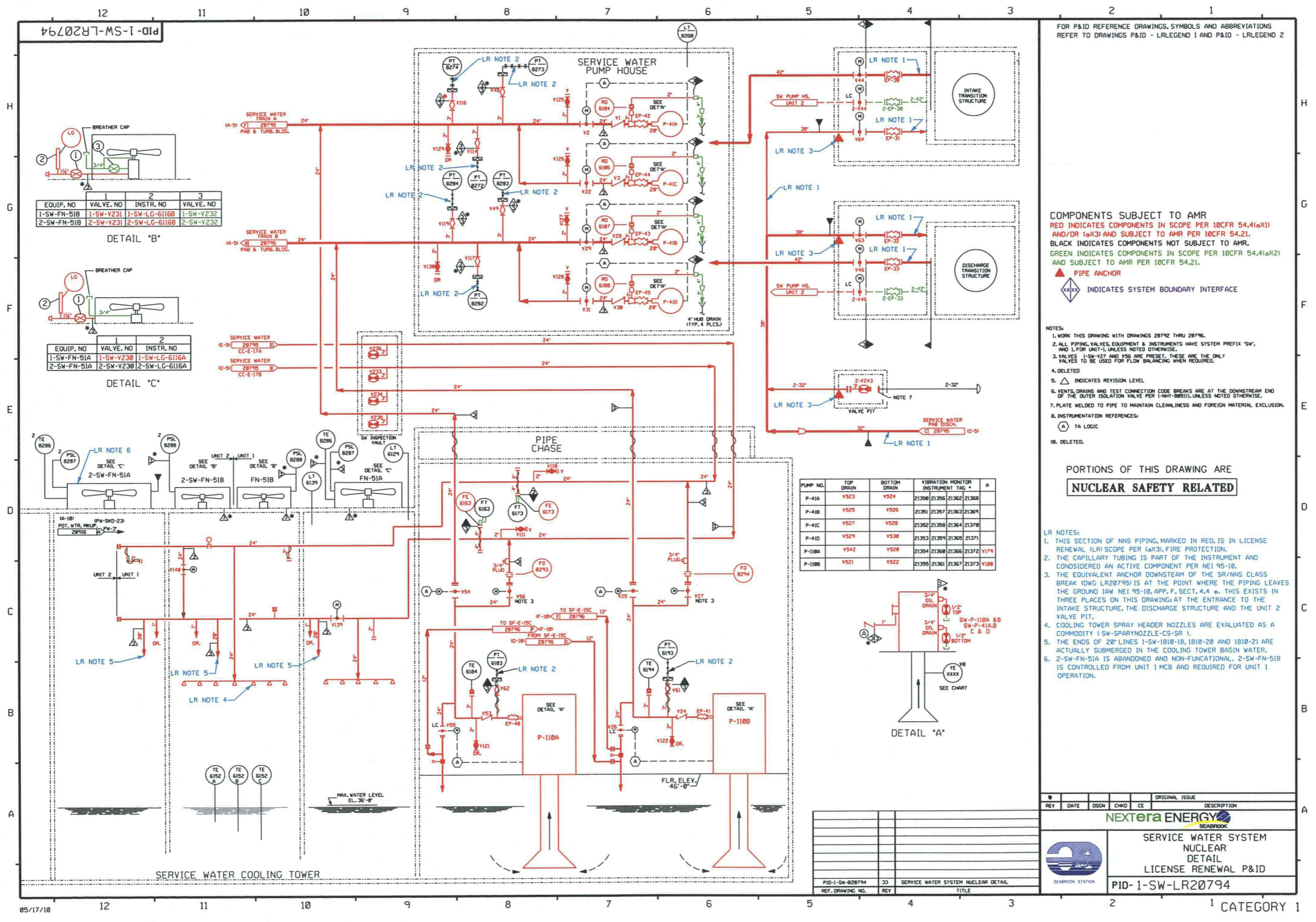


REV	DATE	DESCRIPTION

05/17/10

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

PID-1-SW-LR20794



DETAIL "B"

EQUIP. NO	VALVE. NO	INSTR. NO	VALVE. NO
1-SW-FN-51B	1-SW-V231	1-SW-LG-6116B	1-SW-V232
2-SW-FN-51B	2-SW-V231	2-SW-LG-6116B	2-SW-V232

DETAIL "C"

EQUIP. NO	VALVE. NO	INSTR. NO
1-SW-FN-51A	1-SW-V230	1-SW-LG-6116A
2-SW-FN-51A	2-SW-V230	2-SW-LG-6116A

PUMP NO.	TOP DRAIN	BOTTOM DRAIN	VIBRATION MONITOR INSTRUMENT TAG #	A
P-41A	Y523	Y524	21350 21356 21362 21368	
P-41B	Y525	Y526	21351 21357 21363 21369	
P-41C	Y527	Y528	21352 21358 21364 21370	
P-41D	Y529	Y530	21353 21359 21365 21371	
P-110A	Y542	Y528	21354 21360 21366 21372	V179
P-110B	Y521	Y522	21355 21361 21367 21373	V180

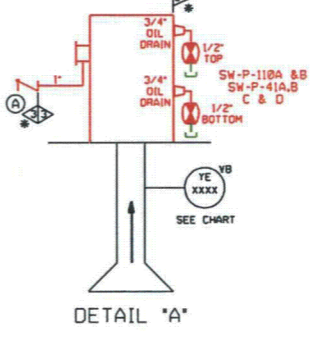
FOR P&ID REFERENCE DRAWINGS, SYMBOLS AND ABBREVIATIONS REFER TO DRAWINGS P&ID - LRLEGEND 1 AND P&ID - LRLEGEND 2

COMPONENTS SUBJECT TO AMR
 RED INDICATES COMPONENTS IN SCOPE PER 10CFR 54.41(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
 - ◇(XXXX) INDICATES SYSTEM BOUNDARY INTERFACE
- NOTES:**
1. WORK THIS DRAWING WITH DRAWINGS 28792 THRU 28796.
 2. ALL PIPING, VALVES, EQUIPMENT & INSTRUMENTS HAVE SYSTEM PREFIX "SW", AND "L" FOR UNIT-1, UNLESS NOTED OTHERWISE.
 3. VALVES 1-SW-V27 AND Y56 ARE PRESET. THESE ARE THE ONLY VALVES TO BE USED FOR FLOW BALANCING WHEN REQUIRED.
 4. DELETED
 5. △ INDICATES REVISION LEVEL
 6. VENTS, DRAINS AND TEST CONNECTION CODE BREAKS ARE AT THE DOWNSTREAM END OF THE OUTER ISOLATION VALVE PER 1-NHT-880111, UNLESS NOTED OTHERWISE.
 7. PLATE WELDED TO PIPE TO MAINTAIN CLEANLINESS AND FOREIGN MATERIAL EXCLUSION.
 8. INSTRUMENTATION REFERENCES:
 (A) TA LOGIC
 10. DELETED.

PORTIONS OF THIS DRAWING ARE
NUCLEAR SAFETY RELATED

- LR NOTES:**
1. THIS SECTION OF NNS PIPING, MARKED IN RED, IS IN LICENSE RENEWAL (LR) SCOPE PER (a)(3), FIRE PROTECTION.
 2. THE CAPILLARY TUBING IS PART OF THE INSTRUMENT AND CONSIDERED AN ACTIVE COMPONENT PER NEI 95-10.
 3. THE EQUIVALENT ANCHOR DOWNSTREAM OF THE SR/NNS CLASS BREAK (DWG LR20795) IS AT THE POINT WHERE THE PIPING LEAVES THE GROUND (AW NEI 95-10, APP. F, SECT. 4.4 e). THIS EXISTS IN THREE PLACES ON THIS DRAWING: AT THE ENTRANCE TO THE INTAKE STRUCTURE, THE DISCHARGE STRUCTURE AND THE UNIT 2 VALVE PIT.
 4. COOLING TOWER SPRAY HEADER NOZZLES ARE EVALUATED AS A COMMODITY (SW-SPARYNOZZLE-CS-SR).
 5. THE ENDS OF 20" LINES 1-SW-1810-18, 1810-20 AND 1810-21 ARE ACTUALLY SUBMERGED IN THE COOLING TOWER BASIN WATER.
 6. 2-SW-FN-51A IS ABANDONED AND NON-FUNCTIONAL. 2-SW-FN-51B IS CONTROLLED FROM UNIT 1 MCB AND REQUIRED FOR UNIT 1 OPERATION.



REV	DATE	DSGN	CHKD	CE	DESCRIPTION

ORIGINAL ISSUE

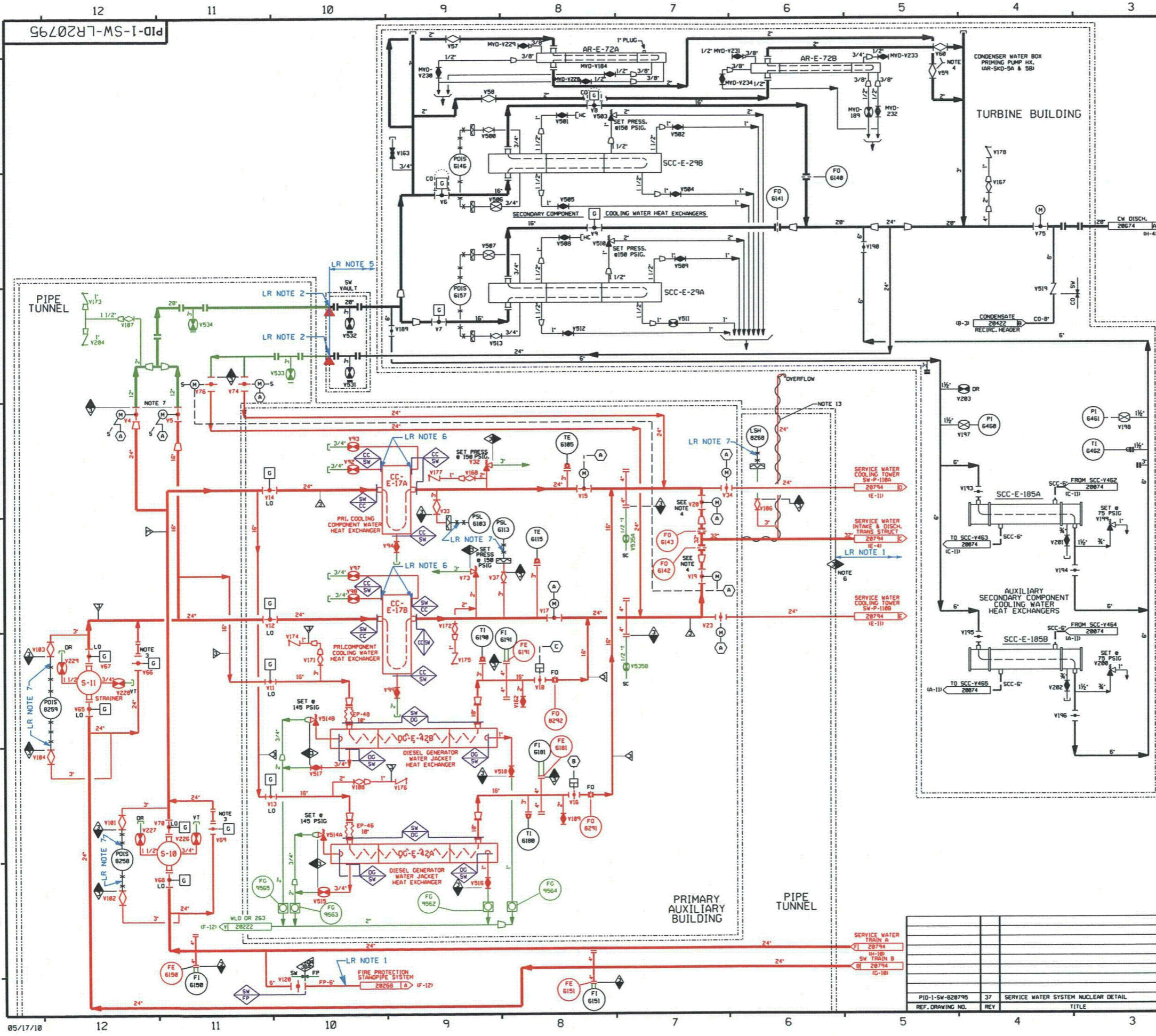
NEXTERA ENERGY
SEABROOK

SERVICE WATER SYSTEM
NUCLEAR
DETAIL
LICENSE RENEWAL P&ID

PID-1-SW-LR20794

PID-1-SW-20794	33	SERVICE WATER SYSTEM NUCLEAR DETAIL
REF. DRAWING NO.	REV	TITLE

PID-1-SW-LR20795



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

LR NOTES:

1. THIS SECTION OF NNS PIPING, MARKED IN RED, IS IN LICENSE RENEWAL (LR) SCOPE PER 10X3, FIRE PROTECTION.
2. THE PIPE SUPPORT EQUIVALENT ANCHOR ON THESE LINES IS THE POINT WHERE THE PIPE EXITS THE SW VAULT INTO THE GROUND (1AW NEI 95-10, APP. F, SECTION 4.4.e).
3. NOT USED
4. NOT USED
5. NNS COMPONENTS DOWNSTREAM OF THE EQUIVALENT ANCHORS DESCRIBED IN NOTES 2, AND OUTSIDE OF THE P&ID HAVE NO LR INTENDED FUNCTION AND ARE NOT IN SCOPE.
6. THE SW/CC INTERFACE AT THE HEAT EXCHANGER VENT VALVES IS AT THE PIPE MATERIAL CHANGE FROM TITANIUM (CC SIDE) TO CARBON STEEL (SW SIDE).
7. THE 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 54.21 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

SW - SERVICE WATER SYSTEM
 CC - PRIMARY COMPONENT COOLING SYSTEM
 DG - DIESEL GENERATORS
 FP - FIRE PROTECTION SYSTEM

NOTES:

1. WORK THIS DRAWING WITH DRAWINGS 20792 & 20794.
2. ALL PIPING, VALVES, EQUIPMENT, & INSTRUMENTS HAVE SYSTEM PREFIX 'SW' UNLESS NOTED OTHERWISE.
3. SPOOL PIECE NECESSARY FOR ADDITIONAL SERVICE WATER STRAINER AT LATER DATE (IF REQUIRED).
4. VALVES V-5W-119, 20, 59 AND V60 ARE PRESET. THESE ARE THE ONLY VALVES TO BE USED FOR FLOW BALANCING, WHEN REQUIRED.
5. CLASS BREAK OCCURS WHERE PIPE ENTERS EARTH.
6. VALVES V4 & V5 TO CLOSE ON COMPLETE LOSS OF OFF SITE POWER.
8. XX - DENOTES TITANIUM MATERIAL.
9. DELETED
10. △ INDICATES REVISION LEVEL
11. INSTRUMENTATION REFERENCES
 (A) TA LOGIC
 (B) OPEN CMD FROM DG-1A
 (C) OPEN CMD FROM DG-1B
12. VENTS, DRAINS AND TEST CONNECTION CODE BREAKS ARE AT THE DOWNSTREAM END OF THE OUTER ISOLATION VALVE PER 1-MW-98511, UNLESS NOTED OTHERWISE.
13. HEAT TRACING HAS BEEN DISCONNECTED AND IS NON-FUNCTIONAL.

PORTIONS OF THIS DRAWING ARE
NUCLEAR SAFETY RELATED

REV	DATE	DSGN	CHNG	CE	ORIGINAL ISSUE	DESCRIPTION

SEABROOK STATION

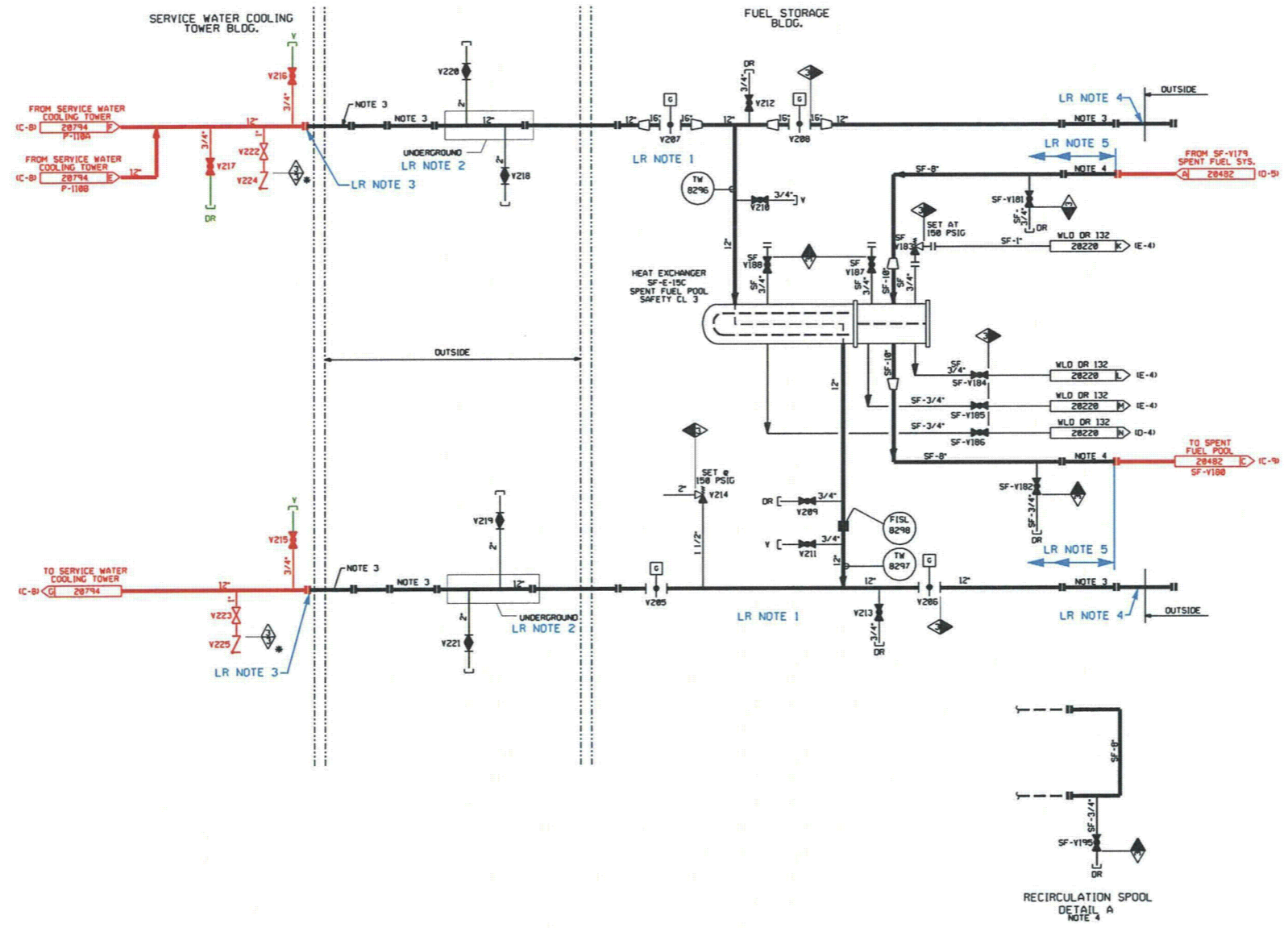
**SERVICE WATER SYSTEM
 NUCLEAR
 DETAIL
 LICENSE RENEWAL P&ID**

PID-1-SW-LR20795

PID-1-SW-20795	37	SERVICE WATER SYSTEM NUCLEAR DETAIL
REF. DRAWING NO.	REV	TITLE

05/17/10

PID-1-SW-LR20796



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

- LR NOTES:
- HEAT EXCHANGER SF-E-15C IS ISOLATED AND DRAINED. THE SW PIPING, FIXED AND SPOOLED, IN THE SPENT FUEL BUILDING IS REMOVED AS ASFC IS NO LONGER REQUIRED.
 - THE UNDERGROUND PIPING IS DRAINED AND ISOLATED (BLIND FLANGES AT BOTH ENDS).
 - PIPE FLANGE CONNECTIONS INSIDE THE SW COOLING TOWER ARE BLANKED, AND PIPE SPOOLS FROM THE COOLING TOWER TO THE UNDERGROUND PIPING ARE REMOVED.
 - THE FLANGED SECTIONS BETWEEN THE SF BUILDING AND OUTSIDE ARE EMPTY AND BLANKED ON BOTH SIDES.
 - COMPONENTS DOWNSTREAM OF THE BLIND FLANGE ARE CONTROLLED BY THE EQUIPMENT TO BE ABANDONED PROGRAM AND ARE NOT IN SCOPE FOR LICENSE RENEWAL (LR). THE COMPONENTS ARE DRAINED AND HAVE AN INTERNAL ENVIRONMENT OF AIR/GAS.

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

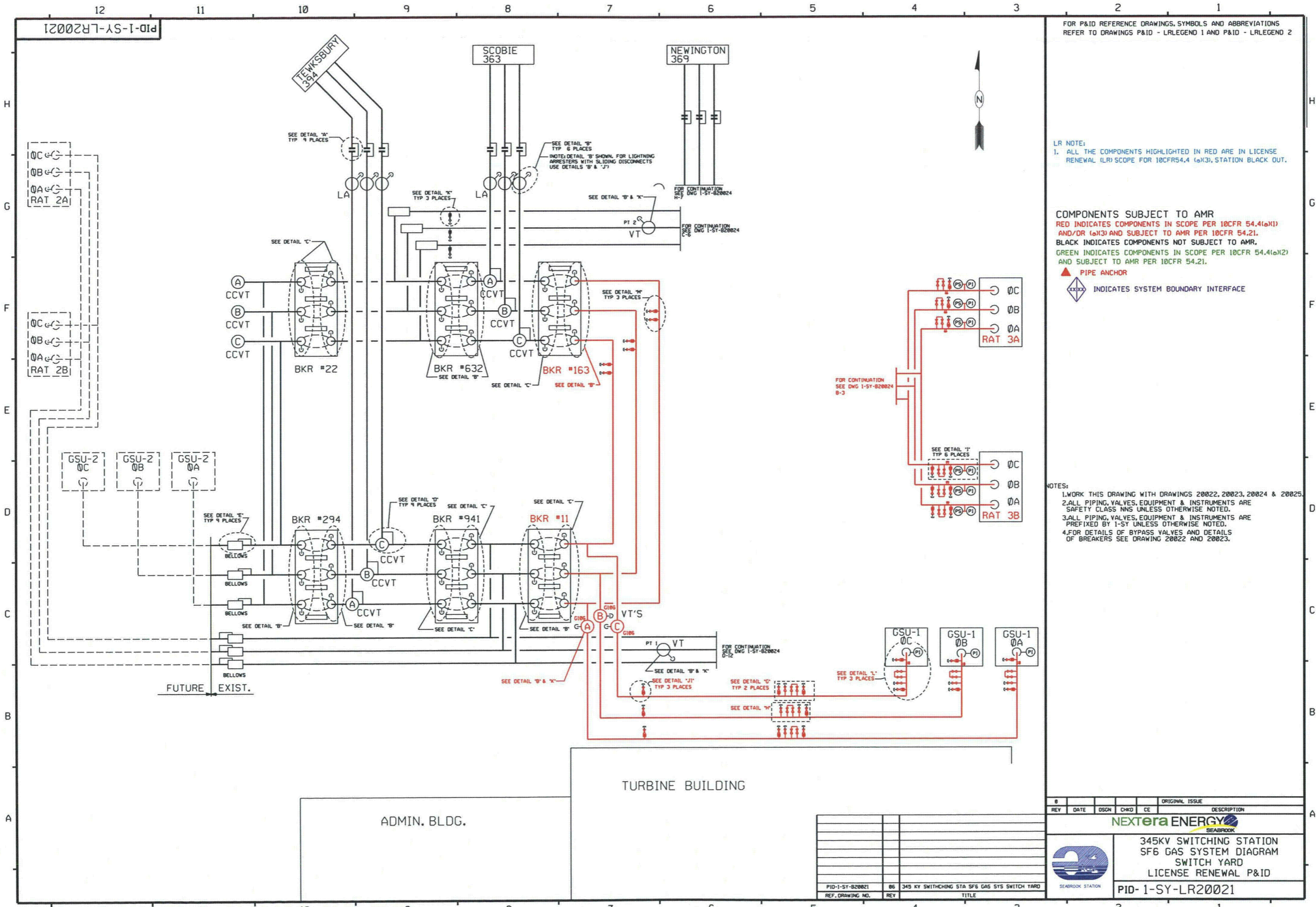
- NOTES:
- WORK THIS DRAWING WITH DRAWINGS 28792 THRU 28795.
 - ALL PIPING, VALVES, EQUIPMENT & INSTRUMENTS HAVE SYSTEM PREFIX "SW", AND L FOR UNIT-L, UNLESS NOTED OTHERWISE.
 - AT A MINIMUM, UPON COMPLETION OF ASFC USE, RESTORE SW SYSTEM AS FOLLOWS:
 - REMOVE FABRICATION ENCLOSURE AND REMOVABLE PIPE SPOOL SECTIONS FROM BELOW THE FUEL STORAGE BLDG. WEST ROLL-UP DOOR. (REF. SKD 980842-1187)
 - REMOVE 1845 AND 1846-83-168-12" NMS PIPE SPOOLS INSIDE THE FUEL STORAGE BLDG. EAST WALL.
 - INSTALL BLANKS ON BOTH ENDS OF SPOOL SECTIONS WHICH REMAIN AT PENETRATION 3193 AND 3194.
 - REMOVE PIPING SPOOLS ON LINES 1845 AND 1846-1-168-12" WHERE THESE LINES EXIT THE GROUND COOLING TOWER END. REMOVE PIPING SPOOLS WHICH PENETRATE THE COOLING TOWER EAST END LOUVER AND RESTORE LOUVER WITH GRATING PANEL DESCRIBED ON SKD 980842-1183, NOTE 2.
 - UPON COMPLETION OF ASFC USE, LINES 1764 AND 1765-81-191-8" INSIDE THE FUEL STORAGE BLDG. MAY BE REMOVED AND INSTALL BLANKS ON BOTH ENDS OF SECTIONS WHICH REMAIN OR, IF DESIRED, INSTALL RECIRCULATION SPOOL. SEE DETAIL A IC-9.
 - △ INDICATES REVISION LEVEL.
 - VENTS, DRAINS AND TEST CONNECTION CODE BREAKS ARE AT THE DOWNSTREAM END OF THE OUTER ISOLATION VALVE PER I-NHT-885111, UNLESS NOTED OTHERWISE.

PORTIONS OF THIS DRAWING ARE
NUCLEAR SAFETY RELATED

ORIGINAL ISSUE				
REV	DATE	DSGN	CHKD	CE
SERVICE WATER SYSTEM NUCLEAR DETAIL LICENSE RENEWAL P&ID				
PID-1-SW-LR20796				

REF. DRAWING NO.	REV	TITLE
PID-1-SW-B28794	5	SERVICE WATER SYSTEM NUCLEAR DETAIL

PID-1-SY-LR20021



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

LR NOTE:
1. ALL THE COMPONENTS HIGHLIGHTED IN RED ARE IN LICENSE RENEWAL (LR) SCOPE FOR 10CFR54.4 (a)(3), STATION BLACK OUT.

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
◇XXXXX INDICATES SYSTEM BOUNDARY INTERFACE

NOTES:
1. WORK THIS DRAWING WITH DRAWINGS 20022, 20023, 20024 & 20025.
2. ALL PIPING, VALVES, EQUIPMENT & INSTRUMENTS ARE SAFETY CLASS MNS UNLESS OTHERWISE NOTED.
3. ALL PIPING, VALVES, EQUIPMENT & INSTRUMENTS ARE PREFIXED BY 1-SY UNLESS OTHERWISE NOTED.
4. FOR DETAILS OF BYPASS VALVES AND DETAILS OF BREAKERS SEE DRAWING 20022 AND 20023.

REV	DATE	DSGN	CHKD	CE	DESCRIPTION

ORIGINAL ISSUE

	SEABROOK
345KV SWITCHING STATION SF6 GAS SYSTEM DIAGRAM SWITCH YARD LICENSE RENEWAL P&ID	
PID-1-SY-LR20021	

PID-1-SY-B20021	06	345 KV SWITCHING STA SF6 GAS SYS SWITCH YARD
REF. DRAWING NO.	REV	TITLE

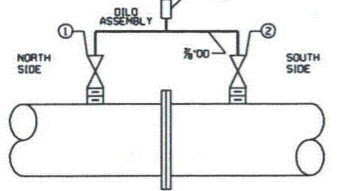
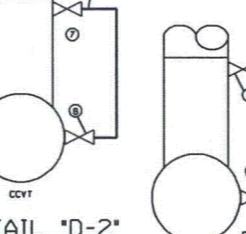
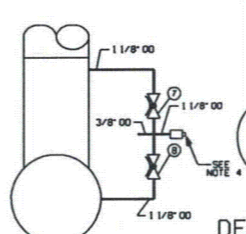
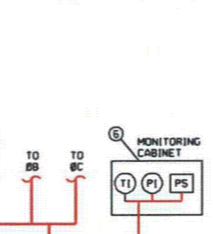
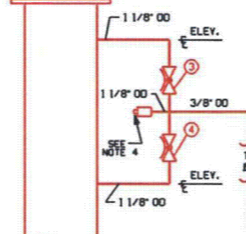
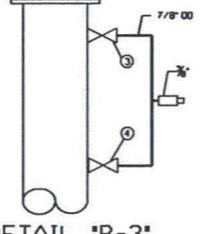
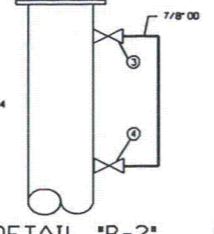
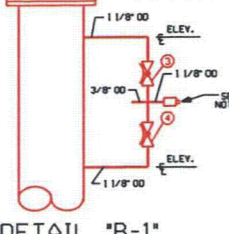
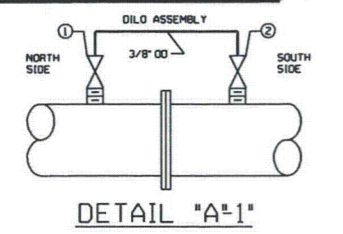
220018-LR2022

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

LR NOTE: 1. ALL THE COMPONENTS HIGHLIGHTED IN RED ARE IN LICENSE RENEWAL (LR) SCOPE FOR 10CFR54.4 (a)(3), STATION BLACK OUT.

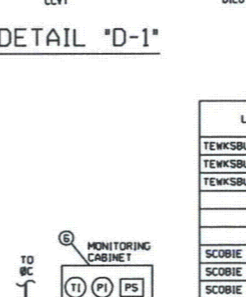
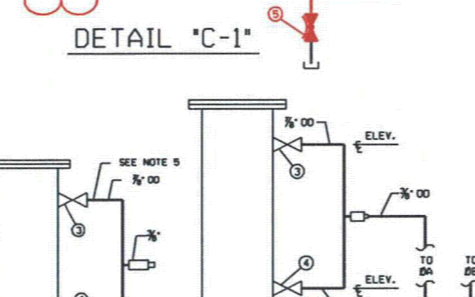
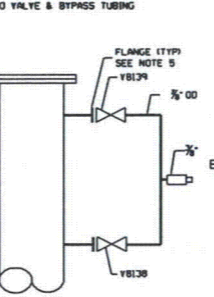
COMPONENTS SUBJECT TO AMR RED INDICATES COMPONENTS IN SCOPE PER 10CFR 54.4(a)(1) AND/OR (a)(3) AND SUBJECT TO AMR PER 10CFR 54.21. BLACK INDICATES COMPONENTS NOT SUBJECT TO AMR. GREEN INDICATES COMPONENTS IN SCOPE PER 10CFR 54.4(a)(2) AND SUBJECT TO AMR PER 10CFR 54.21.

PIPE ANCHOR INDICATES SYSTEM BOUNDARY INTERFACE SY - SWITCHYARD SFG GAS SYSTEM ED - ELECTRICAL DISTRIBUTION SYSTEM



DETAIL 'B' DILO VALVE & BYPASS TUBING

Table with columns: LOCATION, BYPASS VALVES, DETAIL, SEE NOTE 4. Lists various line locations like TEWKSBURY LINE LA A through SCOBIE LINE LA C.



DETAIL 'D' DILO VALVE & BYPASS TUBING

Table with columns: LOCATION, BYPASS VALVES, DETAIL, SEE NOTE 4. Lists locations like TEWKSBURY LINE CCYT A through SCOBIE LINE CCYT C.

Table with columns: LOCATION, BYPASS VALVES, DETAIL. Lists locations like TEWKSBURY LINE A through NEWINGTON LINE C.

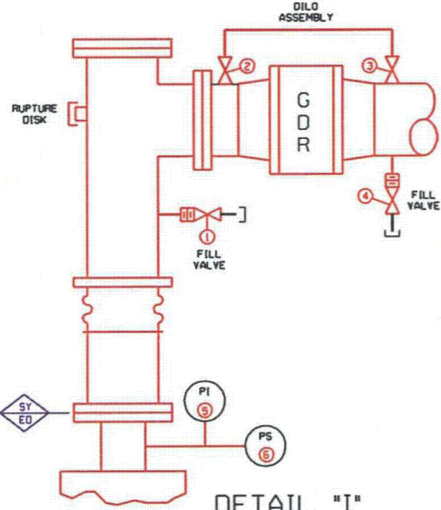


Table with columns: LOCATION, BYPASS VALVES, DETAIL, SEE NOTE 4. Lists various breaker locations like BREAKER *22 WEST A through BREAKER *163 WEST C.

Table with columns: LOCATION, BYPASS VALVES, FILL VALVE, MC, TI, PI, PS, DETAIL, SEE NOTE 4. Lists various breaker locations like BREAKER *22 WEST A through BREAKER *163 WEST C.

Table with columns: LOCATION, BYPASS VALVES, FILL VALVE, MC, TI, PI, PS, DETAIL, SEE NOTE 4. Lists various breaker locations like BREAKER *22 WEST A through BREAKER *163 WEST C.

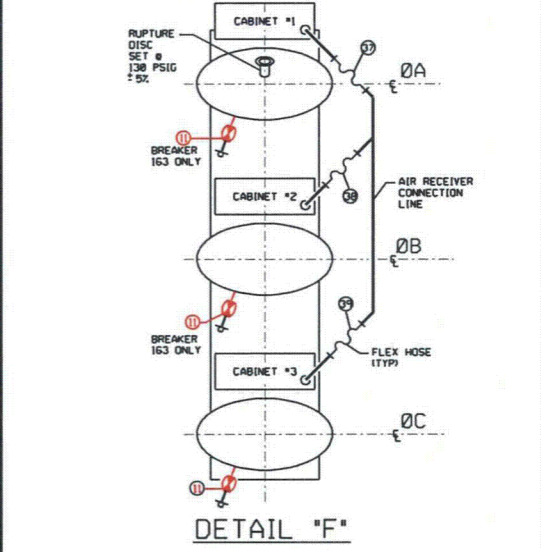
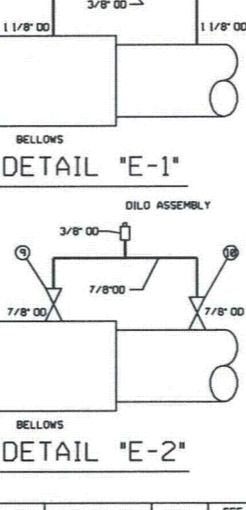
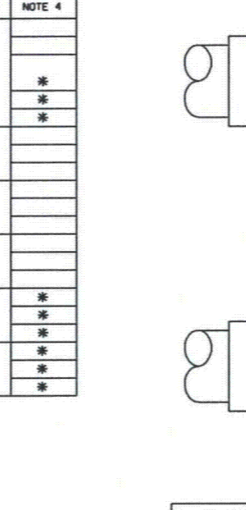


Table with columns: LOCATION, VACUUM VALVE, FLEX HOSE, FLEX HOSE, FLEX HOSE. Lists breaker locations and associated valve/hose IDs.

NOTES: 1. WORK THIS DRAWING WITH DRAWING 20021.20023.20024 AND 20025. 2. ALL PIPING, VALVES, EQUIPMENT AND INSTRUMENTS ARE SAFETY CLASS INNS UNLESS NOTED OTHERWISE NOTED. 3. ALL PIPING, VALVES, EQUIPMENT AND INSTRUMENTS ARE PREFIXED BY 1-SY UNLESS NOTED OTHERWISE NOTED. 4. LOCATIONS NOTED WITH A * HAVE HAD THE PIPE CAP REPLACED WITH A DILO FITTING (DN2B, PART# J-481-R003 ICA1 ID 431649 OR SIMILAR) 5. SEE PFD0471 REF. MSE 08-146/EC*2450

Table with columns: LOCATION, FILL VALVE, DILO ASSEMBLY, FILL VALVE, ED-PI, ED-PS. Lists various RAT locations like RAT *3A DA through RAT *3B EC.

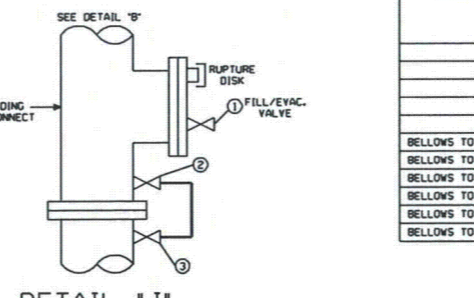
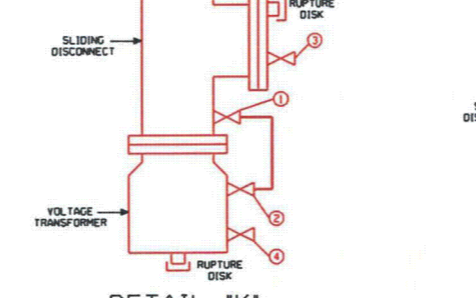


Table with columns: LOCATION, BYPASS VALVES, DETAIL, SEE NOTE 4. Lists bellows locations like BELLOWS TO GSU-2 A through BELLOWS TO RAT-2 C.

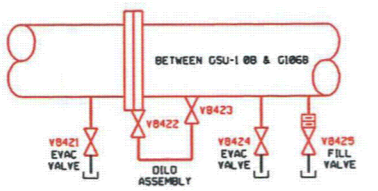
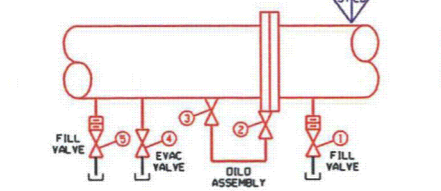


Table with columns: LOCATION, BYPASS VALVES, FILL/EVACUATION VALVES. Lists 345KV BUS locations like 345KV BUS-1 B-PHASE and 345KV BUS-2 B-PHASE.

Table with columns: LOCATION, FILL/EVACUATION VALVES, BYPASS VALVES. Lists various line locations like TEWKSBURY LINE LA A through NEWINGTON LINE LA C.

Table with columns: LOCATION, FILL VALVE, DILO ASSEMBLY, EVAC VALVE, FILL VALVE. Lists locations between GSU-1 BA & C106A and GSU-1 BC & C106C.

Revision table with columns: REV, DATE, DSCN, CHKD, CE, ORIGINAL ISSUE, DESCRIPTION. Includes NEXTERA ENERGY logo and project title: 345KV SWITCHING STATION SFG GAS SYSTEM DIAGRAM DETAILS LICENSE RENEWAL P&ID.

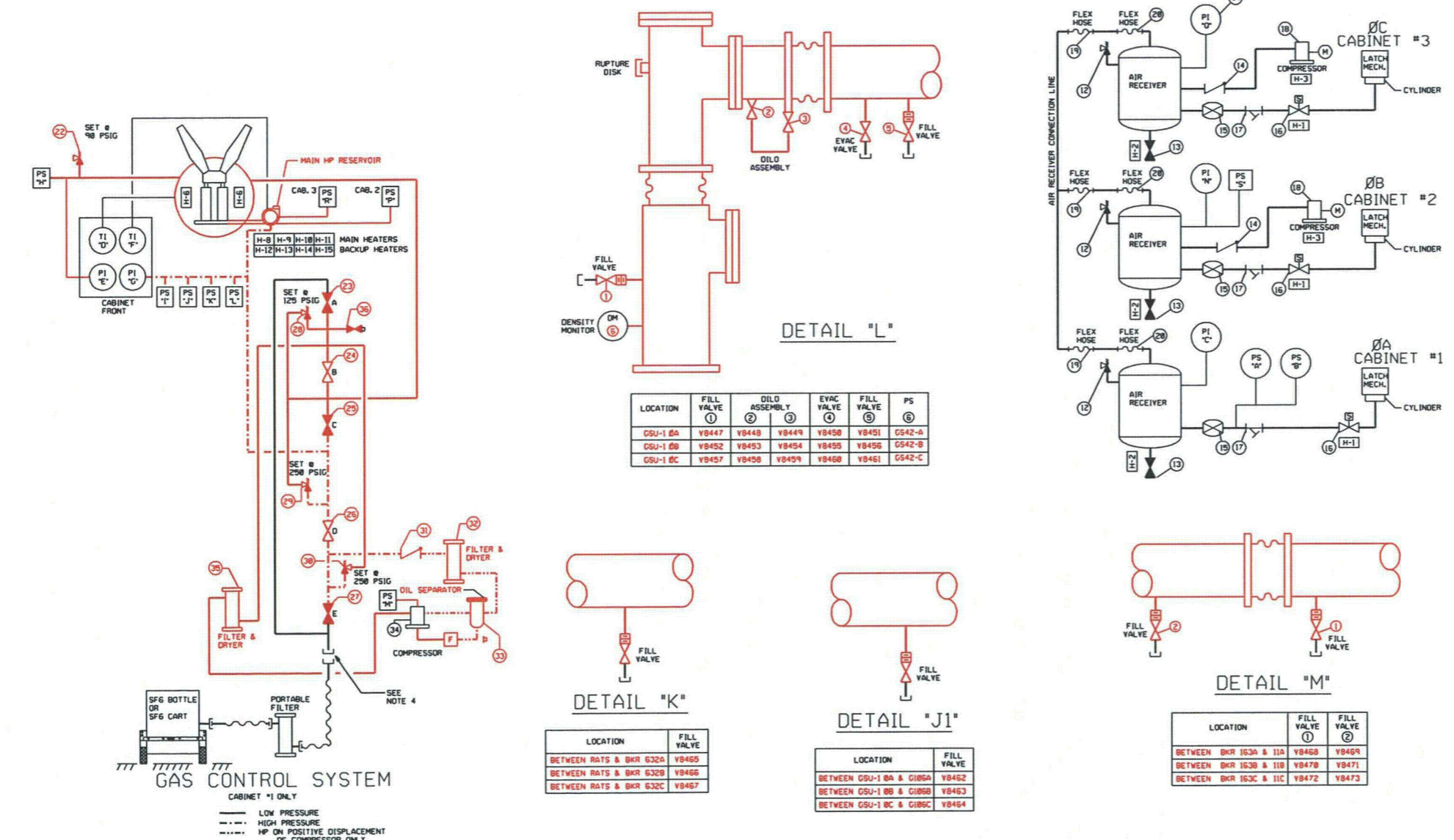
PNEUMATIC OPERATING SYSTEM																															
LOCATION	CABINET #1												CABINET #2						CABINET #3												
	SAFETY VALVE 12	DRAIN VALVE 13	SHUTOFF VALVE 14	SOLENOID VALVE 15	STRAINER 16	FLEX HOSE 17	FLEX HOSE 18	PS "A"	PS "B"	PI "C"	SAFETY VALVE 12	DRAIN VALVE 13	CHECK VALVE 14	SHUTOFF VALVE 15	SOLENOID VALVE 16	STRAINER 17	COMPRESSOR 18	FLEX HOSE 19	FLEX HOSE 20	PI "N"	PS "S"	SAFETY VALVE 12	DRAIN VALVE 13	CHECK VALVE 14	SHUTOFF VALVE 15	SOLENOID VALVE 16	STRAINER 17	COMPRESSOR 18	FLEX HOSE 19	FLEX HOSE 20	PI "O"
BREAKER *22	Y8220	Y8219	Y8221	Y8222	S-0800	MM-0808	MM-0805	PS-0830Z	PS-0829Z	PI-0823Z	Y8225	Y8225	Y8483	Y8223	Y8224	S-0801	C-0808	MM-0839	MM-0863	PI-0824Z	PS-0828Z	Y8230	Y8229	Y8520	Y8227	Y8228	S-0802	C-0824	MM-0848	MM-0854	PI-0825Z
BREAKER *632	Y8245	Y8244	Y8242	Y8243	S-0803	MM-0841	MM-0805	PS-0878Z	PS-0877Z	PI-0871Z	Y8248	Y8249	Y8404	Y8246	Y8247	S-0804	C-0801	MM-0842	MM-0866	PI-0892Z	PS-0896Z	Y8252	Y8253	Y8521	Y8250	Y8251	S-0805	C-0825	MM-0843	MM-0867	PI-0893Z
BREAKER *163	Y8266	Y8267	Y8264	Y8265	S-0806	MM-0844	MM-0806	PS-0847Z	PS-0846Z	PI-0848Z	Y8270	Y8271	Y8405	Y8268	Y8269	S-0807	C-0802	MM-0845	MM-0869	PI-0841Z	PS-0845Z	Y8276	Y8277	Y8522	Y8274	Y8275	S-0808	C-0826	MM-0846	MM-0870	PI-0842Z
BREAKER *294	Y8388	Y8389	Y8386	Y8387	S-0812	MM-0850	MM-0874	PS-0881Z	PS-0880Z	PI-0874Z	Y8392	Y8393	Y8407	Y8390	Y8391	S-0813	C-0804	MM-0851	MM-0875	PI-0875Z	PS-0879Z	Y8396	Y8397	Y8524	Y8394	Y8395	S-0814	C-0828	MM-0852	MM-0876	PI-0876Z
BREAKER *941	Y8364	Y8365	Y8362	Y8363	S-0815	MM-0853	MM-0877	PS-0815Z	PS-0814Z	PI-0808Z	Y8369	Y8368	Y8408	Y8366	Y8367	S-0816	C-0805	MM-0854	MM-0878	PI-0809Z	PS-0813Z	Y8372	Y8373	Y8525	Y8370	Y8371	S-0817	C-0829	MM-0855	MM-0879	PI-0810Z
BREAKER *11	Y8341	Y8342	Y8339	Y8340	S-0818	MM-0856	MM-0880	PS-0815Z	PS-0814Z	PI-0808Z	Y8345	Y8346	Y8409	Y8343	Y8344	S-0819	C-0806	MM-0857	MM-0881	PI-0809Z	PS-0813Z	Y8349	Y8350	Y8526	Y8347	Y8348	S-0820	C-0830	MM-0858	MM-0882	PI-0810Z

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

LR NOTE:
1. ALL THE COMPONENTS HIGHLIGHTED IN RED ARE IN LICENSE RENEWAL (LR) SCOPE FOR 10CFR54.4 (a)(3), STATION BLACK OUT.

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



LOCATION	FILL VALVE ①	DILLO ASSEMBLY ②	EVAC VALVE ③	FILL VALVE ④	PS ⑤
GSU-1 0A	Y8447	Y8448	Y8449	Y8450	CS42-A
GSU-1 0B	Y8452	Y8453	Y8454	Y8455	CS42-B
GSU-1 0C	Y8457	Y8458	Y8459	Y8460	CS42-C

LOCATION	FILL VALVE
BETWEEN RATS & BKR 632A	Y8465
BETWEEN RATS & BKR 632B	Y8466
BETWEEN RATS & BKR 632C	Y8467

LOCATION	FILL VALVE
BETWEEN GSU-1 0A & C108A	Y8462
BETWEEN GSU-1 0B & C108B	Y8463
BETWEEN GSU-1 0C & C108C	Y8464

LOCATION	FILL VALVE ①	FILL VALVE ②
BETWEEN BKR 153A & 11A	Y8468	Y8469
BETWEEN BKR 153B & 11B	Y8470	Y8471
BETWEEN BKR 153C & 11C	Y8472	Y8473

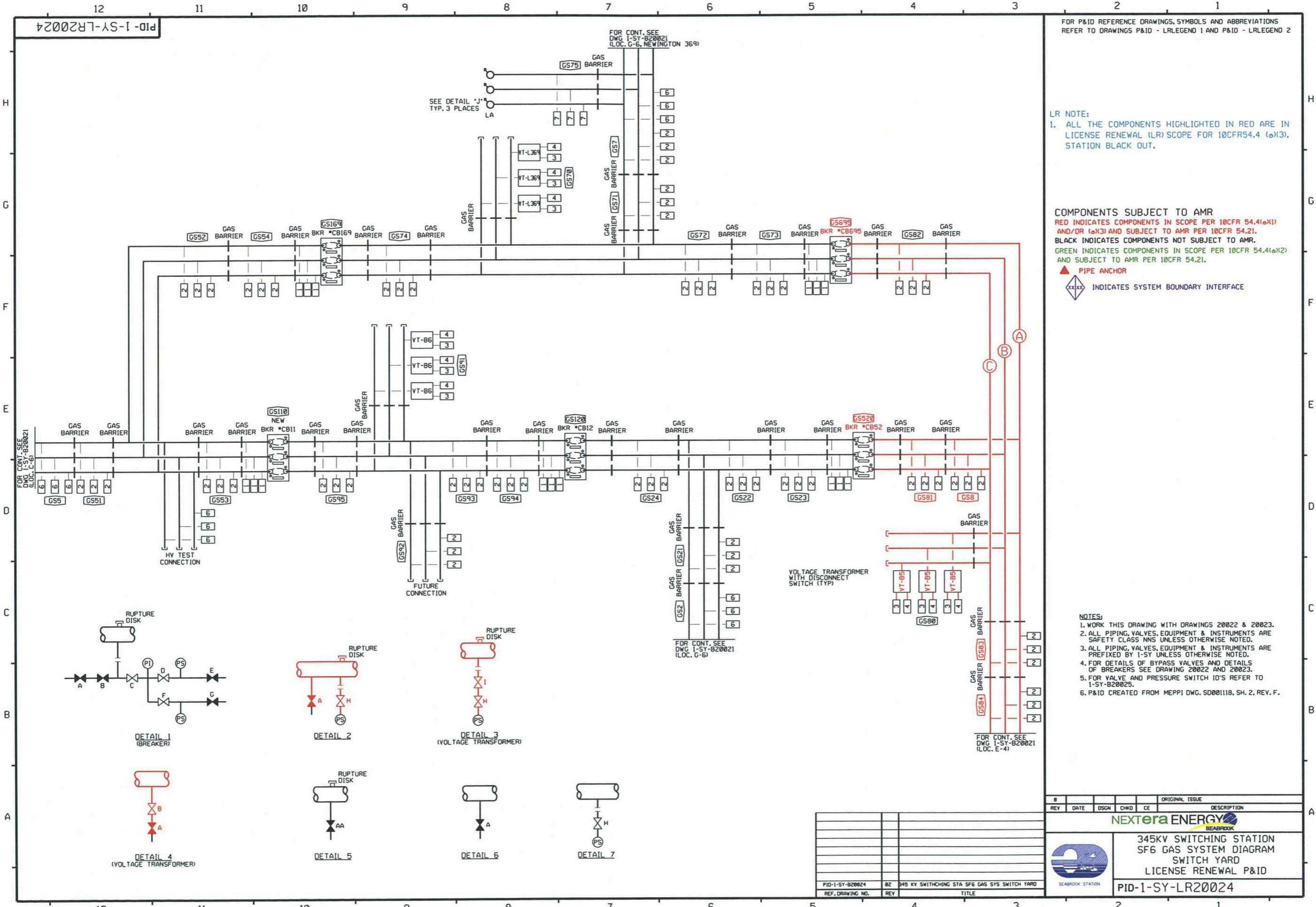
- NOTES:
1. WORK THIS DRAWING WITH DRAWING 20821, 20822, 20824 AND 20825.
2. ALL PIPING, VALVES, EQUIPMENT AND INSTRUMENTS ARE SAFETY CLASS MMS UNLESS NOTED OTHERWISE NOTED.
3. ALL PIPING, VALVES, EQUIPMENT AND INSTRUMENTS ARE PREFIXED BY 1-SY UNLESS NOTED OTHERWISE NOTED.
4. LOCATIONS NOTED WITH A # HAVE HAD THE CAP REPLACED WITH A DILLO FITTING PART # 3-401-R881 CID# 431653 OR SIMILAR

GAS CONTROL SYSTEM																										
LOCATION	CABINET #1 ONLY												SEE NOTE 4													
	SAFETY VALVE 22	VALVE A 23	VALVE B 24	VALVE C 25	VALVE D 26	VALVE E 27	RELIEF 28	RELIEF 29	RELIEF 30	CHECK 31	FILTER DRYER 32	OIL SEP. 33	COMP. 34	FILTER DRYER VALVE 35	PS "H"	TI "O"	TI "F"	PI "E"	PI "C"	PS "I"	PS "J"	PS "K"	PS "L"	PS "R"	PS "T"	PS "U"
BREAKER *22	Y8218	Y8213	Y8212	Y8211	Y8210	Y8209	Y8215	Y8216	Y8217	Y8208	F-0800	MM-0800	C-0815	F-0800	Y8214	PS-0802Z	TI-0872Z	TI-0865Z	PI-0827Z	PS-0837Z	PS-0836Z	PS-0834Z	PS-0832Z	PS-0830Z	PS-0828Z	PS-0826Z
BREAKER *632	Y8240	Y8235	Y8234	Y8233	Y8232	Y8231	Y8237	Y8238	Y8239	Y8241	F-0801	MM-0801	C-0817	F-0801	Y8236	PS-0802Z	TI-0872Z	TI-0865Z	PI-0895Z	PS-0895Z	PS-0894Z	PS-0892Z	PS-0890Z	PS-0888Z	PS-0886Z	PS-0884Z
BREAKER *163	Y8263	Y8258	Y8257	Y8256	Y8255	Y8254	Y8259	Y8260	Y8261	Y8262	F-0802	MM-0802	C-0818	F-0802	Y8259	PS-0804Z	TI-0895Z	TI-0888Z	PI-0844Z	PS-0844Z	PS-0843Z	PS-0841Z	PS-0839Z	PS-0837Z	PS-0835Z	PS-0833Z
BREAKER *294	Y8385	Y8379	Y8378	Y8377	Y8376	Y8375	Y8380	Y8381	Y8382	Y8383	F-0804	MM-0804	C-0820	F-0804	Y8384	PS-0803Z	TI-0872Z	TI-0865Z	PI-0878Z	PS-0808Z	PS-0807Z	PS-0805Z	PS-0803Z	PS-0801Z	PS-0799Z	PS-0797Z
BREAKER *941	Y8361	Y8355	Y8354	Y8353	Y8352	Y8351	Y8356	Y8357	Y8358	Y8359	F-0805	MM-0805	C-0821	F-0805	Y8360	PS-0817Z	TI-0824Z	TI-0817Z	PI-0812Z	PS-0812Z	PS-0811Z	PS-0809Z	PS-0807Z	PS-0805Z	PS-0803Z	PS-0801Z
BREAKER *11	Y8337	Y8332	Y8331	Y8330	Y8329	Y8328	Y8333	Y8334	Y8335	Y8336	F-0806	MM-0806	C-0822	F-0806	Y8338	PS-0817Z	TI-0812Z	TI-0805Z	PI-0812Z	PS-0812Z	PS-0811Z	PS-0809Z	PS-0807Z	PS-0805Z	PS-0803Z	PS-0801Z

REV	DATE	DSGN	CHKD	CE	DESCRIPTION

345KV SWITCHING STATION
SF6 GAS SYSTEM DIAGRAM
DETAILS
LICENSE RENEWAL P&ID
PID-1-SY-LR2023

PID-1-SY-LR20024

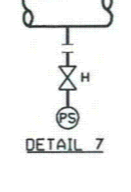
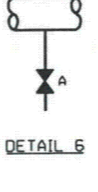
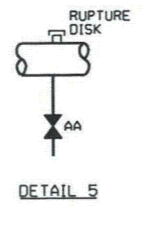
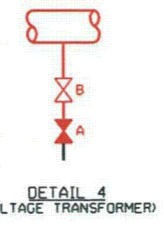
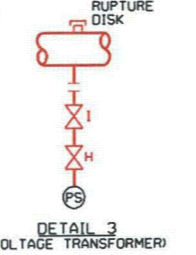
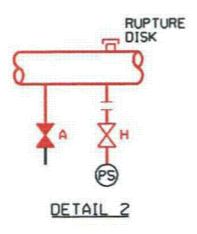
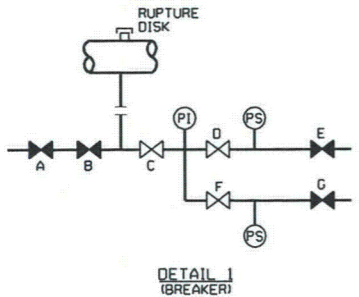


FOR P&ID REFERENCE DRAWINGS, SYMBOLS AND ABBREVIATIONS REFER TO DRAWINGS P&ID - LRLEGEND 1 AND P&ID - LRLEGEND 2

LR NOTE:
1. ALL THE COMPONENTS HIGHLIGHTED IN RED ARE IN LICENSE RENEWAL (LR) SCOPE FOR 10CFR54.4 (a)(3). STATION BLACK OUT.

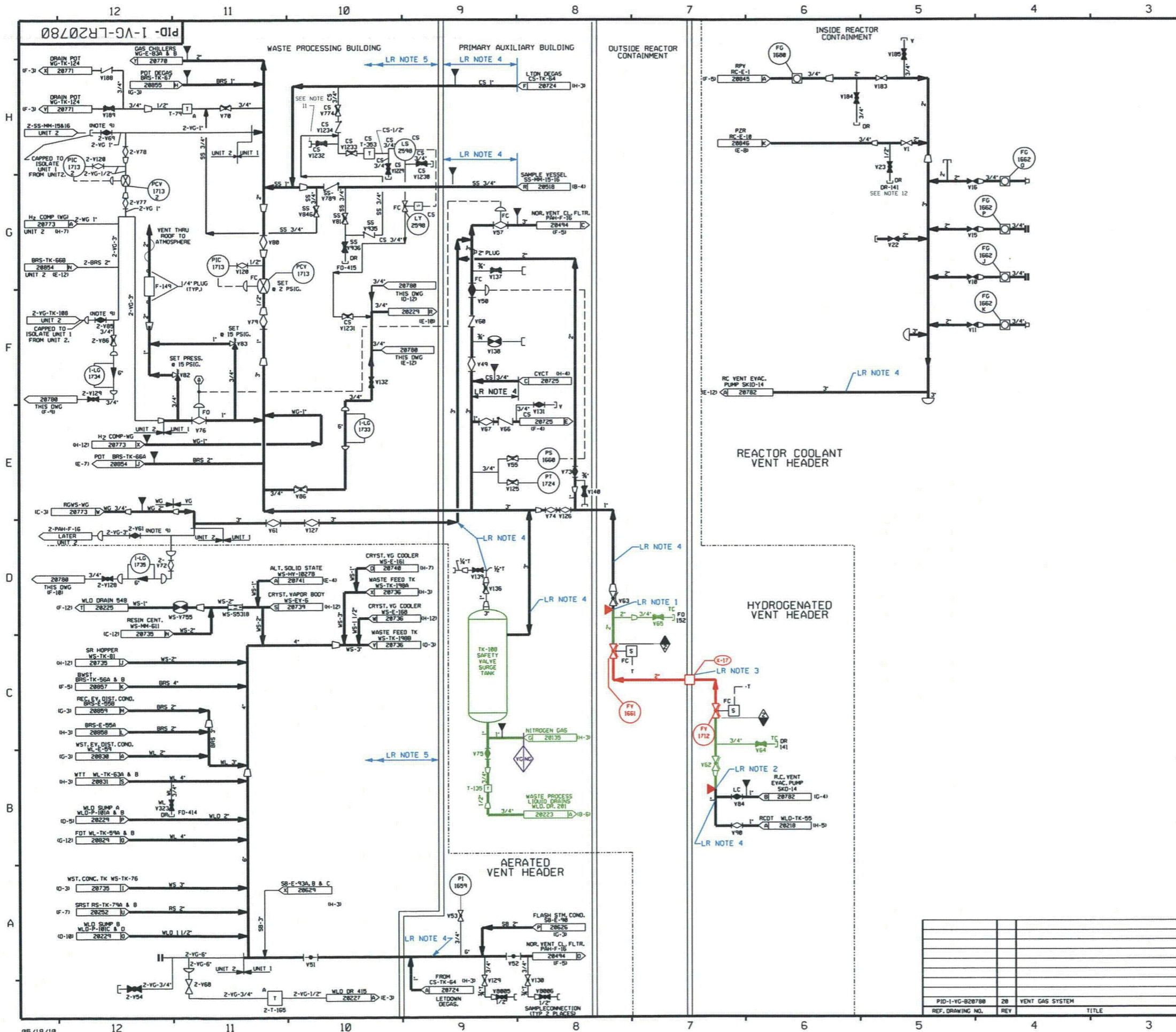
COMPONENTS SUBJECT TO AMR
 RED INDICATES COMPONENTS IN SCOPE PER 10CFR 54.4(a)(1) AND/OR (a)(3) AND SUBJECT TO AMR PER 10CFR 54.21.
 BLACK INDICATES COMPONENTS NOT SUBJECT TO AMR.
 GREEN INDICATES COMPONENTS IN SCOPE PER 10CFR 54.4(a)(2) AND SUBJECT TO AMR PER 10CFR 54.21.
 ▲ PIPE ANCHOR
 ◆ INDICATES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

NOTES:
 1. WORK THIS DRAWING WITH DRAWINGS 20022 & 20023.
 2. ALL PIPING, VALVES, EQUIPMENT & INSTRUMENTS ARE SAFETY CLASS NNS UNLESS OTHERWISE NOTED.
 3. ALL PIPING, VALVES, EQUIPMENT & INSTRUMENTS ARE PREFIXED BY 1-SY UNLESS OTHERWISE NOTED.
 4. FOR DETAILS OF BYPASS VALVES AND DETAILS OF BREAKERS SEE DRAWING 20022 AND 20023.
 5. FOR VALVE AND PRESSURE SWITCH IO'S REFER TO 1-SY-B20025.
 6. P&ID CREATED FROM MEPEPI DWG. S0001118, SH. 2, REV. F.



REV	DATE	DSGN	CHKD	CE	DESCRIPTION

ORIGINAL ISSUE					
REV	DATE	DSGN	CHKD	CE	DESCRIPTION
345KV SWITCHING STATION SF6 GAS SYSTEM DIAGRAM SWITCH YARD LICENSE RENEWAL P&ID					
PID-1-SY-LR20024					



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 DWG: 1-VG-1525-12
HANGER NO: 1525-A-10.
 - PIPE SUPPORT ANCHOR
ISO DWG: 1-VG-1525-20
HANGER NO: 1525-A-34.
 - COMPONENT DESIGNATED AS (X-17) IS A CONTAINMENT PENETRATION THAT WILL BE EVALUATED UNDER CIVIL/STRUCTURAL SYSTEM LRSP-CNT.
 - THE COMPONENTS HAVE AN AIR/GAS INTERNAL ENVIRONMENT WHICH HAS NO LICENSE RENEWAL INTENDED FUNCTION AND ARE NOT IN SCOPE.
 - THE WASTE PROCESSING BUILDING (WPB) HAS NO SAFETY RELATED COMPONENTS LOCATED INSIDE, THEREFORE COMPONENTS WILL 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
 VG - VENT GAS SYSTEM
 NG - NITROGEN GAS SYSTEM

- NOTES:
- WORK THIS DRAWING WITH DRAWING 28779 & 28782.
 - DELETED
 - ALL PIPING, VALVES, EQUIPMENT AND INSTRUMENTS HAVE SYSTEM PREFIX UNLESS NOTED OTHERWISE.
 - ALL LINES, EQUIPMENT, COMPONENTS AND INSTRUMENTS ARE SAFETY CLASS MMS UNLESS NOTED OTHERWISE.
 - DELETED
 - DELETED
 - DELETED
 - △ INDICATES REVISION LEVEL
 - 2-3-VG-V81, 2-1-VG-V89 AND 2-3-VG-V85 SHOULD BE CLOSED AND LOCKED DURING CONSTRUCTION OF UNIT NO 2.
 - TO 2-3-VG-V87 UNIT 21-VG-V78 SHALL BE ADMINISTRATIVELY MAINTAINED OPEN BY ISOLATING THE AIR SUPPLY VALVE TO THE ACTUATOR DURING UNIT 2 CONSTRUCTION.
 - INSTALL THREADED CAP WHEN HOSE CONN. IS NOT INSTALLED.
 - QUICK DISCONNECTS MAY BE INSTALLED UPSTREAM OF PIPE CAPS AS DEEMED NECESSARY BY STATION STAFF TO FACILITATE VENT AND DRAIN OPERATIONS.

PORTIONS OF THIS DRAWING ARE
NUCLEAR SAFETY RELATED

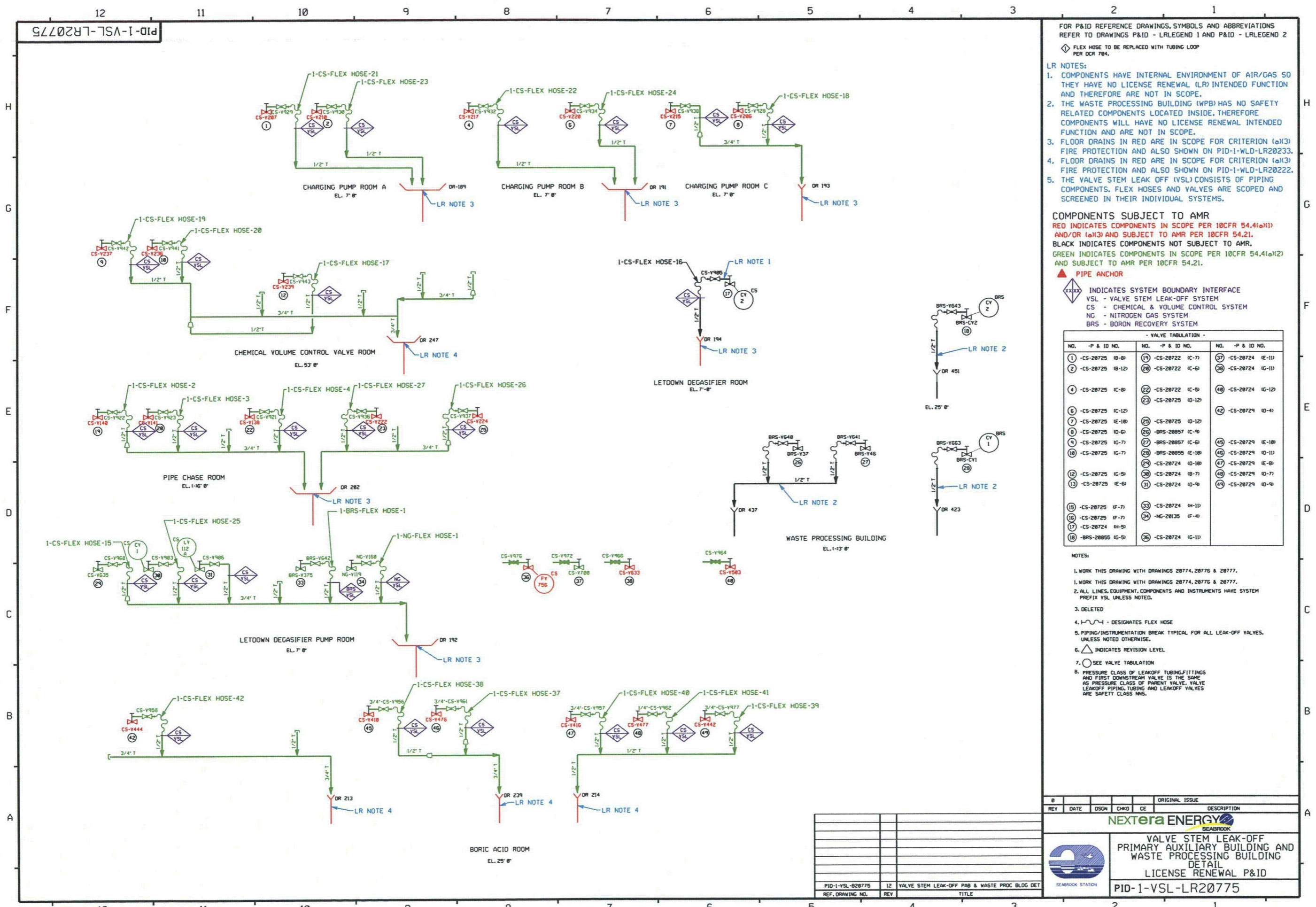
REV	DATE	DSGN	CHKD	CE	DESCRIPTION

ORIGINAL ISSUE

VENT GAS SYSTEM
 LICENSE RENEWAL P&ID

PID-1-VG-28780 20 VENT GAS SYSTEM
 REF. DRAWING NO. REV. TITLE

PID-1-VG-LR20780



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

◇ FLEX HOSE TO BE REPLACED WITH TUBING LOOP PER DCR 784.

- LR NOTES:
- COMPONENTS HAVE INTERNAL ENVIRONMENT OF AIR/GAS SO THEY HAVE NO LICENSE RENEWAL (LR) INTENDED FUNCTION AND THEREFORE ARE NOT IN SCOPE.
 - THE WASTE PROCESSING BUILDING (WPB) HAS NO SAFETY RELATED COMPONENTS LOCATED INSIDE, THEREFORE COMPONENTS WILL HAVE NO LICENSE RENEWAL INTENDED FUNCTION AND ARE NOT IN SCOPE.
 - FLOOR DRAINS IN RED ARE IN SCOPE FOR CRITERION (a)(3) FIRE PROTECTION AND ALSO SHOWN ON PID-1-WLD-LR20233.
 - FLOOR DRAINS IN RED ARE IN SCOPE FOR CRITERION (a)(3) FIRE PROTECTION AND ALSO SHOWN ON PID-1-WLD-LR20222.
 - THE VALVE STEM LEAK OFF (VSL) CONSISTS OF PIPING COMPONENTS, FLEX HOSES AND VALVES ARE SCOPED AND SCREENED IN THEIR INDIVIDUAL SYSTEMS.

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
 VSL - VALVE STEM LEAK-OFF SYSTEM
 CS - CHEMICAL & VOLUME CONTROL SYSTEM
 NG - NITROGEN GAS SYSTEM
 BRS - BORDON RECOVERY SYSTEM

VALVE TABULATION

NO.	-P & ID NO.	NO.	-P & ID NO.	NO.	-P & ID NO.
1	-CS-20725 (B-8)	19	-CS-20722 (C-7)	37	-CS-20724 (E-11)
2	-CS-20725 (B-12)	20	-CS-20722 (C-6)	38	-CS-20724 (G-11)
4	-CS-20725 (C-8)	22	-CS-20722 (C-5)	40	-CS-20724 (G-12)
6	-CS-20725 (C-12)	23	-CS-20725 (D-12)	42	-CS-20729 (D-4)
7	-CS-20725 (E-10)	25	-CS-20725 (D-12)	45	-CS-20729 (E-10)
8	-CS-20725 (D-6)	26	-BRS-20057 (C-9)	46	-CS-20729 (D-11)
9	-CS-20725 (G-7)	27	-BRS-20057 (C-6)	47	-CS-20729 (E-8)
10	-CS-20725 (G-7)	28	-BRS-20055 (E-10)	48	-CS-20729 (D-7)
12	-CS-20725 (G-5)	29	-CS-20724 (D-10)	49	-CS-20729 (D-9)
13	-CS-20725 (E-6)	31	-CS-20724 (D-9)		
15	-CS-20725 (F-7)	33	-CS-20724 (H-11)		
16	-CS-20725 (F-7)	34	-NG-20135 (F-4)		
17	-CS-20724 (H-5)				
18	-BRS-20055 (G-5)	36	-CS-20724 (G-11)		

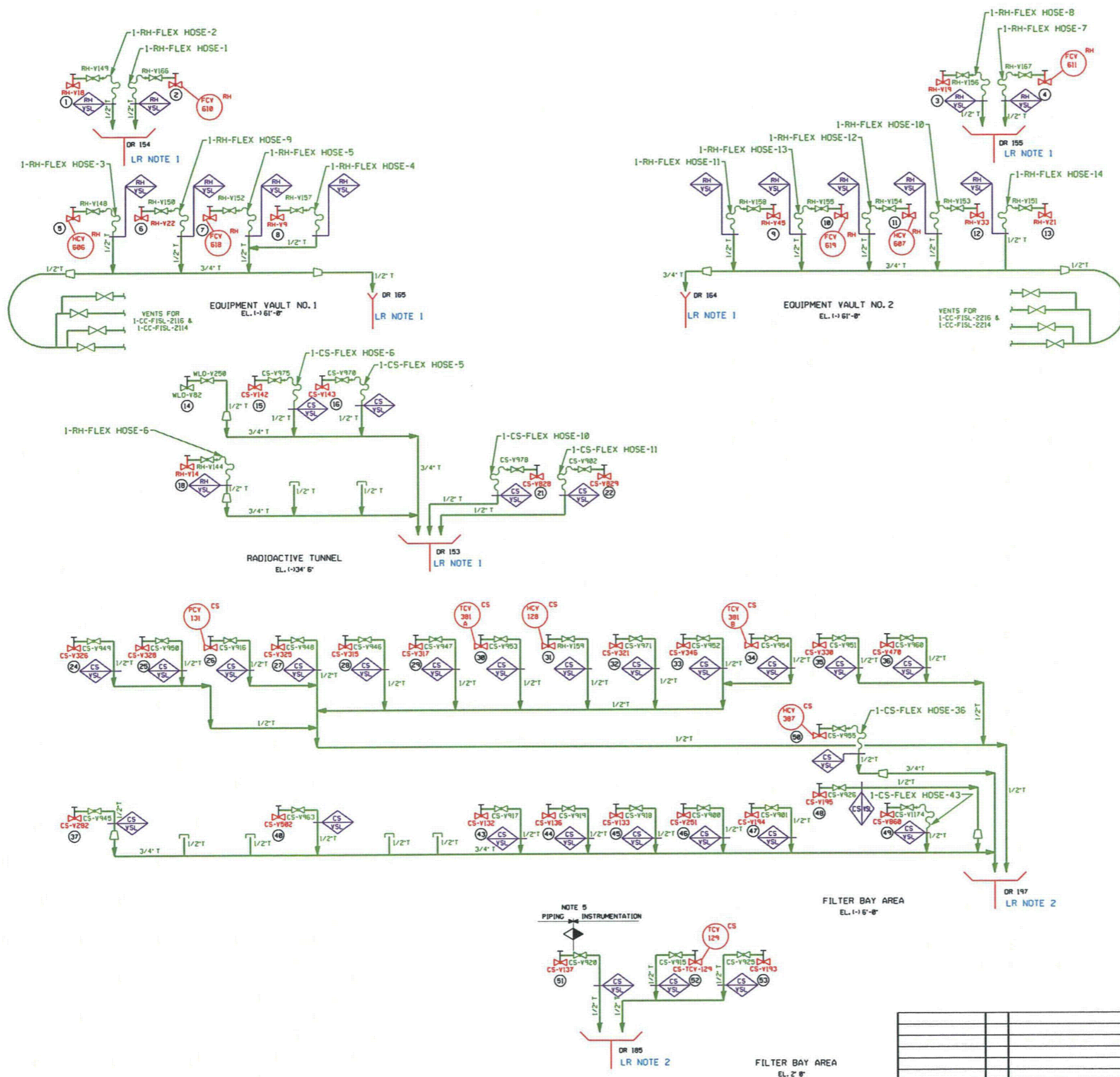
- NOTES:
- WORK THIS DRAWING WITH DRAWINGS 20774, 20775 & 20777.
 - WORK THIS DRAWING WITH DRAWINGS 20774, 20775 & 20777.
 - ALL LINES, EQUIPMENT, COMPONENTS AND INSTRUMENTS HAVE SYSTEM PREFIX VSL UNLESS NOTED.
 - DELETED
 - DESIGNATES FLEX HOSE
 - PIPING/INSTRUMENTATION BREAK TYPICAL FOR ALL LEAK-OFF VALVES, UNLESS NOTED OTHERWISE.
 - INDICATES REVISION LEVEL
 - SEE VALVE TABULATION
 - PRESSURE CLASS OF LEAKOFF TUBING/FITTINGS AND FIRST DOWNSTREAM VALVE IS THE SAME AS PRESSURE CLASS OF PARENT VALVE. VALVE LEAKOFF PIPING, TUBING AND LEAKOFF VALVES ARE SAFETY CLASS MNS.

REV	DATE	DSGN	CHKD	CE	ORIGINAL ISSUE	DESCRIPTION

VALVE STEM LEAK-OFF PRIMARY AUXILIARY BUILDING AND WASTE PROCESSING BUILDING DETAIL
 LICENSE RENEWAL P&ID
PID-1-VSL-LR20775

REF. DRAWING NO.	REV	TITLE
PID-1-VSL-020775	12	VALVE STEM LEAK-OFF PAB & WASTE PROC BLDG DET

H
G
F
E
D
C
B
A



- LR NOTES:
- FLOOR DRAINS IN RED ARE IN SCOPE FOR CRITERION (a)(3) FIRE PROTECTION AND ALSO SHOWN ON PID-1-WLD-LR20221.
 - FLOOR DRAINS IN RED ARE IN SCOPE FOR CRITERION (a)(3) FIRE PROTECTION AND ALSO SHOWN ON PID-1-WLD-LR20223.
 - THE VALVE STEM LEAK OFF (VSL) CONSISTS OF PIPING COMPONENTS, FLEX HOSES AND VALVES ARE SCOPED AND SCREENED IN THEIR INDIVIDUAL SYSTEMS.

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
 YSL - VALVE STEM LEAK-OFF SYSTEM
 CS - CHEMICAL & VOLUME CONTROL SYSTEM
 RH - RESIDUAL HEAT REMOVAL SYSTEM

- VALVE TABULATION -

NO.	-P & ID NO.	NO.	-P & ID NO.	NO.	-P & ID NO.
1	-RH-20662 IG-12	19		37	-CS-20723 IB-0
2	-RH-20662 IA-12	20			
3	-RH-20663 IG-12	21	-RH-20662 IB-7		
4	-RH-20663 IA-12	22	-RH-20663 IB-7	48	-CS-20723 IB-4
5	-RH-20662 IE-9				
6	-RH-20663 IH-0	24	-CS-20722 IH-4		
7	-RH-20662 ID-0	25	-CS-20722 IG-3	43	-CS-20726 IF-9
8	-RH-20662 IF-9	26	-CS-20722 IG-3	44	-CS-20726 IF-9
9	-RH-20663 IF-9	27	-CS-20722 IG-5	45	-CS-20726 IF-0
10	-RH-20663 ID-0	28	-CS-20727 IB-0	46	-CS-20726 IG-7
11	-RH-20663 IE-9	29	-CS-20727 IC-4	47	-CS-20726 IF-4
12	-RH-20663 IG-0	30	-CS-20727 IC-4	48	-CS-20726 ID-4
13	-RH-20663 IF-0	31	-CS-20722 ID-0	49	-CS-20726 IF-0
14	-WLD-20222 IG-5	32	-CS-20722 IF-5	50	-CS-20728 IE-3
15	-CS-20722 IC-7	33	-CS-20722 IF-6	51	-CS-20723 IC-0
16	-CS-20722 IC-0	34	-CS-20722 IF-7	52	-CS-20723 IH-4
		35	-CS-20722 IF-7	53	-CS-20725 ID-7
18	-RH-20662 IE-0	36	-CS-20722 IF-7		

- NOTES:
- WORK THIS DRAWING WITH DRAWINGS 20774, 20775 & 20777.
 - ALL LINES, EQUIPMENT, COMPONENTS, AND INSTRUMENTS HAVE SYSTEM PREFIX YSL UNLESS NOTED.
 - ALL LINES, EQUIPMENT, COMPONENTS, AND INSTRUMENTS ARE SAFETY CLASS N UNLESS NOTED.
 - DESIGNATES FLEX HOSE.
 - PIPING INSTRUMENTATION BREAK TYPICAL FOR ALL LEAKOFF VALVES UNLESS NOTED.
 - △ - INDICATES REVISION LEVEL.
 - - SEE VALVE TABULATION.
 - PRESSURE CLASS OF LEAKOFF TUBING, FITTINGS, AND FIRST DOWNSTREAM VALVE IS THE SAME AS PRESSURE CLASS OF PARENT VALVE. VALVE LEAKOFF PIPING, TUBING AND LEAKOFF VALVES ARE SAFETY CLASS N.

REV	DATE	DSGN	CHKD	CE	DESCRIPTION

ORIGINAL ISSUE

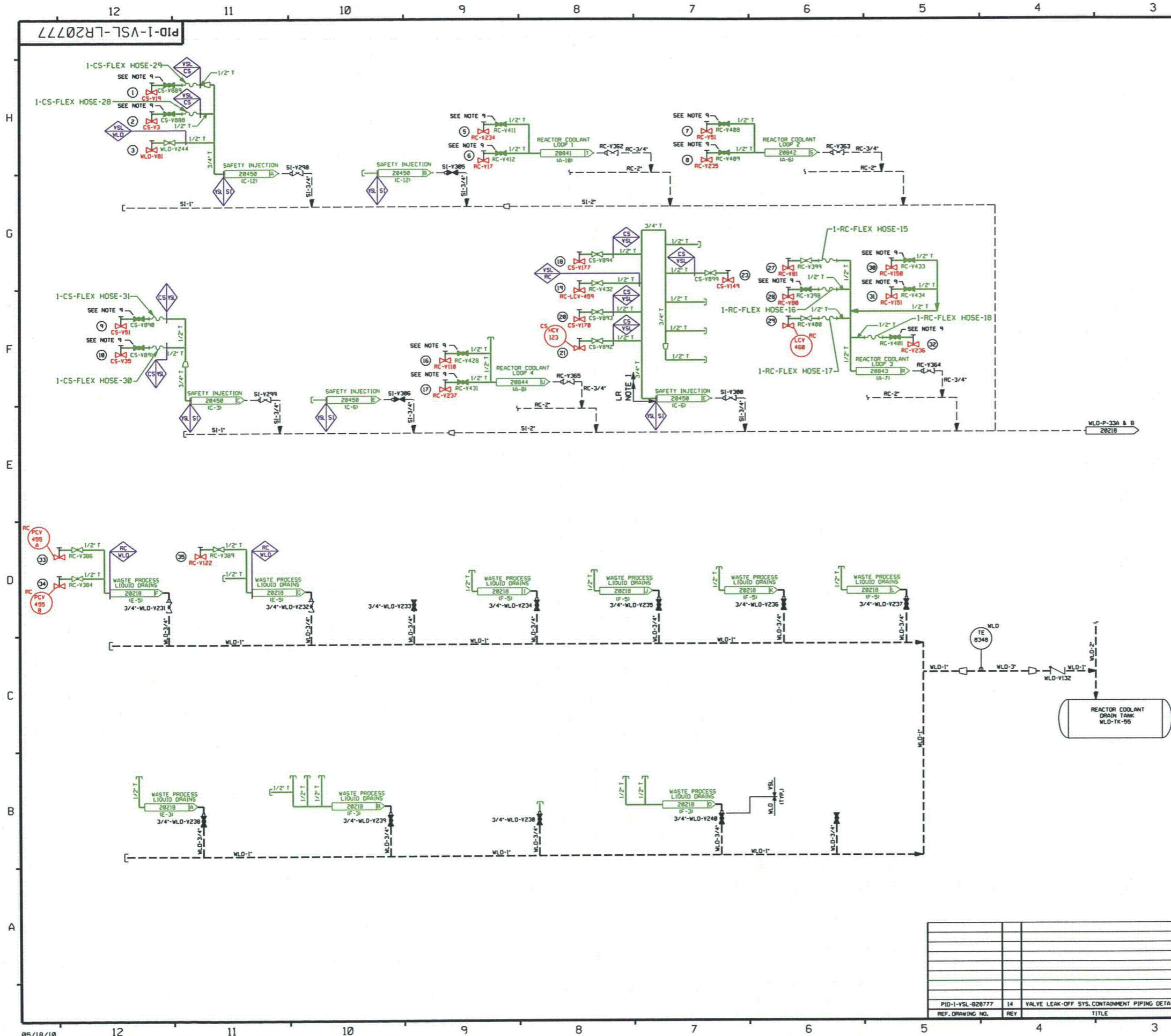
NEXTERA ENERGY
SEABROOK

VALVE STEM LEAK-OFF
PRIMARY AUXILIARY BUILDING AND
EQUIPMENT VAULT
DETAILS
LICENSE RENEWAL P&ID

PID-1-VSL-LR20776

REF. DRAWING NO.	REV	TITLE
PID-1-VSL-020776	0	VALVE STEM LEAK-OFF P&ID & EQUIP VAULT DET

PID-1-VSL-LR20777



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

LR NOTES:
 1. THE VALVE STEM LEAK OFF (VSL) CONSISTS OF PIPING COMPONENTS, FLEX HOSES AND VALVES ARE SCOPED AND SCREENED IN THEIR INDIVIDUAL SYSTEMS.

COMPONENTS SUBJECT TO AMR
 RED INDICATES COMPONENTS IN SCOPE PER 10CFR 54.1(a)(1) AND/OR 1(a)(3) AND SUBJECT TO AMR PER 10CFR 54.21.
 BLACK INDICATES COMPONENTS NOT SUBJECT TO AMR.
 GREEN INDICATES COMPONENTS IN SCOPE PER 10CFR 54.1(a)(2) AND SUBJECT TO AMR PER 10CFR 54.21.

▲ PIPE ANCHOR
 ◆ INDICATES SYSTEM BOUNDARY INTERFACE
 VSL - VALVE STEM LEAK-OFF SYSTEM
 RC - REACTOR COOLANT SYSTEM
 CS - CHEMICAL & VOLUME CONTROL SYSTEM
 WLD - WASTE PROCESSING LIQUID DRAINS SYSTEM
 SI - SAFETY INJECTION SYSTEM

VALVE TABULATION		
NO. - P&ID NO.	NO. - P&ID NO.	NO. - P&ID NO.
1 - CS-20726 IB-9	23 - CS-20722 IG-9	43
2 - CS-20726 IA-9		44
3 - WLD-20218 IF-11		45
4		46
5 - RC-20041 IB-10		47
6 - RC-20041 ID-6	27 - RC-20043 IA-7	48
7 - RC-20042 ID-10	28 - RC-20043 IA-8	49
8 - RC-20042 IB-6	29 - RC-20043 IA-9	50
9 - CS-20726 IC-9	30 - RC-20046 IB-10	51
10 - CS-20726 IC-9	31 - RC-20046 IB-10	52
11	32 - RC-20043 IA-7	53
12	33 - RC-20046 IF-5	54
13	34 - RC-20046 IG-5	55
14	35 - RC-20046 IG-7	56
15	36	57
16 - RC-20044 IB-8	37	58
17 - RC-20044 IA-8	38	59
18 - CS-20722 IE-12	39	60
19 - RC-20043 IA-6	40	61
20 - CS-20722 IC-10	41	62
21 - CS-20722 IC-11	42	

- NOTES:
- WORK THIS DRAWING WITH DRAWINGS 20774 THRU 20776.
 - ALL LINES, EQUIPMENT, COMPONENTS AND INSTRUMENTS HAVE SYSTEM PREFIX VSL, UNLESS NOTED OTHERWISE.
 - DELETED
 - PIPING / INSTRUMENTATION BREAK TYPICAL FOR ALL LEAK-OFF VALVES, UNLESS NOTED OTHERWISE.
 - DESIGNATES FLEX HOSE
 - △ INDICATES REVISION LEVEL
 - SEE VALVE TABULATION
 - PRESSURE CLASS OF LEAKOFF TUBING, FITTINGS AND FIRST DOWNSTREAM VALVE IS THE SAME AS PRESSURE CLASS OF PARENT VALVE. VALVE LEAKOFF PIPING, TUBING AND LEAKOFF VALVES ARE SAFETY CLASS MNS.
 - VALVE STEM LEAK-OFF ISOLATION VALVES TO BE MAINTAINED CLOSED. VALVE STEM LEAK-OFF TO BE CONSIDERED IMPERABLE.

REV	DATE	DSGN	CHKD	CE	ORIGINAL ISSUE	DESCRIPTION

NEXTERA ENERGY
 SEABROOK

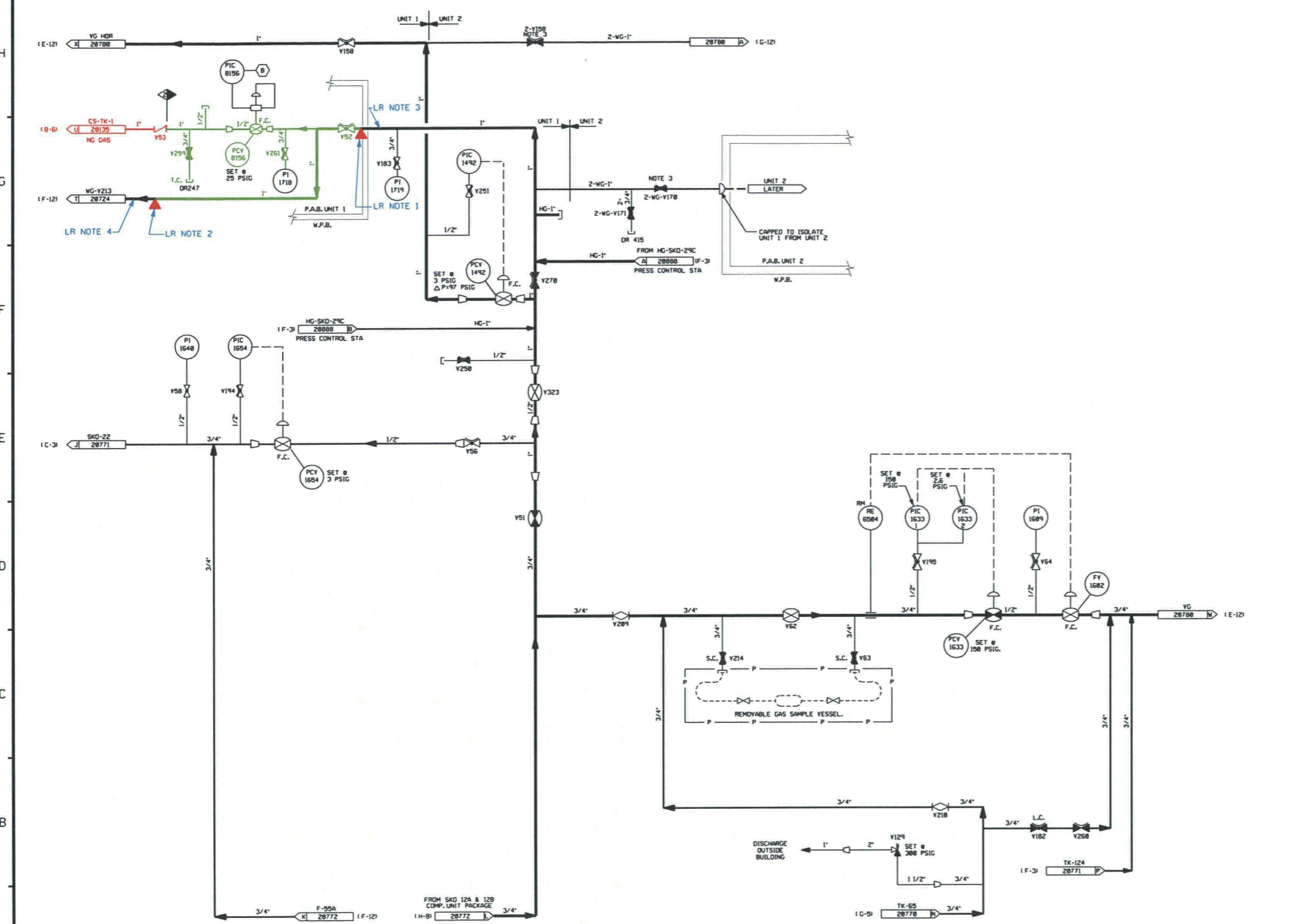
VALVE LEAK-OFF SYSTEM
 CONTAINMENT PIPING
 DETAIL
 LICENSE RENEWAL P&ID

PID-1-VSL-LR20777

REF. DRAWING NO.	REV.	TITLE
PID-1-VSL-20777	14	VALVE LEAK-OFF SYS. CONTAINMENT PIPING DETAIL

PID-1-WG-LR20773

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-800567-644.00A
HANGER NO.: 567-A-23
 - PIPE SUPPORT ANCHOR
ISO NO.: 9763-D-800567-644.00A
HANGER NO.: 582-A-04
 - COMPONENTS DOWNSTREAM OF ANCHOR HAVE AN ENVIRONMENT OF AIR/GAS AND HAVE NO LICENSE RENEWAL(LR) INTENDED FUNCTION SO THEY ARE NOT SCOPE.
 - COMPONENTS UPSTREAM OF ANCHOR HAVE AN ENVIRONMENT OF AIR/GAS AND HAVE NO LR INTENDED FUNCTION SO THEY ARE NOT 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 DRAWING WITH DRAWINGS 20758, 20770, 20771, & 20772.
 - ALL PIPING, EQUIPMENT, COMPONENTS, & INSTRUMENTS HAVE SYSTEM PREFIX "1-WG" UNLESS NOTED OTHERWISE.
 - THIS VALVE TO BE LOCKED CLOSED DURING UNIT 2 CONSTRUCTION.
 - ALL PIPING & INSTRUMENTS ARE SAFETY CLASS UNLESS OTHERWISE NOTED.
 - ▲ - INDICATES REVISION LEVEL.
 - ◆ - DELETED
 - INSTRUMENT REFERENCES:
 (B) FROM CS-PT-115 ON P&ID CS-20725

PORTIONS OF THIS DRAWING ARE
NUCLEAR SAFETY RELATED

REV	DATE	DSGN	CHKD	CE	DESCRIPTION

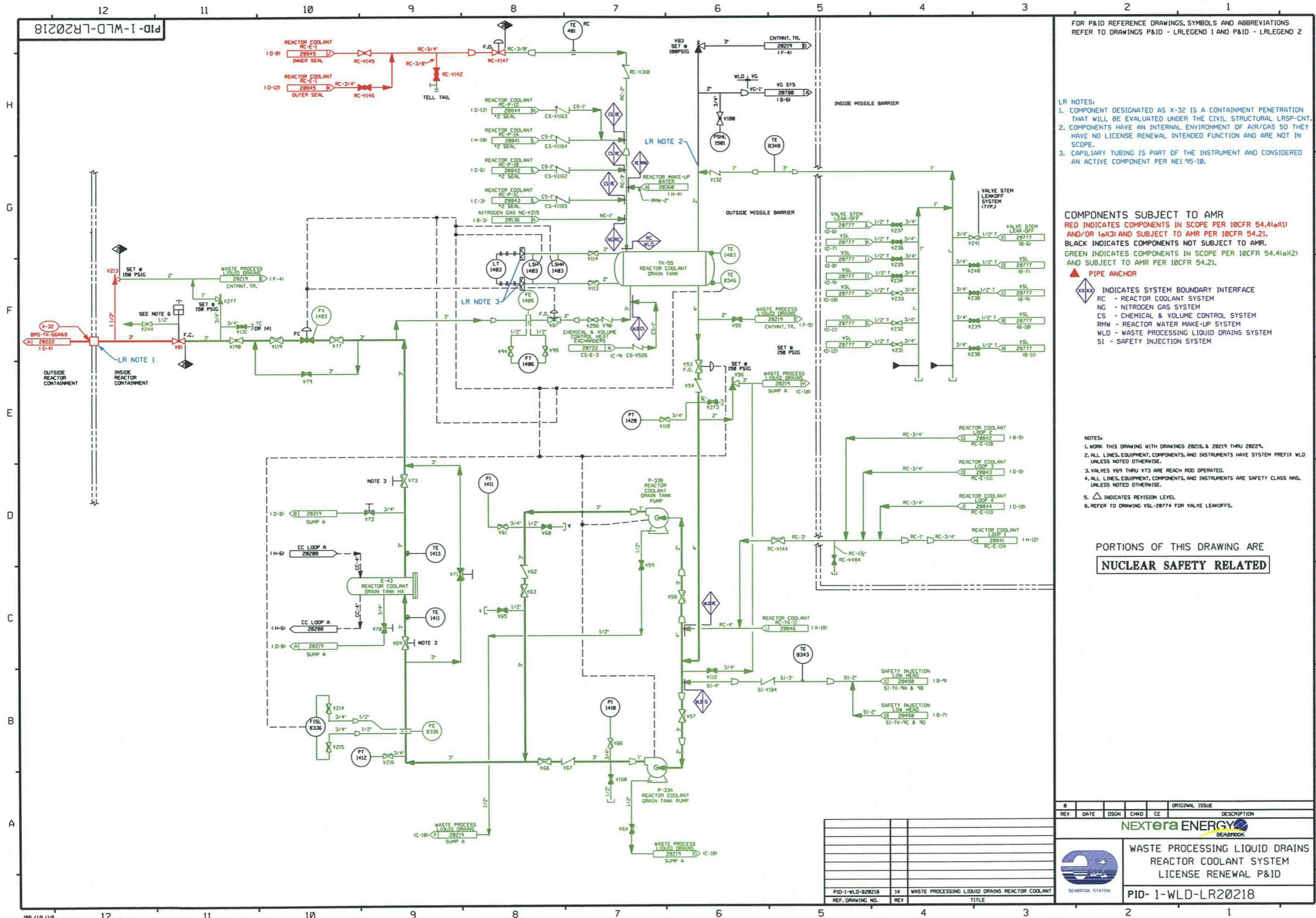
NEXTERA ENERGY
 SEABROOK

WASTE GAS SYSTEM
 DETAIL
 LICENSE RENEWAL P&ID

PID-1-WG-LR20773

REV	DATE	DESCRIPTION

PID-1-WLD-LR20218



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-32 IS A CONTAINMENT PENETRATION THAT WILL BE EVALUATED UNDER THE CIVIL STRUCTURAL LRSP-CNT.
 2. COMPONENTS HAVE AN INTERNAL ENVIRONMENT OF AIR/GAS SO THEY HAVE NO LICENSE RENEWAL INTENDED FUNCTION AND ARE NOT IN SCOPE.
 3. 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
- RC - REACTOR COOLANT SYSTEM
 - NG - NITROGEN GAS SYSTEM
 - CS - CHEMICAL & VOLUME CONTROL SYSTEM
 - RMW - REACTOR WATER MAKE-UP SYSTEM
 - WLD - WASTE PROCESSING LIQUID DRAINS SYSTEM
 - SI - SAFETY INJECTION SYSTEM

- NOTES:
1. WORK THIS DRAWING WITH DRAWINGS 28216 & 28219 THRU 28229.
 2. ALL LINES, EQUIPMENT, COMPONENTS, AND INSTRUMENTS HAVE SYSTEM PREFIX WLD UNLESS NOTED OTHERWISE.
 3. VALVES V69 THRU V73 ARE REACH ROD OPERATED.
 4. ALL LINES, EQUIPMENT, COMPONENTS, AND INSTRUMENTS ARE SAFETY CLASS NNS, UNLESS NOTED OTHERWISE.
 5. △ INDICATES REVISION LEVEL
 6. REFER TO DRAWING YSL-28774 FOR VALVE LEAKOFFS.

PORTIONS OF THIS DRAWING ARE
NUCLEAR SAFETY RELATED

REV	DATE	DSGN	CHKD	CE	DESCRIPTION

ORIGINAL ISSUE

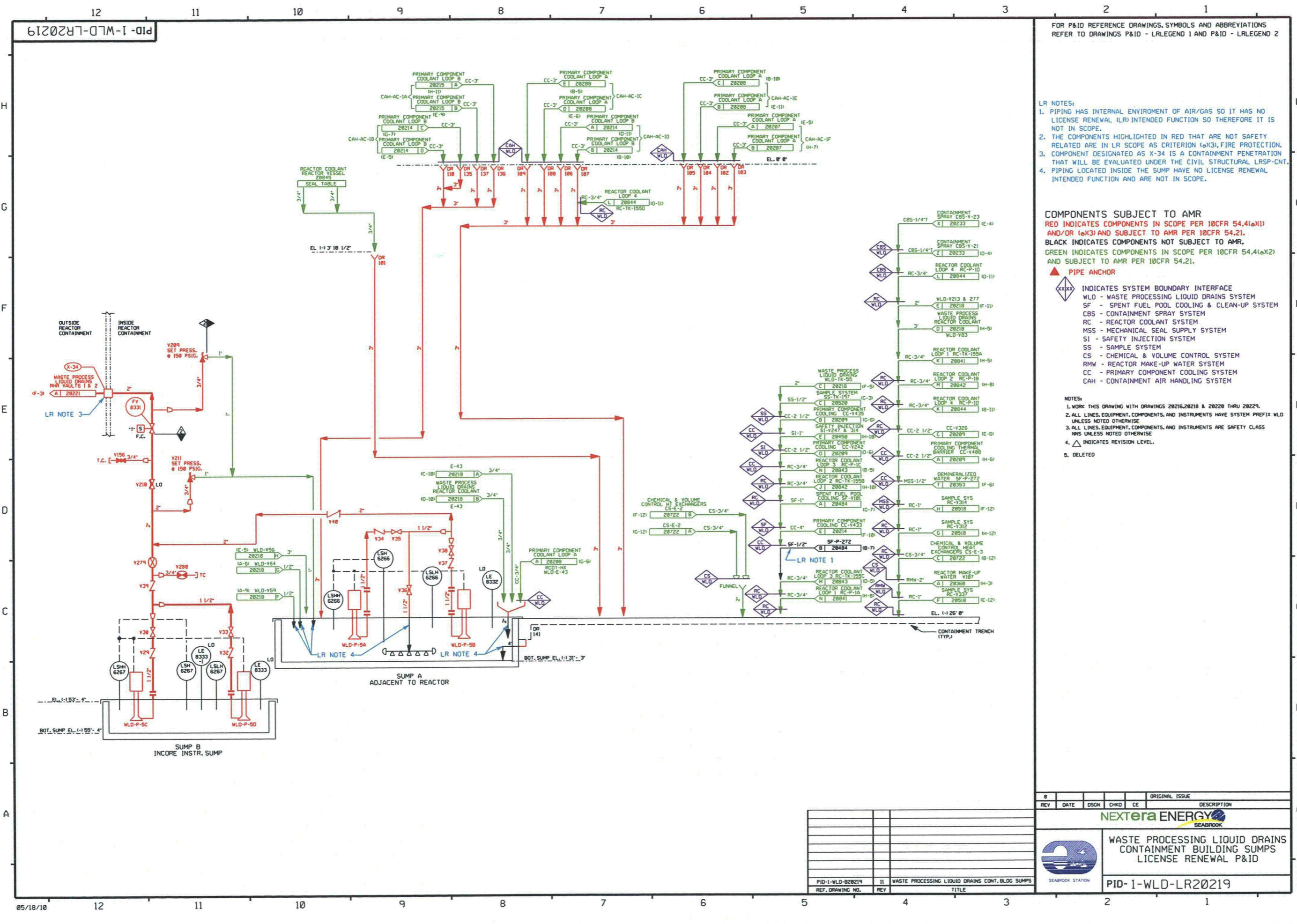
NEXTERA ENERGY
SEABROOK

WASTE PROCESSING LIQUID DRAINS
 REACTOR COOLANT SYSTEM
 LICENSE RENEWAL P&ID

PID-1-WLD-LR20218



PID-1-WLD-LR20219



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

- LR NOTES:
1. PIPING HAS INTERNAL ENVIRONMENT OF AIR/GAS SO IT HAS NO LICENSE RENEWAL (LR) INTENDED FUNCTION SO THEREFORE IT IS NOT IN SCOPE.
 2. THE COMPONENTS HIGHLIGHTED IN RED THAT ARE NOT SAFETY RELATED ARE IN LR SCOPE AS CRITERION (a)(3), FIRE PROTECTION.
 3. COMPONENT DESIGNATED AS X-34 IS A CONTAINMENT PENETRATION THAT WILL BE EVALUATED UNDER THE CIVIL STRUCTURAL LRSP-CNT.
 4. PIPING LOCATED INSIDE THE SUMP 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

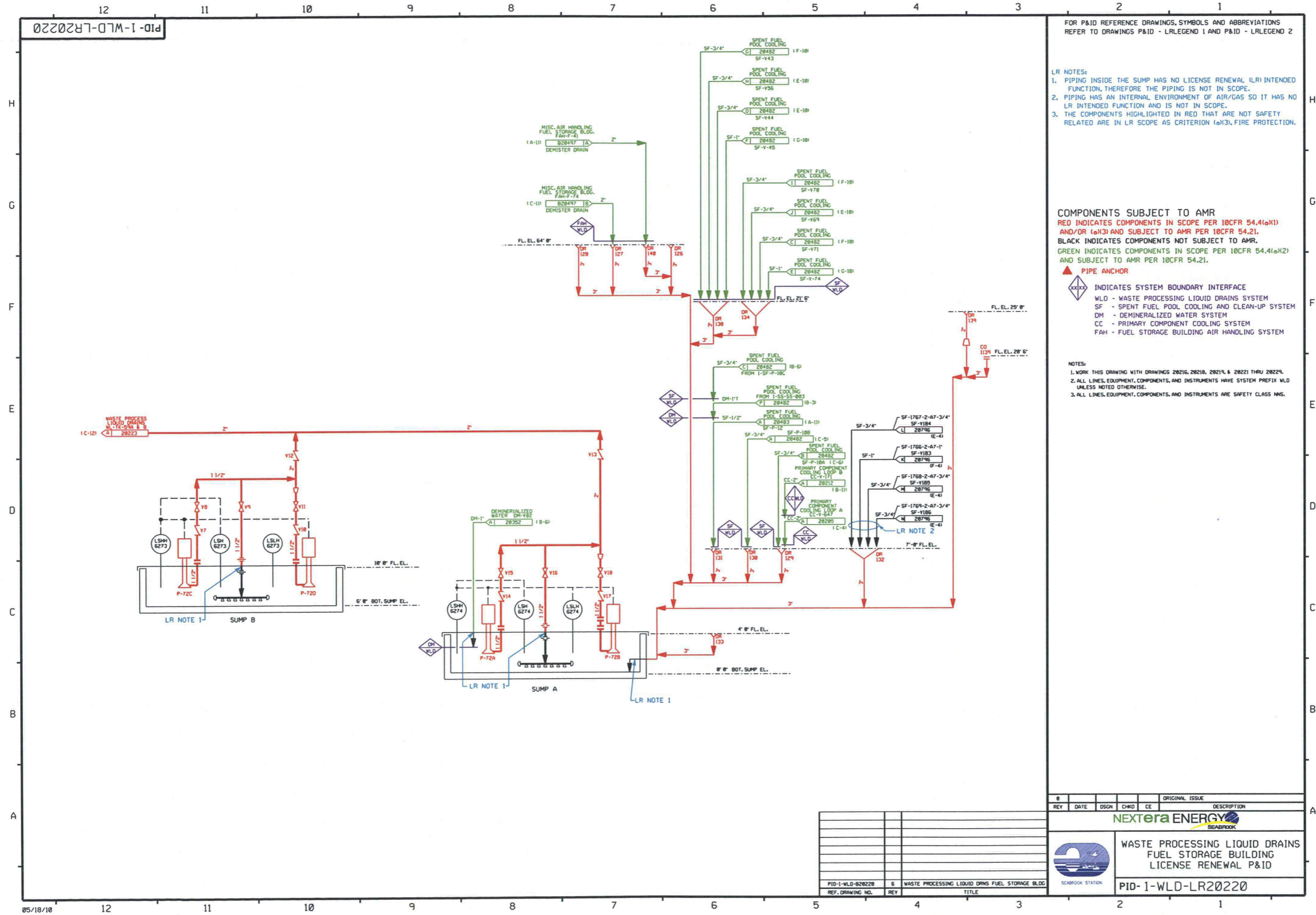
- INDICATES SYSTEM BOUNDARY INTERFACE
- WLD - WASTE PROCESSING LIQUID DRAINS SYSTEM
 - SF - SPENT FUEL POOL COOLING & CLEAN-UP SYSTEM
 - CBS - CONTAINMENT SPRAY SYSTEM
 - RC - REACTOR COOLANT SYSTEM
 - MSS - MECHANICAL SEAL SUPPLY SYSTEM
 - SI - SAFETY INJECTION SYSTEM
 - SS - SAMPLE SYSTEM
 - CS - CHEMICAL & VOLUME CONTROL SYSTEM
 - RMW - REACTOR MAKE-UP WATER SYSTEM
 - CC - PRIMARY COMPONENT COOLING SYSTEM
 - CAH - CONTAINMENT AIR HANDLING SYSTEM

- NOTES:
1. WORK THIS DRAWING WITH DRAWINGS 20216, 20218 & 20220 THRU 20229.
 2. ALL LINES, EQUIPMENT, COMPONENTS, AND INSTRUMENTS HAVE SYSTEM PREFIX UNLESS NOTED OTHERWISE.
 3. ALL LINES, EQUIPMENT, COMPONENTS, AND INSTRUMENTS ARE SAFETY CLASS UNLESS NOTED OTHERWISE.
 4. ▲ INDICATES REVISION LEVEL.
 5. DELETED

REV	DATE	DSGN	CHKD	CE	DESCRIPTION
0					ORIGINAL ISSUE
WASTE PROCESSING LIQUID DRAINS CONTAINMENT BUILDING SUMPS LICENSE RENEWAL P&ID					
					PID-1-WLD-LR20219

PID-1-WLD-820219	11	WASTE PROCESSING LIQUID DRAINS CONT. BLDG SUMPS
REF. DRAWING NO.	REV	TITLE

PID-1-WLD-LR20220



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 HAS NO LICENSE RENEWAL (LR) INTENDED FUNCTION, THEREFORE THE PIPING IS NOT IN SCOPE.
 2. PIPING HAS AN INTERNAL ENVIRONMENT OF AIR/GAS SO IT HAS NO LR INTENDED FUNCTION AND IS NOT IN SCOPE.
 3. THE COMPONENTS HIGHLIGHTED IN RED THAT ARE NOT SAFETY RELATED ARE IN LR SCOPE AS 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
- XXXX INDICATES SYSTEM BOUNDARY INTERFACE
- WLD - WASTE PROCESSING LIQUID DRAINS SYSTEM
- SF - SPENT FUEL POOL COOLING AND CLEAN-UP SYSTEM
- DM - DEMINERALIZED WATER SYSTEM
- CC - PRIMARY COMPONENT COOLING SYSTEM
- FAH - FUEL STORAGE BUILDING AIR HANDLING SYSTEM

- NOTES:
1. WORK THIS DRAWING WITH DRAWINGS 28216, 28218, 28219, & 28221 THRU 28229.
 2. ALL LINES, EQUIPMENT, COMPONENTS, AND INSTRUMENTS HAVE SYSTEM PREFIX WLD UNLESS NOTED OTHERWISE.
 3. ALL LINES, EQUIPMENT, COMPONENTS, AND INSTRUMENTS ARE SAFETY CLASS NMS.

REV	DATE	DSGN	CHKD	CE	DESCRIPTION



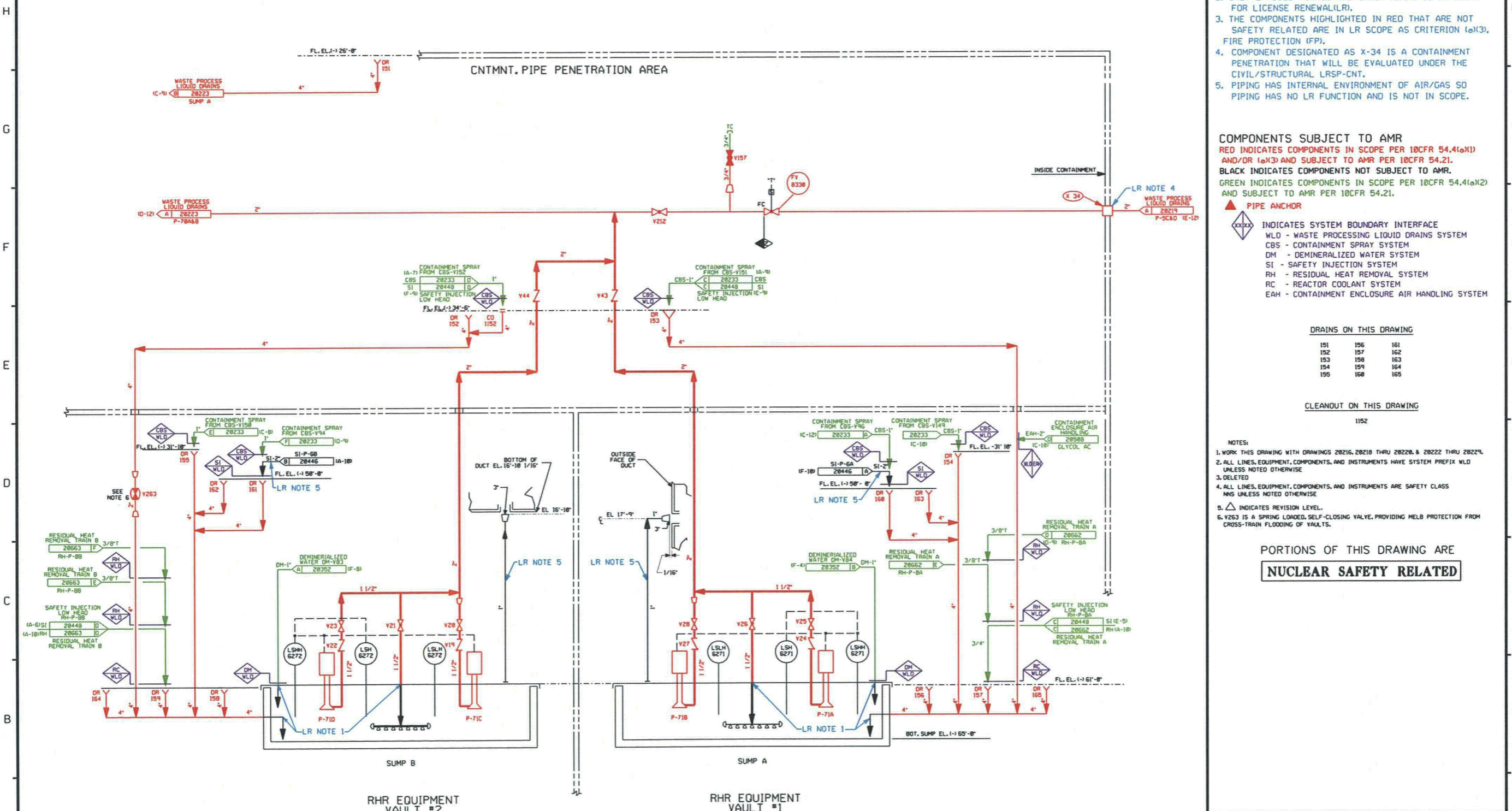
WASTE PROCESSING LIQUID DRAINS FUEL STORAGE BUILDING LICENSE RENEWAL P&ID

PID-1-WLD-LR20220

REV	DATE	DESCRIPTION

05/18/10

PID-1-WLD-LR20221



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

- LR NOTES:
1. PIPING LOCATED INSIDE THE SUMP HAS NO LICENSE RENEWAL INTENDED FUNCTION, THEREFORE THE PIPING IS NOT IN SCOPE.
 2. ONLY EXPOSED FUNNEL AND DRAIN PIPING IS IN SCOPE FOR LICENSE RENEWAL(LR).
 3. THE COMPONENTS HIGHLIGHTED IN RED THAT ARE NOT SAFETY RELATED ARE IN LR SCOPE AS CRITERION (a)(3), FIRE PROTECTION (FP).
 4. COMPONENT DESIGNATED AS X-34 IS A CONTAINMENT PENETRATION THAT WILL BE EVALUATED UNDER THE CIVIL/STRUCTURAL LRSP-CNT.
 5. PIPING HAS INTERNAL ENVIRONMENT OF AIR/GAS SO PIPING HAS NO LR FUNCTION AND 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
- WLD - WASTE PROCESSING LIQUID DRAINS SYSTEM
 - CBS - CONTAINMENT SPRAY SYSTEM
 - DM - DEMINERALIZED WATER SYSTEM
 - SI - SAFETY INJECTION SYSTEM
 - RH - RESIDUAL HEAT REMOVAL SYSTEM
 - RC - REACTOR COOLANT SYSTEM
 - EAH - CONTAINMENT ENCLOSURE AIR HANDLING SYSTEM

DRAINS ON THIS DRAWING

151	156	161
152	157	162
153	158	163
154	159	164
155	160	165

CLEANOUT ON THIS DRAWING

1152

- NOTES:
1. WORK THIS DRAWING WITH DRAWINGS 20216, 20218 THRU 20220, & 20222 THRU 20224.
 2. ALL LINES, EQUIPMENT, COMPONENTS, AND INSTRUMENTS HAVE SYSTEM PREFIX WLD UNLESS NOTED OTHERWISE.
 3. DELETED
 4. ALL LINES, EQUIPMENT, COMPONENTS, AND INSTRUMENTS ARE SAFETY CLASS UNLESS NOTED OTHERWISE.
 5. △ INDICATES REVISION LEVEL.
 6. Y263 IS A SPRING LOADED, SELF-CLOSING VALVE, PROVIDING MELB PROTECTION FROM CROSS-TRAIN FLOODING OF VAULTS.

PORTIONS OF THIS DRAWING ARE
NUCLEAR SAFETY RELATED

REV	DATE	DSGN	CHKD	CE	DESCRIPTION

ORIGINAL ISSUE

WASTE PROCESSING LIQUID DRAINS
 RHR
 EQUIPMENT VAULTS #1 & #2
 LICENSE RENEWAL P&ID

PID-1-WLD-LR20221



SEABROOK STATION

05/18/10

PID-1-WLD-LR20222

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

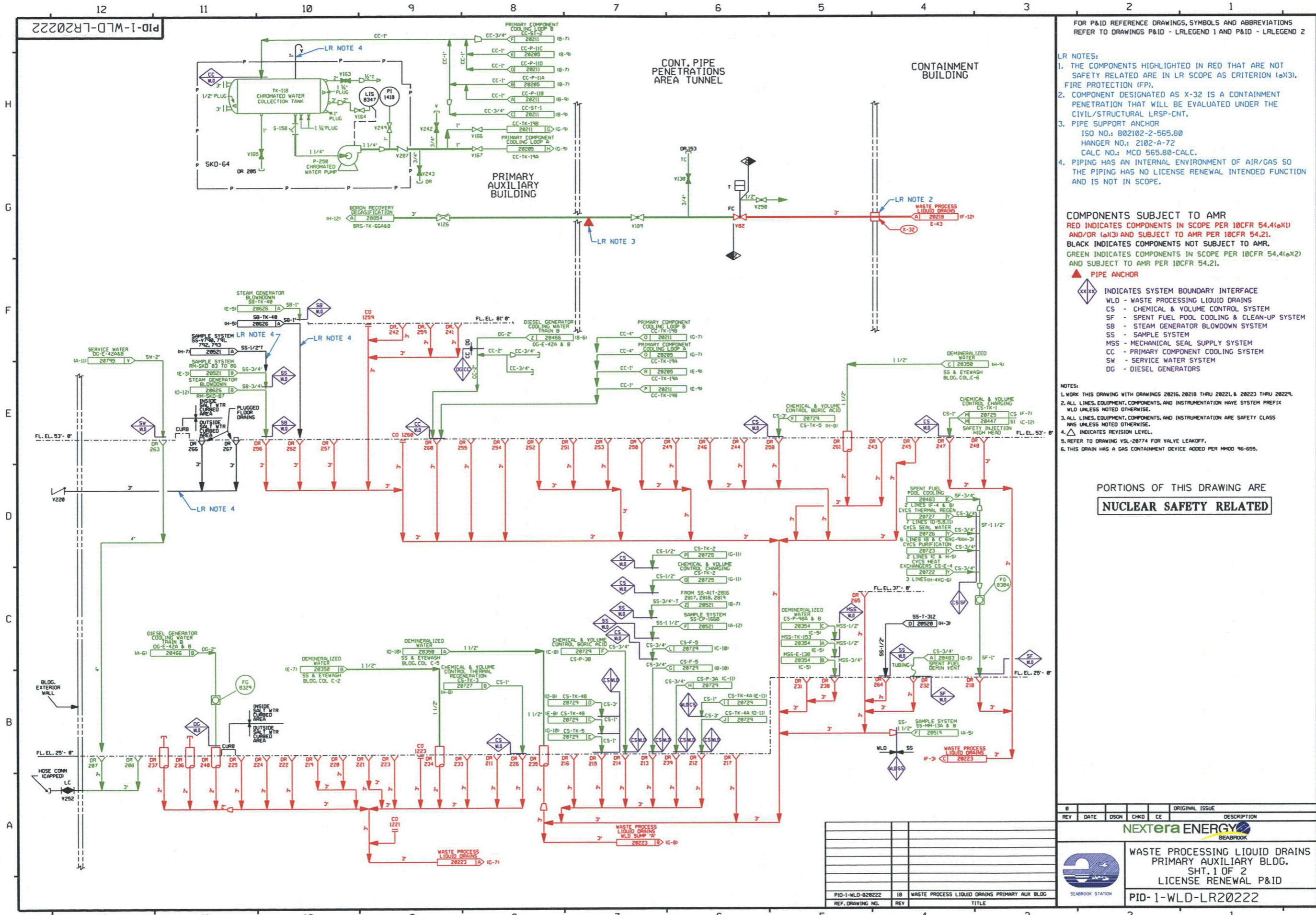
- LR NOTES:
1. THE COMPONENTS HIGHLIGHTED IN RED THAT ARE NOT SAFETY RELATED ARE IN LR SCOPE AS CRITERION (a)(3), FIRE PROTECTION (FP).
 2. COMPONENT DESIGNATED AS X-32 IS A CONTAINMENT PENETRATION THAT WILL BE EVALUATED UNDER THE CIVIL/STRUCTURAL LRSP-CNT.
 3. PIPE SUPPORT ANCHOR
ISO NO.: B02102-2-565.80
HANGER NO.: 2102-A-72
CALC NO.: MCO 565.80-CALC.
 4. PIPING HAS AN INTERNAL ENVIRONMENT OF AIR/GAS SO THE PIPING HAS NO LICENSE RENEWAL INTENDED FUNCTION AND 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
- WLD - WASTE PROCESSING LIQUID DRAINS
 - CS - CHEMICAL & VOLUME CONTROL SYSTEM
 - SF - SPENT FUEL POOL COOLING & CLEAN-UP SYSTEM
 - SB - STEAM GENERATOR BLOWDOWN SYSTEM
 - SS - SAMPLE SYSTEM
 - MSS - MECHANICAL SEAL SUPPLY SYSTEM
 - CC - PRIMARY COMPONENT COOLING SYSTEM
 - SW - SERVICE WATER SYSTEM
 - DG - DIESEL GENERATORS

- NOTES:
1. WORK THIS DRAWING WITH DRAWINGS 28216, 28218 THRU 28221, & 28223 THRU 28224.
 2. ALL LINES, EQUIPMENT, COMPONENTS, AND INSTRUMENTATION HAVE SYSTEM PREFIX UNLESS NOTED OTHERWISE.
 3. ALL LINES, EQUIPMENT, COMPONENTS, AND INSTRUMENTATION ARE SAFETY CLASS UNLESS NOTED OTHERWISE.
 4. ▲ INDICATES REVISION LEVEL.
 5. REFER TO DRAWING VSL-28774 FOR VALVE LEAKOFF.
 6. THIS DRAIN HAS A GAS CONTAINMENT DEVICE ADDED PER M400 96-695.

PORTIONS OF THIS DRAWING ARE
NUCLEAR SAFETY RELATED



REV	DATE	OSGN	CHKD	CE	DESCRIPTION

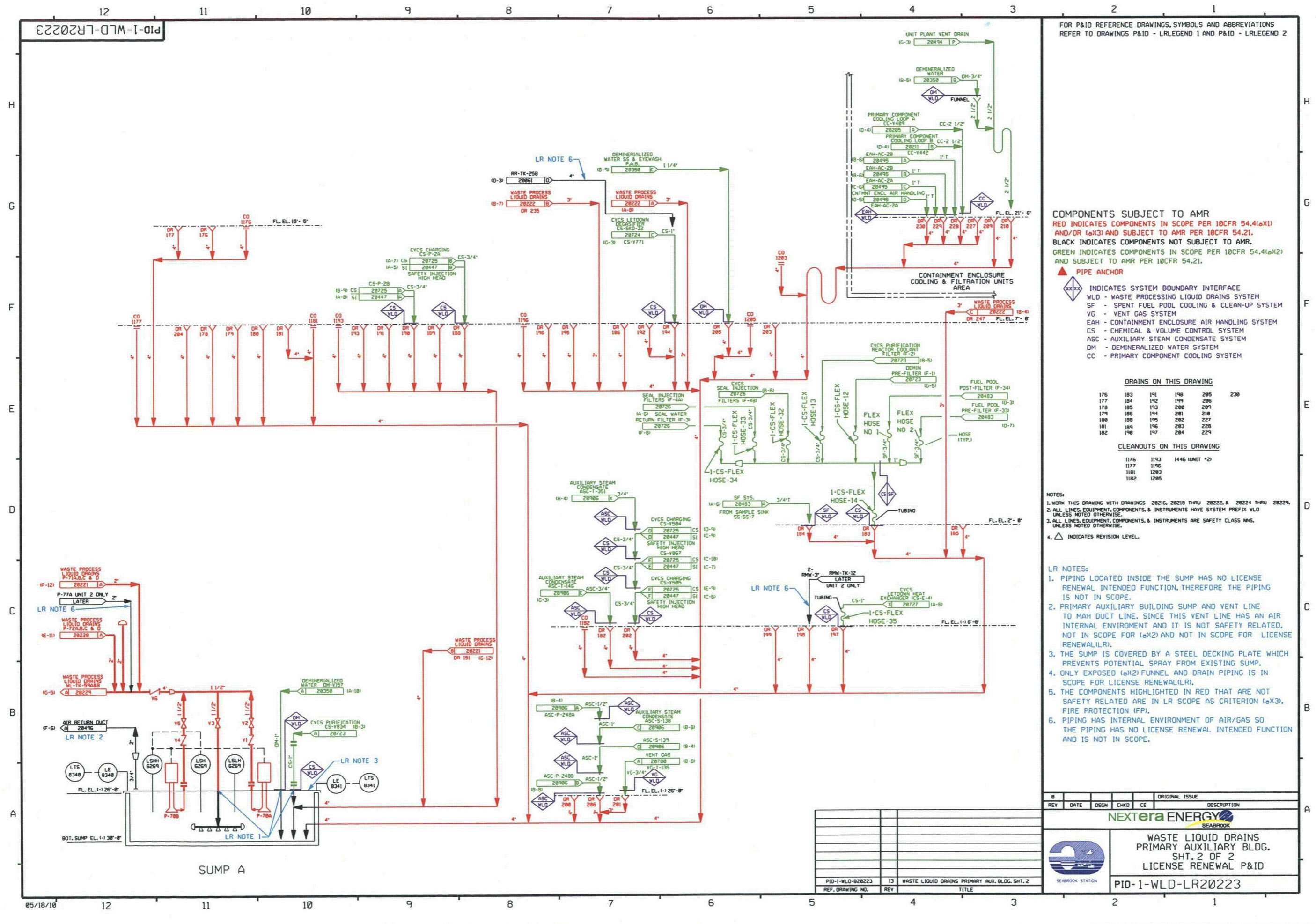
NEXTERA ENERGY
SEABROOK

WASTE PROCESSING LIQUID DRAINS
 PRIMARY AUXILIARY BLDG.
 SHT. 1 OF 2
 LICENSE RENEWAL P&ID

PID-1-WLD-LR20222



PID-1-WLD-LR20223



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
 WLD - WASTE PROCESSING LIQUID DRAINS SYSTEM
 SF - SPENT FUEL POOL COOLING & CLEAN-UP SYSTEM
 VG - VENT GAS SYSTEM
 EAH - CONTAINMENT ENCLOSURE AIR HANDLING SYSTEM
 CS - CHEMICAL & VOLUME CONTROL SYSTEM
 ASC - AUXILIARY STEAM CONDENSATE SYSTEM
 DM - DEMINERALIZED WATER SYSTEM
 CC - PRIMARY COMPONENT COOLING SYSTEM

DRAINS ON THIS DRAWING

176	183	191	198	205	238
177	184	192	199	206	
178	185	193	200	209	
179	186	194	201	218	
180	188	195	202	227	
181	189	196	203	228	
182	190	197	204	229	

CLEANOUTS ON THIS DRAWING

1176	1193	1446 UNIT *2
1177	1196	
1181	1203	
1182	1205	

- NOTES:**
1. WORK THIS DRAWING WITH DRAWINGS 20216, 20218 THRU 20222, & 20224 THRU 20229. UNLESS NOTED OTHERWISE.
 2. ALL LINES, EQUIPMENT, COMPONENTS, & INSTRUMENTS HAVE SYSTEM PREFIX WLD UNLESS NOTED OTHERWISE.
 3. ALL LINES, EQUIPMENT, COMPONENTS, & INSTRUMENTS ARE SAFETY CLASS NNS, UNLESS NOTED OTHERWISE.
 4. ▲ INDICATES REVISION LEVEL.

- LR NOTES:**
1. PIPING LOCATED INSIDE THE SUMP HAS NO LICENSE RENEWAL INTENDED FUNCTION, THEREFORE THE PIPING IS NOT IN SCOPE.
 2. PRIMARY AUXILIARY BUILDING SUMP AND VENT LINE TO MAH DUCT LINE, SINCE THIS VENT LINE HAS AN AIR INTERNAL ENVIRONMENT AND IT IS NOT SAFETY RELATED, NOT IN SCOPE FOR (a)(2) AND NOT IN SCOPE FOR LICENSE RENEWAL(R).
 3. THE SUMP IS COVERED BY A STEEL DECKING PLATE WHICH PREVENTS POTENTIAL SPRAY FROM EXISTING SUMP.
 4. ONLY EXPOSED (a)(2) FUNNEL AND DRAIN PIPING IS IN SCOPE FOR LICENSE RENEWAL(R).
 5. THE COMPONENTS HIGHLIGHTED IN RED THAT ARE NOT SAFETY RELATED ARE IN LR SCOPE AS CRITERION (a)(3), FIRE PROTECTION (FP).
 6. PIPING HAS INTERNAL ENVIRONMENT OF AIR/GAS SO THE PIPING HAS NO LICENSE RENEWAL INTENDED FUNCTION AND IS NOT IN SCOPE.

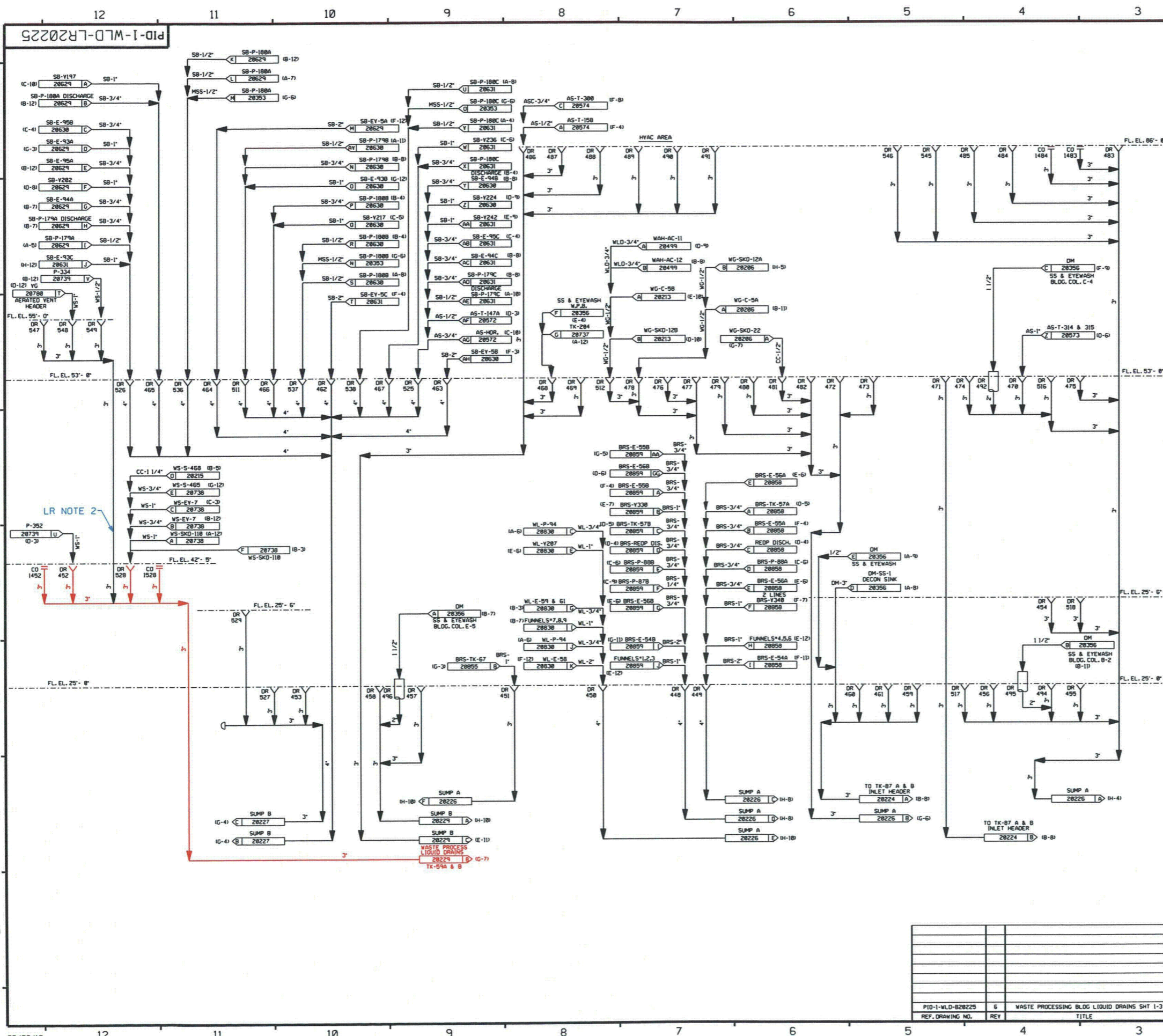
REV	DATE	DSGN	CHKD	CE	ORIGINAL ISSUE	DESCRIPTION

NEXTERA ENERGY
 SEABROOK

WASTE LIQUID DRAINS
 PRIMARY AUXILIARY BLDG.
 SH. 2 OF 2
 LICENSE RENEWAL P&ID

PID-1-WLD-LR20223

REF. DRAWING NO.	REV	TITLE
PID-1-WLD-20223	13	WASTE LIQUID DRAINS PRIMARY AUX. BLDG. SH. 2



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 HIGHLIGHTED IN RED ARE IN LR SCOPE AS CRITERION (a)(3), FIRE PROTECTION (FP).
 2. ALL COMPONENTS HIGHLIGHTED IN BLACK ARE LOCATED IN THE WASTE PROCESSING BUILDING WHICH HAS NO SAFETY RELATED COMPONENTS THEREFORE THESE COMPONENTS 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
 (XXX) INDICATES SYSTEM BOUNDARY INTERFACE

DRAINS ON THIS DRAWING

448	458	468	478	489	517	545
449	459	469	479	490	518	546
450	460	470	480	491	525	547
451	461	471	481	492	526	548
452	462	472	482	493	527	549
453	463	473	483	494	528	
454	464	474	484	495	529	
455	465	475	485	496	536	
456	466	476	486	511	537	
457	467	477	487	512	538	
				488	516	

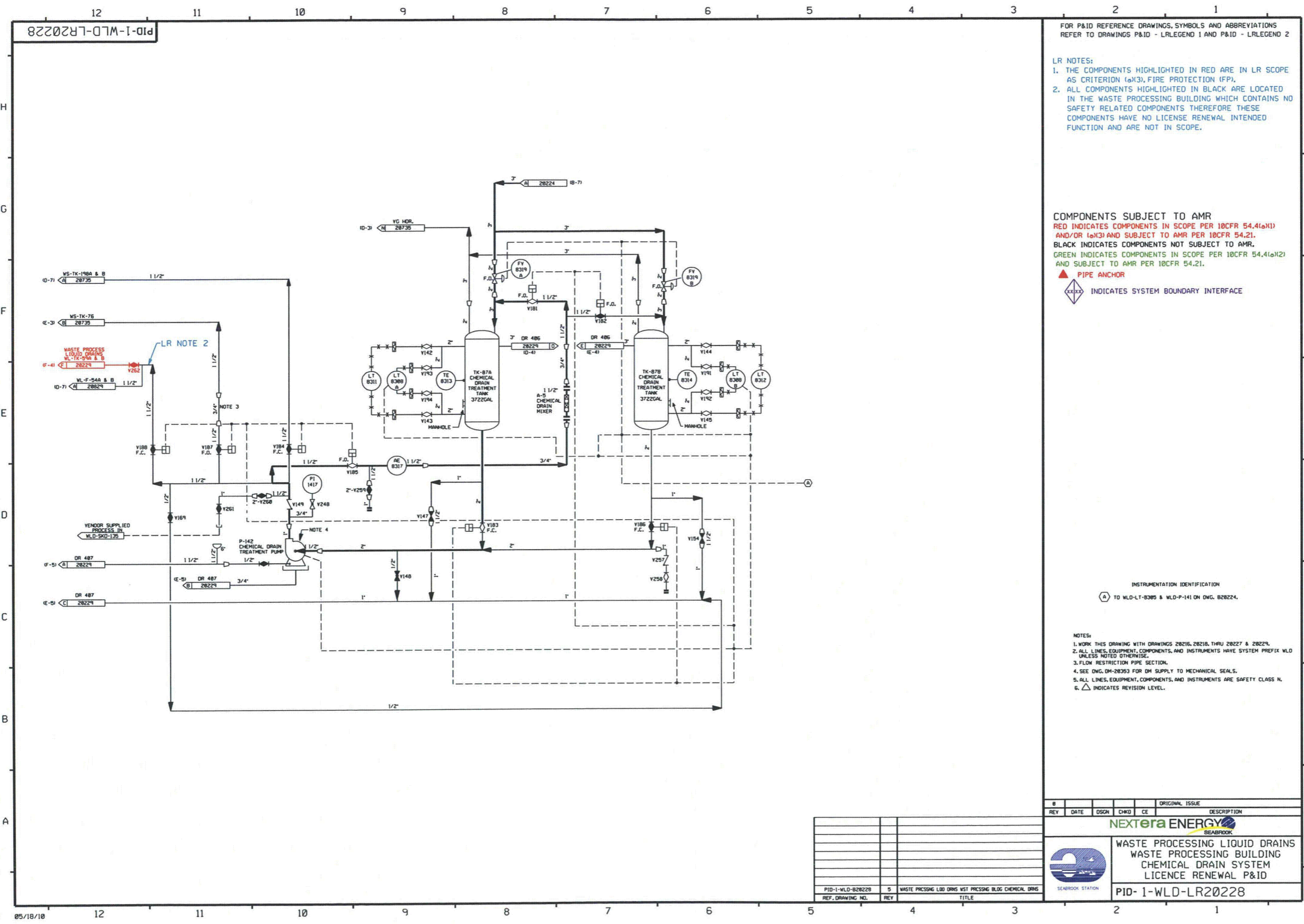
CLEANOUTS ON THIS DRAWING

1452
1483
1484
1528

NOTES:
 1. WORK THIS DRAWING WITH DRAWINGS 28216, 28218 THRU 28224, & 28226 THRU 28229.
 2. ALL LINES, EQUIPMENT, COMPONENTS, AND INSTRUMENTATION HAVE SYSTEM PREFIX WLD UNLESS NOTED OTHERWISE.
 3. ALL LINES, EQUIPMENT, COMPONENTS, AND INSTRUMENTATION ARE SAFETY CLASS MNS. UNLESS NOTED OTHERWISE.
 4. ▲ INDICATES REVISION LEVEL.

REV	DATE	DSGN	CHKD	CE	ORIGINAL ISSUE	DESCRIPTION
WASTE PROCESSING LIQUID DRAINS WASTE PROCESSING BUILDING DRAINS SHT 1 OF 3 LICENSE RENEWAL P&ID						
					PID-1-WLD-LR20225	

PID-1-WLD-LR20228



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 HIGHLIGHTED IN RED ARE IN LR SCOPE AS CRITERION (a)(3), FIRE PROTECTION (FP).
 2. ALL COMPONENTS HIGHLIGHTED IN BLACK ARE LOCATED IN THE WASTE PROCESSING BUILDING WHICH CONTAINS NO SAFETY RELATED COMPONENTS THEREFORE THESE COMPONENTS 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

INSTRUMENTATION IDENTIFICATION
 (A) TO WLD-LT-8305 & WLD-P-141 ON DWG. B20224.

- NOTES:
1. WORK THIS DRAWING WITH DRAWINGS 20215, 20218, THRU 20227 & 20229.
 2. ALL LINES, EQUIPMENT, COMPONENTS, AND INSTRUMENTS HAVE SYSTEM PREFIX WLD UNLESS NOTED OTHERWISE.
 3. FLOW RESTRICTION PIPE SECTION.
 4. SEE DWG. DM-20353 FOR DM SUPPLY TO MECHANICAL SEALS.
 5. ALL LINES, EQUIPMENT, COMPONENTS, AND INSTRUMENTS ARE SAFETY CLASS N.
 6. △ INDICATES REVISION LEVEL.

REV	DATE	DSGN	CHKD	CE	DESCRIPTION

ORIGINAL ISSUE

NEXTERA ENERGY
SEABROOK

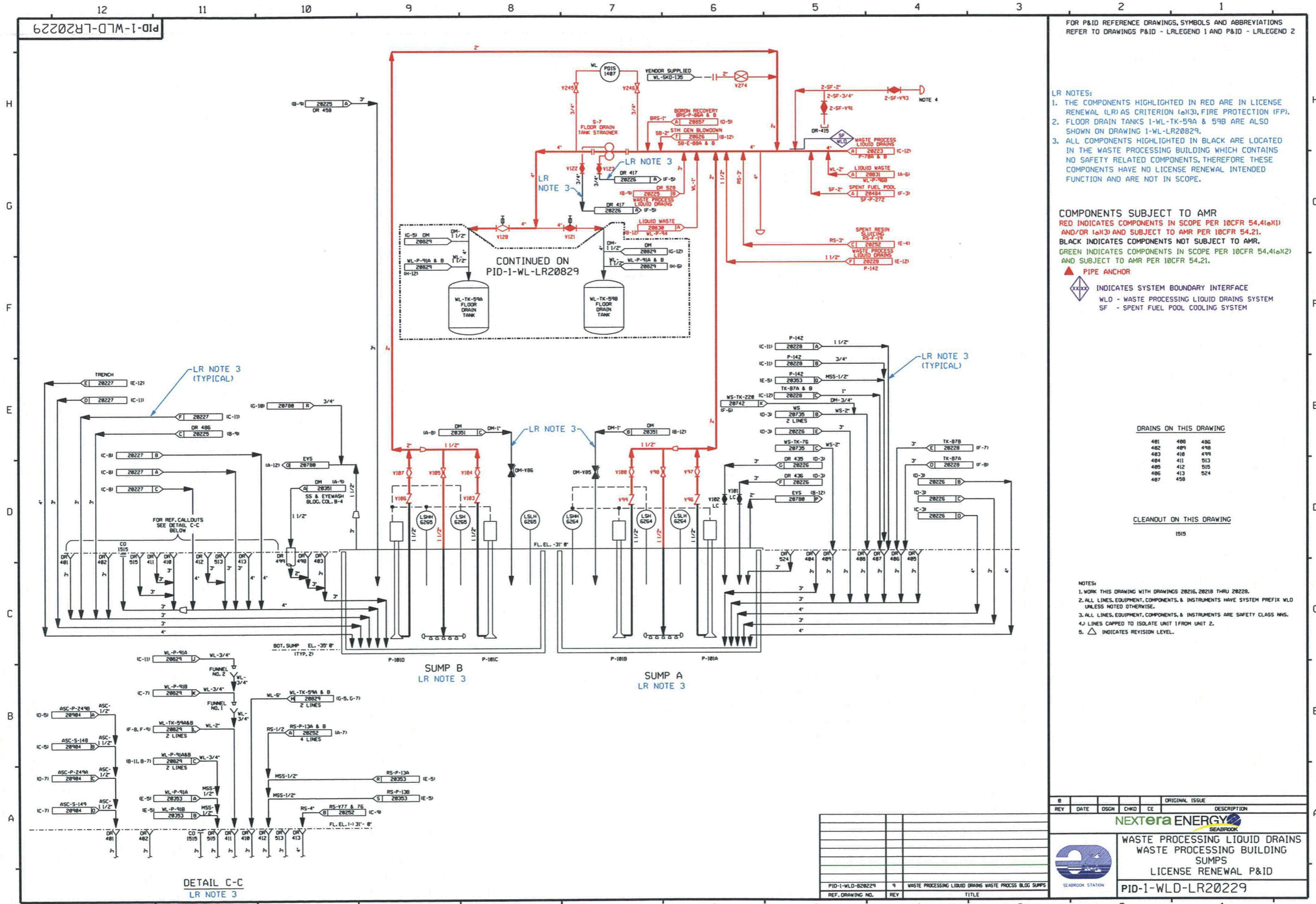
WASTE PROCESSING LIQUID DRAINS
 WASTE PROCESSING BUILDING
 CHEMICAL DRAIN SYSTEM
 LICENCE RENEWAL P&ID

PID-1-WLD-LR20228



SEABROOK STATION

PID-1-WLD-B20228	5	WASTE PROCESSING LIQ DRAINS W/ST PRESSING BLDG CHEMICAL DRAINS
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 HIGHLIGHTED IN RED ARE IN LICENSE RENEWAL (LR) AS CRITERION (a)(3), FIRE PROTECTION (FP).
 2. FLOOR DRAIN TANKS 1-WL-TK-59A & 59B ARE ALSO SHOWN ON DRAWING 1-WL-LR20829.
 3. ALL COMPONENTS HIGHLIGHTED IN BLACK ARE LOCATED IN THE WASTE PROCESSING BUILDING WHICH CONTAINS NO SAFETY RELATED COMPONENTS, THEREFORE THESE COMPONENTS 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
 WLD - WASTE PROCESSING LIQUID DRAINS SYSTEM
 SF - SPENT FUEL POOL COOLING SYSTEM

DRAINS ON THIS DRAWING

481	486	486
482	489	498
483	418	499
484	411	513
485	412	515
486	413	524
487	458	

CLEANOUT ON THIS DRAWING

1515

- NOTES:
1. WORK THIS DRAWING WITH DRAWINGS 28216, 28218 THRU 28228.
 2. ALL LINES, EQUIPMENT, COMPONENTS, & INSTRUMENTS HAVE SYSTEM PREFIX WLD UNLESS NOTED OTHERWISE.
 3. ALL LINES, EQUIPMENT, COMPONENTS, & INSTRUMENTS ARE SAFETY CLASS MNS.
 - 4) LINES CAPPED TO ISOLATE UNIT 1 FROM UNIT 2.
 5. △ INDICATES REVISION LEVEL.

REV	DATE	DSGN	CHKD	CE	DESCRIPTION
					ORIGINAL ISSUE

NEXTERA ENERGY
 SEABROOK

WASTE PROCESSING LIQUID DRAINS
 WASTE PROCESSING BUILDING
 SUMPS
 LICENSE RENEWAL P&ID

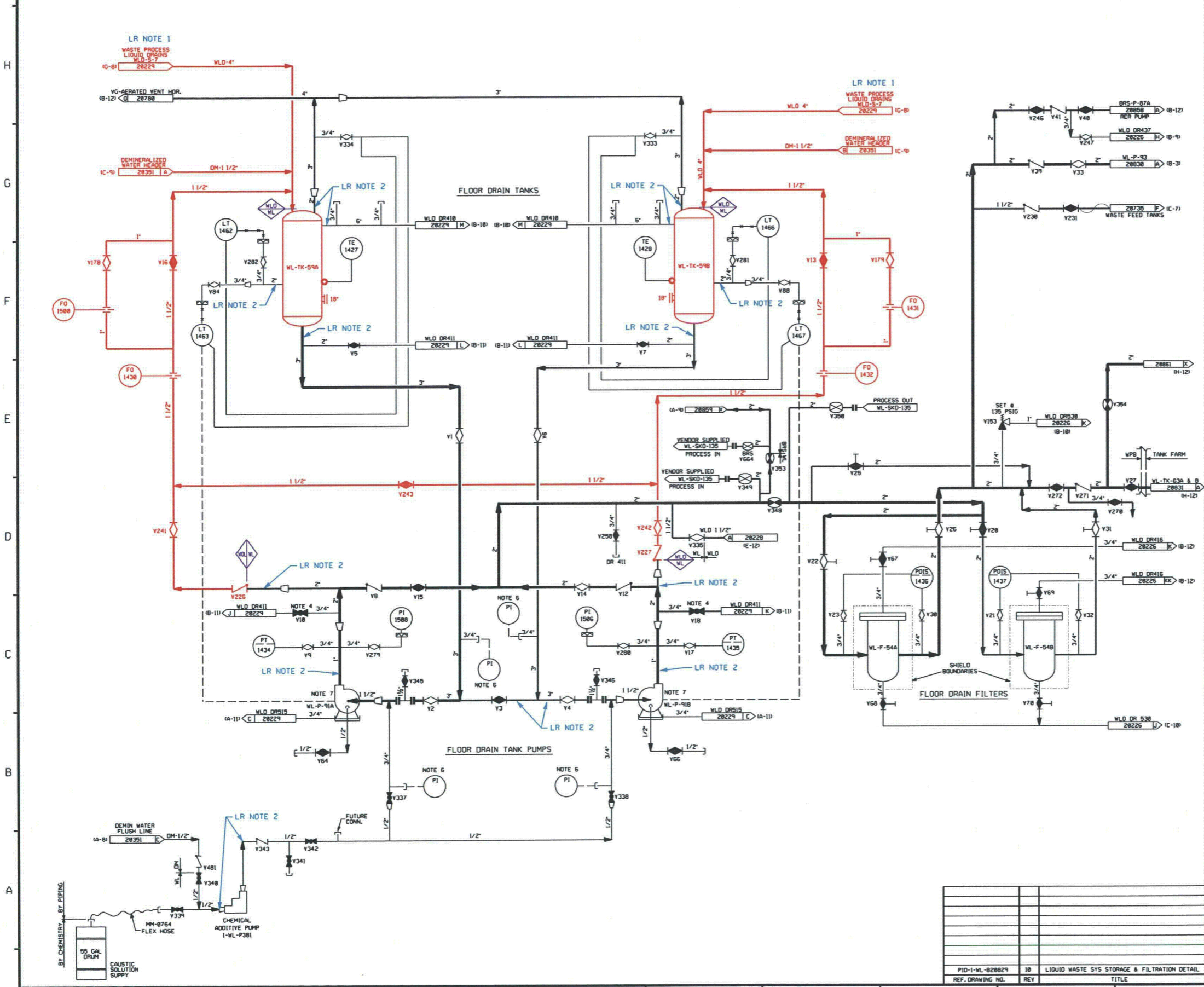
PID-1-WLD-LR20229



DETAIL C-C
 LR NOTE 3

REF. DRAWING NO.	REV	TITLE
PID-1-WLD-82829	9	WASTE PROCESSING LIQUID DRAINS WASTE PROCESS BLDG SUMPS

PID-1-WL-LR20829



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

- LR NOTES:
- THE FLOW PATH HIGHLIGHTED IN RED FROM THE WLD-S-7 CONTINUATION FLAGS (G-6 & H-12) TO THE FLOOR DRAIN TANKS 1-WL-TK-59A & 59B MEETS THE LICENSE RENEWAL (LR) CRITERIA (a)(3) FOR FIRE PROTECTION (FP). THE FLOW PATH TO THE TANKS IS REQUIRED TO MEET THE FIRE PROTECTION PROGRAM ASSUMPTIONS. THE ADDITIONAL RED HIGHLIGHTED COMPONENTS IN THE FLOOR DRAIN TANKS DISCHARGE LINE HELP ASSURE THE FLOW PATH IS THE WASTE PROCESSING BUILDING TO THE FLOOR DRAIN TANKS.
 - COMPONENTS ARE LOCATED IN THE WASTE PROCESSING BUILDING WHICH CONTAIN NO SAFETY RELATED COMPONENTS. THEREFORE COMPONENTS 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
- X INDICATES SYSTEM BOUNDARY INTERFACE
- WL - LIQUID WASTE SYSTEM
- WLD - WASTE PROCESSING LIQUID DRAINS SYSTEM

- NOTES:
- WORK THIS DWG WITH DWGS 20828, 20830, & 20831.
 - ALL LINES, EQUIPMENT, COMPONENTS, & INSTRUMENTS HAVE SYSTEM PREFIX WL UNLESS NOTED OTHERWISE.
 - ALL LINES, EQUIPMENT, COMPONENTS, & INSTRUMENTS ARE SAFETY CLASS NMS UNLESS NOTED OTHERWISE.
 - FLUSH, VENT, AND/OR SAMPLE CONNECTION PIPE TO LOCAL DRAIN FUNNEL.
 - TELL TALE DRAIN PIPED TO LOCAL DRAIN FUNNEL.
 - START UP ENGINEERING TO PROVIDE PIPING, VALVES & PIS ALSO STRAINER BLOW OFF PIPING & VALVES FOR INITIAL FLUSHING OPERATIONAL STRAINER SCREEN TO BE REMOVED AFTER START UP.
 - SEE P&ID DM-20303 FOR WATER SUPPLY TO PUMP DOUBLE MECHANICAL SEALS.

REV	DATE	DSGN	CHKD	CE	DESCRIPTION

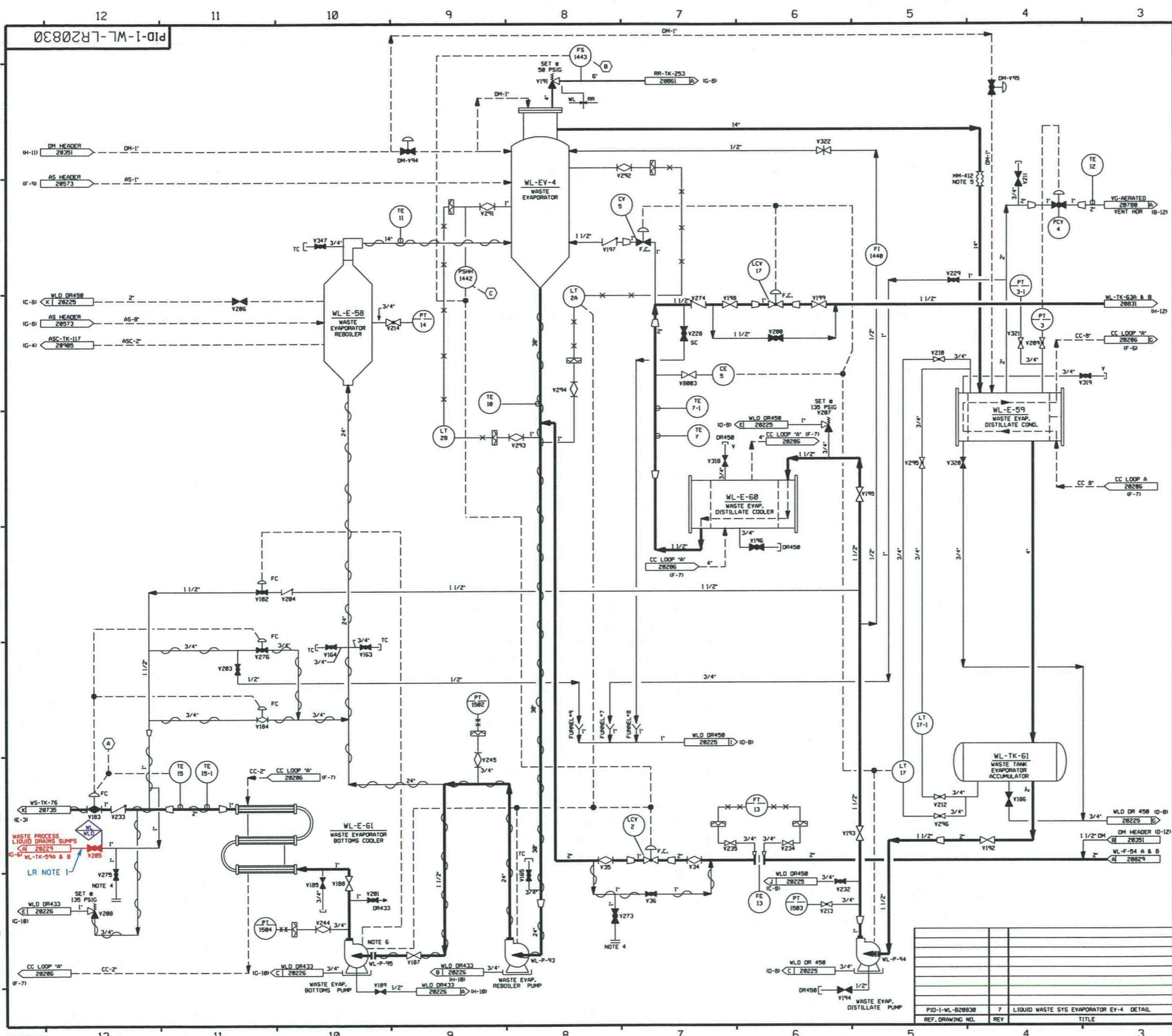
ORIGINAL ISSUE

NEXTERA ENERGY
SEABROOK

LIQUID WASTE SYSTEM
STORAGE & FILTRATION
DETAIL
LICENSE RENEWAL P&ID

PID-1-WL-LR20829





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 HIGHLIGHTED IN RED ARE IN LICENSE RENEWAL (LR) SCOPE AS CRITERION (a)(3), FIRE PROTECTION. ALL OTHER COMPONENTS INDICATED ON THIS DRAWING ARE LOCATED IN THE WASTE PROCESSING BUILDING WHICH HAS NO SAFETY RELATED COMPONENTS SO THEY 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
 WLD - WASTE PROCESSING LIQUID DRAINS SYSTEM
 WL - LIQUID WASTE SYSTEM

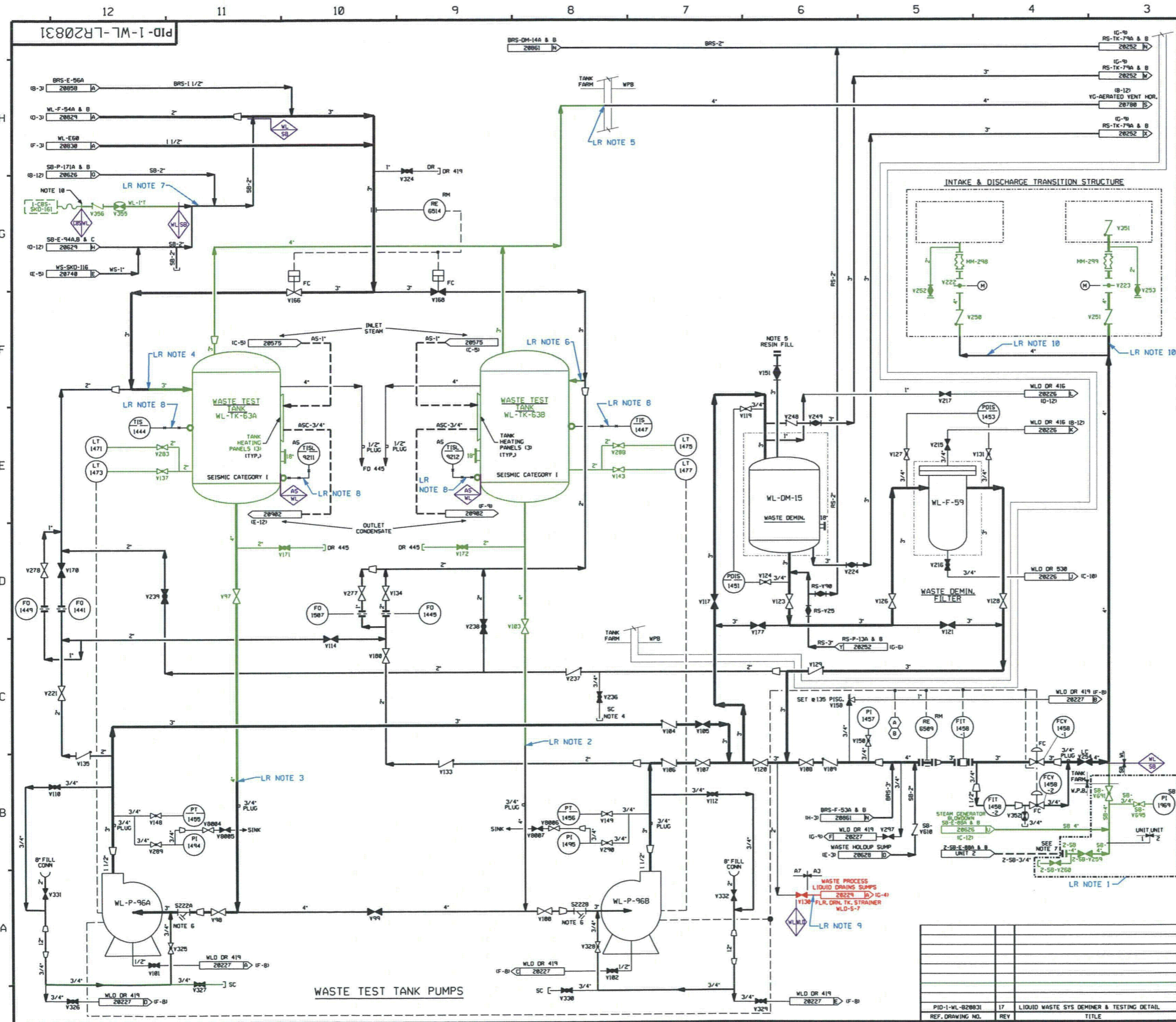
NOTES:
 1. WORK THIS DWG WITH DWGS 20828, 20829, & 20831.
 2. ALL LINES, EQUIPMENT, COMPONENTS AND INSTRUMENTS ARE SYSTEM PREFIX WL UNLESS NOTED OTHERWISE.
 3. ALL LINES, EQUIPMENT, COMPONENTS AND INSTRUMENTS ARE SAFETY CLASS INGS, NON-SEISMIC CATEGORY I UNLESS NOTED OTHERWISE.
 4. CHEMICAL ADDITION & REMOVAL CONNECTIONS.
 5. ENTIRE LINE IS FLEX CONNECTION.
 6. SEE DM-20353 FOR WATER SUPPLY TO PUMP DOUBLE MECHANICAL SEALS.
 7. △ - INDICATES REVISION LEVEL.
 8. INSTRUMENT REFERENCES:
 (A) HIGH WASTE CONCENTRATES TANK VS-TK-75 & HIGH COOLER OUTLET TEMPERATURE & LOW EV-4 LEVEL DISCHARGE INTERLOCK
 (B)(C) TO 1-DM-Y94 DN DWG, DM-20351 04-10, 1-WL-FCY-1 AND 1-AS-V539 DN DWG, AS-20573 04-10 AND 07-10

REV	DATE	DSGN	CHKD	CE	ORIGINAL ISSUE	DESCRIPTION

**LIQUID WASTE SYSTEM
 EVAPORATOR EV-4
 DETAIL
 LICENSE RENEWAL P&ID**

PID-1-WL-LR20830

PID-1-WL-B20830	7	LIQUID WASTE SYS EVAPORATOR EV-4 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

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

SB - STEAM GENERATOR BLOWDOWN SYSTEM
 WL - LIQUID WASTE SYSTEM
 AS - AUXILIARY STEAM SYSTEM
 WLD - WASTE PROCESSING LIQUID DRAINS SYSTEM
 CBS - CONTAINMENT SPRAY SYSTEM

- NOTES:**
1. WORK THIS DRAWING WITH DRAWINGS 20828, 20829 & 20830.
 2. ALL LINES, EQUIPMENT, COMPONENTS AND INSTRUMENTS HAVE SYSTEM PREFIX WL UNLESS NOTED OTHERWISE.
 3. ALL LINES, EQUIPMENT, COMPONENTS AND INSTRUMENTS ARE SAFETY CLASS MNS UNLESS NOTED OTHERWISE.
 4. FLUSH AND SAMPLE CONNECTIONS USE FLEXIBLE HOSE TO A LOCAL DRAIN FUNNEL TO FLUSH THE LINE. USE POLYETHYLENE COLLECTION BOTTLES TO COLLECT SAMPLES.
 5. RESIN FILL TANK (TYP) AS SHOWN ON Dwg. BRS-20861.
 6. START-UP ENGINEERING TO PROVIDE PIPING, VALVE AND P & ID'S ALSO STRAINER BLOWOFF PIPING & VALVES FOR INITIAL FLUSHING OPERATION. STRAINER SCREEN TO BE REMOVED AFTER START-UP.
 7. LINE BLIND FLANGED TO ISOLATE UNIT 1 FROM UNIT 2
 8. △ INDICATES REVISION LEVEL.
 9. INSTRUMENT REFERENCES
 (A) FROM SB-P-242 DRAWING SB-20628
 (B) FROM BRS-P-10AAB DRAWING BRS-20861
 10. CAP IS INSTALLED WHEN HOSE IS NOT CONNECTED.

- LR NOTES:**
1. COMPONENTS SB-V691, SB-V695, PI-1969, 2-SB-V259 AND 2-SB-V260 ARE CONSIDERED IN THE TANK FARM FOR LICENSE RENEWAL (LR).
 2. LINE EXISTS TANK FARM AREA DOWNSTREAM OF V-103 (1-WT-942-01).
 3. LINE EXISTS TANK FARM AREA DOWNSTREAM OF V-97 (1-WL-941-01).
 4. LINE EXISTS TANK FARM AREA PRIOR TO BRANCH CONNECTION TO VALVE V-166 (1-WL-906-11).
 5. LINE EXISTS TANK FARM AREA ON ISOMETRIC 1-WL-906-03.
 6. LINE EXISTS TANK FARM AREA PRIOR TO BRANCH CONNECTION TO 3" LINE (1-WL-906-02).
 7. SKID 1-CBS-SKD-161 IS LOCATED IN THE PRIMARY AUXILIARY BUILDING THE CONNECTING PIPE IS ROUTED TO THE WASTE PROCESSING BUILDING WHICH HAS NO SAFETY RELATED COMPONENTS AND HAS NO LICENSE RENEWAL INTENDED FUNCTION AND NOT IN SCOPE.
 8. CAPILLARY TUBING IS PART OF THE INSTRUMENT AND CONSIDERED AN ACTIVE COMPONENT PER NEI 95-10.
 9. THE COMPONENTS HIGHLIGHTED IN RED ARE IN LR SCOPE AS CRITERION (a)(3), FIRE PROTECTION.
 10. COMPONENTS LOCATED OUTSIDE THE INTAKE & DISCHARGE TRANSITION STRUCTURE ARE NOT IN LR SCOPE SINCE NO SAFETY RELATED COMPONENTS ARE IN THE AREA.

REV	DATE	DSGN	CHKD	CE	ORIGINAL ISSUE	DESCRIPTION

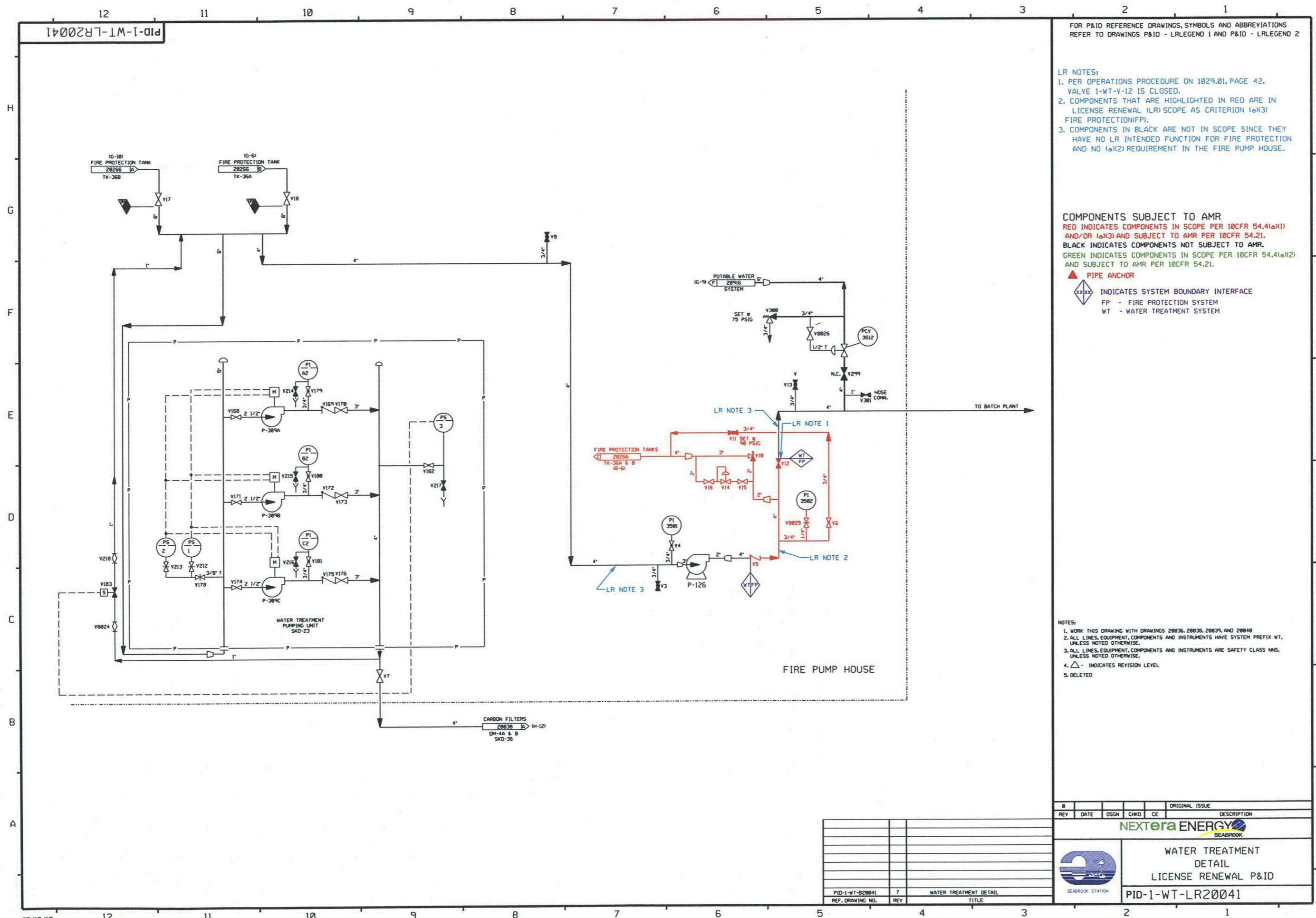
NEXTERA ENERGY
SEABROOK

**LIQUID WASTE SYSTEM
DEMINERALIZATION & TESTING
DETAIL
LICENSE RENEWAL P&ID**

PID-1-WL-LR20831

PID-1-WL-B20831	17	LIQUID WASTE SYS DEMINER & TESTING DETAIL
REF. DRAWING NO.	REV	TITLE

PID-1-WT-LR20041



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

- LR NOTES:
- PER OPERATIONS PROCEDURE ON 1029.01, PAGE 42, VALVE 1-WT-V-12 IS CLOSED.
 - COMPONENTS THAT ARE HIGHLIGHTED IN RED ARE IN LICENSE RENEWAL (LR) SCOPE AS CRITERION (a)(3) FIRE PROTECTION(FP).
 - COMPONENTS IN BLACK ARE NOT IN SCOPE SINCE THEY HAVE NO LR INTENDED FUNCTION FOR FIRE PROTECTION AND NO (a)(2) REQUIREMENT IN THE FIRE PUMP HOUSE.

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
- FP - FIRE PROTECTION SYSTEM
- WT - WATER TREATMENT SYSTEM

- NOTES:
- WORK THIS DRAWING WITH DRAWINGS 20036, 20038, 20039, AND 20040
 - ALL LINES, EQUIPMENT, COMPONENTS AND INSTRUMENTS HAVE SYSTEM PREFIX WT, UNLESS NOTED OTHERWISE.
 - ALL LINES, EQUIPMENT, COMPONENTS AND INSTRUMENTS ARE SAFETY CLASS NIS, UNLESS NOTED OTHERWISE.
 - △ - INDICATES REVISION LEVEL
 - DELETED

REV	DATE	DSGN	CHKD	CE	ORIGINAL ISSUE	DESCRIPTION



WATER TREATMENT
 DETAIL
 LICENSE RENEWAL P&ID
 PID-1-WT-LR20041

REF. DRAWING NO.	REV	TITLE
PID-1-WT-820041	7	WATER TREATMENT DETAIL