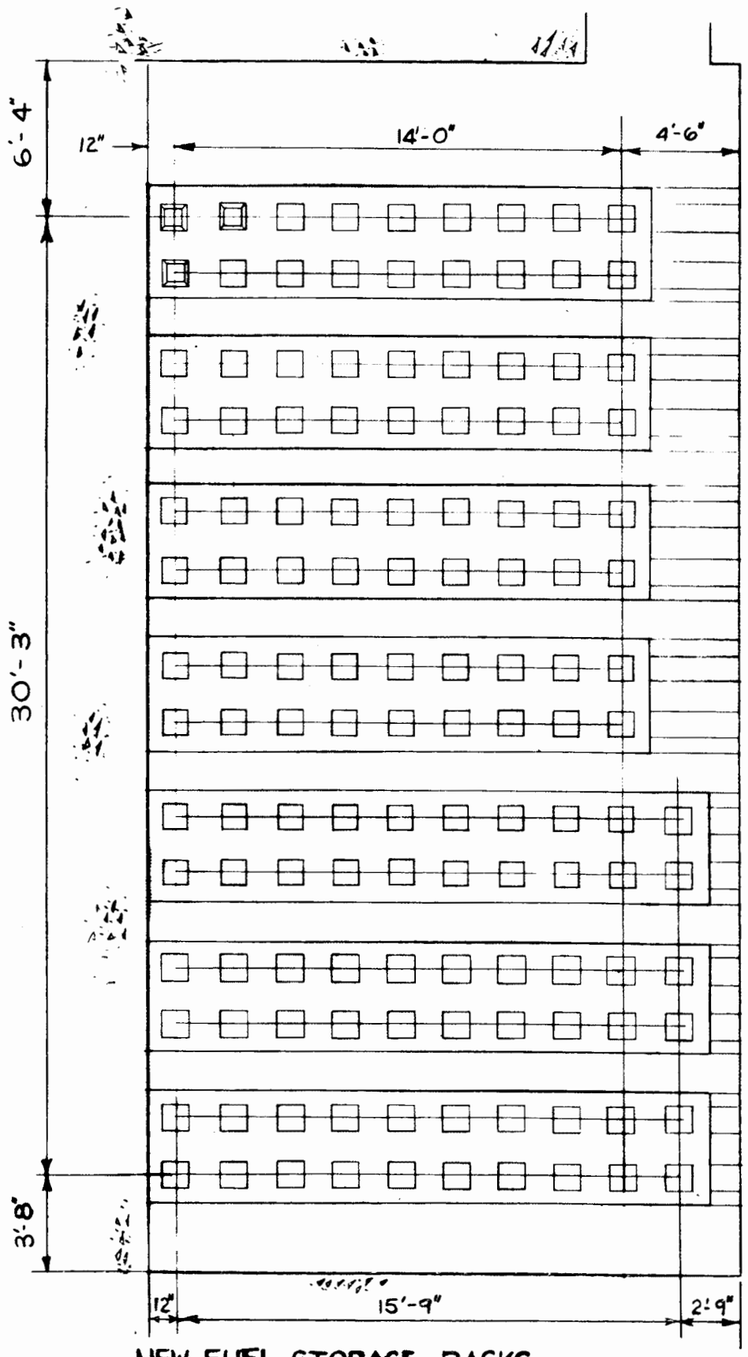
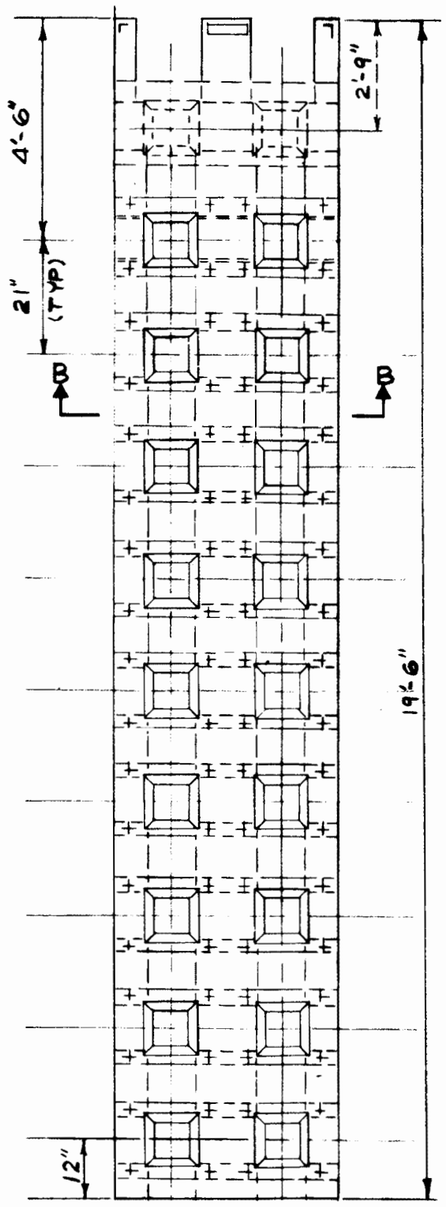
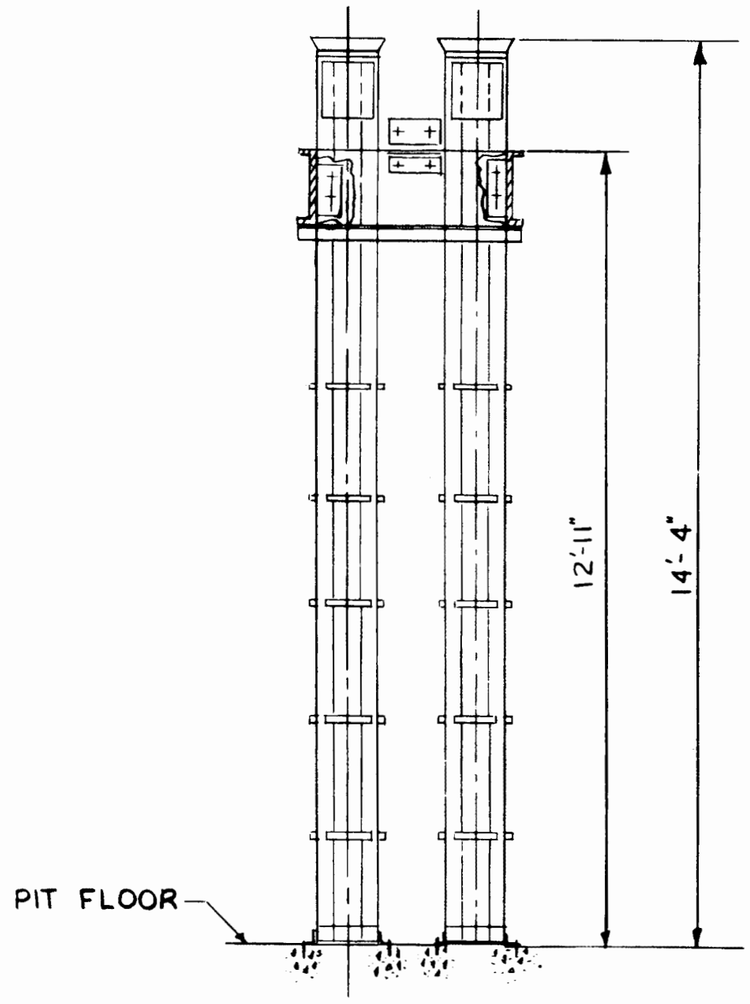



NEW FUEL STORAGE RACKS
(132 ASS'Y)




PARTIAL PLAN A

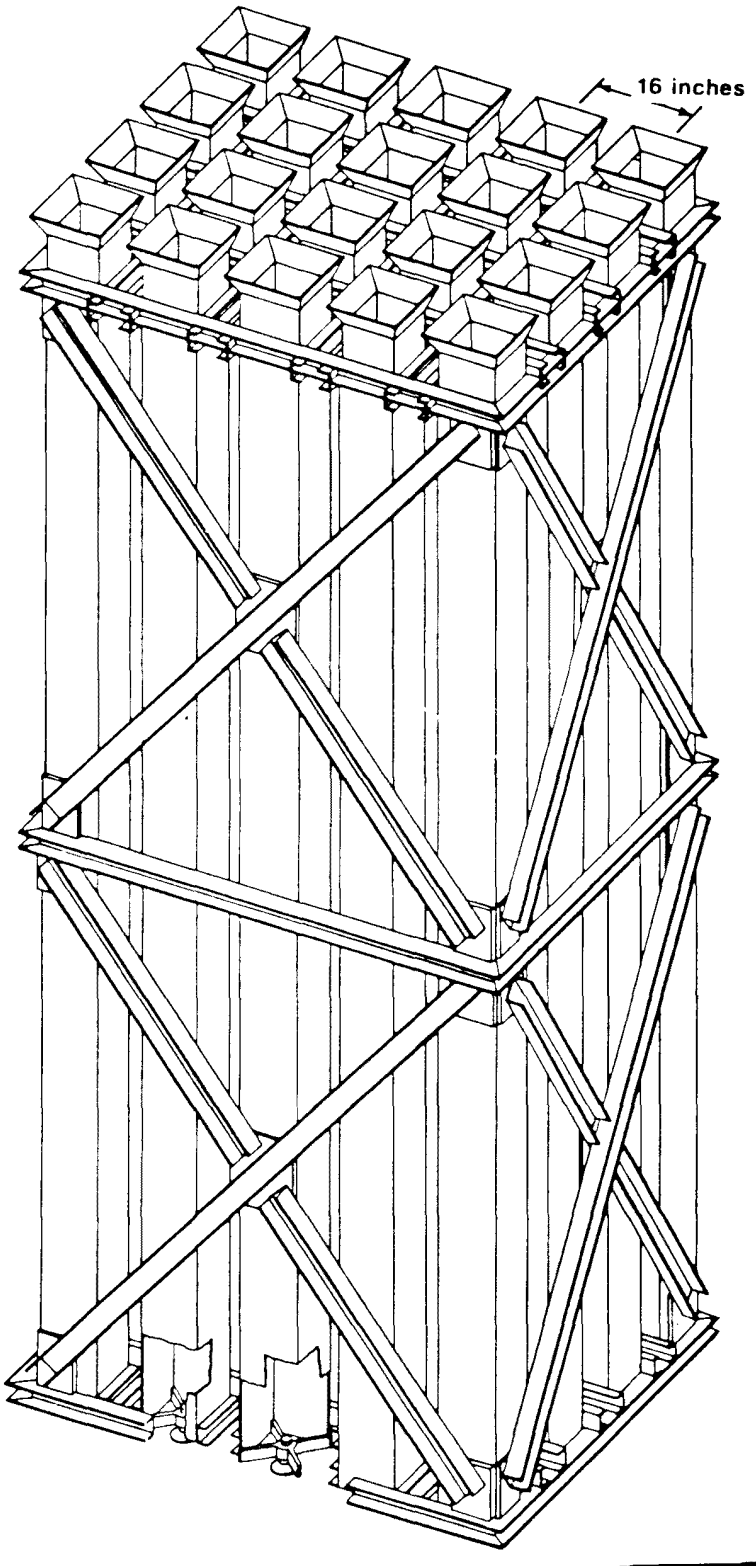



SECTION B-B

COMANCHE PEAK S.E.S.
FINAL SAFETY ANALYSIS REPORT
UNITS 1 and 2

NEW FUEL STORAGE RACKS

FIGURE 9.1-1

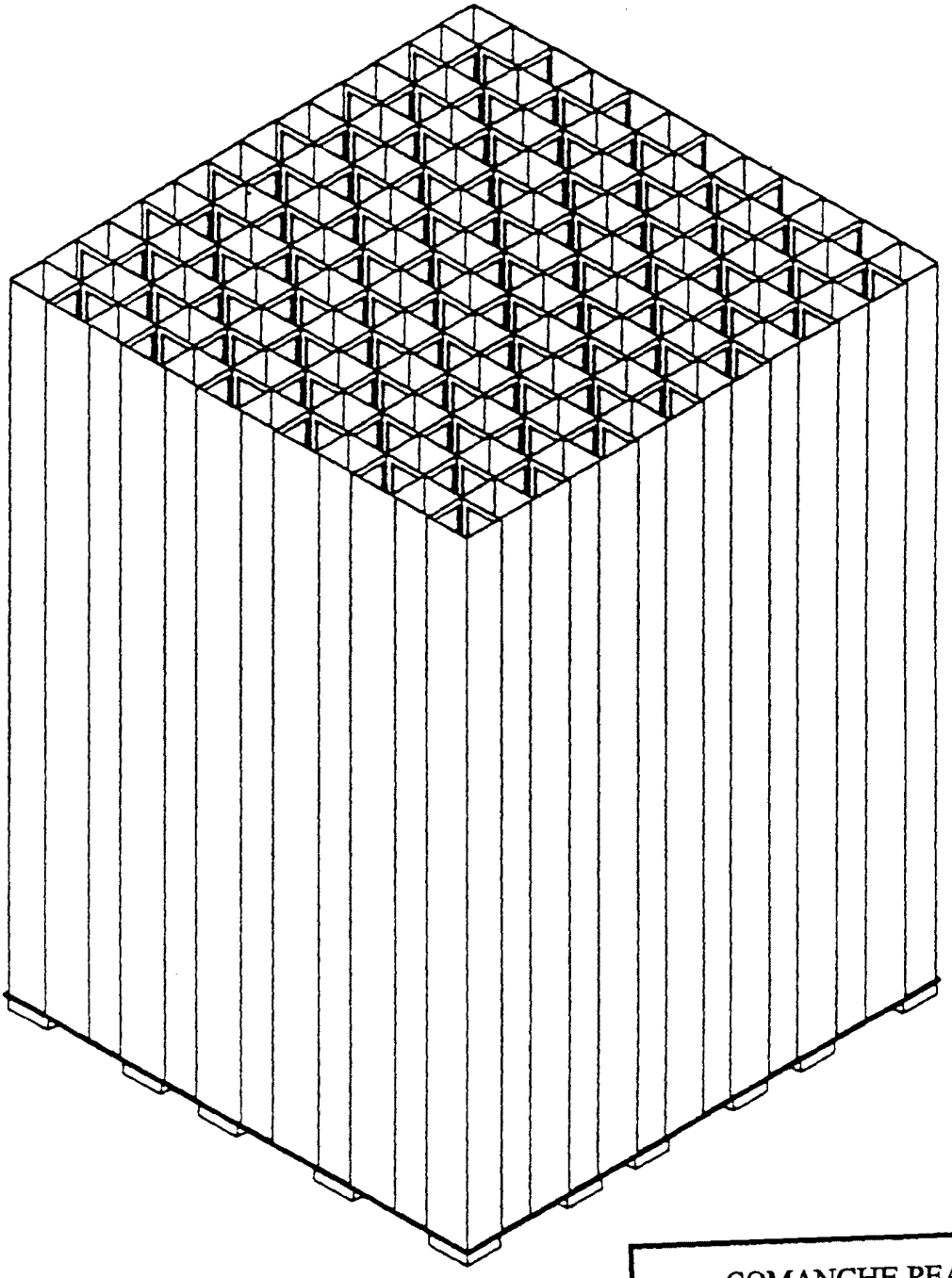



Typical

COMANCHE PEAK S.E.S.
FINAL SAFETY ANALYSIS REPORT
UNITS 1 and 2

Spent Fuel Low Density Rack

FIGURE 9.1-2



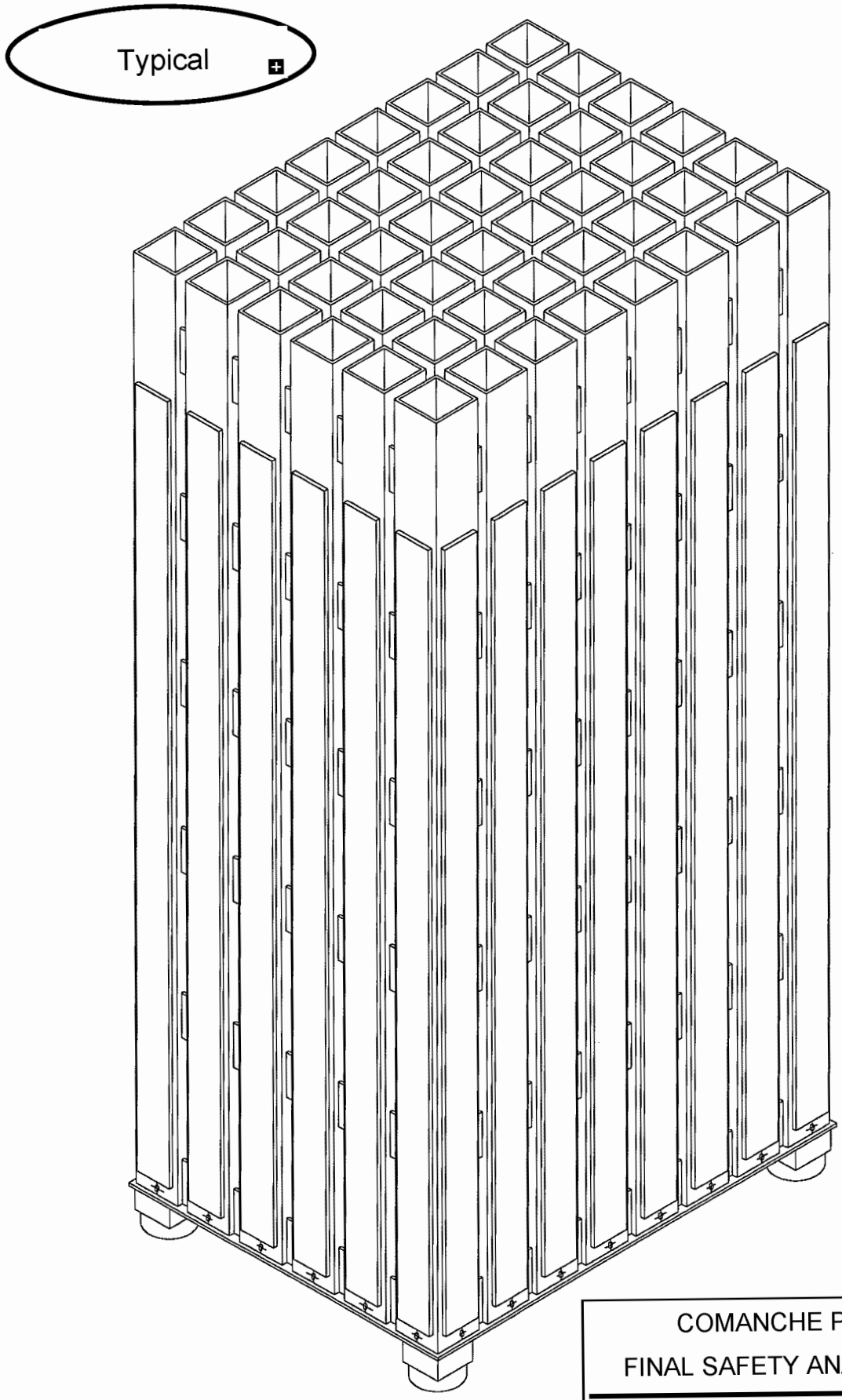
Spent Fuel

COMANCHE PEAK S. E. S.
FINAL SAFETY ANALYSIS REPORT
UNITS 1 and 2

Typical
Amendment 98

Figure 9.1-2A

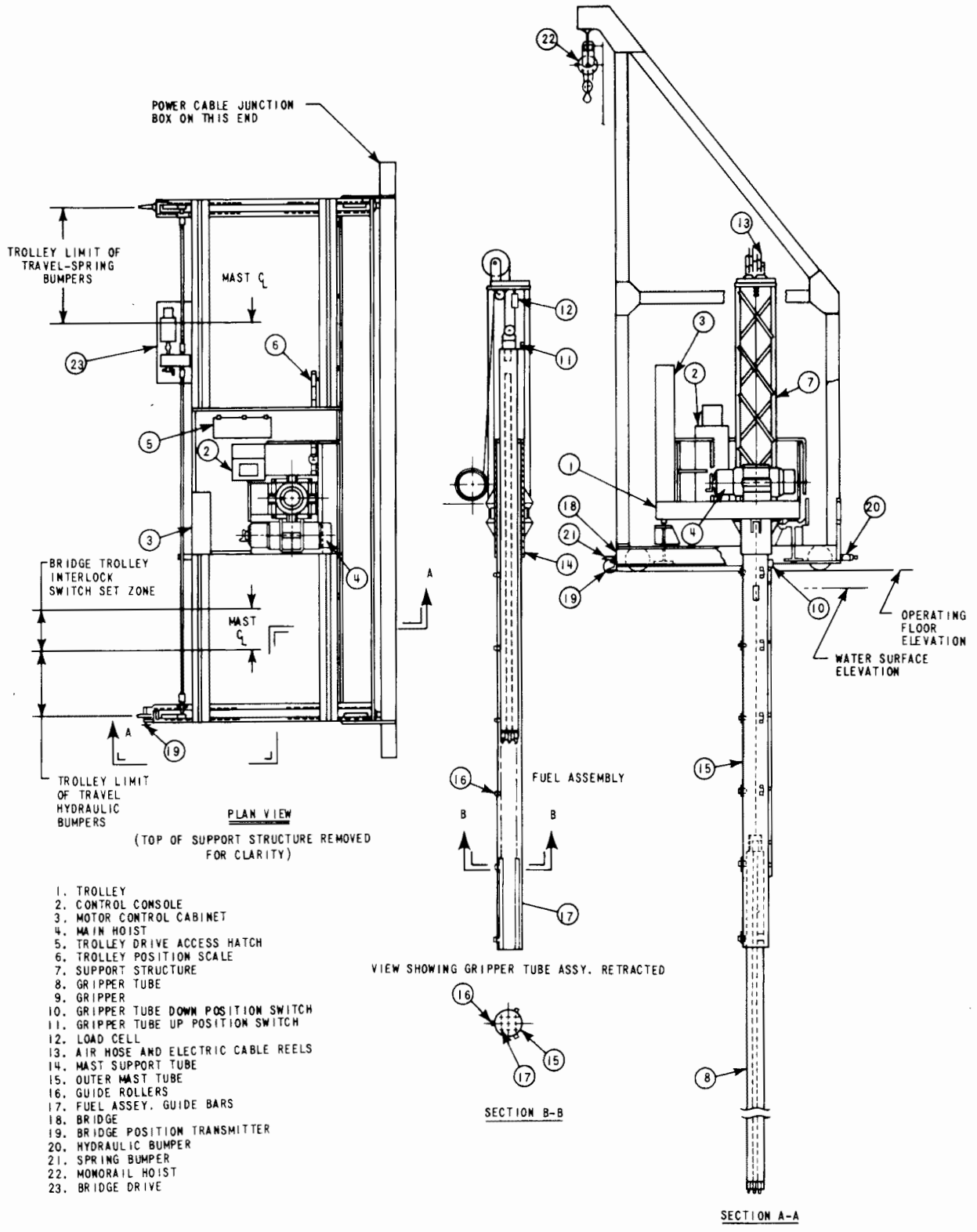
Amendment 94
August 1, 1996




COMANCHE PEAK S. E. S.
FINAL SAFETY ANALYSIS REPORT

Spent Fuel High Density Region I Rack

Figure 9.1-2B




1. TROLLEY
2. CONTROL CONSOLE
3. MOTOR CONTROL CABINET
4. MAIN HOIST
5. TROLLEY DRIVE ACCESS HATCH
6. TROLLEY POSITION SCALE
7. SUPPORT STRUCTURE
8. GRIPPER TUBE
9. GRIPPER
10. GRIPPER TUBE DOWN POSITION SWITCH
11. GRIPPER TUBE UP POSITION SWITCH
12. LOAD CELL
13. AIR HOSE AND ELECTRIC CABLE REELS
14. MAST SUPPORT TUBE
15. OUTER MAST TUBE
16. GUIDE ROLLERS
17. FUEL ASSEY. GUIDE BARS
18. BRIDGE
19. BRIDGE POSITION TRANSMITTER
20. HYDRAULIC BUMPER
21. SPRING BUMPER
22. MONORAIL HOIST
23. BRIDGE DRIVE

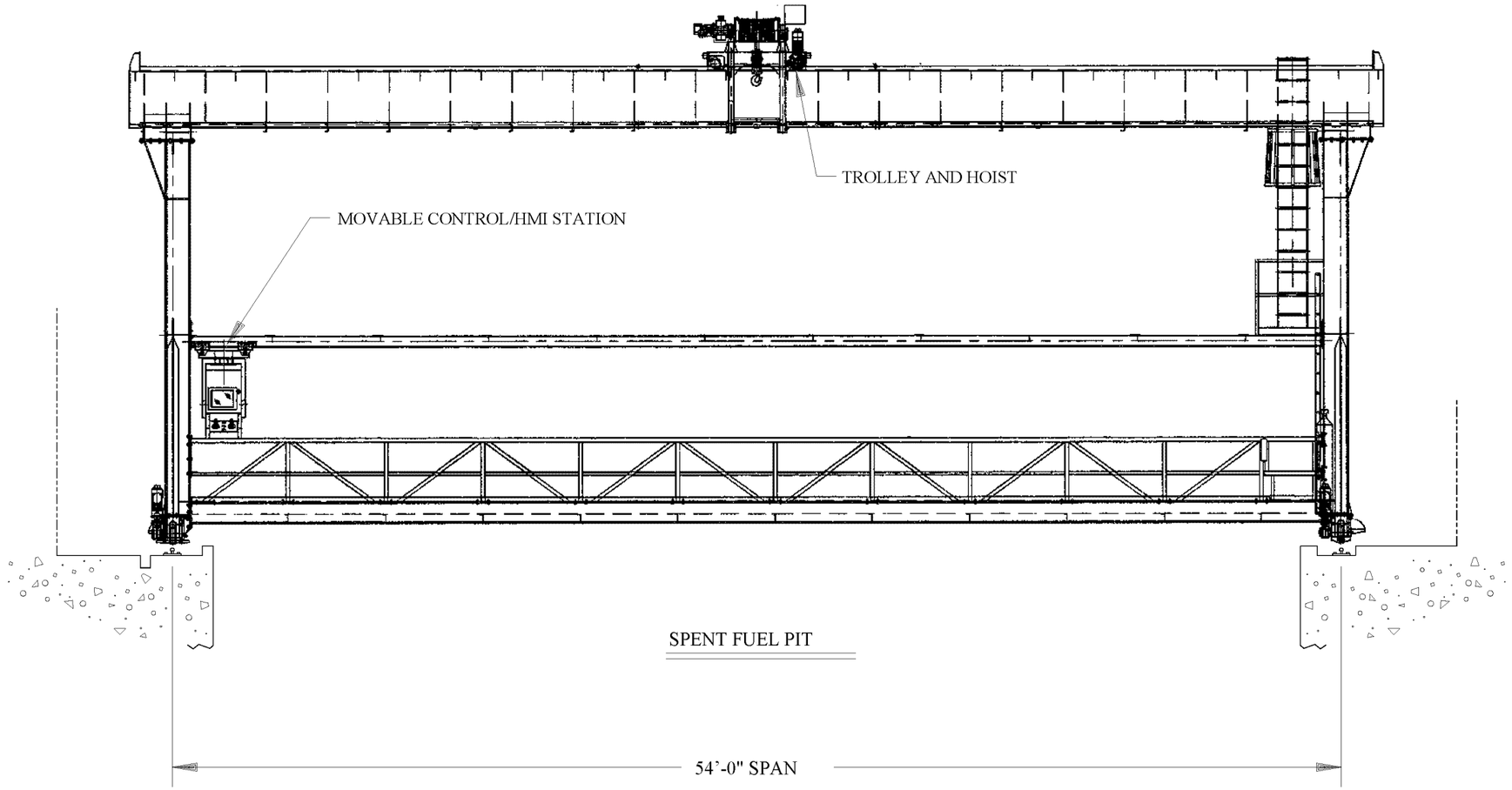
11.946-10

COMANCHE PEAK S.E.S.
FINAL SAFETY ANALYSIS REPORT
UNITS 1 and 2

**Refueling Machine**

FIGURE 9.1-3

CPE




Amendment 104

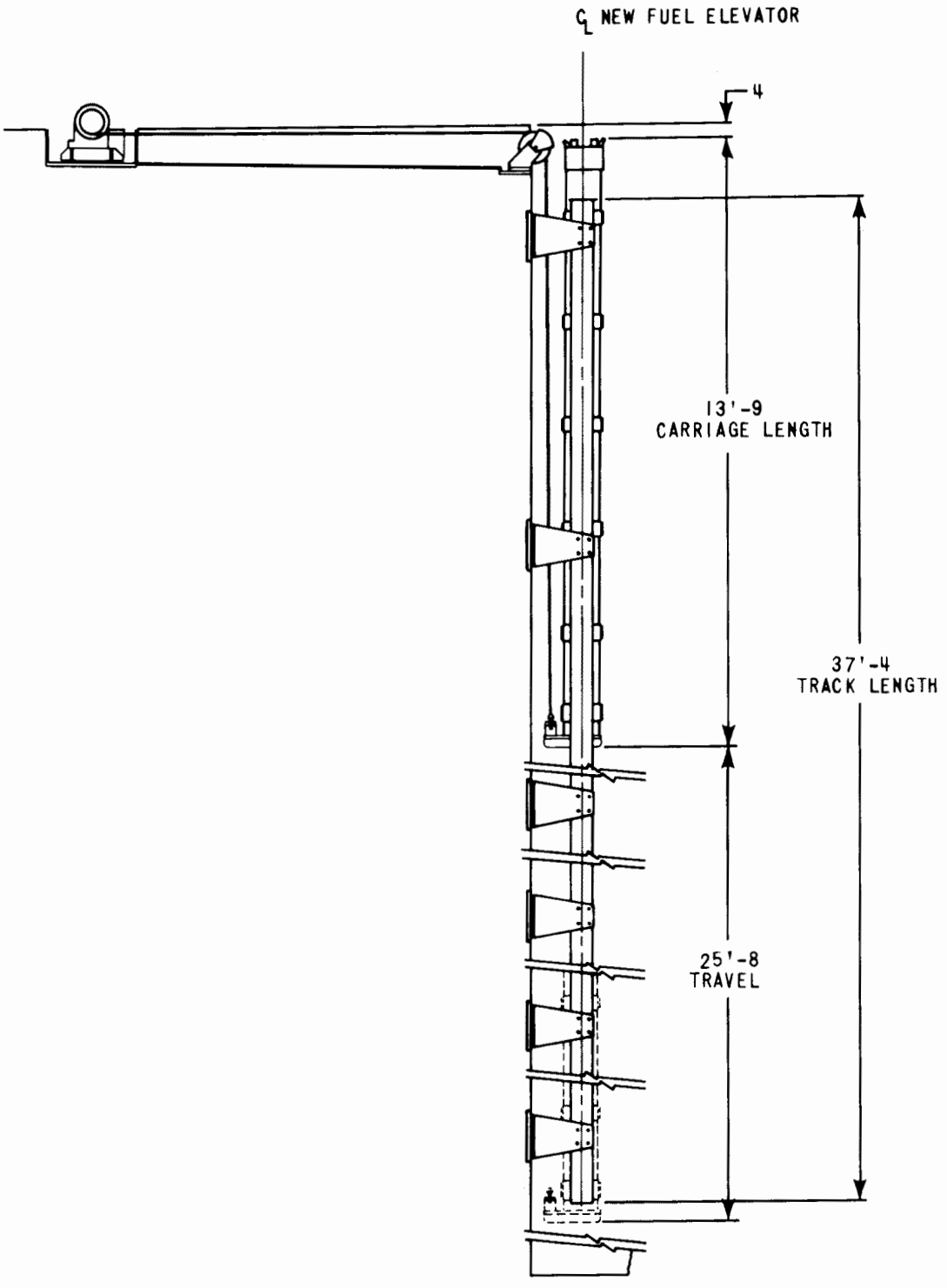
COMANCHE PEAK N P P

FINAL SAFETY ANALYSIS REPORT

UNITS 1 AND 2

FUEL HANDLING
BRIDGE CRANE

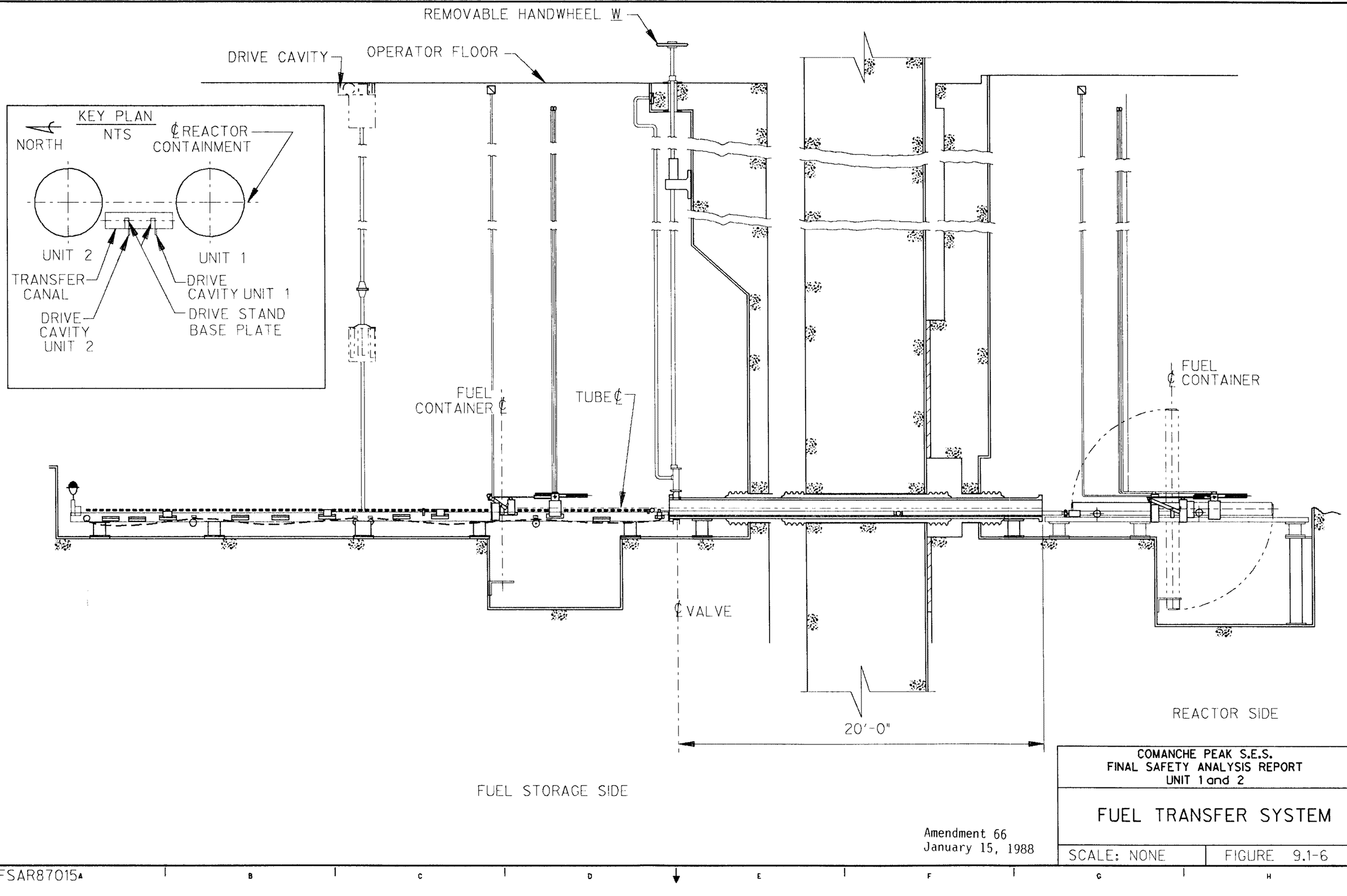
FIGURE 9.1-4




COMANCHE PEAK S.E.S.
FINAL SAFETY ANALYSIS REPORT
UNITS 1 and 2

**New Fuel Elevator**

FIGURE 9.1-5

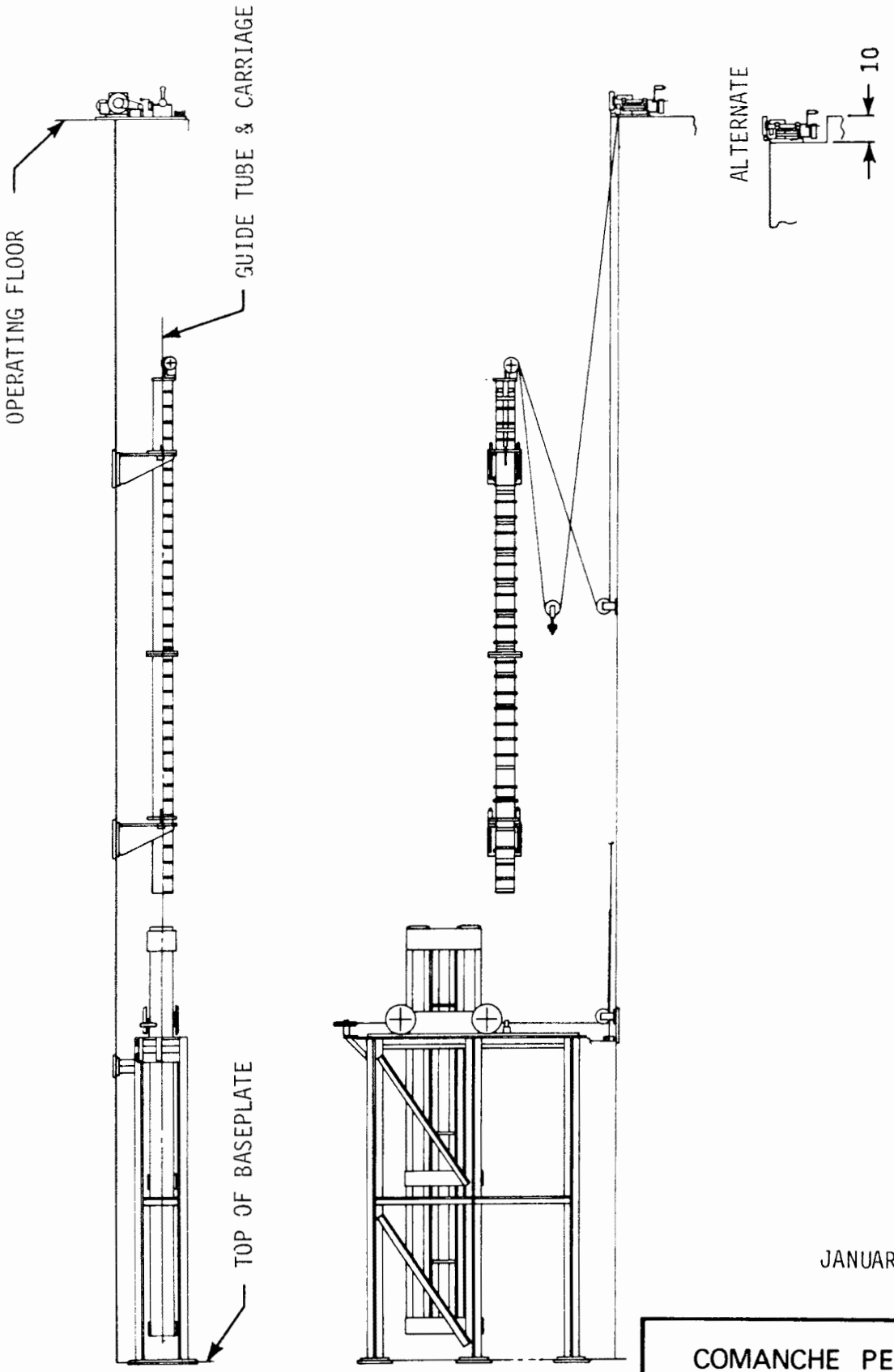



COMANCHE PEAK S.E.S.
FINAL SAFETY ANALYSIS REPORT
UNIT 1 and 2

# FUEL TRANSFER SYSTEM

SCALE: NONE | FIGURE 9.1-6

Amendment 66
January 15, 1988

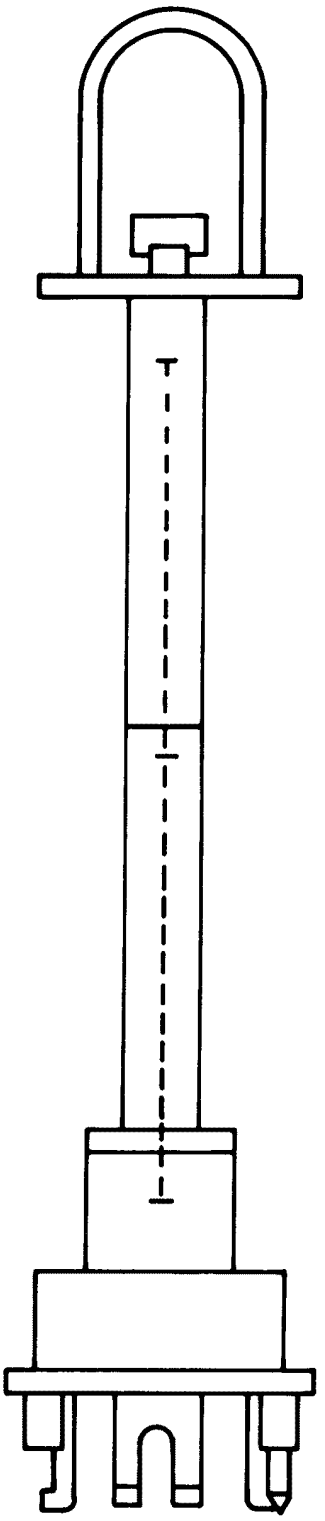



JANUARY 30, 1981

COMANCHE PEAK S.E.S.
FINAL SAFETY ANALYSIS REPORT
UNITS 1 and 2

Rod Cluster Control
Changing Fixture

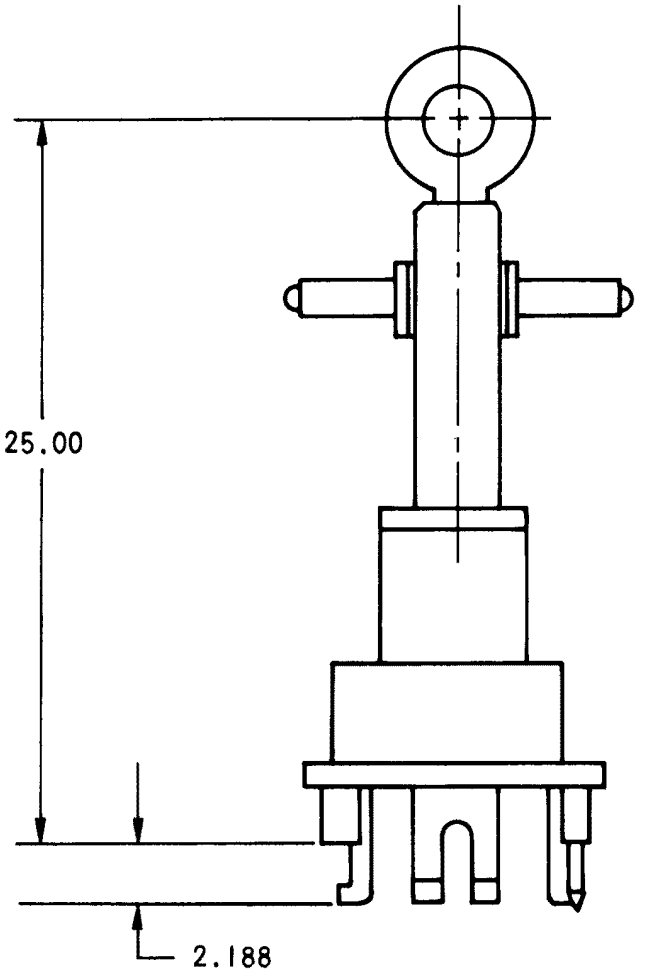
FIGURE 3.1-7



COMANCHE PEAK S.E.S.
FINAL SAFETY ANALYSIS REPORT
UNITS 1 and 2

**Spent Fuel Handling Tool**

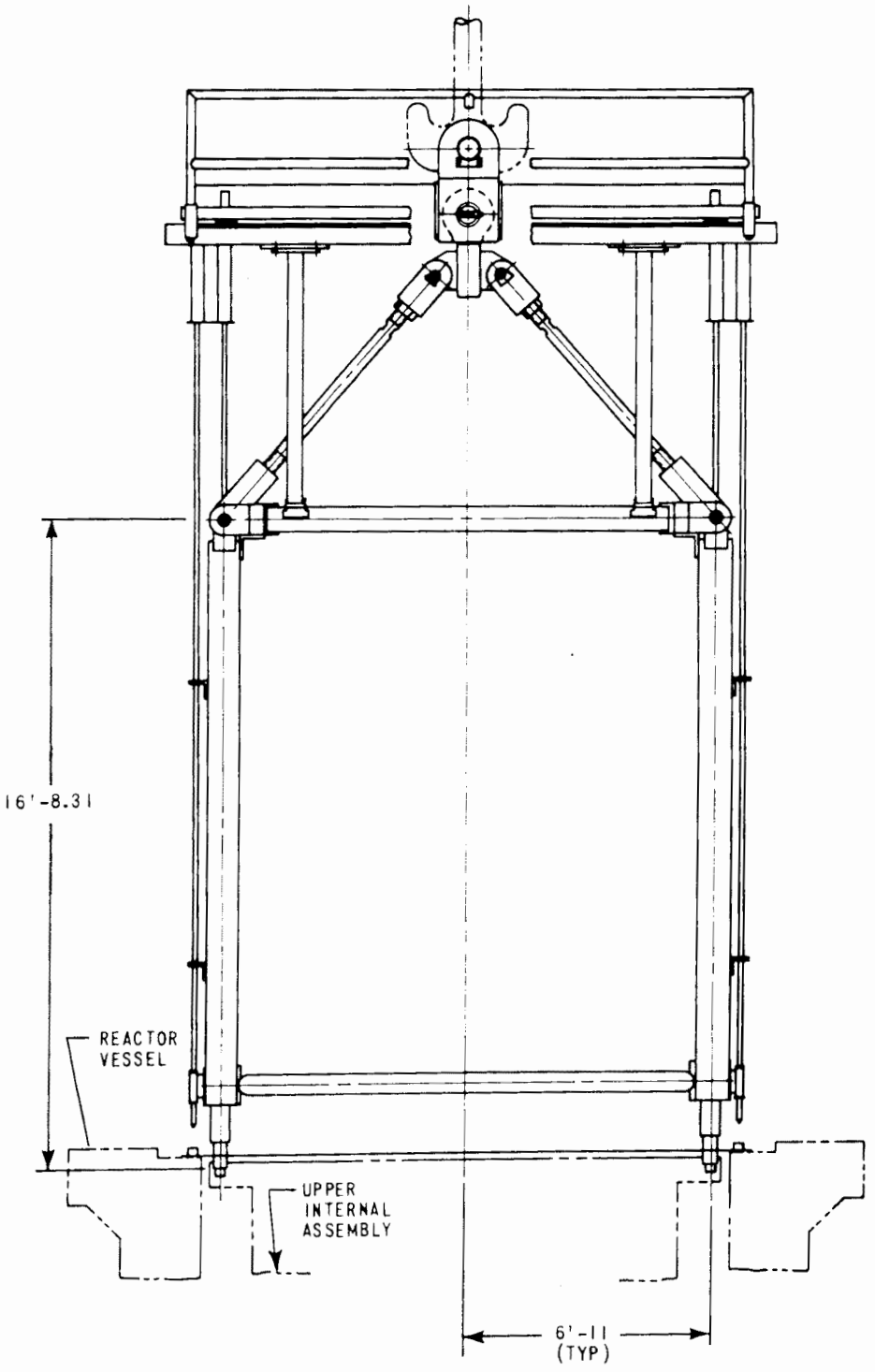
FIGURE **9.1-8**




COMANCHE PEAK S.E.S.
FINAL SAFETY ANALYSIS REPORT
UNITS 1 and 2

New Fuel Handling Tool

FIGURE 9.1- 9

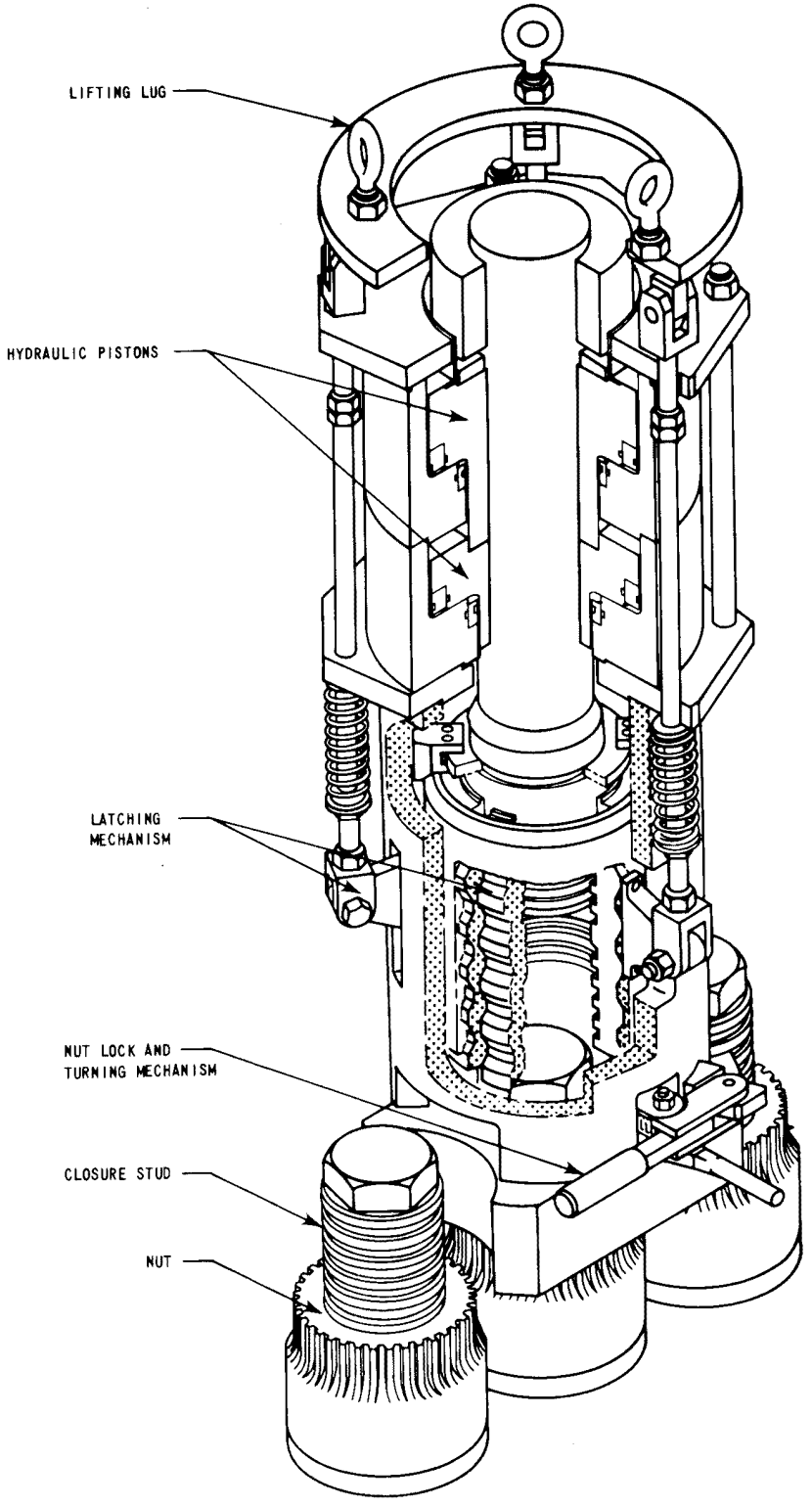



COMANCHE PEAK S.E.S.
FINAL SAFETY ANALYSIS REPORT
UNITS 1 and 2

Upper Core Barrel Handling Fixture

FIGURE 9.1-10

AMENDMENT 13
DECEMBER 15, 1980

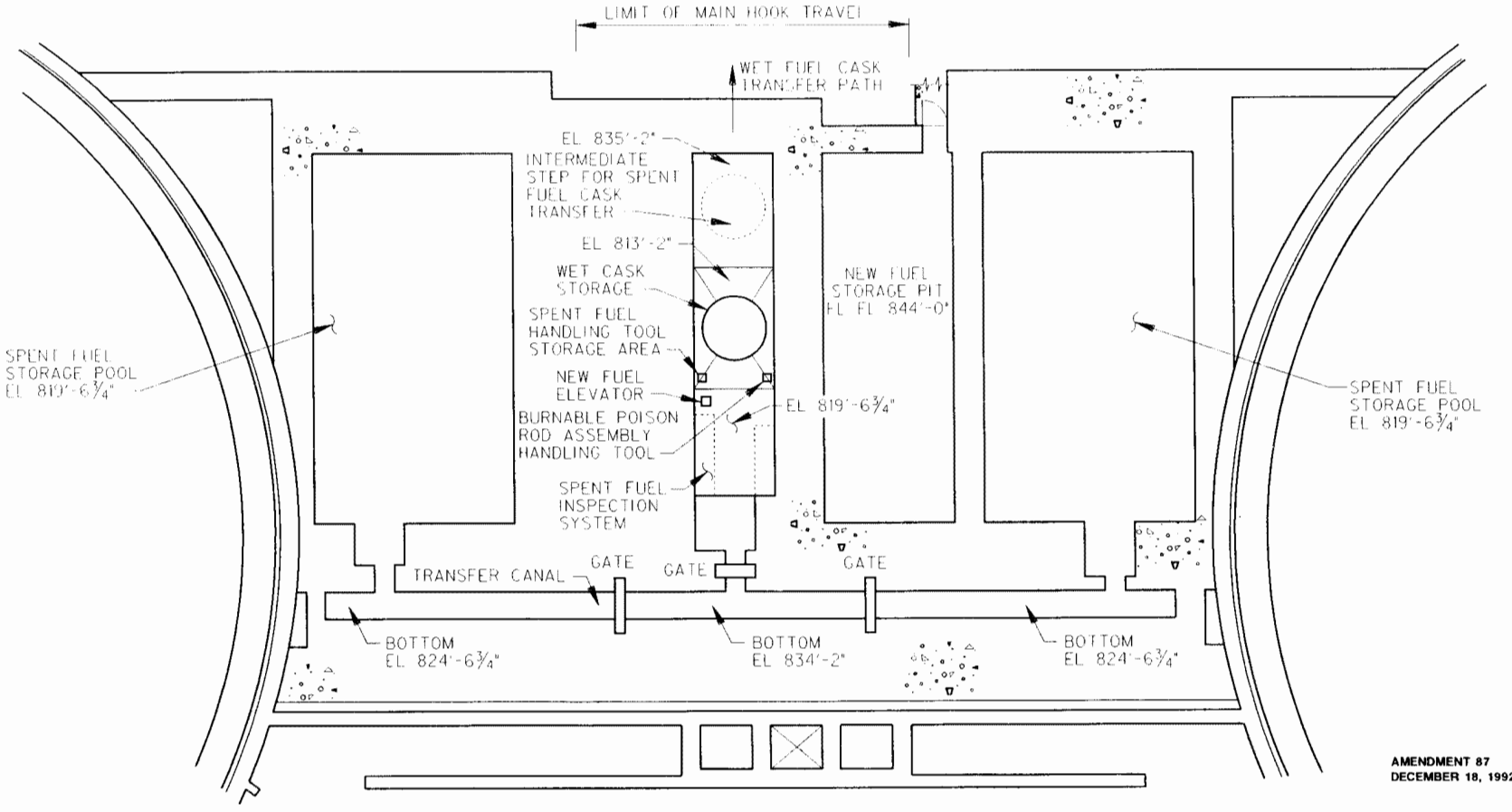



11.946-9

COMANCHE PEAK S.E.S.
FINAL SAFETY ANALYSIS REPORT
UNITS 1 and 2

**Stud Tensioner**

FIGURE 9.1-11




**AMENDMENT 87**
**DECEMBER 18, 1992**

COMANCHE PEAK S E S
FINAL SAFETY ANALYSIS REPORT
UNITS 1 AND 2

SPENT FUEL CASK
LOADING AREA

FIGURE 9.1-12

FSAR91120.DGN

| REV | DWN | CHKD | APVD | REMARKS |
|---|---|---|---|---|
| CP-23 | MM 02-22 2013 | | | THIS DRAWING REVISED TO INCORPORATE AN EDITORIAL CHANGE PER A1-CR-2013-001650-1. |

NOTES:

1. FOR MECHANICAL SYMBOLS AND NOTES SEE DRAWING M1-0200.
2. (X-PI-4867 AND X-PI-4868 ) ARE ABANDONED IN PLACE.
3. ALL PIPING TO THE SPENT FUEL POOL HEAT EXCHANGER SHELL IS SHOWN ON THE COMPONENT COOLING WATER FLOW DIAGRAM.
4. CAPS WILL NOT BE PROVIDED ON VENT AND DRAIN LINES.
5. PIPING WAS ORIGINALLY SUPPLIED BY VENDOR AND DAMAGED. PIPING IS NOW FIELD SUPPLIED FOR PUMPS CPX-SFAPSF-01 AND CPX-SFAPSF-02 .

FSAR FIGURE 9.1-13

THIS DRAWING CREATED ELECTRONICALLY

CLASS I
(NUCLEAR SAFETY-RELATED)
SAFETY CLASS 1 — SEISMIC CATEGORY I
SAFETY CLASS 2 — CLASS 1E ASSOCIATED CIRCUITS
SAFETY CLASS 3

LUMINANT
CPNPP
GLEN ROSE, TEXAS

FLOW DIAGRAM
SPENT FUEL POOL COOLING
AND CLEAN-UP SYSTEM

| DWG. NO. | SH. NO. | REV. |
|---|---|---|
| M1-0235 | - | CP-23 |

$$$$$$$DATE$$$$$$

me923700.dgn M1-0235 < FINAL PRINT >

| REV. | DWN | CHKD | APVD | REMARKS |
|---|---|---|---|---|
| CP-20 | DLK 01-02 2018 | MM 01-02 2018 | MHF 01-02 2018 | THIS DRAWING REVISED TO INCORPORATE EDITORIAL CHANGES PER AI-CR-2017-013562-1. EDITORIAL CHANGES AS NOTED. |

NOTES:

1. FOR MECHANICAL SYMBOLS AND NOTES SEE DRAWING M1-0200.
2. SPOOL PIECES ARE AVAILABLE TO INSTALL TEMPORARY STRAINERS AS REQUIRED.
3. 400 LB R.F. FLANGE TO MATCH 400 LB FLANGE ON RESIN FILL TANK.
4. FILTER VENTS AND DRAINS ROUTED INTO THE FLOOR DRAINS IN FILTER COMPARTMENT.
5. CAPS WILL NOT BE PROVIDED ON VENT AND DRAIN LINES.
6. DELETED
7. DELETED
8. DELETED

FSAR FIGURE 9.1-13

THIS DRAWING CREATED ELECTRONICALLY

CLASS I
(NUCLEAR SAFETY-RELATED)
SAFETY CLASS 1 — SEISMIC CATEGORY I
SAFETY CLASS 2 — CLASS 1E
SAFETY CLASS 3 — ASSOCIATED CIRCUITS

LUMINANT
CPNPP
GLEN ROSE, TEXAS

FLOW DIAGRAM
SPENT FUEL POOL COOLING
AND CLEAN-UP SYSTEM

DWG. NO. M1-0235 | SH. NO. 01 | REV. CP-20

REF CHK 12/8/17

me453600.dgn | A M1-0235-01 | FINAL PRINT

| REV | DWN | CHKD | APVD | REMARKS |
|---|---|---|---|---|
| CP-26 | DLK 04-30 2018 | GAW 05-01 2018 | MHP 05-01 2018 | THIS DRAWING REVISED TO INCORPORATE EDITORIAL CHANGES PER AI-CR-2018-003008-1. |

NOTES:

1. FOR MECHANICAL SYMBOLS AND NOTES SEE DRAWING M1-0200.
2. TEMPORARY STRAINERS ARE INSTALLED IN SPOOL PIECES DURING INITIAL FLUSHING OPERATIONS STRAINERS AND TEMPORARY PRESSURE GAUGES ARE REMOVED PRIOR TO SYSTEM START-UP.
3. LOCATE □ INCH HOLE IN PIPE 1'-0" BELOW NORMAL WATER LEVEL.
4. SPARGER LOCATED 6 FEET ABOVE FUEL ASSEMBLIES.
5. LOCATE □ INCH HOLE IN PIPE 1'-0" BELOW NORMAL WATER LEVEL.
6. LOCK OPEN IN MODES 1-4.
7. FILTER VENTS ARE DRAINS ROUTED INTO THE FLOOR DRAINS IN FILTER COMPARTMENT.
8. CAPS WILL NOT BE PROVIDED ON VENTS AND DRAINS LINES.
9. VALVES ARE VAL-MATIC CO 3"-125 LB MODEL 1903 SURE SEAL FOOT VALVES ALL 304 SS CONSTRUCTION WITH NEOPRENE SEAL RING.
10. THE TRANSFER CANAL LIFT GATE ( CPX-SFHAGT-03 ) IS NORMALLY STORED IN THE WET CASK LOADING PIT, BUT CAN BE USED IN ANY OF THE THREE LOCATIONS IN THE FUEL TRANSFER CANAL. THIS IS A REMOVABLE TYPE GATE.
11. ANTISIPHON DEVICES LOCATED ON SUCTION LINES TO SKIMMER PUMP. INLET TO ANTISIPHON DEVICE IS ONE FOOT BELOW SUCTION LINE.
12. WHEN A GATE IS IN POSITION, THE WATER LEVEL ON EITHER SIDE OF THE GATE MAY VARY.
13. THE REFUELING CAVITY LIFT GATE ( CP1-SFHAGT-01 ) IS NORMALLY STORED IN A LOCAL RACK. THIS IS A REMOVABLE TYPE GATE.
14. CAUTION: CONSULT APPLICABLE BRP'S FOR PHYSICAL LAYOUT, ARRANGEMENT OF PIPING ENTERING, EXITING SPENT FUEL POOLS.
15. CAVITY DRAIN PIPE SHALL NOT BE REDUCED TO LESS THAN 4" DURING POWER OPERATION. THIS IS NEEDED TO MAINTAIN CAVITY DRAINAGE DURING AN ACCIDENT SCENARIO, REFER TO FDA 2005-003364-14.

FSAR FIGURE 9.1-13

THIS DRAWING CREATED ELECTRONICALLY

CLASS I
(NUCLEAR SAFETY-RELATED)
SAFETY CLASS I — SEISMIC CATEGORY I
SAFETY CLASS 2 — CLASS 1E
SAFETY CLASS 3 — ASSOCIATED CIRCUITS

LUMINANT
CPNPP
GLEN ROSE, TEXAS

FLOW DIAGRAM
SPENT FUEL POOL COOLING
AND CLEAN-UP SYSTEM

| DWG. NO. | SH. NO. | REV. |
|---|---|---|
| M1-0235 | 02 | CP-26 |

REF CKD 4/26/18 CP-26

me101920.dgn A M1-0235-02 FINAL PRINT

| REV | DWN | CHKD | APVD | REMARKS |
|---|---|---|---|---|
| CP-17 | BMC 10-20-2014 | RMG 10-22-2014 | | THIS DRAWING REVISED TO INCORPORATE DESIGN CHANGE FDA-2014-000244-01-00 PER SK-0001-14-000244-01-00. |

NOTES:

1. FOR MECHANICAL SYMBOLS AND NOTES SEE DRAWING M1-0200.
2. VALVE TYPE PER QC WALKDOWN VERIFICATION.
3. LOCK OPEN IN MODES 1-4.
4. WHEN THE GATE IS IN POSITION, THE WATER LEVEL ON EITHER SIDE OF THE GATE MAY VARY. CP2-SFHAGT-01 IS NORMALLY STORED IN A LOCAL RACK. THIS IS REMOVABLE TYPE GATE.
5. CAVITY DRAIN PIPE SHALL NOT BE REDUCED TO LESS THAN 4" DURING POWER OPERATION. THIS IS NEEDED TO MAINTAIN CAVITY DRAINAGE DURING AN ACCIDENT SCENARIO, REFER TO FDA 2005-003364-04.

OUTSIDE CONTAINMENT | INSIDE UNIT 2 CONTAINMENT

SPENT FUEL POOL SKIMMER FILTER M1-0235-02 LOC: G-2

3-SF-2-027-151R-5

□-151R-5 — SEE NOTE 2 — 2SF-0057 (V)

□-151R-5 — 2SF-0042 (TD)

2SF-0056 (LC) — CP -16

PENETRATION 2-MIII-0031 — 3-SF-2-011-151R-2 — 2SF-0055 (LC)

TD □-151R-5 — 2SF-0046

3-SF-2-010-151R-5

4-SF-2-025-151R-5 — PURIFICATION LOOP M1-0235-01 LOC: C-6 — 4-SF-2-013-151R-5 — 2SF-0037

□-151R-5 — SEE NOTE 2 — 2SF-0052 (D)

AUX BLDG | SG BLDG

2SF-0011 (LC) — 2SF-0047 (TD) — □-151R-5

PENETRATION 2-MIII-0016 — 4-SF-2-014-151R-2 — 2SF-0012 (LC)

TC □-151R-5 — 2SF-0043

4-SF-2-016-151R-5

3-SF-2-015-151R-5

3-SF-2-012-151R-5 — SPENT FUEL POOL SKIMMER FILTER M1-0235-02 LOC: A-5 — 2SF-0051 — 2SF-0010

2-LS-4871 | 2-TE-4872 | 2SF-0013 | 2SF-0050 | 2-LS-4873 | 2-TE-4874

NORMAL WATER LEVEL EL 858'-6"

SKIMMER CP2-SFSKRS-02

SKIMMER CP2-SFSKRS-01

REFUELING CAVITY SKIMMER STRAINER CP2-SFSRSP-01

2SF-0048

2SF-0016 — □-151R-5 — 2SF-0032 — SEE NOTE 2 — 2-PI-4870

2-HS-4869

1□-151R-5 — SEE NOTE 2

1-151R-5

REFUELING CAVITY SKIMMER PUMP CP2-SFAPRS-01

3-SF-2-008-151R-5 — 3-SF-2-009-151R-5 — 2SF-0014 — 2SF-0015

1□x1 — 1-SF-2-015R-2 — 2SF-0031 — 1-VD-2-144-151R-5

2SF-0049 — 2-SF-2-015R-5 — VALVE BY INST (D)

VD | SF

VENTS AND DRAINS M2-0238 LOC: F-6

CP2-SFHAGT-01 (LIFT GATE) SEE NOTE 4

FLEXIBLE HOSE

1□-151R-5 — 2-SF-2-007-151R-5 — 1□-151R-5 — 2-SF-2-006-151R-5

2-SF-2-029-151R-3 (SEAL RING DRAIN)

4-SF-2-026-151R-3

UNIT 2 REFUELING CAVITY

RV

DEBRIS SCREEN CP2-SFSRDS-03

DEBRIS SCREEN CP2-SFSRDS-04

DRAIN STRAINER CP2-SFSRDS-02

2□-2505-2 | 2□-2505-5 — TC — 2SF-0053

BY VENDOR — VALVE 2SF-0001

FUEL TRANSFER TUBE TCX-FHSTTT-01

CP2-FHEXTT-01 | CP2-FHEXTT-03

BLIND FLG

CP2-FHEXTT-04 | CP2-FHEXTT-02

DRAIN STRAINER CP2-SFSRDS-01

4-SF-2-021-151R-3

ARCHITECTURE DRAIN TO LOOP ROOM 3 — 6" SS

ARCHITECTURE DRAIN TO LOOP ROOM 4 — 6" SS

4-SF-2-023-15IR-3 | 4-SF-2-002-15IR-3 | 4-SF-2-001-15IR-3

4-SF-2-017-151R-3

4-SF-2-018-151R-3

2SF-0025 | 2SF-0026

4-SF-2-024-15IR-5 | 4-SF-2-022-15IR-5

2SF-0019 | 2SF-0020

4-SF-2-003-151R-5

SF WP — 2-7129

REACT. COOLANT DRAIN TK PUMPS M2-0264 LOC: A-6 — 4-WP-2-028-151R-5

2SF-0027 LO — SEE NOTE 3 — 4-SF-2-020-15IR-5 SEE NOTE 5

2SF-0028 LO — SEE NOTE 3 — 4-SF-2-019-15IR-5 SEE NOTE 5

DRAIN TO CONTAINMENT FLOOR EL 808'-0" DRIP PAN DURING NORMAL OPERATION FLOOR DRAIN LINE 4-FD-2-014-150R-5

TV □-151R-5 — 2SF-0044

REFUELING WATER PURIFICATION PUMP M1-0235-01 LOC: D-4 — 4-SF-2-028-151R-5

2SF-0022 (LC)

PENETRATION 2-MIII-0027 — 4-SF-2-005-151R-2 — 2SF-0021 (LC)

TD □-151R-5 — 2SF-0045

4-SF-2-004-151R-5

FSAR FIGURE 9.1-13

THIS DRAWING CREATED ELECTRONICALLY

CLASS I
(NUCLEAR SAFETY-RELATED)
SAFETY CLASS 1 | SEISMIC CATEGORY I
SAFETY CLASS 2 | CLASS 1E
SAFETY CLASS 3 | ASSOCIATED CIRCUITS

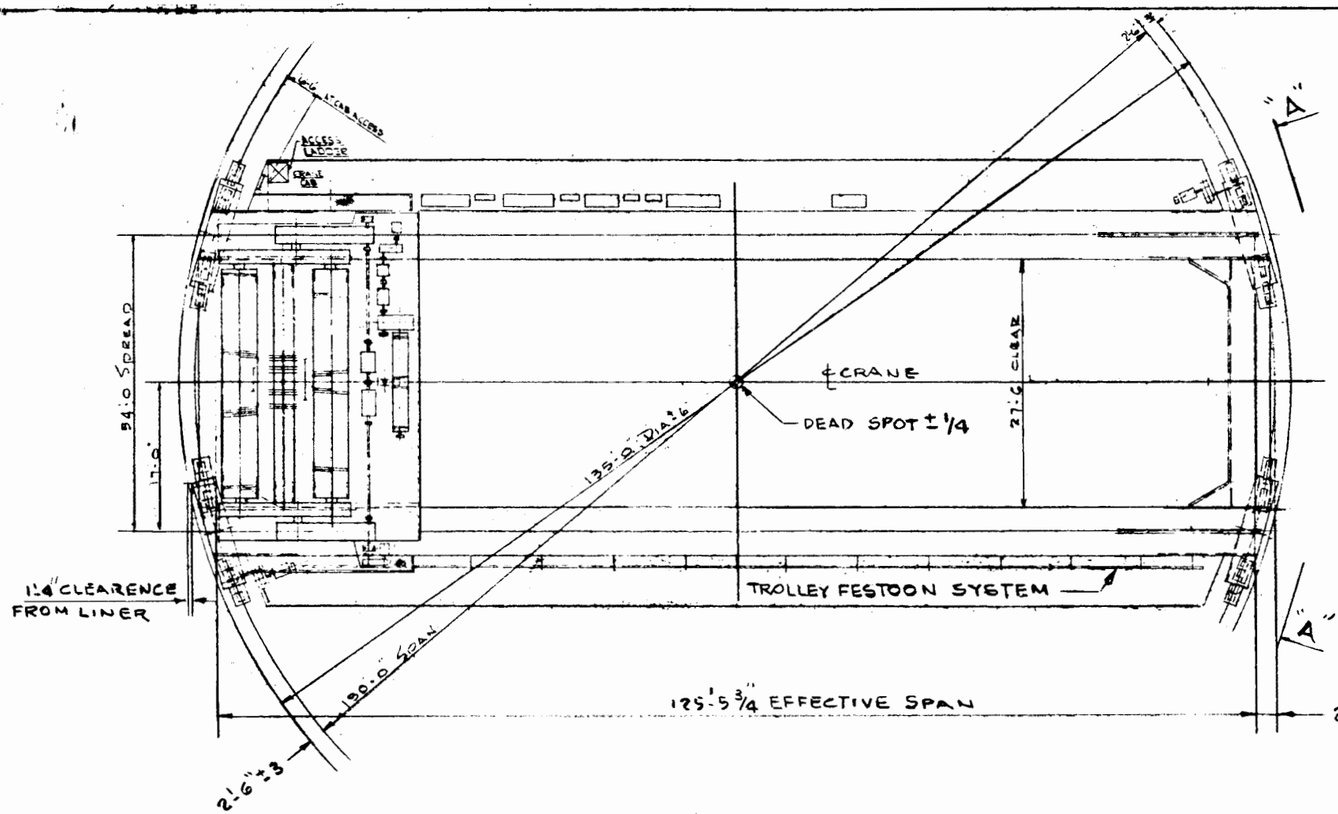
LUMINANT
CPNPP
GLEN ROSE, TEXAS

FLOW DIAGRAM
SPENT FUEL POOL COOLING
AND CLEAN-UP SYSTEM

| DWG. NO. | SH. NO. | REV. |
|---|---|---|
| M2-0235 | - | CP-17 |

$$$$$$$DATE$$$$$$$

me101930.dgn — M2-0235 — < FINAL PRINT >




REFERENCE DWG
GIBBS & HILL, INC. XB-2323-M-203

BRIDGE WGT: 593,500#
TROLLEY WGT: 416,500#
ELECTRICAL: 16,000#
CRANE WGT: 1,026,000#
MAX. WHEEL LOAD: 64.3 TON (NO IMPACT) PLANT LIFE
MAX. WHEEL LOAD: 99.7 TON (NO IMPACT) CONSTRUCTION LIFT
OPER. VOLTAGE: 460 VOLT / 3 / 60 AC

MAX. VERTICAL & HORIZONTAL SEISMIC WHEEL LOADS ACTING SIMULTANEOUSLY
ONE-HALF SSE: 146.7 TON MAX VERTICAL W/ 22.4 TON HORIZONTAL SIMULTANEOUS
56 TON MAX HORIZONTAL W/ 89 TON VERTICAL "
FULL SSE: 114 TON MAX VERTICAL W/ 34.4 TON HORIZONTAL "
97 TON MAX HORIZONTAL W/ 91.4 TON VERTICAL "

CRANE TO BE DESIGNED TO REMAIN ON RAILS DURING DIAMETRAL EXPANSION OF CONTAINMENT
MAX. UPLIFT CORNER DESIGN LOAD-½ SSE = 73 TON
MAX UPLIFT CORNER DESIGN LOAD-FULL SSE = 109 TON

NOTE: SEISMIC LOADS APPLY TO ANY INDIVIDUAL CORNER AND NOT ALL FOUR SIMULTANEOUS

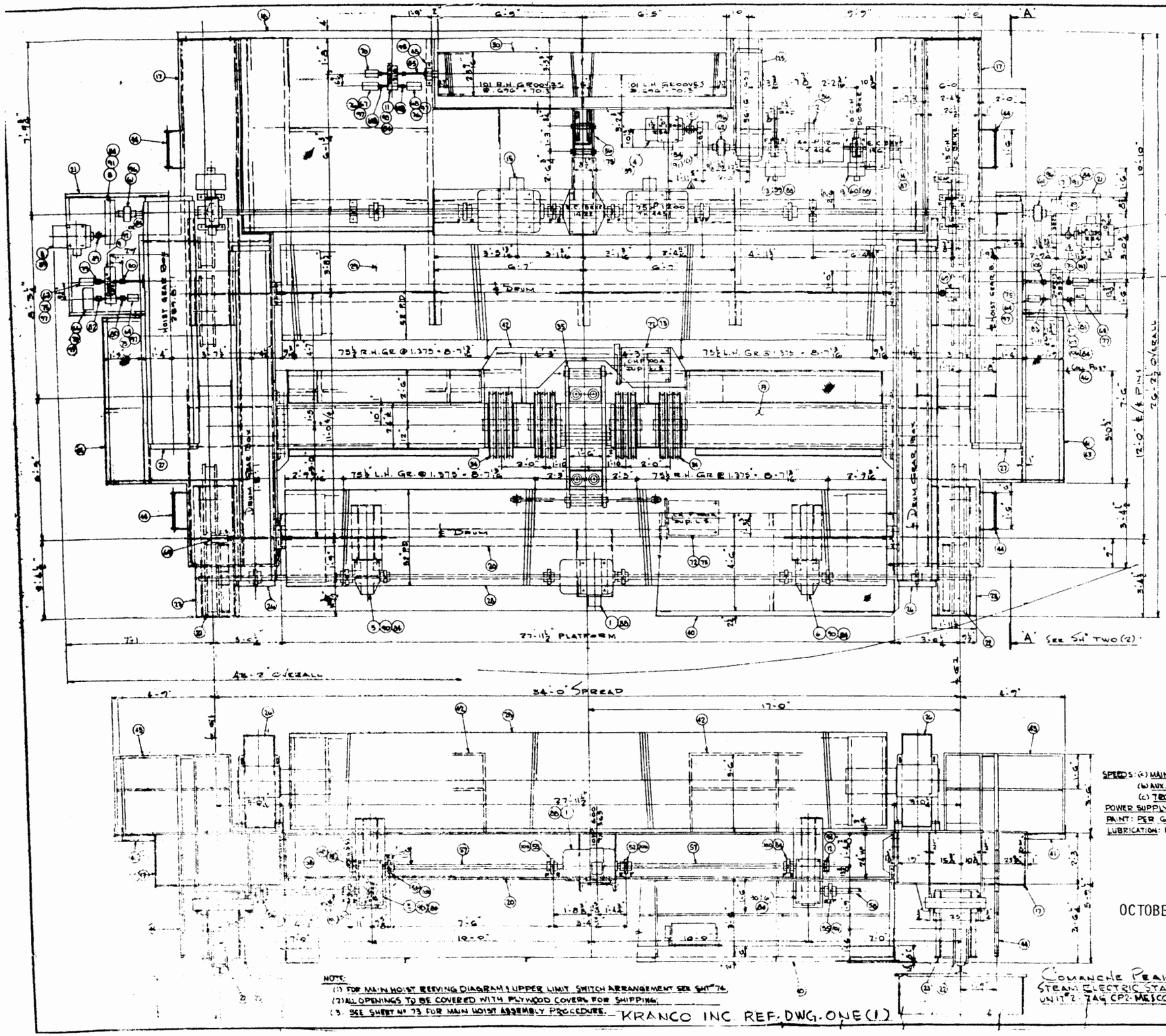
KRANCO INC. REF DWG. No. 7524-CL-1

OCTOBER 8, 1980

COMANCHE PEAK S.E.S.
FINAL SAFETY ANALYSIS REPORT
UNITS 1 and 2

CONTAINMENT POLAR CRANE

FIGURE 9.1-14 (SH 1 OF 3)




MATERIAL FOR 1 UNITS. 1 UNITS REQ'D PER CRANE 1 CRANES REQ'D.

| ITEM | QTY PER UNIT | REF NO | DESCRIPTION | MATL | WGT | REMARKS |
|---|---|---|---|---|---|---|
| | 1 | MK-1A | TROLLEY ASSEMBLY | TOTAL | 383,844 | |
| 1 | 1 | | GE MOTOR 10 HP, 600 RPM, FR. 365 | - | 840 | ✓ |
| | | | 460, 3/60, WOUND ROTOR, TYPE MR, | | — | |
| | | | 60 MIN, CL. H INSUL CL. B RISE, | | — | |
| | | | 50°C AMBIENT, TENV, DBL. STR SHAFT, | | — | |
| | | | F1 CONDUIT BOX MTG & SPACE HEATER | | — | |
| 2 | 1 | | DITTO EXCEPT 40 HP, 1200 RPM | - | 990 | ✓ |
| | | | FR. 404 | | — | |
| 3 | 2 | | GE MOTOR 5 HP, 1800 RPM, FR. 254 | - | 582 | ✓ |
| | | | 460, 3/60, WOUND ROTOR, TYPE M, | | — | |
| | | | CONTINUOUS DUTY, CL. H INSUL, | | — | |
| | | | CL. B RISE, 50°C AMBIENT, TEFC, | | — | |
| | | | SINGLE STR SHAFT, F1 CONDUIT BOX | | — | |
| | | | MTG & SPACE HEATER | | — | |
| 4 | 1 | | DITTO EXCEPT 12 HP, 1800 RPM, FR 254 | - | 276 | ✓ |
| 5 | 1 | | DORRIS RED" 6335 LH-DI (35.3 RED) | - | 475 | ✓ |
| 6 | 1 | | DORRIS RED" 8388 RH-DI (35.3 RED) | - | 475 | ✓ |
| 7 | 1 | | DORRIS RED" 3823 RH (22.8 RED) | - | 201 | ✓ |
| 8 | 1 | | DORRIS RED" 3673 LH (22.8 RED) | - | 221 | ✓ |
| 9 | 1 | | DORRIS RED" 2636 DI-DO (36.2 RED) | - | 161 | ✓ |
| 10 | 1 | | DORRIS RED" 3841 RH (41.2 RED) | - | 121 | ✓ |
| 11 | 1 | | DORRIS RED" 218 DI-DO (17.8 RED) | - | 89 | ✓ |
| 12 | 2 | | CM S-5½ BRAKE" SIH1460-41 WITH | - | 67 | ✓ |
| | | | BRAKE WHEEL" SIH1160-7 | | — | |
| 13 | 2 | | CM 10" & NEMA TYL OPERATED | - | 526 | ✓ |
| | | | BRAKE TYPE 505" 0 BRAKE WHL. | | — | |
| 14 | 1 | | GH MAGNETIC CRANE CONTROLLER | - | 650 | ✓ |
| | | | MODEL" 146" ALTERNATOR | | — | |
| 15 | 1 | MK-60A | CONSTRICTION LIFT MACH. ASSY | - | 7732 | |
| 16 | 1 | MK-60B | PLANT LIFT MACHINERY ASSY | - | — | |
| 17 | 1 LOT | MK-16A | TROLLEY SIDES | - | 24,276 | |
| 18 | 1 | MK-16A | AUX HOIST FRAME | - | 4,383 | |
| 19 | 1 | MK-16A | TROLLEY LOAD GIRT | - | 26,915 | |
| 20 | 1 | MK-19A | AUXILIARY GIRT | - | 4,10 | |
| 21 | 1 LOT | MK-20A | MACHINERY SUPPORT | - | 3,7 | |
| 22 | 4 OR 8 | MK-10A | TROLLEY WHL ASSY (36" DIA) | - | 20,368 | |
| 23 | 1 LOT | MK-12A | TROLLEY DRIVE TRUCK | - | 4,127 | |
| 24 | 2 | MK-13A | TROLLEY IDLE TRUCK | - | 3,361 | |
| 25 | 1 | 36-16 | KRANCO REDUCER (i=4985:1 RATIO) | - | 2429 | |
| 26 | 1 LOT | 36-90 | KRANCO REDUCER (DRUM GEAR BOX) | - | 49,774 | |
| 27 | 1 LOT | 36-91 | KRANCO REDUCER (HOIST GEAR BOX) | - | 37,574 | |
| 28 | 1 | MK-25A | MAIN HOIST DRUM | - | 44,292 | |
| 29 | 1 | MK-26A | MAIN HOIST DRUM | - | 44,290 | |
| 30 | 1 | MK-24A | AUX. HOIST DRUM | - | 8,266 | |
| 31 | 1 | MK-33A | KRANCO DUAL BOTTOM BLOCK | - | 38,299 | |
| 33 | 1 | | JOHNSON BOTTOM BLOCK" 300 KIPS | - | 617 | ✓ |
| | | | RATED @ 20 TON GROOVE FOR 9/16" ROPE | | — | |
| 34 | 2 | MK-52A | MAIN HOIST UPPER SHEAVE ASSY | - | 12,592 | |
| 35 | 1 | MK-49A | M.H. UPPER EQUALIZER BAR ASSY | - | 3031 | |
| 36 | 1 | MK-23A | AUX. HOIST UPPER SHEAVE ASSY | - | 180 | |
| 37 | 2 | | 1¼" PREFORMED PREMIUM WHYTE | - | 47722 | |
| | | | STRAND 7-FLEX IWRC WIRE | | — | |
| | | | ROPE = 1163 FT. LG | | — | |
| 38 | 2 | | DITTO EXCEPT 1163 FT LG. | - | 6835 | ✓ |
| 39 | 1 | | 9/16" DIA 6 x 37 IPS-IWRC | | 706 | ✓ |
| | | | WIRE ROPE = 1807 FT. LG | | — | |
| 40 | 1 | MK-21A | TROLLEY PLATFORM | - | 2,679 | |
| 41 | 2 | MK-22A | TROLLEY SIDE PLATFORM | - | 447 | |
| 42 | 1 | MK-47A | TR LOAD GIRT PLATFORM & HANDRAIL | - | 982 | |
| 43 | 1 | MK-46A | TROLLEY HANDRAIL | - | 499 | |
| 44 | 4 | MK-48B | TROLLEY LADDERS | - | 283 | |
| 45 | 2 | MK-45A | TROLLEY SPRING BUMPERS | - | 364 | |
| 46 | 1 | MK-44A | TROLLEY COLLECTOR POST | - | 516 | |
| 47 | 1 | | DORRIS RED" 5835 DI-DO (36.3 RED) | - | 363 | ✓ |
| | | | BILL OF MATERIAL CONT. ON SHT" 2 | | | |

SPEEDS: (a) MAIN HOIST - 37/.25 FPM, 5 SV/SS
(b) AUX. HOIST - 20/1 FPM, 5 SV/SS
(c) TROLLEY - 30 FPM 5 SV
POWER SUPPLY - 460/3/60 AC.
PAINT: PER GIBBS & HILL SPECIFICATION No 7328-QS-900 DATED AUG 27, 1974, REV" 1
LUBRICATION: PIPE LUBRICATION POINTS TO ONE ACCESSIBLE CENTRAL LOCATION ON THE TROLLEY (ACCESSIBLE FROM THE FRONT PLATFORM MK-43A)

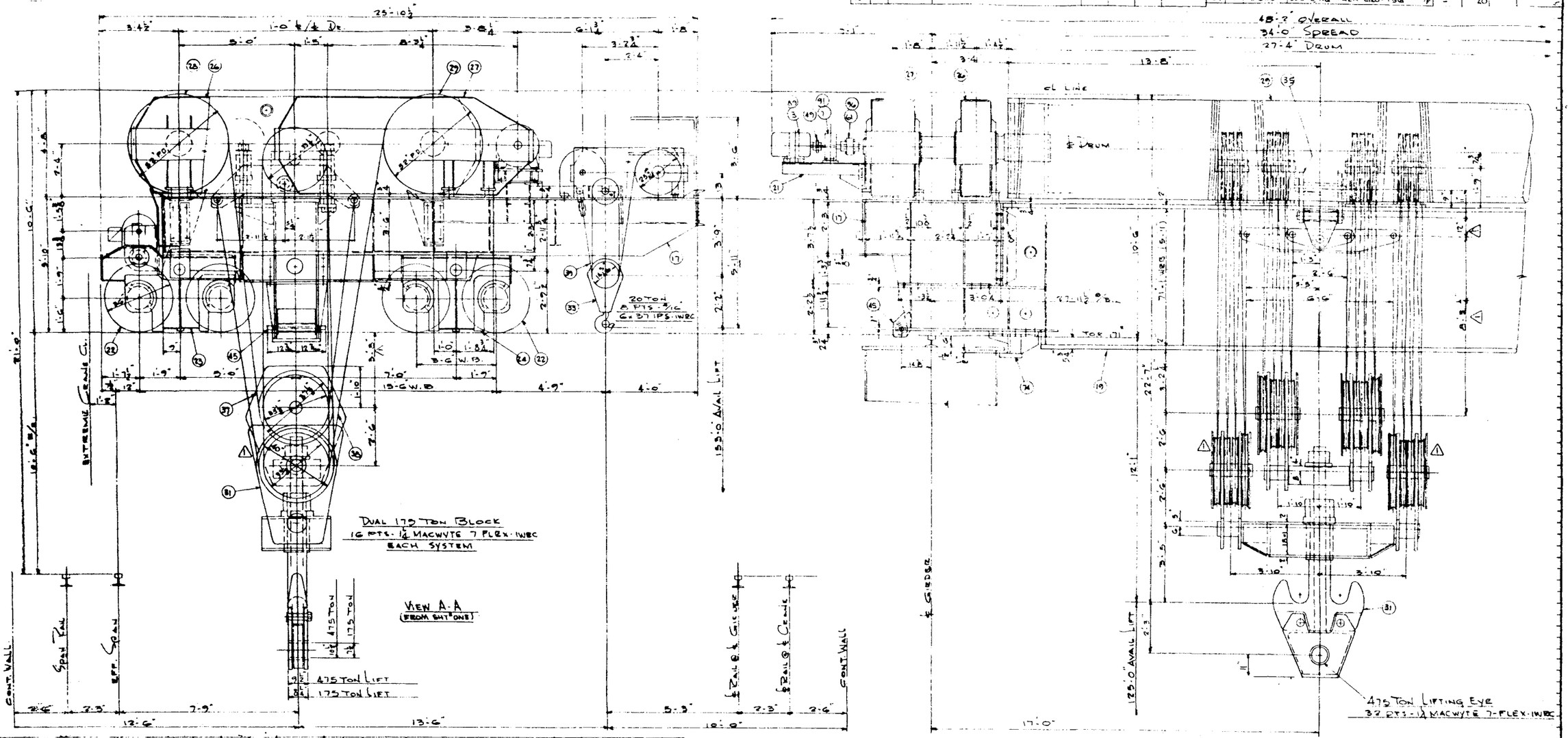
OCTOBER 8, 1980

COMANCHE PEAK S.E.S.
FINAL SAFETY ANALYSIS REPORT
UNITS 1 and 2

CONTAINMENT POLAR CRANE

FIGURE 9.1-14 Sh. 2 of 3

| ITEM | NO. REQ'D | REF. NO. | DESCRIPTION | MAT'L | WGT. | REMARKS |
|---|---|---|---|---|---|---|
| | | | MATERIAL CONT FROM SHT # 1 | | | |
| 48 | 1 | | PILLOW BLOCK-REX # 2207 (2 7/16") | - | 15 | ✓ |
| 49 | 2 | MK-62G | COUPLING-FALK # G20-15G | F/F | - | 40 |
| 50 | 1 | MK-62H | " -FALK # G20-15G | F/F | - | 20 |
| 51 | 1 | MK-62J | COUPLING-FALK # G20-15G | F/F | - | 20 |




| ITEM | NO. REQ'D | REF. NO. | DESCRIPTION | MAT'L | WGT. | REMARKS |
|---|---|---|---|---|---|---|
| 101 | 4 | | KEY - 3/4" SQ. x 3 1/2" LG SQ ENDS | STOCK | 5P | |
| 100 | 4 | | KEY - 1/2" SQ x 2" LG SQ ENDS | STOCK | | |
| 99 | 4 | | 3/4" x 3 1/2" LG HHMB # NUT & LW | ST. | | |
| 98 | | | " - 1 1/2" LG TO SUIT HHMB # NUT & LW | " | | |
| 97 | 24 | | 1/2" - 2" LG HHMB # NUT & LW | " | | |
| 96 | 12 | | 1/2" - 2" LG HHMB # NUT & LW | " | | |
| 95 | 2 | | 3/4" x 3 1/2" LG HHMB # NUT & LW | " | | |
| 94 | 4 | | 3/4" x 4" LG TO SUIT HHMB # NUTS LW | " | | |
| 93 | 4 | | 1" x 2 1/2" LG HHMB # NUT & LW | " | | |
| 92 | 4 | | 3/4" x 3 1/2" LG HHMB # NUT & LW | " | | |
| 91 | 12 | | 1/2" x 3 1/2" LG HHMB # NUT & LW | " | | |
| 90 | 6 | | 1/2" x 3 1/2" LG HHMB # NUT & LW | " | | |
| 89 | 12 | | 1/2" x 2 1/2" LG HHMB # NUT & LW | " | | |
| 88 | 16 | | 3/4" x 3" LG HHMB # NUT & LW | ST. | | |
| 87 | 4 | MK-63 | MOUNTING PADS | - | 11 | |
| 86 | 4 | MK-61E | MOUNTING PADS | - | 37 | |
| 85 | 1 | MK-72B | EXTENSION - HAYFORD AUX HOIST LS # 25Y | - | 3 | |
| 84 | 8 | | BREATHER CAP # P TWO | - | - | |
| 83 | 1 | | COUP - LOVEJOY # L-095B2 (BORE 2 7/16") | KIT | 5 | |
| 82 | 1 | | COUP - LOVEJOY # L095B2 (BORE 2 7/16") | KIT | 3 | |

| ITEM | NO. REQ'D | REF. NO. | DESCRIPTION | MAT'L | WGT. | REMARKS |
|---|---|---|---|---|---|---|
| 81 | 1 | MK-65E | COUP - FALK # G20-25G | F/F | - | 55 |
| 80 | 1 | | COUP - LOVEJOY # L-095B2 (BORE 2 7/16") | SHIPPED LOOSE | 2 | ✓ |
| 79 | 2 | | COUP - LOVEJOY # L-150B2 (BORE 2 7/16") | SHIPPED LOOSE | 14 | ✓ |
| 78 | 1 | MK-61E | TACHOMETER GENERATOR BASE | - | 7 | |
| 77 | 1 | MK-73C | ALTERNATOR BASE | - | 70 | |
| 76 | 2 | MK-69A | OVERSPEED LS BASE | - | 4 | |
| 75 | 3 | MK-68A | OVERSPEED LS BASE | - | 9 | |
| 74 | 2 | MK-71A | TROLLEY HOLD DOWN LUGS | - | 1092 | |
| 73 | 3 | | A-B LIMIT SWITCH 801-FSC16 W/ CABLE | - | 70 | ✓ |
| 72 | 2 | | CH-POWER LS TYPE "D-100" W/ CABLE | - | 778 | ✓ |
| 71 | 1 | MK-75A | TROLLEY TRAVEL LIMIT SWITCH | - | 32 | |
| 70 | 1 | MK-67A | AUX HOIST DRUM LIMIT SWITCH | - | 10 | |
| 69 | 2 | MK-66A | MAIN HOIST DRUM LIMIT SWITCH | - | 14 | |
| 68 | 1 | | OVERSPEED LS - HUB "2210-32CC4-MM | - | 5 | ✓ |
| 67 | 1 | | OVERSPEED LS - HUB "2210-32CC4-5.5 MM | - | 5 | ✓ |
| 66 | 1 | | TACHOMETER GENERATOR - CH TYPE BC-6 | - | 60 | ✓ |
| 65 | 1 | | ALTERNATOR | - | 450 | ✓ |
| 64 | 2 | | OVERSPEED LS - HUB "2210-32CC4 MM | - | 9 | ✓ |
| 63 | 2 | | OVERSPEED LS - HUB "2210-32CC4-5.5 MM | - | 10 | ✓ |
| 62 | 1 | MK-70B | DINGS MAGNETIC CLUTCH COUP | - | 75 | |

| ITEM | NO. REQ'D | REF. NO. | DESCRIPTION | MAT'L | WGT. | REMARKS |
|---|---|---|---|---|---|---|
| 61 | 2 | MK-70A | DINGS MAGNETIC CLUTCH COUP | - | 50 | |
| 60 | 1 | MK-65C | BRAKE WHEEL COUP - 10" x 3 1/4" | - | 50 | |
| 59 | 1 | MK-65B | BRAKE WHEEL COUP - 10" x 3 1/4" | - | 50 | |
| 58 | 2 | MK-64E | DRIVE SHAFT - 2 7/16" DIA | 1018CF | 187 | |
| 57 | 2 | MK-64D | DRIVE SHAFT - 1 15/16" DIA | 1018CF | 114 | |
| 56 | 2 | MK-62P | COUPLING - FALK # GS2-25G F/R | - | 110 | |
| 55 | 2 | MK-62N | " - FALK # GS2-25G F/R | - | 110 | |
| 54 | 2 | MK-62M | " - FALK # GS2-15G F/R | - | 40 | |
| 53 | 1 | MK-62L | " - FALK # GS2-15G F/R | - | 20 | |
| 52 | 1 | MK-62K | COUPLING - FALK # GS2-15G F/R | - | 20 | |

KRANCO, INC. REF. DWG. TWO (2)

CERTIFIED FOR CONSTRUCTION
BY _____

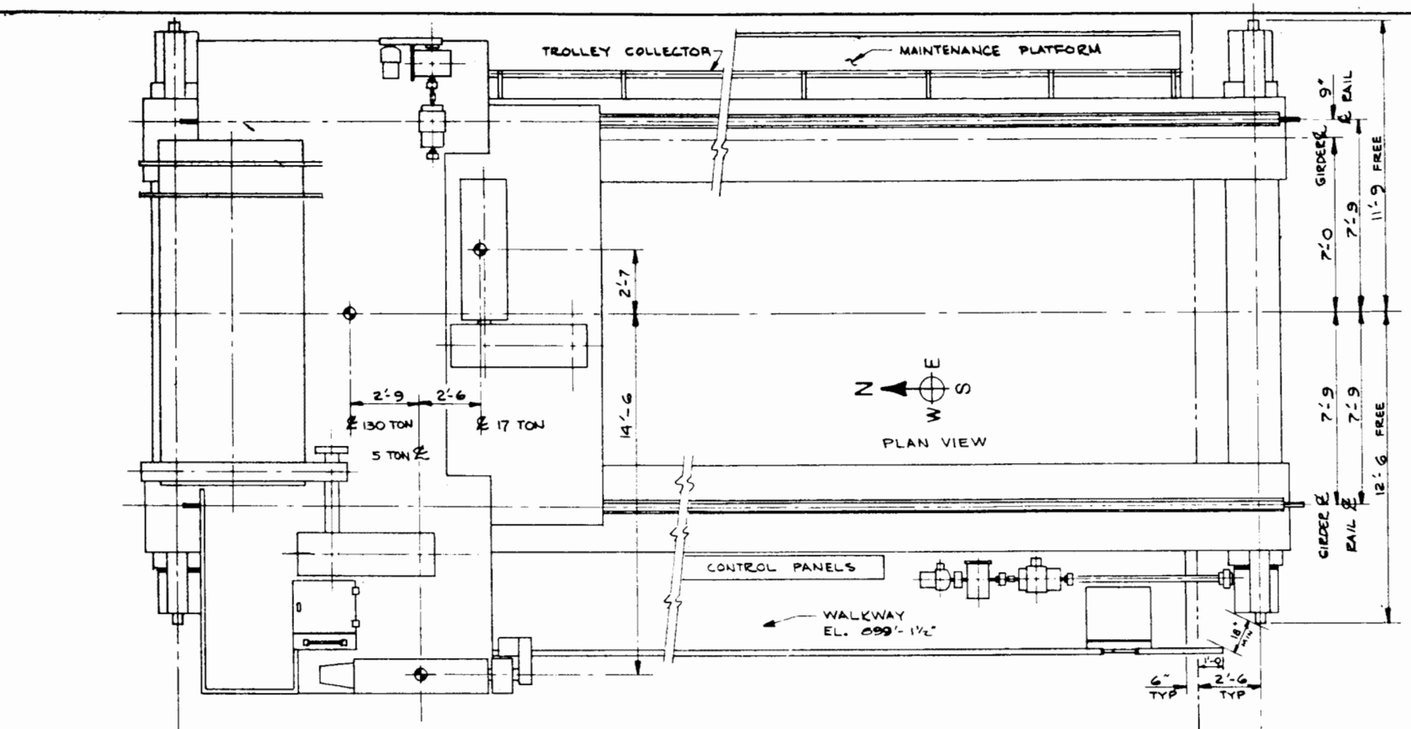
COMANCHE PEAK STEAM ELECTRIC STATION - UNIT 2 TAG: CP2-MESCCP-01

OCTOBER 8, 1980

COMANCHE PEAK S.E.S.
FINAL SAFETY ANALYSIS REPORT
UNITS 1 and 2

CONTAINMENT POLAR CRANE

FIGURE 9.1-14 Sh. 3 of 3




| CRANE DATA | |
|---|---|
| POWER | 480-3-60 |
| BRIDGE WHEEL | (8) 24"DIA |
| MAX WHEEL LOAD | 101,300 lbs |
| RUNWAY RAIL | 171 lb |
| SERVICE | INDOOR |

NOTES: 1. MAX BUMPER FORCE FOR SEISMIC AND IMPACT CONDITIONS = 6500# EACH
2. CRANE MAY BE ERECTED WITH ROOF IN PLACE.

EDERER INC. REF. DWG. No. PA-1216

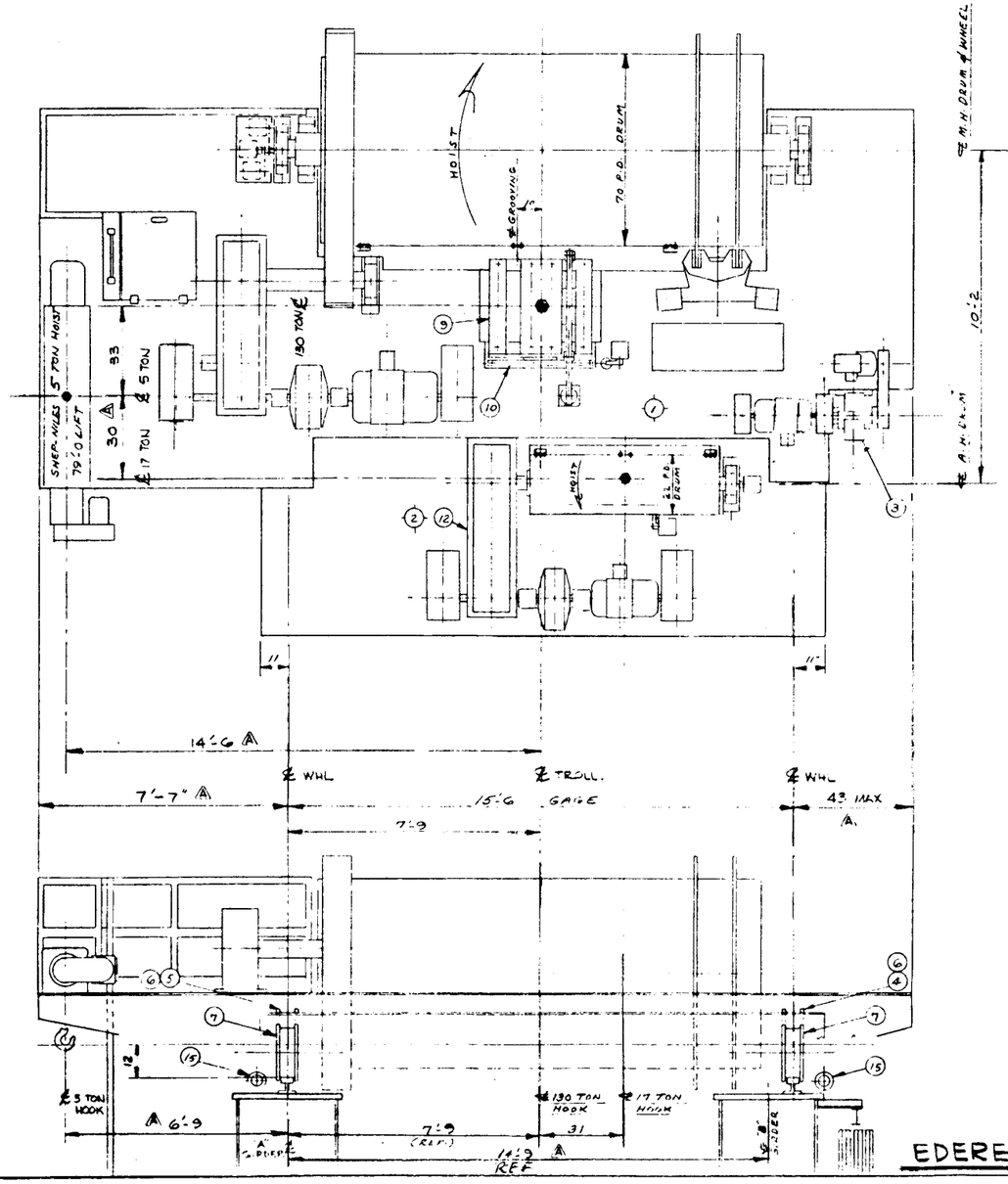
OCTOBER 8, 1980

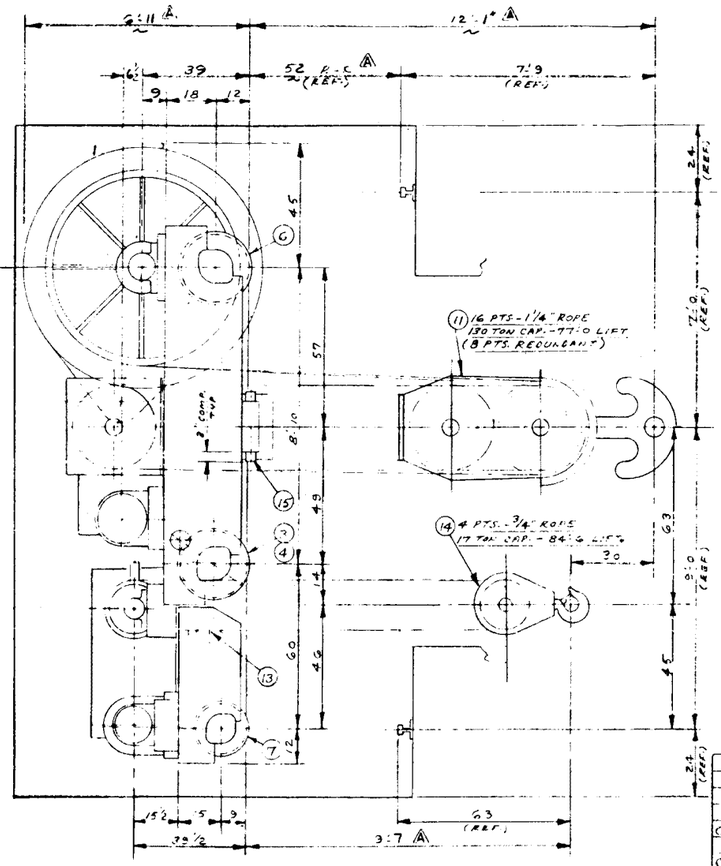
COMANCHE PEAK S.E.S.
FINAL SAFETY ANALYSIS REPORT
UNITS 1 and 2

FUEL BLDG. CRANE

FIGURE 9.1-15 (SH. 1 OF 2)

| REVISIONS | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| LTR | DESCRIPTION | DATE | BY | CHK | ENG | APPD | APPD | APPD |
| A | REMOVED CAB FROM TROLLEY. 5 TON HOIST: 6'-9 WAS 54" 30" WAS 6". 7'-7 WAS 8'-3. GIRDER ES: 14'-9 WAS 14'-0. 43" WAS 48". RAIL TO RAIL: 52" WAS 54", 6'-11 WAS 6'-9 12'-1 WAS 12'-3, 9'-7 WAS 9'-5 | 29 JAN 75 | RJE | RAJ | [illegible] | [illegible] | [illegible] | |




| | | | | |
|---|---|---|---|---|
| | 15 | BUMPER ASSY. | 2 | B-14191 |
| CI | 14 | A.H. L-BLOCK ASSY. | 1 | B-14190 |
| | 13 | A.H. EQUALIZER ASSY. | 1 | B-14189 |
| CI | 12 | AUX HOIST ASSY. | 1 | A-11165 |
| CI | 11 | M.H. L-BLOCK ASSY | 1 | A-11164 |
| CI | 10 | M.H. TWIN SHEAVE ASSY. | 1 | B-14185 |
| CI | 9 | M.H. U-BLOCK ASSY. | 1 | A-11163 |
| | 8 | MAIN HOIST ASSY. | 1 | A-11162 |
| | 7 | 18" IDLER WHL ASSY. | 2 | B-14127 |
| | 6 | 24" IDLER WHL ASSY. | 2 | B-14186 |
| KI | 5 | 24" DR PLAIN WHL ASSY. | 1 | B-14126 |
| KI | 4 | 24" DR SPLINED WHL ASSY. | 1 | B-14187 |
| | 3 | TROLL DRIVE ASSY. | 1 | A-11161 |
| CI | 2 | TROLLEY TROLL FRAME | 1 | A-11159 |
| KI | 1 | MAIN TROLL FRAME | 1 | A-11158 |

EDERER INC. REF. DWG. NO A-11166

OCTOBER 8, 1980

COMANCHE PEAK S.E.S.
FINAL SAFETY ANALYSIS REPORT
UNITS 1 and 2

FUEL BLDG. CRANE

FIGURE 9.1-15 (SH. 2OF2)

| REV | DWN | CHKD | APVD | REMARKS |
|---|---|---|---|---|
| CP-44 | DLK 05-28-2015 | MM 06-01-2015 | MHF 06-09-2015 | THIS DRAWING REVISED TO INCORPORATE AI-CR-2015-004313-1 TO EDITORIALLY ADD CONTINUATION BLOCK TO M1-0240. |

NOTES:

1. THIS SYSTEM IS NUCLEAR SAFETY CLASS 3 EXCEPT FOR THE FOLLOWING, WHICH ARE NON-NUCLEAR SAFETY RELATED: CHLORINATION PIPING AND ASSOCIATED COMPONENTS, INCLUDING SPARGERS; SCREEN WASH PUMPS AND ASSOCIATED PIPING AND COMPONENTS; CIRCULATING WATER MAKEUP TO THE SSI; BIOCIDE INJECTION SYSTEM; CORROSION INHIBITION SYSTEM; AND RECIRCULATION LINE (ABANDONED IN PLACE).
2. FOR MECHANICAL SYMBOLS AND NOTES SEE DRAWING M1-0200.
3. ALL UNIT 2 LINES THAT ARE SHOWN WILL BE INSTALLED WITH UNIT 1 CONSTRUCTION.
4. TRAVELING SCREEN SPRAY HEADERS ARE SUPPLIED BY THE TRAVELING SCREEN MANUFACTURER.
5. 3□" AND SMALLER BRANCH CONNECTIONS TO MAIN LINES SHALL BE IN ACCORDANCE WITH THE DETAIL ON DRAWING M1-1103-01 (LOC: F-6). INSTRUMENTATION CONNECTIONS SHALL BE IN ACCORDANCE WITH SKETCHES XA-2323-M-309 AND XA-2323-M-757.
6. THREE (3") INCH Y-STRAINERS. STRAINERS CP1-SWSRPL-01/02/03/04 SHALL HAVE 40 MESH BASKETS MINIMUM AND STRAINERS CP1-SWSRPL-05/06/07/08 SHALL HAVE 200 MESH BASKETS MINIMUM.
7. FOR TYP VENT AND DRAIN DETAILS SEE DRAWING M1-0740-01.
8. INSTRUMENTATION AND CONTROL LOGIC PROVIDED BY CHLORINATION SYSTEM VENDOR.
9. UNLESS OTHERWISE NOTED ALL DRAINS COLLECTED BY LOCAL DRAIN SYSTEM.
10. DELETED
11. FOR TRASH BASKET DETAILS REFER TO STRUCTURAL DRAWINGS S-1107 AND S-1108 ( CPX-SWSNTR-01 ).
12. CHLORINATION HEADER SUPPLY VALVES 1SW-0056 ,1SW-0057 , 2SW-0056 AND 2SW-0057 ARE NORMALLY CLOSED. DURING CHLORINATION OPERATIONS, ONLY ONE OF THE FOUR VALVES IS OPENED, THUS PRESERVING TRAIN AND UNIT SEPARATION.
13. SCREEN WASH HEADER SUPPLY CROSSTIE VALVE XSW-0012 IS NORMALLY CLOSED. TRAIN A SCREEN WASH HEADER SUPPLY VALVES 1SW-0008 AND 2SW-0008 ARE ALIGNED SUCH THAT ONLY ONE VALVE IS OPEN AT A TIME. TRAIN B SCREEN WASH HEADER SUPPLY VALVES 1SW-0013 AND 2SW-0013 ARE ALIGNED SUCH THAT ONLY ONE VALVE IS OPEN AT A TIME. THUS, TRAIN AND UNIT SEPARATION IS PRESERVED.
14. DELETED
15. CROSS-CONNECT OPERABILITY FOR GDC-5 AND GDC-44

| CONDITION | UNIT (MODE 1-4) TRAIN ISOL VLV | TRAIN ISOL VLV | CROSSTIE XSW-0006 ISOL VLV | UNIT (MODE 1-4) TRAIN ISOL VLV | TRAIN ISOL VLV |
|---|---|---|---|---|---|
| a. NORMAL | NC* | NC* | LC* | NC* | NC* |
| b. 1 TRAIN ISOLATION ISOLATION VALVE OPEN | LO | LC | LC* | NC* | NC* |
| c. THE UNIT CROSSTIE ISOLATION VALVE OPEN | LC* | LC* | LO | NC* | NC* |
| d. b + c | LO | LC | LO | LC* | LC* |
| e. 1 TRAIN ISOLATION VALVE OPEN ON EACH UNIT | LO | LC | LC* | LO | LC |

* VALVES MAY BE CYCLED ONE AT A TIME IN ACCORDANCE WITH TECHNICAL SPECIFICATION 3.7.8 REQUIREMENTS AS DESCRIBED IN THE LCO BASES.

16. CHECK VALVE INTERNALS REMOVED, VALVE BODIES ABANDONED IN PLACE.
17. 1SW-0428 AND 1SW-0429 TO BE USED AS THROTTLING VALVES AND THEN LOCKED IN POSITION.
18. PROCESS TUBING IS ROUTED INSIDE CPVC OR PVC PIPE.
19. PROCESS TUBING IS ROUTED INSIDE METALLIC PIPE, PIPE ACTS AS A FIRE BREAK.
20. TAGS ASSOCIATED WITH THE SWIS CORROSION INHIBITOR/ DISPERSANT STORAGE AND INJECTION SKID ARE:

| | |
|---|---|
| CPX-SWPMCI-01 | SSW CORROSION INHIBITOR PHOSPHORIC ACID PUMP X-01 |
| CPX-SWPMCI-02 | SSW CORROSION INHIBITOR POLYMER PUMP X-02 |
| CPX-SWPMCI-03 | SSW CORROSION INHIBITOR HEDP PUMP X-03 |
| CPX-SWTNCI-01 | SSW CORROSION INHIBITOR PHOSPHORIC ACID TANK-01 |
| CPX-SWTNCI-02 | SSW CORROSION INHIBITOR POLYMER TANK-02 |
| CPX-SWTNCI-03 | SSW CORROSION INHIBITOR HEDP TANK-03 |
| X-LT-3596A | SSW CORROSION INHIBITOR PHOSPHORIC ACID TANK LEVEL TRANSMITTER |
| X-LT-3596B | SSW CORROSION INHIBITOR POLYMER TANK LEVEL TRANSMITTER |
| X-LT-3596C | SSW CORROSION INHIBITOR HEDP TANK LEVEL TRANSMITTER |

| DRAWING 2323-M1-0233 REV CP-10 HAS BEEN SPLIT INTO THE FOLLOWING SHEETS: |
|---|
| M1-0233 |
| M1-0233-A |

CLASS I
(NUCLEAR SAFETY-RELATED)

| | |
|---|---|
| SAFETY CLASS 1 | SEISMIC CATEGORY I |
| SAFETY CLASS 2 | CLASS 1E |
| SAFETY CLASS 3 | ASSOCIATED CIRCUITS |

LUMINANT
CPNPP
GLEN ROSE, TEXAS

FLOW DIAGRAM
STATION SERVICE WATER SYSTEM

| DWG. NO. | SH. NO. | REV. |
|---|---|---|
| M1-0233 | - | CP-44 |

FSAR FIGURE 9.2-1

THIS DRAWING CREATED ELECTRONICALLY

REF CKD CP-29 10/15/97

SSSSSSSSDATESSSSS

me103690.dgn M1-0233 < FINAL PRINT >

| REV | DWN | CHKD | APVD | REMARKS |
|---|---|---|---|---|
| CP-21 | DLK 06-07-2017 | MM 06-08-2017 | MHF 06-08-2017 | THIS DRAWING REVISED TO INCORPORATE EDITORIALLY CHANGES PER AI-TR-2017-006942-1. |

NOTES:

1. DELETED
2. THIS SYSTEM IS NUCLEAR SAFETY CLASS 3 EXCEPT AS NOTED
3. FOR MECHANICAL SYMBOLS AND NOTES SEE DRAWING M1-0200.
4. ALL UNIT 2 LINES THAT ARE SHOWN WILL BE INSTALLED WITH UNIT 1 CONSTRUCTION.
5. 3□" AND SMALLER BRANCH CONNECTIONS TO MAIN LINES SHALL BE IN ACCORDANCE WITH THE DETAIL ON DRAWING M1-1103-01 (ZONE F-6). INSTRUMENTATION CONNECTIONS SHALL BE IN ACCORDANCE WITH SKETCHES XA-2323-M-309 AND XA-2323-M-757.
6. RELIEF VALVES SUPPLIED WITH HEAT EXCHANGER SUPPLIED BY STRUTHERS WELLS.
7. FOR TYPICAL VENT AND DRAIN DETAILS SEE DRAWING M1-0740-01.
8. UNLESS OTHERWISE NOTED ALL DRAINS COLLECTED BY LOCAL DRAIN SYSTEM.
9. REMOVE CHECK VALVE 1SW-0016 , 1SW-0017 INTERNALS, ABANDON IN PLACE PER DCN 6537 REV 0.
10. SURFACE MOUNTED ULTRASONIC FLOW ELEMENT AND ASSOCIATED REMOTE MOUNTED FLOW TRANSDUCER ARE ABANDONED IN PLACE PER FDA-2015-000042-01.

FSAR FIGURE 9.2-1

THIS DRAWING CREATED ELECTRONICALLY

DRAWING 2323-M1-0233 REV CP-10
HAS BEEN SPLIT INTO THE FOLLOWING SHEETS:

| |
|---|
| M1-0233 |
| M1-0233-A |
| |
| |
| |

CLASS I
(NUCLEAR SAFETY-RELATED)
SAFETY CLASS 1 SEISMIC CATEGORY I
SAFETY CLASS 2 CLASS 1E
SAFETY CLASS 3 ASSOCIATED CIRCUITS

LUMINANT
CPNPP
GLEN ROSE, TEXAS

FLOW DIAGRAM
STATION SERVICE WATER
SYSTEM

| DWG. NO. | SH. NO. | REV. |
|---|---|---|
| M1-0233 | A | CP-21 |

me379900.dgn A M1-0233-A B C D E F G FINAL PRINT H

CPE

| REV | DWN | CHK | APVD | REMARKS |
|---|---|---|---|---|
| CP-31 | DLK 06-16-2016 | GAW 06-16-2016 | | THIS DRAWING REVISED TO INCORPORATE DESIGN CHANGE FDA 2016-000053-01-00 PER SK-00001-16-000053-01-00. |

NOTES:

1. THIS SYSTEM IS NUCLEAR SAFETY CLASS 3.
2. FOR MECHANICAL SYMBOLS AND NOTES SEE DRAWING M1-0200.
3. 3□" AND SMALLER BRANCH CONNECTIONS TO MAIN LINES SHALL BE IN ACCORDANCE WITH THE DETAIL ON DRAWING M1-1103-01 (ZONE F-6). INSTRUMENTATION CONNECTIONS SHALL BE IN ACCORDANCE WITH SKETCHES XA-2323-M-309 AND XA-2323-M-757.
4. UNLESS OTHERWISE NOTED ALL DRAINS TO BE COLLECTED LOCALLY UNDER ADMINISTRATIVE CONTROL.
5. CHECK VALVE INTERNALS ARE REMOVED, VALVE BODIES ARE ABANDONED IN PLACE.
6. VACUUM BREAKER SET POINT 1 0.5 PSID.
7. Y-STRAINER SCREEN HAS BEEN REMOVED FOR CP1-SWSRCH-01, CP1-SWSRCH-02, CP1-SWSRCS-01, CP1-SWSRCS-02, CP1-SWSRSI-01 AND CP1-SWSRSI-02.
8. DELETED
9. SURFACE MOUNTED ULTRASONIC FLOW ELEMENT AND ASSOCIATED REMOTE MOUNTED FLOW TRANSDUCER ARE ABANDONED IN PLACE PER FDA-2015-000042-01.
10. VACUUM BREAKERS CP1-SWVAVB-03 AND CP1-SWVAVB-04 ARE ABANDONED IN PLACE.

R

CLASS I
(NUCLEAR SAFETY-RELATED)
SAFETY CLASS 1 SEISMIC CATEGORY I
SAFETY CLASS 2 CLASS 1E
SAFETY CLASS 3 ASSOCIATED CIRCUITS

**LUMINANT**
**CPNPP**
**GLEN ROSE, TEXAS**

FLOW DIAGRAM
STATION SERVICE WATER SYSTEM

| DWG. NO. | SH. NO. | REV. |
|---|---|---|
| M1-0234 | - | CP-31 |

FSAR FIGURE 9.2-1

THIS DRAWING CREATED ELECTRONICALLY

REF CKD 8-5-98 CP-21

mc103910.dgn A M1-0234 FINAL PRINT

| REV | DWN | CHKD | APVD | REMARKS |
|---|---|---|---|---|
| CP-17 | MM 08-01 2017 | GAW 08-01 2017 | | THIS DRAWING REVISED TO INCORPORATE DESIGN CHANGE FDA-2017-000122-01-00 PER SK-0001-17-000122-01-00. |

NOTES:

1. FOR MECHANICAL SYMBOLS AND NOTES SEE DRAWING M1-0200.
2. UNLESS OTHERWISE NOTED ALL DRAINS COLLECTED BY LOCAL DRAIN SYSTEM.
3. DELETED
4. LINE CL-X-205 FROM VALVE XCL-0326 TO ITS DISCHARGE IN THE STATION SERVICE WATER DISCHARGE OPEN CANAL SHALL BE A DOUBLE CONTAINMENT CONFIGURATION CONSISTING OF AN 1□" PVC (009) PIPE WITH □" CPVC (008) INSIDE.

AQUASHADE CONTAINER
CPX-CLTNAS-01

CALIBRATION COLUMN
CPX-CLMEAS-01

CPX-CLSNAS-01

CPX-CLPMAS-01

CPX-CLSNAS-02

CPX-CLPMAS-02

AQUASHADE INJECTION PUMPS

STATION SERVICE WATER DISCHARGE OPEN CANAL

SEE NOTE 4

6,000 GAL
SODIUM HYPOCHLORITE
TANK
CPX-CLTNSH-07

CALIBRATION COLUMN
CPX-CLMESH-04

CPX-CLSNSH-06

CPX-CLPMSH-07

CPX-CLSNSH-07

CPX-CLPMSH-08

SODIUM HYPOCHLORITE
INJECTION PUMPS

6,000 GAL
SODIUM BROMIDE
TANK
CPX-CLTNSB-06

CALIBRATION COLUMN
CPX-CLMESB-05

CPX-CLSNSB-06

CPX-CLPMSB-09

CPX-CLSNSB-07

CPX-CLPMSB-10

SODIUM BROMIDE
INJECTION PUMPS

SWIS
SODIUM HYPOCHLORITE/
SODIUM BROMIDE
PUMP SKID
CPX-CLSESW-01

STATIC MIXER
CPX-CLBLSW-02

VENDOR SUPPLIED

SERVICE WATER CHLORINATION SYSTEM

STATION SERV WATER SYSTEM M1-0233 LOC: A-1

STATION SERV WATER SYSTEM M1-0233 LOC: A-2

STATION SERV WATER SYSTEM M2-0233 LOC: A-6

400 GAL SEMI-BULK CONTAINER (CLAMICIDE)

VENDOR EQUIPMENT

QUICK CONNECTIONS

TANK FILL STATION

SERVICE WATER CHLORINATION BUILDING YARD

SERVICE WATER INTAKE STRUCTURE

FSAR FIGURE 9.2-1

THIS DRAWING CREATED ELECTRONICALLY

REF CKD 02/24/10 CP-13

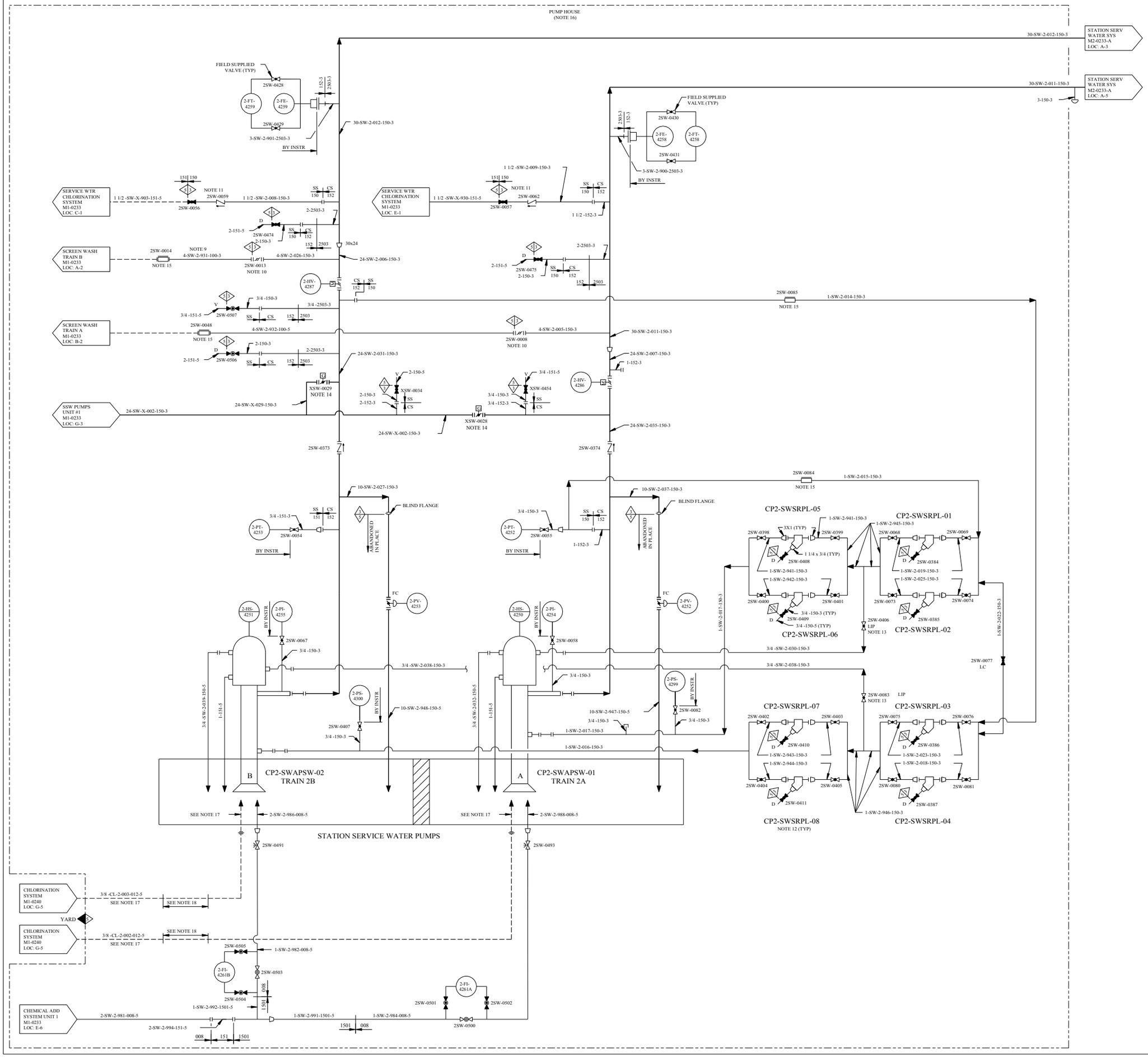
CLASS II

LUMINANT
CPNPP
GLEN ROSE, TEXAS

FLOW DIAGRAM
CHLORINATION SYSTEM

| DWG. NO. | SH. NO. | REV. |
|---|---|---|
| M1-0240 | - | CP-17 |

mc994600.dgn A M1-0240 FINAL PRINT




| REV | DWN | CHK | APVD | REMARKS |
|---|---|---|---|---|
| CP-20 | BGG 02-01-2011 | DLA 02-02-2011 | | THIS DRAWING REVISED TO INCORPORATE DESIGN CHANGE FDA 2006-000911-01-00 PER SK-0001-06-000911-01-00. |

NOTES:

1. THIS SYSTEM IS NUCLEAR SAFETY CLASS 3 EXCEPT FOR THE FOLLOWING, WHICH ARE NON-NUCLEAR SAFETY RELATED:
   CHLORINATION PIPING AND ASSOCIATED COMPONENTS, INCLUDING SPARGERS;
   SCREEN WASH PUMPS AND ASSOCIATED PIPING AND COMPONENTS;
   CIRCULATING WATER MAKEUP TO THE SSI;
   BIOCIDE INJECTION SYSTEM; CORROSION INHIBITION SYSTEM; AND
   RECIRCULATION LINE (ABANDONED IN PLACE).
2. FOR MECHANICAL SYMBOLS AND NOTES SEE DWG M1-0200.
3. DELETED
4. DELETED
5. UNLESS OTHERWISE NOTED ALL DRAINS COLLECTED BY LOCAL DRAIN SYSTEM.
6. THREE INCH Y STRAINERS.
7. DELETED
8. FOR TYPICAL VENT AND DRAIN DETAILS SEE DWG M1-0740-01.
9. UNIT 2 LINE SHALL BE SHIELDED/LAGGED PER THE REQUIREMENTS PROVIDED IN PIPELINE DESGINATION LIST, CPSES-M-1017, PRIOR TO PRESSURIZATION (i.e. START-UP FLUSHING, HYDRO TESTING).
10. SCREEN WASH HEADER SUPPLY CROSSTIE VALVE XSW-0012 IS NORMALLY CLOSED. TRAIN A SCREEN WASH HEADER SUPPLY VALVES 1SW-0008 AND 2SW-0008 ARE ALIGNED SUCH THAT ONLY ONE VALVE IS OPEN AT A TIME TRAIN B SCREEN WASH HEADER SUPPLY VALVES 1SW-0013 AND 2SW-0013 ARE ALIGNED SUCH THAT ONLY ONE VALVE IS OPEN AT A TIME. THUS, TRAIN AND UNIT SEPERATION IS PRESERVED.
11. CHLORINATION HEADER SUPPLY VALVES 1SW-0056 , 1SW-0057 , 2SW-0056 AND 2SW-0057 ARE NORMALLY CLOSED, DURING CHLORINATION OPERATIONS, ONLY ONE OF THE FOUR VALVES IS OPENED. THUS PRESERVING TRAIN AND UNIT SEPERATION.
12. THREE (3") INCH Y-STRAINERS. STRAINERS CP2-SWSRPL-01 , CP2-SWSRPL-02 , CP2-SWSRPL-03 AND CP2-SWSRPL-04 SHALL HAVE 40 MESH BASKETS MINIMUM AND STRAINERS CP2-SWSRPL-05 CP2-SWSRPL-06 , CP2-SWSRPL-07 AND CP2-SWSRPL-08 SHALL HAVE 200 MESH BASKETS MINIMUM. R
13. 2SW-0406 AND 2SW-0083 TO BE USED AS THROTTLING VALVES AND THEN LOCKED IN POSITION.
14. CROSS-CONNECT OPERABILITY FOR GDC-5 AND GDC-44

| CONDITION | UNIT (MODE 1-4) TRAIN ISOL VLV | TRAIN ISOL VLV | CROSSTIE XSW-0006 ISOL VLV | UNIT (MODE 1-4) TRAIN ISOL VLV | TRAIN ISOL VLV |
|---|---|---|---|---|---|
| a. NORMAL | NC* | NC* | LC* | NC* | NC* |
| b. 1 TRAIN ISOLATION ISOLATION VALVE OPEN | LO | LC | LC* | NC* | NC* |
| c. THE UNIT CROSSTIE ISOLATION VALVE OPEN | LC* | LC* | LO | NC* | NC* |
| d. b + c | LO | LC | LO | LC* | LC* |
| e. 1 TRAIN ISOLATION VALVE OPEN ON EACH UNIT | LO | LC | LC* | LO | LC |

* VALVES MAY BE CYCLED ONE AT A TIME IN ACCORDANCE WITH TECHNICAL SPECIFICATION 3.7.8 REQUIREMENTS AS DESCRIBED IN THE LCO BASES.

15. CHECK VALVE INTERNALS REMOVED, VALVE BODY ABANDONED IN PLACE.
16. ALL COMPONENTS ON THIS DRAWING ARE LOCATED INSIDE THE PUMP HOUSE. SEE M1-0233 FOR UNIT 1 COMPONENTS ALSO LOCATED IN THE SAME PUMP HOUSE.
17. PROCESS TUBING IS ROUTED INSIDE CPVC OR PVC PIPE.
18. PROCESS TUBING IS ROUTED INSIDE METALLIC PIPE, PIPE ACTS AS A FIRE BREAK.

FSAR FIGURE 9.2-1

THIS DRAWING CREATED ELECTRONICALLY

DRAWING M2-0233 REV CP-2
HAS BEEN SPLIT INTO THE FOLLOWING SHEETS:
M2-0233
M2-0233-A

CLASS I
(NUCLEAR SAFETY-RELATED)
SAFETY CLASS 1 — SEISMIC CATEGORY I
SAFETY CLASS 2 — CLASS 1E
SAFETY CLASS 3 — ASSOCIATED CIRCUITS

LUMINANT
CPNPP
GLEN ROSE, TEXAS

FLOW DIAGRAM
STATION SERVICE WATER
SYSTEM

DWG. NO. M2-0233 | SH. NO. - | REV. CP-20

FINAL PRINT

REF CKD CP-11 2/19/98

| REV | DWN | CHKD | APVD | REMARKS |
|---|---|---|---|---|
| CP-9 | DLK 06-24-2015 | MM 08-19-2015 | | THIS DRAWING REVISED TO INCORPORATE DESIGN CHANGE FDA 2015-000042-01-00 PER SK-0009-15-000042-01-00. |

NOTES:

1. THIS SYSTEM IS NUCLEAR SAFETY CLASS 3 EXCEPT FOR THE FOLLOWING, WHICH ARE NON-NUCLEAR SAFETY RELATED:
   CHLORINATION PIPING AND ASSOCIATED COMPONENTS, INCLUDING SPARGERS;
   SCREEN WASH PUMPS AND ASSOCIATED PIPING AND COMPONENTS;
   CIRCULATING WATER MAKEUP TO THE SSI;
   BIOCIDE INJECTION SYSTEM; AND
   RECIRCULATION LINE (ABANDONED IN PLACE).
2. FOR MECHANICAL SYMBOLS AND NOTES SEE DWG M1-0200.
3. DELETED
4. RELIEF VALVE SUPPLIED WITH THE HEAT EXCHANGER.
5. UNLESS OTHERWISE NOTED ALL DRAINS COLLECTED BY LOCAL DRAIN SYSTEM.
6. DELETED
7. DELETED
8. FOR TYPICAL VENT AND DRAIN DETAILS SEE DWG M1-0740-01.
9. CHECK VALVE INTERNAL REMOVED, VALVE BODY ABANDONED IN PLACE.
10. SURFACE MOUNTED ULTRASONIC FLOW ELEMENT AND ASSOCIATED REMOTE MOUNTED FLOW TRANSDUCER ARE ABANDONED IN PLACE PER FDA-2015-000042-01.

R

FSAR FIGURE 9.2-1

THIS DRAWING CREATED ELECTRONICALLY

DRAWING M2-0233 REV CP-2
HAS BEEN SPLIT INTO THE FOLLOWING SHEETS:
M2-0233
M2-0233-A

CLASS I
(NUCLEAR SAFETY-RELATED)
SAFETY CLASS 1 — SEISMIC CATEGORY I
SAFETY CLASS 2 — CLASS 1E
SAFETY CLASS 3 — ASSOCIATED CIRCUITS

LUMINANT
CPNPP
GLEN ROSE, TEXAS

FLOW DIAGRAM
STATION SERVICE WATER
SYSTEM
SHEET 2 OF 3

| DWG. NO. | SH. NO. | REV. |
|---|---|---|
| M2-0233 | A | CP-9 |

FINAL PRINT

rne862700.dgn M2-0233-A

| REV | DWN | CHKD | APVD | REMARKS |
|---|---|---|---|---|
| CP-13 | DLK 06-16-2016 | GAW 06-16-2016 | | THIS DRAWING REVISED TO INCORPORATE DESIGN CHANGE FDA 2016-000053-01-00 PER SK-0002-16-000053-01-00. |

NOTES:

1. THIS SYSTEM IS NUCLEAR SAFETY CLASS 3.
2. FOR MECHANICAL SYMBOLS AND NOTES SEE DRAWING M1-0200.
3. 3□" AND SMALLER BRANCH CONNECTIONS TO MAIN LINES SHALL BE IN ACCORDANCE WITH THE DETAIL ON DRAWING M2-1103-01 INSTRUMENTATION CONNECTIONS SHALL BE IN ACCORDANCE WITH SKETCHES XA-2323-M-309 AND XA-2323-M-757.
4. ALL DRAINS SHALL BE COLLECTED IN LOCAL DRAIN SYSTEM UNLESS OTHERWISE SPECIFIED.
5. CHECK VALVE INTERNALS ARE REMOVED, VALVE BODIES ARE ABANDONED IN PLACE.
6. VACUUM BREAKER SET POINT 1 0.5 PSID.
7. Y-STRAINER SCREEN HAS BEEN REMOVED FOR CP2-SWSRCH-01, CP2-SWSRCS-01 AND CP2-SWSRSI-01.
8. Y-STRAINER SCREEN HAS BEEN REMOVED FOR CP2-SWSRCH-02, CP2-SWSRCS-02 AND CP2-SWSRSI-02.
9. SURFACE MOUNTED ULTRASONIC FLOW ELEMENT AND ASSOCIATED REMOTE MOUNTED FLOW TRANSDUCER ARE ABANDONED IN PLACE PER FDA-2015-000042-01.
10. VACUUM BREAKERS CP2-SWVAVB-03 AND CP2-SWVAVB-04 ABANDONED IN PLACE.

R

FSAR FIGURE 9.2-1

THIS DRAWING CREATED ELECTRONICALLY

REF CIRD 6/19/2001

CLASS I
(NUCLEAR SAFETY-RELATED)

| | |
|---|---|
| SAFETY CLASS 1 | SEISMIC CATEGORY I |
| SAFETY CLASS 2 | CLASS 1E |
| SAFETY CLASS 3 | ASSOCIATED CIRCUITS |

LUMINANT
CPNPP
GLEN ROSE, TEXAS

FLOW DIAGRAM
STATION SERVICE WATER
SYSTEM

| DWG. NO. | SH. NO. | REV. |
|---|---|---|
| M2-0234 | - | CP-13 |

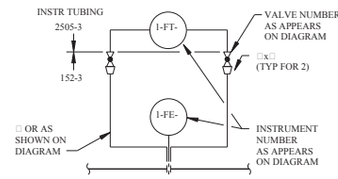
me101750.dgn A M2-0234 FINAL PRINT

**Figure 9.2-2 has been deleted.**

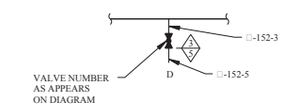
| REV | DWN | CHK | APVD | REMARKS |
|---|---|---|---|---|
| CP-23 | DJK 10-22-2012 | GAW 10-22-2012 | | THIS DRAWING REVISED TO INCORPORATE DESIGN CHANGE FDA 2012-000187-01-00 PER SK-0001-12-000187-01-00. |

NOTES:

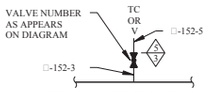
1. CCW SYSTEM IS SAFETY CLASS 3 EXCEPT AS NOTED.
2. DELETED
3. DELETED
4. DELETED
5. UNLESS OTHERWISE NOTED, ALL DRAINS TO BE LOCALLY COLLECTED UNDER ADMINISTRATIVE CONTROL.
6. FOR GENERAL NOTES AND SYMBOLS SEE DWG M1-0200.
7. THIS FLOW DIAGRAM SHOWS VALVE POSITIONS UNIT 1 AND 2 IN OPERATION.
8. ALL VALVES IDENTIFIED AS LIP SHALL BE LOCKED IN POSITION IMMEDIATELY AFTER FINAL BALANCING TO ENSURE THROTTLED POSITION IS MAINTAINED.
9. DELETED
10. VALVES 1CC-0107 , 1CC-0109 , 1CC-0157 AND 1CC-0158 HAVE MODIFIED DISCS THAT FUNCTION AS RESTRICTIVE ORIFICES. THEY CANNOT BE USED FOR ISOLATION PURPOSES.




TYPICAL FLOW STATION DETAIL
(UNLESS OTHERWISE NOTED)




TYPICAL DRAIN DETAIL
(UNLESS OTHERWISE NOTED)




TYPICAL VENT DETAIL
(UNLESS OTHERWISE NOTED)
TYPICAL ALSO FOR TEST CONN (TC)

| DRAWING 2323-M1-0229 REV CP-5 |
|---|
| HAS BEEN SPLIT INTO THE FOLLOWING SHEETS: |
| M1-0229 |
| M1-0229-A |
| M1-0229-B |

CLASS I
(NUCLEAR SAFETY-RELATED)

| | |
|---|---|
| SAFETY CLASS 1 | SEISMIC CATEGORY I |
| SAFETY CLASS 2 | CLASS 1E |
| SAFETY CLASS 3 | ASSOCIATED CIRCUITS |

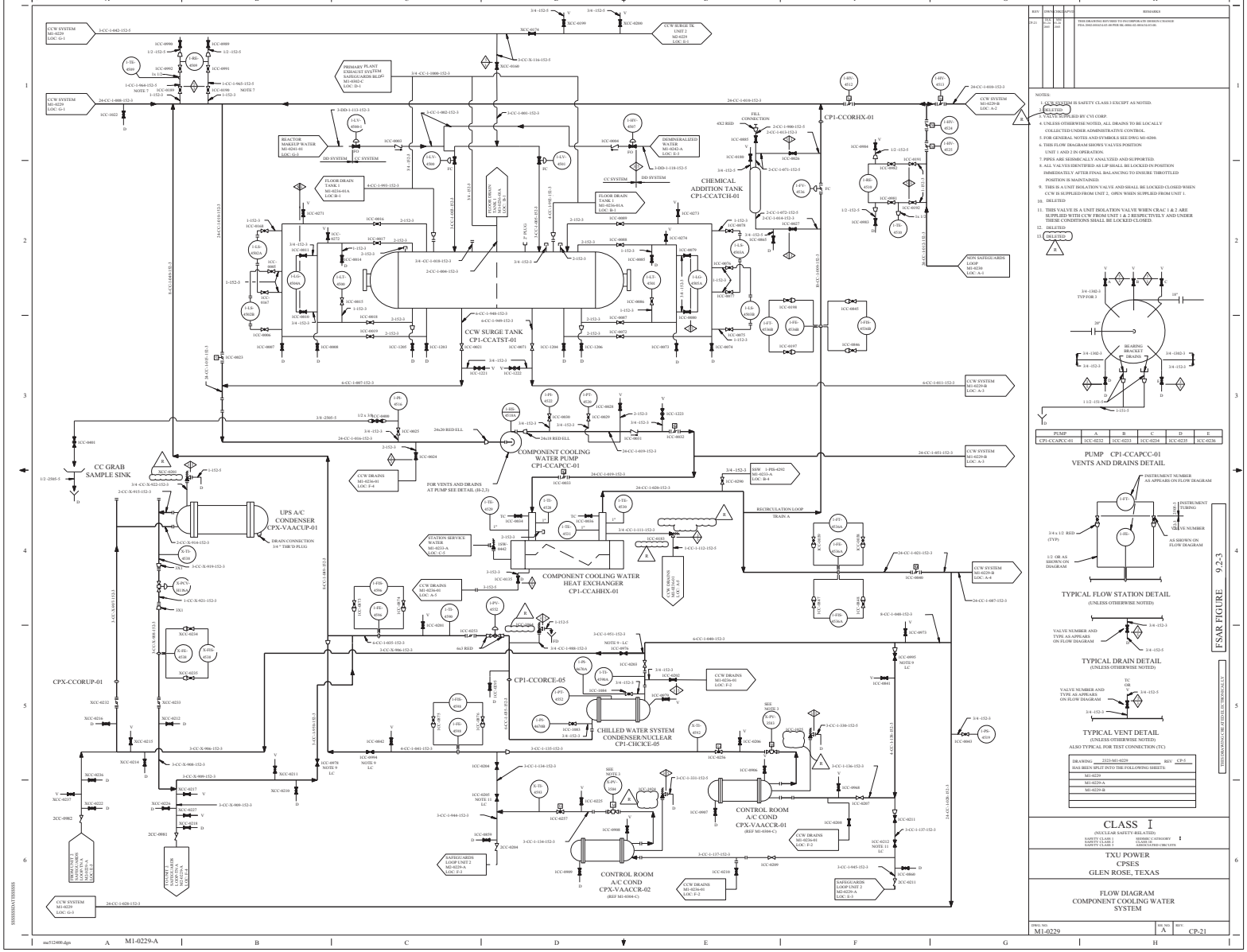
LUMINANT
CPNPP
GLEN ROSE, TEXAS

FLOW DIAGRAM
COMPONENT COOLING WATER
SYSTEM
SHEET 1 OF 8

| DWG. NO. | SH. NO. | REV. |
|---|---|---|
| M1-0229 | - | CP-23 |

FSAR FIGURE 9.2-3

THIS DRAWING CREATED ELECTRONICALLY




NOTES:

1. CCW SYSTEM IS SAFETY CLASS 3 EXCEPT AS NOTED.
2. DELETED
3. VALVES SUPPLIED BY CVI CORP.
4. UNLESS OTHERWISE NOTED, ALL DRAINS TO BE LOCALLY COLLECTED UNDER ADMINISTRATIVE CONTROL.
5. FOR GENERAL NOTES AND SYMBOLS SEE DWG M1-0200.
6. THIS FLOW DIAGRAM SHOWS VALVES POSITION UNIT 1 AND 2 IN OPERATION.
7. PIPES ARE SEISMICALLY ANALYZED AND SUPPORTED.
8. ALL VALVES IDENTIFIED AS LP SHALL BE LOCKED IN POSITION IMMEDIATELY AFTER FINAL BALANCING TO ENSURE THROTTLED POSITION IS MAINTAINED.
9. THIS IS A UNIT ISOLATION VALVE AND SHALL BE LOCKED CLOSED WHEN CCW IS SUPPLIED FROM UNIT 2. OPEN WHEN SUPPLIED FROM UNIT 1.
10. DELETED
11. THIS VALVE IS A UNIT ISOLATION VALVE WHEN CRAC 1 & 2 ARE SUPPLIED WITH CCW FROM UNIT 1 & 2 RESPECTIVELY AND UNDER THESE CONDITIONS SHALL BE LOCKED CLOSED.
12. DELETED
13. DELETED

| PUMP | A | B | C | D | E |
|---|---|---|---|---|---|
| CP1-CCAPCC-01 | ICC-0232 | ICC-0233 | ICC-0234 | ICC-0235 | ICC-0236 |

PUMP CP1-CCAPCC-01
VENTS AND DRAINS DETAIL

TYPICAL FLOW STATION DETAIL
(UNLESS OTHERWISE NOTED)

TYPICAL DRAIN DETAIL
(UNLESS OTHERWISE NOTED)

TYPICAL VENT DETAIL
(UNLESS OTHERWISE NOTED)
ALSO TYPICAL FOR TEST CONNECTION (TC)

| DRAWING 2221-M1-0229 REV CP-5 HAS BEEN SPLIT INTO THE FOLLOWING SHEETS: |
|---|
| M1-0229 |
| M1-0229-A |
| M1-0229-B |
| |
| |

CLASS I
(NUCLEAR SAFETY-RELATED)
SAFETY CLASS 1 / SAFETY CLASS 2 / SAFETY CLASS 3
SEISMIC CATEGORY I
ASSOCIATED CIRCUITS

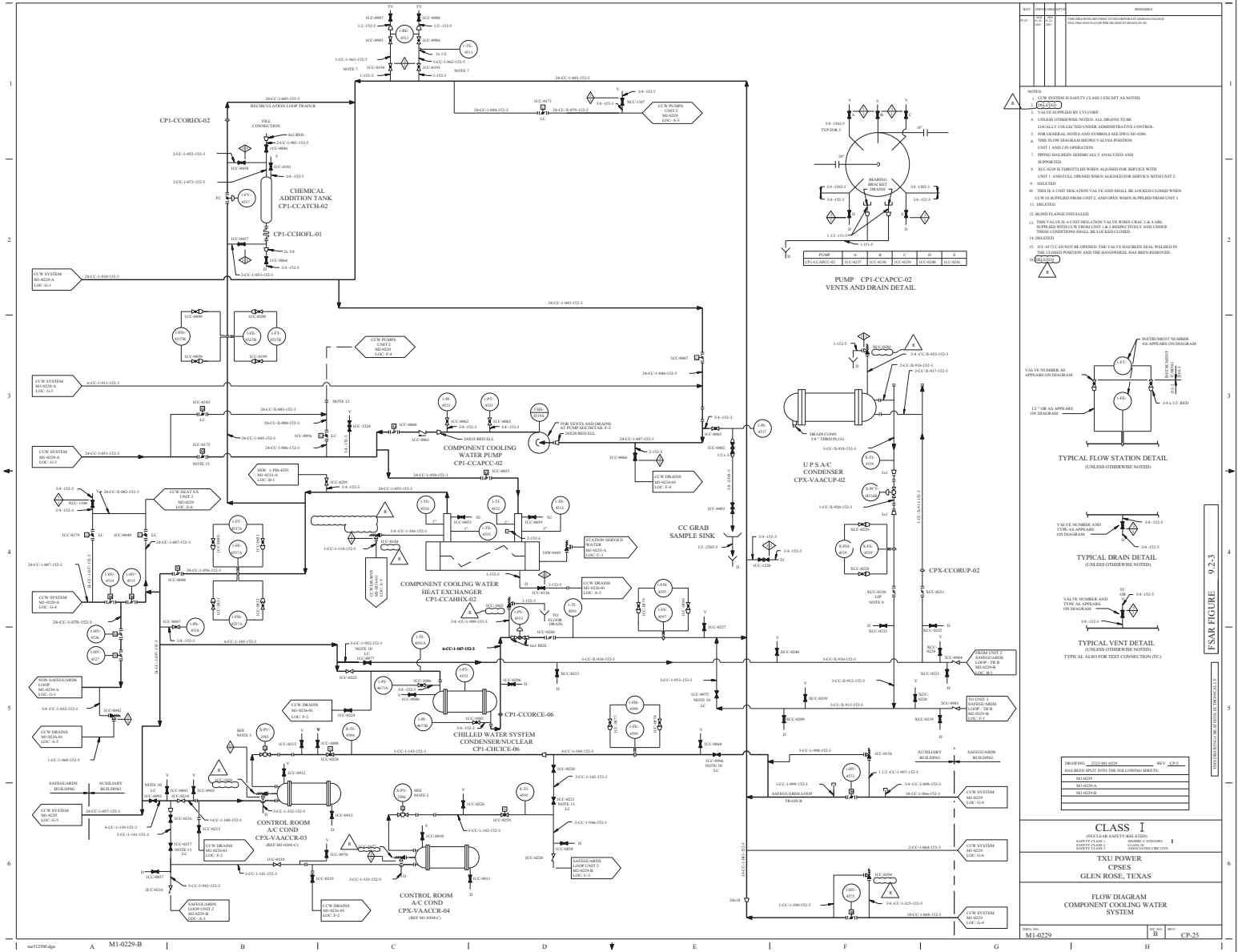
TXU POWER
CPSES
GLEN ROSE, TEXAS

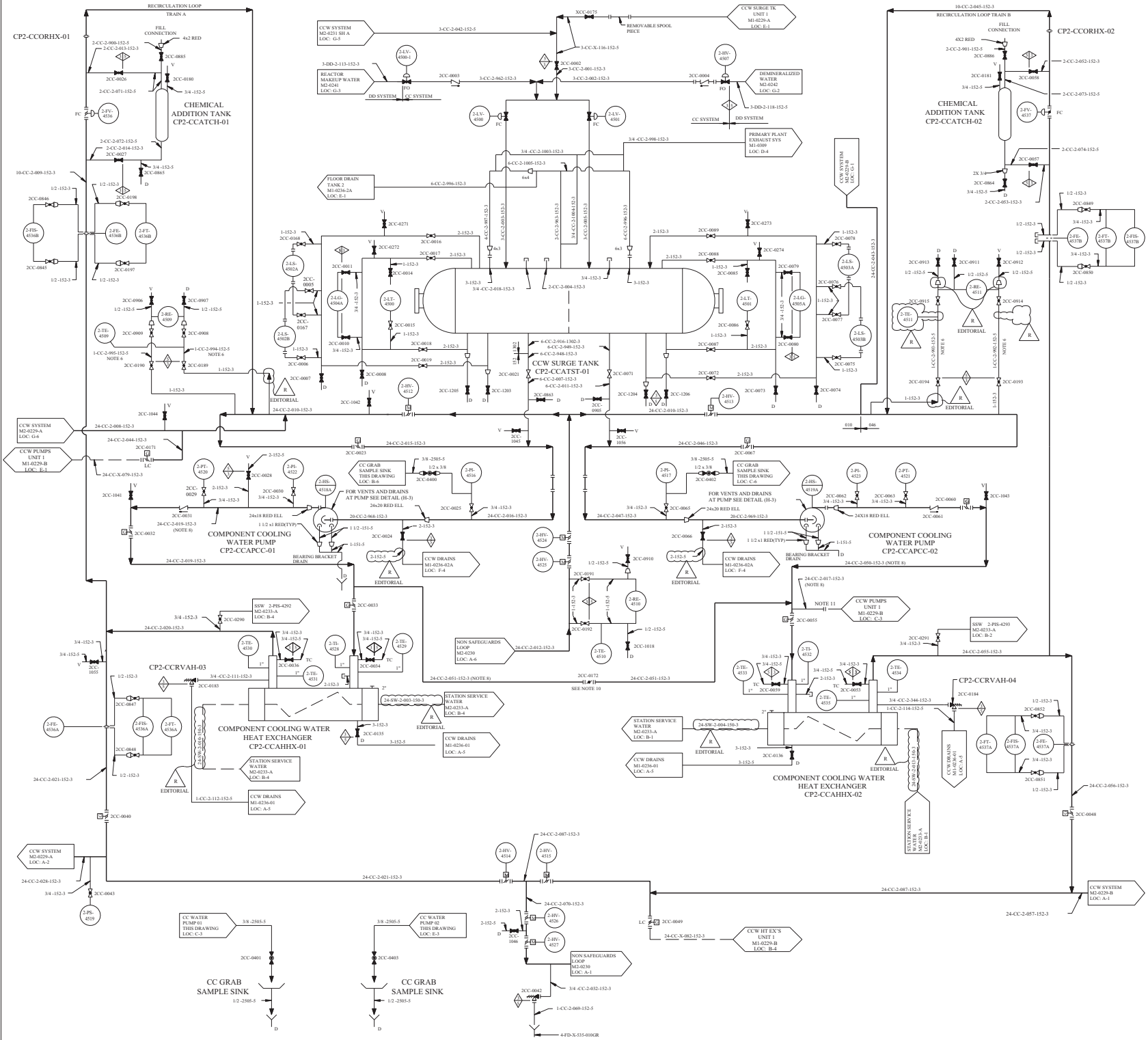
FLOW DIAGRAM
COMPONENT COOLING WATER SYSTEM

DWG. NO. M1-0229 | REV. NO. A | REV. CP-21

FSAR FIGURE 9.2-3

THIS DRAWING REVISED TO INCORPORATE DESIGN CHANGE FDA_2002-0003-01-00 PER DCA_0002-02-00-01/A-01-00.


CP1-CCORHX-02
CHEMICAL ADDITION TANK CP1-CCATCH-02
CP1-CCHOFL-01
COMPONENT COOLING WATER PUMP CP1-CCAPCC-02
COMPONENT COOLING WATER HEAT EXCHANGER CP1-CCAHHX-02
CP1-CCORCE-06
CHILLED WATER SYSTEM CONDENSER/NUCLEAR CP1-CHCICE-06
CONTROL ROOM A/C COND CPX-VAACCR-03
CONTROL ROOM A/C COND CPX-VAACCR-04
CC GRAB SAMPLE SINK
U P S A/C CONDENSER CPX-VAACUP-02
CPX-CCORUP-02
PUMP CP1-CCAPCC-02 VENTS AND DRAIN DETAIL
TYPICAL FLOW STATION DETAIL
(UNLESS OTHERWISE NOTED)
TYPICAL DRAIN DETAIL
(UNLESS OTHERWISE NOTED)
TYPICAL VENT DETAIL
(UNLESS OTHERWISE NOTED)
TYPICAL ALSO FOR TEST CONNECTION (TC)
FSAR FIGURE 9.2-3
CCW SYSTEM M1-0229-A LOC: G-1
CCW SYSTEM M1-0229-A LOC: G-3
CCW SYSTEM M1-0229-A LOC: G-5
CCW SYSTEM M1-0229-A LOC: G-4
CCW HEAT EX UNIT 2 M2-0229 LOC: E-6
CCW PUMPS UNIT 2 M2-0229 LOC: F-4
CCW PUMPS UNIT 2 M2-0229 LOC: A-3
CCW DRAINS M1-0226-01 LOC: A-5
CCW DRAINS M1-0226-01 LOC: F-2
CCW DRAINS M1-0226-01 LOC: F-3
CCW DRAINS LOC: F-4
STATION SERVICE WATER M1-0233-A LOC: C-3
SAFEGUARDS LOOP UNIT 2 M2-0229-B LOC: A-3
SAFEGUARDS LOOP UNIT 2 M2-0229-B LOC: C-3
TO UNIT 2 SAFEGUARDS LOOP - TR B M2-0229-B LOC: F-1
FROM UNIT 2 SAFEGUARDS LOOP - TR B M2-0229-B LOC: E-1
NON SAFEGUARDS LOOP M1-0230-A LOC: G-1
SAFEGUARDS LOOP TRAIN B
AUXILIARY BUILDING
SAFEGUARDS BUILDING
CLASS I
(NUCLEAR SAFETY-RELATED)
TXU POWER
CPSES
GLEN ROSE, TEXAS
FLOW DIAGRAM
COMPONENT COOLING WATER SYSTEM
DRWG NO. M1-0229
REV. CP-25
M1-0229-B
ma512500.dgn




| REV | DWN | CHKD | APVD | REMARKS |
|---|---|---|---|---|
| CP-19 | MD 01-04-2005 | DLA 01-04-2005 | | THIS DRAWING REVISED TO INCORPORATE DESIGN CHANGE FDA-2004-002932-01-00 PER SK-0001-04-002932-01-00. EDITORIAL CHANGES AS NOTED. |

NOTES:

1. CCW SYSTEM IS SAFETY CLASS 3 EXCEPT AS NOTED.
2. DELETED
3. UNLESS OTHERWISE NOTED ALL DRAINS TO BE LOCALLY COLLECTED UNDER ADMINISTRATIVE CONTROL.
4. FLOW INDICATED AT ALL TEST CONNECTIONS. VENTS AND DRAINS SHOULD BE DIRECTED AWAY FROM THE PROCESS PIPING.
5. DURING UNIT 2 CONSTRUCTION, UNIT 2 PIPING IS TO BE PHYSICALLY ISOLATED FROM UNIT 1 PIPING BY REMOVAL OF A SPOOL PIECE TO PROVIDE AN INTERIM PIPING CONFIGURATION. BLIND FLANGES SHALL BE INSTALLED AS INDICATED ON DETAIL Y ON THE PIPING ISOMETRIC DRAWINGS. THE SPOOL PIECE, AFTER REMOVAL, SHALL BE STORED AS REQUIRED UNTIL RE-INSTALLATION.
6. PIPING HAS BEEN SEISMICALLY ANALYZED AND SUPPORTED.
7. DELETED
8. UNIT 2 LINE SHALL BE SHIELDED/LAGGED PER THE REQUIREMENTS PROVIDED IN PIPELINE DESIGNATION LIST, CPES-M-1017, PRIOR TO PRESSURIZATION (i.e. START-UP FLUSHING, HYDRO TESTING).
9. FOR MECHANICAL SYMBOLS AND NOTES SEE M1-0200.
10. 2CC-0172 CANNOT BE OPENED. THE VALVE HAS BEEN SEAL WELDED IN THE CLOSED POSITION AND THE HANDWHEEL HAS BEEN REMOVED.
11. BLIND FLANGE INSTALLED.
12. DELETED
13. DELETED

| PUMP | A | B | C | D | E |
|---|---|---|---|---|---|
| CP2-CCAPCC-01 | 2CC-0232 | 2CC-0233 | 2CC-0234 | 2CC-0235 | 2CC-0236 |
| CP2-CCAPCC-02 | 2CC-0237 | 2CC-0238 | 2CC-0239 | 2CC-0240 | 2CC-0241 |

PUMPS CP2-CCAPCC-01/02
VENTS AND DRAINS DETAIL

TYPICAL VENT CONNECTION
(UNLESS OTHERWISE NOTED)

TYPICAL DRAIN CONNECTION
(UNLESS OTHERWISE NOTED)

FSAR FIGURE 9.2-3

THIS DRAWING CREATED ELECTRONICALLY

DRAWING 2323-M2-0229 REV CP-4
HAS BEEN SPLIT INTO THE FOLLOWING SHEETS:
M2-0229
M2-0229-A
M2-0229-B

CLASS I
(NUCLEAR SAFETY-RELATED)
SAFETY CLASS 1
SAFETY CLASS 2
SAFETY CLASS 3
SEISMIC CATEGORY I
CLASS 1E
ASSOCIATED CIRCUITS

TXU POWER
CPSES
GLEN ROSE, TEXAS

FLOW DIAGRAM
COMPONENT COOLING WATER SYSTEM

DWG. NO. M2-0229 | SH. NO. - | REV. CP-19

FINAL PRINT

REF CKD 11/25/97 CP-13

me599900.dgn M2-0229

| REV | DWN | CHK | APVD | REMARKS |
|---|---|---|---|---|
| CP-14 | DJK 10-22-2012 | GAW 10-22-2012 | | THIS DRAWING REVISED TO INCORPORATE DESIGN CHANGE FDA 2012-000187-01-00 PER SK-0003-12-000187-01-00. |

NOTES:

1. CCW SYSTEM IS SAFETY CLASS 3 EXCEPT AS NOTED.
2. FLOW INDICATED AT ALL TEST CONNECTIONS, VENTS AND DRAINS SHOULD BE DIRECTED AWAY FROM THE PROCESS PIPING.
3. DELETED
4. UNLESS OTHERWISE NOTED, ALL DRAINS TO BE LOCALLY COLLECTED UNDER ADMINISTRATIVE CONTROL.
5. ALL VALVES IDENTIFIED AS LIP SHALL BE LOCKED IN POSITION IMMEDIATELY AFTER FINAL BALANCING TO ENSURE THROTTLED POSITION IS MAINTAINED.
6. DELETED
7. FOR MECHANICAL SYMBOLS AND NOTES SEE M1-0200.
8. THIS IS A UNIT ISOLATION VALVE WHICH SHALL BE LOCKED CLOSED WHEN CCW IS SUPPLIED FROM UNIT 1, AND OPEN WHEN SUPPLIED FROM UNIT 2.
9. DELETED
10. VALVES 2CC0107 AND 2CC0109 ARE MODIFIED DISCS THAT FUNCTION AS RESTRICTIVE ORIFICES. THEY CANNOT BE USED FOR ISOLATION PURPOSES.

TYPICAL VENT DETAIL
(UNLESS OTHERWISE NOTED)

TYPICAL DRAIN DETAIL
(UNLESS OTHERWISE NOTED)

TYPICAL TEST CONNECTION DETAIL
(UNLESS OTHERWISE NOTED)

FSAR FIGURE 9.2-3

THIS DRAWING CREATED ELECTRONICALLY

| DRAWING 2323-M2-0229 REV CP-4 |
|---|
| HAS BEEN SPLIT INTO THE FOLLOWING SHEETS: |
| M2-0229 |
| M2-0229-A |
| M2-0229-B |
| |
| |

CLASS I
(NUCLEAR SAFETY-RELATED)
SAFETY CLASS 1 — SEISMIC CATEGORY I
SAFETY CLASS 2 — CLASS 1E
SAFETY CLASS 3 — ASSOCIATED CIRCUITS

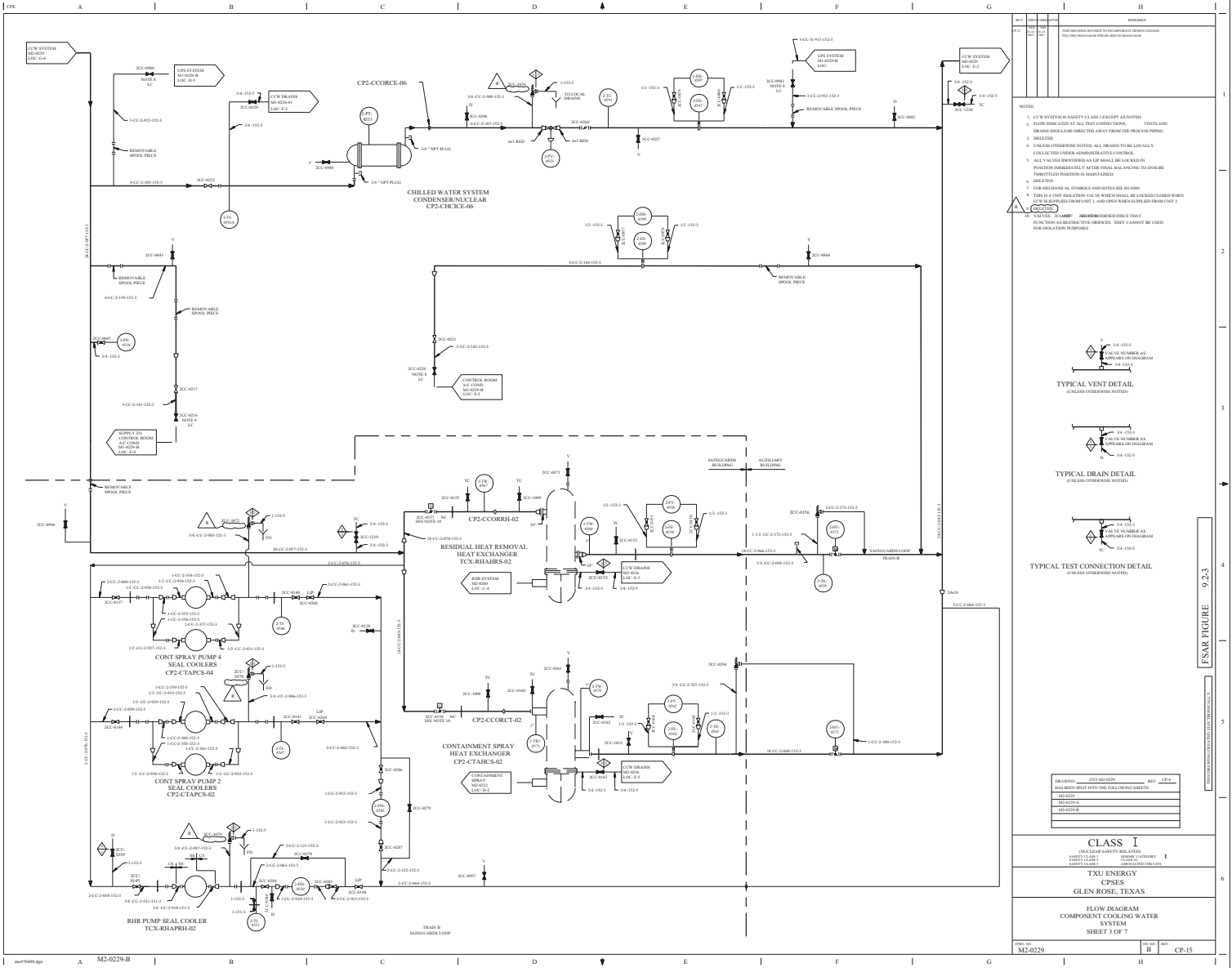
LUMINANT
CPNPP
GLEN ROSE, TEXAS

FLOW DIAGRAM
COMPONENT COOLING WATER SYSTEM
SHEET 2 OF 7

| DWG. NO. | SH. NO. | REV. |
|---|---|---|
| M2-0229 | A | CP-14 |

$$$$$$$$DATE$$$$$$$$

me486300.dgn M2-0229-A < FINAL PRINT >




| REV # | DATE | DRAFTER | APPROVED | REMARKS |
|---|---|---|---|---|
| CP-15 | 10/31/02 | TMH | TGH | THIS DRAWING REVISED TO INCORPORATE DESIGN CHANGE FDA 2002-00010-02-00 PER SIL-00105-02-00010-00-00 |

NOTES:

1. CCW SYSTEM IS SAFETY CLASS 3 EXCEPT AS NOTED.
2. FLOW INDICATED AT ALL TEST CONNECTIONS, VENTS AND DRAINS SHOULD BE DIRECTED AWAY FROM THE PROCESS PIPING.
3. DELETED
4. UNLESS OTHERWISE NOTED, ALL DRAINS TO BE LOCALLY COLLECTED UNDER ADMINISTRATIVE CONTROL.
5. ALL VALVES IDENTIFIED AS LIP SHALL BE LOCKED IN POSITION IMMEDIATELY AFTER FINAL BALANCING TO INSURE THROTTLED POSITION IS MAINTAINED.
6. DELETED
7. FOR MECHANICAL SYMBOLS AND NOTES SEE M1-0200.
8. THIS IS A UNIT ISOLATION VALVE WHICH SHALL BE LOCKED CLOSED WHEN CCW IS SUPPLIED FROM UNIT 1, AND OPEN WHEN SUPPLIED FROM UNIT 2.
9. DELETED
10. VALVES 2CC-6007 AND 2CC-6008 HAVE MODIFIED DISCS THAT FUNCTION AS RESTRICTIVE ORIFICES. THEY CANNOT BE USED FOR ISOLATION PURPOSES.

FSAR FIGURE 9.2-3

THIS DRAWING CREATED FULL DIGITALLY

DRAWING 2323-M2-0229 REV CP-4
HAS BEEN SPLIT INTO THE FOLLOWING SHEETS:
M2-0229
M2-0229-A
M2-0229-B

CLASS I
(NUCLEAR SAFETY-RELATED)
SAFETY CLASS 1 SEISMIC CATEGORY I
SAFETY CLASS 2
SAFETY CLASS 3 ASSOCIATED CIRCUITS

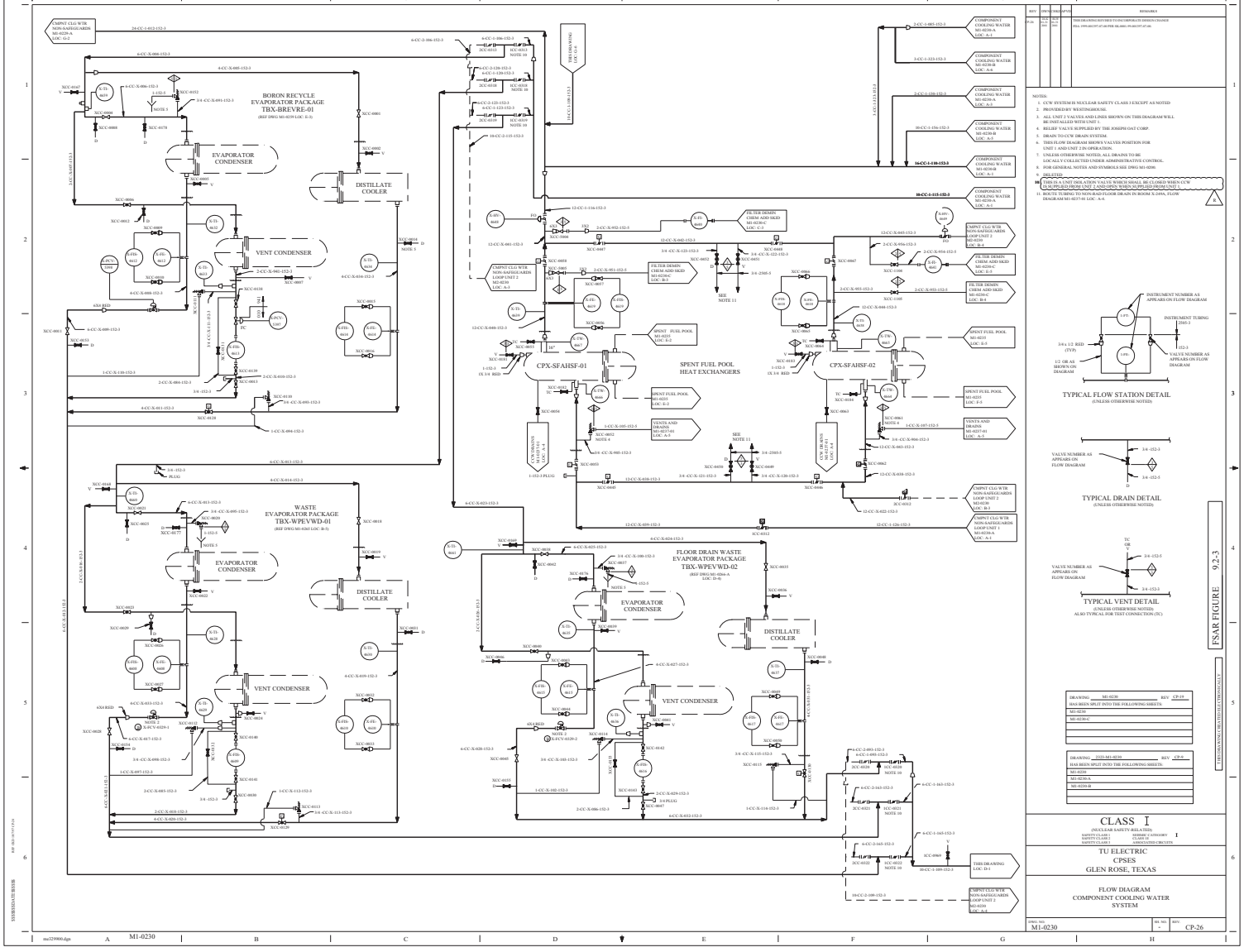
TXU ENERGY
CPSES
GLEN ROSE, TEXAS

FLOW DIAGRAM
COMPONENT COOLING WATER SYSTEM
SHEET 3 OF 7

DWG. NO. M2-0229 | SH. NO. B | REV. CP-15

M2-0229-B

mn476690.dgn




REV | DWN | CHK | APP'D | REMARKS

P.Chg. | Orig. | 06/28/84 | | THIS DRAWING REVISED TO INCORPORATE DESIGN CHANGE FCL 1999-0425-07,-07-A0 FOR ML/ML-99-0417-07,-08.

NOTES:
1. CCW SYSTEM IS NUCLEAR SAFETY CLASS 3 EXCEPT AS NOTED
2. PROVIDED BY WESTINGHOUSE
3. ALL UNIT 2 VALVES AND LINES SHOWN ON THIS DIAGRAM WILL BE INSTALLED WITH UNIT 1.
4. RELIEF VALVE SUPPLIED BY THE JOSEPH OAT CORP.
5. DRAIN TO CCW DRAIN SYSTEM.
6. THIS FLOW DIAGRAM SHOWS VALVES POSITION FOR UNIT 1 AND UNIT 2 IN OPERATION.
7. UNLESS OTHERWISE NOTED, ALL DRAINS TO BE LOCALLY COLLECTED UNDER ADMINISTRATIVE CONTROL.
8. FOR GENERAL NOTES AND SYMBOLS SEE DWG M1-0200.
9. DELETED
10. THIS IS A UNIT ISOLATION VALVE WHICH SHALL BE CLOSED WHEN CCW IS SUPPLIED FROM UNIT 2 AND OPEN WHEN SUPPLIED FROM UNIT 1.
11. ROUTE TUBING TO NON-RAD FLOOR DRAIN IN ROOM X-249A, FLOW DIAGRAM M1-0237-01 LOC: A-6

DRAWING M1-0230 REV CP-19
HAS BEEN SPLIT INTO THE FOLLOWING SHEETS:
M1-0230
M1-0230-C

DRAWING 2323-M1-0230 REV CP-9
HAS BEEN SPLIT INTO THE FOLLOWING SHEETS:
M1-0230
M1-0230-A
M1-0230-B

CLASS I
(NUCLEAR SAFETY-RELATED)
SAFETY CLASS 1 — QUALITY CATEGORY I
SAFETY CLASS 2 — SEISMIC II
SAFETY CLASS 3 — ASSOCIATED CIRCUITS

TU ELECTRIC
CPSES
GLEN ROSE, TEXAS

FLOW DIAGRAM
COMPONENT COOLING WATER SYSTEM

DRWG. NO. M1-0230 | SH. NO. — | REV. CP-26

FSAR FIGURE 9.2-3

CONTROLLED DOCUMENT

ma1299000.dgn

M1-0230

| REV. | DWN | CHKD | APVD | REMARKS |
|---|---|---|---|---|
| CP-22 | DLK 07-03-2014 | | | THIS DRAWING REVISED TO INCORPORATE AI-CR-2014-007702-1 TO EDITORIALLY CORRECT THE LOCATION OF VALVE 1CC-1038 TO AGREE WITH BRP-CC-1-TR-002 REV CP-3. EDITORIAL CHANGES AS NOTED. |

NOTES:

1. CCW SYSTEM IS NUCLEAR SAFETY CLASS 3 EXCEPT AS NOTED.
2. UNLESS OTHERWISE NOTED ALL DRAINS TO BE LOCALLY COLLECTED UNDER ADMINISTRATIVE CONTROL.
3. ALL UNIT 2 VALVES AND LINES SHOWN ON THIS DIAGRAM WILL BE INSTALLED WITH UNIT 1.
4. (T) INDICATES SELF-CONTAINED □° THERMOSTATIC VALVE VENDOR SUPPLIED ITEM.
5. ALL VALVES IDENTIFIED AS LIP SHALL BE LOCKED IN POSITION IMMEDIATELY AFTER FINAL BALANCING TO ENSURE THROTTLED POSITION IS MAINTAINED.
6. * INDICATES VENDOR SUPPLIED ITEM.
7. PROVIDED BY FIELD.
8. DRAIN TO CCW DRAIN SYSTEM.
9. THIS FLOW DIAGRAM SHOWS VALVES POSITION FOR UNIT 1 AND UNIT 2 IN OPERATION.
10. FOR GENERAL NOTES AND SYMBOLS SEE DRAWING M1-0200.
11. VALVE CLOSED WHEN COMPRESSOR IS ON. VALVE OPEN WHEN COMPRESSOR IS OFF.
12. VALVE OPEN WHEN COMPRESSOR IS ON. VALVE CLOSED WHEN COMPRESSOR IS OFF.
13. VALVE THROTTLED, OPERATOR DEGRADED.
14. SYSTEM DRAINED BETWEEN XCC-0161 AND XCC-0162 WHILE IN LAYUP. REFERENCE FDA-2002-0162-05-01.
15. SYSTEM DRAINED BETWEEN XCC-0170 AND XCC-0173 WHILE IN LAYUP. REFERENCE FDA-2002-0162-05-01.

TYPICAL FLOW STATION DETAIL
(UNLESS OTHERWISE NOTED)

TYPICAL DRAIN DETAIL
(UNLESS OTHERWISE NOTED)

TYPICAL VENT DETAIL
(UNLESS OTHERWISE NOTED)
TYPICAL ALSO FOR TEST CONNECTION (TC)

FSAR FIGURE 9.2-3

THIS DRAWING CREATED ELECTRONICALLY

DRAWING 2323-M1-0230 REV CP-9
HAS BEEN SPLIT INTO THE FOLLOWING SHEETS:

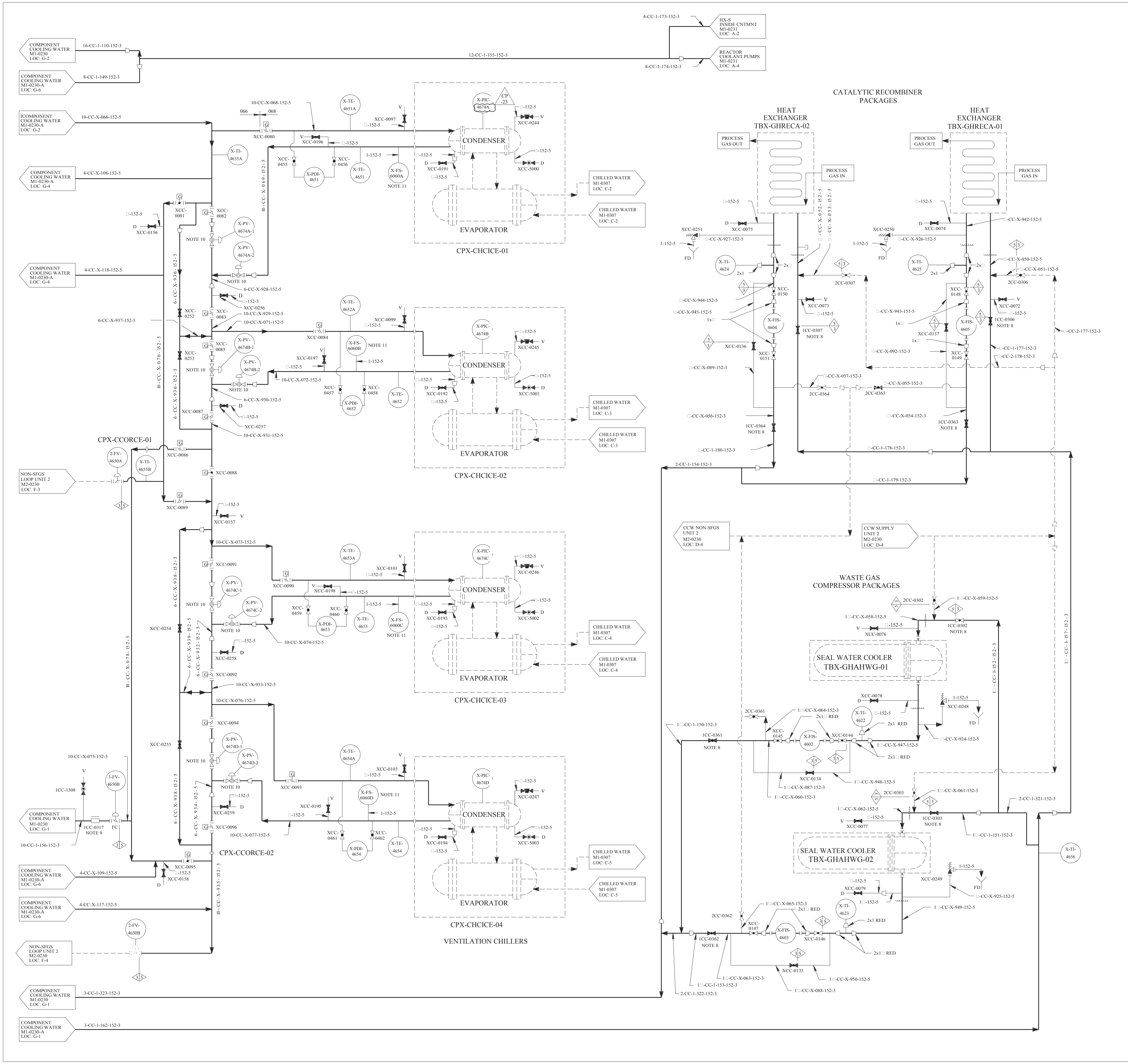
| |
|---|
| M1-0230 |
| M1-0230-A |
| M1-0230-B |
| |
| |

CLASS I
(NUCLEAR SAFETY-RELATED)
SAFETY CLASS 1 — SEISMIC CATEGORY I
SAFETY CLASS 2 — CLASS 1E
SAFETY CLASS 3 — ASSOCIATED CIRCUITS

LUMINANT
CPNPP
GLEN ROSE, TEXAS

FLOW DIAGRAM
COMPONENT COOLING WATER SYSTEM

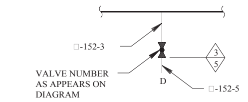
| DWG. NO. | SH. NO. | REV. |
|---|---|---|
| M1-0230 | A | CP-22 |



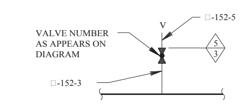

NOTES:

1. CCW SYSTEM IS NUCLEAR SAFETY CLASS 3 EXCEPT AS NOTED.
2. ALL UNIT 2 VALVES AND LINES SHOWN ON THIS DIAGRAM WILL BE INSTALLED WITH UNIT 1.
3. THIS FLOW DIAGRAM SHOWS VALVES POSITION FOR UNIT 1 AND UNIT 2 IN OPERATION.
4. DELETED
5. UNLESS OTHERWISE NOTED ALL DRAINS TO BE LOCALLY COLLECTED UNDER ADMINISTRATIVE CONTROL.
6. DELETED
7. FOR GENERAL NOTES AND SYMBOLS SEE DWG M1-0200.
8. THIS IS A UNIT ISOLATION VALVE WHICH SHALL BE CLOSED WHEN CCW IS SUPPLIED FROM UNIT 2 AND OPEN WHEN SUPPLIED FROM UNIT 1.
9. REMOVE CHECK VALVE 1CC-0317 INTERNALS, ABANDON BODY IN PLACE PER DCN 6533 REV 0.
10. VALVE ACTUATORS WILL BE LOCKED AND REMAIN IN THEIR LAST POSITION ON LOSS OF INSTRUMENT AIR ABOVE THE DIAPHRAGM. THE BYPASS VALVES WILL FAIL CLOSED AND THE INLET VALVES WILL FAIL OPEN ON LOSS OF SIGNAL FROM THE VENTILATION CHILLER CONDENSER PRESSURE INDICATING CONTROLLER.
11. FLOW SWITCH X-FS-6060A, X-FS-6060B, X-FS-6060C, AND X-FS-6060D ARE SPARED IN PLACE.

| REV | DWN | CHKD | APVD | REMARKS |
|---|---|---|---|---|
| CP-23 | DLK 01-26 2015 | | | THIS DRAWING REVISED TO INCORPORATE AI-CR-2015-000645-1 TO EDITORIALLY CORRECT LOCATION (TAG) NUMBER X-PIC-4674 TO X-PIC-4674A. |




TYPICAL DRAIN DETAIL
(UNLESS OTHERWISE NOTED)




TYPICAL VENT DETAIL
(UNLESS OTHERWISE NOTED)

FSAR FIGURE 9.2-3

THIS DRAWING CREATED ELECTRONICALLY

DRAWING 2323-M1-0230 REV CP-9
HAS BEEN SPLIT INTO THE FOLLOWING SHEETS:

| |
|---|
| M1-0230 |
| M1-0230-A |
| M1-0230-B |

CLASS I
(NUCLEAR SAFETY-RELATED)
SAFETY CLASS 1 / SAFETY CLASS 2 / SAFETY CLASS 3
SEISMIC CATEGORY I / CLASS 1E / ASSOCIATED CIRCUITS

LUMINANT
CPNPP
GLEN ROSE, TEXAS

FLOW DIAGRAM
COMPONENT COOLING WATER SYSTEM
SHEET 6 OF 8

DWG. NO. M1-0230 | SH. NO. B | REV. CP-23

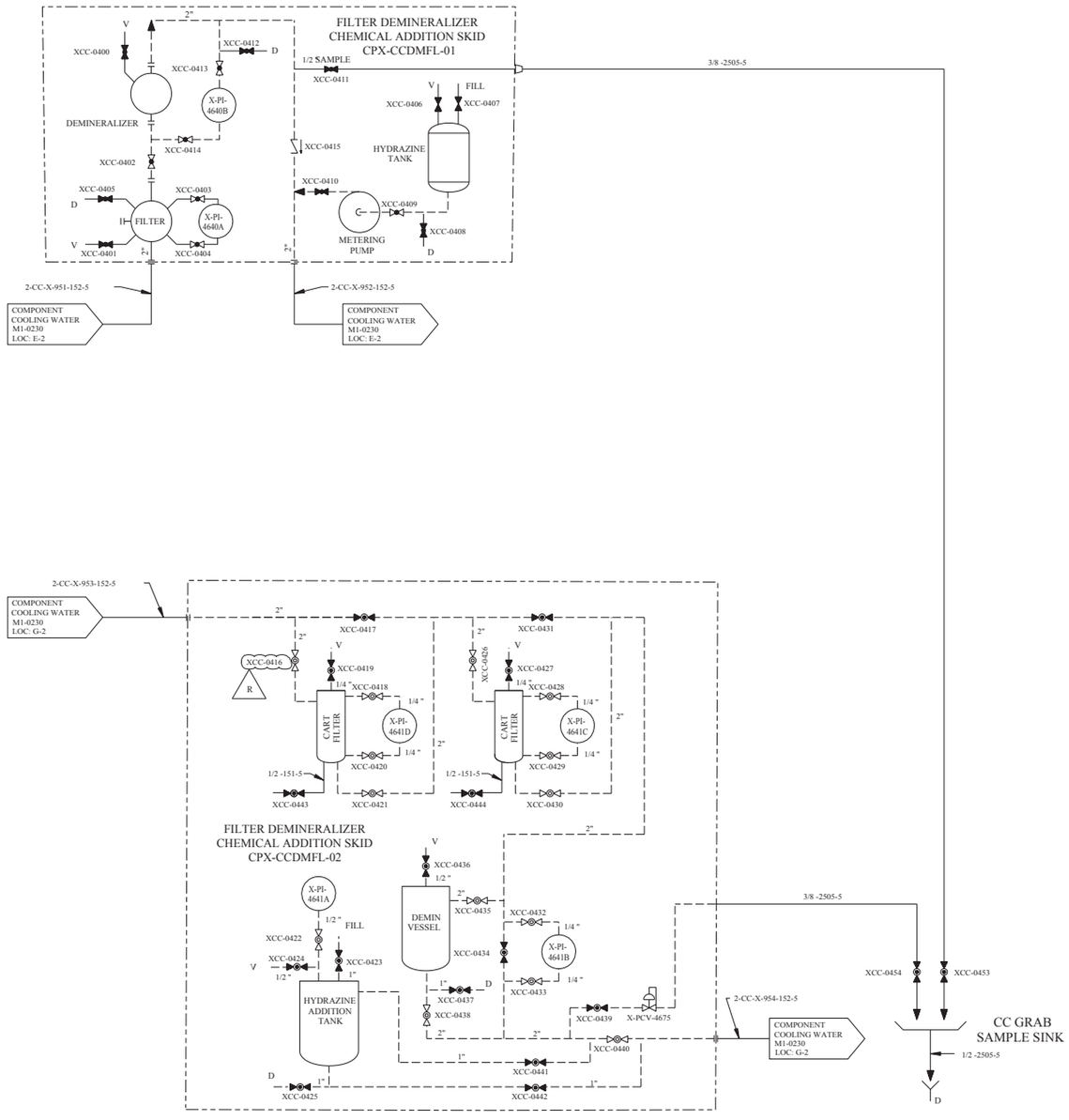


$$$$$$DATE$$$$$

| REV | DWN | CHKD | APVD | REMARKS |
|---|---|---|---|---|
| CP-8 | JRMC 07-30 2008 | DJL 07-31 2008 | | THIS DRAWING REVISED TO INCORPORATE DESIGN CHANGE FDA-2008-002401-01-00 PER SK-0001-08-002401-01-00. |

NOTES:

1. CCW SYSTEM IS NUCLEAR SAFETY CLASS 3 EXCEPT AS NOTED.
2. DELETED
3. THIS FLOW DIAGRAM SHOWS VALVES POSITION FOR UNIT 1 AND UNIT 2 IN OPERATION.
4. UNLESS OTHERWISE NOTED, ALL DRAINS TO BE LOCALLY COLLECTED UNDER ADMINISTRATIVE CONTROL.
5. FOR GENERAL NOTES AND SYMBOLS SEE DWG M1-0200.




FSAR FIGURE 9.2-3

THIS DRAWING CREATED ELECTRONICALLY

| DRAWING M1-0230 REV CP-19 |
|---|
| HAS BEEN SPLIT INTO THE FOLLOWING SHEETS: |
| M1-0230 |
| M1-0230-C |

CLASS

LUMINANT
CPNPP
GLEN ROSE, TEXAS

FLOW DIAGRAM
COMPONENT COOLING WATER
SYSTEM

| DWG. NO. | SH. NO. | REV. |
|---|---|---|
| M1-0230 | C | CP-8 |

REF CHKD 7/20/2001

$$$$$$$DATE$$$$$$

CCW NON-SFGS LOOPS M2-0229 LOC: D-6

24-CC-2-070-152-3

20-CC-2-133-152-3

16-CC-2-158-152-3

12-CC-2-159-152-3

CCW SYSTEM SUPPLY HEADER M2-0230-A LOC: A-1

HEAT EXCHANGER CP2-CCHXCH-02

2-CH-X-1054-152G

2-CH-X-1057-152G

VENT CHILLED WATER SYSTEM M2-0307-A LOC: F-4

VENT CHILLED WATER SYSTEM M2-0307-A LOC: F-4

CHEM FEED SYS M1-0221-02 LOC: F-6

2-CC-2-080-152-3

2CC-1035 NOTE 4

2CC-0377

1-152G

□-152G

2-CC-2-1023-152G

2-152G

2CC-1065

1□-152G

2CC-1243

□-152G

2CC-0311

2CC-1231

2CC-1230

2CC-1242

□-152G

2-FV-4672D

2-PCV-4644B

FC

NOTE 12

2CC-1229

□-152G

2-CC-2-1022-152G

□-2505G

2CC-1104

2CF-0216

□-2505G

TURBINE BLDG

EC

2CC-1232

2-CC-2-1021-152-5

□-152-5

2CC-1228

2CC-1227

2CC-1316

2CC-1225

□-152G

2-TI-4644A

2CC-1233

2-CC-2-1023-152G

□-152G

2CC-1235

2CC-1241

D

2-PI-4644

OIL COOLER

HIGH PRESS STAGE

LOW PRESS STAGE

AFTERCOOLER

INTERCOOLER

REF: ATLAS COPCO 9823-1198-00

2-CC-2-1024-152G

2-CC-2-1018-152-5

CHEM FEED SYS M1-0221-02 LOC: D-6

□-2505G

2CF-0218

2CC-1234

2CC-1236

□-152G

2-TI-4644B

INSTRUMENT AIR COMPRESSOR PACKAGE CP2-CICACO-02

M2-0216-B

2-PCV-4644A

2-FV-4672C

FC

NOTE 12

HEAT EXCHANGER CP2-CCHXCH-01

2CC-1244

□-152-5

2CC-1310

CS

SS

2CC-1312

2CC-1313

1-152-5

□-152-5

2CC-1311

2CC-1237

2CC-1105

□-2505G

□-152G

TURBINE BLDG

EC BLDG

2CC-1238

D

□-152-5

2CC-1239

2CC-1240

2-TI-4644C

2CC-0359

□-152-5

2-152-5

2CC-1013

1□-152G

D

2-CC-2-1019-152-5

2-CH-X-1065-152G

□-152G

2-PI-4669

2CC-1319

2-CC-2-1025-152-5

□-152-5

2CC-1317

D

OIL COOLER

HIGH PRESS STAGE

LOW PRESS STAGE

AFTERCOOLER

INTERCOOLER

REF: ATLAS COPCO 9823-1198-00

2-CC-2-1020-152-5

2-CH-X-1066-152G

VENT CHILLED WATER SYSTEM M2-0307-A LOC: G-6

VENT CHILLED WATER SYSTEM M2-0307-A LOC: G-6

3-CC-2-1062-152-3

INSTRUMENT AIR COMPRESSOR PACKAGE CP2-CICACO-01

M2-0216

2-TI-4644D

□-152-5

2CC-1318

2CC-1314

2CC-1315

REMOVABLE SPOOL PIECE

1□-CC-2-152-152-3

2CC-0302 NOTE 10

□-CC-2-177-152-3

1□-CC-2-157-152-3

2CC-0306 NOTE 10

□-CC-2-178-152-3

1□-CC-2-157-152-3

2CC-0307 NOTE 10

1□-CC-2-151-152-3

2CC-0303 NOTE 10

CATALYTIC RECOMBINER PACKAGES AND WASTE GAS COMPRESSOR PACKAGES

M1-0230-B LOC: E-4

M1-0230-B LOC: F-4

2CC-0363 NOTE 10

2CC-0364 NOTE 10

2CC-0361 NOTE 10

2CC-0362 NOTE 10

□-CC-2-179-152-3

□-CC-2-180-152-3

1□-CC-2-150-152-3

1□-CC-2-153-152-3

2-CC-2-128-152-3

2CC-0344

2" PLUG 2-150-3

2CC-0345

1-152-5

2CC-1077

TO DRAIN

□-CC-2-990-152-3

2-CC-2-903-152-3

3-CC-2-902-152-3

2-TI-4621

2CC-0853

NOTE 3

D

POSITIVE DISPLACEMENT CHARGING PUMP TCX-CSAPPD-01 HYDRAULIC COUPLING OIL COOLER

2-CC-2-122-152-3

2-CC-2-154-152-3

REMOVABLE SPOOL PIECE

2-CC-2-085-152-3

2-CC-2-170-152-3

2CC-0367

2-FIS-4601

2CC-0366

2CC-0368

2CC-0869

2-CC-2-130-152-3

2" PLUG

2-152-3

10-CC-2-115-152-3

6-CC-2-103-152-3

6-CC-2-109-152-3

6-CC-2-106-152-3

2CC-0319 NOTE 10

2CC-0318 NOTE 10

2CC-0313 NOTE 10

M1-0230 LOC: D-2

EVAPORATOR PACKAGES

M1-0230 LOC: G-6

2CC-0312

M1-0230 LOC: G-4 SPENT FUEL POOL HEAT EXCHANGER M1-0230 LOC: G-2

2CC-0322 NOTE 10

2CC-0321 NOTE 10

2CC-0320 NOTE 10

FO

X-HV-4649

6-CC-2-165-152-3

6-CC-2-163-152-3

6-CC-2-093-152-3

REMOVABLE SPOOL PIECE

REMOVABLE SPOOL PIECE

2CC-1036 NOTE 4

10-CC-2-115-152-3

12-CC-2-126-152-3

2-CC-2-125-152-5

10-CC-2-109-152-3

12-CC-2-136-152-3

2-CC-2-085-152-3

24-CC-2-012-152-3

24-CC-2-012-152-3

3-CC-2-123-152-3

16-CC-2-110-152-3

16-CC-2-110-152-3

12-CC-2-155-152-3

CCW SYSTEM RETURN HEADER M2-0230-A LOC: A-6

CCW NON-SFGS M2-0229 LOC:C-4

□-152-3

2CC-0310

2-FIS-4650

2-FE-4650

2CC-0311

□-152-3

10-CC-2-164-152-3

2CC-1309

2-FV-4650A

FC

CP-20

10-CC-2-070-152-5

M1-0230-B LOC: A-3

VENT CHILLERS AND BTRS CHILLERS

M1-0230-B LOC: A-6

10-CC-X-935-152-5

2-FV-4650B

FC

REMOVABLE SPOOL PIECE

2CC-0317 NOTE 11

2CC-1308

10-CC-2-156-152-3

| REV | DWN | CHKD | APVD | REMARKS |
|---|---|---|---|---|
| CP-20 | DLK 06-06-2017 | MM 06-21-2017 | MHF 07-03-2017 | THIS DRAWING REVISED TO INCORPORATE EDITORIAL CHANGES PER AI-TR-2017-005955-1. |

NOTES:

1. DELETED
2. DELETED
3. UNLESS OTHERWISE NOTED ALL DRAINS TO BE LOCALLY COLLECTED UNDER ADMINISTRATIVE CONTROL.
4. VALVES 2CC-1035 AND 2CC-1036 (FORMERLY 2-HV-4663A AND 2-HV-4663B ) HAVE HAD AIR SUPPLIES REMOVED AND ARE NOW OPERATED MANUALLY.
5. FLOW INDICATED AT ALL CONNECTIONS, VENTS AND DRAINS SHOULD BE DIRECTED AWAY FROM THE PROCESS PIPING.
6. DELETED
7. DELETED
8. DELETED
9. FOR MECHANICAL SYMBOLS AND NOTES SEE M1-0200.
10. THIS IS A UNIT ISOLATION VALVE WHICH SHALL BE CLOSED WHEN CCW IS SUPPLIED FROM UNIT 1 AND OPEN WHEN SUPPLIED FROM UNIT 2.
11. CHECK VALVE INTERNAL REMOVED, VALVE BODY ABANDONED IN PLACE.
12. VALVE OPEN WHEN COMPRESSOR IS ON. VALVE CLOSED WHEN COMPRESSOR IS OFF.
13. DELETED
14. DELETED

V

□-152-5

VALVE NUMBER AS APPEARS ON DIAGRAM

□-152-3

TYPICAL VENT DETAIL

(UNLESS OTHERWISE NOTED)

□-152-3

VALVE NUMBER AS APPEARS ON DIAGRAM

D

□-152-5

TYPICAL DRAIN DETAIL

(UNLESS OTHERWISE NOTED)

FSAR FIGURE 9.2-3

THIS DRAWING CREATED ELECTRONICALLY

DRAWING 2323-M2-0230 REV CP-2

HAS BEEN SPLIT INTO THE FOLLOWING SHEETS:

M2-0230

M2-0230-A

CLASS I

(NUCLEAR SAFETY-RELATED)

SAFETY CLASS 1 SEISMIC CATEGORY I

SAFETY CLASS 2 CLASS 1E

SAFETY CLASS 3 ASSOCIATED CIRCUITS

LUMINANT

CPNPP

GLEN ROSE, TEXAS

FLOW DIAGRAM

COMPONENT COOLING WATER SYSTEM

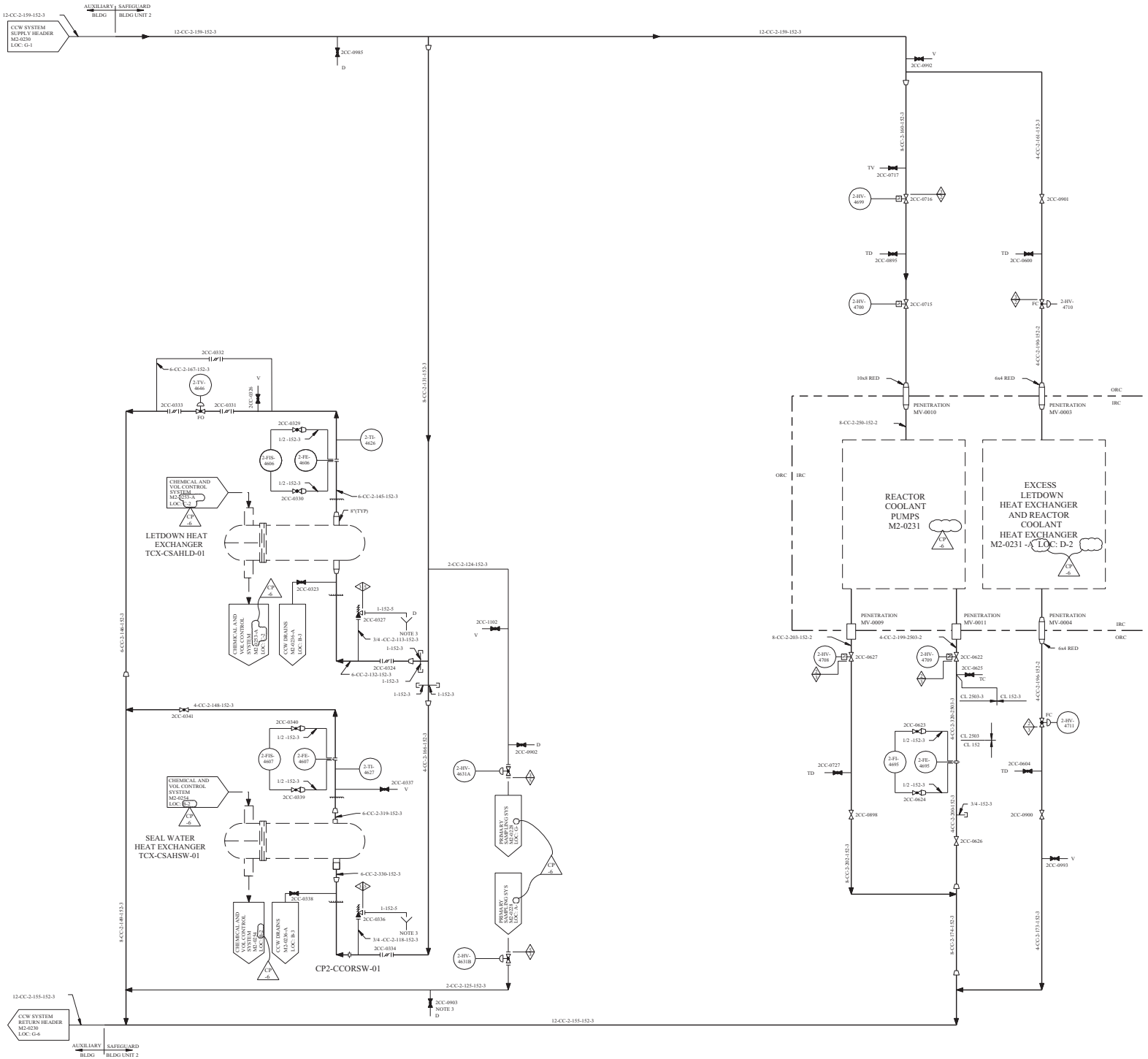
SHEET 4 OF 7

DWG. NO. M2-0230 | SH. NO. - | REV. CP-20

REF CHK'D 5-20-98 CP-11

me966700.dgn M2-0230

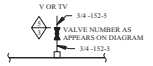
FINAL PRINT



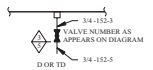

| REV. | DWN | CHKD | APVD | REMARKS |
|---|---|---|---|---|
| CP-6 | S.A. 11/02/1996 | | | THIS DRAWING REVISED TO INCORPORATE EDITORIAL CHANGES AS NOTED. |

NOTES

1. * INDICATES VENDOR SUPPLIED ITEM.
2. UNLESS OTHERWISE NOTED ALL DRAINS TO BE LOCALLY COLLECTED
3. UNDER ADMINISTRATIVE CONTROL.
4. FLOW INDICATED AT ALL TEST CONNECTIONS, VENTS AND DRAINS SHOULD BE DIRECTED AWAY FROM THE PROCESS PIPING.
5. FOR MECHANICAL SYMBOLS AND NOTES SEE DWG M1-0200.




TYPICAL VENT DETAIL
(UNLESS OTHERWISE NOTED)




TYPICAL DRAIN DETAIL
(UNLESS OTHERWISE NOTED)

FSAR FIGURE 9.2-3

THIS DRAWING CREATED ELECTRONICALLY

DRAWING 2323-M2-0230 REV. CP-2
HAS BEEN SPLIT INTO THE FOLLOWING SHEETS:
M2-0230
M2-0230-A

CLASS I
(NUCLEAR SAFETY-RELATED)
SAFETY CLASS 1 — SEISMIC CATEGORY I
SAFETY CLASS 2 — CLASS 1E
SAFETY CLASS 3 — ASSOCIATED CIRCUITS

TXU ELECTRIC
CPSES
GLEN ROSE, TEXAS

FLOW DIAGRAM
COMPONENT COOLING WATER SYSTEM

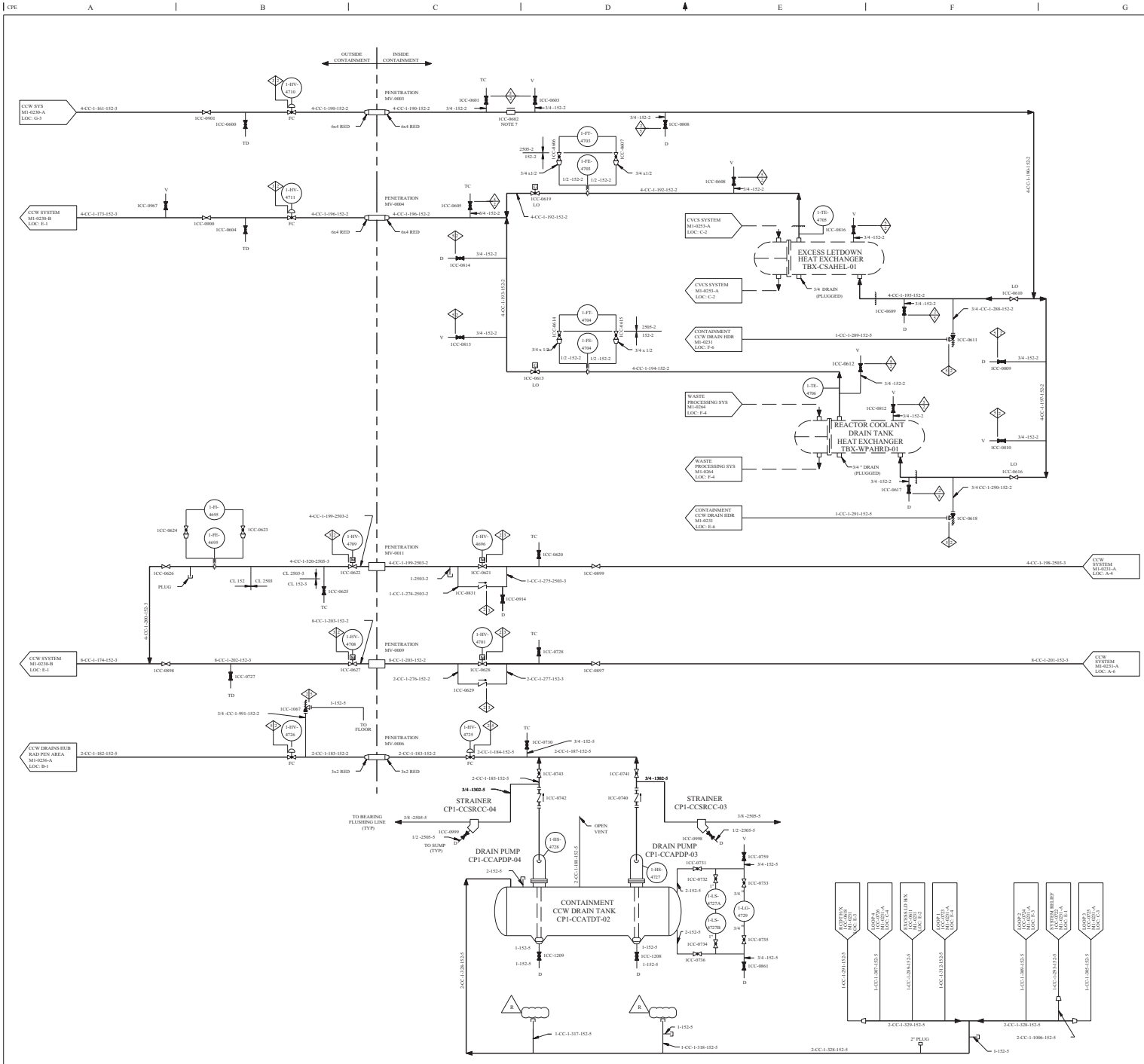
CP -6

| DWG. NO. | SH. NO. | REV. |
|---|---|---|
| M2-0230 | A | CP-6 |

REF CKD CP6 11-1-96

SSSSSSSTA\TESSSSSS

vs0000tg.dgn




| REV | DWN | CHKD | APVD | REMARKS |
|---|---|---|---|---|
| CP-24 | KK 10/1/2001 | CTS 10/1/2001 | | THIS DRAWING REVISED TO INCORPORATE DESIGN CHANGE FDA-2001-002065-01-00 PER SE-0001-01-002065-01-00. |

NOTES:

1. CCW SYSTEM IS SAFETY CLASS 3 EXCEPT AS NOTED.
2. DRAIN LINES, UNLESS OTHERWISE NOTED, MAY BE ROUTED TO THE CONTAINMENT CCW DRAIN TANK HEADER.
3. DELETED.
4. THIS FLOW DIAGRAM SHOWS VALVES POSITION FOR UNIT 1 AND UNIT 2 IN OPERATION.
5. DELETED
6. FOR GENERAL NOTES AND SYMBOLS SEE DWG M1-0200.
7. REMOVE CHECK VALVE 1CC-0602 INTERNALS, ABANDON BODY IN PLACE PER DCN 6554 REV 0.

FSAR FIGURE 9.2-3

THIS DRAWING CREATED ELECTRONICALLY

DRAWING 2323-M1-0231 REV CP-7
HAS BEEN SPLIT INTO THE FOLLOWING SHEETS:
M1-0231
M1-0231-A

CLASS I
(NUCLEAR SAFETY-RELATED)
SAFETY CLASS 1 SEISMIC CATEGORY I
SAFETY CLASS 2 CLASS IE
SAFETY CLASS 3 ASSOCIATED CIRCUITS

TXU ELECTRIC
CPSES
GLEN ROSE, TEXAS

FLOW DIAGRAM
COMPONENT COOLING WATER
SYSTEM

| DWG. NO. | SH. NO. | REV. |
|---|---|---|
| M1-0231 | - | CP-24 |

REF CKD CP-2(9/11-13-96

$$$$$$$DATE$$$$$$

mc371600.dgn

M1-0231

| REV | DWN | CHKD | APVD | REMARKS |
|---|---|---|---|---|
| CP-15 | DLK 10-11-2017 | MM 10-11-2017 | MHF 10-12-2017 | THIS DRAWING REVISED TO INCORPORATE AN EDITORIAL CHANGE PER AI-TR-2017-01092-1. |

NOTES:

1. CCW SYSTEM IS SAFETY CLASS 3 EXCEPT AS NOTED.
2. DRAIN LINES, UNLESS OTHERWISE NOTED, MAY BE ROUTED TO THE CONTAINMENT CCW DRAIN TANK HEADER.
3. DELETED
4. DELETED
5. FOR GENERAL NOTES AND SYMBOLS SEE DWG M1-0200.
6. DELETED

INSTRUMENT NUMBER AS APPEARS ON DIAGRAM
VALVE NUMBER AS APPEARS ON DIAGRAM
□ OR AS APPEARS ON DIAGRAM
□x□ RED
INSTRUMENT TUBING 2503-3
TYPICAL FLOW STATION DETAIL (UNLESS OTHERWISE NOTED)

VALVE NUMBER AS APPEARS ON DIAGRAM
□-152-3/□-2503-3
□-152-5/□-2503-3
TYP DRAIN DETAIL (UNLESS OTHERWISE NOTED)

VALVE NUMBER AS APPEARS ON DIAGRAM
□-152-5/□-2503-5
□-152-3/□-2503-3
TYP VENT DETAIL (UNLESS OTHERWISE NOTED)

FSAR FIGURE 9.2-3

THIS DRAWING CREATED ELECTRONICALLY

DRAWING 2323-M1-0231 REV CP-7
HAS BEEN SPLIT INTO THE FOLLOWING SHEETS:
M1-0231
M1-0231-A

CLASS I
(NUCLEAR SAFETY-RELATED)
SAFETY CLASS 1 — SEISMIC CATEGORY I
SAFETY CLASS 2 — CLASS 1E
SAFETY CLASS 3 — ASSOCIATED CIRCUITS

LUMINANT
CPNPP
GLEN ROSE, TEXAS

FLOW DIAGRAM
COMPONENT COOLING WATER
SYSTEM

DWG. NO. M1-0231 | SH. NO. A | REV. CP-15

REF CKD 4/23/98 CP-9

me371400.dgn A M1-0231-A B C D E F G FINAL PRINT H

| REV | DWN | CHKD | APVD | REMARKS |
|---|---|---|---|---|
| CP-16 | EES 06-04 2007 | MHF 06-04 2007 | | THIS DRAWING REVISED TO INCORPORATE DESIGN CHANGE FDA 1999-003465-06-00 PER SK-0006-99-003465-06-00. |

NOTES:

1. CCW SYSTEM IS SAFETY CLASS 3 EXCEPT AS NOTED.
2. DRAIN LINES, UNLESS OTHERWISE NOTED, MAY BE ROUTED TO THE CONTAINMENT CCW DRAIN TANK HEADER.
3. FOR GENERAL NOTES AND SYMBOLS SEE DWG M1-0200.
4. FLOW INDICATED AT ALL TEST CONNECTIONS, VENTS AND DRAINS SHOULD BE DIRECTED AWAY FROM THE PROCESS PIPING.

TYPICAL VENT DETAIL
(UNLESS OTHERWISE NOTED)

TYPICAL DRAIN DETAIL
(UNLESS OTHERWISE NOTED)

FSAR FIGURE 9.2-3

THIS DRAWING CREATED ELECTRONICALLY

DRAWING 2323-M2-0231 REV CP-2
HAS BEEN SPLIT INTO THE FOLLOWING SHEETS:
M2-0231
M2-0231-A

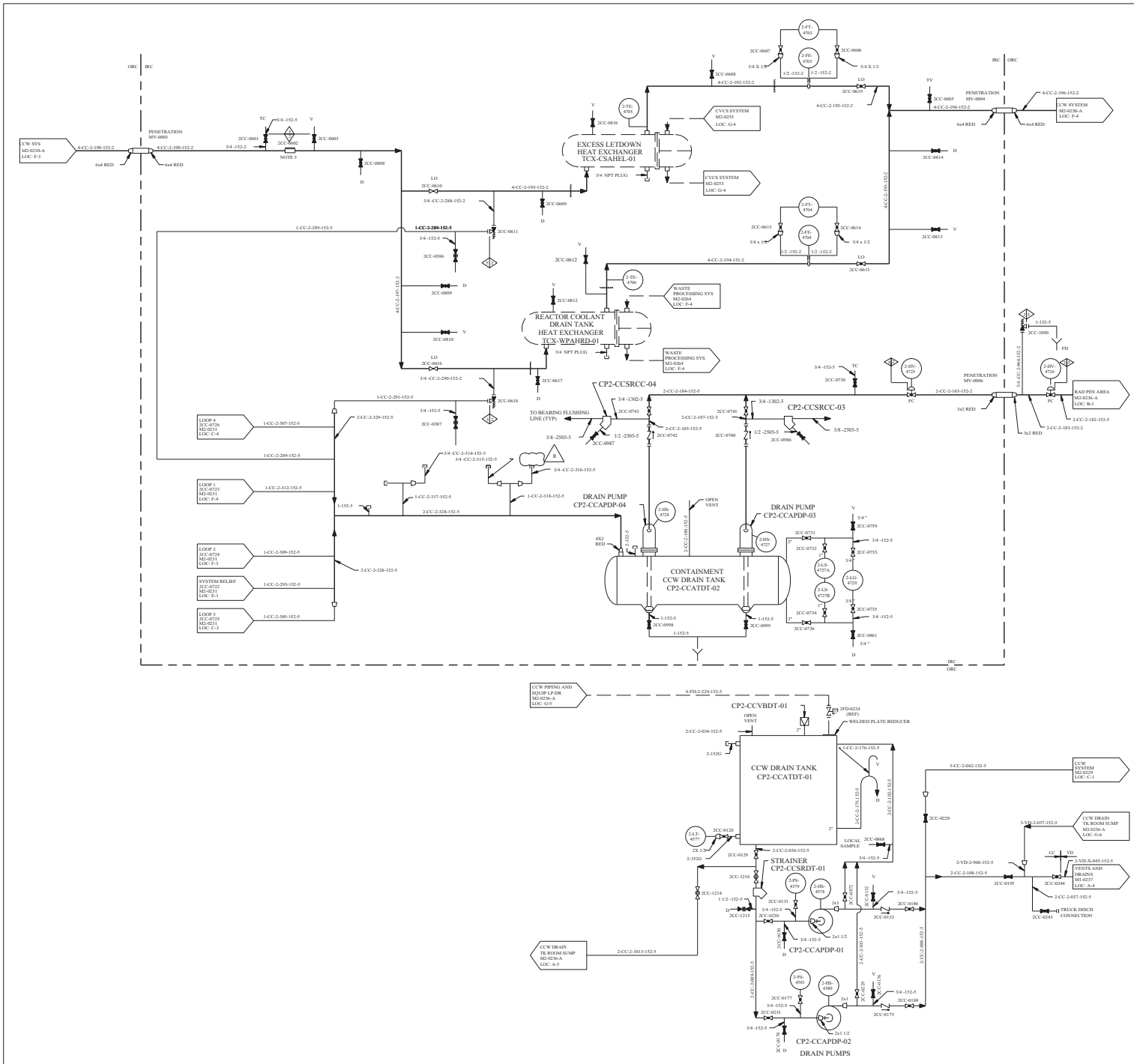
CLASS I
(NUCLEAR SAFETY-RELATED)
SAFETY CLASS 1 SEISMIC CATEGORY I
SAFETY CLASS 2 CLASS 1E
SAFETY CLASS 3 ASSOCIATED CIRCUITS

LUMINANT
CPSES
GLEN ROSE, TEXAS

FLOW DIAGRAM
COMPONENT COOLING WATER
SYSTEM

DWG. NO. M2-0231 | SH. NO. - | REV. CP-16

me873300.dgn M2-0231 FINAL PRINT




| REV | DWN | CHKD | APVD | REMARKS |
|---|---|---|---|---|
| CP-15 | KK 10/1 2001 | CS 10/1 2001 | | THIS DRAWING REVISED TO INCORPORATE DESIGN CHANGE FDA-2001-002065-01-00 PER ER-0065-01-002065-01-00. |

NOTES

1. CCW SYSTEM IS SAFETY CLASS 3 EXCEPT AS NOTED.
2. DRAIN LINES, UNLESS OTHERWISE NOTED, MAY BE ROUTED TO THE CONTAINMENT CCW DRAIN TANK HEADER.
3. FOR GENERAL NOTES AND SYMBOLS SEE DWG M1-0200.
4. FLOW INDICATED AT ALL TEST CONNECTIONS, VENTS AND DRAINS SHOULD BE DIRECTED AWAY FROM THE PROCESS PIPING.
5. CHECK VALVE INTERNAL REMOVED, VALVE BODY ABANDONED IN PLACE.

FSAR FIGURE 9.2-3

THIS DRAWING CREATED ELECTRONICALLY

DRAWING 2323-M2-0231 REV CP-2 HAS BEEN SPLIT INTO THE FOLLOWING SHEETS:

- M2-0231
- M2-0231-A

CLASS I

(NUCLEAR SAFETY-RELATED)

SAFETY CLASS 1 — SEISMIC CATEGORY I
SAFETY CLASS 2 — CLASS IE
SAFETY CLASS 3 — ASSOCIATED CIRCUITS

TXU ELECTRIC
CPSES
GLEN ROSE, TEXAS

FLOW DIAGRAM
COMPONENT COOLING WATER SYSTEM

| DWG. NO. | SH. NO. | REV. |
|---|---|---|
| M2-0231 | A | CP-15 |

$$$$$$$DATE$$$$$$

REF CSKD 11/15/2000

me171700.dgn A M2-0231-A

CPE

STRONG ACID CATION UNIT

STRONG BASE ANION UNIT

MIXED BED UNIT

CATION 1 CPX-WTDMSC-01

ANION 1 CPX-WTDMAD-01

MIXED BED 1 CPX-WTDMMB-01

CATION 2 CPX-WTDMSC-02

ANION 2 CPX-WTDMAD-02

MIXED BED 2 CPX-WTDMMB-02

SURFACE WATER PRE-TREATMENT SYSTEM M1-0224-01B LOC: A-1

ACID DILUTION WATER

REGENERATION WASTE HEADER (TRAIN 1)

REGENERATION WASTE HEADER (TRAIN 2)

ACID REGENERANT HEADER

CAUSTIC REGENERANT HEADER

LOW FLOW RECIRC HEADER (TRAIN 2)

LOW FLOW RECIRCULATION HEADER (TRAIN 1)

LOW FLOW RECIRCULATION PUMP CPX-LRAPWT-02

LOW FLOW RECIRCULATION PUMP CPX-LRAPWT-01

RESIN STRAINER CPX-WTSRMB-01 (X-YX-3930)

RESIN STRAINER CPX-WTSRRT-01 (X-YX-3931A)

RESIN STRAINER CPX-WTSRMB-02 (X-YX-3931)

AIR FILTER CPX-WTFLMB-01 (X-AF-3930)

ACID DILUTION TEE

RESIN CLEANOUT (TYP)

TRAIN 1 WASTE TROUGH

TRAIN 2 WASTE TROUGH

6-WT-X-014-151G

6-FD-X-007-002G

CHEMICAL DRAIN SYSTEM M1-0237 LOC: A-2

TO WASTE TANK (TYP)

DRAIN

TO PUMP SEAL

ACID PUMPS M1-0224-A LOC: A-4

SERVICE AIR SYSTEM M1-0217-A LOC: B-2

CAUSTIC DILUTION WATER HEATING TANK M1-0224-A LOC: A-1

CAUSTIC DILUTION WATER HEATING TANK M1-0224-A LOC: A-3

DEMINERALIZED WATER ST TK M1-0241-A LOC: B-5

CHEMICAL DRAIN SYSTEM M1-0237 LOC: A-2

ANION NUMBER 1 OUTLET

MIXED BED NUMBER 1 OUTLET

MIXED BED COMMON OUTLET

MIXED BED NUMBER 2 OUTLET

ANION NUMBER 2 OUTLET

PORTABLE TOC ANALYZER

SODIUM ANALYZER

SAMPLING MANIFOLD ARRANGEMENT

| REV | DWN | CHKD | APVD | REMARKS |
|---|---|---|---|---|
| CP-17 | DIL 11-11-2014 | RSK 11-11-2014 | | THIS DRAWING REVISED TO INCORPORATE DESIGN CHANGE FDA-2014-000184-01-00 PER SK-0001-14-000184-01-00. |

NOTES

1. A SET OF CHANNEL NUMBERS IS GIVEN TO SYSTEM SUPPLIED IN SPECIFICATION MS-150. ALL THE INSTRUMENTATION AND CONTROL NUMBERS WILL BE ASSIGNED BY SYSTEM SUPPLIED IN THAT RANGE.
2. SEE DRAWING M1-2200-1 FOR INSTRUMENTATION AND CONTROL LEGEND AND MEANING OF IDENTIFICATION LETTERS.
3. SEE MANUFACTURERS DRAWING (LATER) FOR INSTRUMENTATION AND CONTROL LOGIC.
4. THE FOLLOWING SYMBOLS ARE DEFINED AS FOLLOWS:
   - (CE) = CONDUCTIVITY ANALYZER
   - (A) = SILICA ANALYZER
5. THE MANUFACTURER SHALL FURNISH ALL EQUIPMENT ON THIS DRAWING INCLUDING INTERCONNECTING PIPE AND VALVES AS DETAILED IN SPECIFICATION 2323-MS-150.
6. THIS DENOTES THE 3"X12" OBSERVATION WINDOWS FURNISHED FOR THE MIXED BED VESSELS.
7. ALL DRAINS TO HUNGERFORD AND TERRY SUPPLIED DRAIN TROUGHS LOC: F-1.
8. BY H&T = SUPPLIED BY HUNGERFORD AND TERRY ON CP-0150.
9. FOR PIPING CODES ON VENDOR SUPPLIED PIPING SEE MANUFACTURERS DRAWING 28300-A1, CP-0150.
10. INSTRUMENT MANIFOLDING ARRANGEMENT FOR X-PI-4066A AND X-PI-4066B .

| INSTRUMENT TAG NO | A | B | C |
|---|---|---|---|
| XPI-4066A | XWT-0009 | XWT-0619 | XWT-0620 |
| XPI-4066B | XWT-0010 | XWT-0621 | XWT-0622 |

11. TAG NUMBERS IN PARENTHESES INDICATE VENDOR TAG NUMBERS.
12. SAMPLING MANIFOLD ARRANGEMENT.
13. SAMPLING AT POINTS OTHER THAN IDENTIFIED ON THIS DRAWING SERIES IS ACCEPTABLE PROVIDED NO CONTROL FUNCTION IS AFFECTED.

14. THIS LOCATION IS ABANDONED IN PLACE PER FDA-2014-000184-01.

DRAWING 2323-M1-0224 REV CP-5
HAS BEEN SPLIT INTO THE FOLLOWING SHEETS:
M1-0224
M1-0224-A

NON-SAFETY

LUMINANT
CPNPP
GLEN ROSE, TEXAS

FLOW DIAGRAM
WATER TREATMENT

DWG. NO. M1-0224 | SH. NO. - | REV. CP-17

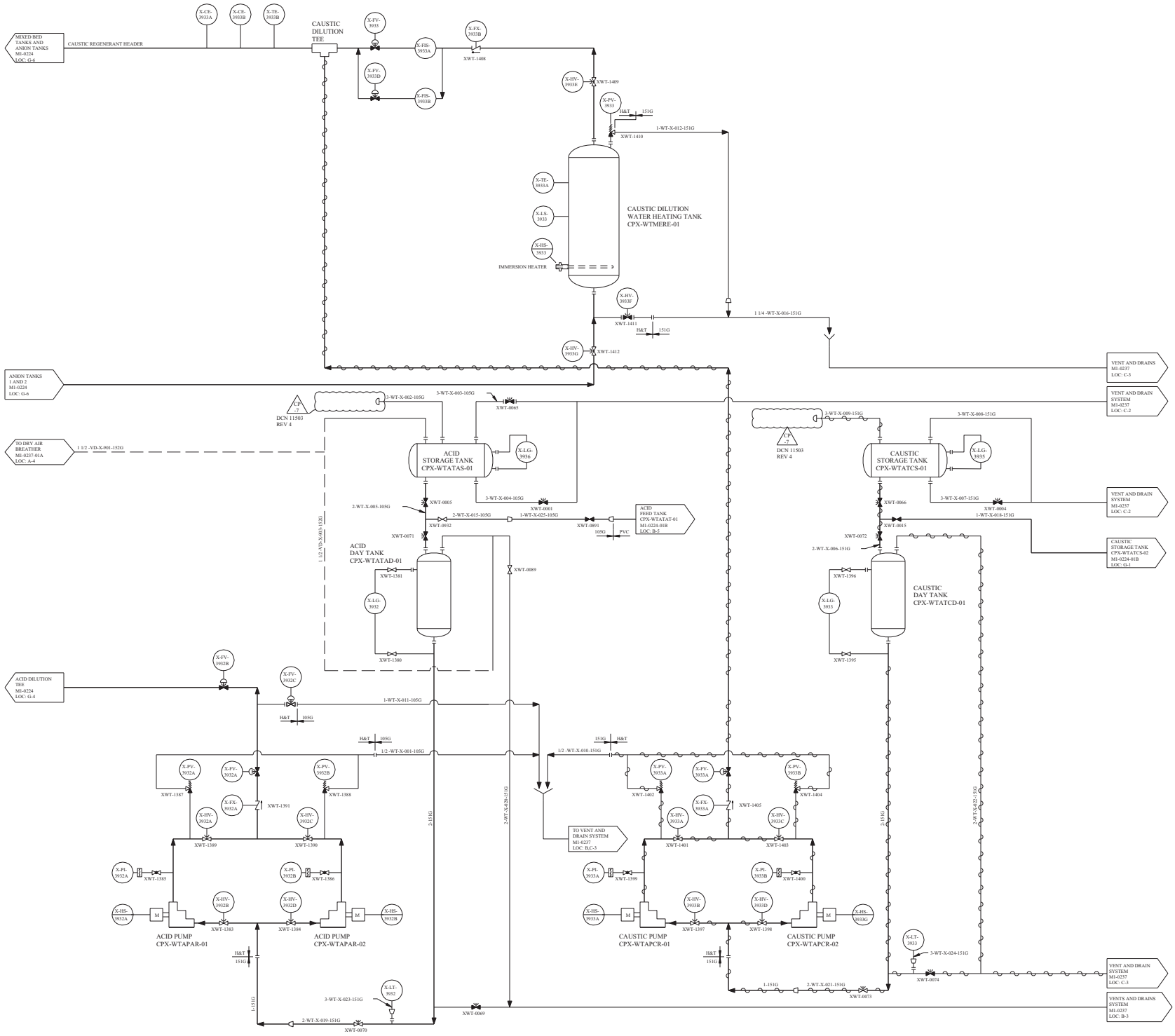
ESAR FIGURE 9.2-4

THIS DRAWING CREATED ELECTRONICALLY

SSSSSSSDATESSSSSS REF CKD 6-1-98 CP-16

me00011z.dgn M1-0224

< FINAL PRINT >




| REV | DWN | CHKD | APVD | REMARKS |
|---|---|---|---|---|
| CP-7 | CA 08/07/1998 | | | THIS DRAWING REVISED TO INCORPORATE DESIGN CHANGE DCN 11503 REV 4. |

NOTE:

1. GENERAL NOTES AND REFERENCE DWGS SEE DWG M1-0224.

FSAR FIGURE 9.2-4

THIS DRAWING CREATED ELECTRONICALLY

DRAWING 2323-M1-0224 REV CP-5
HAS BEEN SPLIT INTO THE FOLLOWING SHEETS:
M1-0224
M1-0224-A

NON-SAFETY

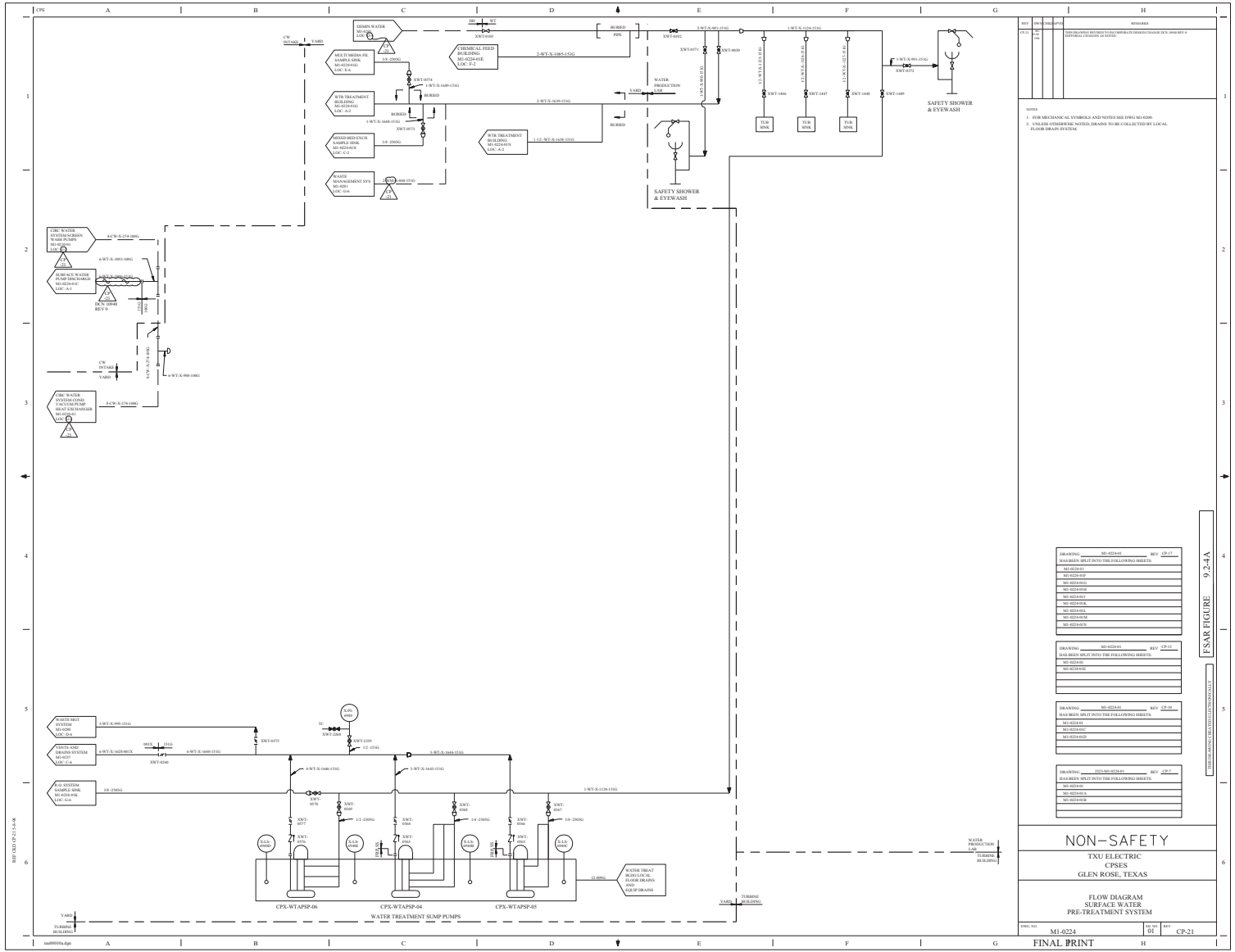
TXU ELECTRIC
CPSES
GLEN ROSE, TEXAS

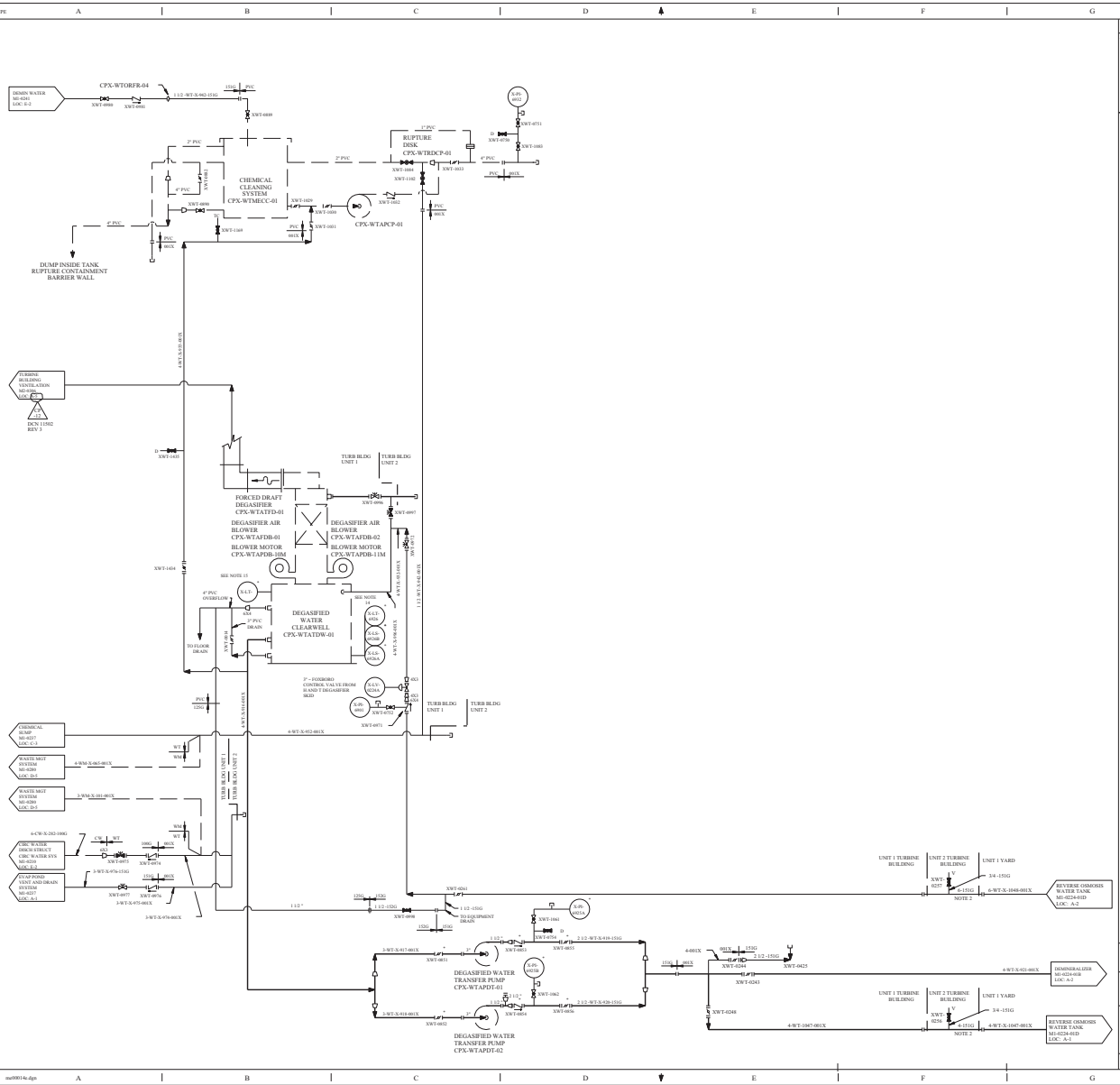
FLOW DIAGRAM
WATER TREATMENT

| DWG. NO. | SH. NO. | REV. |
|---|---|---|
| M1-0224 | A | CP-7 |

me0001750.dgn

$$$$$$$$DA ITESSSSS

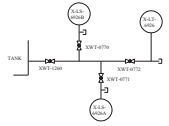

CPE
A
B
C
D
E
F
G
H
REV
DWG
TECH SPEC
NCR
REMARKS
CP-21
NO CHG
THIS DRAWING REVISED TO INCORPORATE DESIGN CHANGE DCN 19948 REV 0. EDITORIAL CLEANUP, AS NOTED.
NOTES
1. FOR MECHANICAL SYMBOLS AND NOTES SEE DWG M1-0200.
2. UNLESS OTHERWISE NOTED, DRAINS TO BE COLLECTED BY LOCAL FLOOR DRAIN SYSTEM.
DRAIN WATER SEALING LOC: C-6
CHEMICAL FEED BUILDING M1-0224-01E LOC: F-2
2-WT-X-1085-151G
MULTI MEDIA FIL SAMPLE SINK M1-0224-01G LOC: E-6
1/4 -2503G
WTR TREATMENT BUILDING M1-0224-01G LOC: A-1
MIXED BED EXCH SAMPLE SINK M1-0224-01N LOC: C-2
1/8 -2503G
WASTE MANAGEMENT SYS M1-0201 LOC: G-6
WTR TREATMENT BUILDING M1-0224-01N LOC: A-2
1 1/2 -WT-X-1638-151G
2-WT-X-1639-151G
1-WT-X-1648-151G
1-WT-X-1649-151G
2-WT-X-991-151G
XWT-6991
XWT-6992
XWT-6993
XWT-6994
XWT-6995
XWT-6996
XWT-6997
XWT-6998
XWT-6999
XWT-1446
XWT-1447
XWT-1448
XWT-1449
XWT-6970
XWT-6971
XWT-6972
XWT-6973
XWT-6974
XWT-6975
XWT-6976
XWT-6977
XWT-6978
XWT-6979
XWT-6980
XWT-6981
XWT-6982
XWT-6983
XWT-6984
XWT-6985
XWT-6986
XWT-6987
XWT-6988
XWT-6989
XWT-6990
XWT-2229
XWT-2230
XWT-4240
TUR SINK
SAFETY SHOWER & EYEWASH
WATER PRODUCTION LAB
TURBINE BUILDING
CIRC WATER SYSTEM SCREEN M1-0201 PUMPS LOC: A-6
8-CW-X-276-108G
6-WT-X-1093-108G
SUBSEACS WATER PUMP DISCHARGE M1-0224-01C LOC: A-1
DCN 19948 REV 0
6-CW-X-274-108G
6-WT-X-998-108G
CW INTAKE
YARD
CHC WATER SYSTEM CHEM VACUUM PUMP HEAT EXCHANGER M1-0228-01 LOC: A-6
WASTE MGT SYSTEM M1-0200 LOC: D-6
WWTS AND DRAINS SYSTEM M1-0237 LOC: C-6
SAS SYSTEM M1-0224-01C M1-0224-01K LOC: G-6
3-WT-X-999-151G
6-WT-X-1629-001N
6-WT-X-1640-151G
3-WT-X-1644-151G
3-WT-X-1643-151G
1-WT-X-1126-151G
1/2 -151G
1/4 -2503G
1/8 -2503G
12-1095G
WATER TREAT BLDG LOC H, FLOOR DRAINS AND EQUIP DRAINS
CPX-WTAPSP-06
CPX-WTAPSP-04
CPX-WTAPSP-05
WATER TREATMENT SUMP PUMPS
TURBINE BUILDING
REF ADD CP-21 E-6,B
DRAWING M1-0224-01 REV CP-17 HAS BEEN SPLIT INTO THE FOLLOWING SHEETS:
M1-0224-01
M1-0224-01F
M1-0224-01G
M1-0224-01H
M1-0224-01J
M1-0224-01K
M1-0224-01L
M1-0224-01M
M1-0224-01N
DRAWING M1-0224-01 REV CP-13 HAS BEEN SPLIT INTO THE FOLLOWING SHEETS:
M1-0224-01
M1-0224-01E
DRAWING M1-0224-01 REV CP-10 HAS BEEN SPLIT INTO THE FOLLOWING SHEETS:
M1-0224-01
M1-0224-01C
M1-0224-01D
DRAWING 2323-M1-0224-01 REV CP-7 HAS BEEN SPLIT INTO THE FOLLOWING SHEETS:
M1-0224-01
M1-0224-01A
M1-0224-01B
FSAR FIGURE 9.2-4A
THESE DRAWINGS ARE ELECTRONICALLY
NON-SAFETY
TXU ELECTRIC
CPSES
GLEN ROSE, TEXAS
FLOW DIAGRAM
SURFACE WATER
PRE-TREATMENT SYSTEM
DWG. NO. M1-0224
SH. NO. 01
REV. CP-21
FINAL PRINT
mn00010a.dgn




| REV | DESIGN | CHECK | APVD | REMARKS |
|---|---|---|---|---|
| CP-13 | [illegible] 11-01-1999 | | | THIS DRAWING REVISED TO INCORPORATE DESIGN CHANGE DCN 11502 REV 3. |

NOTES:

1. ALL PREASSEMBLED EQUIPMENT OR SKID MOUNTED EQUIPMENT AND PIPING SUPPLIED BY GRAVER IS SHOWN IN FRANTONE. ALL EQUIPMENT SUPPLIED BY GRAVER LOOSE FOR INSTALLATION IN PURCHASERS PIPING IS INDICATED BY *
2. CAT 316G AND 601G TO BE 8 CR STAINLESS STEEL.
3. PIPE AND FITTINGS TO BE CARPENTER ALLOY 20.
4. SEE DRAWING M1-2227-01 AND M1-2227-02 FOR CONTROL LOGIC.
5. FOR MECHANICAL NOTES AND SYMBOLS SEE MI-0200.
6. ALL DRAINS TO BE COLLECTED LOCALLY UNLESS OTHERWISE NOTED.
7. FOR CONTROL LOGIC SEE ECODYNE-GRAVER DRAWINGS T-29241 AND T-29369.
8. 4" - 1 XWT-0972 XWT-0896 AND XWT-0897 ) AND 3" - 1 XWT-0975 (FLANGED SARAN LINED DIAPHRAGM VALVE SALVAGED FROM HUNGERFORD AND TERRY DEGASIFIER SKID.
9. THIS FLOW DIAGRAM HAS BEEN REDRAWN FROM ECODYNE GRAVER DRAWINGS T-29241-H AND T-29364-C WITH FIELD CHANGES INCORPORATED.
10. DELETED.
11. DELETED.
12. DELETED.
13. DELETED.
14. INSTRUMENT TREE DETAIL.
15. LEVEL TRANSMITTER ABANDONED IN PLACE.




FSAR FIGURE 9.2-4A

DRAWING 2203-M1-0224-01 REV CP-7
HAS BEEN SPLIT INTO THE FOLLOWING SHEETS:
M1-0224-01
M1-0224-01A
M1-0224-01B

THESE ADDITIONAL SHEETS ARE NOT INCLUDED IN THIS MICROFICHE

NON-SAFETY

TXU ELECTRIC
CPSES
GLEN ROSE, TEXAS

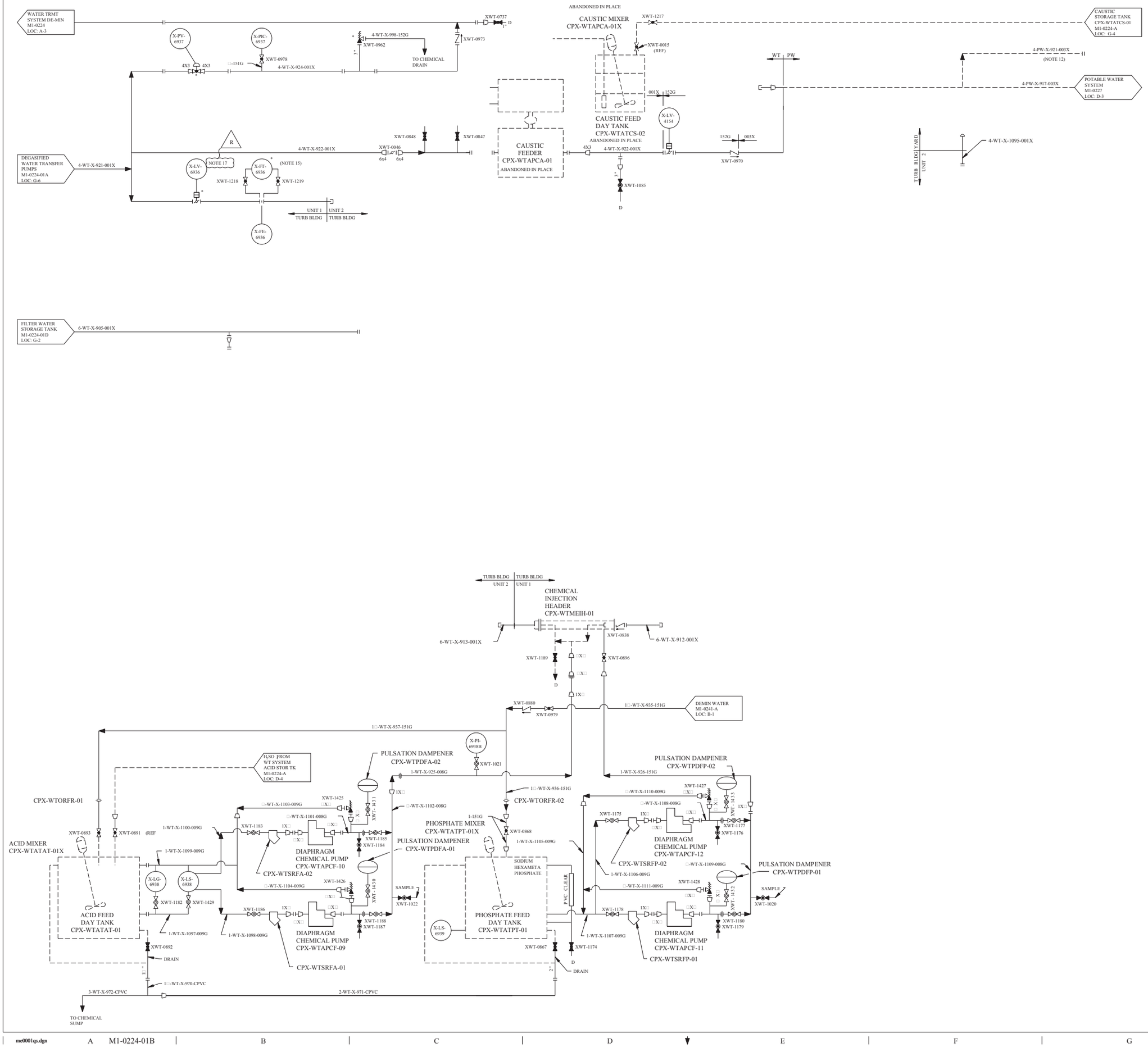
FLOW DIAGRAM
SURFACE WATER
PRE-TREATMENT SYSTEM

DWG. NO. M1-0224 | SHEET 01A | REV. CP-13

FINAL PRINT

REFCND 11/07/CP-12

ma000146.dgn




| REV | DWN | CHKD | APVD | REMARKS |
|---|---|---|---|---|
| CP-18 | DJL 11-11-2014 | JRMC 11-11-2014 | | THIS DRAWING REVISED TO INCORPORATE DESIGN CHANGE FDA-2014-000184-01-00 PER SK-0007-14-000184-01-00. |

NOTES:

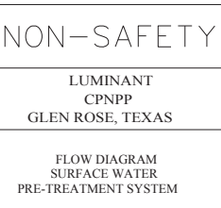
1. ALL PREASSEMBLED EQUIPMENT OR SKID MOUNTED EQUIPMENT AND PIPING SUPPLIED BY GRAVER IS SHOWN IN PHANTOM. ALL EQUIPMENT SUPPLIED BY GRAVER LOOSE FOR INSTALLATION IN PURCHASERS PIPING IS INDICATED BY * .
2. CAT 151G AND 601G TO BE F316 STAINLESS STEEL.
3. FOR CONTROL LOGIC SEE ECODYNE-GRAVER DRAWINGS T-29241 AND T-29569 .
4. ALL LINES 6" AND SMALLER LOCATED ABOVE GROUND OUTDOORS WITH THE EXCEPTION OF THE FOLLOWING LINES: 3-WT-X-990-152G,3-WT-X-991-152G, 3-WT-X-992-152G, 3-WT-X-999-152G (DOWNSTREAM OF VALVE XWT-9881 ), 6-WT-X-956-002X (DOWNSTREAM OF VALVE XWT-8101 ) SHALL BE INSULATED.
5. THIS FLOW DIAGRAM HAS BEEN REDRAWN FROM ECODYNE-GRAVER DRAWINGS T-29241-B AND T-29569-C WITH FIELD CHANGES INCORPORATED.
6. FOR GENERAL NOTES AND SYMBOLS SEE DRAWING M1-0200.
7. DELETED
8. DELETED
9. UNLESS OTHERWISE NOTED, ALL DRAINS TO BE COLLECTED BY LOCAL DRAIN SYSTEM.
10. THE FOLLOWING VALVES ARE TO BE BALL VALVES, MANUFACTURED BY NIBCO/CHEMTROL, "TRUE BLOC" TRUE UNION IN CPVC BODY MATERIAL:

    XWT-1020 , XWT-1021 , XWT-1022 , XWT-1175 , XWT-1176 , XWT-1177 , XWT-1178 , XWT-1179 , XWT-1180 , XWT-1182 , XWT-1183 , XWT-1184 , XWT-1185 , XWT-1186 , XWT-1187 , XWT-1188 , XWT-1429 , XWT-1430 , XWT-1431 , XWT-1432 , XWT-1433
11. THE FOLLOWING VALVES ARE TO BE RELIEF VALVES IN CARPENTER 20 ALLOY (ALLOY 20) BODY MATERIAL, □" ELO VR-6D-1 ALLOY 20 WITH A 115 PSI SET PRESSURE:

    XWT-1425 , XWT-1426

    THE FOLLOWING VALVES ARE TO BE RELIEF VALVES IN 316 SS BODY MATERIAL, □" ELO VR-6A-1 TYPE 316 WITH A 115 PSI SET PRESSURE:

    XWT-1427 , XWT-1428
12. PIPING BLANKED OFF AT THE DEGASIFIED WATER CLEAR WELL ( CPX-WTATDW-01 ) AREA.
13. DELETED.
14. DELETED.
15. MANIFOLDING ARRANGEMENT FOR X-FT-6936 :




16. DELETED.
17. THIS LOCATION IS ABANDONED IN PLACE PER FDA-2014-000184-01.

R

DRAWING 2323-M1-0224-01 REV CP-7
HAS BEEN SPLIT INTO THE FOLLOWING SHEETS:

- M1-0224-01
- M1-0224-01A
- M1-0224-01B

NON–SAFETY

LUMINANT
CPNPP
GLEN ROSE, TEXAS

FLOW DIAGRAM
SURFACE WATER
PRE-TREATMENT SYSTEM

DWG. NO. M1-0224 | SH. NO. 01B | REV. CP-18

FSAR FIGURE 9.2-4A

THIS DRAWING CREATED ELECTRONICALLY

$$$$$$$$DATE$$$$$$$$ REF CKD 1/ 15/ 98 CP-16

me0001qs.dgn M1-0224-01B < FINAL PRINT >

| REV | DWN | CHKD | APVD | REMARKS |
|---|---|---|---|---|
| CP-21 | DLK 05-08-2017 | MM 05-08-2017 | | THIS DRAWING REVISED TO INCORPORATE DESIGN CHANGE FDA 2017-000031-01-00 PER SK-0001-17-000031-01-00. EDITORIAL CHANGE AS NOTED. |

**NOTES:**

1. FOR GENERAL NOTES AND SYMBOLS SEE DRAWING M1-0200.
2. COMPONENTS FURNISHED LOOSE BY WATER PRE-TREATMENT SYSTEM VENDOR FOR INSTALLATION IN CUSTOMER PIPING.
3. DELETED
4. DELETED
5. DELETED
6. DELETED
7. FOR HEAT TRACING SEE DCN-1103.
8. DELETED
9. DELETED
10. VALVE XWT-0112 IS INTENDED AS THE CONNECTION POINT OF AN ALTERNATE FILTRATION UNIT (MOBILE FILTRATION TRAILER). THIS VALVE SERVES AS THE SUPPLY VALVE TO THE ALTERNATE UNIT. THIS ALTERNATE FILTRATION UNIT MAY BE CONNECTED AT THE DISCRETION OF CHEMISTRY TO THE WT SYSTEM DURING AN EXTENDED OUTAGE OF THE PERMANENT MICROFILTRATION SYSTEM.
11. FILLET WELDED STEEL PATCH INSTALLED PER FDA-2017-000031-01.

R

HYPOCHLORITE FEED PUMP 02 M1-0224-01E LOC: A-6
HYPOCHLORITE FEED PUMP 01 M1-0224-01E LOC: A-6
X-PCV-6970B
X-PCV-6970A
ABANDONED IN PLACE
CIRC WATER SYS SCREEN WASH PUMPS M1-0224-01 LOC: A-2
6-WT-X-1006-151G
XWT-0143 LC
6-WT-X-1005-151G
XWT-0249
XWT-0128
4-151G
8-WT-X-1008-001X
8-WT-X-1007-151G
XWT-0109
XWT-0110
CIRCULATING WATER INTAKE STRUCTURE
YARD
8-WT-X-1009-152G
CHEMICAL INJECTION QUILL ASSEMBLY
XWT-0113
□-WT-X-1600-012G
CHEMICAL DRUM M1-0224-01P LOC: A-5
MIXING SPOOL CPX-WTBLRW-01
NOTE 2
XWT-0144
XWT-0145
X-FCV-6976
X-FE-6976
6-WT-X-1010-152G
XWT-0287
6-WT-X-1011-152G
XWT-0118
10x6
OVERFLOW
NORMAL LL
X-LT-6977
3-152G
XWT-0314
□-WT-X-1112-012G
SULFURIC ACID PUMPS M1-0224-01P LOC: G-5
□-WT-X-1604-012G
SODIUM HYPOCHLORITE/ SODIUM BROMIDE TANKS M1-0224-01P LOC: G-2
YARD WATER TREATMENT BLDG
XWT-0223
MICROFILTRATION SAMPLE PUMP CPX-WTPMSP-01
CPX-WTORMF-03
NOTE 2
X-AIT-6983
X-AE-6985
X-AIT-6984
XWT-0483
XWT-0445
XWT-2295
XWT-2287
□-2505G
XWT-2274 (REF)
DEMIN WATER STORAGE TANK SUPPLY TO WTS M1-0224-01E LOC: G-1
CPX-WTSNRW-01
CPX-WTSNRW-02
CPX-WTPMRW-01
CPX-WTPMRW-02
X-HV-6982A
X-HV-6982B
X-PI-6982A-1
X-PI-6982A-2
X-PI-6982B-1
X-PI-6982B-2
XWT-0433
XWT-0434
XWT-0438
XWT-0439
XWT-0115
XWT-0116
XWT-0431
XWT-0432
XWT-0436
XWT-0437
6-WT-X-1609-151G
6-WT-X-1610-151G
6-WT-X-1611-151G
6-WT-X-1073-001X
6-WT-X-1072-151G
6-WT-X-1074-151G
3-WT-X-1607-151G
3-WT-X-1608-151G
4-WT-X-1605-151G
4-WT-X-1606-151G
FILTER SKIDS M1-0224-01D LOC: A-3
XWT-0112 NOTE 10
XWT-0117
□" INJECTION QUILL ASSEMBLY
RAW WATER PUMPS
RAW WATER STORAGE TANK CPX-WTTNRW-01
12440 GAL
VENDOR SUPPLIED
VORTEX BREAKER
XWT-0246
XWT-0247
XWT-0250
8-WT-X-1016-151G
XWT-0169
XWT-0429
XWT-0268
XWT-0269
8-WT-X-1080-001X
3-WT-X-1081-001X
6-WT-X-1004-151G
6-WT-X-1005-151G
XWT-0142
XWT-0141
X-PI-6979A
X-PI-6979B
X-PS-6979A
X-PS-6979B
XWT-0290
XWT-0291
XWT-0140
XWT-0139
XWT-0426
XWT-0427
CPX-WTPMSW-01
CPX-WTPMSW-02
SURFACE WATER PUMPS
VENDOR SUPPLIED
DRAIN PLUGGED
6-001X
ABANDONED IN PLACE
8-WT-X-1003-151G
MICROFILTRATION BREAK TANK M1-0224-01U LOC: E-2
SUMP
SLOPE
8-WT-X-1015-001X
WASTE MANGT SYSTEM M1-0281-B LOC: A-2
12-WM-X-900-001X
EDITORIAL
WMS
WT
XWT-0252
8-WT-X-1083-152G
8-WT-X-1084-152G
SEE NOTE 11
12-WT-X-1082-152G
8-WT-X-1080-001X
XWT-0162
XWT-0255
XWT-0160
XWT-0161
XWT-0254
XWT-0159
X-LT-6967
X-PS-6967A
X-PS-6967B
X-PS-6967C
CPX-WTPMWP-01
CPX-WTPMWP-02
CPX-WTPMWP-03
VENDOR SUPPLIED
OVERFLOW WEIR
WASTE SUMP AND PUMPS
2□-SA-X-954-152G
AUX BOILER SUMP PUMP M1-0213-C LOC: C-1
ABANDONED IN PLACE
10-WT-X-1040-001X
8-WT-X-1027-001X
10-001X
8-WT-X-1039-001X
DRAIN STORAGE TANK M1-0224-01D LOC: A-2
4-WT-X-1079-151G
DRAIN-CHEM FEED BLDG M1-0224-01E LOC: F-6
4-WT-X-1049-001X
2-WT-X-1014-152G
8-WT-X-1614-009G
FILTER SKIDS HIGH FLOW DR M1-0224-01D LOC: A-4
6-WT-X-1615-009G
FILTER SKIDS LOW FLOW DR M1-0224-01D LOC: A-5

FSAR FIGURE 9.2-4A

THIS DRAWING CREATED ELECTRONICALLY

DRAWING M1-0224-01 REV CP-10
HAS BEEN SPLIT INTO THE FOLLOWING SHEETS:

| |
|---|
| **M1-0224-01** |
| M1-0224-01C |
| M1-0224-01D |

NON-SAFETY

LUMINANT
CPNPP
GLEN ROSE, TEXAS

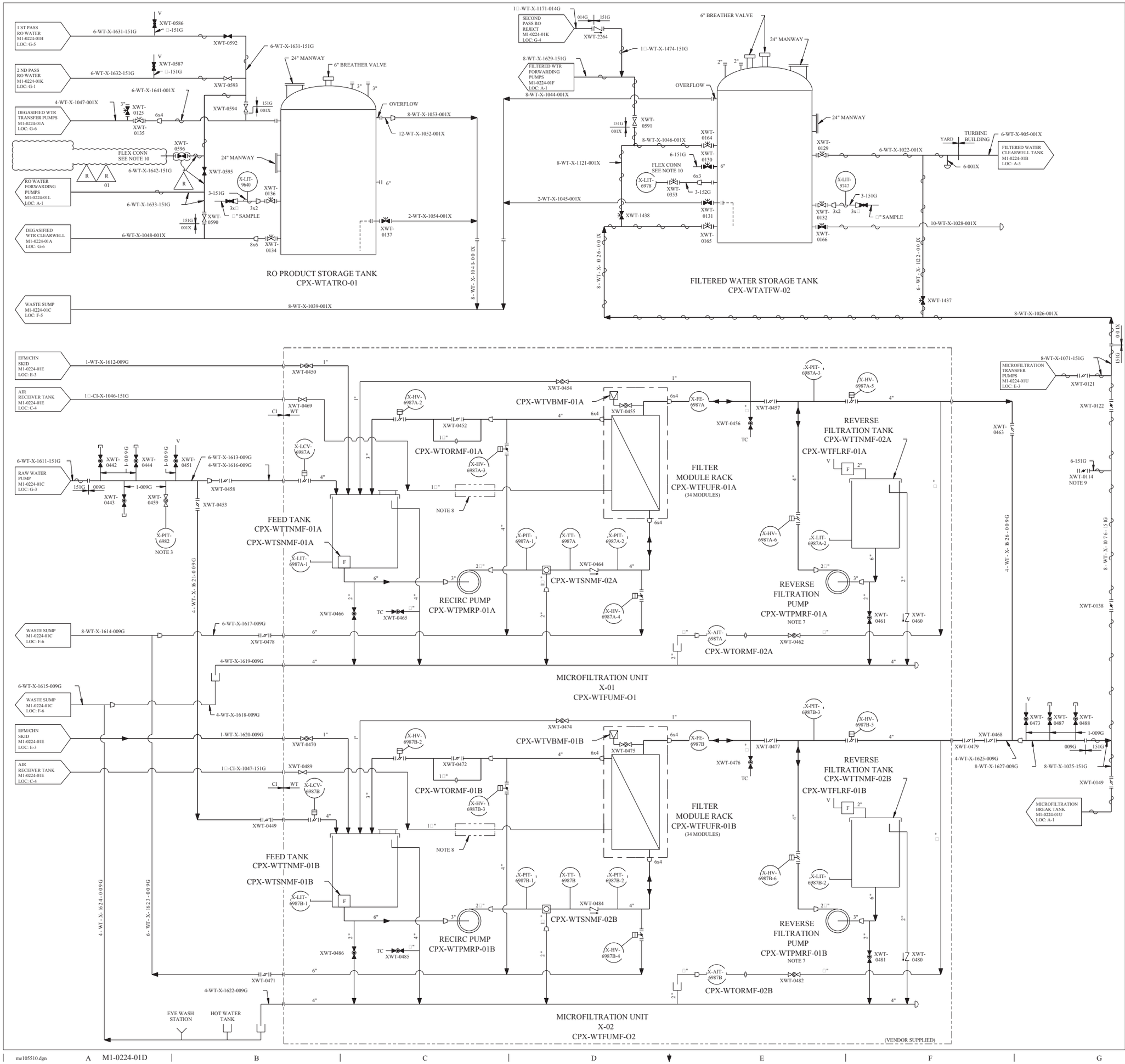
FLOW DIAGRAM
SURFACE WATER
PRE-TREATMENT SYSTEM

| DWG. NO. | SH. NO. | REV. |
|---|---|---|
| M1-0224 | 01C | CP-21 |

REF CKD 5-8-98 CP-12

me105360.dgn A M1-0224-01C

FINAL PRINT




| REV | DWN | CHKD | APVD | REMARKS |
|---|---|---|---|---|
| CP-17 | DLK 09-12-2014 | MM 09-12-2014 | | THIS DRAWING REVISED TO INCORPORATE DESIGN CHANGE FDA 2013-000008-11-01 PER SK-0001-13-000008-11-01. |

NOTES:

1. FOR GENERAL NOTES AND SYMBOLS SEE DRAWING M1-0200.
2. FOR HEAT TRACING SEE DCN-1103.
3. COMPONENTS FURNISHED LOOSE BY WATER PRE-TREATMENT SYSTEM VENDOR FOR INSTALLATION IN CUSTOMER PIPING.
4. DELETED
5. DELETED
6. DELETED
7. THE WATER TREATMENT MICROFILTRATION VENDOR INDICATES THAT THE REVERSE FILTRATION PUMPS ROTATE BACKWARDS DURING THE FILTER MODULE CLEANING AND BACK FLUSHING ACTIVITIES.
8. REFER TO VENDOR DRAWING 10000022051 SHEET 3 FOR ADDITIONAL DETAILS OF THE X-01 AND X-02 SKID MOUNTED INSTRUMENT AIR SYSTEM DESIGN, LAYOUT AND COMPONENTS.
9. VALVE XWT-0114 IS INTENDED AS THE CONNECTION POINT OF AN ALTERNATE FILTRATION UNIT (MOBILE FILTRATION TRAILER). THIS VALVE SERVES AS THE DISCHARGE VALVE TO THE ALTERNATE UNIT. THIS ALTERNATE FILTRATION UNIT MAY BE CONNECTED AT THE DISCRETION OF CHEMISTRY TO THE WT SYSTEM DURING AN EXTENDED OUTAGE OF THE PERMANENT MICROFILTRATION SYSTEM.
10. FLEX CONNECTION - MAY BE A PIPE CAP OR STORZ FITTING.

R 01

FSAR FIGURE 9.2-4A

THIS DRAWING CREATED ELECTRONICALLY

DRAWING M1-0224-01 REV CP-10
HAS BEEN SPLIT INTO THE FOLLOWING SHEETS:
M1-0224-01
M1-0224-01C
M1-0224-01D

NON-SAFETY

LUMINANT
CPNPP
GLEN ROSE, TEXAS

FLOW DIAGRAM
SURFACE WATER
PRE-TREATMENT SYSTEM

DWG. NO. M1-0224 | SH. NO. 01D | REV. CP-17

$$$$$$$$DATE$$$$$$$$

me105510.dgn A M1-0224-01D

< FINAL PRINT >

| REV | DWN | CHKD | APVD | REMARKS |
|---|---|---|---|---|
| CP-15 | DLK 12-18-2013 | MM 12-18-2013 | | THIS DRAWING REVISED TO INCORPORATE DESIGN CHANGE FDA 2013-000191-01-00 PER SK-0001-13-000191-01-00. |

NOTES:

1. FOR GENERAL NOTES AND SYMBOLS ON DRAWING M1-0200.
2. DELETED
3. INSULATION AND HEAT TRACING TO BE PROVIDED ON ALL CAUSTIC LINES AND BULK CAUSTIC STORAGE TANK.
4. * DENOTES SCHEDULE 80 PVC PIPE SUPPLIED BY VENDOR OR 008G IF PROVIDED BY FIELD.
5. FOR HEAT TRACING SEE DCN 1103.
6. VENT VALVES PROVIDED BY CUSTOMER ON VENDOR FURNISHED SKID.
7. DENOTES PVDF OR KYNAR LINED CPVC.
8. COMPONENTS FURNISHED LOOSE BY WATER PRE-TREATMENT SYSTEM VENDOR FOR INSTALLATION IN CUSTOMER PIPING.
9. □" AND □" CATGORY 012G KYNAR CHEMICAL INJECTION LINE SEGMENTS SHALL BE ROUTED INSIDE 1□" PVC SCHEDULE 80 GUARD PIPE.

FSAR FIGURE 9.2-4A

THIS DRAWING CREATED ELECTRONICALLY

DRAWING M1-0224-01 REV CP-13
HAS BEEN SPLIT INTO THE FOLLOWING SHEETS:
M1-0224-01
M1-0224-01E

NON-SAFETY

LUMINANT
CPNPP
GLEN ROSE, TEXAS

FLOW DIAGRAM
SURFACE WATER
PRE-TREATMENT SYSTEM

DWG. NO. M1-0224 | SH. NO. 01E | REV. CP-15

$$$$$$$$DATE$$$$$$ REF CHKD 09-02-2003

me105370.dgn A M1-0224-01E B C D E F G < FINAL PRINT > H

| REV | DWN | CHK | APVD | REMARKS |
|---|---|---|---|---|
| CP-8 | D.K. 10-04-2016 | MHF 03-07-2017 | | THIS DRAWING REVISED TO INCORPORATE DESIGN CHANGE FDA 2016-000043-01-00 PER SK-0001-16-000043-01-00. |

NOTES:

1. FOR GENERAL NOTES AND SYMBOLS SEE DRAWING M1-0200.
2. UNLESS OTHERWISE NOTED ALL DRAINS COLLECTED BY LOCAL DRAIN SYSTEM.
3. GLEGG WATER CONDITIONING, INC DRAWING 2011P1-1.

FILTER WATER STORAGE TANK M1-0224-01D LOC: D-1

8-WT-X-1629-151G

6-WT-X-1132-014G

CPX-WTPMFT-07

4-WT-X-1135-014G

6-WT-X-1131-014G

CPX-WTPMFT-06

4-WT-X-1134-014G

6-WT-X-1130-014G

CPX-WTPMFT-05

4-WT-X-1133-014G

CPX-WTPMFT-04

FILTERED WATER FORWARDING PUMPS

8-WT-X-1138-014G

SECONDARY WATER SUPPLY

CHEMICAL INJECTION

8-WT-X-1630-151G

8-WT-X-1518-151G

SAMPLE SINK M1-0224-01G LOC: D-5

MULTI MEDIA FILTER UNIT CPX-WTFLMM-01

MULTI MEDIA FILTER UNIT CPX-WTFLMM-02

MULTI MEDIA FILTER UNIT CPX-WTFLMM-03

SIGHTGLASSES 3x12

SERVICE INLET

SUBSURFACE WASH INLET

BACKWASH INLET

RINSE OUTLET

SERVICE OUTLET

AIR SCOUR INLET

DRAIN DOWN

MEDIA REMOVAL CONN

18" MANWAY

CORROSION COUPON SKID

TEMPORARY RO MODULE

CARTRIDGE FILTERS M1-0224-01G LOC: A-2

SAMPLE SINK M1-0224-01G LOC: D-5

SAMPLE

MULTI MEDIA FILTER AIR SCOUR BLOWERS

CPX-WTBLMM-01

CPX-WTBLMM-02

FSAR FIGURE 9.2-4A

THIS DRAWING CREATED ELECTRONICALLY

DRAWING M1-0224-01 REV CP-17
HAS BEEN SPLIT INTO THE FOLLOWING SHEETS:

| |
|---|
| M1-0224-01 |
| M1-0224-01F |
| M1-0224-01G |
| M1-0224-01H |
| M1-0224-01J |
| M1-0224-01K |
| M1-0224-01L |
| M1-0224-01M |
| M1-0224-01N |

NON-SAFETY

LUMINANT
CPNPP
GLEN ROSE, TEXAS

FLOW DIAGRAM
SURFACE WATER
PRE-TREATMENT SYSTEM

| DWG. NO. | SH. NO. | REV. |
|---|---|---|
| M1-0224 | 01F | CP-8 |

FINAL PRINT

me103420.dgn

A M1-0224-01F

| REV | DWN | CHKD | APVD | REMARKS |
|---|---|---|---|---|
| CP-9 | ISLK 05-09-2018 | MM 05-09-2018 | | THIS DRAWING REVISED TO INCORPORATE DESIGN CHANGE FDA-2018-000038-01-00 PER SK-0001-18-000038-01-00. |

NOTES:

1. FOR GENERAL NOTES AND SYMBOLS SEE DRAWING M1-0200.
2. UNLESS OTHERWISE NOTED ALL DRAINS COLLECTED BY LOCAL DRAIN SYSTEM.
3. GLEGG WATER CONDITIONING, INC DRAWING 2011P1-2.
4. 500 ML GRADUATED CALIBRATION CYLINDER.




FSAR FIGURE 9.2-4A

THIS DRAWING CREATED ELECTRONICALLY

| DRAWING M1-0224-01 REV CP-17 HAS BEEN SPLIT INTO THE FOLLOWING SHEETS: |
|---|
| M1-0224-01 |
| M1-0224-01F |
| M1-0224-01G |
| M1-0224-01H |
| M1-0224-01J |
| M1-0224-01K |
| M1-0224-01L |
| M1-0224-01M |
| M1-0224-01N |

NON–SAFETY

LUMINANT
CPNPP
GLEN ROSE, TEXAS

FLOW DIAGRAM
SURFACE WATER
PRE-TREATMENT SYSTEM

| DWG. NO. | SH. NO. | REV. |
|---|---|---|
| M1-0224 | 01G | CP-9 |

me103180.dgn

A M1-0224-01G

FINAL PRINT

| REV | DWN | CHKD | APVD | REMARKS |
|---|---|---|---|---|
| CP-10 | DLK 06-10-2014 | | | THIS DRAWING REVISED TO INCORPORATE AI-CR-2014-006805-1 TO EDITORIALLY CORRECT THE DRAIN LINES DOWN STREAM OF X-FV-9480, X-FV-9500 AND X-FV-9520. ALSO EDITORIALLY CORRECT THE DRAIN LINES DOWN STREAM OF X-FV-9472, X-FV-9492, X-FV-9512, XWT-1971, XWT-1972 AND XWT-1973. |

NOTES:

1. FOR GENERAL NOTES AND SYMBOLS SEE DRAWING M1-0200.
2. UNLESS OTHERWISE NOTED ALL DRAINS COLLECTED BY LOCAL DRAIN SYSTEM.
3. GLEGG WATER CONDITIONING, INC. DRAWING 2011P1-3.
4. CHEMICAL INJECTION FITTING FOR USE AT THE DISCRETION OF THE CHEMISTRY DEPARTMENT.

FSAR FIGURE 9.2-4A

THIS DRAWING CREATED ELECTRONICALLY

| DRAWING M1-0224-01 REV CP-17 |
|---|
| HAS BEEN SPLIT INTO THE FOLLOWING SHEETS: |
| M1-0224-01 |
| M1-0224-01F |
| M1-0224-01G |
| M1-0224-01H |
| M1-0224-01J |
| M1-0224-01K |
| M1-0224-01L |
| M1-0224-01M |
| M1-0224-01N |

NON-SAFETY

LUMINANT
CPNPP
GLEN ROSE, TEXAS

FLOW DIAGRAM
SURFACE WATER
PRE-TREATMENT SYSTEM

| DWG. NO. | SH. NO. | REV. |
|---|---|---|
| M1-0224 | 01H | CP-10 |

< FINAL PRINT >

me103190.dgn A M1-0224-01H

REF CKD 1'20/97 CP-5

$$$$$$$$DAT ES$$$$$$

| REV | DWN | CHKD | APVD | REMARKS |
|---|---|---|---|---|
| CP-4 | CA 08-05-1999 | | | THIS DRAWING REVISED TO INCORPORATE DESIGN CHANGE DCN 10745 REV 1. |

NOTES:

1. FOR GENERAL NOTES AND SYMBOLS SEE DRAWING M1-0200.
2. UNLESS OTHERWISE NOTED, ALL DRAINS COLLECTED BY LOCAL DRAIN SYSTEM.
3. GLEGG WATER CONDITIONING, INC DRAWING 2011P1-4.
4. FORCED DRAFT DECARBONATOR FAN FILTER IS A HEPA TYPE FILTER.
5. REMOVE BACKFLOW PREVENTER INTERNALS, ABANDON VALVE BODY XWT-2165 IN PLACE.

FORCED DRAFT DECARBONATOR CPX-WTATFD-02

FORCED DRAFT DECARBONATOR FANS

FORCED DRAFT DECARBONATOR M1-0224-01H LOC: G-5

6-WT-X-1304-014G

XWT-1738

18" MANWAY

X-HS-9530

CPX-WTAFDC-01

X-HS-9531

CPX-WTAFDC-02

6" PACKING REMOVAL CONNECTION

SEE NOTE 4

10-WT-X-1306-014G

10-WT-X-1307-014G

XWT-1820

XWT-1821

2-151G

FORCED DRAFT DECARBONATOR CLEARWELL CPX-WTATDW-02

FORCED DRAFT DECARBONATOR CLEARWELL CPX-WTATDW-03

XWT-2164

6-WT-X-1510-014G

6-WT-X-1511-014G

XWT-2165 NOTE 5

3-WT-X-1506-014G

XWT-2166

XWT-2167

WATER OUTLET

X-LE-9532

X-LE-9533

XWT-1822

XWT-1823

XWT-1824

XWT-1825

XWT-1826

XWT-1827

X-CE-9534

X-FV-9534

XWT-1830

XWT-1831

SAMPLE SINK M1-0224-01K LOC: G-4

□-SS TUBING

4-WT-X-1312-014G

4-WT-X-1313-014G

4-WT-X-1314-014G

4-WT-X-1315-014G

XWT-1832

XWT-1833

XWT-1834

XWT-1835

X-PS-9535

X-PI-9535

XWT-1837

X-PS-9536

X-PI-9536

XWT-1839

X-PS-9537

X-PI-9537

XWT-1841

X-PS-9538

X-PI-9538

XWT-1843

CPX-WTPMRO-05

CPX-WTPMRO-06

CPX-WTPMRO-07

CPX-WTPMRO-08

SECOND PASS REVERSE OSMOSIS FEED PUMPS

X-HS-9543

X-HS-9544

X-HS-9545

X-HS-9546

XWT-1862

XWT-1863

XWT-1864

XWT-1865

XWT-1866

XWT-1867

XWT-1868

XWT-1869

X-PS-9547

X-PI-9547

XWT-1845

X-PS-9548

X-PI-9548

XWT-1847

X-PS-9549

X-PI-9549

XWT-1849

X-PS-9550

X-PI-9550

XWT-1851

XWT-1844

XWT-1846

XWT-1848

XWT-1850

XWT-1852

XWT-1853

XWT-1854

XWT-1855

XWT-1856

XWT-1857

XWT-1858

XWT-1859

XWT-1860

XWT-1861

XWT-2161

XWT-2162

SECONDARY WATER SUPPLY

FEEDWATER TO SECOND PASS RO BANK 1 M1-0224-01K LOC: A-1

FEED INLET

XWT-1870 FEED

XWT-1898

FLUSH INLET 3-WT-X-1544-014G

CLEANING FEED TO SECOND PASS RO BANK 1 M1-0224-01K LOC: A-2

FEEDWATER TO SECOND PASS RO BANK 2 M1-0224-01K LOC: C-1

XWT-1900 FEED

XWT-1928

FLUSH INLET 3-WT-X-1227-014G

CLEANING FEED TO SECOND PASS RO BANK 2 M1-0224-01K LOC: C-2

FEEDWATER TO SECOND PASS RO BANK 3 M1-0224-01K LOC: E-1

XWT-1930 FEED

XWT-1958

FLUSH INLET 3-WT-X-1228-014G

CLEANING FEED TO SECOND PASS RO BANK 3 M1-0224-01K LOC: E-2

XWT-2163

3-WT-X-1555-014G

3-WT-X-1539-014G

3-WT-X-1396-014G

DEMINERALIZER RO FLUSH M1-0224-01H LOC: F-1

CLEANING FEED M1-0224-01H LOC: F-1

XWT-1974

XWT-1975

XWT-1987

XWT-1986

XWT-1984

XWT-1985

XWT-1828

XWT-1829

DCN 10745 REV 1

CP -4

X-FI-9627

X-FE-9627

X-PI-9628

KYNAR TUBING

REVERSE OSMOSIS CARTRIDGE FILTER CPX-WTFLCC-01

□-2505G

COMPRESSED AIR SYSTEM M1-0216-A LOC: E-5

INSTRUMENT AIR SYSTEM M1-0216-A LOC: G-5

PULSED AIR INJECTION SYSTEM CHM-99-000018

SECOND PASS RO BANK REJECT M1-0224-01K LOC: G-4

3-WT-X-1512-014G

CLEANING REJECT M1-0224-01H LOC: F-1

3-WT-X-1540-014G

3-WT-X-1408-014G

XWT-1962

XWT-1963

CLEANING PRODUCT FILL M1-0224-01H LOC: G-4

1□-WT-X-1541-014G

SECOND PASS RO BANK CLEAN PRODUCT FILL M1-0224-01K LOC: G-4

1-WT-X-1412-151G

2-WT-X-1390-014G

X-LS-9621

X-LE-9621

1-WT-X-1473-151G

WTR TREATMENT SYSTEM M1-0224-01G LOC: A-3

XWT-1614

18" MANWAY

XWT-1960

XWT-1961

X-LI-9622

X-TI-9629

X-TW-9629

X-TE-9620

X-TW-9620

H-9620

3-WT-X-1384-014G

XWT-1964

CLEANING SOLUTION TANK CPX-WTTNCC-01

X-PI-9625

X-HS-9623

XWT-1968

XWT-1967

XWT-1965

XWT-1989

CPX-WTPMCC-01

X-PI-9626

X-HS-9624

XWT-1970

XWT-1969

XWT-1966

XWT-2009

CPX-WTPMCC-02

XWT-1988

XWT-1980

XWT-1982

3-WT-X-1388-014G

XWT-1981

XWT-1983

3-WT-X-1389-014G

CLEANING SOLUTION FORWARDING PUMPS

XWT-1988

XWT-2163

FSAR FIGURE 9.2-4A

THIS DRAWING CREATED ELECTRONICALLY

| DRAWING M1-0224-01 REV CP-17 HAS BEEN SPLIT INTO THE FOLLOWING SHEETS: |
|---|
| M1-0224-01 |
| M1-0224-01F |
| M1-0224-01G |
| M1-0224-01H |
| M1-0224-01J |
| M1-0224-01K |
| M1-0224-01L |
| M1-0224-01M |
| M1-0224-01N |

NON-SAFETY

LUMINANT
CPNPP
GLEN ROSE, TEXAS

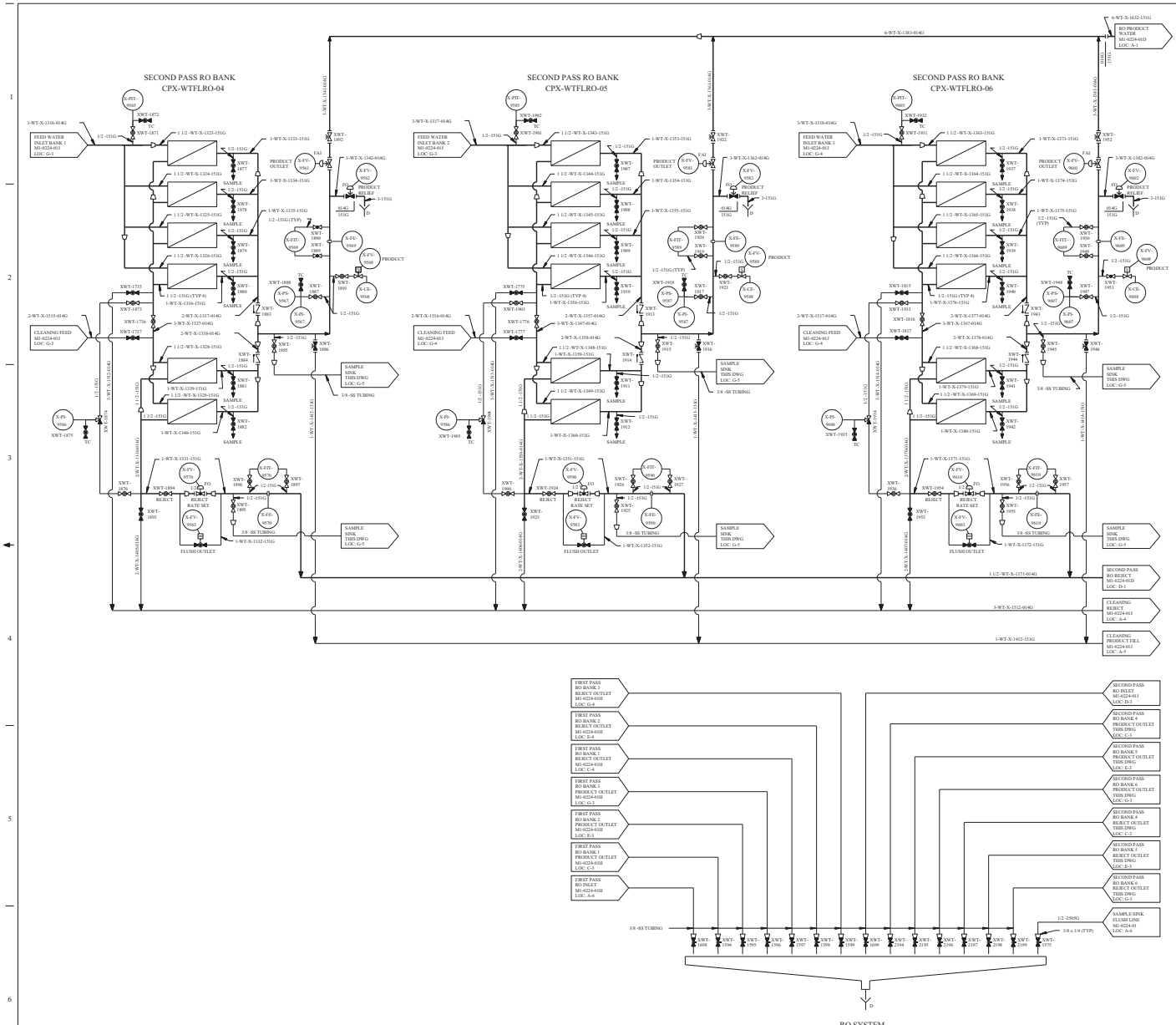
FLOW DIAGRAM
SURFACE WATER
PRE-TREATMENT SYSTEM

| DWG. NO. | SH. NO. | REV. |
|---|---|---|
| M1-0224 | 01J | CP-4 |

< FINAL PRINT >

me0001qi.dgn

$$$$$$$DATE$$$$$$$




| REV | DRWN | CHKD | APVD | REMARKS |
|---|---|---|---|---|
| CP-2 | KMH 04/07/1994 | | | THIS DRAWING REVISED TO ADD THIS FSAR FIGURE NUMBER AS AN EDITORIAL CHANGE. |

NOTES

1. FOR GENERAL NOTES AND SYMBOLS SEE DWG M1-0200.
2. UNLESS OTHERWISE NOTED ALL DRAINS COLLECTED BY LOCAL DRAIN SYSTEM.
3. GILIGG WATER CONDITIONING, INC. DRAWING 2011P1-5.

FSAR FIGURE 9.2-4A

THIS DRAWING CONVERTED ELECTRONICALLY

| DRAWING M1-0224-01 REV CP-17 HAS BEEN SPLIT INTO THE FOLLOWING SHEETS: |
|---|
| M1-0224-01 |
| M1-0224-01F |
| M1-0224-01G |
| M1-0224-01H |
| M1-0224-01J |
| M1-0224-01K |
| M1-0224-01L |
| M1-0224-01M |
| M1-0224-01N |

NON–SAFETY

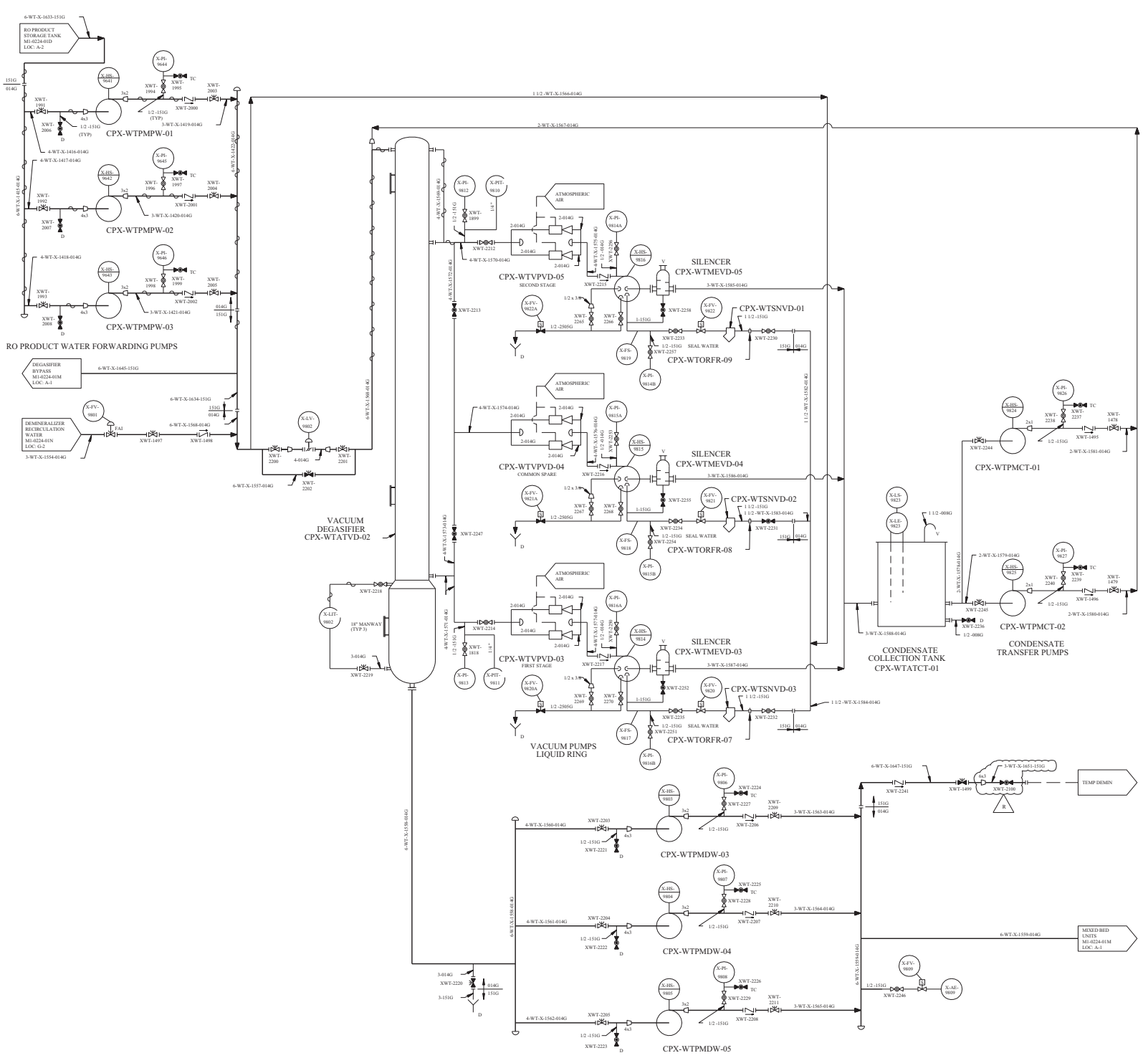
TXU ELECTRIC
CPSES
GLEN ROSE, TEXAS

FLOW DIAGRAM
SURFACE WATER
PRE-TREATMENT SYSTEM

| DWG. NO. | SH. NO. | REV. |
|---|---|---|
| M1-0224 | 01K | CP-2 |

FINAL PRINT

vs00008a.dgn




| REV | DWN | CHKD | APVD | REMARKS |
|---|---|---|---|---|
| CP-7 | DGM 02-18-2005 | DM 03-18-2005 | | THIS DRAWING REVISED TO INCORPORATE DESIGN CHANGE FDA-2003-005573-01-00 PER SK-0001-01-005573-01-00. |

NOTES

1. FOR GENERAL NOTES AND SYMBOLS SEE DRAWING M1-0200.
2. UNLESS OTHERWISE NOTED, ALL DRAINS COLLECTED BY LOCAL DRAIN SYSTEM.
3. GLEGG WATER CONDITIONING, INC DRAWING 2011P1-6 AND 2024P1-1.

FSAR FIGURE 9.2.4A

THIS DRAWING CREATED ELECTRONICALLY

DRAWING M1-0224-01 REV CP-17 HAS BEEN SPLIT INTO THE FOLLOWING SHEETS:

- M1-0224-01
- M1-0224-01F
- M1-0224-01G
- M1-0224-01H
- M1-0224-01J
- M1-0224-01K
- M1-0224-01L
- M1-0224-01M
- M1-0224-01N

NON-SAFETY

TXU POWER
CPSES
GLEN ROSE, TEXAS

FLOW DIAGRAM
SURFACE WATER
PRE-TREATMENT SYSTEM

| DWG. NO. | GD. NO. | REV. |
|---|---|---|
| M1-0224 | 01L | CP-7 |

FINAL PRINT

REF C KD 12/08/04 CP-6

me588000.dgn M1-0224-01L

| REV | DWN | CHKD | APVD | REMARKS |
|---|---|---|---|---|
| CP-7 | JEMC 10-07-2008 | DJL 10-08-2008 | | THIS DRAWING REVISED TO INCORPORATE DESIGN CHANGE FDA-2008-001837-01-00 PER SK-0001-08-001837-01-00. |

NOTES

1. FOR GENERAL NOTES AND SYMBOLS SEE DRAWING M1-0200.
2. UNLESS OTHERWISE NOTED, ALL DRAINS COLLECTED BY LOCAL DRAIN SYSTEM.
3. GLEGG WATER CONDITIONING, INC DRAWING 2011P1-6.
4. MIXED BED VALVE POSITIONS ARE CONTROLLED BY PLC.
5. A CHEMISTRY LAB INSTRUMENT LOCATED IN THE WATER PRODUCTION LAB, USED TO MONITOR MIXED BED EFFLUENT.

R

6-WT-X-1559-014G

VACUUM DEGASIFIER M1-0224-01L LOC: G-6

6-WT-X-1645-151G

DEGASIFIER BYPASS M1-0224-01L LOC: A-3

XWT-0579 XWT-0578

6-WT-X-1542-014G

3-WT-X-1551-014G

2-WT-X-1454-014G

4-WT-X-1545-014G

3-WT-X-1423-014G

4-WT-X-1430-014G

18" MANWAY

AIR OUTLET

SERIES INLET

RESIN SAMPLE CONN

SERVICE INLET

CAUSTIC INLET

SAMPLE SINK M1-0224-01N LOC: C-1

3-WT-X-1457-014G

BACKWASH OUTLET

RINSE INLET

DRAIN DOWN 3-151G

3" x 12" SIGHTGLASSES

2" CAUSTIC RINSE

SERIES OUTLET

SERVICE OUTLET

2-WT-X-1436-014G

BACKWASH INLET

COLLECTOR OUTLET

2-WT-X-1468-014G

3-WT-X-1445-014G

RESIN REMOVAL CONN

RINSE OUTLET

AIR INLET

SAMPLE

2-WT-X-1451-014G

4-WT-X-1448-014G

3/8 -SS TUBING

SAMPLE SINK M1-0224-01N LOC: C-1

2-WT-X-1448-014G

DRAIN

14" x 18" MANWAY

MIXED BED UNIT CPX-WTDMMB-03

6-WT-X-1542-014G

3-WT-X-1552-014G

2-WT-X-1455-014G

4-WT-X-1546-014G

3-WT-X-1424-014G

4-WT-X-1431-014G

SAMPLE SINK M1-0224-01N LOC: C-1

3-WT-X-1458-014G

2-WT-X-1437-014G

2-WT-X-1469-014G

3-WT-X-1446-014G

2-WT-X-1452-014G

4-WT-X-1549-014G

3/8 -SS TUBING

SAMPLE SINK M1-0224-01N LOC: C-1

2-WT-X-1449-014G

MIXED BED UNIT CPX-WTDMMB-04

6-WT-X-1542-014G

3-WT-X-1553-014G

2-WT-X-1456-014G

4-WT-X-1547-014G

3-WT-X-1425-014G

4-WT-X-1432-014G

SAMPLE SINK M1-0224-01N LOC: C-1

3-WT-X-1459-014G

2-WT-X-1438-014G

2-WT-X-1470-014G

3-WT-X-1447-014G

2-WT-X-1453-014G

4-WT-X-1550-014G

3/8 -SS TUBING

SAMPLE SINK M1-0224-01N LOC: C-2

2-WT-X-1450-014G

MIXED BED UNIT CPX-WTDMMB-05

1 1/2 -WT-X-1460-014G

1 1/2 -WT-X-1461-014G

1 1/2 -WT-X-1462-014G

1 1/2 -WT-X-1463-014G

DILUTE ACID M1-0224-01N LOC: E-1

1 1/2 -WT-X-1464-014G

1 1/2 -WT-X-1465-014G

1 1/2 -WT-X-1466-014G

ACID INLET

1 1/2 -WT-X-1466-014G

2-WT-X-1452-014G

2-WT-X-1453-014G

3/8 -SS TUBING

2-WT-X-1471-014G

CPX-WTBLMB-01

CPX-WTBLMB-02

2-WT-X-1472-014G

MIXED BED BLOWERS

3-WT-X-1477-014G

WATER TREATMENT SYSTEM M1-0224-01N LOC: F-1

3/8 -KYNAR TUBING

3/8 -SS TUBING

LAB INSTRUMENT

NOTE 5

WATER TREATMENT LAB USE

DEMINERALIZED WATER STORAGE TANK M1-0241 LOC: A-1

6-DD-X-1014-151G

6-WT-X-1429-014G

1 1/2 -WT-X-1467-014G

DILUTE CAUSTIC M1-0224-01N LOC: G-5

FSAR FIGURE 9.2-4A

THIS DRAWING CREATED ELECTRONICALLY

DRAWING M1-0224-01 REV CP-17 HAS BEEN SPLIT INTO THE FOLLOWING SHEETS:

| |
|---|
| M1-0224-01 |
| M1-0224-01F |
| M1-0224-01G |
| M1-0224-01H |
| M1-0224-01J |
| M1-0224-01K |
| M1-0224-01L |
| M1-0224-01M |
| M1-0224-01N |

NON–SAFETY

LUMINANT
CPNPP
GLEN ROSE, TEXAS

FLOW DIAGRAM
SURFACE WATER
PRE-TREATMENT SYSTEM

DWG NO. M1-0224 | SH. NO. 01M | REV. CP-7

REF: CHKD 07/02/2002

SSSSSSSDATESSSSS

me894500.dgn M1-0224-01M

< FINAL PRINT >

| REV | DWN | CHKD | APVD | REMARKS |
|---|---|---|---|---|
| CP-4 | DLK 12-15 2017 | MBF 12-15 2017 | | THIS DRAWING REVISED TO INCORPORATE DESIGN CHANGE FDA 2016-000043-01-02 PER SK-0002-16-000043-01-01. EDITORIAL CHANGE AS NOTED. |

NOTES:

1. FOR GENERAL NOTES AND SYMBOLS SEE M1-0200.
2. INSULATION AND HEAT TRACING TO BE PROVIDED ON ALL CAUSTIC LINES.
3. UNLESS OTHERWISE NOTED, ALL DRAINS COLLECTED BY LOCAL DRAIN SYSTEM.
4. GLEGG WATER CONDITIONING INC. DRAWING 2011P1-7.
5. COMPONENTS KYNAR LINED BY VENDOR.
6. X-FIT-9757 AND X-FE-9757 ARE CONTAINED WITHIN A SINGLE DEVICE.
7. VALVE FAILS OPEN ON LOSS OF AIR. FOR DETAIL OF ALL FMEA REFER TO FDA-2016-000043-01.

LEGEND:

- PULSATION DAMPENER

SAFETY SHOWER & EYEWASH CPX-WTMELV-02

WTR TREATMENT SYSTEM M1-0224-01 LOC: D-1

1□-WT-X-1638-151G

1-151G

XWT-0581

XWT-0600

□" SS TUBING

MIXED BED UNIT 3 INLET M1-0224-01M LOC: B-2

MIXED BED UNIT 4 INLET M1-0224-01M LOC: E-2

MIXED BED UNIT 5 INLET M1-0224-01M LOC: G-2

MIXED BED UNIT 3 OUTLET M1-0224-01M LOC: B-3

MIXED BED UNIT 4 OUTLET M1-0224-01M LOC: E-3

MIXED BED UNIT 5 OUTLET M1-0224-01M LOC: G-3

□-2505G

SAMPLE SINK FLUSH LINE M1-0224-01 LOC: C-1

□x□ (TYP)

XWT-2182 XWT-2183 XWT-2184 XWT-2185 XWT-2186 XWT-2187 XWT-1576

D

MIXED BED EXCHANGERS SAMPLE SINK

NOTE: THE SILICA AND SODIUM ANALYZERS WILL BE MOUNTED AT THE APPROPRIATE SAMPLE SINKS.

DILUTE ACID M1-0724-01M LOC: F-5

1□-WT-X-1463-014G

DEMINERALIZED WATER M1-0724-01M LOC: C-6

□-151G(TYP)

3-WT-X-1477-014G

XWT-2130

X-FIT-9794

X-FE-9794

XWT-2131

3-WT-X-1554-014G

VACUUM DEGASIFIER M1-0224-01L LOC: A-3

DEMINERALIZED RO FLUSH WATER M1-0224-01H LOC: A-1

3-WT-X-1223-014G

X-PI-9792

TC

XWT-2123

XWT-2122

□-151G

XWT-2126

1□"

DEMINERALIZED WATER REGEN PUMP 01 M1-0241 LOC: B-3

XWT-2127

3-WT-X-1475-014G

X-TE-9653

XWT-2160

R

EDITORIAL

X-PI-9793

TC

XWT-2125

XWT-2124

□-151G

XWT-2128

1□"

DEMINERALIZED WATER REGEN PUMP 02 M1-0241 LOC: B-3

XWT-2129

3-WT-X-H76-0 HG

1□-WT-X-H78-014G

HYDR0METER POT

X-CE-9756

2x1□

2"

1"

1-105G

XWT-2114

XWT-2119

X-HS-9751

X-PI-9753

XWT-2109

XWT-2103

XWT-2105

CPX-WTPMAR-01

XWT-2107

XWT-2111

XWT-2132

X-HS-9752

X-PI-9754

XWT-2110

XWT-2104

XWT-2106

CPX-WTPMAR-02

XWT-2108

XWT-2112

PULSATION DAMPENER CPX-WTPDAR-01

3-WT-X-1635-151G

SULFURIC ACID STORAGE TANK M1-0224-01P LOC: A-6

2-151G

PULSATION DAMPENER CPX-WTPDAR-02

X-FV-9755A

X-FV-9755C

FC

XWT-2113

SEE NOTE 5

MIXING TEE

SEE NOTE 6

X-FIT-9757

X-FE-9757

SEE NOTE 7

X-FV-9757

FO

R 01

1□x1

XWT-2115

ACID DILUTION WATER INLET

1□-WT-X-1478-014G

CPX-WTORFR-05

X-FV-9755B

FO

BLOCK AND BLEED VALVE ASSEMBLY

XWT-2118

ACID REGENERATION PUMPS

ACID REGENERATION SKID CPX-WTMEAR-01

1□" SKID DRAIN

BY VENDOR

□-105G

1□-105G

D

1□-WT-X-1479-014G

DILUTE CAUSTIC M1-0224-01M LOC: C-6

1□-WT-X-1467-014G

X-TE-9780

X-CE-9776

X-TW-9780

X-TW-9781

X-TE-9781

4-014G

4x1□

HYDR0METER POT

1-WT-X-1495-151G

□-151G

XWT-2154

D

1-WT-X-1503-151G

X-FV-9775B

FO

X-FV-9775C

FC

X-FV-9775A

BLOCK AND BLEED VALVE ASSEMBLY

1-WT-X-1499-151G

1□x1

XWT-2153

MIXING TEE

1□-WT-X-1467-014G

XWT-2152

XWT-2150

1-WT-X-1502-15IG

1-WT-X-1498-15IG

1-WT-X-1496-15IG

XWT-2189

□-WT-X-1504-151G

X-PI-9773

X-HS-9771

XWT-2149

□-151G

1-151G

XWT-2151

XWT-2147

CPX-WTPMCR-01

XWT-2190

□-WT-X-1505-151G

X-PI-9774

X-HS-9772

XWT-2148

CPX-WTPMCR-02

1-WT-X-1501-151G

1-151G

1-WT-X-1497-151G

1□x1

XWT-2143

XWT-2145

XWT-2146

XWT-2144

PULSATION DAMPENER CPX-WTPDCR-01

1□-151G

3-WT-X-1636-151G

BULK CAUSTIC STORAGE TANK M1-0224-01E LOC: G-5

3-WT-X-1493-151G

XWT-2193

1-151G

□-151G

3x1□

D

CPX-WTORFR-06

XWT-2155

3x1□

H 9781

320 kW IN-LINE ELECTRIC CAUSTIC DILUTION WATER HEATER CPX-WTMECA-01

XWT-2156

□-151G

D

X-FV-9777

FA1

CAUSTIC DILUTION WATER INLET

X-FIT-9777

XWT-2157

XWT-2158

□-151G

XWT-2159

X-FE-9777

CAUSTIC REGENERATION SYSTEM

CAUSTIC REGENERATION PUMPS

R

FSAR FIGURE 9.2-4A

THIS DRAWING CREATED ELECTRONICALLY

| DRAWING M1-0224-01 REV CP-17 HAS BEEN SPLIT INTO THE FOLLOWING SHEETS: |
|---|
| M1-0224-01 |
| M1-0224-01F |
| M1-0224-01G |
| M1-0224-01H |
| M1-0224-01J |
| M1-0224-01K |
| M1-0224-01L |
| M1-0224-01M |
| M1-0224-01N |

NON-SAFETY

LUMINANT
CPNPP
GLEN ROSE, TEXAS

FLOW DIAGRAM
SURFACE WATER
PRE-TREATMENT SYSTEM

| DWG. NO. | SH. NO. | REV. |
|---|---|---|
| M1-0224 | 01N | CP-4 |

me103580.dgn

A M1-0224-01N

FINAL PRINT

| REV | DWN | CHKD | APVD | REMARKS |
|---|---|---|---|---|
| CP-32 | MM 01-23-2013 | DLK 01-23-2013 | | THIS DRAWING REVISED TO INCORPORATE DESIGN CHANGE FDA 2013-000008-10-01 PER SK-0001-13-000008-10-01. |

NOTES:

1. FOR MECHANICAL SYMBOLS AND NOTES SEE DWG M1-0200.
2. INSTRUMENT ROOT VALVES AND TEST CONNECTIONS WILL BE □" UNLESS OTHERWISE NOTED. ALL INSTRUMENT PIPING WILL BE STAINLESS STEEL CATEGORY 151G OR 151-3 OR AS NOTED.
3. ALL NOZZLE CONNECTIONS TO DWST WILL BE 150 LB RF FLANGES.
4. ALL 1" SERVICE VALVE CONNECTIONS WILL BE FIELD PROCURED CHICAGO FITTINGS.
5. SEE HUNGERFORD AND TERRY DWG 28300-B6 FOR VENDOR VALVE IDENTIFICATIONS.
6. FREEZE PROTECTION REQUIREMENT ONLY APPLIES TO THAT PORTION OF THE LINE WHICH IS EITHER EXPOSED OUTDOORS IN THE YARD OR IS ROUTED WITHIN THE PIPE TUNNELS.
7. **UNLESS OTHERWISE NOTED, DRAINS TO BE COLLECTED BY LOCAL FLOOR DRAIN SYSTEM.**
8. **TRANSFER PUMP CPX-DDAPWT-03 IS ABANDONED IN PLACE BY DCA 87913 REV 0.**
9. THIS VALVE IS NOT USED FOR AUTO FILL OF THE DWST AND IS PLACED IN THE CLOSED POSITION PER FDA-2006-000953-01.
10. FLEX CONNECTION - MAY BE A PIPE CAP OR STORZ FITTING.

R 01

FSAR FIGURE 9.2-5

THIS DRAWING CREATED ELECTRONICALLY

DRAWING 2323-M1-0241 REV CP-8
HAS BEEN SPLIT INTO THE FOLLOWING SHEETS:

| |
|---|
| M1-0241 |
| M1-0241-A |

NON-SAFETY

LUMINANT
CPNPP
GLEN ROSE, TEXAS

FLOW DIAGRAM
DEMINERALIZED AND REACTOR
MAKE UP WATER

| DWG. NO. | SH. NO. | REV. |
|---|---|---|
| M1-0241 | - | CP-32 |

$SSSSSSSDATE$SSSSSS

me887000.dgn

< FINAL PRINT >

| REV | DWN | CHK'D | APVD | REMARKS |
|---|---|---|---|---|
| CP-31 | RMC 11-21-2011 | DJL 11-21-2011 | | THIS DRAWING REVISED TO INCORPORATE DESIGN CHANGE FDA 2011-000018-01-00 PER SK-0002-11-000018-01-00. |

NOTES:

1. FOR MECHANICAL SYMBOLS AND NOTES SEE DWG M1-0200.
2. INSTRUMENT ROOT VALVES AND TEST CONNECTIONS WILL BE 3/4 " UNLESS OTHERWISE NOTED. ALL INSTRUMENT PIPING WILL BE STAINLESS STEEL CATEGORY 151G OR 151-3 OR AS NOTED.
3. ALL 1" SERVICE VALVE CONNECTIONS WILL BE FIELD PROCURED CHICAGO FITTINGS.
4. SEE HUNGERFORD AND TERRY DWG 28300-B6 FOR VENDOR VALVE IDENTIFICATIONS.
5. FREEZE PROTECTION REQUIREMENT ONLY APPLIES TO THAT PORTION OF THE LINE WHICH IS EITHER EXPOSED OUTDOORS, IN THE YARD OR IS ROUTED WITHIN THE PIPE TUNNELS.
6. UNLESS OTHERWISE NOTED DRAINS TO BE COLLECTED BY LOCAL FLOOR DRAIN SYSTEM.
7. XDD-0595 / XDD-0599 OR XDD-0596 / XDD-0600 MAY BE CLOSED AND XDD-0597 OR XDD-0601 MAY BE OPENED TO FLOW DEMIN WATER AT A LOSS THROUGH CPX-WTVPVD-01 OR CPX-WTVPVD-02 . CLOSE XDD-0127 OR XDD-0130 TO ISOLATE THE SEAL LOOP RESPECTIVELY.
8. VALVE NORMALLY OPEN UNLESS DEAERATED WATER TRANSFER PUMPS ARE RETURNED TO SERVICE. AT THAT TIME VALVE TO BE XDD-0076 LOCKED CLOSED.

R

DRAWING 2323-M1-0241 REV CP-8
HAS BEEN SPLIT INTO THE FOLLOWING SHEETS:

- M1-0241
- M1-0241-A

CLASS II

LUMINANT
CPNPP
GLEN ROSE, TEXAS

FLOW DIAGRAM
DEMINERALIZED AND REACTOR
MAKE UP WATER
SHEET 2 OF 6

| DWG. NO. | SH. NO. | REV. |
|---|---|---|
| M1-0241 | A | CP-31 |

FSAR FIGURE 9.2-5

THIS DRAWING CREATED ELECTRONICALLY

REF CHK'D 9/13/2001

me105340.dgn A M1-0241-A

FINAL PRINT

| REV | DWN | CHKD | APVD | REMARKS |
|---|---|---|---|---|
| CP-29 | DLK 11-06-2018 | GAW 11-06-2018 | LER 11-06-2018 | THIS DRAWING REVISED TO INCORPORATE AN EDITORIAL CHANGE PER AI-TR-2018-007092-1. |

NOTES:

1. FOR MECHANICAL SYMBOLS AND NOTES SEE DWG. M1-0200.
2. INSTRUMENT ROOT VALVES AND TEST CONNECTIONS WILL BE □" UNLESS OTHERWISE NOTED. ALL INSTRUMENT PIPING WILL BE STAINLESS STEEL CATEGORY 151G, 151-3 OR AS NOTED.
3. FREEZE PROTECTION REQUIREMENT ONLY APPLIES TO THAT PORTION OF THE LINE WHICH IS EITHER EXPOSED OUTDOORS IN THE YARD OR IS ROUTED WITHIN UNHEATED PIPE TUNNELS.
4. UNLESS OTHERWISE NOTED DRAINS TO BE COLLECTED BY LOCAL FLOOR DRAIN SYSTEM.
5. DELETED
6. DELETED

FSAR FIGURE 9.2-5

THIS DRAWING CREATED ELECTRONICALLY

CLASS I
(NUCLEAR SAFETY-RELATED)

| | |
|---|---|
| SAFETY CLASS 1 | SEISMIC CATEGORY I |
| SAFETY CLASS 2 | CLASS 1E |
| SAFETY CLASS 3 | ASSOCIATED CIRCUITS |

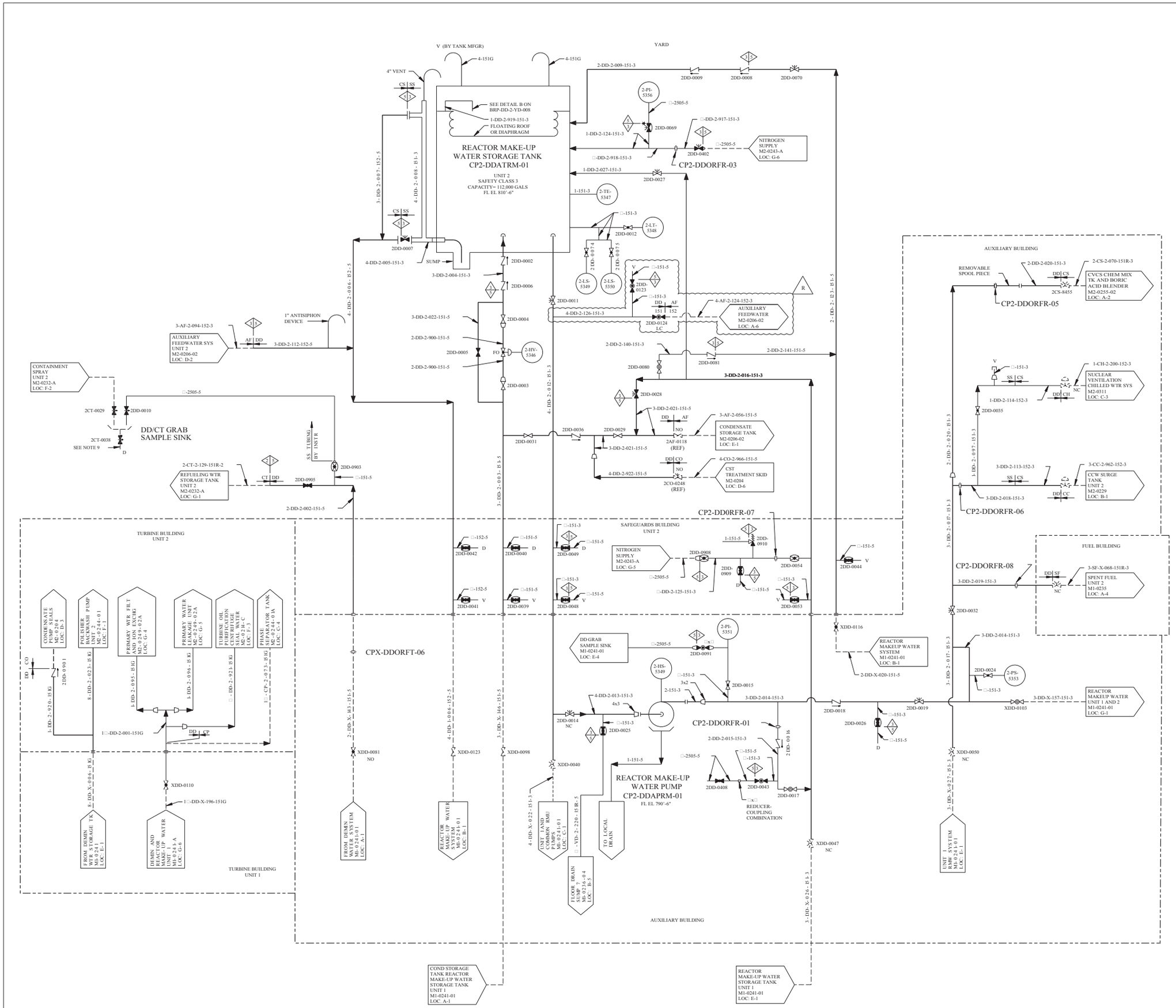
LUMINANT
CPNPP
GLEN ROSE, TEXAS

FLOW DIAGRAM
DEMINERALIZED AND REACTOR
MAKE UP WATER

| DWG. NO. | SH. NO. | REV. |
|---|---|---|
| M1-0241 | 01 | CP-29 |

me744600.dgn A M1-0241-01 FINAL PRINT

REF CKD 12/ 11/ 97 CP- 16




| REV | DWN | CHKD | APVD | REMARKS |
|---|---|---|---|---|
| CP-22 | DEK 10-08-2014 | MM 10-18-2014 | | THIS DRAWING REVISED TO INCORPORATE DESIGN CHANGE FDA 2013-000008-16-00 PER SK-0002-13-000008-16-00. |

NOTES:

1. FOR MECHANICAL SYMBOLS AND NOTES SEE DWG M1-0200.
2. INSTRUMENT ROOT VALVES AND TEST CONNECTIONS WILL BE □" UNLESS OTHERWISE NOTED. ALL INSTRUMENT PIPING WILL BE STAINLESS STEEL CATEGORY 151G OR 151-3 AS NOTED.
3. ALL 1" SERVICE VALVE CONNECTIONS SHOWN ON DRAWING M2-0242 WILL BE FIELD PROCURED CHICAGO FITTINGS. ALL □" SERVICE VALVE CONNECTIONS WILL BE FIRE HOSE CONNECTIONS.
4. DELETED
5. DELETED
6. DELETED
7. UNLESS OTHERWISE NOTED DRAINS TO BE COLLECTED BY LOCAL FLOOR DRAIN SYSTEM.
8. DELETED
9. SAMPLE SINK DRAIN COLLECTED IN A CONTAINER AND TRANSPORTED TO A DRAIN CAPABLE OF ACCEPTING RADIOACTIVE FLUIDS.
10. ACCEPTABLE SAMPLE POINT.

FSAR FIGURE 9.2-5

THIS DRAWING CREATED ELECTRONICALLY

CLASS I
(NUCLEAR SAFETY-RELATED)
SAFETY CLASS 1 — SEISMIC CATEGORY I
SAFETY CLASS 2 — CLASS 1E
SAFETY CLASS 3 — ASSOCIATED CIRCUITS

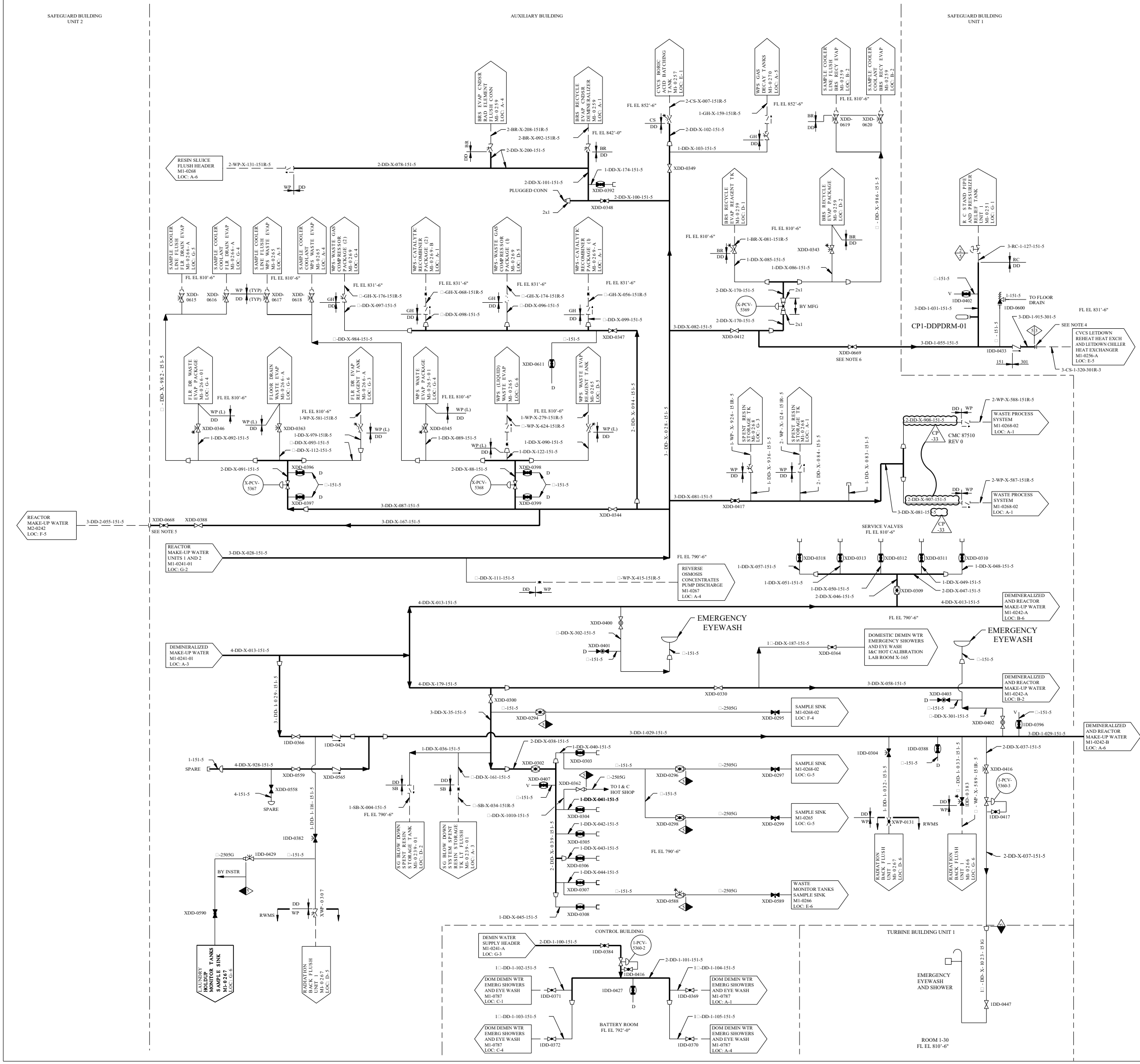
LUMINANT
CPNPP
GLEN ROSE, TEXAS

FLOW DIAGRAM
DEMINERALIZED AND REACTOR
MAKE UP WATER
SHEET 1 OF 2

DWG. NO. M2-0241 | SH. NO. - | REV. CP-22

$$$$$$$ DATE $$$$$$$ REF CKD 12/1V 97 CP-14

me737400.dgn M2-0241 < FINAL PRINT >




| REV | DWN | CHKD | APVD | REMARKS |
|---|---|---|---|---|
| CP-33 | DLK 09-06 2016 | MM 09-06 2016 | MHF 09-07 2016 | THIS DRAWING REVISED TO INCORPORATE AI-CR-2016-007897-1 TO INCORPORATE CMC 87510 REV 0 (ADD LINE NUMBERS DD-X-907, DD-X-908). EDITORIALLY REMOVE THE R FROM LINE NUMBER 3-DD-X-081-151-5. |

NOTES:

1. FOR GENERAL NOTES SEE DRAWINGS M1-0200 AND M1-0241.
2. DELETED
3. UNLESS OTHERWISE NOTED ALL DRAINS TO BE COLLECTED BY LOCAL FLOOR DRAIN SYSTEM.
4. BLANK AND FLANGES INSTALLED PER FDA 2002-002085-01.
5. XDD-0388 IS USED AS THE ISOLATION VALVE VICE USING XDD-0668, BECAUSE XDD-0668 IS NORMALLY THROTTLED TO PROVIDE 60 (+/-2) GPM FLOW TO THE PRT TO REDUCE PRESSURE OSCILLATIONS WHILE FILLING THE RCP STANDPIPES, AND PREVENT RELIEF VALVES 2RC-0036 AND 2DD-0600 FROM OPENING. IF VALVE IS EVER TAKEN OUT OF THE ABOVE THROTTLED POSITION, THEN THE OPPOSITE UNIT'S AOV (1/1-8047) SHOULD BE PLACED IN "CLOSE", AND PROMPT TEAM CONTACTED TO SET UP A FLOW INSTRUMENT FOR RE-POSITIONING.
6. XDD-0412 IS USED AS THE ISOLATION VALVE VICE USING XDD-0669, BECAUSE XDD-0669 IS NORMALLY THROTTLED TO PROVIDE 60 (+/-2) GPM FLOW TO THE PRT TO REDUCE PRESSURE OSCILLATIONS WHILE FILLING THE RCP STANDPIPES, AND PREVENT RELIEF VALVES 1RC-0036 AND 1DD-0600 FROM OPENING. IF VALVE IS EVER TAKEN OUT OF THE ABOVE THROTTLED POSITION, THEN THE OPPOSITE UNIT'S AOV (1/2-8047) SHOULD BE PLACED IN "CLOSE", AND PROMPT TEAM CONTACTED TO SET UP A FLOW INSTRUMENT FOR RE-POSITIONING.

FSAR FIGURE 9.2-5

THIS DRAWING CREATED ELECTRONICALLY

DRAWING 2323-M1-0242 REV CP-6
HAS BEEN SPLIT INTO THE FOLLOWING SHEETS:

| |
|---|
| M1-0242 |
| M1-0242-A |
| M1-0242-B |

# CLASS II

LUMINANT
CPNPP
GLEN ROSE, TEXAS

FLOW DIAGRAM
DEMINERALIZED AND REACTOR
MAKE-UP WATER

| DWG. NO. | SH. NO. | REV. |
|---|---|---|
| M1-0242 | - | CP-33 |

REF CHKD 1/ 21/ 97 CP-21

CPE

SAFEGUARD BUILDING
UNIT 2

HORIZONTAL ELECTRIC HOT WATER AND STORAGE TANK
CPX-DDHTTR-01 16" DIA X29 1/2 " LONG 10 GAL STORAG
CAPACITY. ELECTRIC HEATING SECTION 10KW AT 208
VOLTS. HUBBELL ELECTRIC WATER HEATER MODEL
B1010RS-SS.

DEMINERALIZER WATER
RESPIRATOR WASHER
CPX-DDMERW-01

CHILLED WATER
SURGE TANK
M1-0307
LOC: G-1

2-CH-X-091-152-5
FL EL 918'-0"

FUEL BUILDING

HOT PHASE
SEPARATOR
RESIN SPARGER
M1-0244-01A
LOC: G-4

SG BD
CLEANUP SYSTEM
M1-0239-01
LOC: C-1

WASTE PROCESS
SYSTEM
M1-0268-02
LOC: G-1

FUEL TRANSFER
SYS (HYDRAULIC
POWER PACK)
UNIT 2
W 1093E62
LOC: H-9

FUEL TRANSFER
SYS (HYDRAULIC
POWER PACK)
UNIT 1
W 1093E62
LOC: H-9

UNIT 2 FUEL
TRANSFER CANAL

UNIT 1 FUEL
TRANSFER CANAL

DECONTAMINATION AREA

FDS/RAD
VAULT PIT

RR LOADING AND
UNLOADING AREA

SPENT FUEL
SHIP CASK
AUX COOLING

RR LOADING AND
UNLOADING AREA

CLEAN CASK
STORAGE AREA

DRUM STORAGE
AREA

WET CASK
LOADING

FDS/RAD
VAULT PIT

PLANT
EFFLUENT
SAMPLE SINK
M1-0266-B
LOC: E-6

VENTILATION
CHILLED WATER
SYSTEM
M1-0307-B
LOC: B-1

DRUM
FILLING
AREA

SPENT FUEL
POOL UNITS 1 & 2
M1-0235
LOC: A-3

AUXILIARY BUILDING

DEMINERALIZED
AND REACTOR
MAKE-UP WATER
M1-0242
LOC: F-4

SERVICE VALVES
FL EL 886'-0"

SERVICE VALVES
FL EL 873'-6"

DEMINERALIZED
MAKE-UP WTR
M1-0242
LOC: G-3

CCW SURGE
TK NR UNIT 1
M1-0236-A
LOC: E-1

VENT CHILLER
WTR SYS UNIT 1
M1-0311
LOC: F-3

SERVICE VALVES
FL EL 852'-6"

SERVICE VALVES
FL EL 831'-6"

DEMINERALIZED
MAKE-UP WTR
M2-0242
LOC: G-4

DEMINERALIZED
MAKE-UP WTR
M2-0242
LOC: F-6

DOMESTIC DEMIN WTR
EMERGENCY SHOWERS
& EYE WASH (EVAP
REAGENT TANKS)
M1-0781
LOC: C-2, G-2

DEMINERALIZED
AND REACTOR
MAKE-UP WATER
M1-0242
LOC: F-4

DOMESTIC DEMIN WTR
EMERGENCY SHOWERS
& EYE WASH (EVAP
REAGENT TANKS)
M1-0781
LOC: G-2

LAUNDRY WTR
HEAD TANK
M1-0236-A
LOC: A-5

DOM DEMIN WTR
EVAPORATOR FEED
& CITRIC/NITRIC
ACID BATCHING TK)
M1-0784
LOC: H-5

CVCS CHILLER
SURGE TK UNIT 1
M1-0236-A
LOC: A-1

CHEMICAL FEED
SYSTEM
M1-0221-01
LOC: E-5

CHEMICAL FEED
SYSTEM
M1-0221-01
LOC: E-5

CHEMICAL FEED
SYSTEM
M1-0221-01
LOC: G-5

CHEMICAL FEED
SYSTEM
M1-0221-01
LOC: F-6

CHEMICAL FEED
SYSTEM
M1-0221-01
LOC: F-6

FLR DR WASTE
EVAP FLUSH
M1-0213-01
LOC: G-1

WBS WASTE
EVAP FLUSH
M1-0213-01
LOC: G-2

AUX STEAM
EVAP FLUSH
M1-0213-01
LOC: G-4

BRS RECYCLE
EVAP FLUSH
M1-0213-01
LOC: G-3

CPX-DDMERW-01

CPX-DDORFT-08

CPX-DDORFT-09

NOTES:

1. FOR MECHANICAL SYMBOLS AND NOTES SEE DRAWING M1-0200.
2. FLANGED CONNECTION WITH BLIND FLANGE TO BE INSTALLED WITH UNIT 1 CONSTRUCTION.
3. UNLESS OTHERWISE NOTED ALL DRAINS TO BE COLLECTED BY LOCAL FLOOR DRAIN SYSTEM.

| REV | DWN | CHK | APVD | REMARKS |
|---|---|---|---|---|
| CP-19 | GLK 05-12-2011 | MM 05-12-2011 | | THIS DRAWING REVISED TO INCORPORATE DESIGN CHANGE FDA 2009-000859-06-03 PER SK-0039-09-000859-06-00. |

DRAWING 2323-M1-0242 REV CP-6
HAS BEEN SPLIT INTO THE FOLLOWING SHEETS:

- M1-0242
- M1-0242-A
- M1-0242-B

FSAR FIGURE 9.2-5

THIS DRAWING CREATED ELECTRONICALLY

CLASS II

LUMINANT
CPNPP
GLEN ROSE, TEXAS

FLOW DIAGRAM
DEMINERALIZED AND REACTOR
MAKE-UP WATER

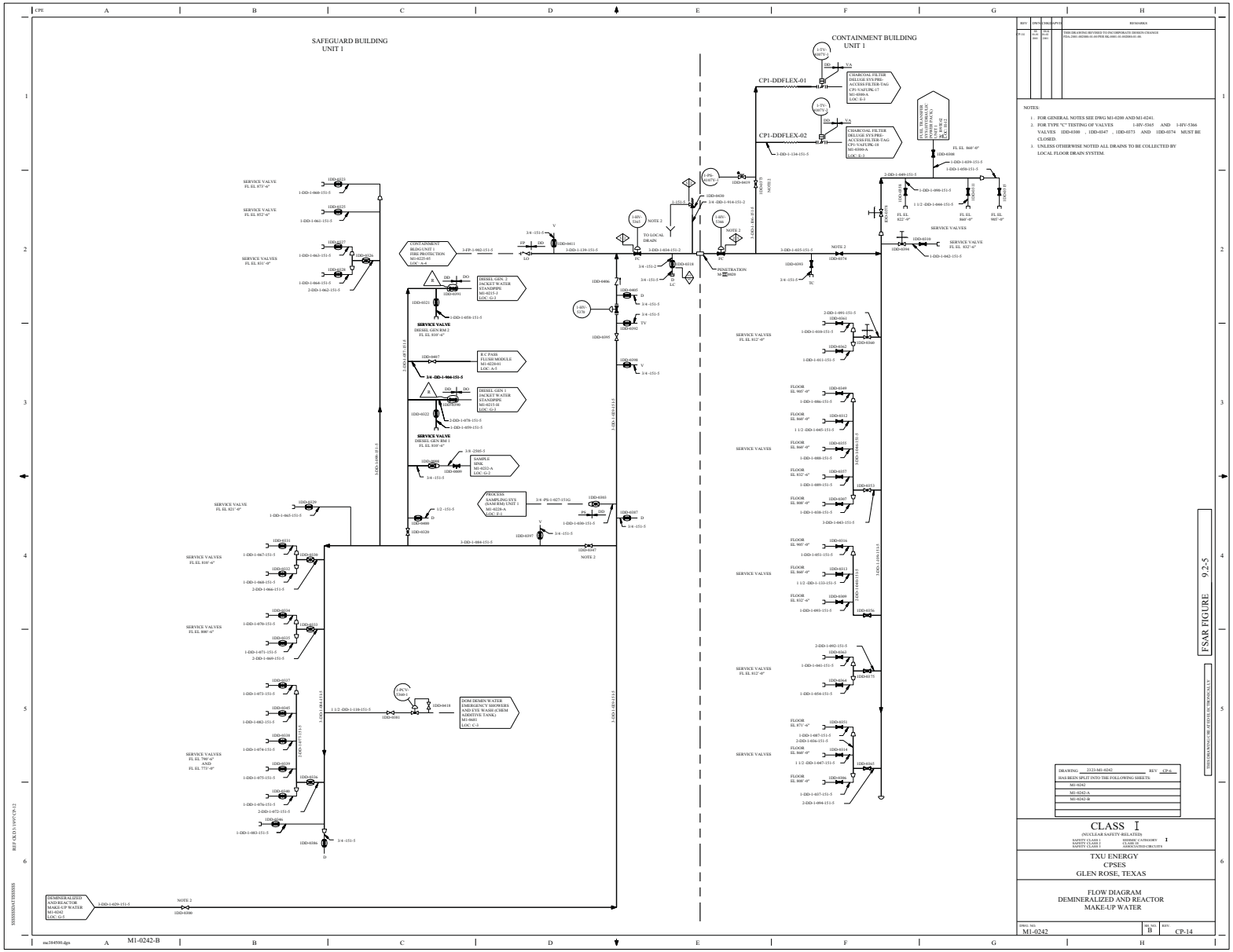
DWG. NO. M1-0242 | SH. NO. A | REV. CP-19

REF CKD CP-14 10/26/96

me102270.dgn

M1-0242-A

FINAL PRINT




NOTES:

1. FOR GENERAL NOTES SEE DWG M1-0200 AND M1-0241.
2. FOR TYPE "C" TESTING OF VALVES 1-HV-5365 AND 1-HV-5366 VALVES 1DD-0300 , 1DD-0347 , 1DD-073 AND 1DD-0374 MUST BE CLOSED.
3. UNLESS OTHERWISE NOTED ALL DRAINS TO BE COLLECTED BY LOCAL FLOOR DRAIN SYSTEM.

| REV | DWG NO | SUPS | REMARKS |
|---|---|---|---|
| CP-14 | M1-0242 | 9.2-5 | THIS DRAWING REVISED TO INCORPORATE DESIGN CHANGE TXU-2001-102300-01-01/PER ML1001-01-102300-01-00. |

FSAR FIGURE 9.2-5

THIS DRAWING CAME UP FOR ELECTRONIC CONVERSION

DRAWING 2123-M1-0242 REV CP-6
HAS BEEN SPLIT INTO THE FOLLOWING SHEETS:
M1-0242
M1-0242-A
M1-0242-B

CLASS I
(NUCLEAR SAFETY-RELATED)
SAFETY CLASS 1 SEISMIC CATEGORY I
SAFETY CLASS 2 QUALITY GROUP
SAFETY CLASS 3 ASSOCIATED CIRCUITS

TXU ENERGY
CPSES
GLEN ROSE, TEXAS

FLOW DIAGRAM
DEMINERALIZED AND REACTOR
MAKE-UP WATER

| DWG. NO. | ML NO. | REV. |
|---|---|---|
| M1-0242 | B | CP-14 |

M1-0242-B

rsc3445500.dgn

REF OLD: 3.19.97 CN-12

SSSSSSSDAT SSSSSSS

CPE

CONTAINMENT BUILDING
UNIT 2

SAFEGUARDS BUILDING
UNIT 2

FUEL BUILDING

AUXILIARY BUILDING

| REV | DWN | CHKD | APVD | REMARKS |
|---|---|---|---|---|
| CP-17 | DLK 01-25-2006 | MM 01-25-2006 | | THIS DRAWING REVISED TO INCORPORATE DESIGN CHANGE FDA 2002-002085-01-00 PER SK-0010-02-002085-01-00. |

NOTES:

1. FOR GENERAL NOTES AND SYMBOLS SEE DRAWINGS M1-0200 AND M2-0241.
2. FOR TYPE C TESTING OF VALVES, 2-HV-5365 AND 2-HV-5366 , VALVES 2DD-0300 , 2DD-0347 , 2DD-0373 AND 2DD-0374 MUST BE CLOSED.
3. SEE UNIT 1 DWG M1-0242-A LOCATION A-5 FOR CONTINUATION.
4. ALL DRAINS TO BE CONNECTED BY LOCAL FLOOR DRAIN SYSTEM UNLESS OTHERWISE NOTED.
5. SEE M1-0242-A LOCATION C-4.
6. SEE M1-0242-A LOCATION C-3.
7. BLIND FLANGE INSTALLED PER FDA 2002-002085-01.

R

FSAR FIGURE 9.2-5

THIS DRAWING CREATED ELECTRONICALLY

CLASS I
(NUCLEAR SAFETY-RELATED)
SAFETY CLASS 1 — SEISMIC CATEGORY I
SAFETY CLASS 2 — CLASS 1E
SAFETY CLASS 3 — ASSOCIATED CIRCUITS

LUMINANT
CPSES
GLEN ROSE, TEXAS

FLOW DIAGRAM
DEMINERALIZED AND REACTOR
MAKE-UP WATER

DWG. NO. M2-0242 | SH. NO. - | REV. CP-17

REF CKD CP11 11-1-96

me871800.dgn | A M2-0242 | FINAL PRINT

| REV | DWN | CHKD | APVD | REMARKS |
|---|---|---|---|---|
| CP-61 | GAW 06-29-2016 | DLK 06-29-2016 | | THIS DRAWING REVISED TO INCORPORATE DESIGN CHANGE FDA 2016-000119-01-00 PER SK-0001-16-000119-01-00. |

NOTES:

1. FOR MECHANICAL SYMBOLS AND NOTES SEE M1-0200.
2. COMPONENTS ARE ABANDONED IN PLACE.
3. DELETED
4. HYPOCHLORINATOR FIELD PROCURED FROM WALLACE & TIERNAN HYPOCHLORINATE DESIGNED TO CHLORINATE 200 GPM FLOW RATE.
5. 2" THREADED ANGLE DRAIN VALVE WITH 1□" THREADED OUTLET SUPPLIED BY TANK SUPPLIER.
6. YARD PIPING TERMINATES AT MATCH LINE WELD ENDS. PIPELINE DESIGNATION NUMBER CHANGES AT WELD OR FIRST FLANGE. PIPING DOWNSTREAM OF DOTTED LINE IS THE RESPONSIBILITY OF SITE FACILITIES ENGINEERING.
7. DELETED
8. PROTECTIVE HOUSING IS PROVIDED FOR HYPOCHLORINATOR, SOLUTION TANKS AND INSTRUMENTS XPI-4151 AND XPS-4153 .
9. PROTECTIVE HOUSING IS PROVIDED FOR THE BATCH PLANT WELL AND METEOROLOGICAL TOWER WELL PUMPS, THE ABOVE GROUND DISCHARGE PIPING AND INSTRUMENTATION.
10. DELETED
11. DELETED
12. THE NOSF POTABLE WATER SYSTEM IS THE RESPONSIBILITY OF SITE FACILITIES ENGINEERING.
13. XXXXN INDICATES BUILDING NUMBER.
14. PIPE IS FABRICATED FROM 316L SS FROM CPX-PWATPW-01 TO XPW-0063 PER DCN 6593
15. DELETED
16. CHLORINE INJECTION PUMP CPX-PWAPCI-01 IS SUPPLIED ON A PORTABLE SKID AND IS POWERED BY 120 VOLT AC STANDARD WALL OUTLET.

DRAWING M1-0227 REV CP-32
HAS BEEN SPLIT INTO THE FOLLOWING SHEETS:

| |
|---|
| M1-0227 |
| M1-0227-01 |
| |
| |
| |

FSAR FIGURE 9.2-6

THIS DRAWING CREATED ELECTRONICALLY

NON-SAFETY

LUMINANT
CPNPP
GLEN ROSE, TEXAS

FLOW DIAGRAM
POTABLE AND SANITARY
WATER SYSTEM

| DWG. NO. | SH. NO. | REV. |
|---|---|---|
| M1-0227 | - | CP-61 |

FINAL PRINT

REF CHKD 01/30/2003

mc105580.dgn

| REV | DWN | CHKD | APVD | REMARKS |
|---|---|---|---|---|
| CP-15 | DJK 07-30-2012 | GAW 07-30-2012 | | THIS DRAWING REVISED TO INCORPORATE DESIGN CHANGE FDA 2009-001966-01-00 PER SK-0019-09-001966-01-00. |

NOTES:

1. FOR GENERAL NOTES AND SYMBOL LIST SEE DRAWING M1-0200.
2. FULL SIZE AIR CHAMBERS (EACH 1'-0" LONG) ARE TO BE PROVIDED ON WATER SUPPLY BRANCHES AT EACH PLUMBING FIXTURE.
3. A. O. OFFICE IS ABANDONED AND THE POTABLE WATER SUPPLY IS DISCONNECTED AND CAPPED.
4. XX INDICATES ROOM NUMBER

REFERENCE DRAWINGS:

| | |
|---|---|
| 1. M1-0788 | PLUMBING AUXILIARY BUILDING PLAN |
| 2. M1-0481 | PLUMBING TURBINE BUILDING PLAN |
| 3. M1-0484 | PLUMBING TURBINE BUILDING PLAN |
| 4. M2-0481 | PLUMBING TURBINE BUILDING PLAN |

FSAR FIGURE 9.2-6

THIS DRAWING CREATED ELECTRONICALLY

| DRAWING M1-0227 REV CP-32 |
|---|
| HAS BEEN SPLIT INTO THE FOLLOWING SHEETS: |
| M1-0227 |
| M1-0227-01 |

NON-SAFETY

LUMINANT
CPNPP
GLEN ROSE, TEXAS

PLUMBING
TURBINE & ELEC CONTROL BLDGS
DOMESTIC WATER RISER
DIAGRAM

| DWG NO. | SH NO. | REV. |
|---|---|---|
| M1-0227 | 01 | CP-15 |

< FINAL PRINT >

REF CHKD 05/12/2003

$$$$$$$DATE$$$$$$

me105710.dgn A M1-0227-01

| REV | DWN | CHKD | APVD | REMARKS |
|---|---|---|---|---|
| CP-7 | DLK 10-23 2013 | MM 10-23 2013 | | THIS DRAWING REVISED TO INCORPORATE DESIGN CHANGE FDA 2013-000044-01-02 PER SK-0002-13-000044-01-01. |

NOTES:

1. FOR MECHANICAL SYMBOLS AND NOTES SEE M1-0200.
2. INSTALLED UNDER SFER 01-000017. SEE SFER FOR SUPPORTING DOCUMENTATION.
3. HEAT TRACE INSTALLED UNDER SFER 03-00007, REF DWG FN-PWE-4.

POTABLE WATER PUMP STATION BUILDING
3K32

SPILL CATCH BASIN
TOTE BIN
1-008G

ABANDONED IN PLACE

SPILL CATCH BASIN
POTABLE WATER CHLORINE DAY TANK X-02

FINE FEED CHEMICAL INJECTION PUMP
COARSE FEED CHEMICAL INJECTION PUMP

X-LS-4140A
VENT
OVERFLOW
8-017G
POTABLE WATER STORAGE TANK X-02
CPX-PWTNWA-01
(50,000 GAL)
SEE NOTE 3
X-LT-4140
XPW-0356
X-FS-4140
6-017G
1-017G
1-008G
6-016G
XPW-0352
XPW-0351
016G 017G
017G 016G
BURIED PIPE

XPW-0358
XPW-0359
XPW-0360
6-017G
1-008G

POTABLE WATER BOOSTER PUMP X-01
CPX-PWPMWA-01
POTABLE WATER BOOSTER PUMP X-02
CPX-PWPMWA-02
POTABLE WATER BOOSTER PUMP X-03
CPX-PWPMWA-03
1□-017G
3-017G
2-017G
XPW-0327
XPW-0328
XPW-0329
X-LV-4152A
X-LV-4152B
X-LV-4152C
XPW-0333
XPW-0334
XPW-0335
□-017G
X-PI-4152B
X-PI-4152C
6-017G
FOR CONTINUATION OF BUILDING SEE BELOW
HYDROPNEUMATIC TANK THIS DRAWING LOC: A-5

STORM DRAIN M1-0227 LOC: C-6
WELL PUMPS M1-0227 LOC: C-6

EYE WASH AND EMERGENCY SHOWER
FOR CONTINUATION OF BUILDING SEE ABOVE
1□-017G
XPW-0338
BOOSTER PUMPS THIS DRAWING LOC: G-2
XPW-0337
XPW-0336
PLANT DISTRIBUTION M1-0227 LOC: G-4
016G 017G
6-016G

ABANDONED IN PLACE
CHLORINE ANALYZER
X-AY-4151
PI
X-LT-4152
X-PI-4152
X-LV-4152D
AIR FILTER
X-LG-4152
POTABLE WATER HYDROPNEUMATIC TANK X-01
CPX-PWTNHP-01
POTABLE WATER HYDROPNEUMATIC TANK AIR COMPRESSOR CPX-PWCACA-01
POTABLE WATER HYDROPNEUMATIC TANK AIR COMPRESSOR CPX-PWCACA-02
□-154G
1□-154G
2-017G
4-008G
2-008G
SANITARY SEWER
BURIED PIPE

FSAR FIGURE 9.2-6

THIS DRAWING CREATED ELECTRONICALLY

NON-SAFETY

LUMINANT
CPNPP
GLEN ROSE, TEXAS

FLOW DIAGRAM
POTABLE WATER SYSTEM

DWG. NO. M1-0227 | SH. NO. 03 | REV. CP-7

< FINAL PRINT >

$$$$$$$DATE$$$$$$ REF CHKD 01/30/2003 CP-2

me698000.dgn A M1-0227-03 B C D E F G H

| REV | DWN | CHKD | APVD | REMARKS |
|---|---|---|---|---|
| CP-25 | DLK 01-21-2014 | MM 01-22-2014 | | THIS DRAWING REVISED TO INCORPORATE DESIGN CHANGE FDA 2013-000008-26-00 PER SK-0002-13-000008-26-00. |

NOTES:

1. CHLORINATION WATER SUPPLY. SYPHON BREAKER IS NOT REQUIRED BECAUSE A DIRECT CONNECTION TO SEWAGE IN THE PLANT DOES NOT EXIST.
2. 2" DISCHARGE LINE 2-ST-X-913-010G IS ENCASED IN 4" SCH 80 PVC PIPE.
3. THIS DRAWING HAS BEEN COMPLETELY REDRAWN TO SHOW THE GENERAL ARRANGEMENT AND TAG NUMBERS OF THE LIFT STATIONS.
4. THE FOLLOWING LINE NUMBERS ARE CAST STEEL WITH WELDED FITTINGS: 4-ST-X-940-010G
   6-ST-X-941-010G
   4-ST-X-946-010G
   4-ST-X-948-010G

REFERENCE DRAWINGS:

1. E1-0290 SERIES DRAWINGS
2. E1-0024-01

2J1 N.P.S. AND WAREHOUSE B
2J2 CALIBRATION LAB
2J3 SAFETY AND SAFE TEAM
2J10 QC LAB
LIFT STATION CPX-STAPLS-23 REF E1-0290-06
LIFT STATION CPX-STAPLS-40 AND CPX-STAPLS-41 REF E1-0290-06
LIFT STATION CPX-STAPLS-24 REF E1-0290-15
2K1 ENVIRONMENTAL AND TELECOM
2K1 WAREHOUSE A
2K7 RADIATION WAREHOUSE
LIFT STATION CPX-STAPLS-27 AND CPX-STAPLS-28 REF E1-0290-15
LIFT STATION CPX-STAPLS-26 REF E1-0290-18
LIFT STATION CPX-STAPLS-25 REF E1-0290-18
2J5 ALTERNATE ACCESS POINT SEE M1-1604 LOC: H-4
2J14 MEGAWATT SUPPORT CENTER
LIFT STATION CPX-STAPLS-15 REF E1-0290-15
LIFT STATION CPX-STAPLS-09 AND CPX-STAPLS-10 REF E1-0024-01
LIFT STATION CPX-STAPLS-29 AND CPX-STAPLS-30 REF E1-0290-11
3K14 MAGION BUILDING
3J16 WATER PRODUCTION LAB
LIFT STATION CPX-STAPLS-13 AND CPX-STAPLS-14 REF E1-0016-A
LIFT STATION CPX-STAPLS-11 AND CPX-STAPLS-12 REF E1-0290-20A
3J43 RP BLDG
LIFT STATION CPX-STAPLS-46
LIFT STATION CPX-STAPLS-31 REF E1-0290-11
3K6 WQTC & VAULT
LIFT STATION CPX-STAPLS-32 AND CPX-STAPLS-33 REF E1-0290-09
3J25 TURBINE BUILDING SEE M1-0227-02 LOC: G-5
3C1 NOSF LAB
3D1 NOSF
LIFT STATION CPX-STAPLS-19 REF E1-0290-01
3C4 GLEN ROSE TRANS
3C3 MICRO-WAVE BLDG
3D2 CPE BLDG
LIFT STATION CPX-STAPLS-44
PROTECTED AREA BOUNDARY
MATCH LINE
3J9 TURBINE SUPPORT BLDG
3K5 WAREHOUSE D
3K4 IRON FAB SHOP
3K12 PAINT SHOP
LIFT STATION CPX-STAPLS-34 REF E1-0290-12
LIFT STATION CPX-STAPLS-35 AND CPX-STAPLS-42 REF E1-0290-16
3L1 MECHANIC SHOP
3J7 MAINTENANCE SERVICES BUILDING
LIFT STATION CPX-STAPLS-01 CPX-STAPLS-02 REF E1-0008
AND
LIFT STATION CPX-STAPLS-07 AND CPX-STAPLS-08 REF E1-0290-22
3G1 SUPPORT SERVICES BLDG
3F1
3F2
3J5 MAINTENANCE BUILDING ANNEX
3J4 MAINTENANCE BUILDING SEE M1-1603 LOC: C-1
LIFT STATION CPX-STAPLS-17 AND CPX-STAPLS-18 REF E1-0290-05
LIFT STATION CPX-STAPLS-21 REF E1-0290-08
LIFT STATION CPX-STAPLS-43 REF E1-0290-22
3J3 PRIMARY ACCESS POINT
3J1 ADMINISTRATION BUILDING SEE M1-1601 LOC: B-1
LIFT STATION CPX-STAPLS-38 AND CPX-STAPLS-39 REF E1-0290-05
LIFT STATION CPX-STAPLS-37 REF E1-0290-11 & 12
STP CONTROL BLDG
3K3 SEWAGE TREATMENT PLANT
NOTE 1
XPW-0311
POTABLE WATER SYSTEM M1-0227 LOC: F-4
TO CIRCULATING WATER DISCHARGE STRUCTURE
3J2 ADMIN ANNEX BUILDING
LIFT STATION CPX-STAPLS-03 AND CPX-STAPLS-04 REF E1-0290-05
LIFT STATION CPX-STAPLS-20 AND CPX-STAPLS-45 REF E1-0290-03
LIFT STATION CPX-STAPLS-05 AND CPX-STAPLS-06 REF E1-0290-15
3G2 PERSONNEL PROCESSING CENTER
MH 1 MH 2 MH 2A MH 3 MH 4 MH 5 MH 6 MH 7 MH 8 MH 9 MH 10 MH 11 MH 12 MH 101 MH 102 MH 103 MH 104 MH 105 MH 106 MH 107 MH 108 MH 109 MH 110 MH 111 MH 112 MH 113
R

FSAR FIGURE 9.2-7

THIS DRAWING CREATED ELECTRONICALLY

NON-SAFETY

LUMINANT
CPNPP
GLEN ROSE, TEXAS

FLOW DIAGRAM
SEWAGE TREATMENT SYSTEM

| DWG. NO. | SH. NO. | REV. |
|---|---|---|
| M1-0226 | - | CP-25 |

$$$$$$$$ DATE$$$$$$$

me970400.dgn A M1-0226 < FINAL PRINT >

FIGURE 9.2-8

THIS FIGURE HAS BEEN DELETED. | 68

- DELETED -

AMENDMENT 10
MARCH 31, 1980

COMANCHE PEAK S.E.S.
FINAL SAFETY ANALYSIS REPORT
UNITS 1 and 2

FIGURE 9.2-9

FIGURE 9.2-10

THIS FIGURE HAS BEEN DELETED. | 68

THIS FIGURE HAS BEEN DELETED.



COMANCHE PEAK S.E.S.
FINAL SAFETY ANALYSIS REPORT
UNITS 1 and 2

FIGURE 9.2-11

DELETED

JULY 31, 1980

| COMANCHE PEAK S.E.S.<br>FINAL SAFETY ANALYSIS REPORT<br>UNITS 1 and 2 |
| --- |
| |
| FIGURE 9.2-12 |

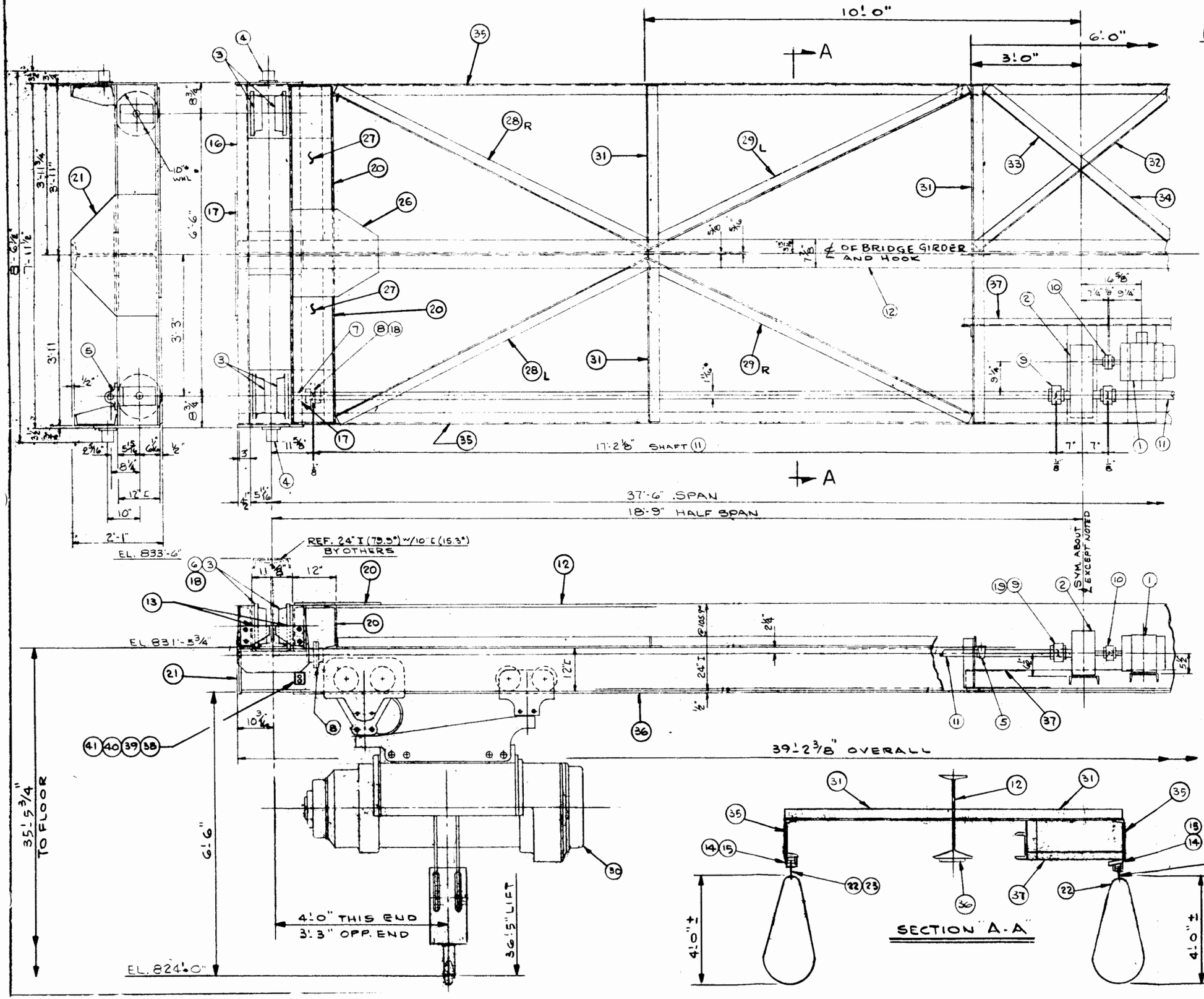
DELETED

JULY 31, 1980

| COMANCHE PEAK S.E.S.<br>FINAL SAFETY ANALYSIS REPORT<br>UNITS 1 and 2 |
| --- |
| |
| FIGURE 9.2-13 |

## LEGEND

| ITEM NO. | COMPONENT |
|---|---|
| 1 | BRIDGE MOTOR & BRAKE |
| 2 | REDUCER |
| 3 | WHEEL ASSEMBLY |
| 4 | BUMPER |
| 5 | PILLOW BLOCK |
| 6 | PINION |
| 7 | SHAFT |
| 8 | COUPLING |
| 9 | COUPLING |
| 10 | COUPLING |
| 11 | SHAFT |
| 12 | GIRDER |
| 13 | SAFETY LUG |
| 14 | UNISTRUT |
| 15 | UNISTRUT |
| 16 | END TRUCKS |
| 17 | KEY |
| 18 | KEY |
| 19 | KEY |
| 20 | CHANNEL |
| 21 | GIRDER END TIE PLATE |
| 22 | COIL CHAIN |
| 23 | SUPPORT |
| 24 | SUPPORT |
| 25 | SUPPORT |
| 26 | GIRDER TOP TIE PLATE |
| 27 | PLATE |
| 28 | ANGLE |
| 29 | ANGLE |
| 30 | HOIST 7.5 TON |
| 31 | ANGLE |
| 32 | ANGLE |
| 33 | ANGLE |
| 34 | ANGLE |
| 35 | CHANNEL |
| 36 | PLATE |
| 37 | MOTOR & REDUCER SUPPORT |
| 38 | TROLLEY STOP |
| 39 | BOLT |
| 40 | NUT |
| 41 | WASHER |

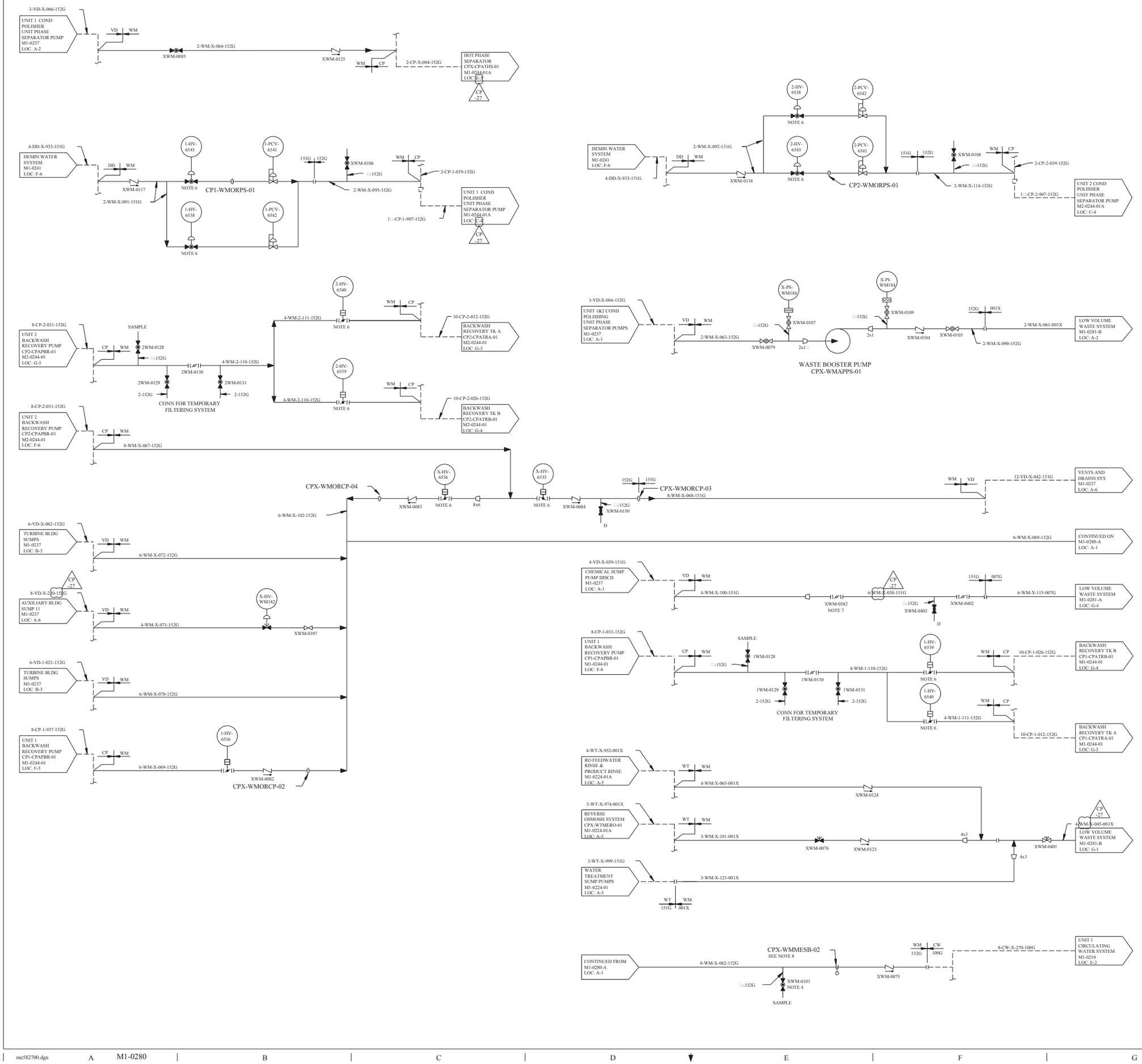



JULY 31, 1980

COMANCHE PEAK S.E.S.
FINAL SAFETY ANALYSIS REPORT
UNITS 1 and 2

SERVICE WATER INTAKE STRUCTURE CRANE

FIGURE 9.2-14




| REV | DWN | CHKD | APVD | REMARKS |
|---|---|---|---|---|
| CP-27 | DLK 09-16-2014 | | | THIS DRAWING REVISED TO INCORPORATE AI-CR-2014-010053-1 TO EDITORIALLY CORRECT LINE NUMBER FROM WMS-X-045 TO WM-X-045 AND WMS-X-038 TO WM-X-038. EDITORIAL CHANGES AS NOTED. |

NOTES:

1. UNLESS OTHERWISE NOTED, DRAINS TO BE COLLECTED BY LOCAL FLOOR DRAIN SYSTEM.
2. DELETED
3. DELETED
4. GRAB SAMPLE ADDED TO 8-WM-X-062-152G TO MONITOR OUTFALL 004 PRIOR TO DILUTION.
5. FOR MECHANICAL SYMBOLS AND NOTES SEE DRAWING M1-0200.
6. F.C. FOR LOSS OF POWER AND F.A.I. FOR LOSS OF AIR.
7. VALVE POSITION IS PROCEDURALLY CONTROLLED BY OPERATIONS/RADWASTE AND MAY BE OPEN OR CLOSED DEPENDING ON PLANT CONDITIONS AND EFFLUENT SAMPLE RESULTS.
8. **SPECTACLE FLANGE IS INSTALLED IN THE OPEN POSITION.**

FSAR FIGURE 9.2-15

THIS DRAWING CREATED ELECTRONICALLY

DRAWING TNE-M1-0280 REV CP-6
HAS BEEN SPLIT INTO THE FOLLOWING SHEETS:
M1-0280
M1-0280-A

NON-SAFETY

LUMINANT
CPNPP
GLEN ROSE, TEXAS

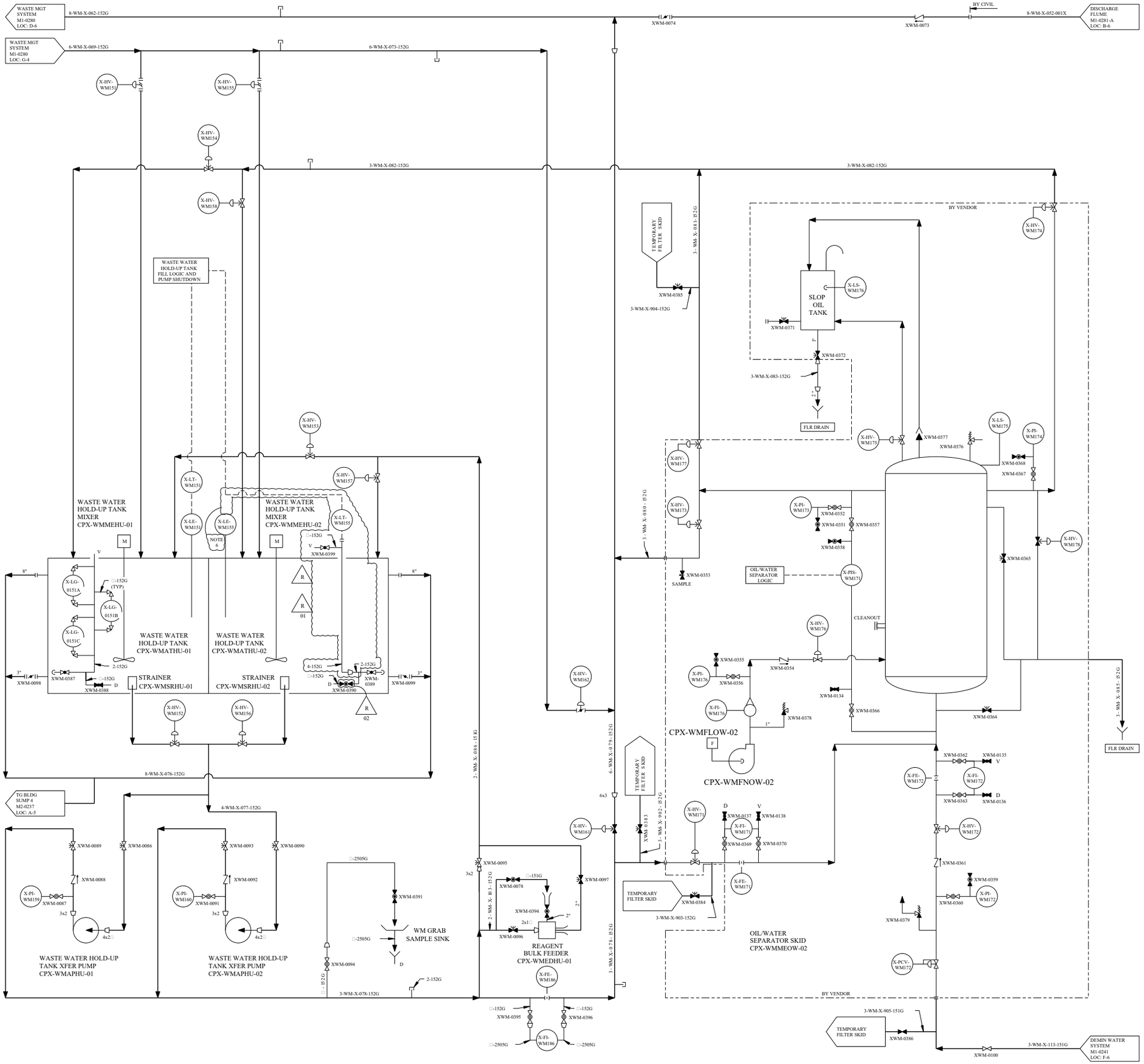
FLOW DIAGRAM
WASTE MANAGEMENT SYSTEM
CO-CURRENT WASTE

| DWG. NO. | SH. NO. | REV. |
|---|---|---|
| M1-0280 | - | CP-27 |

< FINAL PRINT >

SSSSSSSDATESSSSSS REF CHK COMP CP-27 9-16-2014

mc582700.dgn M1-0280




| REV | DWN | CHKD | APVD | REMARKS |
|---|---|---|---|---|
| CP-16 | DLK 06-01-2016 | MM 06-02-2016 | | THIS DRAWING REVISED TO INCORPORATE DESIGN CHANGE FDA 2013-000217-01-04 PER SK-0002-13-000217-01-02. |

NOTES:

1. DELETED
2. UNLESS OTHERWISE NOTED, DRAINS TO BE COLLECTED BY LOCAL FLOOR DRAIN SYSTEM.
3. DELETED
4. HEAT TRACE ABOVE GROUND ONLY.
5. FOR MECHANICAL SYMBOLS AND NOTES SEE DRAWING M1-0200.
6. LEVEL ELEMENT X-LE-XM155 IS ABANDONED IN PLACE. R

FSAR FIGURE 9.2-15

THIS DRAWING CREATED ELECTRONICALLY

DRAWING TNE-M1-0280 REV CP-6
HAS BEEN SPLIT INTO THE FOLLOWING SHEETS:
M1-0280
M1-0280-A

NON-SAFETY

LUMINANT
CPNPP
GLEN ROSE, TEXAS

FLOW DIAGRAM
WASTE MANAGEMENT SYSTEM
CO-CURRENT WASTE

DWG. NO. M1-0280 | SH. NO. A | REV. CP-16

FINAL PRINT

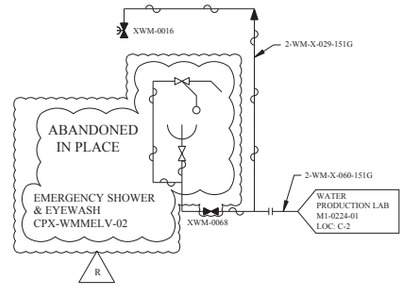
REF CHK COMP CP-13 4-17-98

mc562500.dgn A M1-0280-A

| REV | DWN | CHK | APVD | REMARKS |
|---|---|---|---|---|
| CP-17 | DUK 06-26-2012 | MM 06-26-2012 | | THIS DRAWING REVISED TO INCORPORATE DESIGN CHANGE FDA 2012-000103-01-00 PER SK-0001-12-000103-01-00. |

NOTES:

1. UNLESS OTHERWISE NOTED, ALL DRAINS COLLECTED BY LOCAL DRAIN SYSTEM.
2. DELETED
3. DELETED
4. DELETED
5. DELETED
6. DELETED
7. HEAT TRACE ABOVE GROUND ONLY.
8. DELETED




FSAR FIGURE 9.2-16

THIS DRAWING CREATED ELECTRONICALLY

DRAWING TNE-M1-0281 REV CP-7
HAS BEEN SPLIT INTO THE FOLLOWING SHEETS:
M1-0281
M1-0281-A

DRAWING M1-0281 REV CP-14
HAS BEEN SPLIT INTO THE FOLLOWING SHEETS:
M1-0281
M1-0281-B

NON-SAFETY

LUMINANT
CPNPP
GLEN ROSE, TEXAS

FLOW DIAGRAM
WASTE MANAGEMENT SYSTEM
LOW VOLUME WASTE

| DWG. NO. | SH. NO. | REV. |
|---|---|---|
| M1-0281 | - | CP-17 |

< FINAL PRINT >

$$$$$$$$DATE$$$$$$$$ REF CHK COMP CP-16 4-17-98

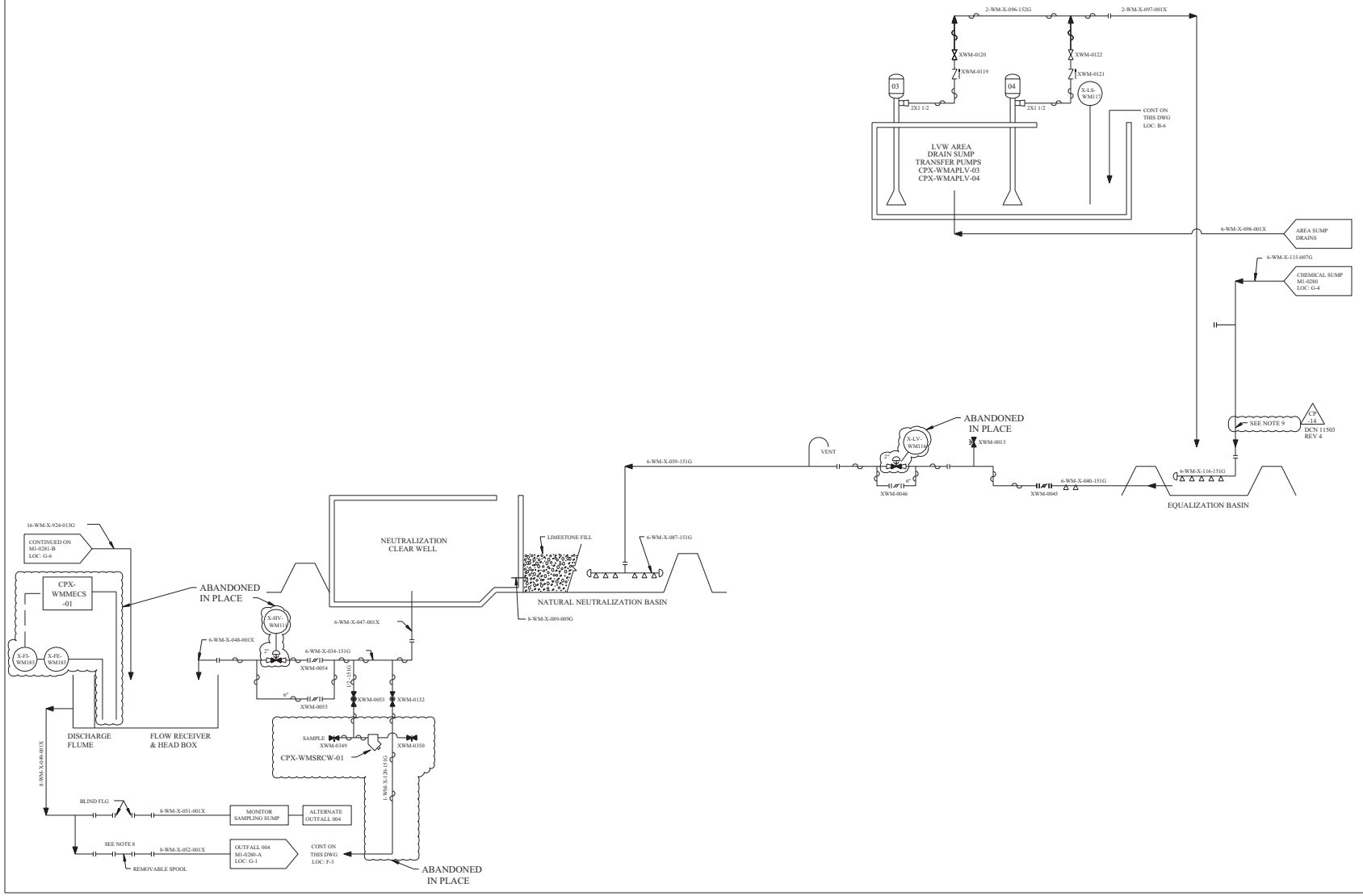
me0000vc.dgn A M1-0281 B C D E F G H

| REV | DWN | CHKD | APVD | REMARKS |
|---|---|---|---|---|
| CP-14 | CA 08/07/08 | | | THIS DRAWING REVISED TO INCORPORATE DESIGN CHANGE DCN 11503 REV 4. |

NOTES:

1. UNLESS OTHERWISE NOTED, ALL DRAINS COLLECTED BY LOCAL DRAIN SYSTEM.
2. FOR MECHANICAL NOTES AND SYMBOLS SEE M1-0200.
3. EXISTING VALVES ARE TO BE LOCKED CLOSED UPON COMPLETION OF API SEPARATOR AND DISCHARGE TO LVW POND.
4. LVW POND IS EXISTING EAST EVAPORATION POND.
5. EVAPORATION POND HAS NO DISCHARGE OR OUTLETS.
6. NATURAL NEUTRALIZATION BASIN IS FILLED WITH 1633 CUBIC YARDS OF CRUSHED LIMESTONE.
7. HEAT TRACE ABOVE GROUND ONLY.
8. REPOSITIONING OF THE SPOOL PIECE IS SUBJECT TO SITE ADMINISTRATIVE CONTROL.
9. LINE 6-WMS-X-115-007G HAS A 1/2" DIAMETER HOLE ON TOP PORTION OF PIPE WHICH WILL ALLOW FOR FUTURE VACUUM BREAKING CAPABILITIES.

CP-14 DCN 11503 REV 4




FSAR FIGURE 9.2-16

THIS DRAWING CREATED ELECTRONICALLY

DRAWING TNE-M1-0281 REV. CP-7
HAS BEEN SPLIT INTO THE FOLLOWING SHEETS:
M1-0281
M1-0281-A

NON-SAFETY

TXU ELECTRIC
CPSES
GLEN ROSE, TEXAS

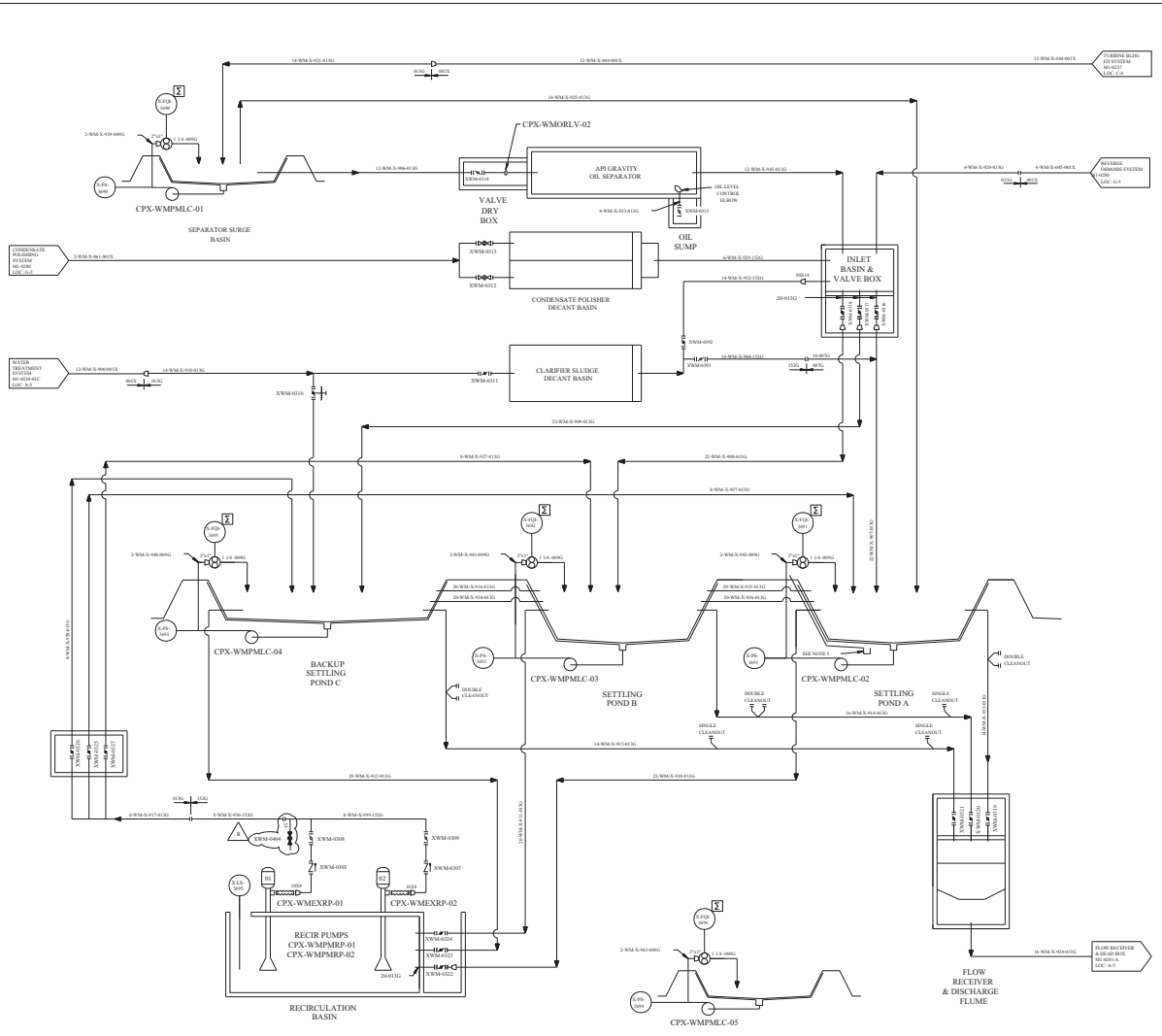
FLOW DIAGRAM
WASTE MANAGEMENT SYSTEM
LOW VOLUME WASTE

| DWG. NO. | SH. NO. | REV. |
|---|---|---|
| M1-0281 | A | CP-14 |

REF C IRC COMP CP-13 4-17-98

$$$$$$$D\TESSSSS

me000173.dgn




| REV | DWN | CHKD | APVD | REMARKS |
|---|---|---|---|---|
| CP-14 | MAC 10-2-14 | MAC 10-2-14 | MAC 10-2-14 | THIS DRAWING REVISED TO INCORPORATE DESIGN CHANGE FDA-2008-005191-01-00 PER SK-0081-00-005191-01-00. |

NOTES:

1. FOR MECHANICAL NOTES AND SYMBOLS SEE MI-0200.
2. UNLESS OTHERWISE NOTED, ALL DRAINS COLLECTED BY LOCAL DRAIN SYSTEM.
3. HEAT TRACE ABOVE GROUND ONLY.
4. TO DETERMINE THE CORRECT PIPE SCHEDULE for PRESSURE/ TEMPERATURE RATING FOR ANY CATEGORY 013G PIPE, SEE THE MASTER EQUIPMENT LIST AND THE "COMMENTS" THEREIN.
5. CATCH BASIN - REFER TO VENDOR DWG 719-2000-301 SH 01.

FSAR FIGURE 9.2-16

THIS DRAWING UPDATED FOR CP-14

DRAWING M1-0281 REV CP-14
HAS BEEN SPLIT INTO THE FOLLOWING SHEETS:
M1-0281
M1-0281-B

NON-SAFETY

TXU ENERGY
CPSES
GLEN ROSE, TEXAS

FLOW DIAGRAM
WASTE MANAGEMENT SYSTEM
LOW VOLUME WASTE

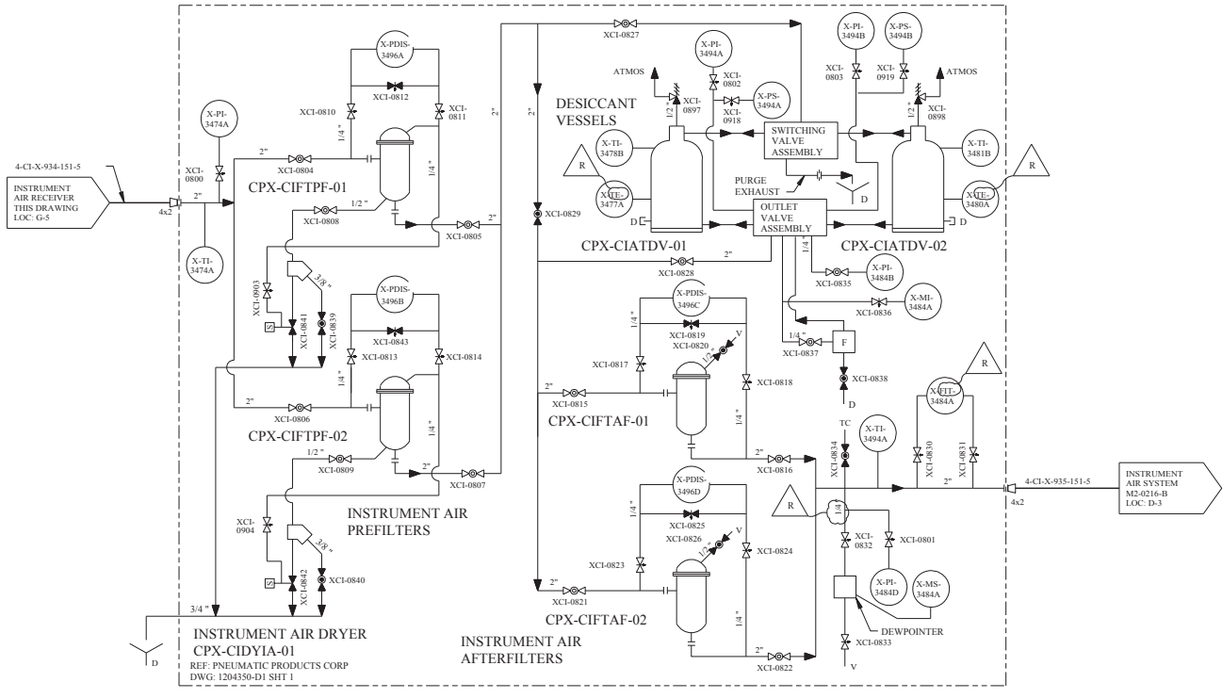
| DWG. NO. | SH. NO. | REV. |
|---|---|---|
| M1-0281 | B | CP-10 |

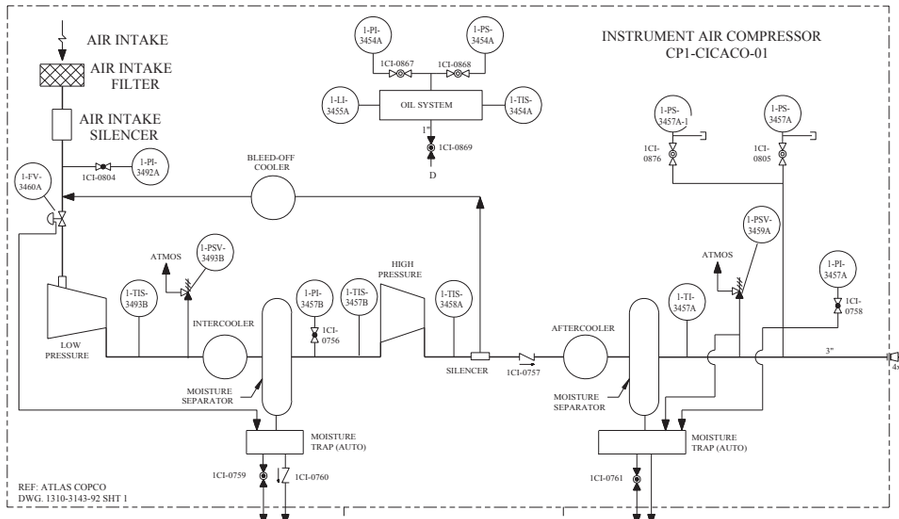
DO NOT SCALE DRAWING

SIEMENS NUCLEAR POWER

mc3498001.dgn

A M1-0281-B

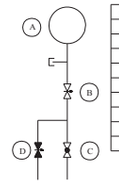



| REV | DWN | CHK | APVD | REMARKS |
|---|---|---|---|---|
| CP-45 | DLK 12-08-2004 | MM 12-09-2004 | | THIS DRAWING REVISED TO INCORPORATE DESIGN CHANGE FDA 2001-000158-08-00 PER SK-0014-01-000158-08-00. |

NOTES:

1. FOR MECHANICAL SYMBOLS AND NOTES SEE DRAWING M1-0200.
2. * SUPPLIED BY VENDOR.
3. ALL DRAINS ARE 3/4 " UNLESS OTHERWISE NOTED.
4. DELETED
5. DELETED
6. UNLESS OTHERWISE NOTED, ALL DRAINS TO BE COLLECTED BY LOCAL FLOOR DRAIN SYSTEM.
7. INSTRUMENT AIR SHALL NOT BE USED FOR BREATHING AIR WITHOUT APPROPRIATE IN LINE CHEMICAL ABSORBERS AND PARTICULATE FILTRATION. TOXIC VAPORS, FUMES AND PARTICULATES MAY BE PRESENT. REF OSHA 1910.134 (d).
8. TYPICAL CONFIGURATION FOR LOCAL MOUNTED PRESSURE SWITCHES AND INDICATORS.




| COMPONENT-A | B | C | D |
|---|---|---|---|
| 1-PI-3471 | 1CA-1001 | 1CA-0035 | 1CA-1003 |
| 1-PI-3472 | 1CA-1004 | 1CA-0054 | 1CA-1006 |
| 1-PS-3470 | 1CA-1007 | 1CA-0034 | 1CA-1009 |
| 1-PI-3474A | 1CI-1601 | 1CI-0048 | 1CI-1603 |
| 1-PI-3475 | 1CI-1578 | 1CI-0056 | 1CI-1580 |
| 1-PS-3473 | 1CI-1587 | 1CI-0047 | 1CI-1589 |

9. DELETED
10. CHECK VALVES 1CI-0005 AND XCI-0005 INTERNALS HAVE BEEN REMOVED AND IT HAS BEEN ABANDONED IN PLACE.
11. PRESSURE SWITCH 1-PS-3473 CONTACTS ARE SPARED (REF FDA-2001-1143).
12. THE GASKET FACES OF DRIP TRAP CP1-CAMEDT-01 WERE REPAIRED PER FDA-2004-002856-01.

FSAR FIGURE 9.3-1

THIS DRAWING CREATED ELECTRONICALLY

DRAWING 2323-M1-0216 REV CP-10
HAS BEEN SPLIT INTO THE FOLLOWING SHEETS:
M1-0216
M1-0216-B

DRAWING 2323-M1-0216 REV CP-9
HAS BEEN SPLIT INTO THE FOLLOWING SHEETS:
M1-0216
M1-0216-A

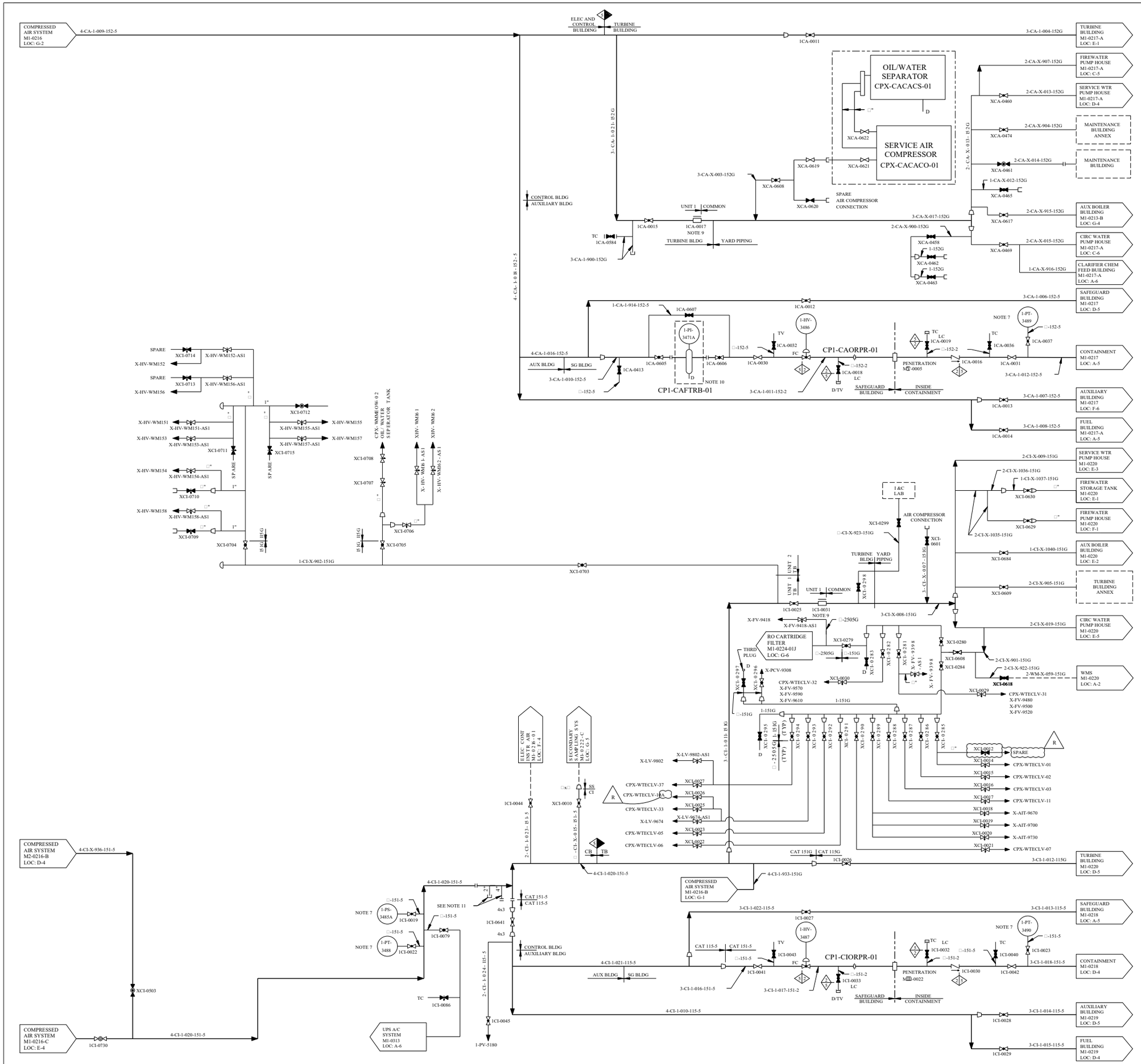
CLASS II

TXU POWER
CPSES
GLEN ROSE, TEXAS

FLOW DIAGRAM
COMPRESSED AIR SYSTEM

| DWG. NO. | SH. NO. | REV. |
|---|---|---|
| M1-0216 | - | CP-45 |

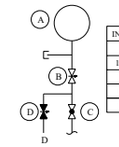
FINAL PRINT




| REV | DWN | CHK | APVD | REMARKS |
|---|---|---|---|---|
| CP-42 | I&K 03-09-2017 | MM 03-09-2017 | | THIS DRAWING REVISED TO INCORPORATE DESIGN CHANGE FDA 2016-000043-01-00 PER SK-0034-16-000043-01-00. |

NOTES:

1. FOR MECHANICAL SYMBOLS AND NOTES SEE DRAWING M1-0200.
2. DELETED
3. ALL DRAINS ARE □* UNLESS OTHERWISE NOTED.
4. UNLESS OTHERWISE NOTED, ALL DRAINS TO BE COLLECTED BY LOCAL FLOOR DRAIN SYSTEM.
5. INSTRUMENT AIR SHALL NOT BE USED FOR BREATHING AIR WITHOUT APPROPRIATE IN-LINE CHEMICAL ABSORBERS AND PARTICULATE FILTRATION. TOXIC VAPORS, FUMES AND PARTICULATES MAY BE PRESENT. REF OSHA 1910.134.(d).
6. DRAIN VALVE WITH INTEGRAL PILOT OPERATED SOLENOID VALVE AND SOLID STATE TIMER.
7. TYPICAL CONFIGURATION FOR LOCAL MOUNTED PRESSURE SWITCHES/INDICATORS.




| INSTRUMENT | VALVES | | |
|---|---|---|---|
| A | B | C | D |
| 1-PS-3485A | 1CI-1608 | 1CI-0019 | 1CI-1609 |
| 1-PT-3488 | 1CI-1610 | 1CI-0022 | 1CI-1611 |
| 1-PT-3490 | 1CI-1612 | 1CI-1614 | 1CI-1615 |
| 1-PT-3489 | 1CA-1020 | 1CA-0037 | 1CA-1021 |

8. DELETED
9. REMOVE CHECK VALVE INTERNALS, ABANDON VALVE BODY 1CA-0017 AND 1CI-0031 IN PLACE.
10. VAN AIR FILTER F100-750.
11. HOT TAP LOCATION FOR A VENDOR SUPPLIED 4" TYPE SHORTSTOPP WELDING FITTING WITH INTERNAL PLUG WITH A BLIND FLANGE AND A 2" TOR NIPPLE SCARFED INSTALLED PER FDA 2001-000158-10, NOT AVAILABLE FOR OTHER USES. II

FSAR FIGURE 9.3-1

THIS DRAWING CREATED ELECTRONICALLY

DRAWING 2323-M1-0216 REV CP-9
HAS BEEN SPLIT INTO THE FOLLOWING SHEETS:
M1-0216
M1-0216-A

DRAWING M1-0216-A REV CP-27
HAS BEEN SPLIT INTO THE FOLLOWING SHEETS:
M1-0216-A
M1-0216-C

CLASS I
(NUCLEAR SAFETY-RELATED)
SAFETY CLASS 1 — SEISMIC CATEGORY I
SAFETY CLASS 2 — CLASS 1E
SAFETY CLASS 3 — ASSOCIATED CIRCUITS

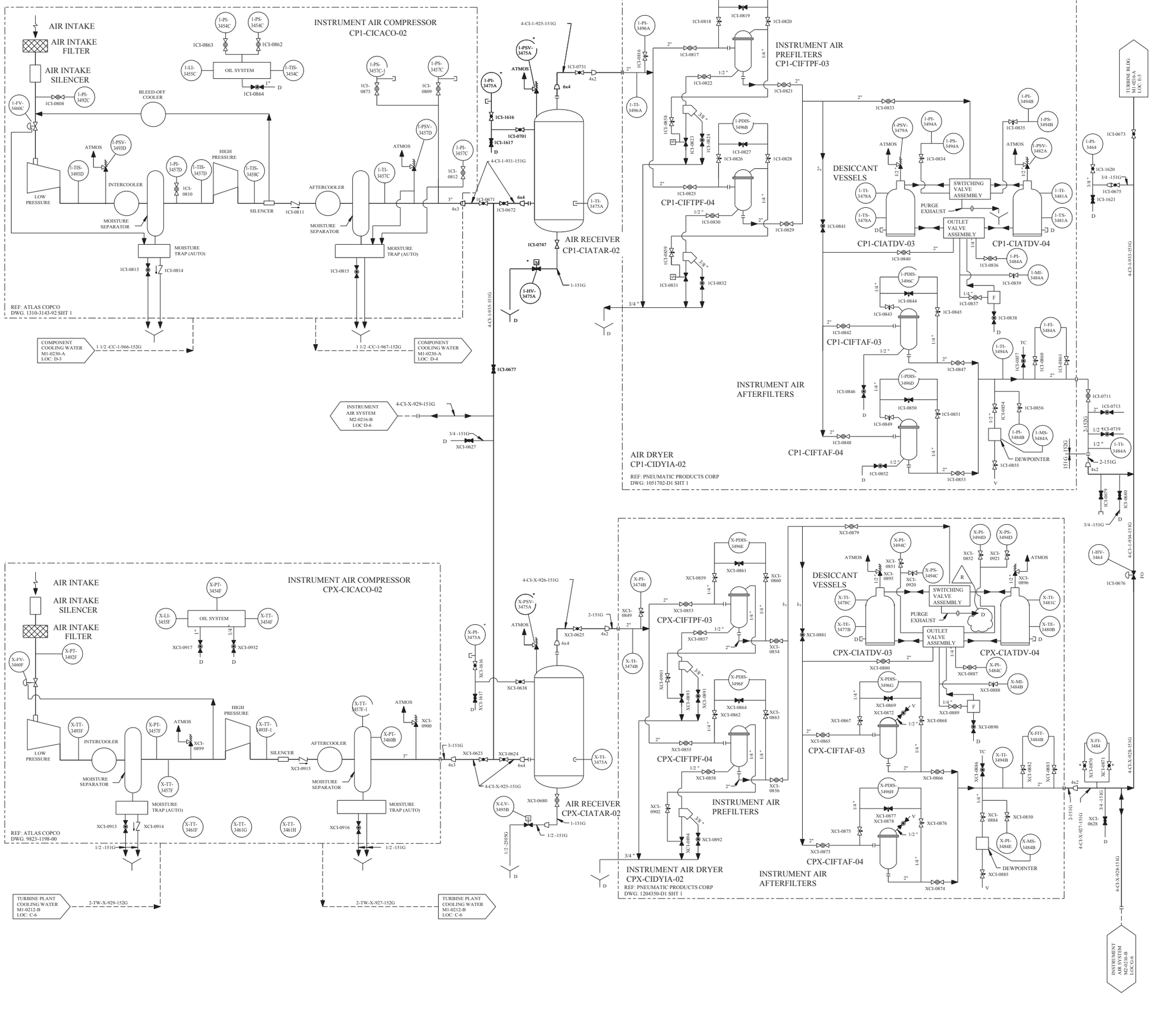
LUMINANT
CPNPP
GLEN ROSE, TEXAS

FLOW DIAGRAM
COMPRESSED AIR SYSTEM

DWG. NO. M1-0216 | SH. NO. A | REV. CP-42

REF CKD CP-33 10/26/97

me103750.dgn A M1-0216-A B C D E F G FINAL PRINT H




| REV | DWN | CHK | APVD | REMARKS |
|---|---|---|---|---|
| CP-21 | JRMC 07-26-2006 | SM 07-27-2006 | | THIS DRAWING REVISED TO INCORPORATE DESIGN CHANGE FDA 2005-003409-01-00 PER SK-0002-05-003409-01-00. |

NOTES:

1. FOR MECHANICAL SYMBOLS AND NOTES SEE M1-0200.
2. * SUPPLIED BY VENDOR.
3. ALL DRAINS ARE 3/4 " UNLESS OTHERWISE NOTED.
4. DELETED
5. DELETED
6. DELETED
7. UNLESS OTHERWISE NOTED, ALL DRAINS TO BE COLLECTED BY LOCAL FLOOR DRAIN SYSTEM.
8. INSTRUMENT AIR SHALL NOT BE USED FOR BREATHING AIR WITHOUT APPROPRIATE IN LINE CHEMICAL ABSORBERS AND PARTICULATE FILTRATION. TOXIC VAPORS, FUMES AND PARTICULATES MAY BE PRESENT. REF OSHA 1910.134 (d).
9. PALLMATIC II DRAIN VALVE WITH INTEGRAL PILOT OPERATED SOLENOID VALVE AND SOLID STATE TIMER.
10. DRAIN LINES MAY BE 151-5 OR SS TUBING.

FSAR FIGURE 9.3-1

THIS DRAWING CREATED ELECTRONICALLY

DRAWING 2323-M1-0216 REV CP-10
HAS BEEN SPLIT INTO THE FOLLOWING SHEETS:
M1-0216
M1-0216-B

NON–SAFETY

LUMINANT
CPSES
GLEN ROSE, TEXAS

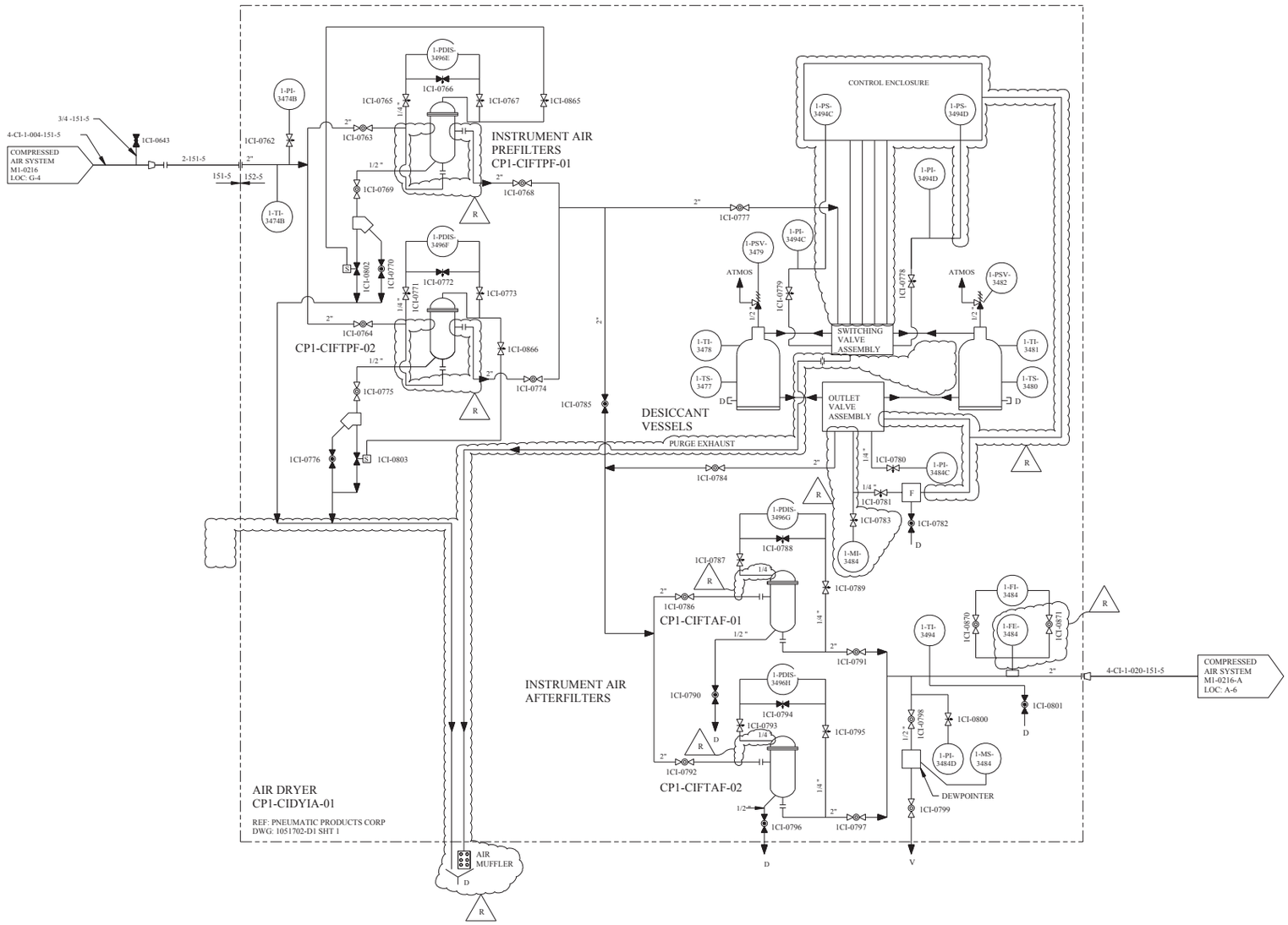
FLOW DIAGRAM
COMPRESSED AIR SYSTEM

DWG. NO. M1-0216 | SH. NO. B | REV. CP-21

FINAL PRINT

me814700.dgn M1-0216-B

REF CKD CP-13 5/1/98




| REV | DWN | CHKD | APVD | REMARKS |
|---|---|---|---|---|
| CP-11 | BSMC 08-04 2009 | SM 08-05 2009 | | THIS DRAWING REVISED TO INCORPORATE DESIGN CHANGE FDA 2009-002126-01-00 PER SK-0001-09-002126-01-00. |

NOTES:

1. FOR MECHANICAL SYMBOLS AND NOTES SEE DRAWING M1-0200.
2. UNLESS OTHERWISE NOTED, ALL DRAINS TO BE COLLECTED BY LOCAL FLOOR DRAIN SYSTEM.

FSAR FIGURE 9.3-1

THIS DRAWING CREATED ELECTRONICALLY

CLASS II

LUMINANT
CPNPP
GLEN ROSE, TEXAS

FLOW DIAGRAM
COMPRESSED AIR SYSTEM

| DWG. NO. | SH. NO. | REV. |
|---|---|---|
| M1-0216 | C | CP-11 |

REF CKD 5-21-98 CP-6

$$$$$$$DATE$$$$$$

me936200.dgn M1-0216-C < FINAL PRINT >

| REV | DWN | CHKD | APVD | REMARKS |
|---|---|---|---|---|
| CP-28 | SM 05-28-2014 | | | THIS DRAWING REVISED TO INCORPORATE AN EDITORIAL CHANGE AS NOTED PER AI-CR-2014-008461-1. |

NOTES:

1. FOR MECHANICAL SYMBOLS AND NOTES SEE DRAWING M1-0200.
2. FOR VALVE/CHANNEL IDENTIFICATION SEE DRAWING M1-2200-02.
3. ALL LINES ARE CATEGORY 115G COPPER AND BRONZE PER SPEC MS-44B, EXCEPT AS NOTED.
4. DANGER - INSTRUMENT AIR SHALL NOT BE USED FOR BREATHING AIR WITHOUT APPROPRIATE IN-LINE CHEMICAL ABSORBERS AND PARTICULATE FILTERS. TOXIC VAPORS OR PARTICULATES MAY BE PRESENT.
5. BAS - BREATHING AIR STATION.
6. SEE M1-2120-02 FOR DETAIL.
7. SEE M1-2120-03 FOR INSTRUMENT DETAIL.
8. PIPE CAPS ADDED TO ISOLATION VALVES TO MITIGATE UNFILTERED AIR INLEAKAGE INTO ROOMS 150 AND 150A PER FDA 1999-002168-01.

FSAR FIGURE 9.3.1

CP-28

THIS DRAWING CREATED ELECTRONICALLY

CLASS I
(NUCLEAR SAFETY-RELATED)
SAFETY CLASS 1 — SEISMIC CATEGORY I
SAFETY CLASS 2 — CLASS 1E
SAFETY CLASS 3 — ASSOCIATED CIRCUITS

LUMINANT
CPNPP
GLEN ROSE, TEXAS

FLOW DIAGRAM
INSTRUMENT AIR SUPPLY
ELECTRICAL AND CONTROL

| DWG. NO. | SH. NO. | REV. |
|---|---|---|
| M1-0216 | 01 | CP-28 |

FINAL PRINT

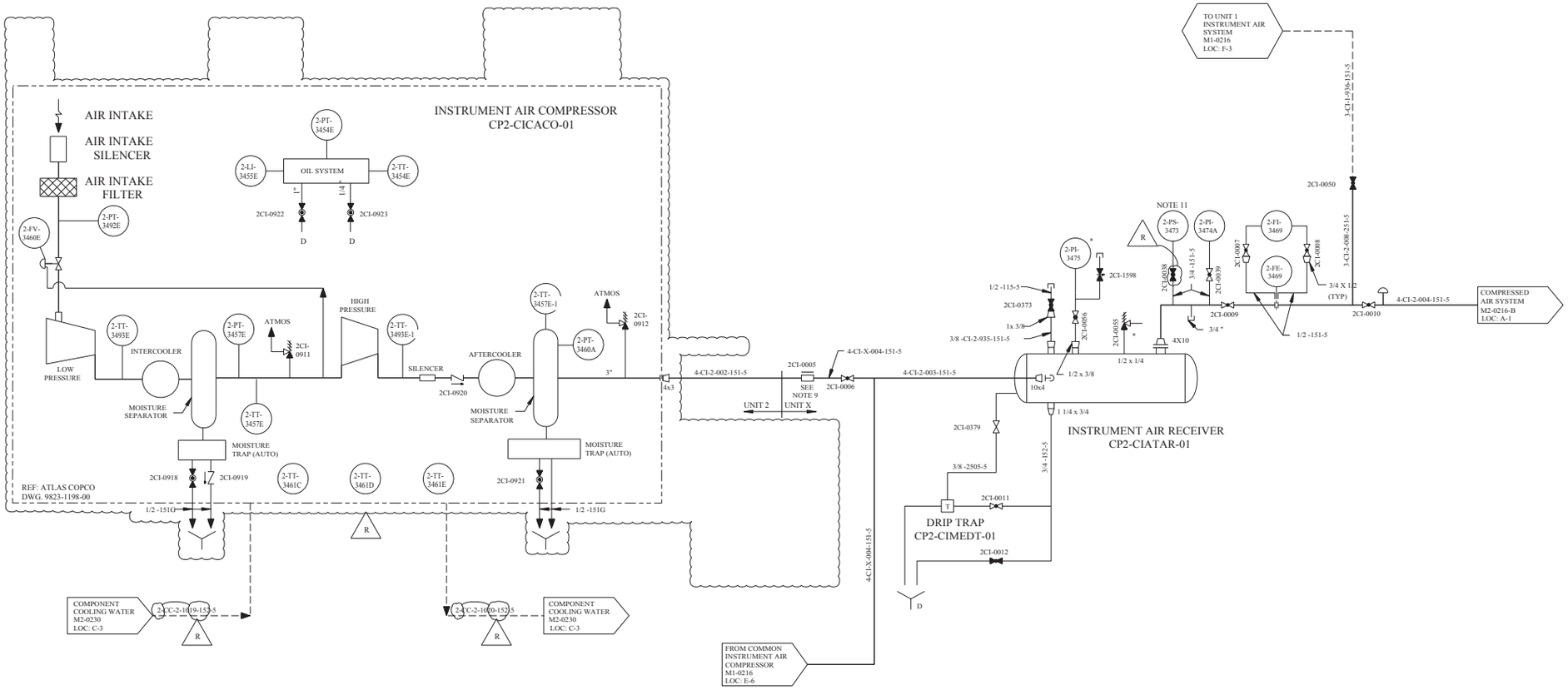
REF CKD CP-23 2/24/98

me573600.dgn M1-0216-01

| REV | DWN | CHKD | APVD | REMARKS |
|---|---|---|---|---|
| CP-21 | OLK 06-02-2004 | MM 07-08-2004 | | THIS DRAWING REVISED TO INCORPORATE DESIGN CHANGE FDA 2001-000158-08-00 PER SK-0001-01-000158-08-00. |

NOTES:

1. FOR MECHANICAL SYMBOLS AND NOTES SEE DWG M1-0200.
2. * SUPPLIED BY VENDOR.
3. ALL DRAINS ARE 3/4 " UNLESS OTHERWISE NOTED.
4. FLANGED CONNECTION WITH BLIND FLANGE TO BE INSTALLED WITH UNIT 1 CONSTRUCTION.
5. DELETED
6. DELETED
7. UNLESS OTHERWISE NOTED ALL DRAINS TO BE COLLECTED BY LOCAL FLOOR DRAIN SYSTEM.
8. INSTRUMENT AIR SHALL NOT BE USED FOR BREATHING AIR WITHOUT APPROPRIATE INLINE CHEMICAL ABSORBERS AND PARTICULATE FILTRATION. TOXIC VAPORS, FUMES AND PARTICULATES MAY BE PRESENT. "REF OSHA 1910.134(d)."
9. CHECK VALVE 2CI-0005 INTERNALS HAVE BEEN REMOVED AND THE VALVE BODY HAS BEEN ABANDONED IN PLACE.
10. DRAIN LINES MAY BE 151-5 OR SS TUBING.
11. PRESSURE SWITCH 2-PS-3473 CONTACTS ARE SPARED (REF FDA-2001-1143).




FSAR FIGURE 9.3-1

THIS DRAWING CREATED ELECTRONICALLY

DRAWING 2323-M2-0216 REV CP-2
HAS BEEN SPLIT INTO THE FOLLOWING SHEETS:

| |
|---|
| M2-0216 |
| M2-0216-A |
| M2-0216-B |
| |
| |

CLASS II

LUMINANT
CPSES
GLEN ROSE, TEXAS

FLOW DIAGRAM
COMPRESSED AIR SYSTEM

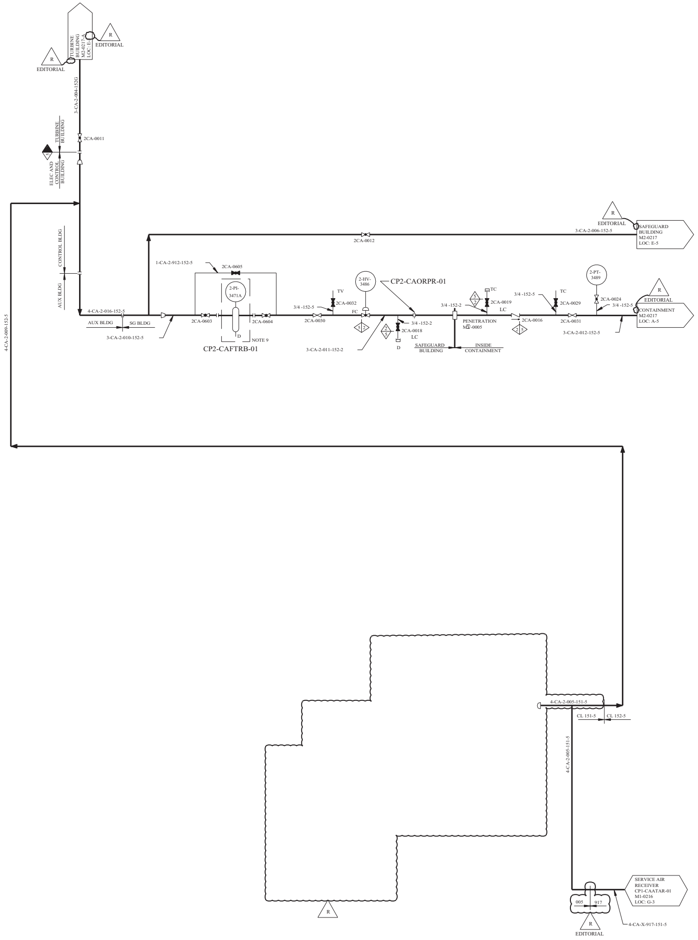
| DWG. NO. | SH. NO. | REV. |
|---|---|---|
| M2-0216 | - | CP-21 |

REF CKD 5-20-98 CP-16

| REV | DWN | CHKD | APVD | REMARKS |
|---|---|---|---|---|
| CP-10 | DLK 06-11 2003 | EES 06-16 2003 | | THIS DRAWING REVISED TO INCORPORATE DESIGN CHANGE FDA 2001-000158-04-00 PER SK-0002-01-000158-04-00. EDITORIAL CHANGE AS NOTED. |

NOTES:

1. FOR MECHANICAL SYMBOLS AND NOTES SEE DWG M1-0200.
2. * SUPPLIED BY VENDOR.
3. ALL DRAINS ARE 3/4 " UNLESS OTHERWISE NOTED.
4. DELETED
5. DELETED
6. DELETED
7. DELETED
8. DELETED
9. **VAN AIR FILTER F100-750.**




| | |
|---|---|
| DRAWING 2323-M2-0216 | REV CP-2 |
| HAS BEEN SPLIT INTO THE FOLLOWING SHEETS: | |
| M2-0216 | |
| M2-0216-A | |
| M2-0216-B | |

FSAR FIGURE 9.3-1

THIS DRAWING CREATED ELECTRONICALLY

CLASS I
(NUCLEAR SAFETY-RELATED)
SAFETY CLASS 1 SAFETY CLASS 2 SAFETY CLASS 3
SEISMIC CATEGORY I CLASS 1E ASSOCIATED CIRCUITS

TXU POWER
CPSES
GLEN ROSE, TEXAS

FLOW DIAGRAM
COMPRESSED AIR SYSTEM

DWG. NO. M2-0216 | SH. NO. A | REV. CP-10

REF CKD CP-9 3/13/98

$$$$$$DATE$$$$$$

me536500.dgn M2-0216-A

| REV | DWN | CHK | APVD | REMARKS |
|---|---|---|---|---|
| CP-20 | JRSMC 04-28-2008 | | DJC 04-28-2008 | THIS DRAWING REVISED TO INCORPORATE DESIGN CHANGE FDA 2005-004851-04-00 PER SK-0002-05-004851-04-00. |

NOTES:
1. FOR MECHANICAL SYMBOLS AND NOTES SEE DWG M1-0200.
2. * SUPPLIED BY VENDOR.
3. ALL DRAINS ARE □" UNLESS OTHERWISE NOTED.
4. DELETED
5. INSTRUMENTS ARE SUPPLIED BY INGERSOLL RAND AND ARE MOUNTED ON THE COMPRESSOR.
6. FIELD INSTALLED CONTROL AIR LINES FOR OPERATION OF THE FREE AIR UNLOADERS ON THE UNIT 2 COMMON INSTRUMENT AIR COMPRESSORS.
7. UNLESS OTHERWISE NOTED ALL DRAINS TO BE COLLECTED BY LOCAL FLOOR DRAIN SYSTEM.
8. INSTRUMENT AIR SHALL NOT BE USED FOR BREATHING AIR WITHOUT APPROPRIATE INLINE CHEMICAL ABSORBERS AND PARTICULATE FILTRATION. TOXIC VAPORS, FUMES AND PARTICULATES MAY BE PRESENT. "REF OSHA 1910.134(d)."
9. DRAIN TRAP TIMER.
10. DELETED

FSAR FIGURE 9.3-1

THIS DRAWING CREATED ELECTRONICALLY

DRAWING 2323-M2-0216 REV CP-1
HAS BEEN SPLIT INTO THE FOLLOWING SHEETS:
M2-0216
M2-0216-A
M2-0216-B

CLASS I
(NUCLEAR SAFETY-RELATED)
SAFETY CLASS 1 SEISMIC CATEGORY I
SAFETY CLASS 2 CLASS 1E
SAFETY CLASS 3 ASSOCIATED CIRCUITS

LUMINANT
CPNPP
GLEN ROSE, TEXAS

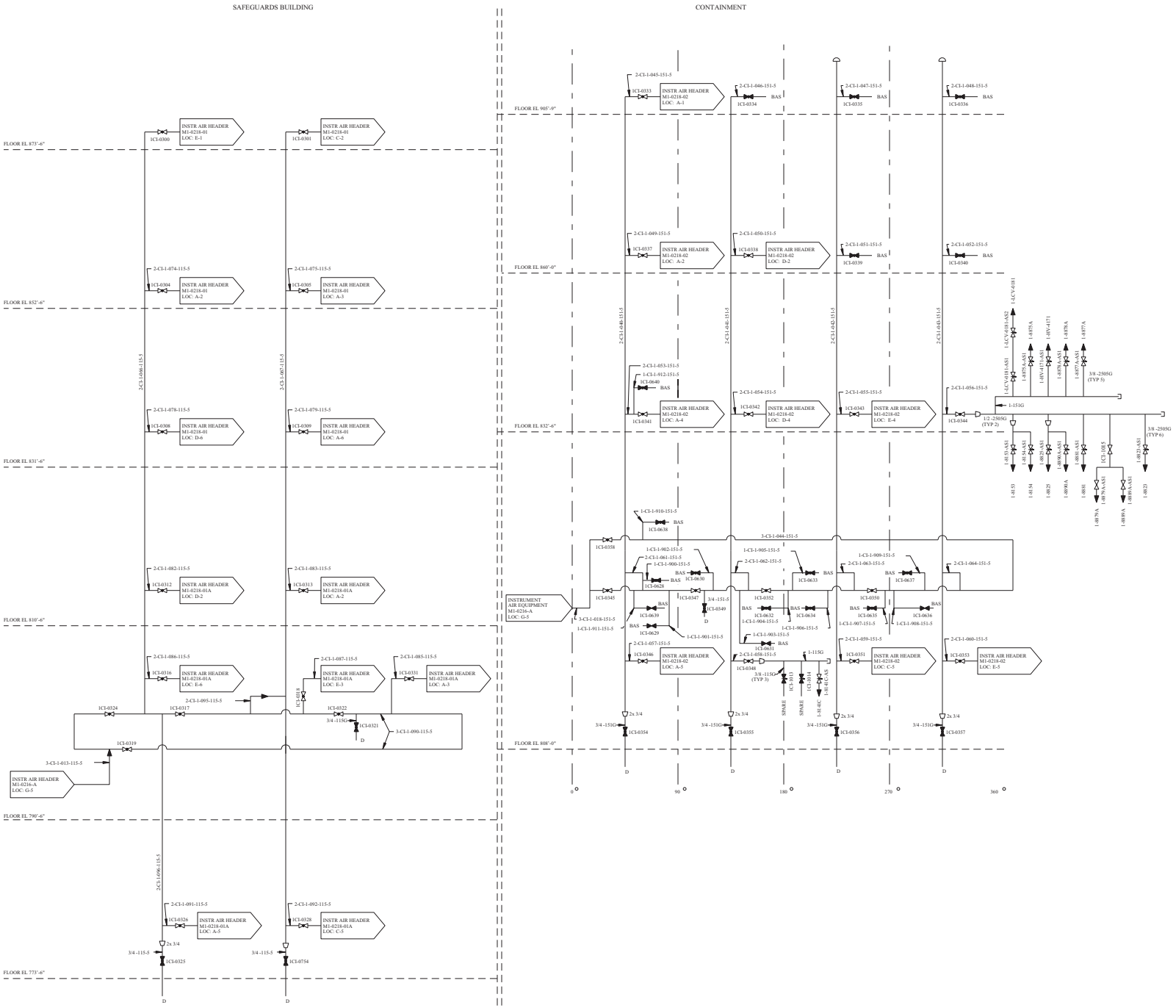
FLOW DIAGRAM
INSTRUMENT AIR SYSTEM

DWG. NO. M2-0216 | SH. NO. B | REV. CP-20

FINAL PRINT

REF CHKD 5/3Y2001

me873600.dgn A M2-0216-B

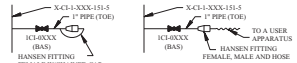



| REV. | DWN | CHKD | APVD | REMARKS |
|---|---|---|---|---|
| CP-14 | AGTD 05/23/96 | | | THIS DRAWING REVISED TO ADD THE FSAR FIGURE NUMBER AS AN EDITORIAL CHANGE. |

NOTES

1. FOR MECHANICAL SYMBOLS AND NOTES SEE DRAWING M1-0200.
2. UNLESS OTHERWISE NOTED, DRAINS COLLECTED BY LOCAL DRAIN SYSTEM.
3. TYPICAL INSTRUMENT AIR SUPPLIED TO INSTRUMENT AIR ACTUATED DIAPHRAGM WITH VALVE POSITIONER.

4. DANGER - INSTRUMENT AIR SHALL NOT BE USED FOR BREATHING AIR WITHOUT APPROPRIATE IN-LINE CHEMICAL ABSORBERS AND PARTICULATE FILTERS. TOXIC VAPORS OR PARTICULATES MAY BE PRESENT.
5. FOR VALVE CHANNEL NUMBER IDENTIFICATION SEE DRAWING M1-2200-02.
6. VALVES DESIGNATED BAS WILL HAVE A HANSEN FITTING FOR CONNECTION TO A USER APPARATUS.




7. HANSEN FITTINGS INSIDE CONTAINMENT ARE TO BE STAINLESS STEEL.

FSAR FIGURE 9.3-1

CP 14

THIS DRAWING CREATED ELECTRONICALLY

CLASS II

TXU ELECTRIC
CPSES
GLEN ROSE, TEXAS

FLOW DIAGRAM
INSTRUMENT AIR

| DWG. NO. | SH. NO. | REV. |
|---|---|---|
| M1-0218 | - | CP-14 |

vs00007p.dgn

$$$$SSSD$TA ITESSSSS

| REV | DWN | CHKD | APVD | REMARKS |
|---|---|---|---|---|
| CP-20 | SM 04-14-2007 | DH 04-14-2007 | | THIS DRAWING REVISED TO INCORPORATE DESIGN CHANGE FDA-2005-000224-06-04 PER SK-0245-05-000224-06-00. |

NOTES:

1. SEE MECHANICAL DRAWING M1-0200 FOR SYMBOLS AND NOTES.
2. FOR VALVE/CHANNEL NUMBER IDENTIFICATION SEE DRAWING M1-2200-02.
3. ALL LINES ARE 115G EXCEPT AS NOTED.
4. ALL LINES 3/4 " AND GREATER ARE COPPER ASTM B88, SWEAT CONNECTIONS, EXCEPT AS NOTED.
5. ALL LINES 1/2 " AND SMALLER ARE COPPER ASTM B68 OR B75 SWAGELOK COMPRESSION FITTINGS EXCEPT AS NOTED.
6. SEE M1-2120-01 FOR INSTRUMENT DETAIL.
7. SEE M1-2120-03 FOR INSTRUMENT DETAIL.
8. BAS - BREATHING AIR STATION.
9. DANGER - INSTRUMENT AIR SHALL NOT BE USED FOR BREATHING AIR WITHOUT APPROPRIATE IN-LINE CHEMICAL ABSORBERS AND PARTICULATE FILTERS. TOXIC VAPORS OR PARTICULATES MAY BE PRESENT.
10. HANSEN FITTINGS INSIDE CONTAINMENT ARE TO BE STAINLESS STEEL.
11. VALVES DESIGNATED BAS WILL HAVE A HANSEN FITTING FOR CONNECTION TO A USER APPARATUS.

X-CI-1-XXX-151-5 1" PIPE (TOE) — 1CI-0XXX (BAS) HANSEN FITTING FEMALE W/CHAINED CAP

X-CI-1-XXX-151-5 1" PIPE (TOE) — 1CI-0XXX (BAS) HANSEN FITTING FEMALE, MALE AND HOSE — TO A USER APPARATUS

12. THESE VALVES ARE CLOSED WHEN THE TUBE SIDE OF THE LETDOWN REHEAT HEAT EXCHANGER TBX-TRAHLR-01 IS ISOLATED AND DRAINED.

FSAR FIGURE 9.3-1

THIS DRAWING CREATED ELECTRONICALLY

DRAWING TNE-M1-0218-01 REV CP-1
HAS BEEN SPLIT INTO THE FOLLOWING SHEETS:
M1-0218-01
M1-0218-01A

CLASS I
(NUCLEAR SAFETY-RELATED)
SAFETY CLASS 1 — SEISMIC CATEGORY I
SAFETY CLASS 2 — CLASS 1E
SAFETY CLASS 3 — ASSOCIATED CIRCUITS

LUMINANT
CPSES
GLEN ROSE, TEXAS

FLOW DIAGRAM
INSTRUMENT AIR
SAFEGUARDS BUILDING

DWG. NO. M1-0218 | SH. NO. 01 | REV. CP-20

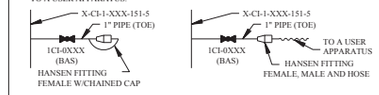
FINAL PRINT

REF CKD CP-15 10/28/97

| REV | DWN | CHK | APVD | REMARKS |
|---|---|---|---|---|
| CP-20 | GLK 08-03-2005 | MM 08-05-2005 | | THIS DRAWING REVISED TO INCORPORATE DESIGN CHANGE FDA-2005-000647-01-00 PER SK-0001-05-000647-01-00. EDITORIAL CHANGES AS NOTED. |

NOTES:

1. SEE MECHANICAL DRAWING M1-0200 FOR SYMBOLS AND NOTES.
2. FOR VALVE/CHANNEL NO. IDENTIFICATION SEE DRAWING M1-2200-02.
3. ALL LINES ARE 115G EXCEPT AS NOTED.
4. ALL LINES 3/4 " AND GREATER ARE COPPER ASTM B88, SWEAT CONNECTIONS, EXCEPT AS NOTED.
5. ALL LINES 1/2 " AND SMALLER ARE COPPER ASTM B68 OR B75 SWAGELOK COMPRESSION FITTINGS EXCEPT AS NOTED.
6. ACCUMULATORS: SEE M1-2120-01 FOR INSTRUMENT DETAIL.
7. DELETED
8. BAS - BREATHING AIR STATION.
9. DANGER - INSTRUMENT AIR SHALL NOT BE USED FOR BREATHING AIR WITHOUT APPROPRIATE IN-LINE CHEMICAL ABSORBERS AND PARTICULATE FILTERS. TOXIC VAPORS OR PARTICULATES MAY BE PRESENT.
10. VALVE WILL REQUIRE LADDER FOR ACCESS.
11. VALVES DESIGNATED BAS WILL HAVE A HANSEN FITTING FOR CONNECTION TO A USER APPARATUS.




12. HANSEN FITTINGS INSIDE CONTAINMENT ARE TO BE STAINLESS STEEL.

FSAR FIGURE 9.3-1

THIS DRAWING CREATED ELECTRONICALLY

DRAWING TNE-M1-0218-01 REV CP-1
HAS BEEN SPLIT INTO THE FOLLOWING SHEETS:

| |
|---|
| M1-0218-01 |
| M1-0218-01A |
| |
| |
| |

CLASS I
(NUCLEAR SAFETY-RELATED)

| | |
|---|---|
| SAFETY CLASS 1 | SEISMIC CATEGORY I |
| SAFETY CLASS 2 | CLASS 1E |
| SAFETY CLASS 3 | ASSOCIATED CIRCUITS |

TXU POWER
CPSES
GLEN ROSE, TEXAS

FLOW DIAGRAM
INSTRUMENT AIR
SAFEGUARDS BUILDING

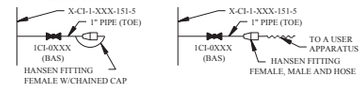
| DWG. NO. | SH. NO. | REV. |
|---|---|---|
| M1-0218 | 01A | CP-20 |

CPE

| REV | DWN | CHK | APVD | REMARKS |
|---|---|---|---|---|
| CP-17 | EES 10-28 2005 | GAW 10-30 2005 | | THIS DRAWING REVISED TO INCORPORATE DESIGN CHANGE FDA-2005-000224-06-00 PER SK-02/46-05-000224-06-00. |

NOTES:

1. SEE MECHANICAL DWG M1-0200 FOR SYMBOLS AND NOTES.
2. FOR VALVE/CHANNEL NUMBER IDENTIFICATION SEE DWG M1-2200-02.
3. ALL PIPE 2" & CATEGORY 151G, INSTRUMENT TUBING IS CATEGORY 2505G.
4. VALVES DESIGNATED BAS WILL HAVE A HANSEN FITTING FOR CONNECTION TO A USER APPARATUS.




5. HANSEN FITTINGS INSIDE CONTAINMENT ARE TO BE STAINLESS STEEL.




FSAR FIGURE 9.3-1

THIS DRAWING CREATED ELECTRONICALLY

REF CKD 04/02/97

NON–SAFETY

LUMINANT
CPSES
GLEN ROSE, TEXAS

FLOW DIAGRAM
CONTAINMENT INSTRUMENT
AIR SYSTEM

| DWG. NO. | SH. NO. | REV. |
|---|---|---|
| M1-0218 | 02 | CP-17 |

me756200.dgn A M1-0218-02 B C D E F G FINAL PRINT H

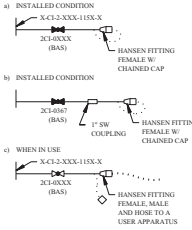
SAFEGUARDS BUILDING

CONTAINMENT BUILDING

| REV. | DWN. | CHKD. | APVD. | REMARKS |
|---|---|---|---|---|
| CP-8 | AUTO 05.15 1996 | | | THIS DRAWING REVISED TO ADD THE FSAR FIGURE NUMBER AS AN EDITORIAL CHANGE. |

NOTES:

1. FOR MECHANICAL SYMBOLS AND NOTES SEE DRAWING M1-0200.
2. THE INSTRUMENT AIR BRANCH LINES ARE CONTINUED ON THE M2-2700 SERIES INSTRUMENT AIR PIPING DRAWINGS.
3. UNLESS OTHERWISE NOTED, ALL DRAINS ON THIS DRAWING TO BE COLLECTED BY LOCAL FLOOR DRAIN SYSTEM.
4. INSTRUMENT AIR SHALL NOT BE USED FOR BREATHING AIR WITHOUT APPROPRIATE IN-LINE CHEMICAL ABSORBERS AND PARTICULATE FILTRATION. TOXIC VAPORS, FUMES AND PARTICULATES MAY BE PRESENT. REF. OSHA 1910.134(d).
5. BAS - BREATHING AIR SUPPLY. VALVES DESIGNATED BAS WILL HAVE A HANSEN FITTING FOR CONNECTION TO A USER APPARATUS.
   a) INSTALLED CONDITION
   b) INSTALLED CONDITION
   c) WHEN IN USE




FSAR FIGURE 9.3-1

CP-8

THIS DRAWING CREATED ELECTRONICALLY

CLASS II

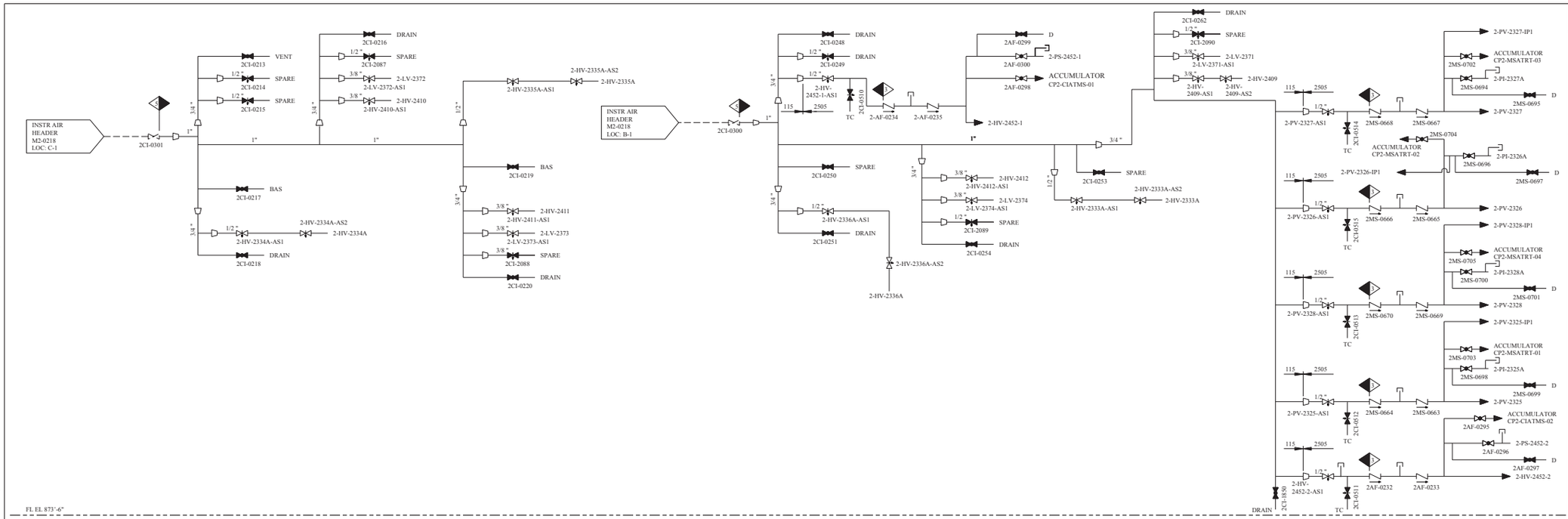
TXU ELECTRIC
CPSES
GLEN ROSE, TEXAS

FLOW DIAGRAM
INSTRUMENT AIR

| DWG. NO. | SH. NO. | REV. |
|---|---|---|
| M2-0218 | - | CP-8 |

vs00007q.dgn

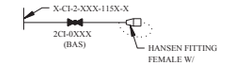
SSSSSSSTA ITESSSSS



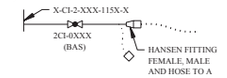

| REV | DWN | CHK | APVD | REMARKS |
|---|---|---|---|---|
| CP-19 | JRMC 09-18 2006 | SM 09-18 2006 | | THIS DRAWING REVISED TO INCORPORATE DESIGN CHANGE FDA 2005-003416-01-00 PER SK-0006-05-003416-01-00. |

NOTES:

1. TUBING CATEGORY IS 158G COPPER PER MS-626, PIPE IS 115G PER SPEC MS-44B EXCEPT AS NOTED.
2. FOR VALVE/CHANNEL NUMBER IDENTIFICATION SEE M2-2200-02.
3. DRAINS ON THIS DRAWING TO BE COLLECTED BY LOCAL FLOOR DRAINS.
4. FOR MECHANICAL SYMBOLS AND NOTES SEE DRAWING M1-0200.
5. DANGER - INSTRUMENT AIR SHALL NOT BE USED FOR BREATHING AIR WITHOUT APPROPRIATE IN LINE CHEMICAL ABSORBERS AND PARTICULATE FILTRATION. TOXIC VAPORS AND PARTICULATES MAY BE PRESENT.
6. BAS - BREATHING AIR SUPPLY. VALVES DESIGNATED BAS WILL HAVE A HANSEN FITTING FOR CONNECTION TO A USER APPARATUS.
   a) INSTALLED CONDITION




   b) WHEN IN USE




7. NEEDLE VALVES SHOWN ON THIS DRAWING ARE INSTRUMENT AIR ISOLATION VALVES FOR INDICATED MAIN PROCESS CONTROL VALVES ONLY.
8. THESE VALVES ARE CLOSED WHEN THE TUBE SIDE OF THE LETDOWN REHEAT HEAT EXCHANGER TCX-TRAHLR-01 IS ISOLATED AND DRAINED.

FSAR FIGURE 9.3-1

THIS DRAWING CREATED ELECTRONICALLY

REF CKD 12/2/97 CP-15

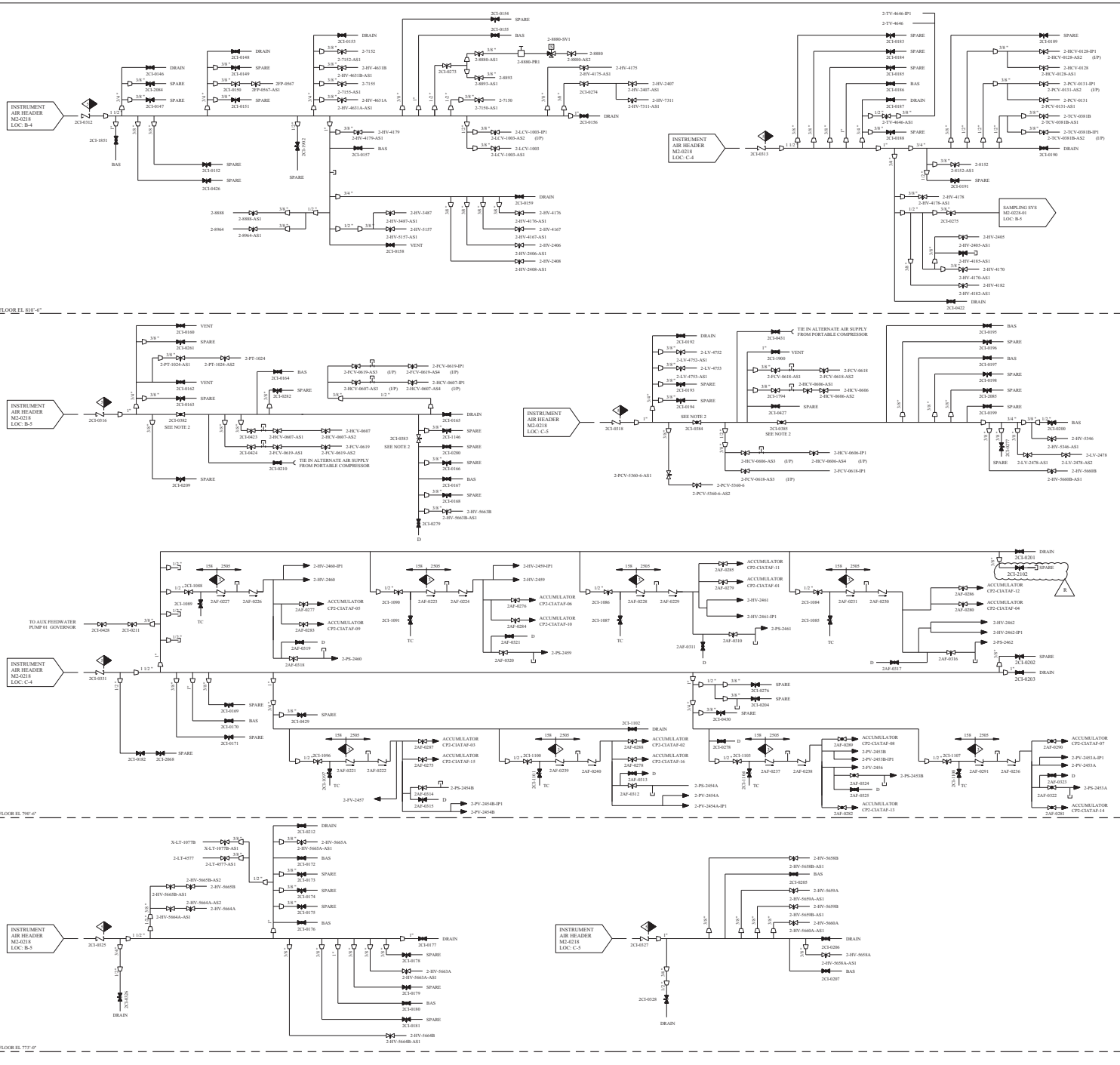
CLASS I
(NUCLEAR SAFETY-RELATED)
SAFETY CLASS 1 — SEISMIC CATEGORY I
SAFETY CLASS 2 — CLASS 1E
SAFETY CLASS 3 — ASSOCIATED CIRCUITS

TXU POWER
CPSES
GLEN ROSE, TEXAS

FLOW DIAGRAM
INSTRUMENT AIR
SAFEGUARDS BUILDING UNIT 2

| DWG. NO. | SH. NO. | REV. |
|---|---|---|
| M2-0218 | 01 | CP-19 |

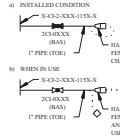
me730300.dgn A M2-0218-01 FINAL PRINT




| REV | DWN | CHKD | APVD | REMARKS |
|---|---|---|---|---|
| CP-12 | MARK 06/09/2002 | BBB 6/09/2002 | | THIS DRAWING REVISED TO INCORPORATE DESIGN CHANGE FIDA-2001-002985-01-00 PER SK-0002-01-002985-01-00. |

NOTES:

1. FOR GENERAL NOTES SEE M2-0218-01.
2. NEW 1" VALVES ( 2CI-0352 , 2CI-0383 , 2CI-0384 , AND 2CI-0385 ) ARE TE 2105 TEMA TYPE VALVES.
3. VALVES DESIGNATED BAS WILL HAVE A HANSEN FITTING FOR CONNECTION TO A USER APPARATUS.
   a) INSTALLED CONDITION
   b) WHEN IN USE




FSAR FIGURE 9.3-1

THIS DRAWING CREATED ELECTRONICALLY

CLASS I
(NUCLEAR SAFETY-RELATED)
SAFETY CLASS 1 SEISMIC CATEGORY I
SAFETY CLASS 2 QUALITY
SAFETY CLASS 3 ASSOCIATED CIRCUITS

TXU ELECTRIC
CPSES
GLEN ROSE, TEXAS

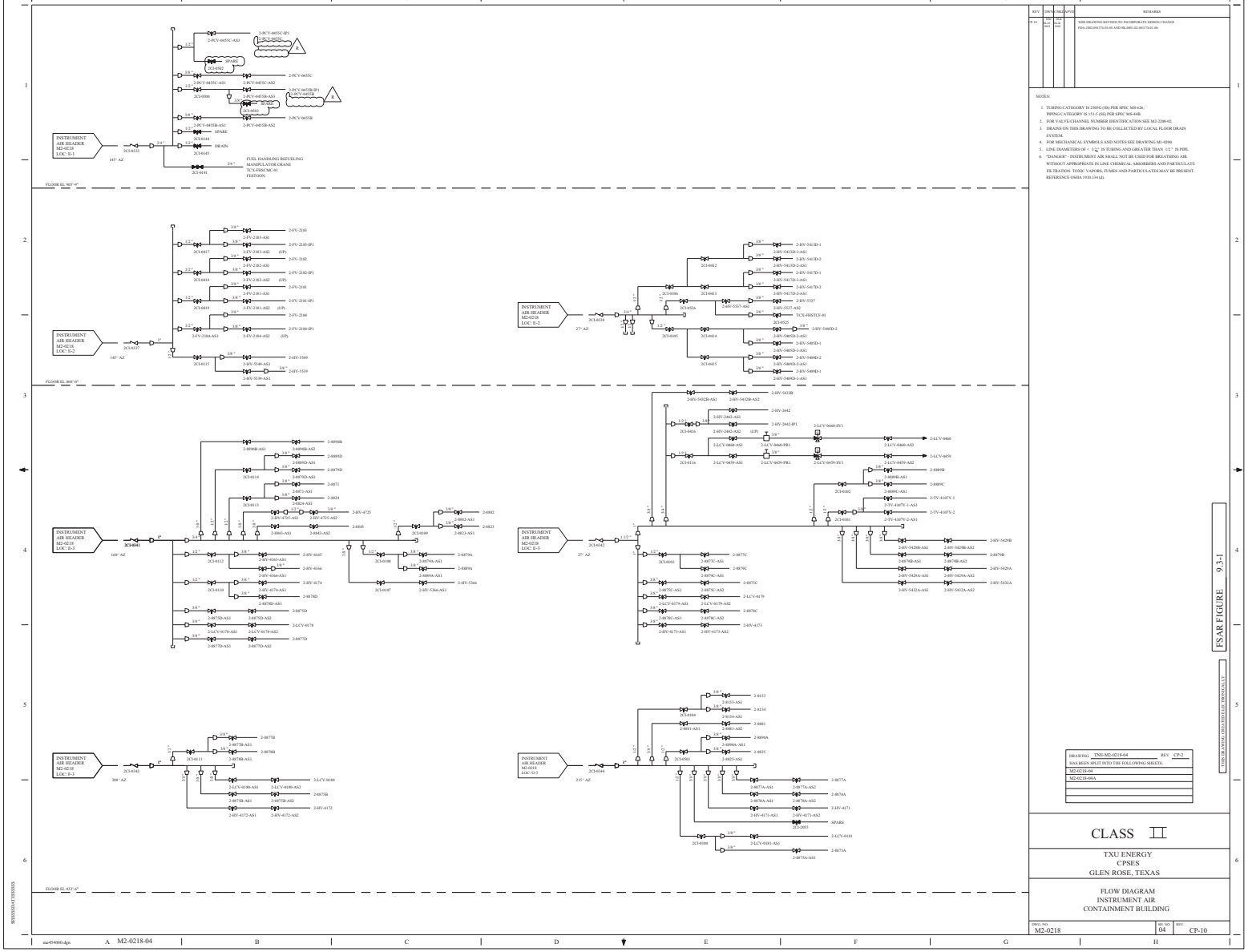
FLOW DIAGRAM
INSTRUMENT AIR
SAFEGUARDS BUILDING UNIT 2

| DWG. NO. | SH. NO. | REV. |
|---|---|---|
| M2-0218 | 02 | CP-12 |

me416500.dgn A M2-0218-02

REF CKD 3/14/97 CP-10

$$$$DATDTS$$$$




| REV | DESCRIPTION | DATE | BY |
|---|---|---|---|
| P-10 | THIS DRAWING REVISED TO INCORPORATE DESIGN CHANGE PDA-2002-00175-01-00 AND SIL-0001-02-00175-01-00. | 10/02 | TCE |

NOTES:

1. TUBING CATEGORY IS 2505G (SS) PER SPEC MS-4-26.
   PIPING CATEGORY IS 133-5 (SS) PER SPEC MS-4-8B.
2. FOR VALVE/CHANNEL NUMBER IDENTIFICATION SEE MD-2200-02.
3. DRAINS ON THIS DRAWING TO BE COLLECTED BY LOCAL FLOOR DRAIN SYSTEM.
4. FOR MECHANICAL SYMBOLS AND NOTES SEE DRAWING M1-0200.
5. LINE DIAMETERS OF < 1½" IS TURING AND GREATER THAN 1/2" IS PIPE.
6. "DANGER" - INSTRUMENT AIR SHALL NOT BE USED FOR BREATHING AIR WITHOUT APPROPRIATE IN LINE CHEMICAL ABSORBERS AND PARTICULATE FILTRATION. TOXIC VAPORS, FUMES AND PARTICULATES MAY BE PRESENT. REFERENCE OSHA 1910.134 (d).

FSAR FIGURE 9.3-1

THIS DRAWING GENERATED FROM DGN FILE

| DRAWING | TXE-M2-0218-04 | REV | CP-2 |
|---|---|---|---|
| HAS BEEN SPLIT INTO THE FOLLOWING SHEETS: | | | |
| M2-0218-04 | | | |
| M2-0218-04A | | | |

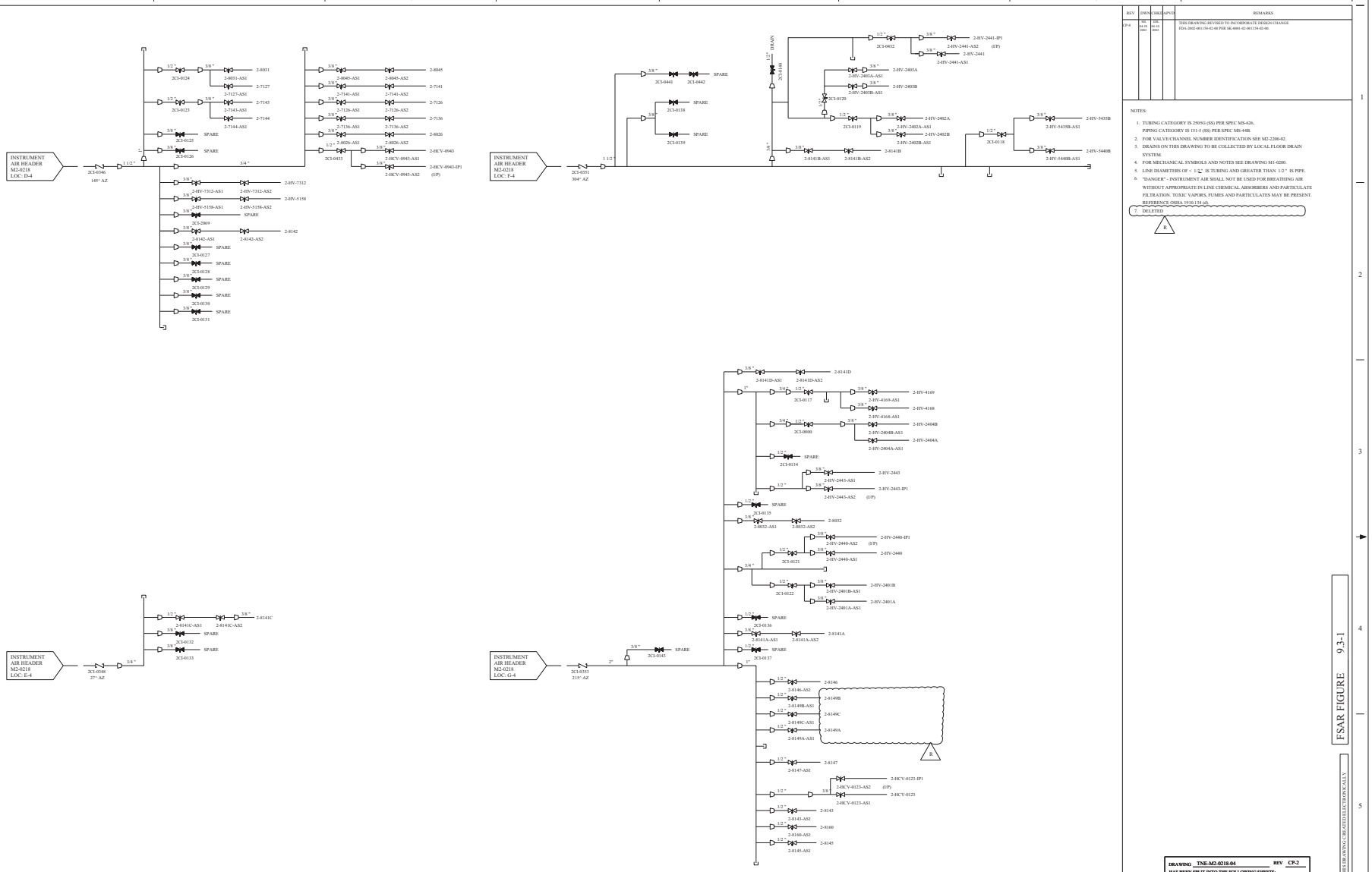
CLASS II

TXU ENERGY
CPSES
GLEN ROSE, TEXAS

FLOW DIAGRAM
INSTRUMENT AIR
CONTAINMENT BUILDING

| DWG. NO. | SH. NO. | REV. |
|---|---|---|
| M2-0218 | 04 | CP-10 |

mw454000.dgn A M2-0218-04




| REV | DWN | CKD | APVD | REMARKS |
|---|---|---|---|---|
| CP-4 | SS 04-18-2002 | DJK 04-18-2002 | | THIS DRAWING REVISED TO INCORPORATE DESIGN CHANGE FDA-2002-001156-02-00 PER SK-0001-02-001156-02-00. |

NOTES:

1. TUBING CATEGORY IS 2505G (SS) PER SPEC MS-626, PIPING CATEGORY IS 151-5 (SS) PER SPEC MS-44B.
2. FOR VALVE/CHANNEL NUMBER IDENTIFICATION SEE M2-2200-02.
3. DRAINS ON THIS DRAWING TO BE COLLECTED BY LOCAL FLOOR DRAIN SYSTEM.
4. FOR MECHANICAL SYMBOLS AND NOTES SEE DRAWING M1-0200.
5. LINE DIAMETERS OF < 1-1/2" IS TUBING AND GREATER THAN 1/2" IS PIPE.
6. "DANGER" - INSTRUMENT AIR SHALL NOT BE USED FOR BREATHING AIR WITHOUT APPROPRIATE IN LINE CHEMICAL ABSORBERS AND PARTICULATE FILTRATION. TOXIC VAPORS, FUMES AND PARTICULATES MAY BE PRESENT. REFERENCE OSHA 1910.134 (d).
7. DELETED

DRAWING TNE-M2-0218-04 REV CP-2
HAS BEEN SPLIT INTO THE FOLLOWING SHEETS:

| |
|---|
| M2-0218-04 |
| M2-0218-04A |
| |
| |
| |

THIS DRAWING CREATED ELECTRONICALLY

FSAR FIGURE 9.3-1

# CLASS II

TXU ELECTRIC
CPSES
GLEN ROSE, TEXAS

FLOW DIAGRAM
INSTRUMENT AIR
CONTAINMENT BUILDING

| DWG NO. | SH. NO. | REV. |
|---|---|---|
| M2-0218 | 04A | CP-8 |

AUXILIARY BUILDING

FUEL BUILDING

| REV | DWN | CHKD | APVD | REMARKS |
|---|---|---|---|---|
| CP-21 | MM 04-23 2014 | DLK 04-24 2014 | | THIS DRAWING REVISED TO INCORPORATE DESIGN CHANGE FDA-2013-000052-01-00 PER SK-0001-13-000052-01-00. |

NOTES:

1. FOR MECHANICAL SYMBOLS AND NOTES, SEE DRAWING M1-0200.
2. ALL DRAINS ARE □" UNLESS OTHERWISE NOTED.
3. ENTIRE INSTRUMENT AIR SYSTEM SHALL BE COPPER TUBING UNLESS OTHERWISE NOTED.
4. BAS - BREATHING AIR STATION.
5. DANGER - INSTRUMENT AIR SHALL NOT BE USED FOR BREATHING AIR WITHOUT APPROPRIATE IN-LINE CHEMICAL ABSORBERS AND PARTICULATE FILTERS. TOXIC VAPORS OR PARTICULATES MAY BE PRESENT.
6. FOR VALVE/CHANNEL NUMBER IDENTIFICATION, SEE DRAWING M1-2200-02.
7. VALVES DESIGNATED BAS WILL HAVE A HANSEN FITTING FOR CONNECTION TO A USER APPARATUS.

X-CI-1-XXX-151-5 — 1" PIPE (TOE) — 1CI-0XXX (BAS) — HANSEN FITTING FEMALE W/CHAINED CAP

X-CI-1-XXX-151-5 — 1" PIPE (TOE) — 1CI-0XXX (BAS) — TO A USER APPARATUS — HANSEN FITTING FEMALE, MALE AND HOSE

8. EACH GATE PROVIDED WITH HOSE ASSEMBLY AS SHOWN IN DETAIL A.

DETAIL A

| FLEX HOSE ASSEMBLY | LOCATION |
|---|---|
| CPX-CIFHFB-01 AND -01A<br>CPX-CIFHFB-02 AND -02A<br>CPX-CIFHFB-03<br>CPX-CIFHFB-04 | POOL 1<br>POOL 2<br>TRANSFER CANAL<br>WET CASK PIT |

9. POOLS 1 AND 2 FLEX HOSE ASSEMBLY AND CAP CAN BE MOVED TO EITHER SEAL. AIR SUPPLY CAN BE EITHER XCI-0611 OR XCI-0612 FOR POOL 1 AND XCI-0616 OR XCI-0617 FOR POOL 2.

DETAIL B

DETAIL C

FSAR FIGURE 9.3-1

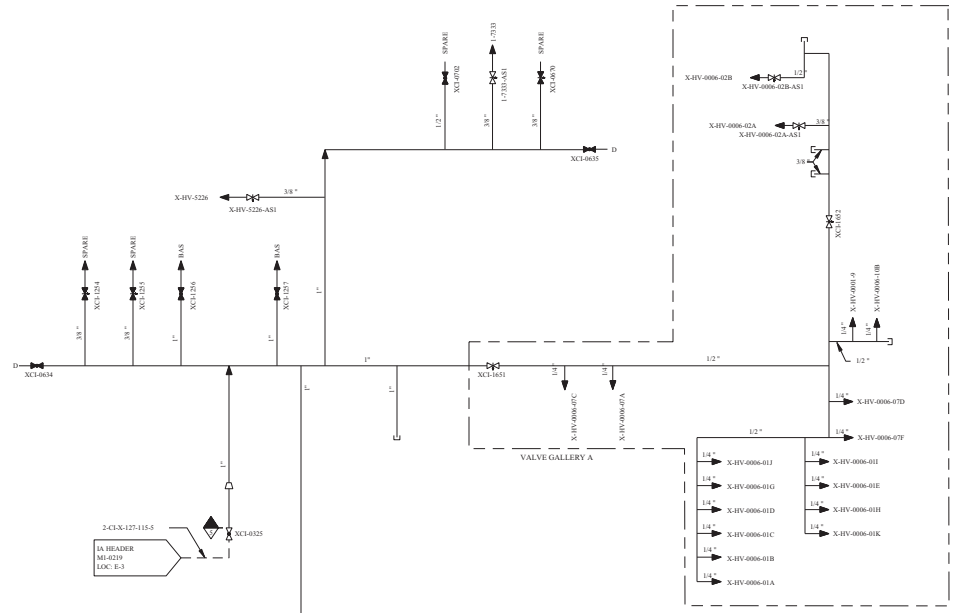
THIS DRAWING CREATED ELECTRONICALLY

CLASS I
(NUCLEAR SAFETY-RELATED)
SAFETY CLASS 1, SAFETY CLASS 2, SAFETY CLASS 3 — SEISMIC CATEGORY I, CLASS 1E, ASSOCIATED CIRCUITS

LUMINANT
CPNPP
GLEN ROSE, TEXAS

FLOW DIAGRAM
INSTRUMENT AIR

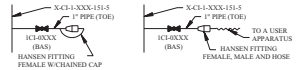
| DWG. NO. | SH. NO. | REV. |
|---|---|---|
| M1-0219 | - | CP-21 |




| REV. | DWN | CHKD | APVD | REMARKS |
|---|---|---|---|---|
| CP-15 | AUTO 05/21/1996 | | | THIS DRAWING REVISED TO ADD THE FSAR FIGURE NUMBER AS AN EDITORIAL CHANGE. |

**NOTES:**

1. SEE MECHANICAL DWG M1-0200 FOR SYMBOLS AND NOTES.
2. BAS - BREATHING AIR STATION.
3. DANGER - INSTRUMENT AIR SHALL NOT BE USED FOR BREATHING AIR WITHOUT APPROPRIATE IN-LINE CHEMICAL ABSORBERS AND PARTICULATE FILTERS. TOXIC VAPORS OR PARTICULATES MAY BE PRESENT.
4. ALL LINES ARE CATEGORY 115G COPPER AND BRONZE PER SPEC MS-44B EXCEPT AS NOTED.
5. FOR VALVE/CHANNEL NUMBER IDENTIFICATION SEE DWG M1-2200-02.
6. VALVES DESIGNATED BAS WILL HAVE A HANSEN FITTING FOR CONNECTION TO A USER APPARATUS.




CP 15

FSAR FIGURE 9.3-1

THIS DRAWING CREATED ELECTRONICALLY

NON–SAFETY

TXU ELECTRIC
CPSES
GLEN ROSE, TEXAS

FLOW DIAGRAM
INSTRUMENT AIR SUPPLY
FUEL BUILDING

| DWG. NO. | SH. NO. | REV. |
|---|---|---|
| M1-0219 | 01 | CP-15 |

$$$$$$$$D:\TES$$$$$$

vs00007z.dgn

| REV | DWN | CHKD | APVD | REMARKS |
|---|---|---|---|---|
| CP-20 | SM 01-26-2010 | BBL 01-27-2010 | | THIS DRAWING REVISED TO INCORPORATE DESIGN CHANGE FDA-2009-002311-01-00 PER SK-0005-09-002311-01-00. |

NOTES:

1. FOR MECHANICAL SYMBOLS AND NOTES SEE DWG M1-0200.
2. FOR VALVE/CHANNEL NUMBER IDENTIFICATION SEE DWG M1-2200-02.
3. ALL LINES ARE CATEGORY 115G, COPPER AND BRONZE PER SPEC MS-44B, EXCEPT AS NOTED.
4. BAS - BREATHING AIR STATION.
5. DANGER - INSTRUMENT AIR SHALL NOT BE USED FOR BREATHING WITHOUT APPROPRIATE IN-LINE CHEMICAL ABSORBERS AND PARTICULATE FILTERS. TOXIC VAPORS OR PARTICULATES MAY BE PRESENT.
6. UNLESS OTHERWISE NOTED, ALL DRAINS TO BE COLLECTED BY LOCAL FLOOR DRAIN SYSTEM.
7. VALVES DESIGNATED BAS WILL HAVE A HANSEN FITTING FOR CONNECTION TO A USER APPARATUS.

X-CI-1-XXX-151-5
1" PIPE (TOE)
1CI-0XXX (BAS)
HANSEN FITTING FEMALE W/CHAINED CAP

X-CI-1-XXX-151-5
1" PIPE (TOE)
1CI-0XXX (BAS)
TO A USER APPARATUS
HANSEN FITTING FEMALE, MALE AND HOSE

FSAR FIGURE 9.3-1

THIS DRAWING CREATED ELECTRONICALLY

DRAWING M1-0219-02 REV 07
HAS BEEN SPLIT INTO THE FOLLOWING SHEETS:
M1-0219-02
M1-0219-02A

NON–SAFETY

LUMINANT
CPNPP
GLEN ROSE, TEXAS

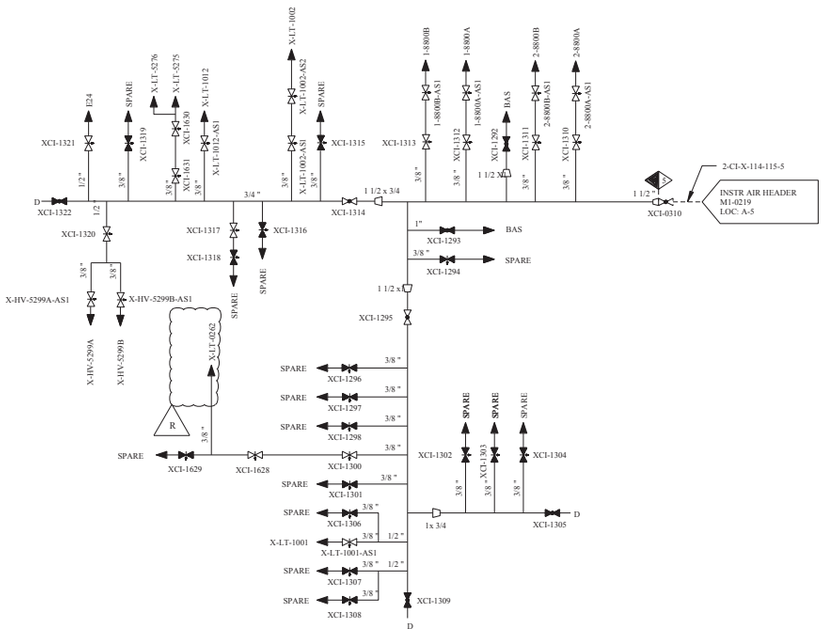
FLOW DIAGRAM
INSTRUMENT AIR SUPPLY
AUXILIARY BUILDING

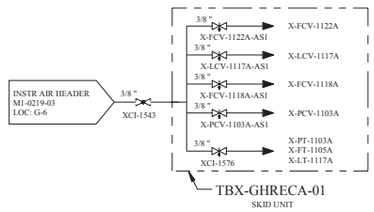
DWG. NO. M1-0219 | SH. NO. 02 | REV. CP-20

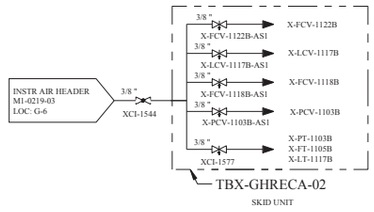
FINAL PRINT

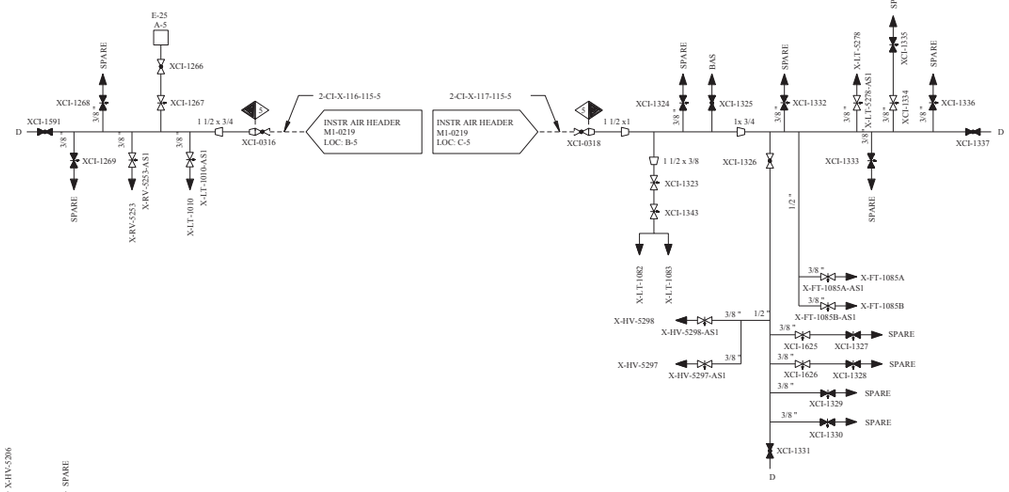
me989800.dgn | M1-0219-02

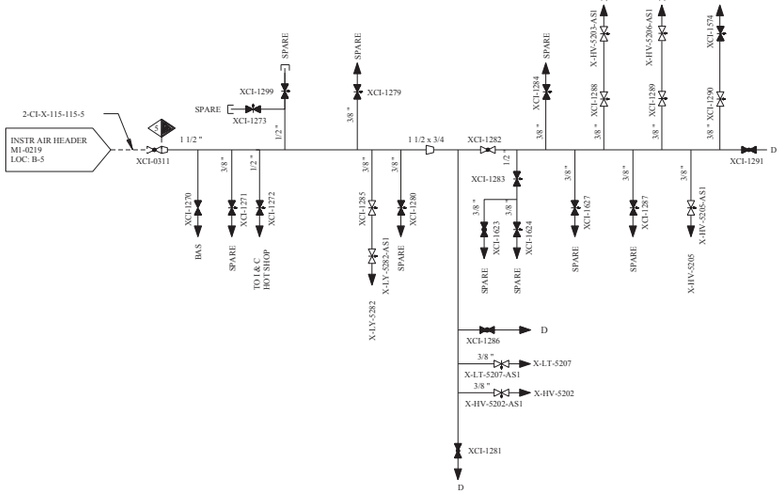
FLOOR EL 810'-6"



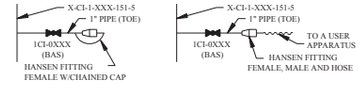




| REV | DWN | CHKD | APVD | REMARKS |
|---|---|---|---|---|
| CP-15 | SM 01-26-2010 | DJL 01-27-2010 | | THIS DRAWING REVISED TO INCORPORATE DESIGN CHANGE FDA-2009-002311-01-00 PER SK-0004-09-002311-01-00. |

**NOTES:**

1. FOR MECHANICAL SYMBOLS AND NOTES SEE DWG M1-0200.
2. FOR VALVE/CHANNEL NUMBER IDENTIFICATION SEE DWG M1-2200-02.
3. ALL LINES ARE CATEGORY 115G, COPPER AND BRONZE PER SPEC MS-44B, EXCEPT AS NOTED.
4. BAS - BREATHING AIR STATION.
5. DANGER - INSTRUMENT AIR SHALL NOT BE USED FOR BREATHING WITHOUT APPROPRIATE IN-LINE CHEMICAL ABSORBERS AND PARTICULATE FILTERS. TOXIC VAPORS OR PARTICULATES MAY BE PRESENT.
6. UNLESS OTHERWISE NOTED, ALL DRAINS TO BE COLLECTED BY LOCAL FLOOR DRAIN SYSTEM.
7. VALVES DESIGNATED BAS WILL HAVE A HANSEN FITTING FOR CONNECTION TO A USER APPARATUS.




FSAR FIGURE 9.3-1

THIS DRAWING CREATED ELECTRONICALLY

| DRAWING M1-0219-02 | REV CP-7 |
|---|---|
| HAS BEEN SPLIT INTO THE FOLLOWING SHEETS: | |
| M1-0219-02 | |
| M1-0219-02A | |

NON–SAFETY

LUMINANT
CPNPP
GLEN ROSE, TEXAS

FLOW DIAGRAM
INSTRUMENT AIR SUPPLY
AUXILIARY BUILDING

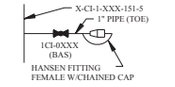
| DWG. NO. | SH. NO. | REV. |
|---|---|---|
| M1-0219 | 02A | CP-15 |

REF CKD CP-10 7/18/967

| REV | DWN | CHK | APVD | REMARKS |
|---|---|---|---|---|
| CP-25 | SM 05-08-2006 | JBM 05-08-2006 | | THIS DRAWING REVISED TO INCORPORATE DESIGN CHANGE FDA-2005-003009-01-00 PER SK-0002-05-003009-01-00. |

NOTES:

1. SEE MECHANICAL DRAWING M1-0200 FOR SYMBOLS AND NOTES.
2. FOR VALVE/CHANNEL NUMBER IDENTIFICATION SEE DRAWING M1-2200-02.
3. ALL LINES ARE CATEGORY 115G, COPPER AND BRONZE PER SPEC MS-44B, EXCEPT AS NOTED.
4. BAS - BREATHING AIR STATION.
5. DANGER - INSTRUMENT AIR SHALL NOT BE USED FOR BREATHING WITHOUT APPROPRIATE INLINE CHEMICAL ABSORBERS AND PARTICULATE FILTERS. TOXIC VAPORS OR PARTICULATE MAY BE PRESENT.
6. VALVES DESIGNATED BAS WILL HAVE A HANSEN FITTING FOR CONNECTION TO A USER APPARATUS.




FSAR FIGURE 9.3-1

THIS DRAWING CREATED ELECTRONICALLY

NON–SAFETY

TXU POWER
CPSES
GLEN ROSE, TEXAS

FLOW DIAGRAM
INSTRUMENT AIR SUPPLY
AUXILIARY BUILDING

| DWG. NO. | SH. NO. | REV. |
|---|---|---|
| M1-0219 | 03 | CP-25 |

FINAL PRINT

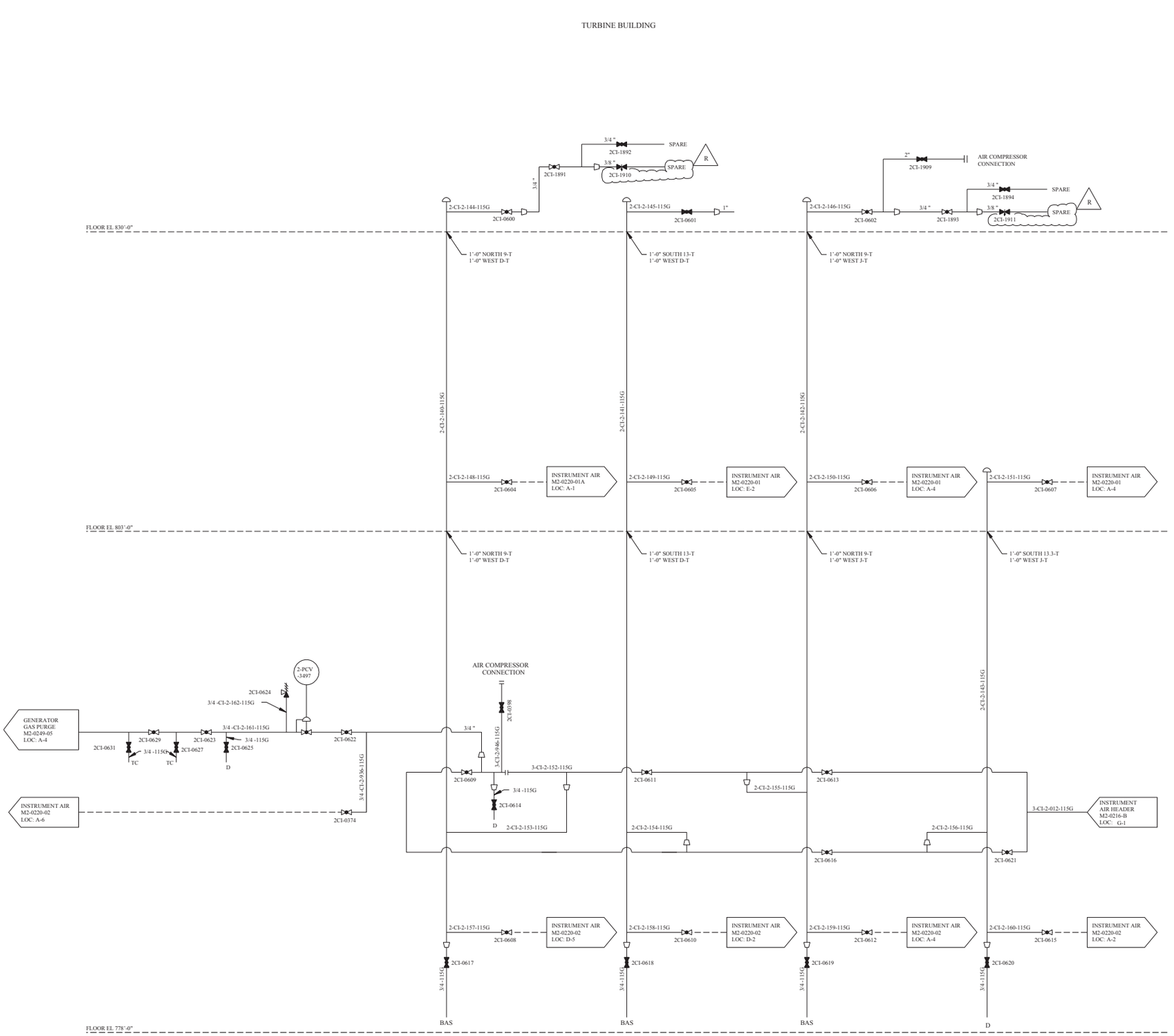
REF CKD CP-20718/97

me679300.dgn A M1-0219-03 B C D E F G H

| REV | DWN | CHKD | APVD | REMARKS |
|---|---|---|---|---|
| CP-15 | MHF 12-17 2008 | EES 12-17 2008 | | THIS DRAWING REVISED TO INCORPORATE DESIGN CHANGE FDA-2006-003080-40-00 PER SK-0036-06-003080-40-00. |

NOTES:

1. FOR MECHANICAL SYMBOLS AND NOTES SEE DRAWING M1-0200.
2. THE INSTRUMENT AIR BRANCH LINES ARE CONTINUED ON THE M2-2700 SERIES INSTRUMENT AIR PIPING DRAWINGS.
3. ALL DRAINS ON THIS DRAWING TO BE COLLECTED BY LOCAL FLOOR DRAIN SYSTEM.




FSAR FIGURE 9.3-1

THIS DRAWING CREATED ELECTRONICALLY

NON–SAFETY

LUMINANT
CPNPP
GLEN ROSE, TEXAS

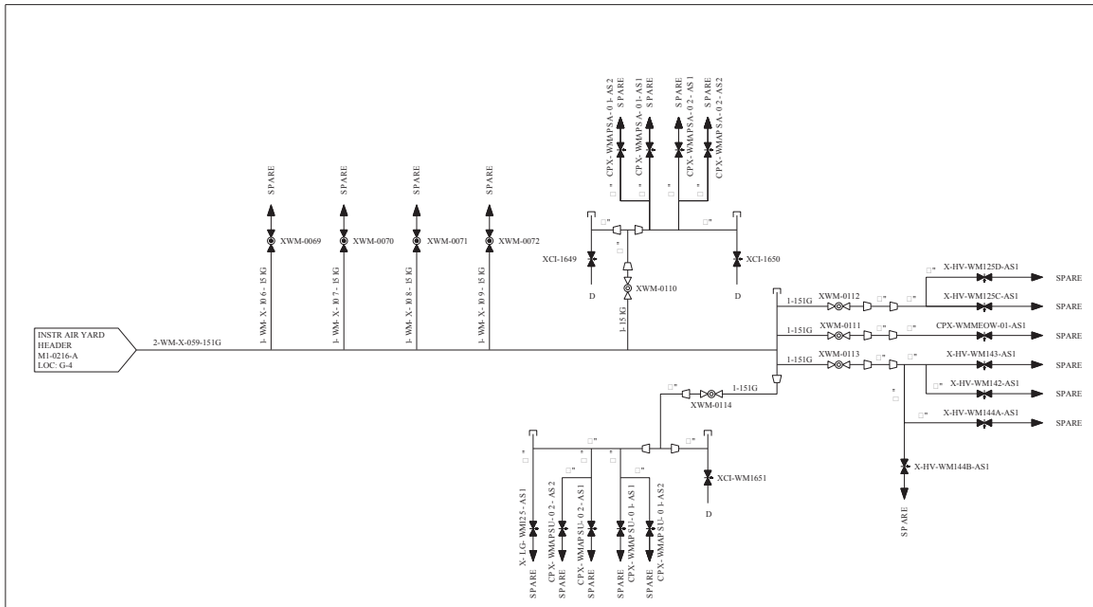
FLOW DIAGRAM
INSTRUMENT AIR
UNIT 2

| DWG. NO. | SH. NO. | REV. |
|---|---|---|
| M2-0219 | - | CP-15 |

REF CKD 10/7/97 CP-9

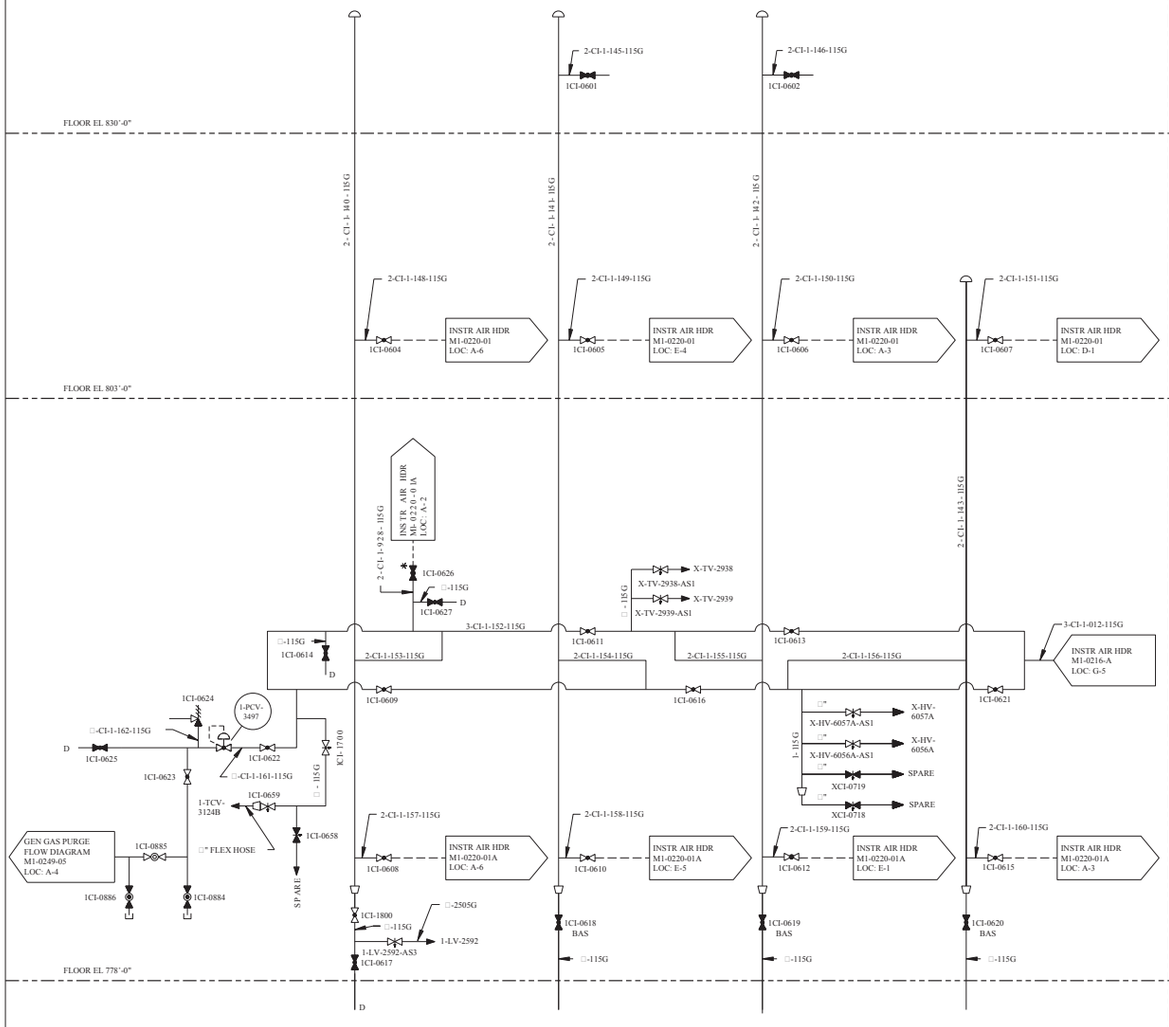
$$$$$$$$DATE$$$$$$

me950700.dgn A M2-0219 B C D E F G < FINAL PRINT > H

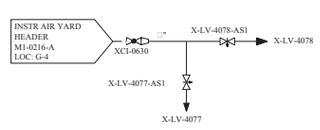



WASTE MANAGEMENT SYSTEM
(ABANDONED IN PLACE)

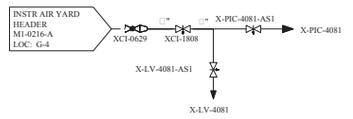
TURBINE BUILDING



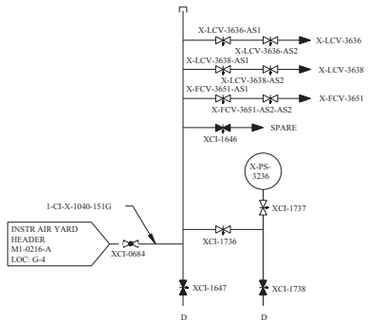

FIREWATER STORAGE TANKS



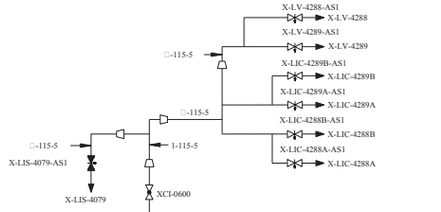

FIREWATER PUMP HOUSE




AUXILIARY BOILER BUILDING

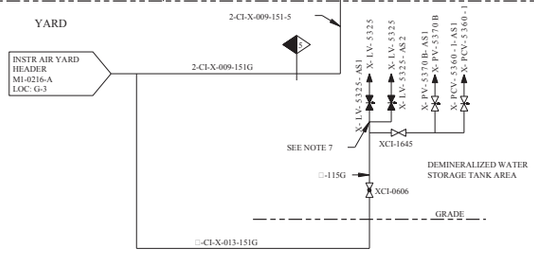



SERVICE WATER PUMP HOUSE

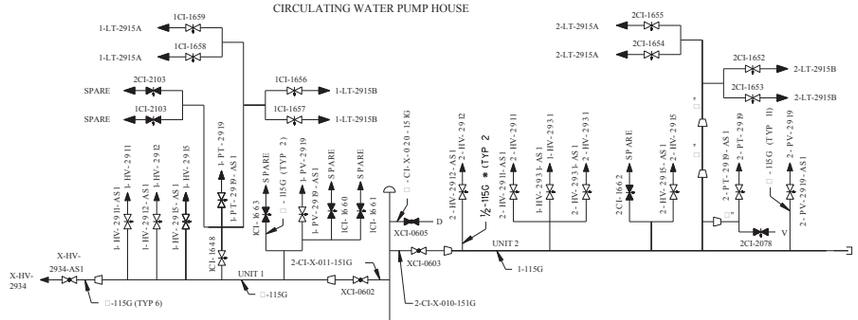



FLOOR EL 796'-0"

YARD

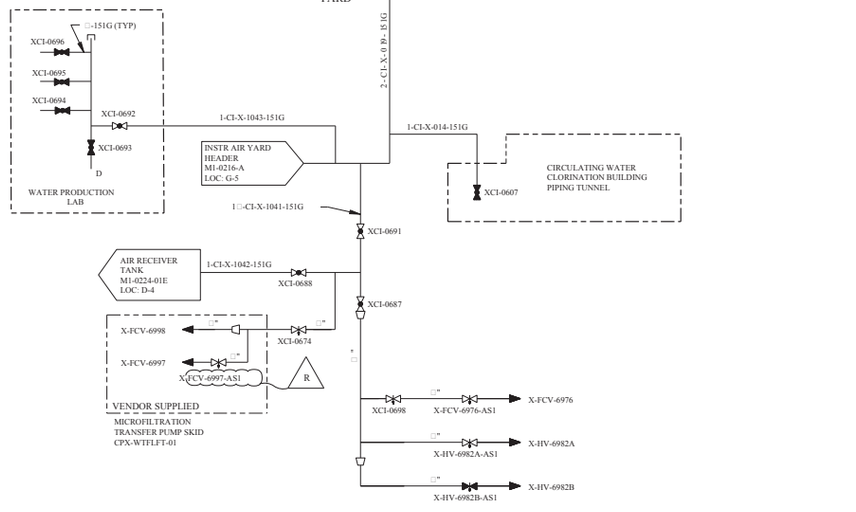



CIRCULATING WATER PUMP HOUSE




FLOOR EL 796'-0"

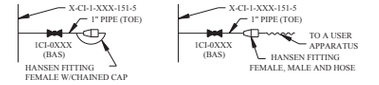
YARD




| REV | DWN | CHKD | APVD | REMARKS |
|---|---|---|---|---|
| CP-52 | MHF 01-09-2012 | GAW 01-09-2012 | | THIS DRAWING REVISED TO INCORPORATE DESIGN CHANGE FDA 2007-003115-06-04 PER SK-0065-07-003115-06-00. |

NOTES:

1. FOR MECHANICAL SYMBOLS AND NOTES SEE DRAWING M1-0200.
2. * VALVES SUPPLIED BY FIELD.
3. COMPRESSION FITTINGS FOR □" OR SMALLER LINES TO BE ASTM B68 OR B75.
4. DANGER - INSTRUMENT AIR SHALL NOT BE USED FOR BREATHING AIR WITHOUT APPROPRIATE IN-LINE CHEMICAL ABSORBERS AND PARTICULATE FILTERS. TOXIC VAPORS OR PARTICULATE MAY BE PRESENT.
5. DELETED
6. VALVES DESIGNATED BAS WILL HAVE A HANSEN FITTING FOR CONNECTION TO A USER APPARATUS.




7. THE INSTRUMENT AIR ISOLATION VALVES MUST REMAIN CLOSED. X-LV-5325
NO LONGER HAS AUTO FUNCTION PER FDA-2006-000953-01.

FSAR FIGURE 9.3-1

THIS DRAWING CREATED ELECTRONICALLY

CLASS II

LUMINANT
CPNPP
GLEN ROSE, TEXAS

FLOW DIAGRAM
INSTRUMENT AIR

| DWG. NO. | SH. NO. | REV. |
|---|---|---|
| M1-0220 | - | CP-52 |

REF CKD 5/8/98 CP-38

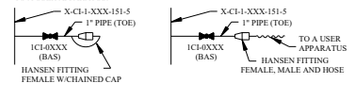
$$$$$$$$ DATE$$$$$$$

me105520.dgn A M1-0220 < FINAL PRINT >

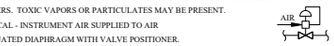
| REV | DWN | CHKD | APVD | REMARKS |
|---|---|---|---|---|
| CP-34 | DLK 06-01-2017 | GAW 06-01-2017 | | THIS DRAWING REVISED TO INCORPORATE DESIGN CHANGE FDA 2016-000081-01-01 PER SK-0029-16-000081-01-01. |

NOTES:

1. ALL LINES □" AND GREATER TO BE COPPER ASTM B88 SWEAT JOINED. CATEGORY 115G PER MS-44B.
2. ALL LINES □" AND SMALLER TO BE ASTM B68 OR B75 COMPRESSION FITTINGS, CATEGORY 158G PER MS-626.
3. FOR MECHANICAL SYMBOLS AND NOTES SEE M1-0200
4. BAS - BREATHING AIR STATION.
5. DANGER - INSTRUMENT AIR SHALL NOT BE USED FOR BREATHING AIR WITHOUT APPROPRIATE IN-LINE CHEMICAL ABSORBERS AND PARTICULATE FILTERS. TOXIC VAPORS OR PARTICULATES MAY BE PRESENT.
6. TYPICAL - INSTRUMENT AIR SUPPLIED TO AIR ACTUATED DIAPHRAGM WITH VALVE POSITIONER.
7. NO LINE NUMBERS ARE ASSIGNED SINCE THEY ARE TUBING WITH DIAMETER LESS THAN 2" BY INSTRUMENTATION.
8. ALL DRAINS COLLECTED BY LOCAL DRAIN SYSTEM, UNLESS OTHERWISE NOTED.
9. FOR VALVE CHANNEL NO. IDENTIFICATION SEE DWG M1-2200-02.
10. VALVES DESIGNATED BAS WILL HAVE A HANSEN FITTING FOR CONNECTION TO A USER APPARATUS.




11. FILTER CP1-CIFTCP-01 INTERNALS HAVE BEEN REMOVED.




FSAR FIGURE 9.3-1

THIS DRAWING CREATED ELECTRONICALLY

DRAWING M1-0220 REV CP-6
HAS BEEN SPLIT INTO THE FOLLOWING SHEETS:
M1-0220-01
M1-0220-01A

NON-SAFETY

LUMINANT
CPNPP
GLEN ROSE, TEXAS

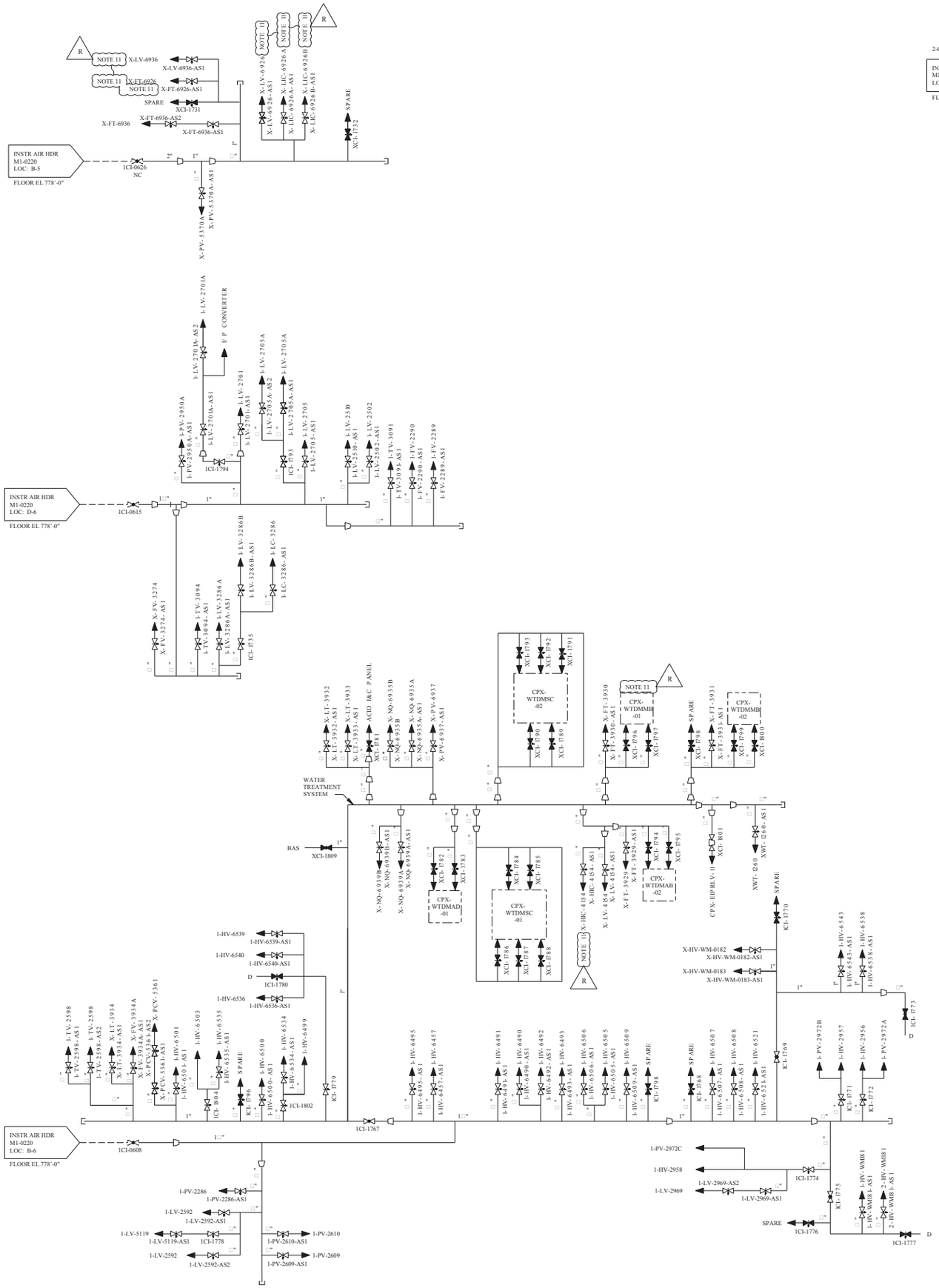
FLOW DIAGRAM
INSTRUMENT AIR
TURBINE BUILDING

| DWG. NO. | SH. NO. | REV. |
|---|---|---|
| M1-0220 | 01 | CP-34 |

REF CKD 5-13-98 CP-20

me901500.dgn M1-0220-01

FINAL PRINT




| REV | DWN | CHKD | APVD | REMARKS |
|---|---|---|---|---|
| CP-28 | HMC 01-15 2015 | DJL 01-21 2015 | | THIS DRAWING REVISED TO INCORPORATE DESIGN CHANGE FDA-2014-000184-01-00 PER SK-0002-14-000184-01-00. |

NOTES:

1. ALL LINES □" AND GREATER TO BE COPPER ASTM B88 SWEAT JOINED. CATEGORY 115G PER MS-44B.
2. ALL LINES □" AND SMALLER TO BE ASTM B68 OR B75 COMPRESSION FITTINGS, CATEGORY 158G PER MS-626.
3. FOR MECHANICAL SYMBOLS AND NOTES SEE M1-0200
4. BAS - BREATHING AIR STATION.
5. DANGER - INSTRUMENT AIR SHALL NOT BE USED FOR BREATHING AIR WITHOUT APPROPRIATE IN-LINE CHEMICAL ABSORBERS AND PARTICULATE FILTERS. TOXIC VAPORS OR PARTICULATES MAY BE PRESENT.
6. TYPICAL - INSTRUMENT AIR SUPPLIED TO AIR ACTUATED DIAPHRAGM WITH VALVE POSITIONER.
7. NO LINE NUMBERS ARE ASSIGNED SINCE THEY ARE TUBING WITH DIAMETER LESS THAN 2" BY INSTRUMENTATION.
8. ALL DRAINS COLLECTED BY LOCAL DRAIN SYSTEM, UNLESS OTHERWISE NOTED.
9. FOR VALVE CHANNEL NO. IDENTIFICATION SEE DWG M1-2200-02.
10. VALVES DESIGNATED BAS WILL HAVE A HANSEN FITTING FOR CONNECTION TO A USER APPARATUS.

AIR

X-CI-1-XXX-151-5
1" PIPE (TOE)
1CI-0XXX
(BAS)
HANSEN FITTING
FEMALE W/CHAINED CAP

X-CI-1-XXX-151-5
1" PIPE (TOE)
1CI-0XXX
(BAS)
TO A USER APPARATUS
HANSEN FITTING
FEMALE, MALE AND HOSE

11. THIS LOCATION IS ABANDONED IN PLACE PER FDA-2014-000184-01.

R

FSAR FIGURE 9.3-1

THIS DRAWING CREATED ELECTRONICALLY

| DRAWING M1-0220 REV CP-6 |
|---|
| HAS BEEN SPLIT INTO THE FOLLOWING SHEETS: |
| M1-0220-01 |
| M1-0220-01A |

NON–SAFETY

LUMINANT
CPNPP
GLEN ROSE, TEXAS

FLOW DIAGRAM
INSTRUMENT AIR
TURBINE BUILDING

| DWG. NO. | SH. NO. | REV. |
|---|---|---|
| M1-0220 | 01A | CP-28 |

$$$$$$$DATE$$$$$$$ REF CKD 1/ 14/ 98 CP- 20

| REV | DWN | CHKD | APVD | REMARKS |
|---|---|---|---|---|
| CP-12 | SM 09-27-2007 | JRMC 09-27-2007 | | THIS DRAWING REVISED TO INCORPORATE DESIGN CHANGES FDA-2005-004951-01-01 PER SK-0023-05-004951-01-00. |

NOTES:

1. THIS DRAWING VOIDS AND SUPERSEDES FSI-00077F.
2. FOR ADDITIONAL TURBINE BUILDING INSTRUMENT AIR SEE M2-0220-02.
3. TUBING CATEGORY IS 115G, COPPER AND BRONZE PER SPEC MS-44B, SAME AS INSTRUMENT AIR HEADER.
4. FOR VALVE/CHANNEL NUMBER IDENTIFICATION SEE M2-2200-02.
5. DRAINS ON THIS DRAWING TO BE COLLECTED BY LOCAL FLOOR DRAIN SYSTEM.
6. FOR MECHANICAL SYMBOLS AND NOTES SEE M1-0200.
7. DANGER - INSTRUMENT AIR SHALL NOT BE USED FOR BREATHING AIR WITHOUT APPROPRIATE IN-LINE CHEMICAL ABSORBERS AND PARTICULATE FILTRATION. TOXIC VAPORS, FUMES AND PARTICULATES MAY BE PRESENT.

INSTR AIR HEADER M2-0219 LOC: D-3

INSTR AIR HEADER M2-0219 LOC: E-3

INSTR AIR HEADER M2-0219 LOC: F-3

TURBINE DECK EL 830'-0"

FL EL 803'-0"

+ Approved LDCRs

FSAR FIGURE 9.3-1

THIS DRAWING CREATED ELECTRONICALLY

DRAWING M2-0220-01 REV CP-3
HAS BEEN SPLIT INTO THE FOLLOWING SHEETS:
M2-0220-01
M2-0220-01A

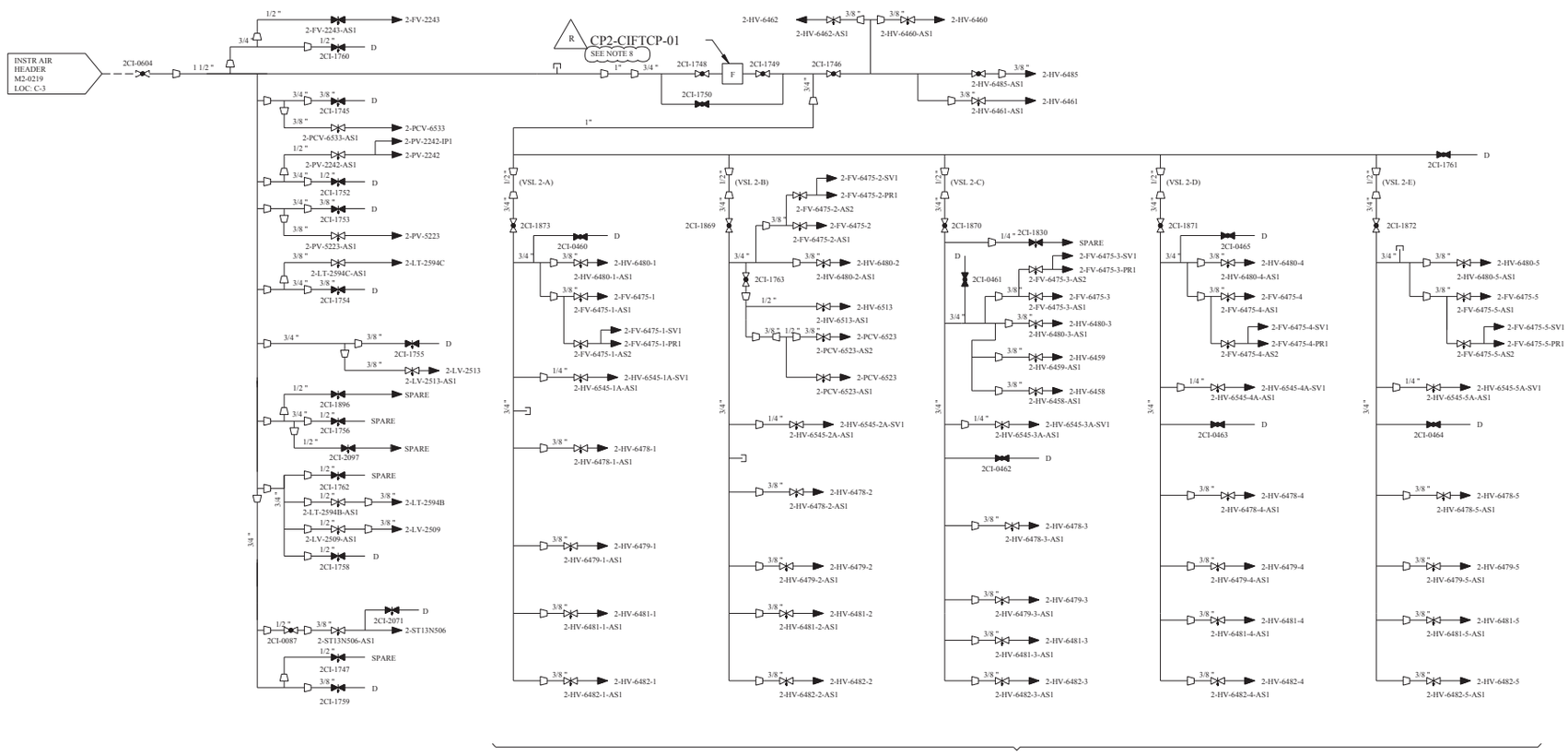
NON-SAFETY

LUMINANT
CPSES
GLEN ROSE, TEXAS

FLOW DIAGRAM
INSTRUMENT AIR
TURBINE BUILDING

DWG. NO. M2-0220 | SH. NO. 01 | REV. CP-12

mc864700.dgn | M2-0220-01 | FINAL PRINT




| REV | DWN | CHKD | APVD | REMARKS |
|---|---|---|---|---|
| CP-9 | DLK 10-12 2005 | MM 10-12 2005 | | THIS DRAWING REVISED TO INCORPORATE DESIGN CHANGE FDA 2004-003147-01-00 PER SK-0002-04-003147-01-00. |

NOTES:

1. THIS DRAWING VOIDS AND SUPERCEDES FSI-00077F.
2. FOR ADDITIONAL TURBINE BUILDING INSTRUMENT AIR SEE M2-0220-02.
3. TUBING CATEGORY IS 115G, COPPER AND BRONZE PER SPEC MS-44B, SAME AS INSTRUMENT AIR HEADER.
4. FOR VALVE/CHANNEL NUMBER IDENTIFICATION SEE M2-2200-02.
5. DRAINS ON THIS DRAWING TO BE COLLECTED BY LOCAL FLOOR DRAIN SYSTEM.
6. FOR MECHANICAL SYMBOLS AND NOTES SEE M1-0200.
7. DANGER - INSTRUMENT AIR SHALL NOT BE USED FOR BREATHING AIR WITHOUT APPROPRIATE IN-LINE CHEMICAL ABSORBERS AND PARTICULATE FILTRATION. TOXIC VAPORS, FUMES AND PARTICULATES MAY BE PRESENT.
8. FILTER CP2-CIFTCP-01 INTERNALS HAVE BEEN REMOVED. R

FSAR FIGURE 9.3-1

THIS DRAWING CREATED ELECTRONICALLY

DRAWING M2-0220-01 REV CP-3
HAS BEEN SPLIT INTO THE FOLLOWING SHEETS:
M2-0220-01
M2-0220-01A

NON-SAFETY

LUMINANT
CPSES
GLEN ROSE, TEXAS

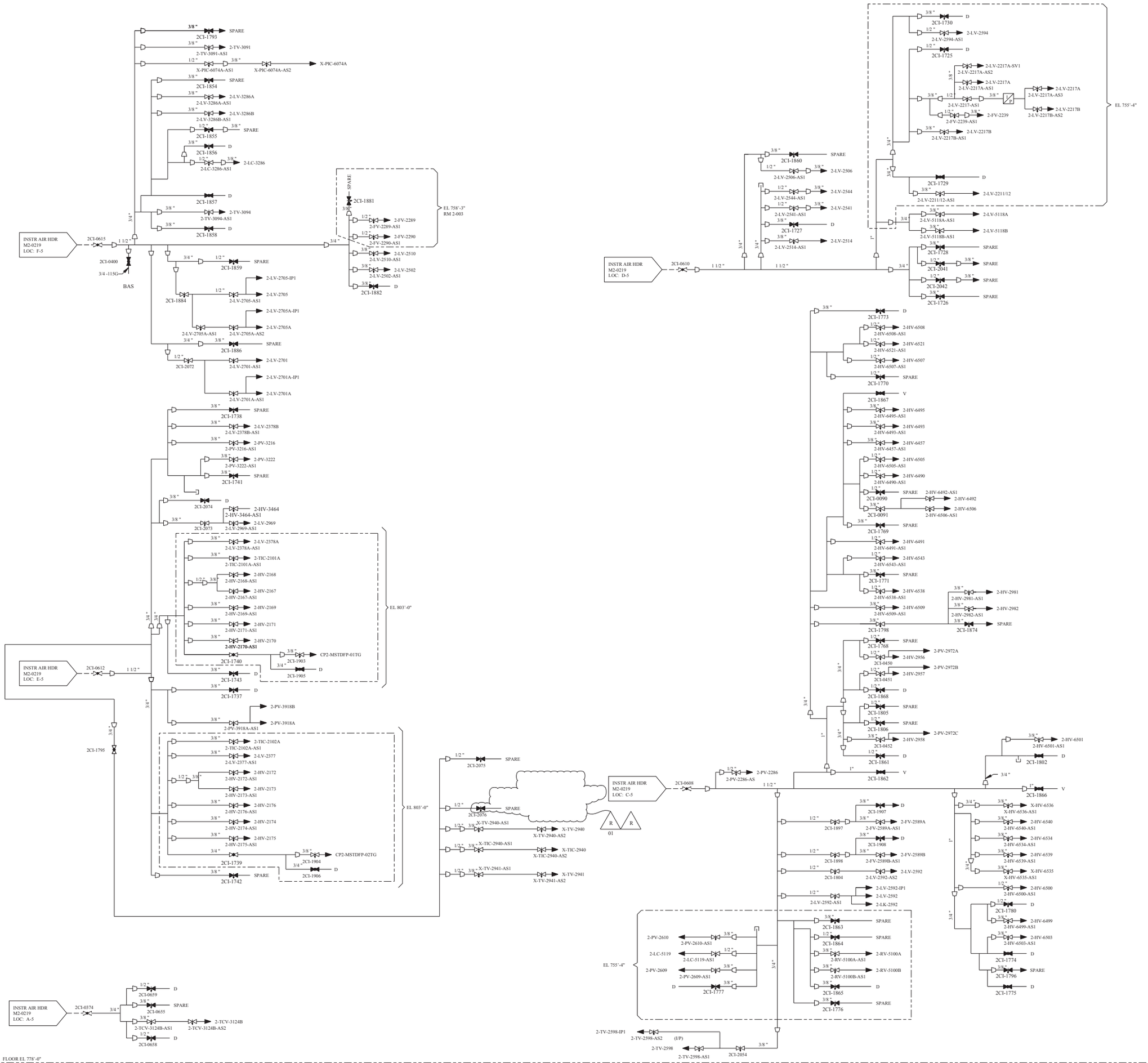
FLOW DIAGRAM
INSTRUMENT AIR
TURBINE BUILDING

DWG. NO. M2-0220 | SH. NO. 01A | REV. CP-9

FINAL PRINT

REF CKD CP-7 6-30-98

me625300.dgn M2-0220-01A




| REV | DWN | CHKD | APVD | REMARKS |
|---|---|---|---|---|
| CP-24 | DLK 06-09-2011 | MM 06-09-2011 | | THIS DRAWING REVISED TO INCORPORATE DESIGN CHANGE FDA-2008-003933-01-03 PER SK-0022-08-003933-01-01. |

NOTES:

1. THIS DRAWING VOIDS AND SUPERCEDES FSI-00077F.
2. FOR ADDITIONAL TURBINE BUILDING INSTRUMENT AIR SEE M2-0220-01.
3. TUBING CATEGORY IS 115G, COPPER AND BRONZE PER SPEC MS-44B, SAME AS INSTRUMENT AIR HEADER.
4. FOR VALVE/CHANNEL NUMBER IDENTIFICATION SEE M2-2200-02.
5. DRAINS ON THIS DRAWING TO BE COLLECTED BY LOCAL FLOOR DRAIN SYSTEM.
6. FOR MECHANICAL SYMBOLS AND NOTES SEE M1-0200.
7. DANGER - INSTRUMENT AIR SHALL NOT BE USED FOR BREATHING AIR WITHOUT APPROPRIATE IN-LINE CHEMICAL ABSORBERS AND PARTICULATE FILTRATION. TOXIC VAPORS, FUMES AND PARTICULATES MAY BE PRESENT.

FSAR FIGURE 9.3-1

THIS DRAWING CREATED ELECTRONICALLY

NON–SAFETY

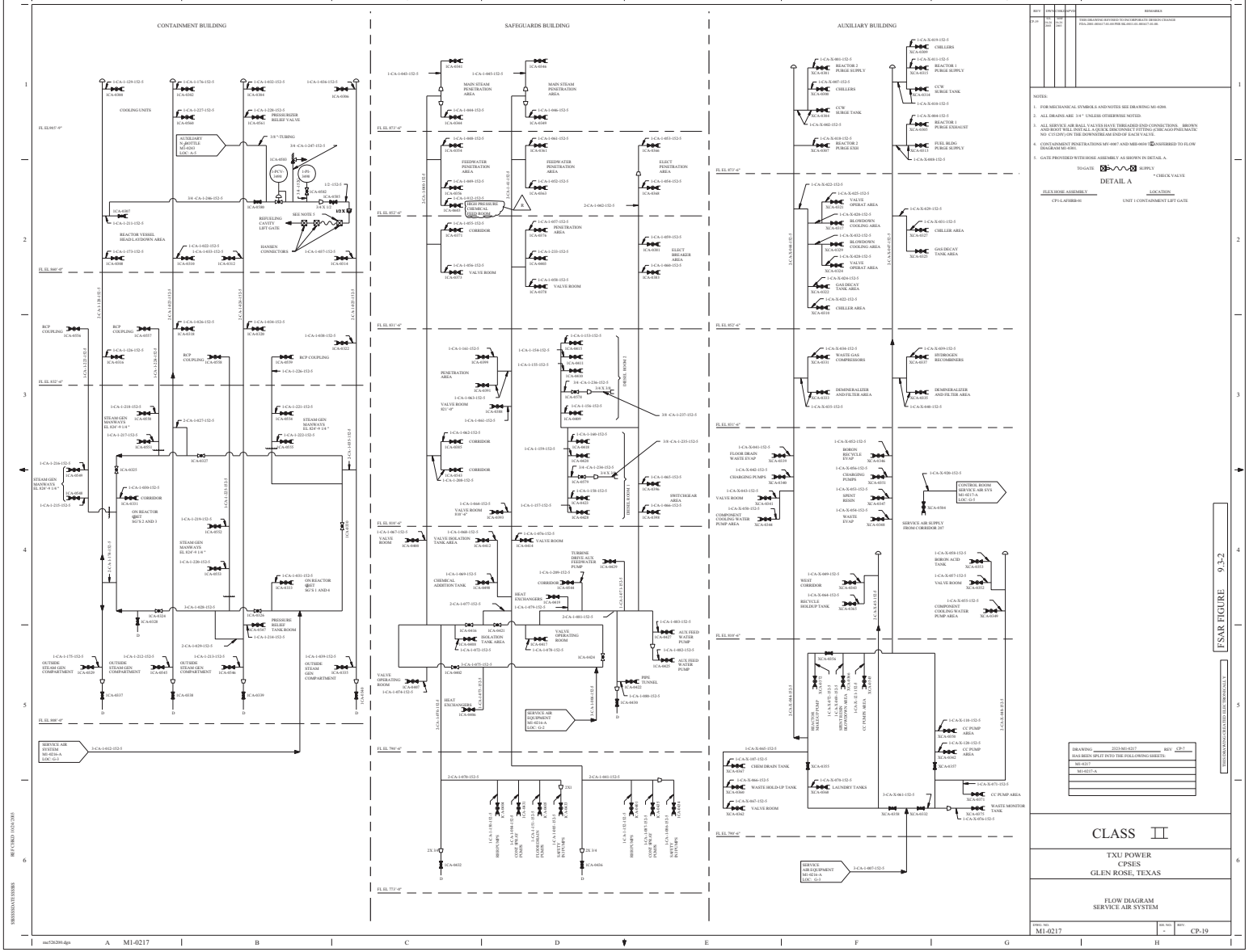
LUMINANT
CPNPP
GLEN ROSE, TEXAS

FLOW DIAGRAM
INSTRUMENT AIR
UNIT 2 TURBINE BUILDING

| DWG. NO. | SH. NO. | REV. |
|---|---|---|
| M2-0220 | 02 | CP-24 |

REF CKD 10/797 CP-14

mel02510.dgn A M2-0220-02 B C D E F G FINAL PRINT H


CONTAINMENT BUILDING
SAFEGUARDS BUILDING
AUXILIARY BUILDING
REVISIONS
NOTES:
1. FOR MECHANICAL SYMBOLS AND NOTES SEE DRAWING M1-0200.
2. ALL DRAINS ARE 3/4 " UNLESS OTHERWISE NOTED.
3. ALL SERVICE AIR BALL VALVES HAVE THREADED END CONNECTIONS. BROWN HANDLES ON THE DOWNSTREAM SIDE OF EACH VALVE INDICATE PNEUMATIC NO - CLOSED ON THE DOWNSTREAM SIDE OF EACH VALVE.
4. CONTAINMENT PENETRATIONS M5-0007 AND M8-0008 TRANSFERRED TO FLOW DIAGRAM M1-0301.
5. GATE PROVIDED WITH HOSE ASSEMBLY AS SHOWN IN DETAIL A.
DETAIL A
FLEX HOSE ASSEMBLY
LOCATION
CP-1-AAF0008-01
UNIT 1 CONTAINMENT LIFT GATE
CLASS II
TXU POWER
CPSES
GLEN ROSE, TEXAS
FLOW DIAGRAM
SERVICE AIR SYSTEM
DRWG NO. M1-0217
REV. CP-19
FSAR FIGURE 9.2.2
THIS DRAWING CREATED FOR COMPLIANCE

TURBINE BUILDING

1-CA-1-229-152G
1CA-0562
1-CA-1-230-152G
1CA-0563
1-CA-1-196-152G
1CA-0523
LOW PRESSURE HEATERS
1-CA-1-197-152G
1CA-0524
1-CA-1-163-152G
1CA-0532
1-CA-1-108-152G
1CA-0452
1-CA-1-164-152G
1CA-0533
1-CA-1-095-152G
1CA-0437
LOW PRESSURE HEATERS
1-CA-1-130-152G
1CA-0438
1-CA-1-167-152G
1CA-0536
1-CA-1-114-152G
1CA-0466
1-CA-1-168-152G
1CA-0537
SERVICE AIR EQUIPMENT M1-0216-A LOC: G-1
1-CA-1-165-152G
1CA-0534
1-CA-1-112-152G
1CA-0457
1-CA-1-131-152G
1CA-0440
1-CA-1-166-152G
1CA-0535
1-CA-1-113-152G
1CA-0461
1-CA-1-132-152G
1CA-0442
1-CA-1-107-152G
1CA-0448
1-CA-1-162-152G
1CA-0531
2-CA-1-89-152G
1-CA-1-118-152G
1CA-0471
1-CA-1-169-152G
1CA-0538
FL EL 830'-0"
YARD
1-CA-X-901-152G
1" PLUG
XCA-0459
1-CA-1-180-152G
DEAERATOR
1CA-0500
1-CA-1-099-152G
COND POLISHING
1CA-0443
2-CA-1-207-152G
1-CA-1-198-152G
1CA-0525
LOW PRESSURE HEATERS
1-CA-1-199-152G
1CA-0526
2-CA-1-190-152G
1-CA-1-110-152G
1CA-0454
1-CA-1-137-152G
1CA-0455
2-CA-1-201-152G
1-CA-1-096-152G
1CA-0441
LOW PRESSURE HEATERS
1-CA-1-135-152G
1CA-0451
1-CA-1-115-152G
1CA-0468
1-CA-1-140-152G
1CA-0462
1-CA-1-133-152G
1CA-0444
1-CA-1-134-152G
1CA-0449
S.G. F.P. TURBINE DRIVES
1-CA-1-170-152G
1CA-0539
1-CA-1-171-152G
1CA-0540
3-CA-1-004-B2G
2-CA-1-240-B2G
1-CA-1-241-B2G
1CA-0571
1-CA-1-242-B2G
1CA-0572
1CA-0575
2-CA-1-91-B2G
1-CA-1-047-152G
1CA-0506
HIGH PRESSURE HEATERS
1-CA-1-188-152G
1CA-0507
1-CA-1-111-152G
1CA-0459
1-CA-1-138-152G
1CA-0458
2-CA-1-243-152G
1-CA-1-097-152G
1CA-0439
2-CA-1-92-152G
1-CA-1-116-152G
1CA-0463
1-CA-1-139-152G
1CA-0460
2-CA-1-85-B2G
1-CA-1-244-B2G
1CA-0574
1CA-0576
1CA-0573
1-CA-1-245-B2G
2-CA-1-189-152G
1-CA-1-189-152G
TURB OIL ROOM
1CA-0511
1-CA-1-109-152G
1CA-0450
1-CA-1-136-152G
1CA-0453
2-CA-1-94-152G
1-CA-1-117-152G
1CA-0473
1-CA-1-141-152G
1CA-0464
R
FL EL 803'-0"
2-CA-1-088-B2G
2-CA-1-183-152G
2-CA-1-182-152G
3-CA-1-121-152G
2-CA-1-200-152G
2-CA-1-102-152G
1□-CA-1-210-152G
1CA-0577
2-CA-1-178-152G
2-CA-1-105-152G
2-CA-1-204-152G
2-CA-1-205-152G
TO GANTRY CRANE LAYDOWN AREA
2-CA-1-187-152G
2-CA-1-127-152G
1CA-0456
1CA-0470
1CA-0474
1CA-0469
1CA-0504
1-CA-1-122-152G
1CA-0482
1-CA-1-146-152G
1CA-0476
1-CA-1-123-152G
1CA-0487
1-CA-1-147-152G
1CA-0480
1-CA-1-186-152G
1CA-0508
CONTROL FLUID TANK
1-CA-1-149-152G
1CA-0488
2-CA-1-104-152G
1CA-0510
1CA-0496
1-CA-1-191-152G
LUBE OIL STORAGE ROOM
1CA-0512
2-CA-1-101-152G
1-CA-1-119-152G
1CA-0513
1CA-0475
2-CA-1-106-152G
1-CA-1-125-152G
1CA-0494
CA-0530
AIR CONTROL STATIONS BY HUNGERFORD & TERRY
2-CA-1-050-152G
WATER TREATMENT SYSTEM M1-0224 LOC: G-6
PHASE SEPARATOR TANK M1-0244-01A LOC: C-3
1-CA-1-120-152G
1CA-0479
1-CA-1-145-152G
1CA-0541
1-CA-1-124-152G
1CA-0491
1-CA-1-148-152G
1CA-0483
1-CA-1-098-152G
AUX CONDR
1CA-0446
1-CA-1-172-152G
1CA-0445
1-CA-1-206-152G
AUX BOILER
1CA-0529
TURBINE GENERATOR
2-CA-1-103-152G
1-CA-1-144-152G
1CA-0472
1-CA-1-181-152G
DEAERATOR PUMPS
1CA-0501
1CA-0477
1-CA-1-100-152G
1CA-0499
2X1
2X1□
M1-0224
LOC: G-6
1-CA-1-184-152G
1CA-0505
BACKWASH
1-CA-1-142-152G
1CA-0467
COND VAC PUMPS
1-CA-1-143-152G
1CA-0542
1-CA-1-202-152G
1CA-0527
TURBINE PLANT COOLING WATER PUMPS
1-CA-1-203-152G
1CA-0528
1CA-0484
2-CA-1-093-152G
1CA-0465
1CA-0509
1CA-0489
1CA-0490
□-152G
□-CA-1-177-152G
1CA-0510
1CA-0496
1CA-0475
1CA-0502
1CA-0503
1CA-0566
1CA-0567
1CA-0568
1CA-0569
FL EL 778'-0"
1-CA-1-192-152G
1CA-0515
1CA-0481
1-CA-1-194-152G
1CA-0517
1CA-0493
1-CA-1-193-152G
1CA-0516
1CA-0485
1-CA-1-195-152G
1CA-0518
1CA-0497
1CA-0514
1CA-0478
PIT FL EL 758'-6" ±
PIT FL EL 755'-3"
PIT FL EL 758'-6"

FUEL BUILDING

HOT PHASE SEPARATOR TANK M1-0244-01A LOC: G-3
CP
CA
1□-CA-X-087-152-5
1-CA-X-154-152-5
XCA-0448
SPENT FUEL POOL
XCA-0386
1-CA-X-079-152-5
1-CA-X-080-152-5
NEW FUEL STORAGE PIT
XCA-0383
XCA-0379
2-CA-X-089-152-5
FL EL 860'-0"
1-CA-X-077-152-5
1-CA-X-078-152-5
NEW FUEL STOP PIT
XCA-0382
1-CA-X-083-152-5
NEW FUEL RECEIVING AREA
XCA-0387
1-CA-X-084-152-5
XCA-0389
1-CA-X-088-152-5
MEZZ LEVEL EL 838'-9"
XCA-0391
1-CA-X-918-152-5
FL EL 831'-6"
2-CA-X-089-152-5
1-CA-X-095-152-5
DECONTAMINATION AREA
XCA-0500
SPENT FUEL POOL PUMP & HEAT EXCH ROOM NO. 2
XCA-0400
1-CA-X-092-152-5
RAILROAD BAY OUTLET
XCA-0393
1-CA-X-093-152-5
SPENT FUEL POOL PUMP & HEAT EXCH ROOM NO. 1
XCA-0398
1-CA-X-091-152-5
CLEAN RADWASTE CONTAINER STORAGE AREA
XCA-0394
1-CA-X-092-152-5
FDS/RAD VAULT PIT
XCA-0399
□-CA-X-922-152-5
FDS/RAD VAULT PIT
XCA-0392
□-CA-X-921-152-5
1-CA-X-090-152-5
SKIMMER PUMP/COMPACTOR
XCA-0395
SERVICE AIR EQUIPMENT M1-0216-A LOC: G-3
3-CA-1-008-152-5
□-152G
XCA-0397
FL EL 810'-6"

CLARIFIER CHEMICAL FEED BUILDING

SERVICE AIR EQUIPMENT M1-0216-A LOC: G-2
1-CA-X-916-152G
XCA-0618

SERVICE WATER PUMPHOUSE

1-CA-X-096-152-5
1-CA-X-097-152-5
XCA-0402
XCA-0404
XCA-0476
1-CA-X-905-152-5
XCA-0475
TRAVELING SCREEN BUBBLER LEVEL M1-0231 LOC: D-4
2-CA-X-013-152G
2-CA-X-013-152-5
SERVICE AIR EQUIPMENT M1-0216-A LOC: G-1
FL EL 796'-0"

FIRE WATER PUMPHOUSE

□-CA-X-912-152G
XCA-0613
□-CA-X-911-152G
XCA-0612
□-CA-X-910-152G
XCA-0611
□-CA-X-914-152G
XCA-0616
□-CA-X-909-152G
XCA-0610
2-CA-X-907-152G
SERVICE AIR SYSTEM M1-0216-A LOC: G-1
XCA-0614
1-CA-X-908-152G

CIRCULATING WATER PUMPHOUSE

115
152
□-115G
XCA-0406
XCA-0407
SEE NOTE 5
XCA-0409
XCA-0411
XCA-0413
1-CA-X-101-152G
1-CA-X-111-B2G
1-CA-X-112-B2G
1-CA-X-910-B2G
SERVICE AIR EQUIPMENT M1-0216-A LOC: G-2
2-CA-X-015-152G
□-CA-X-113-152G
XCA-0415
FL EL 795'-9"

CONTROL BUILDING

1-CA-X-144-152-5
XCA-0439
CONTROL ROOM HVAC ROOM FOR TRAIN "B" EQUIP
1-CA-X-146-152-5
XCA-0435
HVAC ROOM FOR MISC EQUIPMENT
1-CA-X-143-152-5
XCA-0438
CONTROL ROOM HVAC ROOM FOR TRAIN "B" EQUIP
1-CA-X-142-152-5
XCA-0437
CONTROL ROOM HVAC ROOM FOR TRAIN "A" EQUIP
1-CA-X-145-152-5
XCA-0434
HVAC ROOM FOR MISC EQUIPMENT
1-CA-X-141-152-5
XCA-0436
CONTROL ROOM HVAC ROOM FOR TRAIN "A" EQUIP
R
FL EL 854'-4"
CONTROL ROOM 135
1-CA-X-149-152-5
XCA-0442
1-CA-X-919-152-5
1-CA-X-920-152-5
MECHANICAL HOT SHOP
1-CA-X-150-152-5
XCA-0441
XCA-0501
INSTRUMENT SHOP
1-CA-X-167-152-5
XCA-0447
2-CA-X-140-152-5
XCA-0502
XCA-0503
CABLE ROOM 133
CABLE ROOM 134
CORRIDOR 207 SERVICE AIR SYS M1-0237 LOC: G-4
FL EL 810'-6"
2-CA-X-016-152-5
1-CA-X-147-152-5
COMPRESSORS & SGBD HX AREA
XCA-0444
SERVICE AIR EQUIPMENT M1-0216 LOC: G-3
1-CA-X-148-152-5
CHILLER ROOM
XCA-0443
1-CA-X-152-152-5
COMPRS & SGBD HX AREA
XCA-0445
1-CA-X-153-152-5
CHILLER ROOM
XCA-0446
□-152G
XCA-0440
FL EL 778'-0"

NOTES:

1. FOR MECHANICAL SYMBOLS AND NOTES SEE DRAWING M1-0200.
2. ALL DRAINS ARE □" UNLESS OTHERWISE NOTED.
3. UNLESS OTHERWISE SHOWN, ALL SERVICE AIR BALL VALVES HAVE THREADED END CONNECTIONS AND QUICK DISCONNECT FITTING (CHICAGO PNEUMATIC NO. C15120Y) ON THE DOWNSTREAM END OF EACH VALVE.
4. MOISTURE FILTER SUCH AS NORGREN MODEL F18-C00A OR EQUIVALENT MAY BE ADDED TO REMOVE WATER IN SUPPLY LINE.
5. CONNECTION PROVIDED AT EACH LEVEL PROBE FOR FLUSHING.
6. VALVES XCA-0434 THRU -0439 AND -0501 ARE CAPPED TO ENSURE THE INTEGRITY OF THE CONTROL ROOM ENVELOPE WHEN VALVES ARE NOT IN SERVICE.

| REV | DWN | CHKD | APVD | REMARKS |
|---|---|---|---|---|
| CP-19 | JRMC 04-23-2012 | DJL 04-23-2012 | | THIS DRAWING REVISED TO INCORPORATE DESIGN CHANGE FDA 2012-000051-01-00 PER SK-0001-12-000051-01-00. |

FSAR FIGURE 9.3-2

THIS DRAWING CREATED ELECTRONICALLY

DRAWING 2323-M1-0217 REV CP-7
HAS BEEN SPLIT INTO THE FOLLOWING SHEETS:
M1-0217
M1-0217-A

CLASS II

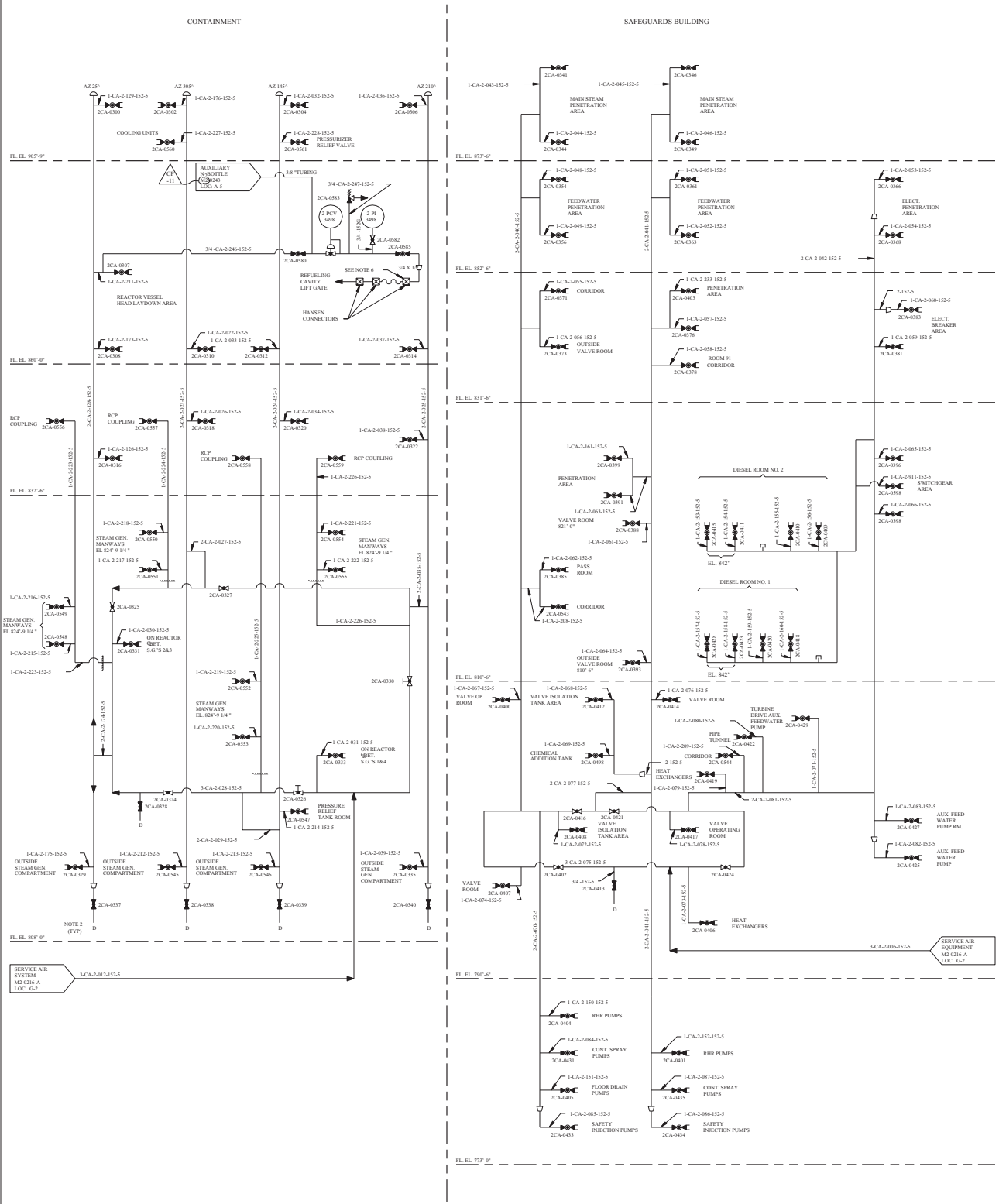
LUMINANT
CPNPP
GLEN ROSE, TEXAS

FLOW DIAGRAM
SERVICE AIR SYSTEM

DWG. NO. M1-0217 | SH. NO. A | REV. CP-19

$$$$$$$DATE$$$$$$$ REF CHKD 07/30/2002

me103740.dgn A M1-0217-A B C D E F G < FINAL PRINT > H




| REV. | DWN | CHKD | APVD | REMARKS |
|---|---|---|---|---|
| CP-11 | DLK 06-11-1999 | | | THIS DRAWING REVISED FOR EDITORIAL CHANGE AS NOTED. |

NOTES:

1. FOR MECHANICAL SYMBOLS AND NOTES SEE DRAWING M1-0200.
2. ALL DRAINS ARE 3/4 " UNLESS OTHERWISE NOTED.
3. ALL SERVICE AIR BALL VALVES ARE SUPPLIED WITH THREADED CONNECTIONS. BROWN & ROOT WILL ATTACH A QUICK DISCONNECT FITTING ON THE DOWNSTREAM END OF EACH VALVE. (CHICAGO PNEUMATIC NUMBER 1512DY)
4. FABRIC REINFORCED HOSE (AEROQUIP NUMBER 2575-4 OR EQUAL) WITH 1/4 " HOSE TO 1/4 " MALE NPT SLIP-ON HOSE CONNECTORS (AEROQUIP NUMBER 4716-4-4 OR EQUAL) SEE THE RESPECTIVE PRESPRAY CORP GATE DRAWING FOR DETAILS ABOUT THE CONNECTION WITH THE VENDOR SUPPLIED HOSE COUPLING.
5. UNLESS OTHERWISE NOTED ALL DRAINS COLLECTED BY LOCAL FLOOR DRAIN SYSTEM.
6. GATE PROVIDED WITH HOSE ASSEMBLY AS SHOWN IN DETAIL A.

DETAIL A

TO GATE ⊠〰⊠ SUPPLY

* CHECK VALVE

| FLEX HOSE ASSEMBLY | LOCATION |
|---|---|
| CP2-LAFHRB-01 | UNIT 2 CONTAINMENT LIFT GATE |

FSAR FIGURE 9.3-2

THIS DRAWING CREATED ELECTRONICALLY

CLASS II

TXU ELECTRIC
CPSES
GLEN ROSE, TEXAS

FLOW DIAGRAM
SERVICE AIR SYSTEM

| DWG. NO. | SH. NO. | REV. |
|---|---|---|
| M2-0217 | - | CP-11 |

CPE | A | B | C | D | E | F | G | H

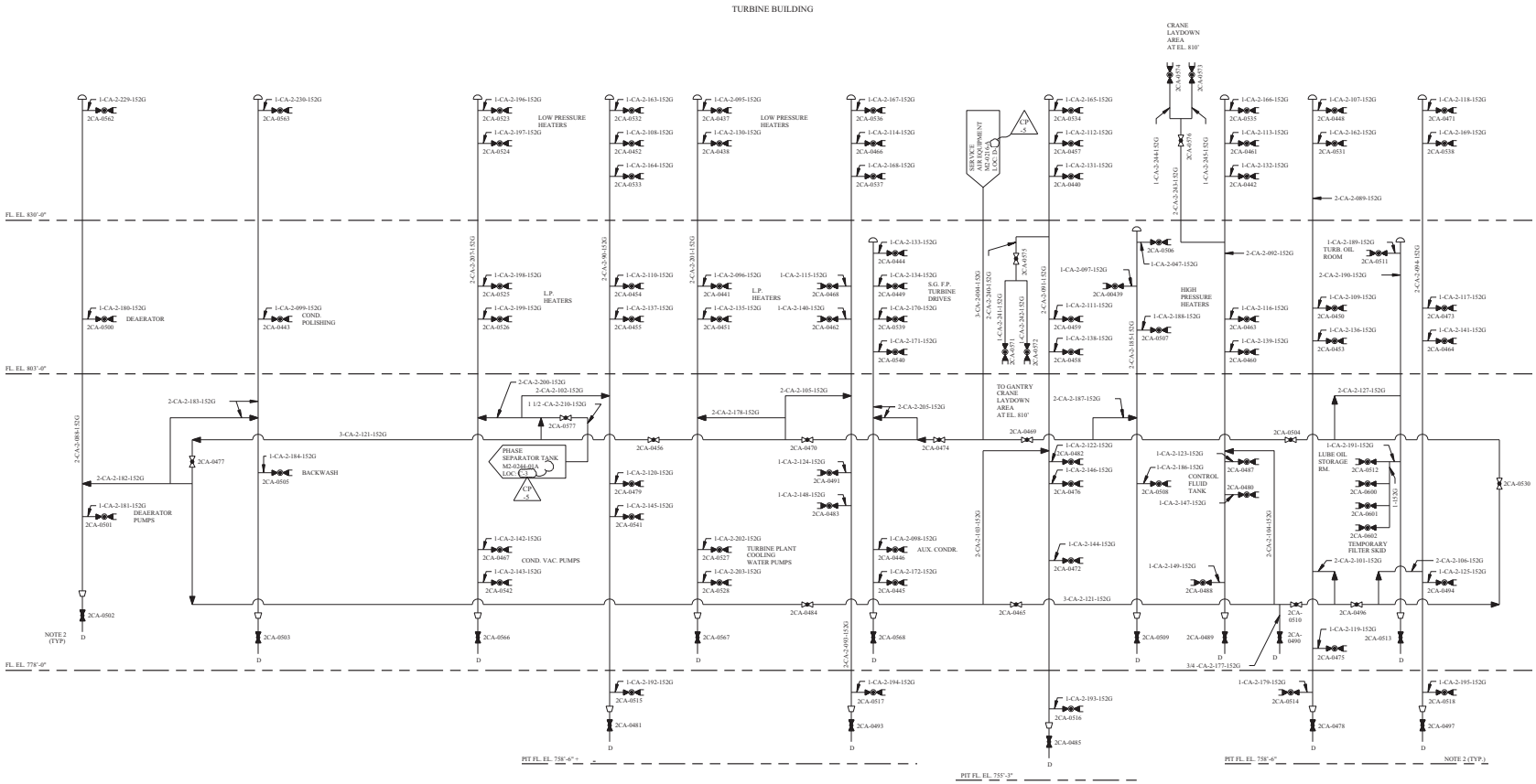
me0001ov.dgn

$$$$$$STA.TESSSSS

| REV. | DWN | CHKD | APVD | REMARKS |
|---|---|---|---|---|
| CP-5 | S.A. 11/02/1996 | | | THIS DRAWING REVISED TO INCORPORATE EDITORIAL CHANGES AS NOTED. |

NOTES

1. FOR MECHANICAL SYMBOLS AND NOTES SEE DRAWING M1-0200.
2. ALL DRAINS ARE 3/4 " UNLESS OTHERWISE NOTED.
3. ALL SERVICE AIR BALL VALVES ARE SUPPLIED WITH THREADED CONNECTIONS. BROWN & ROOT WILL ATTACH A QUICK DISCONNECT FITTING ON THE DOWNSTREAM END OF EACH VALVE. (CHICAGO PNEUMATIC NUMBER 1512DY)
4. FABRIC REINFORCED HOSE (AEROQUIP NUMBER 2575-4 OR EQUAL) WITH 1/4 " HOSE TO 1/4 " MALE NPT SLIP-ON HOSE CONNECTORS (AEROQUIP NUMBER 4738-4-4 OR EQUAL) SEE THE RESPECTIVE PRESPRAY CORP GATE DRAWING FOR DETAILS ABOUT THE CONNECTION WITH THE VENDOR SUPPLIED HOSE COUPLING.
5. UNLESS OTHERWISE NOTED ALL DRAINS COLLECTED BY LOCAL FLOOR DRAIN SYSTEM.




CLASS II
(NUCLEAR SAFETY-RELATED)
SAFETY CLASS 1 SEISMIC CATEGORY 1
SAFETY CLASS 2 CLASS 1E
SAFETY CLASS 3 ASSOCIATED CIRCUITS

TXU ELECTRIC
CPSES
GLEN ROSE, TEXAS

FLOW DIAGRAM
SERVICE AIR SYSTEM

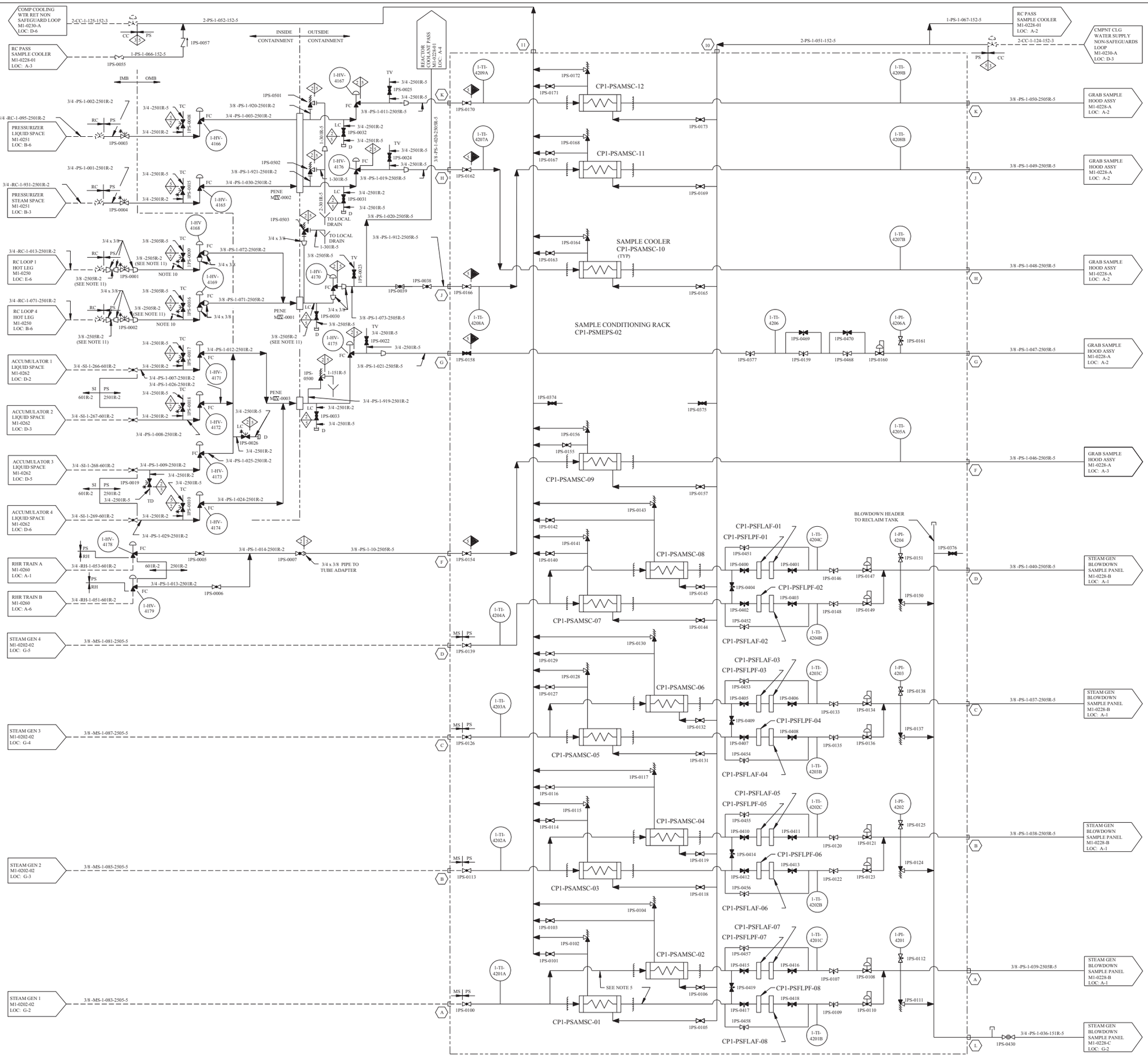
| DWG. NO. | SH. NO. | REV. |
|---|---|---|
| M2-0217 | A | CP-5 |

FSAR FIGURE 9.3-2

THIS DRAWING CREATED ELECTRONICALLY

vs0000th.dgn

$$$$$$$$TA ITESSSSS




| REV | DWN | CHKD | APVD | REMARKS |
|---|---|---|---|---|
| CP-32 | JRMC 03-06-2006 | DJL 03-10-2006 | | THIS DRAWING REVISED TO INCORPORATE DESIGN CHANGE FDA 2004-000371-01-00 PER SK-0001-04-000371-01-00. |

NOTES:

1. TAG NUMBERS:
   GRAB SAMPLE HOOD ASSEMBLY CP1-PSMEPS-01 ,
   SAMPLE CONDITIONING RACK CP1-PSMEPS-02 ,
   STEAM GENERATOR BLOWDOWN SAMPLE PANEL CP1-PSMEPS-03 .
2. RADIATION MONITOR LOCATED REMOTELY OUTSIDE SAMPLE ROOM.
3. FOR MECHANICAL SYMBOLS AND NOTES SEE DRAWING M1-0200.
4. ⬡ INDICATE EQUIPMENT NOZZLE CONNECTIONS IN ACCORDANCE WITH WATER EQUIPMENT INC DWG 58696, 58697, AND 58698.
5. PARALLEL SAMPLE COOLERS PRESSURE REDUCERS, AND REGULATORS ARE PROVIDED TO ASSURE ADEQUATE SAMPLE FLOW.
6. PARALLEL PRESSURE REGULATORS AND RELATED HARDWARE WERE ADDED TO ASSURE ADEQUATE SAMPLE PURGE RATES.
7. ALL pH AND CONDUCTIVITY HAVE AUTOMATIC TEMPERATURE COMPENSATION.
8. TUBING IN RACK 3/8 "-.065 WALL - 316 SS
   TUBING IN BLOWDOWN SAMPLE PANEL AND GRAB SAMPLE HOOD IS 3/8 " OR 1/4 "-.065 WALL -316 SS TO PRESSURE REDUCING VALVES; 3/8 " - .049 WALL - 316 SS TO FLOW METERS FOR ANALYZERS AND GRAB SAMPLE VALVES; 1/4 "- .049. ALL 316 SS TO ANALYZERS AND GRAB SAMPLE VALVES; ALL PER ASTM-A-213.
9. DELETED
10. SAMPLE DELAY TIME OF 60 SECONDS INSIDE MISSILE BARRIER (IMB) REQUIRED FOR N-16 DECAY.
11. SAFETY CLASS 2 TUBING MATERIAL:
    SA213, TYPE 316, TUBING
    3/8 OD x 0.049 WALL
    DESIGN PRESS 2485 PSIG
    DESIGN TEMP 650°

FSAR FIGURE 9.3-4

THIS DRAWING CREATED ELECTRONICALLY

| DRAWING 2323-M1-0228 | REV CP-7 |
|---|---|
| HAS BEEN SPLIT INTO THE FOLLOWING SHEETS: | |
| M1-0228 | |
| M1-0228-A | |
| M1-0228-B | |

CLASS I
(NUCLEAR SAFETY-RELATED)

| | |
|---|---|
| SAFETY CLASS 1 | SEISMIC CATEGORY I |
| SAFETY CLASS 2 | CLASS 1E |
| SAFETY CLASS 3 | ASSOCIATED CIRCUITS |

TXU POWER
CPSES
GLEN ROSE, TEXAS

FLOW DIAGRAM
PROCESS SAMPLING
SYSTEM

| DWG. NO. | SH. NO. | REV. |
|---|---|---|
| M1-0228 | - | CP-32 |

FINAL PRINT

REF CKD 9/3/97 CP-26

me698200.dgn

| REV | DWN | CHKD | APVD | REMARKS |
|---|---|---|---|---|
| CP-22 | LKS 07-23-2007 | RMG 07-23-2007 | | THIS DRAWING REVISED TO INCORPORATE DESIGN CHANGE FDA 2007-002268-01-02 PER SK-0001-07-002268-01-02. |

NOTES:

1. TAG NUMBERS
   GRAB SAMPLE HOOD ASSEMBLY CP1-PSMEPS-01 ,
   SAMPLE CONDITIONING RACK CP1-PSEMPS-02 ,
   STEAM GENERATOR BLOWDOWN SAMPLE PANEL CP1-PSMEPS-03 .
2. RADIATION MONITOR LOCATED REMOTELY OUTSIDE SAMPLE ROOM.
3. FOR MECHANICAL SYMBOLS AND NOTES SEE DRAWING M1-0200.
4. ⬡ INDICATE EQUIPMENT NOZZLE CONNECTIONS IN ACCORDANCE WITH WATER EQUIPMENT INC DWG 58696, 58697, AND 58698.
5. PARALLEL SAMPLE COOLERS PRESSURE REDUCERS, AND REGULATORS ARE PROVIDED TO ASSURE ADEQUATE SAMPLE FLOW.
6. PARALLEL PRESSURE REGULATORS AND RELATED HARDWARE WERE ADDED TO ASSURE ADEQUATE SAMPLE FLOW.
7. ALL pH AND CONDUCTIVITY HAVE AUTOMATIC TEMPERATURE COMPENSATION.
8. TUBING IN RACK 3/8 "-.065 WALL - 316 SS
   TUBING IN BLOWDOWN SAMPLE PANEL AND GRAB SAMPLE HOOD IS 3/8 "-.049 WALL OR 1/4 "-.065 WALL - 316 SS TO PRESSURE REDUCING VALVES; 3/8 "-.049 WALL - 316 SS TO FLOW METERS FOR ANALYZERS AND GRAB SAMPLE VALVES; 1/4 "-.049 WALL - 316 SS TO ANALYZERS AND GRAB SAMPLE VALVES; ALL PER ASTM-A-213.
9. DELETED
10. SAMPLE DELAY TIME OF 60 SECONDS INSIDE MISSILE BARRIER (IMB) REQUIRED FOR N-16 DECAY.
11. ISOLATION VALVES ASSOCIATED WITH THE GRAB SAMPLE VESSELS ASSEMBLIES ARE TO BE CLOSED EXCEPT DURING GRAB SAMPLE OPERATION.
12. SAMPLE BOTTLE ASSEMBLY IS STORED AT A REMOTE LOCATION BY CHEMISTRY.
13. GRAB SAMPLE QUICK DISCONNECT FITTINGS MAY BE UTILIZED FOR OTHER IN-LINE SAMPLING INSTRUMENTATION.
14. □ INDICATES EQUIPMENT CONNECTIONS IN ACCORDANCE WITH ORBISPHERE LABORATORIES DWG 4586-S-100.
15. THERMAL SHUTOFF VALVE BY SENTRY EQUIPMENT CORPORATION.
16. GRAB SAMPLE QUICK DISCONNECT FITTINGS MAY BE UTILIZED AT THIS LOCATION FOR ARGON INJECTION TO VOLUME CONTROL TANK REFERENCE M1-0243-01 (B-6).

DRAWING 2323-M1-0228 REV CP-7
HAS BEEN SPLIT INTO THE FOLLOWING SHEETS:
M1-0228
M1-0228-A
M1-0228-B

CLASS I
(NUCLEAR SAFETY-RELATED)
SAFETY CLASS 1 — SEISMIC CATEGORY I
SAFETY CLASS 2 — CLASS 1E
SAFETY CLASS 3 — ASSOCIATED CIRCUITS

LUMINANT
CPSES
GLEN ROSE, TEXAS

FLOW DIAGRAM
PROCESS SAMPLING
SYSTEM

| DWG. NO. | SH. NO. | REV. |
|---|---|---|
| M1-0228 | A | CP-22 |

FSAR FIGURE 9.3-4

THIS DRAWING CREATED ELECTRONICALLY

REF CHKD 11/06/2002

me0006ge.dgn A M1-0228-A B C D E F G FINAL PRINT H

| REV | DWN | CHKD | APVD | REMARKS |
|---|---|---|---|---|
| CP-14 | GLK 07-06-2004 | MM 07-07-2004 | | THIS DRAWING REVISED TO INCORPORATE DESIGN CHANGE FDA 2000-003261-02-00 PER SK-0018-00-003261-02-00. |

NOTES:

1. TAG NUMBERS:
   GRAB SAMPLE HOOD ASSEMBLY CP1-PSMEPS-01 ,
   SAMPLE CONDITIONING RACK CP1-PSMEPS-02 ,
   STEAM GENERATOR BLOWDOWN SAMPLE PANEL. CP1-PSMEPS-03 .
2. RADIATION MONITOR LOCATED REMOTELY OUTSIDE SAMPLE ROOM.
3. FOR MECHANICAL SYMBOLS AND NOTES SEE DRAWING M1-0200.
4. ⬡ INDICATE EQUIPMENT NOZZLE CONNECTIONS IN ACCORDANCE WITH WATER EQUIPMENT INC DWG 58696, 58697, AND 58698.
5. PARALLEL SAMPLE COOLERS PRESURE REDUCERS, AND REGULATOR ARE PROVIDED TO ASSURE ADEQUATE SAMPLE PURGE RATES.
6. PARALLEL PRESSURE REGULATORS AND RELATED HARDWARE WERE ADDED TO ASSURE ADEQUATE SAMPLE PURGE RATES.
7. ALL pH AND CONDUCTIVITY HAVE AUTOMATIC TEMPERATURE COMPENSATION.
8. TUBING IN RACK 3/8 "- .065 WALL - 316 SS
   TUBING IN BLOWDOWN SAMPLE PANEL AND GRAB SAMPLE HOOD IS 3/8 " OR 1/4 "- .065 WALL -316 SS TO PRESSURE REDUCING VALVES; 3/8 " - .049 WALL - 316 SS TO FLOW METERS FOR ANALYZERS AND GRAB SAMPLE VALVES; 1/4 "- .049. ALL 316 SS TO ANALYZERS AND GRAB SAMPLE VALVES; ALL PER ASTM-A-213.
9. RECORDER CHART SPEED - 2 INCHES PER HOUR.
10. SAMPLE DELAY TIME OF 60 SECONDS INSIDE MISSILE BARRIER (IMB) REQUIRED FOR N-16 DECAY.
11. SAFETY CLASS 2 TUBING MATERIAL:
    SA213, TYPE 316 TUBING
    3/8 OD x 0.049 WALL
    DESIGN PRESS 2485 PSIG
    DESIGN TEMP 650°
12. * MOUNTED LOCALLY OFF PANEL.
13. VALVE LOCATED AT GRAB SAMPLE SINK.
14. 1-AE-4238 IS MOUNTED ON THE WALL.

FSAR FIGURE 9.3-4

THIS DRAWING CREATED ELECTRONICALLY

DRAWING M1-0228-B REV CP-5
HAS BEEN SPLIT INTO THE FOLLOWING SHEETS:
M1-0228-B
M1-0228-C

DRAWING M1-0228 REV CP-7
HAS BEEN SPLIT INTO THE FOLLOWING SHEETS:
M1-0228
M1-0228-A
M1-0228-B

CLASS II

LUMINANT
CPSES
GLEN ROSE, TEXAS

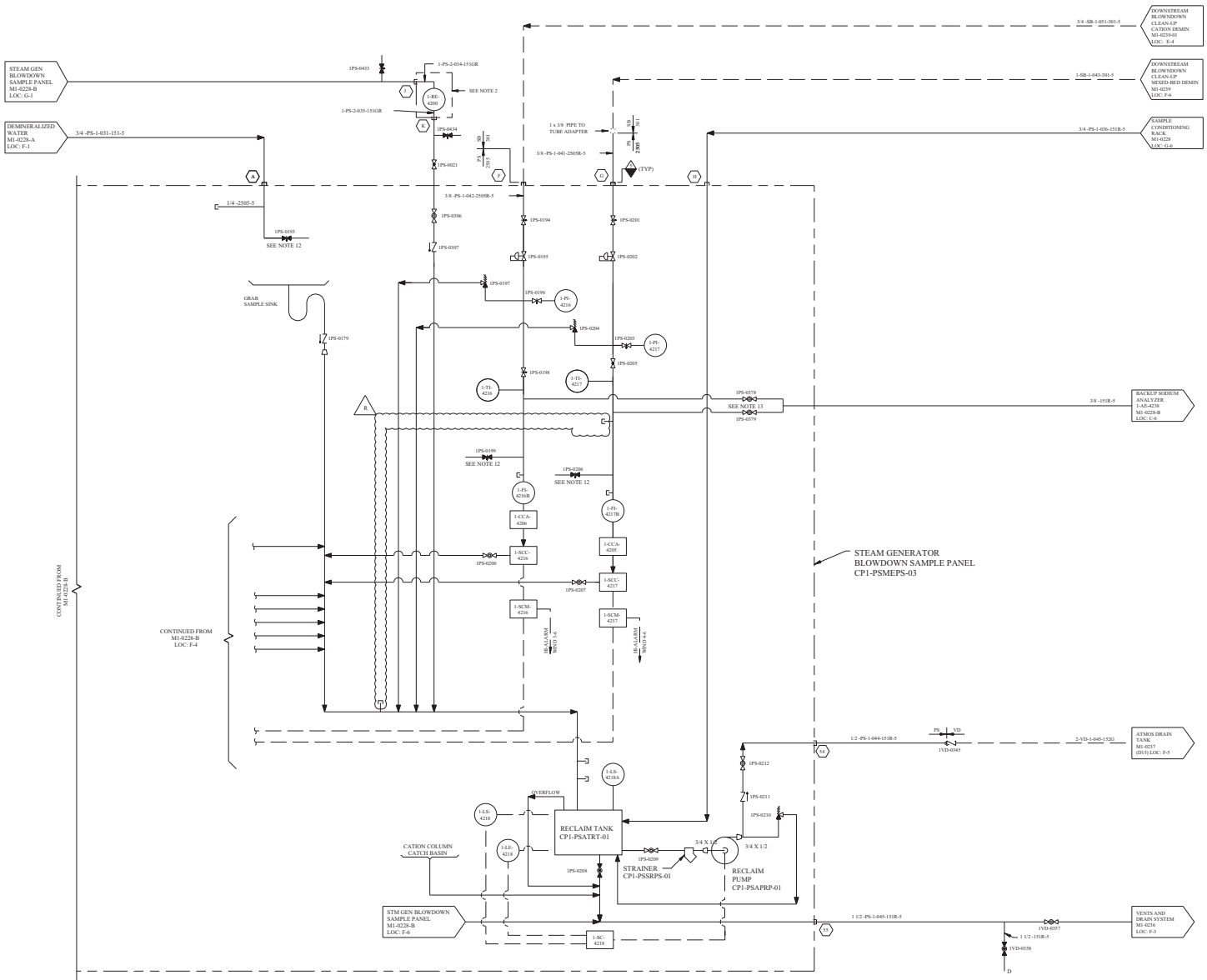
FLOW DIAGRAM
PROCESS SAMPLING
SYSTEM

| DWG. NO. | SH. NO. | REV. |
|---|---|---|
| M1-0228 | B | CP-14 |

FINAL PRINT

REF CKD 3-26-98 CP-12

me573200.dgn A M1-0228-B




| REV | DWN | CHKD | APVD | REMARKS |
|---|---|---|---|---|
| CP-10 | RLK 04-27-2005 | HDE 04-28-2005 | | THIS DRAWING REVISED TO INCORPORATE DESIGN CHANGE EDA 1999-002673-01-00 PER SK-0045-99-002473-01-00. |

NOTES:

1. TAG NUMBERS:
   GRAB SAMPLE HOOD ASSEMBLY CP1-PSMEPS-01
   SAMPLE CONDITIONING RACK CP1-PSMEPS-02
   STEAM GENERATOR BLOWDOWN SAMPLE PANEL CP1-PSMEPS-03
2. RADIATION MONITOR LOCATED REMOTELY OUTSIDE SAMPLE ROOM.
3. FOR MECHANICAL SYMBOLS AND NOTES SEE DRAWING M1-0200.
4. ⬡ INDICATE EQUIPMENT NOZZLE CONNECTIONS IN ACCORDANCE WITH WATER EQUIPMENT INC DWG 59096, 58697, AND 58698.
5. PARALLEL SAMPLE COOLERS PRESURE REDUCERS, AND REGULATOR ARE PROVIDED TO ASSURE ADEQUATE SAMPLE PURGE RATES.
6. PARALLEL PRESSURE REGULATORS AND RELATED HARDWARE WERE ADDED TO ASSURE ADEQUATE SAMPLE PURGE RATES.
7. ALL pH AND CONDUCTIVITY HAVE AUTOMATIC TEMPERATURE COMPENSATION.
8. TUBING IN RACK 3/8 "-.065 WALL - 316 SS
   TUBING IN BLOWDOWN SAMPLE PANEL AND GRAB SAMPLE HOOD IS 3/8 "
   OR 1/4 "-.065 WALL -316 SS TO PRESSURE REDUCING VALVES; 3/8 "-.049
   WALL - 316 SS TO FLOW METERS FOR ANALYZERS AND GRAB SAMPLE
   VALVES; 1/4 "-.049 ALL 316 SS TO ANALYZERS AND GRAB SAMPLE
   VALVES; ALL PER ASTM-A-213.
9. DELETED
10. SAMPLE DELAY TIME OF 60 SECONDS INSIDE MISSILE BARRIER (IMB) REQUIRED FOR N-16 DECAY.
11. SAFETY CLASS 2 TUBING MATERIAL:
    SA213, TYPE 316 TUBING
    3/8 OD x 0.049 WALL
    DESIGN PRESS 2485 PSIG
    DESIGN TEMP 650°
12. VALVE TO BE LOCATED AT GRAB SAMPLE SINK.
13. EITHER 1PS-0378 OR 1PS-0379 IS NORMALLY OPEN; THE OTHER IS NORMALLY CLOSED.

FSAR FIGURE 9.3-4

THIS DRAWING CREATED ELECTRONICALLY

DRAWING M1-0228-B REV CP-5
HAS BEEN SPLIT INTO THE FOLLOWING SHEETS:
M1-0228-B
M1-0228-C

DRAWING M1-0228 REV CP-7
HAS BEEN SPLIT INTO THE FOLLOWING SHEETS:
M1-0228
M1-0228-A
M1-0228-B

CLASS II

TXU ENERGY
CPSES
GLEN ROSE, TEXAS

FLOW DIAGRAM
PROCESS SAMPLING
SYSTEM

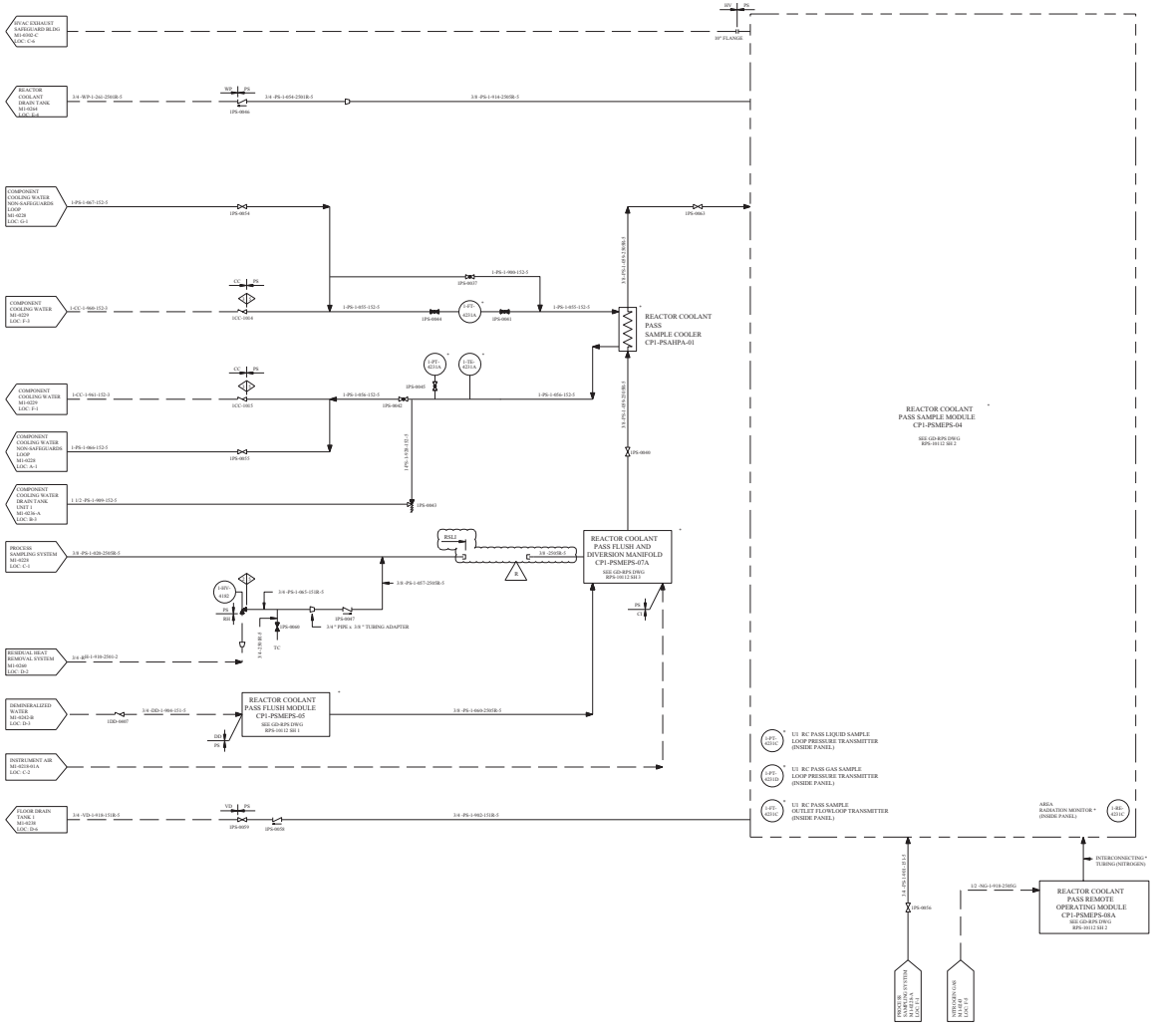
| DWG. NO. | SH. NO. | REV. |
|---|---|---|
| M1-0228 | C | CP-10 |

REF CKD 7-26-94 CP-6

SSSSSSSDATSSSSS

mc449800.dgn

M1-0228-C




| REV | DESCRIPTION | DRAWN | CHKD | APPD | REMARKS |
|---|---|---|---|---|---|
| P-00 | NEW ISSUE | Rick Hall | Ron Hall | | THIS DRAWING REVISED TO INCORPORATE DESIGN CHANGE TXX-3001 (MEDAC-00-PSE-ME-02-00230-01-00) EDITORIAL CHANGE AS NOTED |

NOTES:

1. THE INTERNAL DETAILS OF THE POST-ACCIDENT SAMPLE SYSTEM ARE SHOWN ON THE GENERAL DYNAMIC REACTOR PLANT SERVICES DRAWING INDICATED.
2. ALL ASTERISKED (*) EQUIPMENT IS SUPPLIED BY GENERAL DYNAMICS - REACTOR PLANT SERVICES.
3. ALL TUBING COMPRESSION FITTINGS ON THE RC PASS SAMPLE LINES WILL BE SEAL WELDED PER WELDING SPECIFICATION SE WPS-00021. NO VENDOR EQUIPMENT IS AFFECTED. THE AFFECTED LINES ARE AS FOLLOWS:

   1/8 -PS-1-620-2505R-S

   1/8 -PS-1-657-2505R-S

   1/8 -PS-1-659-2505R-S

   1/8 -PS-1-914-2505R-S

4. FOR MECHANICAL SYMBOLS AND NOTES SEE DRAWING M1-0200.
5. UNLESS OTHERWISE NOTED ALL DRAINS TO BE COLLECTED BY LOCAL FLOOR DRAIN SYSTEM.

CLASS I
(NUCLEAR SAFETY-RELATED)
SAFETY CLASS 1 — SEISMIC CATEGORY I
SAFETY CLASS 2 — CLASS 1E
SAFETY CLASS 3 — ASSOCIATED CIRCUITS

TXU ENERGY
CPSES
GLEN ROSE, TEXAS

FLOW DIAGRAM
POST-ACCIDENT
SAMPLING SYSTEM
REACTOR COOLANT

| DRWG NO. | SH. NO. | REV. |
|---|---|---|
| M1-0228 | 01 | CP-20 |

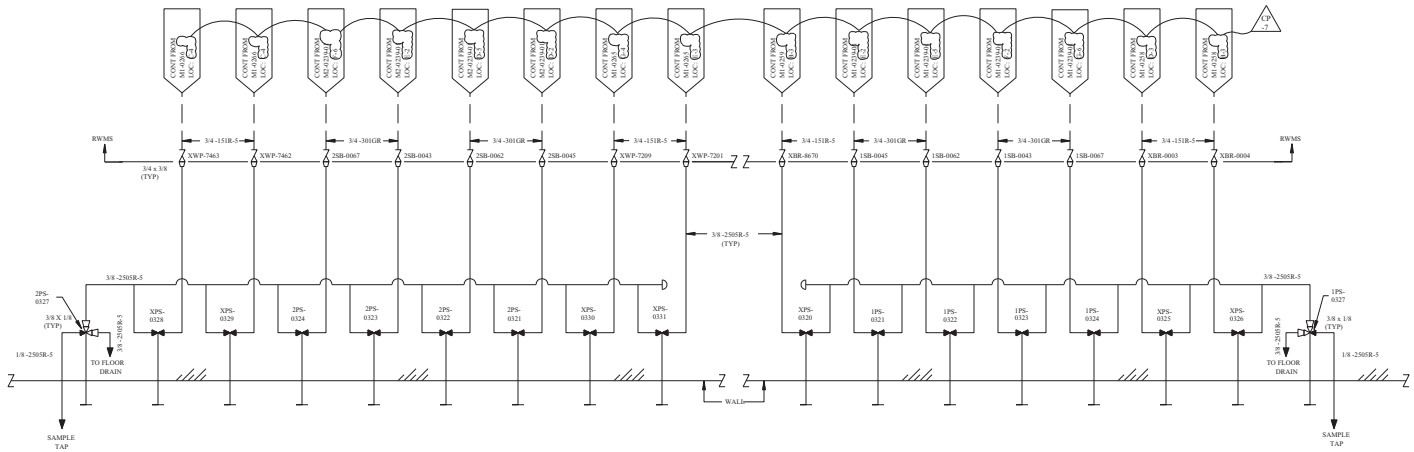
M1-0228-01

su502200.dgn

| REV | DWN | CHKD | APVD | REMARKS |
|---|---|---|---|---|
| CP-7 | LJC 05/11/1997 | | | THIS DRAWING REVISED TO INCORPORATE EDITORIAL CHANGES AS NOTED. |

NOTES:

1. FOR MECHANICAL SYMBOLS AND NOTES SEE DWG M1-0200.




FSAR FIGURE 9.3-4

THIS DRAWING CREATED ELECTRONICALLY

CLASS II

TXU ELECTRIC
CPSES
GLEN ROSE, TEXAS

FLOW DIAGRAM
AUXILIARY BUILDING DEMINERALIZER
SAMPLING STATION

| DWG. NO. | SH. NO. | REV. |
|---|---|---|
| M1-0228 | 02 | CP-7 |

vs0000zm.dgn

$$$$$$$D:\TESSSSS

| REV | DWN | CHK | APVD | REMARKS |
|---|---|---|---|---|
| CP-17 | JRMC 03-06-2006 | DJL 03-10-2006 | | THIS DRAWING REVISED TO INCORPORATE DESIGN CHANGE FDA 2004-000371-01-00 PER SK-0004-04-000371-01-00. |

NOTES:

1. TAG NUMBERS
   GRAB SAMPLE HOOD ASSEMBLY CP2-PSMEPS-01
   SAMPLE CONDITIONING RACK CP2-PSMEPS-02
   STEAM GENERATOR BLOWDOWN SAMPLE PANEL CP2-PSMEPS-03
2. RADIATION MONITOR LOCATED REMOTELY OUTSIDE SAMPLE ROOM.
3. FOR MECHANICAL SYMBOLS AND NOTES SEE DWG M1-0200.
4. DELETED
5. ⬡ INDICATES EQUIPMENT NOZZLE CONNECTIONS IN ACCORDANCE WITH WATER EQUIPMENT INC DWG 58696, 58697 AND 58698.
6. PARALLEL SAMPLE COOLERS PRESSURE REDUCERS AND REGULATORS ARE PROVIDED TO ASSURE ADEQUATE SAMPLE PURGE RATES.
7. PARALLEL PRESSURE REGULATORS AND RELATED HARDWARE WERE ADDED TO ASSURE ADEQUATE SAMPLE PURGE RATES.
8. ALL pH AND CONDUCTIVITY HAVE AUTOMATIC TEMPERATURE COMPENSATION.
9. DELETED
10. DELETED
11. TUBING IN RACK 3/8 "-.065" WALL - 316 SS
    TUBING IN BLOWDOWN SAMPLE PANEL AND GRAB SAMPLE HOOD IS 3/8 " OR 1/4 " -.065" WALL - 316 SS TO PRESSURE REDUCING VALVES; 3/8 "-.049" WALL - 316 SS TO FLOW METERS FOR ANALYZERS AND GRAB SAMPLE VALVES; 1/4 "-.049" WALL - 316 SS TO ANALYZERS AND GRAB SAMPLE VALVES-ALL PER ASTM-A-213.
12. RECORDER CHART SPEED - 2 INCHES PER HOUR.
13. DELETED
14. DELETED
15. SAMPLE DELAY TIME OF 60 SECONDS OR GREATER IS REQUIRED FOR N-16 DECAY.
16. TUBE FITTINGS ON RC PASS TO BE SEAL WELDED PER WPS-88023.
17. TUBE-SIDE SWAGELOK FITTING TO BE SEAL WELDED.
18. SAFETY CLASS 2 TUBING MATERIAL:
    SA213, TYPE 316, TUBING
    3/8 " ODx0.049" WALL
    DESIGN PRESS 2485 PSIG
    DESIGN TEMP 650^

FSAR FIGURE 9.3-4

THIS DRAWING CREATED ELECTRONICALLY

| DRAWING 2323-M2-0228 | REV CP-2 |
|---|---|
| HAS BEEN SPLIT INTO THE FOLLOWING SHEETS: | |
| M2-0228 | |
| M2-0228-A | |
| M2-0228-B | |
| M2-0228-C | |

CLASS I
(NUCLEAR SAFETY-RELATED)
SAFETY CLASS 1 — SEISMIC CATEGORY I
SAFETY CLASS 2 — CLASS 1E
SAFETY CLASS 3 — ASSOCIATED CIRCUITS

TXU POWER
CPSES
GLEN ROSE, TEXAS

FLOW DIAGRAM
PROCESS SAMPLING
SYSTEM

| DWG. NO. | SH. NO. | REV. |
|---|---|---|
| M2-0228 | - | CP-17 |

REF CKD 3/14/97 CP-12

me698500.dgn A M2-0228

FINAL PRINT

| REV | DWN | CHKD | APVD | REMARKS |
|---|---|---|---|---|
| CP-15 | LKK 07-23-2007 | RMG 07-23-2007 | | THIS DRAWING REVISED TO INCORPORATE DESIGN CHANGE FDA 2007-002268-01-02 PER SK-0002-07-002268-01-02. |

NOTES:

1. DELETED
2. DELETED
3. FOR MECHANICAL SYMBOLS AND NOTES SEE DWG M1-0200.
4. DELETED
5. ⬡ INDICATES EQUIPMENT NOZZLE CONNECTIONS IN ACCORDANCE WITH WATER EQUIPMENT INC DWG 58696, 58697 AND 58698.
6. DELETED
7. DELETED
8. DELETED
9. DELETED
10. DELETED
11. TUBING IN RACK 3/8 "-.065" WALL - 316 SS
    TUBING IN BLOWDOWN SAMPLE PANEL AND GRAB SAMPLE HOOD IS 3/8 " OR 1/4 " -.065" WALL - 316 SS TO PRESSURE REDUCTNG VALVES; 3/8 "-.049" WALL - 316 SS TO FLOW METERS FOR ANALYZERS AND GRAB SAMPLE VALVES; 1/4 "-.049" WALL - 316 SS TO ANALYZERS AND GRAB SAMPLE VALVES-ALL PER ASTM-A-213.
12. DELETED
13. DELETED
14. DELETED
15. DELETED
16. DELETED
17. SAMPLE BOTTLE ASSEMBLY IS STORED AT A REMOTE LOCATION BY CHEMISTRY.
18. GRAB SAMPLE QUICK DISCONNECT FITTINGS MAY BE UTILIZED FOR OTHER IN-LINE SAMPLING INSTRUMENTATION.
19. ☐ INDICATES EQUIPMENT CONNECTIONS IN ACCORDANCE WITH ORBISPHERE LABORATORIES DWG 4565-S-100.
20. THERMAL SHUTOFF VALVE BY SENTRY EQUIPMENT CORPORATION.
21. GRAB SAMPLE QUICK DISCONNECT FITTINGS MAY BE UTILIZED AT THIS LOCATION FOR ARGON INJECTION TO VOLUME CONTROL TANK REFERENCE M2-0243-02 (C-5).

FSAR FIGURE 9.3-4

THIS DRAWING CREATED ELECTRONICALLY

DRAWING 2323-M2-0228 REV CP-2
HAS BEEN SPLIT INTO THE FOLLOWING SHEETS:

| |
|---|
| M2-0228 |
| M2-0228-A |
| M2-0228-B |
| M2-0228-C |
| |

CLASS I
(NUCLEAR SAFETY-RELATED)
SAFETY CLASS 1 SEISMIC CATEGORY I
SAFETY CLASS 2 CLASS 1E
SAFETY CLASS 3 ASSOCIATED CIRCUITS

LUMINANT
CPSES
GLEN ROSE, TEXAS

FLOW DIAGRAM
PROCESS SAMPLING
SYSTEM

| DWG. NO. | SH. NO. | REV. |
|---|---|---|
| M2-0228 | A | CP-15 |

REF CHKD 11/06/2002

me0006gf.dgn A M2-0228-A B C D E F G FINAL PRINT H

| REV | DWN | CHK | APVD | REMARKS |
|---|---|---|---|---|
| CP-11 | GLK 07-06-2004 | MM 07-07-2004 | | THIS DRAWING REVISED TO INCORPORATE DESIGN CHANGE FDA 2000-003261-02-00 PER SK-0019-00-003261-02-00. |

NOTES:

1. TAG NUMBERS:
   GRAB SAMPLE HOOD ASSEMBLY CP2-PSMEPS-01
   SAMPLE CONDITIONING RACK CP2-PSMEPS-02
   STEAM GENERATOR BLOWDOWN SAMPLE PANEL CP2-PSMEPS-03
2. RADIATION MONITOR LOCATED REMOTELY OUTSIDE SAMPLE ROOM.
3. **FOR MECHANICAL SYMBOLS AND NOTES SEE DWG M1-0200.**
4. * MOUNTED LOCALLY OFF PANEL
5. ⬡ **INDICATES EQUIPMENT NOZZLE CONNECTIONS IN ACCORDANCE WITH** WATER EQUIPMENT INC DWG 58696, 58697 AND 58698.
6. PARALLEL SAMPLE COOLERS PRESSURE REDUCERS AND REGULATORS ARE PROVIDED TO ASSURE ADEQUATE SAMPLE FLOW.
7. PARALLEL PRESSURE REGULATORS AND RELATED HARDWARE WERE ADDED TO ASSURE ADEQUATE SAMPLE PURGE RATES.
8. ALL pH AND CONDUCTIVITY HAVE AUTOMATIC TEMPERATURE COMPENSATION.
9. DELETED
10. DELETED
11. TUBING IN RACK 3/8 "-.065" WALL - 316 SS
    TUBING IN BLOWDOWN SAMPLE PANEL AND GRAB SAMPLE HOOD IS 3/8 " OR 1/4 " -.065" WALL - 316 SS TO PRESSURE REDUCING VALVES; 3/8 "-.049" WALL - 316 SS TO FLOW METERS FOR ANALYZERS AND GRAB SAMPLE VALVES; 1/4 "-.049" WALL - 316 SS TO ANALYZERS AND GRAB SAMPLE VALVES-ALL PER ASTM-A-213.
12. **RECORDER CHART SPEED - 2 INCHES PER HOUR.**
13. VALVE LOCATED AT GRAB SAMPLE SINK.
14. **DELETED**
15. SAMPLE DELAY TIME OF 60 SECONDS OR GREATER IS REQUIRED FOR N-16 DECAY.
16. TUBE FITTINGS ON RC PASS TO BE SEAL WELDED PER WPS-88023.
17. 2-AE-4238 MOUNTED ON WALL.

FSAR FIGURE 9.3-4

THIS DRAWING CREATED ELECTRONICALLY

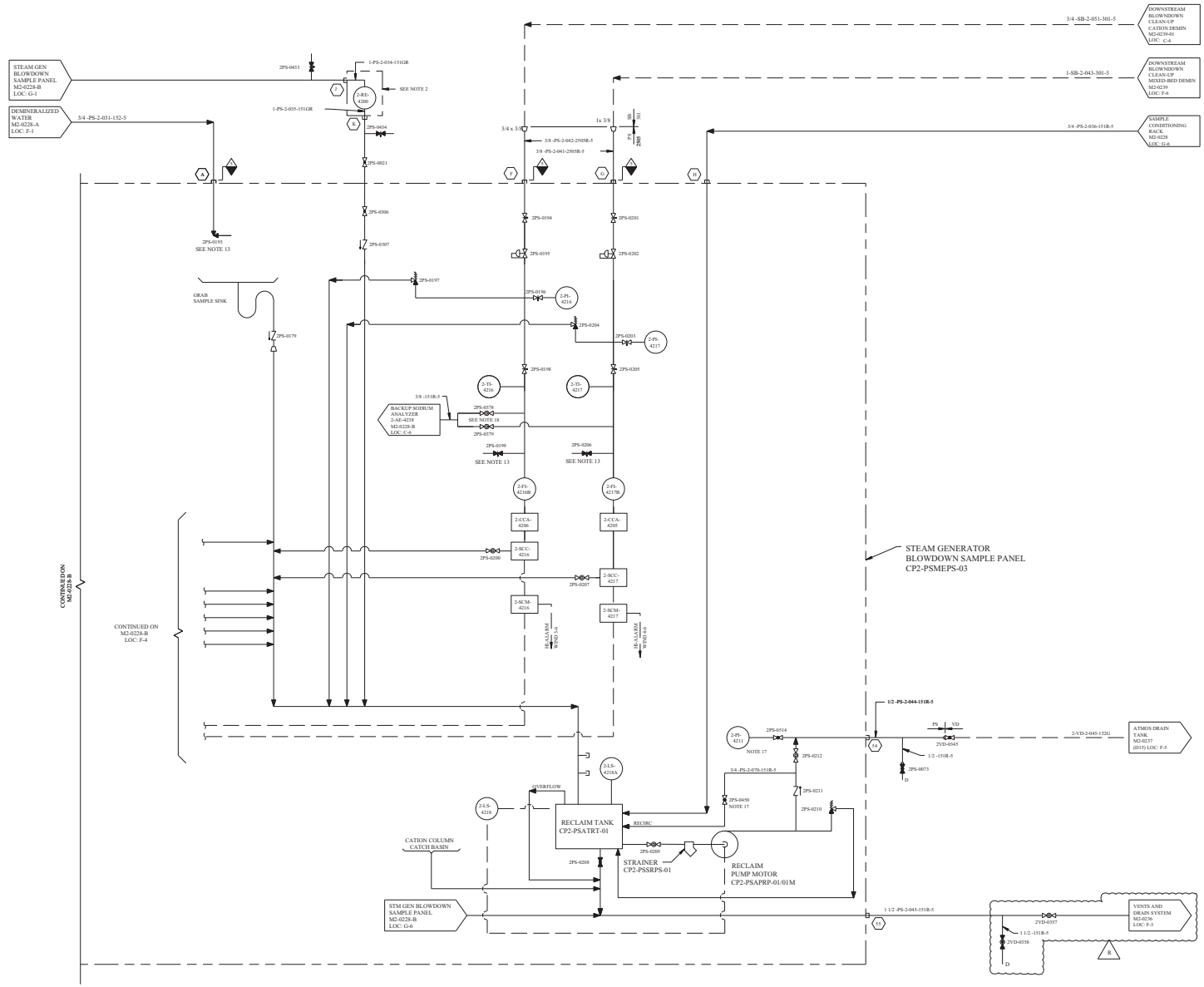
| DRAWING 2323-M2-0228 REV CP-2 |
|---|
| HAS BEEN SPLIT INTO THE FOLLOWING SHEETS: |
| M2-0228 |
| M2-0228-A |
| M2-0228-B |
| M2-0228-C |

CLASS II

LUMINANT
CPSES
GLEN ROSE, TEXAS

FLOW DIAGRAM
PROCESS SAMPLING
SYSTEM

| DWG. NO. | SH. NO. | REV. |
|---|---|---|
| M2-0228 | B | CP-11 |




| REV | DWN | CHKD | APVD | REMARKS |
|---|---|---|---|---|
| 2P/9 | HOK 10/15/2001 | HHS 10/15/2001 | | THIS DRAWING REVISED TO INCORPORATE DESIGN CHANGE FDA 1999-008214-01-00 FSE SK-0002-99-008214-01-00. |

NOTES:

1. TAG NUMBERS
   GRAB SAMPLE HOOD ASSEMBLY CP2-PSMEPS-01
   SAMPLE CONDITIONING RACK CP2-PSMEPS-02
   STEAM GENERATOR BLOWDOWN SAMPLE PANEL CP2-PSMEPS-03
2. RADIATION MONITOR LOCATED REMOTELY OUTSIDE SAMPLE ROOM.
3. FOR MECHANICAL SYMBOLS AND NOTES SEE DWG M1-0200.
4. DELETED
5. ◯ INDICATES EQUIPMENT NOZZLE CONNECTIONS IN ACCORDANCE WITH WATER EQUIPMENT INC DWG 59696, 59697 AND 59698.
6. PARALLEL SAMPLE COOLERS PRESSURE REDUCERS AND REGULATORS ARE PROVIDED TO ASSURE ADEQUATE SAMPLE FLOW.
7. PARALLEL PRESSURE REGULATORS AND RELATED HARDWARE WERE ADDED TO ASSURE ADEQUATE PURGE RATES.
8. ALL pH AND CONDUCTIVITY HAVE AUTOMATIC TEMPERATURE COMPENSATION.
9. DELETED
10. DELETED
11. TUBING IN RACK 3/8 "-.065" WALL - 316 SS
    TUBING IN BLOWDOWN SAMPLE PANEL AND GRAB SAMPLE HOOD IS 3/8 " OR 1/4 " -.065" WALL - 316 SS TO PRESSURE REDUCING VALVES;
    3/8 "-.049" WALL - 316 SS TO FLOW METERS FOR ANALYZERS AND GRAB SAMPLE VALVES; 1/4 "-.049" WALL - 316 SS TO ANALYZERS AND GRAB SAMPLE VALVES-ALL PER ASTM-A-213.
12. RECORDER CHART SPEED - 2 INCHES PER HOUR.
13. VALVE TO BE LOCATED AT GRAB SAMPLE SINK.
14. DELETED
15. SAMPLE DELAY TIME OF 60 SECONDS OR GREATER IS REQUIRED FOR N-16 DECAY.
16. TUBE FITTINGS ON RC PASS TO BE SEAL WELDED PER WPS-89023.
17. THROTTLE RECIRC VALVE, 2PS-0450 , TO OBTAIN A PRESSURE BETWEEN 60 PSIG (MIN). AND 80 PSIG (MAX). AT 2-PI-4211 FOR PROPER FLOW RATE FROM RECLAIM TANK.
18. EITHER 2PS-0378 OR 2PS-0379 IS NORMALLY OPEN; THE OTHER ONE IS NORMALLY CLOSED.

FSAR FIGURE 9.3-4

THIS DRAWING CREATED ELECTRONICALLY

DRAWING 2323-M2-0228 REV CP-2
HAS BEEN SPLIT INTO THE FOLLOWING SHEETS:

| |
|---|
| M2-0228 |
| M2-0228-A |
| M2-0228-B |
| M2-0228-C |
| |

CLASS II

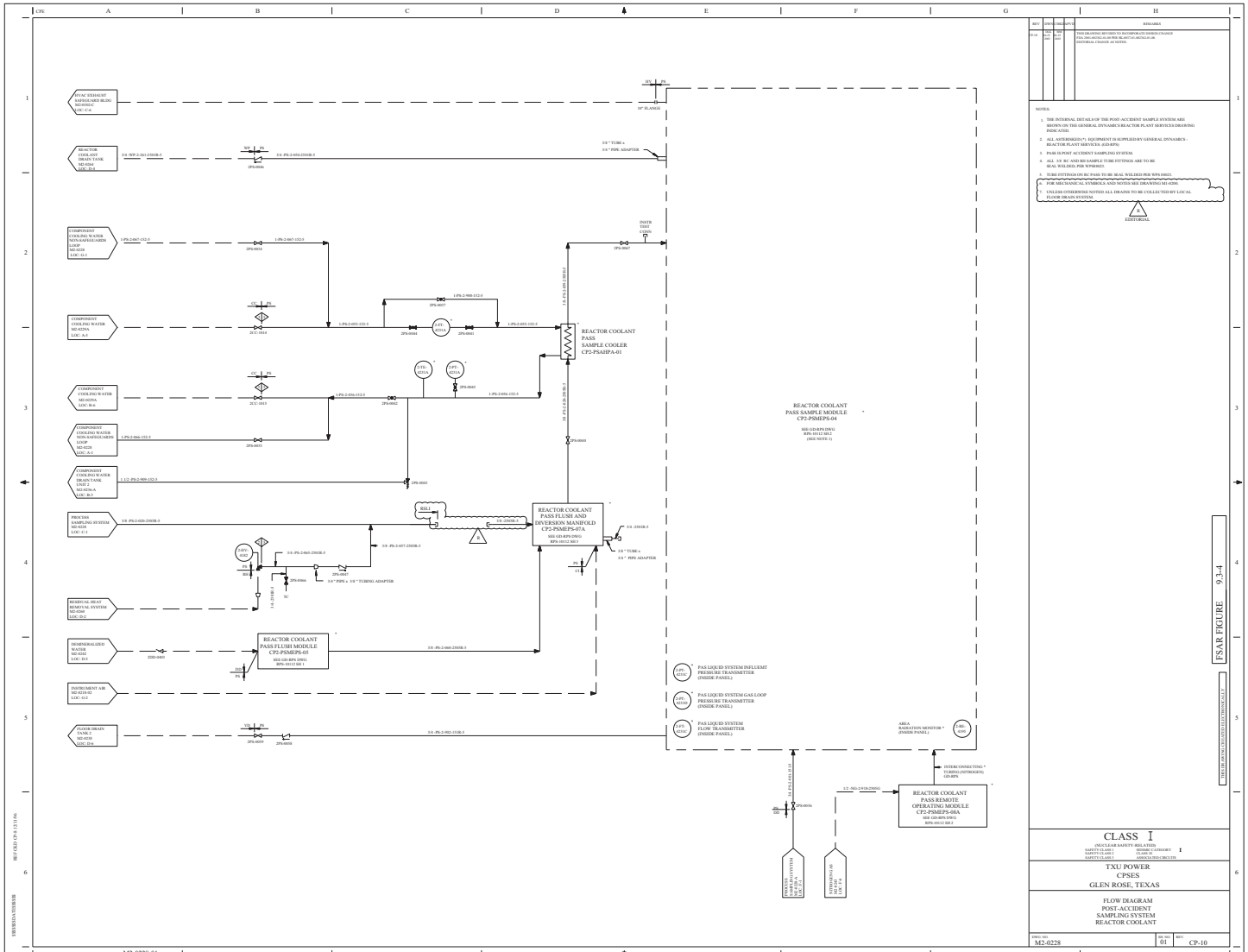
TXU ELECTRIC
CPSES
GLEN ROSE, TEXAS

FLOW DIAGRAM
PROCESS SAMPLING
SYSTEM

| DWG. NO. | SH. NO. | REV. |
|---|---|---|
| M2-0228 | C | CP-9 |

$$$$DATE$$$$

mc346100.dgn M2-0228-C




| REV. | DESCRIPTION | | | REMARKS |
|---|---|---|---|---|
| | ORIG. | CHK. | APP. | |
| CP-10 | | | | THIS DRAWING REVISED TO INCORPORATE DESIGN CHANGE TXX-TRM-CP-0228-00-00-00-CP-10 (ECN 21-46) HISTORICAL CHANGE AS NOTED |

NOTES:

1. THE INTERNAL DETAILS OF THE POST-ACCIDENT SAMPLE SYSTEM ARE SHOWN ON THE GENERAL DYNAMICS/REACTOR PLANT SERVICES DRAWING INDICATED.
2. ALL ASTERISKED (*) EQUIPMENT IS SUPPLIED BY GENERAL DYNAMICS - REACTOR PLANT SERVICES. (GD-RPS)
3. PASS IS POST ACCIDENT SAMPLING SYSTEM.
4. ALL 3/8 SC AND RH SAMPLE TUBE FITTINGS ARE TO BE SEAL WELDED, PER WPS0035.
5. TUBE FITTINGS ON SC PASS TO BE SEAL WELDED PER WPS 0302/1.
6. FOR MECHANICAL SYMBOLS AND NOTES SEE DRAWING M2-0200.
7. UNLESS OTHERWISE NOTED ALL DRAINS TO BE COLLECTED BY LOCAL FLOOR DRAIN SYSTEM.

EDITORIAL

FSAR FIGURE 9.3-4

THIS DRAWING INCORPORATES ECN 21-46

CLASS I

(NUCLEAR SAFETY-RELATED)

| | | | |
|---|---|---|---|
| SAFETY CLASS 1 | | SEISMIC CATEGORY | I |
| SAFETY CLASS 2 | | CLASS 1E | |
| SAFETY CLASS 3 | | ASSOCIATED CIRCUITS | |

TXU POWER
CPSES
GLEN ROSE, TEXAS

FLOW DIAGRAM
POST-ACCIDENT
SAMPLING SYSTEM
REACTOR COOLANT

| DWG. NO. | DR. NO. | REV. |
|---|---|---|
| M2-0228 | 01 | CP-10 |

M2-0228-01

mu545566.dgn

BE FUCKED UP 4 2 13 0%

MERIDIAN 5 SYSTEMS

| REV | DWN | CHKD | APVD | REMARKS |
|---|---|---|---|---|
| CP-22 | DGC 10-28 2015 | GAW 10-28 2015 | MHF 10-29 2015 | THIS DRAWING REVISED TO INCORPORATE AI-CR-2015-010410-1 TO EDITORIALLY ADD R TO LINE NUMBER 3-WP-1-901-151-5. |

NOTES:

1. DELETED
2. FOR MECHANICAL SYMBOLS AND NOTES SEE DWG M1-0200.
3. THE BOXED-IN NUMBERS DESIGNATE THE SPECIFIC ROOM NUMBERS ON THE PLUMBING DRAWING SHOWING VARIOUS DRAIN LOCATIONS.
4. FOR DRAIN SYMBOLS SEE DWG M1-0236 NOTE 4.
5. THIS SYSTEM IS NON-NUCLEAR SAFETY CLASS EXCEPT AS NOTED.
6. DELETED
7. TEST GROOVE DRAINS ARE □" SS TUBING.
8. PIPING DESIGNATED FD IS PROCURED BY SPECIFICATION MS-73. PIPING DESIGNATED VD IS PROCURED BY SPECIFICATION MS-43A AND MS-44A.
9. FOR CONDENSATE MEASURING SYSTEM SEE DWG M1-0238-0A, LOC: H-3.
10. UNLESS OTHERWISE NOTED DRAINS COLLECTED BY LOCAL DRAIN SYSTEM.
11. ISOLATION VALVE PROVIDED FOR TEMPORARY SUMP PUMP CONNECTION.
12. EQUIPMENT DRAIN IS COVERED WITH REMOVABLE CAP.

FSAR FIGURE 9.3-5

THIS DRAWING CREATED ELECTRONICALLY

| DRAWING 2323-M1-0238 | REV CP-5 |
|---|---|
| HAS BEEN SPLIT INTO THE FOLLOWING SHEETS: | |
| M1-0238 | |
| M1-0238-A | |

CLASS I
(NUCLEAR SAFETY-RELATED)
SAFETY CLASS 1 — SEISMIC CATEGORY I
SAFETY CLASS 2 — CLASS 1E
SAFETY CLASS 3 — ASSOCIATED CIRCUITS

LUMINANT
CPNPP
GLEN ROSE, TEXAS

FLOW DIAGRAM
VENTS AND DRAINS SYSTEM
CONTAINMENT BUILDING

| DWG. NO. | SH. NO. | REV. |
|---|---|---|
| M1-0238 | - | CP-22 |

$$$$$$$DATE$$$$$$ REF CHKD 11/03/2003

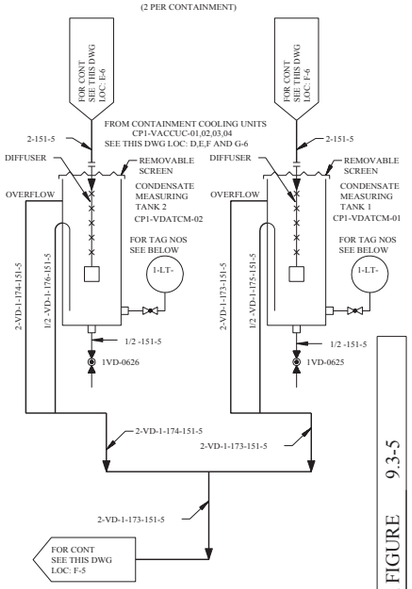
me848500.dgn | A M1-0238 | B | C | D | E | F | G | < FINAL PRINT > | H

| REV | DWN | CHKD | APVD | REMARKS |
|---|---|---|---|---|
| CP-12 | DLK 07-11 2005 | MM 07-12 2005 | | THIS DRAWING REVISED TO INCORPORATE DESIGN CHANGE FDA 2005-002581-01-00 PER SK-0004-05-002581-01-00. |

NOTES:
1. DELETED R
2. FOR MECHANICAL SYMBOLS AND NOTES SEE DWG M1-0200.
3. THE BOXED-IN NUMBERS DESIGNATE THE SPECIFIC ROOM NUMBERS ON THE PLUMBING DRAWING SHOWING VARIOUS DRAIN LOCATIONS.
4. FOR DRAIN SYMBOLS SEE DWG M1-0236 NOTE 4.
5. THIS SYSTEM IS NON-NUCLEAR SAFETY CLASS EXCEPT AS NOTED.
6. TEST GROOVE DRAINS ARE 3/4 " S.S. TUBING.
7. PIPING DESIGNATED "FD" IS PROCURED BY SPECIFICATION MS-73. PIPING DESIGNATED "VD" IS PROCURED BY SPECIFICATION MS-43A AND MS-44A.
8. UNLESS OTHERWISE NOTED DRAINS COLLECTED BY LOCAL DRAIN SYSTEM.
9. ISOLATION VALVE PROVIDED FOR TEMPORARY SUMP PUMP CONNECTION.

R

## CONTAINMENT COOLING UNITS CONDENSATE MEASURING SYSTEM
(2 PER CONTAINMENT)




LEVEL TRANSMITTER AND BLOCK VALVE TAG NOS

| CONDENSATE MEASURING TANK | FLOOR EL | 1-LT- | 1VD- |
|---|---|---|---|
| CP1-VDATCM-02 | 860'-0" | 5162 | 0619 |
| CP1-VDATCM-01 | 905'-9" | 5163 | 0620 |

DRAWING 2323-M1-0238 REV CP-5
HAS BEEN SPLIT INTO THE FOLLOWING SHEETS:
- M1-0238
- M1-0238-A

FSAR FIGURE 9.3-5

THIS DRAWING CREATED ELECTRONICALLY

CLASS II

TXU POWER
CPSES
GLEN ROSE, TEXAS

FLOW DIAGRAM
VENTS AND DRAINS SYSTEM
CONTAINMENT BUILDING

| DWG NO. | SH. NO. | REV. |
|---|---|---|
| M1-0238 | A | CP-12 |

FL EL 916'-9"
FL EL 908'-0"
FL EL 905'-9"
FL EL 894'-9"
FL EL 885'-6"
FL EL 873'-0"
FL EL 871'-6"
FL EL 861'-6"
FL EL 860'-0"
FL EL 853'-6"
FL EL 851'-6"
FL EL 849'-6"
FL EL 842'-0"
FL EL 832'-6"
FL EL 828'-0"
FL EL 822'-9"
FL EL 819'-6"
FL EL 812'-0"
FL EL 808'-0"

PRESSURIZER ROOF
PRESSURIZER ROOM
PRESSURIZER RELIEF TK RM
ACCUMULATOR
INSTRUMENT RACK
SEAL TABLE ROOM
REGENERATIVE HEAT EXCH
VALVE ROOM
CONTAINMENT CCW DRAIN TANK
INSTRUMENT RACK SEE NOTE 10
EXCESS LETDOWN HX ROOM
REACTOR COOLANT PUMP SEAL LEAKOFF
REACTOR COOLANT DRAIN TANK
REACTOR COOLANT DRAIN TANK HEAT EXCHANGER
GENERATOR STEAM LOOP 1 2-VD-2-929-1302-5
STEAM GENERATOR LOOP 4 2-VD-2-932-1302-5

4-FD-2-060-150GR
4-FD-2-059-150GR
2-150GR FROM CRANE RAILS
2-150GR FROM CRANE RAIL
4-FD-2-022-150GR
4-FD-2-002-150GR
4-FD-2-005-150GR
PENETRATION AREA
4-FD-2-062-150GR
4-FD-2-063-150GR
4" FCO
4-FD-2-067-150GR
4-FD-2-068-150GR
4-FD-2-066-150GR
4-FD-2-038-150GR
2-150GR FROM CRANE RAIL DRAINS AND LIGHTING PIT
4x2
4-FD-2-382-150R-5
2-150GR FROM CRANE RAIL AND LIGHTING PIT DRAINS
4-FD-2-387-150GR
4-FD-2-050-150GR
4-FD-2-070-150GR
4-FD-2-071-150GR
4-FD-2-004-150GR
4-FD-2-245-150GR
1-FD-2-252-150G
1-FD-2-254-150G
1-FD-2-251-150G
1-FD-2-253-150G
4-FD-2-257-150GR
4-FD-2-052-150R-5
4-FD-2-051-150R-5
4-FD-2-383-150GR
4-FD-2-053-150GR
4-FD-2-078-150GR
4-FD-2-269-150GR
4-FD-2-237-150GR
4-FD-2-238-150GR
4-FD-2-075-150GR
4-FD-2-076-150GR
4-FD-2-065-150GR
4-FD-2-385-150R-5
RISER 5
4-FD-2-045-150GR
4-FD-2-255-150R-5
RISER 6
4-FD-2-062-150GR
RISER 1
4-FD-2-001-150GR
4-FD-2-080-150GR
RISER 7
4-FD-2-219-150GR
4-FD-2-053-151R-5
VENTS AND DRAINS SYSTEM CONT BLDG M2-0238-A LOC: A-4
3-VD-2-141-151R-5
1-151R-5
2VD-0613
2VD-0627 (NOTE 9)
2VD-0612
2-VD-2-058-151R-5
2-VD-2-057-151R-5
3/4 -151R-5
2VD-0615
2VD-0614
RC'S PRT M2-0251 LOC: I-4
1-RC-2-941-151R-5
2-LS-5142-2
CP2-VDSRCS-01
CP2-VDSRCS-02
2VD-0868
2VD-0869
2-HS-5143
2-HS-5144
3-VD-2-903-151R-5
2-LT-5160
2-LS-5142-3
2-LS-5142-1
3-VD-2-902-151R-5
2RC-8154 LO
2RC-8157
3/8 -2505R-5
1/2 -2505R-5
1/2 -151R-5
4-FD-2-009-150GR
4-FD-2-236-150GR
4-FD-2-087-150GR
4-FD-2-208-150GR
4-FD-2-207-150GR
4-FD-2-206-150GR
4-FD-2-077-150GR
4-FD-2-081-150GR
4-FD-2-006-150GR
4-FD-2-048-150GR
4-FD-2-055-150GR
4-FD-2-046-150GR
4-FD-2-036-150GR
4-FD-2-058-150GR
4-FD-2-045-150GR
CONTAINMENT SUMP 1
CP2-WPAPCS-01
CP2-WPAPCS-02
CP2-FDSPCB-01
4-VD-2-053-151R-5
3-VD-2-148-151R-5
WASTE PROCESSING RELIEF VLV DISCHARGE (2-7160) M2-0264 LOC: C-3
2-VD-2-147-151R-5
REACTOR COOLANT DR TK M2-0264 LOC: A-3
3-VD-2-146-151R-5
WASTE PROCESSING RELIEF VLV DISCHARGE (2-7169) M2-0264 LOC: A-4
1-VD-2-144-151R-5
REFUELING CAV SKIMMER STRAINER M2-0235 LOC: G-4
4-VD-2-049-151R-5
FLOOR DRAIN TANK 2 M1-0266 LOC: G-1
3-VD-2-145-151R-5
RC PASS SAMPLE MODULE DRAIN M2-0228-01 LOC: A-5
2-HV-5158
2-HV-5157
2VD-0616
2VD-0618
2VD-0895
2VD-0896
2VD-0606
2VD-0607
2VD-0617
2VD-0633
2VD-0600
2VD-0601
2-FT-5159
2-FE-5159
2PS-0059 (REF)
PS
VD
1-151R-5
1/2 -151GR
3/4 -151GR
3/4 -151R-2
3/4 -151-5
3/4 -151R-5
3/4 -VD-2-925-151R-2
3/4 -VD-2-922-151R-5
4-VD-2-060-151R-2
4-VD-2-049-151R-5
4-WP-2-061-151R-5
4-VD-2-059-151R-5
PENET M III-0021
TO 77 FLOOR DRAIN
FC
LC
TC
INSIDE CONTAINMENT
OUTSIDE CONTAINMENT
WASTE HOLD-UP TANK M1-0265 LOC: A-1
VD WP

| REV | DWN | CHK | APVD | REMARKS |
|---|---|---|---|---|
| CP-14 | DLK 08-17 2009 | MM 08-17 2009 | | THIS DRAWING REVISED TO INCORPORATE DESIGN CHANGE FDA 2009-001707-01-00 PER SK-0008-09-001707-01-00. |

NOTES:

1. FOR MECHANICAL SYMBOLS AND NOTES SEE DWG M1-0200.
2. THE BOXED-IN NUMBERS DESIGNATE THE SPECIFIC ROOM NUMBERS ON THE PLUMBING DRAWING SHOWING VARIOUS DRAIN LOCATIONS.
3. DRAIN SYMBOLS ARE AS FOLLOWS:
   - FLOOR DRAIN WITHOUT BACKWATER VALVE.
   - FLOOR DRAIN WITH BACKWATER VALVE (SEE NOTE 8 AND 11).
   - EQUIPMENT DRAIN WITHOUT BACKWATER VALVE.
   - EQUIPMENT DRAIN WITH BACKWATER VALVE. (SEE NOTE 8 AND 11)
   - CRANE RAIL DRAIN
   - LIGHTING PIT DRAIN
4. THIS SYSTEM IS NON-NUCLEAR SAFETY CLASS EXCEPT AS NOTED.
5. TEST GROVE DRAINS ARE 3/4 " SS TUBING.
6. PIPING DESIGNATED "FD" IS PROCURED BY SPECIFICATION MS-73. PIPING DESIGNATED "VD" IS PROCURED BY SPECIFICATION MS-43A AND MS-44A.
7. UNLESS OTHERWISE NOTED DRAINS COLLECTED BY LOCAL DRAIN SYSTEM.
8. UNLESS OTHERWISE NOTED, EQUIPMENT TAG NUMBERS FOR BACKWATER VALVES SHOULD CORRESPOND TO THE UNIT IN WHICH THEY ARE INSTALLED AND THE NUMBER OF THE PIPE IN WHICH IT IS INSTALLED, THAT IS, THE BACKWATER VALVE IN LINE NUMBER 6-FD-2-454-010-5 SHOULD BE **2FD-0454.**
9. ISOLATION VALVE PROVIDED FOR TEMPORARY SUMP PUMP CONNECTION.
10. EQUIPMENT DRAIN IS COVERED WITH REMOVABLE CAP.
11. FOR LOCATION OF BACKWATER VALVES AT FLOOR ELEVATIONS 773' AND 785' SEE DCN 7245 REV 0.

R

DRAWING 2323-M2-0238 REV CP-2
HAS BEEN SPLIT INTO THE FOLLOWING SHEETS:
M2-0238
M2-0238-A

FSAR FIGURE 9.3-5

THIS DRAWING CREATED ELECTRONICALLY

CLASS I
(NUCLEAR SAFETY-RELATED)
SAFETY CLASS 1 — SEISMIC CATEGORY I
SAFETY CLASS 2 — CLASS 1E
SAFETY CLASS 3 — ASSOCIATED CIRCUITS

LUMINANT
CPNPP
GLEN ROSE, TEXAS

FLOW DIAGRAM
VENTS AND DRAINS SYSTEM
CONTAINMENT BUILDING

DWG. NO. M2-0238 | SH. NO. - | REV. CP-14

REF CKD CP-8 10/27/97

SSSSSSDATESSSSSS

FL EL 916'-9"
FL EL 905'-9"
FL EL 894'-9"
FL EL 885'-6"
FL EL 873'-0"
FL EL 871'-6"
FL EL 861'-6"
FL EL 860'-0"
FL EL 853'-6"
FL EL 851'-6"
FL EL 849'-6"
FL EL 842'-0"
FL EL 832'-6"
FL EL 828'-0"
FL EL 822'-9"
FL EL 812'-0"
FL EL 808'-0"
FL EL 783'-7"

4-FD-2-019-150GR
4-FD-2-020-150GR
2-150GR
4-FD-2-032-150GR
2-150GR FROM CRANE RAILS
REACTOR HEAD LAYDOWN AREA
4-FD-2-010-150GR
4-FD-2-930-150GR
4-FD-2-027-150GR
4-FD-2-026-150GR
2-150GR FROM CRANE RAIL AND LIGHTING PIT DRAINS
4-FD-2-012-150GR
2-150GR FROM LIGHTING PIT DRAINS
4-FD-2-037-150R-5
ACCUMULATOR
INSTRUMENT RACK
HVAC FILTER UNIT
4-FD-2-013-150GR
4-FD-2-239-150GR
4-FD-2-029-150R-5
4-FD-2-241-150R-5
4-FD-2-242-150R-5
4-FD-2-244-150R-5
4-FD-2-243-150R-5
4-FD-2-030-150R-5
4-FD-2-025-150R-5
4" CO
4-FD-2-040-150R-5
4-FD-2-240-150R-5
4-FD-2-039-150GR
REACTOR COOLANT PUMP SEAL LEAKOFF
RISER 2
4-FD-2-011-150GR
4-FD-2-084-150R-5
RISER 3
4-FD-2-018-150GR
RISER 4
4-FD-2-031-150GR
4-FD-2-232-150R-5
STEAM GENERATOR LOOP 3
2-VD-2-931-1302-5
STEAM GENERATOR LOOP 2
2-VD-2-930-1302-5
VENTS AND DRAINS SYSTEM CONT BLDG M2-0238 LOC: G-5
4-VD-2-053-151R-5
3-VD-2-052-151R-5
1-151R-5
2VD-0605
2VD-0628 (NOTE 10)
2-VD-2-051-151R-5
2-VD-2-050-151R-5
2VD-0604
2VD-0603
2VD-0602
2-LS-5152-3
CP2-VDSRCS-03
CP2-VDSRCS-04
2-VD-2-173-151-5
FOR CONT SEE THIS DWG LOC: G-5
TEST GROOVE DRAINS FROM REFUELING CANAL
1 TO 22
DRIP PAN
3/4 -FD-2-250-2505R-5
3-VD-2-056-151R-5
4-FD-2-017-150GR
4-FD-2-044-150GR
2-LT-5161
2-LS-5152-1
2VD-0870
2-HS-5154
2VD-0871
2-HS-5153
2-LS-5152-2
3-VD-2-900-151R-5
NEUTRON DETECTOR WELL COOLING UNITS
4" FCO
4-FD-2-014-150R-5
4-FD-2-047-150GR
4-FD-2-016-150GR
4-FD-2-015-150GR
4-FD-2-085-150GR
4-FD-2-220-150GR
4-FD-2-086-150GR
4-FD-2-024-150GR
4-FD-2-043-150GR
4-FD-2-042-150GR
CP2-WPAPCS-03
CP2-WPAPCS-04
CONTAINMENT SUMP 2 CP2-FDSPCB-02
2-VD-2-055-151R-5
2-VD-2-054-151R-5
2VD-0610
2VD-0611
2VD-0609
2VD-0608
3-VD-2-905-151R-5
3-VD-2-904-151R-5
CP2-VDSRRS-01
CP2-VDSRRS-02
2VD-0876
2VD-0877
2-HS-5148
2-HS-5149
2-LT-5164
2-LS-5147
3/8 -2505R-5
1/2 -2505R-5
1/2 -151R-5
CP2-WPAPRS-01
CP2-WPAPRS-02
REACTOR CAVITY SUMP CP2-FDSPRC-01
CP2-VACCUC-04
CP2-VACCUC-03
CP2-VACCUC-02
CP2-VACCUC-01
2-151-5
FOR CONT SEE THIS DWG LOC: H-3
FOR CONT SEE THIS DWG LOC: G-3
CONTAINMENT COOLING COIL UNITS
EL 860'-0"
CONTAINMENT COOLING COIL UNITS
EL 905'-0"

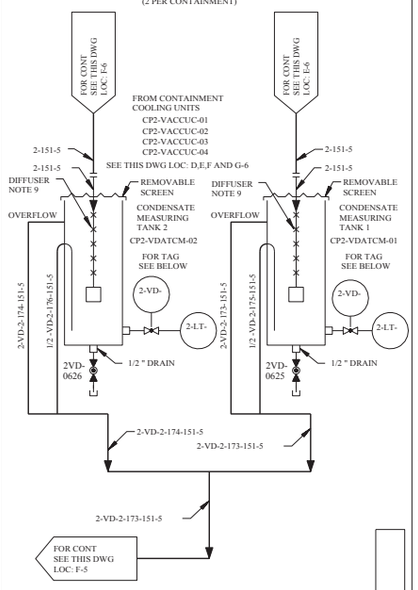
| REV | DWN | CHKD | APVD | REMARKS |
|---|---|---|---|---|
| CP-12 | JRMC 08-27-2007 | BHB 08-27-2007 | | THIS DRAWING REVISED TO INCORPORATE DESIGN CHANGE FDA-2005-001856-01-00 PER SK-0001-05-001856-01-00. |

NOTES

1. FOR MECHANICAL SYMBOLS AND NOTES SEE DWG M1-0200.
2. THE BOXED-IN NUMBERS DESIGNATE THE SPECIFIC ROOM NUMBERS ON THE PLUMBING DRAWING SHOWING VARIOUS DRAIN LOCATIONS.
3. FOR TYPICAL DRAIN SYMBOLS SEE DWG M2-0238 NOTE 3.
4. THIS SYSTEM IS NON-NUCLEAR SAFETY CLASS EXCEPT AS NOTED.
5. TEST GROVE DRAINS ARE 3/4 " SS TUBING.
6. PIPING DESIGNATED "FD" IS PROCURED BY SPECIFICATION MS-73. PIPING DESIGNATED "VD" IS PROCURED BY SPECIFICATION MS-43A AND MS-44A
7. DELETED
8. UNLESS OTHERWISE NOTED, DRAINS COLLECTED BY LOCAL DRAIN SYSTEM.
9. FOR CONDENSATE MEASURING TANK DIFFUSER DETAILS SEE DCA 20715 REV 1.
10. ISOLATION VALVE PROVIDED FOR TEMPORARY SUMP PUMP CONNECTION.

## CONTAINMENT COOLING UNITS CONDENSATE MEASURING SYSTEM

(2 PER CONTAINMENT)




LEVEL TRANS TAG NUMBERS

| CONDENSATE MEASURING TANK | | TAG NUMBERS | |
|---|---|---|---|
| CP2-VDATCM-02 | | 2-LT-5163 | 2VD-0619 |
| CP2-VDATCM-01 | | 2-LT-5162 | 2VD-0620 |

| DRAWING 2323-M2-0238 REV CP-2 HAS BEEN SPLIT INTO THE FOLLOWING SHEETS: |
|---|
| M2-0238 |
| M2-0238-A |
| |
| |
| |

CLASS II

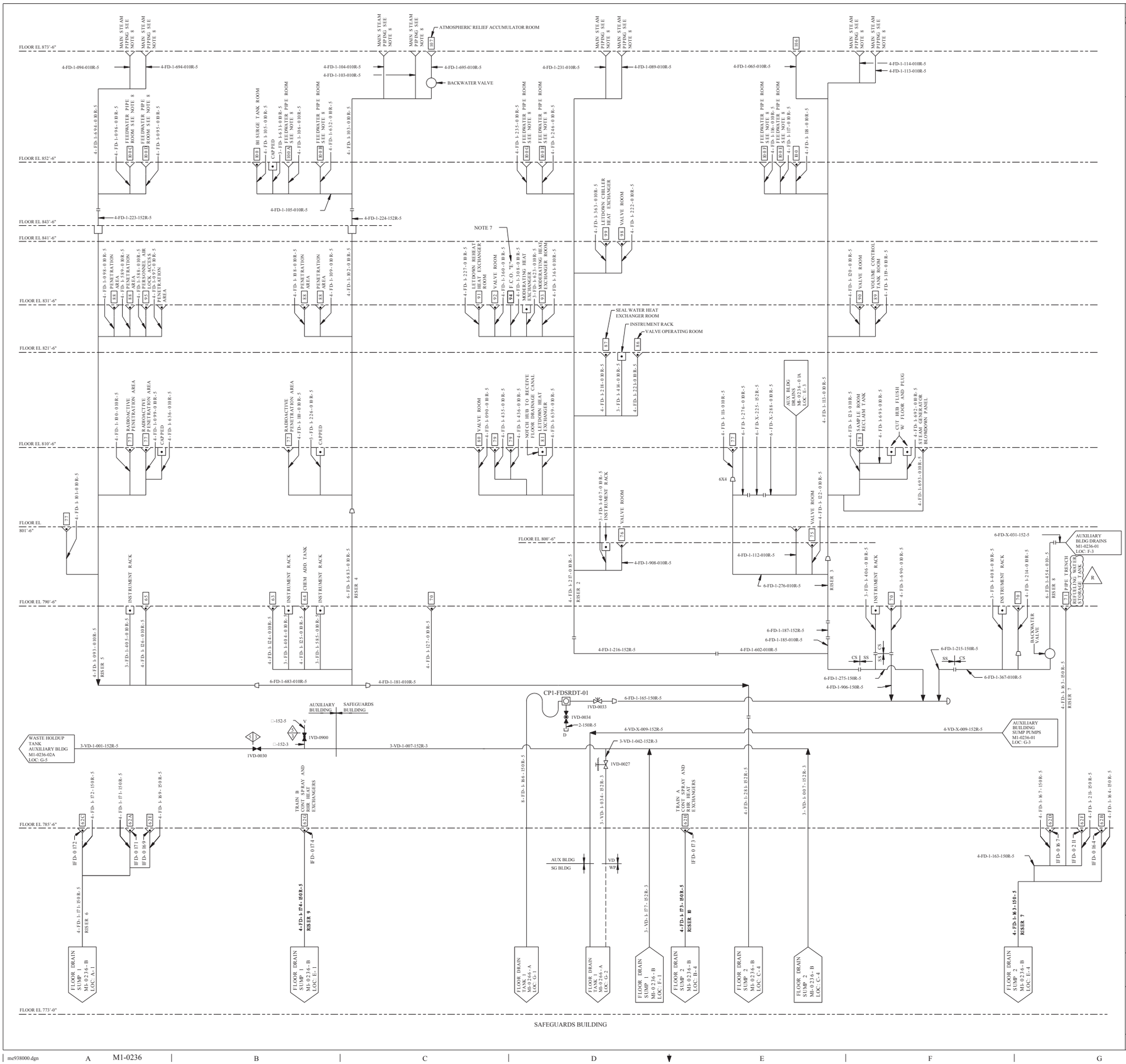
LUMINANT
CPSES
GLEN ROSE, TEXAS

FLOW DIAGRAM
VENTS AND DRAINS SYSTEM
CONTAINMENT BUILDING

| DWG. NO. | SH. NO. | REV. |
|---|---|---|
| M2-0238 | A | CP-12 |

FSAR FIGURE 9.3-5

THIS DRAWING CREATED ELECTRONICALLY




| REV | DWN | CHKD | APVD | REMARKS |
|---|---|---|---|---|
| CP-21 | DLK 03-12 2013 | MM 03-14 2013 | | THIS DRAWING REVISED TO INCORPORATE DESIGN CHANGE FDA 2013-000024-01-00 PER SK-0005-13-000024-01-00. |

NOTES:

1. DELETED
2. FOR MECHANICAL SYMBOLS AND NOTES SEE DRAWING M1-0200.
3. THE BOXED-IN NUMBERS DESIGNATE THE SPECIFIC ROOM NUMBERS ON THE PLUMBING DRAWINGS WHICH SHOW VARIOUS DRAIN LOCATIONS.
4. DRAIN SYMBOLS ARE AS FOLLOWS:
   - FLOOR DRAIN WITHOUT BACKWATER VALVE.
   - FLOOR DRAIN WITH BACKWATER VALVE. (SEE NOTE 6 AND 9)
   - EQUIPMENT DRAIN WITHOUT BACKWATER VALVE.
   - EQUIPMENT DRAIN WITH BACKWATER VALVE. (SEE NOTE 6 AND 9)
5. PIPING DESIGNATED FD IS PROCURED BY SPECIFICATION 2323-MS-73 AND PIPING DESIGNATED VD IS PROCURED BY SPECIFICATIONS 2323-MS-43B AND 2323-MS-44B.
6. UNLESS OTHERWISE NOTED, EQUIPMENT TAG NUMBERS FOR BACKWATER VALVES SHOULD CORRESPOND TO THE NUMBER OF THE PIPE IN WHICH IT IS INSTALLED. THAT IS, THE BACKWATER VALVE IN LINE NUMBER 6-FD-1-454-010-5 SHOULD BE 1FD-0454.
7. F.C.O. : FLOOR CLEAN-OUT. FOR DETAIL "E" SEE DRAWING 2323-M1-0680.
8. FEEDWATER DRAINS AT ELEV 852'-6" AND MAIN STEAM DRAINS AT ELEV 873'-6" ARE EQUIPPED WITH BALL FLOATS. NO BACKWATER VALVES ARE INSTALLED AT THOSE LOCATIONS. SEE DWG 2323-M1-0680 FOR BALL FLOAT DETAIL. THE BALL FLOAT TAG NUMBER WILL CORRESPOND TO THE NUMBER OF THE PIPE IN WHICH IT IS INSTALLED. (EXAMPLE: BALL FLOAT IN LINE NUMBER 4-FD-1-103-010R-5 WILL HAVE TAG NUMBER "1-103-BF").
9. FOR LOCATION OF BACKWATER VALVES AT FLOOR ELEVATIONS 773' AND 785' SEE DCN 7245 REV 0.

FSAR FIGURE 9.3-6

THIS DRAWING CREATED ELECTRONICALLY

| DRAWING M1-0236 REV CP-14 HAS BEEN SPLIT INTO THE FOLLOWING SHEETS: |
|---|
| M1-0236 |
| M1-0236-B |

| DRAWING 2323-M1-0236 REV CP-6 HAS BEEN SPLIT INTO THE FOLLOWING SHEETS: |
|---|
| M1-0236 |
| M1-0236-A |

CLASS I

(NUCLEAR SAFETY-RELATED)

| | |
|---|---|
| SAFETY CLASS 1 | SEISMIC CATEGORY I |
| SAFETY CLASS 2 | CLASS 1E |
| SAFETY CLASS 3 | ASSOCIATED CIRCUITS |

LUMINANT
CPNPP
GLEN ROSE, TEXAS

FLOW DIAGRAM
VENTS AND DRAINS SYSTEM
SAFEGUARDS AND AUXILIARY BUILDING

| DWG. NO. | SH. NO. | REV. |
|---|---|---|
| M1-0236 | - | CP-21 |

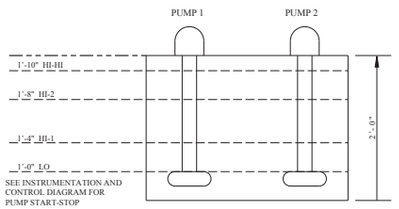
$$$$$$$$DATE$$$$$$$$ REF CKD CP-20 3/12/13

me938000.dgn M1-0236 < FINAL PRINT >

| REV | DWN | CHKD | APVD | REMARKS |
|---|---|---|---|---|
| CP-21 | DLK 03-12-2013 | MM 03-14-2013 | | THIS DRAWING REVISED TO INCORPORATE DESIGN CHANGE FDA 2013-000024-01-00 PER SK-0004-13-000024-01-00. |

NOTES:

1. FOR SWITCH LEVEL SYSTEM AND PUMP CONTROL SEE TYPICAL SUMP DETAIL.
2. FOR MECHANICAL SYMBOLS AND NOTES SEE DRAWING M1-0200.
3. THE BOXED-IN NUMBERS DESIGNATE THE SPECIFIC ROOM NUMBERS ON THE PLUMBING DRAWINGS WHICH SHOW VARIOUS DRAIN LOCATIONS.
4. FOR DRAIN SYMBOLS SEE M1-0236, NOTE 4.
5. OPERATIONS MAY INSTALL RAISED HUBS AND/OR PLUGS FOR NON RADIOACTIVE DRAINS THAT DUE TO THEIR PROXIMITY TO A RADIOACTIVE DRAIN COULD COLLECT RADIOACTIVE FLUIDS.
6. PIPING DESIGNATED FD IS PROCURED BY SPECIFICATION MS-73 AND PIPING DESIGNATED VD IS PROCURED BY SPECIFICATIONS MS-43A AND MS-44A.
7. ALTERNATE DRAIN PATH.




TYPICAL SUMP DETAIL

FSAR FIGURE 9.3-6

THIS DRAWING CREATED ELECTRONICALLY

| DRAWING 2323-M1-0236 REV CP-6 HAS BEEN SPLIT INTO THE FOLLOWING SHEETS: |
|---|
| M1-0236 |
| M1-0236-A |
| |
| |
| |

CLASS II

LUMINANT
CPNPP
GLEN ROSE, TEXAS

FLOW DIAGRAM
VENTS AND DRAINS SYSTEM
SAFEGUARDS BUILDING

| DWG. NO. | SH. NO. | REV. |
|---|---|---|
| M1-0236 | A | CP-21 |

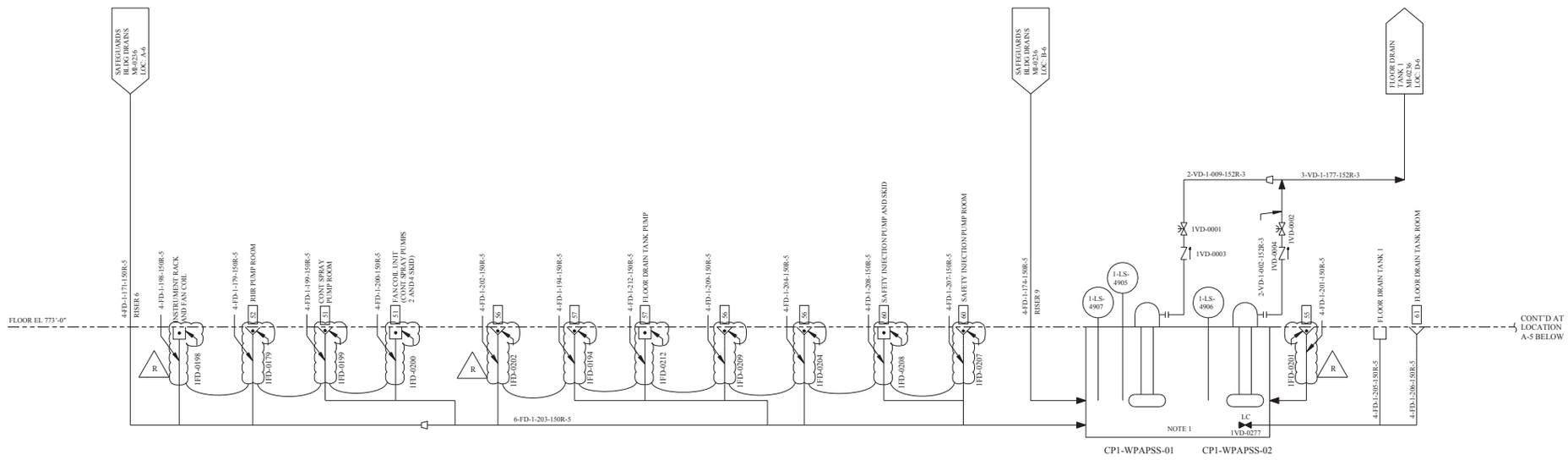
$$$$$$$DATES$$$$$$ REF CKD 3/12/13 CP-20

me937900.dgn A M1-0236-A B C D E F G < FINAL PRINT > H

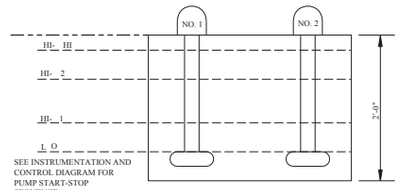
| REV. | DWN | CHKD | APVD | REMARKS |
|---|---|---|---|---|
| CP-3 | DLK 08-13-2009 | MM 08-17-2009 | | THIS DRAWING REVISED TO INCORPORATE DESIGN CHANGE FDA 2009-001707-01-00 PER SK-0003-09-001707-01-00. EDITORIAL CHANGE AS NOTED. |

NOTES:

1. FOR SWITCH LEVEL SYSTEM AND PUMP CONTROL SEE TYPICAL SUMP DETAIL.
2. FOR MECHANICAL SYMBOLS AND NOTES SEE DRAWING M1-0200.
3. THE BOXED-IN NUMBERS DESIGNATE THE SPECIFIC ROOM NUMBERS ON THE PLUMBING DRAWINGS WHICH SHOW VARIOUS DRAIN LOCATIONS.
4. FOR DRAIN SYMBOLS SEE M1-0236, NOTE 4.
5. PIPING DESIGNATED FD IS PROCURED BY SPECIFICATION 2323-MS-73 AND PIPING DESIGNATED VD IS PROCURED BY SPECIFICATIONS 2323-MS-43B AND 2323-MS-44B.

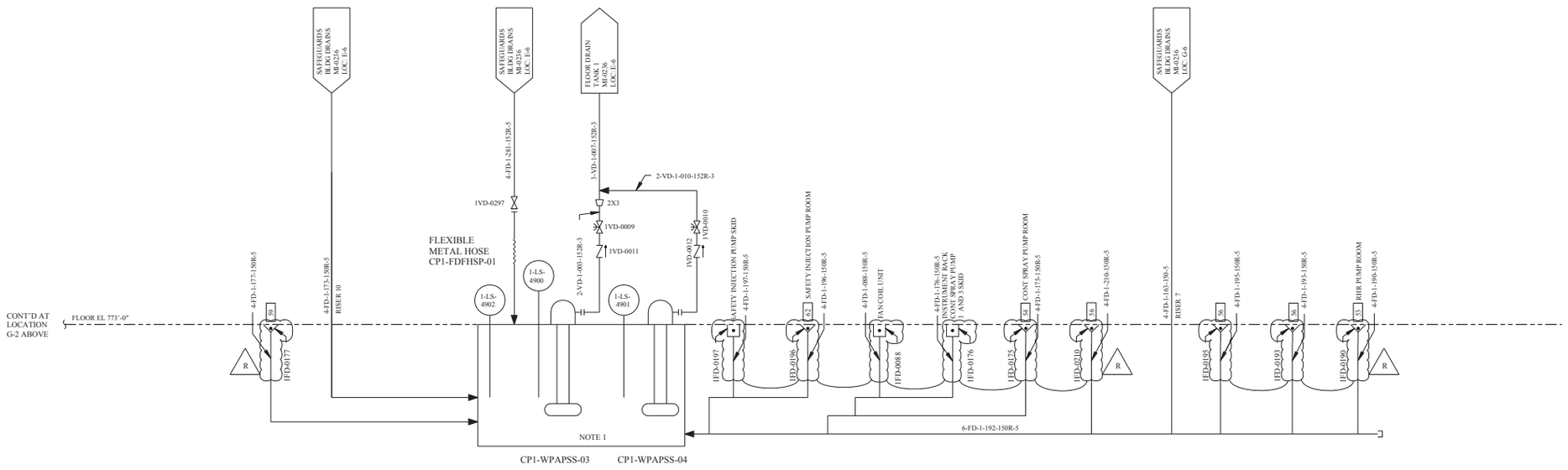



FLOOR DRAIN SUMP 1
CP1-FDSPSG-01




SEE INSTRUMENTATION AND CONTROL DIAGRAM FOR PUMP START-STOP SEQUENCE
SEE M1-2400 FOR SETPOINTS

SAFEGUARDS SUMP DETAIL




FLOOR DRAIN SUMP 2
CP1-FDSPSG-02

SAFEGUARDS BUILDING

R EDITORIAL

FSAR FIGURE 9.3-6

THIS DRAWING CREATED ELECTRONICALLY

| DRAWING M1-0236 REV CP-14 HAS BEEN SPLIT INTO THE FOLLOWING SHEETS: |
|---|
| M1-0236 |
| M1-0236-B |

CLASS I
(NUCLEAR SAFETY-RELATED)

| | |
|---|---|
| SAFETY CLASS 1 | SEISMIC CATEGORY I |
| SAFETY CLASS 2 | CLASS 1E |
| SAFETY CLASS 3 | ASSOCIATED CIRCUITS |

LUMINANT
CPNPP
GLEN ROSE, TEXAS

FLOW DIAGRAM
VENTS AND DRAINS SYSTEM
SAFEGUARDS AND AUXILIARY BUILDING

| DWG. NO. | SH. NO. | REV. |
|---|---|---|
| M1-0236 | B | CP-3 |

REF CKD CP-1 10/27/97

$$$$$$$DATE$$$$$$

me938100.dgn

< FINAL PRINT >

| REV | DWN | CHK | LA | PVD | REMARKS |
|---|---|---|---|---|---|
| CP-20 | DEK 08-13 2009 | MM 08-17 2009 | | | THIS DRAWING REVISED TO INCORPORATE DESIGN CHANGE FDA 2009-001707-01-00 PER SK-00004-09-001707-01-00. |

NOTES:

1. FOR MECHANICAL SYMBOLS AND NOTES SEE DRAWING M1-0200.
2. THE BOX-IN NUMBERS DESIGNATE THE SPECIFIC ROOM NUMBERS ON THE PLUMBING DRAWINGS SHOWING VARIOUS DRAIN LOCATIONS.
3. FOR TYPICAL DRAIN SYMBOLS SEE DRAWING M2-0238 NOTE 3.
4. OPERATIONS MAY INSTALL RAISED HUBS AND/OR PLUGS FOR NON RADIOACTIVE DRAINS THAT DUE TO THEIR PROXIMITY TO A RADIOACTIVE DRAIN COULD COLLECT RADIOACTIVE FLUIDS.
5. PIPING DESIGNATED FD IS PROCURED BY SPECIFICATION MS-73 AND PIPING DESIGNATED VD IS PROCURED BY SPECIFICATIONS MS-43B AND MS-44B.
6. THIS PADDLE BLIND TO BE INSTALLED OR REMOVED ONLY AT THE DIRECTION OF NUCLEAR OPERATIONS.
7. F.C.O. : FLOOR CLEAN-OUT. FOR DETAIL "E" SEE DRAWING 2323-M1-0680.
8. FEEDWATER DRAINS AT ELEV 852'-6" AND MAIN STEAM DRAINS AT ELEV 873'-6" ARE EQUIPPED WITH BALL FLOATS. NO BACKWATER VALVES ARE INSTALLED AT THOSE LOCATIONS. SEE DWG 2323-M1-0680 FOR BALL FLOAT DETAIL. THE BALL FLOAT TAG NUMBER WILL CORRESPOND TO THE NUMBER OF THE PIPE IN WHICH IT IS INSTALLED. (EXAMPLE: BALL FLOAT IN LINE NUMBER 4-FD-2-103-010R-5 WILL HAVE TAG NUMBER "2-103-BF").

FSAR FIGURE 9.3-6

THIS DRAWING CREATED ELECTRONICALLY

DRAWING M2-0236 REV CP-12
HAS BEEN SPLIT INTO THE FOLLOWING SHEETS:
M2-0236
M2-0236-B

DRAWING 2323-M2-0236 REV CP-1
HAS BEEN SPLIT INTO THE FOLLOWING SHEETS:
M2-0236
M2-0236-A

CLASS I
(NUCLEAR SAFETY-RELATED)
SAFETY CLASS 1 — SEISMIC CATEGORY I
SAFETY CLASS 2 — CLASS 1E
SAFETY CLASS 3 — ASSOCIATED CIRCUITS

LUMINANT
CPNPP
GLEN ROSE, TEXAS

FLOW DIAGRAM
VENTS AND DRAINS SYSTEM
SAFEGUARDS AND AUXILIARY BUILDING

| DWG. NO. | SH. NO. | REV. |
|---|---|---|
| M2-0236 | - | CP-20 |

SAFEGUARDS BUILDING

| REV | DWN | CHKD | APVD | REMARKS |
|---|---|---|---|---|
| CP-15 | DLK 06-13 2009 | MM 06-17 2009 | | THIS DRAWING REVISED TO INCORPORATE DESIGN CHANGE FDA 2009-001707-01-00 PER SK-0005-09-001707-01-00. |

NOTES:

1. FOR MECHANICAL SYMBOLS AND NOTES SEE DRAWING M1-0200.
3. FOR TYPICAL DRAIN SYMBOLS, SEE DRAWING M2-0238 NOTE 3.
4. OPERATIONS MAY INSTALL RAISED HUBS AND/OR PLUGS FOR NON RADIOACTIVE DRAINS THAT DUE TO THEIR PROXIMITY TO A RADIOACTIVE DRAIN COULD COLLECT RADIOACTIVE FLUIDS.
5. PIPING DESIGNATED FD IS PROCURED BY SPECIFICATION MS-73 AND PIPING DESIGNATED VD IS PROCURED BY SPECIFICATIONS MS-43B AND MS-44B.
6. FLOOR DRAINS IN TUBING TRENCH HAVE BEEN FILLED WITH GROUT AND ABANDONED IN PLACE.
7. ALTERNATE DRAIN FLOW PATH.

FSAR FIGURE 9.3-6

THIS DRAWING CREATED ELECTRONICALLY

| DRAWING 2323-M2-0236 REV CP-1 |
|---|
| HAS BEEN SPLIT INTO THE FOLLOWING SHEETS: |
| M2-0236 |
| M2-0236-A |

CLASS II

LUMINANT
CPNPP
GLEN ROSE, TEXAS

FLOW DIAGRAM
VENTS AND DRAINS SYSTEM
SAFEGUARDS BUILDING

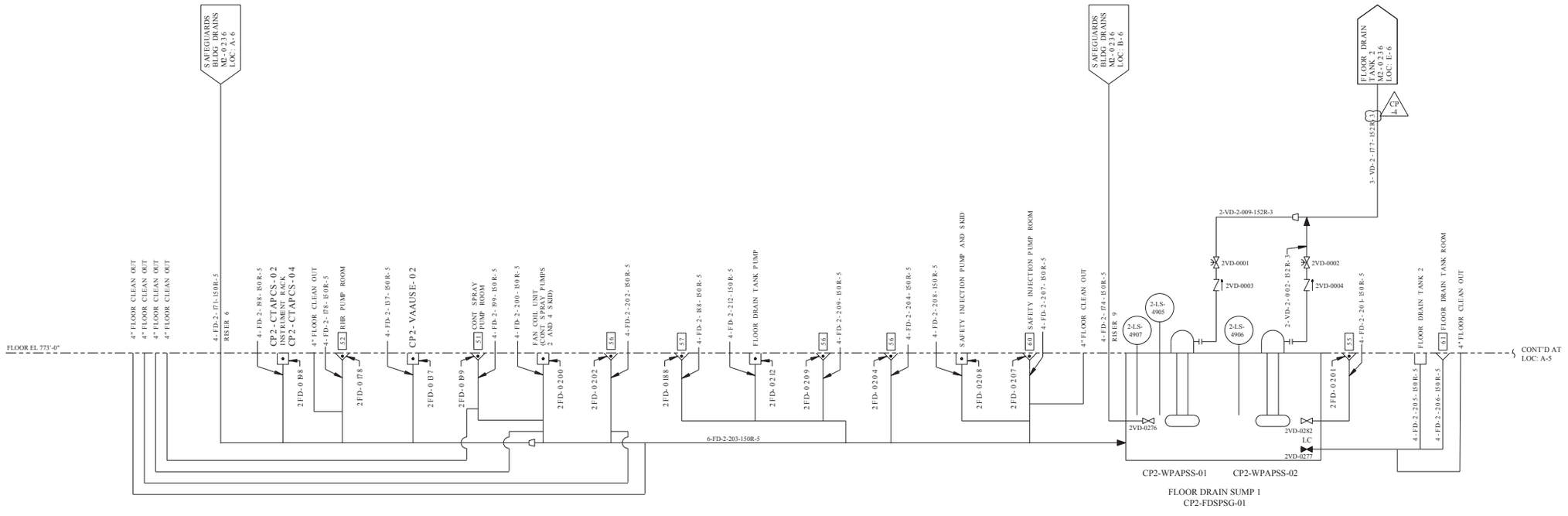
| DWG. NO. | SH. NO. | REV. |
|---|---|---|
| M2-0236 | A | CP-15 |

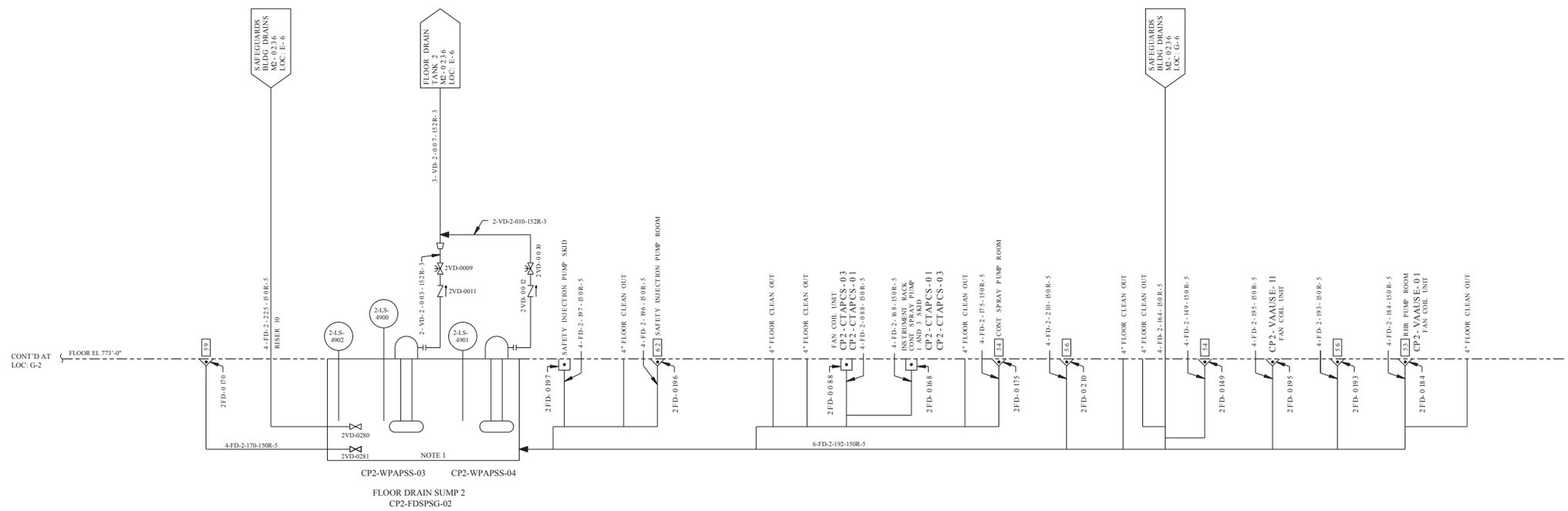
REF CKD 36/97 CP-8

$$$$$$$DATE$$$$$$

me938300.dgn M2-0236-A

< FINAL PRINT >




| REV | DWN | CHKD | APVD | REMARKS |
|---|---|---|---|---|
| CP-4 | DJK 01-29-2013 | | | THIS DRAWING REVISED TO EDITORIALLY CORRECT THE LINE SEGMENT NUMBER VD-2-177 SAFETY CLASS FROM 5 TO 3. THIS LATENT ERROR OCCURRED IN 1997 WHEN M2-0236-B REV CP-1 WAS CREATED WHEN SPLITTING FROM M2-0236 REV CP-11. THIS ADMINISTRATIVE/EDITORIAL CHANGE WILL BE IN AGREEMENT WITH APPROVE DESIGN DOCUMENTS M2-0236 REV CP-20 AND MAXIMO. |

NOTES:

1. FOR MECHANICAL SYMBOLS AND NOTES SEE DRAWING M1-0200.
2. THE BOXED-IN NUMBERS DESIGNATE THE SPECIFIC ROOM NUMBERS ON THE PLUMBING DRAWINGS WHICH SHOW VARIOUS DRAIN LOCATIONS.
3. FOR TYPICAL DRAIN SYMBOLS SEE DRAWING M2-0238 NOTE 3.
4. OPERATIONS MAY INSTALL RAISED HUBS AND/OR PLUGS FOR NON RADIOACTIVE DRAINS THAT DUE TO THEIR PROXIMITY TO A RADIOACTIVE DRAIN COULD COLLECT RADIOACTIVE FLUIDS.
5. PIPING DESIGNATED FD IS PROCURED BY SPECIFICATION MS-73 AND PIPING DESIGNATED VD IS PROCURED BY SPECIFICATIONS MS-43B AND MS-44B.

FSAR FIGURE 9.3-6

THIS DRAWING CREATED ELECTRONICALLY

DRAWING M2-0236 REV CP-11
HAS BEEN SPLIT INTO THE FOLLOWING SHEETS:
M2-0236
M2-0236-B

CLASS I
(NUCLEAR SAFETY-RELATED)
SAFETY CLASS 1 — SEISMIC CATEGORY I
SAFETY CLASS 2 — CLASS 1E
SAFETY CLASS 3 — ASSOCIATED CIRCUITS

LUMINANT
CPNPP
GLEN ROSE, TEXAS

FLOW DIAGRAM
VENTS AND DRAINS SYSTEM
SAFEGUARDS AND AUXILIARY BUILDING

DWG. NO. M2-0236 | SH. NO. B | REV. CP-4

< FINAL PRINT >

me938400.dgn M2-0236-B

SSSSSSSDATESSSSSS

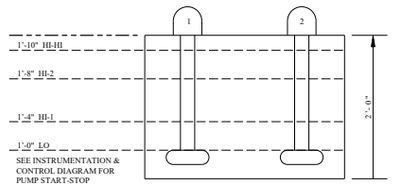
| REV | DWN | CHKD | APVD | REMARKS |
|---|---|---|---|---|
| CP-18 | DLK 10-25 2017 | MM 10-25 2017 | | THIS DRAWING REVISED TO INCORPORATE DESIGN CHANGE FDA 2017-000085-01-00 PER SK-0001-17-000085-01-00. |

NOTES:

1. FOR SWITCH LEVEL SYSTEM AND PUMP CONTROL SEE TYPICAL SUMP DETAIL.
2. THE BOXED IN NUMBERS DESIGNATE THE SPECIFIC ROOM NUMBERS ON THE PLUMBING DRAWING SHOWING VARIOUS DRAIN LOCATIONS.
3. FOR DRAIN SYMBOLS SEE M1-0236, NOTE 4.
4. ALL PIPING IS NON-NUCLEAR SAFETY CLASS.
5. FOR MECHANICAL SYMBOLS AND NOTES SEE DRAWING M1-0200.
6. DELETED
7. PIPING DESIGNATED FD IS PROCURED BY SPECIFICATION MS-73 AND PIPING DESIGNATED VD IS PROCURED BY SPECIFICATION MS-44B.
8. PIPING IS PLUGGED BELOW FLOOR.

| SCHEDULE I | |
|---|---|
| VALVE NUMBER | LINE NUMBER |
| XFD-0900I | 6-FD-X-929-150-5 |
| XFD-0900J | 6-FD-X-930-150-5 |
| XFD-0900K | 6-FD-X-931-150-5 |
| XFD-0900L | 6-FD-X-932-150-5 |
| XFD-0900M | 6-FD-X-933-150-5 |
| XFD-0900N | 6-FD-X-934-150-5 |
| XFD-0900O | 6-FD-X-935-150-5 |
| XFD-0900P | 6-FD-X-936-150-5 |

| SCHEDULE II | |
|---|---|
| VALVE NUMBER | LINE NUMBER |
| XFD-0900A | 6-FD-X-921-150-5 |
| XFD-0900B | 6-FD-X-922-150-5 |
| XFD-0900C | 6-FD-X-923-150-5 |
| XFD-0900D | 6-FD-X-924-150-5 |
| XFD-0900E | 6-FD-X-925-150-5 |
| XFD-0900F | 6-FD-X-926-150-5 |
| XFD-0900G | 6-FD-X-927-150-5 |
| XFD-0900H | 6-FD-X-928-150-5 |




SEE INSTRUMENTATION & CONTROL DIAGRAM FOR PUMP START-STOP SEQUENCE

TYPICAL SUMP DETAIL

FSAR FIGURE 9.3-7

THIS DRAWING CREATED ELECTRONICALLY

DRAWING 2323-M1-0236-01 REV CP-4
HAS BEEN SPLIT INTO THE FOLLOWING SHEETS:

| |
|---|
| M1-0236-01 |
| M1-0236-01A |
| |
| |
| |

CLASS II

LUMINANT
CPNPP
GLEN ROSE, TEXAS

FLOW DIAGRAM
VENTS AND DRAINS SYSTEM
AUXILIARY BUILDING

| DWG. NO. | SH. NO. | REV. |
|---|---|---|
| M1-0236 | 01 | CP-18 |

FINAL PRINT

me679000.dgn

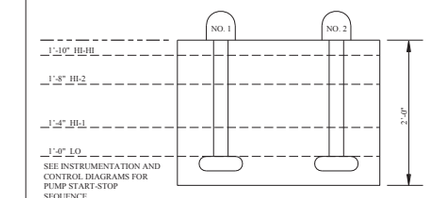
AUXILIARY BUILDING SOUTHERN HALF

| REV | DWN | CHKD | APVD | REMARKS |
|---|---|---|---|---|
| CP-13 | JRMC 04-10 2009 | DJL 04-11 2009 | | THIS DRAWING REVISED TO INCORPORATE DESIGN CHANGE FDA 2009-003898-01-00 PER SK-0001-09-003898-01-00. |

NOTES:

1. FOR SWITCH LEVEL SYSTEM AND PUMP CONTROL SEE TYPICAL SUMP DETAIL.
2. THE BOXED IN NUMBERS DESIGNATE THE SPECIFIC ROOM NUMBERS ON THE PLUMBING DRAWING SHOWING VARIOUS DRAIN LOCATIONS.
3. FOR DRAIN SYMBOLS SEE M1-0236, NOTE 4.
4. ALL PIPING IS NON-NUCLEAR SAFETY CLASS.
5. FOR MECHANICAL SYMBOLS AND NOTES SEE DRAWING M1-0200.
6. DELETED
7. PIPING DESIGNATED FD IS PROCURED BY SPECIFICATION MS-73 AND PIPING DESIGNATED VD IS PROCURED BY SPECIFICATION MS-44B.
8. EMERG RECIRC AND EMREG PRESS UNIT DRAINS AT EL 854'-4" ARE EQUIPPED WITH BALL FLOATS TO MITIGATE UNFILTERED AIR INLEAKAGE INTO ROOM 150A PER FDA 1999-002168-01.
9. BACKSPLASH ENCLOSURE MAY BE INSTALLED PER FDA-2009-003898-01.

R




TYPICAL SUMP DETAIL

FSAR FIGURE 9.3-7

THIS DRAWING CREATED ELECTRONICALLY

DRAWING 2323-M1-0236-01 REV CP-4
HAS BEEN SPLIT INTO THE FOLLOWING SHEETS:
M1-0236-01
M1-0236-01A

CLASS II

LUMINANT
CPNPP
GLEN ROSE, TEXAS

FLOW DIAGRAM
VENTS & DRAINS SYSTEM
AUXILIARY BUILDING

DWG. NO. M1-0236 | SH. NO. 01A | REV. CP-13

SSSSSSDATSSSSSS

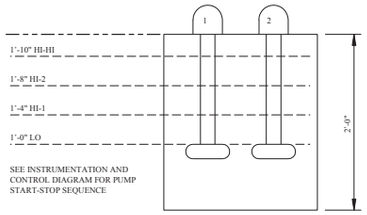
me934500.dgn A M1-0236-01A

< FINAL PRINT >

| REV | DWN | CHKD | APVD | REMARKS |
|---|---|---|---|---|
| CP-17 | GA 09-23-1999 | | | THIS DRAWING REVISED TO INCORPORATE DESIGN CHANGE DCN 12707 REV 0. |

NOTES:

1. FOR SWITCH LEVEL SYSTEM AND PUMP CONTROL SEE TYPICAL SUMP DETAIL.
2. THE BOXED IN NUMBERS DESIGNATE THE SPECIFIC ROOM NUMBERS ON THE PLUMBING DRAWINGS SHOWING VARIOUS DRAIN LOCATIONS.
3. FOR DRAIN SYMBOLS SEE M1-0236, NOTE 4.
4. ALL PIPING IS NON-NUCLEAR SAFETY CLASS.
5. FOR MECHANICAL SYMBOLS AND NOTES SEE DRAWING M1-0200.
6. PIPING DESIGNATED FD IS PROCURED BY SPECIFICATION MS-73 AND PIPING DESIGNATED VD IS PROCURED BY SPECIFICATION MS-44B.
7. PIPING IS PLUGGED BELOW FLOOR.




TYPICAL SUMP DETAIL

FSAR FIGURE 9.3-7

THIS DRAWING CREATED ELECTRONICALLY

DRAWING 2323-M1-0236-02 REV CP-6
HAS BEEN SPLIT INTO THE FOLLOWING SHEETS:
M1-0236-02
M1-0236-02A

CLASS II

LUMINANT
CPSES
GLEN ROSE, TEXAS

FLOW DIAGRAM
VENTS AND DRAINS SYSTEM
AUXILIARY BUILDING

| DWG. NO. | SH. NO. | REV. |
|---|---|---|
| M1-0236 | 02 | CP-17 |

FINAL PRINT

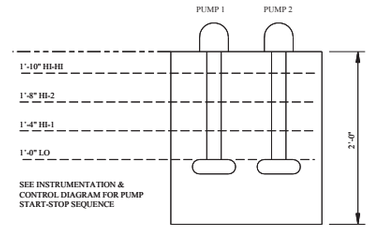
REF CRD CP-14 2/16/98

me0001s2.dgn

| REV. | DWN | CHKD | APVD | REMARKS |
|---|---|---|---|---|
| CP-13 | DLK 05-13-2010 | EHS 05-26-2010 | | THIS DRAWING REVISED TO INCORPORATE DESIGN CHANGE FDA 2003-001871-03-00 PER SK-0001-01-001871-03-00. |

NOTES:

1. FOR SWITCH LEVEL SYSTEM AND PUMP CONTROL SEE TYPICAL SUMP DETAIL.
2. THE BOXED IN NUMBERS DESIGNATE THE SPECIFIC ROOM NUMBERS ON THE PLUMBING DRAWINGS SHOWING VARIOUS DRAIN LOCATIONS.
3. FOR DRAIN SYMBOLS SEE M1-0236, NOTE 4.
4. ALL PIPING IS NON-NUCLEAR SAFETY CLASS.
5. FOR MECHANICAL SYMBOLS AND NOTES SEE DRAWING M1-0200.
6. PIPING DESIGNATED FD IS PROCURED BY SPECIFICATION MS-73 AND PIPING DESIGNATED VD IS PROCURED BY SPECIFICATION MS-44A.
7. PIPING IS PLUGGED BELOW FLOOR.
8. EMERG RECIRC AND EMREG PRESS UNIT DRAINS AT EL 854'-4" ARE EQUIPPED WITH BALL FLOATS TO MITIGATE UNFILTERED AIR INLEAKAGE INTO ROOM 150 PER FDA 1999-002168-01.




TYPICAL SUMP DETAIL

| DRAWING 2323-M1-0236-02 | REV CP-6 |
|---|---|
| HAS BEEN SPLIT INTO THE FOLLOWING SHEETS: | |
| M1-0236-02 | |
| M1-0236-02A | |

CLASS II

LUMINANT
CPNPP
GLEN ROSE, TEXAS

FLOW DIAGRAM
VENTS AND DRAIN SYSTEM
AUXILIARY BUILDING

| DWG. NO. | SH. NO. | REV. |
|---|---|---|
| M1-0236 | 02A | CP-13 |

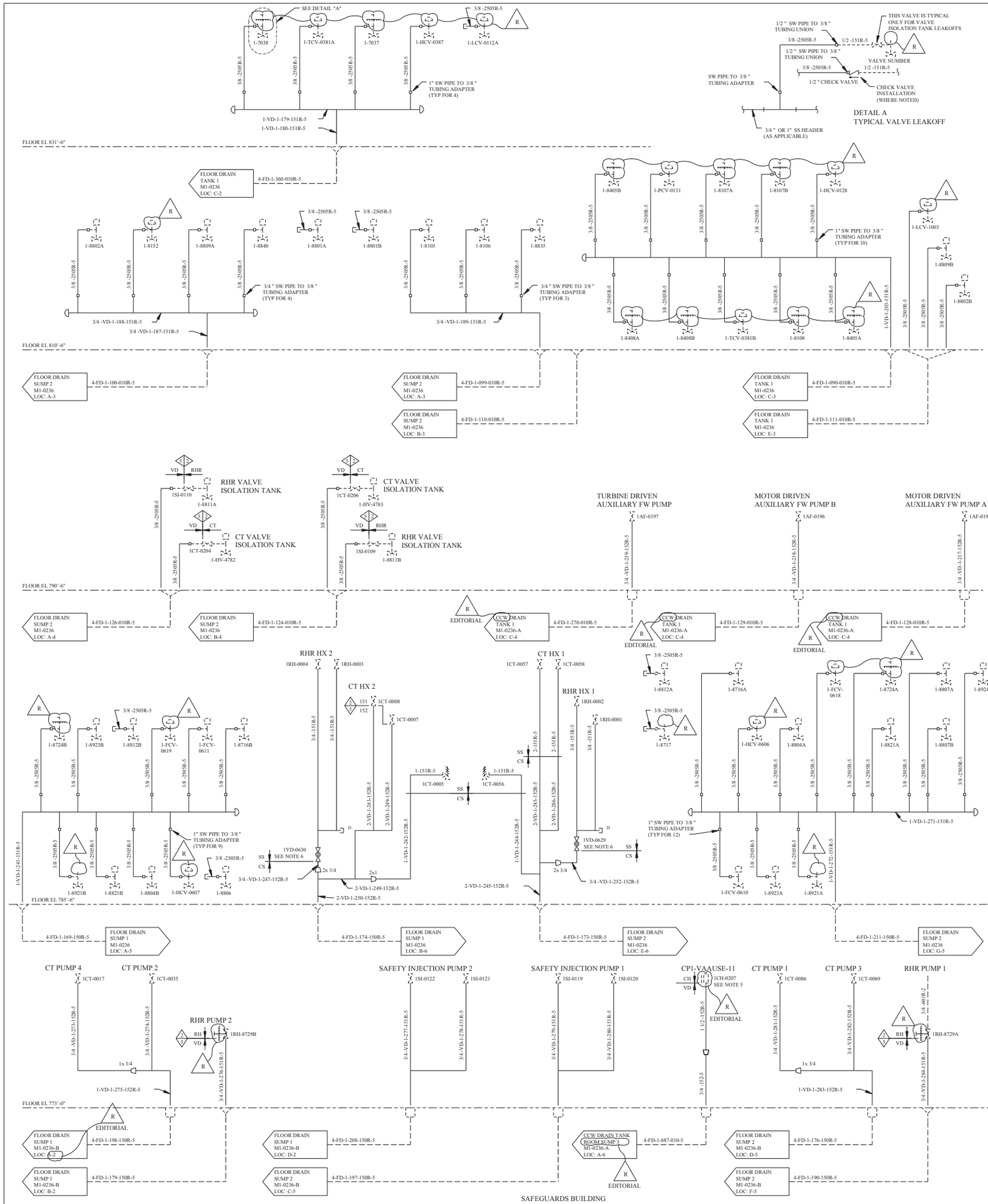
FINAL PRINT

FSAR FIGURE 9.3-7

THIS DRAWING CREATED ELECTRONICALLY

REF CKD CP-10 05/14/98

me996500.dgn A M1-0236-02A







DETAIL A
TYPICAL VALVE LEAKOFF

VALVE LEAKOFFS - SAFEGUARDS BUILDING

| VALVE NO. | LOCATION | REFERENCE | | |
|---|---|---|---|---|
| 1-7037 | B-1 | CVCS | M1-0256-A | (LOC: E-4) |
| 1-7038 | B-1 | CVCS | M1-0256-A | (LOC: G-6) |
| 1-8105 | C-2 | CVCS | M1-0255-01 | (LOC: A-2) |
| 1-8106 | C-2 | CVCS | M1-0255-01 | (LOC: A-2) |
| 1-8107A | D-1 | CVCS | M1-0254 | (LOC: A-2) |
| 1-8107B | D-1 | CVCS | M1-0254 | (LOC: A-1) |
| 1-8108 | E-2 | CVCS | M1-0254 | (LOC: A-1) |
| 1-8152 | A-2 | CVCS | M1-0253-A | (LOC: G-2) |
| 1-8405A | E-2 | CVCS | M1-0254 | (LOC: A-1) |
| 1-8405B | D-1 | CVCS | M1-0254 | (LOC: A-2) |
| 1-8408A | D-2 | CVCS | M1-0254 | (LOC: C-2) |
| 1-8408B | D-2 | CVCS | M1-0254 | (LOC: C-1) |
| 1-8716A | D-4 | RHR | M1-0260 | (LOC: A-3) |
| 1-8716B | B-4 | RHR | M1-0260 | (LOC: A-4) |
| 1-8717 | D-4 | RHR | M1-0260 | (LOC: B-4) |
| 1-8724A | E-4 | RHR | M1-0260 | (LOC: D-2) |
| 1-8724B | A-4 | RHR | M1-0260 | (LOC: D-4) |
| 1-8801A | B-2 | SIS | M1-0261 | (LOC: C-2) |
| 1-8801B | B-2 | SIS | M1-0261 | (LOC: C-2) |
| 1-8802A | A-2 | SIS | M1-0263-A | (LOC: A-1) |
| 1-8802B | E-2 | SIS | M1-0263-A | (LOC: A-3) |
| 1-8804A | E-4 | SIS | M1-0261 | (LOC: G-4) |
| 1-8804B | A-5 | SIS | M1-0263-A | (LOC: F-3) |
| 1-8806 | B-5 | SIS | M1-0263-A | (LOC: G-2) |
| 1-8807A | E-4 | SIS | M1-0261 | (LOC: E-4) |
| 1-8807B | E-4 | SIS | M1-0261 | (LOC: G-5) |
| 1-8809A | B-2 | SIS | M1-0263-B | (LOC: A-1) |
| 1-8809B | E-2 | SIS | M1-0263-B | (LOC: A-3) |
| 1-8811A | B-3 | SIS | M1-0263-B | (LOC: C-6) |
| 1-8811B | B-3 | SIS | M1-0263-B | (LOC: C-5) |
| 1-8812A | D-4 | SIS | M1-0263-B | (LOC: F-2) |
| 1-8812B | A-4 | SIS | M1-0263-B | (LOC: F-3) |
| 1-8821A | E-4 | SIS | M1-0263-A | (LOC: C-3) |
| 1-8821B | A-5 | SIS | M1-0263-A | (LOC: C-4) |
| 1-8921A | E-5 | SIS | M1-0263-A | (LOC: C-2) |
| 1-8921B | A-5 | SIS | M1-0263-A | (LOC: C-3) |
| 1-8923A | D-5 | SIS | M1-0263-A | (LOC: F-2) |
| 1-8923B | A-4 | SIS | M1-0263-A | (LOC: F-3) |
| 1-8924 | E-4 | SIS | M1-0261 | (LOC: E-4) |
| 1-8835 | C-2 | SIS | M1-0263-A | (LOC: A-4) |
| 1-8840 | B-2 | SIS | M1-0263-B | (LOC: A-2) |
| 1-FCV-0610 | D-5 | RHR | M1-0260 | (LOC: E-1) |
| 1-FCV-0611 | B-4 | RHR | M1-0260 | (LOC: E-6) |
| 1-FCV-0618 | E-4 | RHR | M1-0260 | (LOC: C-3) |
| 1-FCV-0619 | A-4 | RHR | M1-0260 | (LOC: C-6) |
| 1-HCV-0128 | E-1 | CVCS | M1-0254 | (LOC: A-2) |
| 1-HCV-0387 | C-1 | CVCS | M1-0256-A | (LOC: G-6) |
| 1-HCV-0606 | D-4 | RHR | M1-0260 | (LOC: A-2) |
| 1-HCV-0607 | A-5 | RHR | M1-0260 | (LOC: A-4) |
| 1-HIV-4782 | B-3 | CT | M1-0232-A | (LOC: D-5) |
| 1-HIV-4783 | B-3 | CT | M1-0232-A | (LOC: D-6) |
| 1-LCV-1003 | E-2 | WP | M1-0264 | (LOC: E-3) |
| 1-LCV-0112A | C-1 | CVCS | M1-0254 | (LOC: F-3) |
| 1-PCV-0131 | D-1 | CVCS | M1-0254 | (LOC: C-1) |
| 1-TCV-0381A | B-1 | CVCS | M1-0256-A | (LOC: G-6) |
| 1-TCV-0381B | D-2 | CVCS | M1-0254 | (LOC: A-1) |

A-5 R EDITORIAL

EQUIPMENT DRAINS - SAFEGUARDS BUILDING

| VALVE NO. | LOCATION | REFERENCE | | |
|---|---|---|---|---|
| 1AF-0193 | E-3 | AFS | M1-0206-01 | (LOC: B-2) |
| 1AF-0196 | E-3 | AFS | M1-0206-01 | (LOC: B-3) |
| 1AF-0197 | D-3 | AFS | M1-0206-01 | (LOC: B-4) |
| 1CH-0207 | D-5 | CH | M1-0311-A | (LOC: E-6) |
| 1CT-0005 | C-4 | CT | M1-0232 | (LOC: C-3) |
| 1CT-0007 | B-4 | CT | M1-0232 | (LOC: C-3) |
| 1CT-0008 | B-4 | CT | M1-0232 | (LOC: C-3) |
| 1CT-0017 | A-5 | CT | M1-0232 | (LOC: G-3) |
| 1CT-0035 | A-5 | CT | M1-0232 | (LOC: G-3) |
| 1CT-0056 | C-4 | CT | M1-0232 | (LOC: C-5) |
| 1CT-0057 | C-4 | CT | M1-0232 | (LOC: C-5) |
| 1CT-0058 | C-4 | CT | M1-0232 | (LOC: C-5) |
| 1CT-0069 | E-5 | CT | M1-0232 | (LOC: G-3) |
| 1CT-0086 | E-5 | CT | M1-0232 | (LOC: G-3) |
| 1CT-0204 | B-3 | CT | M1-0232-A | (LOC: D-5) |
| 1CT-0206 | B-3 | CT | M1-0232-A | (LOC: D-6) |
| 1RH-0001 | D-4 | RHR | M1-0260 | (LOC: C-3) |
| 1RH-0002 | C-4 | RHR | M1-0260 | (LOC: C-3) |
| 1RH-0003 | B-4 | RHR | M1-0260 | (LOC: B-5) |
| 1RH-0004 | B-4 | RHR | M1-0260 | (LOC: B-5) |
| 1RH-8729A | E-6 | RHR | M1-0260 | (LOC: D-4) |
| 1RH-8729B | B-6 | RHR | M1-0260 | (LOC: D-6) |
| 1SI-0109 | B-3 | SIS | M1-0263-B | (LOC: C-5) |
| 1SI-0110 | A-3 | SIS | M1-0263-B | (LOC: C-6) |
| 1SI-0119 | C-5 | SIS | M1-0263-A | (LOC: F-3) |
| 1SI-0120 | D-5 | SIS | M1-0263-A | (LOC: F-3) |
| 1SI-0121 | C-5 | SIS | M1-0263-A | (LOC: F-4) |
| 1SI-0122 | C-5 | SIS | M1-0263-A | (LOC: F-4) |

EDITORIAL

| REV | DWN | CHK | APVD | REMARKS |
|---|---|---|---|---|
| CP-15 | DLK 08-12 2008 | MM 08-19 2008 | | THIS DRAWING REVISED TO INCORPORATE DESIGN CHANGE FDA 2008-002198-01-00 PER SK-0002-08-002198-01-00. EDITORIAL CHANGES AS NOTED. |

NOTES:

1. FOR MECHANICAL SYMBOLS AND NOTES SEE DRAWING M1-0200.
2. FOR DRAIN SYMBOLS SEE M1-0236 NOTE 4.
3. ALL PIPING IS NON-NUCLEAR SAFETY CLASS.
4. PIPING DESIGNATED FD IS PROCURED BY SPECIFICATION MS-73 AND PIPING DESIGNATED VD IS PROCURED BY SPECIFICATION MS-44A.
5. INTERNALS REMOVED FROM VALVE 1CH-0207.
6. VALVES 1VD-0629 AND 1VD-0630 ARE THE NORMAL DRAIN PATH FOR RHR HEAT EXCHANGER DRAINING.

FSAR FIGURE 9.3-7

THIS DRAWING CREATED ELECTRONICALLY

CLASS II

LUMINANT
CPNPP
GLEN ROSE, TEXAS

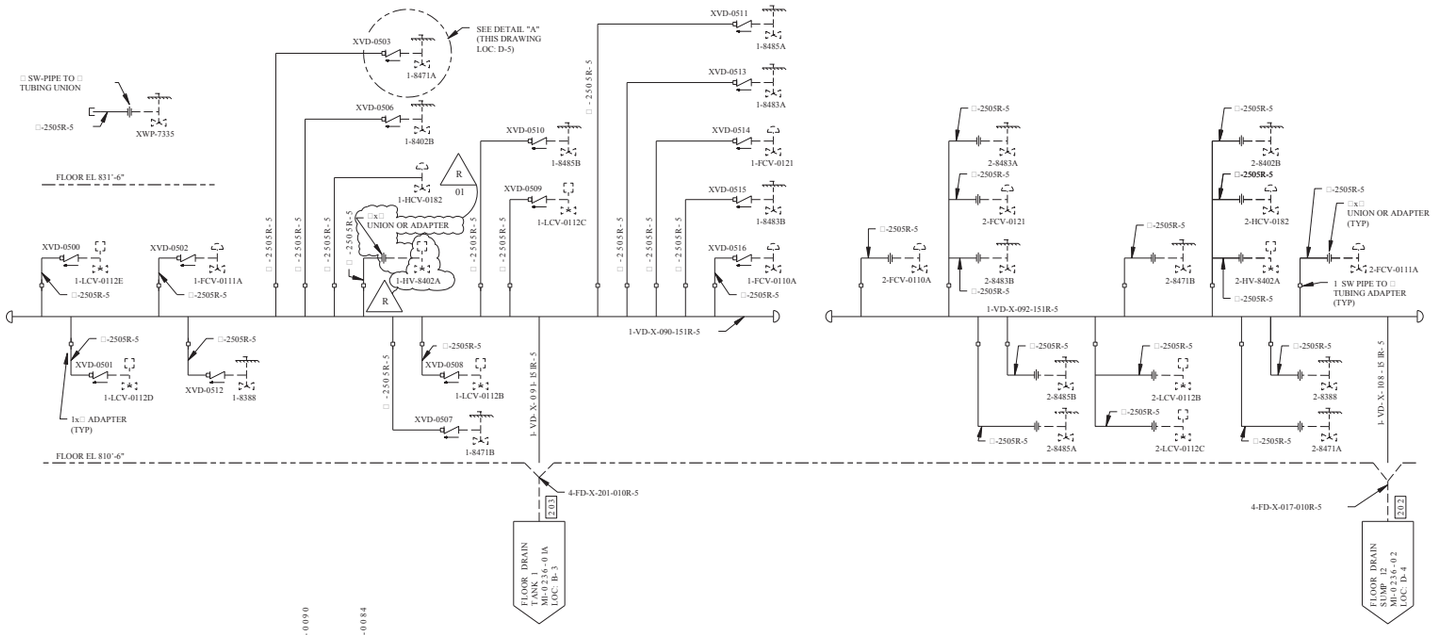
FLOW DIAGRAM
VENTS AND DRAINS SYSTEM
SAFEGUARDS BUILDING

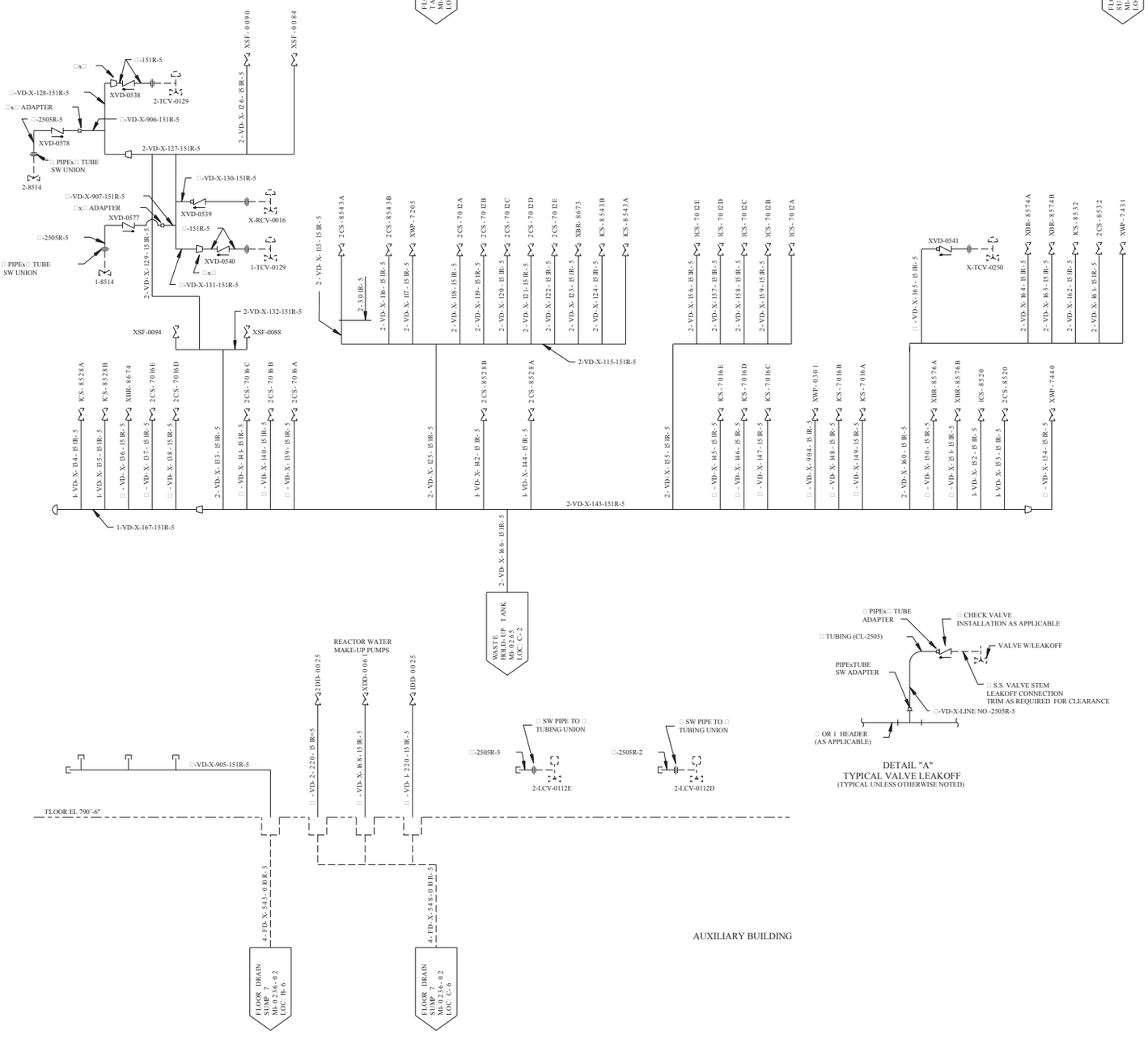
| DWG. NO. | SH. NO. | REV. |
|---|---|---|
| M1-0236 | 03 | CP-15 |

REF CHKD 05/05/2003

SSSSSSDA TSSSSSS

me903500.dgn A M1-0236-03 B C D E F G < FINAL PRINT > H







DETAIL "A"
TYPICAL VALVE LEAKOFF
(TYPICAL UNLESS OTHERWISE NOTED)

VALVE LEAKOFFS - AUXILIARY BUILDING

| VALVE NO. | LOCATION | REFERENCE | |
|---|---|---|---|
| R 1-8388 | A-2 | CVCS, F.D. | M1-0255-01 (LOC: C-2) |
| 1-HV-8402A | B-1 | CVCS, F.D. | M1-0255-01 (LOC: B-2) |
| 1-8402B | B-1 | CVCS, F.D. | M1-0255-01 (LOC: B-2) |
| 1-8471A | B-1 | CVCS, F.D. | M1-0255-01 (LOC: G-3) |
| 1-8471B | B-2 | CVCS, F.D. | M1-0255-01 (LOC: G-5) |
| 1-8483A | C-1 | CVCS, F.D. | M1-0255-01 (LOC: D-3) |
| 1-8483B | C-1 | CVCS, F.D. | M1-0255-01 (LOC: D-3) |
| 1-8485A | C-1 | CVCS, F.D. | M1-0255-01 (LOC: D-3) |
| 1-8485B | B-1 | CVCS, F.D. | M1-0255-01 (LOC: C-5) |
| 1-8514 | A-3 | CVCS, F.D. | M1-0254 (LOC: G-6) |
| 1-FCV-0110A | C-1 | CVCS, F.D. | M1-0255-02 (LOC: E-5) |
| 1-FCV-0111A | A-1 | CVCS, F.D. | M1-0255-02 (LOC: C-1) |
| 1-FCV-0121 | C-1 | CVCS, F.D. | M1-0255-01 (LOC: D-3) |
| 1-HCV-0182 | B-1 | CVCS, F.D. | M1-0255-01 (LOC: B-2) |
| 1-LCV-0112B | B-2 | CVCS, F.D. | M1-0255 (LOC: E-5) |
| 1-LCV-0112C | B-1 | CVCS, F.D. | M1-0255 (LOC: D-5) |
| 1-LCV-0112D | A-2 | CVCS, F.D. | M1-0255 (LOC: A-5) |
| 1-LCV-0112E | A-1 | CVCS, F.D. | M1-0255 (LOC: D-4) |
| 1-TCV-0129 | B-3 | CVCS, F.D. | M1-0254 (LOC: G-2) |
| 2-8388 | E-2 | CVCS, F.D. | M2-0254 (LOC: G-4) |
| 2-HV-8402A | E-1 | CVCS, F.D. | M2-0255 (LOC: B-1) |
| 2-8402B | E-1 | CVCS, F.D. | M2-0255 (LOC: B-1) |
| 2-8471A | E-2 | CVCS, F.D. | M2-0254 (LOC: D-5) |
| 2-8471B | D-1 | CVCS, F.D. | M2-0254 (LOC: D-6) |
| 2-8483A | D-1 | CVCS, F.D. | M2-0254 (LOC: G-5) |
| 2-8483B | D-1 | CVCS, F.D. | M2-0254 (LOC: G-5) |
| 2-8485A | D-2 | CVCS, F.D. | M2-0254 (LOC: G-5) |
| 2-8485B | D-2 | CVCS, F.D. | M2-0254 (LOC: G-6) |
| 2-8514 | A-3 | CVCS, F.D. | M2-0253-A (LOC: D-4) |
| 2-FCV-0110A | C-1 | CVCS, F.D. | M2-0255-02 (LOC: C-1) |
| 2-FCV-0111A | E-1 | CVCS, F.D. | M2-0255-02 (LOC: C-1) |
| 2-FCV-0121 | D-1 | CVCS, F.D. | M2-0254 (LOC: G-5) |
| 2-HCV-0182 | E-1 | CVCS, F.D. | M2-0255 (LOC: B-1) |
| 2-LCV-0112B | D-2 | CVCS, F.D. | M2-0254 (LOC: D-3) |
| 2-LCV-0112C | D-2 | CVCS, F.D. | M2-0254 (LOC: D-4) |
| 2-LCV-0112D | C-5 | CVCS, F.D. | M2-0254 (LOC: B-4) |
| 2-LCV-0112E | C-5 | CVCS, F.D. | M2-0254 (LOC: B-5) |
| 2-TCV-0129 | A-3 | CVCS, F.D. | M2-0253-A (LOC: E-3) |
| X-RCV-0016 | B-3 | BRS | M1-0259 (LOC: A-4) |
| X-TCV-0250 | E-3 | BRS | M1-0258 (LOC: B-1) |
| XWP-7335 | A-1 | WP | M1-0268 (LOC: A-6) |

EQUIPMENT DRAIN VALVES AUXILIARY BUILDING

| VALVE NO. | LOCATION | REFERENCE | |
|---|---|---|---|
| 1CS-7012A | D-3 | CVCS | M1-0256 (LOC: F-3) |
| 1CS-7012B | D-3 | CVCS | M1-0256 (LOC: E-3) |
| 1CS-7012C | C-3 | CVCS | M1-0256 (LOC: D-3) |
| 1CS-7012D | C-3 | CVCS | M1-0256 (LOC: C-3) |
| 1CS-7012E | C-3 | CVCS | M1-0256 (LOC: B-3) |
| 1CS-7016A | D-4 | CVCS | M1-0256 (LOC: E-4) |
| 1CS-7016B | D-4 | CVCS | M1-0256 (LOC: D-4) |
| 1CS-7016C | D-4 | CVCS | M1-0256 (LOC: C-4) |
| 1CS-7016D | C-4 | CVCS | M1-0256 (LOC: B-4) |
| 1CS-7016E | C-4 | CVCS | M1-0256 (LOC: A-4) |
| 1CS-8520 | D-4 | CVCS | M1-0254 (LOC: G-6) |
| 1CS-8528A | A-4 | CVCS | M1-0254 (LOC: D-6) |
| 1CS-8528B | A-4 | CVCS | M1-0254 (LOC: B-6) |
| 1CS-8532 | E-3 | CVCS | M1-0254 (LOC: G-5) |
| 1CS-8543A | C-3 | CVCS | M1-0254 (LOC: D-5) |
| 1CS-8543B | C-3 | CVCS | M1-0254 (LOC: B-5) |
| 2CS-7012A | B-3 | CVCS | M2-0256-B (LOC: B-2) |
| 2CS-7012B | B-3 | CVCS | M2-0256-B (LOC: C-2) |
| 2CS-7012C | C-3 | CVCS | M2-0256-B (LOC: D-2) |
| 2CS-7012D | C-3 | CVCS | M2-0256-B (LOC: E-2) |
| 2CS-7012E | C-3 | CVCS | M2-0256-B (LOC: F-2) |
| 2CS-7016A | B-4 | CVCS | M2-0256-B (LOC: B-4) |
| 2CS-7016B | B-4 | CVCS | M2-0256-B (LOC: C-4) |
| 2CS-7016C | B-4 | CVCS | M2-0256-B (LOC: D-4) |
| 2CS-7016D | A-4 | CVCS | M2-0256-B (LOC: E-4) |
| 2CS-7016E | A-4 | CVCS | M2-0256-B (LOC: F-4) |
| 2CS-8520 | E-4 | CVCS | M2-0253-A (LOC: D-6) |
| 2CS-8528A | C-4 | CVCS | M2-0253-A (LOC: B-4) |
| 2CS-8528B | B-4 | CVCS | M2-0253-A (LOC: A-4) |
| 2CS-8532 | E-3 | CVCS | M2-0253-A (LOC: D-5) |
| 2CS-8543A | B-3 | CVCS | M2-0253-A (LOC: D-3) |
| 2CS-8543B | B-3 | CVCS | M2-0253-A (LOC: B-3) |
| XBR-8574A | E-3 | BRS | M1-0258 (LOC: B-1) |
| XBR-8574B | E-3 | BRS | M1-0258 (LOC: D-1) |
| XBR-8576A | D-4 | BRS | M1-0258 (LOC: C-3) |
| XBR-8576B | D-4 | BRS | M1-0258 (LOC: F-3) |
| XBR-8673 | C-3 | BRS | M1-0259 (LOC: B-1) |
| XBR-8674 | A-4 | BRS | M1-0259 (LOC: B-3) |
| XSF-0084 | B-3 | SFP | M1-0235-01 (LOC: A-2) |
| XSF-0088 | B-4 | SFP | M1-0235-01 (LOC: A-4) |
| XSF-0090 | B-3 | SFP | M1-0235-01 (LOC: G-2) |
| XSF-0094 | A-4 | SFP | M1-0235-01 (LOC: G-4) |
| XWP-0301 | D-4 | WPS | M1-0265 (LOC: C-1) |
| XWP-7205 | B-3 | WPS | M1-0265 (LOC: E-4) |
| XWP-7431 | E-3 | WPS | M1-0266 (LOC: A-4) |
| XWP-7440 | E-4 | WPS | M1-0266 (LOC: A-5) |
| 1DD-0025 | B-5 | DD | M1-0241-01 (LOC: C-3) |
| XDD-0061 | B-5 | DD | M1-0241-01 (LOC: C-2) |
| 2DD-0025 | B-5 | DD | M2-0241 (LOC: D-5) |

| REV | DWN | CHK'D | APV'D | REMARKS |
|---|---|---|---|---|
| CP-15 | MHF 03-12-2013 | GAW 03-12-2013 | | THIS DRAWING REVISED TO INCORPORATE DESIGN CHANGE FDA 2010-000172-01-04 PER SK-00009-10-000172-01-01. |

NOTES:

1. FOR MECHANICAL SYMBOLS AND NOTES SEE DRAWING M1-0200.
2. FOR DRAIN SYMBOLS SEE M1-0236 NOTE 4.
3. ALL PIPING IS NON-NUCLEAR SAFETY CLASS.
4. PIPING DESIGNATED FD IS PROCURED BY SPECIFICATION MS-73 AND PIPING DESIGNATED VD IS PROCURED BY SPECIFICATION MS-44A.
5. DELETED

FSAR FIGURE 9.3-7

THIS DRAWING CREATED ELECTRONICALLY

CLASS II

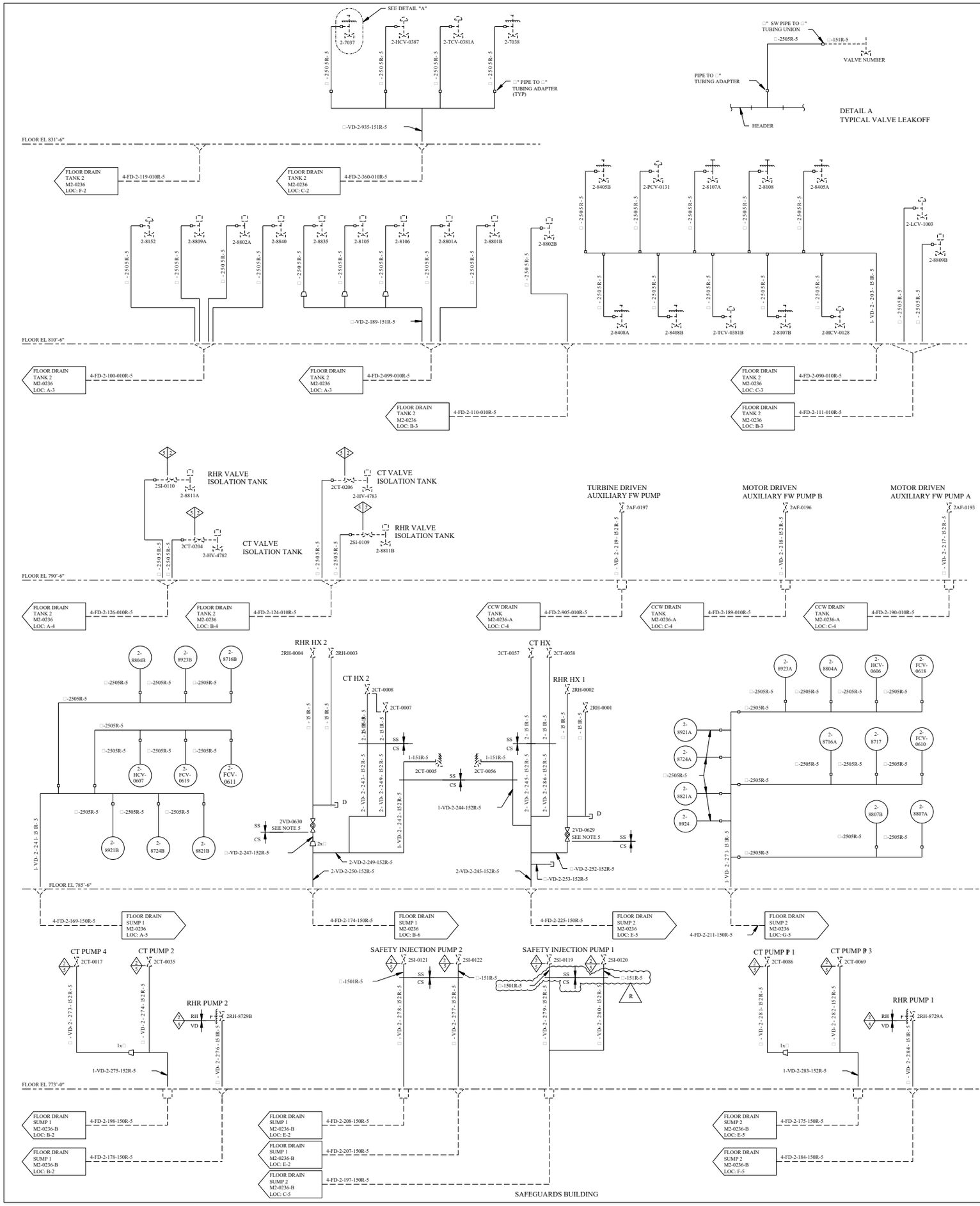
LUMINANT
CPNPP
GLEN ROSE, TEXAS

VENTS & DRAINS SYSTEM
FLOW DIAGRAM
AUXILIARY BUILDING LEAK-OFFS

| DWG. NO. | SH. NO. | REV. |
|---|---|---|
| M1-0236 | 04 | CP-15 |

$$$$$$$DATE$$$$$$$

me903600.dgn A M1-0236-04 B C D E F G < FINAL PRINT > H




## VALVE LEAKOFFS - SAFEGUARDS BUILDING

| VALVE NO. | LOCATION | | REFERENCE | |
|---|---|---|---|---|
| 2-7037 | B-1 | CS | M2-0256-A | (LOC: E-3) |
| 2-7038 | C-1 | CS | M2-0256-A | (LOC: F-6) |
| 2-8105 | C-2 | CS | M2-0255 | (LOC: D-1) |
| 2-8106 | C-2 | CS | M2-0255 | (LOC: C-1) |
| 2-8107A | D-1 | CS | M2-0253-A | (LOC: A-2) |
| 2-8107B | D-2 | CS | M2-0253-A | (LOC: A-1) |
| 2-8108 | D-1 | CS | M2-0253-A | (LOC: A-1) |
| 2-8152 | A-2 | CS | M2-0253 | (LOC: G-3) |
| 2-8405A | E-2 | CS | M2-0253-A | (LOC: C-2) |
| 2-8405B | D-1 | CS | M2-0253-A | (LOC: D-1) |
| 2-8408A | D-2 | CS | M2-0253-A | (LOC: E-1) |
| 2-8408B | D-2 | CS | M2-0253-A | (LOC: F-1) |
| 2-8716A | E-4 | RH | M2-0260 | (LOC: A-3) |
| 2-8716B | B-4 | RH | M2-0260 | (LOC: A-4) |
| 2-8717 | E-4 | RH | M2-0260 | (LOC: A-3) |
| 2-8724A | D-4 | RH | M2-0260 | (LOC: D-2) |
| 2-8724B | A-5 | RH | M2-0260 | (LOC: D-5) |
| 2-8801A | C-2 | SI | M2-0261 | (LOC: E-5) |
| 2-8801B | C-2 | SI | M2-0261 | (LOC: E-5) |
| 2-8804A | E-4 | SI | M2-0261 | (LOC: A-5) |
| 2-8804B | A-4 | SI | M2-0262 | (LOC: B-4) |
| 2-8807A | E-5 | SI | M2-0261 | (LOC: C-6) |
| 2-8807B | E-5 | SI | M2-0261 | (LOC: A-6) |
| 2-8809A | B-2 | SI | M2-0263-A | (LOC: F-1) |
| 2-8809B | E-2 | SI | M2-0263-A | (LOC: F-3) |
| 2-8811A | B-3 | SI | M2-0263-A | (LOC: C-5) |
| 2-8811B | B-3 | SI | M2-0263-A | (LOC: C-6) |
| 2-8821A | D-4 | SI | M2-0262 | (LOC: E-3) |
| 2-8821B | B-5 | SI | M2-0262 | (LOC: E-4) |
| 2-8921A | D-4 | SI | M2-0262 | (LOC: D-1) |
| 2-8921B | A-5 | SI | M2-0262 | (LOC: D-4) |
| 2-8923A | E-4 | SI | M2-0262 | (LOC: A-1) |
| 2-8923B | B-4 | SI | M2-0262 | (LOC: A-4) |
| 2-8924 | D-5 | SI | M2-0261 | (LOC: C-5) |
| 2-8840 | B-2 | SI | M2-0263-A | (LOC: F-2) |
| 2-8802A | B-2 | SI | M2-0262 | (LOC: F-1) |
| 2-8802B | C-2 | SI | M2-0262 | (LOC: F-4) |
| 2-8835 | B-2 | SI | M2-0262 | (LOC: F-3) |
| 2-FCV-0610 | E-4 | RH | M2-0260 | (LOC: G-1) |
| 2-FCV-0611 | B-4 | RH | M2-0260 | (LOC: G-6) |
| 2-FCV-0618 | E-4 | RH | M2-0260 | (LOC: C-3) |
| 2-FCV-0619 | A-4 | RH | M2-0260 | (LOC: C-6) |
| 2-HCV-0128 | E-2 | CS | M2-0253-A | (LOC: A-1) |
| 2-HCV-0387 | C-1 | CS | M2-0256-A | (LOC: E-6) |
| 2-HCV-0606 | E-4 | RH | M2-0260 | (LOC: A-2) |
| 2-HCV-0607 | A-4 | RH | M2-0260 | (LOC: A-4) |
| 2-HV-4782 | B-3 | CT | M2-0232-A | (LOC: D-5) |
| 2-HV-4783 | B-3 | CT | M2-0232-A | (LOC: D-6) |
| 2-LCV-1003 | E-2 | WP | M2-0264 | (LOC: F-2) |
| 2-PCV-0131 | D-1 | CS | M2-0253-A | (LOC: E-1) |
| 2-TCV-0381A | C-1 | CS | M2-0256-A | (LOC: F-5) |
| 2-TCV-0381B | D-2 | CS | M2-0253-A | (LOC: A-2) |

## EQUIPMENT DRAINS - SAFEGUARDS BUILDING

| VALVE NO. | LOCATION | | REFERENCE | |
|---|---|---|---|---|
| 2AF-0193 | E-3 | AF | M2-0206-01 | (LOC: C-2) |
| 2AF-0196 | E-3 | AF | M2-0206-01 | (LOC: C-3) |
| 2AF-0197 | D-3 | AF | M2-0206-01 | (LOC: C-5) |
| 2CT-0005 | C-4 | CT | M2-0232 | (LOC: C-3) |
| 2CT-0007 | B-4 | CT | M2-0232 | (LOC: C-3) |
| 2CT-0008 | B-4 | CT | M2-0232 | (LOC: C-3) |
| 2CT-0017 | A-5 | CT | M2-0232 | (LOC: G-3) |
| 2CT-0035 | A-5 | CT | M2-0232 | (LOC: G-3) |
| 2CT-0056 | C-4 | CT | M2-0232 | (LOC: C-5) |
| 2CT-0057 | C-4 | CT | M2-0232 | (LOC: C-5) |
| 2CT-0058 | C-4 | CT | M2-0232 | (LOC: C-5) |
| 2CT-0069 | E-5 | CT | M2-0232 | (LOC: G-3) |
| 2CT-0086 | E-5 | CT | M2-0232 | (LOC: G-3) |
| 2CT-0204 | B-3 | CT | M2-0232-A | (LOC: D-5) |
| 2CT-0206 | B-3 | CT | M2-0232-A | (LOC: D-6) |
| 2RH-0001 | D-4 | RH | M2-0260 | (LOC: C-3) |
| 2RH-0002 | C-4 | RH | M2-0260 | (LOC: C-3) |
| 2RH-0003 | B-4 | RH | M2-0260 | (LOC: C-6) |
| 2RH-0004 | B-4 | RH | M2-0260 | (LOC: C-6) |
| 2RH-8729A | E-6 | RH | M2-0260 | (LOC: E-3) |
| 2RH-8729B | B-6 | RH | M2-0260 | (LOC: E-6) |
| 2SI-0109 | B-3 | SI | M2-0263-A | (LOC: C-6) |
| 2SI-0110 | A-3 | SI | M2-0263-A | (LOC: C-5) |
| 2SI-0119 | C-5 | SI | M2-0262 | (LOC: C-2) |
| 2SI-0120 | D-5 | SI | M2-0262 | (LOC: C-2) |
| 2SI-0121 | C-5 | SI | M2-0262 | (LOC: D-5) |
| 2SI-0122 | C-5 | SI | M2-0262 | (LOC: B-5) |

| REV | DWN | CHKD | APVD | REMARKS |
|---|---|---|---|---|
| CP-17 | DLK 05-16 2018 | MM 05-16 2018 | | THIS DRAWING REVISED TO INCORPORATE DESIGN CHANGE FDA-2018-000037-01-00 PER SK-0002-18-000037-01-00. |

NOTES:

1. FOR MECHANICAL SYMBOLS AND NOTES SEE DRAWING M1-0200.
2. FOR TYPICAL DRAIN SYMBOLS, SEE DRAWING M2-0238 NOTE 3.
3. PIPING DESIGNATED FD IS PROCURED BY SPECIFICATION MS-73 AND PIPING DESIGNATED VD IS PROCURED BY SPECIFICATION MS-43B AND MS-44B.
4. DELETED
5. VALVES 2VD-0629 AND 2VD-0630 ARE THE NORMAL DRAIN PATH FOR RHR HEAT EXCHANGER DRAINING.
6. DELETED

FSAR FIGURE 9.3-7

THIS DRAWING CREATED ELECTRONICALLY

REF CHKD 04-28-2003

CLASS II

LUMINANT
CPNPP
GLEN ROSE, TEXAS

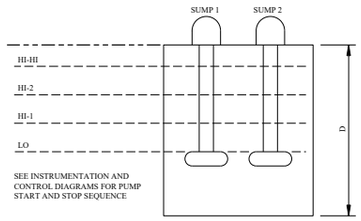
FLOW DIAGRAM
VENTS AND DRAINS SYSTEM
SAFEGUARDS BUILDING

| DWG. NO. | SH. NO. | REV. |
|---|---|---|
| M2-0236 | 03 | CP-17 |

| REV | DWN | CHKD | APVD | REMARKS |
|---|---|---|---|---|
| CP-50 | DLK 05-19-2017 | GAW 05-19-2017 | | THIS DRAWING REVISED TO INCORPORATE DESIGN CHANGE FDA 2017-000111-01-00 PER SK-0002-17-000111-01-00. |

NOTES:

1. FOR SWITCH LEVEL SYSTEM AND PUMP CONTROL SEE TYPICAL SUMP DETAIL, LOCATION H-3 THIS DRAWING.
2. THE BOXED IN NUMBERS DESIGNATE THE SPECIFIC ROOM NUMBERS ON THE PLUMBING DRAWINGS SHOWING VARIOUS DRAIN LOCATIONS.
3. FOR DRAIN SYMBOLS SEE DRAWING M1-0236 NOTE 4.
4. FOR MECHANICAL SYMBOLS AND NOTES SEE M1-0200.
5. ALL PIPING IS NON-NUCLEAR SAFETY CLASS.
6. PIPING DESIGNATED FD IS PROCURED BY SPECIFICATION MS-73 AND PIPING DESIGNATED VD IS PROCURED BY SPECIFICATION MS-44A.
7. TURBINE BUILDING SUMP 1 HAS AN AIRTIGHT COVER WITH A VENT LINE, PENETRATING THE COVER.
8. PIPING DESIGNATED FD IS PROCURED BY SPECIFICATION MS-73. PIPING DESIGNATED VD IS PROCURED BY SPECIFICATIONS MS-43A AND MS-43B.
9. DELETED
10. "ADJACENT-TO-LINE" RADIATION DETECTOR.
11. VALVE POSITION IS PROCEDURALLY CONTROLLED BY OPERATIONS/RADWASTE AND MAY BE OPEN OR CLOSED DEPENDING ON PLANT CONDITIONS AND EFFLUENT SAMPLE RESULTS.
12. FLOOR DRAINS PLUGGED BY NON-SHRINK GROUT.
13. LAV DRAINS TO BE CAPPED.
14. VALVES 1VD-0331 AND 1VD-0336 ARE LOCKED CLOSED TO ISOLATE THE ABANDONED IN PLACE ELECTRIC AUXILIARY BOILER.




TYPICAL SUMP DETAIL

| SUMP NUMBER | D | LO | HI-1 | HI-2 | HI-HI |
|---|---|---|---|---|---|
| 1 | 4'-6" | 1'-0" | 1'-9" | 3'-0" | 4'-0" |
| 2 | 3'-5" | 1'-0" | 2'-6" | 2'-8" | 3'-0" |
| CHEMICAL | 11'-11" | 3'-4" | 5'-10" | 6'-8" | 10'-0" |

ACTUATOR LEVELS
(MEASURED FROM SUMP BOTTOM)

ATMOSPHERIC DRAIN TANK DRAIN REFERENCE
(SEE LOCATION F-5 AND G-5 THIS DRAWING)

| DRAIN NUMBER | REFERENCE |
|---|---|
| D1 | AUXILIARY BOILER FW PUMP DISCHARGE M1-0213-A, LOC: G-5 |
| D4 | ACPSI CONNECTION NO T18 M1-0223, LOC: G-4 |
| D6 | AUXILIARY BOILER CIRC PUMP COOLING WATER DRAIN M1-0213-A, LOC: G-5 |
| D7 | SG FEEDWATER PUMP 1-B PRIMARY STUFFING BOX LEAKAGE CONNECTION M1-0203, LOC: B-6 |
| D9 | SPARE CONNECTION |
| D12 | CV AND WBP SYSTEM, MAIN CONDENSER VACUUM BREAKER SEALS M1-0211, LOC: G-1 |
| D13 | GLAND STEAM CONDENSER M1-0223, LOC: G-6 |
| D14 | AUXILIARY GLAND STEAM CONDENSER M1-0223-A LOC: F-6 |
| D15 | PRIMARY SAMPLING SYSTEM M1-0228-C, LOC: F-5 |
| D16 | SPARE CONNECTION |
| D17 | SG FEEDWATER PUMP 1-A PRIMARY STUFFING BOX LEAKAGE CONNECTION M1-0203, LOC: B-3 |
| D18 | AUXILIARY STEAM DRAIN PUMPS DISCHARGE M1-0213-01, LOC: G-4 |
| | |
| | |
| | |

DRAWING 2323-M1-0237 REV CP-6
HAS BEEN SPLIT INTO THE FOLLOWING SHEETS:

| |
|---|
| M1-0237 |
| M1-0237-A |
| |
| |
| |

CLASS II

LUMINANT
CPNPP
GLEN ROSE, TEXAS

FLOW DIAGRAM
VENTS AND DRAINS SYSTEM
TURBINE AND FUEL HANDLING BUILDING

| DWG. NO. | SH. NO. | REV. |
|---|---|---|
| M1-0237 | - | CP-50 |

FSAR FIGURE 9.3-8

THIS DRAWING CREATED ELECTRONICALLY

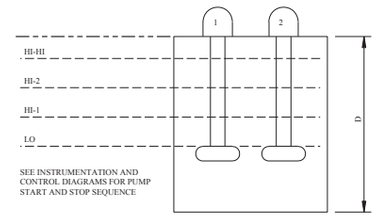
REF CRKD CP-41 BY 04/99

me103120.dgn A M1-0237 B C D E F G FINAL PRINT H

| REV | DWN | CHKD | APVD | REMARKS |
|---|---|---|---|---|
| CP-14 | MM 10-07-2004 | DLK 10-07-2004 | | THIS DRAWING REVISED TO INCORPORATE DESIGN CHANGE FDA-2002-002767-01-00 PER SK-0008-02-002767-01-00. EDITORIAL CHANGES AS NOTED. |

NOTES:

1. FOR SWITCH LEVEL SYSTEM AND PUMP CONTROL SEE TYPICAL SUMP DETAIL, LOCATION H-3 THIS DRAWING.
2. THE BOXED IN NUMBERS DESIGNATE THE SPECIFIC ROOM NUMBERS ON THE PLUMBING DRAWINGS SHOWING VARIOUS DRAIN LOCATIONS.
3. FOR DRAIN SYMBOLS SEE DRAWING M1-0236 NOTE 4.
4. FOR MECHANICAL SYMBOLS AND NOTES SEE M1-0200. **0200**.
5. **PIPING DESIGNATED FD IS PROCURED BY SPECIFICATION MS-73** AND PIPING DESIGNATED VD IS PROCURED BY SPECIFICATION MS-44A.
6. TURBINE BUILDING SUMP 1 HAS AN AIRTIGHT COVER WITH A VENT LINE, PENETRATING THE COVER.
7. PIPING DESIGNATED FD IS PROCURED BY SPECIFICATION MS-73. PIPING DESIGNATED VD IS PROCURED BY SPECIFICATIONS MS-43A AND MS-43B.




SEE INSTRUMENTATION AND CONTROL DIAGRAMS FOR PUMP START AND STOP SEQUENCE

TYPICAL SUMP DETAIL

| SUMP NUMBER | D | LO | HI-1 | HI-2 | HI-HI |
|---|---|---|---|---|---|
| 1 | 4'-6" | 1'-0" | 1'-9" | 3'-0" | 4'-0" |
| 2 | 3'-5" | 1'-0" | 2'-6" | 2'-8" | 3'-0" |
| CHEMICAL | 11'-11" | 5'-0" | 7'-6" | 8'-9" | 10'-0" |

ACTUATOR LEVELS
(MEASURED FROM SUMP BOTTOM)

FSAR FIGURE 9.3-8

THIS DRAWING CREATED ELECTRONICALLY

DRAWING 2323-M1-0237 REV CP-6
HAS BEEN SPLIT INTO THE FOLLOWING SHEETS:
M1-0237
M1-0237-A

CLASS II

TXU POWER
CPSES
GLEN ROSE, TEXAS

FLOW DIAGRAM
VENTS AND DRAINS SYSTEM
TURBINE BUILDING

DWG. NO. M1-0237 | SH. NO. A | REV. CP-14

me608300.dgn | A M1-0237-A | FINAL PRINT

## ATMOSPHERIC DRAIN TANK DRAIN REFERENCE

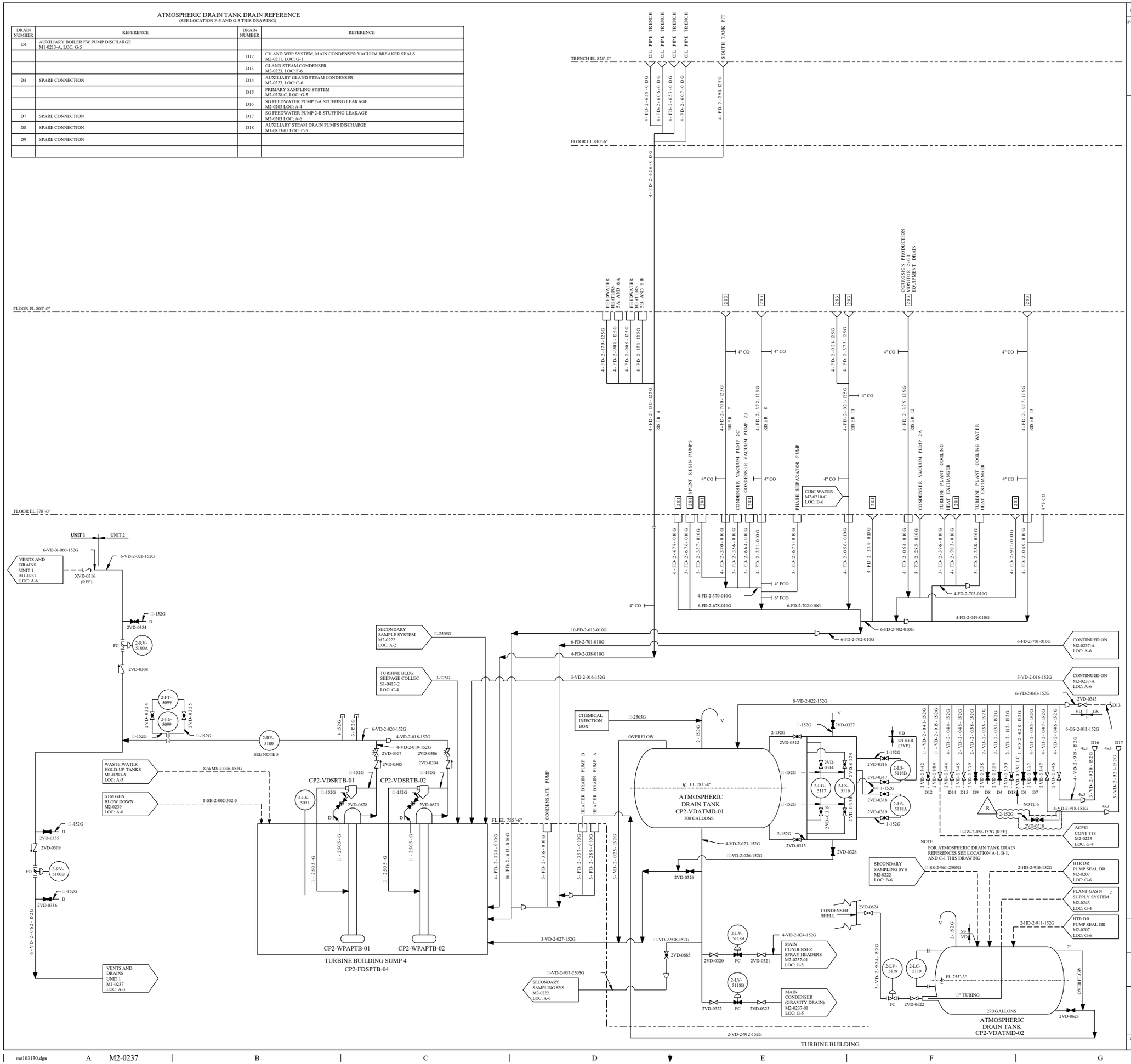
(SEE LOCATION F-5 AND G-5 THIS DRAWING)

| DRAIN NUMBER | REFERENCE | DRAIN NUMBER | REFERENCE |
|---|---|---|---|
| D1 | AUXILIARY BOILER FW PUMP DISCHARGE M1-0213-A, LOC: G-5 | | |
| | | D12 | CV AND WBP SYSTEM, MAIN CONDENSER VACUUM BREAKER SEALS M2-0211, LOC: G-1 |
| | | D13 | GLAND STEAM CONDENSER M2-0223, LOC: F-6 |
| D4 | SPARE CONNECTION | D14 | AUXILIARY GLAND STEAM CONDENSER M2-0223, LOC: C-6 |
| | | D15 | PRIMARY SAMPLING SYSTEM M2-0228-C, LOC: G-5 |
| | | D16 | SG FEEDWATER PUMP 2-A STUFFING LEAKAGE M2-0203 LOC: A-4 |
| D7 | SPARE CONNECTION | D17 | SG FEEDWATER PUMP 2-B STUFFING LEAKAGE M2-0203 LOC: A-6 |
| D8 | SPARE CONNECTION | D18 | AUXILIARY STEAM DRAIN PUMPS DISCHARGE M1-0813-01 LOC: C-5 |
| D9 | SPARE CONNECTION | | |
| | | | |

| REV | DWN | CHKD | APVD | REMARKS |
|---|---|---|---|---|
| CP-20 | DLK 06-09-2016 | MHF 06-09-2016 | | THIS DRAWING REVISED TO INCORPORATE DESIGN CHANGE FDA 2016-000106-01-00 PER SK-0001-16-000106-01-00. |

NOTES:

1. THE BOXED-IN NUMBERS DESIGNATE THE SPECIFIC ROOM NUMBERS ON THE PLUMBING DRAWINGS SHOWING VARIOUS DRAIN LOCATIONS.
2. FOR TYPICAL DRAIN SYMBOLS SEE DRAWING M2-0238 NOTE 3.
3. FOR MECHANICAL SYMBOLS AND NOTES SEE DRAWING M1-0200.
4. PIPING DESIGNATED FD IS PROCURED BY SPECIFICATION MS-73 AND PIPING DESIGNATED VD IS PROCURED BY SPECIFICATION MS-44A, MS-43A AND MS-43B.
5. "ADJACENT-TO-LINE" RADIATION DETECTOR.
6. VALVE 2VD-0331 IS LOCKED CLOSED TO ISOLATE THE ABANDONED IN PLACE ELECTRIC AUXILIARY BOILER.




DRAWING 2323-M2-0237 REV CP-3
HAS BEEN SPLIT INTO THE FOLLOWING SHEETS:

| |
|---|
| M2-0237 |
| M2-0237-A |
| |
| |
| |

NON–SAFETY

LUMINANT
CPNPP
GLEN ROSE, TEXAS

FLOW DIAGRAM
VENTS AND DRAINS SYSTEM
TURBINE AND FUEL HANDLING BUILDING

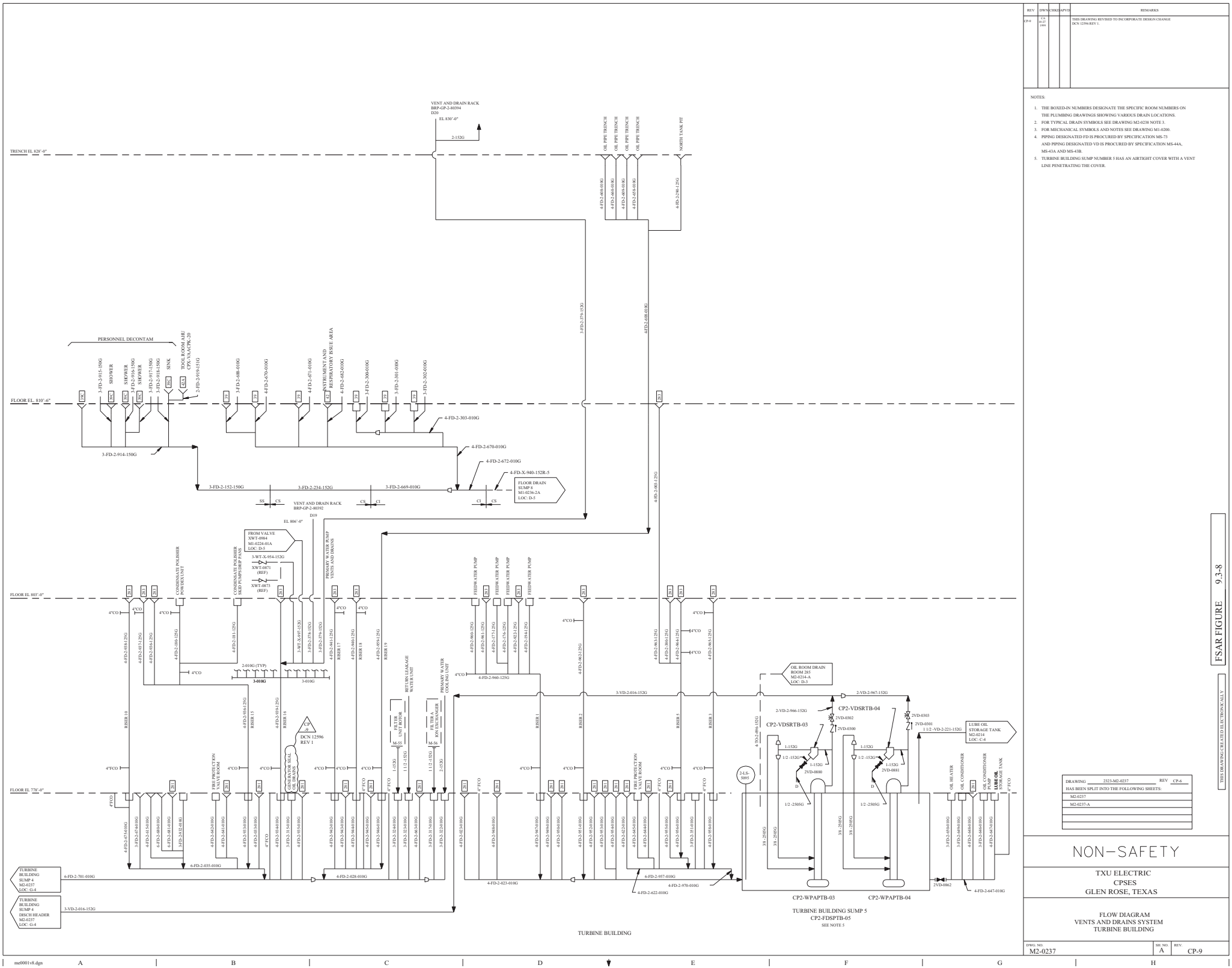
DWG. NO. M2-0237 | SH. NO. - | REV. CP-20

FINAL PRINT

FSAR FIGURE 9.3-8

THIS DRAWING CREATED ELECTRONICALLY

me103130.dgn




| REV | DWN | CHKD | APVD | REMARKS |
|---|---|---|---|---|
| CP-9 | S.A. 10-17-1995 | | | THIS DRAWING REVISED TO INCORPORATE DESIGN CHANGE DCN 12596 REV 1. |

NOTES:

1. THE BOXED-IN NUMBERS DESIGNATE THE SPECIFIC ROOM NUMBERS ON THE PLUMBING DRAWINGS SHOWING VARIOUS DRAIN LOCATIONS.
2. FOR TYPICAL DRAIN SYMBOLS SEE DRAWING M2-0238 NOTE 3.
3. FOR MECHANICAL SYMBOLS AND NOTES SEE DRAWING M1-0200.
4. PIPING DESIGNATED FD IS PROCURED BY SPECIFICATION MS-73 AND PIPING DESIGNATED VD IS PROCURED BY SPECIFICATION MS-44A, MS-43A AND MS-43B.
5. TURBINE BUILDING SUMP NUMBER 5 HAS AN AIRTIGHT COVER WITH A VENT LINE PENETRATING THE COVER.

FSAR FIGURE 9.3-8

THIS DRAWING CREATED ELECTRONICALLY

| DRAWING | 2323-M2-0237 | REV | CP-6 |
|---|---|---|---|
| HAS BEEN SPLIT INTO THE FOLLOWING SHEETS: | | | |
| M2-0237 | | | |
| M2-0237-A | | | |

NON–SAFETY

TXU ELECTRIC
CPSES
GLEN ROSE, TEXAS

FLOW DIAGRAM
VENTS AND DRAINS SYSTEM
TURBINE BUILDING

| DWG. NO. | SH. NO. | REV. |
|---|---|---|
| M2-0237 | A | CP-9 |

me0001v8.dgn

SSSSSSSTA ITESSSSS

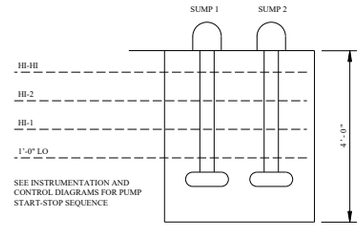
| REV | DWN | CHKD | APVD | REMARKS |
|---|---|---|---|---|
| CP-17 | MM 11-29 2017 | DLK 11-29 2017 | | THIS DRAWING REVISED TO INCORPORATE DESIGN CHANGE FDA 2017-000085-01-00 PER SK-0002-17-000085-01-00. |

NOTES:

1. FOR MECHANICAL SYMBOLS AND NOTES, SEE DRAWING M1-0200.
2. FOR DRAIN SYMBOLS, SEE DRAWING M1-0236 NOTE 4.
3. BOXED NUMBERS DESIGNATE THE SPECIFIC ROOM NUMBERS ON THE PLUMBING DRAWINGS SHOWING VARIOUS DRAIN LOCATIONS.
4. FOR SWITCH LEVEL SYSTEM AND PUMP CONTROL, SEE TYPICAL SUMP DETAIL, LOC: H-3 ON THIS DRAWING.
5. THIS DRAWING IS NON-NUCLEAR SAFETY RELATED.
6. PIPING DESIGNATED FD IS PROCURED BY SPECIFICATION MS-73 AND PIPING DESIGNATED VD IS PROCURED BY SPECIFICATIONS MS-44A.
7. OPERATIONS MAY INSTALL RAISED HUBS AND/OR PLUGS FOR NON RADIOACTIVE DRAINS THAT DUE TO THEIR PROXIMITY TO A RADIOACTIVE DRAIN COULD COLLECT RADIOACTIVE FLUIDS.
8. FLOOR DRAIN MAY BE PLUGGED TO PREVENT FLOOR DRAIN SYSTEM CONTAMINATION DURING MAINTENANCE ACTIVITIES.

REFERENCE DRAWING:
1. E1-0055-79

R




SEE INSTRUMENTATION AND CONTROL DIAGRAMS FOR PUMP START-STOP SEQUENCE

TYPICAL SUMP DETAIL

FSAR FIGURE 9.3-9

THIS DRAWING CREATED ELECTRONICALLY

| DRAWING M1-0237-01 REV CP-4 |
|---|
| HAS BEEN SPLIT INTO THE FOLLOWING SHEETS: |
| M1-0237-01 |
| M1-0237-01A |

CLASS II

LUMINANT
CPNPP
GLEN ROSE, TEXAS

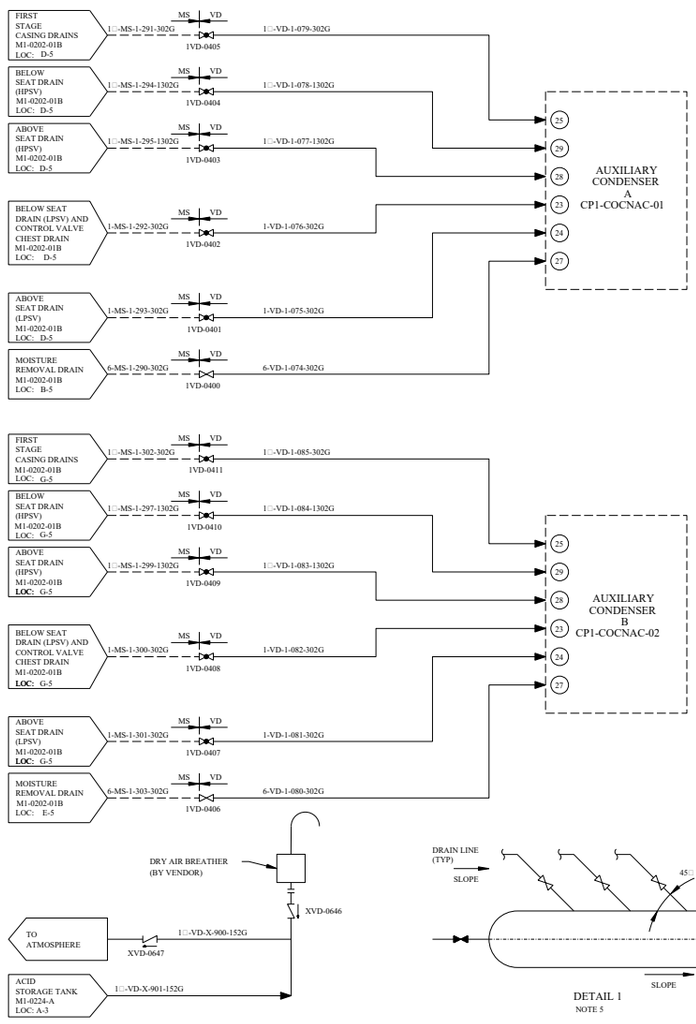
FLOW DIAGRAM
VENTS AND DRAINS SYSTEM
TURBINE AND FUEL HANDLING BLDG

| DWG. NO. | SH. NO. | REV. |
|---|---|---|
| M1-0237 | 01 | CP-17 |

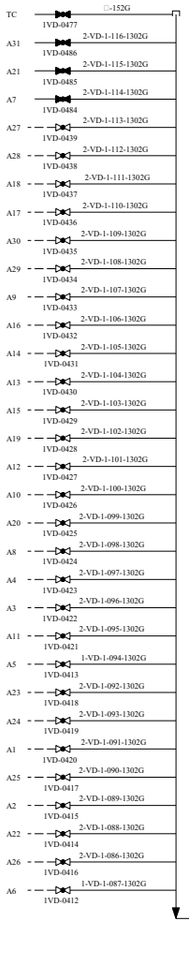
FINAL PRINT

mc351700.dgn

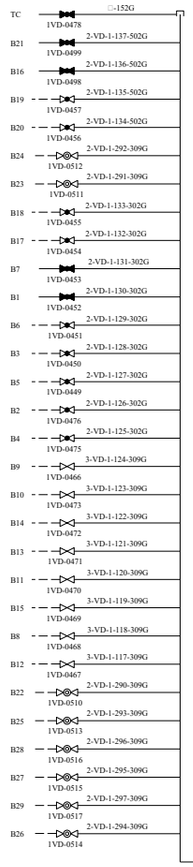
M1-0237-01



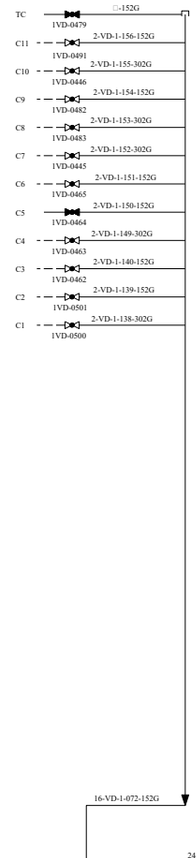

DRAIN HEADER A
(HIGH PRESSURE)



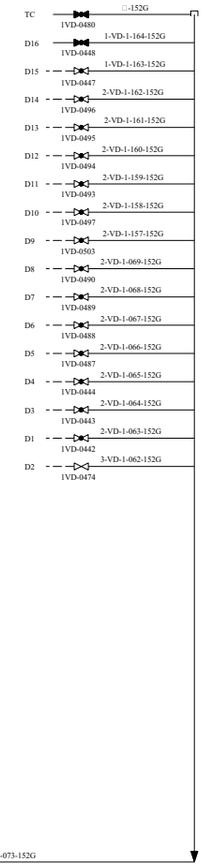

DRAIN HEADER B
(INTERMEDIATE PRESSURE)



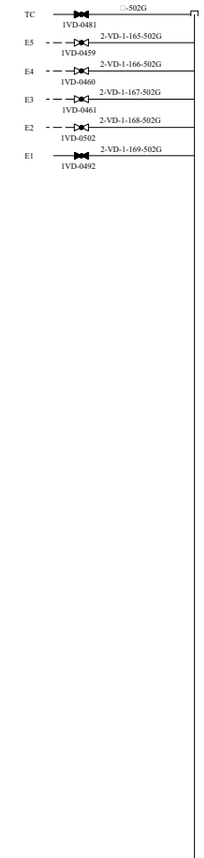

DRAIN HEADER C
(INTERMEDIATE LOW PRESSURE)



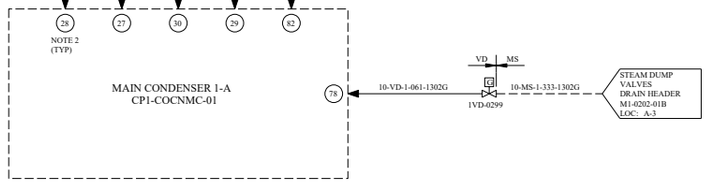

DRAIN HEADER D
(LOW PRESSURE)

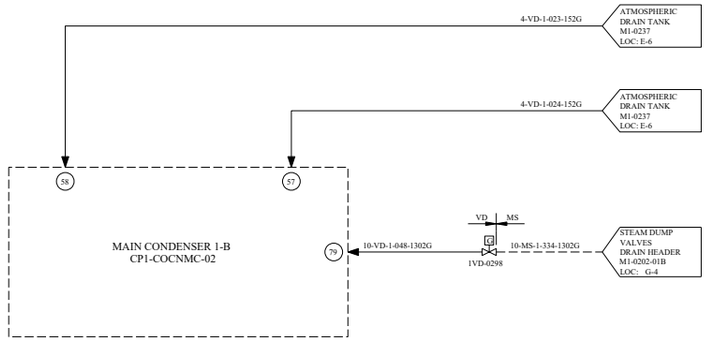



DRAIN HEADER E
(INTERMEDIATE HIGH PRESSURE)




16-VD-1-072-152G
24-VD-1-073-152G
12-VD-1-170-502G
36-VD-1-070-152G
40-VD-1-071-152G




| DRAIN NO. | REFERENCE | DRAIN NO. | REFERENCE | DRAIN NO. | REFERENCE | DRAIN NO. | | DRAIN NO. | REFERENCE | DRAIN NO. | REFERENCE | DRAIN NO. | REFERENCE |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| A1 | HOT REHEAT LINE DRAIN POT 1-MS-08 M1-0202-01A, LOC: A-4 | A22 | HP TURBINE S AND CV DRAIN T2 M1-0202-01, LOC: G-3 | B1 | SPARE CONNECTION | B22 | COLD REHEAT DRAIN M1-0202-01A, LOC: B-6 | C1 | TURBINE GLAND STEAM LINE DRAIN POT 1-GS-04 M1-0223, LOC: B-5 | D1 | TURBINE GLAND STEAM LINE DRAIN POT 1-GS-03 M1-0223, LOC: C-5 | E1 | SPARE CONNECTION |
| A2 | HOT REHEAT LINE DRAIN POT 1-MS-07 M1-0202-01A, LOC: A-5 | A23 | HP TURBINE S AND CV DRAIN T2 M1-0202-01, LOC: A-4 | B2 | 14" LP STM SUPPLY LINE TO STM GEN FEED PUMP TURB M1-0202-01B, LOC: F-6 | B23 | COLD REHEAT DRAIN M1-0202-01A, LOC: B-3 | C2 | AUX STEAM LINE DRAIN POT X-SA-03,08 M1-0213, LOC: F-5 CP -12 | D2 | TURBINE GLAND STEAM SYSTEM, T12 M1-0223, LOC: F-4 CP -12 | E2 | EXTRACTION STEAM LINE DRAIN POT 1-EX-03 M1-0205, LOC: F-2 |
| A3 | HOT REHEAT LINE DRAIN POT 1-MS-06 M1-0202-01A, LOC: A-1 | A24 | HP TURBINE S AND CV DRAIN T2 M1-0202-01, LOC: G-4 | B3 | 14" LP STM SUPPLY LINE TO STM GEN FEED PUMP TURB M1-0202-01B, LOC: B-6 | B24 | COLD REHEAT DRAIN M1-0202-01A, LOC: A-3 | C3 | AUX STEAM LINE DRAIN POT 1-SA-03,09 M1-0213, LOC: D-4 | D3 | TURBINE GLAND STEAM LINE DRAIN POT 1-GS-02 M1-0223, LOC: B-5 | E3 | EXTRACTION STEAM LINE DRAIN POT 1-EX-01 M1-0205, LOC: D-2 |
| A4 | HOT REHEAT LINE DRAIN POT 1-MS-05 M1-0202-01A, LOC: A-2 | A25 | HP TURBINE S AND CV DRAIN T2 M1-0202-01, LOC: A-3 | B4 | 14" LP STM SUPPLY LINE TO STM GEN FEED PUMP TURB M1-0202-01B, LOC: D-6 | B25 | COLD REHEAT DRAIN M1-0202-01A, LOC: B-5 | C4 | AUX STEAM LINE DRAIN POT 1-SA-02 M1-0213, LOC: A-6 CP -12 | D4 | TURBINE GLAND STEAM LINE DRAIN POT 1-GS-01 M1-0223, LOC: D-5 | E4 | EXTRACTION STEAM LINE DRAIN POT 1-EX-04 M1-0205, LOC: F-2 |
| A5 | HOT REHEAT DRAIN, T10 M1-0202-01A, LOC: A-4 | A26 | HP TURBINE S AND CV DRAIN T3 M1-0202-01, LOC: G-3 | B5 | 14" LP STM SUPPLY LINE TO STM GEN FEED PUMP TURB M1-0202-01B, LOC: G-6 | B26 | COLD REHEAT DRAIN M1-0202-01A, LOC: D-6 | C5 | SPARE CONNECTION | D5 | TURBINE GLAND STEAM LINE DRAIN POT 1-GS-05 M1-0223-A, LOC: A-4 | E5 | EXTRACTION STEAM LINE DRAIN POT 1-EX-02 M1-0205, LOC: D-1 |
| A6 | HOT REHEAT DRAIN, T10 M1-0202-01A, LOC: A-1 | A27 | 32" MAIN STEAM LINE DRAIN POT 1-MS-23 M1-0202, LOC: C-2 | B6 | 14" LP STM SUPPLY LINE TO STM GEN FEED PUMP TURB M1-0202-01B, LOC: E-6 | B27 | COLD REHEAT DRAIN M1-0202-01A, LOC: D-3 | C6 | EXTRACTION STEAM LINE DRAIN POT 1-EX-17 M1-0205, LOC: G-4 | D6 | AUX STEAM LINE DRAIN POT X-SA-06 M1-0213, LOC: E-6 CP -12 | | |
| A7 | SPARE CONNECTION CP -12 | A28 | 32" MAIN STEAM LINE DRAIN POT 1-MS-24 M1-0202, LOC: C-3 | B7 | SPARE CONNECTION | B28 | COLD REHEAT DRAIN M1-0202-01A, LOC: D-3 | C7 | EXTRACTION STEAM LINE DRAIN POT 1-EX-10 M1-0205, LOC: D-5 | D7 | AUX STEAM LINE DRAIN POT X-SA-07 M1-0213, LOC: E-5 | | |
| A8 | 34" MAIN STEAM LINE DRAIN POT 1-MS-04 M1-0202-01, LOC: A-5 | A29 | 32" MAIN STEAM LINE DRAIN POT 1-MS-25 M1-0202, LOC: C-4 | B8 | COLD REHEAT DRAIN T7 M1-0202-01A, LOC: E-3 | B29 | COLD REHEAT DRAIN M1-0202-01A, LOC: D-5 | C8 | EXTRACTION STEAM LINE DRAIN POT 1-EX-11 M1-0205, LOC: G-5 | D8 | AUX STEAM LINE DRAIN POT X-SA-04 M1-0213, LOC: D-5 CP -12 | | |
| A9 | 34" MAIN STEAM LINE DRAIN POT 1-MS-01 M1-0202-01, LOC: G-2 | A30 | 32" MAIN STEAM LINE DRAIN POT 1-MS-26 M1-0202, LOC: C-5 | B9 | COLD REHEAT DRAIN T6 M1-0202-01A, LOC: C-3 | | | C9 | EXTRACTION STEAM LINE DRAIN POT 1-EX-09 M1-0205, LOC: D-4 | D9 | AUX STEAM LINE DRAIN POT 1-SA-01 M1-0213, LOC: A-6 | | |
| A10 | 34" MAIN STEAM LINE DRAIN POT 1-MS-02 M1-0202-01, LOC: A-2 | A31 | SPARE CONNECTION | B10 | COLD REHEAT DRAIN T6 M1-0202-01A, LOC: C-6 | | | C10 | EXTRACTION STEAM LINE DRAIN POT 1-EX-12 M1-0205, LOC: G-5 | D10 | LEAKOFF VALVE FROM SG FEED TURB SEAL STM HDR M1-0223-A, LOC: A-3 | | CP -12 |
| A11 | 34" MAIN STEAM LINE DRAIN POT 1-MS-03 M1-0202-01, LOC: G-5 | | | B11 | COLD REHEAT DRAIN T7 M1-0202-01A, LOC: E-6 | | | C11 | AUX STEAM LINE DRAIN POT X-SA-11,12 M1-0213, LOC: G-3 CP -12 | D11 | EXTRACTION STEAM LINE DRAIN POT 1-EX-16 M1-0205-A, LOC: G-6 | | |
| A12 | 3" AUX. STEAM LINE DRAIN POT 1-MS-28 M1-0202-01B, LOC: A-5 | | | B12 | COLD REHEAT DRAIN T7 M1-0202-01A, LOC: E-3 | | | | | D12 | EXTRACTION STEAM LINE DRAIN POT 1-EX-14 M1-0205-A, LOC: G-5 | | |
| A13 | 26" STEAM DUMP HEADER DRAIN POT 1-MS-22 M1-0202-01B, LOC: B-3 | | | B13 | COLD REHEAT DRAIN T6 M1-0202-01A, LOC: C-3 | | | | | D13 | EXTRACTION STEAM LINE DRAIN POT 1-EX-15 M1-0205-A, LOC: G-6 | | |
| A14 | 26" STEAM DUMP HEADER DRAIN POT 1-MS-13 M1-0202-01B, LOC: G-2 CP -12 | | | B14 | COLD REHEAT DRAIN T6 M1-0202-01A, LOC: C-6 | | | | | D14 | EXTRACTION STEAM LINE DRAIN POT 1-EX-13 M1-0205-A, LOC: G-5 | | |
| A15 | 6" SG FW PUMP TURB STM SUPPLY DRAIN POT 1-MS-20 M1-0202-01B, LOC: C-5 | | | B15 | COLD REHEAT DRAIN T7 M1-0202-01A, LOC: E-6 | | | | | D15 | AUX STEAM LINE DRAIN POT X-SA-10 M1-0213, LOC: D-4 CP -12 | | |
| A16 | 6" SG FW PUMP TURB STM SUPPLY DRAIN POT 1-MS-19 M1-0202-01B, LOC: E-4 | | | B16 | SPARE CONNECTION | | | | | D16 | SPARE CONNECTION | | |
| A17 | 34" MAIN STEAM LINE STRAINER DR POT 1-MS-12 M1-0202-01, LOC: G-2 | | | B17 | EXTRACTION STEAM LINE DRAIN POT 1-EX-08 M1-0205, LOC: G-6 CP -12 | | | | | | | | |
| A18 | 34" MAIN STEAM LINE STRAINER DR POT 1-MS-11 M1-0202-01, LOC: A-2 | | | B18 | EXTRACTION STEAM LINE DRAIN POT 1-EX-06 M1-0205, LOC: D-3 | | | | | | | | |
| A19 | 34" MAIN STEAM LINE STRAINER DR POT 1-MS-10 M1-0202-01, LOC: A-6 | | | B19 | EXTRACTION STEAM LINE DRAIN POT 1-EX-07 M1-0205, LOC: G-4 | | | | | | | | |
| A20 | 34" MAIN STEAM LINE STRAINER DR POT 1-MS-09 M1-0202-01, LOC: G-6 | | | B20 | EXTRACTION STEAM LINE DRAIN POT 1-EX-05 M1-0205, LOC: D-3 | | | | | | | | |
| A21 | SPARE CONNECTION | | | B21 | SPARE CONNECTION | | | | | | | | |

MAIN CONDENSER 1-A DRAIN REFERENCES

| REV | DWN | CHKD | APVD | REMARKS |
|---|---|---|---|---|
| CP-12 | DEK 05-01-2018 | GAW 05-02-2018 | MBF 05-01-2018 | THIS DRAWING REVISED TO INCORPORATE EDITORIAL CHANGES PER AI-CR-2018-003023-1. |

NOTES:

1. GENERAL NOTES AND SYMBOLS SEE DWG M1-0200.
2. CIRCLED NUMBERS REPRESENT CONDENSER PENETRATION NUMBERS.
3. T NUMBERS, SUCH AS T16, DESIGNATE UPC CONNECTION NUMBERS.
4. CAPS ON SPARE DRAIN CONNECTIONS SHALL BE THREADED.
5. ALL DRAIN HEADERS SHALL BE SLOPED TOWARDS THE CONDENSER.
6. DRAIN VALVES SHALL BE LOCATED AS CLOSE AS POSSIBLE TO DRAIN HEADERS.
7. EXCEPT FOR SPARE CONNECTIONS, ALL DRAIN VALVES SHALL BE LOCKED OPEN.

FSAR FIGURE 9.3-9

THIS DRAWING CREATED ELECTRONICALLY

| DRAWING 2323-M1-0237-01 REV CP-4 HAS BEEN SPLIT INTO THE FOLLOWING SHEETS: |
|---|
| M1-0237-01 |
| M1-0237-01A |

NON-SAFETY

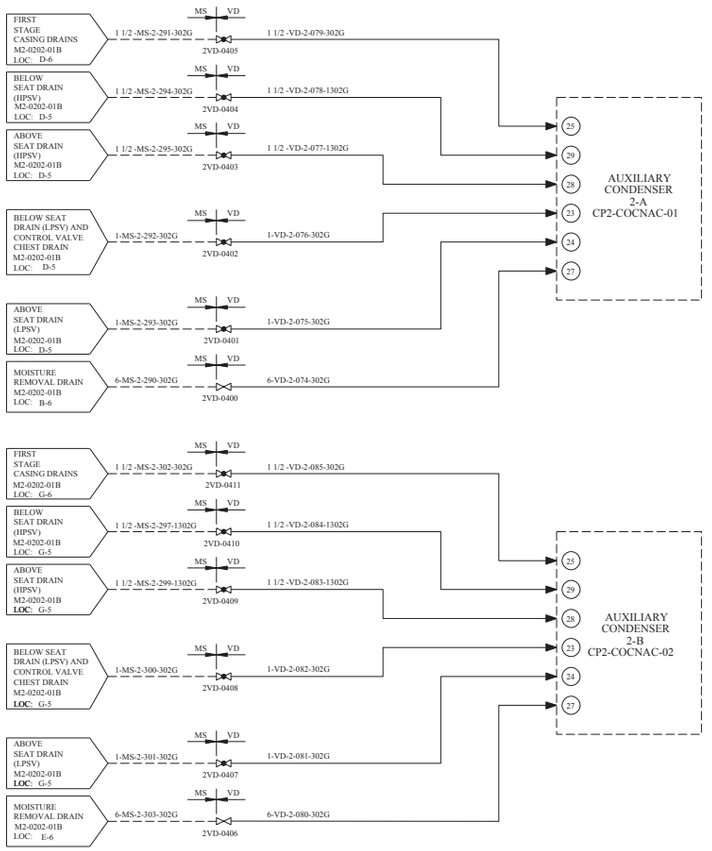
LUMINANT
CPNPP
GLEN ROSE, TEXAS

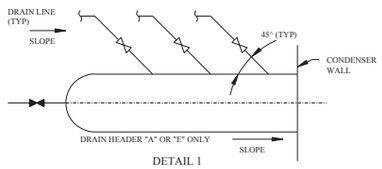
FLOW DIAGRAM
VENTS AND DRAINS SYSTEM
TURBINE BUILDING

| DWG. NO. | SH. NO. | REV. |
|---|---|---|
| M1-0237 | 01A | CP-12 |

REF CKD 5-1-20 18 CP-12

me839800.dgn A M1-0237-01A B C D E F G FINAL PRINT H




DETAIL 1
NOTE 7

| DRAIN NO. | REFERENCE | DRAIN NO. | REFERENCE | DRAIN NO. | REFERENCE | DRAIN NO. | | DRAIN NO. | REFERENCE | DRAIN NO. | REFERENCE | DRAIN NO. | REFERENCE |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| A1 | HOT REHEAT LINE DRAIN POT 2-MS-08 M2-0202-01A, LOC: A-4 | A22 | HP TURBINE S AND CV DRAIN T2 M2-0202-01, LOC: G-3 | B1 | SPARE CONNECTION | B22 | COLD REHEAT DRAIN M2-0202-01A, LOC: B-6 | C1 | TURBINE GLAND STEAM LINE DRAIN POT 2-GS-04 M2-0223, LOC: B-5 | D1 | TURBINE GLAND STEAM LINE DRAIN POT 2-GS-03 M2-0223, LOC: B-4 | E1 | SPARE CONNECTION |
| A2 | HOT REHEAT LINE DRAIN POT 2-MS-07 M2-0202-01A, LOC: A-5 | A23 | HP TURBINE S AND CV DRAIN T2 M2-0202-01, LOC: A-4 | B2 | 14" LP STM SUPPLY LINE TO STM GEN FEED PUMP TURB M2-0202-01B, LOC: F-6 | B23 | COLD REHEAT DRAIN M2-0202-01A, LOC: B-3 | C2 | AUX STEAM LINE DRAIN POT 2-SA-02 M1-0213, LOC: A-3 | D2 | TURBINE GLAND STEAM SYSTEM, T12 M2-0223, LOC: G-2 | E2 | EXTRACTION STEAM LINE DRAIN POT 2-EX-03 M2-0205, LOC: F-2 |
| A3 | HOT REHEAT LINE DRAIN POT 2-MS-06 M2-0202-01A, LOC: A-1 | A24 | HP TURBINE S AND CV DRAIN T2 M2-0202-01, LOC: G-4 | B3 | 14" LP STM SUPPLY LINE TO STM GEN FEED PUMP TURB M2-0202-01B, LOC: B-6 | B24 | COLD REHEAT DRAIN M2-0202-01A, LOC: A-3 | C3 | AUX STEAM LINE DRAIN POT 2-SA-03 M1-0213, LOC: G-1 | D3 | TURBINE GLAND STEAM LINE DRAIN POT 2-GS-02 M2-0223, LOC: A-4 | E3 | EXTRACTION STEAM LINE DRAIN POT 2-EX-01 M2-0205, LOC: D-2 |
| A4 | HOT REHEAT LINE DRAIN POT 2-MS-05 M2-0202-01A, LOC: A-2 | A25 | HP TURBINE S AND CV DRAIN T2 M2-0202-01, LOC: A-3 | B4 | 14" LP STM SUPPLY LINE TO STM GEN FEED PUMP TURB M2-0202-01B, LOC: D-6 | B25 | COLD REHEAT DRAIN M2-0202-01A, LOC: A-5 | C4 | AUX STEAM LINE DRAIN POT 2-EX-12 M2-0205, LOC: G-5 | D4 | TURBINE GLAND STEAM LINE DRAIN POT 2-GS-01 M2-0223, LOC: C-5 | E4 | EXTRACTION STEAM LINE DRAIN POT 2-EX-04 M2-0205, LOC: F-2 |
| A5 | HOT REHEAT DRAIN, T16 M2-0202-01A, LOC: A-4 | A26 | HP TURBINE S AND CV DRAIN T3 M2-0202-01, LOC: G-3 | B5 | 14" LP STM SUPPLY LINE TO STM GEN FEED PUMP TURB M2-0202-01B, LOC: G-6 | B26 | COLD REHEAT DRAIN M2-0202-01A, LOC: D-6 | C5 | EXTRACTION STEAM LINE DRAIN POT 2-EX-10 M2-0205, LOC: D-5 | D5 | TURBINE GLAND STEAM LINE DRAIN POT 2-GS-05 M2-0223-A, LOC: A-4 | E5 | EXTRACTION STEAM LINE DRAIN POT 2-EX-02 M2-0205, LOC: D-1 |
| A6 | HOT REHEAT DRAIN, T16 M2-0202-01A, LOC: A-1 | A27 | 32" MAIN STEAM LINE DRAIN POT 2-MS-23 M2-0202, LOC: C-2 | B6 | 14" LP STM SUPPLY LINE TO STM GEN FEED PUMP TURB M2-0202-01B, LOC: E-6 | B27 | COLD REHEAT DRAIN M2-0202-01A, LOC: D-3 | C6 | EXTRACTION STEAM LINE DRAIN POT 2-EX-17 M2-0205, LOC: G-4 | D6 | LEAKOFF VALVE FROM SG FEED TURB SEAL STM HDR M2-0223-A, LOC: A-3 | | |
| A7 | SPARE CONNECTION | A28 | 32" MAIN STEAM LINE DRAIN POT 2-MS-24 M2-0202, LOC: C-3 | B7 | SPARE CONNECTION | B28 | COLD REHEAT DRAIN M2-0202-01A, LOC: D-3 | C7 | EXTRACTION STEAM LINE DRAIN POT 2-EX-09 M2-0205, LOC: D-5 | D7 | EXTRACTION STEAM LINE DRAIN POT 2-EX-16 M2-0205-A, LOC: G-6 | | |
| A8 | 34" MAIN STEAM LINE DRAIN POT 2-MS-04 M2-0202-01, LOC: A-5 | A29 | 32" MAIN STEAM LINE DRAIN POT 2-MS-25 M2-0202, LOC: C-4 | B8 | COLD REHEAT DRAIN T6 M2-0202-01A, LOC: E-3 | B29 | COLD REHEAT DRAIN M2-0202-01A, LOC: D-5 | C8 | EXTRACTION STEAM LINE DRAIN POT 2-EX-11 M2-0205, LOC: G-5 | D8 | EXTRACTION STEAM LINE DRAIN POT 2-EX-14 M2-0205-A, LOC: G-5 | | |
| A9 | 34" MAIN STEAM LINE DRAIN POT 2-MS-01 M2-0202-01, LOC: G-2 | A30 | 32" MAIN STEAM LINE DRAIN POT 2-MS-26 M2-0202, LOC: C-5 | B9 | COLD REHEAT DRAIN T6 M2-0202-01A, LOC: C-3 | | | C9 | SPARE CONNECTION | D9 | EXTRACTION STEAM LINE DRAIN POT 2-EX-15 M2-0205-A, LOC: G-6 | | |
| A10 | 34" MAIN STEAM LINE DRAIN POT 2-MS-02 M2-0202-01, LOC: A-2 | A31 | SPARE CONNECTION | B10 | COLD REHEAT DRAIN T7 M2-0202-01A, LOC: C-6 | | | C10 | SPARE CONNECTION | D10 | EXTRACTION STEAM LINE DRAIN POT 2-EX-13 M2-0205-A, LOC: G-5 | | |
| A11 | 34" MAIN STEAM LINE DRAIN POT 2-MS-03 M2-0202-01, LOC: G-5 | | | B11 | COLD REHEAT DRAIN T7 M2-0202-01A, LOC: E-6 | | | C11 | SPARE CONNECTION | D11 | AUX STEAM LINE DRAIN POT 2-SA-01 M1-0213, LOC: G-1 | | |
| A12 | 3" AUX. STEAM LINE DRAIN POT 2-MS-28 M2-0202-01B, LOC: A-5 | | | B12 | COLD REHEAT DRAIN T6 M2-0202-01A, LOC: E-3 | | | | | D12 | SPARE CONNECTION | | |
| A13 | 26" STEAM DUMP HEADER DRAIN POT 2-MS-22 M2-0202-01B, LOC: B-3 | | | B13 | COLD REHEAT DRAIN T7 M2-0202-01A, LOC: C-3 | | | | | D13 | SPARE CONNECTION | | |
| A14 | 26" STEAM DUMP HEADER DRAIN POT 2-MS-13 M2-0202-01B, LOC: F-2 | | | B14 | COLD REHEAT DRAIN T7 M2-0202-01A, LOC: C-6 | | | | | D14 | SPARE CONNECTION | | |
| A15 | 6" SG FW PUMP TURB STM SUPPLY DRAIN POT 2-MS-20 M2-0202-01B, LOC: C-5 | | | B15 | COLD REHEAT DRAIN T6 M2-0202-01A, LOC: E-6 | | | | | | | | |
| A16 | 6" SG FW PUMP TURB STM SUPPLY DRAIN POT 2-MS-19 M2-0202-01B, LOC: E-4 | | | B16 | SPARE CONNECTION | | | | | | | | |
| A17 | 34" MAIN STEAM LINE STRAINER DR POT 2-MS-12 M2-0202-01, LOC: G-2 | | | B17 | EXTRACTION STEAM LINE DRAIN POT 2-EX-08 M2-0205, LOC: G-4 | | | | | | | | |
| A18 | 34" MAIN STEAM LINE STRAINER DR POT 2-MS-11 M2-0202-01, LOC: A-2 | | | B18 | EXTRACTION STEAM LINE DRAIN POT 2-EX-06 M2-0205, LOC: D-3 | | | | | | | | |
| A19 | 34" MAIN STEAM LINE STRAINER DR POT 2-MS-10 M2-0202-01, LOC: A-6 | | | B19 | EXTRACTION STEAM LINE DRAIN POT 2-EX-07 M2-0205, LOC: G-4 | | | | | | | | |
| A20 | 34" MAIN STEAM LINE STRAINER DR POT 2-MS-09 M2-0202-01, LOC: G-6 | | | B20 | EXTRACTION STEAM LINE DRAIN POT 2-EX-05 M2-0205, LOC: D-3 | | | | | | | | |
| A21 | SPARE CONNECTION | | | B21 | SPARE CONNECTION | | | | | | | | |

MAIN CONDENSER 2-A DRAIN REFERENCES

| REV | DWN | CHKD | APVD | REMARKS |
|---|---|---|---|---|
| CP-9 | JRMC 11-17 2009 | SM 11-17 2009 | | THIS DRAWING REVISED TO INCORPORATE DESIGN CHANGE FDA 2004-003813-01-00 PER SK-0002-04-003813-01-00. |

NOTES:

1. FOR MECHANICAL SYMBOLS AND NOTES SEE DRAWING M1-0200.
2. FOR TYPICAL DRAIN SYMBOLS SEE DRAWING M2-0238, NOTE 3.
3. CIRCLED NUMBERS REPRESENT CONDENSER PENETRATION NUMBERS.
4. PIPING DESIGNATED VD IS PROCURED BY SPECIFICATION MS-44A.
5. T NUMBERS, SUCH AS TI6, DESIGNATE ALLIS CHALMERS CONNECTION NUMBERS.
6. CAPS ON SPARE DRAIN CONNECTIONS SHALL BE THREADED.
7. ALL DRAIN HEADERS SHALL BE SLOPED TOWARDS THE CONDENSER.
9. DRAIN VALVES SHALL BE LOCATED AS CLOSE AS POSSIBLE TO DRAIN HEADERS.
10. EXCEPT FOR SPARE CONNECTIONS, ALL DRAIN VALVES SHALL BE LOCKED OPEN.

FSAR FIGURE 9.3-9

THIS DRAWING CREATED ELECTRONICALLY

NON–SAFETY

LUMINANT
CPNPP
GLEN ROSE, TEXAS

FLOW DIAGRAM
VENTS AND DRAINS SYSTEM
TURBINE BUILDING

| DWG. NO. | SH. NO. | REV. |
|---|---|---|
| M2-0237 | 01 | CP-9 |

$$$$$$DATE$$$$$$

| REV | DWN | CHKD | APVD | REMARKS |
|---|---|---|---|---|
| CP-22 | DLK 09-05 2018 | GAW 09-05 2018 | BR 09-05 2018 | THIS DRAWING REVISED TO INCORPORATE EDITORIAL CHANGES PER AI-CR-2018-005909-1. |

NOTES:

1. DELETED
2. DELETED
3. BOTTOM OF STANDPIPE LOCATED 22 0.5 FT ABOVE THE CONNECTION TO THE REACTOR COOLANT PUMP SEAL 3.
4. PIPING TO RUN HORIZONTAL OR SLOPING THROUGHOUT ENTIRE RUN FROM RCP SEAL 2 LEAKOFF CONNECTION TO RCDT. DO NOT POCKET ANY PART OF LINE. LOCATE CHECK VALVE BELOW THE SEAL 2 LEAKOFF NOZZLE AT A DISTANCE EQUAL TO OR GREATER THAN THE HEAD OF WATER EQUIVALENT TO THE CHECK VALVE CRACKING PRESSURE.
5. DELETED
6. DELETED
7. DELETED
8. 1-TE-0172 AND 1-TE-0173 ETC. ARE FURNISHED WITH RC PUMPS.
9. □" ID FLOW RESTRICTOR PROVIDED FOR CLASS 1 - CLASS 2 TRANSITION SIMILAR TO ARRANGEMENT SHOWN IN NOTE 15 ON MECHANICAL SYMBOLS AND NOTES SHEET DRAWING M1-0200.
10. FOR MECHANICAL NOTES AND SYMBOLS SEE DRAWING M1-0200.
11. 3 IN DIA DELAY LINE - 24 FT LONG.
12. 3 IN 150 LB RAISED FACE FLANGE.
13. 150 LB FLANGES TO PERMIT REMOVAL OF STANDPIPE FOR LEVEL SWITCH MAINTENANCE ON LOOPS 1, 2 AND 3 ONLY.
14. PIPING SHOULD BE SLOPED DOWNWARD FROM THIS POINT TO ASSURE 0 PSIG BACK PRESSURE ON SEAL 3.
15. DELETED
16. DELETED
17. **DELETED**
18. A SECTION OF PIPE HAS BEEN UPGRADED TO SCHEDULE 80 ON LINE 2-CS-1-428-151R-2.
19. FOR LOOPS 1,3 AND 4,THE □" FLANGE (SECOND FLANGE FROM THE REACTOR COOLANT PUMP) HAS BEEN REPLACED BY A 1" FLANGE WITH 1"X□" REDUCERS ON BOTH SIDES.
20. DELETED
21. DELETED

FSAR FIGURE 9.3-10

THIS DRAWING CREATED ELECTRONICALLY

DRAWING 2323-M1-0253 REV CP-6
HAS BEEN SPLIT INTO THE FOLLOWING SHEETS:
M1-0253
M1-0253-A

CLASS I
(NUCLEAR SAFETY-RELATED)
SAFETY CLASS 1 SAFETY CLASS 2 SAFETY CLASS 3
SEISMIC CATEGORY I
CLASS 1E
ASSOCIATED CIRCUITS

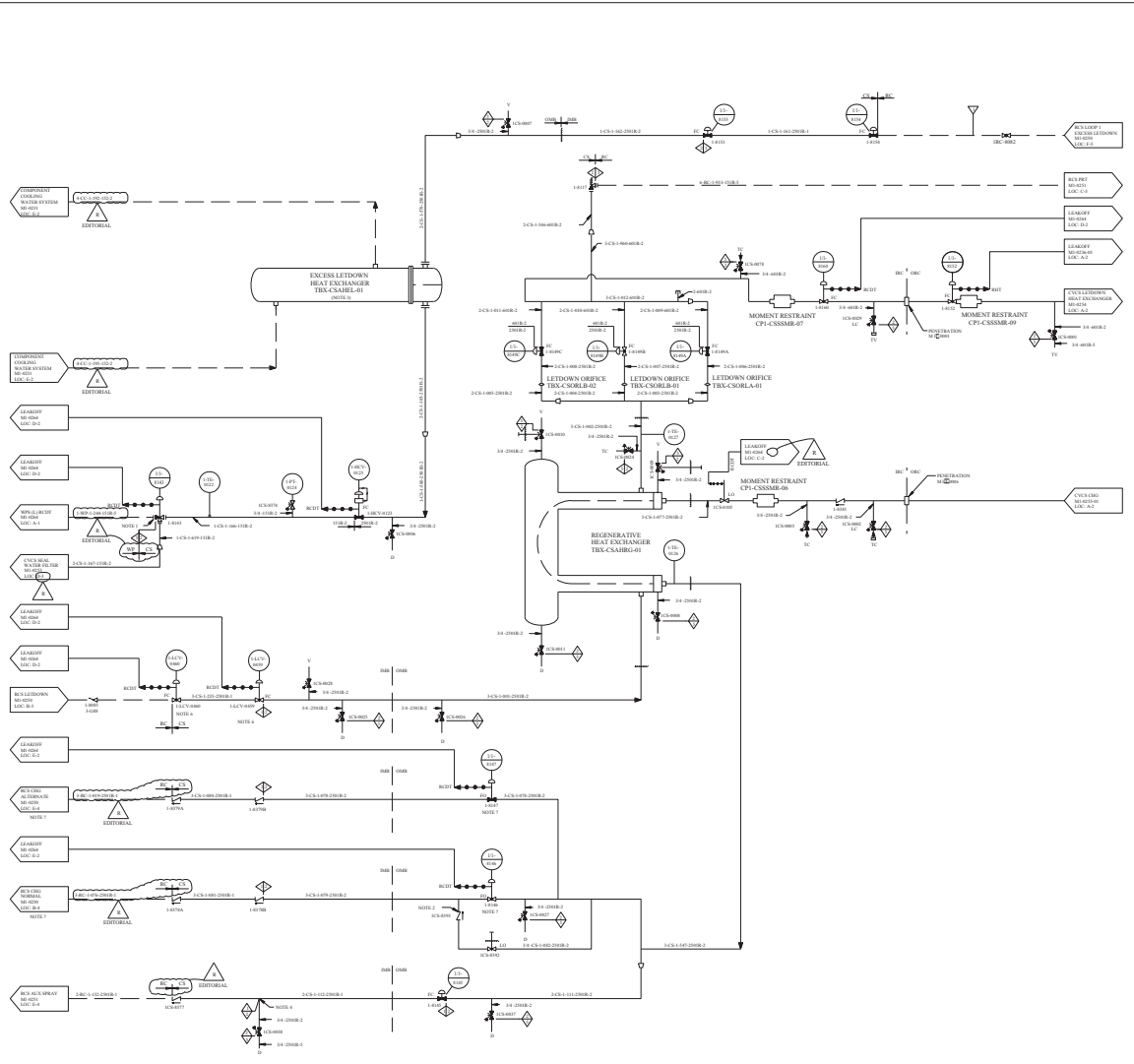
LUMINANT
CPNPP
GLEN ROSE, TEXAS

FLOW DIAGRAM
CHEMICAL AND VOLUME
CONTROL SYSTEM

DWG. NO. M1-0253 | SH. NO. - | REV. CP-22

REF CHKD 03/15/2001

me316000.dgn M1-0253 FINAL PRINT




| REV. | PWR CHG ART'D | | REMARKS |
|---|---|---|---|
| | Yes | Yes | THIS DRAWING REVISED TO INCORPORATE DESIGN CHANGE |
| 10 | No | No | FSAR-2008-0019 (ECH 98 000 34) AND (ECH 02 00 54). |
| | | | EDITORIAL CHANGES AS NOTED |

NOTES

1. THREE WAY VALVE ORIENTED IN PIPING AS SHOWN SO THAT VALVE FAILS WITH FLOW TO SEAL WATER FILTER.
2. SPRING LOADED CHECK VALVE.
3. ALL SHELL SIDE CONNECTIONS ARE SHOWN ON THE COMPONENT COOLING WATER FLOW DIAGRAM MI-0231.
4. 3/8 IN ID FLOW RESTRICTOR FOR CLASS 1-CLASS 2 TRANSITION SIMILAR TO ARRANGEMENT SHOWN IN NOTE 11 ON MECHANICAL SYMBOLS AND NOTES SHEET DRAWING MI-0200.
5. FOR MECHANICAL NOTES AND SYMBOLS SEE DRAWING MI-0200.
6. PRESSURIZER LOW LEVEL SIGNAL CLOSES VALVE.
7. USE OF THE NORMAL CHARGING LINE AND ALTERNATE CHARGING LINE SHOULD BE ALTERNATED OVER THE PLANT LIFE SUCH THAT NEITHER PATH WILL BE EXPOSED TO MORE THAN 50% OF THE DESIGN TRANSIENTS INVOLVING COMPLETE STOPPAGE OF LETDOWN AND/OR CHARGING FLOW. TRANSFER FROM ONE PATH TO THE OTHER SHOULD BE PERFORMED ONLY AT COLD SHUTDOWN CONDITIONS TO AVOID SUBJECTING THE CHARGING LINES TO UNNECESSARY THERMAL TRANSIENTS.

REFERENCES

THIS FLOW DIAGRAM HAS BEEN REDRAWN FROM WESTINGHOUSE DRAWING 11-5809-841 REV 6 WITH EXCEPTIONS AS FOLLOWS:

a. VALVES AND LINE NUMBERS HAVE BEEN ADDED.

b. CONTROL LOOPS HAVE BEEN DELETED (EXCEPT FOR THE PRESSURIZER LEVEL CONTROL LOOP) AND REPLACED WITH THE CONTROL LOOPS WILL BE SHOWN ON INSTRUMENTATION AND CONTROL DIAGRAM.

DRAWING 2123-MI-0253 REV. CP-6
HAS BEEN SPLIT INTO THE FOLLOWING SHEETS:
MI-0253
MI-0253-A

CLASS 1
(NUCLEAR SAFETY-RELATED)
SAFETY CLASS 1 SEISMIC CATEGORY I
SAFETY CLASS 2 QUALITY GROUP A
SAFETY CLASS 3 QUALITY GROUP CP-CPSES

TU ELECTRIC
CPSES
GLEN ROSE, TEXAS

FLOW DIAGRAM
CHEMICAL AND VOLUME CONTROL SYSTEM

| DWG. NO. | SH. NO. | REV. |
|---|---|---|
| M1-0253 | A | CP-10 |

FSAR FIGURE 9.3-10

PROPRIETARY INFORMATION

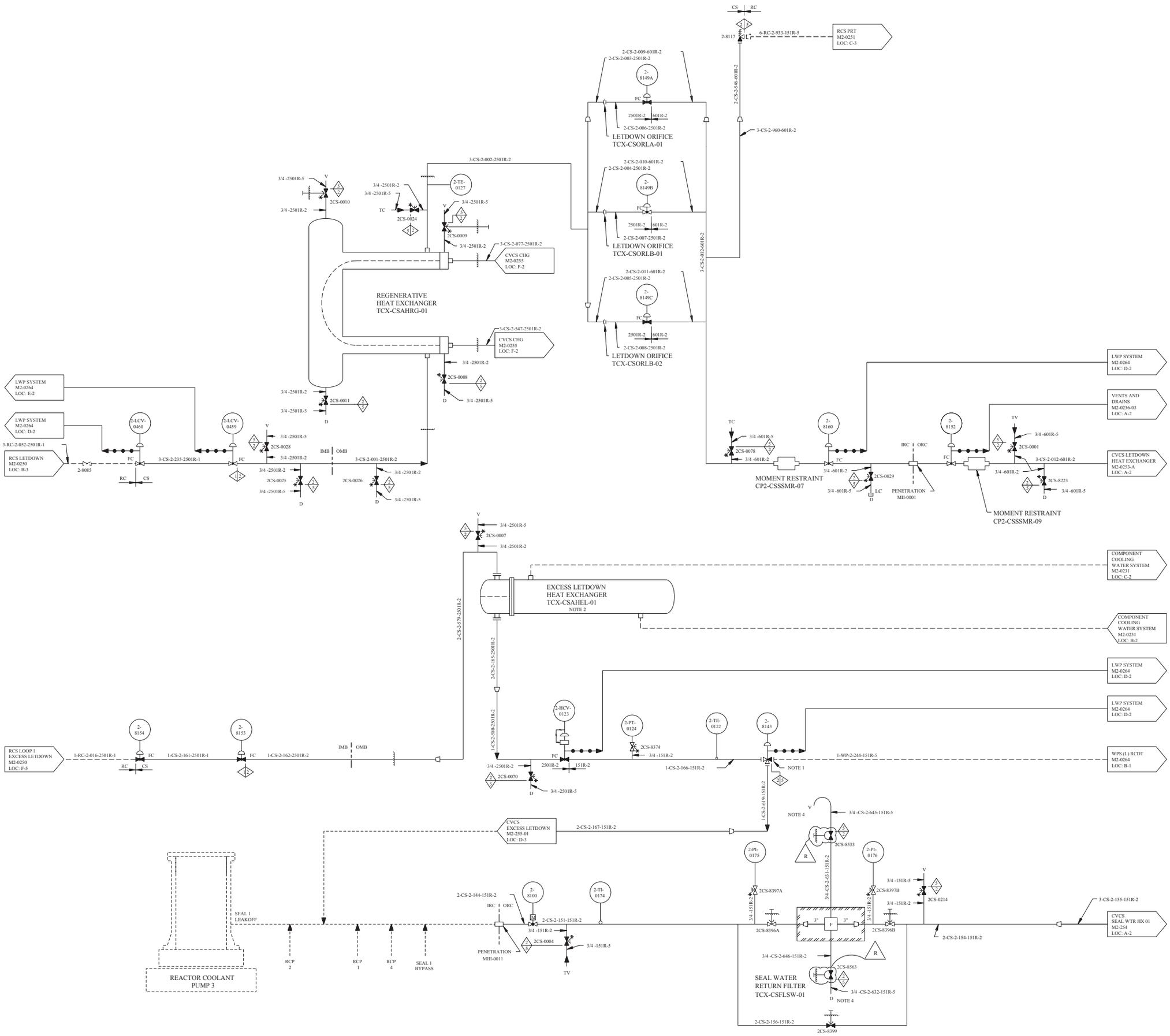
REF UNID 3-8-2001

RESTRICTED RIGHTS

| REV | DWN | CHK | APVD | REMARKS |
|---|---|---|---|---|
| CP-7 | Mkf 01-31 2006 | DLK 01-31 2006 | | THIS DRAWING REVISED TO INCORPORATE DESIGN CHANGE FDA-2004-001193-04-00 PER SK-0011-04-001193-04-00. |

NOTES:

1. THREE WAY VALVE ORIENTED IN PIPING AS SHOWN SO THAT VALVE FAILS WITH FLOW TO SEAL WATER FILTER.
2. ALL SHELL SIDE CONNECTIONS ARE SHOWN ON THE COMPONENT COOLING WATER FLOW DIAGRAM M2-0231-0.
3. FOR MECHANICAL NOTES AND SYMBOLS SEE DRAWING M1-0200-0.
4. DRAIN AND VENT LINES ROUTED TO FLOOR DRAIN IN FILTER COMPARTMENT.
5. UNLESS OTHERWISE NOTED, ALL DRAINS ON THIS DRAWING ARE DRAINED TO CHANNEL B.




FSAR FIGURE 9.3-10

THIS DRAWING CREATED ELECTRONICALLY

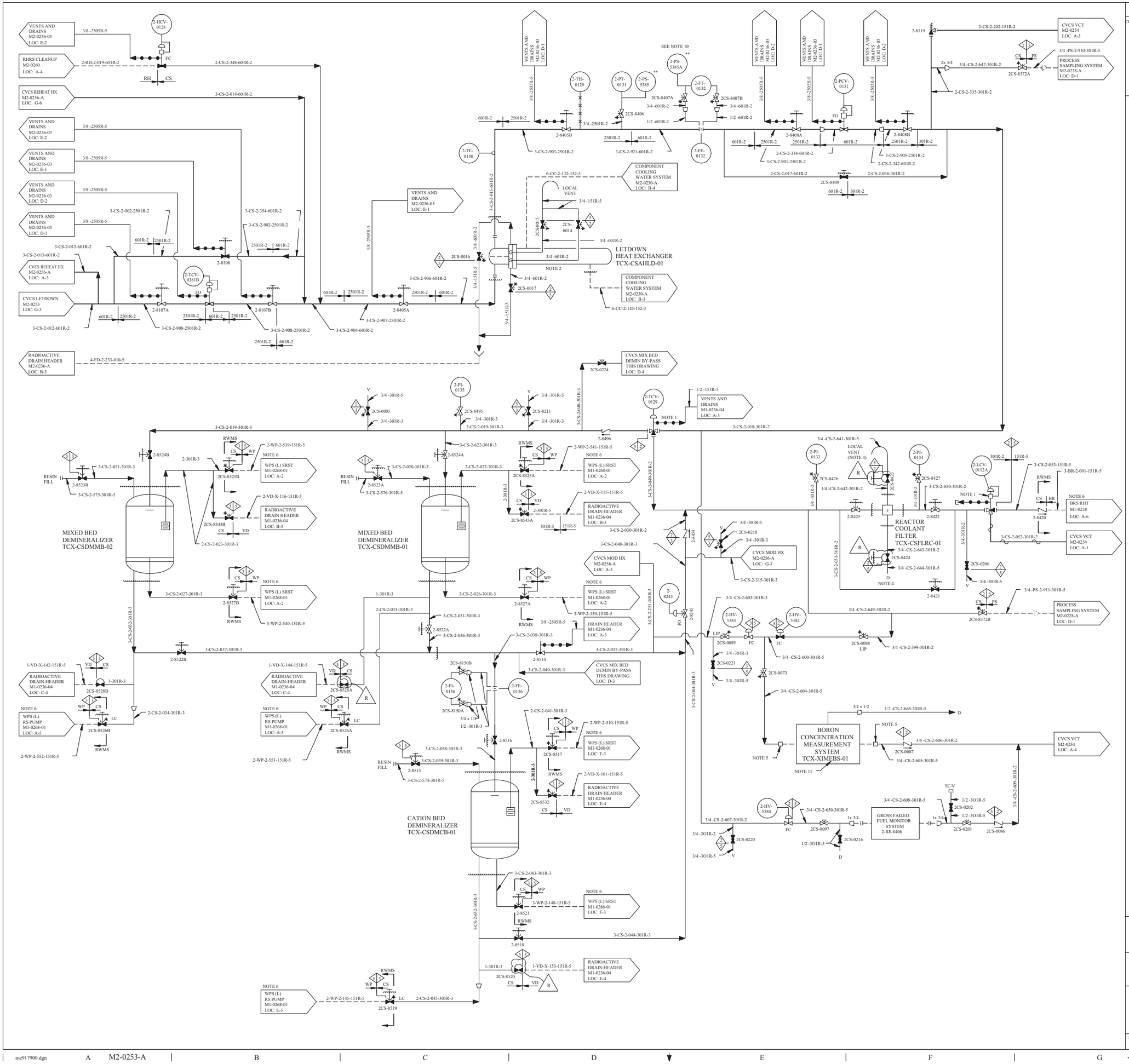
CLASS I
(NUCLEAR SAFETY-RELATED)

| | |
|---|---|
| SAFETY CLASS 1 | SEISMIC CATEGORY I |
| SAFETY CLASS 2 | CLASS 1E |
| SAFETY CLASS 3 | ASSOCIATED CIRCUITS |

LUMINANT
CPSES
GLEN ROSE, TEXAS

FLOW DIAGRAM
CHEMICAL AND VOLUME
CONTROL SYSTEM

| DWG. NO. | SH. NO. | REV. |
|---|---|---|
| M2-0253 | - | CP-7 |




| REV. | DWN | CHKD | APVD | REMARKS |
|---|---|---|---|---|
| CP-16 | DLK 01-12-2009 | MHF 01-12-2009 | | THIS DRAWING REVISED TO INCORPORATE DESIGN CHANGE FDA 2004-001193-04-00 PER SK-00124-04-001193-04-00. |

NOTES:

1. THREE-WAY VALVE ORIENTED IN PIPING AS SHOWN SO THAT VALVE FAILS WITH FLOW TO THE VCT.
2. ALL SHELL SIDE CONNECTIONS ARE SHOWN ON THE COMPONENT COOLING WATER SYSTEM DRAWING M2-0230.
3. FOR MECHANICAL SYMBOLS AND NOTES SEE DRAWING M1-0200.
4. DRAIN AND VENT LINES ROUTED TO FLOOR DRAIN IN FILTER COMPARTMENT.
5. COMPRESSION FITTING.
6. DENOTES RADIOACTIVE WASTE MANAGEMENT SYSTEM CONTINUES ON IDENTIFIED DRAWING.
7. ** EQUIPMENT USED IN MITIGATION OF HELB.
8. DELETED
9. ALL DRAINS ON THIS DRAWING DRAIN TO DRAIN CHANNEL B UNLESS OTHERWISE NOTED.
10. PRESSURE SWITCH 2-PS-5385A ALSO PROVIDES LOCAL PRESSURE INDICATION.
11. THE BCMS IS ABANDONED IN PLACE.

FSAR FIGURE 9.3-10

THIS DRAWING CREATED ELECTRONICALLY

CLASS I
(NUCLEAR SAFETY-RELATED)
SAFETY CLASS 1 — SEISMIC CATEGORY I
SAFETY CLASS 2 — CLASS 1E
SAFETY CLASS 3 — ASSOCIATED CIRCUITS

LUMINANT
CPNPP
GLEN ROSE, TEXAS

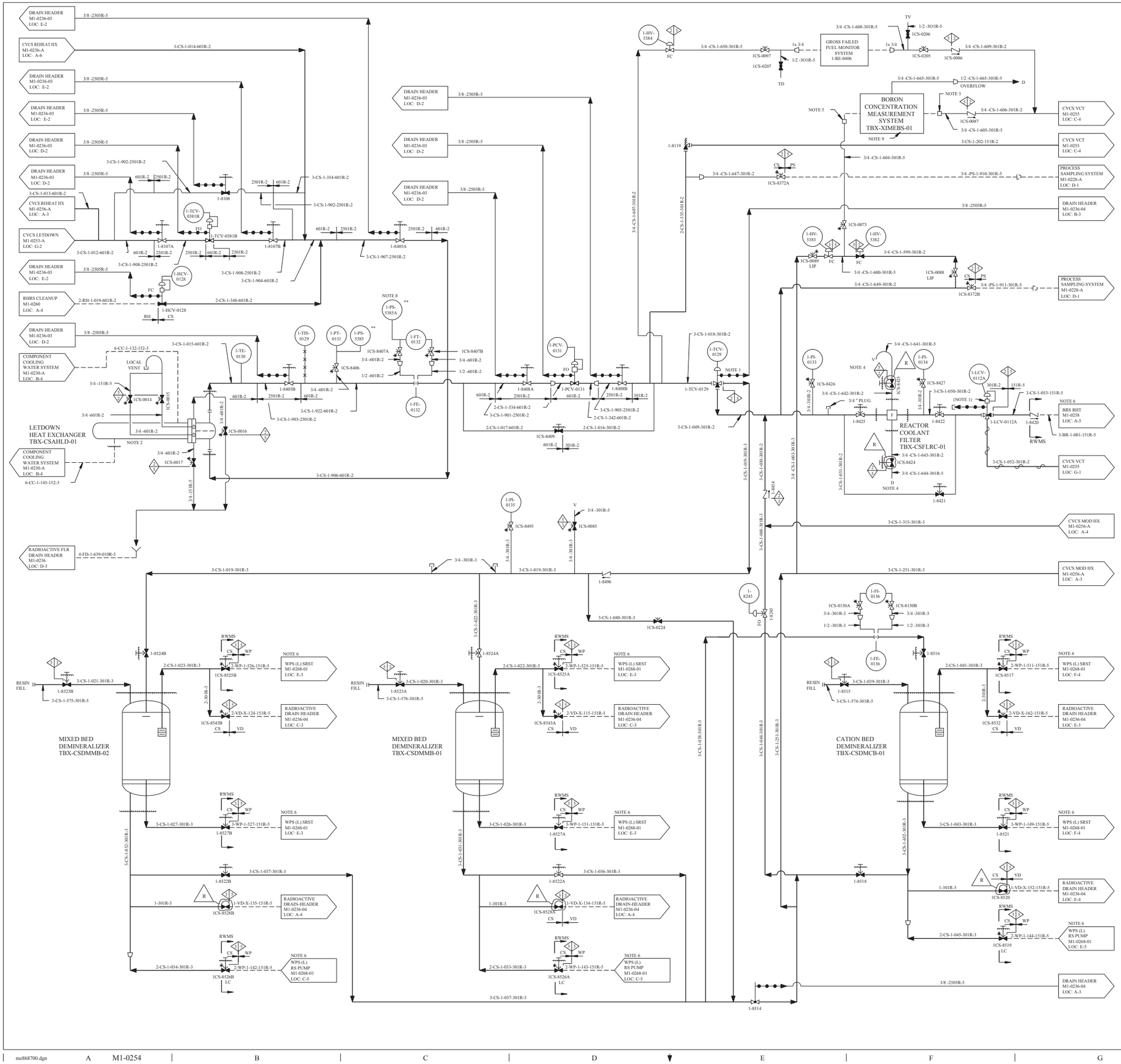
FLOW DIAGRAM
CHEMICAL AND VOLUME
CONTROL SYSTEM

| DWG. NO. | SH. NO. | REV. |
|---|---|---|
| M2-0253 | A | CP-16 |

REF CKD 3/597 CP-8

$$$$$$$DATESSSSS

me917900.dgn A M2-0253-A B C D E F G < FINAL PRINT > H




| REV | DWN | CHKD | APVD | REMARKS |
|---|---|---|---|---|
| CP-25 | DLC 09-14-2006 | MM 09-14-2006 | | THIS DRAWING REVISED TO INCORPORATE DESIGN CHANGE FDA-2004-001193-03-00 PER SK-0019-04-001193-03-00. |

NOTES:

1. THREE-WAY VALVE ORIENTED IN PIPING AS SHOWN SO THAT VALVE FAILS WITH FLOW TO THE VCT.
2. ALL SHELL SIDE CONNECTIONS ARE SHOWN ON THE COMPONENT COOLING WATER SYSTEM DRAWING M1-0230-A, LOC C-4.
3. FOR MECHANICAL SYMBOLS AND NOTES SEE DRAWING M1-0200.
4. DRAIN AND VENT LINES ROUTED TO FLOOR DRAIN IN FILTER COMPARTMENT.
5. COMPRESSION FITTING.
6. DENOTES RADIOACTIVE WASTE MANAGEMENT SYSTEM CONTINUES ON IDENTIFIED DRAWING.
7. ** EQUIPMENT USED IN MITIGATION OF HELB.
8. PRESSURE SWITCH 1-PS-5385A ALSO PROVIDES LOCAL PRESSURE INDICATION.
9. THE BCMS IS ABANDONED IN PLACE.

REFERENCE NOTES:

THIS FLOW DIAGRAM HAS BEEN REDRAWN FROM WESTINGHOUSE DRAWING 1138E94 (SH 2) REV 6, WITH EXCEPTIONS AS FOLLOWS:

a.) VALVE AND LINE NUMBERS HAVE BEEN ADDED.

b.) CONTROL LOOPS HAVE BEEN DELETED EXCEPT FOR THE PRIMARY AND THE FINAL ELEMENTS. THE DETAILS OF THE CONTROL LOOPS WILL BE SHOWN ON INSTRUMENTATION AND CONTROL DIAGRAM.

FSAR FIGURE 9.3-10

THIS DRAWING CREATED ELECTRONICALLY

CLASS I
(NUCLEAR SAFETY-RELATED)
SAFETY CLASS 1 — SEISMIC CATEGORY I
SAFETY CLASS 2 — CLASS 1E
SAFETY CLASS 3 — ASSOCIATED CIRCUITS

LUMINANT
CPSES
GLEN ROSE, TEXAS

FLOW DIAGRAM
CHEMICAL AND VOLUME
CONTROL SYSTEM

| DWG. NO. | SH. NO. | REV. |
|---|---|---|
| M1-0254 | - | CP-25 |

REF CKD 3/5/97 CP-19

me868700.dgn A M1-0254 FINAL PRINT

| REV | DWN | CHKD | APVD | REMARKS |
|---|---|---|---|---|
| CP-30 | DLK 01-22-2017 | MM 01-22-2017 | | THIS DRAWING REVISED TO INCORPORATE DESIGN CHANGE FDA 2016-000141-01-03 PER SK-0017-16-000141-01-00. |

NOTES:

1. FOR MECHANICAL SYMBOLS AND NOTES SEE DRAWING M1-0200.
2. DELETED
3. OVERFLOW FROM PUMP COOLANT HEAD TANK.
4. CHECK VALVE MUST BE IN HORIZONTAL PIPE AT HIGH POINT OF PIPE FROM STABILIZER TO VCT VENT.
5. DENOTES RADIOACTIVE WASTE MANAGEMENT SYSTEM CONTINUES ON IDENTIFIED DRAWING.
6. CHECK VALVE 2CS-0109 INSTALLED IN 45□V ANGLE SO FLAPPER REMAINS OPEN TO ALLOW GAS TO BACKFLOW UNDER LOW VELOCITY. HIGH FLOW CONDITIONS WILL CAUSE FLAPPER TO CLOSE.
7. FOR ALL SHELL SIDE CONNECTIONS SEE COMPONENT COOLING WATER SYSTEM FLOW DIAGRAM M2-0230 LOC: F-4.
8. ALL VENTS AND DRAINS ON THIS DRAWING DRAIN TO DRAIN CHANNEL B, UNLESS OTHERWISE NOTED.
9. TEMPORARY STRAINER IS PLACED IN THE SPOOL PIECE DURING INITIAL FLUSHING OPERATIONS. STRAINER MUST BE REMOVED AT PLANT START-UP. INSTALL PRESSURE GAUGE USING □* CAPPED CONNECTION. STRAINER AND PRESSURE GAUGE TO BE SUPPLIED BY OTHERS. THE TEMPORARY STRAINERS CAN BE RE-INSTALLED FOR POST MAINTENANCE ACTIVITY.
10. MINIMUM OF 5 FEET OF STRAIGHT RUN AFTER MINIMUM FLOW ORIFICE. ORIFICE SUPPLIED BY PUMP MANUFACTURER.
11. PLUNGER POT DRAIN.
12. PIPE FROM SUCTION STABILIZER MUST BE CONTINUOUSLY SLOPED UP TO CHECK VALVE.
13. FOR CONTINUATION SEE M1-0236-02 LOC: A-4.
14. DELETED
15. VALVES MAINTAINED IN NORMALLY CLOSED POSITION, EXCEPT WHEN THE POSITIVE DISPLACEMENT PUMP IS IN OPERATION, WHEN THEY ARE OPENED.
16. REMOTE OPERATORS FOR VALVES 2CS-8387A AND 2CS-8387B REMOVED PER DCN 8662.
17. VALVES MAINTAINED IN NORMALLY CLOSED POSITION, EXCEPT UPON INDICATION OF HI LEVEL IN SUCTION STABILIZER, WHEN THEY ARE MANUALLY OPERATED.
18. ARGON INJECTION PATH REFERENCE M2-0228-A (G-4) AND NOTE 21.
19. THESE INSTRUMENTS 2-PI-0118, 2-PI-0119, 2-PI-0187 AND 2-PI-0188 ARE ABANDONED IN PLACE PER FDA-2016-000141-01.

FSAR FIGURE 9.3-10

THIS DRAWING CREATED ELECTRONICALLY

CLASS I
(NUCLEAR SAFETY-RELATED)
SAFETY CLASS 1 — SEISMIC CATEGORY I
SAFETY CLASS 2 — CLASS 1E
SAFETY CLASS 3 — ASSOCIATED CIRCUITS

LUMINANT
CPNPP
GLEN ROSE, TEXAS

FLOW DIAGRAM
CHEMICAL AND VOLUME CONTROL SYSTEM
VOLUME CONTROL TANK LOOP

| DWG. NO. | SH. NO. | REV. |
|---|---|---|
| M2-0254 | - | CP-30 |

REF CKD CP-16 11/24/97

mc995000.dgn M2-0254 FINAL PRINT

| REV | DWN | CHKD | APVD | REMARKS |
|---|---|---|---|---|
| CP-30 | DLK 03-23 2017 | GAW 03-23 2017 | MHF 04-12 2017 | THIS DRAWING REVISED TO INCORPORATE AI-CR-2017-000789-16 TO EDITORIALLY ADD A NOTE TO VALVE 1-8341. |

NOTES:

1. FOR MECHANICAL SYMBOLS AND NOTES SEE DRAWING M1-0200.
2. DRAIN AND VENT LINES ROUTED TO FLOOR DRAIN IN FILTER COMPARTMENT.
3. DELETED
4. CHECK VALVE 1CS-0109 INSTALLED IN 45□ V ANGLE SO FLAPPER REMAINS OPEN TO ALLOW GAS TO BACKFLOW UNDER LOW VELOCITY. HIGH FLOW CONDITIONS WILL CAUSE FLAPPER TO CLOSE.
5. DENOTES RADIOACTIVE WASTE MANAGEMENT SYSTEM CONTINUES ON IDENTIFIED DRAWING.
6. CHECK VALVE 1CS-0109 INSTALLED IN 45□ V ANGLE SO FLAPPER REMAINS OPEN TO ALLOW GAS TO BACKFLOW UNDER LOW VELOCITY. HIGH FLOW CONDITIONS WILL CAUSE FLAPPER TO CLOSE.
7. FLOW DIAGRAM ORIGINALLY REDRAWN FROM WESTINGHOUSE DRAWING 1138E94 (SH 3) REV 6.
8. LINE 3-CS-1-242-151R-2 HAS A SCHEDULE 160 PIECE OF PIPE IN IT, SEE BRP-CS-1-SB-010.
9. ARGON INJECTION PATH REFERENCE M1-0228-A (G-4) AND NOTE 16.
10. CAUTION, CLOSING THIS VALVE REMOVES CCP AND PDP SUCTION PIPING OVER PRESSURE PROTECTION.

CP -30

FSAR FIGURE 9.3-10

THIS DRAWING CREATED ELECTRONICALLY

CLASS I
(NUCLEAR SAFETY-RELATED)
SAFETY CLASS 1 — SEISMIC CATEGORY I
SAFETY CLASS 2 — CLASS 1E
SAFETY CLASS 3 — ASSOCIATED CIRCUITS

LUMINANT
CPNPP
GLEN ROSE, TEXAS

FLOW DIAGRAM
CHEMICAL & VOLUME CONTROL SYSTEM
VOLUME CONTROL TANK LOOP

DWG. NO. M1-0255 | SH. NO. - | REV. CP-30

REF CHKD 3/19/2001

me872700.dgn A M1-0255 B C D E F G FINAL PRINT H

| REV | DWN | CHK | APVD | REMARKS |
|---|---|---|---|---|
| CP-35 | DLK 01-22 2017 | MM 01-22 2017 | | THIS DRAWING REVISED TO INCORPORATE DESIGN CHANGE FDA 2016-000141-01-03 PER SK-0021-16-000141-01-00. |

NOTES:

1. TEMPORARY STRAINERS CP1-CSSRTS-01,02,03 ARE PLACED IN THE SPOOL PIECE DURING INITIAL FLUSHING OPERATIONS. STRAINER MUST BE REMOVED AT PLANT START-UP, INSTALL PRESSURE GAUGE USING □" CAPPED CONNECTION. STRAINER AND PRESSURE GAUGE TO BE SUPPLIED BY OTHERS. THE TEMPORARY STRAINERS CAN BE RE-INSTALLED FOR POST MAINTENANCE ACTIVITIES.
2. MINIMUM OF 5 FEET OF STRAIGHT RUN AFTER MINIMUM FLOW ORIFICE SUPPLIED BY PUMP MANUFACTURER.
3. FOR MECHANICAL SYMBOLS AND NOTES SEE DRAWING M1-0200.
4. OVERFLOW FROM PUMP COOLANT HEAD TANK.
5. PLUNGER POT DRAIN.
6. DRAIN AND VENT LINES ROUTED TO FLOOR DRAIN IN FILTER COMPARTMENT.
7. PIPE FROM SUCTION STABILIZER MUST BE CONTINUOUSLY SLOPED UP TO CHECK VALVE.
8. NON-NUCLEAR SAFETY RELATED □" SS TUBING DRIP POCKET DRAINS, ROUTED TO EQUIPMENT DRAINS PROVIDED FOR TBX-CSAPCH-01,02 .
9. FLOW DIAGRAM ORIGINALLY REDRAWN FROM WESTINGHOUSE DRAWING 1138E94 (SH 3) REV 6.
10. PIPING FROM THE OUTLET OF THE RELIEF VALVES TO THE RWST SHALL BE SUPPORTED SUCH THAT THE PRESSURE BOUNDARY WILL REMAIN INTACT AND ALLOW FLOW PATH THROUGH THE LINE FOLLOWING A SAFE SHUTDOWN EARTHQUAKE.
11. VALVES MAINTAINED IN NORMALLY CLOSED POSITION, EXCEPT WHEN THE POSITIVE DISPLACEMENT PUMP IS IN OPERATION, WHEN THEY ARE OPENED.
12. VALVES MAINTAINED IN NORMALLY CLOSED POSITION, EXCEPT UPON INDICATION OF HI LEVEL IN SUCTION STABILIZER, WHEN THEY ARE MANUALLY OPERATED.
13. FLEX CONNECTION - MAY BE A PIPE CAP OR STORZ CONNECTION.
14. THESE INSTRUMENTS 1-PI-0118, 1-PI-0119, 1-PI-0186, 1-PI-0187 AND 1-PI-0188 ARE ABANDONED IN PLACE PER FDA-2016-000141-01.
15. CAUTION, CLOSING THIS VALVE REMOVES CCP AND PDP SUCTION PIPING OVER PRESSURE PROTECTION.

R

FSAR FIGURE 9.3-10

THIS DRAWING CREATED ELECTRONICALLY

CLASS I
(NUCLEAR SAFETY-RELATED)
SAFETY CLASS 1 — SEISMIC CATEGORY I
SAFETY CLASS 2 — CLASS 1E
SAFETY CLASS 3 — ASSOCIATED CIRCUITS

LUMINANT
CPNPP
GLEN ROSE, TEXAS

FLOW DIAGRAM
CHEMICAL AND VOLUME CONTROL
SYSTEM CHARGING AND POSITIVE
DISPLACEMENT PUMP TRAINS

| DWG. NO. | SH. NO. | REV. |
|---|---|---|
| M1-0255 | 01 | CP-35 |

REF CKD CP-18 11/24/97

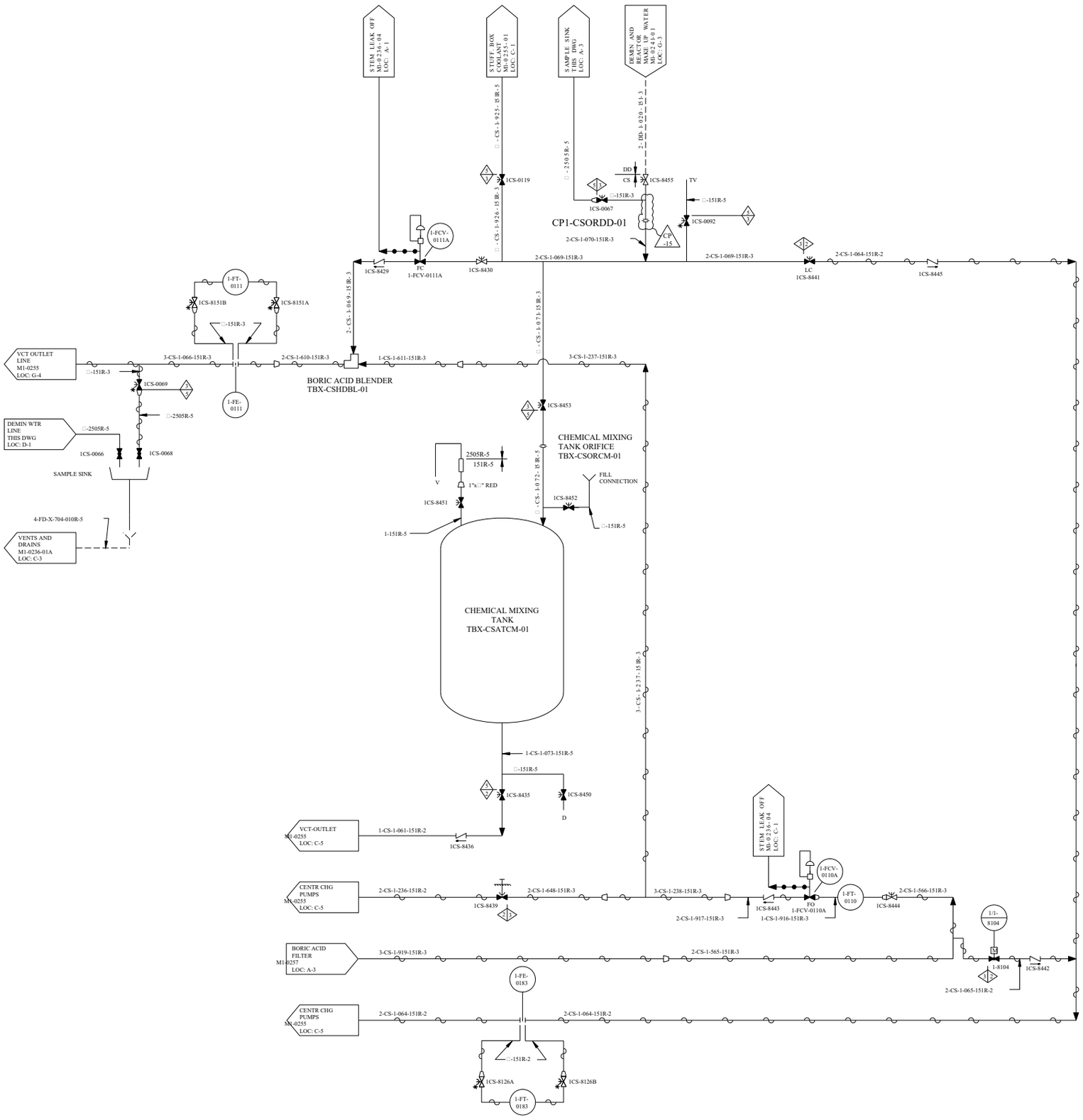
me919600.dgn A M1-0255-01

FINAL PRINT

| REV | DWN | CHK | APVD | REMARKS |
|---|---|---|---|---|
| CP-15 | DLK 07-11 2016 | GAW 07-11 2016 | MHF 07-18 2016 | THIS DRAWING REVISED TO INCORPORATE AI-CR-2016-006497-1 TO EDITORIALLY CORRECT THE LOCATION OF THE TAKEOFF POINT FOR SUPPLY VALVE 1CS-0067 TO BE BETWEEN 1CS-8455 AND ORIFICE FLANGE CP1-CSORDD-01. |

NOTES:

1. FOR MECHANICAL SYMBOLS AND NOTES SEE DRAWING M1-0200.
2. FLOW DIAGRAM ORIGINALLY REDRAWN FROM WESTINGHOUSE DRAWING 1138E94 SH 3 REV 6.
3. UNLESS OTHERWISE NOTED ALL DRAINS COLLECTED BY LOCAL DRAIN SYSTEM TO DRAIN CHANNEL B.




FSAR FIGURE 9.3-10

THIS DRAWING CREATED ELECTRONICALLY

CLASS I
(NUCLEAR SAFETY-RELATED)
SAFETY CLASS 1 — SEISMIC CATEGORY I
SAFETY CLASS 2 — CLASS 1E
SAFETY CLASS 3 — ASSOCIATED CIRCUITS

LUMINANT
CPNPP
GLEN ROSE, TEXAS

FLOW DIAGRAM
CHEMICAL & VOLUME
CONTROL SYSTEM

| DWG. NO. | SH. NO. | REV. |
|---|---|---|
| M1-0255 | 02 | CP-15 |

REF. CHECKED 07/2016

mc462300.dgn A M1-0255-02 FINAL PRINT

| REV | DWN | CHKD | APVD | REMARKS |
|---|---|---|---|---|
| CP-14 | DLK 10-19-2014 | MM 10-21-2014 | | THIS DRAWING REVISED TO INCORPORATE DESIGN CHANGE FDA 2013-000008-06-00 PER SK-0001-13-000008-06-00. |

NOTES:

1. LOCATED AS CLOSE TO CONTAINMENT AS POSSIBLE.
2. FOR MECHANICAL SYMBOLS AND NOTES SEE DRAWING M1-0200.
3. DRAIN AND VENT LINES ROUTED TO FLOOR DRAIN IN FILTER COMPARTMENT.
4. ALL VENTS AND DRAINS ON THIS DRAWING DRAIN TO DRAIN CHANNEL B, UNLESS OTHERWISE NOTED.
5. FLEX CONNECTION - MAY BE A PIPE CAP OR STORZ CONNECTION.

DISCHARGE DAMPENER M2-0254 LOC: G-4

3-CS-2-074-2501R-2

2-FT-0121

2-FE-0121

2CS-8404A

2CS-8404B

□-2501R-2

3-CS-2-083-2501R-2

VENTS AND DRAINS M2-0256-04 LOC: F-1

□" SS

2-HCV-0182

2-HIS-8402A

2-8402B

2-HCV-0182

FO

2CS-8403

2-CS-2-349-2501R-2

2-CS-2-087-250IR-2

□-2501R-5

2CS-0223

FLEX CONNS

SEE NOTE 5

2CS-0254

2CS-0255

2-CS-2-689-2501R-5

2CS-2-688-250IR-2

2CS-0253

2-8106

FLOOR DRAIN M2-0256-03 LOC: C-2

□ - 15 IR-5

2-8105

FLOOR DRAIN M2-0256-03 LOC: C-2

MOMENT RESTRAINT CP2-CSSSMR-14

3-CS-2-074-2501R-2

2CS-8222

2CS-0023

PENETRATION M-III-0006

ORC IRC

3-CS-2-077-2501R-2

2-8381

2CS-0002

LC

2CS-0003

TC

MOMENT RESTRAINT CP2-CSSSMR-06

LO

2CS-0105

RCDT

LIQUID WASTE PROCESSING M2-0264 LOC: D-3

REGENERATIVE HEAT EXCHANGER TCX-CSAHRG-01

2-TE-0126

3-CS-2-547-2501R-2

2-8147

OMB IMB

3-CS-2-078-2501R-2

LWP SYSTEM M2-0264 LOC: E-2

CS RC

3-CS-2-080-2501R-1

RCS CHG ALTERNATE M2-0250 LOC: E-4

2-8379B 2-8379A

3-RC-2-019-2501R-1

2-8146

3-CS-2-079-2501R-2

3-CS-2-081-2501R-1

RCS CHG NORMAL M2-0250 LOC: C-4

2-8378B 2-8378A

3-RC-2-076-2501R-1

2CS-0027

3-CS-2-082-2501R-2

2CS-8392

2CS-8393

2-8145

2-CS-2-111-2501R-2

2-CS-2-112-2501R-1

2-RC-2-132-2501R-1

RCS AUX SPRAY M2-0251 LOC: E-5

2CS-8377

NOTE 4

2CS-0037

2CS-0038

CHARGING PUMP M2-0254 LOC: G-5

2-CS-2-482-2501R-2

2CS-8345

2-CS-2-087-250IR-2

2CS-0213

2-PIS-0140

2CS-8383A

2CS-8389A

V (NOTE 3)

2CS-8385A

2CS-8384A

2CS-8382A

2-CS-2-088-250IR-2

2-CS-2-634-250IR-2

SEAL WATER INJECTION FILTER TCX-CSFLSI-01

2CS-8386A

(NOTE 3)

2-PIS-0141

2CS-8383B

2CS-8389B

2CS-8385B

2CS-8384B

2CS-8382B

2-CS-2-638-250IR-2

2-CS-2-089-2501R-2

2-CS-2-090-250IR-2

SEAL WATER INJECTION FILTER TCX-CSFLSI-02

2CS-8386B

2CS-0212

MOMENT RESTRAINT CP2-CSSSMR-11

2-FE-0144

LIP 2CS-8369B

2-FT-0144

2-CS-2-089-2501R-2

2CS-8371B

2CS-8370B

1-CS-2-667-2501R-2

2-CS-2-095-2501R-2

2-8351B

RC PUMP 2 M2-0255-01 LOC: D-6

PENETRATION M-III-0008

MOMENT RESTRAINT CP2-CSSSMR-10

2-FE-0145

LIP 2CS-8369A

2-FT-0145

2-CS-2-093-2501R-2

2CS-8371A

2CS-8370A

1-CS-2-666-2501R-2

2-CS-2-092-2501R-2

2-8351A

RC PUMP 1 M2-0255-01 LOC: A-6

PENETRATION M-III-0007

MOMENT RESTRAINT CP2-CSSSMR-13

2-FE-0142

LIP 2CS-8369D

2-FT-0142

2-CS-2-099-2501R-2

2CS-8371D

2CS-8370D

1-CS-2-669-2501R-2

2-CS-2-101-2501R-2

2-8351D

RC PUMP 4 M2-0255-01 LOC: A-3

PENETRATION M-III-0010

MOMENT RESTRAINT CP2-CSSSMR-12

2-FE-0143

LIP 2CS-8369C

2-FT-0143

2-CS-2-096-2501R-2

2CS-8371C

2CS-8370C

1-CS-2-668-2501R-2

2-CS-2-098-2501R-2

2-8351C

RC PUMP 3 M2-0255-01 LOC: D-3

PENETRATION M-III-0009

FSAR FIGURE 9.3-10

THIS DRAWING CREATED ELECTRONICALLY

CLASS I

(NUCLEAR SAFETY-RELATED)

| | |
|---|---|
| SAFETY CLASS 1 | SEISMIC CATEGORY I |
| SAFETY CLASS 2 | CLASS 1E |
| SAFETY CLASS 3 | ASSOCIATED CIRCUITS |

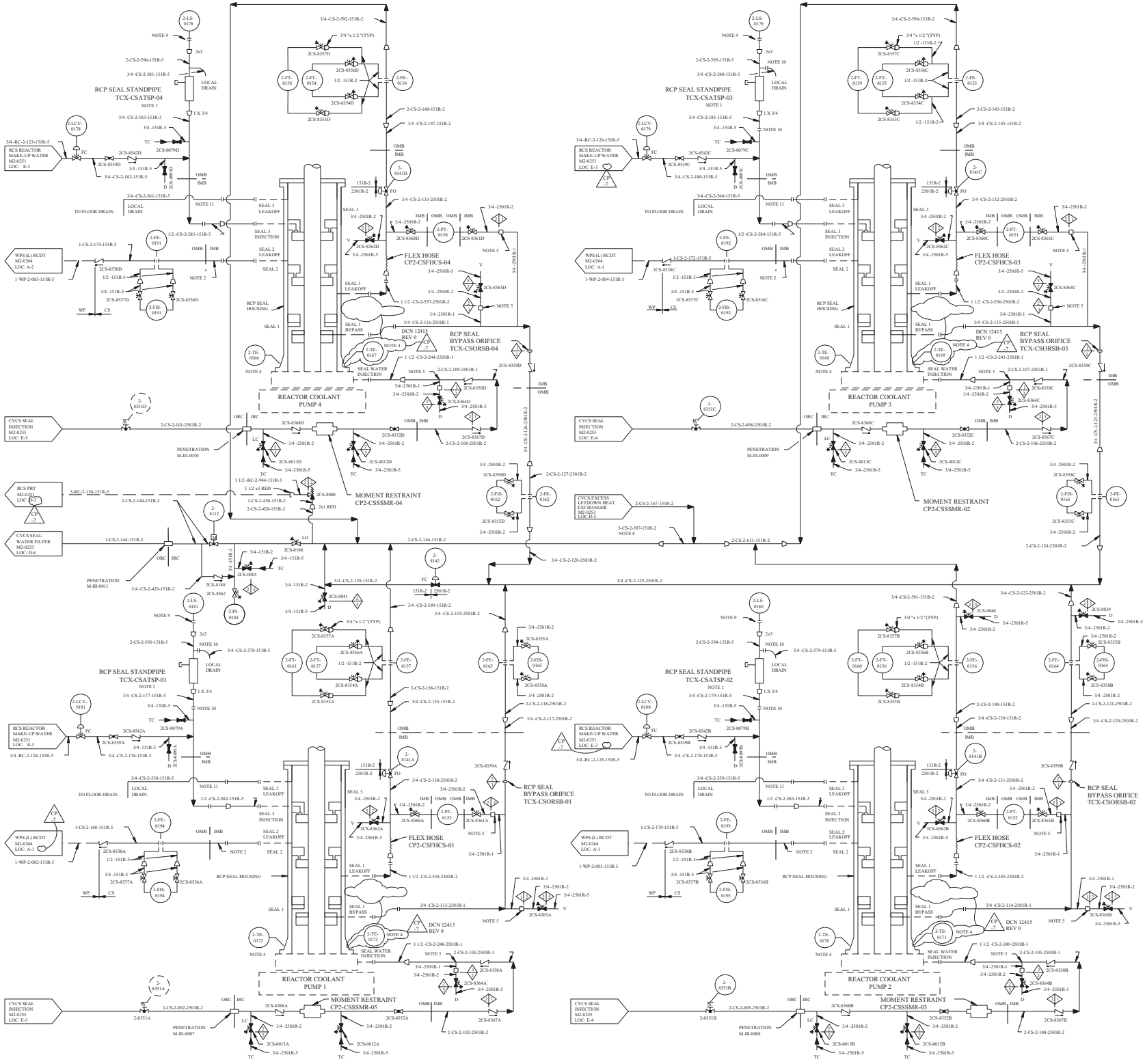
LUMINANT
CPNPP
GLEN ROSE, TEXAS

FLOW DIAGRAM
CHEMICAL AND VOLUME CONTROL SYSTEM

| DWG. NO. | SH. NO. | REV. |
|---|---|---|
| M2-0255 | - | CP-14 |

$$$$$$$ DATE $$$$$

me919000.dgn A M2-0255 B C D E F G < FINAL PRINT > H




| REV. | DWN. | CHK. | APVD. | REMARKS |
|---|---|---|---|---|
| CP-7 | BSE 09/02/1998 | | | THIS DRAWING REVISED TO INCORPORATE DESIGN CHANGE DCN 12413 REV 0. |

NOTES

1. BOTTOM OF STANDPIPE LOCATED 22 0.5 FT ABOVE THE CONNECTION TO THE REACTOR COOLANT PUMP SEAL 3.
2. PIPING TO RUN HORIZONTAL OR SLOPING THROUGHOUT ENTIRE RUN FROM RCP SEAL 2 LEAKOFF CONNECTION TO RCDT. DO NOT POCKET ANY PART OF LINE. LOCATE CHECK VALVE BELOW THE SEAL 2 LEAKOFF NOZZLE AT A DISTANCE EQUAL TO OR GREATER THAN THE HEAD OF WATER EQUIVALENT TO THE CHECK VALVE CRACKING PRESSURE.
3. DELETED
4. 2-TE-0172 AND 2-TE-0173 ETC. ARE FURNISHED WITH RC PUMPS.
5. 3/8 " ID FLOW RESTRICTOR PROVIDED FOR CLASS 1 - CLASS 2 TRANSITION SIMILAR TO ARRANGEMENT SHOWN IN NOTE 15 ON MECHANICAL SYMBOLS AND NOTES SHEET DRAWING M1-0200.
6. FOR MECHANICAL NOTES AND SYMBOLS SEE DRAWING M1-0200.
7. DELETED
8. 3 IN DIA DELAY LINE - 24 FT LONG.
9. 3 IN 150 LB RAISED FACE FLANGE.
10. 150 LB FLANGES TO PERMIT REMOVAL OF STANDPIPE FOR LEVEL SWITCH MAINTENANCE ON LOOPS 1, 2 AND 3 ONLY.
11. PIPING SHOULD BE SLOPED DOWNWARD FROM THIS POINT TO ASSURE 0 PSIG.
12. ALL DRAINS ON THIS DRAWING ARE DRAINED TO CHANNEL B, UNLESS OTHERWISE NOTED.

FSAR FIGURE 9.3-10

THIS DRAWING CREATED ELECTRONICALLY

CLASS I

(NUCLEAR SAFETY-RELATED)

| | |
|---|---|
| SAFETY CLASS 1 | SEISMIC CATEGORY I |
| SAFETY CLASS 2 | CLASS 1E |
| SAFETY CLASS 3 | ASSOCIATED CIRCUITS |

TXU ELECTRIC
CPSES
GLEN ROSE, TEXAS

FLOW DIAGRAM
CHEMICAL AND VOLUME
CONTROL SYSTEM

| DWG. NO. | SH. NO. | REV. |
|---|---|---|
| M2-0255 | 01 | CP-7 |

me000199.dgn

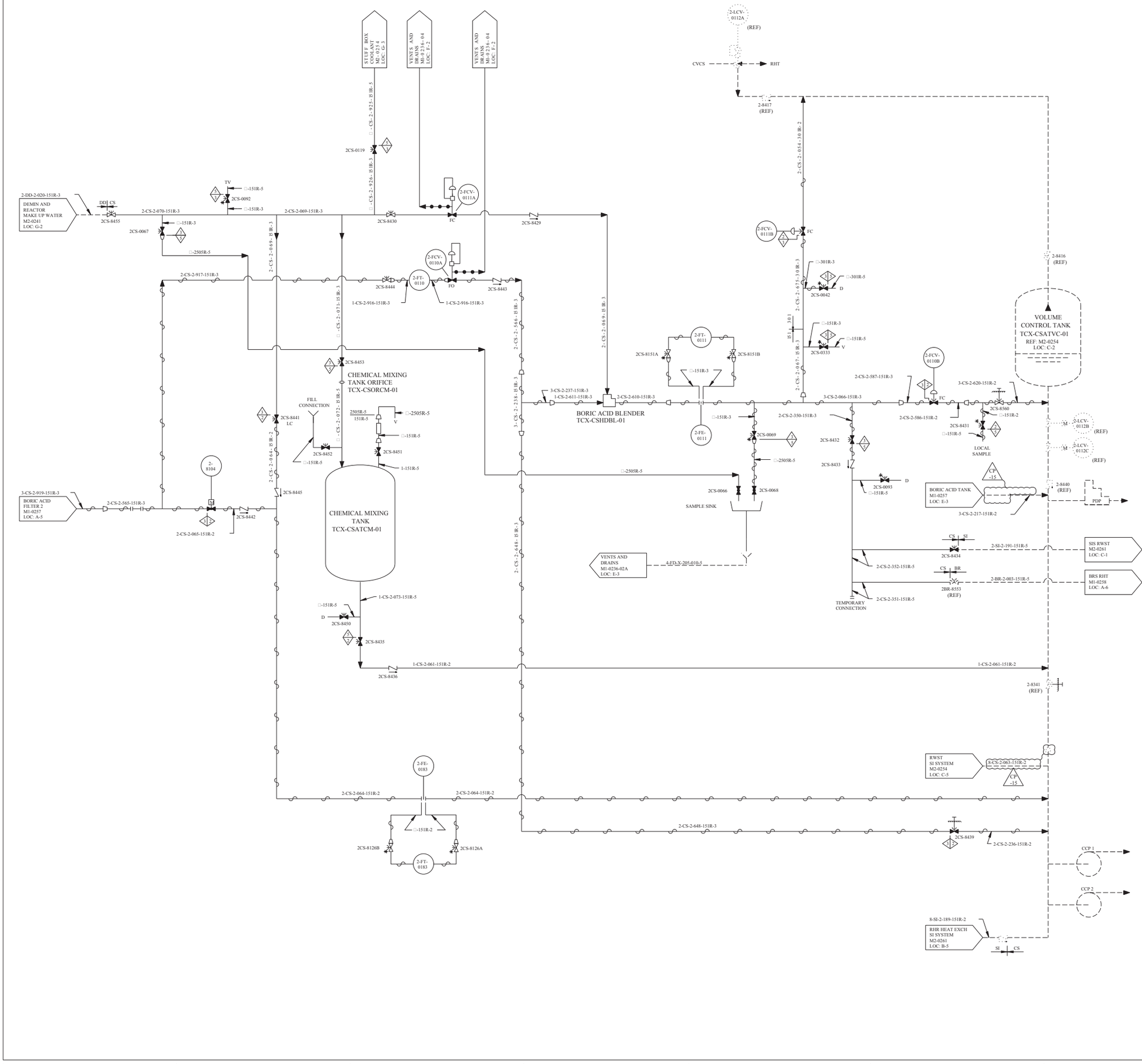
$$$$SSSD.TXTSSSSS

CPE

| REV | DWN | CHK | APVD | REMARKS |
|---|---|---|---|---|
| CP-15 | DLK 02-04-2015 | | | THIS DRAWING REVISED TO INCORPORATE AI-CR-2015-001056-1 TO EDITORIALLY REMOVE "MAIN EMERGENCY BORATE" FROM LINE NUMBER 3-CS-2-217-151R-2 EDITORIAL CHANGES AS NOTED. |

NOTES:

1. FOR MECHANICAL SYMBOLS AND NOTES SEE DRAWING M1-0200.
2. ALL VENTS AND DRAINS ON THIS DRAWING DRAIN TO DRAIN CHANNEL B, UNLESS OTHERWISE NOTED.
3. DELETED
4. DELETED




FSAR FIGURE 9.3-10

THIS DRAWING CREATED ELECTRONICALLY

CLASS I
(NUCLEAR SAFETY-RELATED)
SAFETY CLASS 1 — SEISMIC CATEGORY I
SAFETY CLASS 2 — CLASS 1E
SAFETY CLASS 3 — ASSOCIATED CIRCUITS

LUMINANT
CPNPP
GLEN ROSE, TEXAS

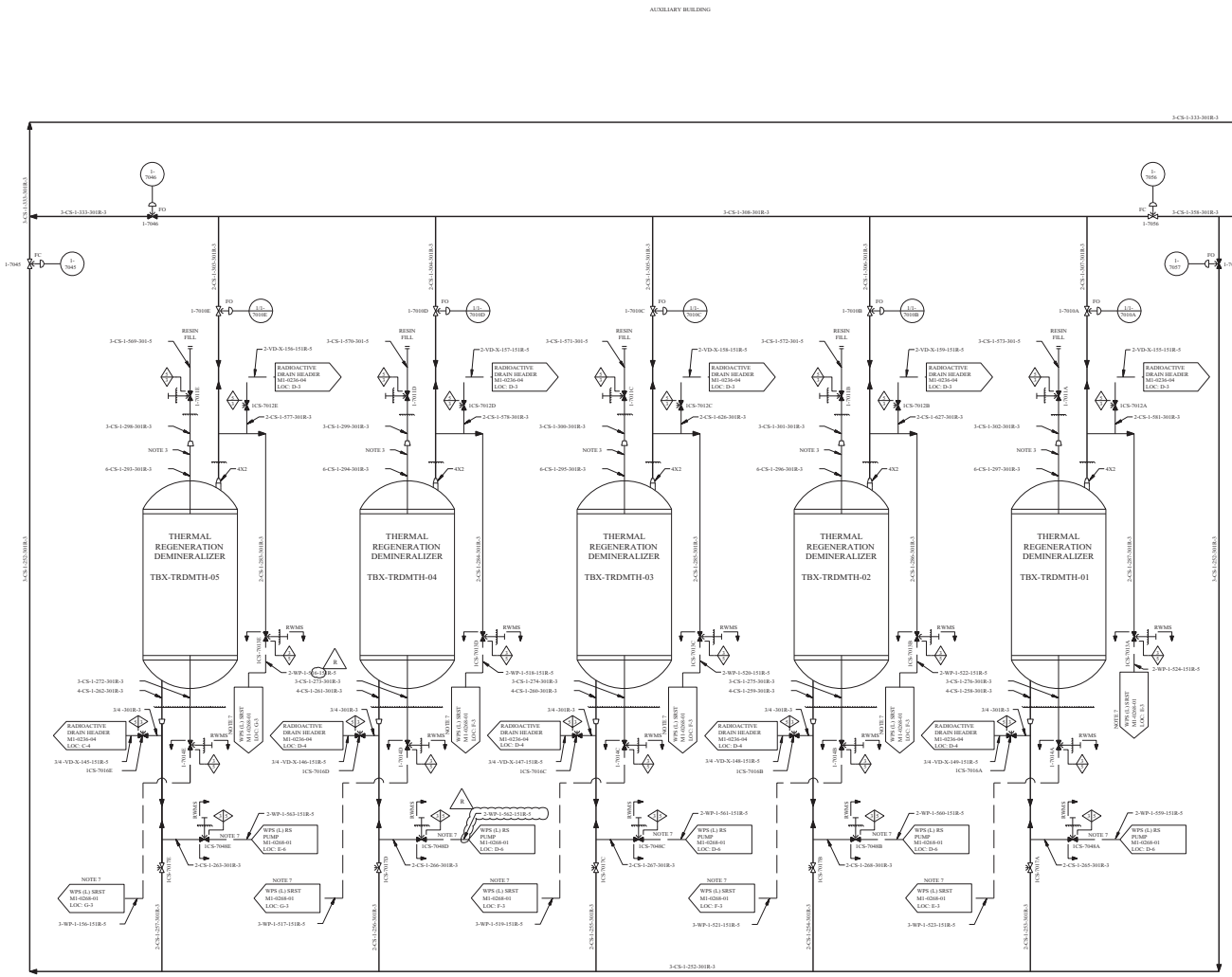
FLOW DIAGRAM
CHEMICAL AND VOLUME
CONTROL SYSTEM

| DWG. NO. | SH. NO. | REV. |
|---|---|---|
| M2-0255 | 02 | CP-15 |

$$$$$$$DATE$$$$$$ REF CHKD 11/04/2000

me0006el.dgn A M2-0255-02

< FINAL PRINT >




| REV | DWN | CHKD | APVD | REMARKS |
|---|---|---|---|---|
| CP-11 | DLR 04/01/2009 | | | THIS DRAWING REVISED TO INCORPORATE DESIGN CHANGE FDA 2000-002923-01-00 PER ML-0001-00-0029231-01-00. |

NOTES:

1. ALL VALVES ALIGNED FOR BORON REMOVAL (DILUTION).
2. DELETED
3. 6 FEET OF 6 INCH PIPE PROVIDED BETWEEN DEMINERALIZER AND REDUCER.
4. DELETED
5. DELETED
6. DELETED
7. INDICATES RADIOACTIVE WASTE MANAGEMENT SYSTEM CONTINUES ON IDENTIFIED DRAWING.

REFERENCE DRAWINGS:

THIS FLOW DIAGRAM HAS BEEN REDRAWN FROM DWG 1139, SH 4 REV 5 WITH THE EXCEPTION AS FOLLOWS:

a. VALVES AND LINE NUMBERS HAVE BEEN ADDED
b. CONTROL LOOPS HAVE BEEN DELETED EXCEPT FOR THE PRIMARY AND THE FINAL ELEMENTS. THE CONTROL LOOPS WILL BE SHOWN ON THE INSTUMENTATION AND CONTROL DIAGRAM

FSAR FIGURE 9.3-10

THIS DRAWING CREATED ELECTRONICALLY

DRAWING 2323-M1-0256 REV CP-5
HAS BEEN SPLIT INTO THE FOLLOWING SHEETS:

| |
|---|
| M1-0256 |
| M1-0256-A |

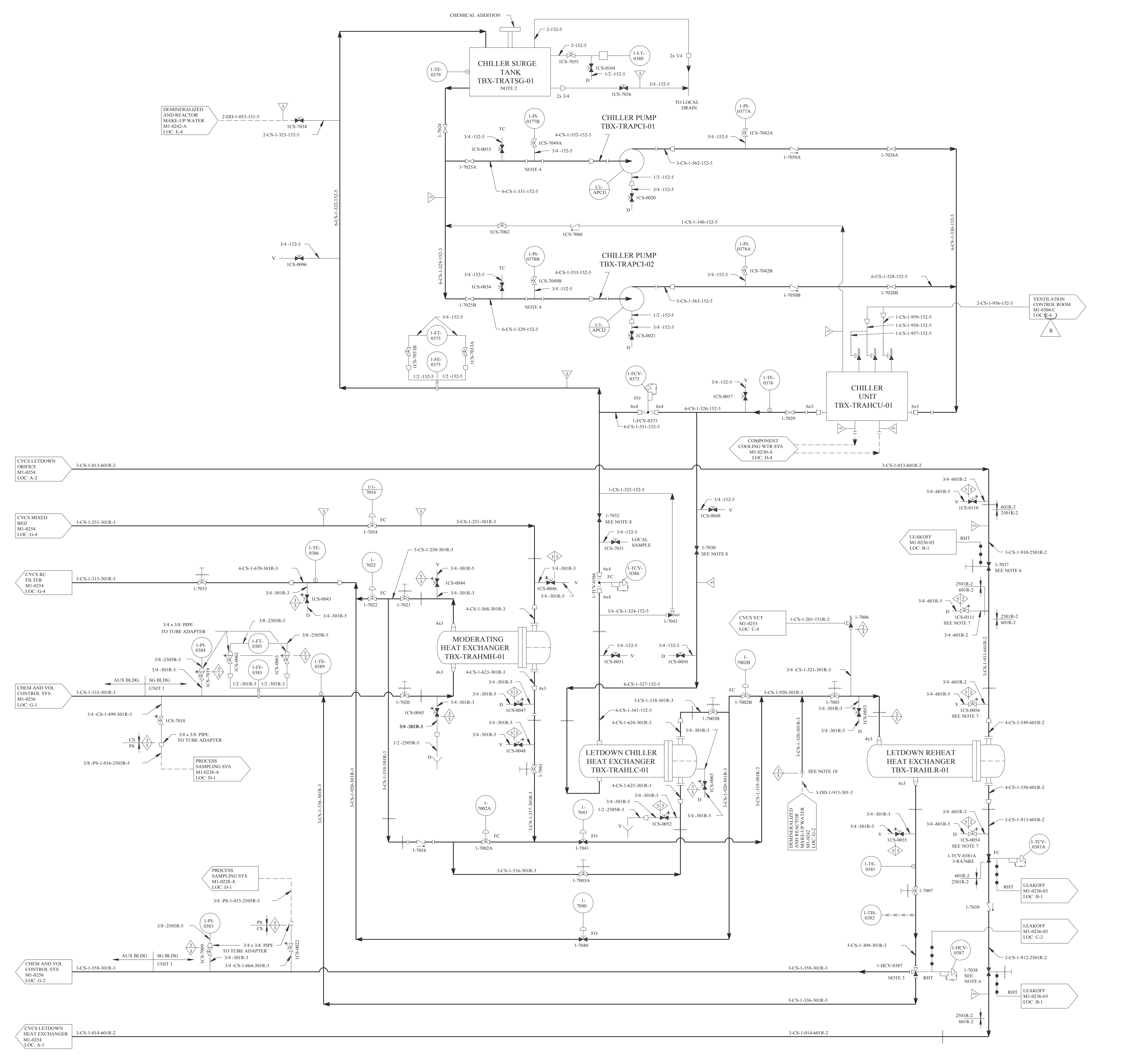
CLASS I
(NUCLEAR SAFETY-RELATED)
SAFETY CLASS 1 SEISMIC CATEGORY I
SAFETY CLASS 2 CLASS 1E
SAFETY CLASS 3 ASSOCIATED CIRCUITS

TXU ELECTRIC
CPSES
GLEN ROSE, TEXAS

FLOW DIAGRAM
CHEMICAL & VOLUME
CONTROL SYSTEM

| DWG. NO. | SH. NO. | REV. |
|---|---|---|
| M1-0256 | - | CP-11 |

FINAL PRINT




| REV | DWN | CHKD | APVD | REMARKS |
|---|---|---|---|---|
| CP-18 | MM 05-27 2008 | DLK 05-27 2008 | | THIS DRAWING REVISED TO INCORPORATE DESIGN CHANGE FDA 2008-001745-01-00 PER SK-0002-08-001745-01-00. |

NOTES:

1. ALL VALVES SHOWN ALIGNED FOR BORON REMOVAL (DILUTION).
2. CHILLER SURGE TANK IS LOCATED AT HIGH POINT IN THE CHILLER CIRCUIT.
3. THREE-WAY VALVES SHOULD BE ORIENTED IN PIPING AS SHOWN SO FAILURE IS WITH FLOW TO DEMINERALIZERS.
4. TEMPORARY STRAINERS CP1-CSSRTS-04 AND -05 ARE PLACED IN SPOOL PIECE DURING INITIAL FLUSHING OPERATION. STRAINER MUST BE REMOVED BEFORE PLANT START-UP. THE TEMPORARY STRAINERS CAN BE RE-INSTALLED FOR POST MAINTENANCE ACTIVITY.
5. INDICATES HERMETICALLY SEALED VALVE.
6. THIS VALVE IS CLOSED WHEN THE TUBE SIDE OF THE LETDOWN REHEAT HEAT EXCHANGER IS ISOLATED AND DRAINED.
7. THIS VALVE IS OPEN WHEN THE TUBE SIDE OF THE LETDOWN REHEAT HEAT EXCHANGER IS ISOLATED AND DRAINED.
8. VALVES CLOSED WHILE SYSTEM IS IN LAYUP.
9. FOR MECHANICAL SYMBOLS AND NOTES SEE DRAWING M1-0200.
10. VALVE 1-7004 HAS BEEN REMOVED AND A BLANK AND FLANGES HAS BEEN INSTALLED IN ITS PLACE PER FDA 2002-002085-01.

REFERENCE NOTES:

THIS FLOW DIAGRAM HAS BEEN REDRAWN FROM DWG 113-94 (SH 4) REV 5 WITH THE EXCEPTION AS FOLLOWS:

a. VALVES AND LINE NUMBERS HAVE BEEN ADDED.

b. CONTROL LOOPS HAVE BEEN DELETED EXCEPT FOR THE PRIMARY AND THE FINAL ELEMENTS. THE DETAILS OF THE CONTROL LOOPS WILL BE SHOWN ON THE INSTRUMENTATION AND CONTROL DIAGRAM.

FSAR FIGURE 9.3-10

THIS DRAWING CREATED ELECTRONICALLY

DRAWING 2323-M1-0256 REV CP-5
HAS BEEN SPLIT INTO THE FOLLOWING SHEETS:
M1-0256
M1-0256-A

CLASS I
(NUCLEAR SAFETY-RELATED)
SAFETY CLASS 1 / SAFETY CLASS 2 / SAFETY CLASS 3
SEISMIC CATEGORY I / CLASS 1E / ASSOCIATED CIRCUITS

LUMINANT
CPSES
GLEN ROSE, TEXAS

FLOW DIAGRAM
CHEMICAL AND VOLUME
CONTROL SYSTEM

DWG. NO. M1-0256 SH. NO. A REV. CP-18

FINAL PRINT

REF CHKD 01-02-2003

me879300.dgn M1-0256-A

| REV | DWN | CHKD | APVD | REMARKS |
|---|---|---|---|---|
| CP-14 | MHF 08-15 2006 | DLK 08-15 2006 | | THIS DRAWING REVISED TO INCORPORATE DESIGN CHANGE FDA 2002-002085-01-00 PER SK-0009-02-002085-01-00 |

NOTES:

1. ALL VALVES SHOWN ALIGNED FOR BORON REMOVAL (DILUTION).
2. CHILLER SURGE TANK IS LOCATED AT HIGH POINT IN THE CHILLER CIRCUIT.
3. THREE-WAY VALVE SHOULD BE ORIENTED IN PIPING AS SHOWN SO FAILURE IS WITH FLOW TO DEMINERALIZERS.
4. TEMPORARY STRAINERS CP2-CSSRTS-04 AND CP2-CSSRTS-05 ARE PLACED IN SPOOL PIECE DURING INITIAL FLUSHING OPERATION. STRAINER MUST BE REMOVED BEFORE PLANT START-UP. THE TEMPORARY STRAINERS CAN BE RE-INSTALLED FOR POST MAINTENANCE ACTIVITY.
5. FOR MECHANICAL SYMBOLS AND NOTES SEE DRAWING M1-0200.
6. DELETED
7. ALL DRAINS ON THIS DRAWING ARE DRAINED TO DRAIN CHANNEL B UNLESS OTHERWISE NOTED.
8. RELIEF VALVES BY VENDOR.
9. THIS VALVE IS CLOSED WHEN THE TUBE SIDE OF THE LETDOWN REHEAT HEAT EXCHANGER IS ISOLATED AND DRAINED.
10. THIS VALVE IS OPEN WHEN THE TUBE SIDE OF THE LETDOWN REHEAT HEAT EXCHANGER IS ISOLATED AND DRAINED.
11. VALVES CLOSED WHILE SYSTEM IS IN LAYUP.
12. VALVE 2-7004 HAS BEEN REMOVED AND A BLIND FLANGE HAS BEEN INSTALLED IN ITS PLACE PER FDA 2002-002085-01.

R

FSAR FIGURE 9.3-10

THIS DRAWING CREATED ELECTRONICALLY

CLASS I
(NUCLEAR SAFETY-RELATED)
SAFETY CLASS 1 — SEISMIC CATEGORY I
SAFETY CLASS 2 — CLASS 1E
SAFETY CLASS 3 — ASSOCIATED CIRCUITS

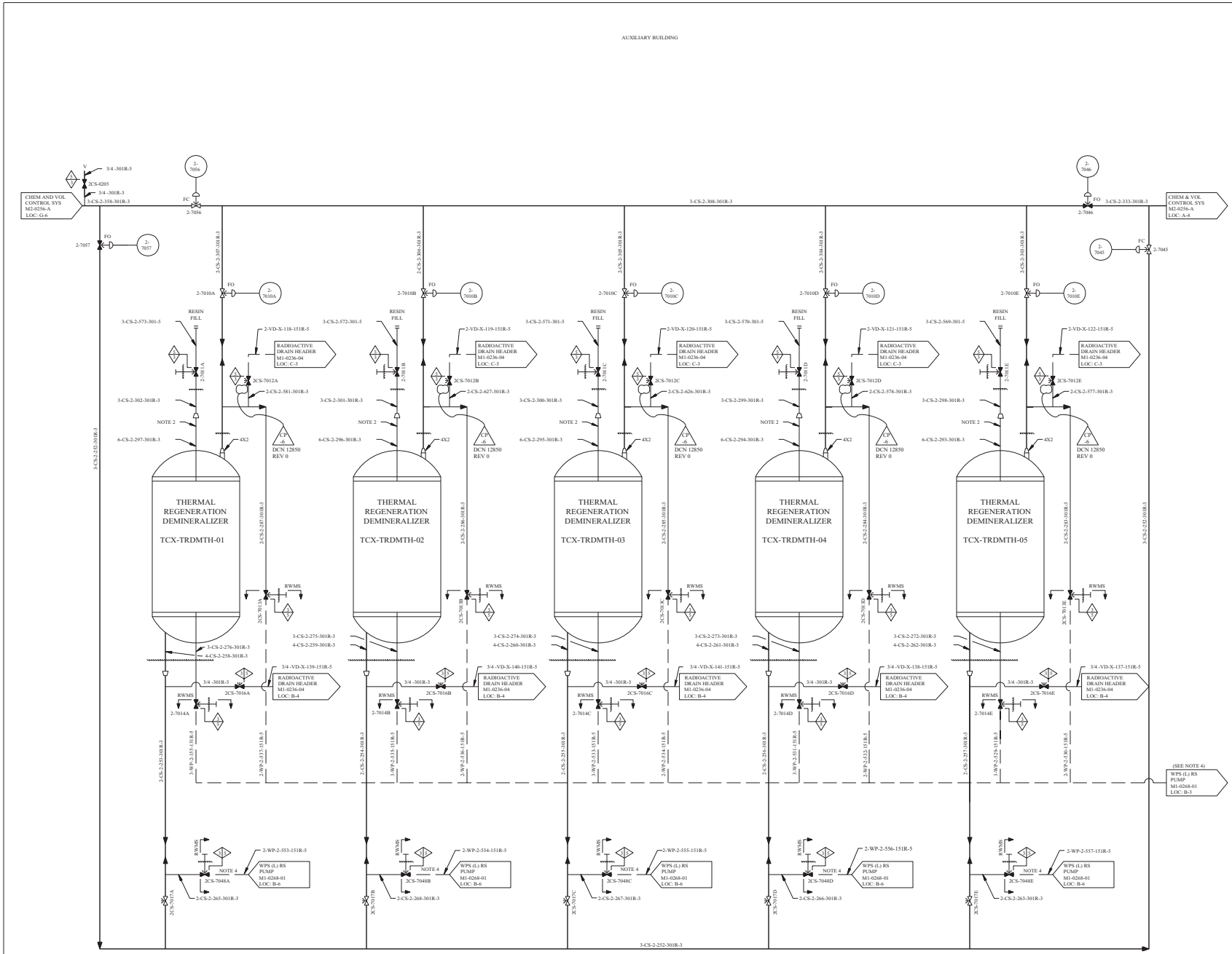
LUMINANT
CPSES
GLEN ROSE, TEXAS

FLOW DIAGRAM
CHEMICAL AND VOLUME
CONTROL SYSTEM

| DWG. NO. | SH. NO. | REV. |
|---|---|---|
| M2-0256 | A | CP-14 |

REF CKD 318/97 CP-8

me871700.dgn A M2-0256-A B C D E F G FINAL PRINT H




| REV. | DWN | CHKD | APVD | REMARKS |
|---|---|---|---|---|
| CP-6 | YA 10-01-1995 | | | THIS DRAWING REVISED TO INCORPORATE DESIGN CHANGE DCN 12850 REV 0. |

NOTES

1. ALL VALVES SHOWN ALIGNED FOR BORON REMOVAL (DILUTION).
2. 6 FEET OF 6 INCH PIPE PROVIDED BETWEEN DEMINERALIZER AND REDUCER.
3. FOR MECHANICAL SYMBOLS AND NOTES SEE DRAWING M1-0200.
4. DENOTES RADIOACTIVE WASTE MANAGEMENT SYSTEMS CONTINUES ON IDENTIFIED DRAWING.
5. ALL DRAINS ON THIS DRAWING ARE DRAINED TO DRAIN CHANNEL B UNLESS OTHERWISE NOTED.
6. DURING UNIT 2 CONSTRUCTION, UNIT 2 PIPING IS TO BE PHYSICALLY ISOLATED FROM UNIT 1 PIPING BY REMOVAL OF A SECTION OF PIPE TO PROVIDE AN INTERIM PIPING CONFIGURATION. END CONNECTIONS SHALL BE INSTALLED AS INDICATED ON THE PIPING ISOMETRIC DRAWING. THE FINAL DESIGN CONFIGURATION, FOR UNIT 2 OPERATION SHALL REFLECT WELDED PIPE.

FSAR FIGURE 9.3-10

THIS DRAWING CREATED ELECTRONICALLY

CLASS I

(NUCLEAR SAFETY-RELATED)

| | |
|---|---|
| SAFETY CLASS 1 | SEISMIC CATEGORY I |
| SAFETY CLASS 2 | CLASS 1E |
| SAFETY CLASS 3 | ASSOCIATED CIRCUITS |

TXU ELECTRIC
CPSES
GLEN ROSE, TEXAS

FLOW DIAGRAM
CHEMICAL AND VOLUME
CONTROL SYSTEM

| DWG. NO. | SH. NO. | REV. |
|---|---|---|
| M2-0256 | B | CP-6 |

$$$$$$$$D\TESSSSS

me000113.dgn

| REV | DWN | CHKD | APVD | REMARKS |
|---|---|---|---|---|
| CP-33 | DLK 09-01-2016 | MM 09-01-2016 | | THIS DRAWING REVISED TO INCORPORATE DESIGN CHANGE FDA 2016-000114-01-00 PER SK-0008-16-000114-01-00. |

NOTES:

1. ALL EQUIPMENT AND PIPING SHOWN TO BE MAINTAINED AT A MINIMUM TEMPERATURE OF 65□ F.
2. LOWER LOOP TO EXTEND 12 INCHES BELOW NOZZLE. UPPER LOOP TO EXTEND TO 6 INCHES BELOW THE DIAPHRAGM FLANGE DIRECT OVERFLOW INTO FUNNEL SYPHON BREAK LOCATED AT TOP OF PIPE.
3. LOOP SEAL TO EXTEND 12 INCHES BELOW AND ABOVE OVERFLOW NOZZLE.
4. FOR MECHANICAL SYMBOLS AND NOTES SEE DRAWING M1-0200.
5. TEMPERATURE WELL WITH FLANGE PROVIDED.
6. INDICATES HERMETICALLY SEALED VALVE.
7. INDICATES HEAT TRACED.
8. FILTER VENT AND DRAIN LINES ROUTED TO FLOOR DRAIN IN FILTER COMPARTMENT.
9. PLUGGED □ INCH SOCKET WELD CONNECTION.
10. UNLESS OTHERWISE NOTED ALL DRAINS COLLECTED BY LOCAL DRAIN SYSTEM TO DRAIN CHANNEL B.
11. DRAIN LINE TO BE USED AS A LOCAL SAMPLE LINE.
12. DELETED
13. DELETED
14. DELETED
15. REDUCER IS DRILLED OUT TO ONE INCH PIPE DIAMETER. LINE 1-CS-X-902-151R-3 ON TANK 1 AND 1-CS-X-903-151R-3 ON TANK 2 EXTENDS THROUGH THE TWO INCH PIPE AND REDUCER TO CONNECT WITH A 1"x□" REDUCER COUPLING.
16. X-LIS-0101 (PRESSURE BOUNDARY ONLY): ALL WIRING DETERMINATED VIA DCN 0656 REV 0 AND DCN 0665 REV 0.
17. FLEX CONNECTION - STORZ CONNECTION MAINTAINED IN FLEX EQUIPMENT STORAGE BUILDING (X-FX-2K19).
18. FLEX CONNECTION - MAY BE A PIPE CAP OR STORZ CONNECTION.

REFERENCE NOTE:

THIS FLOW DIAGRAM HAS BEEN REDRAWN FROM WESTINGHOUSE DRAWING 1138E96 REV 6 WITH EXCEPTIONS AS FOLLOWS:

a. VALVE AND LINE NUMBERS HAVE BEEN ADDED.

b. CONTROL LOOPS HAVE BEEN DELETED EXCEPT FOR THE PRIMARY AND THE FINAL ELEMENTS. THE DETAILS OF THE CENTRAL LOOPS WILL BE SHOWN ON INSTRUMENTATION AND CONTROL DIAGRAM.

FSAR FIGURE 9.3-10

THIS DRAWING CREATED ELECTRONICALLY

CLASS I
(NUCLEAR SAFETY-RELATED)
SAFETY CLASS 1 — SEISMIC CATEGORY I
SAFETY CLASS 2 — CLASS 1E
SAFETY CLASS 3 — ASSOCIATED CIRCUITS

LUMINANT
CPNPP
GLEN ROSE, TEXAS

FLOW DIAGRAM
CHEMICAL AND VOLUME
CONTROL SYSTEM (COMMON)

| DWG. NO. | SH. NO. | REV. |
|---|---|---|
| M1-0257 | - | CP-33 |

REF CKD 6-1-98 CP-24

me676100.dgn A M1-0257 FINAL PRINT

| REV | DWN | CHKD | APVD | REMARKS |
|---|---|---|---|---|
| CP-31 | JRMC 05-08-2014 | DJL 05-07-2014 | | THIS DRAWING REVISED TO INCORPORATE DESIGN CHANGE FDA 2014-000109-01-00 PER SK-0001-14-000109-01-00. |

NOTES:

1. RHT LEVEL INDICATION MUST BE VISIBLE FROM RE FEED PUMP LOCAL CONTROL.
2. QUICK DISCONNECT COUPLING TO MATE WITH HALF COUPLING PROVIDED WITH SAMPLE VESSEL.
3. LOWER LOOP TO EXTEND 20 INCHES BELOW OVERFLOW CONNECTION AND UPPER LOOP 6 INCHES BELOW DIAPHRAGM FLANGE. LOCATE SYPHON BREAK VENT ON TOP OF UPPER LOOP.
4. HIGH POINT OF PIPE CROSS CONNECTION BETWEEN RHT'S TO BE 12 INCHES BELOW DIAPHRAGM FLANGE.
5. LOCATE THESE CONNECTIONS AS CLOSE TOGETHER AS POSSIBLE.
6. ORIENT 3-WAY VALVE AS SHOWN SO IT FAILS WITH FLOW TO THE RECYCLE EVAPORATOR FILTER.
7. LOCATE CLOSE TO WPS (G) GAS COMPRESSOR.
8. FOR MECHANICAL SYMBOLS AND NOTES SEE DRAWING M1-0200.
9. 400 LB RF FLANGE TO MATCH 400 LB FLANGE ON RESIN FILL TANK.
10. FILTER VENT AND DRAIN LINES ROUTED TO FLOOR DRAIN IN FILTER COMPARTMENT.
11. DELETED
12. PROTECT TURBINE METER FROM CONDENSATE IN DRAINAGE BY INSTALLING 1T AT A LOCAL HIGH POINT. SLOPE INLET AND OUTLET PIPING DOWNWARD FROM THE METER.
13. DENOTES RADIOACTIVE WASTE MANAGEMENT SYSTEM CONTINUES ON IDENTIFIED DRAWINGS.
14. FLOW DIAGRAM REDRAWN FROM WESTINGHOUSE DRAWING 1138E95 SH 1, REV 4 AND DESIGN VERIFIED AGAINST LATEST ISSUED REVISION, REV 7.

RECYCLE EVAPORATOR FEED DEMINERALIZER TBX-BRDMRE-01

RECYCLE EVAPORATOR FEED DEMINERALIZER TBX-BRDMRE-02

RECYCLE EVAPORATOR FEED FILTER TBX-BRFLRE-01

RECYCLE EVAPORATOR FEED FILTER TBX-BRFLRE-02

RECYCLE HOLDUP TANK 1 CPX-BRATRH-01

RECYCLE HOLDUP TANK 2 CPX-BRATRH-02

RECYCLE EVAPORATOR FEED PUMP 1 TBX-BRAPRE-01

RECYCLE EVAPORATOR FEED PUMP 2 TBX-BRAPRE-02

RECYCLE HOLDUP TANK VENT EJECTOR TBX-BREJHT-01

CLASS II

LUMINANT
CPNPP
GLEN ROSE, TEXAS

FLOW DIAGRAM
BORON RECYCLE SYSTEM

| DWG. NO. | SH. NO. | REV. |
|---|---|---|
| M1-0258 | - | CP-31 |

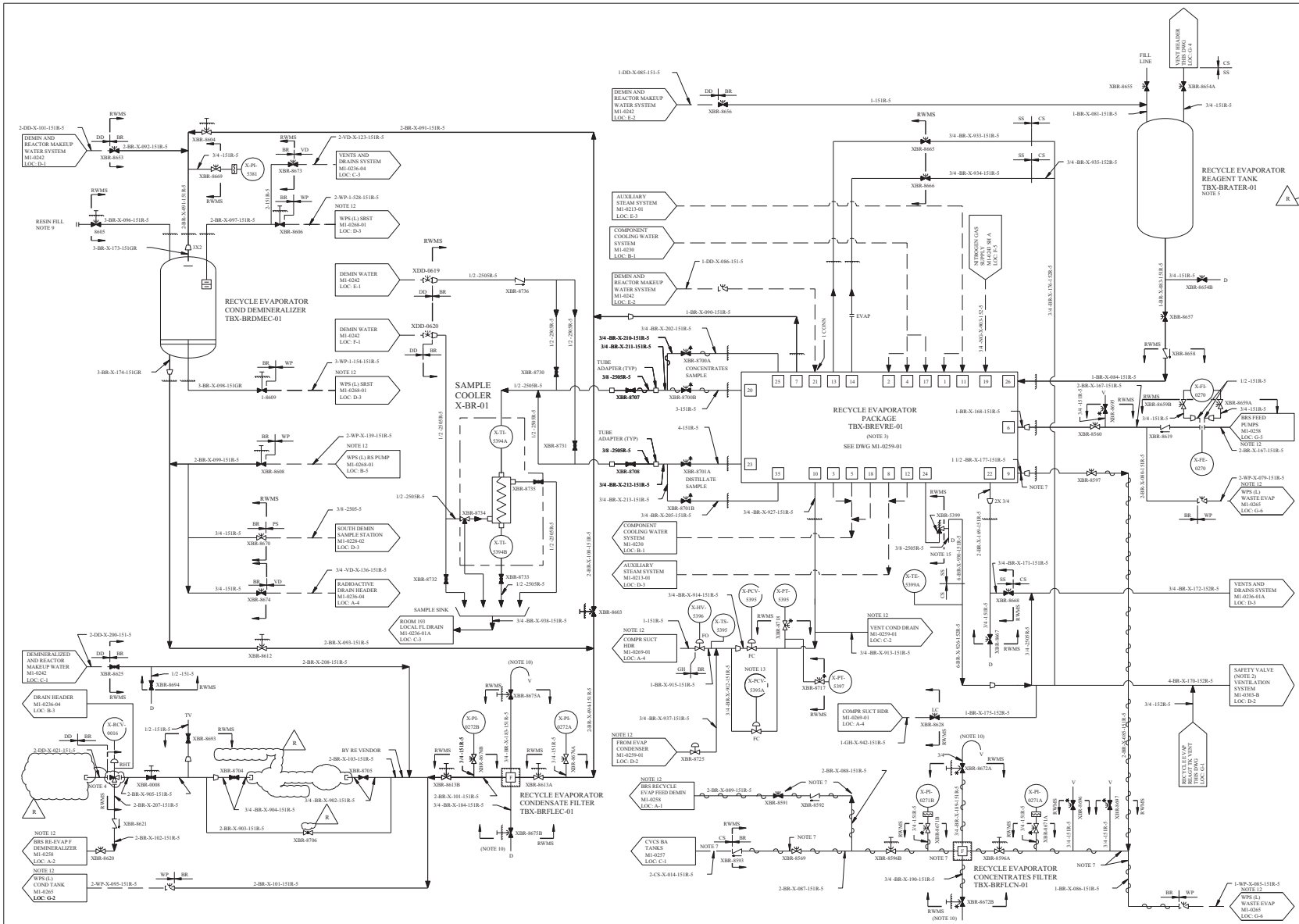
FSAR FIGURE 9.3-11

THIS DRAWING CREATED ELECTRONICALLY

REF CKD 2/6/97 CP-24

$$$$$$$ DATE $$$$$$$

me990500.dgn M1-0258 < FINAL PRINT >




| REV | DWN | CHKD | APVD | REMARKS |
|---|---|---|---|---|
| CP-23 | MHF 02-22-2002 | SA 02-22-2002 | | THIS DRAWING REVISED TO INCORPORATE DESIGN CHANGE FDA-1999-003471-01-00 PER SK-0019-99-003471-01-00. |

NOTES

1. SEE M1-0200 FOR MECHANICAL NOTES AND SYMBOLS.
2. CONNECTION PERMANENTLY CONNECTED TO PLANT VENT UPSTREAM OF RADIATION MONITOR RT-014.
3. RECYCLE EVAPORATOR PACKAGE TBX-BREVRE-01 WAS FURNISHED BY WESTINGHOUSE. SEE VENDOR DWG 730376 FOR DIMENSIONAL OUTLINE AND CONNECTION SIZES. REFERENCE P.O. CP-0001 AND S.O. 232. SEE M1-0259-01 AND M1-2259 SERIES FOR PIPING AND INSTRUMENTATION.
4. THREE-WAY VALVE SHOULD BE ORIENTED IN PIPING AS SHOWN SO THAT VALVE FAILS WITH FLOW TO THE RECYCLE EVAPORATOR FEED DEMINERALIZER.
5. LOCATE REAGENT TANK AND PIPING TO ALLOW FOR GRAVITY DRAIN INTO EVAPORATOR.
6. MUST BE ROUTED THRU SFPC'S DEMINERALIZERS AND FILTER.
7. THIS EQUIPMENT AND PIPING TO BE HEAT TRACED.
8. DELETED
9. 400 LB RF FLANGE TO MATCH 400 LB FLANGE ON RESIN FILL TANK.
10. FILTER VENT AND DRAIN LINES ROUTED TO FLOOR DRAIN IN FILTER COMPARTMENT.
12. DENOTES RADIOACTIVE WASTE MANAGEMENT SYSTEM CONTINUES ON IDENTIFIED DRAWING.
13. LOCATE PRESS SENSOR TAP FOR THESE TWO PCV'S UPSTREAM OF THESE PCV'S ON LINE NUMBER 3/4 -BR-X-927-151R-5.
14. DELETED
15. NON-NUCLEAR SAFETY CLASS 3/8 " SS TUBING SHALL BE INSTALLED PER SPECIFICATION CPES-I-1017.
16. DELETED

REFERENCE DRAWINGS

THIS FLOW DIAGRAM HAS BEEN REDRAWN FROM WESTINGHOUSE DRAWING 1138E95 (SH 2) REV '7 WITH EXCEPTIONS AS FOLLOWS:

a) VALVES AND LINES NUMBERS HAVE BEEN ADDED.

b) CONTROL LOOPS HAVE BEEN DELETED EXCEPT FOR THE PRIMARY AND THE FINAL ELEMENTS. THE DETAILS OF THE CONTROL LOOPS WILL BE SHOWN ON INSTRUMENTATION AND CONTROL DIAGRAM.

FSAR FIGURE 9.3-11

THIS DRAWING CREATED ELECTRONICALLY

DRAWING M1-0259 REV CP-15
HAS BEEN SPLIT INTO THE FOLLOWING SHEETS:
M1-0259
M1-0259-A

CLASS II

TXU ENERGY
CPSES
GLEN ROSE, TEXAS

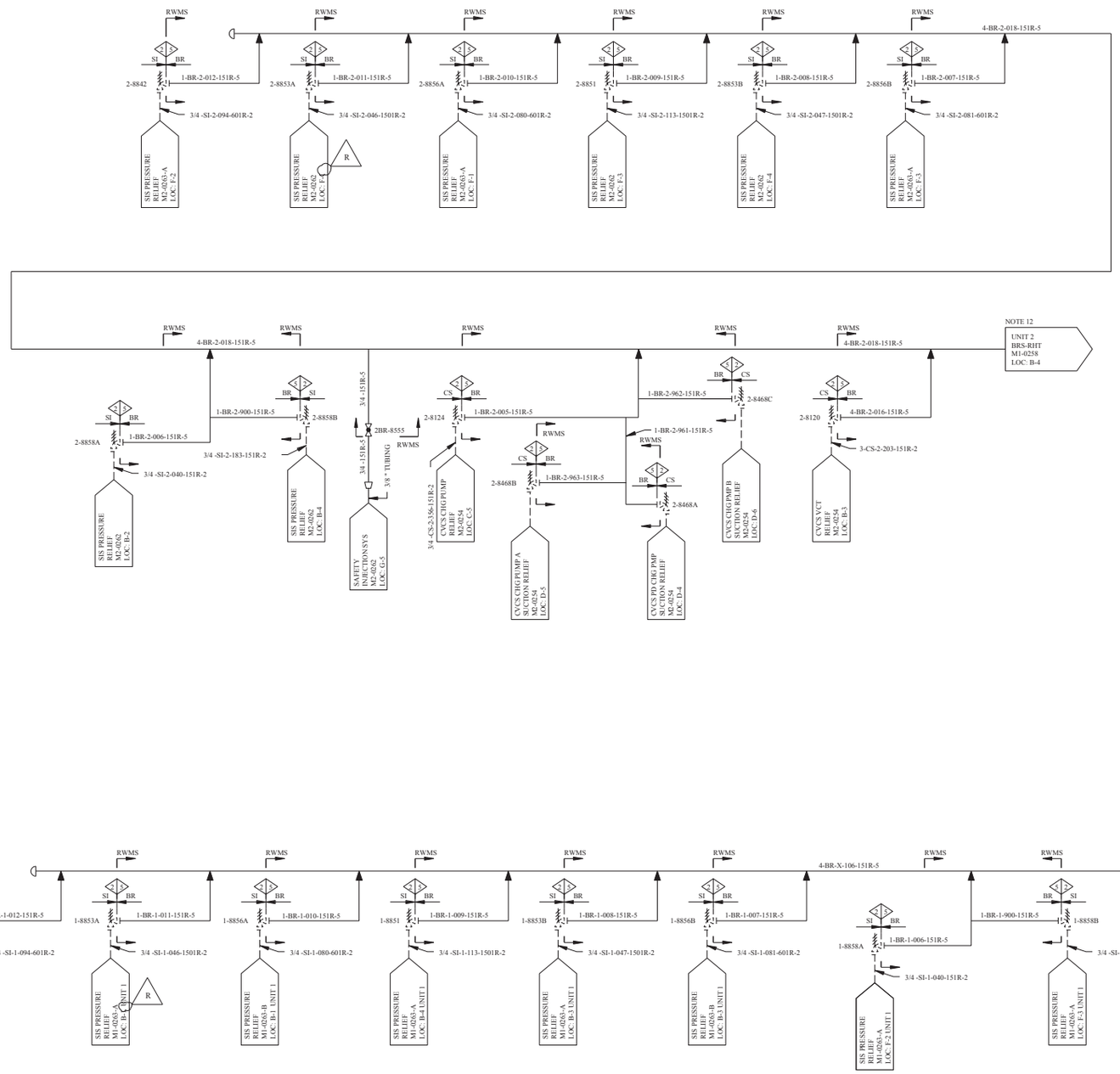
FLOW DIAGRAM
BORON RECYCLE SYSTEM

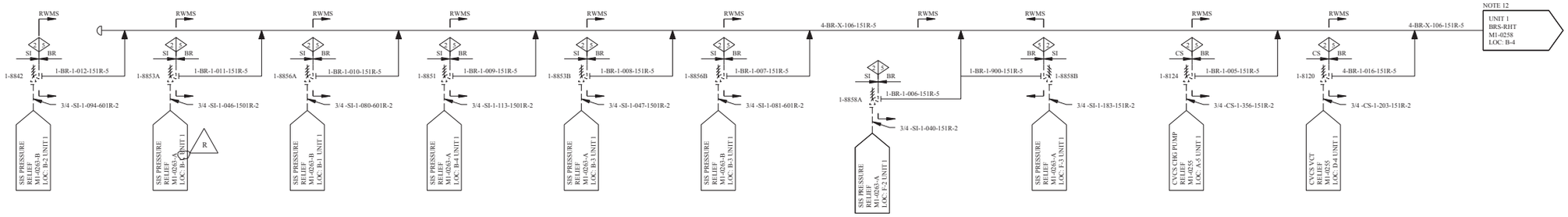
| DWG. NO. | SH. NO. | REV. |
|---|---|---|
| M1-0259 | - | CP-23 |

FINAL PRINT

REF CKD 1/21/97 CP-21

me421400.dgn M1-0259




| REV | DWN | CHK | APVD | REMARKS |
|---|---|---|---|---|
| CP-8 | DLK 06-08-2009 | EES 06-08-2009 | | THIS DRAWING REVISED TO INCORPORATE DESIGN CHANGE FDA 2009-002540-01-00 PER SK-0001-09-002540-01-00. |

NOTES:

1. SEE M1-0200 FOR MECHANICAL NOTES AND SYMBOLS.
2. DELETED
3. DELETED
4. DELETED
5. DELETED
6. DELETED
7. DELETED
8. DELETED
9. DELETED
10. DELETED
12. DENOTES RADIOACTIVE WASTE MANAGEMENT SYSTEM CONTINUES ON IDENTIFIED DRAWING.
13. DELETED
14. DELETED
15. DELETED
16. DELETED

REFERENCE DRAWINGS:

THIS FLOW DIAGRAM HAS BEEN REDRAWN FROM WESTINGHOUSE DRAWING 1138E95 (SH 2) REV 7 WITH EXCEPTIONS AS FOLLOWS:

a) VALVES AND LINES NUMBERS HAVE BEEN ADDED.

b) CONTROL LOOPS HAVE BEEN DELETED EXCEPT FOR THE PRIMARY AND THE FINAL ELEMENTS. THE DETAILS OF THE CONTROL LOOPS WILL BE SHOWN ON INSTRUMENTATION AND CONTROL DIAGRAM.

REFERENCE DRAWINGS:

THIS FLOW DIAGRAM HAS BEEN REDRAWN FROM WESTINGHOUSE DRAWING 1138E95 (SH 2) REV 7 WITH EXCEPTIONS AS FOLLOWS:

a) VALVES AND LINES NUMBERS HAVE BEEN ADDED.

b) CONTROL LOOPS HAVE BEEN DELETED EXCEPT FOR THE PRIMARY AND THE FINAL ELEMENTS. THE DETAILS OF THE CONTROL LOOPS WILL BE SHOWN ON INSTRUMENTATION AND CONTROL DIAGRAM.

FSAR FIGURE 9.3-11

THIS DRAWING CREATED ELECTRONICALLY

DRAWING M1-0259 REV CP-15
HAS BEEN SPLIT INTO THE FOLLOWING SHEETS:
M1-0259
M1-0259-A

CLASS II

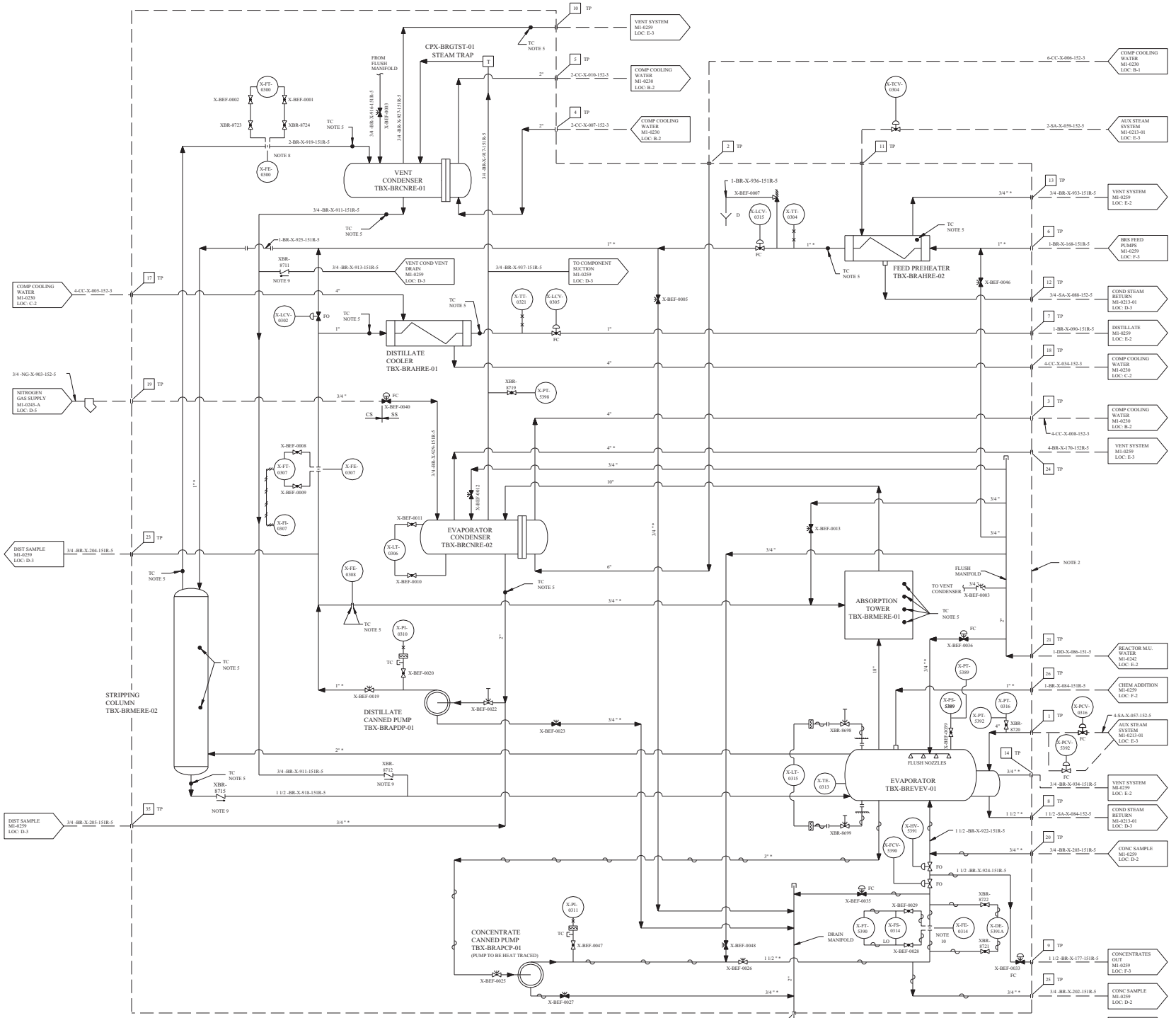
LUMINANT
CPNPP
GLEN ROSE, TEXAS

FLOW DIAGRAM
BORON RECYCLE SYSTEM

| DWG. NO. | SH. NO. | REV. |
|---|---|---|
| M1-0259 | A | CP-8 |

$$$$$$$$DATE$$$$$$$$

me931000.dgn M1-0259-A




| REV | DWN | CHK | APVD | REMARKS |
|---|---|---|---|---|
| CP-10 | RME 05/24/096 | | | THIS DRAWING REVISED TO ADD THE FSAR FIGURE NUMBER AS AN EDITORIAL CHANGE. |

NOTES:

1. FOR MECHANICAL NOTES AND SYMBOLS SEE DRAWING M1-0200.
2. 15 GPM RECYCLE EVAPORATOR SUPPLY BY WESTINGHOUSE DRAWING 4667D56 PIPING AND EQUIPMENT SUPPLIED ON A SKID, SHOP ORDER NUMBER 232 WNES SPIN NUMBER TBX-BREVRE-01.
3. ALL LINES MARKED WITH * ARE CLASS 151R. THIS IS A DESIGNATION ONLY AND NO ADDITIONAL INSPECTION HAS BEEN PERFORMED ON THIS PIPING. ALL OTHER PIPE IS CLASS 151.
4. TP INDICATES "TERMINAL POINT" AND NOZZLE NUMBER ON EVAPORATOR, SEE WESTINGHOUSE DRAWING 7301376, R-10.
5. TC INDICATES "TEST CONNECTIONS" FOR FIELD TEST, 1/2 " NPT PLUGGED BOSSES.
6. FOR INSTALLATION DETAILS OF INSTRUMENTATION FOR THE EVAPORATOR SKID, SEE WESTINGHOUSE DRAWING 737J884, R-1A.
7. FOR EQUIPMENT LOGIC DIAGRAM SEE INSTRUMENTATION AND CONTROL DIAGRAM NUMBER M1-2259-SERIES.
8. INSTALL ORIFICE IN VERTICAL SECTION IMMEDIATELY ABOVE THE VENT CONDENSER.
9. REMOVE INTERNAL SPRING FROM XBR-8711, XBR-8712 AND XBR-8715.
10. REPLACED WITH A NEW ORIFICE PLATE PER DCA 80218 REV 2.

FSAR FIGURE 9.3-11

CP 10

THIS DRAWING CREATED ELECTRONICALLY

CLASS I

(NUCLEAR SAFETY-RELATED)

SAFETY CLASS 1 — SEISMIC CATEGORY I
SAFETY CLASS 2 — CLASS 1E
SAFETY CLASS 3 — ASSOCIATED CIRCUITS

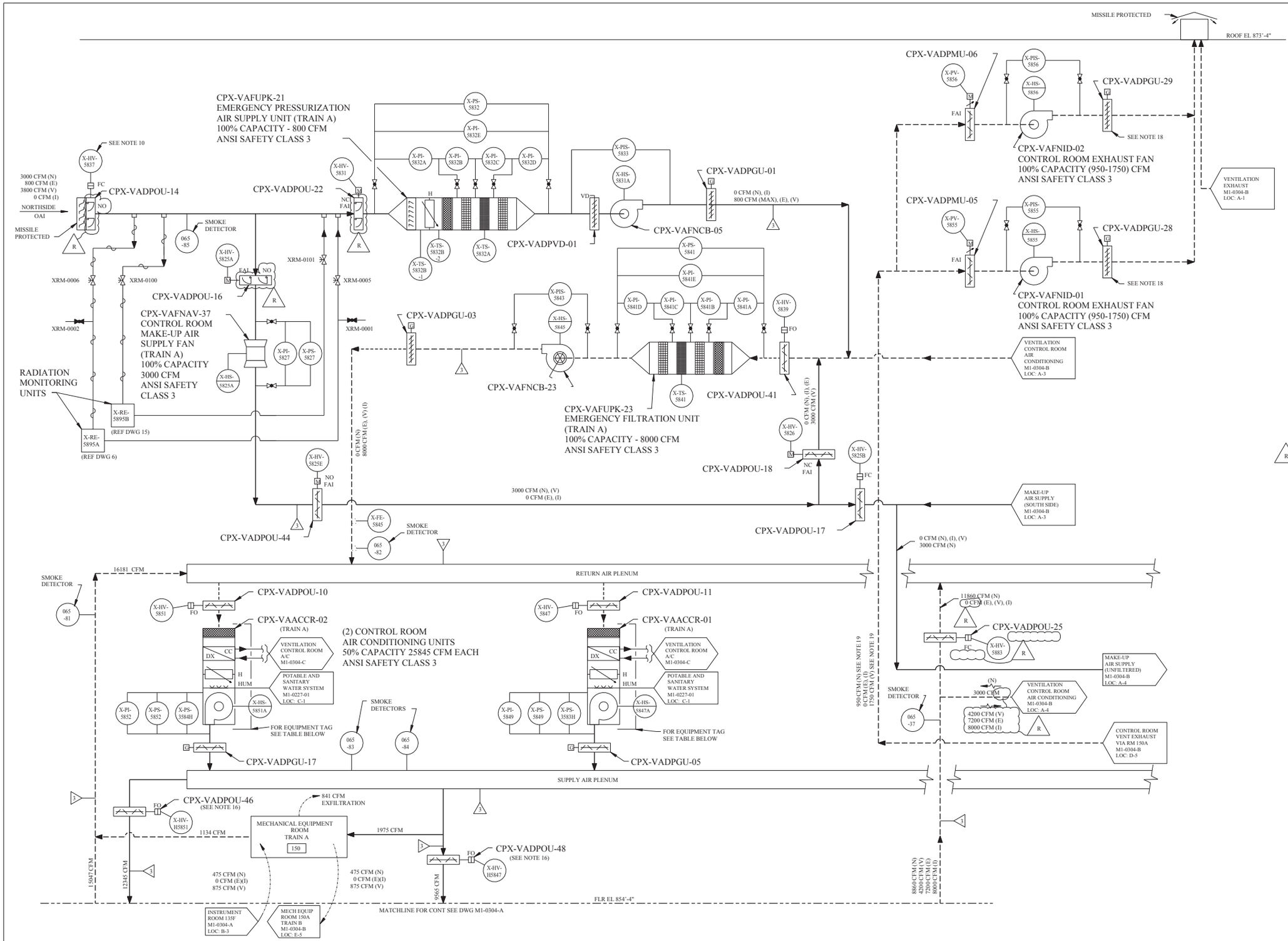
TXU ELECTRIC
CPSES
GLEN ROSE, TEXAS

FLOW DIAGRAM
BORON RECYCLE SYSTEM

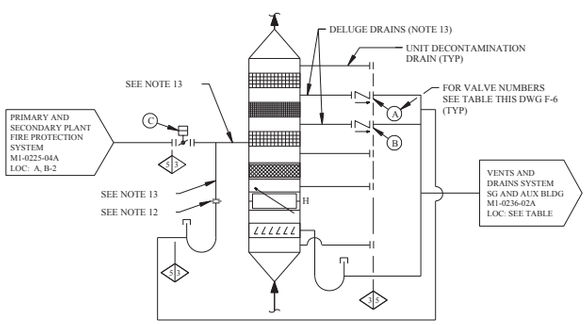
| DWG. NO. | SH. NO. | REV. |
|---|---|---|
| M1-0259 | 01 | CP-10 |

vs0000cu.dgn

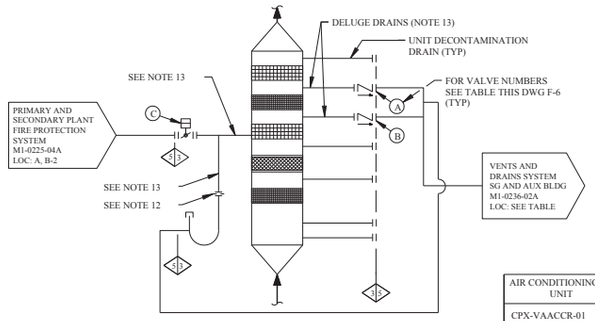
$$$$$$$D\A\TE$$$$$$




CONTROL ROOM AIR CONDITIONING SYSTEM
SAFETY CLASS 3 (EXCEPT AS NOTED)




TYPICAL DELUGE AND DRAIN CONNECTION
FOR EMERGENCY PRESSURIZATION UNITS




TYPICAL DELUGE AND DRAIN CONNECTION
FOR EMERGENCY FILTRATION UNITS

| FILTRATION UNIT NUMBER | DELUGE DRAIN VALVES | | DELUGE SUPPLY VALVE | DRAIN CONNECTION REFERENCE DWG AND LOCATION |
|---|---|---|---|---|
| | (A) | (B) | (C) | |
| CPX-VAFUPK-21 | CPX-VADPCK-37 | CPX-VADPCK-38 | XFP-0654 | M1-0236-02A LOC: G-2 |
| CPX-VAFUPK-23 | CPX-VADPCK-41 | CPX-VADPCK-42 | XFP-0656 | M1-0236-02A LOC: G-2 |

| AIR CONDITIONING UNIT | PREFILTER | COOLING COIL | ELECTRIC HEATER | CENTRIFUGAL FAN | HUMIDIFIER | CONDENSER | COMPRESSOR |
|---|---|---|---|---|---|---|---|
| CPX-VAACCR-01 | CPX-VAACCR-01A | CPX-VAACCR-01B | CPX-VAACCR-01H | CPX-VAACCR-01D | CPX-VAACCR-01E | CPX-VAACCR-01F | CPX-VAACCR-01G |
| CPX-VAACCR-02 | CPX-VAACCR-02A | CPX-VAACCR-02B | CPX-VAACCR-02H | CPX-VAACCR-02D | CPX-VAACCR-02E | CPX-VAACCR-02F | CPX-VAACCR-02G |

| REV | DWN | CHK | APVD | REMARKS |
|---|---|---|---|---|
| CP-34 | MM 11-10 2005 | DLK 11-10 2005 | | THIS DRAWING REVISED TO INCORPORATE DESIGN CHANGE FDA 2001-002847-01-03 PER SK-0021-01-002847-01-00. |

NOTES:

1. THIS DIAGRAM IS A SCHEMATIC REPRESENTATION AND IS INTENDED TO SHOW GENERAL AIR DISTRIBUTION AND FLOW PATHS. AIR FLOWS MAY VARY SLIGHTLY DEPENDING ON OPERATING AIR CONDITIONERS.
2. BALANCING DAMPERS, REGISTERS, DIFFUSERS, FLEXIBLE CONNECTIONS AND ALL OTHER RELATED ACCESSORIES NOT SHOWN ON THIS DIAGRAM SHALL BE PROVIDED AS INDICATED ON THE HVAC ARRANGEMENT DRAWINGS AND SPECIFICATIONS.
3. FOR ABBREVIATIONS AND SYMBOLS SEE DRAWINGS M1-0313 AND M1-0200.
4. DELETED
5. WORK THIS DRAWING WITH M1-0308.
6. THIS FLOW DIAGRAM IS COMMON FOR UNIT 1 AND 2.
7. THE CONTROL ROOM AREA WILL BE MAINTAINED AT A POSITIVE PRESSURE OF 0.125 INCHES WG.
8. THIS EXFILTRATION WILL OCCUR DURING EMERGENCY RECIRCULATION AND ISOLATION MODES WHEN THE KITCHEN AND TOILET EXHAUST FANS ARE NOT OPERATING.
9. DELETED
10. CONTROL VALVE HAS AN ASSOCIATED SAFETY CLASS 3 AIR ACCUMULATOR CPX-CICATHV-01 .
11. CONTROL VALVE HAS AN ASSOCIATED SAFETY CLASS 3 AIR ACCUMULATOR CPX-CIATHV-02 .
12. FOR DRAIN FLOW ORIFICE NUMBER AND LINE CONTINUATION SEE DRAWING M1-0225-04A LOC: A, B, C, & D-2
13. NOT WITHIN ASME CODE BOUNDARY.
14. AIR FLOW QUANTITIES SHOWN ARE BASED ON A DENSITY OF 0.075 LB/FT³ OCCURRING AT THE STANDARD CONDITION OF DRY AIR AT 70°F AND 29.92" HG BAROMETRIC PRESSURE. QUANTITIES IN PARENTHESES ARE ACTUAL AIR FLOW RATES BASED ON DENSITY AT DESIGN CONDITIONS.
15. MAXIMUM EXFILTRATION FROM CONTROL ROOM ENVELOPE DURING ALL MODES OF OPERATION EXCEPT ISOLATION MODE.
16. DAMPER MANUALLY POSITIONED FOR FLOW BALANCING PURPOSE.
17. DELETED
18. DAMPERS CPX-VADPGU-28 AND 29 WEIGHT AND ARM POSITIONS HAVE BEEN REPOSITIONED TO RETAIN .25 INCHES OF WATER PRESSURE PRIOR TO OPENING.
19. VALUES SHOWN ARE MINIMUM AIR FLOWS. ACTUAL AIR FLOW DEPENDS ON THE LEAK TIGHTNESS OF THE CONTROL ROOM PRESSURE BOUNDARY.
20. THE AMOUNT OF RETURN AIR FLOW WAS CALCULATED BASED ON EXISTING READINGS AS WELL AS NEW READINGS AND FROM TRAVERSE READINGS TAKEN DOWNSTREAM.

REFERENCES:

| | |
|---|---|
| 1. M1-0313 | FLOW DIAGRAM VENTILATION AAP BLDG AND CONTROL BLDG UPS AREA A/C SYSTEMS |
| M1-0200 | MECHANICAL SYMBOLS AND NOTES |
| 3. M1-0308 | FLOW DIAGRAM VENTILATION CONTROL ROOM AIR CONDITIONING |
| 4. M1-0236-01 AND M1-0236-02 | FLOW DIAGRAM VENTS AND DRAINS SYSTEM SAFEGUARDS AND AUXILIARY BUILDINGS |
| 5. M1-0227 | FLOW DIAGRAM POTABLE AND SANITARY WATER SYSTEM |
| 6. ELD-353-1800 | GENERAL ATOMIC COMPANY OUTLINE GAS SAMPLER WITH PUMP |
| 7. M1-0788 | PLUMBING AUXILIARY BUILDING PLANT AT EL 830'-0" |
| 8. M1-0306 | FLOW DIAGRAM VENTILATION TURBINE BUILDING |
| 9. M2-0306 | FLOW DIAGRAM VENTILATION TURBINE BUILDING |
| 10. M1-0304-A | FLOW DIAGRAM VENTILATION CONTROL ROOM AIR CONDITIONING |
| 11. M1-0304-B | FLOW DIAGRAM VENTILATION CONTROL ROOM AIR CONDITIONING |
| 12. M1-0225-04 | FLOW DIAGRAM PRIMARY AND SECONDARY PLANT FIRE PROTECTION SYSTEM |
| 13. M2-0256 | FLOW DIAGRAM CHEMICAL AND VOLUME CONTROL SYSTEM |
| 14. M1-0229 | FLOW DIAGRAM COMPONENT COOLING WATER SYSTEM |
| 15. 353-1100 | OUTLINE NOBLE GAS MONITOR (SORRENTO ELECTRONICS) |

LEGEND:

(N) CFM FOR NORMAL OPERATION MODE
(E) CFM FOR EMERGENCY RECIRCULATION MODE
(V) CFM FOR EMERGENCY VENTILATION MODE
(I) CFM FOR ISOLATION MODE

DRAWING M1-0304 REV CP-12 HAS BEEN SPLIT INTO THE FOLLOWING SHEETS:
M1-0304
M1-0304-A

DRAWING M1-0304 REV CP-13 HAS BEEN SPLIT INTO THE FOLLOWING SHEETS:
M1-0304
M1-0304-B

DRAWING M1-0304 REV CP-20 HAS BEEN SPLIT INTO THE FOLLOWING SHEETS:
M1-0304
M1-0304-C
M1-0304-D

CLASS I
(NUCLEAR SAFETY-RELATED)
SAFETY CLASS 1, SAFETY CLASS 2, SAFETY CLASS 3
SEISMIC CATEGORY I
CLASS 1E
ASSOCIATED CIRCUITS

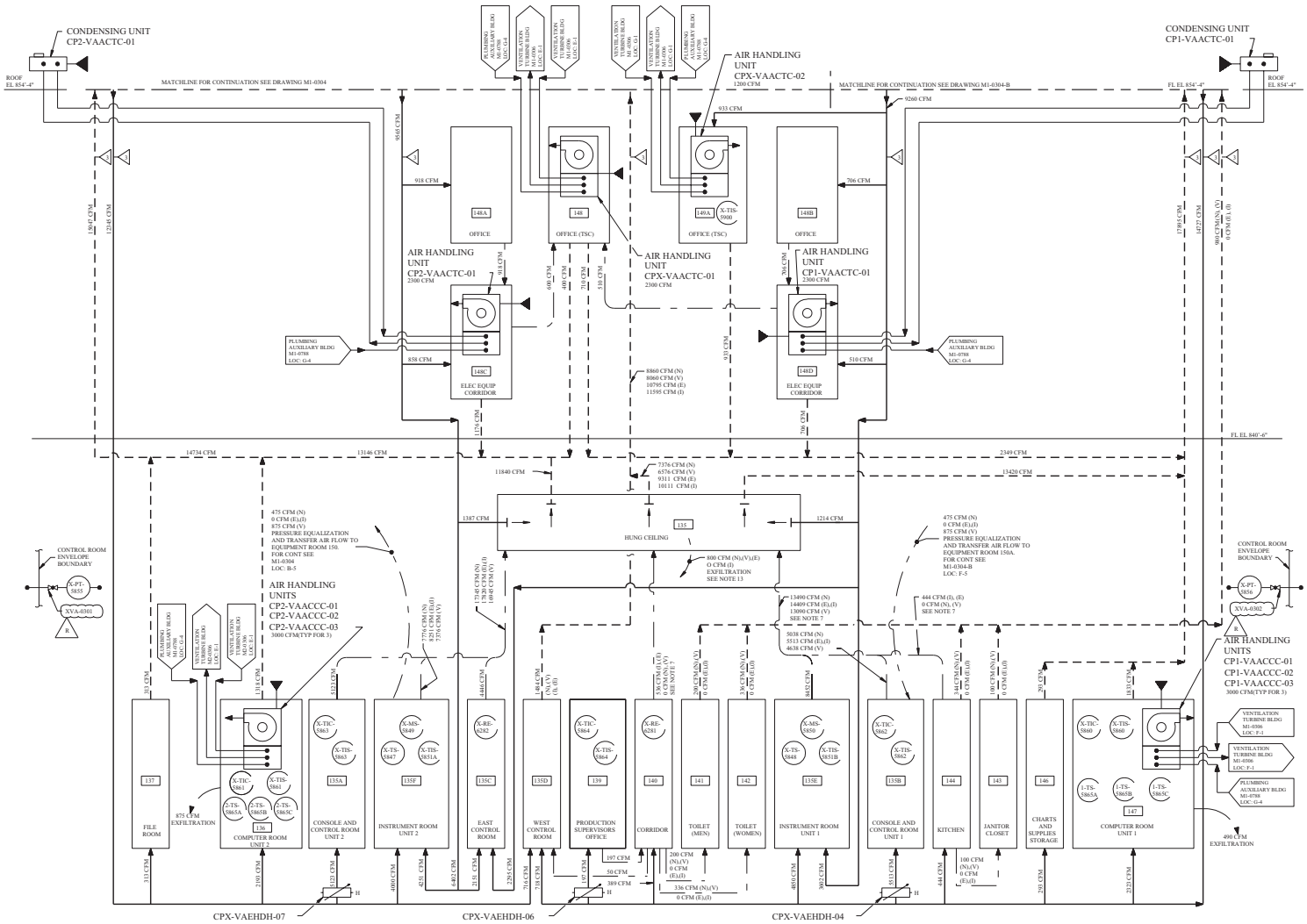
LUMINANT
CPSES
GLEN ROSE, TEXAS

FLOW DIAGRAM
VENTILATION CONTROL ROOM
AIR CONDITIONING

DWG NO. M1-0304 | SH. NO. - | REV. CP-34

FSAR FIGURE 9.4-1

THIS DRAWING CREATED ELECTRONICALLY




| REV. | DWN | CHK | APVD | REMARKS |
|---|---|---|---|---|
| CP-14 | NJL 04-17-2002 | DJL 04-17-2002 | | THIS DRAWING REVISED TO INCORPORATE DESIGN CHANGE EDA-2002-0008 TX-01 ON PER SIC-0001-02-0008 TX-01-00. |

NOTES:

1. **THIS DIAGRAM IS A SCHEMATIC REPRESENTATION AND IS INTENDED TO SHOW GENERAL AIR DISTRIBUTION AND FLOW PATHS.** AIR FLOWS MAY VARY SLIGHTLY DEPENDING ON OPERATING AIR CONDITIONERS.
2. BALANCING DAMPERS, REGISTERS, DIFFUSERS, FLEXIBLE CONNECTIONS AND ALL OTHER RELATED ACCESSORIES NOT SHOWN ON THIS DIAGRAM SHALL BE PROVIDED AS INDICATED ON THE HVAC ARRANGEMENT DRAWINGS AND SPECIFICATIONS.
3. FOR ABBREVIATIONS AND SYMBOLS SEE DRAWINGS M1-0313 AND M1-0200.
4. WORK THIS DRAWING WITH M1-0308.
5. THIS FLOW DIAGRAM IS COMMON FOR UNIT 1 AND 2.
6. THE CONTROL ROOM AREA WILL BE MAINTAINED AT A POSITIVE PRESSURE OF 0.125 INCHES WG.
7. THIS EXFILTRATION WILL OCCUR DURING EMERGENCY RECIRCULATION AND ISOLATION MODES WHEN THE KITCHEN AND TOILET EXHAUST FANS ARE NOT OPERATING.
8. CONTROL VALVE HAS AN ASSOCIATED SAFETY CLASS 3 AIR ACCUMULATOR CPX-CIATHV-01
9. CONTROL VALVE HAS AN ASSOCIATED SAFETY CLASS 3 AIR ACCUMULATOR CPX-CIATHV-02
10. FOR DRAIN FLOW ORIFICE NUMBER AND LINE CONTINUATION SEE DRAWING M1-0225-04 LOC: C, D, E AND F-2.
11. FIELD INSTALLED PIPE IN ACCORDANCE WITH MS-44B, LINE CATEGORY 152G AND VENDOR RECOMMENDATIONS. THE SAFETY CLASS 3 PIPING IDENTIFIED ON THE TYPICAL DELUGE AND DRAIN CONNECTION DETAIL (A-6) HAS BEEN FABRICATED AND INSTALLED TO THE REQUIREMENTS OF CLASS 5 PIPING. (REF NCR 88-15777 REV 0).
12. AIR FLOW QUANTITIES SHOWN ARE BASED ON A DENSITY OF 0.075 LB/FT CUBURING AT THE STANDARD CONDITION OF DRY AIR AT 70°F AND 29.92" HG BAROMETRIC PRESSURE. QUANTITIES IN PARENTHESES ARE ACTUAL AIR FLOW RATES BASED ON DENSITY AT DESIGN CONDITIONS.
13. MAXIMUM EXFILTRATION FROM CONTROL ROOM ENVELOPE DURING ALL MODES OF OPERATION EXCEPT ISOLATION MODE.
14. DAMPER MANUALLY POSITIONED FOR FLOW BALANCING PURPOSE.
15. DAMPER FAILS TO A PRESET POSITION DETERMINED BY FLOW BALANCING.
16. THE AMOUNT OF RETURN AIR FLOW WAS CALCULATED BASED ON EXISTING READINGS AS WELL AS NEW READINGS AND FROM TRAVERSE READINGS TAKEN DOWNSTREAM.

REFERENCES:

| | | |
|---|---|---|
| 1. | M1-0313 | FLOW DIAGRAM VENTILATION AAP BLDG AND CONTROL BLDG UPS AREA A/C SYSTEMS |
| 2. | M1-0200 | MECHANICAL SYMBOLS AND NOTES |
| 3. | M1-0308 | FLOW DIAGRAM VENTILATION CONTROL ROOM AIR CONDITIONING |
| 4. | M1-0236-01 AND M1-0236-02 | FLOW DIAGRAM VENTS AND DRAINS SYSTEM SAFEGUARDS AND AUXILIARY BUILDINGS |
| 5. | M1-0227 | FLOW DIAGRAM POTABLE AND SANITARY WATER SYSTEM |
| 6. | ELD-353-1800 | GENERAL ATOMIC COMPANY OUTLINE GAS SAMPLER WITH PUMP |
| 7. | M1-0788 | PLUMBING AUXILIARY BUILDING PLANT AT EL 830'-0" |
| 8. | M1-0306 | FLOW DIAGRAM VENTILATION TURBINE BUILDING |
| 9. | M2-0306 | FLOW DIAGRAM VENTILATION TURBINE BUILDING |
| 10. | M1-0304-A | FLOW DIAGRAM VENTILATION CONTROL ROOM AIR CONDITIONING |
| 11. | M1-0304-B | FLOW DIAGRAM VENTILATION CONTROL ROOM AIR CONDITIONING |
| 12. | M1-0225-04 | FLOW DIAGRAM PRIMARY AND SECONDARY PLANT FIRE PROTECTION SYSTEM |
| 13. | M2-0256 | FLOW DIAGRAM CHEMICAL AND VOLUME CONTROL SYSTEM |
| 14. | M1-0229 | FLOW DIAGRAM COMPONENT COOLING WATER SYSTEM |
| 15. | 353-1100 | OUTLINE NOBLE GAS MONITOR (SORRENTO ELECTRONICS) |

LEGEND:

(N) CFM FOR NORMAL OPERATION MODE

(E) CFM FOR EMERGENCY RECIRCULATION MODE

(V) CFM FOR EMERGENCY VENTILATION MODE

(I) CFM FOR ISOLATION MODE

FSAR FIGURE 9.4-I

THIS DRAWING OBSOLETED ELECTRONICALLY

CLASS I

(NUCLEAR SAFETY-RELATED)

SAFETY CLASS 1 SAFETY CLASS 2 SAFETY CLASS 3 SEISMIC CATEGORY I CLASS 1E ASSOCIATED CIRCUITS

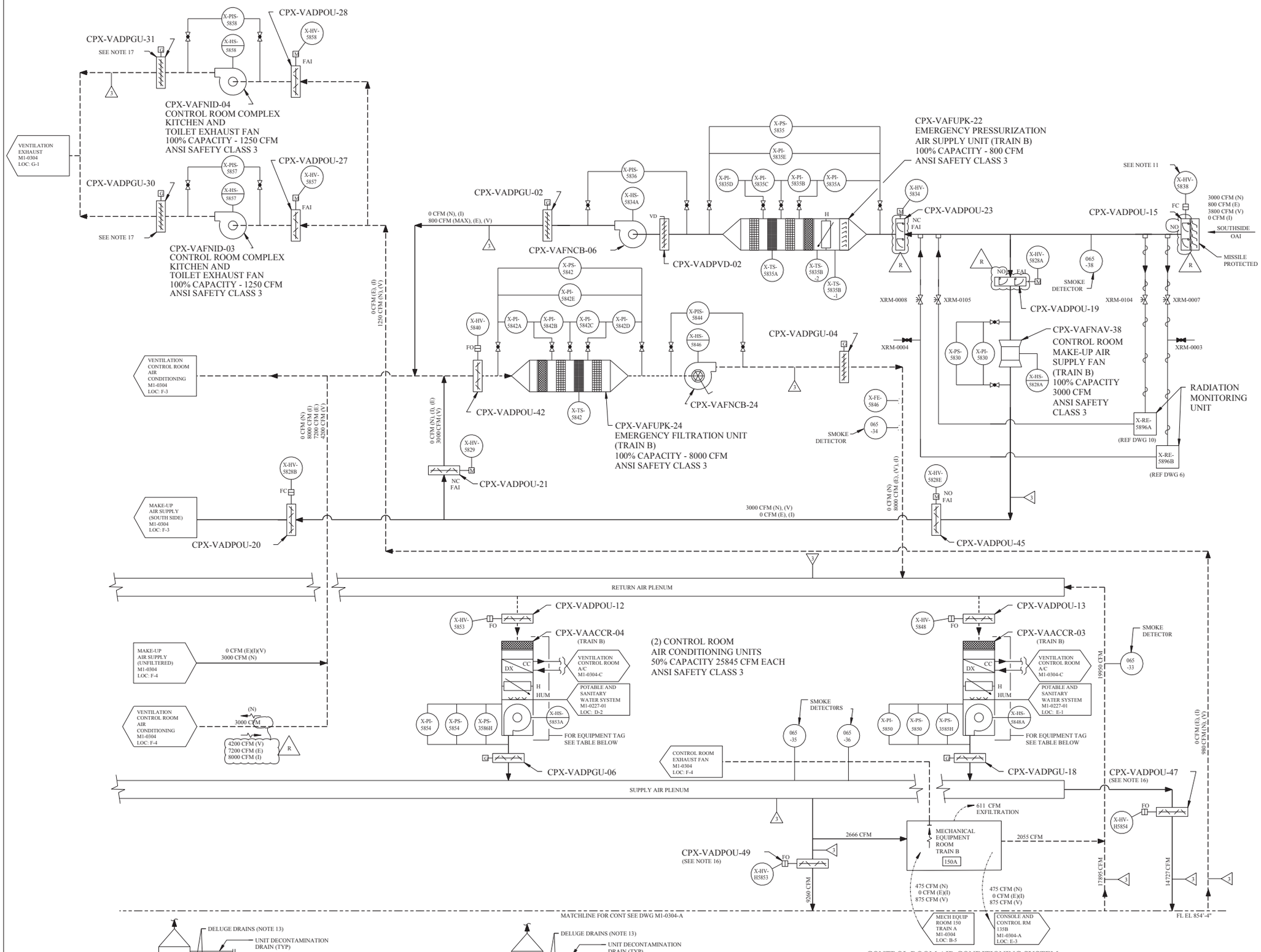
TXU ENERGY
CPSES
GLEN ROSE, TEXAS

FLOW DIAGRAM-VENTILATION
CONTROL ROOM AIR CONDITIONING

| DWG. NO. | SH. NO. | REV. |
|---|---|---|
| M1-0304 | A | CP-14 |

me430300.dgn A M1-0304-A

SSSSSSSSSSSSSSSS




| FILTRATION UNIT NUMBER | DELUGE DRAIN VALVES | | DELUGE SUPPLY VALVE | DRAIN CONNECTION REFERENCE DWG AND LOCATION |
|---|---|---|---|---|
| | (A) | (B) | (C) | |
| CPX-VAFUPK-22 | CPX-VADPCK-39 | CPX-VADPCK-40 | XFP-0655 | M1-0236-01A LOC: F-2 |
| CPX-VAFUPK-24 | CPX-VADPCK-43 | CPX-VADPCK-44 | XFP-0657 | M1-0236-01A LOC: F-2 |

| AIR CONDITIONING UNIT | PREFILTER | COOLING COIL | ELECTRIC HEATER | CENTRIFUGAL FAN | HUMIDIFIER | CONDENSER | COMPRESSOR |
|---|---|---|---|---|---|---|---|
| CPX-VAACCR-03 | CPX-VAACCR-03A | CPX-VAACCR-03B | CPX-VAACCR-03H | CPX-VAACCR-03D | CPX-VAACCR-03E | CPX-VAACCR-03F | CPX-VAACCR-03G |
| CPX-VAACCR-04 | CPX-VAACCR-04A | CPX-VAACCR-04B | CPX-VAACCR-04H | CPX-VAACCR-04D | CPX-VAACCR-04E | CPX-VAACCR-04F | CPX-VAACCR-04G |

| REV | DWN | CHK | APVD | REMARKS |
|---|---|---|---|---|
| CP-19 | MM 11-10 2005 | DLK 11-10 2005 | | THIS DRAWING REVISED TO INCORPORATE DESIGN CHANGE FDA 2001-002847-01-03 PER SK-0022-01-002847-01-00. |

NOTES:
1. THIS DIAGRAM IS A SCHEMATIC REPRESENTATION AND IS INTENDED TO SHOW GENERAL AIR DISTRIBUTION AND FLOW PATHS. AIR FLOWS MAY VARY SLIGHTLY DEPENDING ON OPERATING AIR CONDITIONERS.
2. BALANCING DAMPERS, REGISTERS, DIFFUSERS, FLEXIBLE CONNECTIONS AND ALL OTHER RELATED ACCESSORIES NOT SHOWN ON THIS DIAGRAM SHALL BE PROVIDED AS INDICATED ON THE HVAC ARRANGEMENT DRAWINGS AND SPECIFICATIONS.
3. FOR ABBREVIATIONS AND SYMBOLS SEE DRAWINGS M1-0313 AND M1-0200.
4. DELETED
5. WORK THIS DRAWING WITH M1-0308.
6. THIS FLOW DIAGRAM IS COMMON FOR UNIT 1 AND 2.
7. THE CONTROL ROOM AREA WILL BE MAINTAINED AT A POSITIVE PRESSURE OF 0.125 INCHES WG.
8. THIS EXFILTRATION WILL OCCUR DURING EMERGENCY RECIRCULATION AND ISOLATION MODES WHEN THE KITCHEN AND TOILET EXHAUST FANS ARE NOT OPERATING.
9. DELETED
10. CONTROL VALVE HAS AN ASSOCIATED SAFETY CLASS 3 AIR ACCUMULATOR CPX-CIATHV-01 .
11. CONTROL VALVE HAS AN ASSOCIATED SAFETY CLASS 3 AIR ACCUMULATOR CPX-CIATHV-02 .
12. FOR DRAIN FLOW ORIFICE NUMBER AND LINE CONTINUATION SEE DRAWING M1-0225-04A LOC: A, B, C & D-2.
13. NOT WITHIN ASME CODE BOUNDARY.
14. AIR FLOW QUANTITIES SHOWN ARE BASED ON A DENSITY OF 0.075 LB/FT3 OCCURRING AT THE STANDARD CONDITION OF DRY AIR AT 70°F AND 29.92" HG BAROMETRIC PRESSURE. QUANTITIES IN PARENTHESES ARE ACTUAL AIR FLOW RATES BASED ON DENSITY AT DESIGN CONDITIONS.
15. MAXIMUM EXFILTRATION FROM CONTROL ROOM ENVELOPE DURING ALL MODES OF OPERATION EXCEPT ISOLATION MODE.
16. DAMPER MANUALLY POSITIONED FOR FLOW BALANCING PURPOSE.
17. DAMPERS CPX-VADPGU-30 AND 31 WEIGHT AND ARM POSITIONS HAVE BEEN REPOSITIONED TO RETAIN .25 INCHES OF WATER PRESSURE PRIOR TO OPENING.
18. THE AMOUNT OF RETURN AIR FLOW WAS CALCULATED BASED ON EXISTING READINGS AS WELL AS NEW READINGS AND FROM TRAVERSE READINGS TAKEN DOWNSTREAM.

REFERENCES:

| | | |
|---|---|---|
| 1. | M1-0313 | FLOW DIAGRAM VENTILATION AAP BUILDING AND CONTROL BUILDING UPS AREA A/C SYSTEM. |
| 2. | M1-0200 | MECHANICAL SYMBOLS AND NOTES |
| 3. | M1-0308 | FLOW DIAGRAM VENTILATION CONTROL ROOM AIR CONDITIONING |
| 4. | M1-0236-01 AND M1-0236-02 | FLOW DIAGRAM VENTS AND DRAINS SYSTEM SAFEGUARDS AND AUXILIARY BUILDINGS |
| 5. | M1-0227 | FLOW DIAGRAM POTABLE AND SANITARY WATER SYSTEM |
| 6. | ELD-353-1800 | GENERAL ATOMIC COMPANY OUTLINE GAS SAMPLER WITH PUMP |
| 7. | M1-0304 | FLOW DIAGRAM VENTILATION CONTROL ROOM AIR CONDITIONING |
| 8. | M1-0304-A | FLOW DIAGRAM VENTILATION CONTROL ROOM AIR CONDITIONING |
| 9. | M1-0225-04 | FLOW DIAGRAM PRIMARY AND SECONDARY PLANT FIRE PROTECTION SYSTEM. |
| 10. | 353-1100 | OUTLINE NOBLE GAS MONITOR (SORRENTO ELECTRONICS) |

LEGEND:
(N) CFM FOR NORMAL OPERATION MODE
(E) CFM FOR EMERGENCY RECIRCULATION MODE
(V) CFM FOR EMERGENCY VENTILATION MODE
(I) CFM FOR ISOLATION MODE

FSAR FIGURE 9.4-1

THIS DRAWING CREATED ELECTRONICALLY

DRAWING M1-0304 REV CP-13 HAS BEEN SPLIT INTO THE FOLLOWING SHEETS:
M1-0304
M1-0304-B

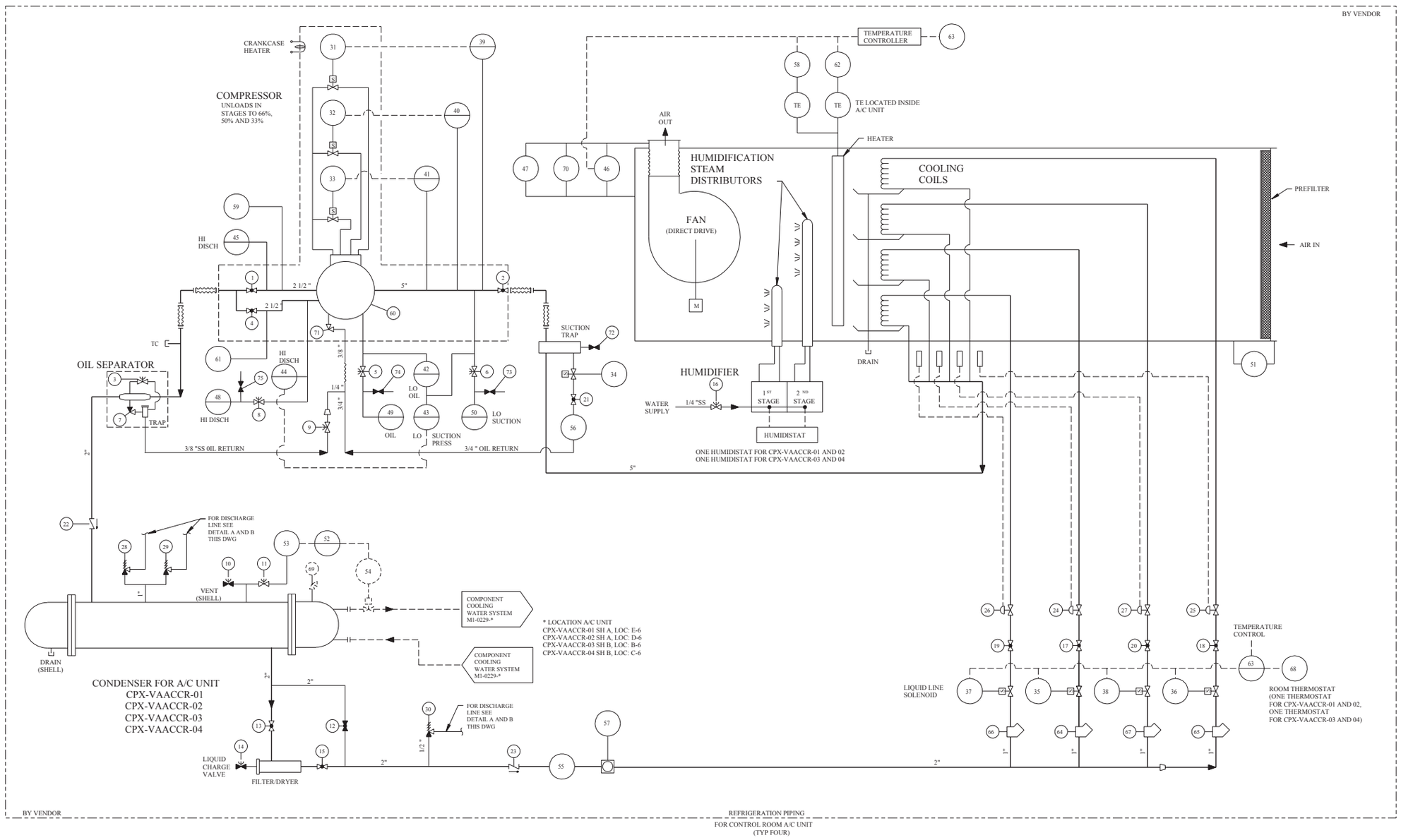
CLASS I
(NUCLEAR SAFETY-RELATED)
SAFETY CLASS 1 — SEISMIC CATEGORY I
SAFETY CLASS 2 — CLASS 1E
SAFETY CLASS 3 — ASSOCIATED CIRCUITS

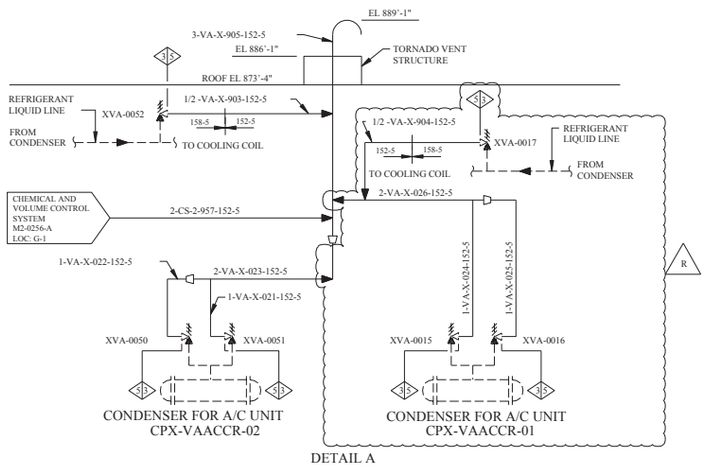
LUMINANT
CPSES
GLEN ROSE, TEXAS

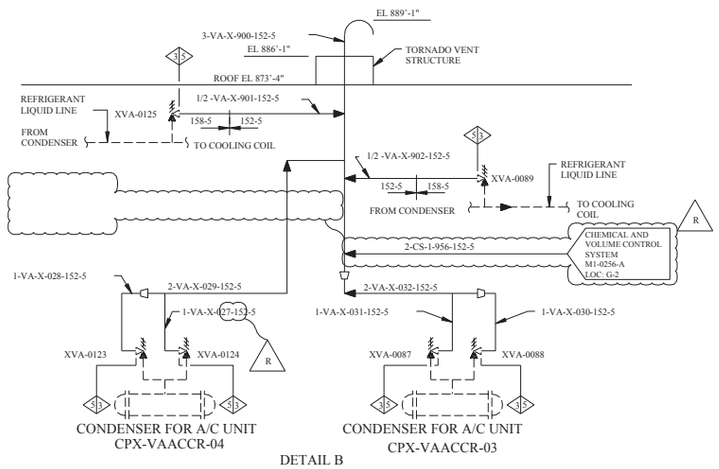
FLOW DIAGRAM
VENTILATION CONTROL ROOM
AIR CONDITIONING

DWG. NO. M1-0304 | SH. NO. B | REV. CP-19

me651600.dgn | A M1-0304-B | FINAL PRINT




| REV | DWN | CHKD | APVD | REMARKS |
|---|---|---|---|---|
| CP-4 | MM 05-22-2008 | DLK 05-22-2008 | | THIS DRAWING REVISED TO INCORPORATE DESIGN CHANGE FDA-2008-001745-01-00 PER SK-0001-08-001745-01-00. |

NOTES:

1. THIS DIAGRAM IS A SCHEMATIC REPRESENTATION AND IS INTENDED TO SHOW GENERAL FLOW PATHS.
2. FOR ABBREVIATIONS AND SYMBOLS SEE DRAWINGS M1-0313 AND M1-0200.
3. THIS FLOW DIAGRAM IS COMMON FOR UNIT 1 AND 2.
4. WORK THIS DRAWING WITH M1-0304-D.

REFERENCES:

| | | |
|---|---|---|
| 1. | M1-0313 | FLOW DIAGRAM VENTILATION AAP BLDG AND CONTROL BLDG UPS AREA A/C SYSTEMS |
| | ⊠1-0200 | MECHANICAL SYMBOLS AND NOTES |
| 3. | M1-0227 | FLOW DIAGRAM POTABLE AND SANITARY WATER SYSTEM |
| 4. | M1-0788 | PLUMBING AUXILIARY BUILDING PLANT AT EL 830'-0" |
| 5. | M1-0306 | FLOW DIAGRAM VENTILATION TURBINE BUILDING |
| 6. | M1-0304 | FLOW DIAGRAM VENTILATION CONTROL ROOM AIR CONDITIONING |
| 7. | M1-0304-A | FLOW DIAGRAM VENTILATION CONTROL ROOM AIR CONDITIONING |
| 8. | M1-0304-B | FLOW DIAGRAM VENTILATION CONTROL ROOM AIR CONDITIONING |
| 9. | M1-0229-A | FLOW DIAGRAM COMPONENT COOLING WATER SYSTEM |
| 10. | M1-0229-B | FLOW DIAGRAM COMPONENT COOLING WATER SYSTEM |
| 11. | M2-0256-A | FLOW DIAGRAM CHEMICAL AND VOLUME CONTROL SYSTEM |
| 12. | B-587-0200 | CVI P&I DIAGRAM AIR CONDITIONING SYSTEM |

FSAR FIGURE 9.4-1

THIS DRAWING CREATED ELECTRONICALLY

| DRAWING M1-0304 REV CP-20 HAS BEEN SPLIT INTO THE FOLLOWING SHEETS: |
|---|
| M1-0304 |
| M1-0304-C |

CLASS I
(NUCLEAR SAFETY-RELATED)
SAFETY CLASS 1, SAFETY CLASS 2, SAFETY CLASS 3 — SEISMIC CATEGORY I, CLASS 1E, ASSOCIATED CIRCUITS

LUMINANT
CPSES
GLEN ROSE, TEXAS

FLOW DIAGRAM-VENTILATION
CONTROL ROOM AIR CONDITIONING

| DWG. NO. | SH. NO. | REV. |
|---|---|---|
| M1-0304 | C | CP-4 |

| ITEM | DESCRIPTION | CVI TAG NUMBER | CONTROL ROOM A/C UNIT | | | |
|---|---|---|---|---|---|---|
| | | | CPX-VAACCR-01 | CPX-VAACCR-02 | CPX-VAACCR-03 | CPX-VAACCR-04 |
| 1 | CR A/C UNIT REFRIG COMPRESSOR DISCHARGE VALVE | HOV-10 | XVA-0026 | XVA-0061 | XVA-0098 | XVA-0134 |
| 2 | CR A/C UNIT REFRIG COMPRESSOR SUCTION VALVE | HOV-11 | XVA-0027 | XVA-0062 | XVA-0099 | XVA-0135 |
| 3 | CR A/C UNIT REFRIG DISCHARGE LINE OIL SEPARATOR ANGLE STOP VALVE | HOV-12 | XVA-0028 | XVA-0063 | XVA-0100 | XVA-0136 |
| 4 | CR A/C UNIT REFRIG COMPRESSOR DISCHARGE VALVE | HOV-13 | XVA-0029 | XVA-0064 | XVA-0101 | XVA-0137 |
| 5 | CR A/C UNIT REFRIG COMPRESSOR LUBE OIL PRESSURE INDICATOR ROOT VALVE | HOV-14 | XVA-0030 | XVA-0065 | XVA-0102 | XVA-0138 |
| 6 | CR A/C UNIT REFRIG COMPRESSOR LUBE OIL PRESSURE INDICATOR ROOT VALVE | HOV-15 | XVA-0031 | XVA-0066 | XVA-0103 | XVA-0139 |
| 7 | CR A/C UNIT REFRIG COMPRESSOR DISCH LINE OIL SEPARATOR ANGLE STOP VALVE | HOV-16 | XVA-0032 | XVA-0067 | XVA-0104 | XVA-0140 |
| 8 | CR A/C UNIT REFRIG COMPRESSOR LUBE OIL PRESSURE INDICATOR ROOT VALVE | HOV-17 | XVA-0033 | XVA-0068 | XVA-0105 | XVA-0141 |
| 9 | CR A/C UNIT REFRIG COMPRESSOR DISCH OIL SEPARATOR RETURN ISO VALVE | HOV-18 | XVA-0034 | XVA-0069 | XVA-0106 | XVA-0142 |
| 10 | CR A/C UNIT REFRIG CONDENSER SHELL VENT VALVE | HOV-21 | XVA-0035 | XVA-0070 | XVA-0107 | XVA-0143 |
| 11 | CR A/C UNIT REFRIG CONDENSER SHELL PRESS TRANSMITTER ROOT VALVE | HOV-22 | XVA-0036 | XVA-0071 | XVA-0108 | XVA-0144 |
| 12 | CR A/C UNIT REFRIG FILTER/DRYER BYPASS VALVE | HOV-23 | XVA-0037 | XVA-0072 | XVA-0109 | XVA-0145 |
| 13 | CR A/C UNIT REFRIG FILTER/DRYER INLET VALVE | HOV-24 | XVA-0038 | XVA-0073 | XVA-0110 | XVA-0146 |
| 14 | CR A/C UNIT REFRIG FILTER/DRYER LIQUID CHARGING VALVE | HOV-25 | XVA-0039 | XVA-0074 | XVA-0111 | XVA-0147 |
| 15 | CR A/C UNIT REFRIG FILTER/DRYER OUTLET VALVE | HOV-26 | XVA-0040 | XVA-0075 | XVA-0112 | XVA-0148 |
| 16 | CR A/C UNIT HUMIDIFIER WATER SUPPLY ISOLATION VALVE | HOV-30 | XVA-0041 | XVA-0076 | XVA-0113 | XVA-0149 |
| 17 | CR A/C UNIT COOLING COIL REFRIG SUPPLY ISOLATION VALVE | HOV-31 | XVA-0042 | XVA-0077 | XVA-0114 | XVA-0150 |
| 18 | CR A/C UNIT COOLING COIL REFRIG SUPPLY ISOLATION VALVE | HOV-32 | XVA-0043 | XVA-0078 | XVA-0115 | XVA-0151 |
| 19 | CR A/C UNIT COOLING COIL REFRIG SUPPLY ISOLATION VALVE | HOV-33 | XVA-0044 | XVA-0079 | XVA-0116 | XVA-0152 |
| 20 | CR A/C UNIT COOLING COIL REFRIG SUPPLY ISOLATION VALVE | HOV-34 | XVA-0045 | XVA-0080 | XVA-0117 | XVA-0153 |
| 21 | CR A/C UNIT REFRIG COMPRESSOR SUCTION TRAP OIL RETURN THROTTLE VALVE | HCV-8 | XVA-0046 | XVA-0081 | XVA-0118 | XVA-0154 |
| 22 | CR A/C UNIT REFRIG COMPRESSOR DISCHARGE CHECK VALVE | CKV-92 | XVA-0158 | XVA-0160 | XVA-0162 | XVA-0164 |
| 23 | CR A/C UNIT COOLING COIL REFRIG SUPPLY LINE CHECK VALVE | CKV-61 | XVA-0159 | XVA-0161 | XVA-0163 | XVA-0165 |
| 24 | CR A/C UNIT COOLING COIL REFRIG THERMAL EXPANSION VALVE | TCV-75 | XVA-0166 | XVA-0170 | XVA-0174 | XVA-0178 |
| 25 | CR A/C UNIT COOLING COIL REFRIG THERMAL EXPANSION VALVE | TCV-76 | XVA-0167 | XVA-0171 | XVA-0175 | XVA-0179 |
| 26 | CR A/C UNIT COOLING COIL REFRIG THERMAL EXPANSION VALVE | TCV-77 | XVA-0168 | XVA-0172 | XVA-0176 | XVA-0180 |
| 27 | CR A/C UNIT COOLING COIL REFRIG THERMAL EXPANSION VALVE | TCV-78 | XVA-0169 | XVA-0173 | XVA-0177 | XVA-0181 |
| 28 | CR A/C UNIT REFRIG CONDENSER SHELL SIDE RELIEF VALVE | PSV-54 | XVA-0015 | XVA-0050 | XVA-0087 | XVA-0123 |
| 29 | CR A/C UNIT REFRIG CONDENSER SHELL SIDE RELIEF VALVE | PSV-55 | XVA-0016 | XVA-0051 | XVA-0088 | XVA-0124 |
| 30 | CR A/C UNIT LIQUID LINE RELIEF VALVE | PSV-56 | XVA-0017 | XVA-0052 | XVA-0089 | XVA-0125 |
| 31 | CR A/C UNIT REFRIG COMPRESSOR 1 ST STAGE PRESSURE CONTROL UNLOADING | SOV-1 | X-SV-3583C | X-SV-3584C | X-SV-3585C | X-SV-3586C |
| 32 | CR A/C UNIT REFRIG COMPRESSOR 2 ND STAGE PRESSURE CONTROL UNLOADING | SOV-2 | X-SV-3583D | X-SV-3584D | X-SV-3585D | X-SV-3586D |
| 33 | CR A/C UNIT REFRIG COMPRESSOR 3 RD STAGE PRESSURE CONTROL UNLOADING | SOV-3 | X-SV-3583E | X-SV-3584E | X-SV-3585E | X-SV-3586E |
| 34 | CR A/C UNIT REFRIG COMPRESSOR SUCTION TRAP OIL RETURN SOLENOID VALVE | SOV-4 | X-SV-3587 | X-SV-3588 | X-SV-3589 | X-SV-3590 |
| 35 | CR A/C UNIT LIQUID LINE SOLENOID VALVE | SOV-70 | X-SV-3583-1A | X-SV-3583-2A | X-SV-3585-1A | X-SV-3585-2A |
| 36 | CR A/C UNIT LIQUID LINE SOLENOID VALVE | SOV-71 | X-SV-3583-1B | X-SV-3583-2B | X-SV-3585-1B | X-SV-3585-2B |
| 37 | CR A/C UNIT LIQUID LINE SOLENOID VALVE | SOV-72 | X-SV-3583-1C | X-SV-3583-2C | X-SV-3585-1C | X-SV-3585-2C |
| 38 | CR A/C UNIT LIQUID LINE SOLENOID VALVE | SOV-73 | X-SV-3583-1D | X-SV-3583-2D | X-SV-3585-1D | X-SV-3585-2D |
| 39 | CR A/C UNIT REFRIG COMPRESSOR 1 ST STAGE UNLOADING PRESSURE SWITCH | PSS-35 | X-PS-3583C | X-PS-3584C | X-PS-3585C | X-PS-3586C |
| 40 | CR A/C UNIT REFRIG COMPRESSOR 2 ND STAGE UNLOADING PRESSURE SWITCH | PSS-36 | X-PS-3583D | X-PS-3584D | X-PS-3585D | X-PS-3586D |
| 41 | CR A/C UNIT REFRIG COMPRESSOR 3 RD STAGE UNLOADING PRESSURE SWITCH | PSS-37 | X-PS-3583E | X-PS-3584E | X-PS-3585E | X-PS-3586E |
| 42 | CR A/C UNIT REFRIG COMPRESSOR OIL PRESSURE SWITCH | PSS-49 | X-PS-3583B | X-PS-3584B | X-PS-3585B | X-PS-3586B |
| 43 | CR A/C UNIT REFRIG COMPRESSOR SUCTION PRESSURE SWITCH | PSS-50 | X-PS-3583A | X-PS-3584A | X-PS-3585A | X-PS-3586A |
| 44 | CR A/C UNIT REFRIG COMPRESSOR DISCHARGE PRESSURE SWITCH | PSS-51 | X-PS-3583F | X-PS-3584F | X-PS-3585F | X-PS-3586F |
| 45 | CR A/C UNIT REFRIG COMPRESSOR DISCHARGE PRESSURE SWITCH | PSS-52 | X-PS-3583G | X-PS-3584G | X-PS-3585G | X-PS-3586G |
| 46 | CR A/C UNIT FAN DIFFERENTIAL PRESSURE SWITCH | DPS-81 | X-PS-3583H | X-PS-3584H | X-PS-3585H | X-PS-3586H |
| 47 | CR A/C UNIT FAN DIFFERENTIAL PRESSURE INDICATOR | DPI-83 | X-PI-5849 | X-PI-5852 | X-PI-5850 | X-PI-5854 |
| 48 | CR A/C UNIT REFRIG COMPRESSOR DISCHARGE PRESSURE INDICATOR | PI-45 | X-PI-3583A | X-PI-3584A | X-PI-3585A | X-PI-3586A |
| 49 | CR A/C UNIT REFRIG COMPRESSOR LUBE OIL PRESSURE INDICATOR | PI-46 | X-PI-3583B | X-PI-3584B | X-PI-3585B | X-PI-3586B |
| 50 | CR A/C UNIT REFRIG COMPRESSOR SUCTION PRESSURE INDICATOR | PI-47 | X-PI-3583C | X-PI-3584C | X-PI-3585C | X-PI-3586C |
| 51 | CR A/C UNIT PREFILTER DIFFERENTIAL PRESSURE INDICATOR | DPI-80 | X-PI-3583D | X-PI-3584D | X-PI-3585D | X-PI-3586D |
| 52 | CR A/C UNIT REFRIG CONDENSER SHELL SIDE PRESSURE INDICATOR CONTROL | PIC-58 | X-PIC-3583 | X-PIC-3584 | X-PIC-3585 | X-PIC-3586 |
| 53 | CR A/C UNIT REFRIG CONDENSER SHELL SIDE PRESSURE TRANSMITTER | PT-58 | X-PT-3583 | X-PT-3584 | X-PT-3585 | X-PT-3586 |
| 54 | CR A/C UNIT CCW RETURN PRESSURE CONTROL VALVE | PCV-58 | X-PV-3583 (REF M1-0229-A) | X-PV-3584 (REF M1-0229-A) | X-PV-3585 (REF M1-0229-B) | X-PV-3586 (REF M1-0229-B) |
| 55 | CR A/C UNIT REFRIG LIQUID LINE SIGHT GLASS | FI-63 | X-FI-3583A | X-FI-3584A | X-FI-3585A | X-FI-3586A |
| 56 | CR A/C UNIT REFRIG COMPRESSOR SUCTION OIL RETURN SIGHT GLASS | FI-64 | X-FI-3583B | X-FI-3584B | X-FI-3585B | X-FI-3586B |
| 57 | CR A/C UNIT REFRIG LIQUID LINE MOISTURE INDICATOR | MI-62 | X-MI-3583A | X-MI-3584A | X-MI-3585A | X-MI-3586A |
| 58 | CR A/C UNIT AUTOMATIC RESET HEATER TEMPERATURE SWITCH | TSS-39 | X-TS-3583D | X-TS-3584D | X-TS-3585D | X-TS-3586D |
| 59 | CR A/C UNIT REFRIG COMPRESSOR DISCHARGE TEMPERATURE SWITCH | TSS-40 | X-TS-3583A | X-TS-3584A | X-TS-3585A | X-TS-3586A |
| 60 | CR A/C UNIT REFRIG COMPRESSOR OIL TEMPERATURE SWITCH | TSS-41 | X-TS-3583B | X-TS-3584B | X-TS-3585B | X-TS-3586B |
| 61 | CR A/C UNIT REFRIG COMPRESSOR DISCHARGE TEMPERATURE SWITCH | TSS-42 | X-TS-3583C | X-TS-3584C | X-TS-3585C | X-TS-3586C |
| 62 | CR A/C UNIT MANUAL RESET HEATER TEMPERATURE SWITCH | TSS-43 | X-TS-3583E | X-TS-3584E | X-TS-3585E | X-TS-3586E |
| 63 | CR A/C UNIT CPX-VAACCR-01/02 CPX-VAACCR-03/04 TEMP CONTROLLER | TC-90 | X-TC-3583 | | X-TC-3585 | |
| 64 | CR A/C UNIT REFRIG COOLING COIL SUPPLY LINE STRAINER | STR-65 | CPX-VASRCR-01 | CPX-VASRCR-05 | CPX-VASRCR-09 | CPX-VASRCR-13 |
| 65 | CR A/C UNIT REFRIG COOLING COIL SUPPLY LINE STRAINER | STR-66 | CPX-VASRCR-02 | CPX-VASRCR-06 | CPX-VASRCR-10 | CPX-VASRCR-14 |
| 66 | CR A/C UNIT REFRIG COOLING COIL SUPPLY LINE STRAINER | STR-67 | CPX-VASRCR-03 | CPX-VASRCR-07 | CPX-VASRCR-11 | CPX-VASRCR-15 |
| 67 | CR A/C UNIT REFRIG COOLING COIL SUPPLY LINE STRAINER | STR-68 | CPX-VASRCR-04 | CPX-VASRCR-08 | CPX-VASRCR-12 | CPX-VASRCR-16 |
| 68 | CONTROL ROOM THERMOSTAT | TE-87 | X-TS-5847 | | X-TS-5848 | |
| 69 | CR A/C UNIT CONDENSER TUBE SIDE RELIEF VALVE | PSV-53 | 1CC-1025 (REF M1-0229-A) | 1CC-1024 (REF M1-0229-A) | 1CC-1026 (REF M1-0229-B) | 1CC-1027 (REF M1-0229-B) |
| 70 | CR A/C UNIT FAN DIFFERENTIAL PRESSURE SWITCH | DPS-82 | X-PS-5849 | X-PS-5852 | X-PS-5850 | X-PS-5854 |
| 71 | CR A/C UNIT REFRIG COMPRESSOR OIL RETURN ANGLE STOP VALVE | - | XVA-0255 | XVA-0256 | XVA-0257 | XVA-0258 |
| 72 | CR A/C UNIT REFRIG SUCTION TRAP STOP VALVE | - | XVA-0259 | XVA-0260 | XVA-0261 | XVA-0262 |
| 73 | CR A/C UNIT SUCTION PRESSURE ACCESS VALVE | - | XVA-0263 | XVA-0264 | XVA-0265 | XVA-0266 |
| 74 | CR A/C UNIT OIL PRESSURE ACCESS VALVE | - | XVA-0267 | XVA-0268 | XVA-0269 | XVA-0270 |
| 75 | CR A/C UNIT DISCHARGE PRESSURE ACCESS VALVE | - | XVA-0271 | XVA-0272 | XVA-0273 | XVA-0274 |

R

| REV | DWN | CHKD | APVD | REMARKS |
|---|---|---|---|---|
| CP-4 | TES 09-08-2005 | GAW 09-08-2005 | | THIS DRAWING REVISED TO INCORPORATE DESIGN CHANGE FDA-2003-002013-01-00 PER SK-0004-03-002013-01-00. |

NOTES:

1. THIS DIAGRAM IS A SCHEMATIC REPRESENTATION AND IS INTENDED TO SHOW GENERAL FLOW PATHS.
2. FOR ABBREVIATIONS AND SYMBOLS SEE DRAWINGS M1-0313 AND M1-0200.
3. THIS FLOW DIAGRAM IS COMMON FOR UNIT 1 AND 2.
4. WORK THIS DRAWING WITH M1-0304-C.

REFERENCES:

| | | |
|---|---|---|
| 1. | M1-0313 | FLOW DIAGRAM VENTILATION AAP BLDG AND CONTROL BLDG UPS AREA A/C SYSTEMS |
| 2. | M1-0200 | MECHANICAL SYMBOLS AND NOTES |
| 3. | M1-0304 | FLOW DIAGRAM VENTILATION CONTROL ROOM AIR CONDITIONING |
| 4. | M1-0304-A | FLOW DIAGRAM VENTILATION CONTROL ROOM AIR CONDITIONING |
| 5. | M1-0304-B | FLOW DIAGRAM VENTILATION CONTROL ROOM AIR CONDITIONING |
| 6. | M1-0229-A | FLOW DIAGRAM COMPONENT COOLING WATER SYSTEM |
| 7. | M1-0229-B | FLOW DIAGRAM COMPONENT COOLING WATER SYSTEM |
| 8. | B-587-0200 | CVI P&I DIAGRAM AIR CONDITIONING SYSTEM |

FSAR FIGURE 9.4-1

THIS DRAWING CREATED ELECTRONICALLY

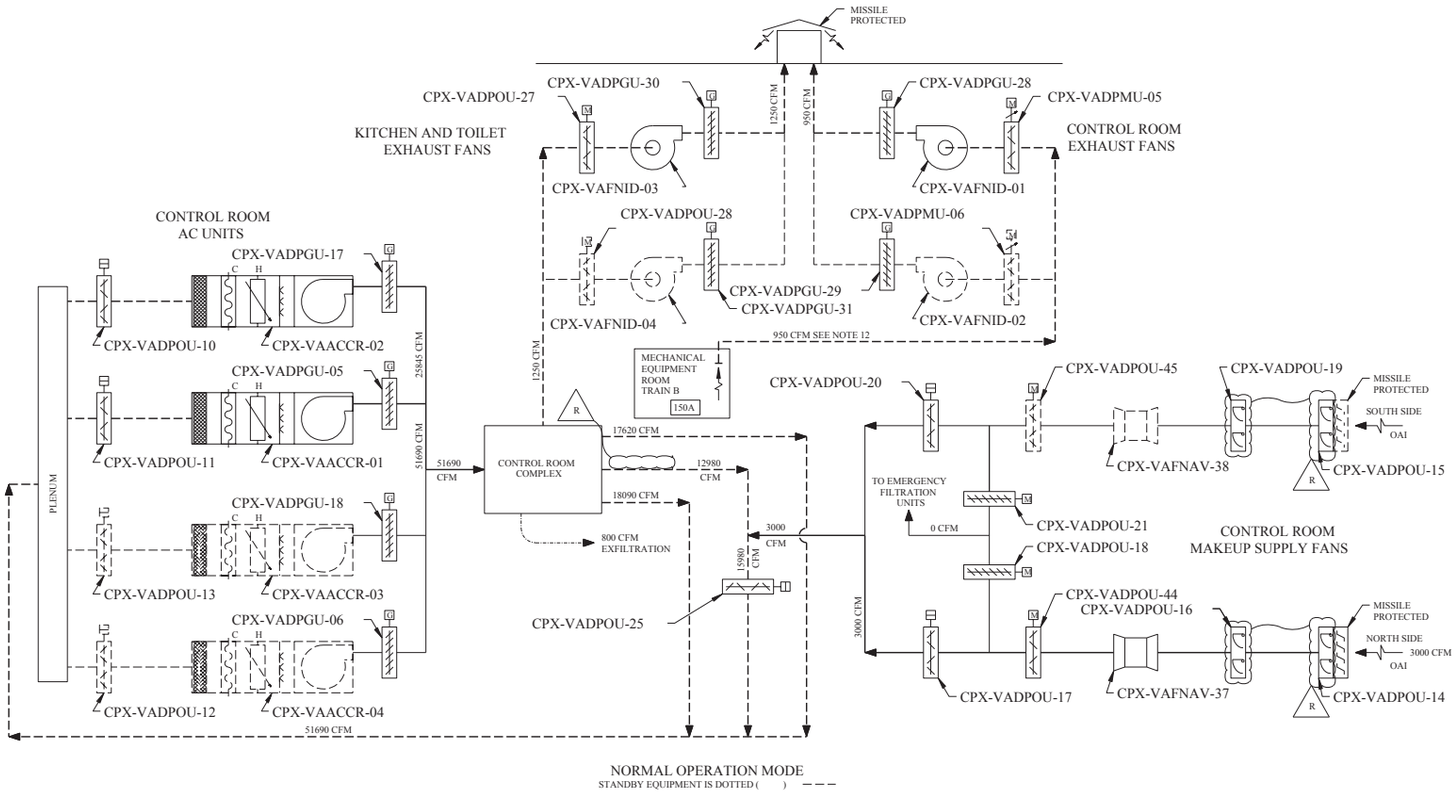
DRAWING M1-0304 REV CP-20
HAS BEEN SPLIT INTO THE FOLLOWING SHEETS:
M1-0304
M1-0304-D

CLASS I
(NUCLEAR SAFETY-RELATED)
SAFETY CLASS 1 SEISMIC CATEGORY I
SAFETY CLASS 2 CLASS 1E
SAFETY CLASS 3 ASSOCIATED CIRCUITS

LUMINANT
CPSES
GLEN ROSE, TEXAS

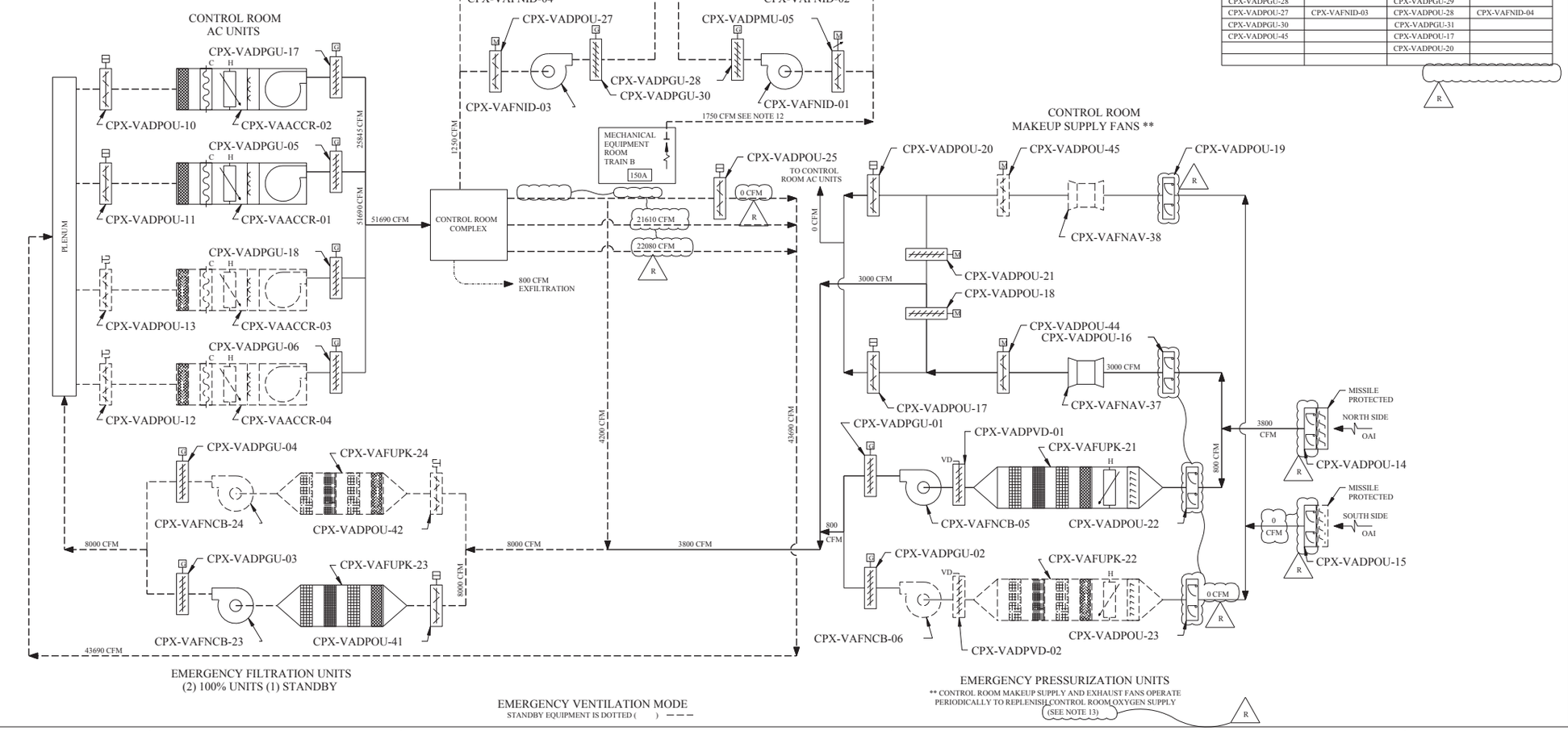
FLOW DIAGRAM-VENTILATION
CONTROL ROOM AIR CONDITIONING

DWG NO. M1-0304 | SH. NO. D | REV. CP-4




NORMAL OPERATION MODE
STANDBY EQUIPMENT IS DOTTED ( ) - - -

| NORMAL OPERATION SEE NOTE 10 | | | |
|---|---|---|---|
| DAMPERS OPEN | FANS ON | DAMPERS CLOSED | FANS OFF |
| CPX-VADPOU-11 | CPX-VAACCR-01 | CPX-VADPOU-13 | CPX-VAACCR-03 |
| CPX-VADPGU-05 | | CPX-VADPGU-18 | |
| CPX-VADPOU-10 | CPX-VAACCR-02 | CPX-VADPOU-12 | CPX-VAACCR-04 |
| CPX-VADPGU-17 | | CPX-VADPGU-06 | |
| CPX-VADPOU-25 | | | |
| CPX-VADPOU-15 | | | |
| CPX-VADPOU-14 | | | |
| CPX-VADPOU-16 | CPX-VAFNAV-37 | CPX-VADPOU-19 | CPX-VAFNAV-38 |
| CPX-VADPOU-17 | | CPX-VADPOU-20 | |
| CPX-VADPOU-44 | | CPX-VADPOU-18 | |
| CPX-VADPOU-45 | | CPX-VADPOU-21 | |
| CPX-VADPMU-05 | CPX-VAFNID-01 | CPX-VADPMU-06 | CPX-VAFNID-02 |
| CPX-VADPGU-28 | | CPX-VADPGU-29 | |
| CPX-VADPOU-27 | CPX-VAFNID-03 | CPX-VADPOU-28 | CPX-VAFNID-04 |
| CPX-VADPGU-30 | | CPX-VADPGU-31 | |
| | | CPX-VADPOU-22 | CPX-VAFNCB-05 |
| | | CPX-VADPGU-01 | |
| | | CPX-VADPOU-23 | CPX-VAFNCB-06 |
| | | CPX-VADPGU-02 | |
| | | CPX-VADPOU-41 | CPX-VAFNCB-23 |
| | | CPX-VADPGU-03 | |
| | | CPX-VADPOU-42 | CPX-VAFNCB-24 |
| | | CPX-VADPGU-04 | |




EMERGENCY FILTRATION UNITS
(2) 100% UNITS (1) STANDBY

EMERGENCY VENTILATION MODE
STANDBY EQUIPMENT IS DOTTED ( ) - - -

| EMERGENCY VENTILATION MODE SEE NOTE 10 | | | |
|---|---|---|---|
| DAMPERS OPEN | FANS ON | DAMPERS CLOSED | FANS OFF |
| CPX-VADPOU-11 | CPX-VAACCR-01 | CPX-VADPOU-13 | CPX-VAACCR-03 |
| CPX-VADPGU-05 | | CPX-VADPGU-18 | |
| CPX-VADPOU-10 | CPX-VAACCR-02 | CPX-VADPOU-12 | CPX-VAACCR-04 |
| CPX-VADPGU-17 | | CPX-VADPGU-06 | |
| | | CPX-VADPOU-25 | |
| CPX-VADPOU-41 | CPX-VAFNCB-23 | CPX-VADPOU-42 | CPX-VAFNCB-24 |
| CPX-VADPGU-03 | | CPX-VADPGU-04 | |
| | | CPX-VADPOU-15 | |
| CPX-VADPOU-14 | | | |
| CPX-VADPOU-22 | CPX-VAFNCB-05 | CPX-VADPOU-23 | CPX-VAFNCB-06 |
| CPX-VADPGU-01 | | CPX-VADPGU-02 | |
| CPX-VADPOU-16 | CPX-VAFNAV-37 | CPX-VADPOU-19 | CPX-VAFNAV-38 |
| CPX-VADPOU-18 | | CPX-VADPOU-21 | |
| CPX-VADPOU-44 | | | |
| CPX-VADPMU-05 | CPX-VAFNID-01 | CPX-VADPMU-06 | CPX-VAFNID-02 |
| CPX-VADPGU-28 | | CPX-VADPGU-29 | |
| CPX-VADPOU-27 | CPX-VAFNID-03 | CPX-VADPOU-28 | CPX-VAFNID-04 |
| CPX-VADPGU-30 | | CPX-VADPGU-31 | |
| CPX-VADPOU-45 | | CPX-VADPOU-17 | |
| | | CPX-VADPOU-20 | |

EMERGENCY PRESSURIZATION UNITS
** CONTROL ROOM MAKEUP SUPPLY AND EXHAUST FANS OPERATE PERIODICALLY TO REPLENISH CONTROL ROOM OXYGEN SUPPLY (SEE NOTE 13)

| REV | DWN | CHK | APVD | REMARKS |
|---|---|---|---|---|
| CP-12 | DLK 11-16-2005 | MM 11-16-2005 | | THIS DRAWING REVISED TO INCORPORATE DESIGN CHANGE FDA 2001-0028447-01-04 PER SK-0056-01-0028447-01-01. |

NOTES:

1. FOR ABBREVIATIONS AND SYMBOLS SEE DRAWINGS M1-0313 AND M1-0200.
2. DELETED
3. THIS DIAGRAM IS A SCHEMATIC REPRESENTATION AND IS INTENDED TO SHOW GENERAL AIR DISTRIBUTION AND FLOW PATHS.
4. BALANCING DAMPERS, REGISTERS, DIFFUSERS, FLEXIBLE CONNECTIONS AND ALL OTHER RELATED ACCESSORIES NOT SHOWN ON THIS DIAGRAM SHALL BE PROVIDED AS INDICATED ON THE HVAC ARRANGEMENT DRAWINGS AND SPECIFICATIONS.
5. WORK THIS DRAWING WITH M1-0304, M1-0304-A AND M1-0304-B.
6. THIS FLOW DIAGRAM IS COMMON FOR UNITS 1 AND 2.
7. DURING OXYGEN REPLENISHMENT THE EMERGENCY RECIRCULATION MODE IS REPLACED BY THE EMERGENCY VENTILATION MODE FOR SHORT INTERVALS.
8. DELETED
9. DELETED
10. DAMPERS CPX-VADPMU-05 AND -06 ARE MODULATING CONTROL DAMPERS.
11. FOR DAMPER AND FAN MODE OF OPERATIONS SEE TABLES.
12. VALUES SHOWN ARE MINIMUM AIR FLOWS. ACTUAL AIR FLOW DEPENDS ON THE LEAK TIGHTNESS OF THE CONTROL ROOM PRESSURE BOUNDARY.
13. DAMPER CPX-VADPOU-14 OR -15 IS CLOSED BY THE OPERATOR WHEN SHUTTING DOWN THE ASSOCIATED TRAIN OF CRAC VENTILATION SYSTEM AFTER AN SI, BLACKOUT OR HIGH RADIATION SIGNAL.

R

REFERENCES:

| | | |
|---|---|---|
| 1. | M1-0313 | FLOW DIAGRAM - VENTILATION AAP BLDG AND CONTROL BLDG UPS AREA A/C SYSTEMS |
| 2. | M1-0200 | MECHANICAL SYMBOLS AND NOTES |
| 3. | M1-0304<br>M1-0304-A<br>M1-0304-B | FLOW DIAGRAM - VENTILATION CONTROL ROOM AIR CONDITIONING |

FSAR FIGURE 9.4-1

THIS DRAWING CREATED ELECTRONICALLY

| DRAWING M1-0308 REV CP-4 HAS BEEN SPLIT INTO THE FOLLOWING SHEETS: |
|---|
| M1-0308 |
| M1-0308-A |

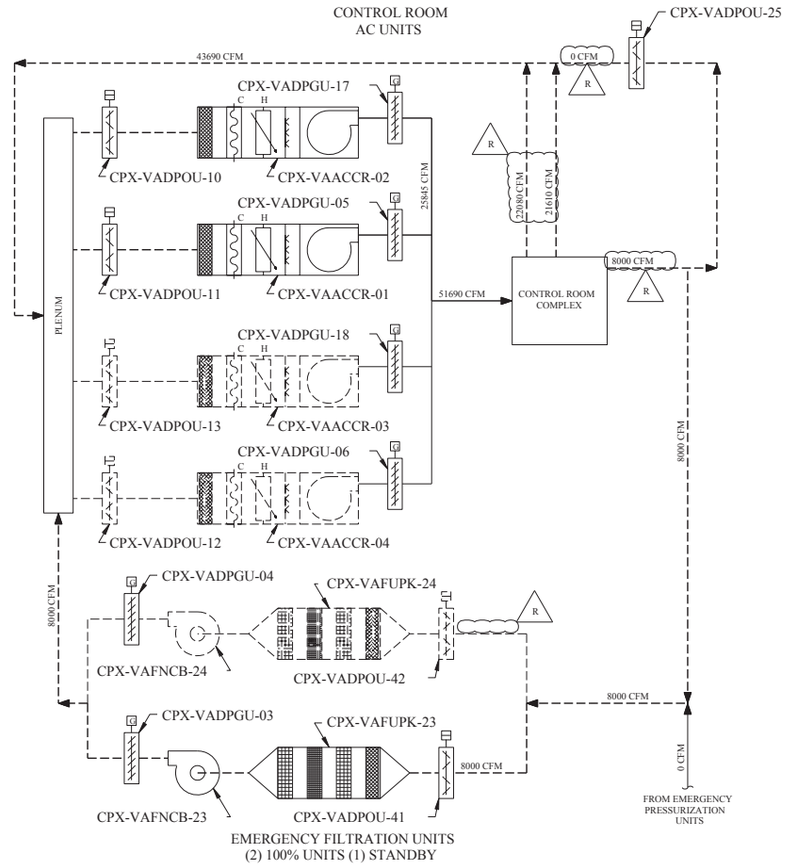
CLASS I
(NUCLEAR SAFETY-RELATED)
SAFETY CLASS 1 SEISMIC CATEGORY I
SAFETY CLASS 2 CLASS 1E
SAFETY CLASS 3 ASSOCIATED CIRCUITS

LUMINANT
CPSES
GLEN ROSE, TEXAS

FLOW DIAGRAM - VENTILATION
CONTROL ROOM AIR CONDITIONING

| DWG. NO. | SH. NO. | REV. |
|---|---|---|
| M1-0308 | - | CP-12 |

CONTROL ROOM
AC UNITS




EMERGENCY FILTRATION UNITS
(2) 100% UNITS (1) STANDBY

ISOLATION MODE
STANDBY EQUIPMENT IS DOTTED ( ) - - -

TRAIN A EQUIPMENT LINE-UP FOR CONTROL ROOM
AIR CONDITIONING SYSTEM

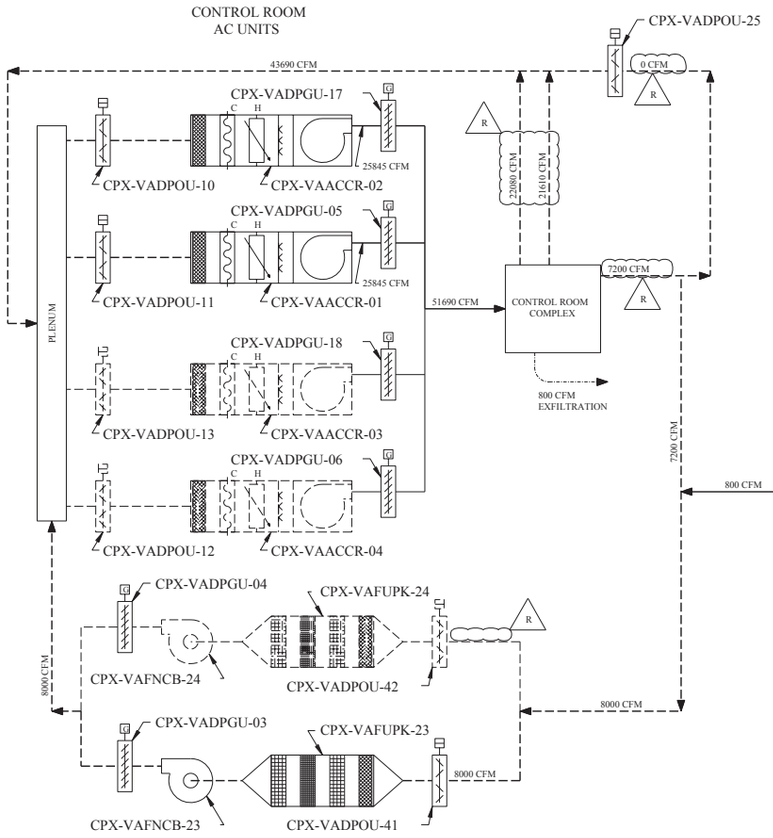
| ISOLATION MODE SEE NOTE 9 | | | |
|---|---|---|---|
| DAMPERS OPEN | FANS ON | DAMPERS CLOSED | FANS OFF |
| CPX-VADPOU-11 | CPX-VAACCR-01 | CPX-VADPOU-13 | CPX-VAACCR-03 |
| CPX-VADPGU-05 | | CPX-VADPGU-18 | |
| CPX-VADPOU-10 | CPX-VAACCR-02 | CPX-VADPOU-12 | CPX-VAACCR-04 |
| CPX-VADPGU-17 | | CPX-VADPGU-06 | |
| | | CPX-VADPOU-25 | |
| CPX-VADPOU-41 | CPX-VAFNCB-23 | CPX-VADPOU-42 | CPX-VAFNCB-24 |
| CPX-VADPGU-03 | | CPX-VADPGU-04 | |
| | | CPX-VADPOU-14 | |
| | | CPX-VADPOU-22 | CPX-VAFNCB-05 |
| | | CPX-VADPOU-01 | |
| | | CPX-VADPOU-23 | CPX-VAFNCB-06 |
| | | CPX-VADPOU-02 | |
| CPX-VADPOU-44 | | CPX-VADPOU-15 | CPX-VAFNAV-37 |
| | | CPX-VADPOU-17 | |
| | | CPX-VADPOU-18 | |
| CPX-VADPOU-45 | | CPX-VADPOU-19 | CPX-VAFNAV-38 |
| | | CPX-VADPOU-20 | |
| | | CPX-VADPOU-21 | |
| | | CPX-VADPMU-05 | CPX-VAFNID-01 |
| | | CPX-VADPGU-28 | |
| | | CPX-VADPMU-06 | CPX-VAFNID-02 |
| | | CPX-VADPGU-29 | |
| | | CPX-VADPOU-27 | CPX-VAFNID-03 |
| | | CPX-VADPGU-30 | |
| | | CPX-VADPOU-28 | CPX-VAFNID-04 |
| | | CPX-VADPGU-31 | |

R

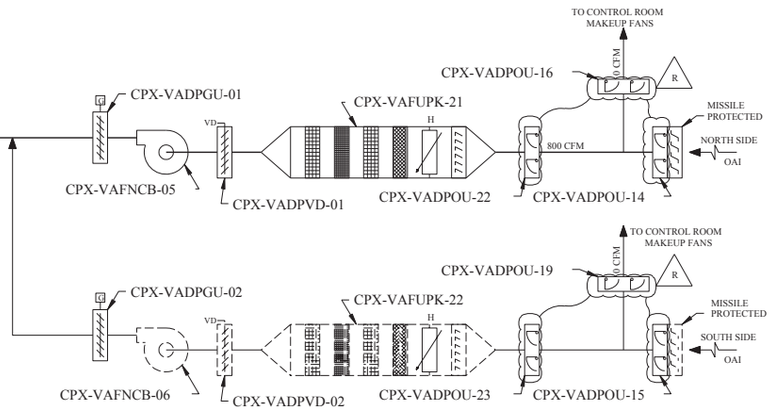
| EMERGENCY RECIRCULATION MODE SEE NOTE 7 | | | |
|---|---|---|---|
| DAMPERS OPEN | FANS ON | DAMPERS CLOSED | FANS OFF |
| CPX-VADPOU-11 | CPX-VAACCR-01 | CPX-VADPOU-13 | CPX-VAACCR-03 |
| CPX-VADPGU-05 | | CPX-VADPGU-18 | |
| CPX-VADPOU-10 | CPX-VAACCR-02 | CPX-VADPOU-12 | CPX-VAACCR-04 |
| CPX-VADPGU-17 | | CPX-VADPGU-06 | |
| | | CPX-VADPOU-25 | |
| CPX-VADPOU-41 | CPX-VAFNCB-23 | CPX-VADPOU-42 | CPX-VAFNCB-24 |
| CPX-VADPGU-03 | | CPX-VADPGU-04 | |
| | | CPX-VADPOU-15 | |
| CPX-VADPOU-14 | | | |
| CPX-VADPOU-22 | CPX-VAFNCB-05 | CPX-VADPOU-23 | CPX-VAFNCB-06 |
| CPX-VADPGU-01 | | CPX-VADPGU-02 | |
| CPX-VADPOU-44 | | CPX-VADPOU-16 | CPX-VAFNAV-37 |
| | | CPX-VADPOU-17 | |
| | | CPX-VADPOU-18 | |
| CPX-VADPOU-45 | | CPX-VADPOU-19 | CPX-VAFNAV-38 |
| | | CPX-VADPOU-20 | |
| | | CPX-VADPOU-21 | |
| | | CPX-VADPMU-05 | CPX-VAFNID-01 |
| | | CPX-VADPGU-28 | |
| | | CPX-VADPMU-06 | CPX-VAFNID-02 |
| | | CPX-VADPGU-29 | |
| | | CPX-VADPOU-27 | CPX-VAFNID-03 |
| | | CPX-VADPGU-30 | |
| | | CPX-VADPOU-28 | CPX-VAFNID-04 |
| | | CPX-VADPGU-31 | |

R

CONTROL ROOM
AC UNITS




EMERGENCY FILTRATION UNITS
(2) 100% UNITS (1) STANDBY




EMERGENCY PRESSURIZATION UNITS
800 CFM (2) 100% UNITS (1) STANDBY

EMERGENCY RECIRCULATION MODE
STANDBY EQUIPMENT IS DOTTED ( ) - - -
(SEE NOTE 12) R

| REV | DWN | CHK | APVD | REMARKS |
|---|---|---|---|---|
| CP-5 | DLK 11-16-2005 | MM 11-16-2005 | | THIS DRAWING REVISED TO INCORPORATE DESIGN CHANGE FDA 2001-002847-01-04 PER SK-0057-01-002847-01-01. |

**NOTES:**

1. FOR ABBREVIATIONS AND SYMBOLS SEE DRAWINGS M1-0313 AND M1-0200.
2. DELETED
3. THIS DIAGRAM IS A SCHEMATIC REPRESENTATION AND IS INTENDED TO SHOW GENERAL AIR DISTRIBUTION AND FLOW PATHS.
4. BALANCING DAMPERS, REGISTERS, DIFFUSERS, FLEXIBLE CONNECTIONS AND ALL OTHER RELATED ACCESSORIES NOT SHOWN ON THIS DIAGRAM SHALL BE PROVIDED AS INDICATED ON THE HVAC ARRANGEMENT DRAWINGS AND SPECIFICATIONS.
5. WORK THIS DRAWING WITH M1-0304, M1-0304-A AND M1-0304-B.
6. THIS FLOW DIAGRAM IS COMMON FOR UNITS 1 AND 2.
7. DURING OXYGEN REPLENISHMENT THE EMERGENCY RECIRCULATION MODE IS REPLACED BY THE EMERGENCY VENTILATION MODE FOR SHORT INTERVALS.
8. DELETED
9. ISOLATION MODE IS USED IF SMOKE IS DETECTED.
10. DELETED
11. FOR DAMPER AND FAN MODE OF OPERATIONS SEE TABLES.
12. DAMPER CPX-VADPOU-14 OR -15 IS CLOSED BY THE OPERATOR WHEN SHUTTING DOWN THE ASSOCIATED TRAIN OF CRAC VENTILATION SYSTEM AFTER AN SI, BLACKOUT OR HIGH RADIATION SIGNAL.

R

REFERENCES:

| | |
|---|---|
| 1. M1-0313 | FLOW DIAGRAM - VENTILATION AAP BLDG AND CONTROL BLDG UPS AREA A/C SYSTEMS |
| M1-0200 | MECHANICAL SYMBOLS AND NOTES |
| 3. M1-0304<br>M1-0304-A<br>M1-0304-B | FLOW DIAGRAM - VENTILATION CONTROL ROOM AIR CONDITIONING |

FSAR FIGURE 9.4-1

THIS DRAWING CREATED ELECTRONICALLY

DRAWING M1-0308 REV CP-4
HAS BEEN SPLIT INTO THE FOLLOWING SHEETS:
M1-0308
M1-0308-A

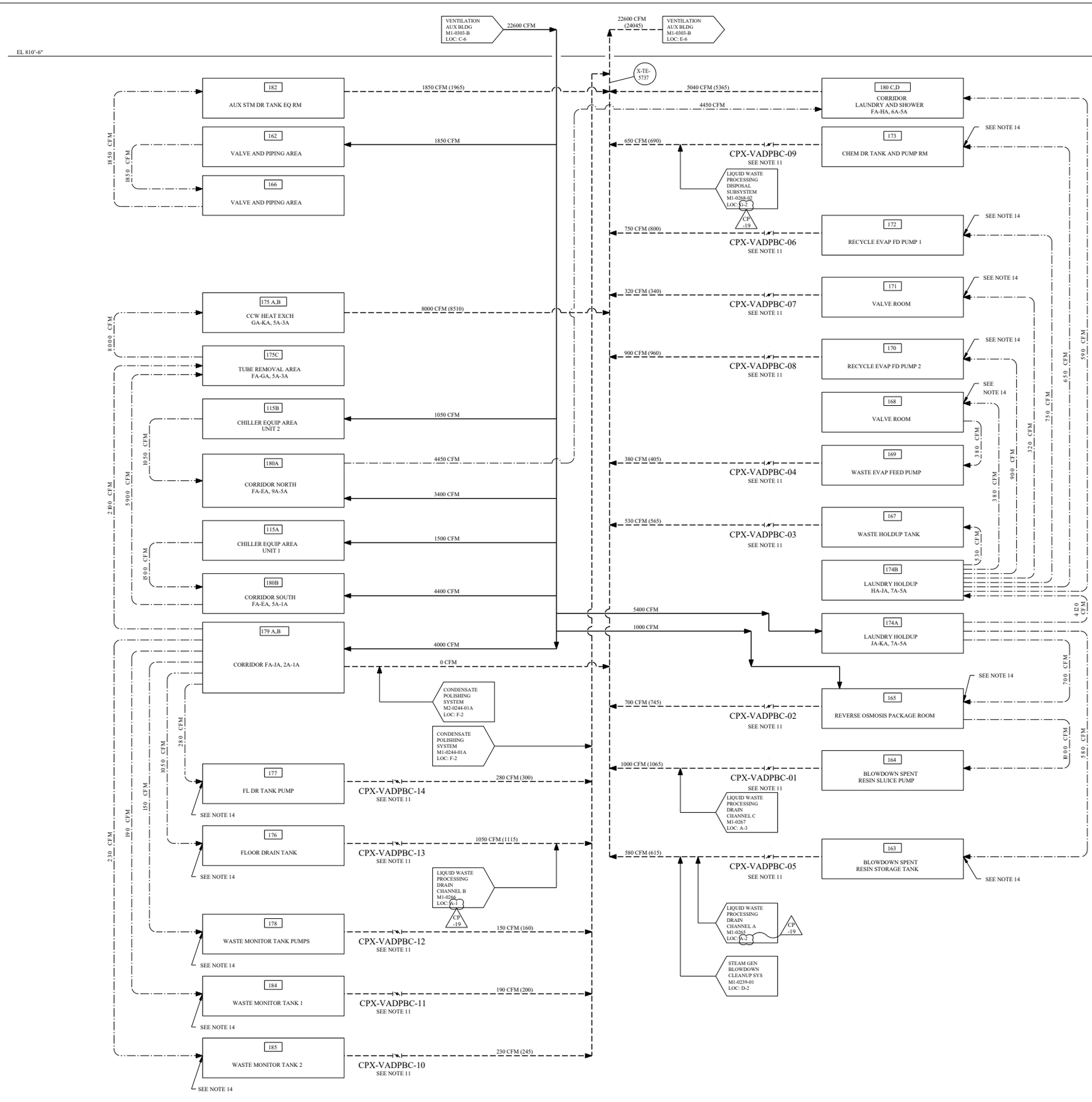
CLASS I
(NUCLEAR SAFETY-RELATED)
SAFETY CLASS 1 — SEISMIC CATEGORY I
SAFETY CLASS 2 — CLASS 1E
SAFETY CLASS 3 — ASSOCIATED CIRCUITS

LUMINANT
CPSES
GLEN ROSE, TEXAS

FLOW DIAGRAM - VENTILATION
CONTROL ROOM AIR CONDITIONING

DWG. NO. M1-0308 | SH. NO. A | REV. CP-5

FINAL PRINT




| REV | DWN | CHKD | APVD | REMARKS |
|---|---|---|---|---|
| CP-19 | DLK 03-14-2018 | SBM 03-21-2018 | MHF 03-26-2018 | THIS DRAWING REVISED TO INCORPORATE EDITORIAL CHANGES PER AI-CR-2018-001969-1. |

NOTES:

1. FOR HVAC ABBREVIATIONS AND SYMBOLS SEE DRAWINGS M1-0313 AND M1-0200.
2. THIS DIAGRAM IS A SCHEMATIC REPRESENTATION AND IS INTENDED TO SHOW GENERAL AIR DISTRIBUTION AND FLOW PATH.
3. BALANCING DAMPERS, REGISTERS, DIFFUSERS, FLEXIBLE CONNECTIONS AND ALL OTHER RELATED ACCESSORIES NOT SHOWN ON THIS DIAGRAM SHALL BE PROVIDED AS INDICATED ON THE HVAC ARRANGEMENT DRAWINGS AND OR SPECIFICATIONS.
4. INSTRUMENTATION AND CONTROLS FOR ROOM COOLING UNITS ARE TO BE SUPPLIED BY EQUIPMENT MANUFACTURERS.
5. THIS FLOW DIAGRAM IS COMMON FOR UNITS 1 AND 2. ALL CP2 EQUIPMENT SHOWN ON THIS FLOW DIAGRAM WILL BE INSTALLED WITH UNIT NUMBER 1 EQUIPMENT.
6. THE AUXILIARY BUILDING WILL BE MAINTAINED AT A SLIGHT NEGATIVE PRESSURE.
7. FOR LOGIC OF X-TIS-6249 AND X-TIS-6249A SEE I&C DRAWING M1-2300-05.
8. FOR LOGIC OF 1-PV-5688 , 1-HV-5689 , 2-PV-5688 AND 2-HV-5689 SEE I&C DRAWING M1-2302-09
9. FOR LOGIC OF 1-TIC-6098 AND 2-TIC-6098 SEE I&C DRAWINGS M1-2307-06 AND M2-2307-03 RESPECTIVELY.
10. FOR LOGIC OF 1-RE-5698 AND 2-RE-5698 SEE I&C DRAWINGS M1-2302-10A AND M2-2302-10A.
11. DAMPER ABANDONED IN PLACE (IN OPEN POSITION), ALL AIR CONNECTIONS AND ELECTRICAL CONNECTIONS ARE DISCONNECTED.
12. AIR FLOW QUANTITIES SHOWN ARE BASED ON A DENSITY OF 0.075 LB/FT OCCURING AT THE STANDARD CONDITION OF DRY AIR AT 70□F AND 29.92" HG BAROMETRIC PRESSURE. QUANTITIES IN PARENTHESES ARE ACTUAL AIR FLOW RATES BASED ON DENSITY AT DESIGN CONDITIONS.
13. AIR ENTERS THROUGH A DOOR WITH AN ELECTRO-THERMAL LINK CONTROL FOR FIRE PROTECTION AND TORNADO VENTING PURPOSES.
14. AIR ENTERS THROUGH LOUVERS IN DOOR OR WIRE MESH DOORS.
15. THE MAXIMUM AIR DISCHARGE (6900 CFM) FROM THE CONDENSER EXHAUSTING VACUUM PUMPS IS NOT CONSIDERED IN THE FLOW DIAGRAM BALANCE DUE TO THE SHORT DURATION OF THE PRIMING AND HOGGING MODES ASSOCIATED WITH THE VACUUM PUMPS.
16. THE AIR FLOW RATES SHOWN ARE ORIGINAL DESIGN VALUES FOR INITIAL FLOW BALANCING AND DO NOT REPRESENT AS-BUILT. AIR FLOW IS BALANCED TO MAINTAIN ROOM TEMPERATURES WITHIN DESIGN DURING NORMAL OPERATION AND TO ENSURE THE DIRECTION OF AIR FLOW IS AS SHOWN.

REFERENCES:

| | |
|---|---|
| M1-0200 | MECHANICAL DRAWING NOTES AND SYMBOLS |
| M1-0244-01 | FLOW DIAGRAM CONDENSATE POLISHING SYSTEM |
| M1-0265 | FLOW DIAGRAM LIQUID WASTE PROCESSING DRAIN CHANNEL A |
| M1-0266 | FLOW DIAGRAM LIQUID WASTE PROCESSING DRAIN CHANNEL B |
| M1-0267 | FLOW DIAGRAM LIQUID WASTE PROCESSING DRAIN CHANNEL C |
| M1-0268-02 | FLOW DIAGRAM LIQUID WASTE PROCESSING DISPOSAL SUBSYSTEM |
| M1-0300 | FLOW DIAGRAM VENTILATION CONTAINMENT |
| M1-0302 | FLOW DIAGRAM VENTILATION SAFEGUARD AND ELECTRICAL AREA |
| M1-0303-B | FLOW DIAGRAM VENTILATION AUXILIARY BUILDING |
| M1-0304-01 | FLOW DIAGRAM VENTILATION OFFICE AND SERVICE AREAS AIR CONDITIONING |
| M1-0307 | FLOW DIAGRAM VENTILATION CHILLED WATER SYSTEM |
| M1-0309 | FLOW DIAGRAM VENTILATION PRIMARY PLANT SUPPLY AND EXHAUST |
| M1-0311 | FLOW DIAGRAM VENTILATION SAFETY CHILLED WATER SYSTEM |
| M2-0244 | FLOW DIAGRAM CONDENSATE POLISHING SYSTEM |
| M2-0302 | FLOW DIAGRAM VENTILATION SAFEGUARD AND ELECTRICAL AREA |
| M2-0311 | FLOW DIAGRAM VENTILATION SAFETY CHILLED WATER SYSTEM |

DRAWING M1-0303 REV CP-13 HAS BEEN SPLIT INTO THE FOLLOWING SHEETS:
M1-0303
M1-0303-B

DRAWING M1-0303 REV CP-12 HAS BEEN SPLIT INTO THE FOLLOWING SHEETS:
M1-0303
M1-0303-A

FSAR FIGURE 9.4-2

THIS DRAWING CREATED ELECTRONICALLY

CLASS II

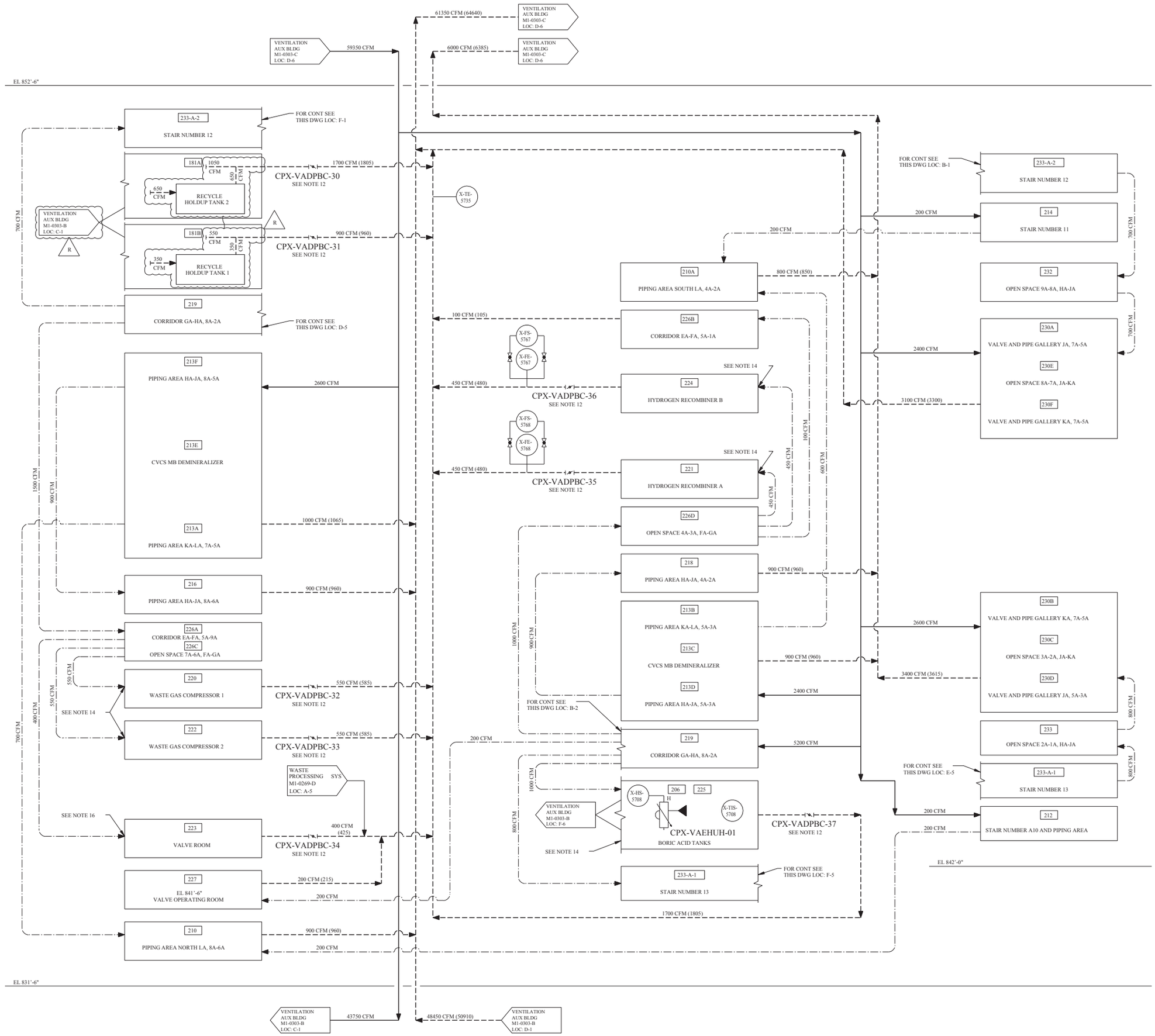
LUMINANT
CPNPP
GLEN ROSE, TEXAS

FLOW DIAGRAM VENTILATION
AUXILIARY BUILDING

DWG. NO. M1-0303 | SH. NO. - | REV. CP-19

REF CKD 3/14/2018 CP-19

me514100.dgn A M1-0303 B C D E F G FINAL PRINT H




AUXILIARY BLDG VENTILATION SYSTEM

| REV | DWN | CHKD | APVD | REMARKS |
|---|---|---|---|---|
| CP-8 | DLK 11-15-2004 | MM 11-15-2004 | | THIS DRAWING REVISED TO INCORPORATE DESIGN CHANGE FDA 2004-003380-01-00 PER SK-0001-04-003380-01-00. |

NOTES:

1. FOR HVAC ABBREVIATIONS AND SYMBOLS SEE DRAWINGS M1-0313 AND M1-0200.
2. DELETED
3. THIS DIAGRAM IS A SCHEMATIC REPRESENTATION AND IS INTENDED TO SHOW GENERAL AIR DISTRIBUTION AND FLOW PATH.
4. BALANCING DAMPERS, REGISTERS, DIFFUSERS, FLEXIBLE CONNECTIONS AND ALL OTHER RELATED ACCESSORIES NOT SHOWN ON THIS DIAGRAM SHALL BE PROVIDED AS INDICATED ON THE HVAC ARRANGEMENT DRAWINGS AND OR SPECIFICATIONS.
5. INSTRUMENTATION AND CONTROLS FOR ROOM COOLING UNITS ARE TO BE SUPPLIED BY EQUIPMENT MANUFACTURERS.
6. THIS FLOW DIAGRAM IS COMMON FOR UNITS 1 AND 2. ALL CP2 EQUIPMENT SHOWN ON THIS FLOW DIAGRAM WILL BE INSTALLED WITH UNIT NUMBER 1 EQUIPMENT.
7. THE AUXILIARY BUILDING WILL BE MAINTAINED AT A SLIGHT NEGATIVE PRESSURE.
8. FOR LOGIC OF X-TIS-6249 AND X-TIS-6249A SEE I&C DRAWING M1-2300-05.
9. FOR LOGIC OF 1-PV-5688 , 1-HV-5689 , 2-PV-5688 AND 2-HV-5689 SEE I&C DRAWING M1-2302-09
10. FOR LOGIC OF 1-TIC-6098 AND 2-TIC-6098 SEE I&C DRAWINGS M1-2307-06 AND M2-2307-09 RESPECTIVELY.
11. FOR LOGIC OF 1-RE-5698 AND 2-RE-5698 SEE I&C DRAWINGS M1 AND M2-2302 SERIES.
12. DAMPER ABANDONED IN PLACE (IN OPEN POSITION). ALL AIR CONNECTIONS AND ELECTRICAL CONNECTIONS ARE DISCONNECTED.
13. AIR FLOW QUANTITIES SHOWN ARE BASED ON A DENSITY OF 0.075 LB/FT OCCURING AT THE STANDARD CONDITION OF DRY AIR AT 70°F AND 29.92" HG BAROMETRIC PRESSURE. QUANTITIES IN PARENTHESES ARE ACTUAL AIR FLOW RATES BASED ON DENSITY AT DESIGN CONDITIONS.
14. AIR ENTERS THROUGH A DOOR WITH AN ELECTRO-THERMAL LINK CONTROL FOR FIRE PROTECTION AND TORNADO VENTING PURPOSES.
15. DELETED
16. AIR ENTERS THROUGH LOUVERS IN DOOR OR WIRE MESH DOORS.
17. THE MAXIMUM AIR DISCHARGE (6900 CFM) FROM THE CONDENSER EXHAUSTING VACUUM PUMPS IS NOT CONSIDERED IN THE FLOW DIAGRAM BALANCE DUE TO THE SHORT DURATION OF THE PRIMING AND HOGGING MODES ASSOCIATED WITH THE VACUUM PUMPS.
18. THE AIR FLOW RATES SHOWN ARE ORIGINAL DESIGN VALUES FOR INITIAL FLOW BALANCING AND DO NOT REPRESENT AS-BUILT. AIR FLOW IS BALANCED TO MAINTAIN ROOM TEMPERATURES WITHIN DESIGN DURING NORMAL OPERATION AND TO ENSURE THE DIRECTION OF AIR FLOW IS AS SHOWN.

REFERENCES:

| | |
|---|---|
| M1-0200 | MECHANICAL DRAWING NOTES AND SYMBOLS |
| M1-0263 | FLOW DIAGRAM SAFETY INJECTION SYSTEM |
| M1-0300 | FLOW DIAGRAM VENTILATION CONTAINMENT |
| M1-0302 | FLOW DIAGRAM VENTILATION SAFEGUARD AND ELECTRICAL AREA |
| M1-0303-B | FLOW DIAGRAM VENTILATION AUXILIARY BUILDING |
| M1-0303-C | FLOW DIAGRAM VENTILATION AUXILIARY BUILDING |
| M1-0304-01 | FLOW DIAGRAM VENTILATION OFFICE AND SERVICE AREAS AIR CONDITIONING |
| M1-0307 | FLOW DIAGRAM VENTILATION CHILLED WATER SYSTEM |
| M1-0309 | FLOW DIAGRAM VENTILATION PRIMARY PLANT SUPPLY AND EXHAUST |
| M1-0311 | FLOW DIAGRAM VENTILATION SAFETY CHILLED WATER SYSTEM |
| M2-0302 | FLOW DIAGRAM VENTILATION SAFEGUARD AND ELECTRICAL AREA |
| M2-0311 | FLOW DIAGRAM VENTILATION SAFETY CHILLED WATER SYSTEM |

FSAR FIGURE 9.4-2

THIS DRAWING CREATED ELECTRONICALLY

DRAWING M1-0303-A REV CP-1
HAS BEEN SPLIT INTO THE FOLLOWING SHEETS:
M1-0303-A
M1-0303-C

DRAWING M1-0303 REV CP-12
HAS BEEN SPLIT INTO THE FOLLOWING SHEETS:
M1-0303
M1-0303-A

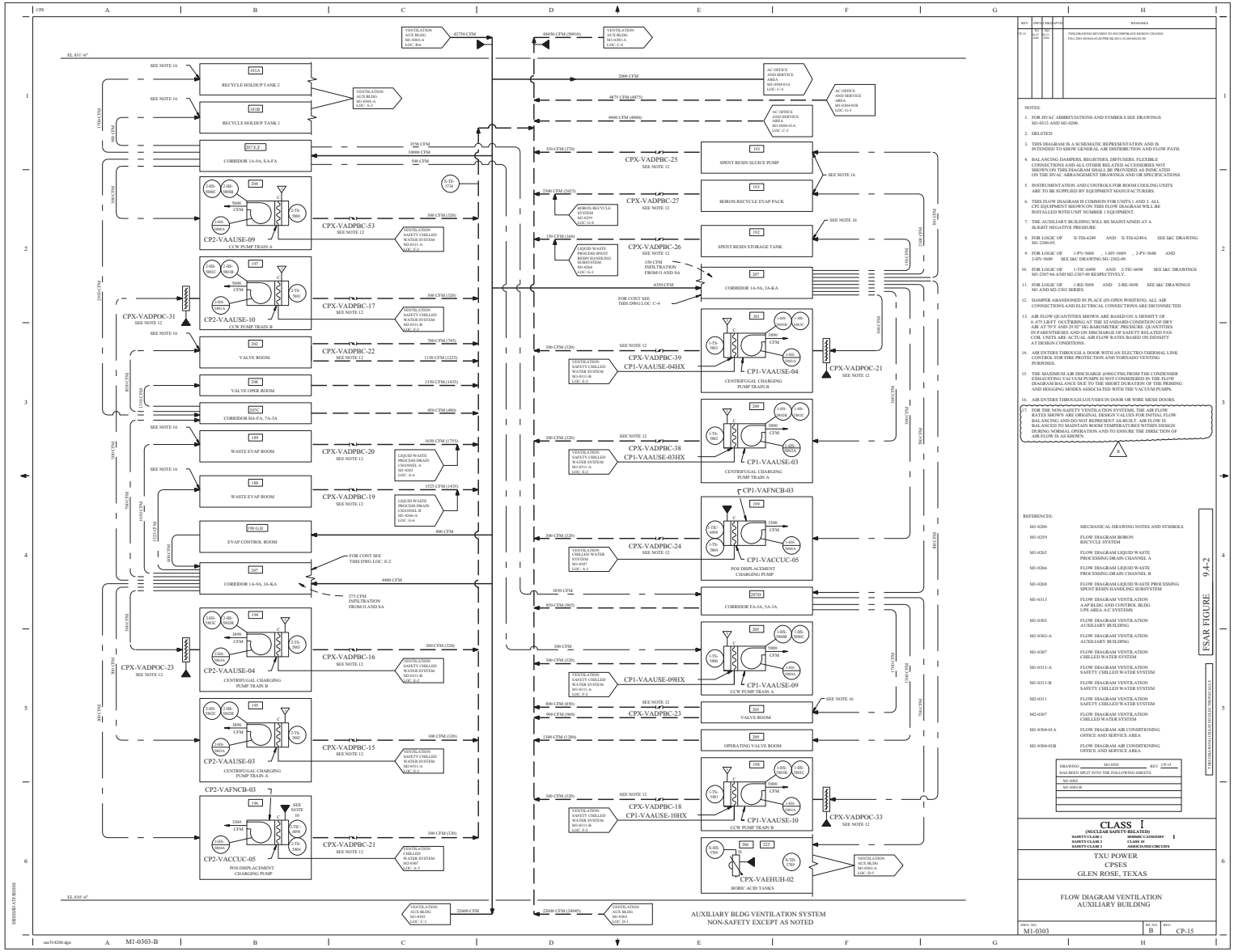
CLASS II

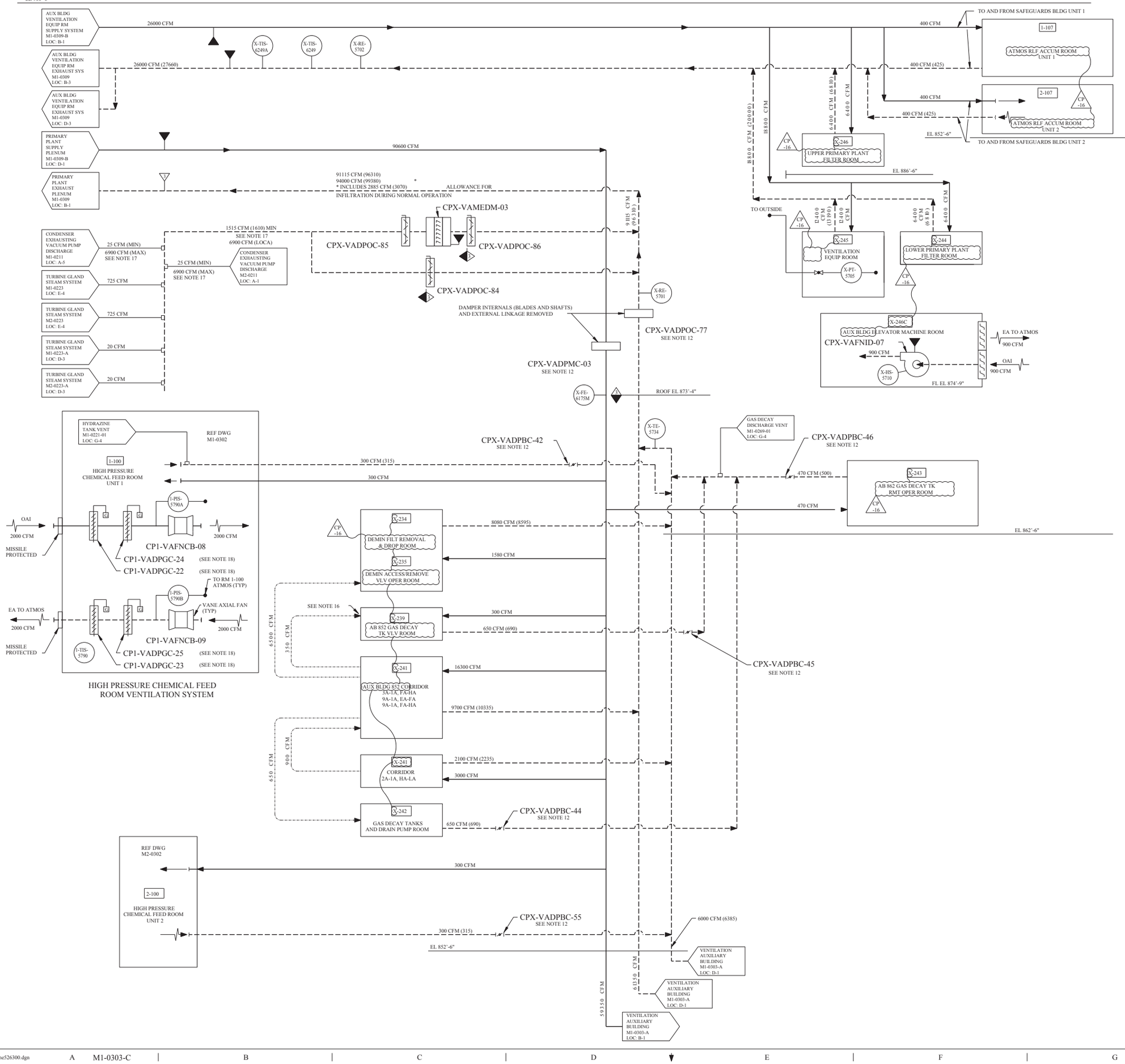
LUMINANT
CPSES
GLEN ROSE, TEXAS

FLOW DIAGRAM VENTILATION
AUXILIARY BUILDING

DWG. NO. M1-0303 | SH. NO. A | REV. CP-8

REF CHKD 3/22/2001


AUXILIARY BLDG VENTILATION SYSTEM
NON-SAFETY EXCEPT AS NOTED
EL 831'-6"
EL 810'-6"
CPE
M1-0303-B
SEE NOTE 16
181A
RECYCLE HOLDUP TANK 2
181B
RECYCLE HOLDUP TANK 1
207 E,F
CORRIDOR 1A-9A, EA-FA
204
CP2-VAAUSE-09
CCW PUMP TRAIN A
197
CP2-VAAUSE-10
CCW PUMP TRAIN B
202
VALVE ROOM
208
VALVE OPER ROOM
207C
CORRIDOR 8A-FA, 7A-9A
189
WASTE EVAP ROOM
188
WASTE EVAP ROOM
190 G,H
EVAP CONTROL ROOM
207
CORRIDOR 1A-9A, 2A-KA
194
CP2-VAAUSE-04
CENTRIFUGAL CHARGING
PUMP TRAIN B
195
CP2-VAAUSE-03
CENTRIFUGAL CHARGING
PUMP TRAIN A
CP2-VAFNCB-03
196
CP2-VACCUC-05
POS DISPLACEMENT
CHARGING PUMP
CPX-VADPOC-31
SEE NOTE 12
CPX-VADPOC-23
SEE NOTE 12
CPX-VADPBC-53
CPX-VADPBC-17
CPX-VADPBC-22
CPX-VADPBC-20
CPX-VADPBC-19
CPX-VADPBC-16
CPX-VADPBC-15
CPX-VADPBC-21
SEE NOTE 12
VENTILATION AUX BLDG MI-0303-A LOC: B-6
VENTILATION AUX BLDG MI-0303-A LOC: C-6
VENTILATION AUX BLDG MI-0303-A LOC: C-1
VENTILATION AUX BLDG MI-0303 LOC: D-1
VENTILATION SAFETY CHILLED WATER SYSTEM MI-0311-A LOC: E-3
VENTILATION SAFETY CHILLED WATER SYSTEM MI-0311-B LOC: E-3
VENTILATION CHILLED WATER SYSTEM MI-0307 LOC: A-3
LIQUID WASTE PROCESS DRAIN CHANNEL A MI-0265 LOC: A-6
LIQUID WASTE PROCESS DRAIN CHANNEL B MI-0266-A LOC: G-6
FOR CONT SEE THRS DWG LOC: I-2
FOR CONT SEE THIS DWG LOC: C-4
42750 CFM
44459 CFM (5091b)
2000 CFM
4875 CFM (4875)
4400 CFM (4000)
3550 CFM
10000 CFM
500 CFM
X-TE-5726
17000 CFM
600 CFM
360 CFM
3500 CFM
3500 CFM
360 CFM (320)
360 CFM (320)
700 CFM (745)
1150 CFM (1225)
1350 CFM (1435)
450 CFM (480)
1650 CFM (1755)
1525 CFM (1435)
400 CFM
4460 CFM
275 CFM INFILTRATION FROM O AND SA
360 CFM (320)
360 CFM (320)
360 CFM (320)
360 CFM (320)
SEE NOTE 10
CPX-VADPBC-25
SEE NOTE 12
CPX-VADPBC-27
SEE NOTE 12
CPX-VADPBC-26
SEE NOTE 12
350 CFM INFILTRATION FROM O AND SA
4350 CFM
CPX-VADPBC-39
CPX-VADPBC-38
CPX-VADPBC-24
SEE NOTE 12
CPX-VADPBC-18
CPX-VADPBC-10HX
CPX-VADPBC-23
SEE NOTE 12
CPX-VADPOC-21
SEE NOTE 12
CPX-VADPOC-33
SEE NOTE 12
CP1-VAAUSE-04HX
CP1-VAAUSE-03HX
CP1-VAAUSE-09HX
CP1-VAAUSE-10HX
CP1-VAFNCB-03
CP1-VACCUC-05
POS DISPLACEMENT
CHARGING PUMP
CP1-VAAUSE-04
CENTRIFUGAL CHARGING
PUMP TRAIN B
CP1-VAAUSE-03
CENTRIFUGAL CHARGING
PUMP TRAIN A
CP1-VAAUSE-09
CCW PUMP TRAIN A
CP1-VAAUSE-10
CCW PUMP TRAIN B
SPENT RESIN SLUICE PUMP
BORON RECYCLE EVAP PACK
SPENT RESIN STORAGE TANK
CORRIDOR 1A-9A, 1A-KA
CORRIDOR FA-FA, 5A-3A
VALVE ROOM
OPERATING VALVE ROOM
CPX-VAEHUH-02
BORIC ACID TANKS
AC OFFICE AND SERVICE AREA MI-0304-01A LOC: C-4
AC OFFICE AND SERVICE AREA MI-0304-01B LOC: G-5
AC OFFICE AND SERVICE AREA MI-0304-01A LOC: C-3
BORON RECYCLE SYSTEM MI-0259 LOC: G-6
LIQUID WASTE PROCESS RESIN HANDLING SUBSYSTEM MI-0263 LOC: G-1
22600 CFM
22600 CFM (20445)
REV
DRN
CHKD
APVD
REMARKS
THIS DRAWING REVISED TO INCORPORATE DESIGN CHANGE FDA 2001-0019-01-01 PER ML0411-15-00101-02-101
NOTES:
1. FOR HVAC ABBREVIATIONS AND SYMBOLS SEE DRAWINGS M1-0113 AND M1-0200.
2. DELETED
3. THIS DIAGRAM IS A SCHEMATIC REPRESENTATION AND IS INTENDED TO SHOW GENERAL AIR DISTRIBUTION AND FLOW PATH.
4. BALANCING DAMPERS, REGISTERS, DIFFUSERS, FLEXIBLE CONNECTIONS AND ALL OTHER RELATED ACCESSORIES NOT SHOWN ON THIS DIAGRAM SHALL BE PROVIDED AS INDICATED ON THE HVAC ARRANGEMENT DRAWINGS AND OR SPECIFICATIONS.
5. INSTRUMENTATION AND CONTROLS FOR ROOM COOLING UNITS ARE TO BE SUPPLIED BY EQUIPMENT MANUFACTURERS.
6. THIS FLOW DIAGRAM IS COMMON FOR UNITS 1 AND 2. ALL CP1 EQUIPMENT SHOWN ON THIS FLOW DIAGRAM WILL BE INSTALLED WITH UNIT NUMBER 1 EQUIPMENT.
7. THE AUXILIARY BUILDING WILL BE MAINTAINED AT A SLIGHT NEGATIVE PRESSURE.
8. FOR LOGIC OF X-TIS-6249 AND X-TIS-6249A SEE I&C DRAWING M1-2300-07.
9. FOR LOGIC OF 1-PV-5688 , 1-MV-5689 , 2-PV-5688 AND 2-MV-5689 SEE I&C DRAWING M1-2302-09.
10. FOR LOGIC OF 1-TIC-6098 AND 2-TIC-6098 SEE I&C DRAWINGS M1-2307-04 AND M2-2307-09 RESPECTIVELY.
11. FOR LOGIC OF 1-RE-5698 AND 2-RE-5698 SEE I&C DRAWINGS M1 AND M2-2302 SERIES.
12. DAMPER ABANDONED IN PLACE (IN OPEN POSITION), ALL AIR CONNECTIONS AND ELECTRICAL CONNECTIONS ARE DICONNECTED.
13. AIR FLOW QUANTITIES SHOWN ARE BASED ON A DENSITY OF 0. 075 LB/CF, OCCURRING AT THE STANDARD CONDITION OF DRY AIR AT 70°F AND 29.92" HG BAROMETRIC PRESSURE. QUANTITIES IN PARENTHESES AND ON DISCHARGE OF SAFETY RELATED FAN COIL UNITS ARE ACTUAL AIR FLOW RATES BASED ON DENSITY AT DESIGN CONDITIONS.
14. AIR ENTERS THROUGH A DOOR WITH AN ELECTRO-THERMAL LINK CONTROL FOR FIRE PROTECTION AND TORNADO VENTING PURPOSES.
15. THE MAXIMUM AIR DISCHARGE (6900 CFM) FROM THE CONDENSER EXHAUSTING VACUUM PUMPS IS NOT CONSIDERED IN THE FLOW DIAGRAM BALANCE DUE TO THE SHORT DURATION OF THE PRIMING AND HOGGING MODES ASSOCIATED WITH THE VACUUM PUMPS.
16. AIR ENTERS THROUGH LOUVERS IN DOOR OR WIRE MESH DOORS.
17. FOR THE NON-SAFETY VENTILATION SYSTEMS, THE AIR FLOW RATES SHOWN ARE ORIGINAL DESIGN VALUES FOR INITIAL FLOW BALANCING AND DO NOT REPRESENT AS-BUILT. AIR FLOW IS BALANCED TO MAINTAIN ROOM TEMPERATURES WITHIN DESIGN DURING NORMAL OPERATION AND TO ENSURE THE DIRECTION OF AIR FLOW IS AS SHOWN.
A.
REFERENCES:
M1-0200 MECHANICAL DRAWING NOTES AND SYMBOLS
M1-0259 FLOW DIAGRAM BORON RECYCLE SYSTEM
M1-0265 FLOW DIAGRAM LIQUID WASTE PROCESSING DRAIN CHANNEL A
M1-0266 FLOW DIAGRAM LIQUID WASTE PROCESSING DRAIN CHANNEL B
M1-0268 FLOW DIAGRAM LIQUID WASTE PROCESSING SPENT RESIN HANDLING SUBSYSTEM
M1-0313 FLOW DIAGRAM VENTILATION AAP BLDG AND CONTROL BLDG VPS AREA A/C SYSTEMS
M1-0303 FLOW DIAGRAM VENTILATION AUXILIARY BUILDING
M1-0303-A FLOW DIAGRAM VENTILATION AUXILIARY BUILDING
M1-0307 FLOW DIAGRAM VENTILATION CHILLED WATER SYSTEM
M1-0311-A FLOW DIAGRAM VENTILATION SAFETY CHILLED WATER SYSTEM
M1-0311-B FLOW DIAGRAM VENTILATION SAFETY CHILLED WATER SYSTEM
M2-0311 FLOW DIAGRAM VENTILATION SAFETY CHILLED WATER SYSTEM
M2-0307 FLOW DIAGRAM VENTILATION CHILLED WATER SYSTEM
M1-0304-01A FLOW DIAGRAM AIR CONDITIONING OFFICE AND SERVICE AREA
M1-0304-01B FLOW DIAGRAM AIR CONDITIONING OFFICE AND SERVICE AREA
DRAWING M1-0303 REV CP-13
HAS BEEN SPLIT INTO THE FOLLOWING SHEETS
M1-0303
M1-0303-B
FSAR FIGURE 9.4-2
THIS DRAWING CLASSIFIED AS FUEL HANDLING AREA
CLASS I
(NUCLEAR SAFETY RELATED)
SAFETY CLASS 1 SEISMIC CATEGORY I
SAFETY CLASS 2 CLASS 1E
SAFETY CLASS 3 ASSOCIATED CIRCUITS
TXU POWER
CPSES
GLEN ROSE, TEXAS
FLOW DIAGRAM VENTILATION
AUXILIARY BUILDING
DWG NO M1-0303
SH NO B
REV CP-15
SBSSSSDS AUE BSSSS
ma514200.dgn




| REV | DWN | CHKD | APVD | REMARKS |
|---|---|---|---|---|
| CP-16 | CWG 05-05-2014 | | | THIS DRAWING REVISED TO INCORPORATE EDITORIAL CHANGES PER A1-CR-2014-004067-1. |

NOTES:

1. FOR HVAC ABBREVIATIONS AND SYMBOLS SEE DRAWINGS M1-0313 AND M1-0200.
2. DELETED
3. THIS DIAGRAM IS A SCHEMATIC REPRESENTATION AND IS INTENDED TO SHOW GENERAL AIR DISTRIBUTION AND FLOW PATH.
4. BALANCING DAMPERS, REGISTERS, DIFFUSERS, FLEXIBLE CONNECTIONS AND ALL OTHER RELATED ACCESSORIES NOT SHOWN ON THIS DIAGRAM SHALL BE PROVIDED AS INDICATED ON THE HVAC ARRANGEMENT DRAWINGS AND OR SPECIFICATIONS.
5. INSTRUMENTATION AND CONTROLS FOR ROOM COOLING UNITS ARE TO BE SUPPLIED BY EQUIPMENT MANUFACTURERS.
6. THIS FLOW DIAGRAM IS COMMON FOR UNITS 1 AND 2. ALL CP2 EQUIPMENT SHOWN ON THIS FLOW DIAGRAM WILL BE INSTALLED WITH UNIT NUMBER 1 EQUIPMENT.
7. THE AUXILIARY BUILDING WILL BE MAINTAINED AT A SLIGHT NEGATIVE PRESSURE.
8. FOR LOGIC OF X-TIS-6249 AND X-TIS-6249A SEE I&C DRAWING M1-2300-05.
9. FOR LOGIC OF 1-PV-5688 , 1-HV-5689 , 2-PV-5688 AND 2-HV-5689 SEE I&C DRAWING M1-2302-09
10. FOR LOGIC OF 1-TIC-6098 AND 2-TIC-6098 SEE I&C DRAWINGS M1-2307-06 AND M2-2307-09 RESPECTIVELY.
11. FOR LOGIC OF 1-RE-5698 AND 2-RE-5698 SEE I&C DRAWINGS M1 AND M2-2302 SERIES.
12. DAMPER ABANDONED IN-PLACE (IN OPEN POSITION). ALL AIR CONNECTIONS AND ELECTRICAL CONNECTIONS ARE DISCONNECTED.
13. AIR FLOW QUANTITIES SHOWN ARE BASED ON A DENSITY OF 0.075 LB/FT OCCURRING AT THE STANDARD CONDITION OF DRY AIR AT 70□F AND 29.92" HG BAROMETRIC PRESSURE. QUANTITIES IN PARENTHESES ARE ACTUAL AIR FLOW RATES BASED ON DENSITY AT DESIGN CONDITIONS.
14. AIR ENTERS THROUGH A DOOR WITH AN ELECTRO-THERMAL LINK CONTROL FOR FIRE PROTECTION AND TORNADO VENTING PURPOSES.
15. DELETED
16. AIR ENTERS THROUGH LOUVERS IN DOOR OR WIRE MESH DOORS.
17. THE MAXIMUM AIR DISCHARGE (6900 CFM) FROM THE CONDENSER EXHAUSTING VACUUM PUMPS IS NOT CONSIDERED IN THE FLOW DIAGRAM BALANCE DUE TO THE SHORT DURATION OF THE PRIMING AND HOGGING MODES ASSOCIATED WITH THE VACUUM PUMPS.
18. DAMPERS CP1-VADPGC-22 , CP1-VADPGC-23 , CP1-VADPGC-24 AND CP1-VADPGC-25 WERE RETAGGED FROM DAMPERS CP2-VADPGC-16 , CP2-VADPGC-17 , CP2-VADPGC-18 AND CP2-VADPGC-15 RESPECTIVELY.
19. THE AIR FLOW RATES SHOWN ARE ORIGINAL DESIGN VALUES FOR INITIAL FLOW BALANCING AND DO NOT REPRESENT AS-BUILT. AIR FLOW IS BALANCED TO MAINTAIN ROOM TEMPERATURES WITHIN DESIGN DURING NORMAL OPERATION AND TO ENSURE THE DIRECTION OF AIR FLOW IS AS SHOWN.

REFERENCES:

| | |
|---|---|
| M1-0200 | MECHANICAL DRAWING NOTES AND SYMBOLS |
| M1-0211 | FLOW DIAGRAM CONDENSER VACUUM AND WATER BOX PRIMING SYSTEM |
| M1-0221 | FLOW DIAGRAM CHEMICAL FEED SYSTEM STEAM GENERATOR RECIRCULATION SUBSYSTEMS |
| M1-0225 | FLOW DIAGRAM FIRE PROTECTION SYSTEM |
| M1-0269 | FLOW DIAGRAM WASTE PROCESSING (GAS) |
| M1-0302 | FLOW DIAGRAM VENTILATION SAFEGUARDS AND ELECTRICAL AREA |
| M1-0303-A | FLOW DIAGRAM VENTILATION AUXILIARY BUILDING |
| M1-0309 | FLOW DIAGRAM VENTILATION PRIMARY PLANT SUPPLY AND EXHAUST |
| M1-0309-B | FLOW DIAGRAM VENTILATION PRIMARY PLANT SUPPLY AND EXHAUST |
| M2-0302 | FLOW DIAGRAM VENTILATION SAFEGUARDS AND ELECTRICAL AREA |
| M1-0313 | FLOW DIAGRAM VENTILATION AAP BLDG AND CONTROL BLDG UPS AREA A/C SYSTEMS |

FSAR FIGURE 9.4-2

THIS DRAWING CREATED ELECTRONICALLY

DRAWING M1-0303-A REV CP-1 HAS BEEN SPLIT INTO THE FOLLOWING SHEETS:

| |
|---|
| M1-0303-A |
| M1-0303-C |
| |
| |
| |

CLASS I
(NUCLEAR SAFETY-RELATED)

| | |
|---|---|
| SAFETY CLASS 1 | SEISMIC CATEGORY I |
| SAFETY CLASS 2 | CLASS 1E |
| SAFETY CLASS 3 | ASSOCIATED CIRCUITS |

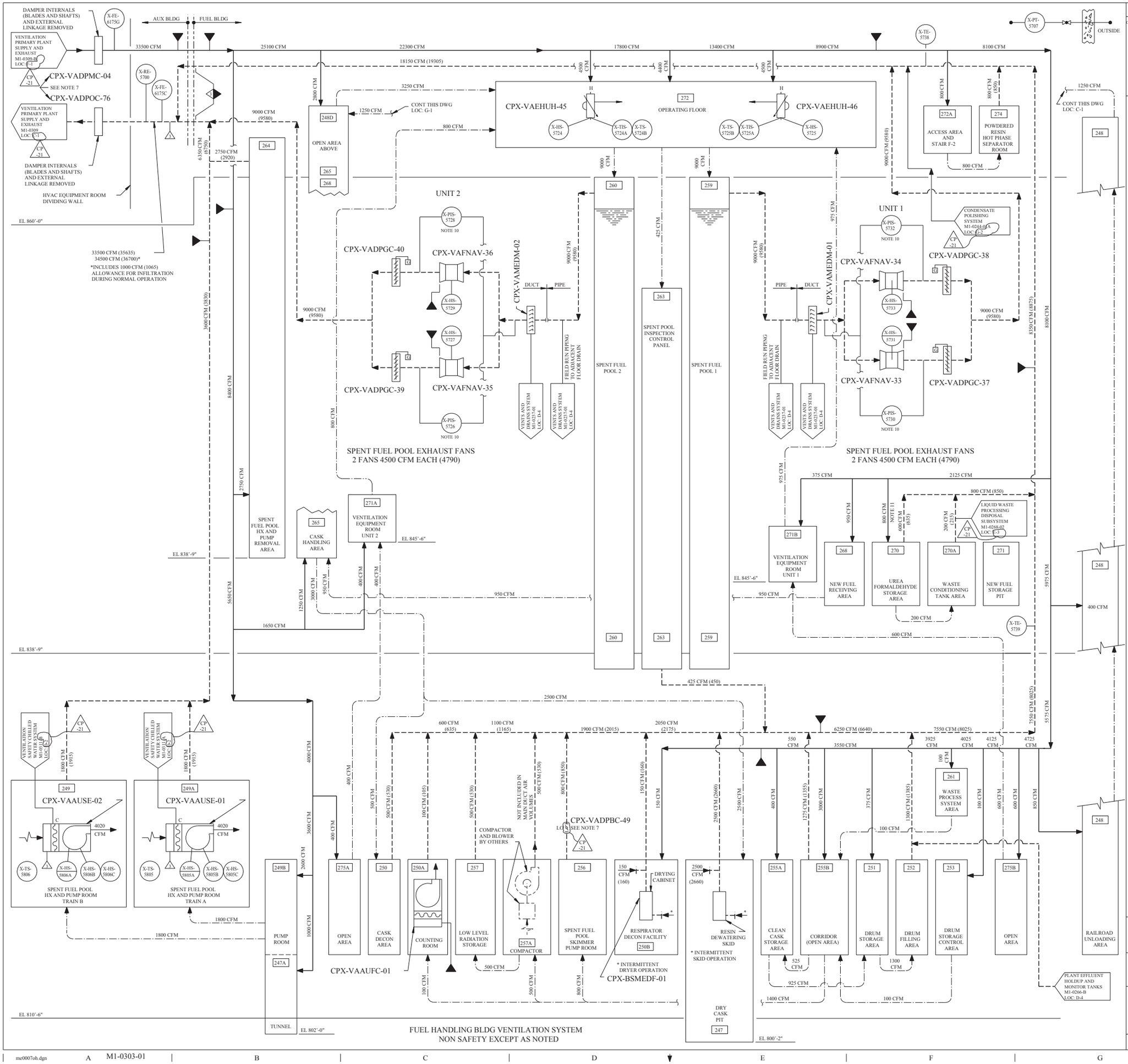
LUMINANT
CPNPP
GLEN ROSE, TEXAS

FLOW DIAGRAM VENTILATION AUXILIARY BUILDING

DWG NO. M1-0303 | SH. NO. C | REV. CP-16

$$$$$$$DATE$$$$$$ REF CHKD 10/24/2003

me526300.dgn A M1-0303-C B C D E F G < FINAL PRINT > H




| REV | DWN | CHKD | APVD | REMARKS |
|---|---|---|---|---|
| CP-21 | DLK 06-03-2010 | | | THIS DRAWING REVISED TO EDITORIALLY CORRECT DRAWING REFERENCES PER CR-2010-007228 AND SHOW CORRECT VALVE SYMBOL FOR CPX-VDDPBC-49. |

NOTES:

1. FOR ABBREVIATIONS AND SYMBOLS SEE DRAWINGS M1-0313 AND M1-0200.
2. THIS DIAGRAM IS A SCHEMATIC REPRESENTATION AND IS INTENDED TO SHOW GENERAL AIR DISTRIBUTION AND FLOW PATHS.
3. BALANCING DAMPERS, REGISTERS, DIFFUSERS, FLEXIBLE CONNECTIONS AND ALL OTHER RELATED ACCESSORIES NOT SHOWN ON THIS DIAGRAM SHALL BE PROVIDED AS INDICATED ON THE HVAC ARRANGEMENT DRAWING AND SPECIFICATIONS.
4. INSTRUMENTATION AND CONTROLS FOR ROOM COOLING UNITS ARE TO BE SUPPLIED BY EQUIPMENT MANUFACTURERS.
5. THE FUEL HANDLING BUILDING WILL BE MAINTAINED AT A SLIGHT NEGATIVE PRESSURE.
6. FOR LOGIC OF CHANNEL X-FE-6175C SEE ICD M1-2509.
7. DAMPER ABANDONED IN PLACE (IN OPEN POSITION). ALL AIR CONNECTIONS AND ELECTRICAL CONNECTIONS ARE DISCONNECTED.
8. AIR FLOW QUANTITIES SHOWN ARE BASED ON A DENSITY OF 0. 075 LB/FT OCCURRING AT THE STANDARD CONDITION OF DRY AIR AT 70°F AND 29.92" HG BAROMETRIC PRESSURE. QUANTITIES IN PARENTHESES AND ON DISCHARGE OF SAFETY RELATED FAN COIL UNITS ARE ACTUAL AIR FLOW RATES BASED ON DENSITY AT DESIGN CONDITIONS.
9. AIR FLOW FOR ROOM 270 INCLUDES ADDITIONAL 500 CFM RESERVED FOR ROOM 271 IF REQUIRED AT A LATER DATE.
10. THE ALARM FUNCTION OF THIS INSTRUMENT IS DEACTIVATED.

REFERENCES:

| | |
|---|---|
| M1-0200 | MECHANICAL SYMBOLS AND NOTES |
| M1-0237-01 | FLOW DIAGRAM VENTS AND DRAINS SYSTEM TURBINE AND FUEL HANDLING BLDG SHEET 3 OF 4 |
| M1-0244-01 | FLOW DIAGRAM CONDENSATE POLISHING SYSTEM |
| M1-0268-02 | FLOW DIAGRAM LIQUID WASTE PROCESSING DISPOSAL SUBSYSTEM |
| M1-0300 | FLOW DIAGRAM VENTILATION CONTAINMENT |
| M1-0309 | FLOW DIAGRAM VENTILATION PRIMARY PLANT SUPPLY AND EXHAUST |
| M1-0311 | FLOW DIAGRAM VENTILATION SAFETY CHILLED WATER SYSTEM |
| M1-0313 | FLOW DIAGRAM VENTILATION AAP BLDG AND CONTROL BLDG UPS AREA A/C SYSTEMS |

FSAR FIGURE 9.4-2

THIS DRAWING CREATED ELECTRONICALLY

**CLASS I**

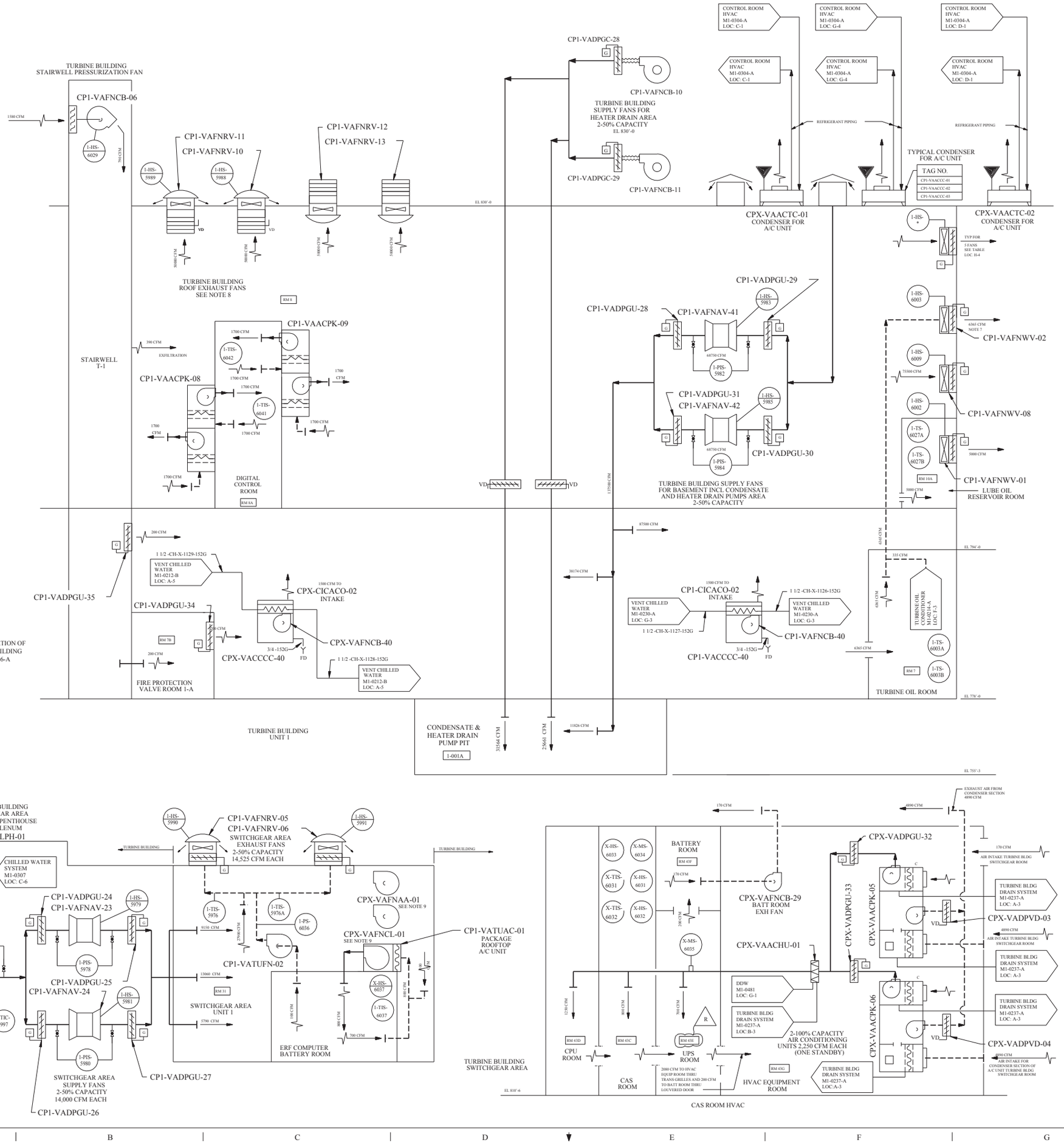
(NUCLEAR SAFETY-RELATED)

| | |
|---|---|
| SAFETY CLASS 1 | SEISMIC CATEGORY I |
| SAFETY CLASS 2 | CLASS 1E |
| SAFETY CLASS 3 | ASSOCIATED CIRCUITS |

LUMINANT
CPNPP
GLEN ROSE, TEXAS

FLOW DIAGRAM
VENTILATION
FUEL HANDLING BUILDING

| DWG. NO. | SH. NO. | REV. |
|---|---|---|
| M1-0303 | 01 | CP-21 |




| REV | DWN | CHKD | APVD | REMARKS |
|---|---|---|---|---|
| CP-30 | JKG 04-21-2010 | SM 04-21-2010 | | THIS DRAWING REVISED TO INCORPORATE DESIGN CHANGE FDA-2010-000075-01-00 PER SK-0001-10-000075-01-00. |

NOTES:

1. FOR HVAC ABBREVIATIONS AND SYMBOLS SEE DWG M1-0313.
2. FOR I&C AND MECHANICAL SYMBOLS SEE DWG M1-0200.
3. THIS DIAGRAM IS A SCHEMATIC REPRESENTATION AND IS INTENDED TO SHOW GENERAL AIR DISTRIBUTION AND FLOW PLANS.
4. BALANCING DAMPERS, REGISTERS, DIFFUSERS, FLEXIBLE CONNECTIONS AND ALL OTHER RELATED ACCESSORIES NOT SHOWN ON THIS DIAGRAM SHALL BE PROVIDED AS INDICATED ON THE HVAC ARRANGEMENT DRAWING AND SPECIFICATION.
5. THE TURBINE BUILDING AND SWITCHGEAR AREA WILL BE MAINTAINED AT ATMOSPHERIC PRESSURE.
6. ALL ROOT VALVES FOR DIFFERENTIAL PRESSURE INDICATING SWITCHES SHOWN ON THIS DRAWING WILL BE SUPPLIED BY SPECIFICATION MS-85.
7. AIR FLOW QUANTITY FOR CP1-VAFNWV-02 , LOC G-2 REFLECTS EQUIPMENT AS BUILT CAPACITY.
8. THERE ARE FOUR ROOF EXHAUST FANS: THREE ARE RUNNING AND ONE IS KEPT IN STANDBY.
9. FAN ABANDONED IN PLACE WITH ALL CONNECTING DUCTWORK REMOVED.
10. AIR FLOW RATES SHOWN ARE ORIGINAL DESIGN VALUES FOR INITIAL FLOW BALANCING AND DO NOT REPRESENT AS-BUILT. AIR FLOW IS BALANCED TO MAINTAIN ROOM TEMPERATURES WITHIN DESIGN DURING NORMAL OPERATION AND TO ENSURE THE DIRECTION OF AIR FLOW IS AS SHOWN.

REFERENCES:

| | |
|---|---|
| 1. M1-0313 | FLOW DIAGRAM-VENTILATION AAP BLDG AND CONTROL BLDG UPS AREA A/C SYSTEMS |
| 2. M1-0200 | MECHANICAL SYMBOLS AND NOTES |

TURBINE BUILDING
WALL VENTILATORS (LOC. G-2)

| TAG NO | CFM | I-HS- |
|---|---|---|
| CP1-VAFNWV-03 | 75,500 | 6004 |
| CP1-VAFNWV-04 | 75,500 | 6005 |
| CP1-VAFNWV-05 | 75,500 | 6006 |
| CP1-VAFNWV-06 | 75,500 | 6007 |
| CP1-VAFNWV-07 | 75,500 | 6008 |

DRAWING M1-0306 REV CP-18
HAS BEEN SPLIT INTO THE FOLLOWING SHEETS:
M1-0306
M1-0306-A

FSAR FIGURE 9.4-3

THIS DRAWING CREATED ELECTRONICALLY

NON-SAFETY

LUMINANT
CPNPP
GLEN ROSE, TEXAS

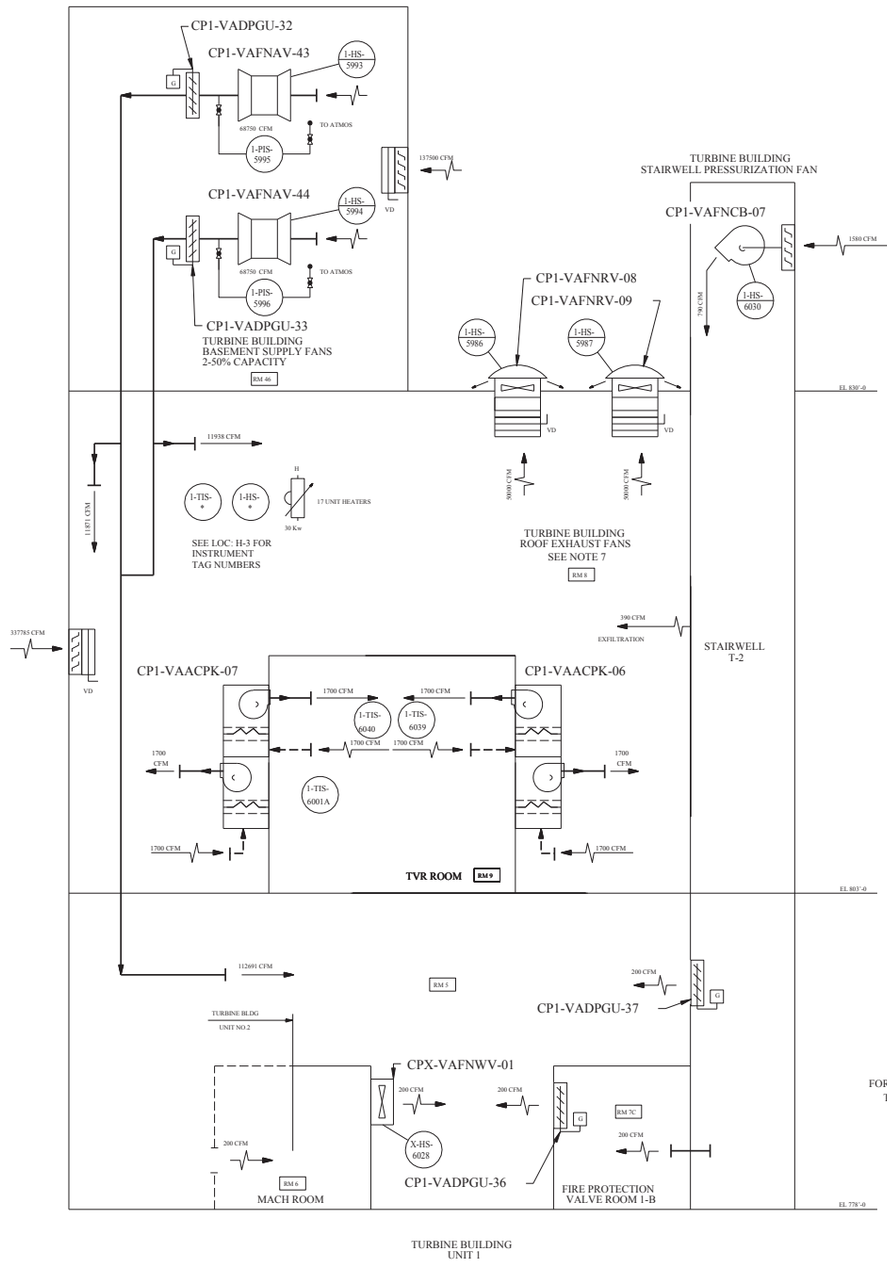
FLOW DIAGRAM
VENTILATION
TURBINE BUILDING

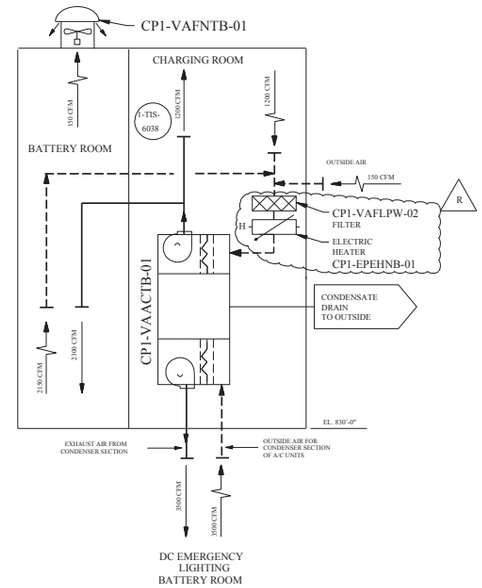
DWG. NO. M1-0306 | SH. NO. - | REV. CP-30

FINAL PRINT

REF CKD CP-25 01-05-01

me979000.dgn M1-0306




| REV | DWN | CHK | APVD | REMARKS |
|---|---|---|---|---|
| CP-4 | JRMC 03-31 2007 | SM 03-31 2007 | | THIS DRAWING REVISED TO INCORPORATE DESIGN CHANGE FDA-2006-0035693-01-00 PER SK-0001-06-0035693-01-00. |

NOTES:

1. FOR HVAC ABBREVIATIONS AND SYMBOLS SEE DWG M1-0313.
2. FOR I&C AND MECHANICAL SYMBOLS SEE DWG M1-0200.
3. THIS DIAGRAM IS A SCHEMATIC REPRESENTATION AND IS INTENDED TO SHOW GENERAL AIR DISTRIBUTION AND FLOW PLANS.
4. BALANCING DAMPERS, REGISTERS, DIFFUSERS, FLEXIBLE CONNECTIONS AND ALL OTHER RELATED ACCESSORIES NOT SHOWN ON THIS DIAGRAM SHALL BE PROVIDED AS INDICATED ON THE HVAC ARRANGEMENT DRAWING AND SPECIFICATION.
5. THE TURBINE BUILDING AND SWITCHGEAR AREA WILL BE MAINTAINED AT ATMOSPHERIC PRESSURE.
6. ALL ROOT VALVES FOR DIFFERENTIAL PRESSURE INDICATING SWITCHES SHOWN ON THIS DRAWING WILL BE SUPPLIED BY SPECIFICATION MS-85.
7. THERE ARE FOUR ROOF EXHAUST FANS: THREE ARE RUNNING AND ONE IS KEPT IN STANDBY.
8. AIR FLOW RATES SHOWN ARE ORIGINAL DESIGN VALUES FOR INITIAL FLOW BALANCING AND DO NOT REPRESENT AS-BUILT AIR FLOW IS BALANCED TO MAINTAIN ROOM TEMPERATURES WITHIN DESIGN DURING NORMAL OPERATION AND TO ENSURE THE DIRECTION OF AIR FLOW IS AS SHOWN.

REFERENCES:

| | |
|---|---|
| 1. M1-0313 | FLOW DIAGRAM-VENTILATION AAP BLDG AND CONTROL BLDG UPS AREA A/C SYSTEMS |
| 2. M1-0200 | MECHANICAL SYMBOLS AND NOTES |

| UNIT HEATERS | | |
|---|---|---|
| TAG NUMBER | 1-HS- | 1-TS- |
| CP1-VAEHUH-03 | 6010 | 6010 |
| CP1-VAEHUH-04 | 6011 | 6011 |
| CP1-VAEHUH-05 | 6012 | 6012 |
| CP1-VAEHUH-06 | 6013 | 6013 |
| CP1-VAEHUH-07 | 6014 | 6014 |
| CP1-VAEHUH-08 | 6015 | 6015 |
| CP1-VAEHUH-09 | 6016 | 6016 |
| CP1-VAEHUH-10 | 6017 | 6017 |
| CP1-VAEHUH-11 | 6018 | 6018 |
| CP1-VAEHUH-12 | 6019 | 6019 |
| CP1-VAEHUH-13 | 6020 | 6020 |
| CP1-VAEHUH-14 | 6021 | 6021 |
| CP1-VAEHUH-15 | 6022 | 6022 |
| CP1-VAEHUH-16 | 6023 | 6023 |
| CP1-VAEHUH-17 | 6024 | 6024 |
| CP1-VAEHUH-18 | 6025 | 6025 |
| CP1-VAEHUH-19 | 6026 | 6026 |

FSAR FIGURE 9.4-3

THIS DRAWING CREATED ELECTRONICALLY

DRAWING M1-0306 REV CP-18
HAS BEEN SPLIT INTO THE FOLLOWING SHEETS:

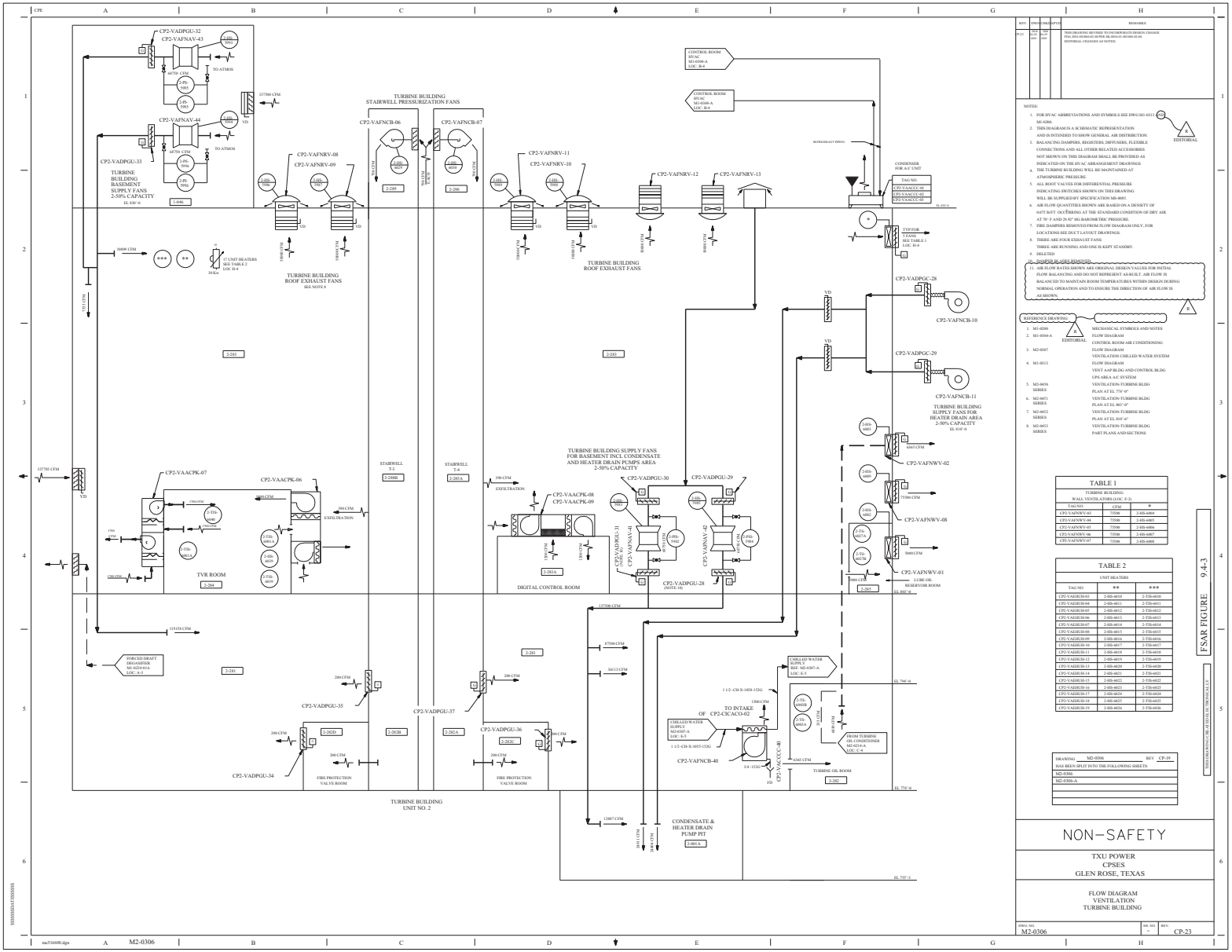
| |
|---|
| M1-0306 |
| M1-0306-A |
| |

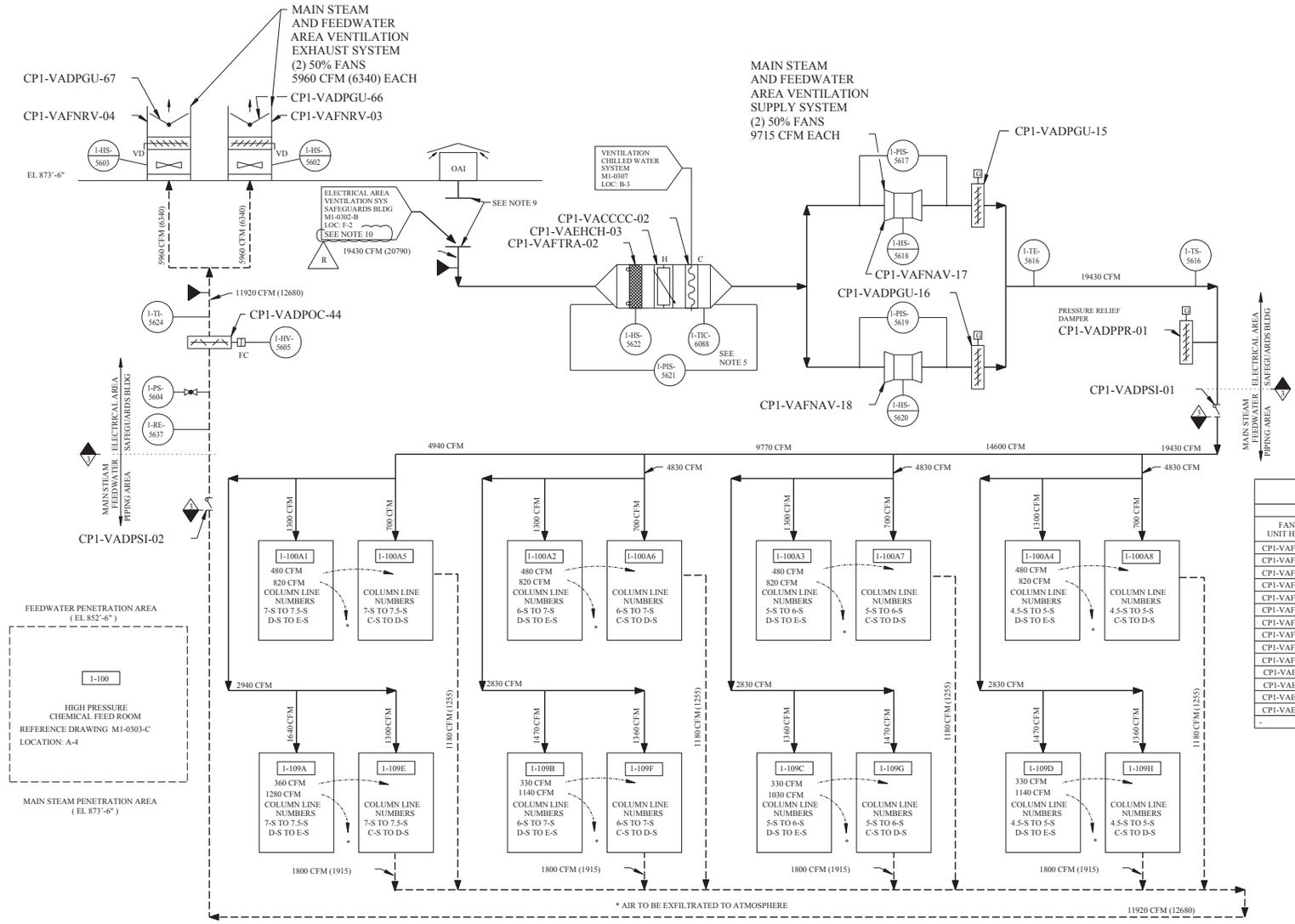
NON–SAFETY

LUMINANT
CPSES
GLEN ROSE, TEXAS

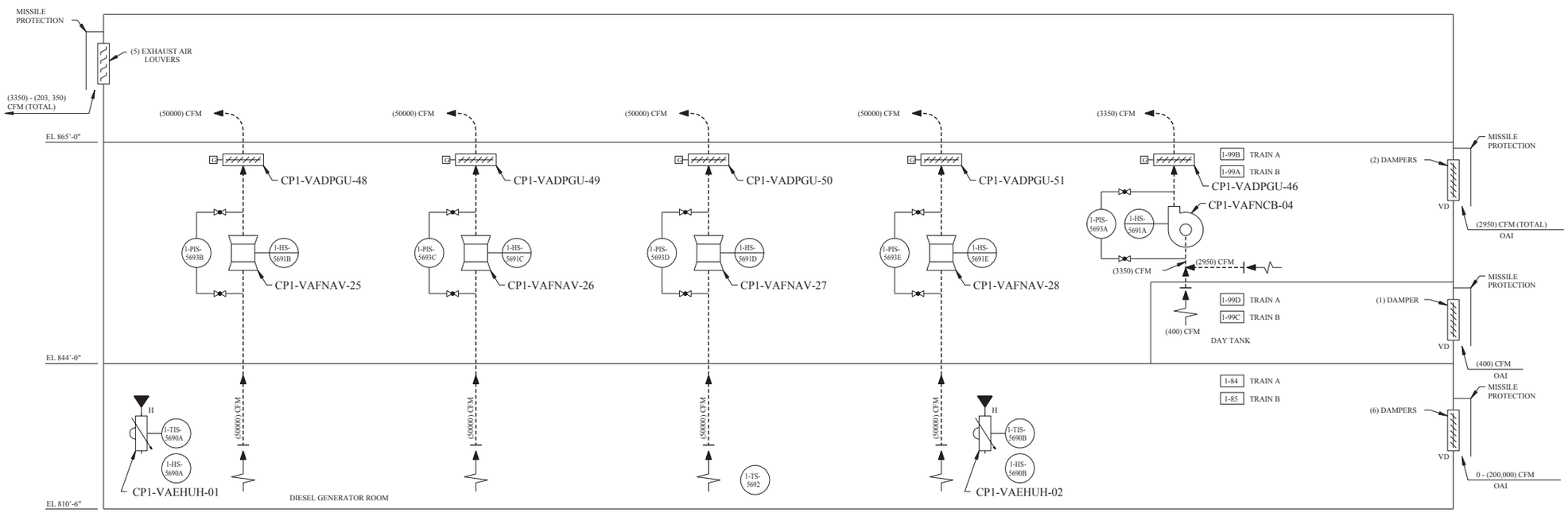
FLOW DIAGRAM
VENTILATION
TURBINE BUILDING

| DWG. NO. | SH. NO. | REV. |
|---|---|---|
| M1-0306 | A | CP-4 |


CP2-VADPGU-32
CP2-VAFNAV-43
TO ATMOS
68756 CFM
CP2-VAFNAV-44
CP2-VADPGU-33
TURBINE BUILDING BASEMENT SUPPLY FANS 2-50% CAPACITY
EL 830'-6
1-046
127500 CFM
TURBINE BUILDING STAIRWELL PRESSURIZATION FANS
CP2-VAFNCB-06
CP2-VAFNCB-07
2-289
2-286
CP2-VAFNRV-08
CP2-VAFNRV-09
CP2-VAFNRV-11
CP2-VAFNRV-10
CP2-VAFNRV-12
CP2-VAFNRV-13
TURBINE BUILDING ROOF EXHAUST FANS
SEE NOTE 8
TURBINE BUILDING ROOF EXHAUST FANS
CONTROL ROOM HVAC M1-0306-A LOC. B-4
CONTROL ROOM HVAC M1-0306-A LOC. B-4
REFRIGERANT PIPING
CONDENSER FOR A/C UNIT
TAG NO.
CP2-VAACOC-01
CP2-VAACOC-02
CP2-VAACOC-03
EL 830'-6
TVP FOR T-FANS SEE TABLE 1 LOC. H-4
CP2-VADPGC-28
CP2-VAFNCB-10
CP2-VADPGC-29
CP2-VAFNCB-11
TURBINE BUILDING SUPPLY FANS FOR HEATER DRAIN AREA 2-50% CAPACITY
EL 810'-0
16000 CFM
17 UNIT HEATERS SEE TABLE 2 LOC H-4
30 Kw
2-283
2-283
TURBINE BUILDING SUPPLY FANS FOR BASEMENT INCL CONDENSATE AND HEATER DRAIN PUMPS AREA 2-50% CAPACITY
CP2-VADPGU-30
CP2-VADPGU-29
CP2-VADPGU-31
CP2-VAFNAV-41
CP2-VAFNAV-42
CP2-VADPGU-28
(NOTE 10)
CP2-VAFNWV-02
CP2-VAFNWV-08
CP2-VAFNWV-01
CUBE OIL RESERVOIR ROOM
EL 805'-0
2-285
137705 CFM
CP2-VAACPK-07
CP2-VAACPK-06
CP2-VAACPK-08
CP2-VAACPK-09
TVR ROOM
2-284
DIGITAL CONTROL ROOM
2-283A
STAIRWELL T-3
2-288
STAIRWELL T-4
2-285A
EXFILTRATION
137500 CFM
87500 CFM
84113 CFM
CHILLED WATER SUPPLY REF: M2-0307-A LOC. E-5
EL 794'-0
CP2-VADPGU-35
CP2-VADPGU-37
CP2-VADPGU-36
CP2-VADPGU-34
2-282D
2-282B
2-282A
2-282C
FIRE PROTECTION VALVE ROOM
TO INTAKE OF CP2-CIACCO-02
CHILLED WATER SUPPLY M2-0307-A LOC. E-5
FROM TURBINE OIL CONDITIONER M2-0214-A LOC. C-4
CP2-VAFNCB-40
CP2-VACCC-40
TURBINE OIL ROOM
2-282
EL 770'-0
TURBINE BUILDING UNIT NO. 2
11887 CFM
CONDENSATE & HEATER DRAIN PUMP PIT
2-001A
EL 755'-3
NOTES:
1. FOR HVAC ABBREVIATIONS AND SYMBOLS SEE DWG M1-0311 AND M2-0200.
2. THIS DIAGRAM IS A SCHEMATIC REPRESENTATION AND IS INTENDED TO SHOW GENERAL AIR DISTRIBUTION.
3. BALANCING DAMPERS, REGISTERS, DIFFUSERS, FLEXIBLE CONNECTIONS AND ALL OTHER RELATED ACCESSORIES NOT SHOWN ON THIS DIAGRAM SHALL BE PROVIDED AS INDICATED ON THE HVAC ARRANGEMENT DRAWINGS
4. THE TURBINE BUILDING WILL BE MAINTAINED AT ATMOSPHERIC PRESSURE.
5. ALL ROOT VALVES FOR DIFFERENTIAL PRESSURE INDICATING SWITCHES SHOWN ON THIS DRAWING WILL BE SUPPLIED BY SPECIFICATION M6-0003.
6. AIR FLOW QUANTITIES SHOWN ARE BASED ON A DENSITY OF 0.075 lb/FT OCCURRING AT THE STANDARD CONDITION OF DRY AIR AT 70° F AND 29.92" HG BAROMETRIC PRESSURE.
7. FIRE DAMPERS REMOVED FROM FLOW DIAGRAM ONLY. FOR LOCATIONS SEE DUCT LAYOUT DRAWINGS.
8. THERE ARE FOUR EXHAUST FANS THREE ARE RUNNING AND ONE IS EQPT STANDBY.
9. DELETED
10. DAMPER IS ASS'D W/FAN
11. AIR FLOW RATES SHOWN ARE ORIGINAL DESIGN VALUES FOR INITIAL FLOW BALANCING AND DO NOT REPRESENT AS-BUILT. AIR FLOW IS BALANCED TO MAINTAIN ROOM TEMPERATURES WITHIN DESIGN DURING NORMAL OPERATION AND TO ENSURE THE DIRECTION OF AIR FLOW IS AS SHOWN.
EDITORIAL
REFERENCE DRAWING
1. M1-0200 MECHANICAL SYMBOLS AND NOTES
2. M1-0306-A FLOW DIAGRAM CONTROL ROOM AIR CONDITIONING
3. M2-0307 FLOW DIAGRAM VENTILATION CHILLED WATER SYSTEM
4. M1-0313 FLOW DIAGRAM VENT AAP BLDG AND CONTROL BLDG UPS AREA A/C SYSTEM
5. M2-0450 SERIES VENTILATION-TURBINE BLDG PLAN AT EL 774'-6"
6. M2-0451 SERIES VENTILATION-TURBINE BLDG PLAN AT EL 803'-0"
7. M2-0452 SERIES VENTILATION-TURBINE BLDG PLAN AT EL 819'-6"
8. M2-0453 SERIES VENTILATION-TURBINE BLDG PART PLANS AND SECTIONS
TABLE 1
TURBINE BUILDING WALL VENTILATORS (LOC. F-2)
TAG NO | CFM | *
CP2-VAFNWV-01 | 75500 | 2-HS-6004
CP2-VAFNWV-08 | 75500 | 2-HS-6005
CP2-VAFNWV-02 | 75500 | 2-HS-6006
CP2-VAFNWV-06 | 75500 | 2-HS-6007
CP2-VAFNWV-07 | 75500 | 2-HS-6008
TABLE 2
UNIT HEATERS
TAG NO | ** | ***
CP2-VAEHUH-01 | 2-HS-6010 | 2-TH-6010
CP2-VAEHUH-04 | 2-HS-6011 | 2-TH-6011
CP2-VAEHUH-05 | 2-HS-6012 | 2-TH-6012
CP2-VAEHUH-06 | 2-HS-6013 | 2-TH-6013
CP2-VAEHUH-07 | 2-HS-6014 | 2-TH-6014
CP2-VAEHUH-08 | 2-HS-6015 | 2-TH-6015
CP2-VAEHUH-09 | 2-HS-6016 | 2-TH-6016
CP2-VAEHUH-10 | 2-HS-6017 | 2-TH-6017
CP2-VAEHUH-11 | 2-HS-6018 | 2-TH-6018
CP2-VAEHUH-12 | 2-HS-6019 | 2-TH-6019
CP2-VAEHUH-13 | 2-HS-6020 | 2-TH-6020
CP2-VAEHUH-14 | 2-HS-6021 | 2-TH-6021
CP2-VAEHUH-15 | 2-HS-6022 | 2-TH-6022
CP2-VAEHUH-16 | 2-HS-6023 | 2-TH-6023
CP2-VAEHUH-17 | 2-HS-6024 | 2-TH-6024
CP2-VAEHUH-18 | 2-HS-6025 | 2-TH-6025
CP2-VAEHUH-19 | 2-HS-6026 | 2-TH-6026
DRAWING M2-0306 REV CP-19 HAS BEEN SPLIT INTO THE FOLLOWING SHEETS:
M2-0306
M2-0306-A
NON-SAFETY
TXU POWER
CPSES
GLEN ROSE, TEXAS
FLOW DIAGRAM
VENTILATION
TURBINE BUILDING
DWG. NO. M2-0306
REV. CP-23
FSAR FIGURE 9.4-3
THIS DRAWING CAN BE REVISED ELECTRONICALLY




MAIN STEAM AND FEEDWATER AREA VENTILATION SYSTEM
NON-NUCLEAR SAFETY (EXCEPT AS NOTED)




DIESEL GENERATOR AREA VENTILATION SYSTEM
SAFETY CLASS 3 (EXCEPT AS NOTED)
(TAG NUMBERS FOR TRAIN A SHOWN - SEE TABLE FOR CORRESPONDING TRAIN B TAG NUMBERS)

| DIESEL GENERATOR AREA TRAIN A | | | DIESEL GENERATOR AREA TRAIN B | | |
|---|---|---|---|---|---|
| TAG NUMBER | | | TAG NUMBER | | |
| FAN AND UNIT HEATER | DAMPER | I/C NUMBER | FAN AND UNIT HEATER | DAMPER | I/C NUMBER |
| CP1-VAFNCB-04 | CP1-VADPGU-46 | 1-HS-5691A | CP1-VAFNCB-05 | CP1-VADPGU-47 | 1-HS-5695A |
| CP1-VAFNCB-04 | CP1-VADPGU-46 | 1-PIS-5693A | CP1-VAFNCB-05 | CP1-VADPGU-47 | 1-PIS-5697A |
| CP1-VAFNAV-25 | CP1-VADPGU-48 | 1-HS-5691B | CP1-VAFNAV-29 | CP1-VADPGU-52 | 1-HS-5695B |
| CP1-VAFNAV-25 | CP1-VADPGU-48 | 1-PIS-5693B | CP1-VAFNAV-29 | CP1-VADPGU-52 | 1-PIS-5697B |
| CP1-VAFNAV-26 | CP1-VADPGU-49 | 1-HS-5691C | CP1-VAFNAV-30 | CP1-VADPGU-53 | 1-HS-5695C |
| CP1-VAFNAV-26 | CP1-VADPGU-49 | 1-PIS-5693C | CP1-VAFNAV-30 | CP1-VADPGU-53 | 1-PIS-5697C |
| CP1-VAFNAV-27 | CP1-VADPGU-50 | 1-HS-5691D | CP1-VAFNAV-31 | CP1-VADPGU-54 | 1-HS-5695D |
| CP1-VAFNAV-27 | CP1-VADPGU-50 | 1-PIS-5693D | CP1-VAFNAV-31 | CP1-VADPGU-54 | 1-PIS-5697D |
| CP1-VAFNAV-28 | CP1-VADPGU-51 | 1-HS-5691E | CP1-VAFNAV-32 | CP1-VADPGU-55 | 1-HS-5695E |
| CP1-VAFNAV-28 | CP1-VADPGU-51 | 1-PIS-5693E | CP1-VAFNAV-32 | CP1-VADPGU-55 | 1-PIS-5697E |
| CP1-VAEHUH-01 | - | 1-HS-5690A | CP1-VAEHUH-23 | - | 1-HS-5694A |
| CP1-VAEHUH-01 | - | 1-TIS-5690A | CP1-VAEHUH-23 | - | 1-TIS-5694A |
| CP1-VAEHUH-02 | - | 1-HS-5690B | CP1-VAEHUH-24 | - | 1-HS-5694B |
| CP1-VAEHUH-02 | - | 1-TIS-5690B | CP1-VAEHUH-24 | - | 1-TIS-5694B |
| - - | - | 1-TS-5692 | - | - | 1-TS-5696 |

| REV | DWN | CHK | APVD | REMARKS |
|---|---|---|---|---|
| CP-22 | Mdf 01-17 2006 | Mfff 01-17 2006 | | THIS DRAWING REVISED TO INCORPORATE DESIGN CHANGE FDA-1999-003133-01-04 PER SK-0083-99-003133-01-00. |

**NOTES:**

1. FOR ABBREVIATIONS AND SYMBOLS SEE DRAWINGS M1-0313 AND M1-0200.
2. THIS DIAGRAM IS A SCHEMATIC REPRESENTATION AND IS INTENDED TO SHOW GENERAL AIR DISTRIBUTION AND FLOW PATHS.
3. BALANCING DAMPERS, REGISTERS, DIFFUSERS, FLEXIBLE CONNECTIONS AND ALL OTHER RELATED ACCESSORIES NOT SHOWN ON THIS DIAGRAM SHALL BE PROVIDED AS INDICATED ON THE HVAC ARRANGEMENT DRAWINGS AND SPECIFICATIONS.
4. INSTRUMENTATION AND CONTROLS FOR ROOM COOLING UNITS ARE TO BE SUPPLIED BY EQUIPMENT MANUFACTURERS.
5. FOR LOGIC CHANNELS 1-TIC-6087 AND 1-TIC-6088 , SEE ICD M1-2307-06.
6. 750 CFM INTERMITTENTLY FROM EACH SAMPLE PANEL MODULE.
7. AIR FLOW QUANTITIES SHOWN ARE BASED ON A DENSITY OF 0.075 LB/FT³ OCCURING AT THE STANDARD CONDITION OF DRY AIR AT 70°F AND 29.92" HG BAROMETRIC PRESSURE. QUANTITIES IN PARENTHESES ARE ACTUAL AIR FLOW RATES BASED ON DENSITY AT DESIGN CONDITIONS.
8. FOR THE NON-SAFETY VENTILATION SYSTEM, THE AIR FLOW RATES SHOWN ARE ORIGINAL DESIGN VALUES FOR INITIAL FLOW BALANCING AND DO NOT REPRESENT AS-BUILT. AIR FLOW IS BALANCED TO MAINTAIN ROOM TEMPERATURES WITHIN DESIGN DURING NORMAL OPERATION AND TO ENSURE THE DIRECTION OF AIR FLOW IS AS SHOWN.
9. WIRE MESH GRILLE IS INSTALLED OVER THE DUCT FLANGE AT THE CEILING. A SUPPLY DUCT ELBOW WITH WIRE MESH GRILLE IS INSTALLED ON THE TOP OF THE AHU.
10. THE S-5 STAIRWELL (ROOMS 085C, 096B AND 105B) IS PART OF THE NORMAL EAVS EXHAUST AIR FLOW PATH FROM THE MAJOR EQUIPMENT ROOMS TO THE HVAC EQUIPMENT ROOM 104 PER DBD-ME-302B AND DBD-ME-302C.

R

REFERENCES:

| | | |
|---|---|---|
| 1. | M1-0313 | FLOW DIAGRAM VENTILATION AAP BLDG AND CONTROL BLDG UPS AREA A/C SYSTEMS |
| 2. | M1-0200 | MECHANICAL SYMBOLS AND NOTES |
| 3. | M1-0307 | FLOW DIAGRAM VENTILATION CHILLED WATER SYSTEM |
| 4. | M1-0302-A | FLOW DIAGRAM VENTILATION SAFEGUARDS AND ELECTRICAL AREA |
| 5. | M1-0302-B | FLOW DIAGRAM VENTILATION SAFEGUARDS AND ELECTRICAL AREA |
| 6. | M1-0303-C | FLOW DIAGRAM VENTILATION AUXILIARY BUILDING |

DRAWING M1-0302 REV CP-9
HAS BEEN SPLIT INTO THE FOLLOWING SHEETS:
M1-0302
M1-0302-B

DRAWING M1-0302 REV CP-8
HAS BEEN SPLIT INTO THE FOLLOWING SHEETS:
M1-0302
M1-0302-A

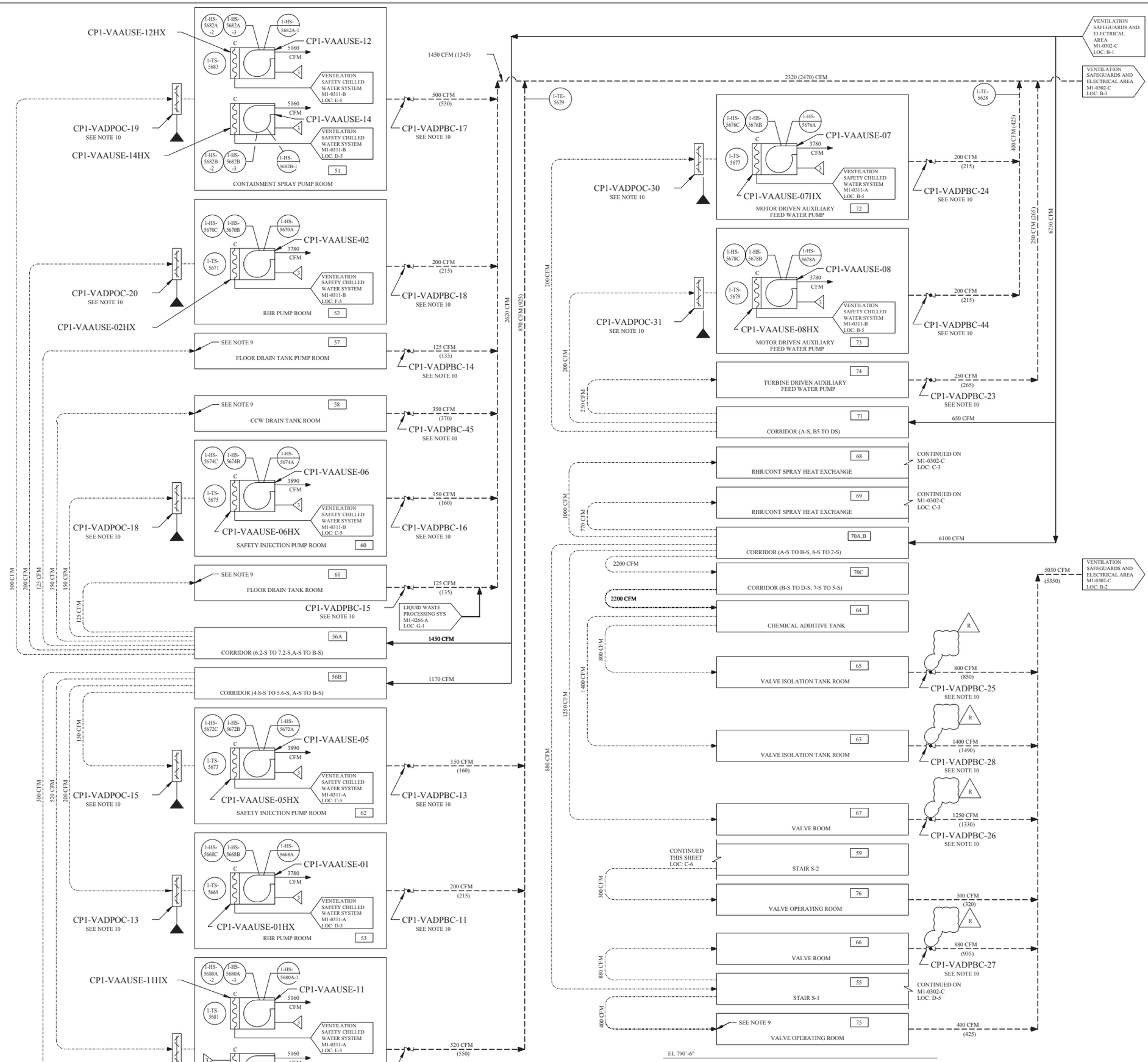
FSAR FIGURE 9.4-4

THIS DRAWING CREATED ELECTRONICALLY

LUMINANT
CPSES
GLEN ROSE, TEXAS

FLOW DIAGRAM - VENTILATION
SAFEGUARDS AND ELECTRICAL AREA

DWG. NO. M1-0302 | SH. NO. - | REV. CP-22




SAFEGUARDS BUILDING VENTILATION SYSTEM
NON-SAFETY (EXCEPT AS NOTED)

| REV | DWN | CHK | APVD | REMARKS |
|---|---|---|---|---|
| CP-13 | DLK 07-11-2005 | MM 07-12-2005 | | THIS DRAWING REVISED TO INCORPORATE DESIGN CHANGE FDA 2005-002581-01-00 PER SK-0005-05-002581-01-00. |

NOTES:

1. FOR ABBREVIATIONS AND SYMBOLS SEE DRAWINGS M1-0313 AND M1-0200.
2. AIR FLOW QUANTITIES SHOWN ARE BASED ON A DENSITY OF 0. 075 LB/FT OCCURING AT THE STANDARD CONDITION OF DRY AIR AT 70°F AND 29.92" HG BAROMETRIC PRESSURE. QUANTITIES IN PARENTHESES AND ON DISCHARGE OF SAFETY RELATED FAN COIL UNITS ARE ACTUAL AIR FLOW RATES BASED ON DENSITY AT DESIGN CONDITIONS.
3. THIS DIAGRAM IS A SCHEMATIC REPRESENTATION AND IS INTENDED TO SHOW GENERAL AIR DISTRIBUTION AND FLOW PATHS.
4. BALANCING DAMPERS, REGISTERS, DIFFUSERS, FLEXIBLE CONNECTIONS AND ALL OTHER RELATED ACCESSORIES NOT SHOWN ON THIS DIAGRAM SHALL BE PROVIDED AS INDICATED ON THE HVAC ARRANGEMENT DRAWINGS AND SPECIFICATIONS.
5. INSTRUMENTATION AND CONTROLS FOR ROOM COOLING UNITS ARE TO BE SUPPLIED BY EQUIPMENT MANUFACTURERS.
6. THE SAFEGUARD BUILDING WILL BE MAINTAINED AT SLIGHT NEGATIVE PRESSURE.
7. FOR LOGIC CELLS 1-TIC-6087 AND 1-TIC-6088 SEE ICD-M1-2307-06.
8. 750 CFM INTERMITTENTLY FROM EACH SAMPLE PANEL MODULE.
9. AIR INTAKE FOR THE INDICATED ROOMS IS THROUGH DOORWAY. DOORS ARE OPEN FOR TORNADO VENTING PURPOSES.
10. DAMPER ABANDONED IN PLACE (IN OPEN POSITION), ALL AIR CONNECTIONS AND ELECTRICAL CONNECTIONS ARE DISCONNECTED.
11. FOR THE NON-SAFETY VENTILATION SYSTEMS, THE AIR FLOW RATES SHOWN ARE ORIGINAL DESIGN VALUES FOR INITIAL FLOW BALANCING AND DO NOT REPRESENT AS-BUILT. AIR FLOW IS BALANCED TO MAINTAIN ROOM TEMPERATURES WITHIN DESIGN DURING NORMAL OPERATION AND TO ENSURE THE DIRECTION OF AIR FLOW IS AS SHOWN.

REFERENCES:

| | |
|---|---|
| M1-0313 | FLOW DIAGRAM VENTILATION AAP BLDG AND CONTROL BLDG UPS AREA A/C SYSTEMS |
| M1-0200 | MECHANICAL SYMBOLS AND NOTES |
| M1-0302-C | FLOW DIAGRAM VENTILATION SAFEGUARDS AND ELECTRICAL AREA |
| M1-0311-A | FLOW DIAGRAM VENTILATION SAFETY CHILLED WATER SYSTEM |
| M1-0311-B | FLOW DIAGRAM VENTILATION SAFETY CHILLED WATER SYSTEM |
| M1-0260 | FLOW DIAGRAM LIQUID WASTE PROCESSING SYSTEM |

FSAR FIGURE 9.4-4

THIS DRAWING CREATED ELECTRONICALLY

DRAWING M1-0302-A REV CP-1
HAS BEEN SPLIT INTO THE FOLLOWING SHEETS:
M1-0302-A
M1-0302-C

CLASS I
(NUCLEAR SAFETY-RELATED)
SAFETY CLASS 1 SEISMIC CATEGORY I
SAFETY CLASS 2 CLASS 1E
SAFETY CLASS 3 ASSOCIATED CIRCUITS

LUMINANT
CPSES
GLEN ROSE, TEXAS

FLOW DIAGRAM-VENTILATION
SAFEGUARDS AND ELECTRICAL AREA

DWG. NO. M1-0302 | SH. NO. A | REV. CP-13

ELECTRICAL AREA VENTILATION SYSTEM
SAFETY CLASS 3 (EXCEPT AS NOTED)

| REV | DWN | CHKD | APVD | REMARKS |
|---|---|---|---|---|
| CP-17 | MM 01-17 2006 | MH 01-17 2006 | | THIS DRAWING REVISED TO INCORPORATE DESIGN CHANGE FDA-1999-003133-01-04 PER SK-0084-99-003133-01-00. |

**NOTES:**

1. FOR ABBREVIATIONS AND SYMBOLS SEE DRAWINGS M1-0313 AND M1-0200.
2. DELETED
3. THIS DIAGRAM IS A SCHEMATIC REPRESENTATION AND IS INTENDED TO SHOW GENERAL AIR DISTRIBUTION AND FLOW PATHS.
4. BALANCING DAMPERS, REGISTERS, DIFFUSERS, FLEXIBLE CONNECTIONS AND ALL OTHER RELATED ACCESSORIES NOT SHOWN ON THIS DIAGRAM SHALL BE PROVIDED AS INDICATED ON THE HVAC ARRANGEMENT DRAWINGS AND SPECIFICATIONS.
5. INSTRUMENTATION AND CONTROLS FOR ROOM COOLING UNITS ARE TO BE SUPPLIED BY EQUIPMENT MANUFACTURERS.
6. AIR FLOW QUANTITIES SHOWN ARE BASED ON A DENSITY OF 0. 075 LB/FT OCCURRING AT THE STANDARD CONDITION OF DRY AIR AT 70°F AND 29.92" HG BAROMETRIC PRESSURE. QUANTITIES IN PARENTHESES AND ON DISCHARGE OF SAFETY RELATED FAN COIL UNITS ARE ACTUAL AIR FLOW RATES BASED ON DENSITY AT DESIGN CONDITIONS.
7. FOR LOGIC CHANNELS 1-TIC-6087 AND 1-TIC-6088 , SEE ICD M1-2307-06 AND M1-0307-C.
8. 750 CFM INTERMITTENTLY FROM EACH SAMPLE PANEL MODULE.
9. FOR THE NON-SAFETY VENTILATION SYSTEMS, THE AIR FLOW RATES SHOWN ARE ORIGINAL DESIGN VALUES FOR INITIAL FLOW BALANCING AND DO NOT REPRESENT AS-BUILT. AIR FLOW IS BALANCED TO MAINTAIN ROOM TEMPERATURES WITHIN DESIGN DURING NORMAL OPERATION AND TO ENSURE THE DIRECTION OF AIR FLOW IS AS SHOWN.
10. THE SAFEGUARDS BUILDING ELECTRICAL AREA MUST BE MAINTAINED AT A SLIGHTLY POSITIVE PRESSURE.
11. THE S-5 STAIRWELL (ROOMS 085C, 096B AND 105B) IS PART OF THE NORMAL EAVS EXHAUST AIR FLOW PATH FROM THE MAJOR EQUIPMENT ROOMS TO THE HVAC EQUIPMENT ROOM 104 PER DBD-ME-302B AND DBD-ME-302C. R

REFERENCES:

| | |
|---|---|
| M1-0313 | FLOW DIAGRAM VENTILATION AAP BLDG AND CONTROL BLDG UPS AREA A/C SYSTEMS |
| M1-0200 | MECHANICAL SYMBOLS AND NOTES |
| M1-0307 | FLOW DIAGRAM VENTILATION CHILLED WATER SYSTEM |
| M1-0311-A | FLOW DIAGRAM VENTILATION SAFETY CHILLED WATER SYSTEM |
| M1-0311-B | FLOW DIAGRAM VENTILATION SAFETY CHILLED WATER SYSTEM |

FSAR FIGURE 9.4-4

THIS DRAWING CREATED ELECTRONICALLY

DRAWING M1-0302 REV CP-9
HAS BEEN SPLIT INTO THE FOLLOWING SHEETS:
M1-0302
M1-0302-B

CLASS I
(NUCLEAR SAFETY-RELATED)
SAFETY CLASS 1 SEISMIC CATEGORY I
SAFETY CLASS 2 CLASS 1E
SAFETY CLASS 3 ASSOCIATED CIRCUITS

LUMINANT
CPSES
GLEN ROSE, TEXAS

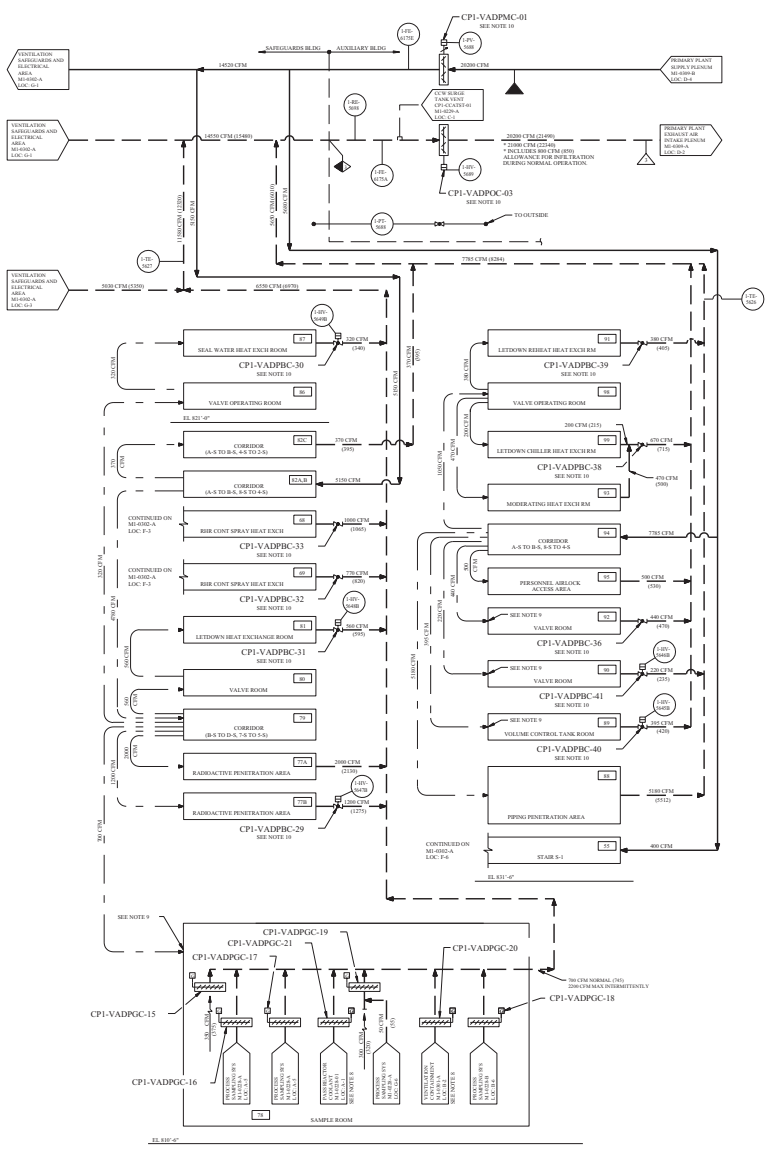
FLOW DIAGRAM - VENTILATION
SAFEGUARDS AND ELECTRICAL AREA

DWG. NO. M1-0302 | SH. NO. B | REV. CP-17

FINAL PRINT

REF CKD CP-13 2/16/98

me668100.dgn M1-0302-B




| REV | DWN | CHKD | APP'D | REMARKS |
|---|---|---|---|---|
| CP-8 | MAA 7/2/07 | MRC 7/2/07 | | THIS DRAWING REVISED TO INCORPORATE DESIGN CHANGE 5DA-2001-00034413.00 PER SK-5DAE-01-00034413.00. |

NOTES:

1. FOR ABBREVIATIONS AND SYMBOLS SEE DRAWINGS M1-0311 AND M1-0200.
2. AIR FLOW QUANTITIES SHOWN ARE BASED ON A DENSITY OF 0.073 LB/FT CUBIC/FT AT THE STANDARD CONDITION OF DRY AIR AT 70°F AND 29.92" HG BAROMETRIC PRESSURE. QUANTITIES IN PARENTHESES ARE ACTUAL AIR FLOW RATES BASED ON DENSITY AT DESIGN CONDITIONS.
3. **THIS DIAGRAM IS A SCHEMATIC REPRESENTATION AND IS INTENDED TO SHOW GENERAL AIR DISTRIBUTION AND FLOW PATHS.**
4. BALANCING DAMPERS, REGISTERS, DIFFUSERS, FLEXIBLE CONNECTIONS AND ALL OTHER RELATED ACCESSORIES NOT SHOWN ON THIS DIAGRAM SHALL BE PROVIDED AS INDICATED ON THE HVAC ARRANGEMENT DRAWINGS AND SPECIFICATIONS.
5. **INSTRUMENTATION AND CONTROLS FOR ROOM COOLING UNITS ARE TO BE SUPPLIED BY EQUIPMENT MANUFACTURERS.**
6. **THE SAFEGUARD BUILDING WILL BE MAINTAINED AT SLIGHT NEGATIVE PRESSURE.**
7. **FOR LOGIC CELLS** 1-TIC-6087 **AND** 1-TIC-6088 **SEE ICD-M1-2307-06.**
8. **750 CFM INTERMITTENTLY FROM EACH SAMPLE PANEL MODULE.**
9. AIR INTAKE FOR THE INDICATED ROOMS IS THROUGH DOORWAY. DOORS ARE OPEN FOR TORNADO VENTING PURPOSES.
10. DAMPER ABANDONED IN PLACE (IN OPEN POSITION), ALL AIR CONNECTIONS AND ELECTRICAL CONNECTIONS ARE DISCONNECTED.
11. THE AIR FLOW RATES SHOWN ARE ORIGINAL DESIGN VALUES FOR INITIAL FLOW BALANCING AND DO NOT REPRESENT AS-BUILT. AIR FLOW IS BALANCED TO MAINTAIN ROOM TEMPERATURES WITHIN DESIGN DURING NORMAL OPERATION AND TO ENSURE THE DIRECTION OF AIR FLOW IS AS SHOWN.

A

REFERENCES:

| | |
|---|---|
| M1-0313 | FLOW DIAGRAM VENTILATION A/P BLDG AND CONTROL BLDG UPS AREA A/C SYSTEM |
| M1-0200 | MECHANICAL SYMBOLS AND NOTES |
| M1-0228 | FLOW DIAGRAM PROCESS SAMPLING SYSTEM |
| M1-0228-01 | FLOW DIAGRAM POST ACCIDENT SAMPLING SYSTEM REACTOR COOLANT |
| M1-0301-A | FLOW DIAGRAM VENTILATION CONTAINMENT |
| M1-0302-A | FLOW DIAGRAM VENTILATION SAFEGUARD AND ELECTRICAL AREA |
| M1-0309-A | FLOW DIAGRAM VENTILATION PRIMARY PLANT SUPPLY AND EXHAUST |
| M1-0309-B | FLOW DIAGRAM VENTILATION PRIMARY PLANT SUPPLY AND EXHAUST |

FSAR FIGURE 9.4-4

DRAWING M1-0302-A REV CP-1
HAS BEEN SPLIT INTO THE FOLLOWING SHEETS:
M1-0302-A
M1-0302-C

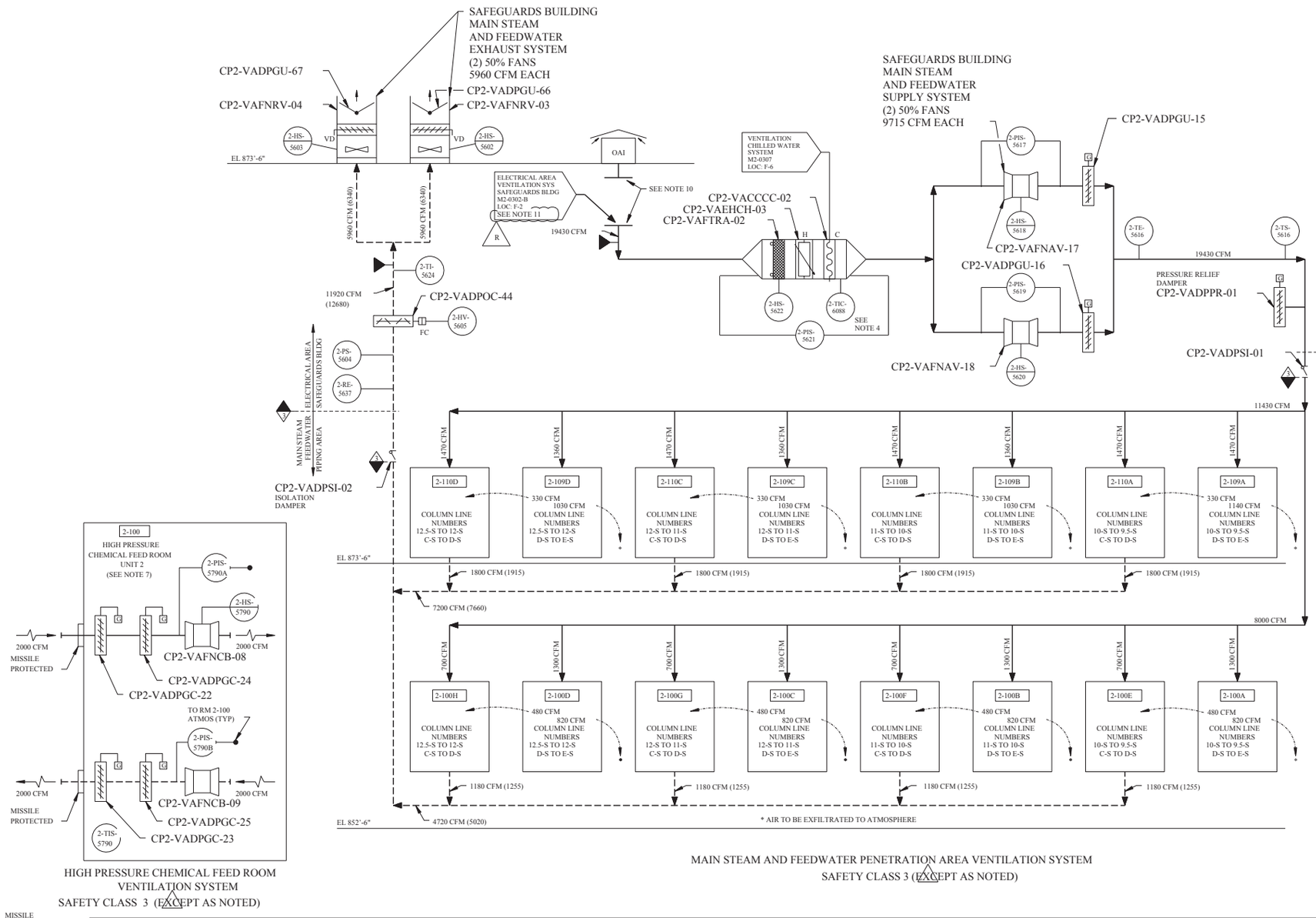
CLASS I
(NUCLEAR SAFETY-RELATED)
SAFETY CLASS 1 SEISMIC CATEGORY I
SAFETY CLASS 2 CLASS 1E
SAFETY CLASS 3 ASSOCIATED CIRCUITS

TXU POWER
CPSES
GLEN ROSE, TEXAS

FLOW DIAGRAM - VENTILATION
SAFEGUARDS AND ELECTRICAL AREA

| DWG. NO. | SH. NO. | REV. |
|---|---|---|
| M1-0302 | C | CP-8 |

DESIGN WINDOW - RESTRICTED TO PROPRIETARY




HIGH PRESSURE CHEMICAL FEED ROOM
VENTILATION SYSTEM
SAFETY CLASS 3 (EXCEPT AS NOTED)

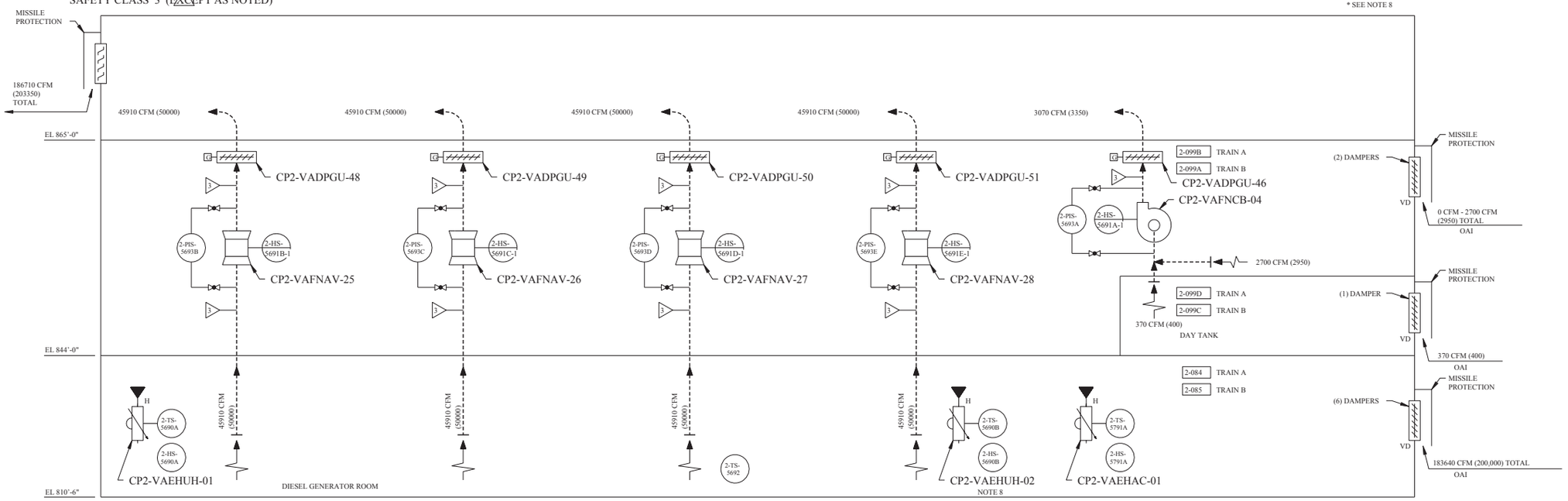
MAIN STEAM AND FEEDWATER PENETRATION AREA VENTILATION SYSTEM
SAFETY CLASS 3 (EXCEPT AS NOTED)

| DIESEL GENERATOR AREA TRAIN A | | |
|---|---|---|
| TAG NUMBER | | |
| FAN AND UNIT HEATER | DAMPER | I/C NUMBER |
| CP2-VAFNCB-04 | CP2-VADPGU-46 | 2-HS-5691A-1 |
| CP2-VAFNCB-04 | CP2-VADPGU-46 | 2-PIS-5693A |
| CP2-VAFNAV-25 | CP2-VADPGU-48 | 2-HS-5691B-1 |
| CP2-VAFNAV-25 | CP2-VADPGU-48 | 2-PIS-5693B |
| CP2-VAFNAV-26 | CP2-VADPGU-49 | 2-HS-5691C-1 |
| CP2-VAFNAV-26 | CP2-VADPGU-49 | 2-PIS-5693C |
| CP2-VAFNAV-27 | CP2-VADPGU-50 | 2-HS-5691D-1 |
| CP2-VAFNAV-27 | CP2-VADPGU-50 | 2-PIS-5693D |
| CP2-VAFNAV-28 | CP2-VADPGU-51 | 2-HS-5691E-1 |
| CP2-VAFNAV-28 | CP2-VADPGU-51 | 2-PIS-5693E |
| CP2-VAEHUH-01 | - | 2-HS-5690A |
| CP2-VAEHUH-01 | - | 2-TS-5690A |
| * CP2-VAEHUH-02 | - | 2-HS-5690B |
| * CP2-VAEHUH-02 | - | 2-TS-5690B |
| - | - | 2-TS-5692 |
| CP2-VAEHAC-01 | - | 2-HS-5791A |
| CP2-VAEHAC-01 | - | 2-TS-5791A |

* SEE NOTE 8

| DIESEL GENERATOR AREA TRAIN B | | |
|---|---|---|
| TAG NUMBER | | |
| FAN AND UNIT HEATER | DAMPER | I/C NUMBER |
| CP2-VAFNCB-05 | CP2-VADPGU-47 | 2-HS-5695A |
| CP2-VAFNCB-05 | CP2-VADPGU-47 | 2-PIS-5697A |
| CP2-VAFNAV-29 | CP2-VADPGU-52 | 2-HS-5695B |
| CP2-VAFNAV-29 | CP2-VADPGU-52 | 2-PIS-5697B |
| CP2-VAFNAV-30 | CP2-VADPGU-53 | 2-HS-5695C |
| CP2-VAFNAV-30 | CP2-VADPGU-53 | 2-PIS-5697C |
| CP2-VAFNAV-31 | CP2-VADPGU-54 | 2-HS-5695D |
| CP2-VAFNAV-31 | CP2-VADPGU-54 | 2-PIS-5697D |
| CP2-VAFNAV-32 | CP2-VADPGU-55 | 2-HS-5695E |
| CP2-VAFNAV-32 | CP2-VADPGU-55 | 2-PIS-5697E |
| * CP2-VAEHUH-23 | - | 2-HS-5694A |
| * CP2-VAEHUH-23 | - | 2-TS-5694A |
| CP2-VAEHUH-24 | - | 2-HS-5694B |
| CP2-VAEHUH-24 | - | 2-TS-5694B |
| - | - | 2-TS-5696 |
| CP2-VAEHAC-02 | - | 2-HS-5791B |
| CP2-VAEHAC-02 | - | 2-TS-5791B |

* SEE NOTE 8




DIESEL GENERATOR AREA TRAIN A AND TRAIN B VENTILATION SYSTEM
SAFETY CLASS 3 (EXCEPT AS NOTED)
(TAG NUMBERS FOR TRAIN A SHOWN - SEE TABLE FOR CORRESPONDING TRAIN B TAG NUMBERS)

| REV | DWN | CHKD | APVD | REMARKS |
|---|---|---|---|---|
| CP-13 | Mbf 01-17 2006 | MHF 01-17 2006 | | THIS DRAWING REVISED TO INCORPORATE DESIGN CHANGE FDA-1999-003133-01-04 PER SK-0085-99-003133-01-00. |

NOTES:

1. FOR HVAC ABBREVIATIONS AND SYMBOLS SEE DRAWINGS M1-0313 AND M1-0200.
2. THIS DIAGRAM IS A SCHEMATIC REPRESENTATION AND IS INTENDED TO SHOW GENERAL AIR DISTRIBUTION AND FLOW PATHS.
3. BALANCING DAMPERS, REGISTERS, DIFFUSERS, FLEXIBLE CONNECTIONS AND ALL OTHER RELATED ACCESSORIES NOT SHOWN ON THIS DIAGRAM SHALL BE PROVIDED AS INDICATED ON THE HVAC ARRANGEMENT DRAWINGS AND SPECIFICATIONS.
4. FOR LOGIC OF 2-TIC-6088 SEE ICD M2-2307-03
5. AIR FLOW QUANTITES SHOWN ARE BASED ON A DENSITY OF 0.075 LB/FT OCCURING AT THE STANDARD CONDITION OF DRY AIR AT 70°F AND 29.92" HG BAROMETRIC PRESSURE. QUANTITIES IN PARENTHESES ARE ACTUAL AIR FLOW RATES BASED ON DENSITY AT DESIGN CONDITIONS.
6. FIRE DAMPERS REMOVED FROM FLOW DIAGRAM ONLY, FOR LOCATIONS SEE DUCT LAYOUT DRAWINGS.
7. FOR NORMAL VENTILATION SYSTEM (NON SAFETY RELATED) REFER TO DWG M1-0303-C.
8. UNIT HEATER ABANDONED IN PLACE. ELECTRICAL CONNECTIONS ARE DISCONNECTED.
9. FOR THE NON-SAFETY VENTILATION SYSTEMS, THE AIR FLOW RATES SHOWN ARE ORIGINAL DESIGN VALUES FOR INITIAL FLOW BALANCING AND DO NOT REPRESENT AS-BUILT. AIR FLOW IS BALANCED TO MAINTAIN ROOM TEMPERATURES WITHIN DESIGN DURING NORMAL OPERATION AND TO ENSURE THE DIRECTION OF AIR FLOW IS AS SHOWN.
10. WIRE MESH GRILLE IS INSTALLED OVER THE DUCT FLANGE AT THE CEILING. A SUPPLY DUCT ELBOW WITH WIRE MESH GRILLE IS INSTALLED ON TOP OF THE AHU.
11. THE S-5 STAIRWELL (ROOMS 085C, 096B AND 105B) IS PART OF THE NORMAL EAVS EXHAUST AIR FLOW PATH FROM THE MAJOR EQUIPMENT ROOMS TO THE HVAC EQUIPMENT ROOM 104 PER DBD-ME-302B AND DBD-ME-302C.

R

REFERENCE DRAWINGS:

| | | |
|---|---|---|
| 1. | FLOW DIAG VENT AAP BLDG AND CONTROL BLDG UPS AREA A/C SYSTEM | M1-0313 |
| 2. | MECHANICAL DRAWING NOTES AND SYMBOLS | M1-0200 |
| 3. | FLOW DIAGRAM VENT CHILLED WATER | M2-0307 |
| 4. | DELETED | |
| 5. | FLOW DIAG VENT SAFEGUARDS AND ELEC AREA | M2-0302A |
| 6. | FLOW DIAG VENT SAFEGUARDS AND ELEC AREA | M2-0302B |
| 7. | FLOW DIAG VENT SAFEGUARDS AND ELEC AREA | M2-0302C |
| 8. | DELETED | |
| 9. | VENT SAFEGUARDS BLDG PLAN @ EL 852"-6" | M2-0654 SERIES |
| 10. | VENT SAFEGUARDS BLDG DIESEL GEN AREA PLAN | M2-0658 SERIES |
| 11. | VENT SAFEGUARDS BLDG PLAN @ EL 873"-6" | M2-0655 SERIES |
| 12. | FLOW DIAG VENT AUXILIARY BLDG | M1-0303-C |

FSAR FIGURE 9.4-4

THIS DRAWING CREATED ELECTRONICALLY

DRAWING 2323-M2-0302 REV CP-2
HAS BEEN SPLIT INTO THE FOLLOWING SHEETS:

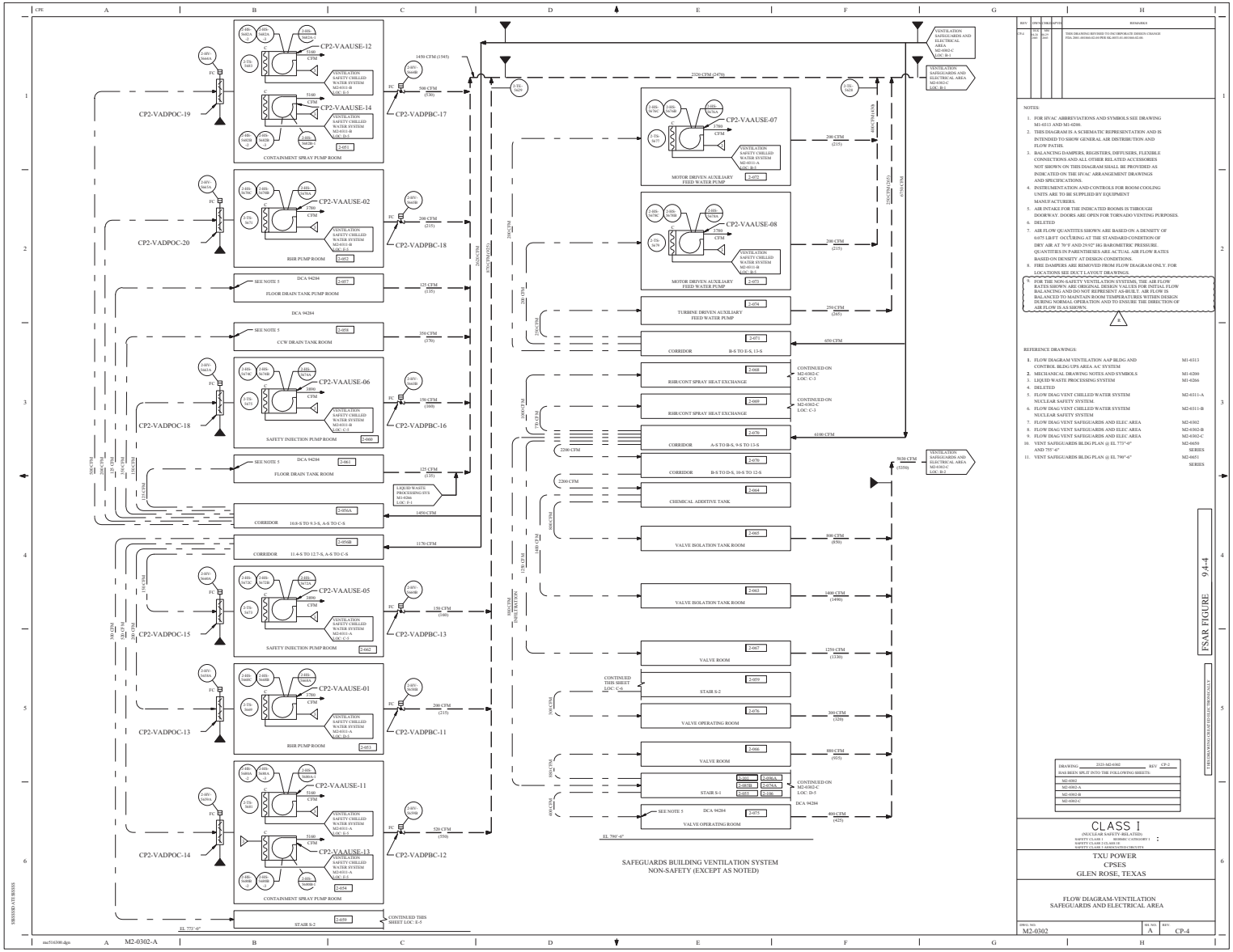
| |
|---|
| M2-0302 |
| M2-0302-A |
| M2-0302-B |
| M2-0302-C |

CLASS I
(NUCLEAR SAFETY-RELATED)
SAFETY CLASS 1 SEISMIC CATEGORY I
SAFETY CLASS 2 CLASS 1E
SAFETY CLASS 3 ASSOCIATED CIRCUITS

LUMINANT
CPSES
GLEN ROSE, TEXAS

FLOW DIAGRAM - VENTILATION
SAFEGUARDS AND ELECTRICAL AREA

| DWG. NO. | SH. NO. | REV. |
|---|---|---|
| M2-0302 | - | CP-13 |




| REV | DRN | CHKD | APVD | REMARKS |
|---|---|---|---|---|
| 19.4 | MM 10/31/2011 | MM 10/31/2011 | MM 10/31/2011 | THIS DRAWING REVISED TO INCORPORATE DESIGN CHANGE FSAR 2009-0018-EC-01 PER NL-09-01 01-09-1000-EC-01 |

NOTES:

1. FOR HVAC ABBREVIATIONS AND SYMBOLS SEE DRAWING M1-6013 AND M1-0200.
2. THIS DIAGRAM IS A SCHEMATIC REPRESENTATION AND IS INTENDED TO SHOW GENERAL AIR DISTRIBUTION AND FLOW PATHS.
3. BALANCING DAMPERS, REGISTERS, DIFFUSERS, FLEXIBLE CONNECTIONS AND ALL OTHER RELATED ACCESSORIES NOT SHOWN ON THIS DIAGRAM SHALL BE PROVIDED AS INDICATED ON THE HVAC ARRANGEMENT DRAWINGS AND SPECIFICATIONS.
4. INSTRUMENTATION AND CONTROLS FOR ROOM COOLING UNITS ARE TO BE SUPPLIED BY EQUIPMENT MANUFACTURERS.
5. AIR INTAKE FOR THE INDICATED ROOMS IS THROUGH DOORWAY. DOORS ARE OPEN FOR TORNADO VENTING PURPOSES.
6. DELETED
7. AIR FLOW QUANTITIES SHOWN ARE BASED ON A DENSITY OF 0.075 LB/FT OCCURRING AT THE STANDARD CONDITION OF DRY AIR AT 70°F AND 29.92" HG BAROMETRIC PRESSURE. QUANTITIES IN PARENTHESES ARE ACTUAL AIR FLOW RATES BASED ON DENSITY AT DESIGN CONDITIONS.
8. FIRE DAMPERS ARE REMOVED FROM FLOW DIAGRAM ONLY. FOR LOCATIONS SEE DUCT LAYOUT DRAWINGS.
9. FOR THE NON-SAFETY VENTILATION SYSTEMS, THE AIR FLOW RATES SHOWN ARE ORIGINAL DESIGN VALUES FOR INITIAL FLOW BALANCING AND DO NOT REPRESENT AS-BUILT. AIR FLOW IS BALANCED TO MAINTAIN ROOM TEMPERATURES WITHIN DESIGN DURING NORMAL OPERATION AND TO ENSURE THE DIRECTION OF AIR FLOW IS AS SHOWN.

REFERENCE DRAWINGS:

| | | |
|---|---|---|
| 1. | FLOW DIAGRAM VENTILATION AAF BLDG AND CONTROL BLDG UPS AREA AC SYSTEM | M1-6313 |
| 2. | MECHANICAL DRAWING NOTES AND SYMBOLS | M1-0200 |
| 3. | LIQUID WASTE PROCESSING SYSTEM | M1-0266 |
| 4. | DELETED | |
| 5. | FLOW DIAG VENT CHILLED WATER SYSTEM NUCLEAR SAFETY SYSTEM. | M2-6311-A |
| 6. | FLOW DIAG VENT CHILLED WATER SYSTEM NUCLEAR SAFETY SYSTEM | M2-6311-B |
| 7. | FLOW DIAG VENT SAFEGUARDS AND ELEC AREA | M2-6302 |
| 8. | FLOW DIAG VENT SAFEGUARDS AND ELEC AREA | M2-6302-B |
| 9. | FLOW DIAG VENT SAFEGUARDS AND ELEC AREA | M2-6302-C |
| 10. | VENT SAFEGUARDS BLDG PLAN @ EL 775'-0" AND 755'-6" | M2-6650 SERIES |
| 11. | VENT SAFEGUARDS BLDG PLAN @ EL 780'-6" | M2-6651 SERIES |

FSAR FIGURE 9.4-4

THIS DRAWING IS NOT SPLIT INTO THE FOLLOWING SHEETS

| DRAWING 2123-M2-0302 | REV CP-2 |
|---|---|
| M2-0302 | |
| M2-0302-A | |
| M2-0302-B | |
| M2-0302-C | |

CLASS I
(NUCLEAR SAFETY-RELATED)
SAFETY CLASS 1 : SEISMIC CATEGORY 1
SAFETY CLASS 2 GUARANTEED CRUSTY

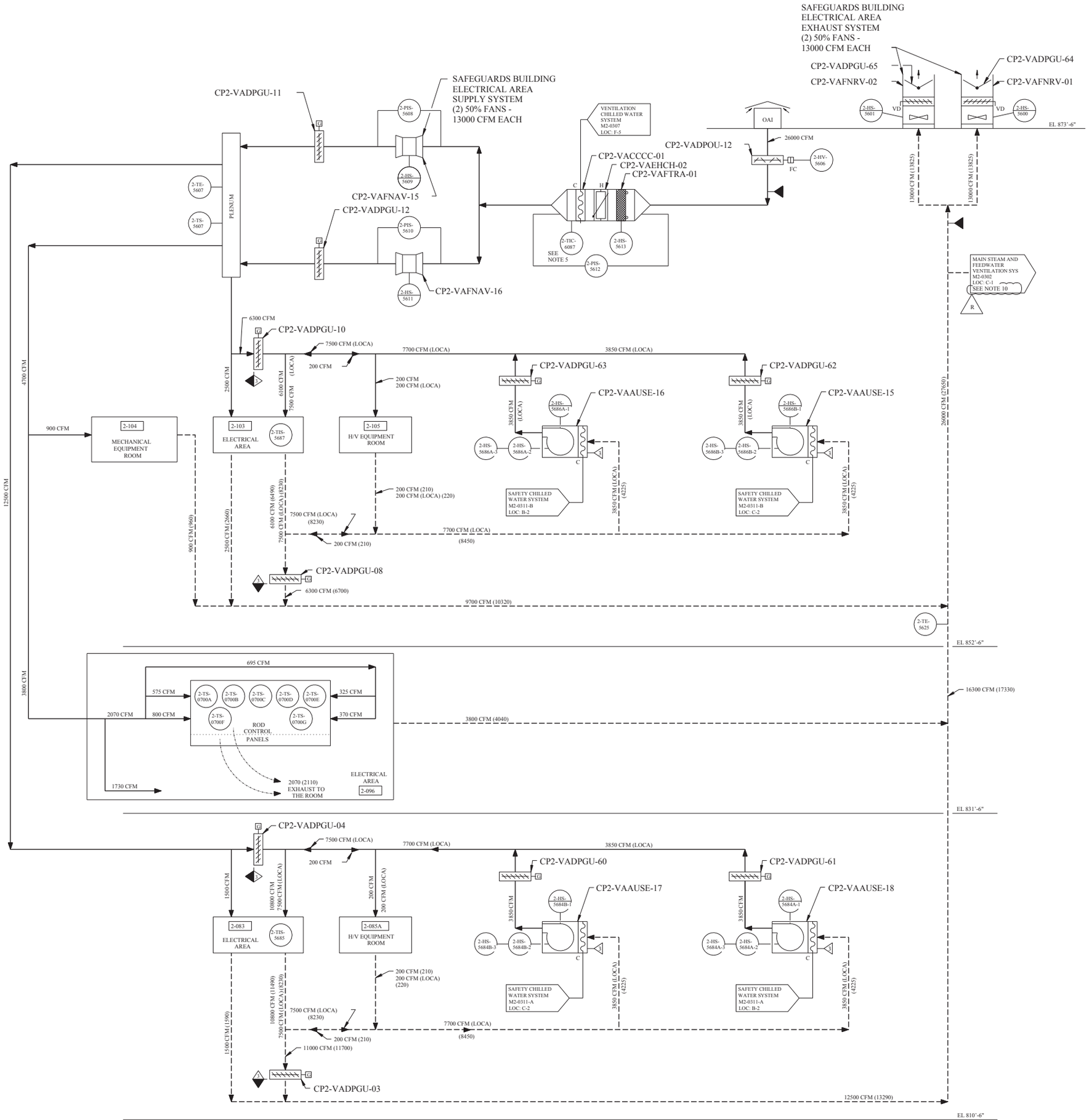
TXU POWER
CPSES
GLEN ROSE, TEXAS

FLOW DIAGRAM-VENTILATION
SAFEGUARDS AND ELECTRICAL AREA

| DRWG NO. | REV NO. | REV: |
|---|---|---|
| M2-0302 | A | CP-4 |

M2-0302-A

nuc516300.dgn




ELECTRICAL AREA VENTILATION SYSTEM
SAFETY CLASS 3 (EXCEPT AS NOTED)

| REV | DWN | CHK | APVD | REMARKS |
|---|---|---|---|---|
| CP-11 | MM 01-17 2006 | MH 01-17 2006 | | THIS DRAWING REVISED TO INCORPORATE DESIGN CHANGE FDA-1999-003133-01-04 PER SK-0086-99-003133-01-00. |

NOTES

1. FOR HVAC ABBREVIATIONS AND SYMBOLS SEE DRAWING M1-0313 AND M1-0200.
2. THIS DIAGRAM IS A SCHEMATIC REPRESENTATION AND IS INTENDED TO SHOW GENERAL AIR DISTRIBUTION AND FLOW PATHS.
3. BALANCING DAMPERS, REGISTERS, DIFFUSERS, FLEXIBLE CONNECTIONS AND ALL OTHER RELATED ACCESSORIES NOT SHOWN ON THIS DIAGRAM SHALL BE PROVIDED AS INDICATED ON THE HVAC ARRANGEMENT DRAWINGS AND SPECIFICATIONS.
4. INSTRUMENTATION AND CONTROLS FOR ROOM COOLING UNITS ARE TO BE SUPPLIED BY EQUIPMENT MANUFACTURERS.
5. FOR LOGIC OF 2-TIC-6087 SEE ICD M2-2307-06
6. FIRE DAMPERS REMOVED FROM FLOW DIAGRAM ONLY, FOR LOCATIONS SEE DUCT LAYOUT DRAWINGS.
7. AIR FLOW QUANTITIES SHOWN ARE BASED ON DENSITY OF 0.075 LB/FT OCCURING AT THE STANDARD CONDITION OF DRY AIR AT 70°F AND 29.92" HG BAROMETRIC PRESSURE. QUANTITIES IN PARENTHESIS ARE ACTUAL AIR FLOW RATES BASED ON DENSITY AT DESIGN CONDITION.
8. FOR THE NON-SAFETY VENTILATION SYSTEMS, THE AIR FLOW RATES SHOWN ARE ORIGINAL DESIGN VALUES FOR INITIAL FLOW BALANCING AND DO NOT REPRESENT AS-BUILT. AIR FLOW IS BALANCED TO MAINTAIN ROOM TEMPERATURES WITHIN DESIGN DURING NORMAL OPERATION AND TO ENSURE THE DIRECTION OF AIR FLOW IS AS SHOWN.
9. THE SAFEGUARDS BUILDING ELECTRICAL AREA MUST BE MAINTAINED AT A SLIGHTLY POSITIVE PRESSURE.
10. THE S-5 STAIRWELL (ROOMS 085C, 096B AND 105B) IS PART OF THE NORMAL EAVS EXHAUST AIR FLOW PATH FROM THE MAJOR EQUIPMENT ROOMS TO THE HVAC EQUIPMENT ROOM 104 PER DBD-ME-302B AND DBD-ME-302C.

R

REFERENCE DRAWINGS

| | | |
|---|---|---|
| 1. | FLOW DIAGRAM VENTILATION AAP BLDG AND CONTROL BLDG UPS AREA A/C SYSTEM | M1-0313 |
| 2. | MECHANICAL DRAWING NOTES AND SYMBOLS | M1-0200 |
| 3. | FLOW DIAGRAM VENT CHILLED WATER | M2-0307 |
| 4. | FLOW DIAG VENT CHILLED WATER SYSTEM NUCLEAR SAFETY SYSTEM. | M2-0311-A |
| 5. | FLOW DIAG VENT CHILLED WATER SYSTEM NUCLEAR SAFETY SYSTEM. | M2-0311-B |
| 6. | VENT SAFEGUARDS BLDG PLAN @ EL 810'-6" | M2-0652 SERIES |
| 7. | VENT SAFEGUARDS BLDG PLAN @ EL 831'-6" | M2-0653 SERIES |
| 8. | VENT SAFEGUARDS BLDG PLAN @ EL 852'-6" | M2-0654 SERIES |
| 9. | VENT SAFEGUARDS BLDG PLAN @ EL 873'-6" | M2-0655 SERIES |

FSAR FIGURE 9.4-4

THIS DRAWING CREATED ELECTRONICALLY

DRAWING 2323-M2-0302 REV CP-2
HAS BEEN SPLIT INTO THE FOLLOWING SHEETS:

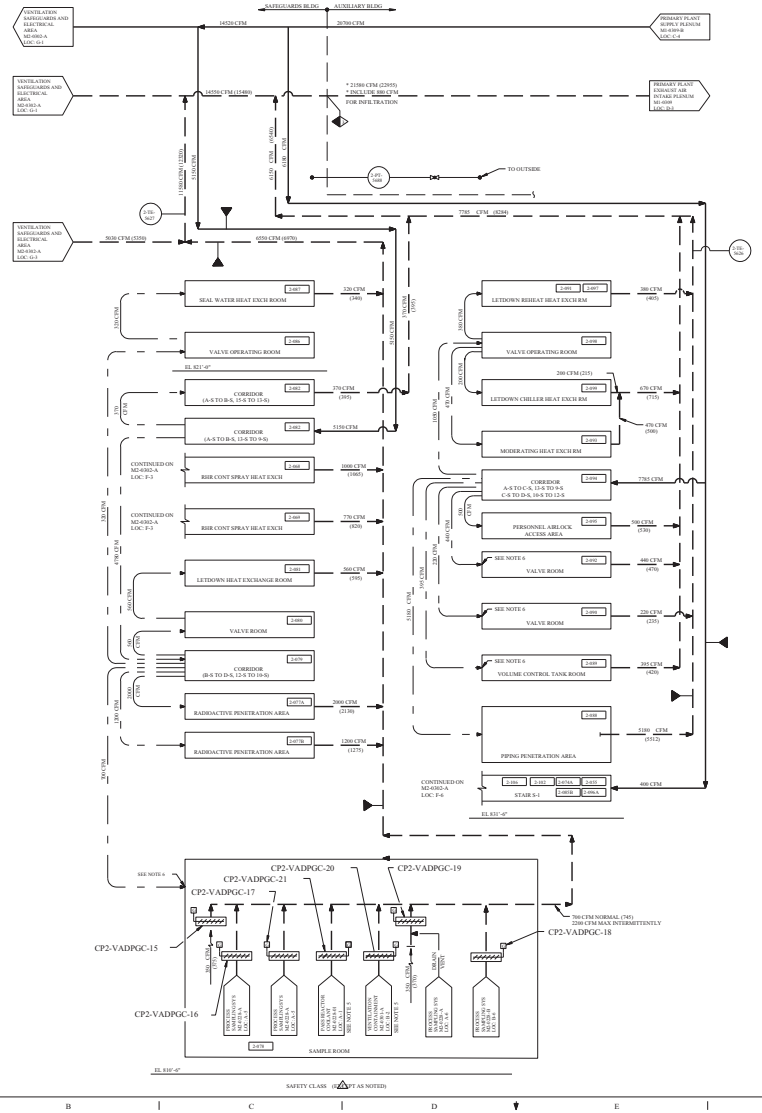
| |
|---|
| M2-0302 |
| M2-0302-A |
| M2-0302-B |
| M2-0302-C |

CLASS I
(NUCLEAR SAFETY-RELATED)
SAFETY CLASS 1 SEISMIC CATEGORY I
SAFETY CLASS 2 CLASS 1E
SAFETY CLASS 3 ASSOCIATED CIRCUITS

LUMINANT
CPSES
GLEN ROSE, TEXAS

FLOW DIAGRAM - VENTILATION
SAFEGUARDS AND ELECTRICAL AREA

DWG. NO. M2-0302 | SH. NO. B | REV. CP-11




| REV | DESCRIPTION | | | REMARKS |
|---|---|---|---|---|
| | ORIG | CHKD | APPD | |
| CP-7 | Nov 2 2010 | Nov 2 2010 | Nov 2 2010 | THIS DRAWING REVISED TO INCORPORATE DESIGN CHANGE FSAR-2009-00304-02-00 PER DCP/07-01-00304-02-00 |

NOTES:

1. FOR HVAC ABBREVIATIONS AND SYMBOLS SEE DRAWING M1-6313 AND M1-6200.
2. THIS DIAGRAM IS A SCHEMATIC REPRESENTATION AND IS INTENDED TO SHOW GENERAL AIR DISTRIBUTION AND FLOW PATHS.
3. BALANCING DAMPERS, REGISTERS, DIFFUSERS, FLEXIBLE CONNECTIONS AND ALL OTHER RELATED ACCESSORIES NOT SHOWN ON THIS DIAGRAM SHALL BE PROVIDED AS INDICATED ON THE HVAC ARRANGEMENT DRAWINGS AND SPECIFICATIONS.
4. THE SAFEGUARD BUILDING WILL BE MAINTAINED AT A SLIGHT NEGATIVE PRESSURE.
5. 750 CFM INTERMITTENTLY FROM EACH SAMPLE PANEL MODULE.
6. AIR INTAKE FOR THE INDICATED ROOMS IS THROUGH DOORWAY DOORS ARE OPEN FOR TORNADO VENTING PURPOSES.
7. AIR FLOW QUANTITIES SHOWN ARE BASED ON A DENSITY OF 0.075 LB/FT OCCURING AT THE ST ANDARD CONDITION OF DRY AIR AT 70°F AND 29.92" HG BAROMETRIC PRESSURE. QUANTITIES IN PARENTHESES ARE AIR FLOW RATES BASED ON DENSITY AT DESIGN CONDITIONS.
8. FIRE DAMPERS REMOVED FROM FLOW DIAGRAM ONLY, FOR LOCATIONS SEE DUCT LAYOUT DRAWINGS.
9. THE AIR FLOW RATES SHOWN ARE ORIGINAL DESIGN VALUES FOR INITIAL FLOW BALANCING AND DO NOT REPRESENT AS-BUILT. AIR FLOW IS BALANCED TO MAINTAIN ROOM TEMPERATURES WITHIN DESIGN DURING NORMAL OPERATION AND TO ENSURE THE DIRECTION OF AIR FLOW IS AS SHOWN. B

REFERENCE DRAWINGS:

| | | |
|---|---|---|
| 1. | FLOW DIAGRAM VENTILATION AAP BLDG AND CONTROL BLDG UPS AREA A/C SYSTEM | M1-6313 |
| 2. | MECHANICAL DRAWING NOTES AND SYMBOLS | M1-6200 |
| 3. | DELETED | |
| 4. | FLOW DIAG VENT PRIM PLANT SUPPLY AND EXHAUST | M1-6309 |
| 5. | FLOW DIAG VENT PRIM PLANT SUPPLY AND EXHAUST | M1-6309-B |
| 6. | FLOW DIAG VENT SAFEGUARD AND ELEC AREA | M2-0302-A |
| 7. | VENT SAFEGUARDS BLDG PLAN @ EL 810'-6" | M2-6652 SERIES |
| 8. | VENT SAFEGUARDS BLDG PLAN @ EL 831'-6" | M2-6653 SERIES |
| 9. | FLOW DIAGRAM VENTILATION CONTAINMENT | M2-6301-A |
| 10. | FLOW DIAGRAM PROCESS SAMPLING SYSTEM | M2-0228-A |
| 11. | FLOW DIAGRAM PROCESS SAMPLING SYSTEM | M2-0228-B |
| 12. | FLOW DIAGRAM POST ACCIDENT SAMPLING SYSTEM REACTOR COOLANT | M2-0229-01 |

FSAR FIGURE 9.4-4

THIS DRAWING IS CERTIFIED ELECTRONICALLY

| DRAWING 3123-M2-0302 | REV CP-2 |
|---|---|
| HAS BEEN SPLIT INTO THE FOLLOWING SHEETS | |
| M2-0302 | |
| M2-0302-A | |
| M2-0302-B | |
| M2-0302-C | |

CLASS I
(NUCLEAR SAFETY-RELATED)
SAFETY CLASS 1 SEISMIC CATEGORY 1
SAFETY CLASS 2 GLASS HS
SAFETY CLASS 3 AND NON-SEISMIC CIRCUITS

TXU POWER
CPSES
GLEN ROSE, TEXAS

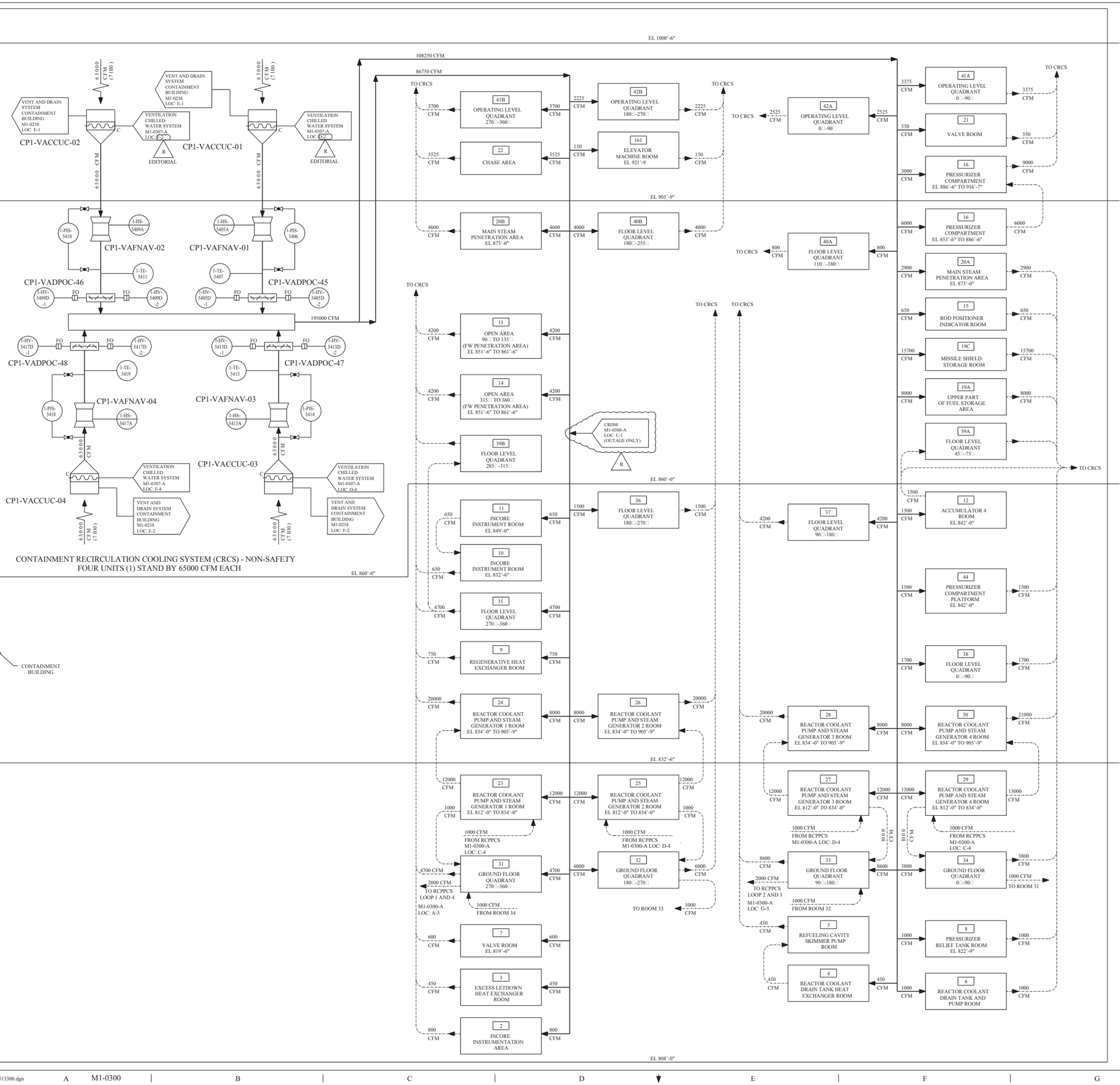
FLOW DIAGRAM - VENTILATION
SAFEGUARDS AND ELECTRICAL AREA

| DRAWING NO. | SH. NO. | REV. |
|---|---|---|
| M2-0302 | C | CP-7 |

SBSSSSDS AT BSSSS

nuc516500.dgn

M2-0302-C




| REV | DWN | CHK | APVD | REMARKS |
|---|---|---|---|---|
| CP-12 | JRMC 01-24 2008 | DJL 02-13 2008 | | THIS DRAWING REVISED TO INCORPORATE DESIGN CHANGE FDA 2007-001775-01-00 PER SIC-0001-07-001775-01-00. EDITORIAL CHANGES AS NOTED |

NOTES:

1. FOR SYMBOLS AND ABBREVIATIONS SEE DRAWINGS M1-0313 AND M1-0200.
2. THIS DIAGRAM IS A SCHEMATIC REPRESENTATION AND IS INTENDED TO SHOW GENERAL AIR DISTRIBUTION AND FLOW PATHS.
3. BALANCING DAMPERS, REGISTERS, DIFFUSERS, FLEXIBLE CONNECTIONS AND ALL OTHER RELATED ACCESSORIES SHALL BE PROVIDED AS INDICATED ON THE HVAC ARRANGEMENT DRAWING AND SPECIFICATIONS.
4. THIS FLOW DIAGRAM IS FOR UNIT 1 ONLY.
5. THE CONTAINMENT BUILDING WILL BE MAINTAINED AT ATMOSPHERIC PRESSURE.
6. AIR FLOW QUANTITIES SHOWN ARE BASED ON A DENSITY OF 0.075 LB/FT OCCURRING AT THE STANDARD CONDITION OF DRY AIR AT 70°F AND 29.92" HG BAROMETRIC PRESSURE. QUANTITIES IN PARENTHESES ARE ACTUAL AIR FLOW RATES BASED ON DENSITY AT DESIGN CONDITIONS.
7. AIR FLOW RATES SHOWN ARE ORIGINAL DESIGN VALUES FOR INITIAL FLOW BALANCING AND DO NOT REPRESENT AS-BUILT. AIR FLOW IS BALANCED TO MAINTAIN ROOM TEMPERATURES WITHIN DESIGN DURING NORMAL OPERATION AND TO ENSURE THE DIRECTION OF AIR FLOW IS AS SHOWN.

REFERENCES:

| | | |
|---|---|---|
| 1. | M1-0200 | MECHANICAL SYMBOLS AND NOTES |
| 2. | M1-0313 | FLOW DIAGRAM - VENTILATION AAP BLDG AND CONTROL BLDG UPS AREA A/C SYSTEMS |
| 3. | M1-0307-A | FLOW DIAGRAM - VENTILATION CHILLED WATER SYSTEM |
| 4. | M1-0238 | FLOW DIAGRAM - VENT AND DRAIN SYSTEM CONTAINMENT BLDG |
| 5. | M1-0300-A | FLOW DIAGRAM - VENTILATION CONTAINMENT |

FSAR FIGURE 9.4-5

THIS DRAWING CREATED ELECTRONICALLY

DRAWING M1-0300 REV CP-8
HAS BEEN SPLIT INTO THE FOLLOWING SHEETS:
M1-0300
M1-0300-A

CLASS II

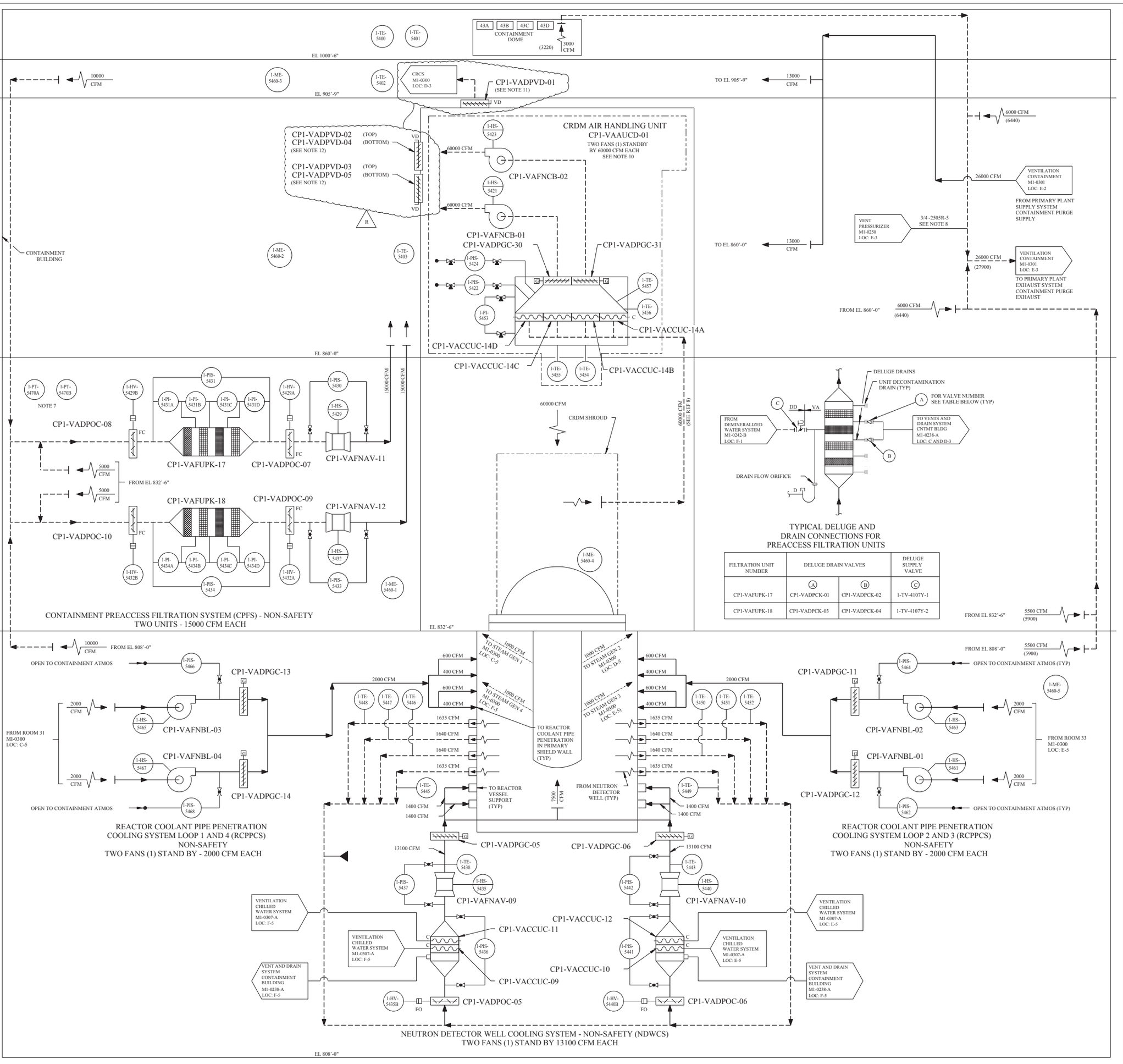
LUMINANT
CPNPP
GLEN ROSE, TEXAS

FLOW DIAGRAM - VENTILATION CONTAINMENT

DWG. NO. M1-0300 | SH. NO. - | REV. CP-12

$$$$$$$$ DATE$$$$$$

me513300.dgn M1-0300 < FINAL PRINT >




| REV | DWN | CHK | APVD | REMARKS |
|---|---|---|---|---|
| CP-10 | JSAC 01-28-2008 | DJL 02-11-2008 | | THIS DRAWING REVISED TO INCORPORATE DESIGN CHANGE FDA 2007-001775-01-00 PER SK-0002-07-001775-01-01. |

NOTES:

1. FOR SYMBOLS AND ABBREVIATIONS SEE DRAWINGS M1-0313 AND M1-0200.
2. THIS DIAGRAM IS A SCHEMATIC REPRESENTATION AND IS INTENDED TO SHOW GENERAL AIR DISTRIBUTION AND FLOW PATHS.
3. BALANCING DAMPERS, REGISTERS, DIFFUSERS, FLEXIBLE CONNECTIONS AND ALL OTHER RELATED ACCESSORIES SHALL BE PROVIDED AS INDICATED ON THE HVAC ARRANGEMENT DRAWING AND SPECIFICATIONS.
4. THIS FLOW DIAGRAM IS FOR UNIT 1 ONLY.
5. THE CONTAINMENT BUILDING WILL BE MAINTAINED AT ATMOSPHERIC PRESSURE.
6. AIR FLOW QUANTITIES SHOWN ARE BASED ON A DENSITY OF 0.075 LB/FT OCCURRING AT THE STANDARD CONDITION OF DRY AIR AT 70°F AND 29.92" HG BAROMETRIC PRESSURE. QUANTITIES IN PARENTHESES ARE ACTUAL AIR FLOW RATES BASED ON DENSITY AT DESIGN CONDITIONS.
7. 1-PT-5470A AND B MONITOR THE CONTAINMENT PRESSURE (NARROW RANGE).
8. 3/4 " TUBING TO BE INSTALLED AT THIS CONNECTION TO VENT PRESSURIZER DURING DRAINING AND FILLING.
9. AIR FLOW RATES SHOWN ARE ORIGINAL DESIGN VALUES FOR INITIAL FLOW BALANCING AND DO NOT REPRESENT AS-BUILT. AIR FLOW IS BALANCED TO MAINTAIN ROOM TEMPERATURES WITHIN DESIGN DURING NORMAL OPERATION AND TO ENSURE THE DIRECTION OF AIR FLOW IS AS SHOWN.
10. SEE GENERAL ARRANGEMENT DRAWINGS N1559-GA SERIES FOR THE AIR HANDLING UNIT (AHU) FOR THE CRDM VENTILATION SYSTEM.
11. DAMPER CLOSED EXCEPT DURING OUTAGES.
12. DAMPER OPEN EXCEPT DURING OUTAGES.

R

REFERENCES:

| | | |
|---|---|---|
| 1. | M1-0200 | MECHANICAL SYMBOLS AND NOTES |
| 2. | M1-0301 | FLOW DIAGRAM - VENTILATION CONTAINMENT |
| 3. | M1-0307-A | FLOW DIAGRAM - VENTILATION CHILLED WATER SYSTEM |
| 4. | M1-0238 | FLOW DIAGRAM - VENT AND DRAIN SYSTEM CONTAINMENT BLDG |
| 5. | M1-0242 | DEMINERALIZED WATER |
| 6. | M1-0300 | FLOW DIAGRAM - VENTILATION CONTAINMENT |
| 7. | M1-0313 | FLOW DIAGRAM - VENTILATION AAP BLDG AND CONTROL BLDG UPS AREA A/C SYSTEMS |
| 8. | 10023E90 | VENDOR DRAWING - RRVCH/HAUP FINAL ASSEMBLY |

FSAR FIGURE 9.4-5

THIS DRAWING CREATED ELECTRONICALLY

DRAWING M1-0300 REV CP-8
HAS BEEN SPLIT INTO THE FOLLOWING SHEETS:
M1-0300
M1-0300-A

CLASS III

LUMINANT
CPNPP
GLEN ROSE, TEXAS

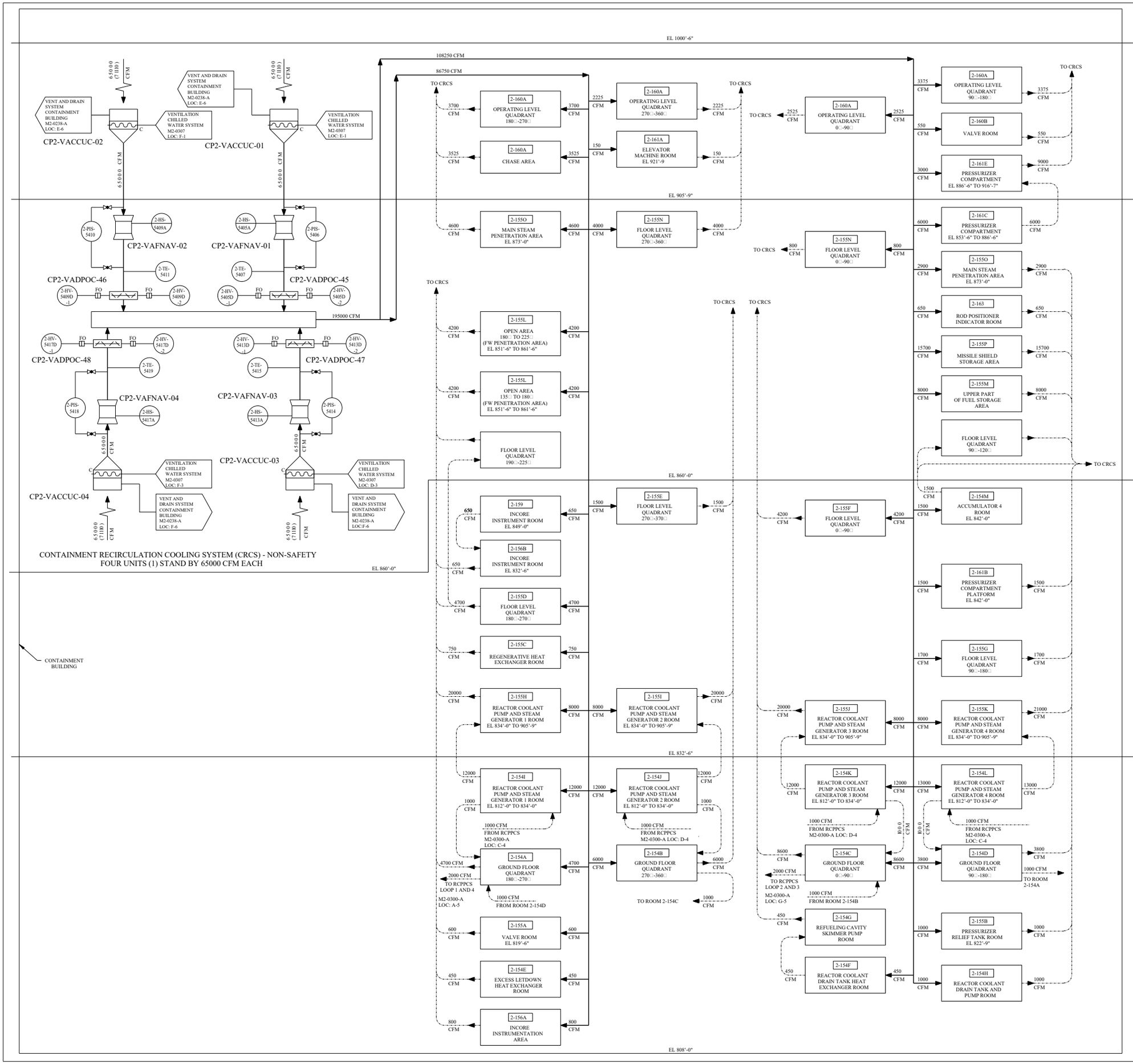
FLOW DIAGRAM - VENTILATION CONTAINMENT

| DWG. NO. | SH. NO. | REV. |
|---|---|---|
| M1-0300 | A | CP-10 |

FINAL PRINT

REF CKD 3/18/97 CP-4

me104290.dgn A M1-0300-A B C D E F G H




| REV | DWN | CHKD | APVD | REMARKS |
|---|---|---|---|---|
| CP-7 | GAW 12-06-2016 | DLK 12-06-2016 | | THIS DRAWING REVISED TO INCORPORATE DESIGN CHANGE FDA 2013-000133-03-00 PER SK-0003-13-000133-03-00. |

NOTES:

1. FOR SYMBOLS AND ABBREVIATIONS SEE DRAWINGS M1-0313 AND M1-0200.
2. THIS DIAGRAM IS A SCHEMATIC REPRESENTATION AND IS INTENDED TO SHOW GENERAL AIR DISTRIBUTION AND FLOW PATHS.
3. BALANCING DAMPERS, REGISTERS, DIFFUSERS, FLEXIBLE CONNECTIONS AND ALL OTHER RELATED ACCESSORIES SHALL BE PROVIDED AS INDICATED ON THE HVAC ARRANGEMENT DRAWING AND SPECIFICATIONS.
4. THIS FLOW DIAGRAM IS FOR UNIT 2 ONLY.
5. THE CONTAINMENT BUILDING WILL BE MAINTAINED AT ATMOSPHERIC PRESSURE.
6. AIR FLOW QUANTITIES SHOWN ARE BASED ON A DENSITY OF 0.075 LB/FT OCCURING AT THE STANDARD CONDITION OF DRY AIR AT 70□F AND 29.92" HG BAROMETRIC PRESSURE. QUANTITIES IN PARENTHESES ARE AIR FLOW RATES BASED ON DENSITY AT DESIGN CONDITIONS.
7. AIR FLOW RATES SHOWN ARE ORIGINAL DESIGN VALUES FOR INITIAL FLOW BALANCING AND DO NOT REPRESENT AS-BUILT. AIR FLOW IS BALANCED TO MAINTAIN ROOM TEMPERATURES WITHIN DESIGN DURING NORMAL OPERATION AND TO ENSURE THE DIRECTION OF AIR FLOW IS AS SHOWN.
8. FDA-2013-000133-03-00 ALLOWS FOR THE BELLMOUTH FITTING TO BE REMOVED AND THE SILENCER UNIT INSTALLED AS SHOWN ON VDRT-4796645 FOR CP2-VAFNAV-01 AND 02. THE SILENCER UNIT MAY BE INSTALLED IN MODES 5, 6 AND NO MODE. THE BELLMOUTH FITTING SHOULD BE RESTORED PRIOR TO ENTRY INTO MODE 4. R

REFERENCES:

| | | |
|---|---|---|
| 1. | M1-0200 | MECHANICAL SYMBOLS AND NOTES |
| 2. | M1-0313 | FLOW DIAGRAM - VENTILATION AAP BLDG AND CONTROL BLDG UPS AREA A/C SYSTEMS |
| 3. | M2-0307 | FLOW DIAGRAM - VENTILATION CHILLED WATER SYSTEM |
| 4. | M2-0238-A | FLOW DIAGRAM - VENT AND DRAIN SYSTEM CONTAINMENT BLDG |
| 5. | M2-0300-A | FLOW DIAGRAM - VENTILATION CONTAINMENT |

FSAR FIGURE 9.4-5

THIS DRAWING CREATED ELECTRONICALLY

DRAWING 2323-M2-0300 REV CP-2
HAS BEEN SPLIT INTO THE FOLLOWING SHEETS:
M2-0300
M2-0300-A

CLASS II

LUMINANT
CPNPP
GLEN ROSE, TEXAS

FLOW DIAGRAM - VENTILATION CONTAINMENT

| DWG. NO. | SH. NO. | REV. |
|---|---|---|
| M2-0300 | - | CP-7 |

me515900.dgn M2-0300 FINAL PRINT

| REV | DWN | CHKD | APVD | REMARKS |
|---|---|---|---|---|
| CP-11 | DLK 10-16-2006 | MH 10-16-2006 | | THIS DRAWING REVISED TO INCORPORATE DESIGN CHANGE FDA 2005-003364-05-02 PER SK-0031-05-003364-05-00. |

NOTES:

1. FOR SYMBOLS AND ABBREVIATIONS SEE DRAWINGS M1-0313 AND M1-0200.
2. THIS DIAGRAM IS A SCHEMATIC REPRESENTATION AND IS INTENDED TO SHOW GENERAL AIR DISTRIBUTION AND FLOW PATHS.
3. BALANCING DAMPERS, REGISTERS, DIFFUSERS, FLEXIBLE CONNECTIONS AND ALL OTHER RELATED ACCESSORIES SHALL BE PROVIDED AS INDICATED ON THE HVAC ARRANGEMENT DRAWING AND SPECIFICATIONS.
4. AIR FLOW QUANTITIES SHOWN ARE BASED ON A DENSITY OF 0.075 LB/FT³ OCCURING AT THE STANDARD CONDITION OF DRY AIR AT 70°F AND 29.92" HG BAROMETRIC PRESSURE. QUANTITIES IN PARENTHESES ARE AIR FLOW RATES BASED ON DENSITY AT DESIGN CONDITIONS.
5. THIS FLOW DIAGRAM IS FOR UNIT 2 ONLY.
6. THE CONTAINMENT BUILDING WILL BE MAINTAINED AT ATMOSPHERIC PRESSURE.
7. 2-PT-5470A AND B MONITOR THE CONTAINMENT PRESSURE (NARROW RANGE).
8. 3/4 " TUBING TO BE INSTALLED AT THIS CONNECTION TO VENT PRESSURIZER DURING DRAINING AND FILLING.
9. AIR FLOW RATES SHOWN ARE ORIGINAL DESIGN VALUES FOR INITIAL FLOW BALANCING AND DO NOT REPRESENT AS-BUILT. AIR FLOW IS BALANCED TO MAINTAIN ROOM TEMPERATURES WITHIN DESIGN DURING NORMAL OPERATION AND TO ENSURE THE DIRECTION OF AIR FLOW IS AS SHOWN.

REFERENCES:

| | | |
|---|---|---|
| 1. | M1-0200 | MECHANICAL SYMBOLS AND NOTES |
| 2. | M2-0301<br>M2-0301-A | FLOW DIAGRAM - VENTILATION CONTAINMENT |
| 3. | M2-0307 | FLOW DIAGRAM - VENTILATION CHILLED WATER SYSTEM |
| 4. | M2-0238-A | FLOW DIAGRAM - VENT AND DRAIN SYSTEM CONTAINMENT BLDG |
| 5. | M2-0242 | DEMINERALIZED WATER |
| 6. | M2-0300 | FLOW DIAGRAM - VENTILATION CONTAINMENT |
| 7. | M1-0313 | FLOW DIAGRAM - VENTILATION AAP BLDG AND CONTROL BLDG UPS AREA A/C SYSTEMS |

DRAWING 2323-M2-0300 REV CP-2
HAS BEEN SPLIT INTO THE FOLLOWING SHEETS:

- M2-0300
- M2-0300-A

FSAR FIGURE 9.4-5

THIS DRAWING CREATED ELECTRONICALLY

CLASS II

TXU POWER
CPSES
GLEN ROSE, TEXAS

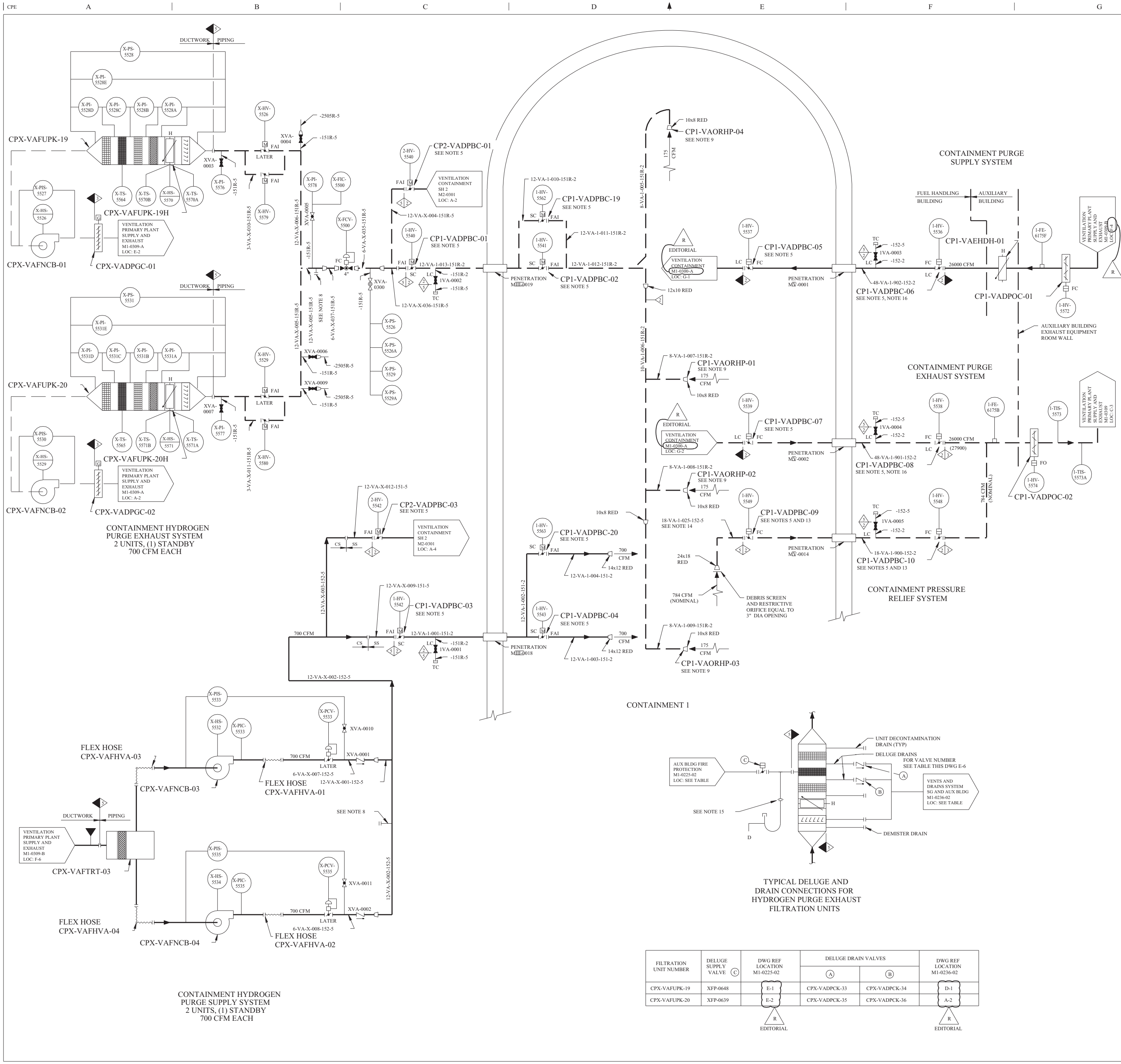
FLOW DIAGRAM - VENTILATION CONTAINMENT

DWG. NO. M2-0300 | SH. NO. A | REV. CP-11

FINAL PRINT

REF CKD 09/22/97 CP-7

me722000.dgn A M2-0300-A B C D E F G H




| FILTRATION UNIT NUMBER | DELUGE SUPPLY VALVE (C) | DWG REF LOCATION M1-0225-02 | DELUGE DRAIN VALVES (A) | DELUGE DRAIN VALVES (B) | DWG REF LOCATION M1-0236-02 |
|---|---|---|---|---|---|
| CPX-VAFUPK-19 | XFP-0648 | E-1 | CPX-VADPCK-33 | CPX-VADPCK-34 | D-1 |
| CPX-VAFUPK-20 | XFP-0639 | E-2 | CPX-VADPCK-35 | CPX-VADPCK-36 | A-2 |

| REV | DWN | CHKD | APVD | REMARKS |
|---|---|---|---|---|
| CP-21 | SJL 05-30 2001 | DJL 05-31 2001 | | THIS DRAWING REVISED TO INCORPORATE DESIGN CHANGE FDA-2001-001370-01-00 PER SK-0002-01-001370-01-00. EDITORIAL CHANGES AS NOTED. |

NOTES:

1. FOR ABBREVIATIONS AND SYMBOLS SEE DRAWINGS M1-0313 AND M1-0200.
2. THIS DIAGRAM IS A SCHEMATIC REPRESENTATION AND IS INTENDED TO SHOW GENERAL AIR DISTRIBUTION AND FLOW PATHS.
3. BALANCING DAMPERS, REGISTERS, DIFFUSERS, FLEXIBLE CONNECTIONS AND ALL OTHER RELATED ACCESSORIES NOT SHOWN ON THIS DIAGRAM SHALL BE PROVIDED AS INDICATED ON THE HVAC ARRANGEMENT DRAWINGS AND SPECIFICATIONS.
4. 1-PT-0934 THRU 1-PT-0939 ARE TO BE PROVIDED BY WESTINGHOUSE. SEE WESTINGHOUSE DRAWING 8758D39, SHEETS 22 AND 42 FOR PROCESS CONTROL BLOCK DIAGRAM.
5. VALVES ARE WELDED ON THE END CLOSEST TO THE PENETRATIONS AND FLANGED ON THE OPPOSITE END.
6. BLIND FLANGES TO BE INSTALLED DURING PENETRATION LEAK TEST ONLY.
7. FOR CONTAINMENT RADIATION MONITORING SYSTEM DETAILS SEE GENERAL ATOMIC COMPANY DRAWING ELD 353-1700.
8. THE BLIND FLANGE IS PROVIDED TO FACILITATE FILTER TRAIN TESTING AND FOR ON LINE TESTING OF H2 PURGE SUPPLY AND EXHAUST FANS.
9. PROVIDE SUITABLE SIZE ORIFICE PLATE TO BALANCE AIR FLOW. PLATE SHALL BE MIN WELDED TO 8"x10" AIR INTAKES. ORIFICE DIAMETER MAY VARY FROM 3" TO 8".
10. RADIATION MONITOR IS SEISMIC CATEGORY I AND HAS A DESIGN PRESSURE OF 1 ATMOSPHERE. MONITOR IS BUILT TO MANUFACTURERS STANDARDS.
11. PENETRATIONS M -00[illegible] AND M -0007 DETAILS TRANSFERRED FROM FLOW DIAGRAM M1-0217.
12. END OF PENETRATION PROVIDED WITH THREADED PLUG FOR HYDRO AND ILRT.
13. VALVES CP1-VADPBC-09 AND CP1-VADPBC-10 ARE LIMITED TO 65^ MAX OPEN.
14. LINE 18-VA-1-025-152-5 HAS BEEN QUALIFIED AS SEISMIC CATEGORY I BY ANALYSIS.
15. FOR DRAIN FLOW ORIFICE NUMBER AND LINE CONT SEE DWG M1-0225-02 AND 02A LOCATION C,D,E AND F2.
16. A BLIND FLANGE, LOCKED CLOSED TC, PIPE FITTINGS AND CONTAINMENT ISOLATION CAP PER VENDOR DRAWING 4800D186LXI SHT 01 MAY BE USED ON THE OUTBOARD SIDE OF THE CONTAINMENT AIR SUPPLY AND/OR EXHAUST ISOLATION VALVES IF THE PENETRATION FAILS THE LOCAL LEAK RATE TEST.

REFERENCES:

| | |
|---|---|
| M1-0200 | MECHANICAL SYMBOLS AND NOTES |
| M1-0225-02 | FLOW DIAGRAM AUXILIARY BUILDING FIRE PROTECTION |
| M1-0236-02 | FLOW DIAGRAM VENTS AND DRAINS SYSTEM SAFEGUARDS AND AUXILIARY BUILDINGS |
| M1-0300 | FLOW DIAGRAM VENTILATION CONTAINMENT |
| M1-0309 | FLOW DIAGRAM VENTILATION PRIMARY PLANT SUPPLY AND EXHAUST |
| M1-0313 | FLOW DIAGRAM VENTILATION AAP BLDG AND CONTROL BLDG UPS AREA A/C SYSTEMS |
| M2-0301 | FLOW DIAGRAM VENTILATION CONTAINMENT SH 2 |
| S1-0513 | RB CONTAINMENT LINER DETAILS SH 3 |
| BRP-PN-RB-001 | PENETRATION PNEUMATIC AND HYDRAULIC CONN |
| BRP-PN-RB-002 | PENETRATION PNEUMATIC AND HYDRAULIC CONN |
| BRP-PN-1-503-004 | REACTOR CONTAINMENT PENETRATION AND DETAIL |

FSAR FIGURE 9.4-6

THIS DRAWING CREATED ELECTRONICALLY

DRAWING M1-0301 REV CP-10 HAS BEEN SPLIT INTO THE FOLLOWING SHEETS:
- M1-0301
- M1-0301-A

CLASS I
(NUCLEAR SAFETY-RELATED)
SAFETY CLASS 1 / SAFETY CLASS 2 / SAFETY CLASS 3
SEISMIC CATEGORY I / CLASS 1E / ASSOCIATED CIRCUITS

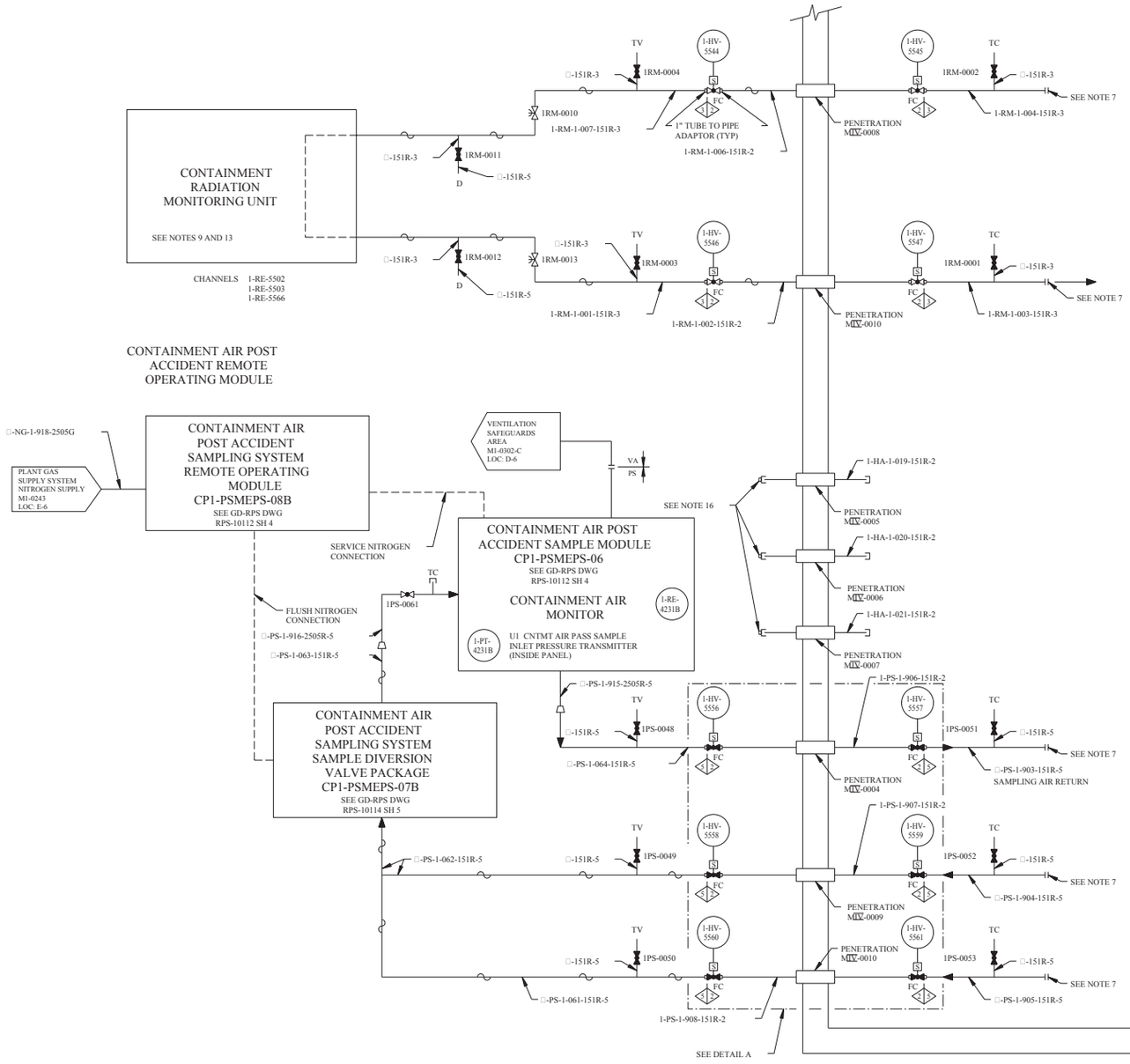
TXU ELECTRIC
CPSES
GLEN ROSE, TEXAS

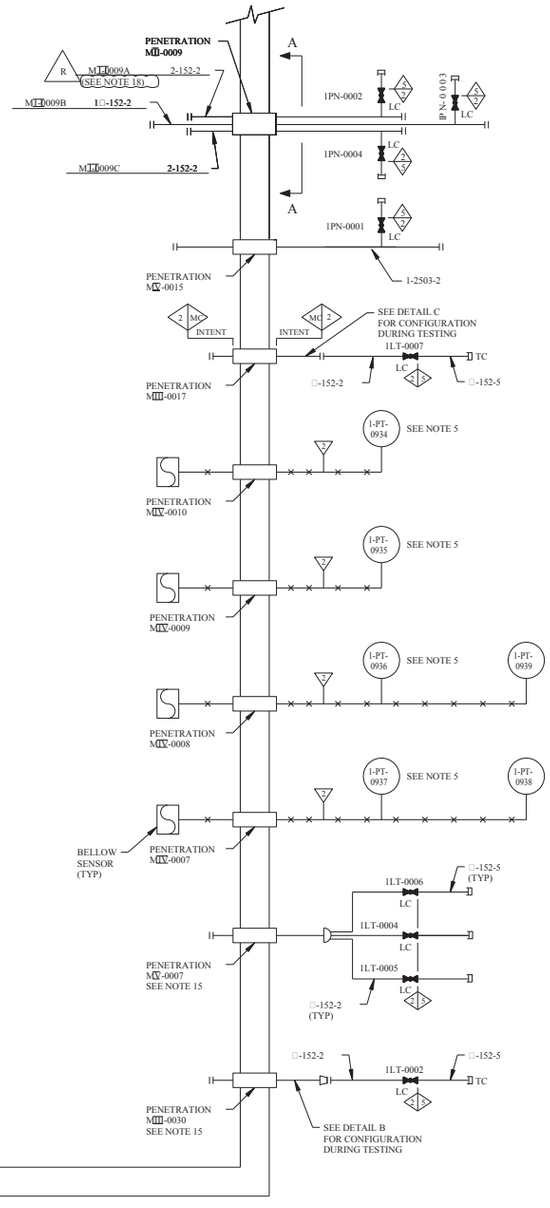
FLOW DIAGRAM
VENTILATION CONTAINMENT

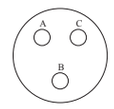
DWG. NO. M1-0301 SH. NO. - REV. CP-21



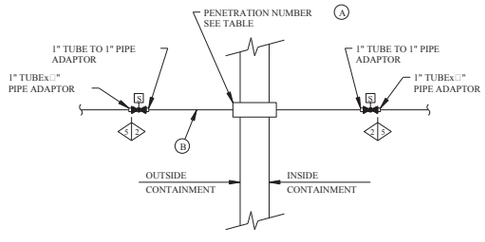
REF CHKD 5/30/2001 $$$$$$DATE$$$$$$



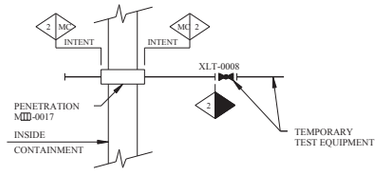




SECTION A-A



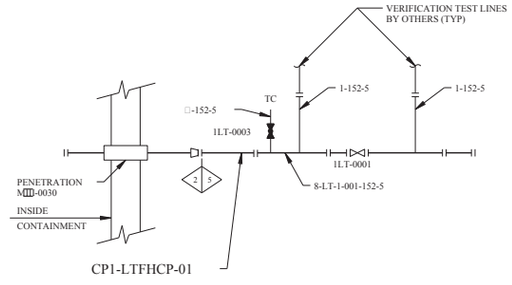

DETAIL A
ZONE C-5

| LINE NUMBERS FOR POST-ACCIDENT SAMPLING SYSTEM CONTAINMENT PENETRATIONS | |
|---|---|
| PENETRATION NUMBER (A) | LINE NUMBER (B) |
| MX-0004 | 1-PS-1-906-151R-2 |
| MX-0009 | 1-PS-1-907-151R-2 |
| MX-0010 | 1-PS-1-908-151R-2 |




DETAIL C
F-2

TO BE USED DURING TESTING ONLY.
CONTAINMENT DEPRESSURIZATION PERFORMED UTILIZING TEMPORARY TEST VALVE XLT-0008 .




DETAIL B
F-4

TO BE USED DURING TESTING ONLY

| REV. | DWN | CHKD | APVD | REMARKS |
|---|---|---|---|---|
| CP-17 | JRMC 03-04-2014 | DJL 03-05-2014 | | THIS DRAWING REVISED TO INCORPORATE DESIGN CHANGE FDA 2013-000203-01-00 PER SK-0001-13-000205-01-00. |

NOTES:

1. FOR ABBREVIATIONS AND SYMBOLS SEE DRAWINGS M1-0313 AND M1-0200.
2. DELETED
3. DELETED
4. DELETED
5. 1-PT-0934 THRU 1-PT-0937 ARE TO BE PROVIDED BY WESTINGHOUSE. SEE WESTINGHOUSE DRAWING 8758D39, SHEETS 22 AND 42 FOR PROCESS CONTROL BLOCK DIAGRAM.
6. VALVES ARE WELDED ON THE END CLOSEST TO THE PENETRATIONS AND FLANGED ON THE OPPOSITE END.
7. BLIND FLANGES TO BE INSTALLED DURING PENETRATION LEAK TEST ONLY.
8. DELETED
9. FOR CONTAINMENT RADIATION MONITORING SYSTEM DETAILS SEE TAG NUMBER 1-REK-5502/03/66.
10. DELETED
11. DELETED
12. DELETED
13. RADIATION MONITOR IS SEISMIC CATEGORY AND HAS A DESIGN PRESSURE OF 1 ATMOSPHERE. MONITOR IS BUILT TO MANUFACTURERS STANDARDS.
14. DELETED
15. PENETRATIONS M -0004 AND M -0007 DETAILS TRANSFERRED FROM FLOW DIAGRAM M1-0217.
16. END OF PENETRATION PROVIDED WITH THREADED PLUG FOR HYDRO AND ILRT.
17. DELETED
18. ACCEPTABLE ALTERNATE PENETRATION INSERT X-M -0009 IS APPROVED FOR MODES 5, 6 AND DEFUELED (SEE FDA-2013-000203-01). R

REFERENCES:

| | |
|---|---|
| M1-0200 | MECHANICAL SYMBOLS AND NOTES |
| M1-0243 | FLOW DIAGRAM PLANT GAS SUPPLY SYSTEM NITROGEN SUPPLY |
| M1-0302 | FLOW DIAGRAM VENTILATION SAFEGUARDS AND ELECTRICAL AREA |
| M1-0313 | FLOW DIAGRAM VENTILATION AAP BLDG AND CONTROL BLDG UPS AREA A/C SYSTEMS |
| S1-0513 | RB CONTAINMENT LINER DETAILS SH 3 |
| BRP-PN-RB-001 | PENETRATION PNEUMATIC AND HYDRAULIC CONN |
| BRP-PN-RB-002 | PENETRATION PNEUMATIC AND HYDRAULIC CONN |
| BRP-PN-1-503-004 | REACTOR CONTAINMENT PENETRATION AND DETAIL |

FSAR FIGURE 9.4-6

TBS DRAWING CREATED ELECTRONICALLY

| DRAWING M1-0301 REV CP-10 |
|---|
| HAS BEEN SPLIT INTO THE FOLLOWING SHEETS: |
| M1-0301 |
| M1-0301-A |

CLASS I
(NUCLEAR SAFETY-RELATED)
SAFETY CLASS 1 SEISMIC CATEGORY I
SAFETY CLASS 2 CLASS 1E
SAFETY CLASS 3 ASSOCIATED CIRCUITS

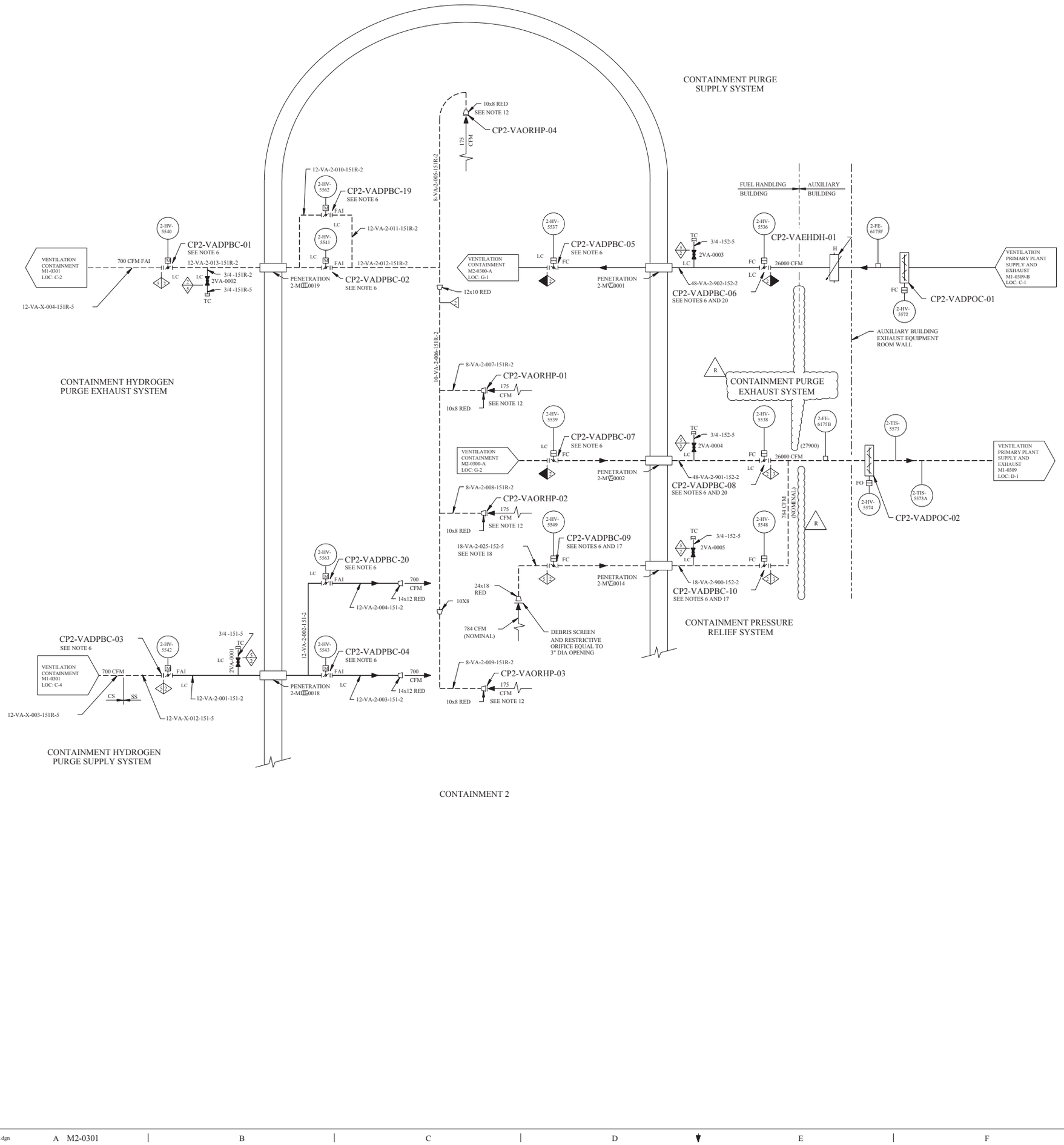
LUMINANT
CPNPP
GLEN ROSE, TEXAS

FLOW DIAGRAM
VENTILATION CONTAINMENT

| DWG. NO. | SH. NO. | REV. |
|---|---|---|
| M1-0301 | A | CP-17 |

$$$$$$$ DATE $$$$$ REF CHK CP-II 06/04/97

me513500.dgn M1-0301-A < FINAL PRINT >




| REV | DWN | CHKD | APVD | REMARKS |
|---|---|---|---|---|
| CP-13 | JRMC 08-24 2009 | DJL 08-24 2009 | | THIS DRAWING REVISED TO INCORPORATE DESIGN CHANGE FDA-2009-001372-01-00 PER SK-0002-09-001372-01-00. |

NOTES:

1. FOR ABBREVIATIONS AND SYMBOLS SEE DRAWINGS M1-0200 & M1-0313.
2. DELETED
3. THIS DIAGRAM IS A SCHEMATIC REPRESENTATION AND IS INTENDED TO SHOW GENERAL AIR DISTRIBUTION AND FLOW PATHS.
4. BALANCING DAMPERS, REGISTERS, DIFFUSERS, FLEXIBLE CONNECTIONS AND ALL OTHER RELATED ACCESSORIES NOT SHOWN ON THIS DIAGRAM SHALL BE PROVIDED AS INDICATED ON THE HVAC ARRANGEMENT DRAWINGS AND SPECIFICATIONS.
5. DELETED
6. VALVES ARE WELDED ON END CLOSEST TO THE PENETRATIONS AND FLANGED ON THE OPPOSITE END.
7. BLIND FLANGES TO BE INSTALLED DURING PENETRATION LEAK TEST ONLY.
8. DELETED
9. FOR CONTAINMENT RADIATION MONITORING SYSTEM DETAILS SEE GENERAL ATOMIC COMPANY DRAWING ELD 353-1700.
10. DELETED
11. DELETED
12. PROVIDE SUITABLE SIZE ORIFICE PLATE TO BALANCE AIR FLOW. THE ORIFICE PLATE SHALL BE 1/8 INCH THICK MINIMUM AND WELDED TO 8"x10" AIR INTAKES. ORIFICE SIZE MAY VARY FROM 3" TO 8" IN DIAMETER.
13. DELETED
14. RADIATION MONITOR IS SEISMIC CATEGORY 1 AND HAS A DESIGN PRESSURE OF 1 ATMOSPHERE. MONITOR IS BUILT TO MANUFACTURERS STANDARDS.
15. DELETED
16. DELETED
17. VALVES CP2-VADPBC-09 AND CP2-VADPBC-10 ARE LIMITED TO 65° MAX OPEN.
18. LINE 18-VA-2-025-152-5 HAS BEEN QUALIFIED AS SEISMIC CATEGORY 1 BY ANALYSIS.
19. FOR DRAIN FLOW ORIFICE NUMBER AND LINE CONT SEE DWG M2-0225-02 AND 02A LOCATION C, D, E AND F2.
20. A BLIND FLANGE, LOCKED CLOSED TC, PIPE FITTINGS AND CONTAINMENT ISOLATION CAP PER VENDOR DRAWING 4800D186LXI SHT 01 MAY BE USED ON THE OUTBOARD SIDE OF THE CONTAINMENT AIR SUPPLY AND/OR EXHAUST ISOLATION VALVES IF THE PENETRATION FAILS THE LOCAL LEAK RATE TEST.

REFERENCE DRAWINGS:

| | |
|---|---|
| M1-0200 | MECHANICAL SYMBOLS AND NOTES. |
| M1-0225-02 | FLOW DIAGRAM AUXILIARY BUILDING FIRE PROTECTION. |
| M2-0300 | FLOW DIAGRAM VENTILATION CONTAINMENT. |
| M1-0309 & M1-0309B | FLOW DIAGRAM VENTILATION PRIMARY PLANT SUPPLY AND EXHAUST. |
| M1-0313 | FLOW DIAGRAM VENTILATION AAP BUILDING AND CONTROL BUILDING. UPS AREA A/C SYSTEMS |
| M2-0301-A | FLOW DIAGRAM VENTILATION CONTAINMENT |
| BRP-VA-2-AB-001 | HEATING & VENTILATION (CONTAINMENT PENETRATIONS) |
| BRP-VA-2-AB-002 | HEATING & VENTILATION (CONTAINMENT PENETRATIONS) |
| BRP-VA-2-FB-001 | HEATING & VENTILATION (CONTAINMENT PENETRATIONS) |
| BRP-VA-2-RB-001 | HEATING & VENTILATION (CONTAINMENT PENETRATIONS) |
| BRP-VA-2-RB-002 | HEATING & VENTILATION (CONTAINMENT PENETRATIONS) |
| BRP-VA-2-RB-005 | HEATING & VENTILATION (CONTAINMENT PENETRATIONS) |
| BRP-VA-2-RB-007 | HEATING & VENTILATION (CONTAINMENT PENETRATIONS) |
| M1-0301 & M1-0301-A | FLOW DIAGRAM VENTILATION CONTAINMENT. |

FSAR FIGURE 9.4-6

THIS DRAWING CREATED ELECTRONICALLY

DRAWING 2323-M2-0301 REV CP-4
HAS BEEN SPLIT INTO THE FOLLOWING SHEETS:
M2-0301
M2-0301-A

CLASS I
(NUCLEAR SAFETY-RELATED)
SAFETY CLASS 1, SAFETY CLASS 2, SAFETY CLASS 3
SEISMIC CATEGORY I
CLASS 1E ASSOCIATED CIRCUITS

LUMINANT
CPNPP
GLEN ROSE, TEXAS

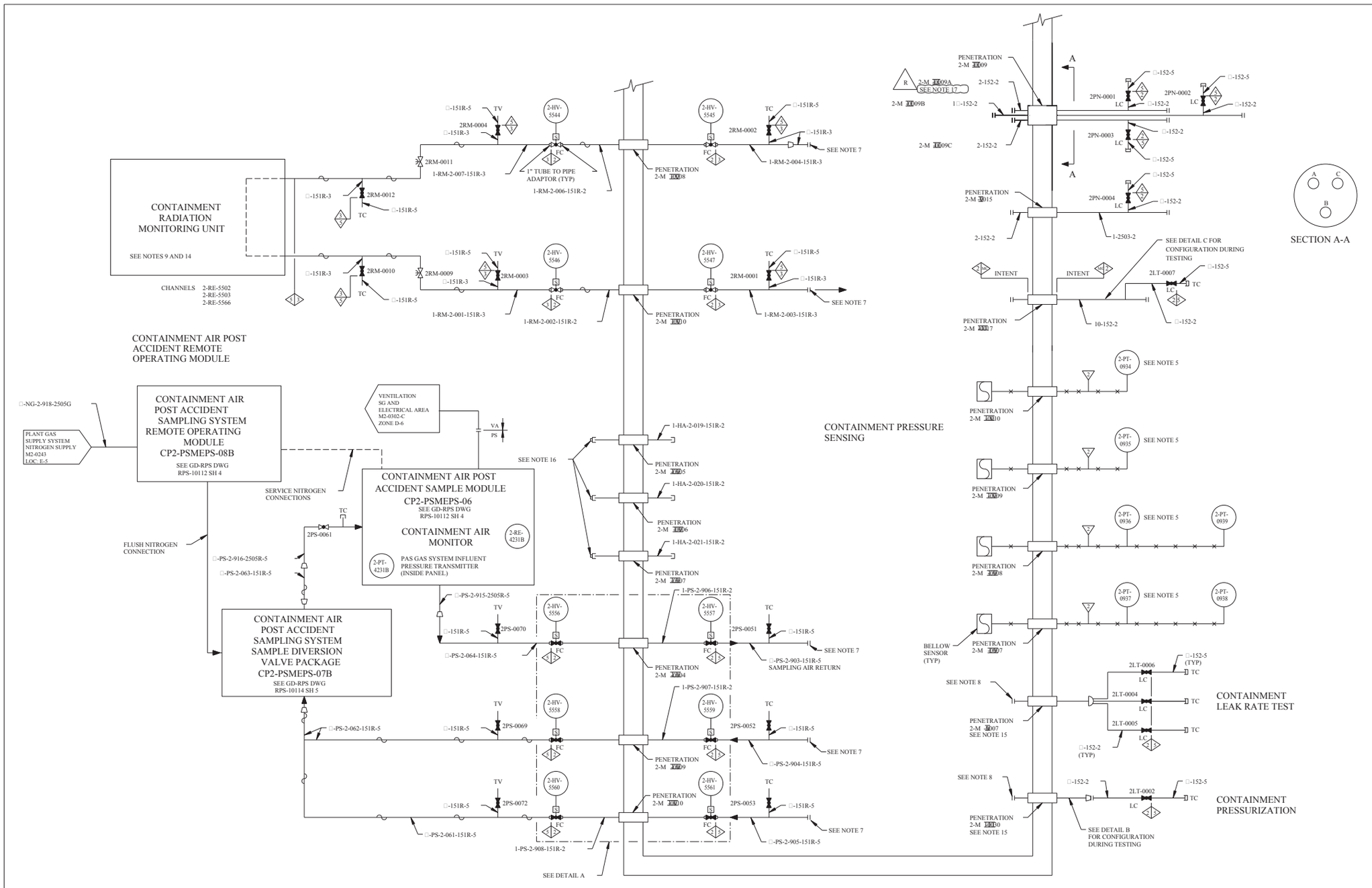
FLOW DIAGRAM
VENTILATION CONTAINMENT

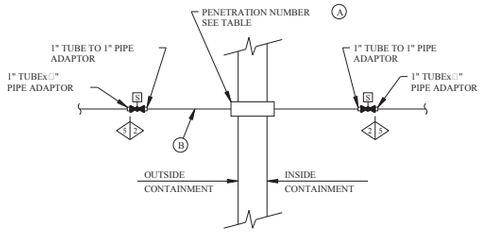
| DWG. NO. | SH. NO. | REV. |
|---|---|---|
| M2-0301 | - | CP-13 |

REF CKD CP-10 12/19/96

$$$$$$$DATE$$$$$$

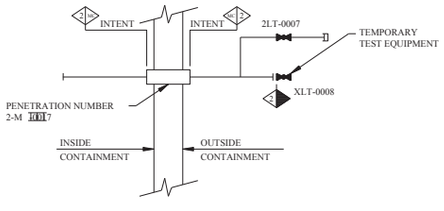
me962400.dgn A M2-0301 < FINAL PRINT >



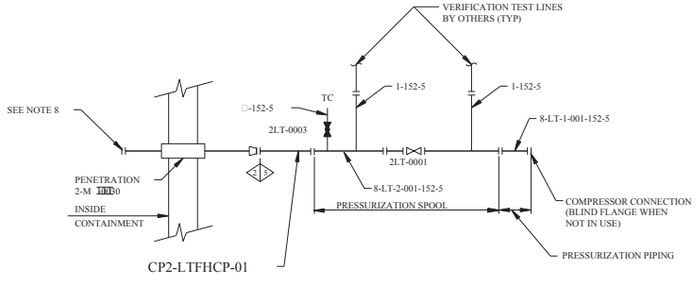

DETAIL A
(C-5)

| LINE NUMBERS FOR POST-ACCIDENT SAMPLING SYSTEM CONTAINMENT PENETRATIONS | |
|---|---|
| PENETRATION NUMBER (A) | LINE NUMBER (B) |
| M□-0004 | 1-PS-2-906-151R-2 |
| M□-0009 | 1-PS-2-907-151R-2 |
| M□-0010 | 1-PS-2-908-151R-2 |




DETAIL C
(F-2)

TO BE USED DURING TESTING ONLY.
CONTAINMENT DEPRESSURIZATION PERFORMED UTILIZING TEMPORARY TEST VALVE XLT-0008.




DETAIL B (F-4)

TO BE USED DURING TESTING ONLY

| REV | DWN | CHKD | APVD | REMARKS |
|---|---|---|---|---|
| CP-15 | JRMC 03-04-2014 | DJL 03-05-2014 | | THIS DRAWING REVISED TO INCORPORATE DESIGN CHANGE FDA 2013-000203-01-00 PER SK-0002-13-000203-01-00. |

NOTES:

1. FOR ABBREVIATIONS AND SYMBOLS SEE DRAWINGS M1-0313 & M1-0200.
2. DELETED
3. DELETED
4. DELETED
5. 2-PT-0934 THRU 2-PT-0937 ARE TO BE PROVIDED BY WESTINGHOUSE. SEE WESTINGHOUSE DRAWING 8768D39, SHEET 22 AND 42 FOR PROCESS CONTROL BLOCK DIAGRAM.
6. DELETED
7. BLIND FLANGES TO BE INSTALLED DURING PENETRATION LEAK TEST ONLY.
8. DELETED
9. FOR CONTAINMENT RADIATION MONITORING SYSTEM DETAILS SEE TAG NUMBER 2-REK-5502/03/66.
10. DELETED
11. DELETED
12. DELETED
13. DELETED
14. RADIATION MONITOR IS SEISMIC CATEGORY AND HAS A DESIGN PRESSURE OF 1 ATMOSPHERE. MONITOR IS BUILT TO MANUFACTURERS STANDARDS.
15. PENETRATIONS M -0007 AND M -0007 DETAILS TRANSFERRED FROM FLOW DIAGRAM M2-0217.
16. END OF PENETRATION PROVIDED WITH THREADED PLUG FOR HYDRO AND ILRT.
17. ACCEPTABLE ALTERNATE PENETRATION INSERT X-M -0009 IS APPROVED FOR MODES 5, 6 AND DEFUELED (SEE FDA-2013-000203-01). R

REFERENCE DRAWINGS:

| | |
|---|---|
| M1-0200 | MECHANICAL SYMBOLS AND NOTES. |
| M2-0300 & M2-0300-A | FLOW DIAGRAM VENTILATION CONTAINMENT. |
| M1-0313 | FLOW DIAGRAM VENTILATION AAP BUILDING. AND CONTROL BUILDING. UPS AREA A/C SYSTEMS |
| M1-0301 & M1-0301-A | FLOW DIAGRAM VENTILATION CONTAINMENT SHEET 2. |
| BRP-PN-RB-001 | PENETRATION (PNEUMATIC & HYDRAULIC CONN) |
| BRP-PN-RB-002 | PENETRATION (PNEUMATIC & HYDRAULIC CONN) |
| BRP-HA-RB-004 | PENETRATION (PNEUMATIC & HYDRAULIC CONN) |
| BRP-HA-RB-005 | PENETRATION (PNEUMATIC & HYDRAULIC CONN) |
| BRP-HA-RB-006 | PENETRATION (PNEUMATIC & HYDRAULIC CONN) |
| M1-0243 | PLANT GAS SUPPLY SYSTEM, NITROGEN SUPPLY |
| M2-0302 | VENTILATION SG AND ELECTRICAL |

FSAR FIGURE 9.4-6

THIS DRAWING CREATED ELECTRONICALLY

DRAWING 2323-M2-0301 REV CP-4
HAS BEEN SPLIT INTO THE FOLLOWING SHEETS:
M2-0301
M2-0301-A

CLASS I
(NUCLEAR SAFETY-RELATED)
SAFETY CLASS 1 SEISMIC CATEGORY I
SAFETY CLASS 2 CLASS 1E
SAFETY CLASS 3 ASSOCIATED CIRCUITS

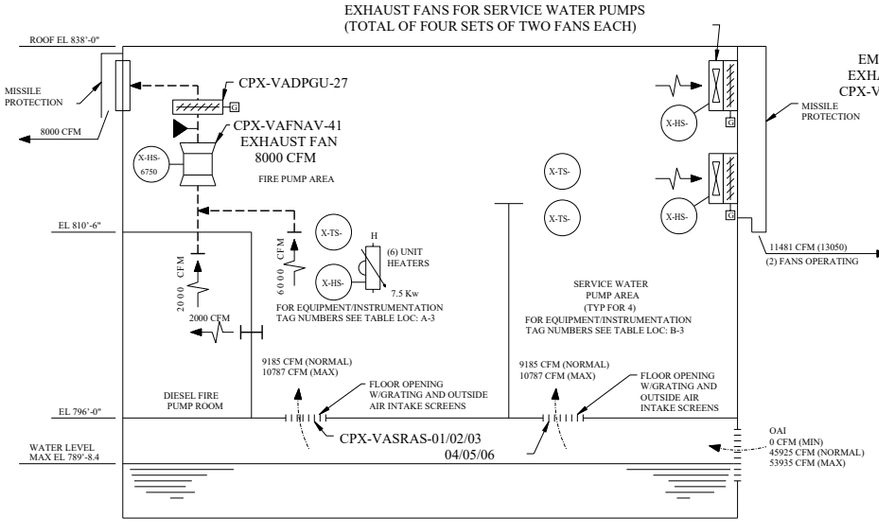
LUMINANT
CPNPP
GLEN ROSE, TEXAS

FLOW DIAGRAM
VENTILATION CONTAINMENT

DWG. NO. M2-0301 | SH. NO. A | REV. CP-15

$$$$$$$DATE$$$$$$$ REF CKD CP-10 06/04/97

me516100.dgn A M2-0301-A B C D E F G < FINAL PRINT > H

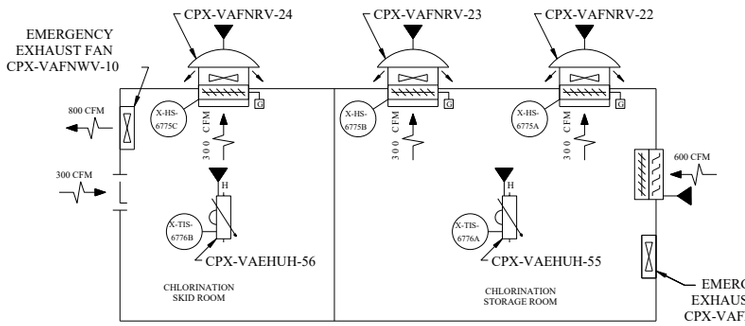



CIRCULATING WATER INTAKE STRUCTURE - CHLORINATION BUILDING VENTILATION SYSTEM
NON-SAFETY
(NOT DESIGN VALIDATED BY EBASCO)

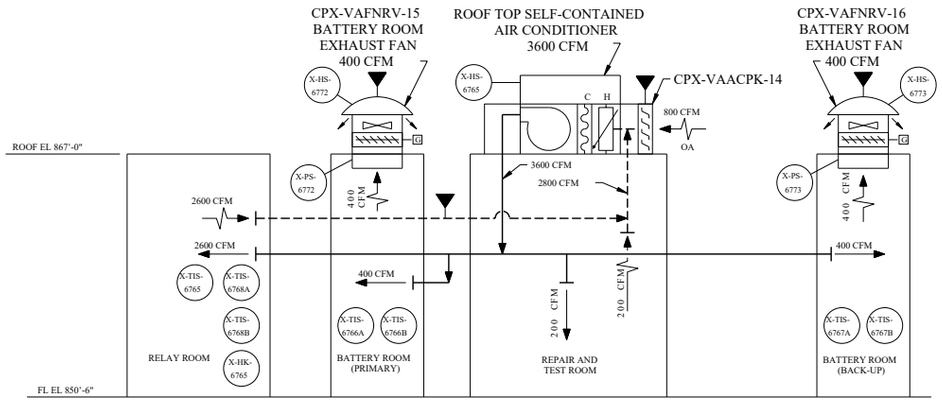
| UNIT HEATERS | | LO-LO TEMP THERMOSTAT |
|---|---|---|
| TAG NUMBER | **X-HS-** | **X-TS-** |
| CPX-VAEHUH-04 | 6759 | 6759B |
| CPX-VAEHUH-05 | 6760 | 6760B |
| CPX-VAEHUH-06 | 6761 | 6761B |
| CPX-VAEHUH-07 | 6762 | 6762B |
| CPX-VAEHUH-08 | 6763 | 6763 |
| CPX-VAEHUH-09 | 6764 | 6764 |

| EXHAUST FANS | | | | HI TEMP THERMOSTAT | DAMPER |
|---|---|---|---|---|---|
| TAG NUMBER | ACFM | **X-HS-** | **X-TS-** | **X-TS-** | TAG NUMBER |
| CPX-VAFNWV-02 | 6525 | 6751 | 6755 | 6759A | CPX-VADPSW-02 |
| CPX-VAFNWV-03 | 6525 | 6752 | | | CPX-VADPSW-03 |
| CPX-VAFNWV-04 | 6525 | 6753 | 6756 | 6760A | CPX-VADPSW-04 |
| CPX-VAFNWV-05 | 6525 | 6754 | | | CPX-VADPSW-05 |
| CPX-VAFNWV-06 | 6525 | 6755 | 6757 | 6761A | CPX-VADPSW-06 |
| CPX-VAFNWV-07 | 6525 | 6756 | | | CPX-VADPSW-07 |
| CPX-VAFNWV-08 | 6525 | 6757 | 6758 | 6762A | CPX-VADPSW-08 |
| CPX-VAFNWV-09 | 6525 | 6758 | | | CPX-VADPSW-09 |

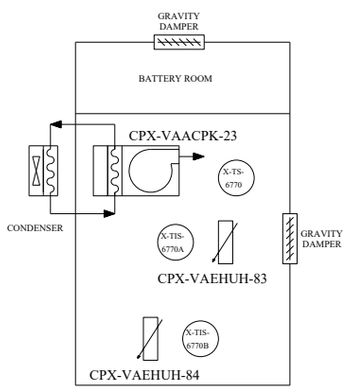
SERVICE WATER INTAKE STRUCTURE VENTILATION SYSTEM
SAFETY CLASS 3 (EXCEPT AS NOTED)



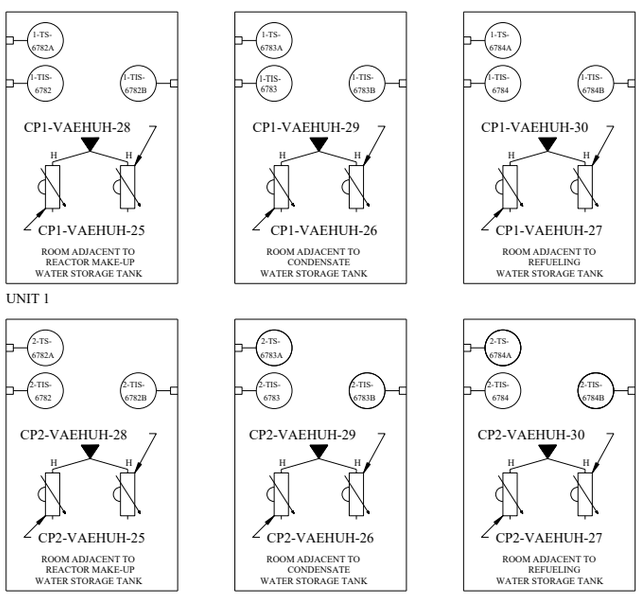

SERVICE WATER INTAKE STRUCTURE - CHLORINATION BUILDING VENTILATION SYSTEM
NON-SAFETY
(NOT DESIGN VALIDATED BY EBASCO)

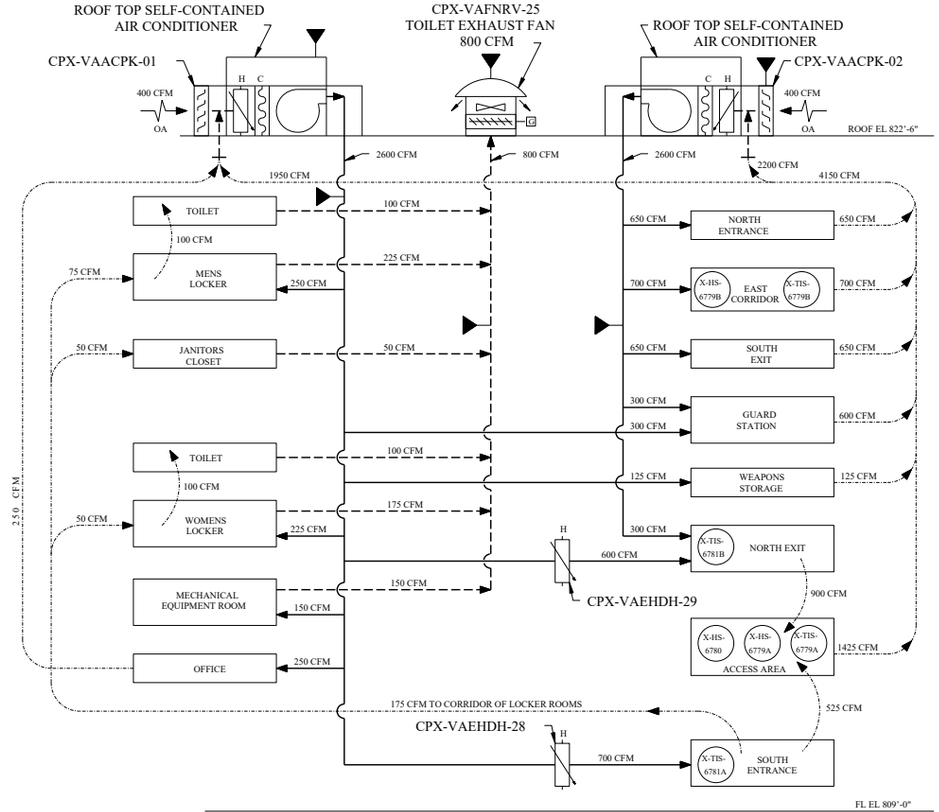



SWITCHYARD RELAY HOUSE A/C SYSTEM
NON-SAFETY
(NOT DESIGN VALIDATED BY EBASCO)




138 KV SWITCHYARD RELAY HOUSE
NON-SAFETY
(SEE NOTE 10)




GUARD HOUSE A/C SYSTEM
NON-SAFETY
(NOT DESIGN VALIDATED BY EBASCO)

| REV | DWN | CHK | APVD | REMARKS |
|---|---|---|---|---|
| CP-18 | DLK 10-22 2018 | GAW 10-22 2018 | LEB 10-23 2018 | THIS DRAWING REVISED TO INCORPORATE ENHANCEMENT CHANGE PER AI-TR-2018-006979-1. |

**NOTES:**

1. FOR ABBREVIATIONS AND SYMBOLS SEE DRAWINGS M1-0313 AND M1-0200.
2. DELETED
3. THIS DIAGRAM IS A SCHEMATIC REPRESENTATION AND IS INTENDED TO SHOW GENERAL AIR DISTRIBUTION AND FLOW PATHS.
4. BALANCING DAMPERS, REGISTERS, DIFFUSERS, FLEXIBLE CONNECTIONS AND ALL OTHER RELATED ACCESSORIES NOT SHOWN ON THIS DIAGRAM SHALL BE PROVIDED AS INDICATED ON THE HVAC ARRANGEMENT DRAWINGS AND SPECIFICATIONS.
5. IN THE SERVICE WATER INTAKE STRUCTURE, ANY OPERATING FAN DRAWS AIR EQUALLY THRU ALL FIVE AIR INTAKES AT FLOOR.
6. AIR FLOW QUANTITIES SHOWN ARE BASED ON A DENSITY OF 0.075 LB/FT OCCURRING AT THE STANDARD CONDITION OF DRY AIR AT 70□F AND 29.92" HG BAROMETRIC PRESSURE. QUANTITIES IN PARENTHESES ARE ACTUAL AIR FLOW RATES BASED ON DENSITY AT DESIGN CONDITIONS.
7. MAX CFM IS BASED ON ALL EXHAUST FANS, INCLUDING DIESEL FIRE PUMP ROOM EXHAUST FAN, RUNNING.
8. SWIS EXHAUST FANS CPX-VAFNWV-06,07,08,09 TO BE POWERED FROM UNIT 1 EMERGENCY POWER SOURCE AND CPX-VAFNWV-02,03,04,05 TO BE POWERED FROM UNIT 2 EMERGENCY POWER SOURCE (TWO ON TRAIN A AND TWO ON TRAIN B FOR EACH UNIT).
9. EXHAUST FAN CPX-VAFNWV-11 HAS BEEN DISCONNECTED AND IS ABANDONED IN PLACE.
10. OWNERSHIP OF THIS BUILDING BELONGS TO GLEN ROSE TRANSMISSION, REFER TO E-40783 SHEETS 1 AND 2 FOR DETAIL INFORMATION.
11. FOR THE NON-SAFETY VENTILATION SYSTEMS, THE AIR FLOW RATES SHOWN ARE ORIGINAL DESIGN VALUES FOR INITIAL FLOW BALANCING AND DO NOT REPRESENT AS-BUILT. AIR FLOW IS BALANCED TO MAINTAIN ROOM TEMPERATURES WITHIN DESIGN DURING NORMAL OPERATION AND TO ENSURE THE DIRECTION OF AIR FLOW IS AS SHOWN.

REFERENCES:

| | | |
|---|---|---|
| 1. | M1-0313 | FLOW DIAGRAM-VENTILATION AAP BLDG AND CONTROL BLDG UPS AREA A/C SYSTEMS |
| 2. | M1-0200 | MECHANICAL SYMBOLS AND NOTES |
| 3. | E1-0220SY | AC POWER SUPPLY |
| 4. | M1-2312-02 | INSTRUMENTATION & CONTROL DIAGRAM VENTILATION SERVICE WATER INTAKE STRUCTURE & MISC BUILDINGS CHANNEL 6765/6774 |

CP-18

FSAR FIGURE 9.4-7

THIS DRAWING CREATED ELECTRONICALLY

CLASS I
(NUCLEAR SAFETY-RELATED)
SAFETY CLASS 1 SEISMIC CATEGORY I
SAFETY CLASS 2 CLASS 1E
SAFETY CLASS 3 ASSOCIATED CIRCUITS

LUMINANT
CPNPP
GLEN ROSE, TEXAS

FLOW DIAGRAM - VENTILATION
SERVICE WATER INTAKE STRUCTURE
AND MISCELLANEOUS BUILDINGS

| DWG. NO. | SH. NO. | REV. |
|---|---|---|
| M1-0312 | - | CP-18 |

| REV | DWN | CHKD | APVD | REMARKS |
|---|---|---|---|---|
| CP-20 | MM 03-01-2016 | DLK 30-01-2016 | MHF 30-07-2016 | THIS DRAWING REVISED TO INCORPORATE AN EDITORIAL CHANGE PER A1-CR-2014-007886-5. |

NOTES:

1. FOR ABBREVIATIONS AND SYMBOLS SEE DRAWINGS M1-0313 AND M1-0200.
2. DELETED
3. THIS DIAGRAM IS A SCHEMATIC REPRESENTATION AND IS INTENDED TO SHOW GENERAL AIR DISTRIBUTION AND FLOW PATHS.
4. BALANCING DAMPERS, REGISTERS, DIFFUSERS, FLEXIBLE CONNECTIONS AND ALL OTHER RELATED ACCESSORIES NOT SHOWN ON THIS DIAGRAM SHALL BE PROVIDED AS INDICATED ON THE HVAC ARRANGEMENT DRAWING AND SPECIFICATIONS.
5. DELETED
6. THIS FLOW DIAGRAM IS COMMON FOR UNITS 1 AND 2 ALL UNIT 2 EQUIPMENT SHOWN ON THIS FLOW DIAGRAM WILL BE INSTALLED WITH UNIT 1 EQUIPMENT.
7. THE UNCONTROLLED ACCESS AREA WILL BE MAINTAINED AT ATMOSPHERIC PRESSURE.
8. FOR LOGIC OF CHANNEL X-TIC-6086 SEE ICD M1-2307-06.
9. DELETED
10. AIR FLOW QUANTITIES SHOWN ARE BASED ON A DENSITY OF 0.075 LB/FT OCCURING AT THE STANDARD CONDITION OF DRY AIR AT 70□F AND 29.92" HG BAROMETRIC PRESSURE. QUANTITIES IN PARENTHESES ARE ACTUAL AIR FLOW RATES BASED ON DENSITY AT DESIGN CONDITIONS.
11. DAMPER NUMBER CPX-VADPBC-57 IS RETAGGED FROM ORIGINAL TAG NUMBER CP2-VADPBC-25 (SPARE PER ECR-1400). DAMPER NUMBER CPX-VADPBC-58 IS RETAGGED FROM ORIGINAL TAG NUMBER CP2-VADPBC-28 (SPARE PER ECR-1400)
12. DELETED
13. DELETED
14. DELETED
15. IT IS ACCEPTABLE TO REMOVE CPX-VADPGU-11 OR CPX-VADPGU-12 FOR MAINTENANCE AND INSTALL A BLIND FLANGE ON FAN SIDE AND EXHAUST DUCT SIDE. THE SYSTEM REQUIREMENTS (COOLING REQUIRED) WILL HAVE TO BE EVALUATED AT THE TIME AS TO ADEQUATE FLOW PRIOR TO TAKING ONE FAN OUT OF SERVICE. BLIND TO BE SUFFICIENT TO HOLD PRESSURE. A SMALL GUSSET (EXAMPLE 2x2 ANGLE FOR SHEET METAL BLANK) IS ADVISED ON THE BLIND TO PREVENT EXCESSIVE DISTORTION. BLIND THICKNESS SHOULD BE SAME AS DUCT OR THICKER. WEIGHT OF BLIND NOT TO EXCEED WEIGHT OF DAMPER. MATERIALS OTHER THAN METAL ARE ACCEPTABLE (i.e. PLYWOOD). MINIMUM OF 4 BOLTS ARE REQUIRED TO HOLD THE BLIND IN PLACE. SUPPORT THE FAN SIDE OF THE PLENUM AS REQUIRED TO AVOID EXCESS NOZZLE LOADS ON THE FAN. FLOOR JACK STAND IS ADEQUATE. (DCN 12626)
16. FOR THE NON-SAFETY VENTILATION SYSTEMS, THE AIR FLOW RATES SHOWN ARE ORIGINAL DESIGN VALUES FOR INITIAL FLOW BALANCING AND DO NOT REPRESENT AS-BUILT. AIR FLOW IS BALANCED TO MAINTAIN ROOM TEMPERATURES WITHIN DESIGN DURING NORMAL OPERATION AND TO ENSURE THE DIRECTION OF AIR FLOW IS AS SHOWN.

REFERENCES:

| | |
|---|---|
| M1-0200 | MECHANICAL SYMBOLS AND NOTES |
| M1-0305-A | FLOW DIAGRAM VENTILATION UNCONTROLLED AND BATTERY ROOMS |
| M1-0307 | FLOW DIAGRAM VENTILATION CHILLED WATER SYSTEM |
| M1-0313 | FLOW DIAGRAM VENTILATION AAP BLDG AND CONTROL BLDG UPS AREA A/C SYSTEMS |

FSAR FIGURE 9.4-8

THIS DRAWING CREATED ELECTRONICALLY

DRAWING M1-0305 REV CP-9
HAS BEEN SPLIT INTO THE FOLLOWING SHEETS:
M1-0305
M1-0305-A

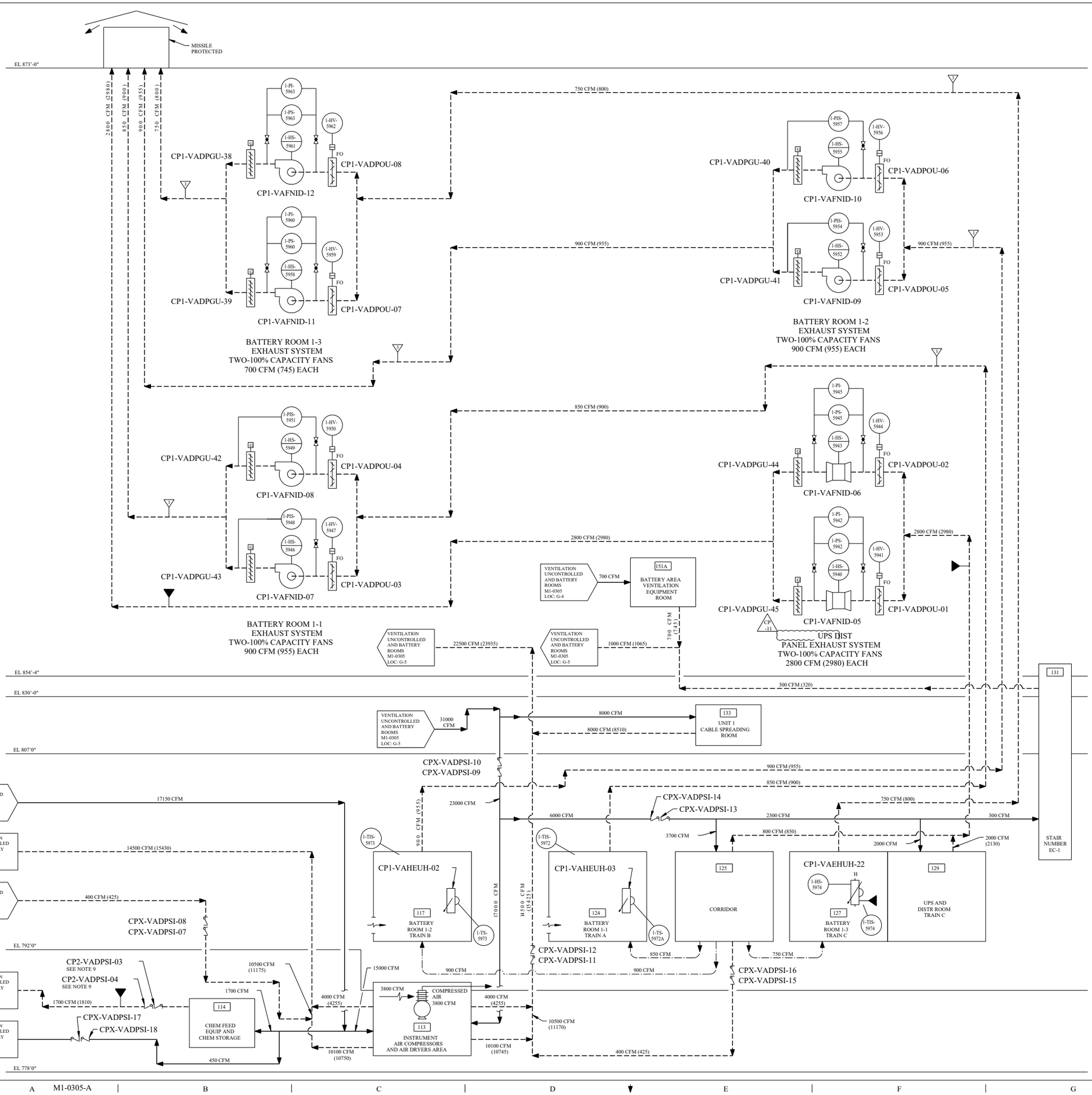
**CLASS I**
(NUCLEAR SAFETY-RELATED)
SAFETY CLASS 1 — SEISMIC CATEGORY I
SAFETY CLASS 2 — CLASS 1E
SAFETY CLASS 3 — ASSOCIATED CIRCUITS

LUMINANT
CPNPP
GLEN ROSE, TEXAS

FLOW DIAGRAM
VENTILATION
UNCONTROLLED AND BATTERY ROOMS

DWG. NO. M1-0305 | SH. NO. - | REV. CP-20

me514700.dgn A M1-0305 | FINAL PRINT




| REV. | DWN | CHK | APVD | REMARKS |
|---|---|---|---|---|
| CP-11 | MM 03-01-2016 | DLK 03-03-2016 | MHF 03-07-2016 | THIS DRAWING REVISED TO INCORPORATE AN EDITORIAL CHANGE PER AI-CR-2014-007886-5. |

NOTES:

1. FOR ABBREVIATIONS AND SYMBOLS SEE DRAWINGS M1-0313 AND M1-0200.
2. THIS DIAGRAM IS A SCHEMATIC REPRESENTATION AND IS INTENDED TO SHOW GENERAL AIR DISTRIBUTION AND FLOW PATHS.
3. BALANCING DAMPERS, REGISTERS, DIFFUSERS, FLEXIBLE CONNECTIONS AND ALL OTHER RELATED ACCESSORIES NOT SHOWN ON THIS DIAGRAM SHALL BE PROVIDED AS INDICATED ON THE HVAC ARRANGEMENT DRAWING AND SPECIFICATIONS.
4. THIS FLOW DIAGRAM IS COMMON FOR UNITS 1 AND 2 ALL UNIT 2 EQUIPMENT SHOWN ON THIS FLOW DIAGRAM WILL BE INSTALLED WITH UNIT 1 EQUIPMENT.
5. THE UNCONTROLLED ACCESS AREA WILL BE MAINTAINED AT ATMOSPHERIC PRESSURE.
6. ALL EXHAUST DUCTWORK IN THE CHEMICAL FEED EQUIPMENT AND CHEMICAL STORAGE ROOM IS CLASSIFIED NNS AND NON-SEISMIC.
7. AIR FLOW QUANTITIES SHOWN ARE BASED ON A DENSITY OF 0.075 LB/FT OCCURING AT THE STANDARD CONDITION OF DRY AIR AT 70□F AND 29.92" HG BAROMETRIC PRESSURE. QUANTITIES IN PARENTHESES ARE ACTUAL AIR FLOW RATES BASED ON DENSITY AT DESIGN CONDITIONS.
8. FOR THE NON-SAFETY VENTILATION SYSTEMS, THE AIR FLOW RATES SHOWN ARE ORIGINAL DESIGN VALUES FOR INITIAL FLOW BALANCING AND DO NOT REPRESENT AS-BUILT. AIR FLOW IS BALANCED TO MAINTAIN ROOM TEMPERATURES WITHIN DESIGN DURING NORMAL OPERATION AND TO ENSURE THE DIRECTION OF AIR FLOW IS AS SHOWN.
9. POSITION SWITCHES 2-ZS-5964A AND B MOUNTED ON DAMPERS CP2-VADPSI-03 AND 04 RESPECTIVELY ARE SPARED IN PLACE. SEE DRAWING E2-0066-47.

REFERENCES:

| | |
|---|---|
| M1-0200 | MECHANICAL SYMBOLS AND NOTES |
| M1-0305 | FLOW DIAGRAM VENTILATION UNCONTROLLED AND BATTERY ROOMS |
| M1-0313 | FLOW DIAGRAM VENTILATION AAP BLDG AND CONTROL BLDG UPS AREA A/C SYSTEMS |

DRAWING M1-0305 REV CP-9
HAS BEEN SPLIT INTO THE FOLLOWING SHEETS:
M1-0305
M1-0305-A

**CLASS I**
(NUCLEAR SAFETY-RELATED)

| | |
|---|---|
| SAFETY CLASS 1 | SEISMIC CATEGORY I |
| SAFETY CLASS 2 | CLASS 1E |
| SAFETY CLASS 3 | ASSOCIATED CIRCUITS |

LUMINANT
CPNPP
GLEN ROSE, TEXAS

FLOW DIAGRAM
VENTILATION
UNCONTROLLED AND BATTERY ROOMS

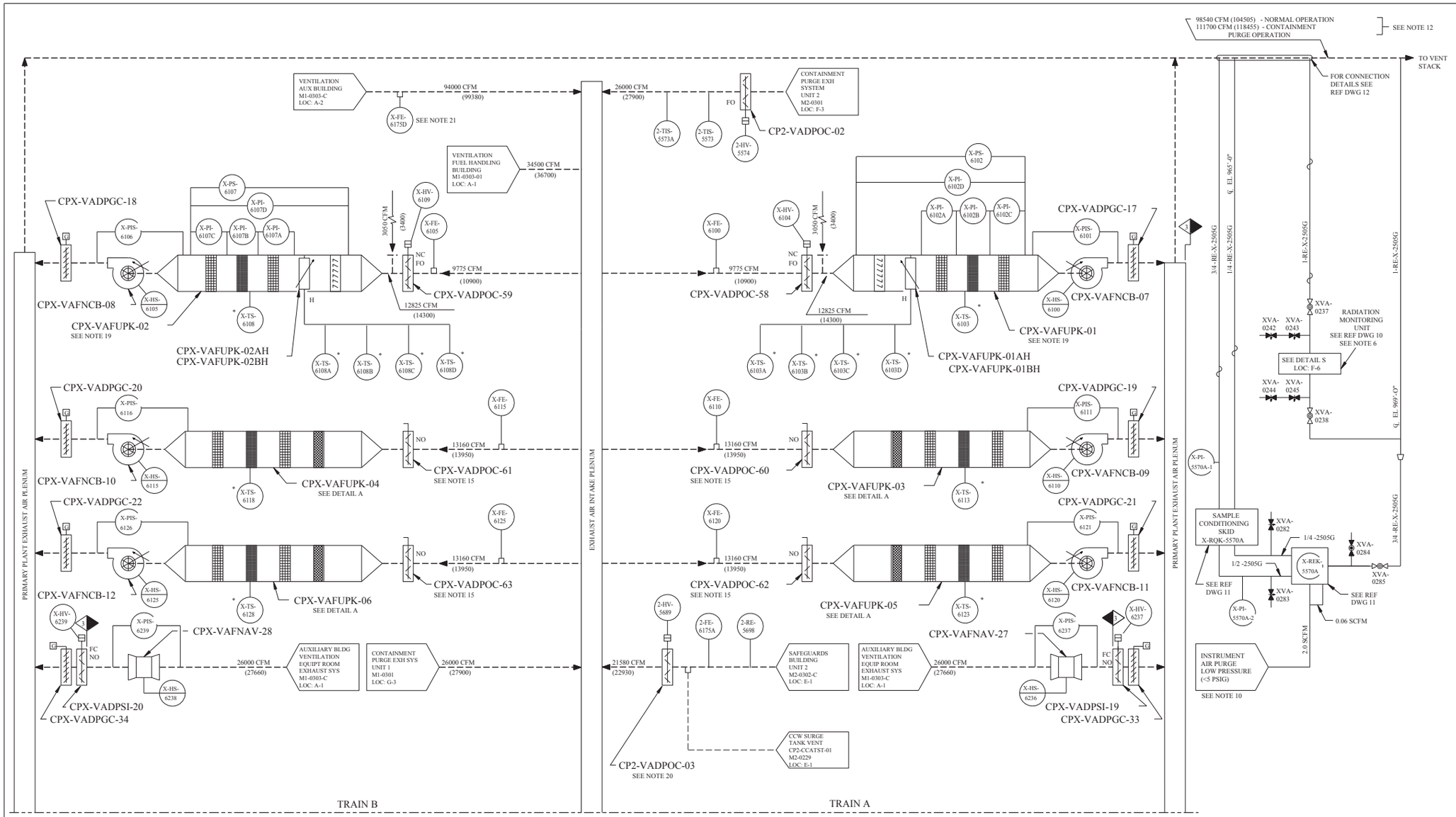
DWG. NO. M1-0305 | SH. NO. A | REV. CP-11

FSAR FIGURE 9.4-8

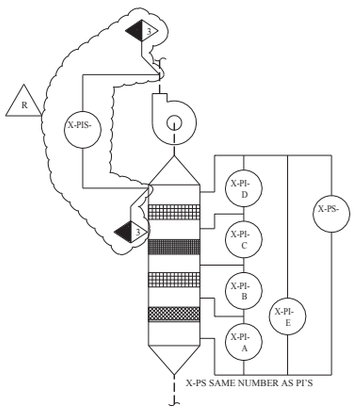
THIS DRAWING CREATED ELECTRONICALLY

REF CKD 7-10-98 CP-7

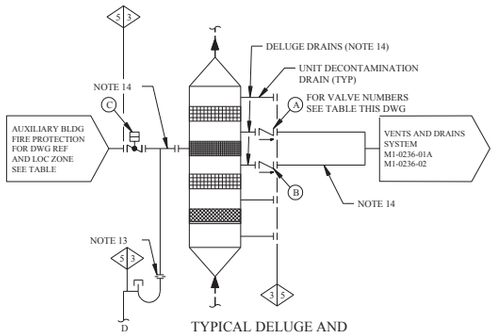
mc571600.dgn A M1-0305-A B C D E F G FINAL PRINT H



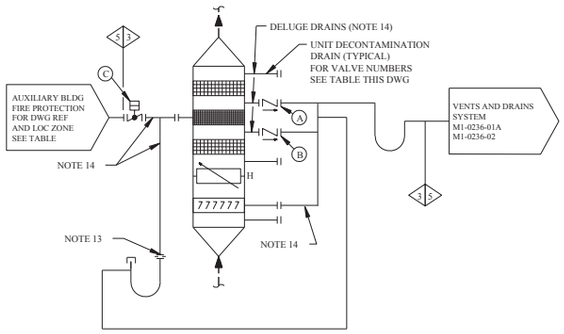

PRIMARY PLANT VENTILATION EXHAUST SYSTEM
SAFETY CLASS 3 (EXCEPT AS NOTED)



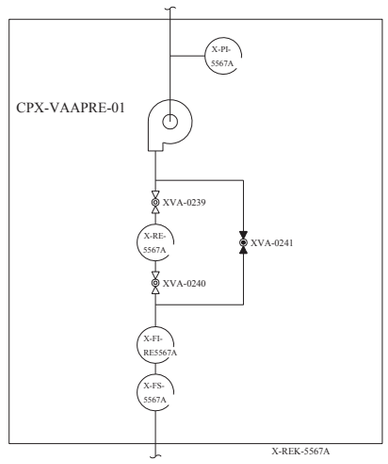

DETAIL A
TYPICAL FOR CPX-VAFUPK-03,04,05,06
SEE TABLE




TYPICAL DELUGE AND DRAIN CONNECTIONS FOR NON ESF FILTRATION UNITS




TYPICAL DELUGE AND DRAIN CONNECTIONS FOR ESF FILTRATION UNITS CPX-VAFUPK-01 AND CPX-VAFUPK-02




DETAIL S

VALVE AND INSTRUMENT TABLE

| FILTRATION UNIT NUMBER (SEE NOTE 17) | DELUGE DRAIN VALVES | | DELUGE SUPPLY | | PRESSURE SWITCHES AND PRESSURE INDICATORS A, B, C, D AND E | PRESSURE INDICATING SWITCH |
|---|---|---|---|---|---|---|
| | (A) | (B) | (C) | DRAWING REF: AND ZONE LOCATION | | |
| CPX-VAFUPK-01 | CPX-VADPCK-01 | CPX-VADPCK-02 | XFP-0653 | M1-0225-02A LOC: D-1 | SEE DIAGRAM | SEE DIAGRAM |
| CPX-VAFUPK-02 | CPX-VADPCK-03 | CPX-VADPCK-04 | XFP-0644 | M1-0225-02A LOC: D-2 | SEE DIAGRAM | SEE DIAGRAM |
| CPX-VAFUPK-03 | CPX-VADPCK-05 | CPX-VADPCK-06 | XFP-0652 | M1-0225-02A LOC: C-1 | 6112 | 6111 |
| CPX-VAFUPK-04 | CPX-VADPCK-07 | CPX-VADPCK-08 | XFP-0643 | M1-0225-02A LOC: C-2 | 6117 | 6116 |
| CPX-VAFUPK-05 | CPX-VADPCK-09 | CPX-VADPCK-10 | XFP-0651 | M1-0225-02A LOC: B-1 | 6122 | 6121 |
| CPX-VAFUPK-06 | CPX-VADPCK-11 | CPX-VADPCK-12 | XFP-0642 | M1-0225-02A LOC: B-2 | 6127 | 6126 |

| REV | DWN | CHK'D | APV'D | REMARKS |
|---|---|---|---|---|
| CP-30 | MM 01-09 2006 | DLE 01-09 2006 | | THIS DRAWING REVISED TO INCORPORATE DESIGN CHANGE FDA-2003-002423-01-00 PER SK-0007-03-002423-01-00. |

NOTES:

1. FOR HVAC ABBREVIATIONS AND SYMBOLS SEE DRAWINGS M1-0313 AND M1-0200.
2. DELETED
3. THIS DIAGRAM IS A SCHEMATIC REPRESENTATION AND IS INTENDED TO SHOW GENERAL AIR DISTRIBUTION AND FLOW PATHS.
4. BALANCING DAMPERS, REGISTERS, DIFFUSERS, FLEXIBLE CONNECTIONS AND ALL OTHER RELATED ACCESSORIES NOT SHOWN ON THIS DIAGRAM SHALL BE PROVIDED AS INDICATED ON THE HVAC ARRANGEMENT DRAWINGS AND SPECIFICATIONS.
5. THIS FLOW DIAGRAM IS COMMON FOR UNITS 1 AND 2.
6. FOR LOGIC OF CHANNEL NUMBER X-RE-5567A, X-RE-5567B, X-RE-5570A AND X-RE-5570B SEE ICD M1-2301-10.
7. IN LINE AIR FLOW ELEMENTS ARE PROVIDED TO MEASURE AIR FLOW THRU DUCTS. MANUAL ADJUSTMENT OF THE INLET VANES ON EXHAUST FANS IS METHOD OF CONTROLLING FLOW. INSTRUMENT CONNECTIONS ARE PROVIDED WITH FLOW ELEMENTS. FLOW ELEMENTS 1-FE-6175B AND 1-FE-6175F ARE SHOWN ON DRAWING M1-0301 FLOW ELEMENTS 2-FE-6175B AND 2-FE-6175F ARE SHOWN ON M2-0301. FLOW ELEMENT X-FE-6175C IS SHOWN ON DRAWING M1-0301-01.
8. DELETED
9. THREE ISOKINETIC NOZZLES ARE PROVIDED AT REFERENCE ELEVATION.
10. FOR INSTRUMENT PURGE LOW PRESSURE (<5 PSIG) CLEAN DRY PURGE GAS FLOW RATE 2.0 SCFM AND 0.06 SCFM FOR EACH MONITOR.
11. MIN SLOPE 1/4 " : 12" TOWARD ALL MONITORS.
12. AIR FLOW THRU VENT STACK IS BASED ON THE MAXIMUM CAPACITY OF THE OPERATING UNITS.
13. FOR DRAIN FLOW ORIFICE NUMBERS AND LINE CONTINUATION SEE DRAWING M1-0225-02 AND 02A, LOC: C, D, E AND F-2.
14. NOT WITHIN ASME CODE BOUNDARY.
15. MANUAL OPERATION (DISCONNECTED OPERATOR).
16. AIR FLOW QUANTITIES SHOWN ARE BASED ON A DENSITY OF 0.075 LB/FT $^3$ OCCURRING AT THE STANDARD CONDITION OF DRY AIR AT 70°F AND 29.92" HG BAROMETRIC PRESSURE. QUANTITIES IN PARENTHESES ARE ACTUAL AIR FLOW RATES BASED ON DENSITY AT DESIGN CONDITIONS.
17. FILTRATION UNITS CPX-VAFUPK-01,02,15,16 ARE ESF. FILTRATION UNITS CPX-VAFUPK-03,04,05,06,07,08,09 , AND CPX-VAFUPK-10,11,12,13,14 ARE NON ESF.
18. * SHOWS COMPONENT IS BY VENDOR.
19. FILTRATION UNIT MAXIMUM AIR FLOW CAPACITY OF 15,000 CFM IS NOT TO BE EXCEEDED AT ALL MODES AND CONDITIONS.
20. DAMPER ABANDONED IN-PLACE (IN OPEN POSITION). ALL AIR CONNECTIONS ARE CLOSED AND ELECTRICAL CONNECTIONS ARE DISCONNECTED.
21. AIR EQUALIZER IS REMOVED, STATIC AND TOTAL PRESSURE SENSORS ARE INSTALLED.
22. THE AIR FLOW RATES SHOWN ARE ORIGINAL VALUES FOR INITIAL FLOW BALANCING AND DO NOT REPRESENT AS-BUILT AIR FLOW. IS BALANCED TO MAINTAIN ROOM TEMPERATURES WITHIN DESIGN DURING NORMAL OPERATION AND TO ENSURE THE DIRECTION OF AIR FLOW IS AS SHOWN.

REFERENCES:

| | | |
|---|---|---|
| 1. | M1-0313 | FLOW DIAGRAM - VENTILATION AAP BLDG AND CONTROL BLDG UPS AREA A/C SYSTEMS |
| 2. | M1-0200 | MECHANICAL DRAWING NOTES AND SYMBOLS |
| 3. | M1-0301 | FLOW DIAGRAM - VENTILATION CONTAINMENT |
| 4. | M1-0225-02A | FLOW DIAGRAM - AUXILIARY BUILDING FIRE PROTECTION |
| 5. | M1-0303-C | FLOW DIAGRAM - VENTILATION AUXILIARY BUILDING |
| 6. | M1-0303-01 | FLOW DIAGRAM - VENTILATION FUEL HANDLING BUILDING |
| 7. | M2-0302 | FLOW DIAGRAM - VENTILATION SAFEGUARDS AND ELECTRICAL AREA |
| 8. | M2-0301 | FLOW DIAGRAM - VENTILATION CONTAINMENT |
| 9. | M1-0236-01A M1-0236-02 | FLOW DIAGRAM - VENTS AND DRAINS SYSTEM |
| 10. | FLO-353-1700 | GENERAL ATOMIC-OUTLINE AND FLOW DIAGRAM |
| 11. | 0366-1600 0366-2000 | GENERAL ATOMIC SAMPLE CONDITIONING SKID SAMPLE DETECTION SKID |
| 12. | 0353-5100 | GENERAL ATOMIC - ISOKINETIC NOZZLE PROBE INSTALLATION (WRGM) |
| 13. | M1-0309-A | FLOW DIAGRAM - VENTILATION PRIMARY PLANT SUPPLY AND EXHAUST |
| 14. | M1-0309-B | FLOW DIAGRAM - VENTILATION PRIMARY PLANT SUPPLY AND EXHAUST |

FSAR FIGURE 9.4-9

THIS DRAWING CREATED ELECTRONICALLY

DRAWING M1-0309 REV CP-9
HAS BEEN SPLIT INTO THE FOLLOWING SHEETS:
M1-0309
M1-0309-A
M1-0309-B

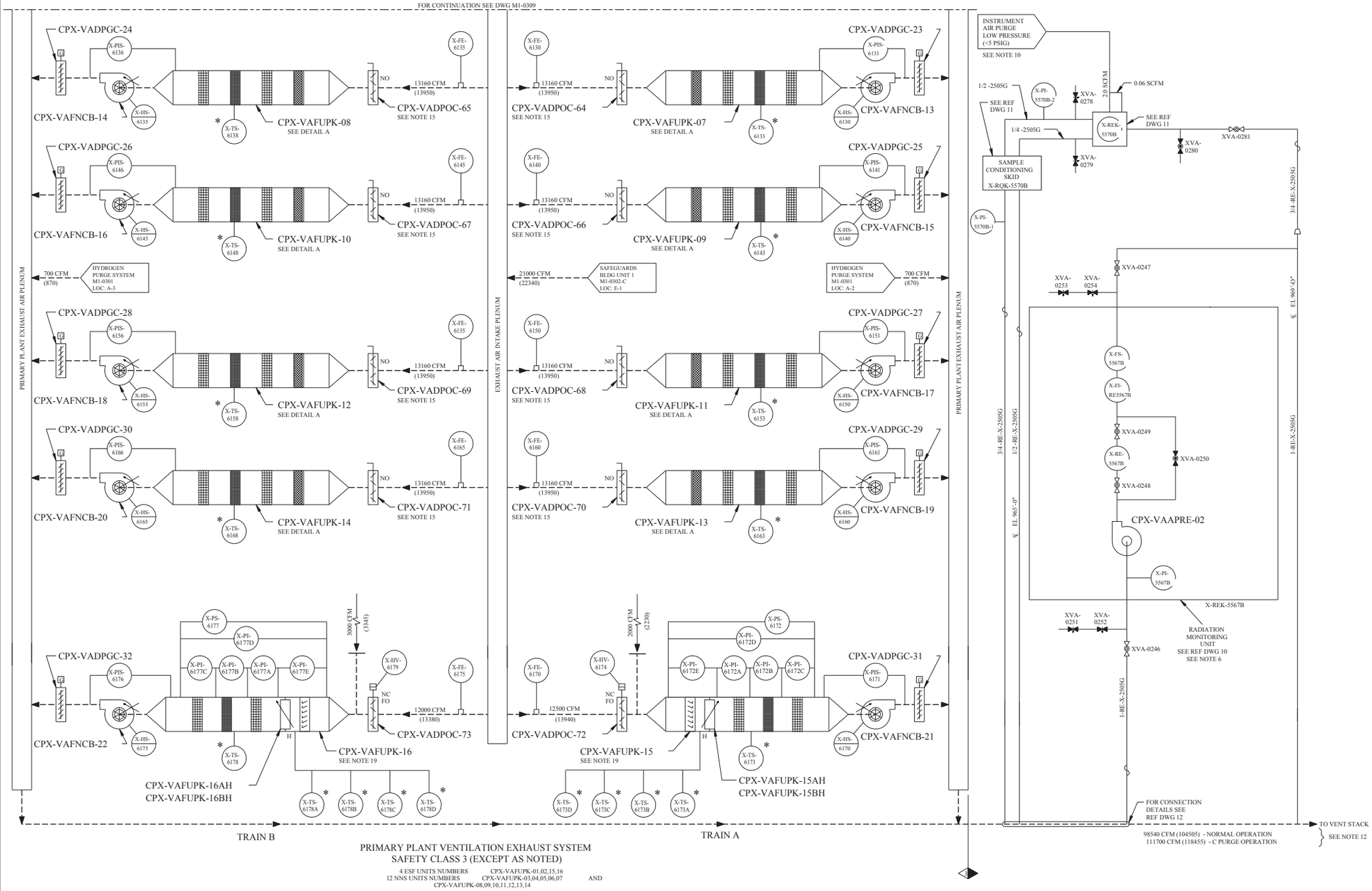
CLASS I
(NUCLEAR SAFETY-RELATED)
SAFETY CLASS 1
SAFETY CLASS 2
SAFETY CLASS 3
SEISMIC CATEGORY I
CLASS 1E
ASSOCIATED CIRCUITS

LUMINANT
CPSES
GLEN ROSE, TEXAS

FLOW DIAGRAM
VENTILATION PRIMARY PLANT
SUPPLY AND EXHAUST

DWG. NO. M1-0309 | SH. NO. - | REV. CP-30

me677600.dgn A M1-0309 B C D E F G FINAL PRINT H




| REV | DWN | CHK | APVD | REMARKS |
|---|---|---|---|---|
| CP-20 | MM 01-09 2006 | DLE 01-09 2006 | | THIS DRAWING REVISED TO INCORPORATE DESIGN CHANGE FDA-2003-002423-01-00 PER SK-0008-03-002423-01-00. |

NOTES:

1. FOR HVAC ABBREVIATIONS AND SYMBOLS SEE DRAWINGS M1-0313 AND M1-0200.
2. DELETED
3. THIS DIAGRAM IS A SCHEMATIC REPRESENTATION AND IS INTENDED TO SHOW GENERAL AIR DISTRIBUTION AND FLOW PATHS.
4. BALANCING DAMPERS, REGISTERS, DIFFUSERS, FLEXIBLE CONNECTIONS AND ALL OTHER RELATED ACCESSORIES NOT SHOWN ON THIS DIAGRAM SHALL BE PROVIDED AS INDICATED ON THE HVAC ARRANGEMENT DRAWINGS AND SPECIFICATIONS.
5. THIS FLOW DIAGRAM IS COMMON FOR UNITS 1 AND 2.
6. FOR LOGIC OF CHANNEL NUMBER X-RE-5570A, X-RE-5570B, X-RE-5567A AND X-RE-5567B SEE ICD M1-2301-10.
7. IN LINE AIR FLOW ELEMENTS ARE PROVIDED TO MEASURE AIR FLOW THRU DUCTS. MANUAL ADJUSTMENT OF THE INLET VANES ON EXHAUST FANS IS METHOD OF CONTROLLING FLOW. INSTRUMENT CONNECTIONS ARE PROVIDED WITH FLOW ELEMENTS. FLOW ELEMENTS 1-FE-6175B AND 1-FE-6175F ARE SHOWN ON DRAWING M1-0301 FLOW ELEMENTS 2-FE-6175B AND 2-FE-6175F ARE SHOWN ON DRAWING M2-0301. FLOW ELEMENT X-FE-6175C IS SHOWN ON DRAWING M1-0301-01.
8. DELETED
9. THREE ISOKINETIC NOZZLES ARE PROVIDED AT REFERENCE ELEVATION.
10. FOR INSTRUMENT PURGE LOW PRESSURE (<5 PSIG) CLEAN DRY PURGE GAS FLOW RATE 2.0 SCFM AND 0.06 SCFM FOR EACH MONITOR.
11. MIN SLOPE 1/4 " : 12" TOWARD ALL MONITORS.
12. AIR FLOW THRU VENT STACK IS BASED ON THE MAXIMUM CAPACITY OF THE OPERATING UNITS.
13. FOR DRAIN FLOW ORIFICE NUMBERS AND LINE CONTINUATION SEE DRAWING M1-0225-02 AND 02A, LOC: C, D, E AND F-2.
14. NOT WITHIN ASME CODE BOUNDARY.
15. MANUAL OPERATION (DISCONNECTED OPERATOR).
16. AIR FLOW QUANTITIES SHOWN ARE BASED ON A DENSITY OF 0.075 LB/FT OCCURRING AT THE STANDARD CONDITION OF DRY AIR AT 70°F AND 29.92" HG BAROMETRIC PRESSURE. QUANTITIES IN PARENTHESES ARE ACTUAL AIR FLOW RATES BASED ON DENSITY AT DESIGN CONDITIONS.
17. FILTRATION UNITS CPX-VAFUPK-01,02,15,16 ARE ESF. FILTRATION UNITS CPX-VAFUPK-03,04,05,06,07,08,09 AND CPX-VAFUPK-10,11,12,13,14 ARE NON ESF.
18. ✻ SHOWS COMPONENT IS BY VENDOR
19. FILTRATION UNIT MAXIMUM AIR FLOW CAPACITY OF 15,000 CFM IS NOT TO BE EXCEEDED AT ALL MODES AND CONDITIONS.
20. THE AIR FLOW RATES SHOWN ARE ORIGINAL VALUES FOR INITIAL FLOW BALANCING AND DO NOT REPRESENT AS-BUILT. AIR FLOW IS BALANCED TO MAINTAIN ROOM TEMPERATURES WITHIN DESIGN DURING NORMAL OPERATION AND TO ENSURE THE DIRECTION OF AIR FLOW IS AS SHOWN.

REFERENCES:

| | | |
|---|---|---|
| 1. | M1-0313 | FLOW DIAGRAM - VENTILATION AAP BLDG AND CONTROL BLDG UPS AREA A/C SYSTEMS |
| 2. | M1-0200 | MECHANICAL DRAWING NOTES AND SYMBOLS |
| 3. | M1-0301 | FLOW DIAGRAM - VENTILATION CONTAINMENT |
| 4. | M1-0302-C | FLOW DIAGRAM - VENTILATION SAFEGUARDS AND ELECTRICAL AREA |
| 5. | M1-0236-01A M1-0236-02 | FLOW DIAGRAM - VENTS AND DRAINS SYSTEM |
| 6. | M1-0225-02 | FLOW DIAGRAM - AUXILIARY BUILDING FIRE PROTECTION |
| 7. | M1-0225-02A | FLOW DIAGRAM - AUXILIARY BUILDING FIRE PROTECTION |
| 8. | M1-0309 | FLOW DIAGRAM - VENTILATION PRIMARY PLANT SUPPLY AND EXHAUST |
| 9. | M1-0309-B | FLOW DIAGRAM - VENTILATION PRIMARY PLANT SUPPLY AND EXHAUST |
| 10. | FLO-353-1700 | GENERAL ATOMIC - OUTLINE AND FLOW DIAGRAM |
| 11. | 0366-1600 0366-2000 | GENERAL ATOMIC SAMPLE CONDITIONING SKID SAMPLE DETECTION SKID |
| 12. | 0353-5100 | GENERAL ATOMIC - ISOKINETIC NOZZLE PROBE INSTALLATION (WRGM) |

FSAR FIGURE 9.4-9

THIS DRAWING CREATED ELECTRONICALLY

DRAWING M1-0309 REV CP-9
HAS BEEN SPLIT INTO THE FOLLOWING SHEETS:
M1-0309
M1-0309-A
M1-0309-B

PRIMARY PLANT VENTILATION SUMMARY

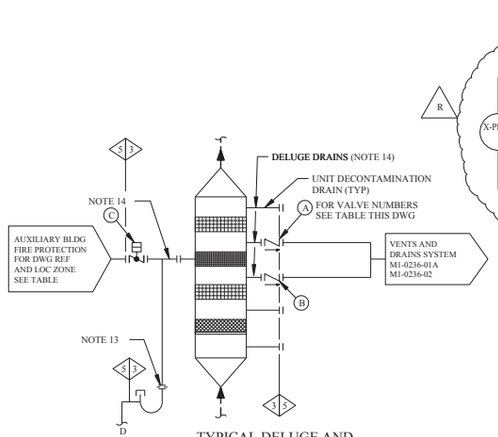
| | PPVSS | | PPVES | | |
|---|---|---|---|---|---|
| | CFM DESIGN FLOW * | NO UNITS | CFM DESIGN FLOW * SCFM | ACFM | NO UNITS |
| AUXILIARY BLDG | 81,600 | | 94,000 | 99,380 | |
| FUEL HANDLING BLDG | 33,500 | | 34,500 | 36,700 | |
| SAFEGUARD BLDG - U1 | 20,200 | | 21,000 | 22,340 | |
| SAFEGUARD BLDG - U2 | 20,700 | | 21,580 | 22,930 | |
| NORMAL MODE U1 AND U2 | 156,000 | 6 | 171,080 | 181,350 | 13 |
| CONT BLDG PURGE U1 OR U2 | 26,000 | | 26,000 | 27,900 | |
| PURGE MODE U1 OR U2 | 161,300 | 7 | 197,080 | 209,250 | 15 |

* ACCEPTANCE CRITERIA FOR TESTING AND BALANCING SHOULD BE BASED ON TOTAL DESIGN AIR FLOWS, AND PROVIDING SLIGHTLY NEGATIVE PRESSURE WITHIN THE PRESSURE BOUNDARY.

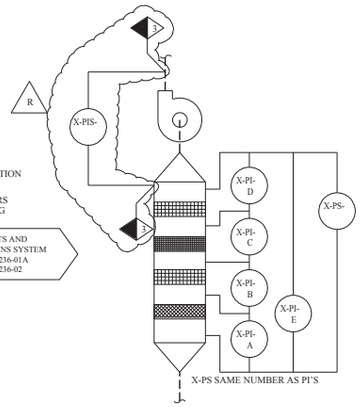
VALVE AND INSTRUMENT TABLE

| FILTRATION UNIT NUMBER (SEE NOTE 17) | DELUGE DRAIN VALVES | | DELUGE SUPPLY | | PRESSURE SWITCHES AND PRESSURE INDICATORS A, B, C, D AND E | PRESSURE INDICATING SWITCH |
|---|---|---|---|---|---|---|
| | (A) | (B) | (C) | DRAWING REF. AND ZONE LOCATION | | |
| CPX-VAFUPK-07 | CPX-VADPCK-13 | CPX-VADPCK-14 | XFP-0650 | M1-0225-02A LOC: A-1 | 6132 | 6131 |
| CPX-VAFUPK-08 | CPX-VADPCK-15 | CPX-VADPCK-16 | XFP-0641 | M1-0225-02A LOC: A-2 | 6137 | 6136 |
| CPX-VAFUPK-09 | CPX-VADPCK-17 | CPX-VADPCK-18 | XFP-0649 | M1-0225-02 LOC: F-1 | 6142 | 6141 |
| CPX-VAFUPK-10 | CPX-VADPCK-19 | CPX-VADPCK-20 | XFP-0640 | M1-0225-02 LOC: F-2 | 6147 | 6146 |
| CPX-VAFUPK-11 | CPX-VADPCK-21 | CPX-VADPCK-22 | XFP-0647 | M1-0225-02 LOC: E-1 | 6152 | 6151 |
| CPX-VAFUPK-12 | CPX-VADPCK-23 | CPX-VADPCK-24 | XFP-0638 | M1-0225-02 LOC: D-2 | 6157 | 6156 |
| CPX-VAFUPK-13 | CPX-VADPCK-25 | CPX-VADPCK-26 | XFP-0646 | M1-0225-02 LOC: D-1 | 6162 | 6161 |
| CPX-VAFUPK-14 | CPX-VADPCK-27 | CPX-VADPCK-28 | XFP-0637 | M1-0225-02 LOC: D-2 | 6167 | 6166 |
| CPX-VAFUPK-15 | CPX-VADPCK-29 | CPX-VADPCK-30 | XFP-0645 | M1-0225-02 LOC: C-1 | SEE DIAGRAM | SEE DIAGRAM |
| CPX-VAFUPK-16 | CPX-VADPCK-31 | CPX-VADPCK-32 | XFP-0636 | M1-0225-02 LOC: C-2 | SEE DIAGRAM | SEE DIAGRAM |

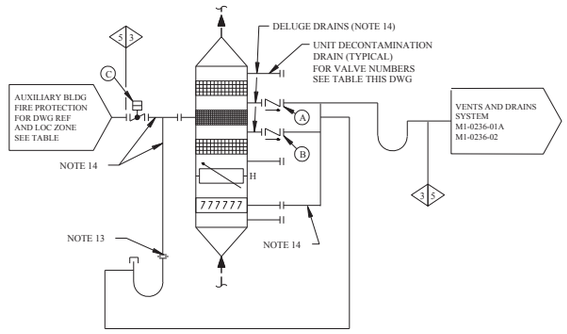
R




TYPICAL DELUGE AND DRAIN CONNECTIONS FOR NON ESF FILTRATION UNITS




DETAIL A
TYPICAL FOR CPX-VAFUPK-07,08, 09,10,11,12,13,14
SEE TABLE



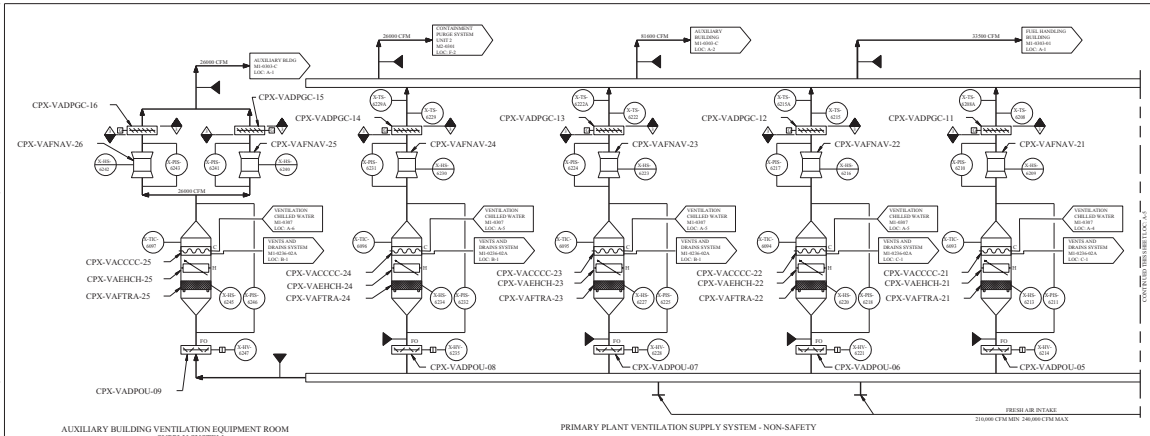

TYPICAL DELUGE AND DRAIN CONNECTIONS FOR ESF FILTRATION UNITS CPX-VAFUPK-15 AND CPX-VAFUPK-16

CLASS I
(NUCLEAR SAFETY-RELATED)
SAFETY CLASS 1 SEISMIC CATEGORY I
SAFETY CLASS 2 CLASS 1E
SAFETY CLASS 3 ASSOCIATED CIRCUITS

LUMINANT
CPSES
GLEN ROSE, TEXAS

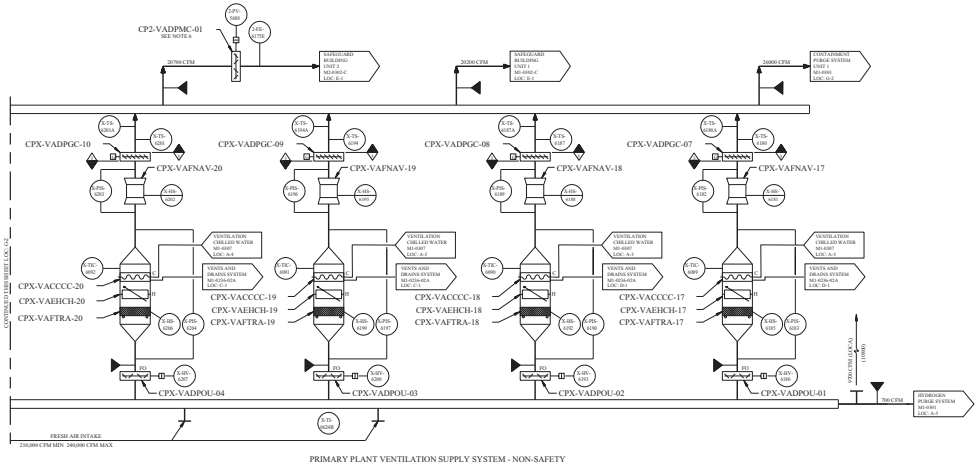
FLOW DIAGRAM
VENTILATION PRIMARY PLANT
SUPPLY AND EXHAUST

| DWG. NO. | SH. NO. | REV. |
|---|---|---|
| M1-0309 | A | CP-20 |




AUXILIARY BUILDING VENTILATION EQUIPMENT ROOM SUPPLY SYSTEM
NON-SAFETY
2 FANS - (1 STANDBY)
26000 CFM EACH

PRIMARY PLANT VENTILATION SUPPLY SYSTEM - NON-SAFETY




PRIMARY PLANT VENTILATION SUPPLY SYSTEM - NON-SAFETY
EIGHT UNITS 26000 CFM EACH
6 UNITS - NORMAL OPERATION
7 UNITS - NORMAL OPERATION & CONTAINMENT PURGE
1 UNIT - STANDBY

| REV. | DRN | CHKD | APP'D | REMARKS |
|---|---|---|---|---|
| 09-11 | Nick Kaiser | Mike Kaiser | | THIS DRAWING REVISED TO INCORPORATE DESIGN CHANGE TMA 3001-2010-003-01-00 PER ISO-0303-01-00/001-01-00. |

NOTES:

1. FOR HVAC ABBREVIATIONS AND SYMBOLS SEE DRAWINGS M1-0313 AND M1-0200.
2. THIS DIAGRAM IS A SCHEMATIC REPRESENTATION AND IS INTENDED TO SHOW GENERAL AIR DISTRIBUTION AND FLOW PATHS.
3. BALANCING DAMPERS, REGISTERS, DIFFUSERS, FLEXIBLE CONNECTIONS AND ALL OTHER RELATED ACCESSORIES NOT SHOWN ON THIS DIAGRAM SHALL BE PROVIDED AS INDICATED ON THE HVAC ARRANGEMENT DRAWINGS AND SPECIFICATIONS.
4. THIS FLOW DIAGRAM IS COMMON FOR UNITS 1 AND 2.
5. AIR FLOW QUANTITIES SHOWN ARE BASED ON A DENSITY OF 0.075 LB/FT OCCURRING AT THE STANDARD CONDITION OF DRY AIR AT 70°F AND 29.92" HG BAROMETRIC PRESSURE. QUANTITIES IN PARENTHESES ARE ACTUAL AIR FLOW RATES BASED ON DENSITY AT DESIGN CONDITIONS.
6. DAMPER ABANDONED IN-PLACE (IN OPEN POSITION), ALL AIR CONNECTIONS AND ELECTRICAL CONNECTIONS ARE DISCONNECTED.
7. AIR FLOW RATES SHOWN ARE ORIGINAL DESIGN VALUES FOR INITIAL FLOW BALANCING AND DO NOT REPRESENT AS-BUILT. AIR FLOW IS BALANCED TO MAINTAIN ROOM TEMPERATURES WITHIN THE REQUIRED RANGE OF OPERATION AND TO ENSURE THE DIRECTION OF AIR FLOW IS AS SHOWN.

REFERENCES:

| | | |
|---|---|---|
| 1. | M1-0313 | FLOW DIAGRAM - VENTILATION AAP BLDG AND CONTROL BLDG UPS AREA A/C SYSTEMS |
| 2. | M1-0200 | MECHANICAL DRAWING NOTES AND SYMBOLS |
| 3. | M1-0301 | FLOW DIAGRAM-VENTILATION CONTAINMENT |
| 4. | M1-0303-C | FLOW DIAGRAM-VENTILATION AUXILIARY BUILDING |
| 5. | M1-0303-01 | FLOW DIAGRAM-VENTILATION FUEL HANDLING BUILDING |
| 6. | M2-0302 | FLOW DIAGRAM-VENTILATION SAFEGUARD AND ELECTRICAL AREA |
| 7. | M2-0301 | FLOW DIAGRAM-VENTILATION CONTAINMENT |
| 8. | M1-0307 | FLOW DIAGRAM - VENTILATION CHILLED WATER SYSTEM |
| 9. | M1-0309 | FLOW DIAGRAM - VENTILATION PRIMARY PLANT SUPPLY AND EXHAUST |
| 10. | M1-0309-A | FLOW DIAGRAM - VENTILATION PRIMARY PLANT SUPPLY AND EXHAUST |
| 11. | M1-0236-02A | FLOW DIAGRAM - VENTS AND DRAIN SYSTEM - AUXILIARY BUILDING |

FSAR FIGURE 9.4-9

THIS DRAWING IS CONTAINED IN FSAR CHAPTER(S) 9

| DRAWING M1-0309 REV CP-9 HAS BEEN SPLIT INTO THE FOLLOWING SHEETS: |
|---|
| M1-0309 |
| M1-0309-A |
| M1-0309-B |

CLASS I
(NUCLEAR SAFETY-RELATED)
SAFETY CLASS 1 — SEISMIC CATEGORY I
SAFETY CLASS 2 — CLASS 1E
SAFETY CLASS 3 — QUALIFIED CIRCUITS

TXU POWER
CPSES
GLEN ROSE, TEXAS

FLOW DIAGRAM
VENTILATION AND PRIMARY PLANT
SUPPLY AND EXHAUST

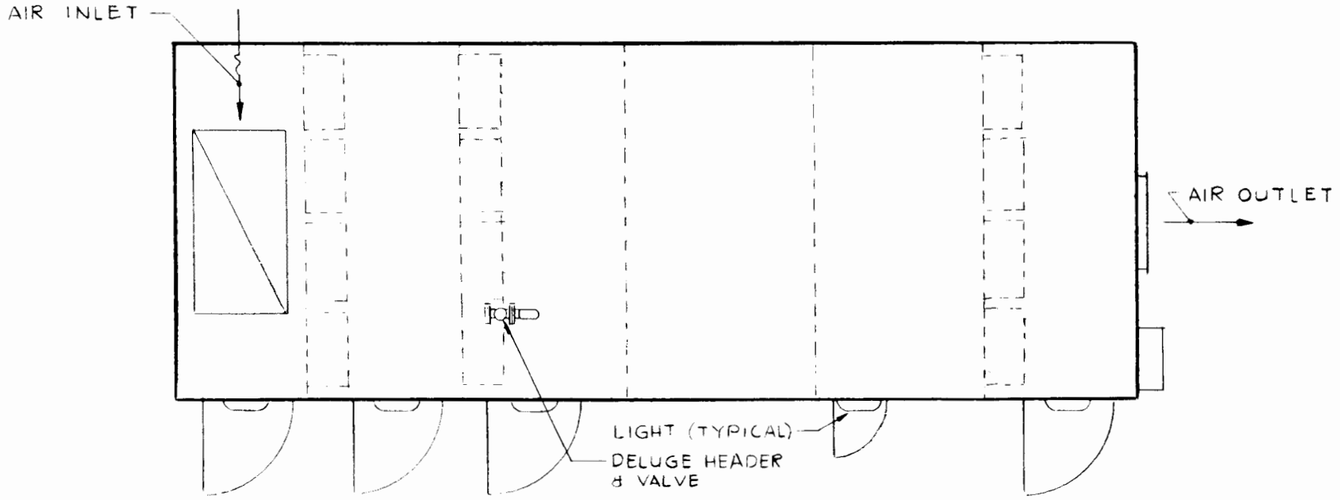
| DWG. NO. | SH. NO. | REV. |
|---|---|---|
| M1-0309 | B | CP-11 |

REF: CORLD 5301.2001

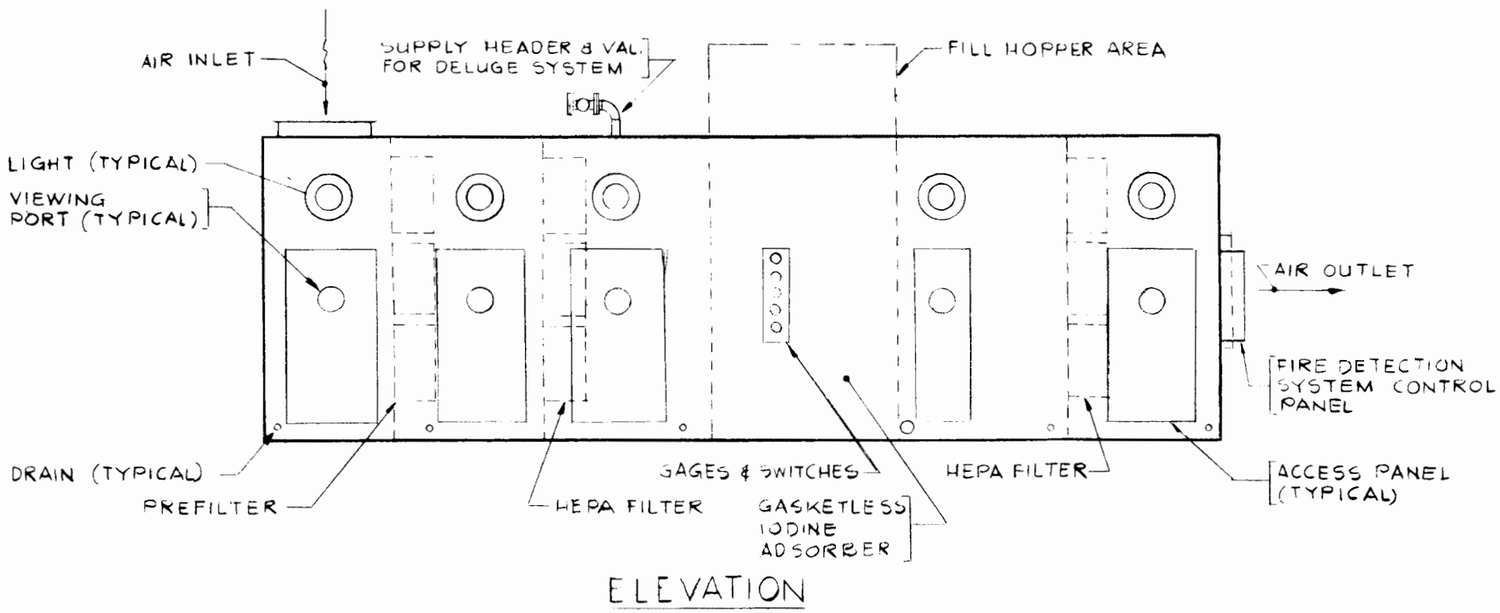
SEISMIC AREAS

nuc515200.dgn

M1-0309-B




PLAN




ELEVATION

COMANCHE PEAK S.E.S.
FINAL SAFETY ANALYSIS REPORT
UNITS 1 and 2

NON-ESF
CHARCOAL FILTER TRAIN

FIGURE 9.4.10

| REV | DWN | CHKD | APVD | REMARKS |
|---|---|---|---|---|
| CP-46 | MM 08-08 2015 | GAW 08-08 2015 | | THIS DRAWING REVISED TO INCORPORATE DESIGN CHANGE FDA-2015-000087-01-00 PER SK-0001-15-000087-01-00. |

NOTES:

1. SEE DRAWING M1-0200 AND M1-0313 FOR I/C AND MECHANICAL SYMBOLS.
2. FOR UNIT 2 PIPE SIZES AND EQUIPMENT IDENTIFICATION SEE DWG M2-0307.
3. SEE TRANE COMPANY DRAWINGS E6000.2450 AND B6000.3134 FOR DETAILS ON ELECTRICAL CONNECTIONS AND LOGIC FS CONNECTIONS.
4. ALL VENTS, DRAINS AND INSTRUMENTATION PIPES HAVE LINE DESIGNATION □-152-5 IN ALL BUILDINGS EXCEPT TURBINE BLDG, WHICH ARE □-152G, UNLESS OTHERWISE NOTED.
5. TEMPORARY STRAINERS CPX-CHSRPS-01,02,03,04 AND TEMPORARY STRAINERS FOR PUMPS CPX-CHAPCP-12,13,14 ARE PLACED IN THE SPOOL PIECES DURING INITIAL FLUSHING OPERATIONS. STRAINERS MUST BE REMOVED AT PLANT START-UP.
6. UNLESS OTHERWISE NOTED, DRAINS COLLECTED BY CCW DRAIN SYSTEM.
7. DELETED
8. PROVIDE VENTS AT HIGH POINTS AND DRAINS AT LOW POINTS ON PIPING SYSTEM.
9. COOLING COIL DETAILS FOR UNITS CPX-VACCCC-17,18,19,20,21,22,23,24,25 ARE SHOWN ON DWG M1-0307-C.
10. VALVE HAS BEEN "TEAM LEAKED" BUT IS NO LONGER TRACKED UNDER THE TEMP MOD PROCESS. ANY FURTHER REWORK SHOULD BE ADDRESSED BY THE NORMAL WORK PROCESS.
11. CONNECTIONS ARE FOR COMPENSATORY ACTIONS IF THE INSTALLED UNITS ARE UNABLE TO PROVIDE ADEQUATE COOLING.

R

REFERENCES:

| | |
|---|---|
| M1-0307-A | FLOW DIAGRAM VENTILATION CHILLED WATER SYSTEM |
| M1-0307-B | FLOW DIAGRAM VENTILATION CHILLED WATER SYSTEM |
| M1-0307-C | FLOW DIAGRAM VENTILATION CHILLED WATER SYSTEM |
| M2-0307 | FLOW DIAGRAM VENTILATION CHILLED WATER SYSTEM |
| M1-0230-B | COMPONENT COOLING WATER SYSTEM |
| M1-0236-01A | VENTS AND DRAINS SYSTEM |
| M1-0222-A | SECONDARY SAMPLING SYSTEM |
| M1-0242-A | DEMINERALIZED AND REACTOR MAKE-UP WATER |
| M1-0210-B | CIRCULATING WATER SYSTEM |

FSAR FIGURE 9.4-11

THIS DRAWING CREATED ELECTRONICALLY

DRAWING M1-0307 REV CP-11
HAS BEEN SPLIT INTO THE FOLLOWING SHEETS:
M1-0307
M1-0307-B
M1-0307-C

DRAWING 2323-M1-0307 REV CP-8
HAS BEEN SPLIT INTO THE FOLLOWING SHEETS:
M1-0307
M1-0307-A

CLASS III

LUMINANT
CPNPP
GLEN ROSE, TEXAS

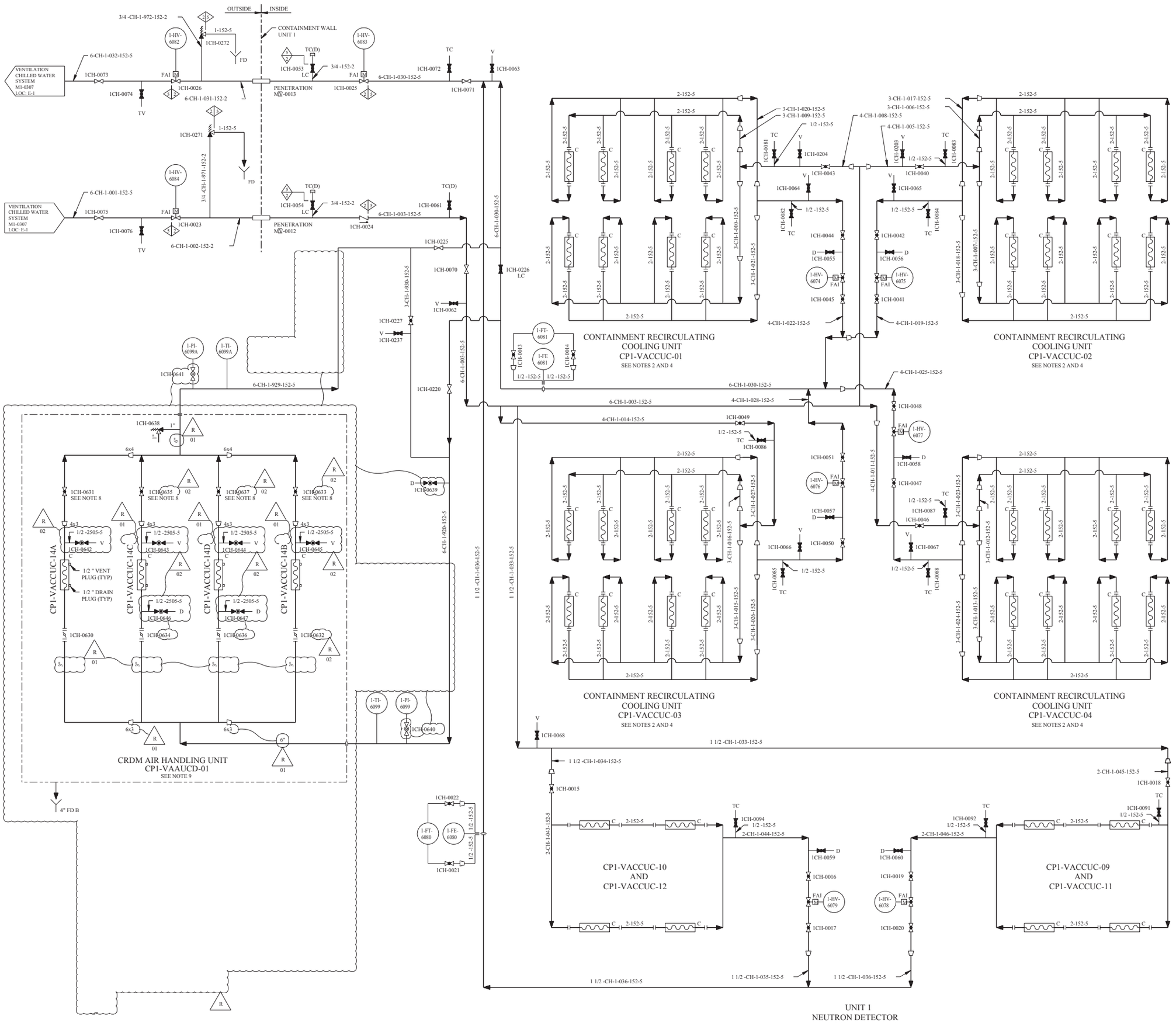
FLOW DIAGRAM VENTILATION CHILLED WATER SYSTEM

DWG. NO. M1-0307 | SH. NO. - | REV. CP-46

FINAL PRINT

REF CKD CP-28 12/19/96

me991300.dgn A M1-0307




| REV | DWN | CHKD | APVD | REMARKS |
|---|---|---|---|---|
| CP-8 | GLC 03-19 2007 | GAW 03-19 2007 | | THIS DRAWING REVISED TO INCORPORATE DESIGN CHANGE FDA 2004-002710-03-03 PER SK-0037-04-002710-03-02. |

NOTES:

1. SEE DRAWINGS M1-0200 AND M1-0313 FOR I&C AND MECHANICAL SYMBOLS.
2. ONE OF THE FOUR CONTAINMENT RECIRCULATING COOLING UNITS IS STANDBY.
3. DELETED
4. FOR CONDENSATE FROM COOLING COILS CP1-VACCUC-01 , CP1-VACCUC-02 ,CP1-VACCUC-03 AND CP1-VACCUC-04 SEE DRAWING M1-0238-A LOCATION E-6.
5. ALL VENTS, DRAINS AND INSTRUMENTATION PIPES HAVE LINE DESIGNATION 3/4 -152-5 IN ALL BUILDINGS EXCEPT TURBINE BUILDING, WHICH ARE 3/4 -152G, UNLESS OTHERWISE NOTED.
6. UNLESS OTHERWISE NOTED, DRAINS COLLECTED BY CCW DRAIN SYSTEM.
7. PROVIDE VENTS AT HIGH POINTS AND DRAINS AT LOW POINTS ON PIPING SYSTEM.
8. CIRCUIT SETTER CALIBRATED BALANCE VALVE.
9. SEE GENERAL ARRANGEMENT DRAWING N1559-GA SERIES FOR THE AIR HANDLING UNIT (AHU) FOR THE CRDM VENTILATION SYSTEM. SEE N1559-CP FOR THE CONTAINMENT COOLER PIPING LAYOUT.

R

REFERENCES:

| | |
|---|---|
| M1-0307 | FLOW DIAGRAM VENTILATION CHILLED WATER SYSTEM |
| M1-0200 | MECHANICAL SYMBOLS AND NOTES |
| M1-0313 | FLOW DIAGRAM VENTILATION AAP BUILDING AND CONTROL BUILDING UPS AREA A/C SYSTEMS |

FSAR FIGURE 9.4-11

THIS DRAWING CREATED ELECTRONICALLY

DRAWING 2323-M1-0307 REV CP-8
HAS BEEN SPLIT INTO THE FOLLOWING SHEETS:
M1-0307
M1-0307-A

CLASS I
(NUCLEAR SAFETY-RELATED)
SAFETY CLASS 1 SEISMIC CATEGORY I
SAFETY CLASS 2 CLASS 1E
SAFETY CLASS 3 ASSOCIATED CIRCUITS

LUMINANT
CPSES
GLEN ROSE, TEXAS

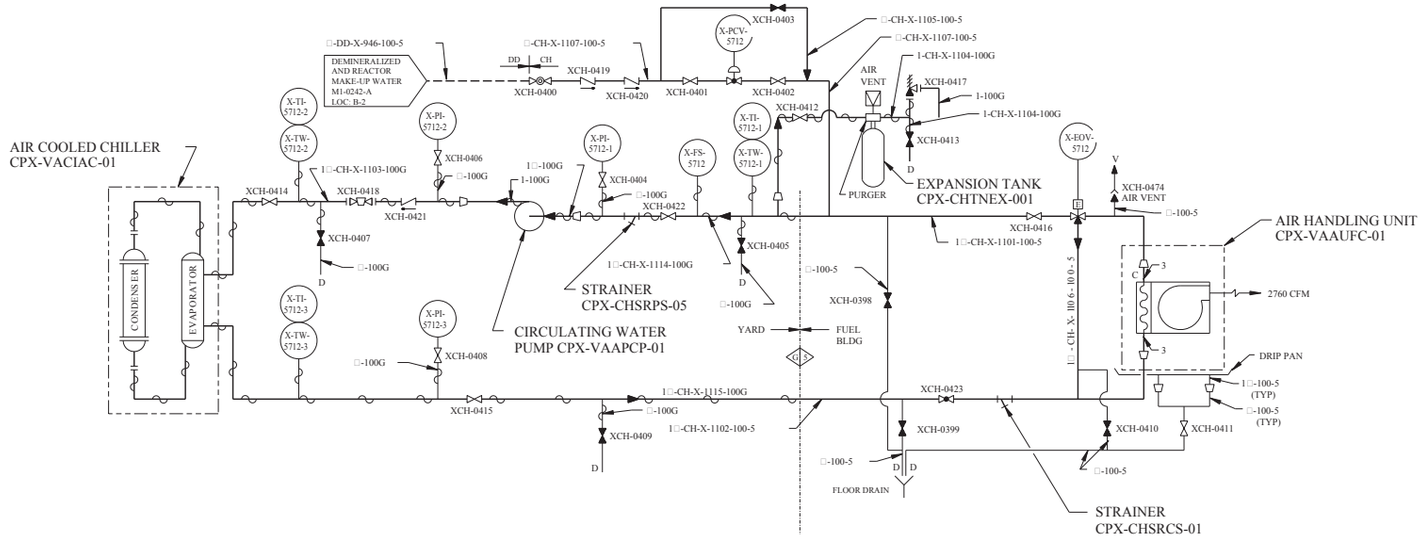
FLOW DIAGRAM
VENTILATION
CHILLED WATER SYSTEM

DWG. NO. M1-0307 | SH. NO. A | REV. CP-8

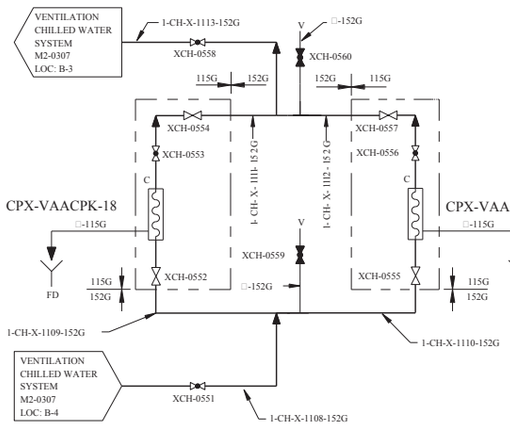
FINAL PRINT

REF CKD CP-6 8/12/97

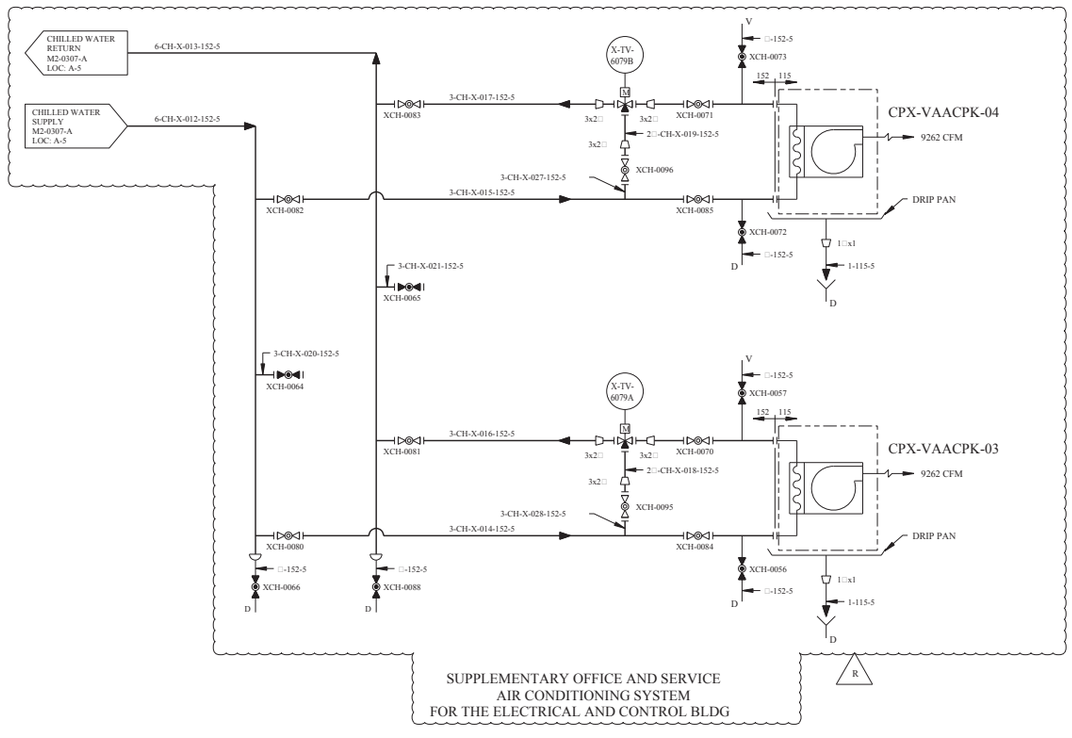
me757700.dgn A M1-0307-A



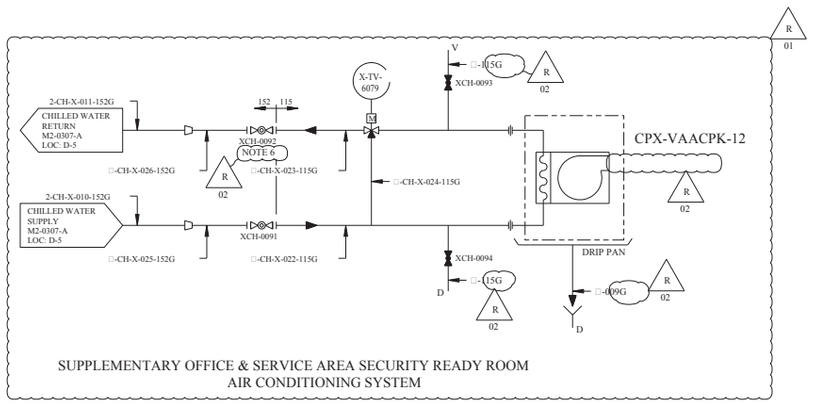

SUPPLEMENTARY AIR CONDITIONING SYSTEM
FOR THE FUEL HANDLING BLDG




SUPPLEMENTARY VENTILATION CHILLED WATER SYSTEM
TURBINE BLDG OFFICE AREA, ROOM 39: ALTERNATE RCA ACCESS




SUPPLEMENTARY OFFICE AND SERVICE
AIR CONDITIONING SYSTEM
FOR THE ELECTRICAL AND CONTROL BLDG




SUPPLEMENTARY OFFICE & SERVICE AREA SECURITY READY ROOM
AIR CONDITIONING SYSTEM

| REV | DWN | CHKD | APVD | REMARKS |
|---|---|---|---|---|
| CP-8 | DJK 07-30-2012 | MM 07-30-2012 | | THIS DRAWING REVISED TO INCORPORATE DESIGN CHANGE FDA 2009-001966-02-07 PER SK-00060-09-001966-02-02. |

NOTES:

1. SEE DRAWINGS M1-0200 AND M1-0313 FOR I/C AND MECHANICAL SYMBOLS.
2. ALL VENTS, DRAINS AND INSTRUMENTATION PIPES HAVE LINE DESIGNATION □-152-5 IN ALL BUILDINGS EXCEPT TURBINE BUILDING, WHICH ARE □-152G, UNLESS OTHERWISE NOTED.
3. UNLESS OTHERWISE NOTED, DRAINS COLLECTED BY CCW DRAIN SYSTEM.
4. PROVIDE VENTS AT HIGH POINTS AND DRAINS AT LOW POINTS ON PIPING SYSTEM.
5. VENDOR SUPPLIED COMPONENTS (WHERE APPLICABLE) SHALL BE HEAT TRACED AND INSULATED FOR FREEZE PROTECTION.
6. THROTTLE VALVE (XCH-0092) DOWNSTREAM OF FAN COIL UNIT TO BE LOCKED IN POSITION (LIP) AFTER BALANCING OF CHILLED WATER THROUGH CPX-VAACPK-12 COIL.

R 02

REFERENCE DRAWINGS:

| | |
|---|---|
| M1-0242-A | FLOW DIAGRAM DEMINERALIZED AND REACTOR MAKE-UP WATER SHEET 4 OF 5 |
| M1-0200 | MECHANICAL SYMBOLS AND NOTES |
| M1-0313 | FLOW DIAGRAM VENTILATION AAP BLDG AND CONTROL BLDG UPS AREA A/C SYSTEMS |

R 01

FSAR FIGURE 9.4-11

THIS DRAWING CREATED ELECTRONICALLY

DRAWING M1-0307 REV CP-11
HAS BEEN SPLIT INTO THE FOLLOWING SHEETS:
M1-0307
M1-0307-B
M1-0307-C

CLASS II

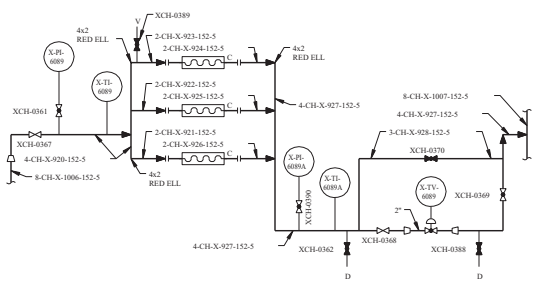
LUMINANT
CPNPP
GLEN ROSE, TEXAS

FLOW DIAGRAM - VENTILATION
CHILLED WATER SYSTEM

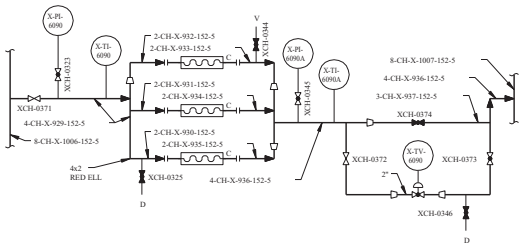
DWG NO. M1-0307 | SH. NO. B | REV. CP-8

$$$$$$$DATE$$$$$$$

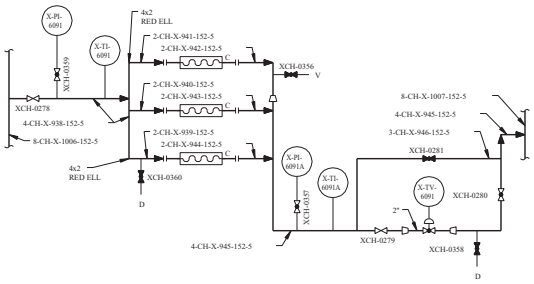
me102260.dgn A M1-0307-B B C D E F G < FINAL PRINT > H



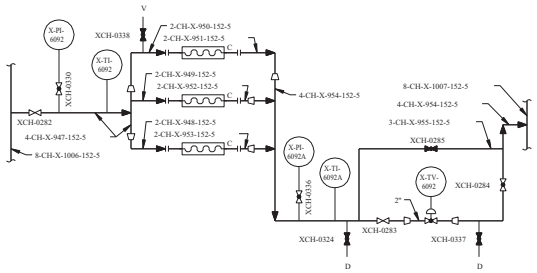

COOLING COILS CPX-VACCCC-17
REF DWG M1-0307 LOCATION (A-2)



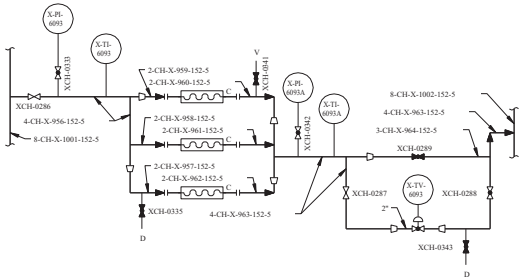

COOLING COILS CPX-VACCCC-18
REF DWG M1-0307 LOCATION (A-3)



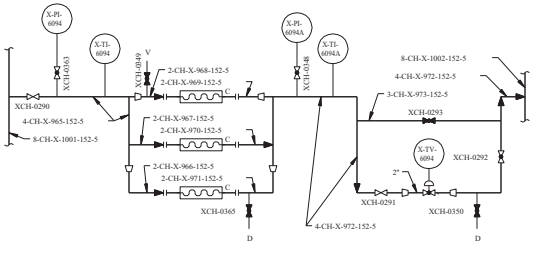

COOLING COILS CPX-VACCCC-19
REF DWG M1-0307 LOCATION (A-3)



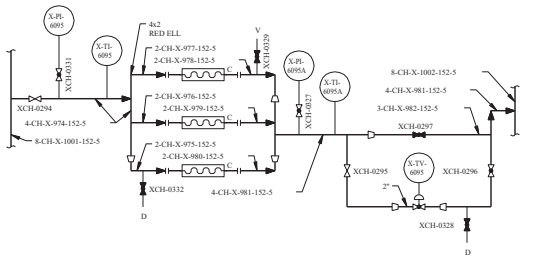

COOLING COILS CPX-VACCCC-20
REF DWG M1-0307 LOCATION (A-3)



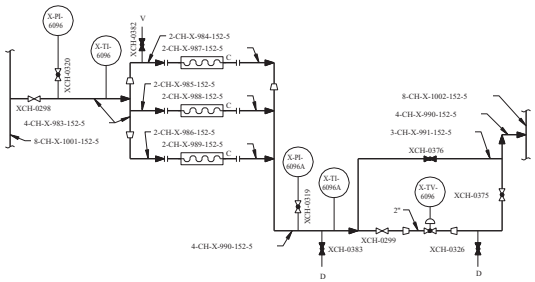

COOLING COILS CPX-VACCCC-21
REF DWG M1-0307 LOCATION (A-4)



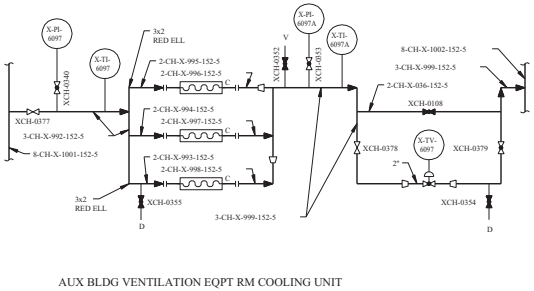

COOLING COILS CPX-VACCCC-22
REF DWG M1-0307 LOCATION (A-4)



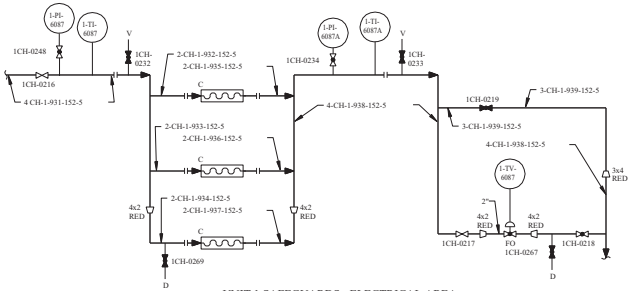

COOLING COILS CPX-VACCCC-23
REF DWG M1-0307 LOCATION (A-5)



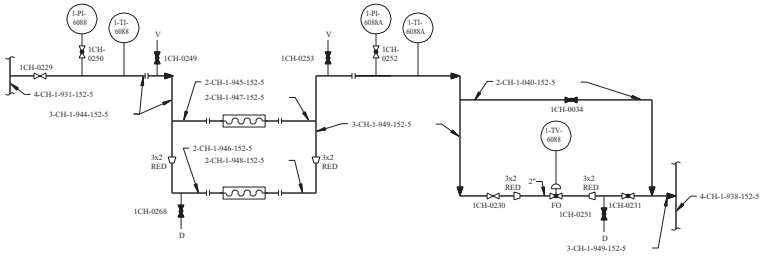

COOLING COILS CPX-VACCCC-24
REF DWG M1-0307 LOCATION (A-5)




AUX BLDG VENTILATION EQPT RM COOLING UNIT
COOLING COILS CPX-VACCCC-25
REF DWG M1-0307 LOCATION (A-6)




UNIT 1 SAFEGUARDS - ELECTRICAL AREA
COOLING COILS CP1-VACCCC-01
REF DWG M1-0307 LOCATION (B-4)




UNIT 1 SAFEGUARDS - MS/FW PENET AREA
COOLING COILS CP1-VACCCC-02
REF DWG M1-0307 LOCATION (B-4.5)

| REV | DWN | CHK | APVD | REMARKS |
|---|---|---|---|---|
| CP-4 | RMS 06-07-1996 | | | THIS DRAWING REVISED TO ADD THE FSAR FIGURE NUMBER AS AN EDITORIAL CHANGE. |

NOTES:
1. SEE DRAWINGS M1-0200 AND M1-0313 FOR I/C AND MECHANICAL SYMBOLS.
2. ALL VENTS, DRAINS AND INSTRUMENTATION PIPES HAVE LINE DESIGNATION 3/4 -152-5 IN ALL BUILDINGS EXCEPT TURBINE BUILDING, WHICH ARE 3/4 -152G, UNLESS OTHERWISE NOTED.
3. UNLESS OTHERWISE NOTED, DRAINS COLLECTED BY CCW DRAIN SYSTEM.
4. PROVIDE VENTS AT HIGH POINTS AND DRAINS AT LOW POINTS ON PIPING SYSTEM.

REFERENCES:

| | |
|---|---|
| M1-0307 | FLOW DIAGRAM VENTILATION CHILLED WATER SYSTEM |
| M1-0200 | MECHANICAL SYMBOLS AND NOTES |
| M1-0313 | FLOW DIAGRAM-VENTILATION AAP BUILDING AND CONTROL BUILDING UPS AREA A/C SYSTEMS |

FSAR FIGURE 9.4-11

CP-4

THIS DRAWING CREATED ELECTRONICALLY

| DRAWING M1-0307 REV CP-11 HAS BEEN SPLIT INTO THE FOLLOWING SHEETS: |
|---|
| M1-0307 |
| M1-0307-B |
| M1-0307-C |

NON-NUCLEAR SAFETY
QA PROGRAM APPLICABLE
CLASS 5 SEISMIC CATEGORY II
FIRE PROTECTION SYSTEM
RADIOACTIVE WASTE MANAGEMENT SYSTEM

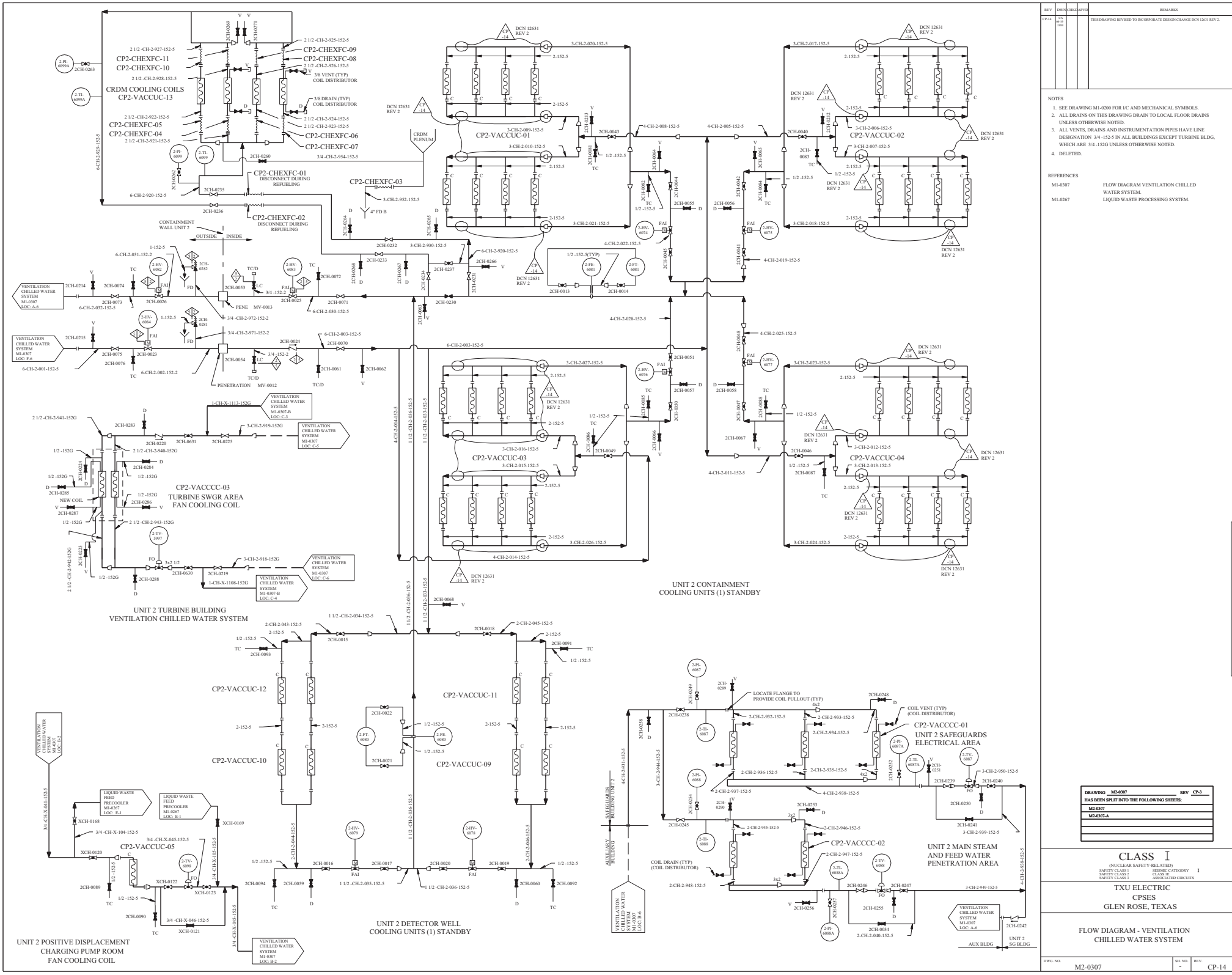
TXU ELECTRIC
CPSES
GLEN ROSE, TEXAS

FLOW DIAGRAM - VENTILATION
CHILLED WATER SYSTEM

| DWG. NO. | SH. NO. | REV. |
|---|---|---|
| M1-0307 | C | CP-4 |

vs0000ho.dgn

SSSSSSSTA\TESSSSSS




| REV | DWN | CHK | APVD | REMARKS |
|---|---|---|---|---|
| CP-14 | CA 08/19/1999 | | | THIS DRAWING REVISED TO INCORPORATE DESIGN CHANGE DCN 12631 REV 2. |

NOTES

1. SEE DRAWING M1-0200 FOR I/C AND MECHANICAL SYMBOLS.
2. ALL DRAINS ON THIS DRAWING DRAIN TO LOCAL FLOOR DRAINS UNLESS OTHERWISE NOTED.
3. ALL VENTS, DRAINS AND INSTRUMENTATION PIPES HAVE LINE DESIGNATION 3/4 -152-5 IN ALL BUILDINGS EXCEPT TURBINE BLDG, WHICH ARE 3/4 -152G UNLESS OTHERWISE NOTED.
4. DELETED.

REFERENCES

| | |
|---|---|
| M1-0307 | FLOW DIAGRAM VENTILATION CHILLED WATER SYSTEM. |
| M1-0267 | LIQUID WASTE PROCESSING SYSTEM. |

FSAR FIGURE 9.4-11

THIS DRAWING CREATED ELECTRONICALLY

| DRAWING M2-0307 | REV CP-3 |
|---|---|
| HAS BEEN SPLIT INTO THE FOLLOWING SHEETS: | |
| M2-0307 | |
| M2-0307-A | |

CLASS I

(NUCLEAR SAFETY-RELATED)

| | |
|---|---|
| SAFETY CLASS 1 | SEISMIC CATEGORY I |
| SAFETY CLASS 2 | CLASS 1E |
| SAFETY CLASS 3 | ASSOCIATED CIRCUITS |

TXU ELECTRIC
CPSES
GLEN ROSE, TEXAS

FLOW DIAGRAM - VENTILATION CHILLED WATER SYSTEM

| DWG. NO. | SH. NO. | REV. |
|---|---|---|
| M2-0307 | - | CP-14 |

me00011d.dgn

REF CKD CP-11 8/12/97

SSSSSSSDA ISSSSSSS

| REV | DWN | CHK'D | APV'D | REMARKS |
|---|---|---|---|---|
| CP-29 | DLK 07-17-2017 | GAW 07-17-2017 | MHF 07-17-2017 | THIS DRAWING REVISED TO EDITORIALLY ADD FSAR FIGURE NUMBER. |

NOTES:

1. SEE DRAWING M1-0200 FOR I/C AND MECHANICAL SYMBOLS.
2. ALL DRAINS ON THIS DRAWING DRAIN TO LOCAL FLOOR DRAINS UNLESS OTHERWISE NOTED.
3. ALL VENTS, DRAINS AND INSTRUMENTATION PIPES HAVE LINE DESIGNATION □-152-5 IN ALL BUILDINGS EXCEPT TURBINE BLDG, WHICH ARE □-152G UNLESS OTHERWISE NOTED.
4. TEMPORARY STRAINERS ARE PLACED IN THE SPOOL PIECES DURING INITIAL FLUSHING OPERATIONS. THEY MUST BE REMOVED AT PLANT START-UP.
5. DELETED
6. X-FS-6070A IS ABANDONED IN PLACE.
7. CONNECTIONS ARE FOR COMPENSATORY ACTIONS IF THE INSTALLED UNITS ARE UNABLE TO PROVIDE ADEQUATE COOLING.

REFERENCES:

| | |
|---|---|
| M1-0307 | FLOW DIAGRAM VENTILATION CHILLED WATER SYSTEM. |
| M2-0210 | FLOW DIAGRAM CIRCULATING WATER SYSTEM. |

* - SUPPLIED BY VENDOR.

CP-29

FSAR FIGURE 9.4-11

THIS DRAWING CREATED ELECTRONICALLY

| DRAWING M2-0307 REV CP-3 HAS BEEN SPLIT INTO THE FOLLOWING SHEETS: |
|---|
| M2-0307 |
| M2-0307-A |

| ITEM | CPX-CHCICE-07 | CPX-CHCICE-09 |
|---|---|---|
| A | 6-CH-X-1030-152G | 6-CH-X-1052-152G |
| B | 3-CH-X-1029-152G | 3-CH-X-1051-152G |
| C | 3-CH-X-1070-152G | 3-CH-X-1068-152G |
| D | XCH-0635 | XCH-0631 |
| E | XCH-0636 | XCH-0632 |
| F | XCH-0637 | XCH-0633 |
| G | CPX-CHFHCH-17 | CPX-CHFHCH-06 |

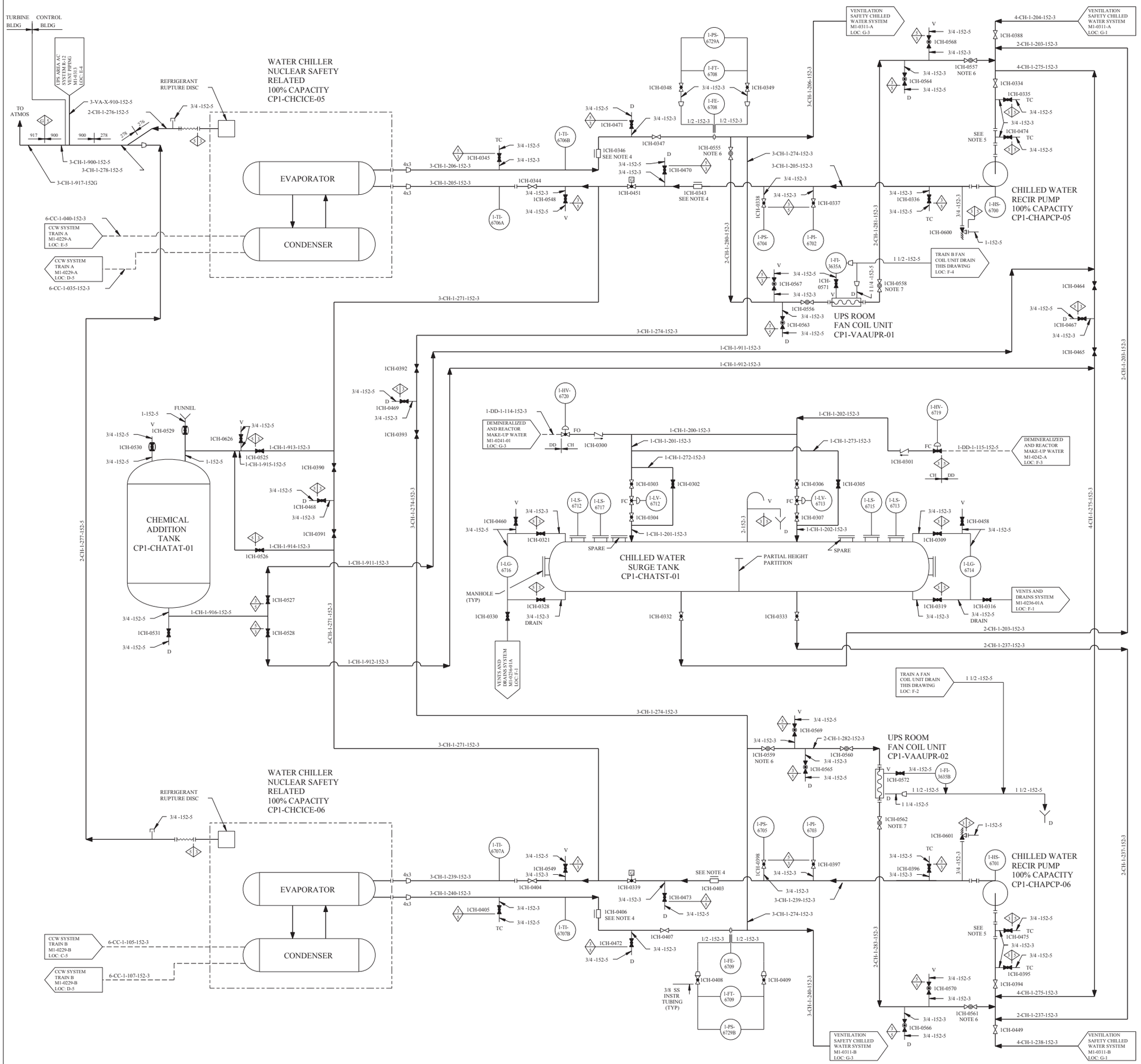
# CLASS II

LUMINANT
CPNPP
GLEN ROSE, TEXAS

FLOW DIAGRAM - VENTILATION CHILLED WATER SYSTEM

| DWG. NO. | SH. NO. | REV. |
|---|---|---|
| M2-0307 | A | CP-29 |

me00081w.dgn A M2-0307-A FINAL PRINT




| REV | DWN | CHK | APVD | REMARKS |
|---|---|---|---|---|
| CP-30 | JRMC 04-26-2006 | SM 04-27-2006 | | THIS DRAWING REVISED TO INCORPORATE DESIGN CHANGE FDA-2006-001196-01-00 PER SK-0013-06-001196-01-00. |

NOTES:

1. FOR MECHANICAL SYMBOLS AND NOTES SEE DWG M1-0200.
2. THE PIPE CATEGORY FOR ALL ROOT VALVE LINES, TEST CONNECTIONS, DRAINS AND VENTS WILL BE THE SAME AS THE MAIN PROCESS LINE, UNLESS OTHERWISE NOTED.
3. UNLESS OTHERWISE NOTED, ALL DRAINS COLLECTED AS FOLLOWS:
   DRAINS FROM FAN COIL UNITS BY LOCAL DRAIN SYSTEM.
   DRAINS FROM PROCESS LINES AND EQUIPMENT BY CCW DRAIN SYSTEM.
4. REMOVE CHECK VALVE INTERNALS, ABANDON VALVE BODIES 1CH-0343 , 1CH-0346 , 1CH-0403 AND 1CH-0406 IN PLACE.
5. TEMPORARY STRAINERS CP1-CHSRPS-01 AND CP1-CHSRPS-02 ARE PLACED IN SPOOL PIECES DURING INITAL FLUSHING OPERATIONS. STRAINERS MUST BE REMOVED AT PLANT START-UP. THE TEMPORARY STRAINERS CAN BE RE-INSTALLED FOR POST MAINTENANCE ACTIVITY. R
6. VALVE IS FIXED IN THE OPEN POSITION BY A WELDED FASTENER.
7. THROTTLE VALVE DOWNSTREAM OF EACH FAN COIL UNIT TO BE LOCKED IN POSITION (LIP) AFTER BALANCING OF CHILLED WATER FLOW THOUGH EACH COIL.

REFERENCES:

| | |
|---|---|
| M1-0229-A | FLOW DIAGRAM COMPONENT COOLING WATER SYSTEM SH 2 OF 8 |
| M1-0229-B | FLOW DIAGRAM COMPONENT COOLING WATER SYSTEM SH 3 OF 8 |
| M1-0236-01A | FLOW DIAGRAM VENTS AND DRAINS SYSTEM SAFEGUARDS AND AUX BLDG |
| M1-0241-01 | FLOW DIAGRAM DEMINERALIZED AND REACTOR MAKE-UP WATER SH 3 OF 6 |
| M1-0242-A | FLOW DIAGRAM DEMINERALIZED AND REACTOR MAKE-UP WATER SH 4 OF 5 |
| M1-0311-A | FLOW DIAGRAM VENTILATION SAFETY CHILLED WATER SYSTEM |
| M1-0311-B | FLOW DIAGRAM VENTILATION SAFETY CHILLED WATER SYSTEM |
| M1-0313 | FLOW DIAGRAM VENTILATION AAP BLDG AND CONTROL BLDG UPS AREA A/C SYSTEMS |

FSAR FIGURE 9.4-12

THIS DRAWING CREATED ELECTRONICALLY

DRAWING M1-0311 REV CP-9
HAS BEEN SPLIT INTO THE FOLLOWING SHEETS:

| |
|---|
| M1-0311 |
| M1-0311-A |
| M1-0311-B |
| |
| |

CLASS I
(NUCLEAR SAFETY-RELATED)
SAFETY CLASS 1 — SEISMIC CATEGORY I
SAFETY CLASS 2 — CLASS 1E
SAFETY CLASS 3 — ASSOCIATED CIRCUITS

LUMINANT
CPSES
GLEN ROSE, TEXAS

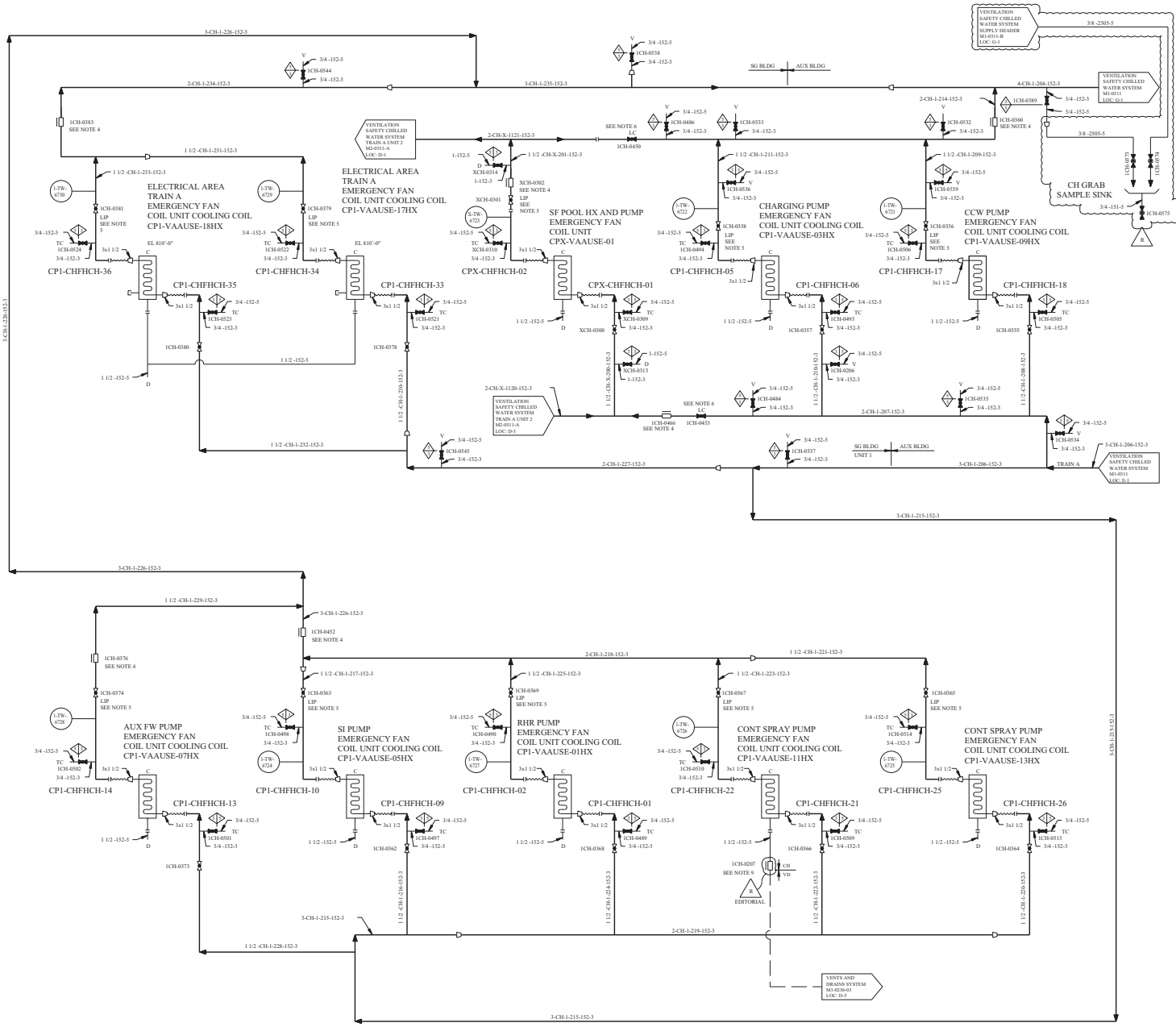
FLOW DIAGRAM
VENTILATION
SAFETY CHILLED WATER SYSTEM

| DWG. NO. | SH. NO. | REV. |
|---|---|---|
| M1-0311 | - | CP-30 |

FINAL PRINT

REF CKD CP-24 3/10/98

me683600.dgn




| REV | DWN | CHKD | APVD | REMARKS |
|---|---|---|---|---|
| CP-11 | HAK 10-25-2006 | DWS 10-25-2006 | | THIS DRAWING REVISED TO INCORPORATE DESIGN CHANGE. EDA 2006-00-0150-01-00 PER SLAN06-00-00-0150-01-00. EDITORIAL CHANGE AS NOTED. |

NOTES:

1. FOR MECHANICAL SYMBOLS AND NOTES SEE DWG M1-0200.
2. THE PIPE CATEGORY FOR ALL ROOT VALVE LINES, TEST CONNECTIONS, DRAINS AND VENTS WILL BE THE SAME AS THE MAIN PROCESS LINE, UNLESS OTHERWISE NOTED.
3. UNLESS OTHERWISE NOTED, ALL DRAINS COLLECTED AS FOLLOWS:
   DRAINS FROM FAN COIL UNITS BY LOCAL DRAIN SYSTEM.
   DRAINS FROM PROCESS LINES AND EQUIPMENT BY CCW DRAIN SYSTEM.
4. REMOVE CHECK VALVE INTERNALS, ABANDON VALVE BODIES 1CH-0360 , 1CH-0376 , 1CH-0383 , 1CH-0452 , 1CH-0466 AND XCH-0302 IN PLACE.
5. THROTTLE VALVE DOWNSTREAM OF EACH FAN COIL UNIT TO BE LOCKED IN POSITION (LIP) AFTER BALANCING OF CHILLED WATER FLOW THROUGH EACH COIL.
6. THIS IS A UNIT ISOLATION VALVE AND SHALL BE NORMALLY OPEN WHEN CHILLED WATER IS PROVIDED BY UNIT 1 CH AND LOCKED CLOSED WHEN CHILLED WATER IS PROVIDED BY UNIT 2 CH.
7. DELETED
8. DELETED
9. INTERNALS REMOVED FROM VALVE . 1CH-0207

REFERENCES:

| | |
|---|---|
| M1-0236-03 | FLOW DIAGRAM VENTS AND DRAINS SYSTEM SAFEGUARDS BLDG |
| | FLOW DIAGRAM VENTILATION SAFETY |
| M2-0311 | CHILLED WATER SYSTEM |
| M1-0311 | FLOW DIAGRAM VENTILATION SAFETY CHILLED WATER SYSTEM |

FSAR FIGURE 9.4-12

THIS DRAWING CREATED ELECTRONICALLY

DRAWING M1-0311 REV CP-9 HAS BEEN SPLIT INTO THE FOLLOWING SHEETS:

- M1-0311
- M1-0311-A
- M1-0311-B

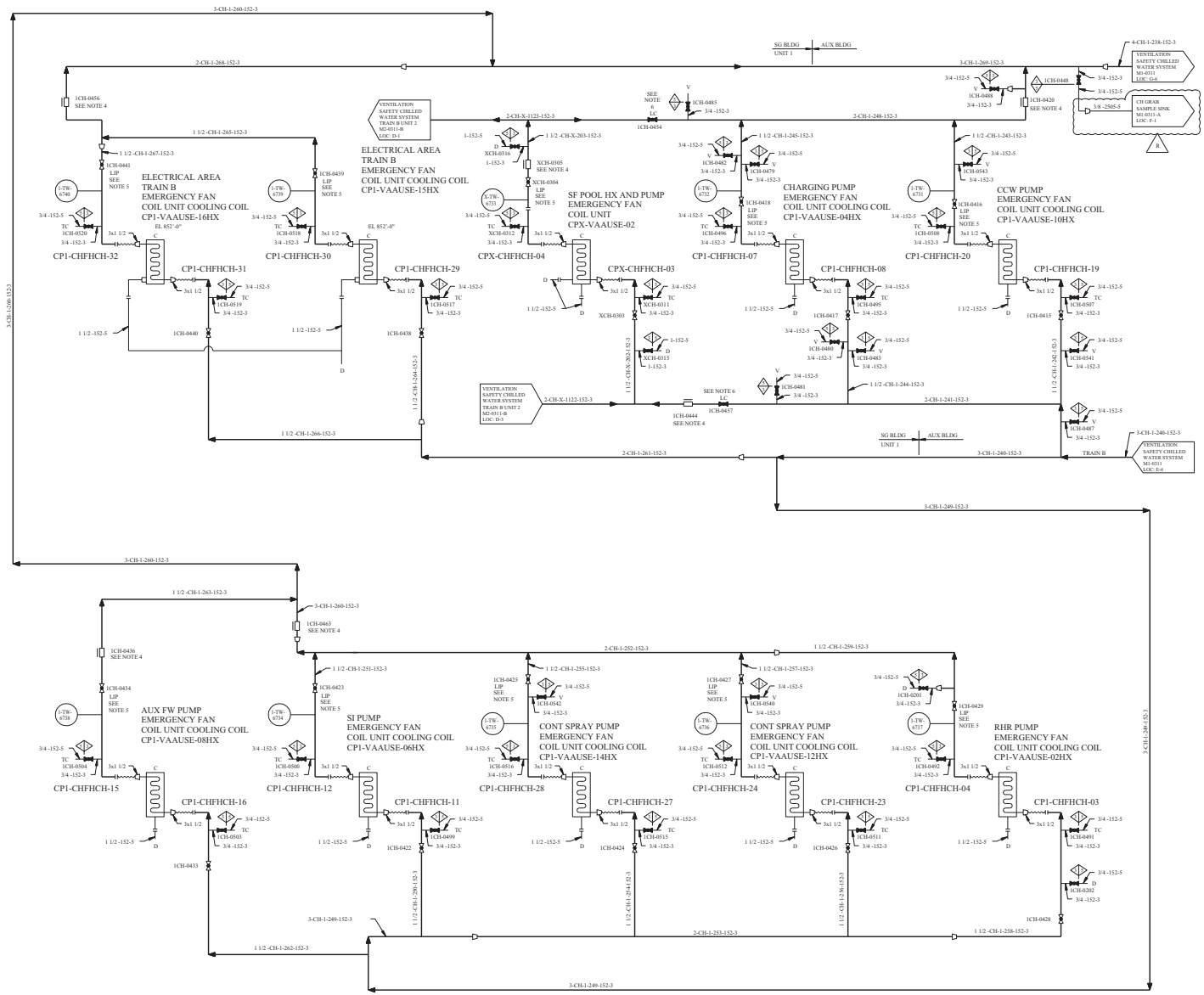
CLASS I
(NUCLEAR SAFETY-RELATED)
SAFETY CLASS 1 SEISMIC CATEGORY I
SAFETY CLASS 2 CLASS 1E
SAFETY CLASS 3 ASSOCIATED CIRCUITS

TXU ELECTRIC
CPSES
GLEN ROSE, TEXAS

FLOW DIAGRAM
VENTILATION
SAFETY CHILLED WATER SYSTEM

| DWG. NO. | SH. NO. | REV. |
|---|---|---|
| M1-0311 | A | CP-11 |

me374200.dgn M1-0311-A




| REV | DWN | CHKD | APVD | REMARKS |
|---|---|---|---|---|
| CP-9 | HOU 04-23-2003 | RHS 04-24-2003 | | THIS DRAWING REVISED TO INCORPORATE DESIGN CHANGE FDA 2000-003458-01-00 PER EIC-0007-00-003-034-01-00. |

NOTES:

1. FOR MECHANICAL SYMBOLS AND NOTES SEE DWG M1-0200.
2. THE PIPE CATEGORY FOR ALL ROOT VALVE LINES, TEST CONNECTIONS, DRAINS AND VENTS WILL BE THE SAME AS THE MAIN PROCESS LINE, UNLESS OTHERWISE NOTED.
3. UNLESS OTHERWISE NOTED, ALL DRAINS COLLECTED AS FOLLOWS:
   DRAINS FROM FAN COIL UNITS BY LOCAL DRAIN SYSTEM.
   DRAINS FROM PROCESS LINES AND EQUIPMENT BY CCW DRAIN SYSTEM.
4. REMOVE CHECK VALVE INTERNALS, ABANDON VALVE BODIES 1CH-0420 , 1CH-0436 , 1CH-0444 , 1CH-0456 , 1CH-0463 AND XCH-0305 IN PLACE.
5. THROTTLE VALVE DOWNSTREAM OF EACH FAN COIL UNIT TO BE LOCKED IN POSITION (LIP) AFTER BALANCING OF CHILLED WATER FLOW THROUGH EACH COIL.
6. THIS IS A UNIT ISOLATION VALVE AND SHALL BE NORMALLY OPEN WHEN CHILLED WATER IS PROVIDED BY UNIT 1 CH AND LOCKED CLOSED WHEN CHILLED WATER IS PROVIDED BY UNIT 2 CH.
7. DELETED
8. DELETED

REFERENCES:

| | |
|---|---|
| M1-0311 | FLOW DIAGRAM VENTILATION SAFETY CHILLED WATER SYSTEM |
| M2-0311 | FLOW DIAGRAM VENTILATION SAFETY CHILLED WATER SYSTEM |

FSAR FIGURE 9.4-12

THIS DRAWING CREATED FOR DESIGN CLASS I

| DRAWING M1-0311 REV CP-9 HAS BEEN SPLIT INTO THE FOLLOWING SHEETS: |
|---|
| M1-0311 |
| M1-0311-A |
| M1-0311-B |

CLASS I
(NUCLEAR SAFETY-RELATED)
SAFETY CLASS 1 SAFETY CLASS 2 SAFETY CLASS 3 SEISMIC CATEGORY I CLASS 1E ASSOCIATED CIRCUITS

TXU ELECTRIC
CPSES
GLEN ROSE, TEXAS

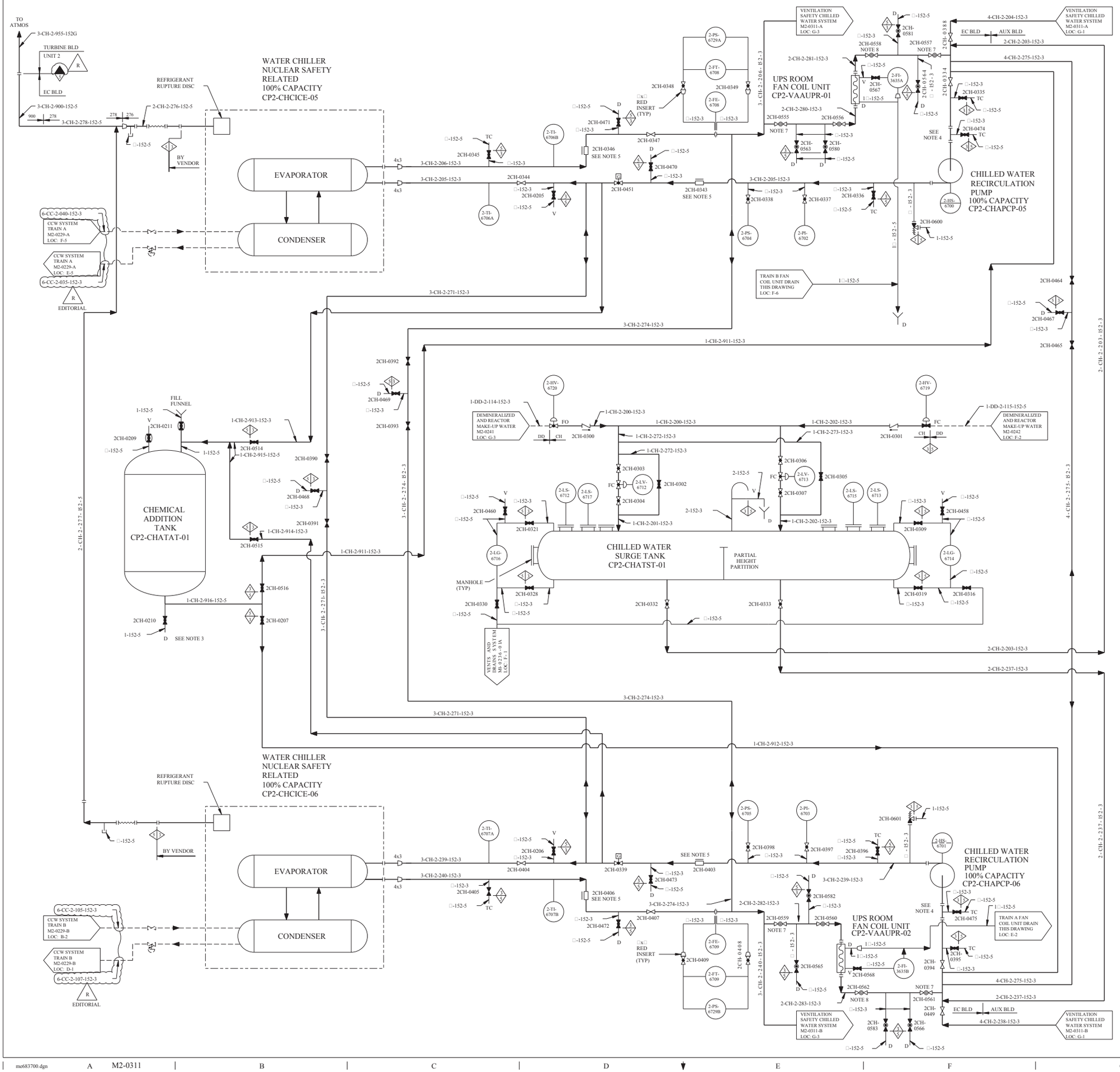
FLOW DIAGRAM
VENTILATION
SAFETY CHILLED WATER SYSTEM

| DWG. NO. | SH. NO. | REV. |
|---|---|---|
| M1-0311 | B | CP-9 |

M1-0311-B

me374300.dgn

$$$$SDATE$$$$




| REV | DWN | CHKD | APVD | REMARKS |
|---|---|---|---|---|
| CP-19 | DLK 04-26-2012 | MM 04-27-2012 | | THIS DRAWING REVISED TO INCORPORATE DESIGN CHANGE FDA 2012-000074-01-00 PER SK-0001-12-000074-01-00. EDITORIAL CHANGES AS NOTED. |

NOTES:

1. FOR MECHANICAL SYMBOLS AND NOTES SEE DWG M1-0200.
2. THE PIPE CATEGORY FOR ALL ROOT VALVE LINES, TEST CONNECTIONS, DRAINS AND VENTS WILL BE THE SAME AS THE MAIN PROCESS LINE UNLESS OTHERWISE NOTED.
3. DRAINS TO BE LOCALLY COLLECTED UNDER ADMINISTRATIVE CONTROLS.
4. TEMPORARY STRAINERS CP2-CHSRPS-01 AND CP2-CHSRPS-02 ARE PLACED IN SPOOL PIECES DURING INITIAL FLUSHING OPERATIONS. STRAINERS MUST BE REMOVED AT PLANT START-UP. THE TEMPORARY STRAINERS CAN BE RE-INSTALLED FOR POST MAINTENANCE ACTIVITY.
5. REMOVE CHECK VALVE INTERNALS, ABANDON VALVE BODIES IN PLACE.
6. UNLESS OTHERWISE NOTED ALL DRAINS COLLECTED BY LOCAL DRAIN SYSTEM EXCEPT AS FOLLOWS:
   CHILLED WATER SURGE TANK DRAIN BY CCW DRAIN SYSTEM VIA VENTS AND DRAIN SYSTEM
7. VALVE IS FIXED IN THE OPEN POSITION BY A WELDED FASTENER.
8. THROTTLE VALVE DOWNSTREAM OF EACH FAN COIL UNIT TO BE LOCKED IN POSITION (LIP) AFTER BALANCING OF CHILLED WATER THROUGH EACH COIL.

REFERENCES:

| | |
|---|---|
| M2-0229-A | FLOW DIAGRAM COMPONENT COOLING WATER SYSTEM |
| M2-0229-B | FLOW DIAGRAM COMPONENT COOLING WATER SYSTEM |
| M2-0236-01A | FLOW DIAGRAM VENTS AND DRAIN SYSTEM |
| M2-0242 | FLOW DIAGRAM DEMINERALIZED AND REACTOR MAKE-UP WATER SYSTEM |
| M2-0241-01 | FLOW DIAGRAM DEMINERALIZED AND REACTOR MAKE-UP WATER SYSTEM |
| M2-0311-A | FLOW DIAGRAM VENTILATION SAFETY CHILLED WATER SYSTEM |
| M2-0311-B | FLOW DIAGRAM VENTILATION SAFETY CHILLED WATER SYSTEM |

FSAR FIGURE 9.4-12

THIS DRAWING CREATED ELECTRONICALLY

| DRAWING 2323-M2-0311 REV CP-3 HAS BEEN SPLIT INTO THE FOLLOWING SHEETS: |
|---|
| M2-0311 |
| M2-0311-A |
| M2-0311-B |

CLASS I
(NUCLEAR SAFETY-RELATED)
SAFETY CLASS 1, SAFETY CLASS 2, SAFETY CLASS 3 — SEISMIC CATEGORY I, CLASS 1E, ASSOCIATED CIRCUITS

LUMINANT
CPNPP
GLEN ROSE, TEXAS

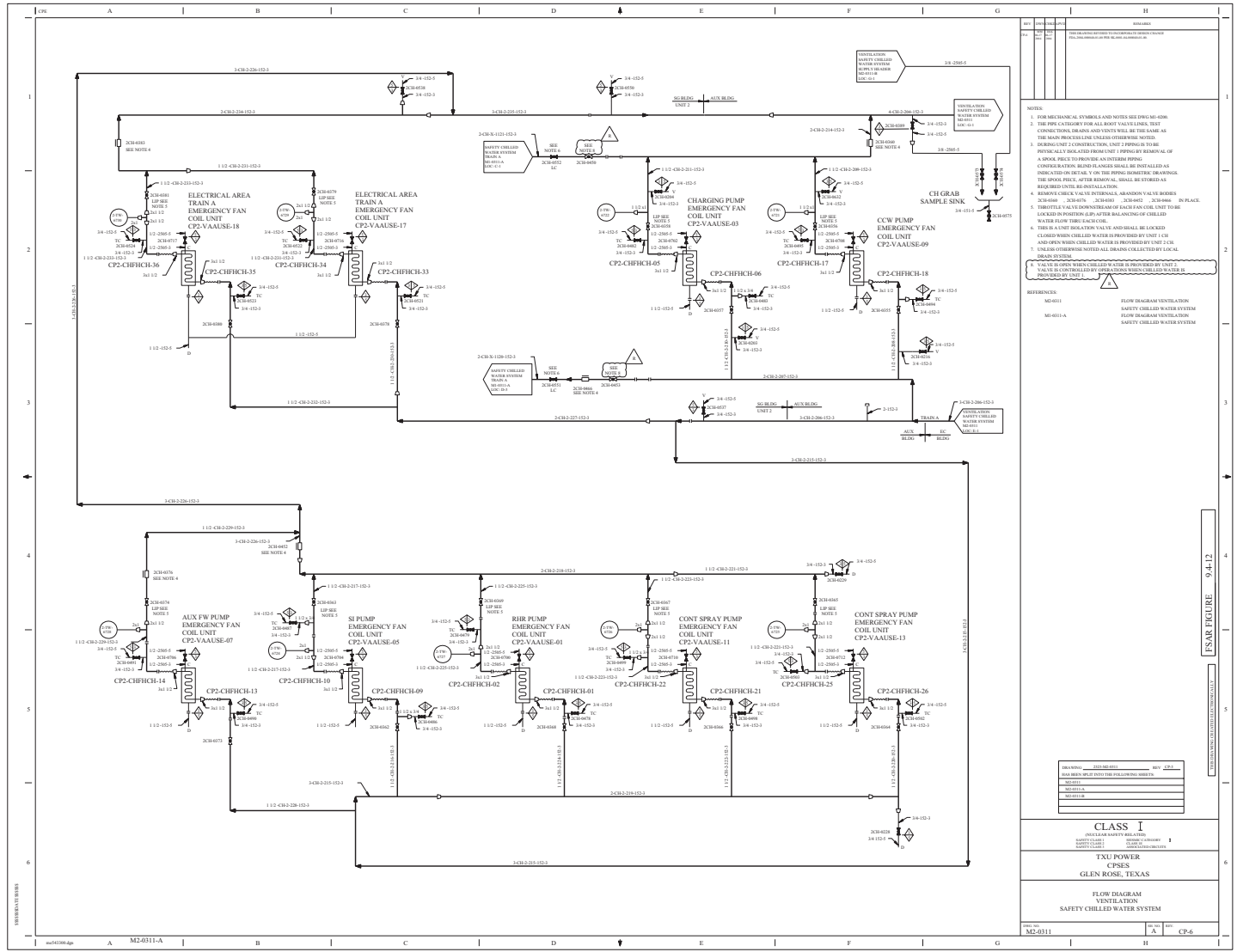
FLOW DIAGRAM
VENTILATION
SAFETY CHILLED WATER SYSTEM

| DWG. NO. | SH. NO. | REV. |
|---|---|---|
| M2-0311 | - | CP-19 |

REF CKD CP-10 IV 8/97

SSSSSSSSDATESSSSSS

me683700.dgn A M2-0311 B C D E F G < FINAL PRINT > H




| REV | DESCRIPTION | ORIGINATOR | APPD |
|---|---|---|---|
| 19-0 | THIS DRAWING REVISED TO INCORPORATE DESIGN CHANGE FCs_2006-0000-00-01 PER DC_2006_02-0000-01-00. | RDS Date | Date |

NOTES:
1. FOR MECHANICAL SYMBOLS AND NOTES SEE DWG M1-0200.
2. THE PIPE CATEGORY FOR ALL ROOT VALVE LINES, TEST CONNECTIONS, DRAINS AND VENTS WILL BE THE SAME AS THE MAIN PROCESS LINE UNLESS OTHERWISE NOTED.
3. DURING UNIT 2 CONSTRUCTION, UNIT 2 PIPING IS TO BE PHYSICALLY ISOLATED FROM UNIT 1 PIPING BY REMOVAL OF A SPOOL PIECE TO PROVIDE AN INTERIM PIPING CONFIGURATION. BLIND FLANGES SHALL BE INSTALLED AS INDICATED ON DETAIL Y ON THE PIPING ISOMETRIC DRAWINGS. THE SPOOL PIECE, AFTER REMOVAL, SHALL BE STORED AS REQUIRED UNTIL RE-INSTALLATION.
4. REMOVE CHECK VALVE INTERNALS, ABANDON VALVE BODIES 2CH-0360 , 2CH-0376 ,2CH-0393 , 2CH-0452 , 2CH-9466 IN PLACE.
5. THROTTLE VALVE DOWNSTREAM OF EACH FAN COIL UNIT TO BE LOCKED IN POSITION (LIP) AFTER BALANCING OF CHILLED WATER FLOW THRU EACH COIL.
6. THIS IS A UNIT ISOLATION VALVE AND SHALL BE LOCKED CLOSED WHEN CHILLED WATER IS PROVIDED BY UNIT 1 CH AND OPEN WHEN CHILLED WATER IS PROVIDED BY UNIT 2 CH.
7. UNLESS OTHERWISE NOTED ALL DRAINS COLLECTED BY LOCAL DRAIN SYSTEMS.
8. VALVE IS OPEN WHEN CHILLED WATER IS PROVIDED BY UNIT 2. VALVE IS CONTROLLED BY OPERATIONS WHEN CHILLED WATER IS PROVIDED BY UNIT 1.

REFERENCES:

| | |
|---|---|
| M2-0311 | FLOW DIAGRAM VENTILATION SAFETY CHILLED WATER SYSTEM |
| M1-0311-A | FLOW DIAGRAM VENTILATION SAFETY CHILLED WATER SYSTEM |

FSAR FIGURE 9.4-12

DRAWING 2103-M2-0311 REV CP-5
HAS BEEN SPLIT INTO THE FOLLOWING SHEETS:
M2-0311
M2-0311-A
M2-0311-B

CLASS I
(NUCLEAR SAFETY RELATED)
SAFETY CLASS 1 SAFETY CLASS 2 SAFETY CLASS 3 — SEISMIC CATEGORY I — ASSOCIATED CIRCUITS

TXU POWER
CPSES
GLEN ROSE, TEXAS

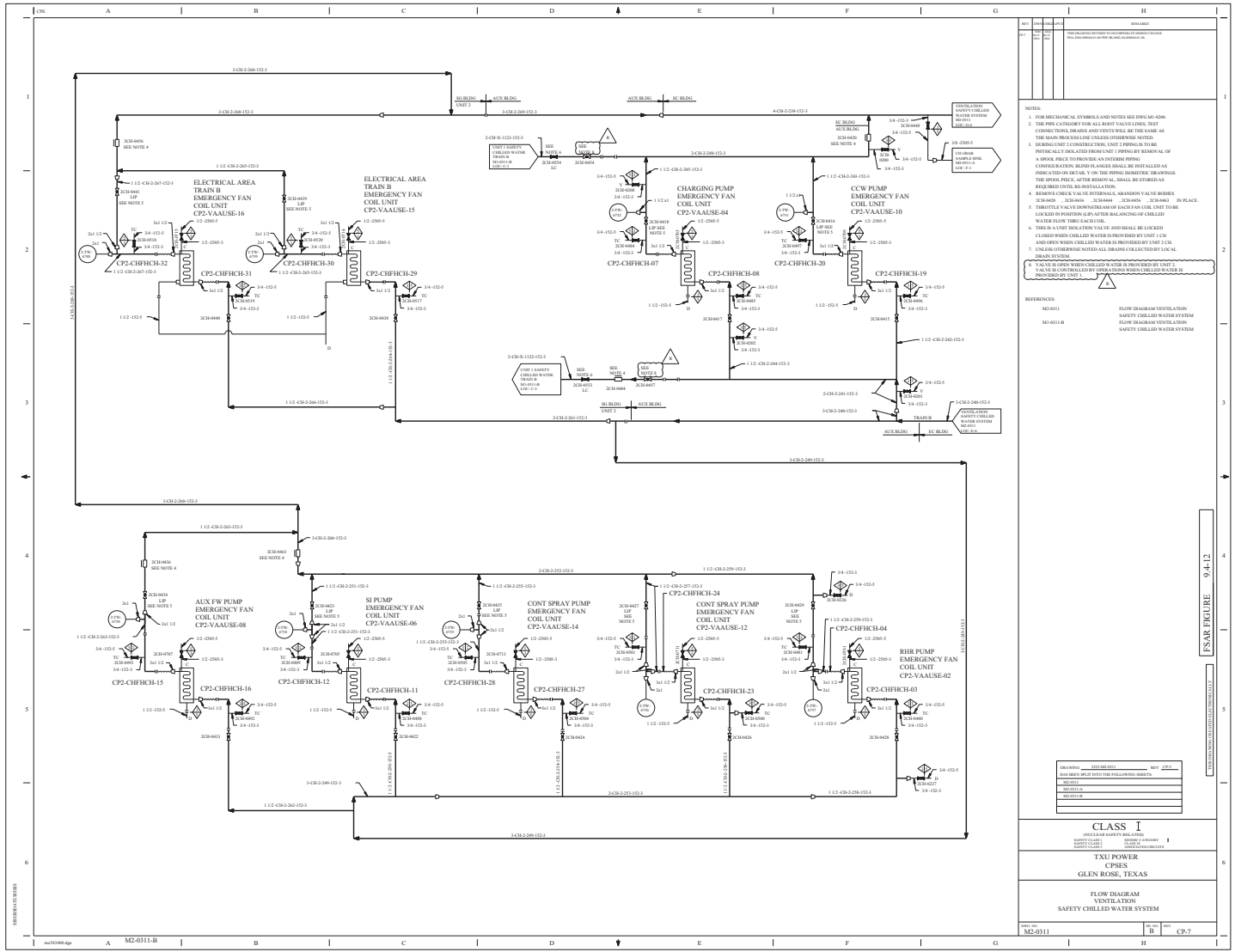
FLOW DIAGRAM
VENTILATION
SAFETY CHILLED WATER SYSTEM

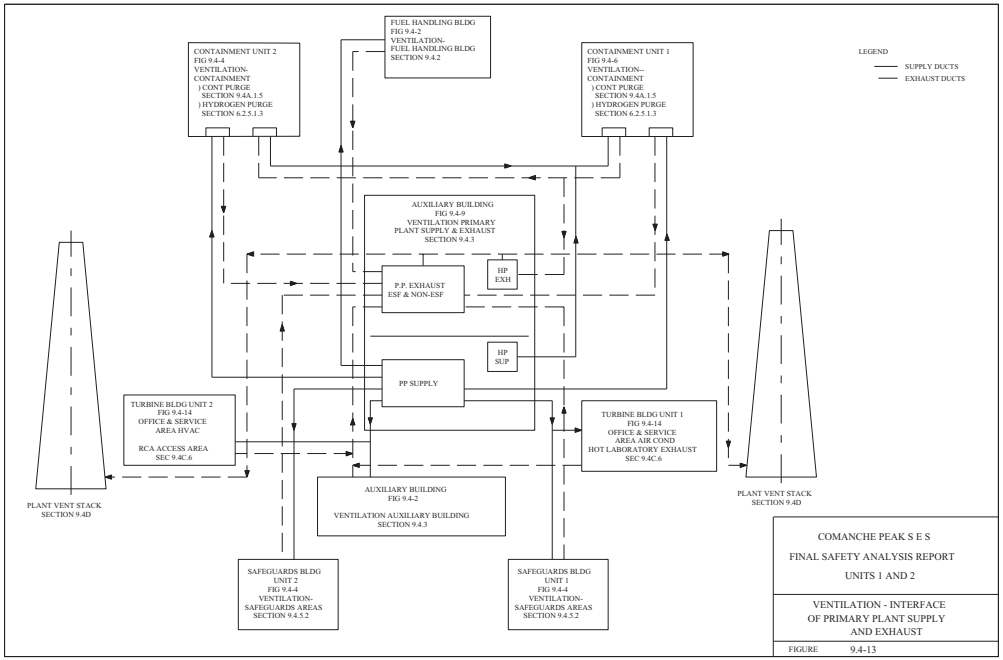
| DWG. NO. | REV. NO. | REV. |
|---|---|---|
| M2-0311 | A | CP-6 |

M2-0311-A

ma541000.dgn

SHEET 1 OF 1

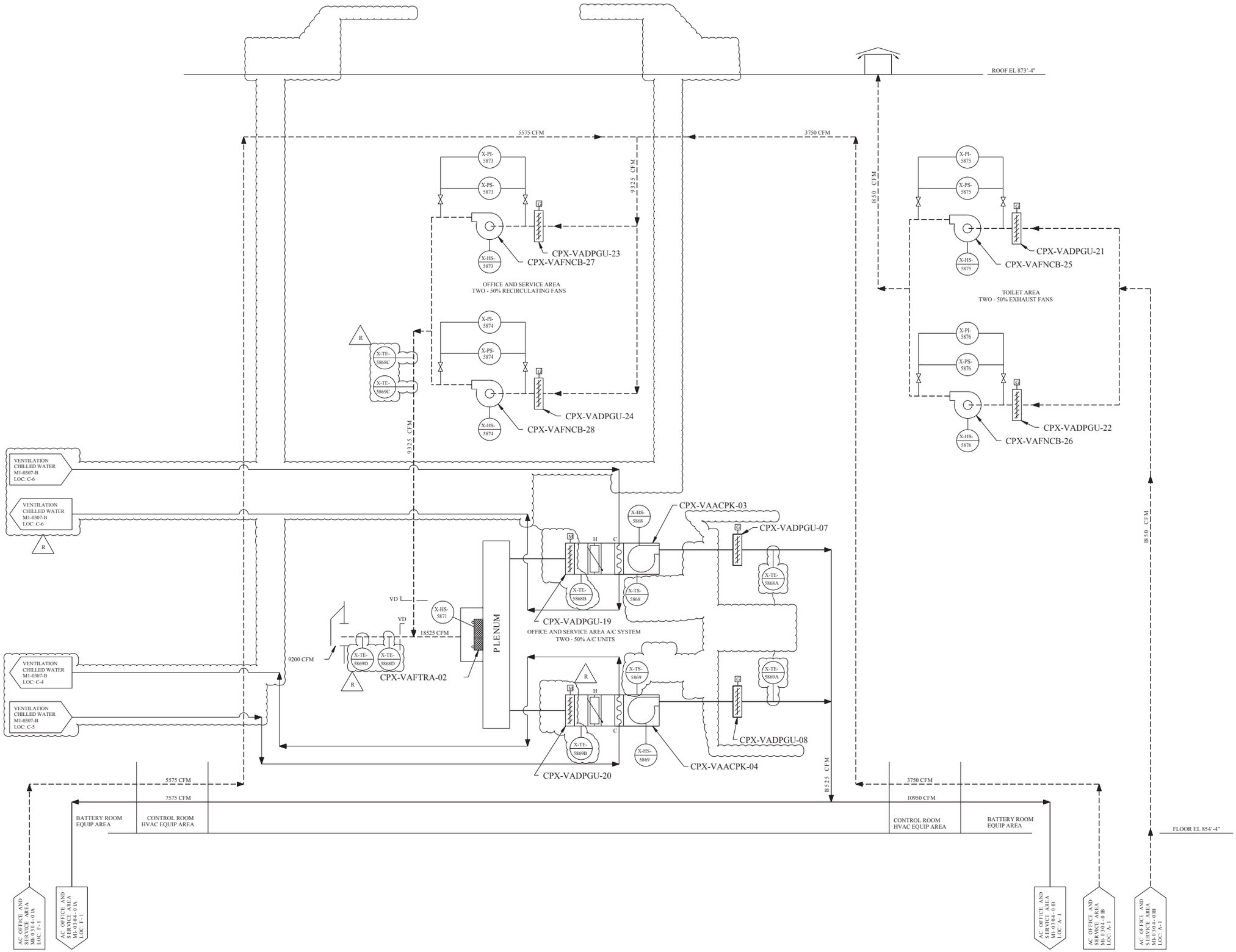

ELECTRICAL AREA TRAIN B EMERGENCY FAN COIL UNIT CP2-VAAUSE-16
ELECTRICAL AREA TRAIN B EMERGENCY FAN COIL UNIT CP2-VAAUSE-15
CHARGING PUMP EMERGENCY FAN COIL UNIT CP2-VAAUSE-04
CCW PUMP EMERGENCY FAN COIL UNIT CP2-VAAUSE-10
AUX FW PUMP EMERGENCY FAN COIL UNIT CP2-VAAUSE-08
SI PUMP EMERGENCY FAN COIL UNIT CP2-VAAUSE-06
CONT SPRAY PUMP EMERGENCY FAN COIL UNIT CP2-VAAUSE-14
CONT SPRAY PUMP EMERGENCY FAN COIL UNIT CP2-VAAUSE-12
RHR PUMP EMERGENCY FAN COIL UNIT CP2-VAAUSE-02
CP2-CHFHCH-32
CP2-CHFHCH-31
CP2-CHFHCH-30
CP2-CHFHCH-29
CP2-CHFHCH-07
CP2-CHFHCH-08
CP2-CHFHCH-20
CP2-CHFHCH-19
CP2-CHFHCH-15
CP2-CHFHCH-16
CP2-CHFHCH-12
CP2-CHFHCH-11
CP2-CHFHCH-28
CP2-CHFHCH-27
CP2-CHFHCH-24
CP2-CHFHCH-23
CP2-CHFHCH-04
CP2-CHFHCH-03
UNIT 1 SAFETY CHILLED WATER TRAIN B M2-0311-B LOC: C-5
UNIT 1 SAFETY CHILLED WATER TRAIN A M2-0311-B LOC: C-5
VENTILATION SAFETY CHILLED WATER SYSTEM M2-0311 LOC: D-6
CIS GRAB SAMPLE SINK M2-0311-A LOC: F-5
VENTILATION SAFETY CHILLED WATER SYSTEM M2-0311 LOC: E-6
AUX BLDG
EC BLDG
SG BLDG UNIT 2
TRAIN B
NOTES:
1. FOR MECHANICAL SYMBOLS AND NOTES SEE DWG M1-0200.
2. THE PIPE CATEGORY FOR ALL ROOT VALVE LINES, TEST CONNECTIONS, DRAINS AND VENTS WILL BE THE SAME AS THE MAIN PROCESS LINE UNLESS OTHERWISE NOTED.
3. DURING UNIT 2 CONSTRUCTION, UNIT 2 PIPING IS TO BE PHYSICALLY ISOLATED FROM UNIT 1 PIPING BY REMOVAL OF A SPOOL PIECE TO PROVIDE AN INTERIM PIPING CONFIGURATION. BLIND FLANGES SHALL BE INSTALLED AS INDICATED ON DETAIL 'Y' ON THE PIPING ISOMETRIC DRAWINGS. THE SPOOL PIECE, AFTER REMOVAL, SHALL BE STORED AS REQUIRED UNTIL RE-INSTALLATION.
4. REMOVE CHECK VALVE INTERNALS, ABANDON VALVE BODIES 2CH-0420 , 2CH-0416 , 2CH-0444 , 2CH-0456 , 2CH-0463 IN PLACE.
5. THROTTLE VALVE DOWNSTREAM OF EACH FAN COIL UNIT TO BE LOCKED IN POSITION (LIP) AFTER BALANCING OF CHILLED WATER FLOW THRU EACH COIL.
6. THIS IS A UNIT ISOLATION VALVE AND SHALL BE LOCKED CLOSED WHEN CHILLED WATER IS PROVIDED BY UNIT 1 CH AND OPEN WHEN CHILLED WATER IS PROVIDED BY UNIT 2 CH.
7. UNLESS OTHERWISE NOTED ALL DRAINS COLLECTED BY LOCAL DRAIN SYSTEMS.
8. 'A' VALVE IS OPEN WHEN CHILLED WATER IS PROVIDED BY UNIT 2. VALVE IS CONTROLLED BY OPERATIONS WHEN CHILLED WATER IS PROVIDED BY UNIT 1.
REFERENCES:
M2-0311 FLOW DIAGRAM VENTILATION SAFETY CHILLED WATER SYSTEM
M1-0311-B FLOW DIAGRAM VENTILATION SAFETY CHILLED WATER SYSTEM
DRAWING 2323-M2-0311 REV CP-3
HAS BEEN SPLIT INTO THE FOLLOWING SHEETS:
M2-0311
M2-0311-A
M2-0311-B
CLASS I
(NUCLEAR SAFETY RELATED)
SAFETY CLASS 1 SAFETY ADVISORY
SAFETY CLASS 2 TS AREA
SAFETY CLASS 3 ASSOCIATED CIRCUITS
TXU POWER
CPSES
GLEN ROSE, TEXAS
FLOW DIAGRAM
VENTILATION
SAFETY CHILLED WATER SYSTEM
DWG. NO. M2-0311
REV. CP-7
FSAR FIGURE 9.4-12
M2-0311-B
su4341600.dgn




pr00007e.dgn

VENTILATION - INTERFACE
OF PRIMARY PLANT SUPPLY
AND EXHAUST

FIGURE 9.4-13




| REV | DWN | CHKD | APVD | REMARKS |
|---|---|---|---|---|
| CP-14 | MHF 10-03-2012 | GAW 10-03-2012 | | THIS DRAWING REVISED TO INCORPORATE DESIGN CHANGE FDA 2009-001966-01-00 PER SK-0018-09-001966-01-00. |

NOTES:

1. FOR HVAC ABBREVIATIONS AND SYMBOLS SEE M1-0313.
2. FOR I&C AND MECHANICAL SYMBOLS SEE M1-0200.
3. THIS DIAGRAM IS A SCHEMATIC REPRESENTATION AND IS INTENDED TO SHOW GENERAL AIR DISTRIBUTION AND FLOW PATHS.
4. BALANCING DAMPERS, REGISTERS, DIFFUSERS, FLEXIBLE CONNECTIONS AND ALL OTHER ACCESSORIES NOT SHOWN ON THIS DIAGRAM SHALL BE PROVIDED AS INDICATED ON THE HVAC ARRANGEMENT DRAWINGS AND SPECIFICATIONS.
5. ALL ROOM NAMES AND NUMBERS CORRESPOND TO ARCHITECTURAL DRAWINGS.
6. ALL AIRFLOW VALUES SHOWN ARE FOR NORMAL OPERATION AND DO NOT REFLECT DISTRIBUTION DURING OPERATION OF INTERMITTENT EQUIPMENT. GRILLS, REGISTERS, DIFFUSERS AND VOLUME DAMPERS SHALL BE SET FOR THE NORMAL OPERATION FLOWS. HVAC CONTRACTOR SHALL SUPPLY AIRFLOW TEST DATA INDICATING ACTUAL AIRFLOWS WITH INTERMITTENT EQUIPMENT IN OPERATION.
7. FIRE DAMPERS REMOVED FROM FLOW DIAGRAM ONLY. FOR LOCATIONS SEE DUCT LAYOUT DRAWINGS.
8. THE AIR FLOW RATES SHOWN ARE ORIGINAL DESIGN VALUES FOR INITIAL FLOW BALANCING AND DO NOT REPRESENT AS-BUILT. AIR FLOW IS BALANCED TO MAINTAIN ROOM TEMPERATURES WITHIN DESIGN DURING NORMAL OPERATION AND TO ENSURE THE DIRECTION OF AIR FLOW IS AS SHOWN.

REFERENCES:

| | | |
|---|---|---|
| 1. | M1-0304-01A<br>M1-0304-01B | FLOW DIAGRAM - AIR CONDITIONING<br>OFFICE AND SERVICE AREA |
| 2. | M1-0200 | MECHANICAL DRAWING NOTES |
| 3. | M1-0227 | POTABLE AND SANITARY WATER SYSTEM |
| 4. | M1-0313 | FLOW DIAGRAM VENTILATION<br>AAP BLDG AND CONTROL BLDG<br>UPS AREA A/C SYSTEMS |

FSAR FIGURE 9.4-14

THIS DRAWING CREATED ELECTRONICALLY

DRAWING 2323-M1-0304-01 REV CP-6
HAS BEEN SPLIT INTO THE FOLLOWING SHEETS:

| |
|---|
| M1-0304-01 |
| M1-0304-01A |
| M1-0304-01B |
| |
| |

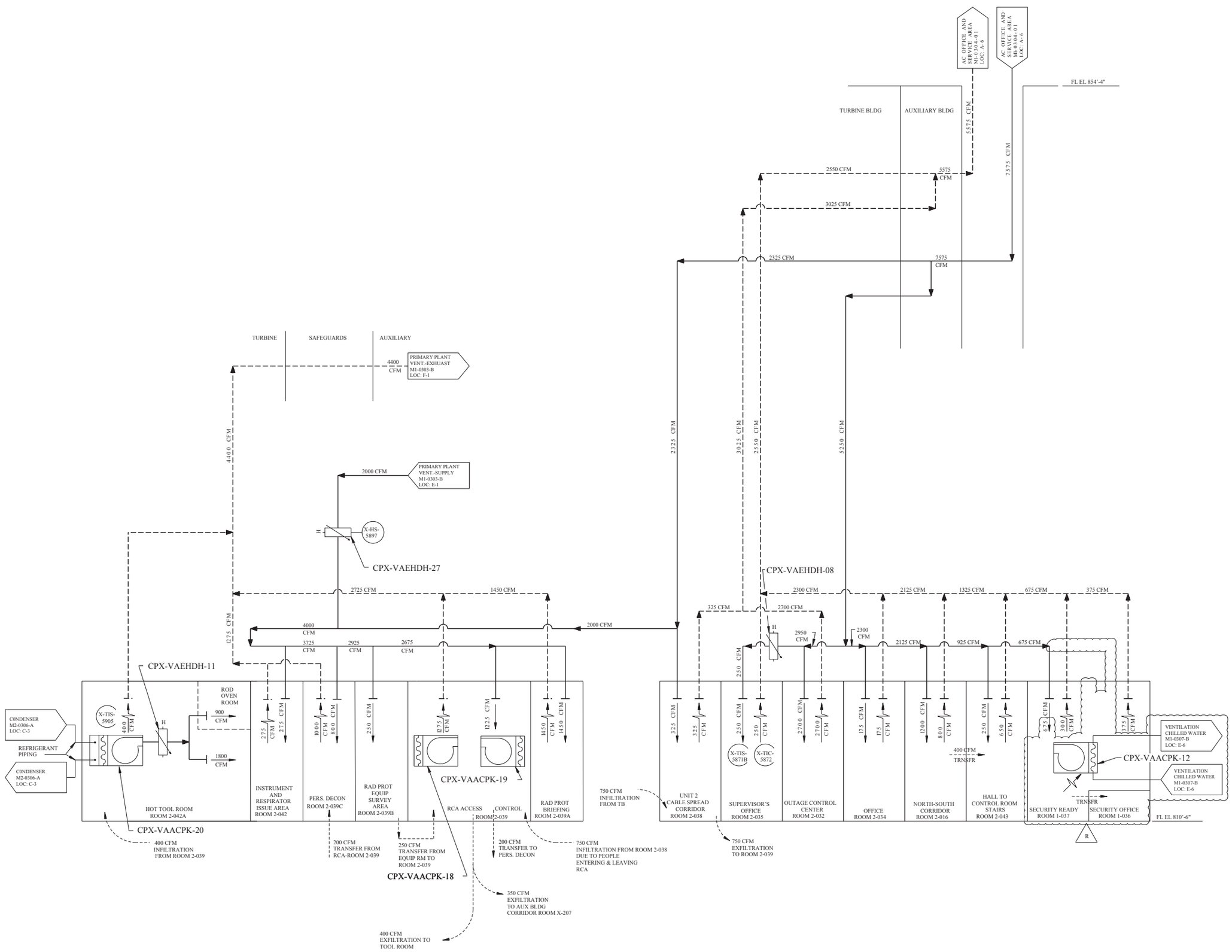
CLASS II

LUMINANT
CPNPP
GLEN ROSE, TEXAS

FLOW DIAGRAM - AIR CONDITIONING
OFFICE AND SERVICE AREA

| DWG. NO. | SH. NO. | REV. |
|---|---|---|
| M1-0304 | 01 | CP-14 |

$$$$$$$DATE$$$$$$




| REV | DWN | CHK | APVD | REMARKS |
|---|---|---|---|---|
| CP-8 | DLK 03-24-2011 | MM 03-29-2011 | | THIS DRAWING REVISED TO INCORPORATE DESIGN CHANGE FDA 2009-001966-02-01 PER SK-0076-09-001966-02-00. |

NOTES:

1. FOR HVAC ABBREVIATIONS AND SYMBOLS SEE M1-0313.
2. FOR I&C AND MECHANICAL SYMBOLS SEE M1-0200.
3. THIS DIAGRAM IS A SCHEMATIC REPRESENTATION AND IS INTENDED TO SHOW GENERAL AIR DISTRIBUTION AND FLOW PATHS.
4. BALANCING DAMPERS, REGISTERS, DIFFUSERS, FLEXIBLE CONNECTIONS AND ALL OTHER ACCESSORIES NOT SHOWN ON THIS DIAGRAM SHALL BE PROVIDED AS INDICATED ON THE HVAC ARRANGEMENT DRAWINGS AND SPECIFICATIONS.
5. ALL ROOM NAMES AND NUMBERS CORRESPOND TO ARCHITECTURAL DRAWINGS.
6. ALL AIRFLOW VALUES SHOWN ARE FOR NORMAL OPERATION AND DO NOT REFLECT DISTRIBUTION DURING OPERATION OF INTERMITTENT EQUIPMENT. GRILLS, REGISTERS, DIFFUSERS AND VOLUME DAMPERS SHALL BE SET FOR THE NORMAL OPERATION FLOWS. HVAC CONTRACTOR SHALL SUPPLY AIRFLOW TEST DATA INDICATING ACTUAL AIRFLOWS WITH INTERMITTENT EQUIPMENT IN OPERATION.
7. FIRE DAMPERS REMOVED FROM FLOW DIAGRAM ONLY. FOR LOCATIONS SEE DUCT LAYOUT DRAWINGS.
8. THE AIR FLOW RATES SHOWN ARE ORIGINAL DESIGN VALUES FOR INITIAL FLOW BALANCING AND DO NOT REPRESENT AS-BUILT. AIR FLOW IS BALANCED TO MAINTAIN ROOM TEMPERATURES WITHIN DESIGN DURING NORMAL OPERATION AND TO ENSURE THE DIRECTION OF AIR FLOW IS AS SHOWN.

REFERENCES:

| | | |
|---|---|---|
| 1. | M1-0304-01<br>M1-0304-01B | FLOW DIAGRAM - AIR CONDITIONING OFFICE AND SERVICE AREA |
| 2. | M1-0200 | MECHANICAL DRAWING NOTES |
| 3. | M1-0306 | FLOW DIAGRAM VENTILATION AAP BLDG AND CONTROL BLDG UPS AREA A/C SYSTEMS |
| 4. | M1-0303-B | FLOW DIAGRAM VENTILATION AUX BLDG |

DRAWING 2323-M1-0304-01 REV CP-6
HAS BEEN SPLIT INTO THE FOLLOWING SHEETS:

- M1-0304-01
- M1-0304-01A
- M1-0304-01B

FSAR FIGURE 9.4-14

THIS DRAWING CREATED ELECTRONICALLY

NON–SAFETY

LUMINANT
CPNPP
GLEN ROSE, TEXAS

FLOW DIAGRAM - AIR CONDITIONING
OFFICE AND SERVICE AREA

| DWG. NO. | SH. NO. | REV. |
|---|---|---|
| M1-0304 | 01A | CP-8 |

$$$$$$$DATE$$$$$$$

me514500.dgn A M1-0304-01A B C D E F G < FINAL PRINT > H

| REV | DWN | CHKD | APVD | REMARKS |
|---|---|---|---|---|
| CP-13 | DLK 10-24-2011 | MM 10-29-2011 | | THIS DRAWING REVISED TO INCORPORATE DESIGN CHANGE FDA 2009-001966-02-01 PER SK-00056-09-001966-02-01. EDITORIAL CHANGES AS NOTED. |

NOTES:

1. FOR HVAC ABBREVIATIONS AND SYMBOLS SEE M1-0313.
2. FOR I&C AND MECHANICAL SYMBOLS SEE M1-0200.
3. THIS DIAGRAM IS A SCHEMATIC REPRESENTATION AND IS INTENDED TO SHOW GENERAL AIR DISTRIBUTION AND FLOW PATHS.
4. BALANCING DAMPERS, REGISTERS, DIFFUSERS, FLEXIBLE CONNECTIONS AND ALL OTHER ACCESSORIES NOT SHOWN ON THIS DIAGRAM SHALL BE PROVIDED AS INDICATED ON THE HVAC ARRANGEMENT DRAWINGS AND SPECIFICATIONS.
5. ALL ROOM NAMES AND NUMBERS CORRESPOND TO ARCHITECTURAL DRAWINGS.
6. FOR CONTINUATION OF PLUMBING VENTS SEE M1-0237.
7. FOR CONTINUATION OF PLUMBING VENTS SEE M2-0237.
8. ALL AIRFLOW VALUES SHOWN ARE FOR NORMAL OPERATION AND DO NOT REFLECT DISTRIBUTION DURING OPERATION OF INTERMITTENT EQUIPMENT. GRILLS, REGISTERS, DIFFUSERS AND VOLUME DAMPERS SHALL BE SET FOR THE NORMAL OPERATION FLOWS. HVAC CONTRACTOR SHALL SUPPLY AIRFLOW TEST DATA INDICATING ACTUAL AIRFLOWS WITH INTERMITTENT EQUIPMENT IN OPERATION.
9. FUME HOOD FAN (KEWAUNEE SCIENTIFIC) SUPPLIED BY TU OPERATIONS.
10. DELETED
11. FIRE DAMPERS REMOVED FROM FLOW DIAGRAM ONLY. FOR LOCATIONS SEE DUCT LAYOUT DRAWINGS.
12. FUME HOOD FAN CPX-VAFNCB-30 MFG BY FISHER SCIENTIFIC.
13. RETAGGED FROM HOT CELL EXHAUST FAN, PO CPF-05244.
14. FOR CONTINUATION OF PLUMBING VENTS SEE M1-0227-02.
15. THE AIR FLOW RATES SHOWN ARE ORIGINAL DESIGN VALUES FOR INITIAL FLOW BALANCING AND DO NOT REPRESENT AS-BUILT. AIR FLOW IS BALANCED TO MAINTAIN ROOM TEMPERATURES WITHIN DESIGN DURING NORMAL OPERATION AND TO ENSURE THE DIRECTION OF AIR FLOW IS AS SHOWN.

REFERENCES:

| | | |
|---|---|---|
| 1. | M1-0304-01<br>M1-0304-01A | FLOW DIAGRAM - AIR CONDITIONING OFFICE AND SERVICE AREA |
| 2. | M1-0200 | MECHANICAL DRAWING NOTES |
| 3. | M1-0306 | FLOW DIAGRAM VENTILATION TURBINE BLDG |
| 4. | M1-0303-B | FLOW DIAGRAM VENTILATION AUX BLDG |
| 5. | M1-0313 | FLOW DIAGRAM VENTILATION AAP BLDG AND CONTROL BLDG UPS AREA A/C SYSTEMS |
| 6. | M1-0237 | FLOW DIAGRAM VENTS AND DRAINS TURBINE AND FUEL HANDLING BLDG |
| 7. | M2-0237 | FLOW DIAGRAM VENTS AND DRAINS |
| 8. | M1-0307 | FLOW DIAGRAM VENTILATION CHILLED WATER SYSTEM |

FSAR FIGURE 9.4-14

THIS DRAWING CREATED ELECTRONICALLY

DRAWING 2323-M1-0304-01 REV CP-6
HAS BEEN SPLIT INTO THE FOLLOWING SHEETS:

| |
|---|
| M1-0304-01 |
| M1-0304-01A |
| M1-0304-01B |
| |
| |

NON-SAFETY

LUMINANT
CPNPP
GLEN ROSE, TEXAS

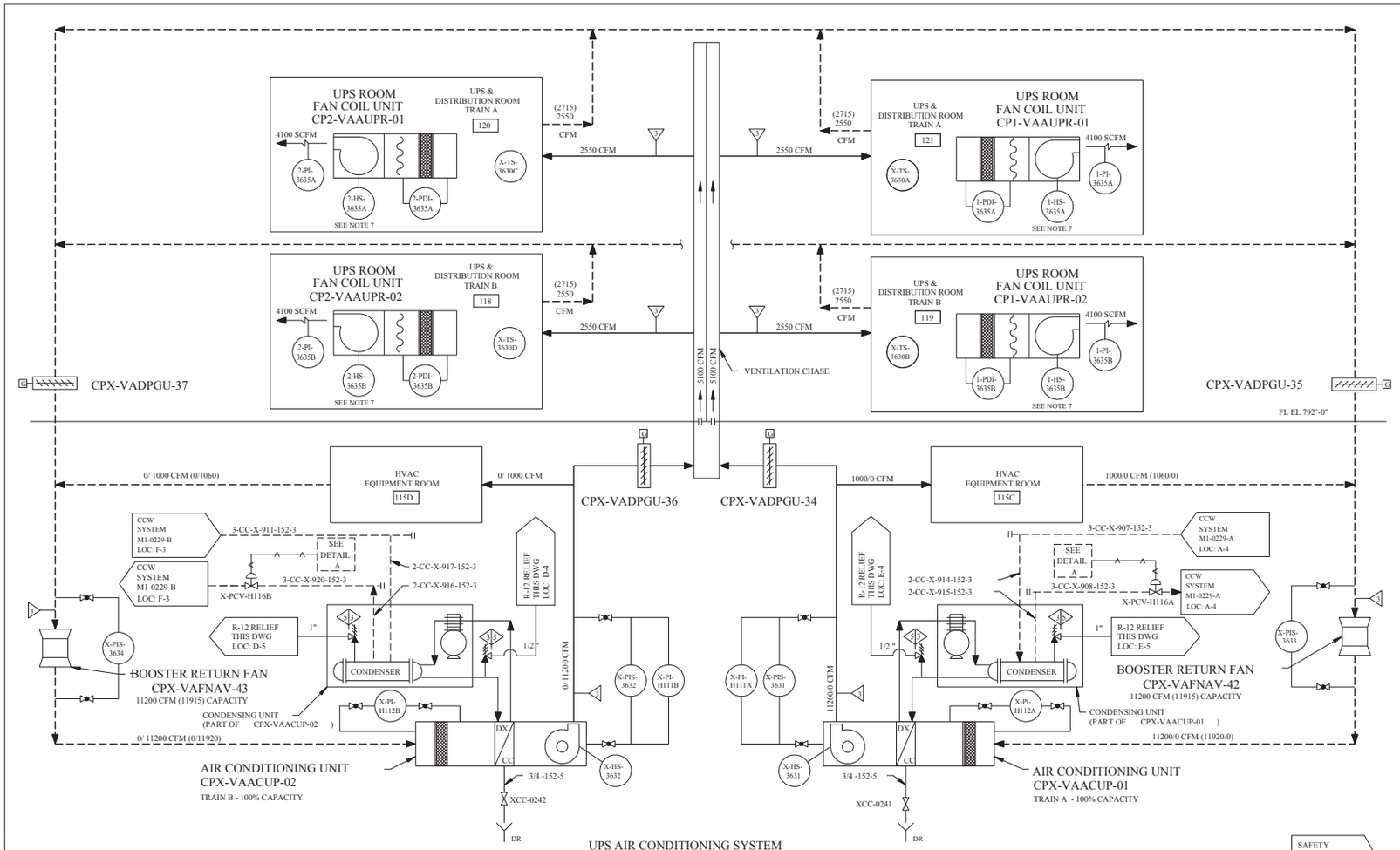
FLOW DIAGRAM - AIR CONDITIONING
OFFICE AND SERVICE AREA

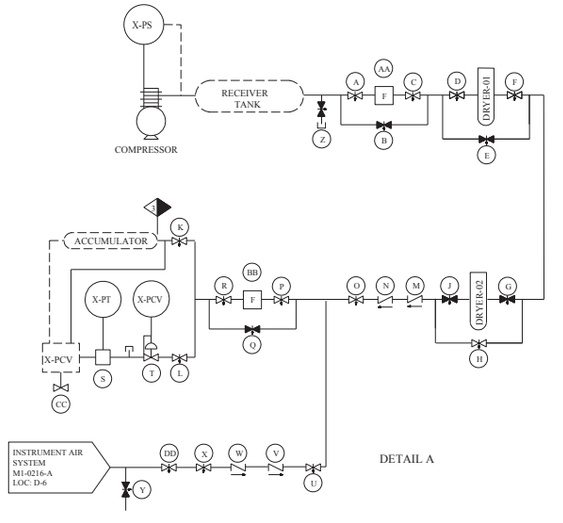
| DWG. NO. | SH. NO. | REV. |
|---|---|---|
| M1-0304 | 01B | CP-13 |

$$$$$$$DATE$$$$$$

me696900.dgn A M1-0304-01B

< FINAL PRINT >




*** ACCUMULATOR IS EQUIPPED WITH AN INTERNAL CHECK VALVE.

CONTROL AIR SUPPLY
FOR UPS AIR CONDITIONING SYSTEM
COMPONENT LOCATION TAG NUMBERS

| | TRAIN A | TRAIN B |
|---|---|---|
| PRESSURE SWITCH | X-PS-H105A | X-PS-H105B |
| COMPRESSOR | CPX-VACAUP-01 | CPX-VACAUP-02 |
| RECEIVER TANK | CPX-VAATUP-01 | CPX-VAATUP-03 |
| PREFILTER AA | CPX-VAFTUP-01 | CPX-VAFTUP-02 |
| DRYER-01 | CPX-VADYUP-01 | CPX-VADYUP-03 |
| DRYER-02 | CPX-VADYUP-02 | CPX-VADYUP-04 |
| PREFILTER BB | CPX-VAFTUP-04 | CPX-VAFTUP-03 |
| ACCUMULATOR *** | CPX-VAATUP-02 | CPX-VAATUP-04 |
| CONTROL VALVE CC | X-PCV-H116A | X-PCV-H116B |
| SERVICE VALVE A | XVA-0194 | XVA-0205 |
| BYPASS VALVE B | XVA-0195 | XVA-0206 |
| SERVICE VALVE C | XVA-0196 | XVA-0207 |
| SERVICE VALVE D | XVA-0197 | XVA-0208 |
| BYPASS VALVE E | XVA-0198 | XVA-0209 |
| SERVICE VALVE F | XVA-0199 | XVA-0210 |
| SERVICE VALVE G | XVA-0200 | XVA-0211 |
| BYPASS VALVE H | XVA-0201 | XVA-0212 |
| SERVICE VALVE J | XVA-0202 | XVA-0213 |
| CUTOFF VALVE K | XVA-0203 | XVA-0214 |
| CUTOFF VALVE L | XVA-0204 | XVA-0215 |
| SERVICE VALVE M | XVA-0236 | XVA-0234 |
| SERVICE VALVE N | XVA-0231 | XVA-0229 |
| SERVICE VALVE O | XVA-0227 | XVA-0221 |
| SERVICE VALVE P | XVA-0224 | XVA-0218 |
| BYPASS VALVE Q | XVA-0226 | XVA-0220 |
| SERVICE VALVE R | XVA-0225 | XVA-0219 |
| TRANSMITTER S | X-PT-H107A | X-PT-H107B |
| REGULATOR T | X-PCV-H116A-PR1 | X-PCV-H116B-PR1 |
| SERVICE VALVE U | XVA-0223 | XVA-0217 |
| SERVICE VALVE V | XVA-0230 | XVA-0228 |
| SERVICE VALVE W | XVA-0235 | XVA-0233 |
| SERVICE VALVE X | XVA-0222 | XVA-0216 |
| DRAIN VALVE Y | XVA-0232 | - |
| TEST VALVE Z | XVA-0276 | XVA-0275 |
| SERVICE VALVE DD | - | XVA-0277 |

## HVAC ABBREVIATIONS

| | |
|---|---|
| AC | AIR CONDITIONING |
| AD | ACCESS DOOR |
| BOT | BOTTOM |
| CD | CEILING DIFFUSER |
| CFM | CUBIC FEET/MINUTE |
| CONT | CONTINUATION |
| DN | DOWN |
| DWG | DRAWING |
| EL | ELEVATION |
| EXH | EXHAUST |
| FAI | FAIL AS IS |
| FC | FAIL CLOSED |
| FO | FAIL OPEN |
| FCON | FLEXIBLE CONNECTION |
| FD | FIRE DAMPER |
| FL | FLOOR |
| NC | NORMALLY CLOSED |
| NNS | NON-NUCLEAR SAFETY |
| NO | NORMALLY OPEN |
| OAI | OUTSIDE AIR INTAKE |
| OPNG | OPENING |
| OPP | OPPOSITE |
| REG | REGISTER |
| RET | RETURN |
| SD | SUPPLY DAMPER |
| SPD | SPLITTER DAMPER |
| SUP | SUPPLY |
| SYS | SYSTEM |
| TYP | TYPICAL |
| VEL | VELOCITY |
| VOL | VOLUME |
| VD | VOLUME DAMPER |
| VPE | VELOCITY PRESSURE ELEMENT (PITOT TUBE) |
| WMS | WIRE MESH SCREEN |
| LC | LOCKED CLOSED |
| LO | LOCKED OPEN |

## SYMBOL LIST

- AUTOMATIC PARTICULATE FILTER
- PARTICULATE FILTER
- CARBON FILTER
- HEPA FILTER
- MIST ELIMINATOR
- COOLING COIL
- DAMPER OPPOSED BLADES
- DAMPER OPPOSED BLADES (MANUAL)
- DAMPER PARALLEL BLADES
- DAMPER PARALLEL BLADES (MANUAL)
- FIXED LOUVER (STORM PROOF)
- BUBBLE TIGHT DAMPER
- SINGLE BLADE DAMPER
- ISOLATION DAMPER
- ELECTRIC HEATING COIL
- UNIT HEATER (ELECTRIC)
- OUTSIDE AIR INTAKE
- AXIAL FAN
- ELECTRIC STRIP HEATER
- DAMPER COUNTERWEIGHT GRAVITY OPERATED
- MOTOR OPERATOR
- PISTON OPERATOR (MODULATING) (PNEUMATIC)
- DIRECT EXPANSION COOLING COIL
- HUMIDIFIER
- PROPELLER FAN
- VARIABLE INLET VANE
- COMPRESSOR
- FAN COIL UNIT
- SUPPLY AIR
- EXHAUST OR RETURN AIR
- AIR FLOW FROM OR TO OPEN AREAS (UNDUCTED)
- LOUVER IN DOOR
- FIRE PROTECTION COATING ON DUCT
- CENTRIFUGAL FAN
- VELOCITY PRESSURE ELEMENT (PITOT TUBE)
- ROOF MOUNTED FAN

| REV | DWN | CHKD | APVD | REMARKS |
|---|---|---|---|---|
| CP-21 | JRMC 12-17 2009 | SM 12-17 2009 | | THIS DRAWING REVISED TO INCORPORATE DESIGN CHANGE FDA 2007-002527-01-00 PER SK-0005-07-002527-01-00. |

NOTES:

1. FOR ABBREVIATIONS AND SYMBOLS SEE THIS DWG (E-5) AND (F-1) AND DWG M1-0200.
2. DELETED
3. THIS DIAGRAM IS A SCHEMATIC REPRESENTATION AND IS INTENDED TO SHOW GENERAL AIR DISTRIBUTION AND FLOW PATHS.
4. BALANCING DAMPERS, FIRE DAMPERS, REGISTERS DIFFUSERS, FLEXIBLE CONNECTIONS AND ALL OTHER ACCESSORIES NOT SHOWN ON THIS DIAGRAM SHALL BE PROVIDED AS INDICATED ON THE HVAC ARRANGEMENT DRAWINGS AND SPECIFICATIONS.
5. AIR FLOW QUANTITIES SHOWN ARE BASED ON A DENSITY OF 0.075 LB/FT OCCURRING AT THE STANDARD CONDITION OF DRY AIR AT 70°F AND 29.92" HG BAROMETER PRESSURE. QUANTITIES IN PARENTHESES ARE ACTUAL AIR FLOW RATES BASED ON DENSITY AT DESIGN CONDITIONS.
6. FOR INTERCONNECTING PIPING TO THE CONDENSER OF THE CONDENSING UNIT FOR UPS AND DISTRIBUTION ROOM AIR CONDITIONING UNIT SEE DWG M1-0229.
7. THIS HAND SWITCH IS LOCAL, MOUNTED ON THE ASSOCIATED EQUIPMENT.

REFERENCES:

| | |
|---|---|
| M1-0200 | MECHANICAL DRAWING NOTES AND SYMBOLS |
| M1-2313-01 | INSTRUMENT & CONTROL DIAGRAM |

FSAR FIGURE 9.4-15

THIS DRAWING CREATED ELECTRONICALLY

CLASS I
(NUCLEAR SAFETY-RELATED)
SAFETY CLASS 1 — SEISMIC CATEGORY I
SAFETY CLASS 2 — CLASS 1E
SAFETY CLASS 3 — ASSOCIATED CIRCUITS

LUMINANT
CPNPP
GLEN ROSE, TEXAS

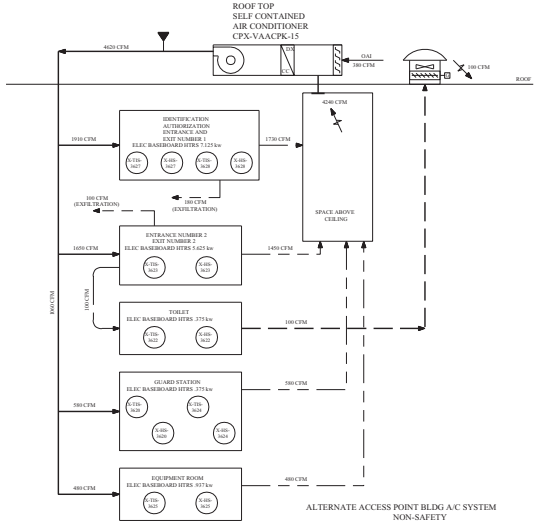
FLOW DIAGRAM-VENTILATION
CONTROL BLDG
UPS AREA A/C SYSTEMS

DWG. NO. M1-0313 | SH. NO. - | REV. CP-21

REF CKD 3/6/97 CP-15

me967500.dgn A M1-0313

FINAL PRINT




ALTERNATE ACCESS POINT BLDG A/C SYSTEM
NON-SAFETY

| REV. | DATE | DRAFTER | REMARKS |
|---|---|---|---|
| CP-3 | 9/4/15 | TSH | THIS DRAWING REVISED TO INCORPORATE DESIGN CHANGE TDA-3901-000366-02-00 PER SIL-00231-01-000366-02-00. |

NOTES:

1. FOR ABBREVIATIONS AND SYMBOLS SEE DWG M1-0313 (E-5) AND (F-1) AND DWG M1-0200.
2. DELETED
3. THIS DIAGRAM IS A SCHEMATIC REPRESENTATION AND IS INTENDED TO SHOW GENERAL AIR DISTRIBUTION AND FLOW PATHS.
4. BALANCING DAMPERS, FIRE DAMPERS, REGISTERS DIFFUSERS, FLEXIBLE CONNECTIONS, AND ALL OTHER ACCESSORIES NOT SHOWN ON THIS DIAGRAM SHALL BE PROVIDED AS INDICATED ON THE HVAC ARRANGEMENT DRAWINGS AND SPECIFICATIONS.
5. AIR FLOW QUANTITIES SHOWN ARE BASED ON A DENSITY OF 0.075 LB/FT OCCURING AT THE STANDARD CONDITION OF DRY AIR AT 70°F AND 29.92" HG BAROMETER PRESSURE. QUANTITIES IN PARENTHESES ARE ACTUAL AIR FLOW RATES BASED ON DENSITY AT DESIGN CONDITIONS.
6. FOR INTERCONNECTING PIPING TO THE CONDENSER OF THE CONDENSING UNIT FOR UPS AND DISTRIBUTION ROOM AIR CONDITIONING UNIT SEE DWG M1-0229.
7. DELETED
8. DELETED
9. AIR FLOW RATES SHOWN ARE ORIGINAL DESIGN VALUES FOR INITIAL FLOW BALANCING AND DO NOT REPRESENT AS-BUILT. AIR FLOW IS BALANCED TO MAINTAIN ROOM TEMPERATURES WITHIN DESIGN DURING NORMAL OPERATION AND TO ENSURE THE DIRECTION OF AIR FLOW IS AS SHOWN.

9

REFERENCES:

| | |
|---|---|
| M1-0200 | MECHANICAL DRAWING NOTES AND SYMBOLS |

FSAR FIGURE 9.4-15

THIS DRAWING IS DATA FILE CONTROLLED

| DRAWING M1-0313 REV CP-9 |
|---|
| HAS BEEN SPLIT INTO THE FOLLOWING SHEETS: |
| M1-0313 |
| M1-0313-A |

NON-SAFETY

TXU POWER
CPSES
GLEN ROSE, TEXAS

FLOW DIAGRAM-VENTILATION
ALTERNATE ACCESS POINT GUARDHOUSE

| DWG. NO. | SH. NO. | REV. |
|---|---|---|
| M1-0313 | A | CP-3 |

mc515800.dgn

M1-0313-A

SIEMENS/SAIC/BNBS

FIGURES 9.5-1 thru 9.5-42
HAVE BEEN DELETED

FIGURES 9.5-1 thru 9.5-42
HAVE BEEN DELETED

FIGURES 9.5-1 thru 9.5-42
HAVE BEEN DELETED

FIGURES 9.5-1 thru 9.5-42
HAVE BEEN DELETED

FIGURES 9.5-1 thru 9.5-42
HAVE BEEN DELETED

FIGURES 9.5-1 thru 9.5-42
HAVE BEEN DELETED

FIGURES 9.5-1 thru 9.5-42
HAVE BEEN DELETED

FIGURES 9.5-1 thru 9.5-42
HAVE BEEN DELETED

FIGURES 9.5-1 thru 9.5-42
HAVE BEEN DELETED

FIGURES 9.5-1 thru 9.5-42
HAVE BEEN DELETED

FIGURES 9.5-1 thru 9.5-42
HAVE BEEN DELETED

FIGURES 9.5-1 thru 9.5-42
HAVE BEEN DELETED

FIGURES 9.5-1 thru 9.5-42
HAVE BEEN DELETED

FIGURES 9.5-1 thru 9.5-42
HAVE BEEN DELETED

FIGURES 9.5-1 thru 9.5-42
HAVE BEEN DELETED

FIGURES 9.5-1 thru 9.5-42
HAVE BEEN DELETED

FIGURES 9.5-1 thru 9.5-42
HAVE BEEN DELETED

FIGURES 9.5-1 thru 9.5-42
HAVE BEEN DELETED

FIGURES 9.5-1 thru 9.5-42
HAVE BEEN DELETED

FIGURES 9.5-1 thru 9.5-42
HAVE BEEN DELETED

FIGURES 9.5-1 thru 9.5-42
HAVE BEEN DELETED

FIGURES 9.5-1 thru 9.5-42
HAVE BEEN DELETED

FIGURES 9.5-1 thru 9.5-42
HAVE BEEN DELETED

FIGURES 9.5-1 thru 9.5-42
HAVE BEEN DELETED

FIGURES 9.5-1 thru 9.5-42
HAVE BEEN DELETED

FIGURES 9.5-1 thru 9.5-42
HAVE BEEN DELETED

FIGURES 9.5-1 thru 9.5-42
HAVE BEEN DELETED

FIGURES 9.5-1 thru 9.5-42
HAVE BEEN DELETED

FIGURES 9.5-1 thru 9.5-42
HAVE BEEN DELETED

FIGURES 9.5-1 thru 9.5-42
HAVE BEEN DELETED

FIGURES 9.5-1 thru 9.5-42
HAVE BEEN DELETED

FIGURES 9.5-1 thru 9.5-42
HAVE BEEN DELETED

FIGURES 9.5-1 thru 9.5-42
HAVE BEEN DELETED

FIGURES 9.5-1 thru 9.5-42
HAVE BEEN DELETED

FIGURES 9.5-1 thru 9.5-42
HAVE BEEN DELETED

FIGURES 9.5-1 thru 9.5-42
HAVE BEEN DELETED

FIGURES 9.5-1 thru 9.5-42
HAVE BEEN DELETED

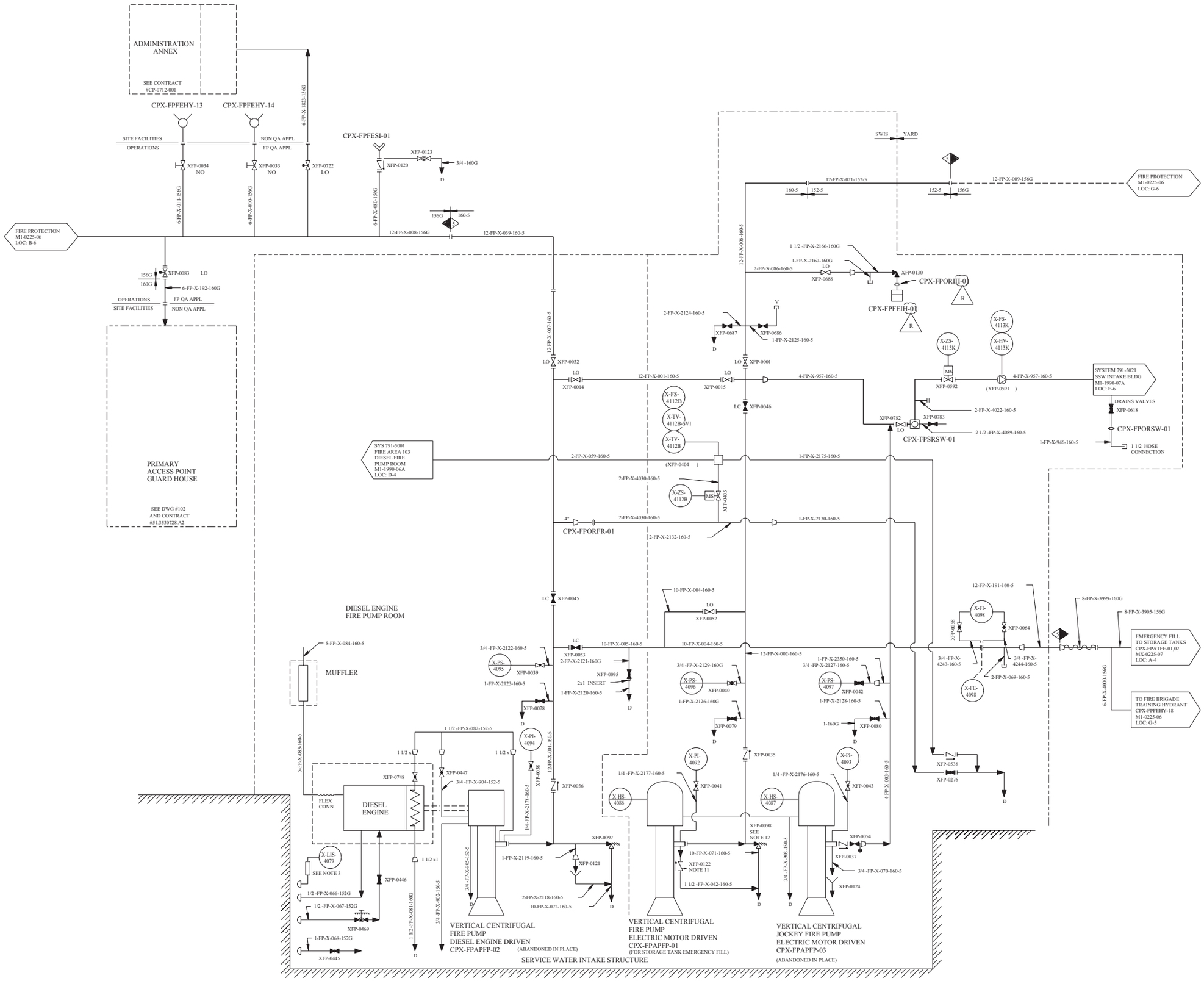
FIGURES 9.5-1 thru 9.5-42
HAVE BEEN DELETED

FIGURES 9.5-1 thru 9.5-42
HAVE BEEN DELETED

FIGURES 9.5-1 thru 9.5-42
HAVE BEEN DELETED

FIGURES 9.5-1 thru 9.5-42
HAVE BEEN DELETED

FIGURES 9.5-1 thru 9.5-42
HAVE BEEN DELETED




| REV | DWN | CHKD | APVD | REMARKS |
|---|---|---|---|---|
| CP-23 | DLK 04-08-2009 | MH 04-09-2009 | | THIS DRAWING REVISED TO INCORPORATE DESIGN CHANGE FDA 2009-000339-01-00 PER SK-0001-09-000339-01-00. |

NOTES:

1. DELETED
2. DELETED
3. ABANDONED IN PLACE.
4. DELETED
5. DELETED
6. FOR OTHER SYMBOLS AND NOTES SEE MECHANICAL SYMBOLS AND NOTES DRAWING M1-0200.
7. DELETED
8. UNLESS OTHERWISE NOTED, DRAINS COLLECTED BY LOCAL DRAIN SYSTEM UNDER ADMINISTRATIVE CONTROL.
9. DELETED
10. VALVE NUMBERS IN PARENTHESIS ARE VALVE BODY NUMBERS PER ECE 5.04-02 AND ARE ENTERED FOR HISTORICAL INFORMATION ONLY.
11. XFP-0122 IS AN AIR RELEASE CHECK VALVE INSTALLED WITH THE FLOW TOWARDS THE PUMP. SEE VL03-005055 FOR DETAILS.
12. VALVE TO BE NORMALLY SET AT 128 PSIG. RESET TO 165 PSIG WHEN PUMP IS USED AS AN ALTERNATE FIRE SUPPRESSION PUMP. 3 ±

LEGEND:

INSTRUMENT AND CONTROLS

U (FIRST LETTER IN BALLOON) - MONITOR
Z (FIRST LETTER IN BALLOON) - MONITOR
FOR EXPLANATION AND OTHER INSTR AND CONTROL SYMBOLS SEE NOTE 6

ABBREVIATIONS:

| | | | |
|---|---|---|---|
| | | STA | STATION |
| FIN FL EL | FINISHED FLOOR ELEVATION | CORR | CORRIDOR |
| BO | BY OTHERS | CONT | CONTINUATION |
| RED | REDUCER | GEN | GENERATOR |
| ECC | ECCENTRIC | RM | ROOM |
| DWG | DRAWING | BSMT | BASEMENT |

EQUIPMENT:

- FIN FL — HOSE VALVE IN EXTERIOR MOUNTED HOSE CABINET-PIPE HEAT TRACED
- STRAINER WITH CLOSED DRAIN VALVE
- SIAMESE FIRE DEPT CONN FOR EMERGENCY FILL BY PUMP TRUCK
- INTERIOR FIRE HOSE STATION
- TWO WAY FIRE HYDRANT WITH HOSE HOUSE
- M — WATER MOTOR ALARM
- FIRE PROT WATER SUPPLY LINE
- SPECTACLE FLANGE (CLOSED)

VALVES:

- VALVE WITH CURB BOX-MECHANICAL END ON YARD PIPING FLANGED END ON HYDRANT PIPING
- DIVISION POST INDICATOR VALVE MECHANICAL JOINT ENDS (LOCKED OPEN UNLESS NOTED OTHERWISE)
- MS — VALVE WITH MONITORING SWITCH, FLANGED ENDS
- DELUGE VALVE
- ALARM CHECK VALVE
- AIR RELEASE CHECK VALVE

REFERENCE BLOCKS:

SYSTEM REFERENCE
SYSTEM 786-9121 CABLE SPREADING RM-SOUTH HALF — DIRECTION OF FLOW
SYSTEM LOCATION
FOR CONT SEE DWG MI-0225 LOC: G-4
DRAWING COORDINATES

FSAR FIGURE 9.5-43

THIS DRAWING CREATED ELECTRONICALLY

NON–SAFETY

LUMINANT
CPNPP
GLEN ROSE, TEXAS

FLOW DIAGRAM
FIRE PROTECTION SYSTEM

| DWG. NO. | SH. NO. | REV. |
|---|---|---|
| M1-0225 | - | CP-23 |

SSSSSSDATESSSSS

me927900.dgn

| REV | DWN | CHKD | APVD | REMARKS |
|---|---|---|---|---|
| CP-14 | DLK 07-06-2015 | MHF 07-06-2015 | | THIS DRAWING REVISED TO INCORPORATE DESIGN CHANGE FDA-2014-000166-01-00 PER SK-0001-14-000166-01-00. |

NOTES:

1. FOR GENERAL NOTES AND LEGEND SEE DRAWING M1-0225.
2. THE TURBINE BUILDING ON THIS DRAWING WAS REDRAWN FROM THE ORIGINAL FLOW DIAGRAM TURBINE BUILDING FIRE PROTECTION DRAWING M1-0225-01, REV 3.
3. DELETED
4. ALARM CHECK VALVES 1FP-0025, 1FP-0042, 1FP-0043, 1FP-0044 AND XFP-0311 ARE NOT ELECTRICALLY CONNECTED.
5. DELETED
6. VALVE NUMBERS IN PARENTHESIS ARE VALVE BODY NUMBERS PER ECE 5.04-02 AND ARE ENTERED FOR HISTORICAL INFORMATION ONLY.
7. ORIFICE DISC NUMBERS IN PARENTHESIS ARE PROVIDED FOR THE 2□" DISCS STORED IN THE TURBINE DECK HOSE HOUSES FOR THE 2□" FIRE HOSES.

REFERENCES:

| | |
|---|---|
| M1-0225 | FLOW DIAGRAM FIRE PROTECTION SYSTEM |
| M2-0225-01 | FLOW DIAGRAM TURBINE BLDG UNIT 2 FIRE PROTECTION |
| M1-0225-04 | FLOW DIAGRAM FUEL AND ELECTRIC CONTROL BUILDINGS-UNITS 1 AND 2 FIRE PROTECTION |
| M1-0225-03 | FLOW DIAGRAM SAFEGUARDS AND DIESEL GENERATOR BUILDINGS UNIT 1 FIRE PROTECTION |

| DRAIN VALVE TABLE | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| A | B | C | D | E | F | G | H | J | K | L | M |
| 1FP-0407 | 1FP-0421 | 1FP-0410 | 1FP-0411 | 1FP-0412 | 1FP-0634 | 1FP-0401 | 1FP-0405 | 1FP-0408 | 1FP-0404 | 1FP-0644 | 1FP-0569 |
| 1FP-0420 | | | 1FP-0434 | 1FP-0406 | | 1FP-0402 | 1FP-0448 | 1FP-0409 | | | 1FP-0570 |
| | | | | 1FP-0675 | | 1FP-0552 | | 1FP-0419 | | | 1FP-0571 |
| | | | | | | 1FP-0553 | | 1FP-0422 | | | 1FP-0620 |
| | | | | | | | | 1FP-0423 | | | 1FP-0662 |
| | | | | | | | | 1FP-0623 | | | |

CLASS II

LUMINANT
CPNPP
GLEN ROSE, TEXAS

FLOW DIAGRAM
TURBINE BUILDING UNIT 1
FIRE PROTECTION

| DWG. NO. | SH. NO. | REV. |
|---|---|---|
| M1-0225 | 01 | CP-14 |

FSAR FIGURE 9.5-44

THIS DRAWING CREATED ELECTRONICALLY

| REV | DWN | CHKD | APVD | REMARKS |
|---|---|---|---|---|
| CP-17 | DLK 07-06-2015 | MHF 07-06-2015 | | THIS DRAWING REVISED TO INCORPORATE DESIGN CHANGE FDA-2014-000166-01-00 PER SK-0002-14-000166-01-00. |

NOTES:

1. PROVIDE VENT VALVES AT HIGH POINTS AND DRAIN VALVES AT THE LOW POINTS.
2. UNLESS OTHERWISE NOTED, ALL DRAINS ARE COLLECTED LOCALLY UNDER ADMINISTRATIVE CONTROLS.
3. FOR FIRE PROTECTION COMMON SUPPLY HEADER/UNIT 2 SYSTEM BOUNDARIES, ALSO SEE DRAWINGS M2-0225-03, M1-0225-02 AND M1-0225-06.
4. ALARM CHECK VALVES 2FP-0043 , 2FP-0044 , 2FP-0042 , 2FP-0025 AND XFP-0317 ARE NOT ELECTRICALLY CONNECTED.
5. PIPING AND COMPONENTS DEPICTED ARE WITHIN UNIT 2 BOUNDARIES AND SHALL BE WORKED IN ACCORDANCE WITH SPECIFICATION NUMBER CPES-M-2017 EXCEPT LINE NUMBERS 6-FP-X-189-160G AND 6-FP-X-134-160-5. IN ALL CASES COORDINATE WITH OPERATIONS PRIOR TO COMMENCEMENT OF WORK.

REFERENCE DRAWINGS

| | |
|---|---|
| M1-0225 | FLOW DIAGRAM FIRE PROTECTION SYSTEM |
| M1-0200 | MECHANICAL DRAWING |
| M2-1990 | LAYOUT DRAWINGS |

DRAIN VALVE TABLE

| A | B | C | D | E | F |
|---|---|---|---|---|---|
| 2FP-0481 | 2FP-0405 | 2FP-0733 | 2FP-0403 | 2FP-0432 | 2FP-0572 |
| | 2FP-0320 | 2FP-0428 | 2FP-0569 | 2FP-0404 | 2FP-0460 |
| | 2FP-0448 | 2FP-0596 | 2FP-0459 | 2FP-0595 | 2FP-0461 |
| | | 2FP-0570 | | 2FP-0431 | 2FP-0479 |
| | | | | | 2FP-0554 |
| | | | | | 2FP-0484 |
| | | | | | 2FP-0571 |
| | | | | | 2FP-0555 |

FSAR FIGURE 9.5-44

THIS DRAWING CREATED ELECTRONICALLY

CLASS II

LUMINANT
CPNPP
GLEN ROSE, TEXAS

FLOW DIAGRAM
TURBINE BUILDING
FIRE PROTECTION

| DWG. NO. | SH. NO. | REV. |
|---|---|---|
| M2-0225 | 01 | CP-17 |

FINAL PRINT

REF CKD CP-16 06/25/15

mc955600.dgn A M2-0225-01

Figure 9.5-44 and 9.5-44A have been transferred to the Flow Diagram Volume. (See Figure 9.5-44 in Table 3.2-4 for the flow diagram for both Figures.) 94

ROOF EL 900'-3"

FIN FL EL 886'-6"

FIN FL EL 873'-6"

FIN FL EL 852'-6"

FIN FL EL 842'-0"

FIN FL EL 831'-6"

FIN FL EL 810'-6"

FIN FL EL 790'-6"

HOSE STATION CPX-FPFEXH-16

HOSE STATION CPX-FPFEXH-15

HOSE STATION CPX-FPFEXH-12

HOSE STATION CPX-FPFEXH-24

HOSE STATION CPX-FPFEXH-23

HOSE STATION CPX-FPFEXH-21

HOSE STATION CPX-FPFEXH-01

FILTRATION UNIT CPX-VAFUPK-15

FILTRATION UNIT CPX-VAFUPK-13

FILTRATION UNIT CPX-VAFUPK-11

FILTRATION UNIT CPX-VAFUPK-19

FILTRATION UNIT CPX-VAFUPK-09

FILTRATION UNIT CPX-VAFUPK-16

FILTRATION UNIT CPX-VAFUPK-14

FILTRATION UNIT CPX-VAFUPK-12

FILTRATION UNIT CPX-VAFUPK-20

FILTRATION UNIT CPX-VAFUPK-10

CP1-FPSREC-01

CP2-FPSREC-01

CPX-FPORAB-03

CPX-FPORAB-04

CPX-FPORAB-05

CPX-FPORAB-07

CPX-FPORAB-08

CPX-FPORAB-09

CPX-FPORAB-01

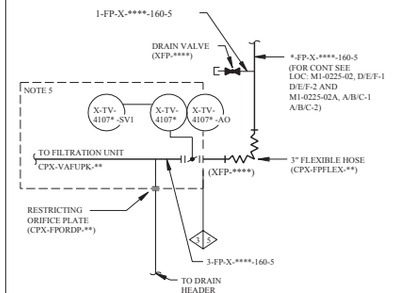
| REV | DWN | CHK | APVD | REMARKS |
|---|---|---|---|---|
| CP-23 | DLK 09-10 2007 | MM 09-11 2007 | | THIS DRAWING REVISED TO INCORPORATE DESIGN CHANGE FDA 2004-000481-01-00 PER SK-0001-04-000481-01-00. |

NOTES:

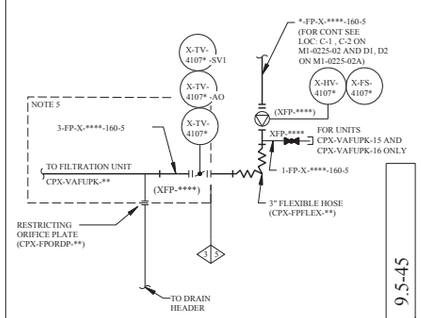
1. FOR GENERAL NOTES AND LEGEND SEE DRAWING M1-0225.
2. PROVIDE VENT VALVES AT THE HIGH POINTS AND DRAIN VALVES AT THE LOW POINTS.
3. THIS DRAWING WAS REDRAWN FROM THE ORIGINAL AUXILIARY BUILDING, SAFEGUARDS BUILDING, AND CONTROL BUILDING FIRE PROTECTION DRAWING M1-0225-02, REV. 2.
4. UNLESS OTHERWISE NOTED DRAINS COLLECTED BY LOCAL DRAIN SYSTEM.
5. PIPING INSTALLED WITHIN THE DASHED LINES (DESIGNATED CLASS 3) IS ASSOCIATED WITH THE FILTRATION UNITS. SEE DRAWINGS M1-0301 AND M1-0309 AND NCR-88-15777 FOR MORE INFORMATION.
6. VALVE NUMBERS IN PARENTHESIS ARE VALVE BODY NUMBER PER ECE 5.04-02 AND ARE ENTERED FOR HISTORICAL INFORMATION ONLY.

REFERENCE DRAWINGS:

1. FLOW DIAGRAM FIRE PROTECTION SYSTEM DWG M1-0225
2. FLOW DIAGRAM SAFEGUARD AND DIESEL GENERATOR BUILDING UNIT 1 FIRE PROTECTION DWG M1-0225-03
3. FLOW DIAGRAM ELEC CONTROL, SWITCHGEAR AND FUEL BUILDING UNITS 1 AND 2 FIRE PROTECTION DWG M1-0225-04
4. FLOW DIAGRAM SAFEGUARD AND DIESEL GENERATOR BUILDING UNIT 2 FIRE PROTECTION DWG M2-0225-03
5. FOR SYSTEM NUMBERS AND PIPING PLANS AND SECTIONS SEE FIRE PROTECTION ISOMETRIC DRAWINGS




DETAIL A
SEE TABLE X FOR ITEM NUMBERS




DETAIL B
SEE TABLE X AND X-1 FOR ITEM NUMBERS

TABLE X
(SEE DETAILS A, B AND C)

| DELUGE VALVE | | | | LINE NUMBER CLASS 5 REQD | LINE NUMBER CLASS 3 REQD | 3" FLEXIBLE HOSE NUMBER | DRAIN LINE NUMBER | DRAIN VALVE NUMBER | FILTRATION UNIT NUMBER | RESTRICTING ORIFICE PLATE NUMBER | DETAIL |
|---|---|---|---|---|---|---|---|---|---|---|---|
| VALVE | | AIR OPERATOR | SOLENOID VALVE | | | | | | | | |
| X-TV-4107E | (XFP-0653) | X-TV-4107E-AO | X-TV-4107E-SV1 | 3-FP-X-132-160-5 | 3-FP-X-4224-160-5 | CPX-FPFLEX-01 | - | - | CPX-VAFUPK-01 | CPX-FPORDP-01 | B |
| X-TV-41071 | (XFP-0652) | X-TV-41071-AO | X-TV-41071-SV1 | 3-FP-X-131-160-5 | 3-FP-X-4226-160-5 | CPX-FPFLEX-03 | 1-FP-X-2232-160-5 | XFP-0552 | CPX-VAFUPK-03 | CPX-FPORDP-03 | A |
| X-TV-4107J | (XFP-0651) | X-TV-4107J-AO | X-TV-4107J-SV1 | 3-FP-X-130-160-5 | 3-FP-X-4228-160-5 | CPX-FPFLEX-05 | 1-FP-X-2233-160-5 | XFP-0555 | CPX-VAFUPK-05 | CPX-FPORDP-05 | A |
| X-TV-4107K | (XFP-0650) | X-TV-4107K-AO | X-TV-4107K-SV1 | 3-FP-X-129-160-5 | 3-FP-X-4230-160-5 | CPX-FPFLEX-07 | 1-FP-X-2234-160-5 | XFP-0566 | CPX-VAFUPK-07 | CPX-FPORDP-07 | A |
| X-TV-4107L | (XFP-0649) | X-TV-4107L-AO | X-TV-4107L-SV1 | 3-FP-X-128-160-5 | 3-FP-X-4232-160-5 | CPX-FPFLEX-09 | 1-FP-X-2241-160-5 | XFP-0547 | CPX-VAFUPK-09 | CPX-FPORDP-09 | A |
| X-TV-4107M | (XFP-0647) | X-TV-4107M-AO | X-TV-4107M-SV1 | 3-FP-X-126-160-5 | 3-FP-X-4234-160-5 | CPX-FPFLEX-11 | 1-FP-X-2239-160-5 | XFP-0681 | CPX-VAFUPK-11 | CPX-FPORDP-11 | A |
| X-TV-4107N | (XFP-0646) | X-TV-4107N-AO | X-TV-4107N-SV1 | 3-FP-X-125-160-5 | 3-FP-X-4236-160-5 | CPX-FPFLEX-13 | 1-FP-X-2238-160-5 | XFP-0683 | CPX-VAFUPK-13 | CPX-FPORDP-13 | A |
| X-TV-4107O | (XFP-0645) | X-TV-4107O-AO | X-TV-4107O-SV1 | 3-FP-X-124-160-5 | 3-FP-X-4238-160-5 | CPX-FPFLEX-15 | 1-FP-X-2237-160-5 | XFP-0680 | CPX-VAFUPK-15 | CPX-FPORDP-15 | B |
| X-TV-4107F | (XFP-0644) | X-TV-4107F-AO | X-TV-4107F-SV1 | 3-FP-X-123-160-5 | 3-FP-X-4225-160-5 | CPX-FPFLEX-02 | - | - | CPX-VAFUPK-02 | CPX-FPORDP-02 | B |
| X-TV-4107Q | (XFP-0643) | X-TV-4107Q-AO | X-TV-4107Q-SV1 | 3-FP-X-122-160-5 | 3-FP-X-4227-160-5 | CPX-FPFLEX-04 | 1-FP-X-2219-160-5 | XFP-0554 | CPX-VAFUPK-04 | CPX-FPORDP-04 | A |
| X-TV-4107R | (XFP-0642) | X-TV-4107R-AO | X-TV-4107R-SV1 | 3-FP-X-121-160-5 | 3-FP-X-4229-160-5 | CPX-FPFLEX-06 | 1-FP-X-2220-160-5 | XFP-0561 | CPX-VAFUPK-06 | CPX-FPORDP-06 | A |
| X-TV-4107S | (XFP-0641) | X-TV-4107S-AO | X-TV-4107S-SV1 | 3-FP-X-120-160-5 | 3-FP-X-4231-160-5 | CPX-FPFLEX-08 | 1-FP-X-2221-160-5 | XFP-0582 | CPX-VAFUPK-08 | CPX-FPORDP-08 | A |
| X-TV-4107T | (XFP-0640) | X-TV-4107T-AO | X-TV-4107T-SV1 | 3-FP-X-119-160-5 | 3-FP-X-4233-160-5 | CPX-FPFLEX-10 | 1-FP-X-2228-160-5 | XFP-0548 | CPX-VAFUPK-10 | CPX-FPORDP-10 | A |
| X-TV-4107U | (XFP-0638) | X-TV-4107U-AO | X-TV-4107U-SV1 | 3-FP-X-117-160-5 | 3-FP-X-4235-160-5 | CPX-FPFLEX-12 | 1-FP-X-2227-160-5 | XFP-0682 | CPX-VAFUPK-12 | CPX-FPORDP-12 | A |
| X-TV-4107V | (XFP-0637) | X-TV-4107V-AO | X-TV-4107V-SV1 | 3-FP-X-116-160-5 | 3-FP-X-4237-160-5 | CPX-FPFLEX-14 | 1-FP-X-2226-160-5 | XFP-0684 | CPX-VAFUPK-14 | CPX-FPORDP-14 | A |
| X-TV-4107W | (XFP-0636) | X-TV-4107W-AO | X-TV-4107W-SV1 | 3-FP-X-115-160-5 | 3-FP-X-4239-160-5 | CPX-FPFLEX-16 | 1-FP-X-2225-160-5 | XFP-0685 | CPX-VAFUPK-16 | CPX-FPORDP-16 | B |
| X-TV-4107G | (XFP-0648) | X-TV-4107G-AO | X-TV-4107G-SV1 | 2-FP-X-127-160-5 | 2-FP-X-2073-160-5 | CPX-FPFLEX-19 | 1-FP-X-4220-160-5 | XFP-0999 | CPX-VAFUPK-19 | CPX-FPORDP-19 | C |
| X-TV-4107H | (XFP-0639) | X-TV-4107H-AO | X-TV-4107H-SV1 | 2-FP-X-118-160-5 | 2-FP-X-2074-160-5 | CPX-FPFLEX-20 | 1-FP-X-4221-160-5 | XFP-1000 | CPX-VAFUPK-20 | CPX-FPORDP-20 | C |

| DRAWING 2323-M1-0225-02 REV CP-5 |
|---|
| HAS BEEN SPLIT INTO THE FOLLOWING SHEETS: |
| M1-0225-02 |
| M1-0225-02A |

CLASS I
(NUCLEAR SAFETY-RELATED)
SAFETY CLASS 1 SEISMIC CATEGORY I
SAFETY CLASS 2 CLASS 1E
SAFETY CLASS 3 ASSOCIATED CIRCUITS

LUMINANT
CPSES
GLEN ROSE, TEXAS

FLOW DIAGRAM
AUXILIARY BUILDING
FIRE PROTECTION

| DWG NO. | SH. NO. | REV. |
|---|---|---|
| M1-0225 | 02 | CP-23 |

FSAR FIGURE 9.5-45

THIS DRAWING CREATED ELECTRONICALLY

ROOF EL 900'-3"

CONTINUED ON M1-0225-02 LOC: G-1

4-FP-X-114-160-5

LO XFP-0521

LO * XFP-0522 — 3-FP-X-129-160-5 — FILTRATION UNIT CPX-VAFUPK-07 — SEE DETAIL A

LO * XFP-0523 — 3-FP-X-130-160-5 — FILTRATION UNIT CPX-VAFUPK-05 — SEE DETAIL A

LO * XFP-0524 — 3-FP-X-131-160-5 — FILTRATION UNIT CPX-VAFUPK-03 — SEE DETAIL A

X-ZS-4107E — MS — * XFP-0525 — 3-FP-X-132-160-5 — FILTRATION UNIT CPX-VAFUPK-01 — SEE DETAIL B

4-FP-X-114-160-5 — XFP-0589 — CPX-FPSRAB-02 — 2 1/2 -FP-X-2231-160-5 — D XFP-0526 — LO XFP-0527 — 1-FP-X-2230-160-5 — XFP-0697 — 1-FP-X-2229-160-5

4-FP-X-114-160-5 — 6-FP-X-094-160-5 — 2-FP-X-109-160-5 — 1 1/2 -FP-X-2021-160-5 — XFP-0144 — CPX-FPORXH-17 — 2-FP-X-3876-160-5 — HOSE STATION CPX-FPFEXH-17

FIN FL EL 886'-6"

CONTINUED ON M1-0225-02 LOC: G-1

4-FP-X-113-160-5

LO XFP-0507

LO * XFP-0508 — 3-FP-X-120-160-5 — FILTRATION UNIT CPX-VAFUPK-08 — SEE DETAIL A

LO * XFP-0509 — 3-FP-X-121-160-5 — FILTRATION UNIT CPX-VAFUPK-06 — SEE DETAIL A

LO * XFP-0510 — 3-FP-X-122-160-5 — FILTRATION UNIT CPX-VAFUPK-04 — SEE DETAIL A

R — X-ZS-4107E — MS — * XFP-0511 — 3-FP-X-123-160-5 — FILTRATION UNIT CPX-VAFUPK-02 — SEE DETAIL B

4-FP-X-113-160-5 — XFP-0587 — CPX-FPSRAB-04 — 2 1/2 -FP-X-2218-160-5 — D XFP-0512 — LO XFP-0513

4-FP-X-113-160-5 — 6-FP-X-186-160-5 — 2-FP-X-107-160-5 — XFP-0143 — CPX-FPORXH-14 — 1 1/2 -FP-X-2018-160-5 — HOSE STATION CPX-FPFEXH-14

6-FP-X-094-160-5 — 2-FP-X-108-160-5 — 1 1/2 -FP-X-2017-160-5 — XFP-0142 — CPX-FPORXH-13 — HOSE STATION CPX-FPFEXH-13

FIN FL EL 873'-6"

CONTINUED ON M1-0225-02 LOC: G-2

6-FP-X-735-160-5

3-FP-X-4617-160-5 — 1-ZS-4113S — 1-FS-4113S — 1-HV-4113S — MS — XFP-0528 — (XFP-0553) — SYS 785-X241 STAIR AREA A-17 M1-1990-104 LOC: B-2 — DRAIN VALVES XFP-0727

4-FP-X-698-160-5 — XFP-0550 — D — 4-FP-X-698-160-5 — 1-FP-X-2168-160-5

CONTINUED ON M1-0225-03 LOC: A-2

4-FP-X-2523-160-5 — X-ZS-4104N — X-FS-4104N — X-HV-4104N — MS — XFP-0466 — (XFP-0467) — 4-FP-X-2523-160-5 — SYS 785-X301 SOUTH HALF CORRIDOR M1-1990-184 LOC: F-3

1-FP-X-2524-160-5 — XFP-0468 — D — 2-FP-X-106-160-5 — 2-FP-X-2323-160-5 — XFP-0137 — CPX-FPORXH-10 — 2" — 1 1/2 -FP-X-2211-160-5 — HOSE STATION CPX-FPFEXH-10

XFP-0461 — 1-FP-X-2488-160-5 — CPX-FPORAB-10 — 1 1/2 " HOSE CONNECTION

4-FP-1-3610-160-5 — 1-ZS-4113P — 1-FS-4113P — 1-HV-4113F — MS — 1FP-0481 — (1FP-0480) — 4-FP-1-3547-160-5 — CONTINUED ON M1-0225-03 LOC: A-2

1-FP-1-3570-160-5 — 1FP-0482 — D — 2-FP-X-102-160-5 — 1 1/2 -FP-X-2016-160-5 — XFP-0139 — CPX-FPFEXH-11 — HOSE STATION CPX-FPFEXH-11

2-FP-X-1277-160-5 — CONTINUED ON M1-0225-04A LOC: G-1

XFP-0724 — 3-FP-X-1276-160-5 — 6-FP-X-094-160-5 — 1 1/2 -FP-X-2014-160-5 — D XFP-0729 — LO XFP-0690

2 1/2 -FP-X-702-160-5 — CONTINUED ON M1-0225-04A LOC: G-1

FIN FL EL 852'-6"

SYSTEM 785-X241 STAIR AREA A-11 DWG#-105 — DRAIN VALVES XFP-0549

2-FP-X-1278-160-5 — 2-FP-X-106-160-5

2-FP-X-1272-160-5 — 1 1/2 -FP-X-1810-160-5 — XFP-0480 — CPX-FPORXH-22 — HOSE STATION CPX-FPFEXH-22

FIN FL EL 842'-0"

2-FP-X-1270-160-5 — 1 1/2 -FP-X-100-160-5 — XFP-0141 — CPX-FPORXH-08 — HOSE STATION CPX-FPFEXH-08

XFP-0478 — 1 1/2 -FP-X-1807-160-5 — 2-FP-X-1270-160-5 — CPX-FPORXH-20 — HOSE STATION CPX-FPFEXH-20

2 1/2 -FP-X-4059-160-5 — 1 1/2 -FP-X-4086-160-5

6-FP-X-735-160-5 — CONTINUED ON M1-0225-03 LOC: A-2

2-FP-X-105-160-5 — 1 1/2 -FP-X-2169-160-5 — XFP-0135 — CPX-FPORXH-09 — 2-FP-X-105-160-5 — HOSE STATION CPX-FPFEXH-09

X-FS-4104H — X-HV-4104H — X-ZS-4104H — MS — (XFP-0612) — XFP-0613 — SYS 785-X161 SOUTH HALF CORR M1-1990-103A LOC: F-4 — 1-FP-X-3396-160-5 — DRAIN VALVES XFP-0776 — CPX-FP0RAB-06 — XFP-0768 — 1 1/2 " HOSE CONNECTION

6-FP-X-1175-160-5 — 1-FP-X-1178-160-5 — XFP-0614 — D

FIN FL EL 831'-6"

4-FP-X-092-160-5 — 4-FP-X-093-160-5

CONTINUED ON M1-0225-02 LOC: G-4

8-FP-X-734-160-5

LO XFP-0691

8-FP-X-734-160-5 — CONTINUED ON M1-0225-03 LOC: A-4

2-FP-X-104-160-5 — 2-FP-X-4087-160-5 — 2-FP-X-104-160-5 — XFP-0136 — CPX-FPORXH-07 — HOSE STATION CPX-FPFEXH-07

2-FP-X-187-160-5 — 2-FP-X-2263-160-5 — 1 1/2 -FP-X-2005-160-5 — 1-FP-X-2003-160-5 — XFP-0134 — CPX-FPORXH-06 — HOSE STATION CPX-FPFEXH-06

1-FP-X-2099-160-5 — XFP-0692 — D — XFP-0151 LO

CONTINUED ON M1-0225-01 LOC: G-2 — 2-FP-1-105-160-5

2-FP-X-101-160-5 — 2-FP-X-101-160-5 — XFP-0138 — CPX-FPORXH-05

2-FP-X-099-160-5 — 1 1/2 -FP-X-2212-160-5 — 1 1/2 -FP-X-2013-160-5 — XFP-0140 — HOSE STATION CPX-FPFEXH-05

1-FP-X-2261-160-5 — D XFP-0700 — CPX-FPORXH-04 — LO XFP-0149 — HOSE STATION CPX-FPFEXH-04

6-FP-X-094-160-5 — 6-FP-1-4562-160-5 — CONTINUED ON M1-0225-04A LOC: E-4

6-FP-1-848-160-5 — SYSTEM 785-X121 SOUTH HALF CORR M1-1990-101A LOC:B-1

DRAIN VALVES XFP-0750 XFP-0596

6-FP-X-365-160-5 — X-ZS-4104F — X-FS-4104F — X-HV-4104F — MS — XFP-0578 — (XFP-0579)

X-FS-4107D — X-HV-4107D — (XFP-0531) — X-ZS-4107D — MS — XFP-0145

XFP-0575 — 1-FP-X-3500-160-5 — 1 1/2 " HOSE CONNECTION — CPX-FPORAB-02

4-FP-X-092-160-5 — 6-FP-X-094-160-5

FIN FL EL 810'-6"

CONTINUED ON M1-0225-02 LOC: G-5

6-FP-X-091-160-5

LO XFP-0190 — LO XFP-0187 — V XFP-0720 — 1-FP-X-2155-160-5

3/4 -FP-X-2156-160-5 — 1-FP-X-4222-160-5 — XFP-0113 — 1-FP-X-2159-160-5 — XFP-0280 — V XFP-0239 — 1-FP-X-1023-160-5

6-FP-X-090-160-5 — 2-FP-X-098-160-5 — 1 1/2 -FP-X-2158-160-5 — XFP-0133 — 2-FP-X-098-160-5 — CPX-FPORXH-03 — HOSE STATION CPX-FPFEXH-03

1-FP-X-2157-160-5 — 6-FP-X-3254-160-5 — SYSTEM 785-X061 SOUTH HALF CORRIDOR M1-1990-146A LOC: F-2 — DRAIN VALVES XFP-0766 — XFP-0717 — D — 6-FP-X-0592-160-5

CONTINUED ON M1-0225-04A LOC: G-6 — 6-FP-X-1553-160-5

X-FS-4104D — X-HV-4104D — X-ZS-4104D — MS — (XFP-0590) — XFP-0577 — 6-FP-X-592-160-5

LO XFP-0248 — 3/4 -FP-X-2002-160-5 — 1-FP-X-1998-160-5 — 1FP-0599 — 6-FP-X-091-160-5 — CONTINUED ON M1-0225-03 LOC: A-5

2-FP-X-1268-160-5 — XFP-0477 — CPX-FPORXH-19 — HOSE STATION CPX-FPFEXH-19 — 1 1/2 -FP-X-2012-160-5

CONTINUED ON M1-0225-02 LOC: G-6 — 6-FP-X-089-160-5 — LO XFP-0183 — 1-FP-X-2144-160-5 — XFP-0476 — 1 1/2 -FP-X-2011-160-5 — 2-FP-X-4090-160-5 — CPX-FPORXH-18 — HOSE STATION CPX-FPFEXH-18

1-FP-X-4070-160-5 — XFP-0254 — D — 2-FP-X-1257-160-5 — XFP-0261 — D

6-FP-X-090-160-5 — CONTINUED ON M1-0225-04 LOC: A-4

CONTINUED ON M1-0225-04A LOC: G-6 — 6-FP-X-133-160-5 — 6-FP-1-201-160-5 — 3/4 -FP-X-1996-160-5 — 3-FP-X-096-160-5 — 1 1/2 -FP-X-1999-160-5 — XFP-0131 — CPX-FPORXH-02 — HOSE STATION CPX-FPFEXH-02 — 1-FP-X-2000-160-5 — XFP-0713

LO XFP-0182 — 2-FP-X-1993-160-5 — 3/4 -FP-X-1994-160-5 — 1-FP-X-2001-160-5 — 6-FP-1-201-160-5 — 1FP-0116 — D

CONTINUED ON M1-0225-03 LOC: A-5

FIN FL EL 790'-6"

TABLE X-1

| FILTRATION UNIT NUMBER | LINE NUMBER | ALARM CHECK VALVE | | |
|---|---|---|---|---|
| | | VALVE | | FLOW SWITCH |
| CPX-VAFUPK-01 | 3-FP-X-132-160-5 | XFP-0630 | X-HV-4107E | X-FS-4107E |
| CPX-VAFUPK-02 | 3-FP-X-123-160-5 | XFP-0551 | X-HV-4107F | X-FS-4107F |
| CPX-VAFUPK-15 | 3-FP-X-124-160-5 | XFP-0997 | X-HV-4107O | |
| CPX-VAFUPK-16 | 3-FP-X-115-160-5 | XFP-0998 | X-HV-4107W | X-FS-4107W |

1-FP-X-****-160-5 — DRAIN VALVE (XFP-****) — *-FP-X-****-160-5 (FOR CONT SEE DRAWING M1-0225-02 LOC: E-1, E-2)

(NOTE 2) — X-TV-4107* -SV1 — X-TV-4107* — X-TV-4107* -AO

TO FILTRATION UNIT CPX-VAFUPK-** — (XFP-****) — 3" FLEXIBLE HOSE (CPX-FPFLEX-**)

RESTRICTING ORIFICE PLATE (CPX-FPORDP-**) — 2-FP-X-****-160-5 — TO DRAIN HEADER

DETAIL C
SEE TABLE X FOR ITEM NUMBERS
(DRAWING M1-0225-02 LOC: E-6)

| REV | DWN | CHK | APVD | REMARKS |
|---|---|---|---|---|
| CP-15 | JRAC 01-04-2011 | SM 01-04-2011 | | THIS DRAWING REVISED TO INCORPORATE DESIGN CHANGE FDA-2010-000196-01-00 PER SK-0029-10-000196-01-00. |

NOTES:

1. FOR GENERAL NOTES AND REFERENCE DRAWINGS SEE DRAWING M1-0225-02.
2. FOR SYSTEM NUMBERS AND PIPING PLANS AND SECTIONS SEE FIRE PROTECTION ISOMETRIC DRAWINGS.

DRAWING 2323-M1-0225-02 REV CP-5
HAS BEEN SPLIT INTO THE FOLLOWING SHEETS:

| |
|---|
| 2323-M1-0225-02 |
| ECE-M1-0225-02A |

CLASS I
(NUCLEAR SAFETY-RELATED)
SAFETY CLASS 1 — SEISMIC CATEGORY I
SAFETY CLASS 2 — CLASS 1E
SAFETY CLASS 3 — ASSOCIATED CIRCUITS

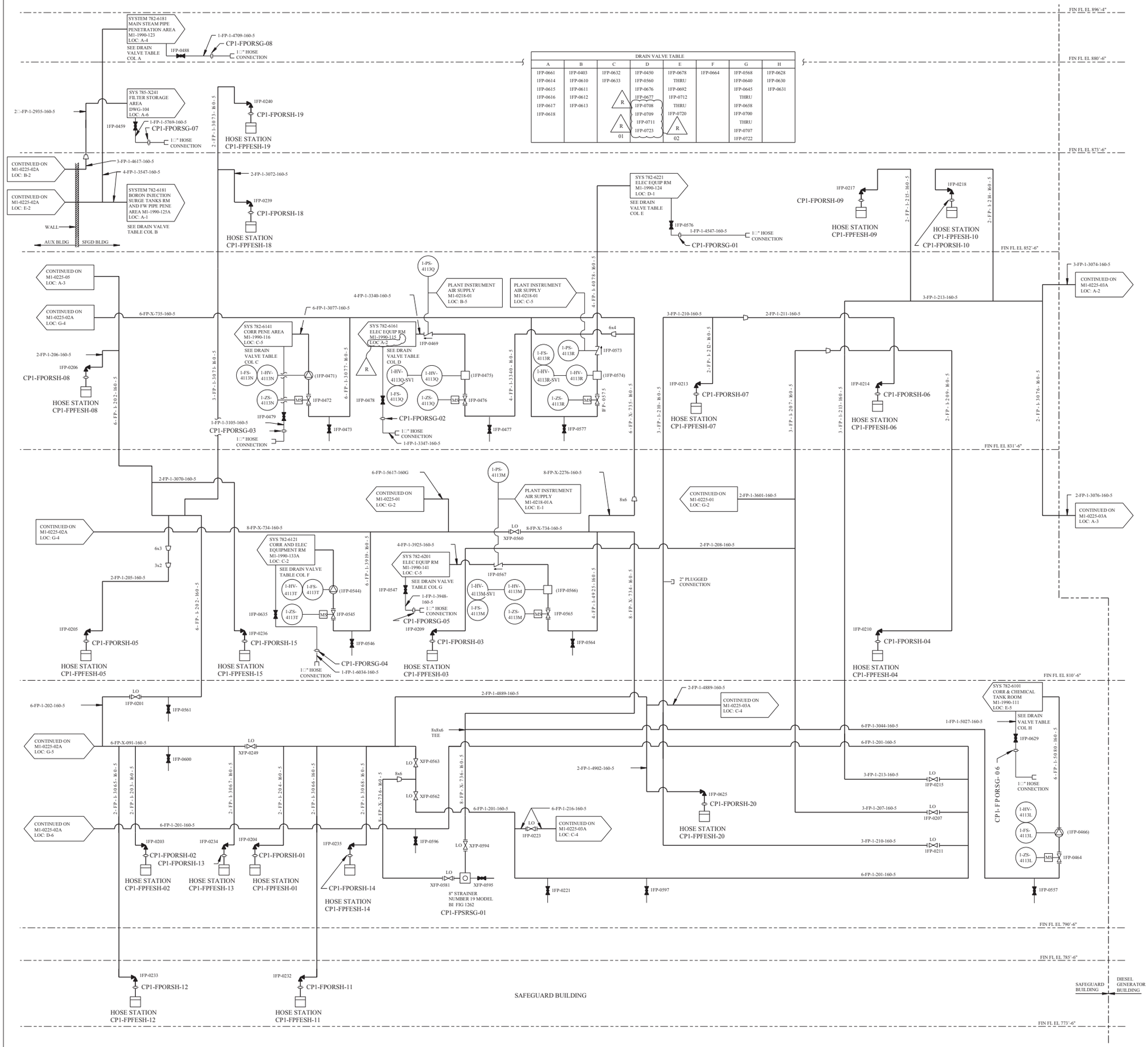
LUMINANT
CPNPP
GLEN ROSE, TEXAS

FLOW DIAGRAM
AUXILIARY BUILDING
FIRE PROTECTION

DWG. NO. M1-0225 | SH. NO. 02A | REV. CP-15

FSAR FIGURE 9.5-45

THIS DRAWING CREATED ELECTRONICALLY




| REV | DWN | CHK | APVD | REMARKS |
|---|---|---|---|---|
| CP-18 | MM 01-26-2011 | GAW 01-26-2011 | | THIS DRAWING REVISED TO INCORPORATE DESIGN CHANGE FDA 2008-000324-02-02 PER SK-0004-08-000324-02-02. |

NOTES:

1. THE SAFEGUARD BUILDING ON THIS DRAWING WAS REDRAWN FROM THE ORIGINAL AUXILIARY BUILDING, SAFEGUARD BUILDING, ELECTRICAL AND CONTROL BUILDING DRAWING M1-0225-02 REV 2 AND THE DIESEL GENERATOR BUILDING ON THIS DRAWING WAS REDRAWN FROM THE ORIGINAL FUEL HANDLING, DIESEL GENERATOR BUILDING AND SERVICE WATER INTAKE STRUCTURE DRAWING M1-0225-03 REV 4.
2. PROVIDE VENT VALVES AT THE HIGH POINTS AND DRAIN VALVES AT LOW POINTS.
3. DELETED
4. VALVE NUMBERS IN PARENTHESIS ARE VALVE BODY NUMBERS PER ECE 5.04-02 AND ARE ENTERED FOR HISTORICAL INFORMATION ONLY.

REFERENCE DRAWINGS:

1. FLOW DIAGRAM FIRE PROTECTION SYSTEM DRAWING M1-0225.
2. FLOW DIAGRAM AUXILIARY BUILDING FIRE PROTECTION DRAWING M1-0225-02.
3. FLOW DIAGRAM FUEL AND ELECTRIC CONTROL BUILDINGS UNIT 1 AND 2 FIRE PROTECTION DRAWING M1-0225-04.
4. FLOW DIAGRAM CONTAINMENT BUILDING UNIT 1 FIRE PROTECTION DRAWING M1-0225-05.
5. FOR SYSTEM NUMBERS AND PIPING PLANS AND SECTIONS SEE GRINNELL FIRE PROTECTION SYSTEM DRAWINGS.
6. FLOW DIAGRAM PLANT GAS SUPPLY SYSTEM NITROGEN SUPPLY, DRAWING M1-0243.

DRAWING M1-0225-03 REV CP-2
HAS BEEN SPLIT INTO THE FOLLOWING SHEETS:
M1-0225-03
M1-0225-03A

FSAR FIGURE 9.5-46

THIS DRAWING CREATED ELECTRONICALLY

CLASS II

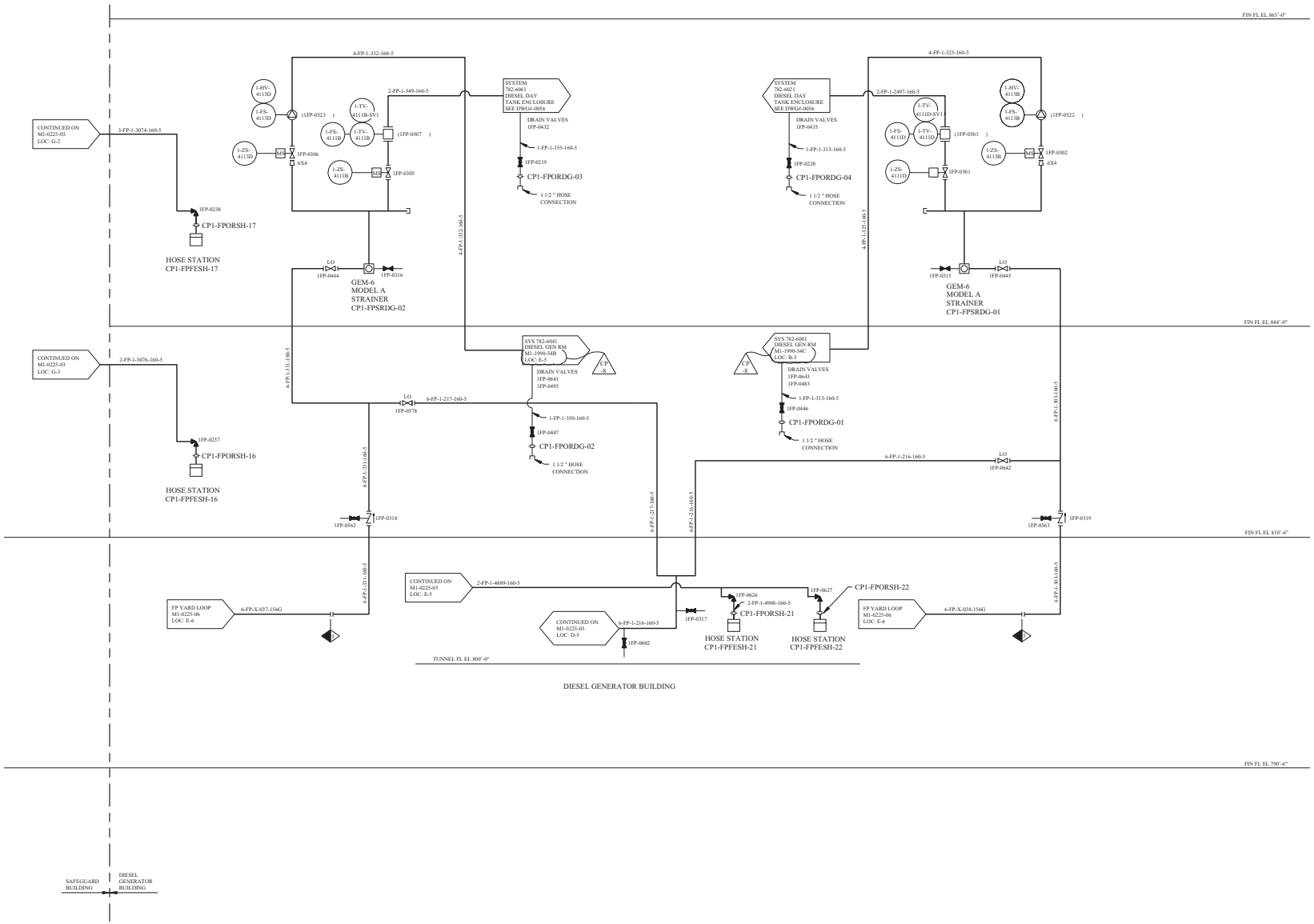
LUMINANT
CPNPP
GLEN ROSE, TEXAS

FLOW DIAGRAM
SAFEGUARD BUILDING
UNIT 1
FIRE PROTECTION

DWG. NO. M1-0225 | SH. NO. 03 | REV. CP-18

me101470.dgn M1-0225-03 < FINAL PRINT >

SSSSSSSSDATESSSSSS




| REV | DWN | CHKD | APVD | REMARKS |
|---|---|---|---|---|
| CP-6 | RCH 11/05/1999 | | | THIS DRAWING REVISED TO INCORPORATE EDITORIAL CHANGES AS NOTED. |

NOTES:

1. THE SAFEGUARD BUILDING ON THIS DRAWING WAS REDRAWN FROM THE ORIGINAL AUXILIARY BUILDING, SAFEGUARD BUILDING, ELECTRICAL AND CONTROL BUILDING DRAWING MI-0225-02 REV. 2 AND THE DIESEL GENERATOR BUILDING ON THIS DRAWING WAS REDRAWN FROM THE ORIGINAL FUEL HANDLING, DIESEL GENERATOR BUILDING AND SERVICE WATER INTAKE STRUCTURE DRAWING MI-0225-03 REV. 4.
2. PROVIDE VENT VALVES AT THE HIGH POINTS AND DRAIN VALVES AT LOW POINTS.
3. DELETED
4. VALVE NUMBERS IN PARENTHESIS ARE VALVE BODY NUMBERS PER ECE 5.04-02 AND ARE ENTERED FOR HISTORICAL INFORMATION ONLY.

REFERENCE DRAWINGS:

1. FLOW DIAGRAM FIRE PROTECTION SYSTEM DRAWING M1-0225.
2. FLOW DIAGRAM AUXILIARY BUILDING FIRE PROTECTION DRAWING M1-0225-02.
3. FLOW DIAGRAM FUEL AND ELECTRIC CONTROL BUILDINGS UNIT 1 AND 2 FIRE PROTECTION DRAWING M1-0225-04.
4. FLOW DIAGRAM CONTAINMENT BUILDING UNIT 1 FIRE PROTECTION DRAWING M1-0225-05.
5. FOR SYSTEM NUMBERS AND PIPING PLANS AND SECTIONS SEE GRINNELL FIRE PROTECTION SYSTEM DRAWINGS.
6. FLOW DIAGRAM PLANT GAS SUPPLY SYSTEM NITROGEN SUPPLY, DRAWING M1-0243.

FSAR FIGURE 9.5-46

THIS DRAWING CREATED ELECTRONICALLY

DRAWING M1-0225-03 REV CP-3
HAS BEEN SPLIT INTO THE FOLLOWING SHEETS:
M1-0225-03
M1-0225-03A

CLASS II

TXU ELECTRIC
CPSES
GLEN ROSE, TEXAS

FLOW DIAGRAM
SAFEGUARD AND DIESEL GENERATOR BUILDINGS
UNIT 1
FIRE PROTECTION

| DWG. NO. | SH. NO. | REV. |
|---|---|---|
| M1-0225 | 03A | CP-8 |

me0001wc.dgn

$$$$$$$D\TESSSSS

| REV | DWN | CHK | APVD | REMARKS |
|---|---|---|---|---|
| CP-12 | JSMC 03-18-2009 | DJL 03-18-2009 | | THIS DRAWING REVISED TO INCORPORATE DESIGN CHANGE FDA-2009-000669-01-00 PER SK-0001-09-000669-01-00. |

NOTES:

1. PROVIDE VENT VALVES AT THE HIGH POINTS AND DRAIN VALVES AT LOW POINTS.
2. UNLESS OTHERWISE NOTED ALL DRAINS ARE COLLECTED LOCALLY UNDER ADMINISTRATIVE CONTROL.
3. FOR FIRE PROTECTION COMMON SUPPLY HEADER/UNIT 2 SYSTEM BOUNDARIES, ALSO SEE DRAWINGS M2-0225-01, M1-0225-02, M1-0225-04A AND M1-0225-06.
4. PIPING AND COMPONENTS WITHIN UNIT 2 BOUNDARIES TO BE WORKED IN ACCORDANCE WITH SPECIFICATION NUMBER CPES-M-2017 EXCEPT SUPPLY PIPING AND IN LINE ISOLATION VALVES. IN ALL CASES COORDINATE WITH OPERATIONS PRIOR TO COMMENCEMENT OF WORK.

REFERENCE DRAWINGS:

| | |
|---|---|
| M1-0225 | FLOW DIAGRAM FIRE PROTECTION SYSTEM DRAWING |
| M1-0200 | MECHANICAL DRAWING |
| M2-1990 | LAYOUT DRAWINGS |

## DRAIN VALVE TABLE

| A | B | C | C (CONT) | D |
|---|---|---|---|---|
| 2FP-0490 | 2FP-0439 | 2FP-0517 | 2FP-0531 | 2FP-0615 |
| 2FP-0651 | 2FP-0541 | 2FP-0518 | 2FP-0532 | 2FP-0614 |
| 2FP-0437 | 2FP-0580 | 2FP-0519 | 2FP-0533 | 2FP-0617 |
| 2FP-0650 | 2FP-0581 | 2FP-0520 | 2FP-0534 | 2FP-0616 |
| 2FP-0510 | 2FP-0727 | 2FP-0521 | 2FP-0535 | 2FP-0618 |
| 2FP-0508 | 2FP-0728 | 2FP-0522 | 2FP-0536 | 2FP-0619 |
| 2FP-0509 | 2FP-0729 | 2FP-0523 | 2FP-0537 | |
| 2FP-0507 | | 2FP-0524 | 2FP-0538 | |
| 2FP-0512 | | 2FP-0525 | 2FP-0539 | |
| 2FP-0492 | | 2FP-0526 | 2FP-0469 | |
| 2FP-0653 | | 2FP-0527 | 2FP-0623 | |
| 2FP-0511 | | 2FP-0528 | 2FP-0647 | |
| 2FP-0739 | | 2FP-0529 | 2FP-0654 | |
| 2FP-0740 | | 2FP-0530 | 2FP-0730 | |
| 2FP-0741 | | 2FP-0742 | 2FP-0731 | |
| 2FP-0656 | | 2FP-0743 | 2FP-0732 | |
| 2FP-0657 | | | | |
| 2FP-0658 | | | | |
| 2FP-0659 | | | | |

R

## DRAIN VALVE TABLE (CONT)

| E | F | G | H | I |
|---|---|---|---|---|
| 2FP-0643 | 2FP-0652 | 2FP-0477 | 2FP-0559 | XFP-0775 |
| 2FP-0605 | 2FP-0649 | 2FP-0560 | 2FP-0549 | XFP-0632 |
| 2FP-0646 | 2FP-0642 | 2FP-0597 | 2FP-0558 | XFP-0633 |
| 2FP-0599 | 2FP-0636 | 2FP-0548 | | XFP-0698 |
| 2FP-0606 | | | | |

DRAWING ECE-M2-0225-03 REV CP-1
HAS BEEN SPLIT INTO THE FOLLOWING SHEETS:
M2-0225-03
M2-0225-03A

THIS DRAWING CREATED ELECTRONICALLY

FSAR FIGURE 9.5-46

# CLASS II

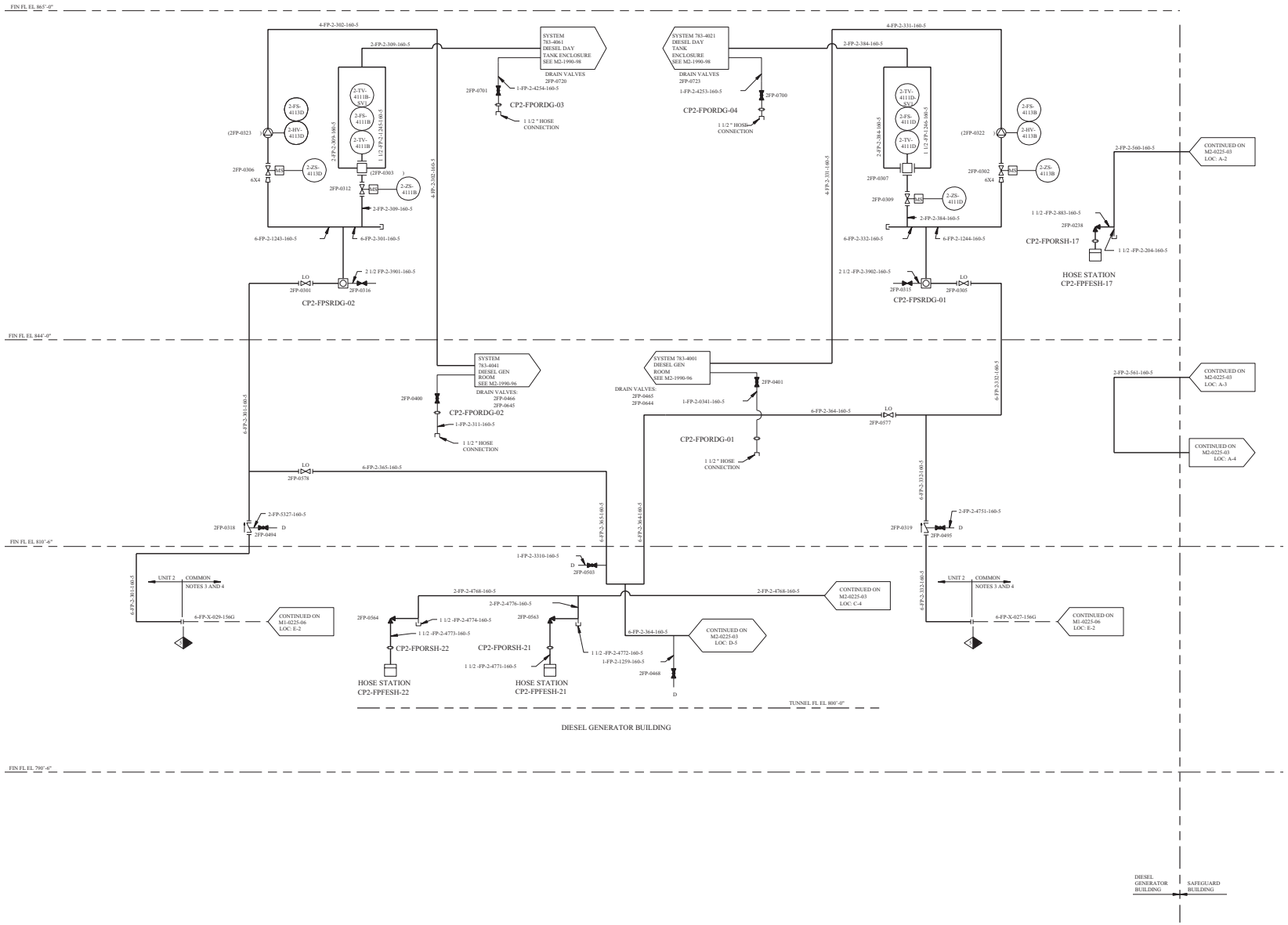
LUMINANT
CPNPP
GLEN ROSE, TEXAS

FLOW DIAGRAM
SAFEGUARD BUILDING
UNIT 2
FIRE PROTECTION

| DWG. NO. | SH. NO. | REV. |
|---|---|---|
| M2-0225 | 03 | CP-12 |



SSSSSSSDATESSSSS




| REV. | DWN. | CHKD. | APVD. | REMARKS |
|---|---|---|---|---|
| CP-5 | AUTO 05/23/1996 | | | THIS DRAWING REVISED TO ADD THE FSAR FIGURE NUMBER AS AN EDITORIAL CHANGE. |

NOTES:

1. PROVIDE VENT VALVES AT THE HIGH POINTS AND DRAIN VALVES AT LOW POINTS.
2. UNLESS OTHERWISE NOTED ALL DRAINS ARE COLLECTED LOCALLY UNDER ADMINISTRATIVE CONTROL.
3. FOR FIRE PROTECTION COMMOM SUPPLY HEADER/UNIT 2 SYSTEM BOUNDARIES, SEE DRAWINGS M2-0225-01, M2-0225-03, M1-0225-02, M1-0225-04A AND M1-0225-06.
4. PIPING AND COMPONENTS WITHIN UNIT 2 BOUNDRIES TO BE WORKED IN ACCORDANCE WITH SPECIFICATION NUMBER CPES-M-2017 EXCEPT SUPPLY PIPING AND IN LINE ISOLATION VALVES. IN ALL CASES COORDINATE WITH OPERATIONS PRIOR TO COMMENCEMENT OF WORK.

REFERENCE DRAWINGS:

| | |
|---|---|
| M1-0225 | FLOW DIAGRAM FIRE PROTECTION SYSTEM DRAWING |
| M1-0200 | MECHANICAL DRAWING |
| M2-1990 | LAYOUT DRAWINGS |

FSAR FIGURE 9.5-46

CP-5

THIS DRAWING CREATED ELECTRONICALLY

DRAWING ECE-M2-0225-03 REV CP-1
HAS BEEN SPLIT INTO THE FOLLOWING SHEETS:
M2-0225-03
M2-0225-03A

CLASS II

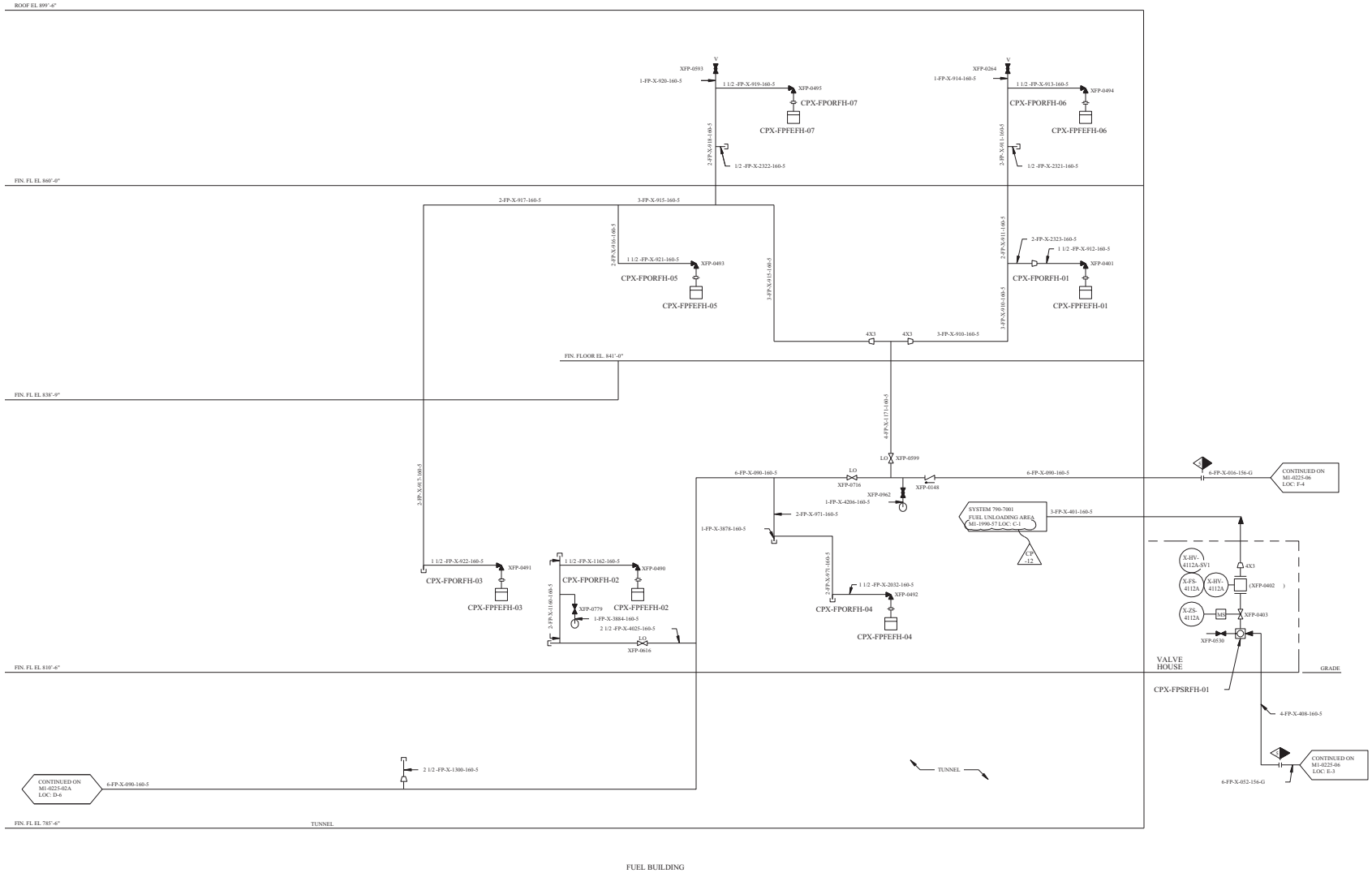
TXU ELECTRIC
CPSES
GLEN ROSE, TEXAS

FLOW DIAGRAM
DIESEL GENERATOR BUILDING
UNIT 2
FIRE PROTECTION

| DWG. NO. | SH. NO. | REV. |
|---|---|---|
| M2-0225 | 03A | CP-5 |

$$$$$$$$D\A\TE$$$$$$$$

vs000094.dgn




FUEL BUILDING

| REV. | DWN | CHKD | APVD | REMARKS |
|---|---|---|---|---|
| CP-12 | RGR 11/03/1999 | | | THIS DRAWING REVISED TO INCORPORATE EDITORIAL CHANGES AS NOTED. |

NOTES

1. FOR GENERAL NOTES AND LEGEND SEE DRAWING M1-0225.
2. THE FUEL BUILDING ON THIS DRAWING WAS REDRAWN FROM THE ORIGINAL ELECTRICAL CONTROL, SWITCHGEAR AND FUEL BUILDINGS - UNITS 1 AND 2 FIRE PROTECTION, DRAWING M1-0225-04 REV CP-5. THE SWITCHGEAR BUILDING WHICH WAS DEPICTED ON EARLIER REVISIONS OF THIS DRAWING HAS BEEN RELOCATED TO THE TURBINE BUILDING UNIT 1 FIRE PROTECTION, DRAWING M1-0225-01 REV CP-4.

REFERENCES

1. M1-0225 FLOW DIAGRAM FIRE PROTECTION SYSTEM
2. M1-0225-01 FLOW DIAGRAM TURBINE BUILDING UNIT 1 FIRE PROTECTION
3. M1-0225-02 FLOW DIAGRAM AUXILIARY BUILDING FIRE PROTECTION
4. M1-0225-03 FLOW DIAGRAM SAFEGUARD AND DIESEL GENERATOR BUILDING UNIT 1 FIRE PROTECTION
5. FOR SYSTEMS PIPING PLANS AND SECTIONS SEE GRINNELL FIRE PROTECTION SYSTEM DRAWINGS

FSAR FIGURE 9.5-47

THIS DRAWING CREATED ELECTRONICALLY

CP -12

DRAWING M1-0225-04 REV CP-4
HAS BEEN SPLIT INTO THE FOLLOWING SHEETS:
M1-0225-04
M1-0225-04A

CLASS II

TXU ELECTRIC
CPSES
GLEN ROSE, TEXAS

FLOW DIAGRAM
FUEL BUILDING
FIRE PROTECTION

| DWG. NO. | SH. NO. | REV. |
|---|---|---|
| M1-0225 | 04 | CP-12 |

me0001wd.dgn

$$$$$$$DA ITESSSSS

FIN. FL EL 873'-0"

1-FP-X-2036-160-5 XFP-0715 3-FP-X-179-160-5 4x3 4-FP-X-171-160-5 4-FP-X-171-160-5 CONTINUED ON M1-0225-02 LOC: D-2

2 1/2 -FP-X-2278-160-5 2 1/2

2-FP-X-180-160-5 4-FP-X-138-160-5 CONTINUED ON M1-0225-02 LOC: D-2

X-ZS-4106H-2 MS XFP-0407 X-ZS-4106H-1 MS XFP-0714 2-FP-X-184-160-5 4x2 4x3 3-FP-X-183-160-5 1-FP-X-2259-160-5 XFP-0431 X-ZS-4106F-1 MS XFP-0529 X-ZS-4106F-2 MS XFP-0430 2-FP-X-1278-160-5 CONTINUED ON M1-0225-02A LOC: B-3

2X7 1/2 FLANGE 2x7 1/2 FLANGE 2-FP-X-1277-160-5 CONTINUED ON M1-0225-02A LOC: E-3

X-TV-4106H-2 X-TV-4106H-2-A0 (XFP-0656) FC EMERGENCY FILTRATION UNIT CPX-VAFUPK-23 REF DWG 1 3" FLEX HOSE CPX-FPFLEX-23 RESTRICTING ORIFICE PLATE CPX-FPORDP-23 TO DRAIN HEADER

X-TV-4106H-1 X-TV-4106H-1-A0 (XFP-0654) FC EMERGENCY PRESSURIZATION UNIT CPX-VAFUPK-21 REF DWG 1 3" FLEX HOSE CPX-FPFLEX-21 RESTRICTING ORIFICE PLATE CPX-FPORDP-21 TO DRAIN HEADER

X-TV-4106F-1 X-TV-4106F-1-A0 (XFP-0655) FC EMERGENCY PRESSURIZATION UNIT CPX-VAFUPK-22 REF DWG 2 3" FLEX HOSE CPX-FPFLEX-22 RESTRICTING ORIFICE PLATE CPX-FPORDP-22 TO DRAIN HEADER

X-TV-4106F-2 X-TV-4106F-2-A0 (XFP-0657) FC EMERGENCY FILTRATION UNIT CPX-VAFUPK-24 REF DWG 2 3" FLEX HOSE CPX-FPFLEX-24 RESTRICTING ORIFICE PLATE CPX-FPORDP-24 TO DRAIN HEADER

2FP-0143 CP2-FPOREH-04 HOSE STATION CP2-FPFEEH-04

1FP-0144 CP1-FPOREH-07 HOSE STATION CP1-FPFEEH-07

FIN. FL EL 854'-4"

2-FP-X-160-160-5 4x2 4x2 2-FP-X-161-160-5 XFP-0164 CPX-FPOREH-01 HOSE STATION CPX-FPFEEH-01

XFP-0163 CPX-FPOREH-03 HOSE STATION CPX-FPFEEH-03

4-FP-X-159-160-5 2-FP-X-1456-160-5 XFP-0474 CPX-FPOREH-04 HOSE STATION CPX-FPFEEH-04

FIN. FLOOR EL. 840'-6"

4x2 2-FP-X-162-160-5 XFP-0161 CPX-FPOREH-02 HOSE STATION CPX-FPFEEH-02

WALL ELECTRIC CONTROL BUILDING AUXILIARY BUILDING X-PS-4104 PLANT INSTRUMENT AIR SUPPLY M1-0219-03 LOC: D-5 XFP-0743 X-FS-4104 X-HV-4104 X-HV-4104-SV1 (XFP-0742) X-ZS-4104 MS XFP-0158 4-FP-X-159-160-5 CONTINUED ON M1-0225-02 LOC: A-4

FIN. FL EL 830'-0"

ELECTRIC CONTROL BUILDING AUXILIARY BUILDING SYSTEM 786-9181 UNIT 2 CABLE SPREADING ROOM NORTH HALF M2-1990-95 R WALL 8-FP-2-740-160-5 1-FP-2-3258-160-5 2-PS-4104A D 2FP-0434 8x6 2FP-0418 PLANT NITROGEN SUPPLY M1-0243-A LOC: E-4 6-FP-2-332-160-5 2-ZS-4104A MS 2FP-0411 2-HV-4104A 2-FS-4104A 2-HV-4104A-SV1 (2FP-0410) 2FP-0414 1-FP-2-3255-160-5 D

ELECTRIC CONTROL BUILDING AUXILIARY BUILDING SYSTEM 786-9141 UNIT 2 CABLE SPREADING ROOM SOUTH HALF M2-1990-95 R CONTINUED ON M1-0225-02 LOC: A-4 WALL 8-FP-2-845-160-5 1-FP-2-3259-160-5 2-PS-4104B D 2FP-0435 8x6 2FP-0433 PLANT NITROGEN SUPPLY M1-0243-A LOC: E-4 2-ZS-4104B MS 2FP-0413 2-HV-4104B 2-FS-4104B 2-HV-4104B-SV1 (2FP-0412) 2FP-0415 1-FP-2-3254-160-5 D

ELECTRIC CONTROL BUILDING AUXILIARY BUILDING CONTINUED ON M1-0225-02 LOC: A-5 SYSTEM 786-9161 UNIT 1 CABLE SPREADING ROOM NORTH HALF DWG-0094 DRAIN VALVES 1FP-0671 1FP-0672 6-FP-2-324-160-5 1FP-0455 1-FP-1-2782-160-5 CP1-FPOREC-02 1 1/2 " HOSE CONNECTION WALL 8-FP-1-293-160-5 1-PS-4104A D 1FP-0441 8x6 1FP-0439 PLANT NITROGEN SUPPLY M1-0243-A LOC: D-4 6-FP-1-456-160-5 1-ZS-4104A MS 1FP-0453 1-HV-4104A 1-FS-4104A 1-HV-4104A-SV1 (1FP-0451) 1FP-0457 D

1FP-0102 CP1-FPOREH-03 HOSE STATION CP1-FPFEEH-03 2-FP-1-103-160-5 1-FP-1-6032-160-5 1FP-0659 ELECTRIC CONTROL BUILDING AUXILIARY BUILDING CONTINUED ON M1-0225-02 LOC: C-4 WALL SYSTEM 786-9121 UNIT 1 CABLE SPREADING ROOM SOUTH HALF DWG-0094 DRAIN VALVES 1FP-0470 , 1FP-0665 , 1FP-0666 , 1FP-0667 , 1FP-0668 , 1FP-0669 AND 1FP-0670 1FP-0456 1-FP-1-2912-160-5 CP1-FPOREC-01 1 1/2 " HOSE CONNECTION 8-FP-1-292-160-5 1-PS-4104B D 1FP-0443 8x6 1FP-0440 PLANT NITROGEN SUPPLY M1-0243-A LOC: D-4 6-FP-1-452-160-5 1-ZS-4104B MS 1FP-0454 1-HV-4104B 1-FS-4104B 1-HV-4104B-SV1 (1FP-0452) 1FP-0458 D

4x2 2-FP-1-102-160-5 4-FP-1-101-160-5 CONTINUED ON M1-0225-02 LOC: G-5 CONTINUED ON M1-0225-02A LOC: G-5 R 2-FP-2-104-160-5 4x2 4x2 4-FP-2-103-160-5 CONTINUED ON M1-0225-02 LOC: C-4 2-FP-2-101-160-5 1FP-0101 CP1-FPOREH-04 HOSE STATION CP1-FPFEEH-04 2FP-0102 CP2-FPOREH-03 HOSE STATION CP2-FPFEEH-03 2FP-0101 CP2-FPOREH-02 HOSE STATION CP2-FPFEEH-02

FIN. FL EL 807'-0"

2FP-0108 V 2FP-0105 LO 3x2 2FP-0109 3-FP-2-105-160-5 CONTINUED ON M2-0225-01 LOC: G-4 6-FP-X-134-160-5 CONTINUED ON M1-0225-02 LOC: A-6

1FP-0103 V 1FP-0112 LO 3x2 1FP-0104 3-FP-1-107-160-5 2-FP-1-104-160-5 2-FP-2-102-160-5 CONTINUED ON M1-0225-01 LOC: F-4 6-FP-X-133-160-5 CONTINUED ON M1-0225-02A LOC: A-6

DRAIN VALVE XFP-0117 SYS 785-X081 WATER CURTAIN M1-1990-134 LOC: D-1 2 1/2 -FP-X-6300-160-5 XFP-0115 LO 3-FP-X-2921-160-5 DRAIN VALVE XFP-0116 SYS 785-X081 M1-1990-134 LOC: F-3 2-FP-X-1279-160-5 1FP-0106 CP1-FPOREH-02 HOSE STATION CP1-FPFEEH-02 2FP-0103 CP2-FPOREH-01 HOSE STATION CP2-FPFEEH-01

WALL CONTINUED ON M1-0225-02 LOC: A-6 4-FP-X-2694-160-5 4-FP-X-2694-160-5 XFP-0114 LO DRAIN VALVES XFP-0754 XFP-0755 XFP-0756 XFP-0758 SYS 785-X081 SEE NOTE 3 M1-1990-134 LOC: F-3 XFP-0753 1-FP-X-2725-160-5 CPX-FPOREC-02 1 1/2 " HOSE CONNECTION AUXILIARY BUILDING ELECTRIC CONTROL BUILDING

FIN. FL EL 778'-0"

1FP-0143 CP1-FPOREH-06 HOSE STATION CP1-FPFEEH-06

FIN. FLOOR EL 792'-0"

2-FP-2-106-160-5 1FP-0111 1FP-0117 CP1-FPOREH-01 HOSE STATION CP1-FPFEEH-01

SYS 785-X061 SEE NOTE 2 M1-1990-146A LOC: C-6 6-FP-X-1553-160-5 WALL CONTINUED ON M1-0225-02A LOC: D-6 DRAIN VALVES XFP-0546 XFP-0763 XFP-0764 XFP-0765 XFP-0767 1-FP-X-3068-160-5 CPX-FPOREC-01 1 1/2 " HOSE CONNECTION ELECTRIC CONTROL BUILDING AUXILIARY BUILDING

ELECTRIC CONTROL BUILDING

| REV | DWN | CHK | APVD | REMARKS |
|---|---|---|---|---|
| CP-15 | DLK 09-10-2007 | MM 09-11-2007 | | THIS DRAWING REVISED TO INCORPORATE DESIGN CHANGE FDA 2004-000481-01-00 PER SK-0002-04-000481-01-00. |

NOTES:

1. FOR GENERAL NOTES AND LEGEND SEE DRAWING M1-0225.
2. SYSTEM No 785-X061 TO ALL AREAS ON SOUTH SIDE ELEVATION 778'-0" AND BATTERY ROOM CORRIDOR ELEVATION 792'-0".
3. SYSTEM No 785-X081 TO ALL AREAS ON NORTH SIDE ELEVATION 778'-0" AND BATTERY ROOM CORRIDOR ELEVATION 792'-0".

REFERENCE DWGS:

1. FLOW DIAGRAM VENT AND CONT RM AIR CONDITIONING M1-0304
2. FLOW DIAGRAM VENT AND CONT RM AIR CONDITIONING M1-0304-B

FSAR FIGURE 9.5-47

THIS DRAWING CREATED ELECTRONICALLY

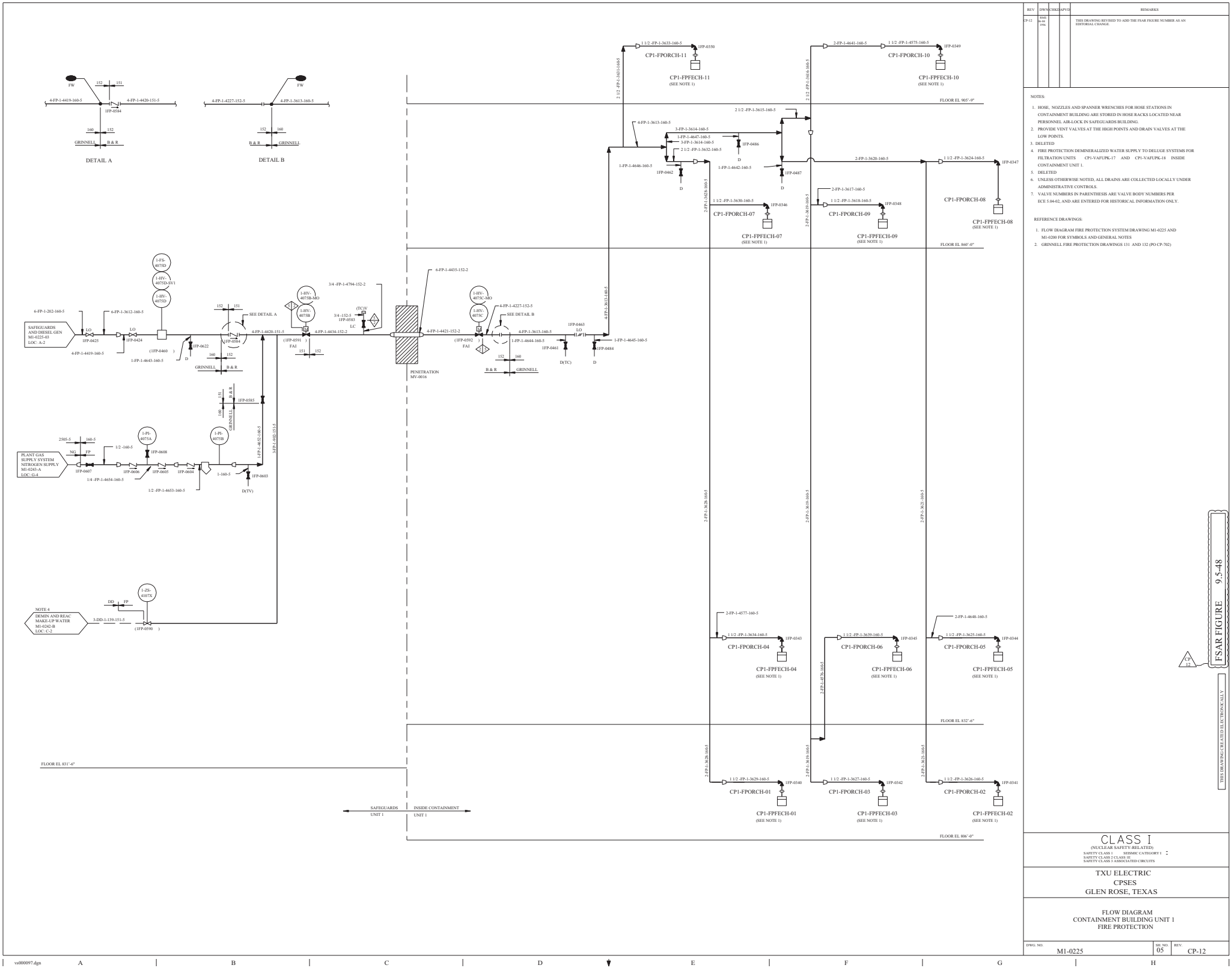
DRAWING M1-0225-04 REV CP-4
HAS BEEN SPLIT INTO THE FOLLOWING SHEETS:
M1-0225-04
M1-0225-04A

CLASS I
(NUCLEAR SAFETY-RELATED)
SAFETY CLASS 1 SAFETY CLASS 2 SAFETY CLASS 3
SEISMIC CATEGORY I
CLASS 1E
ASSOCIATED CIRCUITS

LUMINANT
CPSES
GLEN ROSE, TEXAS

FLOW DIAGRAM
ELECTRIC CONTROL BUILDING
FIRE PROTECTION

DWG. NO. M1-0225 | SH. NO. 04A | REV. CP-15




| REV | DWN | CHKD | APVD | REMARKS |
|---|---|---|---|---|
| CP-12 | RMH 06/04/96 | | | THIS DRAWING REVISED TO ADD THE FSAR FIGURE NUMBER AS AN EDITORIAL CHANGE. |

NOTES:

1. HOSE, NOZZLES AND SPANNER WRENCHES FOR HOSE STATIONS IN CONTAINMENT BUILDING ARE STORED IN HOSE RACKS LOCATED NEAR PERSONNEL AIR-LOCK IN SAFEGUARDS BUILDING.
2. PROVIDE VENT VALVES AT THE HIGH POINTS AND DRAIN VALVES AT THE LOW POINTS.
3. DELETED
4. FIRE PROTECTION DEMINERALIZED WATER SUPPLY TO DELUGE SYSTEMS FOR FILTRATION UNITS CP1-VAFUPK-17 AND CP1-VAFUPK-18 INSIDE CONTAINMENT UNIT 1.
5. DELETED
6. UNLESS OTHERWISE NOTED, ALL DRAINS ARE COLLECTED LOCALLY UNDER ADMINISTRATIVE CONTROLS.
7. VALVE NUMBERS IN PARENTHESIS ARE VALVE BODY NUMBERS PER ECE 5.04-02, AND ARE ENTERED FOR HISTORICAL INFORMATION ONLY.

REFERENCE DRAWINGS:

1. FLOW DIAGRAM FIRE PROTECTION SYSTEM DRAWING M1-0225 AND M1-0200 FOR SYMBOLS AND GENERAL NOTES
2. GRINNELL FIRE PROTECTION DRAWINGS 131 AND 132 (PO CP-702)

FSAR FIGURE 9.5-48

CP 12

THIS DRAWING CREATED ELECTRONICALLY

CLASS I
(NUCLEAR SAFETY-RELATED)
SAFETY CLASS 1 SEISMIC CATEGORY I
SAFETY CLASS 2 CLASS 1E
SAFETY CLASS 3 ASSOCIATED CIRCUITS

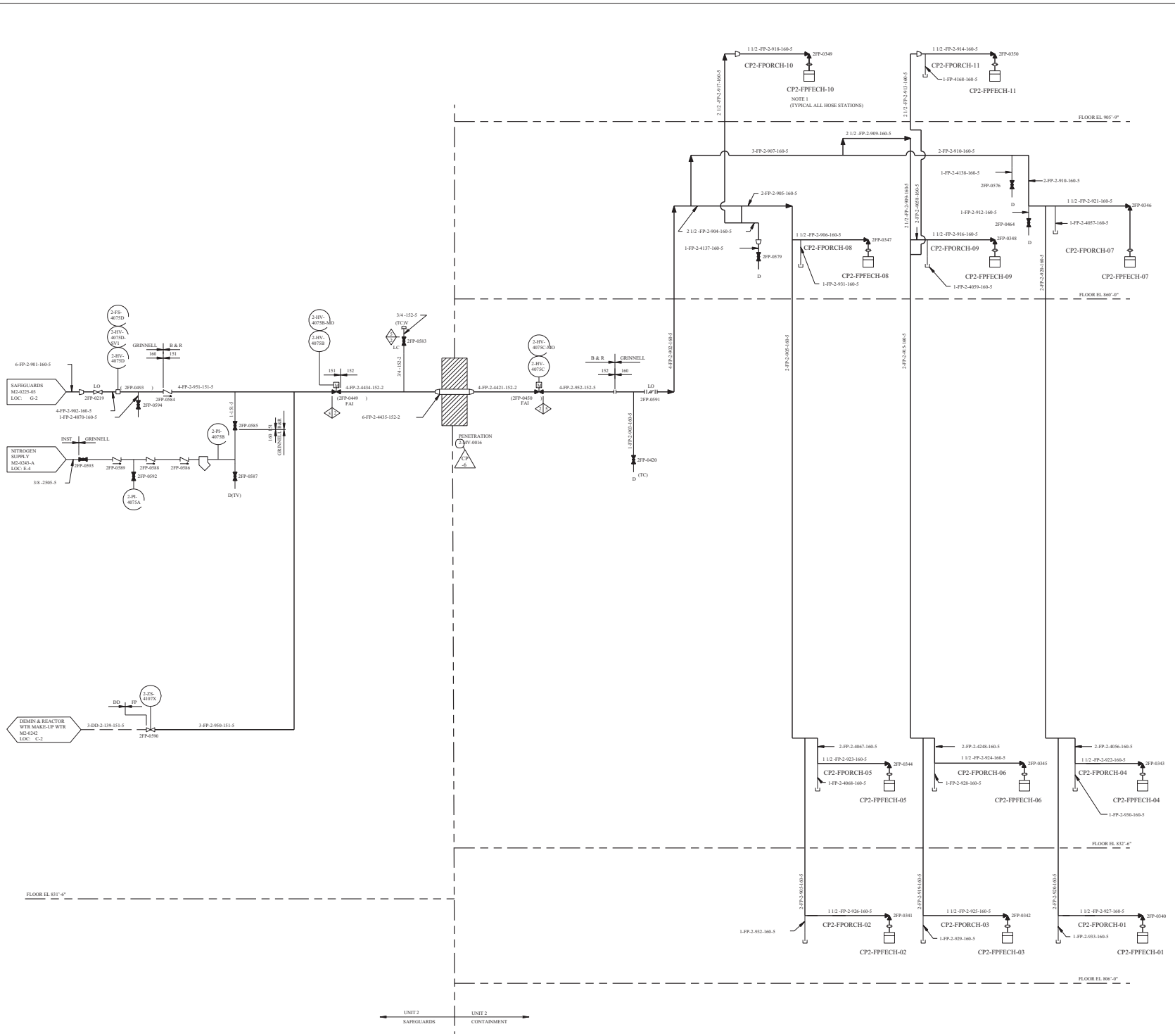
TXU ELECTRIC
CPSES
GLEN ROSE, TEXAS

FLOW DIAGRAM
CONTAINMENT BUILDING UNIT 1
FIRE PROTECTION

| DWG. NO. | SH. NO. | REV. |
|---|---|---|
| M1-0225 | 05 | CP-12 |

vs000097.dgn

$$$$$$$D\A\TE$$$$$$




| REV | DWN | CHK | APVD | REMARKS |
|---|---|---|---|---|
| CP-6 | RAM 10/01/98 | | | THIS DRAWING REVISED TO INCORPORATE AN EDITORIAL CHANGE AS NOTED. |

NOTES

1. FOR CONTAINMENT PREACCESS FILTRATION UNIT CP2-VAFUPK-17 AND CP2-VAFUPK-18 DELUGE SYSTEM ARRANGEMENT, SEE FLOW DIAGRAM M2-0242.
2. PROVIDE VENT VALVES AT THE HIGH POINTS AND DRAIN VALVE AT THE LOW POINTS.
3. UNLESS OTHERWISE NOTED, ALL DRAINS ARE COLLECTED LOCALLY UNDER ADMINISTRATIVE CONTROLS.
4. FOR FIRE PROTECTION COMMON SUPPPLY HEADER/UNIT 2 SYSTEM BOUNDARIES, SEE DRAWINGS M2-0225-01, M2-0225-03, M1-0225-02 AND M1-0225-06.

REFERENCE DRAWINGS

1. FLOW DIAGRAM FIRE PROTECTION SYSTEM DWG M1-0225 AND MECHANICAL DWG M1-0200.
2. M2-1990 SHEETS 119 AND 120.

FSAR FIGURE 9.5-48

THIS DRAWING CREATED ELECTRONICALLY

CLASS I
(NUCLEAR SAFETY-RELATED)
SAFETY CLASS 1 SEISMIC CATEGORY I
SAFETY CLASS 2 CLASS 1E
SAFETY CLASS 3 ASSOCIATED CIRCUITS

TXU ELECTRIC
CPSES
GLEN ROSE, TEXAS

FLOW DIAGRAM
CONTAINMENT BUILDING UNIT 2
FIRE PROTECTION

| DWG. NO. | SH. NO. | REV. |
|---|---|---|
| M2-0225 | 05 | CP-6 |

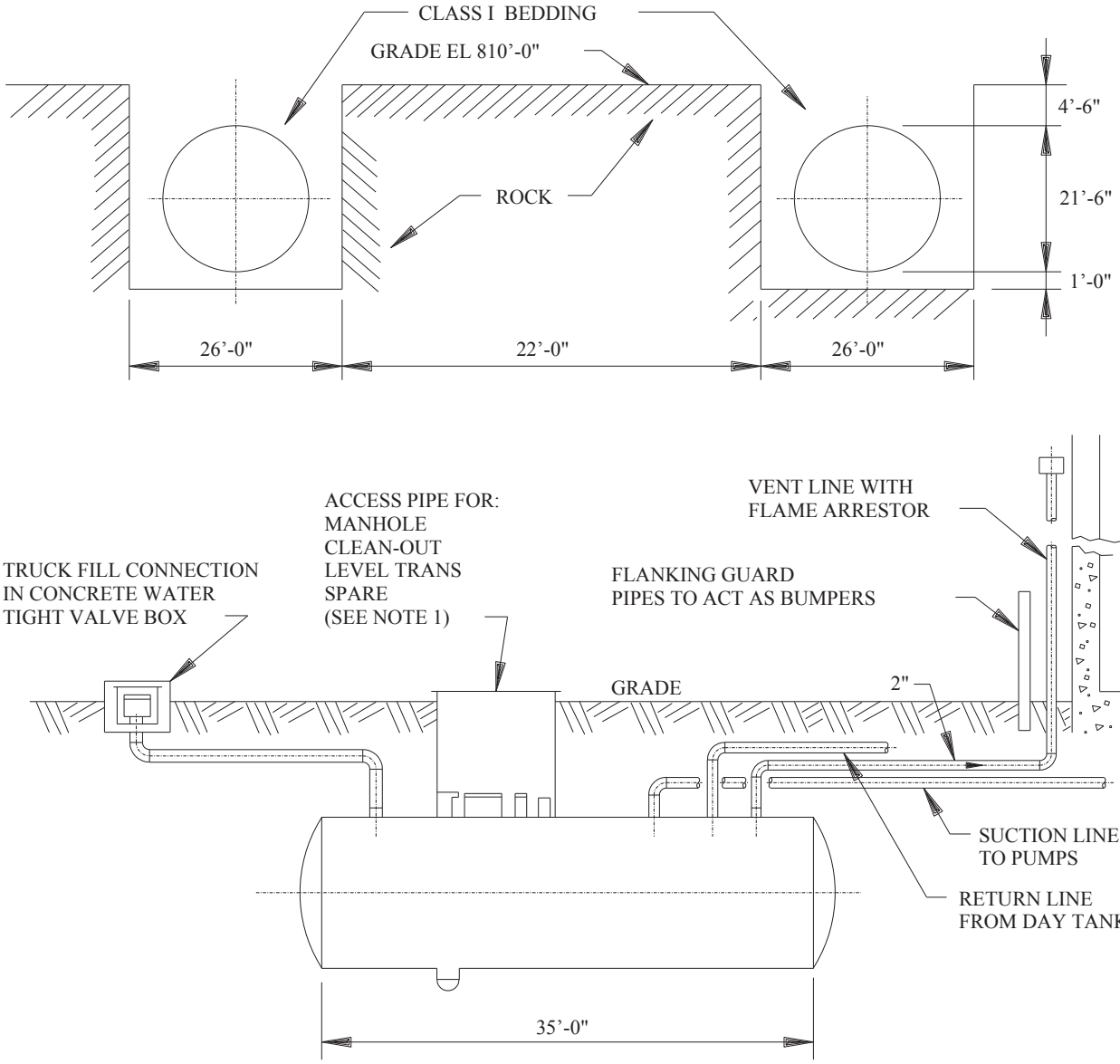
me0001b3.dgn

$$$$SSSTA ITESSSSS

FIGURES 9.5-49 AND 9.5-50
HAVE BEEN DELETED

FIGURES 9.5-49 AND 9.5-50
HAVE BEEN DELETED

NOTE:
FOR LOCATION OF TANKS
SEE DWG FIG 9.5-8 & 1.2-8




# DIESEL FUEL OIL TANK

NOTES:

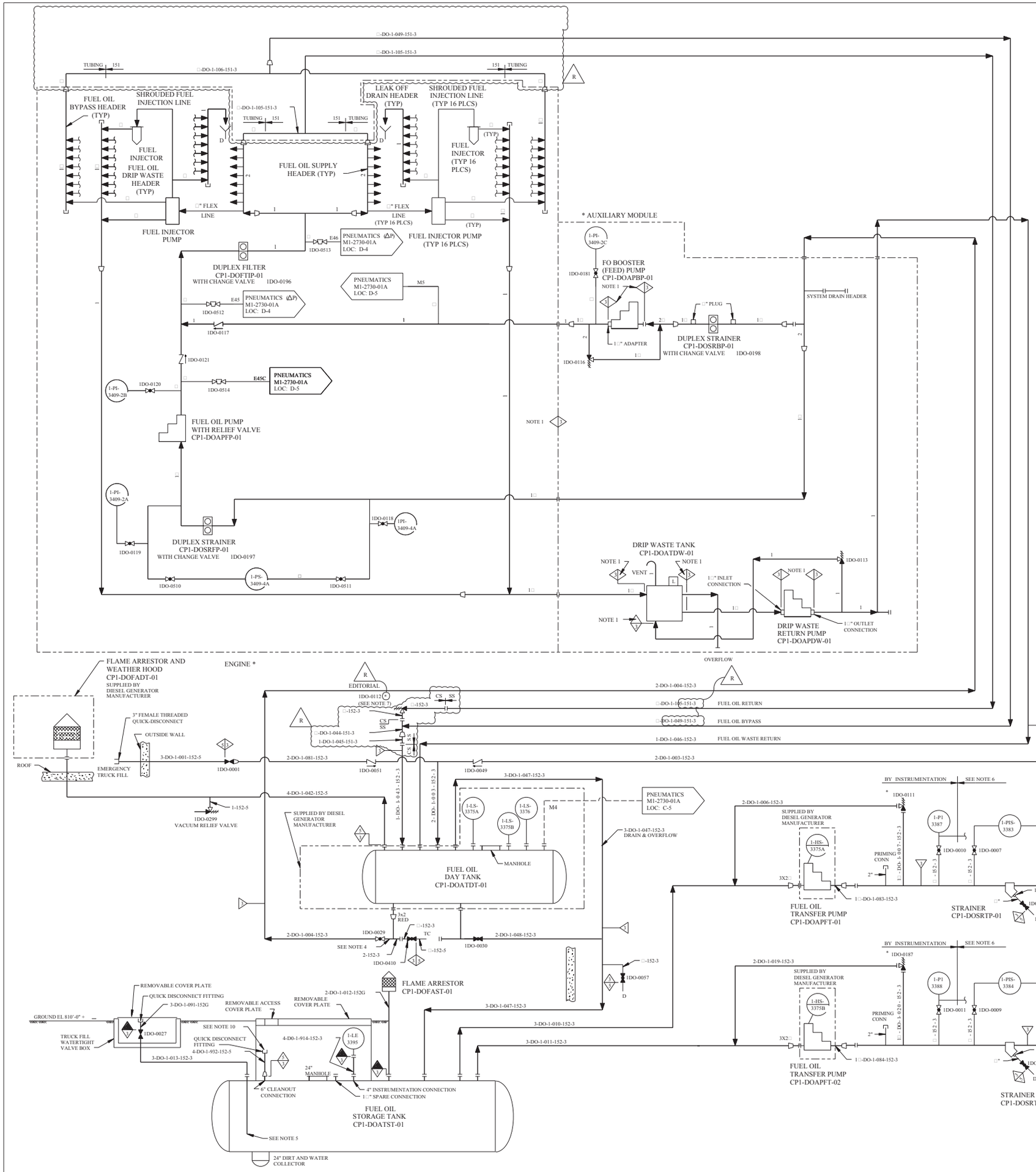
1. SAMPLE GRAB POINT CONNECTION PROVIDES ADDITIONAL TRUCK FILL METHOD VIA USE OF SPECIAL DIFFUSER TOOL. THIS BOX IS MAINTAINED WATERTIGHT.

Amendment 104

COMANCHE PEAK N P P
FINAL SAFETY ANALYSIS REPORT
UNITS 1 AND 2

DIESEL GENERATOR
FUEL OIL STORAGE TANKS

FIGURE 9.5-51




| REV | DWN | CHKD | APVD | REMARKS |
|---|---|---|---|---|
| CP-8 | DLK 11-26-2012 | MM 01-08-2013 | | THIS DRAWING REVISED TO INCORPORATE DESIGN CHANGE FDA 2012-000130-02-00 PER SK-0001-12-000130-02-00. EDITORIAL CHANGE AS NOTED. |

NOTES:

1. NUCLEAR SAFETY RELATED PER 1EEE-387. NOT IN SCOPE OF ANSI N18.2. EXEMPT FROM CODE STAMP.
2. SEE DRAWING M2-0215 SH F FOR UNIT 2 DIESELS (CP2-MEDGEE-01 AND -02).
3. ALL ITEMS MARKED * ARE SUPPLIED BY TRANSAMERICA DELAVAL.
4. THE FIRST HORIZONTAL PIPING RUN IS SLOPED BACK TOWARDS VALVE 1D0-0410.
5. FILL LINE RUN TO WITHIN 2 FEET OF BOTTOM OF TANK. THE END OF THE FILL LINE IS CAPPED AND THE LAST 2 FEET OF THE PIPE IS PERFORATED WITH APPROXIMATELY 16 1" DIAMETER HOLES.
6. TO FUEL OIL "GRAB SAMPLE" CONNECTION SEE M1-2533 SH 02 (NON-SAFETY RELATED).
7. EQUIPMENT IS SAFETY CLASS 3, NON-ASME.
8. ALL DRAINS ARE □" UNLESS OTHERWISE NOTED.
9. SEE FORM CAT 123 FROM CP-0034-001A FOR VENDOR SUPPLIED MECHANICAL SYMBOLS.
10. ALTERNATE FILL METHOD CONNECTION POINT. BOX WITH ACCESS COVER PLATE IS MAINTAINED WATERTIGHT.

EQUIPMENT SCHEDULE

| MANUFACTURERS I.D. | TAG NO. |
|---|---|
| | |

FSAR FIGURE 9.5-52

THIS DRAWING CREATED ELECTRONICALLY

DRAWING M1-0215 REV CP-11
HAS BEEN SPLIT INTO THE FOLLOWING SHEETS:

| |
|---|
| M1-0215 |
| M1-0215-B |
| M1-0215-D |
| M1-0215-F |
| M1-0215-H |

CLASS I
(NUCLEAR SAFETY-RELATED)

| | |
|---|---|
| SAFETY CLASS 1 | SEISMIC CATEGORY I |
| SAFETY CLASS 2 | CLASS 1E |
| SAFETY CLASS 3 | ASSOCIATED CIRCUITS |

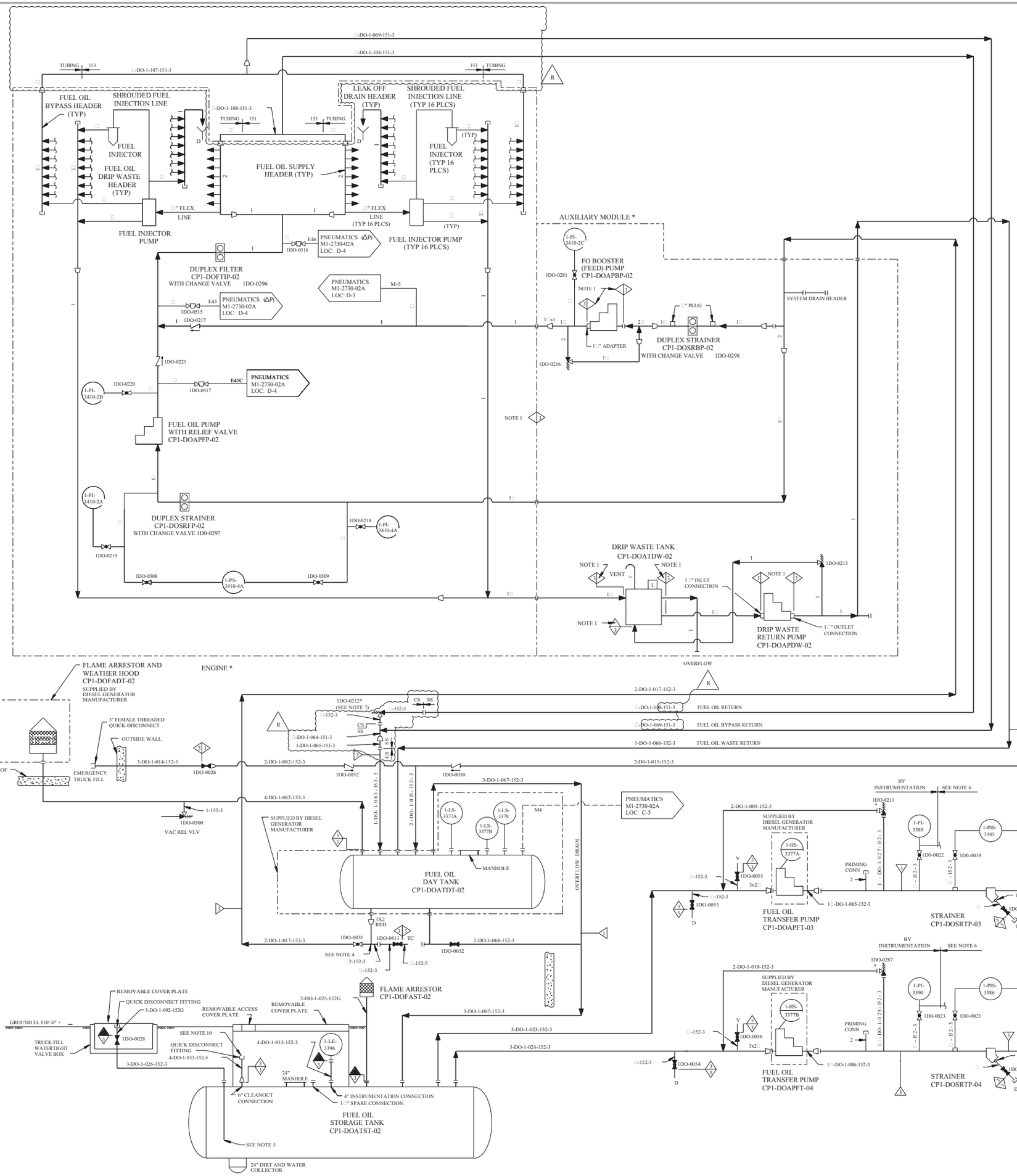
LUMINANT
CPNPP
GLEN ROSE, TEXAS

FLOW DIAGRAM
DIESEL FUEL OIL PIPING
CP1-MEDGEE-01

| DWG. NO. | SH. NO. | REV. |
|---|---|---|
| M1-0215 | F | CP-8 |

$$$$$$$$DATE$$$$$$$$ REF CKD CP-5 4/23/98

me102410.dgn M1-0215-F < FINAL PRINT >




| REV | DWN | CHKD | APVD | REMARKS |
|---|---|---|---|---|
| CP-9 | DLK 11-29 2012 | MM 01-11 2013 | | THIS DRAWING REVISED TO INCORPORATE DESIGN CHANGE FDA 2012-000130-03-00 PER SK-0001-12-000130-03-00. |

NOTES:

1. NUCLEAR SAFTEY RELATED PER 1EEE-387. NOT IN SCOPE OF ANSI N18.2. EXEMPT FROM CODE STAMP.
2. SEE DWG M2-0215 SH G FOR UNIT 2 DIESELS (CP2-MEDGEE-01 AND CP2-MEDGEE-02).
3. ALL ITEMS MARKED * ARE SUPPLIED BY TRANSAMERICA DELAVAL.
4. THE FIRST HORIZONTAL PIPING RUN IS SLOPED BACK TOWARD VALVE 1DO-0411.
5. FILL LINE RUN TO WITHIN 2 FEET OF BOTTOM OF TANK. THE END OF THE FILL LINE IS CAPPED AND THE LAST 2 FEET OF THE PIPE IS PERFORATED WITH APPROXIMATELY 16-1" DIAMETER HOLES.
6. TO FUEL OIL "GRAB SAMPLE" CONNECTION SEE M1-2533-02 (NON-SAFETY RELATED).
7. EQUIPMENT IS SAFETY CLASS 3, NON-ASME.
8. ALL DRAINS ARE □" UNLESS OTHERWISE NOTED.
9. SEE FORM CAT-123 FROM CP-0034-001A FOR VENDOR SUPPLIED MECHANICAL SYMBOLS.
10. ALTERNATE FILL METHOD CONNECTION POINT. BOX WITH ACCESS COVER PLATE IS MAINTAINED WATERTIGHT.

EQUIPMENT SCHEDULE

| MANUFACTURERS I.D. | TAG NO. |
|---|---|
| | |

FSAR FIGURE 9.5-52

THIS DRAWING CREATED ELECTRONICALLY

DRAWING M1-0215-A REV CP-6
HAS BEEN SPLIT INTO THE FOLLOWING SHEETS:

| |
|---|
| M1-0215-A |
| M1-0215-C |
| M1-0215-E |
| M1-0215-G |
| M1-0215-J |

CLASS I
(NUCLEAR SAFETY-RELATED)

| | |
|---|---|
| SAFETY CLASS 1 | SEISMIC CATEGORY I |
| SAFETY CLASS 2 | CLASS 1E |
| SAFETY CLASS 3 | ASSOCIATED CIRCUITS |

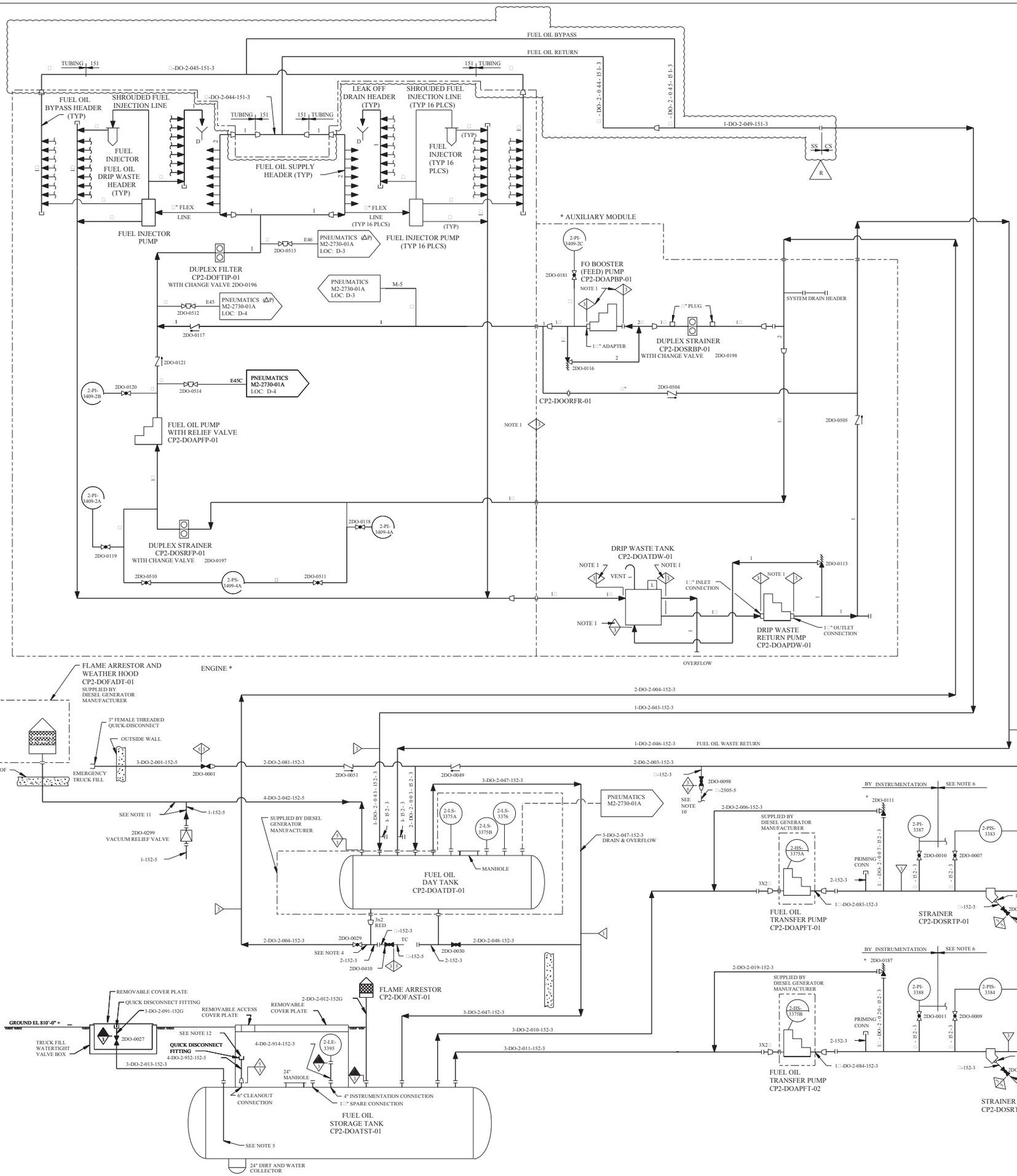
LUMINANT
CPNPP
GLEN ROSE, TEXAS

FLOW DIAGRAM
DIESEL FUEL OIL PIPING
CP1-MEDGEE-02

| DWG. NO. | SH. NO. | REV. |
|---|---|---|
| M1-0215 | G | CP-9 |

$$$$$$$DATE$$$$$$ REF CKD CP-5 4/23/98

me102400.dgn A M1-0215-G B C D E F G < FINAL PRINT > H




| REV. | DWN | CHKD | APVD | REMARKS |
|---|---|---|---|---|
| CP-9 | DLK 04-08-2013 | MM 07-17-2013 | | THIS DRAWING REVISED TO INCORPORATE DESIGN CHANGE FDA 2012-0001/30-04-00 PER SK-0001-12-0001/30-04-00. EDITORIAL CHANGE AS NOTED. |

NOTES:

1. NUCLEAR SAFETY RELATED PER IEEE-387. NOT IN SCOPE OF ANSI N18.2. EXEMPT FROM CODE STAMP.
2. SEE DRAWING M1-0215 SH-F AND SH-G FOR UNIT 1 DIESELS (CP1-MEDGEE-01 AND CP1-MEDGEE-02 ).
3. ALL ITEMS MARKED * ARE SUPPLIED BY TRANSAMERICA DELAVAL.
4. THE FIRST HORIZONTAL PIPING RUN IS SLOPED BACK TOWARDS VALVE 2DO-0410 .
5. FILL LINE RUN TO WITHIN 2 FEET OF BOTTOM OF TANK. THE END OF THE FILL LINE IS CAPPED AND THE LAST 2 FEET OF THE PIPE IS PERFORATED WITH APPROXIMATELY 16 1" DIAMETER HOLES.
6. TO FUEL OIL "GRAB SAMPLE" CONNECTION SEE M2-2533 SH 02 (NON-SAFETY RELATED).
7. DELETED
8. ALL DRAINS ARE □" UNLESS OTHERWISE NOTED.
9. SEE FORM CAT 123 FROM CP-0034-001A FOR VENDOR SUPPLIED MECHANICAL SYMBOLS.
10. TO FUEL OIL SAMPLE STATION. (BY INSTRUMENTATION)
11. FUEL OIL DAY TANK VENT PIPING IS SEISMICALLY ANALYZED.
12. ALTERNATE FILL METHOD CONNECTION POINT. BOX WITH ACCESS COVER PLATE IS MAINTAINED WATERTIGHT.

R EDITORIAL

## EQUIPMENT SCHEDULE

| MANUFACTURERS I.D. | TAG NO. |
|---|---|
| | |

FSAR FIGURE 9.5-52

THIS DRAWING CREATED ELECTRONICALLY

| DRAWING 2323-M2-0215 REV CP-3 | |
|---|---|
| HAS BEEN SPLIT INTO THE FOLLOWING SHEETS: | |
| M2-0215 | M2-0215-E |
| M2-0215-A | M2-0215-F |
| M2-0215-B | M2-0215-G |
| M2-0215-C | M2-0215-H |
| M2-0215-D | M2-0215-J |

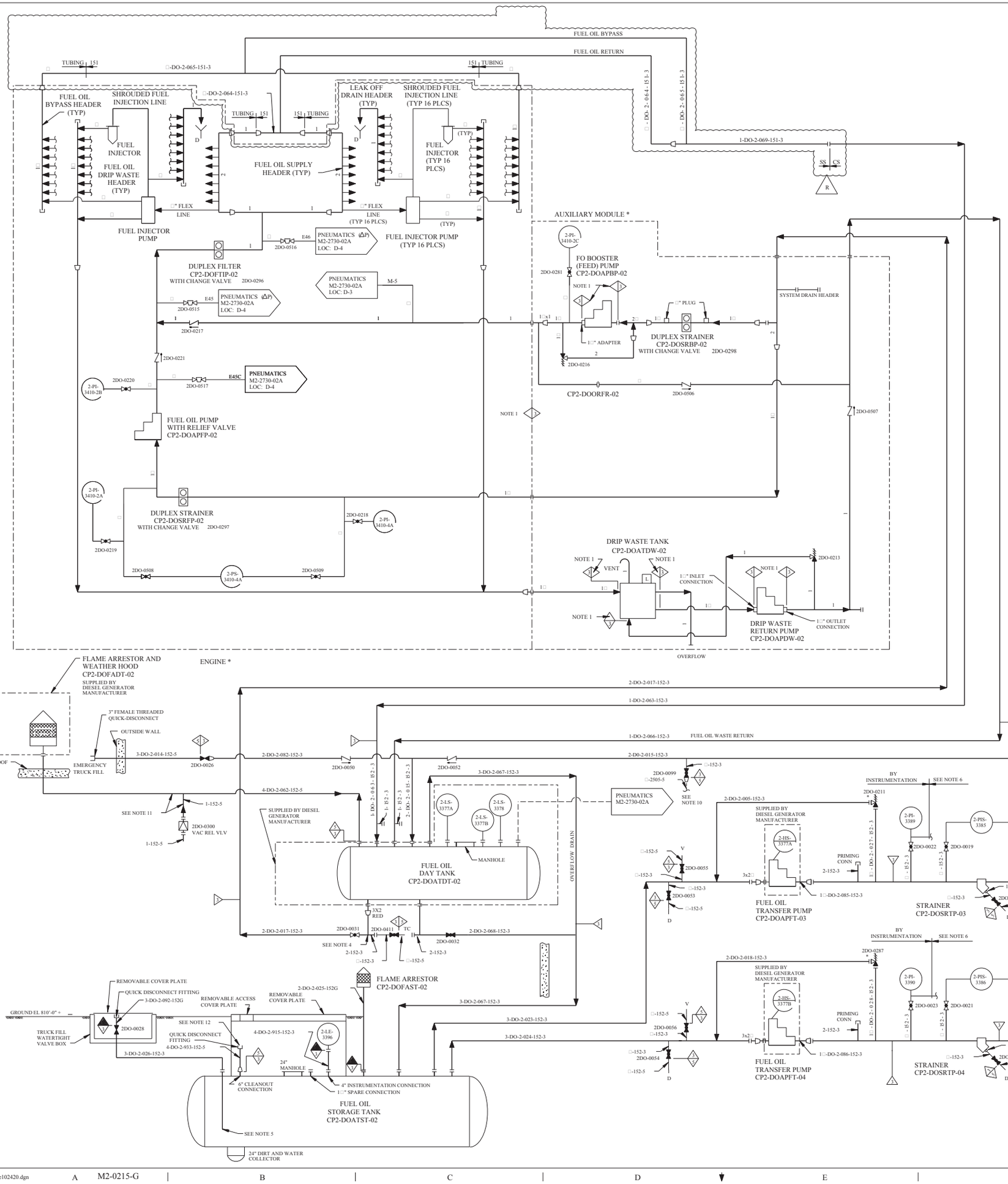
CLASS I
(NUCLEAR SAFETY-RELATED)
SAFETY CLASS 1 SEISMIC CATEGORY I
SAFETY CLASS 2 CLASS 1E
SAFETY CLASS 3 ASSOCIATED CIRCUITS

LUMINANT
CPNPP
GLEN ROSE, TEXAS

FLOW DIAGRAM
DIESEL FUEL OIL PIPING
CP2-MEDGEE-01

| DWG. NO. | SH. NO. | REV. |
|---|---|---|
| M2-0215 | F | CP-9 |

$$$$$$$$DATE$$$$$$$$




| REV | DWN | CHK | APVD | REMARKS |
|---|---|---|---|---|
| CP-12 | DLK 04-08 2013 | MM 08-20 2013 | | THIS DRAWING REVISED TO INCORPORATE DESIGN CHANGE FDA 2012-0001 30-05-00 PER SK-0001-12-000130-05-00. EDITORIAL CHANGE AS NOTED. |

NOTES:

1. NUCLEAR SAFETY RELATED PER IEEE-387. NOT IN SCOPE OF ANSI N18.2. EXEMPT FROM CODE STAMP.
2. SEE DRAWING M1-0215 SH -F AND SH -G FOR UNIT 1 DIESELS (CP1-MEDGEE-01 AND CP1-MEDGEE-02 ).
3. ALL ITEMS MARKED * ARE SUPPLIED BY TRANSAMERICA DELAVAL.
4. THE FIRST HORIZONTAL PIPING RUN IS SLOPED BACK TOWARDS VALVE 2DO-0411 .
5. FILL LINE RUN TO WITHIN 2 FEET OF BOTTOM OF TANK. THE END OF THE FILL LINE IS CAPPED AND THE LAST 2 FEET OF THE PIPE IS PERFORATED WITH APPROXIMATELY 16 1" DIAMETER HOLES.
6. TO FUEL OIL "GRAB SAMPLE" CONNECTION SEE M2-2533 SH 02 (NON-SAFETY RELATED).
7. DELETED
8. ALL DRAINS ARE □" UNLESS OTHERWISE NOTED.
9. SEE FORM CAT 123 FROM CP-0034-001A FOR VENDOR SUPPLIED MECHANICAL SYMBOLS.
10. TO FUEL OIL SAMPLE STATION (BY INSTRUMENTATION).
11. **FUEL OIL DAY TANK VENT PIPING IS SEISMICALLY ANALYZED.**
12. ALTERNATE FILL METHOD CONNECTION POINT. BOX WITH ACCESS COVER PLATE IS MAINTAINED WATERTIGHT.

R EDITORIAL

## EQUIPMENT SCHEDULE

| MANUFACTURERS I.D. | TAG NO. |
|---|---|
| | |

FSAR FIGURE 9.5-52

THIS DRAWING CREATED ELECTRONICALLY

DRAWING 2323-M2-0215 REV CP-3

HAS BEEN SPLIT INTO THE FOLLOWING SHEETS:

| | |
|---|---|
| M2-0215 | M2-0215-E |
| M2-0215-A | M2-0215-F |
| M2-0215-B | M2-0215-G |
| M2-0215-C | M2-0215-H |
| M2-0215-D | M2-0215-J |

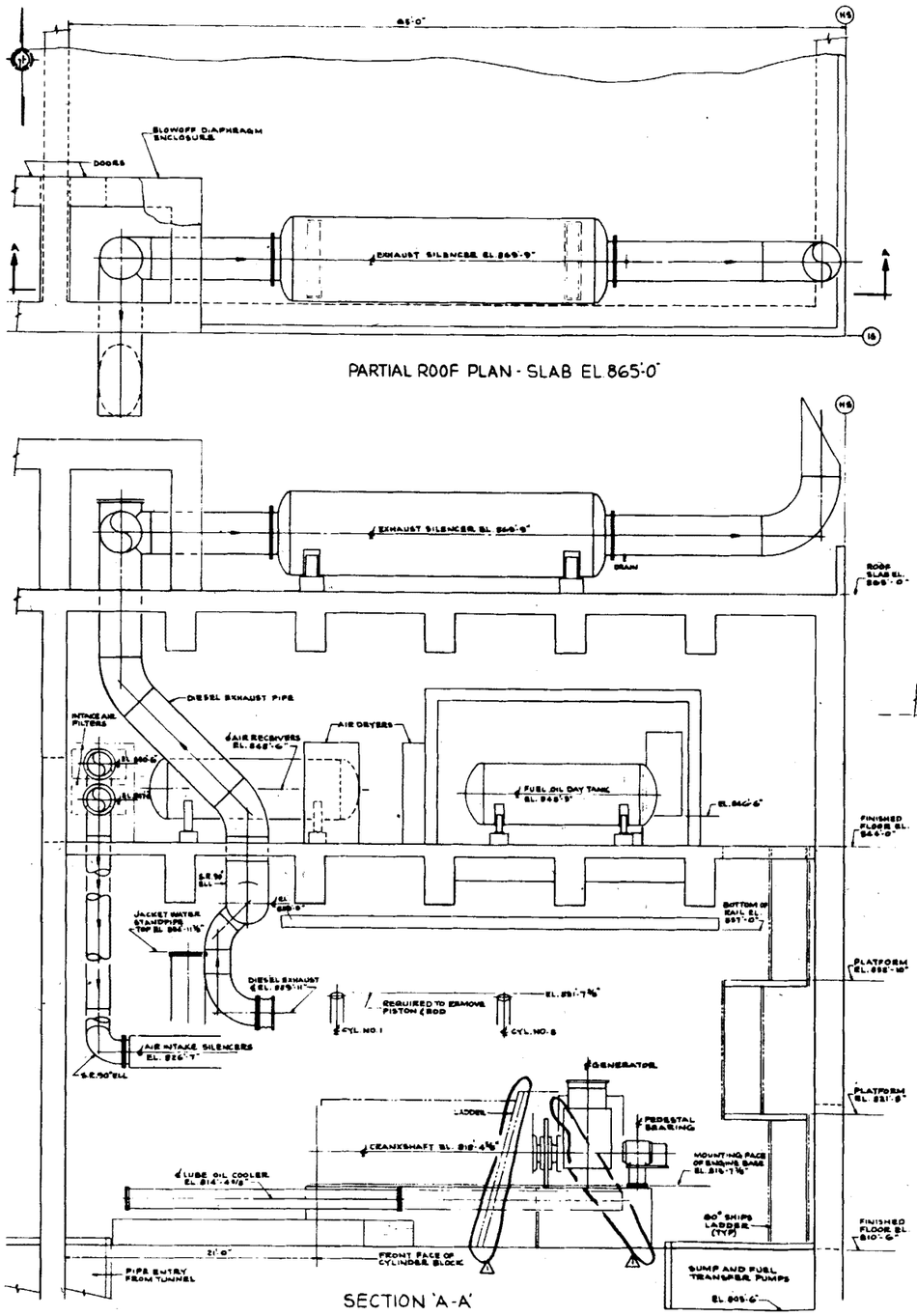
**CLASS I**
(NUCLEAR SAFETY-RELATED)
SAFETY CLASS 1 SAFETY CLASS 2 SAFETY CLASS 3
SEISMIC CATEGORY I
CLASS 1E
ASSOCIATED CIRCUITS

LUMINANT
CPNPP
GLEN ROSE, TEXAS

FLOW DIAGRAM
DIESEL FUEL OIL PIPING
CP2-MEDGEE-02

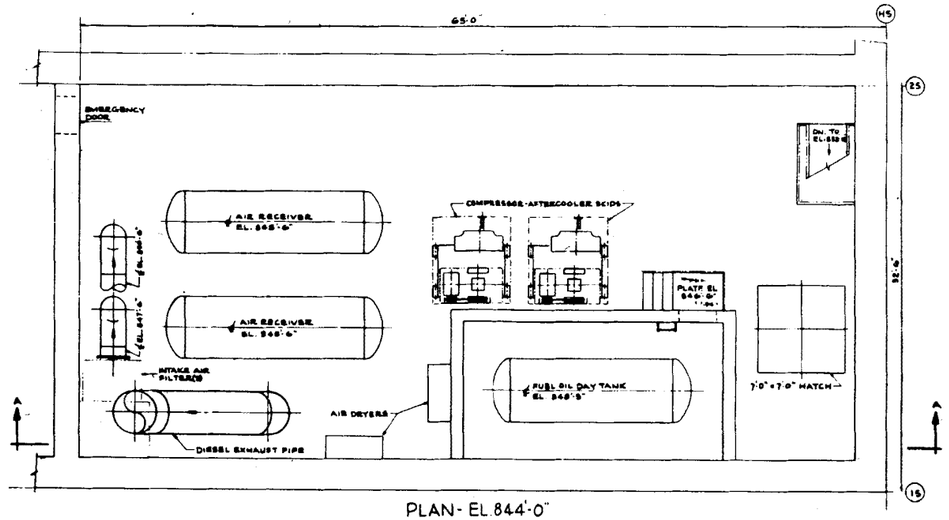
DWG. NO. M2-0215 | SH. NO. G | REV. CP-12

$$$$$$$ DATE $$$$$$$

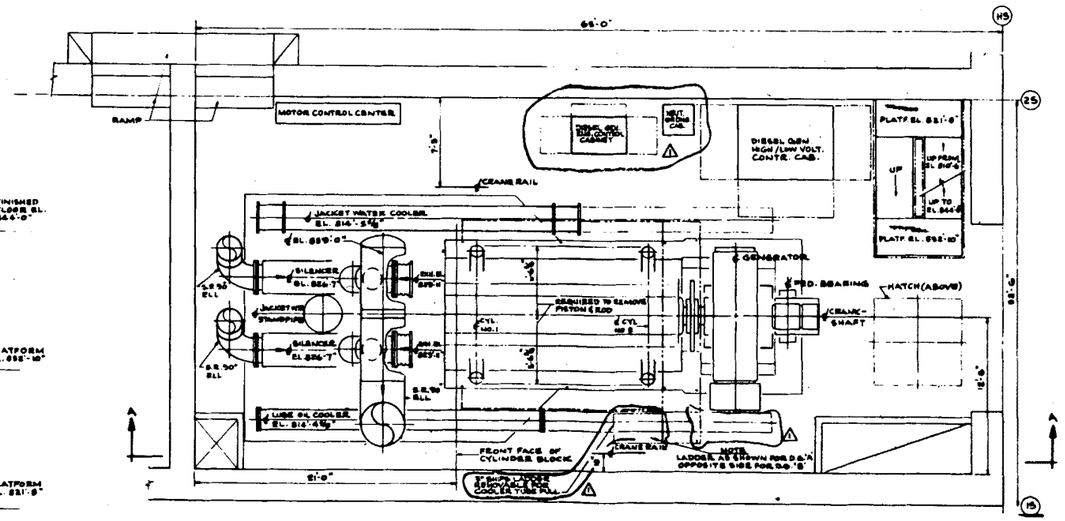



PARTIAL ROOF PLAN - SLAB EL 865'-0"

SECTION 'A-A'




PLAN - EL 844'-0"




PLAN - EL. 810'-6"

WORK THIS DRAWING WITH 2323-MI-0017

| |
|---|
| COMANCHE PEAK S.E.S.<br>FINAL SAFETY ANALYSIS REPORT<br>UNITS 1 and 2 |
| GENERAL ARRANGEMENT<br>DIESEL GENERATOR AREA |
| FIGURE 9.5-53 |

June 15, 1978

2323-MI-0018, REV. 1

| REV | DWN | CHKD | APVD | REMARKS |
|---|---|---|---|---|
| CP-12 | DLK 10-16 2018 | GAW 10-16 2018 | LJR 10-17 2018 | THIS DRAWING REVISED TO INCORPORATE EDITORIAL CHANGES PER AI-TR-2018-006847-1. |

LEGEND:

- DRESSER COUPLING
- □ COUPLING WITH PIPE PLUG

NOTES:

1. NUCLEAR SAFETY RELATED PER IEEE-387. NOT IN SCOPE O ANSI N18.2 EXEMPT FROM ASME CODE STAMPING.
2. SEE M2-0215-H FOR UNIT 2 DIESELS ( CP2-MEDGEE-01,-02 ).
3. ALL ITEMS MARKED * ARE SUPPLIED BY TRANSAMERICA DELAVAL.
4. SEE FORM CAT 123 FROM CP-0034-001A FOR VENDOR SUPPLIED MECHANICAL SYMBOLS.

## EQUIPMENT SCHEDULE

| MANUFACTURERS I D | TAG NO |
|---|---|
| | |

SEE NOTE 1

RIGHT BANK

LEFT BANK

JACKET WATER OUTLETS

JACKET WATER OUTLETS

EXHAUST JACKET

EXHAUST JACKET

TURBO CP1-MEDGTC-01

TURBO CP1-MEDGTC-02

JACKET WATER INLETS

JACKET WATER INLETS

INTERCOOLER CP1-MECCAC-01

INTERCOOLER CP1-MECCAC-02

MAIN HEADER

GOV COOLER

PNEUMATICS M1-2730-01 LOC: C-6

E16

PNEUMATICS M1-2730-01A LOC: D-4

E36

1DO-0554

1-TE-3415-1A

1-TE-3415-1B

VENT

STANDPIPE CP1-MEATJW-01

1-PS-3415-2

1DO-0110

1-TS-3415-2

HEATER CP1-MEHTJW-01

1-LI-3415-1

1DO-0488

1DO-0103

KEEP WARM PUMP CP1-MEAPKW-01

1DO-0104

1DO-0105

1DO-0106

2-151-5

2-1501-5

2-DD-1-078-151-5

DEMINERALIZED WATER SYSTEM M1-0242-B LOC: D-3

1DD-0390

5-151-5

2-151-5

1-TI-3415-3A

1DO-0107

1-TI-3415-3B

JACKET WATER COOLER CP1-MECCJW-01

10-SW-1-129-150-3

SERVICE WATER EDG PACKAGE (M1)0234 LOC: F-4

CP-12

10-SW-1-102-150-3

SERVICE WATER EDG PACKAGE (M1)0234 LOC: F-5

CP-12

ENGINE JACKET WATER PUMP CP1-MEAPJW-01

1DO-0101

1DO-0102

AUX JACKET WATER PUMP CP1-MEAPJW-02

1-TI-3415-2A

1-TI-3415-2B

LUBE OIL COOLER CP1-MECCLO-01

1DO-0109

1DO-0108

BLIND FLANGE

FD

FD

* ENGINE

* AUXILIARY MODULE

1□x□

1DO-0079

□-152-5

NOTE 1

JACKET WATER ENGINE BLOCK DRAIN

1□x□

1DO-0078

□-152-5

NOTE 1

SEE NOTE 1

JACKET WATER ENGINE BLOCK DRAIN

FSAR FIGURE 9.5-54

THIS DRAWING CREATED ELECTRONICALLY

DRAWING M1-0215 REV CP-11 HAS BEEN SPLIT INTO THE FOLLOWING SHEETS:

| |
|---|
| M1-0215 |
| M1-0215-B |
| M1-0215-D |
| M1-0215-F |
| M1-0215-H |

CLASS I
(NUCLEAR SAFETY-RELATED)

| | |
|---|---|
| SAFETY CLASS 1 | SEISMIC CATEGORY I |
| SAFETY CLASS 2 | CLASS 1E |
| SAFETY CLASS 3 | ASSOCIATED CIRCUITS |

LUMINANT
CPNPP
GLEN ROSE, TEXAS

FLOW DIAGRAM
JACKET WATER PIPING
CP1-MEDGEE-01

| DWG. NO. | SH. NO. | REV. |
|---|---|---|
| M1-0215 | H | CP-12 |

REF CKD 3/12/2018 CP-11

me322300.dgn M1-0215-H

FINAL PRINT

| REV | DWN | CHKD | APVD | REMARKS |
|---|---|---|---|---|
| CP-12 | DLK 10-16-2018 | GAW 10-16-2018 | LER 10-17-2018 | THIS DRAWING REVISED TO INCORPORATE EDITORIAL CHANGES PER AI-TR-2018-006847-1. |

LEGEND:

- DRESSER COUPLING
- □ COUPLING WITH PIPE PLUG

NOTES:

1. NUCLEAR SAFETY RELATED PER IEEE-387. NOT IN SCOPE O ANSI N18.2 EXEMPT FROM ASME CODE STAMPING.
2. SEE M2-0215-J FOR UNIT 2 DIESELS ( CP2-MEDGEE-01,-02 ).
3. ALL ITEMS MARKED * SUPPLIED BY TRANSAMERICA DELAVAL.
4. SEE FORM CAT 123 FROM CP-0034-001A FOR VENDOR SUPPLIED MECHANICAL SYMBOLS.

EQUIPMENT SCHEDULE

| MANUFACTURERS I D | TAG NO |
|---|---|
| | |

SEE NOTE 1

RIGHT BANK

LEFT BANK

JACKET WATER OUTLETS

EXHAUST JACKET

TURBO CP1-MEDGTC-03

TURBO CP1-MEDGTC-04

JACKET WATER INLETS

INTERCOOLER CP1-MECCAC-03

INTERCOOLER CP1-MECCAC-04

MAIN HEADER

GOV COOLER

PNEUMATICS M1-2730-02A LOC: D-4

E36

1DO-0555

E16

PNEUMATICS M1-2730-02 LOC: C-6

1-TE-3416-1A

1-TE-3416-1B

VENT

STANDPIPE CP1-MEATJW-02

1-PS-3416-2

1DO-0210

1-TS-3416-2

HEATER CP1-MEHTJW-02

1-LI-3416-1

1DO-0489

1DO-0203

KEEP WARM PUMP CP1-MEAPKW-02

1DO-0204

1DO-0205

1DO-0206

1DO-0207

1-TI-3416-3A

1-TI-3416-3B

1-TI-3416-2A

1-TI-3416-2B

ENGINE JACKET WATER PUMP CP1-MEAPJW-03

AUXILIARY JACKET WATER PUMP CP1-MEAPJW-04

1DO-0201

1DO-0202

JACKET WATER COOLER CP1-MECCJW-02

LUBE OIL COOLER CP1-MECCLO-02

2-151-5

2-1501-5

2-DD-1-057-151-5

DEMINERALIZED WATER SYSTEM M1-0242-B LOC: D-2

1DO-0391

10-SW-1-132-150-3

10-SW-1-173-150-3

SERVICE WATER EDG PACKAGE (M1)0234 LOC: F-3

SERVICE WATER EDG PACKAGE (M1)0234 LOC: F-2

CP-12

1DO-0209

BLIND FLANGE

1DO-0208

* ENGINE

* AUXILIARY MODULE

FD

1DO-0081

1DO-0080

□-152-5

NOTE 1

JACKET WATER ENGINE BLOCK DRAIN

FSAR FIGURE 9.5-54

THIS DRAWING CREATED ELECTRONICALLY

DRAWING M1-0215-A REV CP-6 HAS BEEN SPLIT INTO THE FOLLOWING SHEETS:

| |
|---|
| M1-0215-A |
| M1-0215-C |
| M1-0215-E |
| M1-0215-G |
| M1-0215-J |

CLASS I

(NUCLEAR SAFETY-RELATED)

SAFETY CLASS 1 SAFETY CLASS 2 SAFETY CLASS 3 — SEISMIC CATEGORY I — CLASS 1E — ASSOCIATED CIRCUITS

LUMINANT
CPNPP
GLEN ROSE, TEXAS

FLOW DIAGRAM
JACKET WATER PIPING
CP1-MEDGEE-02

| DWG. NO. | SH. NO. | REV. |
|---|---|---|
| M1-0215 | J | CP-12 |

REF CKD 3/12/2018 CP-11

me322400.dgn M1-0215-J

FINAL PRINT

| REV | DWN | CHKD | APVD | REMARKS |
|---|---|---|---|---|
| CP-11 | ILK 03-12-2018 | MM 03-13-2018 | MHP 03-14-2018 | THIS DRAWING REVISED TO INCORPORATE EDITORIAL CHANGES PER AI-CR-2018-001866-1. |

NOTES:

1. NUCLEAR SAFETY RELATED PER IEEE-387. NOT IN SCOPE OF ANSI N18.2 EXEMPT FROM ASME CODE STAMPING.
2. SEE M1-0215 SH H AND SH J FOR UNIT 1 DIESELS ( CP1-MEDGEE-01 AND CP1-MEDGEE-02 ).
3. ALL ITEMS MARKED * ARE SUPPLIED BY TRANSAMERICA DELAVAL.
4. SEE FORM CAT 123 FROM CP-0034-001A FOR VENDOR SUPPLIED MECHANICAL SYMBOLS.

LEGEND:

- DRESSER COUPLING
- HALF COUPLING WITH PIPE PLUG

SEE NOTE 1

RIGHT BANK

LEFT BANK

JACKET WATER OUTLETS

EXHAUST JACKET

TURBO CP2-MEDGTC-01

TURBO CP2-MEDGTC-02

JACKET WATER INLETS

INTERCOOLER CP2-MECCAC-01

INTERCOOLER CP2-MECCAC-02

MAIN HEADER

2-TI-3415

2-TE-3415-1A

GOV COOLER

PNEUMATICS M2-2730-01 LOC: C-6

PNEUMATICS M2-2730-01A LOC: D-4

E16

E36

2DO-0554

2-TE-3415-1B

VENT

STANDPIPE CP2-MEATJW-01

2-PS-3415-2

2DO-0110

2-TS-3415-2

HEATER CP2-MEHTJW-01

2-LI-3415-1

2DO-0518

2DO-0103

KEEP WARM PUMP CP2-MEAPKW-01

2DO-0104

2DO-0105

2DO-0106

2DO-0107

2-TI-3415-3A

2-TI-3415-3B

2SW-0425

2SW-0424

JACKET WATER COOLER CP2-MECCJW-01

ENGINE JACKET WATER PUMP CP2-MEAPJW-01

AUX JACKET WATER PUMP CP2-MEAPJW-02

2DO-0101

2DO-0102

2-TI-3415-2A

2-TI-3415-2B

LUBE OIL COOLER CP2-MECCLO-01

JACKET WATER OVERFLOW AND DRAIN

2DO-0109

2DO-0108

BLIND FLANGE

* ENGINE

* AUXILIARY MODULE

2-152-G

1-152-G

FD

2DO-0079

NOTE 1

JACKET WATER ENGINE BLOCK DRAIN

JACKET WATER ENGINE BLOCK DRAIN

DEMINERALIZED WATER SYSTEM M2-0242 LOC: E-6

2-DD-2-121-151-5

5-1501-5

2-1501-5

1-1501-5

2DD-0389

SERVICE WATER EDG PACKAGE M2-0254 LOC: F-4

SERVICE WATER EDG PACKAGE M2-0254 LOC: F-5

10-SW-2-129-150-3

10-SW-2-102-150-3

CP-11

| EQUIPMENT SCHEDULE | |
|---|---|
| MANUFACTURERS I D | TAG NO |

DRAWING 2323-M2-0215 REV CP-3

HAS BEEN SPLIT INTO THE FOLLOWING SHEETS:

| | |
|---|---|
| M2-0215 | M2-0215-E |
| M2-0215-A | M2-0215-F |
| | M2-0215-G |
| | M2-0215-H |
| M2-0215-D | M2-0215-J |

FSAR FIGURE 9.5-54

THIS DRAWING CREATED ILICTRONICALLY

CLASS I

(NUCLEAR SAFETY-RELATED)

| | |
|---|---|
| SAFETY CLASS 1 | SEISMIC CATEGORY I |
| SAFETY CLASS 2 | CLASS 1E |
| SAFETY CLASS 3 | ASSOCIATED CIRCUITS |

LUMINANT
CPNPP
GLEN ROSE, TEXAS

FLOW DIAGRAM
JACKET WATER PIPING
CP2-MEDGEE-01

| DWG. NO. | SH. NO. | REV. |
|---|---|---|
| M2-0215 | H | CP-11 |

REF CKD 3/12/2018 CP-11

mc0000np.dgn A M2-0215-H

FINAL PRINT

| REV | DWN | CHKD | APVD | REMARKS |
|---|---|---|---|---|
| CP-10 | DLK 03-12 2018 | MM 03-13 2018 | MHF 03-14 2018 | THIS DRAWING REVISED TO INCORPORATE EDITORIAL CHANGES PER A1-CR-2018-001866-1. |

NOTES:
1. NUCLEAR SAFETY RELATED PER IEEE-387. NOT IN SCOPE OF ANSI N18.2 EXEMPT FROM ASME CODE STAMPING.
2. SEE M1-0215 SH H AND SH J FOR UNIT 1 DIESELS ( CP1-MEDGEE-01 AND CP1-MEDGEE-02 ).
3. ALL ITEMS MARKED * SUPPLIED BY TRANSAMERICA DELAVAL.
4. SEE FORM CAT 123 FROM CP-0034-001A FOR VENDOR SUPPLIED MECHANICAL SYMBOLS.

LEGEND:
- DRESSER COUPLING
- HALF COUPLING WITH PIPE PLUG

## EQUIPMENT SCHEDULE

| MANUFACTURERS I D | TAG NO |
|---|---|
| | |

SEE NOTE 1

RIGHT BANK

LEFT BANK

JACKET WATER OUTLETS

EXHAUST JACKET

TURBO CP2-MEDGTC-03

TURBO CP2-MEDGTC-04

JACKET WATER INLETS

INTERCOOLER CP2-MECCAC-03

INTERCOOLER CP2-MECCAC-04

MAIN HEADER

2-TE-3416-1A

2-TI-3416

GOV COOLER

PNEUMATICS M2-2730-02A LOC: D-4

E36

2DO-0555

E16

PNEUMATICS M2-2730-02 LOC: C-6

2-TE-3416-1B

1□-152-3

VENT

STANDPIPE CP2-MEATJW-02

2-PS-3416-2

2DO-0210

2-TS-3416-2

HEATER CP2-MEHTJW-02

2-LI-3416-1

2DO-0519

2DO-0203

KEEP WARM PUMP CP2-MEAPKW-02

2DO-0204

2DO-0205

DO DD

5-1501-5

2-1501-5

1-1501-5

2-1501-5

2DD-0385 2-1501-5

2-DD-2-120-151-5

DEMINERALIZED WATER SYSTEM M2-0242 LOC: D-6

2DO-0206

2-TI-3416-3A

2DO-0207

2-TI-3416-3B

12x8

2SW-0427

2SW-0426

JACKET WATER COOLER CP2-MECCJW-02

10-SW-2-132-150-3

SERVICE WATER EDG PACKAGE M2-0234 LOC: F-3

CP -10

10-SW-2-173-150-3

SERVICE WATER EDG PACKAGE M2-0234 LOC: F-2

CP -10

ENGINE JACKET WATER PUMP CP2-MEAPJW-03

2DO-0201

2DO-0202

AUXILIARY JACKET WATER PUMP CP2-MEAPJW-04

2-TI-3416-2A

2-TI-3416-2B

LUBE OIL COOLER CP2-MECCLO-02

JACKET WATER OVERFLOW AND DRAIN

2DO-0209

BLIND FLANGE

2DO-0208

2-152-G

1-152-G

FD

* ENGINE

* AUXILIARY MODULE

NPT

1□x□

2DO-0081

□-152-5

NOTE 1

JACKET WATER ENGINE BLOCK DRAIN

2DO-0080

SEE NOTE 1

| DRAWING M2-0215 | REV CP-3 |
|---|---|
| HAS BEEN SPLIT INTO THE FOLLOWING SHEETS: | |
| M2-0215 | M2-0215-E |
| M2-0215-A | M2-0215-F |
| M2-0215-B | M2-0215-G |
| M2-0215-C | M2-0215-H |
| M2-0215-D | M2-0215-J |

FSAR FIGURE 9.5-54

THIS DRAWING CREATED ELECTRONICALLY

CLASS I
(NUCLEAR SAFETY-RELATED)
SAFETY CLASS 1 — SEISMIC CATEGORY I
SAFETY CLASS 2 — CLASS 1E
SAFETY CLASS 3 — ASSOCIATED CIRCUITS

LUMINANT
CPNPP
GLEN ROSE, TEXAS

FLOW DIAGRAM
JACKET WATER PIPING
CP2-MEDGEE-02

| DWG. NO. | SH. NO. | REV. |
|---|---|---|
| M2-0215 | J | CP-10 |

REF CKD 3 / 12 / 2 0 18 CP- 10

me0000nq.dgn M2-0215-J FINAL PRINT

| REV | DWN | CHKD | APVD | REMARKS |
|---|---|---|---|---|
| CP-25 | JRMC 06-26-2014 | DJL 06-26-2014 | | THIS DRAWING REVISED TO INCORPORATE DESIGN CHANGE FDA-2014-000145-01-00 PER SK-0001-14-000145-01-00. |

**NOTES:**

1. NUCLEAR SAFETY RELATED PER IEEE-337, NOT IN SCOPE OF ANSI N18.2 EXEMPT FROM ASME CODE STAMPING.
2. SEE M2-0215 SH D FOR UNIT 2 DIESELS (CP2-MEDGEE-01 AND CP2-MEDGEE-02 ).
3. ALL ITEMS MARKED * ARE SUPPLIED BY DELAVAL.
4. SEE M1-2730-01, -01A,-02 AND -02A FOR PNEUMATIC CONTROL SCHEMATIC.
5. NON-NUCLEAR SAFETY CLASS TUBING INSTALLED PER SPEC CPES-I-1018.
6. FLANGE RATING SUPPLIED BY DIESEL GENERATOR MANUFACTURER.
7. ALL DRAINS ARE □* UNLESS OTHERWISE NOTED.
8. SEE FORM CAT-123 FROM CP-0034-0014 FOR VENDOR SUPPLIED MECHANICAL SYMBOLS.
9. REVERSE VALVE POSITION TO MANUALLY UNLOAD COMPRESSOR LP CYLINDERS.
10. VALVE POSITIONS AND FLOW DIRECTION SHOWN FOR LEFT CHAMBER DRYING AND RIGHT CHAMBER REGENERATION.
11. FLOW SCHEMATIC FOR SOLENOID VALVE:

DE-ENERGIZED / ENERGIZED — A: PRESSURE, B: VENT, C: CYLINDER

12. MOISTURE INDICATOR ABANDONED IN PLACE.

## EQUIPMENT SCHEDULE

| MANUFACTURERS I D | TAG NUMBER |
|---|---|
| | |

DRAWING M1-0215 REV CP-11 HAS BEEN SPLIT INTO THE FOLLOWING SHEETS:

| |
|---|
| M1-0215 |
| M1-0215-B |
| M1-0215-D |
| M1-0215-F |
| M1-0215-H |

CLASS I (NUCLEAR SAFETY-RELATED)

SAFETY CLASS 1, SAFETY CLASS 2, SAFETY CLASS 3 — SEISMIC CATEGORY I, CLASS 1E, ASSOCIATED CIRCUITS

LUMINANT
CPNPP
GLEN ROSE, TEXAS

FLOW DIAGRAM
STARTING AIR PIPING
CP1-MEDGEE-01

DWG NO. M1-0215 | SH. NO. D | REV. CP-25

FSAR FIGURE 9.5-55

THIS DRAWING CREATED ELECTRONICALLY

REF CKD 9/23/97 CP-18

$$$$$$$$DATE$$$$$$

me858200.dgn A M1-0215-D

< FINAL PRINT >

| REV | DWN | CHKD | APVD | REMARKS |
|---|---|---|---|---|
| CP-27 | JESC 06-26-2014 | DJL 06-26-2014 | | THIS DRAWING REVISED TO INCORPORATE DESIGN CHANGE FDA-2014-000145-01-00 PER SK-0002-14-000145-01-00. |

NOTES:

1. NUCLEAR SAFETY RELATED PER IEEE-337, NOT IN SCOPE OF ANSI N18.2 EXEMPT FROM ASME CODE STAMPING.
2. SEE M2-0215 SH E FOR UNIT 2 DIESELS (CP2-MEDGEE-01 AND CP2-MEDGEE-02 ).
3. ALL ITEMS MARKED * ARE SUPPLIED BY DELAVAL.
4. SEE M1-2730-01, -01A, -02 AND -02A FOR PNEUMATIC CONTROL SCHEMATIC.
5. NON-NUCLEAR SAFETY CLASS TUBING INSTALLED PER SPEC CPES-1-1018.
6. ** - 300 LB RF FLANGE RATING TO MATERIAL WITH COMPONENT FLANGE RATING SUPPLIED BY DIESEL GENERATOR MANUFACTURER.
7. ALL DRAINS ARE □" UNLESS OTHERWISE NOTED.
8. SEE FORM CAT-123 FROM CP-0034-0014 FOR VENDOR SUPPLIED MECHANICAL SYMBOLS.
9. REVERSE VALVE POSITION TO MANUALLY UNLOAD COMPRESSOR LP CYLINDERS.
10. VALVE POSITIONS AND FLOW DIRECTION SHOWN FOR LEFT CHAMBER DRYING AND RIGHT CHAMBER REGENERATION.
11. FLOW SCHEMATIC FOR SOLENOID VALVE:

DE-ENERGIZED: C, A, B — ENERGIZED: C, A, B — A: PRESSURE, B: VENT, C: CYLINDER

12. MOISTURE INDICATOR ABANDONED IN PLACE.

## EQUIPMENT SCHEDULE

| MANUFACTURERS I D | TAG NO |
|---|---|
| | |

DRAWING M1-0215-A REV CP-6 HAS BEEN SPLIT INTO THE FOLLOWING SHEETS:

| |
|---|
| M1-0215-A |
| M1-0215-C |
| M1-0215-E |
| M1-0215-G |
| M1-0215-J |

CLASS I (NUCLEAR SAFETY-RELATED)

SAFETY CLASS 1, SAFETY CLASS 2, SAFETY CLASS 3 — SEISMIC CATEGORY I, CLASS 1E ASSOCIATED CIRCUITS

LUMINANT
CPNPP
GLEN ROSE, TEXAS

FLOW DIAGRAM
STARTING AIR PIPING
CP1-MEDGEE-02

DWG. NO. M1-0215 | SH. NO. E | REV. CP-27

FSAR FIGURE 9.5-55

THIS DRAWING CREATED ELECTRONICALLY

$$$$$$$DATE$$$$$$ REF CKD 9/23/97 CP-20

me858300.dgn A M1-0215-E

< FINAL PRINT >

| REV | DWN | CHKD | APVD | REMARKS |
|---|---|---|---|---|
| CP-17 | JRMC 06-26-2014 | DJL 06-26-2014 | | THIS DRAWING REVISED TO INCORPORATE DESIGN CHANGE FDA-2014-000145-01-00 PER SK-0003-14-000145-01-00. |

NOTES:

NUCLEAR SAFETY RELATED PER IEEE-337, NOT IN SCOPE OF ANSI N18.2 EXEMPT FROM ASME CODE STAMPING.

2. SEE M1-0215 SH D AND SH E FOR UNIT 1 DIESELS (CP1-MEDGEE-01 AND CP1-MEDGEE-02 ).
3. ALL ITEMS MARKED * ARE SUPPLIED BY DELAVAL.
4. SEE M2-2730-01,-01A,-02 AND -02A FOR PNEUMATIC CONTROL SCHEMATIC.
5. NON-NUCLEAR SAFETY CLASS TUBING INSTALLED PER SPEC CPES-1-1018.
6. ** -300 LB RF FLANGE RATING TO MATCH WITH COMPONENT FLANGE RATING SUPPLIED BY DIESEL GENERATOR MANUFACTURER.
7. ALL DRAINS ARE □" UNLESS OTHERWISE NOTED.
8. SEE FORM CAT-123 FROM CP-0034-0014 FOR VENDOR SUPPLIED MECHANICAL SYMBOLS.
9. VALVE POSITIONS AND FLOW DIRECTION SHOWN FOR LEFT CHAMBER DRYING AND RIGHT CHAMBER REGENERATION.
10. REVERSE VALVE POSITION TO MANUALLY UNLOAD COMPRESSOR LP CYLINDERS.
11. FLOW SCHEMATIC FOR SOLENOID VALVE:

DE-ENERGIZED C B A — ENERGIZED C B A — A: PRESSURE B: VENT C: CYLINDER

12. MOISTURE INDICATOR ABANDONED IN PLACE.

## EQUIPMENT SCHEDULE

| MANUFACTURERS I D | TAG NUMBER |
|---|---|
| 76001-146 | 2DO-0135 (137) |
| 76001-126 | CP2-MECAAC-01 (02) |
| 76001-153 | 2DO-0145 (142) |

DRAWING 2323-M2-0215 REV CP-3
HAS BEEN SPLIT INTO THE FOLLOWING SHEETS:

| | |
|---|---|
| M2-0215 | M2-0215-E |
| M2-0215-A | M2-0215-F |
| M2-0215-B | M2-0215-G |
| M2-0215-C | M2-0215-H |
| M2-0215-D | M2-0215-J |

CLASS I
(NUCLEAR SAFETY-RELATED)
SAFETY CLASS 1 — SEISMIC CATEGORY I
SAFETY CLASS 2 — CLASS 1E
SAFETY CLASS 3 — ASSOCIATED CIRCUITS

LUMINANT
CPNPP
GLEN ROSE, TEXAS

FLOW DIAGRAM
STARTING AIR PIPING
CP2-MEDGEE-01

DWG. NO. M2-0215 | SH. NO. D | REV. CP-17

FSAR FIGURE 9.5-55

THIS DRAWING CREATED ELECTRONICALLY

SSSSSSSDATESSSSSS REF CKD CP-12 9/26/97

me858400.dgn A M2-0215-D B C D E F G < FINAL PRINT > H

| REV | DWN | CHKD | APVD | REMARKS |
|---|---|---|---|---|
| CP-20 | DLK 10-23-2015 | | | THIS DRAWING REVISED TO INCORPORATE ALCR-2015-002427-1 TO EDITORIALLY RECONNECT REFERENCE BLOCK TO INSTRUMENT LINE THAT WAS DELETED BY MISTAKE. |

NOTES:

1. NUCLEAR SAFETY RELATED PER IEEE-337, NOT IN SCOPE OF ANSI N18.2 EXEMPT FROM ASME CODE STAMPING.
2. SEE M1-0215 SH E AND SH F FOR UNIT 1 DIESELS (CP1-MEDGEE-01 AND CP1-MEDGEE-02 ).
3. ALL ITEMS MARKED * ARE SUPPLIED BY DELAVAL.
4. SEE M2-2730-01, -01A, -02 AND -02A FOR PNEUMATIC CONTROL SCHEMATIC.
5. NON-NUCLEAR SAFETY CLASS TUBING INSTALLED PER SPEC CPES-1-1018.
6. ** - 300 LB RF FLANGE RATING TO MATCH WITH COMPONENT FLANGE RATING SUPPLIED BY DIESEL GENERATOR MANUFACTURER.
7. ALL DRAINS ARE □* UNLESS OTHERWISE NOTED.
8. SEE FORM CAT-123 FROM CP-0034-0014 FOR VENDOR SUPPLIED MECHANICAL SYMBOLS.
9. VALVE POSITIONS AND FLOW DIRECTION SHOWN FOR LEFT CHAMBER DRYING AND RIGHT CHAMBER REGENERATION.
10. REVERSE VALVE POSITION TO MANUALLY UNLOAD COMPRESSOR LP CYLINDERS.
11. FLOW SCHEMATIC FOR SOLENOID VALVE:

DE-ENERGIZED: C–B, A

ENERGIZED: C–A, B

A: PRESSURE
B: VENT
C: CYLINDER

12. MOISTURE INDICATOR ABANDONED IN PLACE.

## EQUIPMENT SCHEDULE

| MANUFACTURERS I D | TAG NO |
|---|---|
| | |

DRAWING 2323-M2-0215 REV CP-3
HAS BEEN SPLIT INTO THE FOLLOWING SHEETS:

| | |
|---|---|
| M2-0215 | M2-0215-E |
| M2-0215-A | M2-0215-F |
| M2-0215-B | M2-0215-G |
| M2-0215-C | M2-0215-H |
| M2-0215-D | M2-0215-J |

CLASS I
(NUCLEAR SAFETY-RELATED)
SAFETY CLASS 1, SAFETY CLASS 2, SAFETY CLASS 3
SEISMIC CATEGORY I
CLASS 1E
ASSOCIATED CIRCUITS

LUMINANT
CPNPP
GLEN ROSE, TEXAS

FLOW DIAGRAM
STARTING AIR PIPING
CP2-MEDGEE-02

DWG. NO. M2-0215 | SH. NO. E | REV. CP-20

FSAR FIGURE 9.5-55

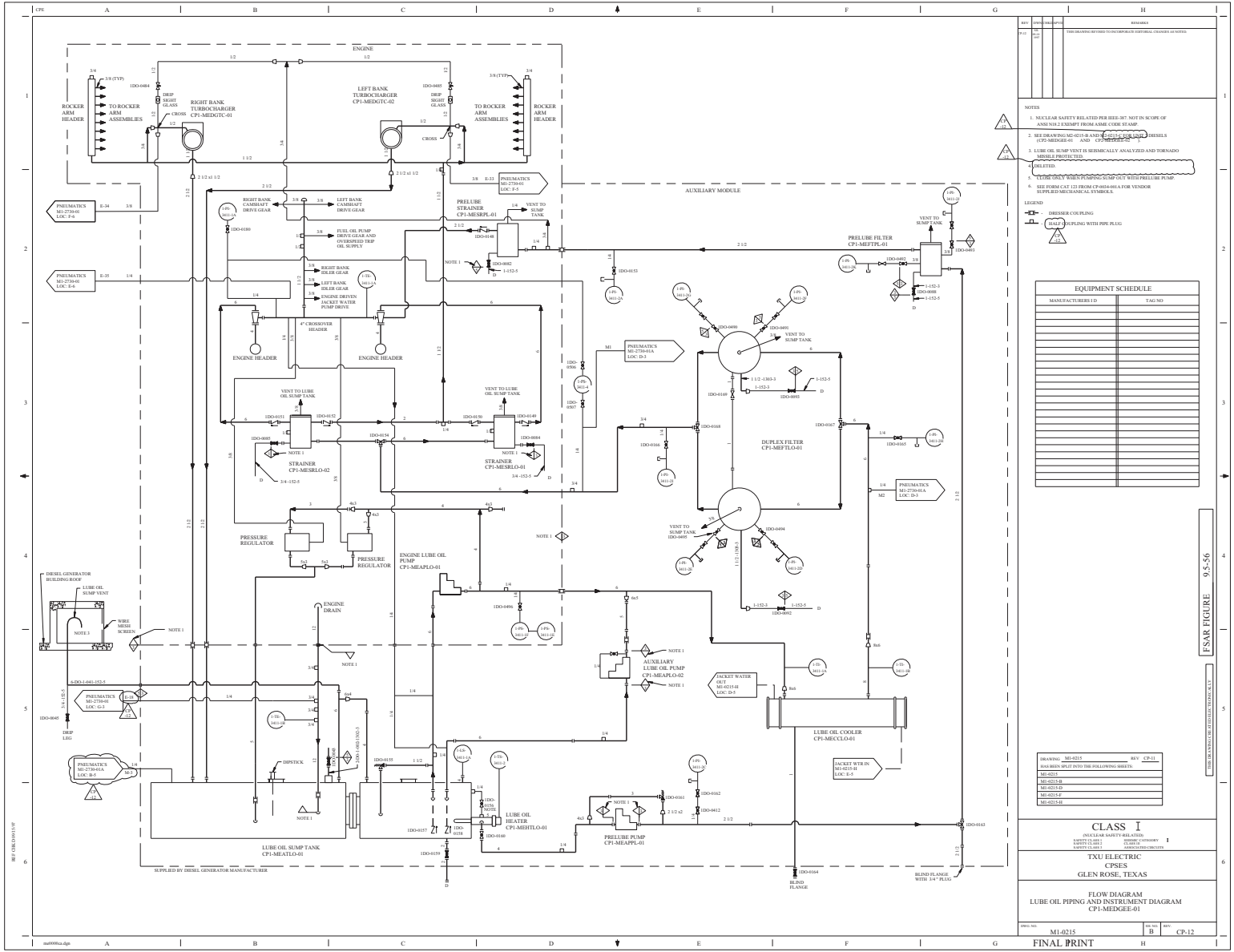
THIS DRAWING CREATED ELECTRONICALLY

REF CKD CP-14 9/26/97

$$$$$$$DATE$$$$$$$

me858500.dgn M2-0215-E

< FINAL PRINT >




| REV | DWN | CHK | APP'D | REMARKS |
|---|---|---|---|---|
| 10-11 | Not Used | | | THIS DRAWING REVISED TO INCORPORATE EDITORIAL CHANGES AS NOTED. |

NOTES

1. NUCLEAR SAFETY RELATED PER REE-307. NOT IN SCOPE OF ANSI N18.2 EXEMPT FROM ASME CODE STAMP.
2. SEE DRAWING M2-0215-B AND M2-0215-D FOR UNIT DIESELS (CP2-MEDGEE-01 AND CP2-MEDGEE-02 ).
3. LUBE OIL SUMP VENT IS SEISMICALLY ANALYZED AND TORNADO MISSILE PROTECTED.
4. DELETED.
5. CLOSE ONLY WHEN PUMPING SUMP OUT WITH PRELUBE PUMP.
6. SEE FORM CAT 123 FROM CP-0034-001A FOR VENDOR SUPPLIED MECHANICAL SYMBOLS.

LEGEND

DRESSER COUPLING

HALF COUPLING WITH PIPE PLUG

EQUIPMENT SCHEDULE

| MANUFACTURERS I D | TAG NO |
|---|---|
| | |

FSAR FIGURE 9.5-56

| DRAWING | M1-0215 | REV | CP-11 |
|---|---|---|---|
| HAS BEEN SPLIT INTO THE FOLLOWING SHEETS. | | | |
| M1-0215 | | | |
| M1-0215-B | | | |
| M1-0215-D | | | |
| M1-0215-F | | | |
| M1-0215-H | | | |

CLASS I
(NUCLEAR SAFETY-RELATED)
SAFETY CLASS 1 SEISMIC CATEGORY I
SAFETY CLASS 2 CLASS 1E
SAFETY CLASS 3 ARMATURE CIRCUITS

TXU ELECTRIC
CPSES
GLEN ROSE, TEXAS

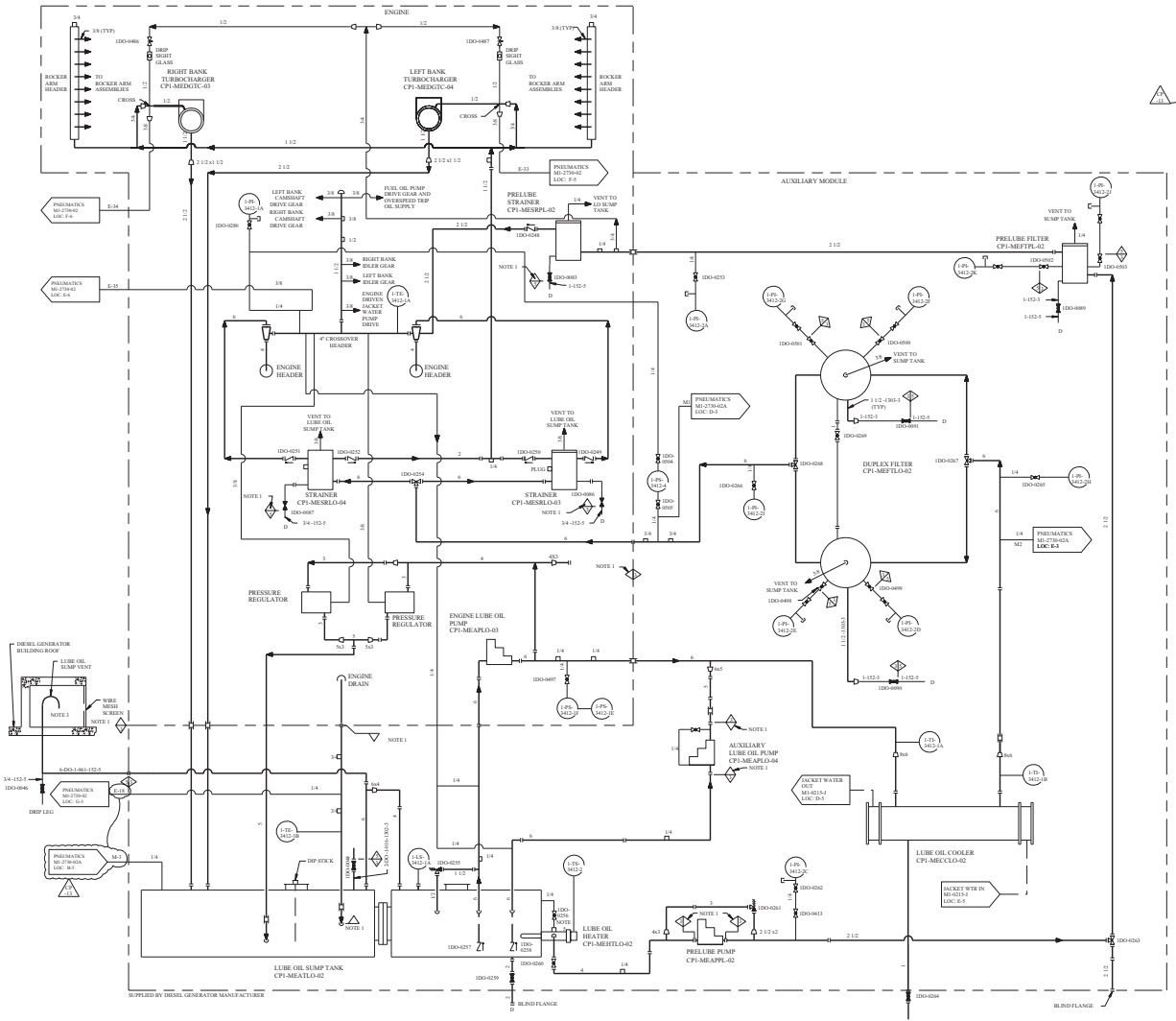
FLOW DIAGRAM
LUBE OIL PIPING AND INSTRUMENT DIAGRAM
CP1-MEDGEE-01

| DRG. NO. | REV. NO. | REV. |
|---|---|---|
| M1-0215 | B | CP-12 |

FINAL PRINT

REF DGN D:\915.0*

ma0006ca.dgn




| REV | DATE | DRAFTER | APPD | REMARKS |
|---|---|---|---|---|
| 0 | 11-01-02 | | | THIS DRAWING REVISED TO INCORPORATE EDITORIAL CHANGES AS NOTED. |

NOTES

1. NUCLEAR SAFETY RELATED PER IEEE-307 NOT IN SCOPE OF ANSI N18.2 EXEMPT FROM ASME CODE STAMP.
2. SEE DRAWING M1-0215-A AND M1-0215-C FOR UNIT 2 DIESELS ( CP2-MEDGTC-03 AND CP2-MEDGTC-04 ) AND CP1-MEDGTC-02 ).
3. LUBE OIL SUMP VENT IS SEISMICALLY ANALYZED AND TORNADO MISSILE PROTECTED.
4. DELETED.
5. CLOSE ONLY WHEN PUMPING SUMP OUT WITH PRELUBE PUMP.
6. SEE FORM CAT 123 FROM CP-9834-001A FOR VENDOR SUPPLIED MECHANICAL SYMBOLS.

LEGEND

- DRESSER COUPLING
- SINGLE COUPLING WITH PIPE PLUG

EQUIPMENT SCHEDULE

| MANUFACTURERS I D | TAG NO |
|---|---|
| | |

| DRAWING | M1-0215-A | REV | CP-6 |
|---|---|---|---|
| HAS BEEN SPLIT INTO THE FOLLOWING SHEETS: | | | |
| M1-0215-A | | | |
| M1-0215-C | | | |
| M1-0215-E | | | |
| M1-0215-G | | | |
| M1-0215-I | | | |

CLASS I

(NUCLEAR SAFETY-RELATED)

| | |
|---|---|
| SAFETY CLASS 1 | SEISMIC CATEGORY I |
| SAFETY CLASS 2 | CLASS 1E |
| SAFETY CLASS 3 | IDENTIFIED CIRCUITS |

TU ELECTRIC

CPSES

GLEN ROSE, TEXAS

FLOW DIAGRAM
LUBE OIL PIPING AND INSTRUMENT DIAGRAM
CP1-MEDGE-02

| DWG. NO. | SH. NO. | REV. |
|---|---|---|
| M1-0215 | C | CP-13 |

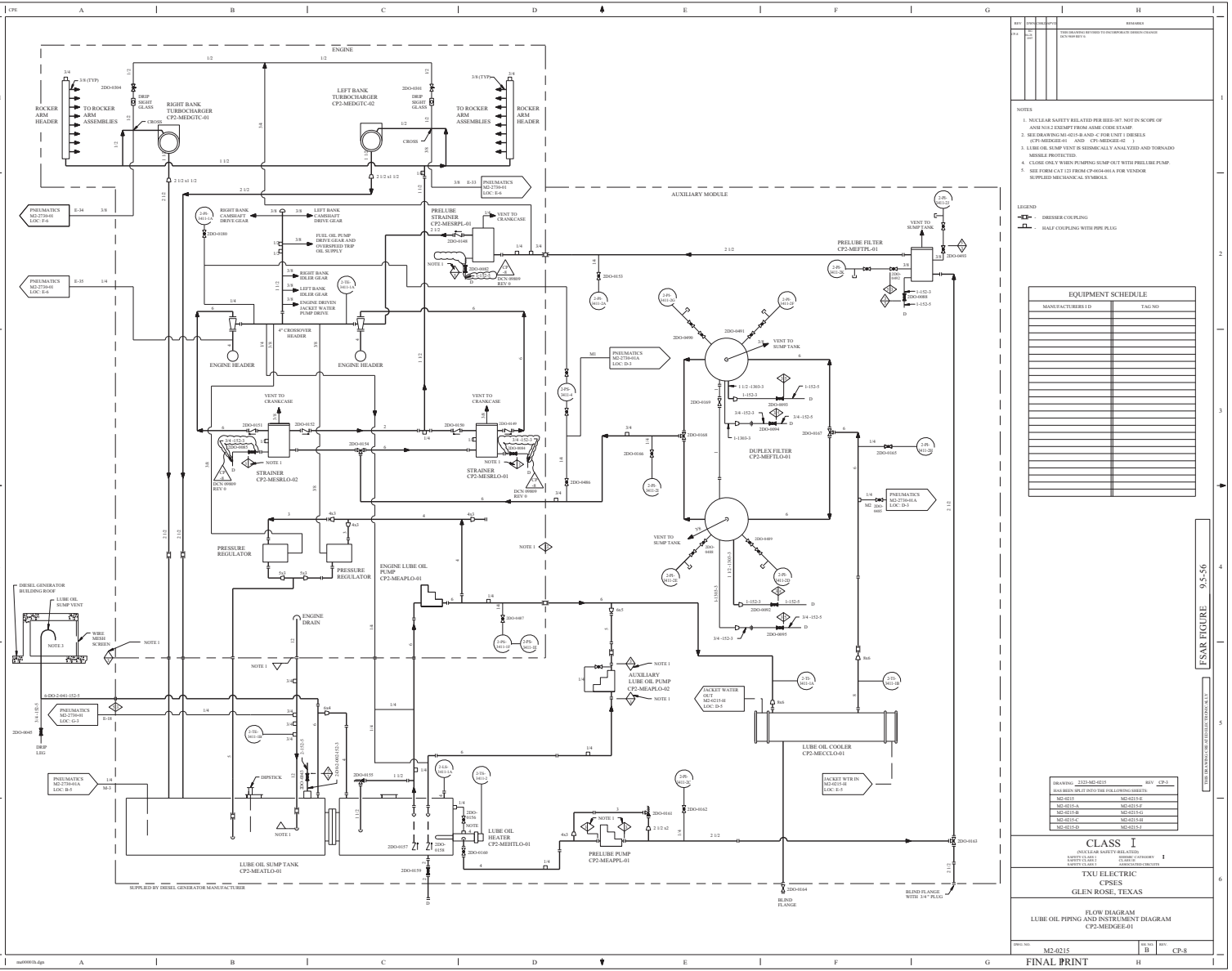
FINAL PRINT

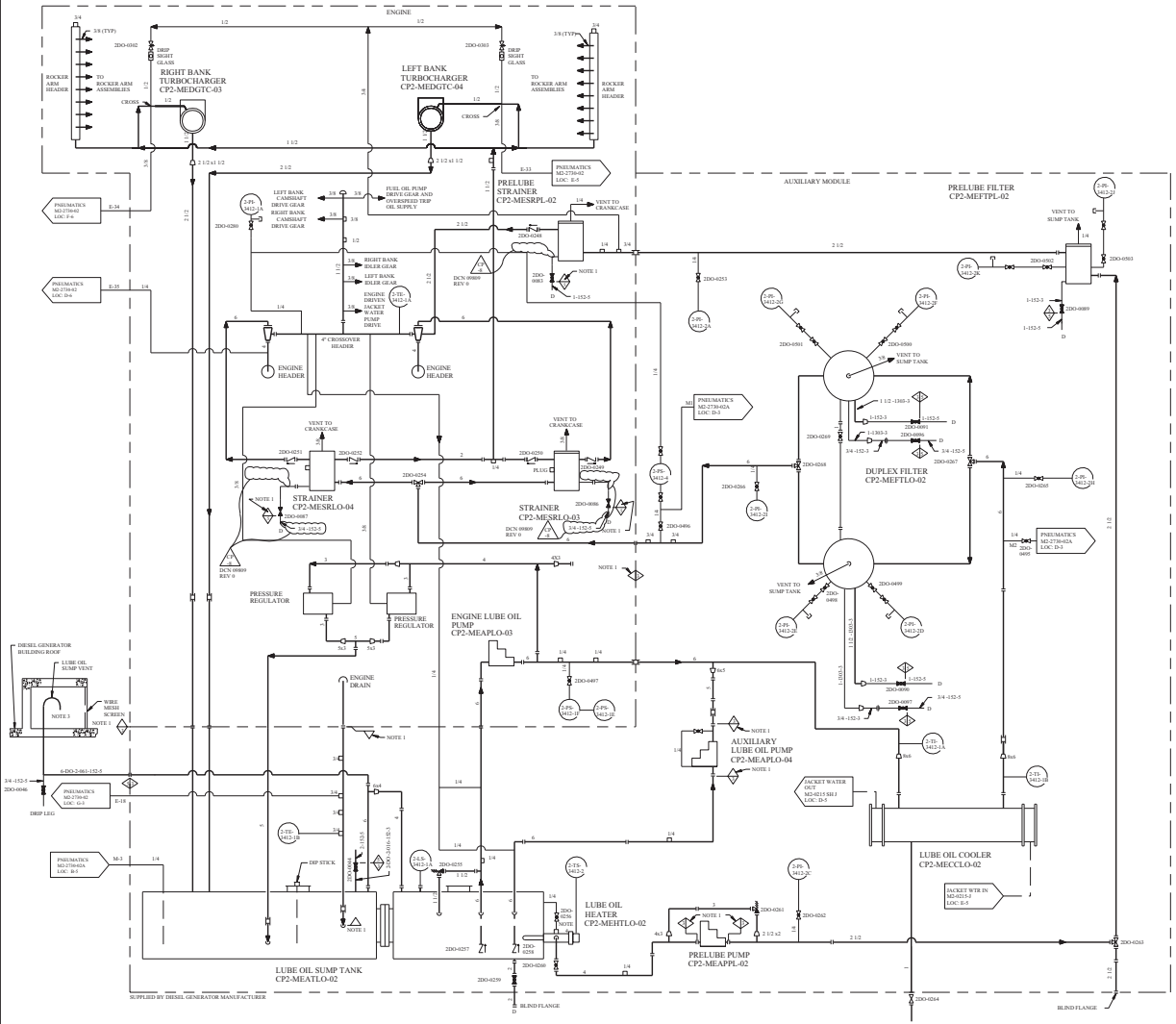
FSAR FIGURE 9.5-56

THIS DRAWING IS AVAILABLE ELECTRONICALLY

DELETED PER CR97-1197

ma0009cd.dgn


ENGINE
ROCKER ARM HEADER
TO ROCKER ARM ASSEMBLIES
RIGHT BANK TURBOCHARGER CP2-MEDGTC-01
LEFT BANK TURBOCHARGER CP2-MEDGTC-02
DRIP SIGHT GLASS
CROSS
2DO-0304
2DO-0301
PNEUMATICS M2-2730-01 LOC: E-6
PNEUMATICS M2-2730-01 LOC: E-5
PNEUMATICS M2-2730-01 LOC: E-4
PNEUMATICS M2-2730-01 LOC: E-3
PNEUMATICS M2-2730-01 LOC: E-2
RIGHT BANK CAMSHAFT DRIVE GEAR
LEFT BANK CAMSHAFT DRIVE GEAR
FUEL OIL PUMP DRIVE GEAR AND OVERSPEED TRIP OIL SUPPLY
RIGHT BANK IDLER GEAR
LEFT BANK IDLER GEAR
ENGINE DRIVEN JACKET WATER PUMP DRIVE
4" CROSSOVER HEADER
ENGINE HEADER
ENGINE HEADER
2DO-0180
PRELUBE STRAINER CP2-MESRPL-01
VENT TO CRANKCASE
2DO-0488
2DO-0489
NOTE 1
DCN 00869 REV 0
AUXILIARY MODULE
PRELUBE FILTER CP2-MEFTPL-01
VENT TO SUMP TANK
2DO-0490
2DO-0491
PNEUMATICS M2-2730-01A LOC: D-3
DUPLEX FILTER CP2-MEFTLO-01
2DO-0165
PNEUMATICS M2-2730-01A LOC: D-5
2DO-0151
2DO-0152
2DO-0150
2DO-0149
2DO-0156
2DO-0486
2DO-0153
2DO-0166
2DO-0167
2DO-0168
2DO-0169
2DO-0494
2DO-0495
2DO-0496
2DO-0497
2DO-0498
2DO-0499
2DO-0500
2DO-0501
2DO-0502
2DO-0503
STRAINER CP2-MESRLO-02
STRAINER CP2-MESRLO-01
PRESSURE REGULATOR
PRESSURE REGULATOR
ENGINE LUBE OIL PUMP CP2-MEAPLO-01
DIESEL GENERATOR BUILDING ROOF
LUBE OIL SUMP VENT
WIRE MESH SCREEN
ENGINE DRAIN
2DO-0487
AUXILIARY LUBE OIL PUMP CP2-MEAPLO-02
JACKET WATER OUT M2-0215-H LOC: D-5
LUBE OIL COOLER CP2-MECCLO-01
JACKET WTR IN M2-0215-H LOC: E-5
DIPSTICK
LUBE OIL SUMP TANK CP2-MEATLO-01
LUBE OIL HEATER CP2-MEHTLO-01
2DO-0155
2DO-0156
2DO-0157
2DO-0158
2DO-0159
2DO-0160
2DO-0161
2DO-0162
PRELUBE PUMP CP2-MEAPPL-01
2DO-0163
2DO-0164
BLIND FLANGE
BLIND FLANGE WITH 3/4 " PLUG
SUPPLIED BY DIESEL GENERATOR MANUFACTURER
EQUIPMENT SCHEDULE
MANUFACTURERS I D
TAG NO
NOTES
1. NUCLEAR SAFETY RELATED PER IEEE-387. NOT IN SCOPE OF ANSI N18.2 EXEMPT FROM ASME CODE STAMP.
2. SEE DRAWING M1-0215-B AND -C FOR UNIT 1 DIESELS (CP1-MEDGEE-01 AND CP1-MEDGEE-02 )
3. LUBE OIL SUMP VENT IS SEISMICALLY ANALYZED AND TORNADO MISSILE PROTECTED.
4. CLOSE ONLY WHEN PUMPING SUMP OUT WITH PRELUBE PUMP.
5. SEE FORM CAT 123 FROM CP-0034-001A FOR VENDOR SUPPLIED MECHANICAL SYMBOLS.
LEGEND
DRESSER COUPLING
HALF COUPLING WITH PIPE PLUG
REV
DRN
CHK
APP'D
REMARKS
THIS DRAWING REVISED TO INCORPORATE DESIGN CHANGE DCN 9000 REV 0.
FSAR FIGURE 9.5-56
THIS DRAWING CORRESPONDS TO DRAWING M-1.3
DRAWING 2222-M2-0215 REV CP-3
HAS BEEN SPLIT INTO THE FOLLOWING SHEETS:
M2-0215 M2-0215-E
M2-0215-A M2-0215-F
M2-0215-B M2-0215-G
M2-0215-C M2-0215-H
M2-0215-D M2-0215-J
CLASS I
(NUCLEAR SAFETY-RELATED)
SAFETY CLASS 1 QUALITY CATEGORY I
SAFETY CLASS 2 CLASS 1E
SAFETY CLASS 3 ASSOCIATED CIRCUITS
TXU ELECTRIC
CPSES
GLEN ROSE, TEXAS
FLOW DIAGRAM
LUBE OIL PIPING AND INSTRUMENT DIAGRAM
CP2-MEDGEE-01
DRG. NO. M2-0215
SIZE B
REV. CP-8
FINAL PRINT




| REV. | DWN | CHKD | APVD | REMARKS |
|---|---|---|---|---|
| CP-8 | | | | THIS DRAWING REVISED TO INCORPORATE DESIGN CHANGE DCN 98809 REV 0. |

NOTES
1. NUCLEAR SAFETY RELATED PER IEEE-387 NOT IN SCOPE OF ANSI/N18.2 EXEMPT FROM ASME CODE STAMP.
2. SEE DRAWING M1-0215-B AND -C FOR UNIT 1 DIESELS (CP1-MEDGEE-01 AND CP1-MEDGEE-02 )
3. LUBE OIL SUMP VENT IS SEISMICALLY ANALYZED AND TORNADO MISSILE PROTECTED.
4. CLOSE ONLY WHEN PUMPING SUMP OUT WITH PRELUBE PUMP.
5. SEE FORM CAT 123 FROM CP-0034-001A FOR VENDOR SUPPLIED MECHANICAL SYMBOLS.

LEGEND
- DRESSER COUPLING
- HALF COUPLING WITH PIPE PLUG

EQUIPMENT SCHEDULE

| MANUFACTURERS I D | TAG NO |
|---|---|
| | |

FSAR FIGURE 9.5-56

THIS DRAWING IS AFFECTED BY CONCAT XY

DRAWING 2323-M2-0215 REV CP-3 HAS BEEN SPLIT INTO THE FOLLOWING SHEETS:

| | |
|---|---|
| M2-0215 | M2-0215-E |
| M2-0215-A | M2-0215-F |
| M2-0215-B | M2-0215-G |
| M2-0215-C | M2-0215-H |
| M2-0215-D | M2-0215-J |

CLASS I
(NUCLEAR SAFETY-RELATED)
SAFETY CLASS 1 SECONDARY
SAFETY CLASS 2 TR
SAFETY CLASS 3 SEPARATED CIRCUITS

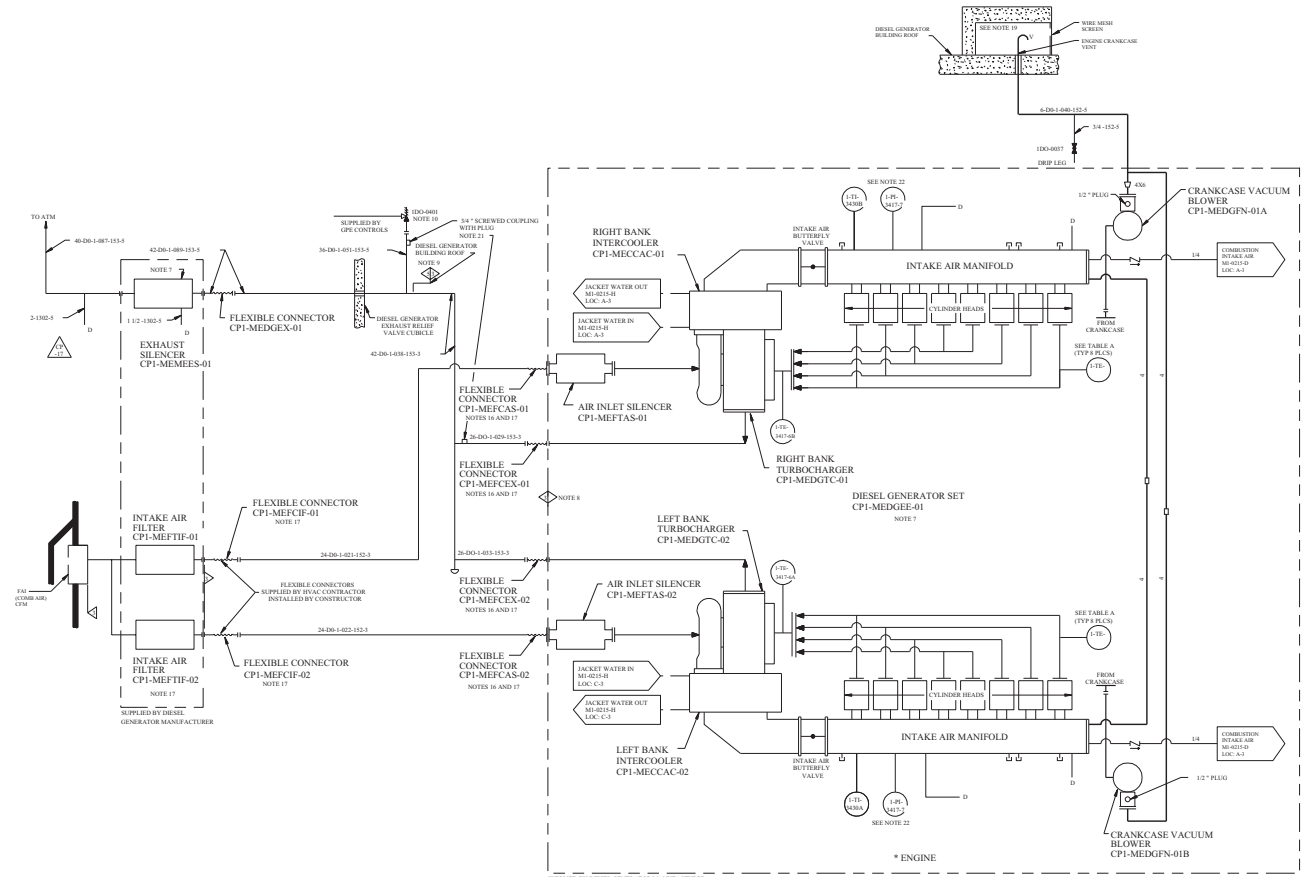
TXU ELECTRIC
CPSES
GLEN ROSE, TEXAS

FLOW DIAGRAM
LUBE OIL PIPING AND INSTRUMENT DIAGRAM
CP2-MEDGEE-02

| DWG. NO. | SH. NO. | REV. |
|---|---|---|
| M2-0215 | C | CP-8 |

FINAL PRINT

ma000001.dgn




| REV | DWN/CHK/APV'D | REMARKS |
|---|---|---|
| CP-18 | RLW 8/31/2000 | THIS DRAWING REVISED TO INCORPORATE FSA-2000-000001-01-00 AND ML-0001-00-000001-01-00. |

NOTES:

1. ALL DRAINS ARE 3/4 " UNLESS OTHERWISE NOTED.
2. DELETED
3. ITEMS MARKED BY * ARE SUPPLIED BY TRANSAMERICA DELAVAL.
4. INSTRUMENTATION CONTROLS PROVIDED BY DIESEL GENERATOR MANUFACTURER ARE NOT SHOWN ON THIS DRAWING.
5. DELETED
6. DELETED
7. SEISMIC CATEGORY 1.
8. NUCLEAR SAFETY RELATED PER IEEE-387, NOT IN SCOPE OF ANSI N18.2.
9. EXHAUST PIPING AND SILENCER MOUNTED ON ROOF ARE SEISMICALLY ANALYZED.
10. RELIEF VALVE IS NON-SEISMIC, NON-NUCLEAR SAFETY RELATED, BUT VALVE AND UPSTREAM PIPING SHALL BE TORNADO MISSILE PROTECTED.
11. DELETED
12. DELETED
13. DELETED
14. DELETED
15. DELETED
16. SUPPLIED BY DIESEL GENERATOR MANUFACTURER.
17. EQUIPMENT IS SAFETY CLASS 3, NON-ASME.
18. DELETED
19. ENGINE CRANKCASE AND LUBE OIL SUMP VENTS ARE SEISMICALLY ANALYZED AND TORNADO MISSILE PROTECTED.
20. DELETED
21. THREADED TAPS ADDED FOR TESTING OF 1DO-0401 .
22. 1-PI-3417-7 HAS SEPARATE TAPS FOR BOTH THE RIGHT BANK AND THE LEFT BANK (REF DWG M1-2730 SH 01A).

LEGEND:

- DRESSER COUPLING
- 1/2 COUPLING WITH PIPE PLUG

| TABLE A | |
|---|---|
| CYLINDER NO | INSTR TAG NO |
| 1L | 1-TE-3417-5A |
| 2L | 1-TE-3417-5B |
| 3L | 1-TE-3417-5C |
| 4L | 1-TE-3417-5D |
| 5L | 1-TE-3417-5E |
| 6L | 1-TE-3417-5F |
| 7L | 1-TE-3417-5G |
| 8L | 1-TE-3417-5H |
| 1R | 1-TE-3417-5I |
| 2R | 1-TE-3417-5J |
| 3R | 1-TE-3417-5K |
| 4R | 1-TE-3417-5L |
| 5R | 1-TE-3417-5M |
| 6R | 1-TE-3417-5N |
| 7R | 1-TE-3417-5P |
| 8R | 1-TE-3417-5Q |

| EQUIPMENT SCHEDULE | |
|---|---|
| MANUFACTURERS I D | TAG NO |
| | |

FSAR FIGURE 9.5.5-7

THIS DRAWING CREATED ELECTRONICALLY

| DRAWING M1-0215 REV CP-11 HAS BEEN SPLIT INTO THE FOLLOWING SHEETS: |
|---|
| M1-0215 |
| M1-0215-B |
| M1-0215-D |
| M1-0215-F |
| M1-0215-H |

| DRAWING 2323-M1-0215 REV CP-5 HAS BEEN SPLIT INTO THE FOLLOWING SHEETS: |
|---|
| M1-0215 |
| M1-0215-A |

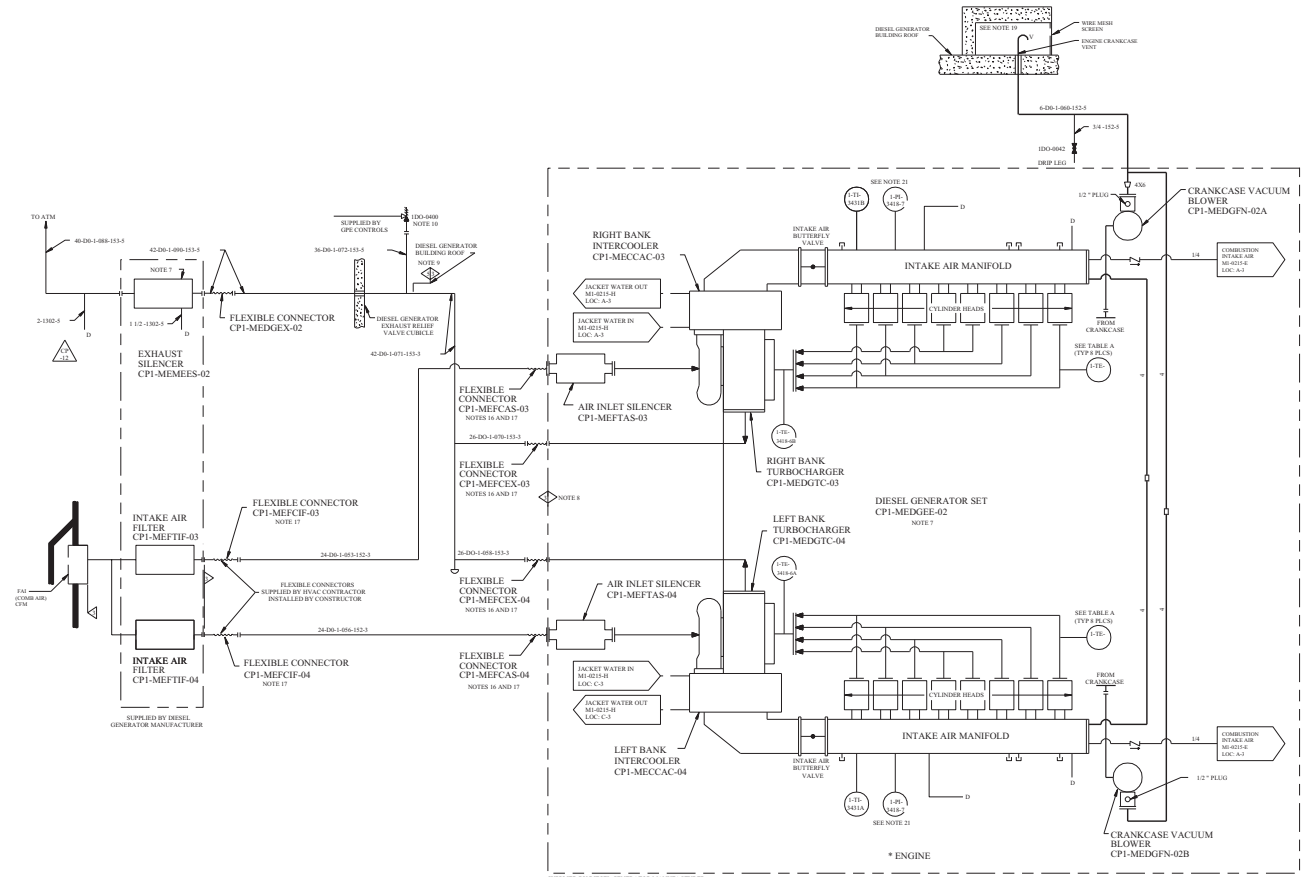
CLASS 1
(NUCLEAR SAFETY-RELATED)
SAFETY CLASS 1 SEISMIC CATEGORY 1
SAFETY CLASS 1 CLASS 1E
SAFETY CLASS 3 ASSOCIATED CIRCUITS

TXU ELECTRIC
CPSES
GLEN ROSE, TEXAS

FLOW DIAGRAM
AIR INTAKE AND EXHAUST SYSTEM
CP1-MEDGEE-01

| DWG NO | SH NO | REV |
|---|---|---|
| M1-0215 | - | CP-18 |

FINAL PRINT




| TABLE A | |
|---|---|
| CYLINDER NO | INSTR TAG NO |
| 1L | 1-TE-3418-5A |
| 2L | 1-TE-3418-5B |
| 3L | 1-TE-3418-5C |
| 4L | 1-TE-3418-5D |
| 5L | 1-TE-3418-5E |
| 6L | 1-TE-3418-5F |
| 7L | 1-TE-3418-5G |
| 8L | 1-TE-3418-5H |
| 1R | 1-TE-3418-5I |
| 2R | 1-TE-3418-5J |
| 3R | 1-TE-3418-5K |
| 4R | 1-TE-3418-5L |
| 5R | 1-TE-3418-5M |
| 6R | 1-TE-3418-5N |
| 7R | 1-TE-3418-5P |
| 8R | 1-TE-3418-5Q |

| REV | DWN | CHK | APVD | REMARKS |
|---|---|---|---|---|
| CP-13 | RAS 2000 | | | THIS DRAWING REVISED TO INCORPORATE FDA-2000-00-000001-01-00 AND SIL-0002-00-000301-01-00. |

NOTES:

1. ALL DRAINS ARE 3/4 " UNLESS OTHERWISE NOTED.
2. DELETED
3. ITEMS MARKED BY * ARE SUPPLIED BY TRANSAMERICA DELAVAL.
4. INSTRUMENTATION CONTROLS PROVIDED BY DIESEL GENERATOR MANUFACTURER ARE NOT SHOWN ON THIS DRAWING.
5. DELETED
6. DELETED
7. SEISMIC CATEGORY 1.
8. NUCLEAR SAFETY RELATED PER IEEE-387, NOT IN SCOPE OF ANSI N18.2.
9. EXHAUST PIPING AND SILENCER MOUNTED ON ROOF ARE SEISMICALLY ANALYZED.
10. RELIEF VALVE IS NON-SEISMIC, NON-NUCLEAR SAFETY RELATED, BUT VALVE AND UPSTREAM PIPING SHALL BE TORNADO MISSILE PROTECTED.
11. DELETED
12. DELETED
13. DELETED
14. DELETED
15. DELETED
16. SUPPLIED BY DIESEL GENERATOR MANUFACTURER.
17. EQUIPMENT IS SAFETY CLASS 3, NON-ASME.
18. DELETED
19. ENGINE CRANKCASE AND LUBE OIL SUMP VENTS ARE SEISMICALLY ANALYZED AND TORNADO MISSILE PROTECTED.
20. DELETED
21. 1-PI-3418-7 HAS SEPARATE TAPS FOR BOTH THE RIGHT BANK AND THE LEFT BANK. (REF M1-2730 SH 02A).

LEGEND

- DRESSER COUPLING
- 1/2 COUPLING WITH PIPE PLUG

| EQUIPMENT SCHEDULE | |
|---|---|
| MANUFACTURERS I.D. | TAG NO. |
| | |

FSAR FIGURE 9.5-57

THIS DRAWING CREATED ELECTRONICALLY

| DRAWING M1-0215-A REV CP-6 HAS BEEN SPLIT INTO THE FOLLOWING SHEETS: |
|---|
| M1-0215-A |
| M1-0215-C |
| M1-0215-E |
| M1-0215-G |
| M1-0215-I |

| DRAWING 2123-M1-0215 REV CP-5 HAS BEEN SPLIT INTO THE FOLLOWING SHEETS: |
|---|
| M1-0215 |
| M1-0215-A |

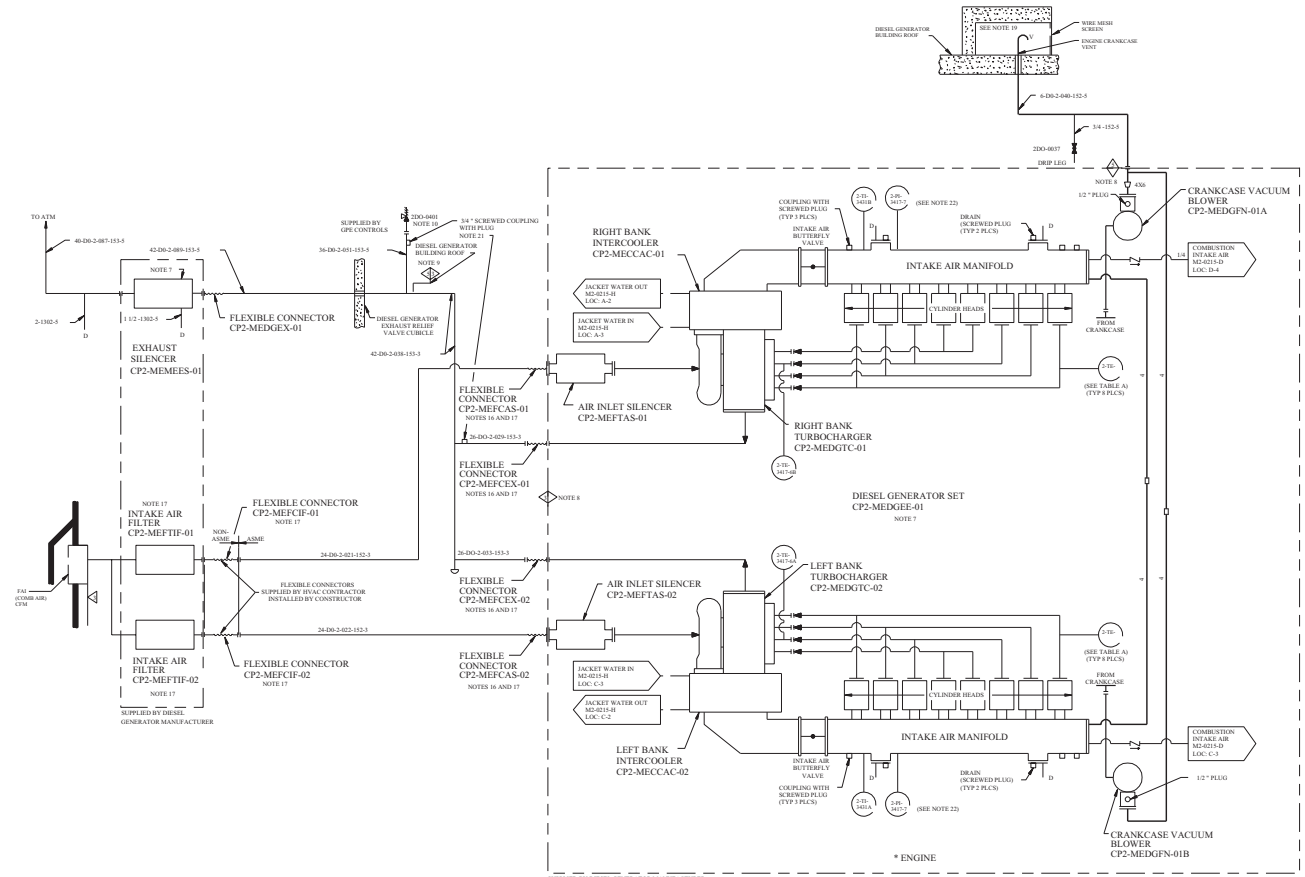
CLASS I
(NUCLEAR SAFETY-RELATED)
SAFETY CLASS 1 SEISMIC CATEGORY 1
SAFETY CLASS 2 CLASS 1E
SAFETY CLASS 3 ASSOCIATED CIRCUITS

TXU ELECTRIC
CPSES
GLEN ROSE, TEXAS

FLOW DIAGRAM
AIR INTAKE AND EXHAUST SYSTEM
CP1-MEDGEE-02

| DWG NO. | SH. NO. | REV. |
|---|---|---|
| M1-0215 | A | CP-13 |

FINAL PRINT




| TABLE A | |
|---|---|
| CYLINDER NO. | INST TAG NO. |
| 1L | 2-TE-3417-5A |
| 2L | 2-TE-3417-5B |
| 3L | 2-TE-3417-5C |
| 4L | 2-TE-3417-5D |
| 5L | 2-TE-3417-5E |
| 6L | 2-TE-3417-5F |
| 7L | 2-TE-3417-5G |
| 8L | 2-TE-3417-5H |
| 1R | 2-TE-3417-5I |
| 2R | 2-TE-3417-5J |
| 3R | 2-TE-3417-5K |
| 4R | 2-TE-3417-5L |
| 5R | 2-TE-3417-5M |
| 6R | 2-TE-3417-5N |
| 7R | 2-TE-3417-5P |
| 8R | 2-TE-3417-5Q |

| REV. | DESCRIPTION | ECN NO. | BY | APVD | REMARKS |
|---|---|---|---|---|---|
| CP-9 | FSAR Update | 23023-AJR | | | THIS DRAWING REVISED TO INCORPORATE FDA-2000-000001-01-00 AND DE-0003-00-000001-01-00. |

NOTES

1. ALL DRAINS ARE 3/4 " UNLESS OTHERWISE NOTED.
2. DELETED
3. ITEMS MARKED BY * ARE SUPPLIED BY TRANSAMERICA DELAVAL.
4. INSTRUMENTATION CONTROLS PROVIDED BY DIESEL GENERATOR MANUFACTURER ARE NOT SHOWN ON THIS DRAWING.
5. DELETED
6. DELETED
7. SEISMIC CATEGORY . I
8. NUCLEAR SAFETY RELATED PER IEEE-387, NOT IN SCOPE OF ANSI N18.2.
9. EXHAUST PIPING AND SILENCER MOUNTED ON ROOF ARE SEISMICALLY ANALYZED.
10. RELIEF VALVE IS NOT SEISMIC, NON-NUCLEAR SAFETY RELATED, BUT VALVE AND UPSTREAM PIPING SHALL BE TORNADO MISSILE PROTECTED.
11. DELETED
12. DELETED
13. DELETED
14. DELETED
15. DELETED
16. SUPPLIED BY DIESEL GENERATOR MANUFACTURER.
17. EQUIPMENT IS SAFETY CLASS 3, NON-ASME.
18. DELETED
19. ENGINE CRANKCASE VENT IS SEISMICALLY ANALYZED AND TORNADO MISSILE PROTECTED.
20. DELETED
21. THREADED TAPS ADDED FOR TESTING OF 2DO-0401 .
22. 2-PI-3417 HAS SEPARATE TAPS FOR BOTH THE RIGHT BANK AND THE LEFT BANK(REF DWG M2-2730 SH 01A).

LEGEND

- DRESSER COUPLING
- HALF COUPLING WITH PIPE PLUG

| EQUIPMENT SCHEDULE | |
|---|---|
| MANUFACTURERS I D | TAG NO |

FSAR FIGURE 9.5.5

THIS DRAWING CREATED ELECTRONICALLY

| DRAWING 2323-M2-0215 REV CP-3 HAS BEEN SPLIT INTO THE FOLLOWING SHEETS: | |
|---|---|
| M2-0215 | M2-0215-E |
| M2-0215-A | M2-0215-F |
| M2-0215-B | M2-0215-G |
| M2-0215-C | M2-0215-H |
| M2-0215-D | M2-0215-J |

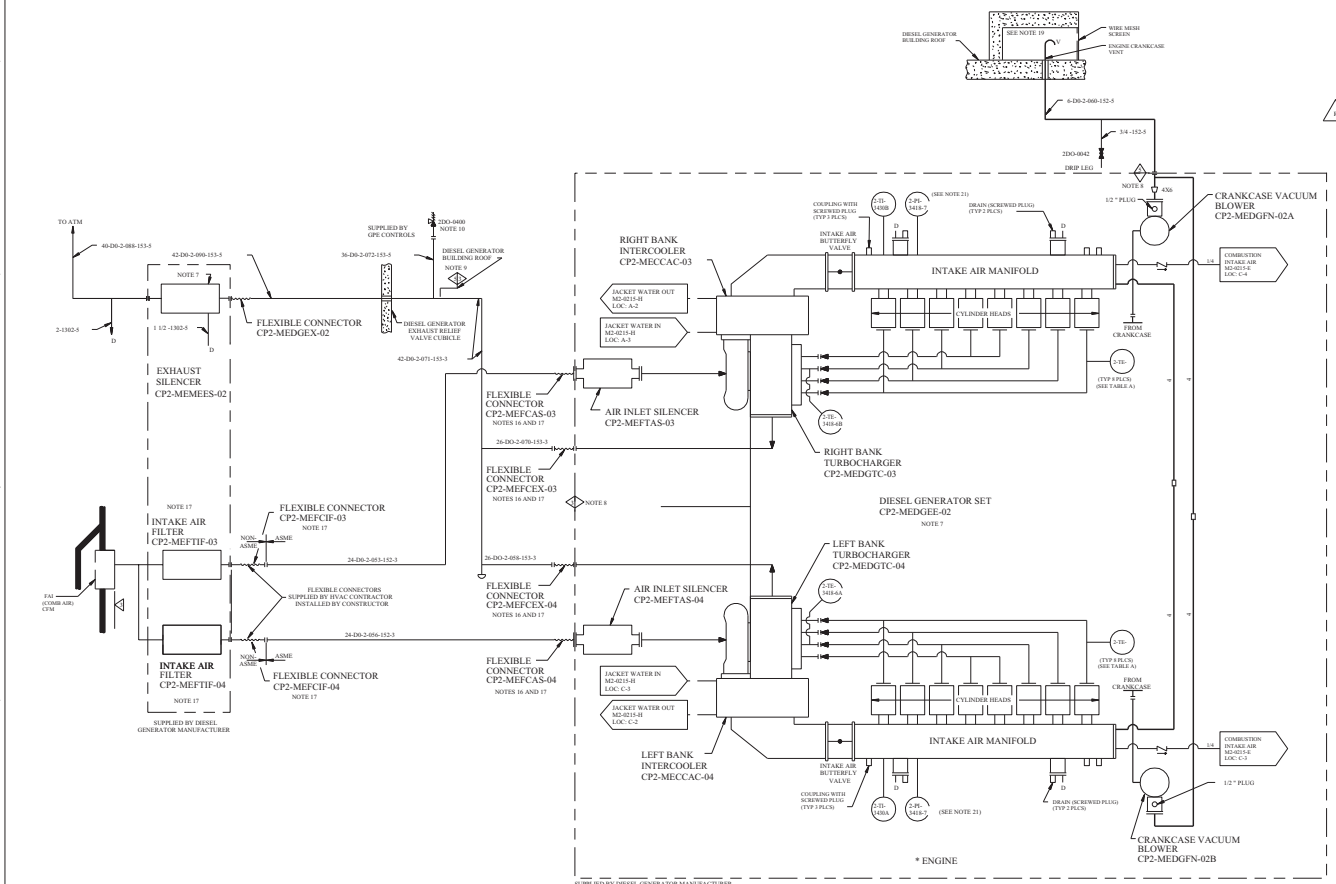
CLASS I
(NUCLEAR SAFETY-RELATED)
SAFETY CLASS 1 — SEISMIC CATEGORY I
SAFETY CLASS 2 — CLASS 1E
SAFETY CLASS 3 — ASSOCIATED CIRCUITS

TU ELECTRIC
CPSES
GLEN ROSE, TEXAS

FLOW DIAGRAM
AIR INTAKE AND EXHAUST SYSTEM
CP2-MEDGEE-01

| DWG. NO. | SH. NO. | REV. |
|---|---|---|
| M2-0215 | - | CP-9 |

FINAL PRINT




| TABLE A | |
|---|---|
| CYLINDER NO. | INST TAG NO. |
| 1L | 2-TE-3418-5A |
| 2L | 2-TE-3418-5B |
| 3L | 2-TE-3418-5C |
| 4L | 2-TE-3418-5D |
| 5L | 2-TE-3418-5E |
| 6L | 2-TE-3418-5F |
| 7L | 2-TE-3418-5G |
| 8L | 2-TE-3418-5H |
| 1R | 2-TE-3418-5I |
| 2R | 2-TE-3418-5J |
| 3R | 2-TE-3418-5K |
| 4R | 2-TE-3418-5L |
| 5R | 2-TE-3418-5M |
| 6R | 2-TE-3418-5N |
| 7R | 2-TE-3418-5P |
| 8R | 2-TE-3418-5Q |

| REV. | DESCRIPTION | ORIG. DWG. NO. | APVD. | REMARKS |
|---|---|---|---|---|
| CP-6 | AS-BUILT | 2123-M2-0215 | | THIS DRAWING REVISED TO INCORPORATE FDA-2000-000001-01-00 AND DL-0000-00-000001-01-00. |

NOTES

1. ALL DRAINS ARE 3/4 " UNLESS OTHERWISE NOTED.
2. DELETED
3. ITEMS MARKED BY * ARE SUPPLIED BY TRANSAMERICA DELAVAL.
4. INSTRUMENTATION CONTROLS PROVIDED BY DIESEL GENERATOR MANUFACTURER ARE NOT SHOWN ON THIS DRAWING.
5. DELETED
6. DELETED
7. SEISMIC CATEGORY . I
8. NUCLEAR SAFETY RELATED PER IEEE-387, NOT IN SCOPE OF ANSI N18.2.
9. EXHAUST PIPING AND SILENCER MOUNTED ON ROOF ARE SEISMICALLY ANALYZED.
10. RELIEF VALVE IS NON-SEISMIC, NON-NUCLEAR SAFETY RELATED, BUT VALVE AND UPSTREAM PIPING SHALL BE TORNADO MISSILE PROTECTED.
11. DELETED
12. DELETED
13. DELETED
14. DELETED
15. DELETED
16. SUPPLIED BY DIESEL GENERATOR MANUFACTURER.
17. EQUIPMENT IS SAFETY CLASS 3, NON-ASME.
18. DELETED
19. ENGINE CRANKCASE VENT IS SEISMICALLY ANALYZED AND TORNADO MISSILE PROTECTED.
20. DELETED
21. 2-PS-3418 HAS SEPARATE TAPS FOR BOTH THE RIGHT BANK AND THE LEFT BANK (REF M2-2730 SH 02A).

LEGEND

- DRESSER COUPLING
- HALF COUPLING WITH PIPE PLUG

| EQUIPMENT SCHEDULE | |
|---|---|
| MANUFACTURERS I.D. | TAG NO. |
| | |

FSAR FIGURE 9.5.5-7

THIS DRAWING CREATED ELECTRONICALLY

DRAWING 2123-M2-0215 REV CP-3
HAS BEEN SPLIT INTO THE FOLLOWING SHEETS:

| | |
|---|---|
| M2-0215 | M2-0215-E |
| M2-0215-A | M2-0215-F |
| M2-0215-B | M2-0215-G |
| M2-0215-C | M2-0215-H |
| M2-0215-D | M2-0215-J |

CLASS I
(NUCLEAR SAFETY-RELATED)
SAFETY CLASS 1 — SEISMIC CATEGORY I
SAFETY CLASS 2 — CLASS 1E
SAFETY CLASS 3 — ASSOCIATED CIRCUITS

TU ELECTRIC
CPSES
GLEN ROSE, TEXAS

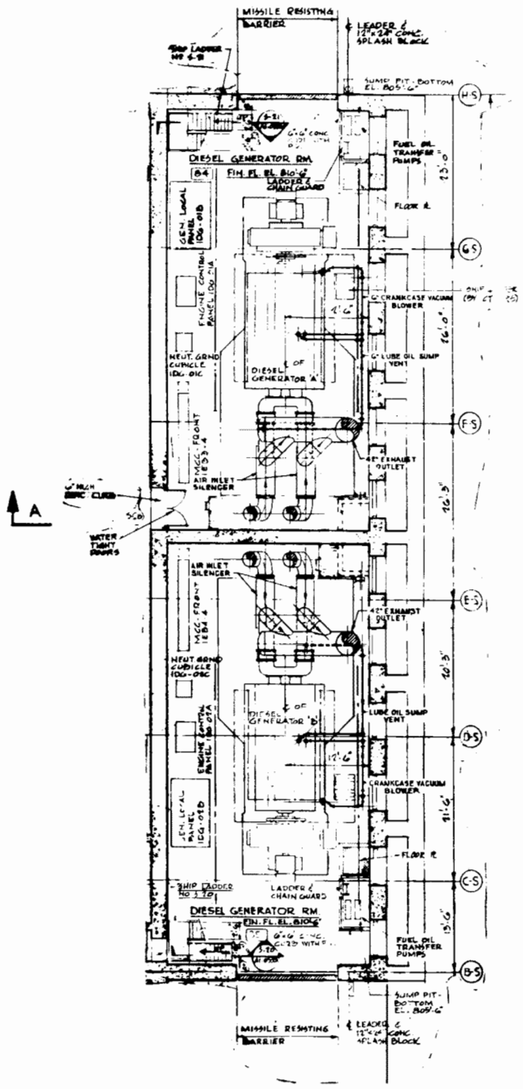
FLOW DIAGRAM
AIR INTAKE AND EXHAUST SYSTEM
CP2-MEDGEE-02

DWG. NO. M2-0215 | SH. NO. A | REV. CP-6

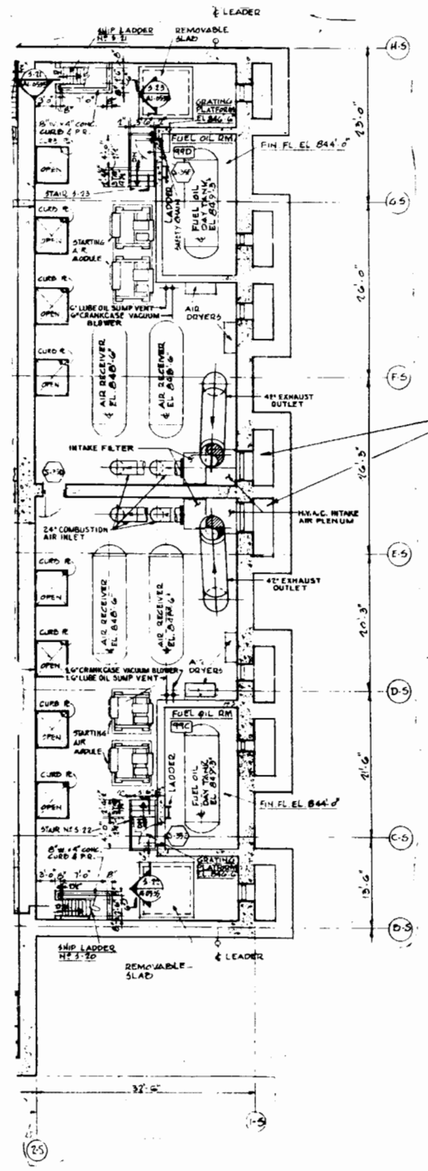
FINAL PRINT

mc273900.dgn A M2-0215-A

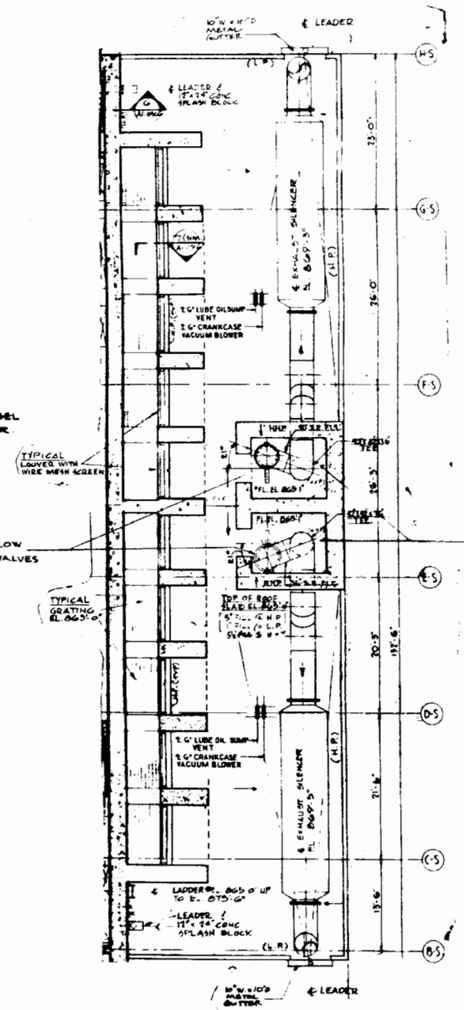
DIESEL GENERATOR BUILDING
PLAN AT EL 810'-6"




DIESEL GENERATOR BUILDING
PLAN AT EL 844'-0"




DIESEL GENERATOR BUILDING
PLAN AT EL. 865'-0"

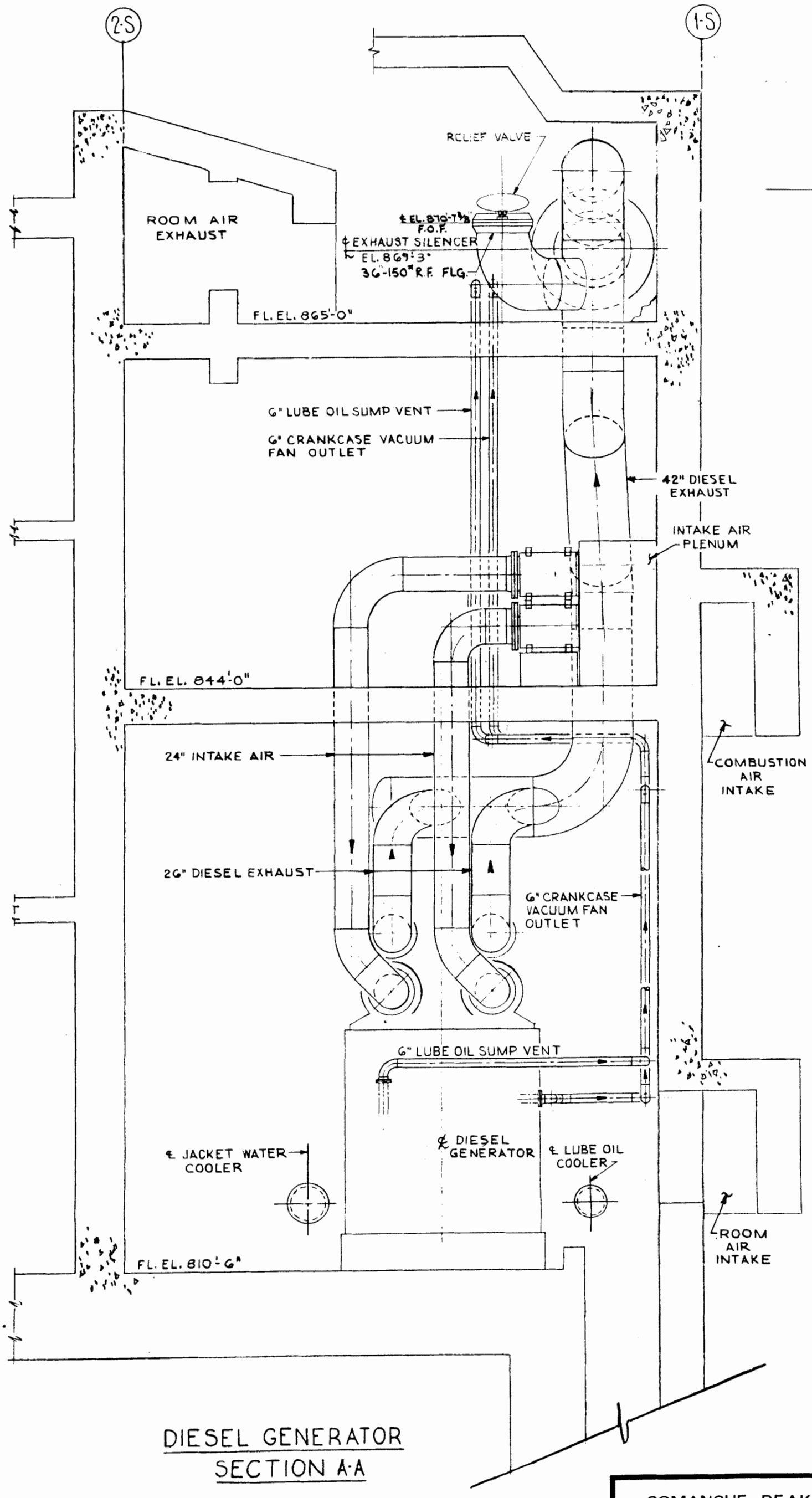



AMENDMENT 11
JULY 31, 1980

COMANCHE PEAK S.E.S.
FINAL SAFETY ANALYSIS REPORT
UNITS 1 and 2

DIESEL GENERATOR
BUILDING PLAN

FIGURE 9.5-58




DIESEL GENERATOR
SECTION A-A

COMANCHE PEAK S.E.S.
FINAL SAFETY ANALYSIS REPORT
UNITS 1 and 2

DIESEL GENERATOR
BUILDING ELEVATION

FIGURE 9.5-59

FIGURE 9.5-60

96

This Figure Not Used

| REV | DWN | CHK | APVD | REMARKS |
|---|---|---|---|---|
| CP-34 | MM 07-22-2014 | GAW 07-22-2014 | | THIS DRAWING REVISED TO INCORPORATE DESIGN CHANGE FDA 2013-000008-29-00 PER SK-0001-13-000008-29-00 |

NOTES:

1. FOR FIRE PROTECTION SYMBOLS AND NOTES SEE DRAWING M1-0225. FOR MECHANICAL SYMBOLS AND NOTES SEE DRAWING M1-0200.
2. UNLESS OTHERWISE NOTED, DRAINS COLLECTED BY LOCAL DRAIN SYSTEM UNDER ADMINISTRATIVE CONTROL.
3. THE FIRE SUPPRESSION SYSTEM FOR STARTUP TRANSFORMER XST2 WILL NOT BE IN SERVICE WHEN SPARE TRANSFORMER XST1/2 IS USED TO REPLACE XST2.
4. THE FIRE SUPPRESSION SYSTEM FOR TRANSFORMERS XST1 AND XST1A WILL ONLY BE IN SERVICE WHEN ITS ASSOCIATED TRANSFORMER IS ENERGIZED.
5. SITE FACILITIES, NON QA APPLICABLE.
6. OPERATIONS, FP QA APPLICABLE.

REFERENCE DRAWINGS:

1. CP-0712-003
2. CP-0708
3. DWG#-1-51.326-920-5A2
4. TSS-FP-86004
5. DWG#-1-51.3530728.A2
6. 1869-B-3
7. DWG#-2-51.326-920-5A2
8. SP-1-CP-0749
9. DWG#-1-51.334681-1A8
10. DWG#-2-51.304201-4A2
11. DWG#-1-80.353034-5A3
12. DWG#-2-80.353034-5A3
13. DWG#-2-1-80.353034-5A3
14. DWG#-3-80.353034-5A3
15. DWG#-3.1-80.353034-5A3
16. DWG#-1-51.304201-4A2
17. DWG#-3-51.304201-4A2
18. DWG#-M1-1012
19. DWG#-E-2J14-F-0289
    DWG#-E-2J14-F-0292
20. DWG#-E-2J17-F-0308

DETAIL 1

DETAIL 2

CLASS II

LUMINANT
CPNPP
GLEN ROSE, TEXAS

FLOW DIAGRAM
FIRE PROTECTION SYSTEM
MAIN LOOP

DWG. NO. M1-0225 | SH. NO. 06 | REV. CP-34

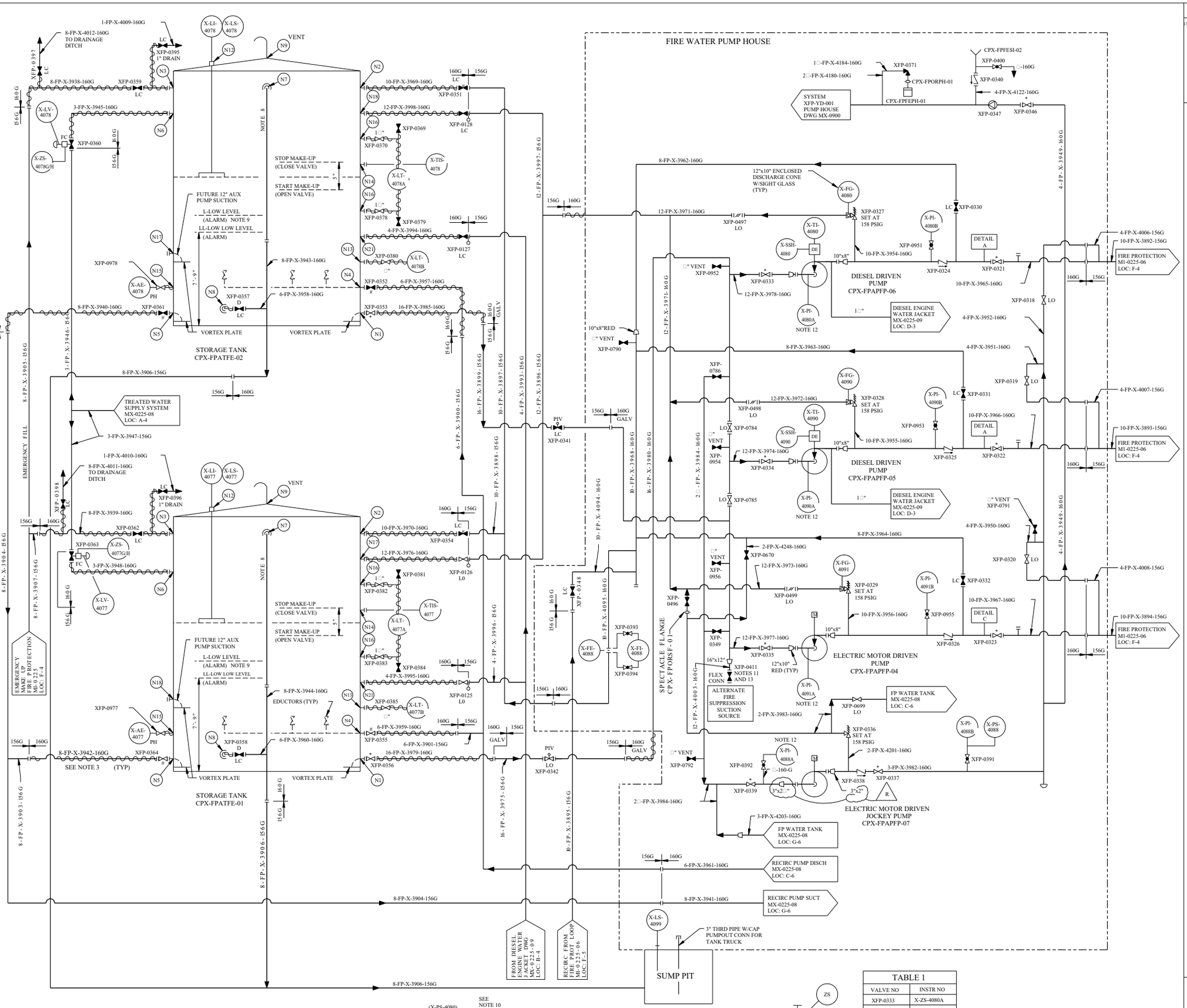
FSAR FIGURE 9.5-61

THIS DRAWING CREATED ELECTRONICALLY

$$$$$$$ DATE $$$$$$$

me00084h.dgn

< FINAL PRINT >




| TABLE 1 | |
|---|---|
| VALVE NO | INSTR NO |
| XFP-0333 | X-ZS-4080A |
| XFP-0321 | X-ZS-4080B |
| XFP-0334 | X-ZS-4090A |
| XFP-0322 | X-ZS-4090B |
| XFP-0335 | X-ZS-4091A |
| XFP-0323 | X-ZS-4091B |
| XFP-0339 | X-ZS-4088A |
| XFP-0337 | X-ZS-4088B |
| XFP-0356 | X-ZS-4077 |
| XFP-0353 | X-ZS-4078 |
| XFP-0346 | X-ZS-4088 |

| TABLE 2 | |
|---|---|
| VALVE | INSTR |
| | |
| | |
| XFP-0364 | X-ZS-4077C/D |
| XFP-0361 | X-ZS-4078C/D |
| XFP-0355 | X-ZS-4077E/F |
| XFP-0352 | X-ZS-4078E/F |

| REV | DWN | CHKD | APVD | REMARKS |
|---|---|---|---|---|
| CP-18 | DLK 11-01-2014 | GAW 11-01-2014 | | THIS DRAWING REVISED TO INCORPORATE DESIGN CHANGE FDA 2014-000249-01-00 PER SK-0002-14-000249-01-00. |

NOTES:

1. FOR INSTRUMENT LEGEND, SYMBOLS AND NOTES REFER TO DWG M1-2200-01. FOR MECHANICAL SYMBOLS AND NOTES REFER TO DWG M1-0200.
2. ALL VALVES MARKED WITH A * AND # WILL HAVE INDICATION SHOWN ON DETAIL B AND D RESPECTIVELY.
3. ALL ABOVE GROUND EXPOSED PIPING IS TO BE HEAT TRACED.
4. DELETED
5. LCP-1 COMMON LOCAL PANEL (CPX-FPCPLV-01) IN CHEMICAL FEED EQUIPMENT ROOM.
   LCP-4 LOCAL CONTROL PANEL FOR MOTOR DRIVEN PUMP 04 (CPX-FPAPFP-04)
   LCP-5 LOCAL CONTROL PANEL FOR DIESEL PUMP 05 (CPX-FPAPFP-05)
   LCP-6 LOCAL CONTROL PANEL FOR DIESEL PUMP 06 (CPX-FPAPFP-06)
   CR-UNIT 1 AND 2 MAIN CONTROL ROOM (COMMON AREA)
6. ALL BUILDING FLOOR AND EQUIPMENT DRAINS WILL BE ROUTED TO SUMP PIT.
7. SEE 15454.15-ESK-4FPS03 SH 1 TO 4 AND 15454.15-ESK-10FPS01 FOR ALARMS ON LOCAL DIESEL DRIVEN PUMP CONTROLLER PANELS WHICH ACTUATE COMMON TROUBLE ALARMS ON THE MAIN CONTROL PANEL, FIRE DETECTION PANEL CPX-EIPRLV-02 AND LOCAL PANEL CPX-FPCPLV-01.
8. TANK OVERFLOW PIPING BY TANK VENDOR (CBI).
9. LOW LEVEL ALARM SET AT 519,586 GALLONS IN THE TANK ABOVE CENTERLINE OF PUMP SUCTION.
10. DIESEL DRIVEN PUMPS CPX-FPAPFP-05 AND CPX-FPAPFP-06 START WHEN THE DISCHARGE HEADER PRESSURE DROPS BELOW 140 PSIG AT 10 AND 20 SECOND INTERVALS RESPECTIVELY.
11. XFP-0411 IS AN APPROVED AND PROCEDURALIZED ALTERNATIVE FIRE SUPPRESSION SUCTION SOURCE.
12. ACCEPTABLE SAMPLE POINT.
13. FLEX CONNECTION - ADAPTER (CPX-FXSTFP-01) MAINTAINED IN WAREHOUSE.

REFERENCES:

FLOW DIAGRAM - FIRE PROTECTION SYSTEM MAIN LOOP DWG M1-0225-6
FLOW DIAGRAM - POTABLE AND SANITARY WATER SYSTEM DWG M1-0227
FLOW DIAGRAM - FIRE PROTECTION TREATED WATER SYSTEM DWG MX-0225-08
FLOW DIAGRAM - FIRE PROTECTION TREATED WATER SYSTEM DWG MX-0225-09
PUMP HOUSE SUPPRESSION SYSTEM DWG MX-0900

FSAR FIGURE 9.5-62

THIS DRAWING CREATED ELECTRONICALLY

CLASS II

LUMINANT
CPNPP
GLEN ROSE, TEXAS

FLOW DIAGRAM
FIRE PROTECTION TREATED WATER SUPPLY SYSTEM

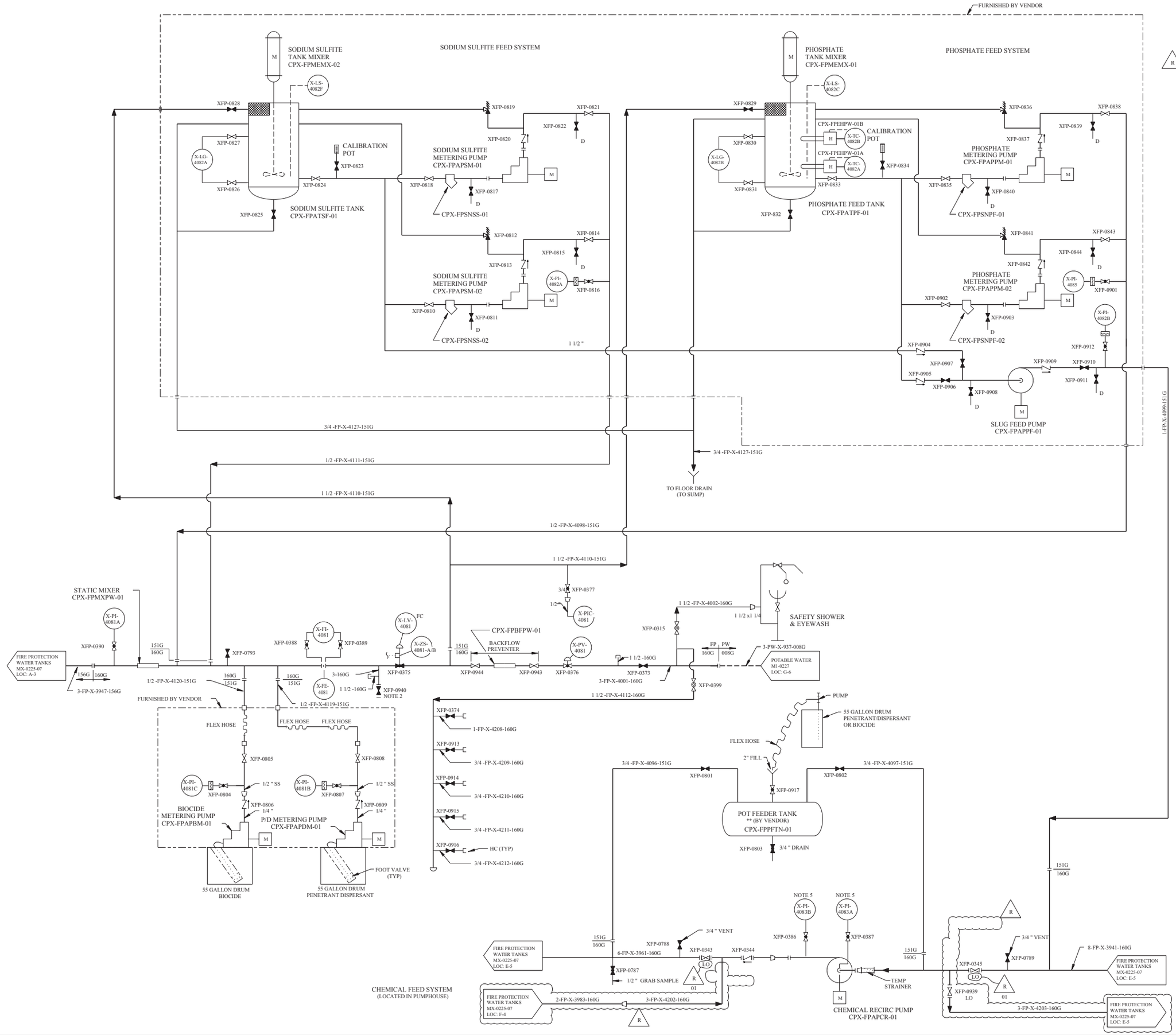
| DWG. NO. | SH. NO. | REV. |
|---|---|---|
| MX-0225 | 07 | CP-18 |

me871600.dgn A MX-0225-07 B C D E F G FINAL PRINT H

| REV | DWN | CHK | APVD | REMARKS |
|---|---|---|---|---|
| CP-11 | DLK 05-30-2006 | MM 05-30-2006 | | THIS DRAWING REVISED TO INCORPORATE DESIGN CHANGE FDA 2003-002435-04-01 PER SK-0002-03-002435-04-01. |

NOTES:

1. FOR INSTRUMENT LEGEND, SYMBOLS AND NOTES REFER TO DWG M1-2200-01. FOR MECHANICAL SYMBOLS AND NOTES REFER TO DWG M1-0200.
2. 3" CONNECTION FOR WATER TRUCK FILL, NOT FOR FILL BY POTABLE WATER SOURCE.
3. DELETED
4. PIPING SHOWN ON THIS DRAWING IS EXEMPT FROM QA APPLICABILITY REQUIREMENT PER SPECIFICATION 2323-MS-98.
5. ACCEPTABLE SAMPLE POINT.




# CLASS II

LUMINANT
CPSES
GLEN ROSE, TEXAS

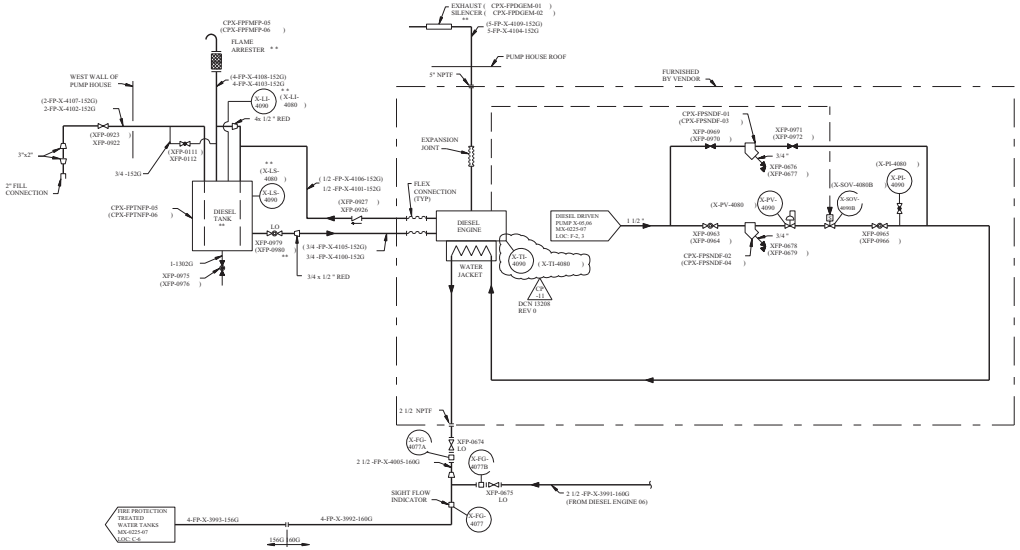
FLOW DIAGRAM
FIRE PROTECTION TREATED WATER
SUPPLY SYSTEM

| DWG. NO. | SH. NO. | REV. |
|---|---|---|
| MX-0225 | 08 | CP-11 |

REF CKD 6-1-98 CP-10

me686700.dgn MX-0225-08

FINAL PRINT




DIESEL ENGINE
CPX-FPAPFP-05,06

LINE NUMBERS AND INSTRUMENT NUMBERS IN PARENTHESES ARE FOR DIESEL PUMP CPX-FPAPFP-06

| REV | DWN | CHKD | APVD | REMARKS |
|---|---|---|---|---|
| CP-11 | RC 12/20/95 | | | THIS DRAWING REVISED TO INCORPORATE DESIGN CHANGE DCN 13208 REV 0. |

NOTES:

1. FOR INSTRUMENT LEGEND, SYMBOLS AND NOTES REFER TO DWG M1-2200-01. FOR MECHANICAL SYMBOLS AND NOTES REFER TO TO DWG M1-0200.
2. PIPING SHOWN ON THIS DRAWING IS EXEMPT FROM QA APPLICABILITY REQUIREMENT PER SPECIFICATION MS-98, EXCEPT LINE NUMBERS 3/4 -FP-X-4100-152G AND 3/4 -FP-X-4105-152G.
3. * * VENDOR SUPPLIED

FSAR FIGURE 9.5-62

THIS DRAWING CREATED ELECTRONICALLY

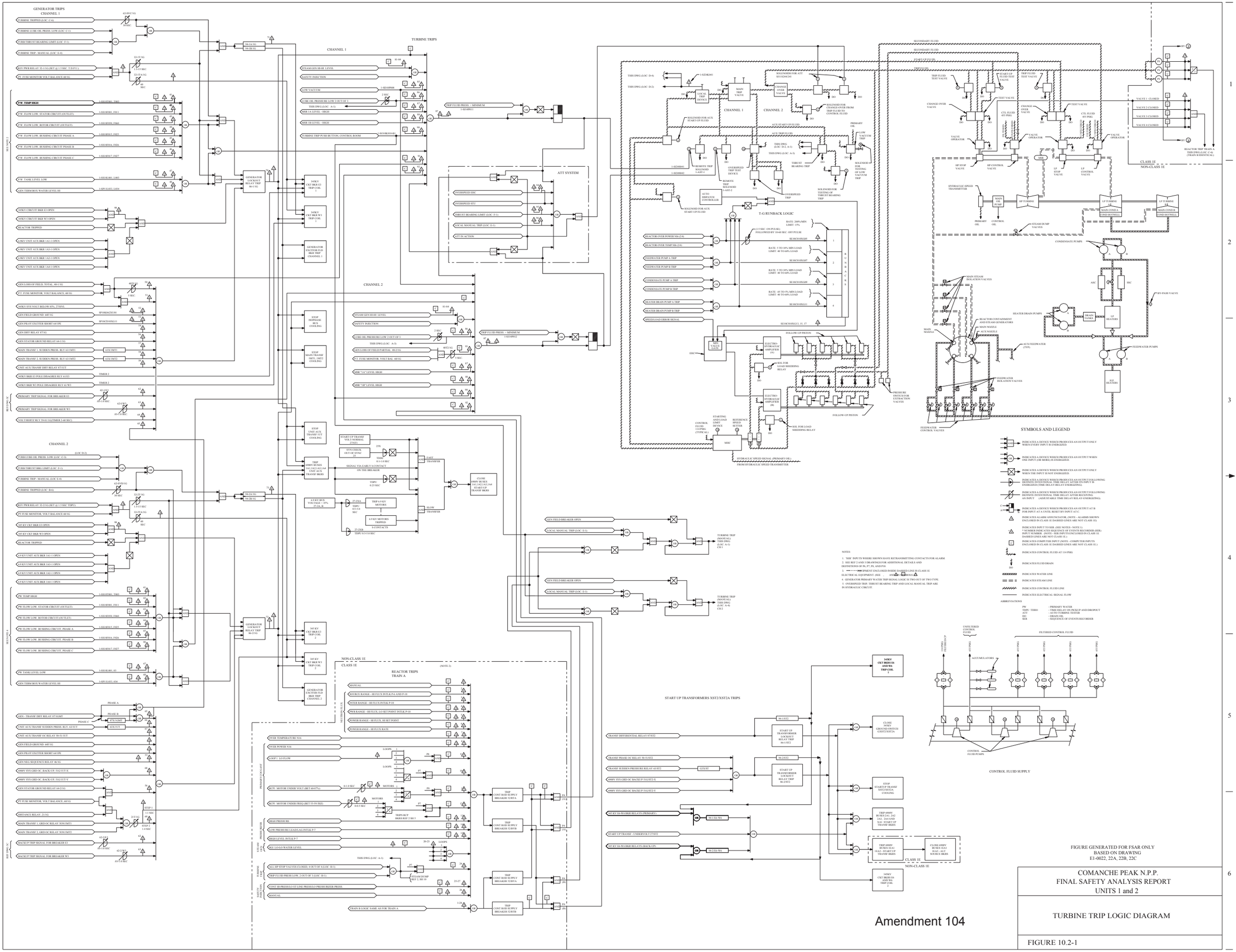
CLASS II

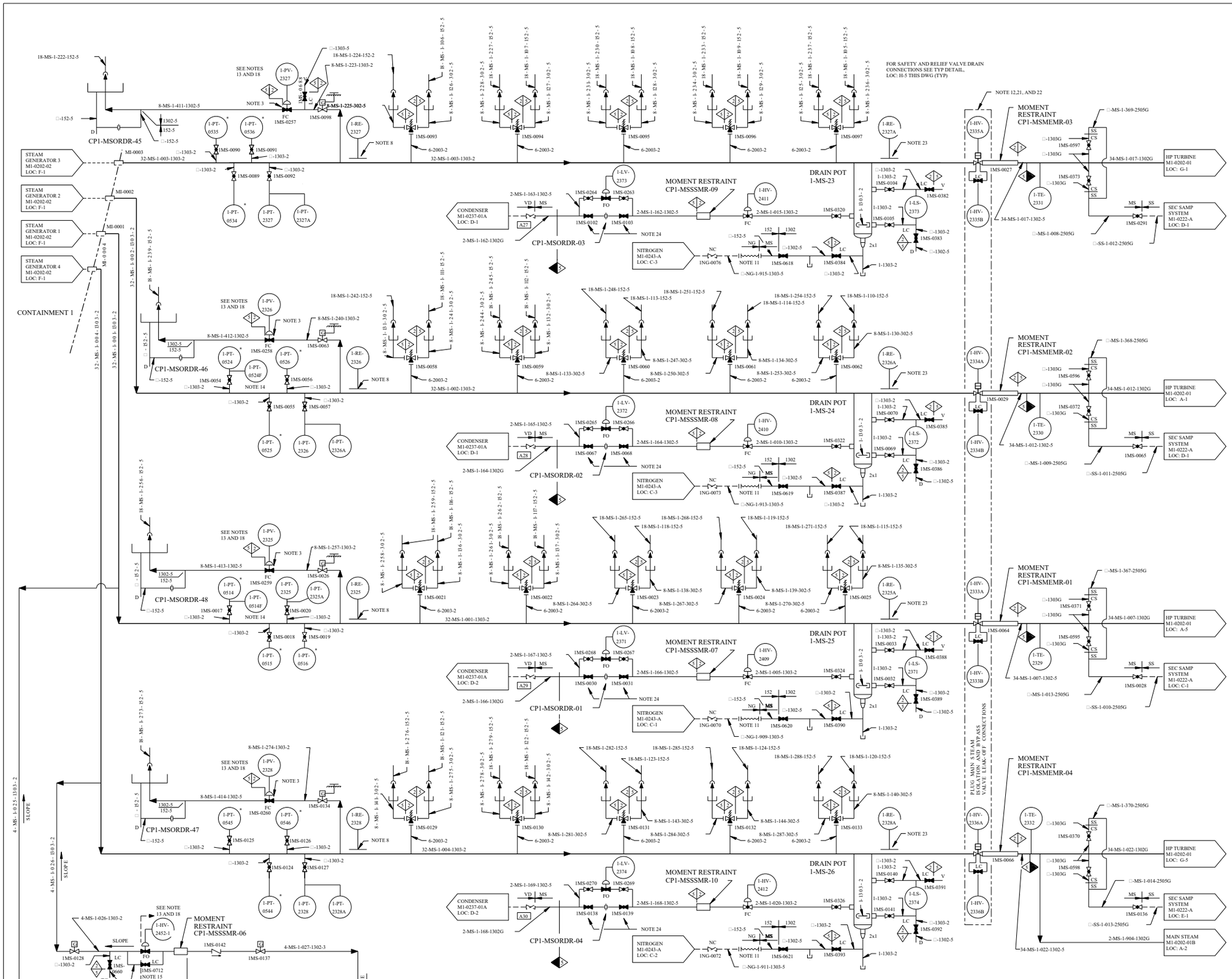
TXU ELECTRIC
CPSES
GLEN ROSE, TEXAS

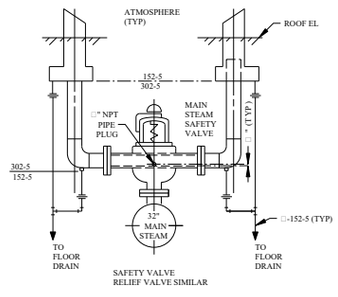
FLOW DIAGRAM
FIRE PROTECTION TREATED WATER
SUPPLY SYSTEM

| DWG. NO. | RS. NO. | REV. |
|---|---|---|
| MX-0225 | 09 | CP-11 |

FINAL PRINT


GENERATOR TRIPS
CHANNEL 1
TURBINE TRIPPED (LOC C-6)
TURBINE LUBE OIL PRESS. LOW (LOC C-1)
TURB THRUST BEARING LIMIT (LOC F-1)
TURBINE TRIP - MANUAL (LOC E-4)
62-3VU/1G
10 SEC
86V PWR RELAY 32-1/1G/(SET @ 1.5 SEC T.D.P.U.)
32-1T/1G
1.5+1.5 SEC
PT. FUSE MONITOR VOLT BALANCE 60/1G
32-1T/A/1G
45 SEC
P.W. TEMP HIGH
P.W. FLOW LOW, STATOR CIRCUIT (OUTLET)
P.W. FLOW LOW, ROTOR CIRCUIT (OUTLET)
P.W. FLOW LOW, BUSHING CIRCUIT PHASE A
P.W. FLOW LOW, BUSHING CIRCUIT PHASE B
P.W. FLOW LOW, BUSHING CIRCUIT PHASE C
P.W. TANK LEVEL LOW
GEN TERM BOX WATER LEVEL HI
SEE PAGE 2
345KV CIRCUIT BKR E3 OPEN
345KV CIRCUIT BKR W3 OPEN
REACTOR TRIPPED
13KV UNIT AUX BKR 1A1-1 OPEN
13KV UNIT AUX BKR 1A3-1 OPEN
13KV UNIT AUX BKR 1A2-1 OPEN
13KV UNIT AUX BKR 1A4-1 OPEN
GEN LOSS OF FIELD, TOTAL, 40-1/1G
PT. FUSE MONITOR, VOLT BALANCE, 60/1G
345KV SYS VOLT BELOW 85%, 27/HVL
GEN FIELD GROUND 64F/1G
GEN PILOT EXCITER SHORT 64/1PE
GEN DIFF RELAY 87/1G
GEN STATOR GROUND RELAY 64-1/1G
MAIN TRANSF 1, SUDDEN PRESS. RLY 63/1MT1
MAIN TRANSF 2, SUDDEN PRESS. RLY 63/1MT2
UNIT AUX TRANSF DIFF RELAY 87/1UT
345KV BKR E3 POLE DISAGREE RLY 61/E3
345KV BKR W3 POLE DISAGREE RLY 61/W3
40T1/1G
5 SEC
PRIMARY TRIP SIGNAL FOR BREAKER E3
62-1/1G
0.0+1.0 SEC
PRIMARY TRIP SIGNAL FOR BREAKER W3
62-3/1G
0.5+1.0 SEC
VOLTHERTZ RLY 59-81/1G(TIMER 2-60 SEC)
SEE PAGE 3
CHANNEL 2
(LOC D-2)
TURB LUBE OIL PRESS. LOW (LOC C-3)
TURB THRUST BRG LIMIT (LOC F-1)
TURBINE TRIP - MANUAL (LOC E-4)
TURBINE TRIPPED (LOC B-6)
62-4VU/1G
10 SEC
86V PWR RELAY 32-2/1G/(SET @ 1.5 SEC TDPU)
32-2T/1G
1.5+1.5 SEC
PT FUSE MONITOR, VOLT BALANCE 60/1G
32-2T/A/1G
45 SEC
345 KV CKT BKR E2 OPEN
345 KV CKT BKR W3 OPEN
REACTOR TRIPPED
13.8 KV UNIT AUX BKR 1A1-1 OPEN
13.8 KV UNIT AUX BKR 1A3-1 OPEN
13.8 KV UNIT AUX BKR 1A2-1 OPEN
13.8 KV UNIT AUX BKR 1A4-1 OPEN
P.W. TEMP HIGH
P.W. FLOW LOW, STATOR CIRCUIT (OUTLET)
P.W. FLOW LOW, ROTOR CIRCUIT (OUTLET)
P.W. FLOW LOW, BUSHING CIRCUIT, PHASE A
P.W. FLOW LOW, BUSHING CIRCUIT, PHASE B
P.W. FLOW LOW, BUSHING CIRCUIT, PHASE C
P.W. TANK LEVEL LOW
GEN TERM BOX WATER LEVEL HI
GEN - TRANSF DIFF RELAY 87/GMT
UNIT AUX TRANSF SUDDEN PRESS. RLY, 63-1UT
UNIT AUX TRANSF OC RELAY 50-51/1UT
GEN FIELD GROUND 64F/1G
GEN PILOT EXCITER SHORT 64/1PE
GEN NEU SEQUENCE RELAY 46/1G
6900V SYS GRD OC BACK-UP, 51G/1UT-X
6900V SYS GRD OC BACK-UP, 51G/1UT-Y
GEN STATOR GROUND RELAY 64-2/1G
PT FUSE MONITOR, VOLT BALANCE, 60/1G
DISTANCE RELAY- 21/1G
MAIN TRANSF 1, GRD OC RELAY 50N/1MT1
MAIN TRANSF 2, GRD OC RELAY 50N/1MT2
BACKUP TRIP SIGNAL FOR BREAKER E3
BACKUP TRIP SIGNAL FOR BREAKER W3
SEE PAGE 4
STEP 1
1.1 SEC
STEP 2
1.4 SEC
21T/1G
62-2/E3
0.0+1.0 SEC
62-2/W3
0.5+1.0 SEC
TURBINE TRIPS
CHANNEL 1
STEAM GEN HI-HI LEVEL
SAFETY INJECTION
LOW VACUUM
LUBE OIL PRESSURE LOW 2 OUT OF 3
THIS DWG (LOC A-1)
MSR 1A LEVEL – HIGH
MSR 1B LEVEL – HIGH
TURBINE TRIP PUSH BUTTON, CONTROL ROOM
1-SD1HP008
2 SEC
1-SD1HP011
TRIP FLUID PRESS. – MINIMUM
1-SI1HP011
1-SO1HK010-D1
ATT SYSTEM
OVERSPEED 1HC
OVERSPEED 5TU
THRUST BEARING LIMIT (LOC F-1)
LOCAL MANUAL TRIP (LOC E-1)
ATT IN ACTION
CHANNEL 2
STEAM GEN HI-HI LEVEL
SAFETY INJECTION
LUBE OIL PRESSURE LOW 2 OUT OF 3
THIS DWG (LOC A-3)
GEN LOSS OF FIELD PARTIAL 40-2/1G
PT. FUSE MONITOR, VOLT BAL 60/1G
MSR "1A" LEVEL HIGH
MSR "1B" LEVEL HIGH
TRIP FLUID PRESS – MINIMUM
1-SI1HP012
START-UP TRANSF VOLTS NORMAL 27/ST1
SYN CHECK OUT OF SYNC 25
TDDO 0.1-1.0 SEC
SIGNAL VIA EARLY b CONTACT ON THE BREAKER
TDPU 0.25 SEC
FAST TRANSFER
SLOW TRANSFER
CLOSE 6900V BUSES 1A1,1A2,1A3,1A4 START-UP TRANSF BKRS
TRIP 6900V BUSES 1A1,1A2,1A3,1A4 UNIT AUX TRANSF BKRS
6.9 KV BUS VOLTAGE – 10% 27-2A, B
27-2XA
TDPU 0.5-5.0 SEC
TRIP 6.9 KV MOTORS
6.9 KV MOTORS TRIPPED
N CONTACTS
27-2XB
TDPU 0.5-5.0 SEC
GENERATOR LOCKOUT RELAY TRIP 86-1/1G
GENERATOR LOCKOUT RELAY TRIP 86-2/1G
345KV CKT BKR E3 TRIP COIL 1
345KV CKT BKR W3 TRIP COIL 1
GENERATOR EXCITER FLD BKR TRIP CHANNEL 1
STOP ISOPHASE BUS COOLING
STOP MAIN TRANSF 1MT1, 1MT2 COOLING
STOP UNIT AUX TRANSF 1UT COOLING
345 KV CKT BKR E3 TRIP COIL 2
345 KV CKT BKR W3 TRIP COIL 2
GENERATOR EXCITER FLD BKR TRIP CHANNEL 2
NON-CLASS 1E
CLASS 1E
REACTOR TRIPS TRAIN A
(NOTE 2)
MANUAL
SOURCE RANGE - HI FLUX INTLK P-6 AND P-10
INTER RANGE - HI FLUX INTLK P-10
PWR RANGE - HI FLUX, LO SET POINT INTLK P-10
POWER RANGE - HI FLUX, HI SET POINT
POWER RANGE - HI FLUX RATE
NEUTRON FLUX
OVER TEMPERATURE N16
OVER POWER N16
LOOP 1 LO FLOW
RCP1 MOTOR UNDER VOLT (SET 60-87%)
RCP1 MOTOR UNDER FREQ (SET 55-58 HZ)
PRIMARY COOLANT
HIGH PRESSURE
LOW PRESSURE LEAD/LAG INTLK P-7
HIGH LEVEL INTLK P-7
SG2 LO-LO WATER LEVEL
PRESS/LEVEL
STEAM GEN
ALL HP STOP VALVES CLOSED, 4 OUT OF 4 (LOC 10-1)
TRIP FLUID PRESS LOW, 2 OUT OF 3 (LOC 10-1)
TURBINE TRIPS
CONT IH-PRESS/LO ST LINE PRESS/LO PRESS/RGTR PRESS
SAFETY SIGNALS
MANUAL
TRAIN B LOGIC SAME AS FOR TRAIN A
TRIPS RCP BKRS #2 SEE 5
TRIP CONT ROD SUPPLY BREAKER 52/RTA
TRIP CONT ROD SUPPLY BREAKER 52/RTB
TRIP CONT ROD SUPPLY BREAKER 52/RVA
TRIP CONT ROD SUPPLY BREAKER 52/RTB
THIS DWG (LOC A-1)
STEAM DUMP SEE 2, SEE 10
1-2P
THIS DWG (LOC: D-4)
THIS DWG (LOC: D-2)
1-SD4K041
1-SD4S041
1-SD4S042
LOCAL TRIP DEVICE
MAIN TRIP VALVE
CHANNEL 1
CHANNEL 2
SOLENOIDS FOR ATT SI1US2/4/24/241
SOLENOID FOR CHANGE-OVER FROM TRIP FLUID TO CONTROL FLUID
SOLENOID FOR AUX START-UP FLUID
AUX START-UP FLUID
AUX. TRIP FLUID
THIS DWG (LOC: D-2, A-1)
THIS DWG (LOC: A-3)
REMOTE TRIP SOLENOID 1-AST-1
REMOTE TRIP SOLENOID 1-AST-2
OVERSPEED TRIP TEST DEVICE
THRUST BEARING TRIP
PRIMARY OIL
LOW VACUUM TRIP
SOLENOID FOR TESTING OF LOW VACUUM TRIP
SOLENOID FOR TESTING OF THRUST BEARING TRIP
OVERSPEED TRIP
AUTO DISPATCH CONTROLLER
T-G RUNBACK LOGIC
RATE: 200%/MIN LIMIT: 15%
(1.5 SEC. ON PULSE) FOLLOWED BY 10-60 SEC. OFF PULSE
SE1HC501HG05
RATE: 5 TO 10% MIN LOAD LIMIT: 40 TO 60% LOAD
SE1HC501HG07
RATE: 5 TO 10% MIN LOAD LIMIT: 40 TO 60% LOAD
SE1HC501HG09
RATE: 85 TO 5% MIN LOAD LIMIT: 40 TO 60% LOAD
SE1HC501HG11
SE1HC501HG13, 15, 17
REACTOR OVER POWER N16 (2/4)
REACTOR OVER TEMP N16 (2/4)
FEEDWATER PUMP A TRIP
FEEDWATER PUMP B TRIP
CONDENSATE PUMP A TRIP
CONDENSATE PUMP B TRIP
HEATER DRAIN PUMP A TRIP
HEATER DRAIN PUMP B TRIP
SPEED/LOAD ERROR SIGNAL
RUNBACK LOGIC
FOLLOW-UP PISTON
MAIN VALVE GATE
ELECTRO-HYDRAULIC AMPLIFIER (A)
ELECTRO-HYDRAULIC AMPLIFIER (B)
SOL FOR LOAD SHEDDING RELAY
PRESSURE SWITCH FOR EXTRACTION VALVES
CONTROL FLUID 114 PSIG (TYPICAL)
STARTING AND LOAD LIMIT DEVICE
REFERENCE SPEED SETTER
MHC
HYDRAULIC SPEED SIGNAL (PRIMARY OIL) FROM HYDRAULIC SPEED TRANSMITTER
SECONDARY FLUID
TRIP FLUID
START-UP FLUID TEST VALVE
CHANGE OVER VALVE
TEST VALVE
CTL FLUID 455 PSIG
VALVE OPERATOR
HP STOP VALVE
HP CONTROL VALVE
MSR
LP STOP VALVE
LP CONTROL VALVE
VALVE 1 CLOSED
VALVE 2 CLOSED
VALVE 3 CLOSED
VALVE 4 CLOSED
REACTOR TRIP TRAIN A THIS DWG (LOC C-6) (TRAIN B IDENTICAL)
CLASS 1E
NON-CLASS 1E
HYDRAULIC SPEED TRANSMITTER
MAIN OIL PUMP
HP TURBINE
LP TURBINE A1
LP TURBINE B1
MAIN COND A
MAIN COND B
COND HOTWELL
PRIMARY OIL
CONTROL OIL
STEAM DUMP VALVES
CONDENSATE PUMPS
MAIN STEAM ISOLATION VALVES
ASC
SSC
BY-PASS VALVE
HEATER DRAIN PUMPS
DRAIN TANKS
LP HEATERS
MAIN NOZZLE
REACTOR CONTAINMENT AND STEAM GENERATORS
AUX NOZZLE
AUX FEEDWATER (TYP)
FEEDWATER PUMPS
HP HEATERS
FEEDWATER ISOLATION VALVES
FEEDWATER CONTROL VALVES
SYMBOLS AND LEGEND
INDICATES A DEVICE WHICH PRODUCES AN OUTPUT ONLY WHEN EVERY INPUT IS ENERGIZED
INDICATES A DEVICE WHICH PRODUCES AN OUTPUT WHEN ONE INPUT OR MORE) IS ENERGIZED
INDICATES A DEVICE WHICH PRODUCES AN OUTPUT ONLY WHEN THE INPUT IS NOT ENERGIZED
INDICATES A DEVICE WHICH PRODUCES AN OUTPUT FOLLOWING DEFINITE INTENTIONAL TIME DELAY AFTER ITS INPUT IS ENERGIZED (TIME DELAY-RELAY ENERGIZING).
INDICATES A DEVICE WHICH PRODUCES AN OUTPUT FOLLOWING DEFINITE INTENTIONAL TIME DELAY AFTER RECEIVING AN INPUT (ADJUSTABLE TIME DELAY RELAY-ENERGIZING).
INDICATES A DEVICE WHICH PRODUCES AN OUTPUT AT B FOR INPUT AT A UNTIL RESET BY INPUT AT C.
INDICATES ALARM ANNUNCIATOR, (NOTE – ALARMS SHOWN ENCLOSED IN CLASS 1E DASHED LINES ARE NOT CLASS 1E)
INDICATES INPUT TO SER. (SEE NOTES - NOTE 1) * NUMBER INDICATES SEQUENCE OF EVENTS RECORDER (SER) INPUT NUMBER. (NOTE - SER INPUTS ENCLOSED IN CLASS 1E DASHED LINES ARE NOT CLASS 1E.)
INDICATES COMPUTER INPUT (NOTE - COMPUTER INPUTS ENCLOSED IN CLASS 1E DASHED LINES ARE NOT CLASS 1E.)
INDICATES CONTROL FLUID AT 114 PSIG
INDICATES FLUID DRAIN
INDICATES WATER LINE
INDICATES STEAM LINE
INDICATES CONTROL FLUID LINE
INDICATES ELECTRICAL SIGNAL FLOW
ABBREVIATIONS
PW - PRIMARY WATER
TDPU, TDDO - TIME DELAY ON PICKUP AND DROPOUT
ATT - AUTO TURBINE TESTER
DO - DRAIN OIL
SER - SEQUENCE OF EVENTS RECORDER
NOTES:
1. 'SER' INPUTS WHERE SHOWN HAVE RETRANSMITTING CONTACTS FOR ALARM.
2. SEE REF 2 AND 3 DRAWINGS FOR ADDITIONAL DETAILS AND DEFINITIONS OF P6, P7, P8, AND P10.
3. EQUIPMENT ENCLOSED INSIDE DASHED LINE IS CLASS 1E ELECTRICAL EQUIPMENT. (SEE ANSI/IEEE STD 308)
4. GENERATOR PRIMARY WATER TRIP SIGNAL LOGIC IS TWO OUT OF TWO TYPE.
5. OVERSPEED TRIP, THRUST BEARING TRIP AND LOCAL MANUAL TRIP ARE IN HYDRAULIC CIRCUIT.
START UP TRANSFORMERS XST2/XST2A TRIPS
TRANSF DIFFERENTIAL RELAY 87/ST2
TRANSF PHASE OC RELAY 50-51/ST2
TRANSF SUDDEN PRESSURE RELAY 63/ST2
6900V SYS GRD OC BACKUP 51G/ST2-X
6900V SYS GRD OC BACKUP 51G/ST2-Y
345 KV E6-W6 BKR RELAYS (PRIMARY)
START UP TRANSF - UNDERVOLT 27/ST2
345 KV E6-W6 BKR RELAYS (BACK-UP)
94-1/ST2
START UP TRANSFORMER LOCKOUT RELAY TRIP 86-1/ST2
94-2/ST2
START UP TRANSFORMER LOCKOUT RELAY TRIP 86-2/ST2
94-1/E6-W6
94-2/E6-W6
CLOSE 6900V BUSES 1A1, 1A2, 1A3, 1A4 GROUND SWITCH GSST2/XST2A
STOP STARTUP TRANSF XST2/XST2A COOLING
TRIP 6900V BUSES 2A1, 2A2 2A3, 2A4 AND 1(A)1 START UP TRANSF BKRS
TRIP 6900V BUSES 1EA1 - START UP TRANSF BKRS
CLOSE 6900V BUSES 1EA1 - ALT SOURCE BKRS
CLASS 1E
NON-CLASS 1E
345KV CKT BKRS E6 AND W6 TRIP COIL 1
345KV CKT BKRS E6 AND W6 TRIP COIL 2
UNFILTERED CONTROL FLUID
FILTERED CONTROL FLUID
TO/FRM FILTER/LOOP
455 PSIG
ACCUMULATORS
CONTROL FLUID PUMPS
CONTROL FLUID SUPPLY
FIGURE GENERATED FOR FSAR ONLY BASED ON DRAWING E1-0022, 22A, 22B, 22C
COMANCHE PEAK N.P.P.
FINAL SAFETY ANALYSIS REPORT
UNITS 1 and 2
TURBINE TRIP LOGIC DIAGRAM
FIGURE 10.2-1
Amendment 104
pe000063.dgn
07-14-2011




| REV | DWN | CHKD | APVD | REMARKS |
|---|---|---|---|---|
| CP-34 | DLK 02-15 2017 | MM 02-16 2017 | MHF 02-16 2017 | THIS DRAWING REVISED TO INCORPORATE AI-TR-2017-001721-1 TO EDITORIALLY CORRECT AIR ACCUMULATOR LOCATION (TAG) NUMBERS. |

NOTES:

1. * INSTRUMENT BY WESTINGHOUSE.
2. FOR GENERAL NOTES AND SYMBOLS SEE DRAWING M1-0200.
3. POWER OPR. VALVE SHALL BE LOCATED ON THE HORIZONTAL RUN.
4. ALL NUCLEAR CLASS LINES 2" AND SMALLER WILL HAVE THE SAME PIPE CATEGORY AS THE MAIN RUN LINE UNLESS NOTED OTHERWISE.
5. DELETED
6. A29 REPRESENTS DRAIN CONNECTIONS SHOWN IN DRAWING M1-0237-01.
7. DELETED
8. MAIN STEAM LINE MONITOR DETECTOR ASSEMBLY IS LOCATED BETWEEN THE PORV AND THE FIRST SAFETY VALVE. IT IS A PROXIMITY DEVICE MOUNTED ADJACENT TO THE PIPE.
9. INSTRUMENT AIR SUPPLY FROM SAFEGUARD BUILDING HEADER NUMBER 3-CI-1-090-115-5.
10. UNLESS OTHERWISE NOTED ALL DRAINS COLLECTED BY LOCAL DRAIN SYSTEM.
11. NITROGEN SUPPLY THRU HOSE CONNECTION.
12. MAIN STEAM ISOLATION VALVES AND BYPASS VALVES SUPPLIED BY ROCKWELL.
13. CONTROL VALVE HAS AN ASSOCIATED SAFETY CLASS 3 ACCUMULATOR AS NOTED;

| | |
|---|---|
| 1-HV-2452-2 | CP1-CIATMS-02 |
| 1-HV-2452-1 | CP1-CIATMS-01 |
| 1-PV-2327 | CP1-MSATRT-03 |
| 1-PV-2326 | CP1-MSATRT-02 |
| 1-PV-2325 | CP1-MSATRT-01 |
| 1-PV-2328 | CP1-MSATRT-04 |

CP -34

14. REFER TO WESTINGHOUSE DWG 8758D39 SH 13.
15. REFER TO ICD M1-2206-02A, B.
16. DELETED
17. DELETED
18. FOR TYPICAL ARRANGEMENT REFER TO M1-2120-01,-03.
19. DELETED
20. DELETED
21. CAUTION: MAIN STEAM ISOLATION VALVES WILL OPEN UPON LOSS OF POWER TO BOTH TRAIN A AND B HYDRAULIC SOLENOIDS UNLESS AIR OPERATED HYDRAULIC PUMP IS DEACTIVATED. SEE M1-2202-02 FOR LOGIC.
22.

| ASSOCIATED MSIV NUM. | TRAIN A HYDR. ISOL. VALVE | TRAIN B HYDR. ISOL. VALVE |
|---|---|---|
| 1-HV-2333A | 1MS-0064A | 1MS-0064B |
| 1-HV-2334A | 1MS-0029A | 1MS-0029B |
| 1-HV-2335A | 1MS-0027A | 1MS-0027B |
| 1-HV-2336A | 1MS-0066A | 1MS-0066B |

23. STEAM GENERATOR LEAK DETECTOR ASSEMBLY IS LOCATED BETWEEN THE DRIP POT AND MAIN STEAM ISOLATION VALVE. IT IS A PROXIMITY DEVICE MOUNTED ON TOP OF THE PIPE INSULATION.
24. EACH ORIFICE MAY BE ISOLATED USING EITHER MANUAL ISOLATION VALVE DURING NORMAL POWER OPERATION.

FSAR FIGURE 10.3-1

THIS DRAWING CREATED ELECTRONICALLY

| DRAWING M1-0202 REV CP-28 HAS BEEN SPLIT INTO THE FOLLOWING SHEETS: |
|---|
| M1-0202 |
| M1-0202-03 |

CLASS I
(NUCLEAR SAFETY-RELATED)
SAFETY CLASS 1 — SEISMIC CATEGORY I
SAFETY CLASS 2 — CLASS 1E
SAFETY CLASS 3 — ASSOCIATED CIRCUITS

LUMINANT
CPNPP
GLEN ROSE, TEXAS

FLOW DIAGRAM
MAIN STEAM REHEAT
AND STEAM DUMP

| DWG. NO. | SH. NO. | REV. |
|---|---|---|
| M1-0202 | - | CP-34 |

FINAL PRINT

REF CKD CP-3105/15/98

me378600.dgn A M1-0202 B C D E F G H

| REV | DWN | CHK | APVD | REMARKS |
|---|---|---|---|---|
| CP-22 | DLK 06-06-2016 | MM 06-06-2016 | GAW 06-06-2016 | THIS DRAWING REVISED TO INCORPORATE AI-CR-2016-004909-1 TO EDITORIALLY CORRECT LINE SEGMENT NUMBER FROM VD-1-131 TO VD-1-110. |

NOTES:

1. * INSTRUMENT BY WESTINGHOUSE.
2. ** BY ACPSI.
3. FOR GENERAL SYMBOLS AND NOTES SEE DRAWING M1-0200.
4. ☐ INDICATES CUSTOMER'S PIPE CONNECTION TO ACPSI SUPPLIED EQUIPMENT.
5. FOR DETAILS OF MSR SEE DRAWING M1-0209 AND M1-0209-A.
6. SLOPED DOWNWARD WITH A 2 FT MINIMUM VERTICAL LEG.
7. ▭ REPRESENTS DRAIN CONNECTIONS SHOWN ON FD M1-0237-01A.
8. DELETED
9. SEAL FLUID TO DRAIN VALVE LANTERN RING IS SUPPLIED FROM THE CONDENSATE SYSTEM. SEE M1-0204, LOC: A/B/C-3.
10. UNLESS OTHERWISE NOTED ALL DRAINS COLLECTED BY LOCAL DRAIN SYSTEM.
11. *** REFER TO ACPSI SPOOL SHEET PIECE PART NUMBERS FOR MATERIAL REQUIREMENTS.

LEGEND:

- MAIN STEAM
- HOT REHEAT (BY ACPSI)
- COLD REHEAT (BY ACPSI)
- AUXILIARY PIPING

FSAR FIGURE 10.3-1

THIS DRAWING CREATED ELECTRONICALLY

| DRAWING 2323-M1-0202-01 REV CP-2 HAS BEEN SPLIT INTO THE FOLLOWING SHEETS: |
|---|
| M1-0202-01 |
| M1-0202-01A |
| M1-0202-01B |
| |
| |

NON-SAFETY

LUMINANT
CPNPP
GLEN ROSE, TEXAS

FLOW DIAGRAM
MAIN STEAM REHEAT
AND STEAM DUMP

| DWG. NO. | SH. NO. | REV. |
|---|---|---|
| M1-0202 | 01 | CP-22 |

me815300.dgn A M1-0202-01 FINAL PRINT

| REV | DWN | CHK | APVD | REMARKS |
|---|---|---|---|---|
| CP-24 | DLK 05/19/2017 | GAW 05/19/2017 | | THIS DRAWING REVISED TO INCORPORATE DESIGN CHANGE FDA 2017-000111-01-00 PER SK-0004-17-000111-01-00. |

NOTES:

1. * INSTRUMENT BY WESTINGHOUSE.
2. ** BY ACPSI
3. FOR GENERAL SYMBOLS AND NOTES SEE DRAWING M1-0200.
4. *** BY GENERAL ELECTRIC.
5. 10X8 REDUCERS ARE WELDED TO THE VALVE BODY BY FISHER CONTROLS.
6. ◯ INDICATES CUSTOMER'S PIPE CONNECTION TO WESTINGHOUSE SUPPLIED CONDENSER.
7. □ INDICATES CUSTOMER'S PIPE CONNECTION TO ACPSI SUPPLIED EQUIPMENT.
8. FOR DETAILS OF MSR SEE DRAWING M1-0209.
9. SLOPED DOWNWARD WITH A 2 FT MINIMUM VERTICAL LEG.
10. ▭ REPRESENTS DRAIN CONNECTIONS SHOWN ON FD M1-0237-01A.
11. ALL I&C CHANNEL NUMBERS WILL HAVE PREFIX ONE (1), IE 1-TE-3229 CONTROLS FOR CHANNEL NUMBERS ABOVE 6000, AS 1-HV-6582 ARE FOUND IN TURBINE INSTRUMENT AND CONTROL DIAGRAMS.
12. ⬡ INDICATES CUSTOMER'S PIPE CONNECTION TO GENERAL ELECTRIC SUPPLIED EQUIPMENT.
13. DELETED
14. SEAL FLUID TO DRAIN VALVE LANTERN RING IS SUPPLIED FROM THE CONDENSATE SYSTEM. SEE M1-0204, LOC: A/B/C-3.
15. UNLESS OTHERWISE NOTED ALL DRAINS COLLECTED BY LOCAL DRAIN SYSTEM.
16. THERMOCOUPLES 1-TE-6580 ( 1-RB01T012 ) ARE EMBEDDED NEAR THE INLET STEAM SURFACE OF THE TUBESHEET.
17. VALVE MAY BE THROTTLED AS REQUIRED TO MAINTAIN DESIRED DRAIN LEVEL AT LEVEL GAUGE.

LEGEND:

- MAIN STEAM
- HOT REHEAT (BY ACPSI)
- COLD REHEAT (BY ACPSI)
- AUXILIARY PIPING

| DRAWING 2323-M1-0202-01 REV CP-2 HAS BEEN SPLIT INTO THE FOLLOWING SHEETS: |
|---|
| M1-0202-01 |
| M1-0202-01A |
| M1-0202-01B |

THIS DRAWING CREATED ELECTRONICALLY

FSAR FIGURE 10.3-1

NON-SAFETY

LUMINANT
CPNPP
GLEN ROSE, TEXAS

FLOW DIAGRAM
MAIN STEAM REHEAT
AND STEAM DUMP

| DWG. NO. | SH. NO. | REV. |
|---|---|---|
| M1-0202 | 01A | CP-24 |

REF CKD CP-14 10/08/00

me103900.dgn A M1-0202-01A

FINAL PRINT

| REV | DWN | CHK | APVD | REMARKS |
|---|---|---|---|---|
| CP-12 | BSMC 11-15 2006 | DJL 11-17 2006 | | THIS DRAWING REVISED TO INCORPORATE DESIGN CHANGE FDA-2006-003622-01-00 PER SK-0003-06-003622-01-00. |

NOTES

1. DELETED
2. ** BY ACPSI.
3. FOR GENERAL SYMBOLS AND NOTES SEE DRAWING M1-0200.
4. *** BY GENERAL ELECTRIC.
5. 10x8 REDUCERS ARE WELDED TO THE VALVE BODY BY FISHER CONTROLS.
6. ◯ INDICATES CUSTOMER'S PIPE CONNECTION TO WESTINGHOUSE SUPPLIED CONDENSER.
7. □ INDICATES CUSTOMER'S PIPE CONNECTION TO ACPSI SUPPLIED EQUIPMENT.
8. FOR DETAILS OF MSR SEE DRAWING M1-0209.
9. SLOPED DOWNWARD WITH A 2 FT MINIMUM VERTICAL LEG.
10. ▭ REPRESENTS DRAIN CONNECTIONS SHOWN ON F.D. M1-0237-01.
11. ALL I&C CHANNEL NUMBERS WILL HAVE PREFIX ONE (1), i.e. 1-TE-3229. CONTROLS FOR CHANNEL NUMBER ABOVE 6000, AS 1-HV-6582 ARE FOUND IN TURBINE INSTRUMENTATION & CONTROL DIAGRAMS.
12. ⬡ INDICATES CUSTOMER'S PIPE CONNECTION TO GENERAL ELECTRIC SUPPLIED EQUIPMENT.
13. DELETED
14. SEAL FLUID TO DRAIN VALVE LANTERN IS SUPPLIED FROM THE CONDENSATE SYSTEM. SEE M1-0204, LOC: A/B/C-3.
15. UNLESS OTHERWISE NOTED ALL DRAINS COLLECTED BY LOCAL DRAIN SYSTEM.

LEGEND

- MAIN STEAM
- HOT REHEAT (BY ACPSI)
- COLD REHEAT (BY ACPSI)
- AUXILIARY PIPING

| DRAWING 2323-M1-0202-01 REV CP-2 |
|---|
| HAS BEEN SPLIT INTO THE FOLLOWING SHEETS: |
| M1-0202 -01 |
| M1-0202-01A |
| M1-0202-01B |

NON–SAFETY

LUMINANT
CPSES
GLEN ROSE, TEXAS

FLOW DIAGRAM
MAIN STEAM REHEAT
AND STEAM DUMP

| DWG. NO. | SH. NO. | REV. |
|---|---|---|
| M1-0202 | 01B | CP-12 |

FSAR FIGURE 10.3-1

THIS DRAWING CREATED ELECTRONICALLY

me741700.dgn A M1-0202-01B

FINAL PRINT

| REV | DWN | CHK | APVD | REMARKS |
|---|---|---|---|---|
| CP-21 | MHJ 04-18 2007 | DLK 04-18 2007 | | THIS DRAWING REVISED TO INCORPORATE DESIGN CHANGE FDA-2005-000224-03-00 PER SK-0017-05-000224-03-00. |

NOTES:

1. * INSTRUMENT BY WESTINGHOUSE.
2. UNLESS OTHERWISE NOTED ALL DRAINS COLLECTED BY LOCAL DRAIN SYSTEM.
3. FOR GENERAL NOTES AND SYMBOLS SEE DRAWING M1-0200.
4. CUSTOMER'S PIPE CONNECTIONS, AS SUPPLIED BY INDICATED BY ⬡ .
5. ALL NUCLEAR CLASS LINES 2" AND SMALLER WILL HAVE THE SAME PIPE CATEGORY AS THE MAIN RUN LINE UNLESS NOTED OTHERWISE.
6. ALL INSTRUMENT AND CONTROL CHANNEL NUMBERS WILL HAVE PREFIX ONE (1), I.E. 1-TE-2341.
7. DENOTES RADIOACTIVE WASTE MANAGEMENT SYSTEM CONTINUES ON IDENTIFIED DRAWING.
8. ** EQUIPMENT USED IN MITIGATION OF HELB.
9. PIPING CATEGORY SHOWN AS BUILT.
10. DELETED

R (3) DRAWING 6655E34

STEAM GEN 2 TBX-RCPCSG-02

STEAM GEN 1 TBX-RCPCSG-01

STEAM GEN 3 TBX-RCPCSG-03

STEAM GEN 4 TBX-RCPCSG-04

CP1-MSFHMS-02

CP1-MSFHMS-01

CP1-MSFHMS-03

CP1-MSFHMS-04

MOMENT RESTRAINT CP1-MSSSMR-03

MOMENT RESTRAINT CP1-MSSSMR-02

MOMENT RESTRAINT CP1-MSSSMR-01

MOMENT RESTRAINT CP1-MSSSMR-04

PROCESS SAMPLING M1-0228 LOC: A-6

PROCESS SAMPLING M1-0228 LOC: A-5

PROCESS SAMPLING M1-0228 LOC: A-3

PROCESS SAMPLING M1-0228 LOC: A-4

CHEMICAL FEED SYSTEM M1-0221 LOC: F-6

CHEMICAL FEED SYSTEM M1-0221 LOC: E-6

STM GEN BLWDN CLEAN UP SYS M1-0239 LOC: A-3

STM GEN BLWDN CLEAN UP SYS M1-0239 LOC: A-4

STM GEN BLWDN CLEAN UP SYS M1-0239 LOC: A-5

STM GEN BLWDN CLEAN UP SYS M1-0239 LOC: A-3

CONTINUED ON M1-0202 LOC: A-1

CONTINUED ON M1-0202 LOC: A-1

CONTINUED ON M1-0202 LOC: A-2

CONTINUED ON M1-0202 LOC: A-2

2" BLIND FLG

NOTE 7

NOTE 9

FSAR FIGURE 10.3-1

THIS DRAWING CREATED ELECTRONICALLY

CLASS I

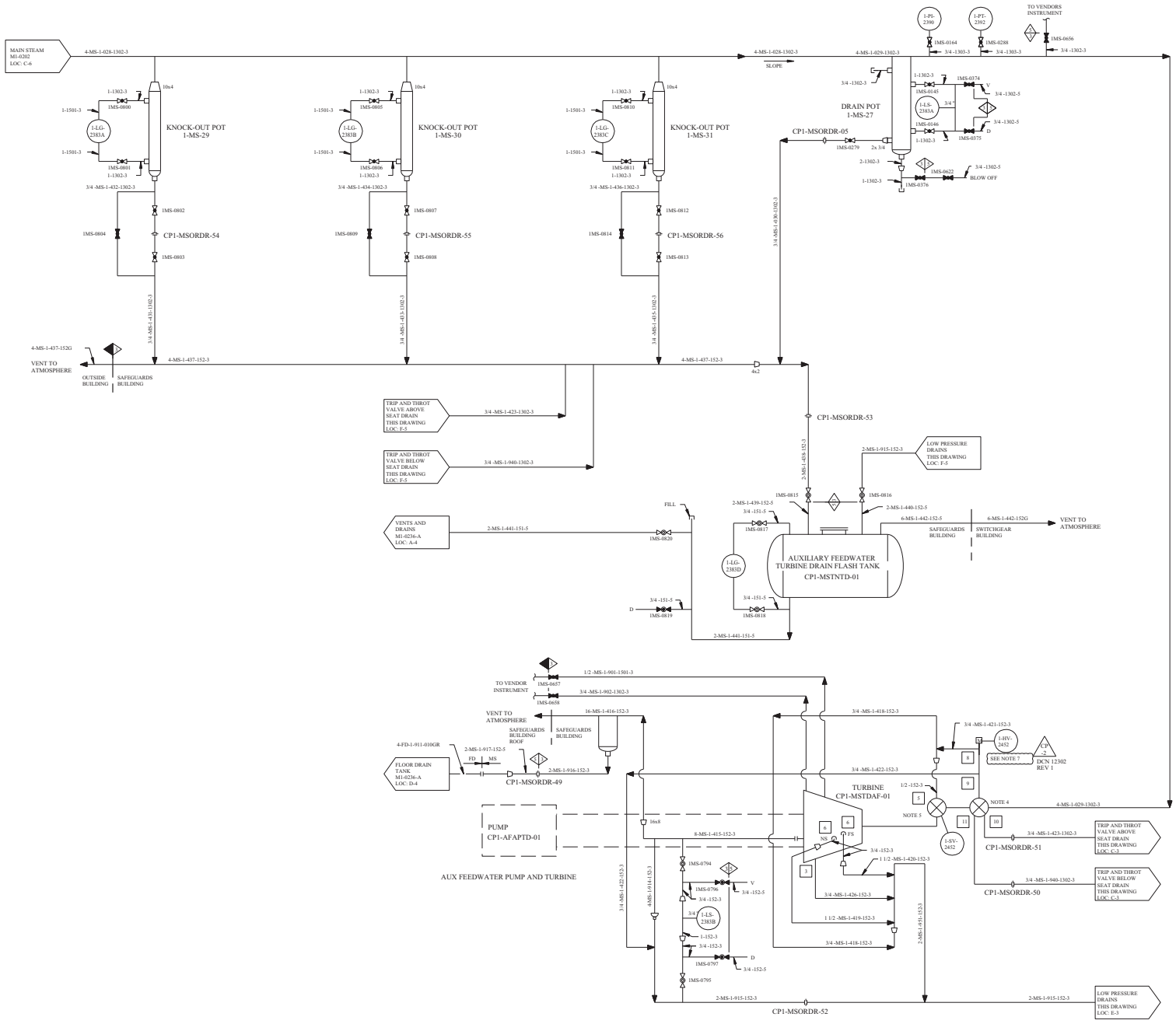
(NUCLEAR SAFETY-RELATED)

| | |
|---|---|
| SAFETY CLASS 1 | SEISMIC CATEGORY I |
| SAFETY CLASS 2 | CLASS 1E |
| SAFETY CLASS 3 | ASSOCIATED CIRCUITS |

LUMINANT
CPSES
GLEN ROSE, TEXAS

FLOW DIAGRAM
MAIN STEAM REHEAT
AND STEAM DUMP

| DWG. NO. | SH. NO. | REV. |
|---|---|---|
| M1-0202 | 02 | CP-21 |




| REV. | DWN | CHKD | APVD | REMARKS |
|---|---|---|---|---|
| CP-2 | CA 11/17/1999 | | | THIS DRAWING REVISED TO INCORPORATE DESIGN CHANGE DCN 12302 REV 1. |

NOTES:

1. FOR GENERAL NOTES AND SYMBOLS SEE DRAWING M1-0200.
2. UNLESS OTHERWISE NOTED ALL DRAINS COLLECTED BY LOCAL DRAIN SYSTEM.
3. [1] REPRESENTS PURCHASER PIPE CONNECTIONS TO TERRY TURBINE.
4. TURBINE TRIP AND THROTTLE VALVE, SUPPLIED BY CP-0007.
5. TURBINE GOVERNER VALVE, SUPPLIED BY CP-0007.
6. THREADED PORTION OF LINES 3/4 -MS-1-421-152-3 AND 3/4 -MS-1-422-152-3 ARE SCH 160 PIPE IN LIEU OF SPECIFIED SCH 80.
7. THE TRIP AND THROTTLE VALVE IS A SOLENOID ACTUATED TRIP VALVE. THE VALVE CAN BE MANUALLY OPENED BY USE OF THE HAND WHEEL. ELECTRICAL POWER TO THE MOTOR OPERATOR HAS BEEN DISCONNECTED.

CP-2
DCN 12302
REV 1

FSAR FIGURE 10.3-1

THIS DRAWING CREATED ELECTRONICALLY

DRAWING M1-0202 REV CP-28
HAS BEEN SPLIT INTO THE FOLLOWING SHEETS:
M1-0202
M1-0202-03

CLASS I
(NUCLEAR SAFETY-RELATED)
SAFETY CLASS 1 — SEISMIC CATEGORY I
SAFETY CLASS 2 — CLASS 1E
SAFETY CLASS 3 — ASSOCIATED CIRCUITS

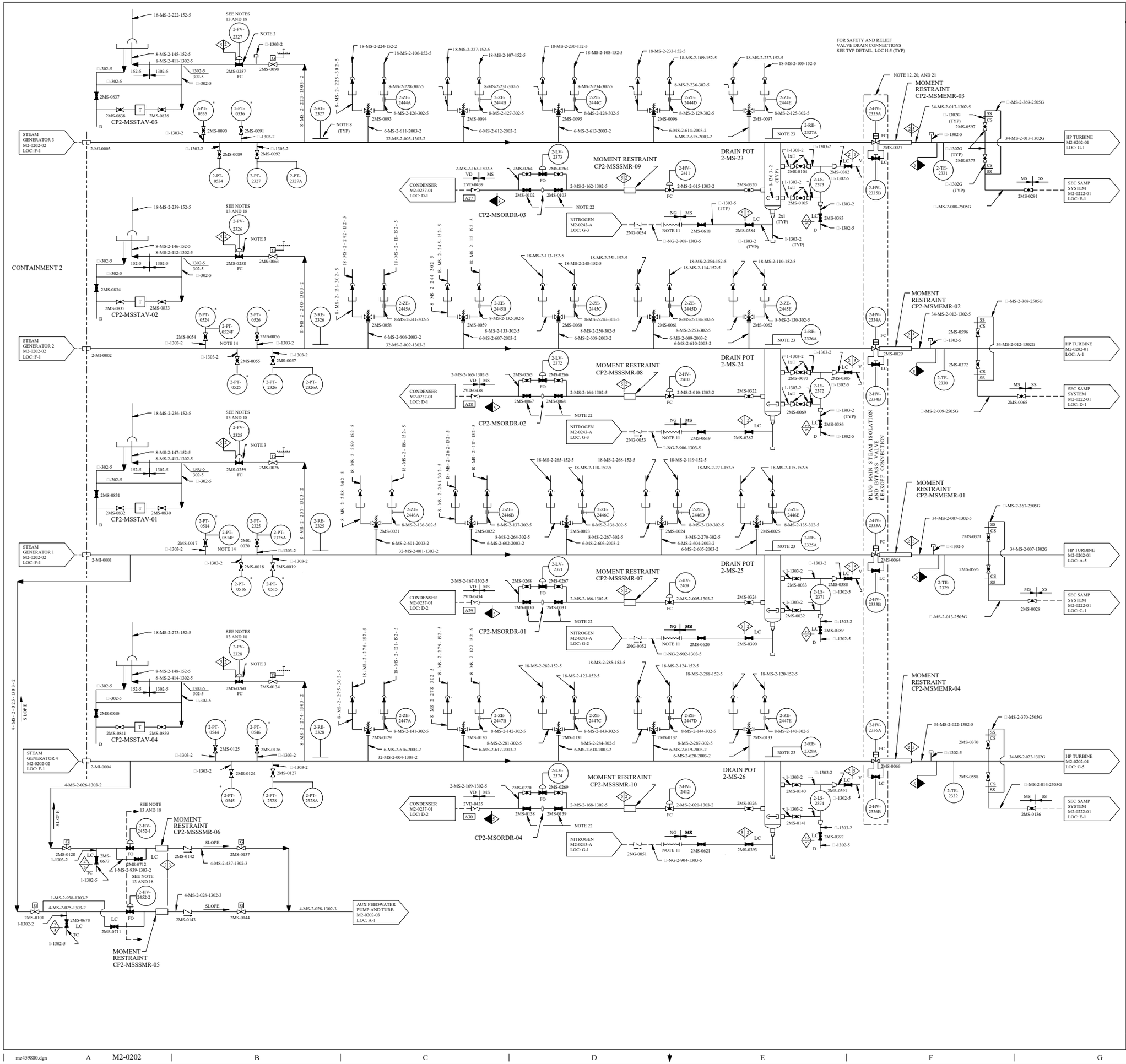
TXU ELECTRIC
CPSES
GLEN ROSE, TEXAS

FLOW DIAGRAM
MAIN STEAM REHEAT
AND STEAM DUMP

| DWG. NO. | SH. NO. | REV. |
|---|---|---|
| M1-0202 | 03 | CP-2 |

$$$$$$$D\TA\TESSSSS

me0001xb.dgn




| REV | DWN | CHKD | APVD | REMARKS |
|---|---|---|---|---|
| CP-23 | DLK 02-15-2017 | MM 02-16-2017 | MHF 02-16-2017 | THIS DRAWING REVISED TO INCORPORATE AI-TR-2017-001721-1 TO EDITORIALLY CORRECT AIR ACCUMULATOR LOCATION (TAG) NUMBERS. |

NOTES:

1. * INSTRUMENT BY WESTINGHOUSE.
2. FOR GENERAL NOTES AND SYMBOLS SEE DRAWING M1-0200.
3. POWER OPR. VALVE SHALL BE LOCATED ON THE HORIZONTAL RUN.
4. ALL NUCLEAR CLASS LINES 2" AND SMALLER WILL HAVE THE SAME PIPE CATEGORY AS THE MAIN RUN LINE UNLESS NOTED OTHERWISE.
5. DELETED
6. A29 REPRESENTS DRAIN CONNECTIONS SHOWN IN DRAWING M2-0237-01.
7. DELETED
8. MAIN STEAM LINE MONITOR DETECTOR ASSEMBLY IS LOCATED BETWEEN THE PORV AND THE FIRST SAFETY VALVE. IT IS A PROXIMITY DEVICE MOUNTED ADJACENT TO THE PIPE.
9. INSTRUMENT AIR SUPPLY FROM SAFEGUARD BUILDING HEADER NUMBER 3-CI-2-090-115-5.
10. UNLESS OTHERWISE NOTED ALL DRAINS COLLECTED BY LOCAL DRAIN SYSTEM.
11. NITROGEN SUPPLY THRU HOSE CONNECTIONS.
12. MAIN STEAM ISOLATION VALVES AND BYPASS VALVES SUPPLIED BY ROCKWELL.
13. CONTROL VALVE HAS AN ASSOCIATED SAFETY CLASS 3 ACCUMULATOR AS NOTED;

| | |
|---|---|
| 2-HV-2452-2 | CP2-CIATMS-02 |
| 2-HV-2452-1 | CP2-CIATMS-01 |
| 2-PV-2327 | CP2-MSATRT-03 |
| 2-PV-2326 | CP2-MSATRT-02 |
| 2-PV-2325 | CP2-MSATRT-01 |
| 2-PV-2328 | CP2-MSATRT-04 |

CP-23

14. REFER TO WESTINGHOUSE DWG. 875SD39 SH. 13.
15. DELETED
16. DELETED
17. DELETED
18. FOR TYPICAL ARRANGEMENT REFER TO M1-2120-01, 03.
19. DELETED
20. CAUTION: MAIN STEAM ISOLATION VALVES WILL OPEN UPON LOSS OF POWER TO BOTH TRAIN A AND TRAIN B HYDRAULIC SOLENOIDS UNLESS AIR OPERATED HYDRAULIC PUMP IS DEACTIVATED. SEE M2-2202-02 FOR LOGIC.
21.

| ASSOCIATED MSIV NUM. | TRAIN A HYDR. ISOL. VALVE | TRAIN B HYDR. ISOL. VALVE |
|---|---|---|
| 2-HV-2333A | 2MS-0064A | 2MS-0064B |
| 2-HV-2334A | 2MS-0029A | 2MS-0029B |
| 2-HV-2335A | 2MS-0027A | 2MS-0027B |
| 2-HV-2336A | 2MS-0066A | 2MS-0066B |

22. EACH ORIFICE MAY BE ISOLATED USING EITHER MANUAL ISOLATION VALVE DURING NORMAL POWER OPERATION.
23. STEAM GENERATOR LEAK DETECTOR ASSEMBLY IS LOCATED ABOVE THE DRIP POT. IT IS A PROXIMITY DEVICE MOUNTED ON TOP OF THE PIPE INSULATION.

| DRAWING | M2-0202 | REV | CP-17 |
|---|---|---|---|
| HAS BEEN SPLIT INTO THE FOLLOWING SHEETS: | | | |
| M2-0202 | | | |
| M2-0202-03 | | | |

FSAR FIGURE 10.3-1

THIS DRAWING CREATED ELECTRONICALLY

**CLASS I**
(NUCLEAR SAFETY-RELATED)

| | |
|---|---|
| SAFETY CLASS 1 | SEISMIC CATEGORY I |
| SAFETY CLASS 2 | CLASS 1E |
| SAFETY CLASS 3 | ASSOCIATED CIRCUITS |

LUMINANT
CPNPP
GLEN ROSE, TEXAS

FLOW DIAGRAM
MAIN STEAM REHEAT
AND STEAM DUMP

| DWG. NO. | SH. NO. | REV. |
|---|---|---|
| M2-0202 | - | CP-23 |

REF CKD CP17 1L 1-96

| REV | DWN | CHK | APVD | REMARKS |
|---|---|---|---|---|
| CP-16 | DLK 02-18-2009 | MM 02-18-2009 | | THIS DRAWING REVISED TO INCORPORATE DESIGN CHANGE FDA 2009-000538-01-00 PER SK-0001-09-000538-01-00. |

NOTES:

1. * INSTRUMENT BY WESTINGHOUSE.
2. ** BY ACPSI.
3. FOR GENERAL SYMBOLS AND NOTES SEE DRAWING M1-0200.
4. DELETE
5. DELETE
6. DELETE
7. ☐ INDICATES CUSTOMER'S PIPE CONNECTION TO ACPSI SUPPLIED EQUIPMENT.
8. FOR DETAILS OF MSR SEE DRAWING M2-0209 AND M2-0209-A.
9. SLOPED DOWNWARD WITH A 2 FT MINIMUM VERTICAL LEG.
10. ▭ REPRESENTS DRAIN CONNECTIONS SHOWN ON FD M2-0237-01.
11. DELETED
12. DELETED
13. DELETED
14. SEAL FLUID TO DRAIN VALVE LANTERN RING IS SUPPLIED FROM THE CONDENSATE SYSTEM. SEE M2-0204, LOC: C/D-4.
15. UNLESS OTHERWISE NOTED ALL DRAINS COLLECTED BY LOCAL DRAIN SYSTEM.
16. *** REFER TO ACPSI SPOOL PIECE PART NUMBERS FOR MATERIAL REQUIREMENTS.

LEGEND:

- MAIN STEAM
- HOT REHEAT (BY ACPSI)
- COLD REHEAT (BY ACPSI)
- AUXILIARY PIPING

FSAR FIGURE 10.3-1

THIS DRAWING CREATED ELECTRONICALLY

DRAWING 2323-M2-0202-01 REV CP-1 HAS BEEN SPLIT INTO THE FOLLOWING SHEETS:

- M2-0202-01
- M2-0202-01A
- M2-0202-01B

NON–SAFETY

LUMINANT
CPNPP
GLEN ROSE, TEXAS

FLOW DIAGRAM
MAIN STEAM REHEAT
AND STEAM DUMP

| DWG. NO. | SH. NO. | REV. |
|---|---|---|
| M2-0202 | 01 | CP-16 |

SSSSSSDATFSSSSS

me926600.dgn A M2-0202-01

| REV | DWN | CHKD | APVD | REMARKS |
|---|---|---|---|---|
| CP-14 | DLK 07-19-2017 | GAW 07-19-2017 | | THIS DRAWING REVISED TO INCORPORATE DESIGN CHANGE FDA 2017-000111-01-00 PER SK-0003-17-000111-01-00. |

NOTES:

1. * INSTRUMENT BY WESTINGHOUSE.
2. ** BY ACPSI.
3. FOR GENERAL SYMBOLS AND NOTES SEE DRAWING M1-0200.
4. DELETE
5. 10x8 REDUCERS ARE WELDED TO THE VALVE BODY BY FISHER CONTROLS.
6. DELETE
7. ☐ INDICATES CUSTOMER'S PIPE CONNECTION TO ACPSI SUPPLIED EQUIPMENT.
8. FOR DETAILS OF MSR SEE DRAWING M2-0209.
9. DELETED
10. ▭ REPRESENTS DRAIN CONNECTIONS SHOWN ON FD M2-0237-01.
11. DELETED
12. DELETED
13. DELETED
14. SEAL FLUID TO DRAIN VALVE LANTERN RING IS SUPPLIED FROM THE CONDENSATE SYSTEM. SEE M2-0204, LOC: C/D-4.
15. DELETE
16. THERMOCOUPLES 2-TE-6580 ( 2-RB01T012 )AND 2-TE-6581 ( 2-RB02T012 )ARE EMBEDDED NEAR THE INLET STEAM SURFACE OF THE TUBESHEET.
17. *** REFER TO ACPSI SPOOL PIECE PART NUMBERS FOR MATERIAL REQUIREMENTS.
18. VALVE MAY BE THROTTLED AS REQUIRED TO MAINTAIN DESIRED DRAIN LEVEL AT LEVEL GAUGE.

LEGEND:

- MAIN STEAM
- HOT REHEAT (BY ACPSI)
- COLD REHEAT (BY ACPSI)
- AUXILIARY PIPING

DRAWING 2323-M2-0202-01 REV CP-1 HAS BEEN SPLIT INTO THE FOLLOWING SHEETS:

| |
|---|
| M2-0202-01 |
| M2-0202-01A |
| M2-0202-01B |
| |

NON–SAFETY

LUMINANT
CPNPP
GLEN ROSE, TEXAS

FLOW DIAGRAM
MAIN STEAM REHEAT
AND STEAM DUMP

| DWG. NO. | SH. NO. | REV. |
|---|---|---|
| M2-0202 | 01A | CP-14 |

FSAR FIGURE 10.3-1

THIS DRAWING CREATED ELECTRONICALLY

REF CHKD CP-11 10/04/00

me873800.dgn A M2-0202-01A B C D E F G FINAL PRINT H

| REV | DWN | CHKD | APVD | REMARKS |
|---|---|---|---|---|
| CP-8 | JRMC 09-12 2007 | DJL 09-13 2007 | | THIS DRAWING REVISED TO INCORPORATE DESIGN CHANGE FDA-2007-000138-01-00 PER SK-0003-07-000138-01-00. |

NOTES

1. DELETED
2. ** BY ACPSI.
3. FOR GENERAL SYMBOLS AND NOTES SEE DRAWING M1-0200.
4. *** BY GENERAL ELECTRIC.
5. 10x8 REDUCERS ARE WELDED TO THE VALVE BODY BY FISHER CONTROLS.
6. ◯ INDICATES CUSTOMER'S PIPE CONNECTIONS TO WESTINGHOUSE SUPPLIED CONDENSER.
7. □ INDICATES CUSTOMER'S PIPE CONNECTION TO ACPSI SUPPLIED EQUIPMENT.
8. FOR DETAILS OF MSR SEE DRAWING M2-0209-0.
9. SLOPED DOWNWARD WITH A 2 FT MINIMUM VERTICAL LEG.
10. ▭ REPRESENTS DRAIN CONNECTIONS SHOWN ON FD M2-0237-01.
11. ALL I&C CHANNEL NUMBERS WILL HAVE PREFIX TWO (2), i.e. 2-TE-3229. CONTROLS FOR CHANNEL NUMBERS ABOVE 6000, AS 2-HV-6582, ARE FOUND IN TURBINE INSTRUMENTATION & CONTROL DIAGRAMS.
12. ⬡ INDICATES CUSTOMER'S PIPE CONNECTION TO GENERAL ELECTRIC SUPPLIED EQUIPMENT.
13. DELETED
14. SEAL FLUID TO DRAIN VALVE LANTERN RING IS SUPPLIED FROM THE CONDENSATE SYSTEM. SEE M2-0204, LOC: C/D-6.
15. UNLESS OTHERWISE NOTED ALL DRAINS COLLECTED BY LOCAL DRAIN SYSTEM.
16. REFER TO ACPSI SPOOL PIECE PART NUMBERS FOR MATERIAL REQUIREMENTS.

LEGEND

- MAIN STEAM
- HOT REHEAT (BY ACPSI)
- COLD REHEAT (BY ACPSI)
- AUXILIARY PIPING

FSAR FIGURE 10.3-1

THIS DRAWING CREATED ELECTRONICALLY

DRAWING 2323-M2-0202-01 REV CP-1
HAS BEEN SPLIT INTO THE FOLLOWING SHEETS:
M2-0202-01
M2-0202-01A
M2-0202-01B

NON–SAFETY

LUMINANT
CPSES
GLEN ROSE, TEXAS

FLOW DIAGRAM
MAIN STEAM REHEAT
AND STEAM DUMP

DWG. NO. M2-0202 | SH. NO. 01B | REV. CP-8

FINAL PRINT

| REV | DWN | CHK | APVD | REMARKS |
|---|---|---|---|---|
| CP-16 | DLK 10-10 2005 | SDM 10-10 2005 | | THIS DRAWING REVISED TO INCORPORATE DESIGN CHANGE FDA 2005-003740-01-00 PER SK-0001-05-003740-01-00. |

NOTES:
1. DELETED
2. UNLESS OTHERWISE NOTED ALL DRAINS COLLECTED BY LOCAL DRAIN SYSTEM.
3. FOR GENERAL NOTES AND SYMBOLS SEE DRAWING M1-0200.
4. CUSTOMERS PIPE CONNECTIONS, AS SUPPLIED BY WESTINGHOUSE DRAWING 1106362 INDICATED BY ○.
5. ALL NUCLEAR CLASS LINES 2" AND SMALLER WILL HAVE THE SAME PIPE CATEGORY AS THE MAIN RUN LINE UNLESS NOTED OTHERWISE.
6. ALL I&C CHANNEL NUMBERS WILL HAVE PREFIX TWO (2), I.E. 2-TE-2341.
7. DENOTES RADIOACTIVE WASTE MANAGEMENT SYSTEM CONTINUES ON IDENTIFIED DRAWING.
8. ** EQUIPMENT USED IN MITIGATION OF HELB.
9. PIPING CATEGORY SHOWN AS BUILT.

FSAR FIGURE 10.3-1

THIS DRAWING CREATED ELECTRONICALLY

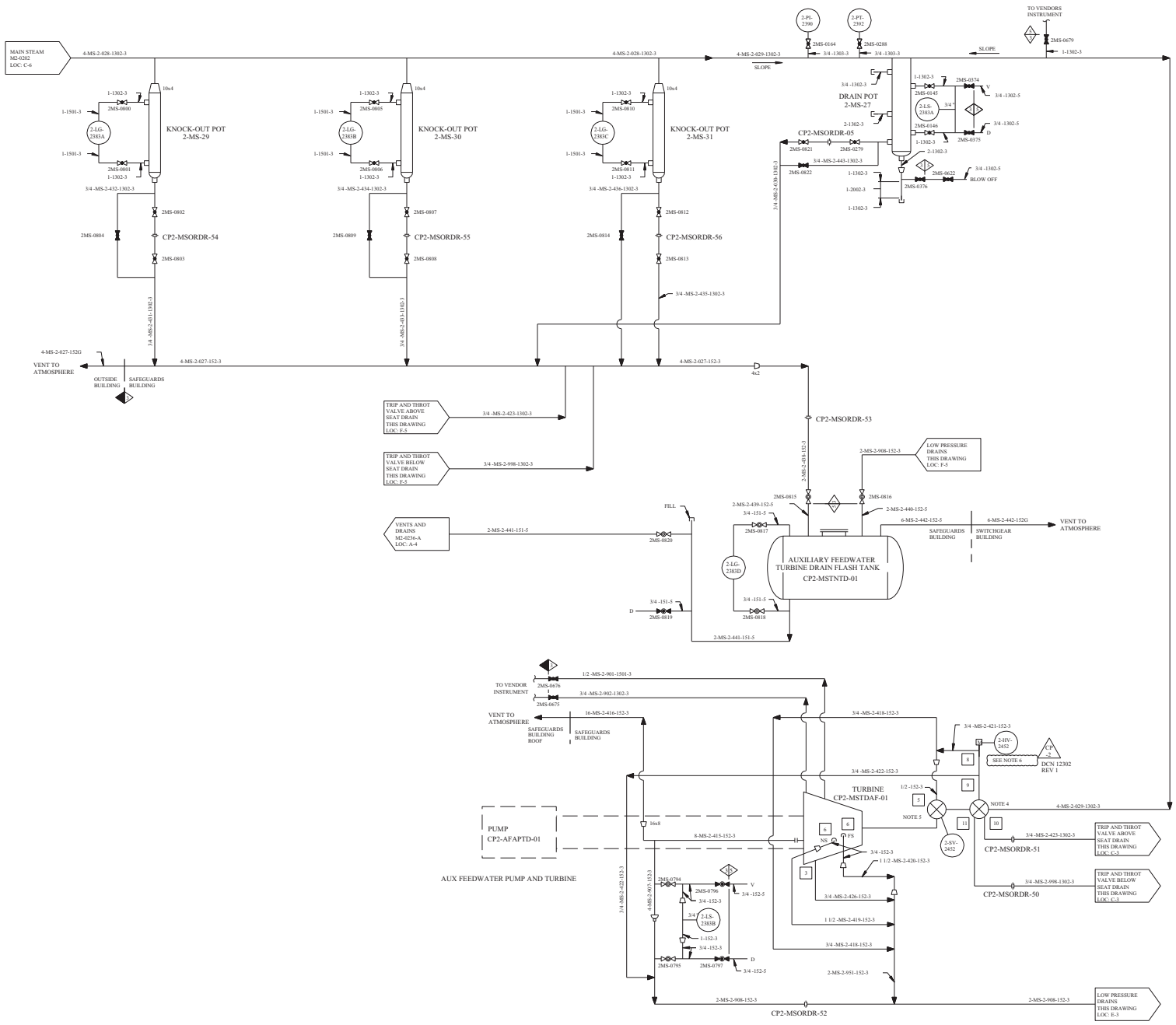
CLASS I
(NUCLEAR SAFETY-RELATED)
SAFETY CLASS 1 — SEISMIC CATEGORY I
SAFETY CLASS 2 — CLASS 1E
SAFETY CLASS 3 — ASSOCIATED CIRCUITS

LUMINANT
CPSES
GLEN ROSE, TEXAS

FLOW DIAGRAM
MAIN STEAM REHEAT
AND STEAM DUMP

DWG. NO. M2-0202 | SH. NO. 02 | REV. CP-16

me623600.dgn | A M2-0202-02 | FINAL PRINT




| REV. | DWN | CHKD | APVD | REMARKS |
|---|---|---|---|---|
| CP-2 | S.A. 11-17-1989 | | | THIS DRAWING REVISED TO INCORPORATE DESIGN CHANGE DCN 12302 REV 1. |

NOTES:

1. FOR GENERAL NOTES AND SYMBOLS SEE DRAWING M1-0200.
2. UNLESS OTHERWISE NOTED ALL DRAINS COLLECTED BY LOCAL DRAIN SYSTEM.
3. [1] REPRESENTS PURCHASER PIPE CONNECTIONS TO TERRY TURBINE.
4. TURBINE TRIP AND THROTTLE VALVE, SUPPLIED BY CP-0007.
5. TURBINE GOVERNER VALVE, SUPPLIED BY CP-0007.
6. THE TRIP AND THROTTLE VALVE IS A SOLENOID ACTUATED TRIP VALVE. THE VALVE CAN BE MANUALLY OPENED BY USE OF THE HAND WHEEL. ELECTRICAL POWER TO THE MOTOR OPERATOR HAS BEEN DISCONNECTED.

CP-2 DCN 12302 REV 1

FSAR FIGURE 10.3-1

THIS DRAWING CREATED ELECTRONICALLY

DRAWING M2-0202 REV CP-17
HAS BEEN SPLIT INTO THE FOLLOWING SHEETS:
M2-0202
M2-0202-03

CLASS I
(NUCLEAR SAFETY-RELATED)
SAFETY CLASS 1 — SEISMIC CATEGORY I
SAFETY CLASS 2 — CLASS 1E
SAFETY CLASS 3 — ASSOCIATED CIRCUITS

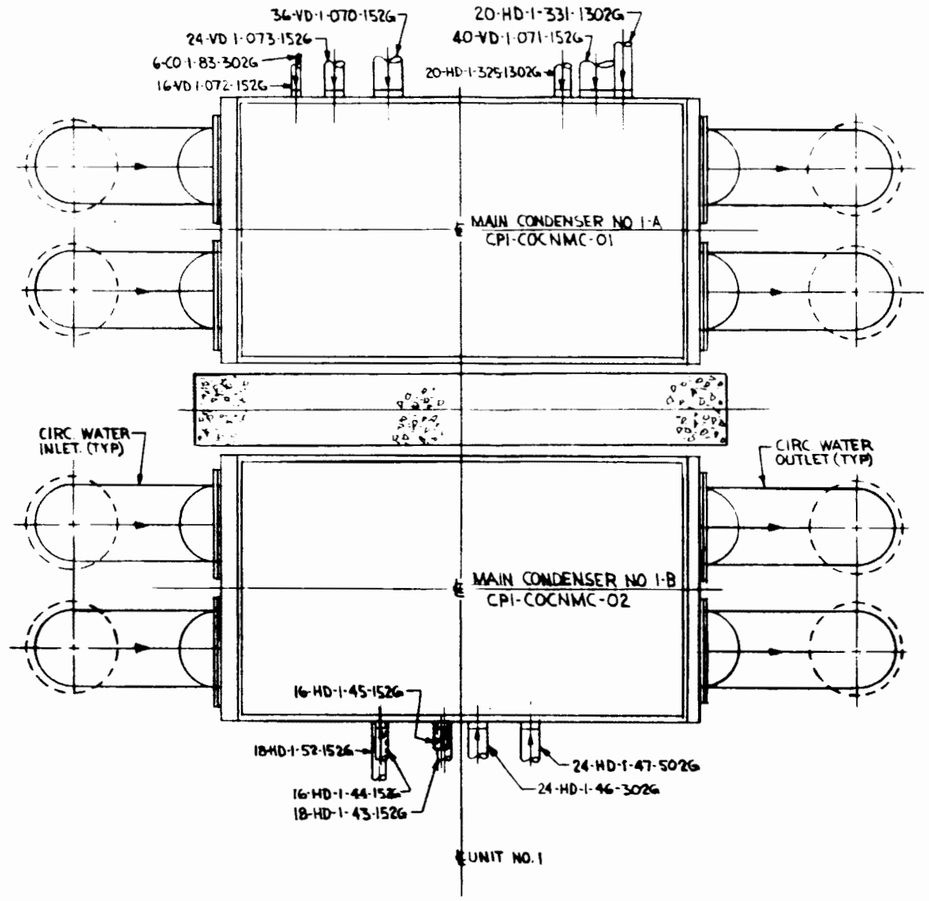
TXU ELECTRIC
CPSES
GLEN ROSE, TEXAS

FLOW DIAGRAM
MAIN STEAM REHEAT
AND STEAM DUMP

| DWG. NO. | SH. NO. | REV. |
|---|---|---|
| M2-0202 | 03 | CP-2 |

$$$$$$$D\TA\TE$$$$$$

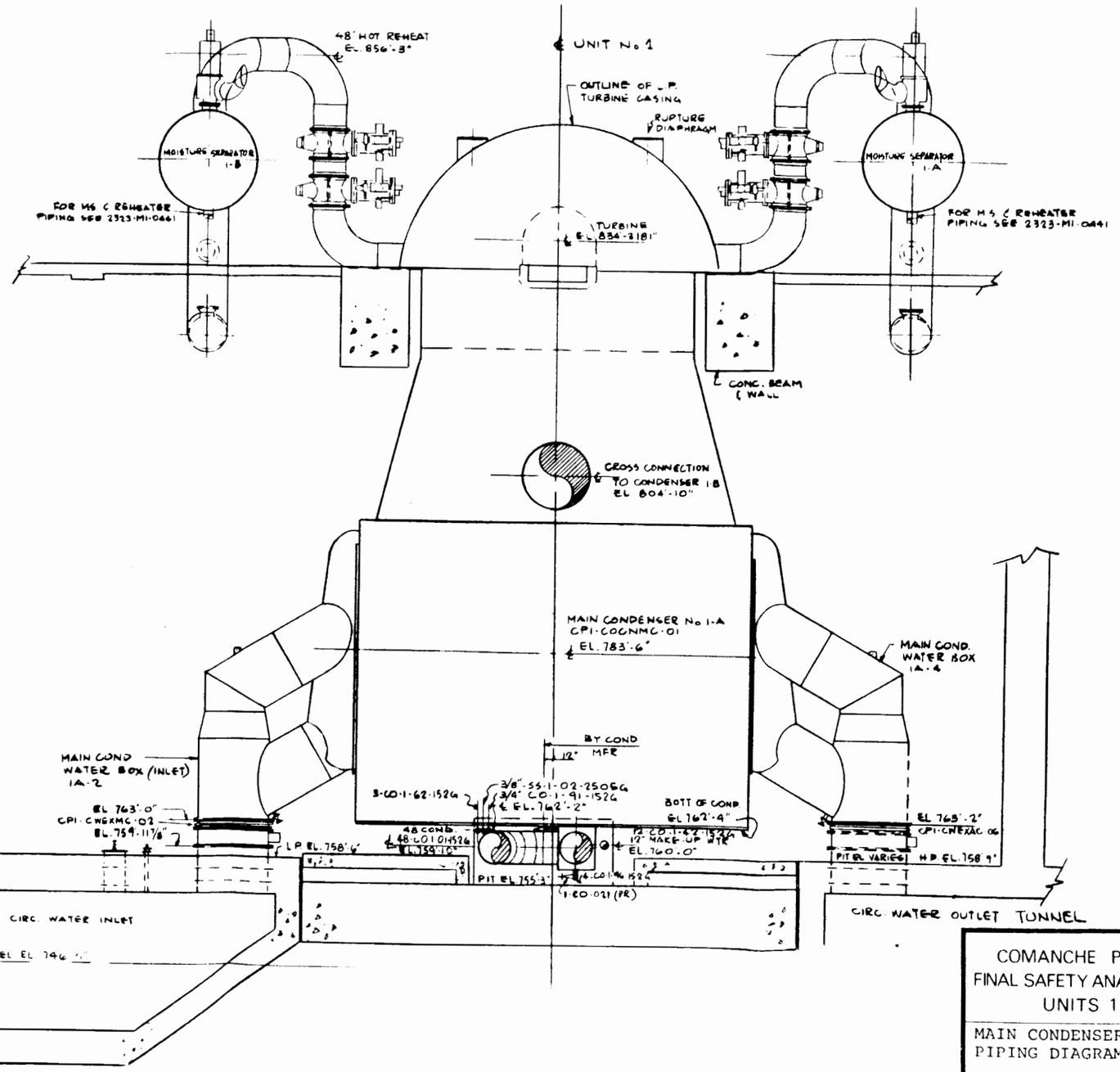
me0001xc.dgn




COMANCHE PEAK S.E.S
FINAL SAFETY ANALYSIS REPORT
UNITS 1 and 2

MAIN CONDENSER
PIPING DIAGRAM

FIGURE 10.4-1




COMANCHE PEAK S.E.S
FINAL SAFETY ANALYSIS REPORT
UNITS 1 and 2

MAIN CONDENSER
PIPING DIAGRAM ELEVATIONS

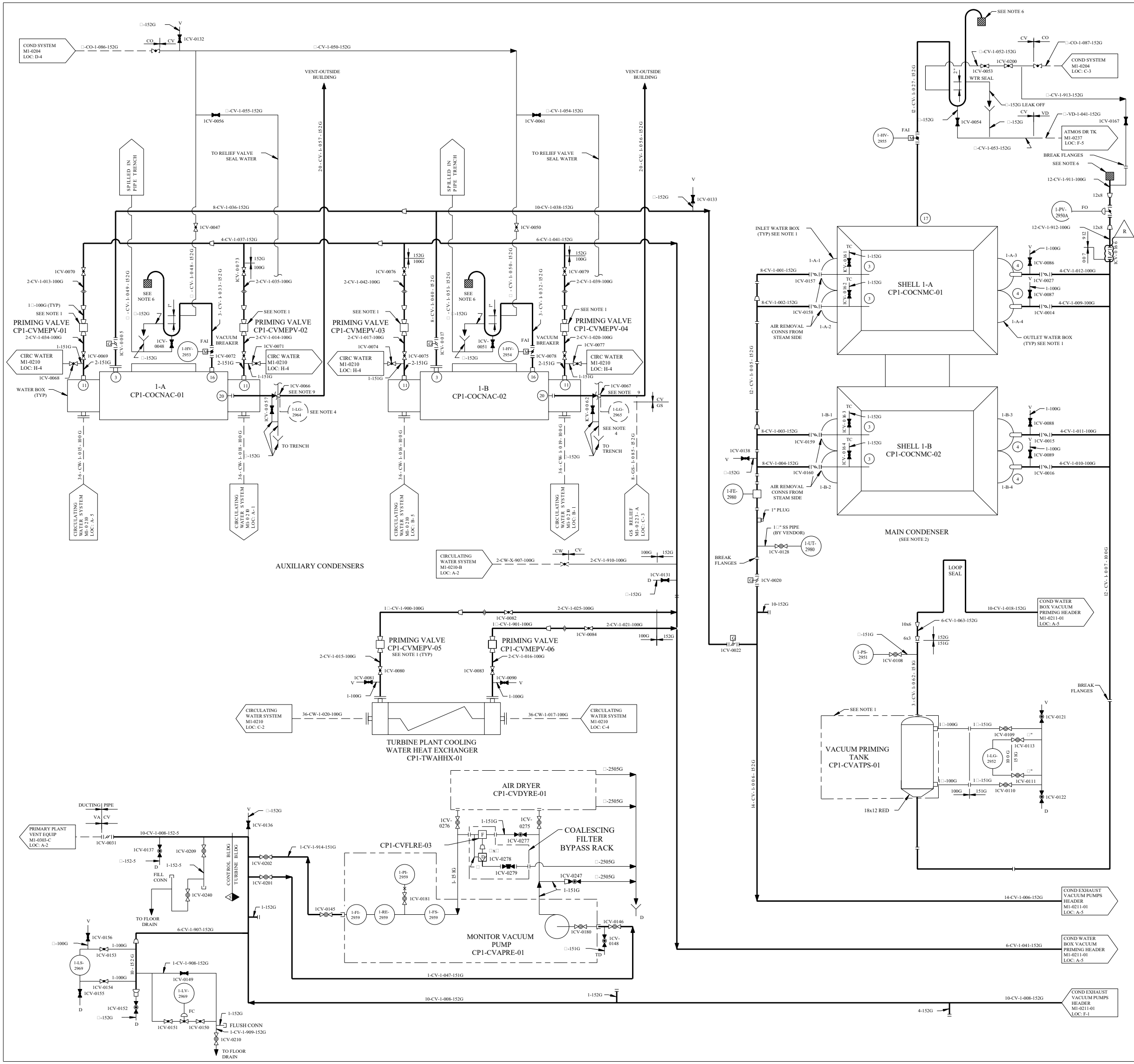
FIGURE 10.4-2

5/76

| REV | DWN | CHKD | APVD | REMARKS |
|---|---|---|---|---|
| CP-43 | DLK 05-25 2017 | GAW 05-25 2017 | | THIS DRAWING REVISED TO INCORPORATE DESIGN CHANGE FDA 2016-000079-01-00 PER SK-0001-16-000079-01-00. |

NOTES:

1. BY CONDENSER VACUUM PUMP SUPPLIER.
2. FOR CONDENSER INSTRUMENTATION SEE DWG M1-0210.
3. DELETED
4. BY AUXILIARY CONDENSER SUPPLIER.
5. (4) VENDOR CONNECTION NUMBER (TYPICAL).
6. COARSE WIRE MESH SCREEN.
7. FOR MECH SYMBOLS AND NOTES SEE DWG M1-0200.
8. ALL VALVE MATERIAL FOR VALVES 2 INCHES AND SMALLER ASSOCIATED WITH PIPING CATEGORY 100G WILL BE BRONZE WITH SCREWED ENDS, EXCEPT AS NOTED BY *.
9. IN-LINE RELIEF VALVE.
10. ALL DRAINS TO BE COLLECTED BY LOCAL FLOOR DRAIN SYSTEM, UNLESS OTHERWISE NOTED.




FSAR FIGURE 10.4-3

THIS DRAWING CREATED ELECTRONICALLY

CLASS II

LUMINANT
CPNPP
GLEN ROSE, TEXAS

FLOW DIAGRAM
CONDENSER VACUUM AND
WATER BOX PRIMING SYSTEM

| DWG. NO. | SH. NO. | REV. |
|---|---|---|
| M1-0211 | - | CP-43 |

FINAL PRINT



REF CKD CP-24 12/20/96

| REV | DWN | CHKD | APVD | REMARKS |
|---|---|---|---|---|
| CP-22 | JESC 10-10 2007 | SM 10-11 2007 | | THIS DRAWING REVISED TO INCORPORATE DESIGN CHANGE FDA 2007-002153-01-00 PER SK-0001-07-002153-01-00. |

NOTES:

1. BY CONDENSER VACUUM PUMP SUPPLIER.
2. FOR MECHANICAL SYMBOLS AND NOTES SEE DRAWING M1-0200.
3. ALL VALVE MATERIAL FOR VALVES 2 INCHES AND SMALLER ASSOCIATED WITH PIPING CATEGORY 100G WILL BE BRONZE WITH SCREWED ENDS.
4. TAG NOS. FOR CONDENSER VACUUM PUMP SPEED REDUCERS ARE CP1-CVVPGR-01, CP1-CVVPGR-02 & CP1-CVVPGR-03.
5. ALL DRAINS TO BE COLLECTED BY LOCAL FLOOR DRAIN SYSTEM, UNLESS OTHERWISE NOTED.

CONDENSER EXHAUSTING VACUUM PUMPS

FSAR FIGURE 10.4-3

THIS DRAWING CREATED ELECTRONICALLY

NON–SAFETY

LUMINANT
CPNPP
GLEN ROSE, TEXAS

FLOW DIAGRAM
CONDENSER VACUUM &
WATER BOX PRIMING SYSTEM

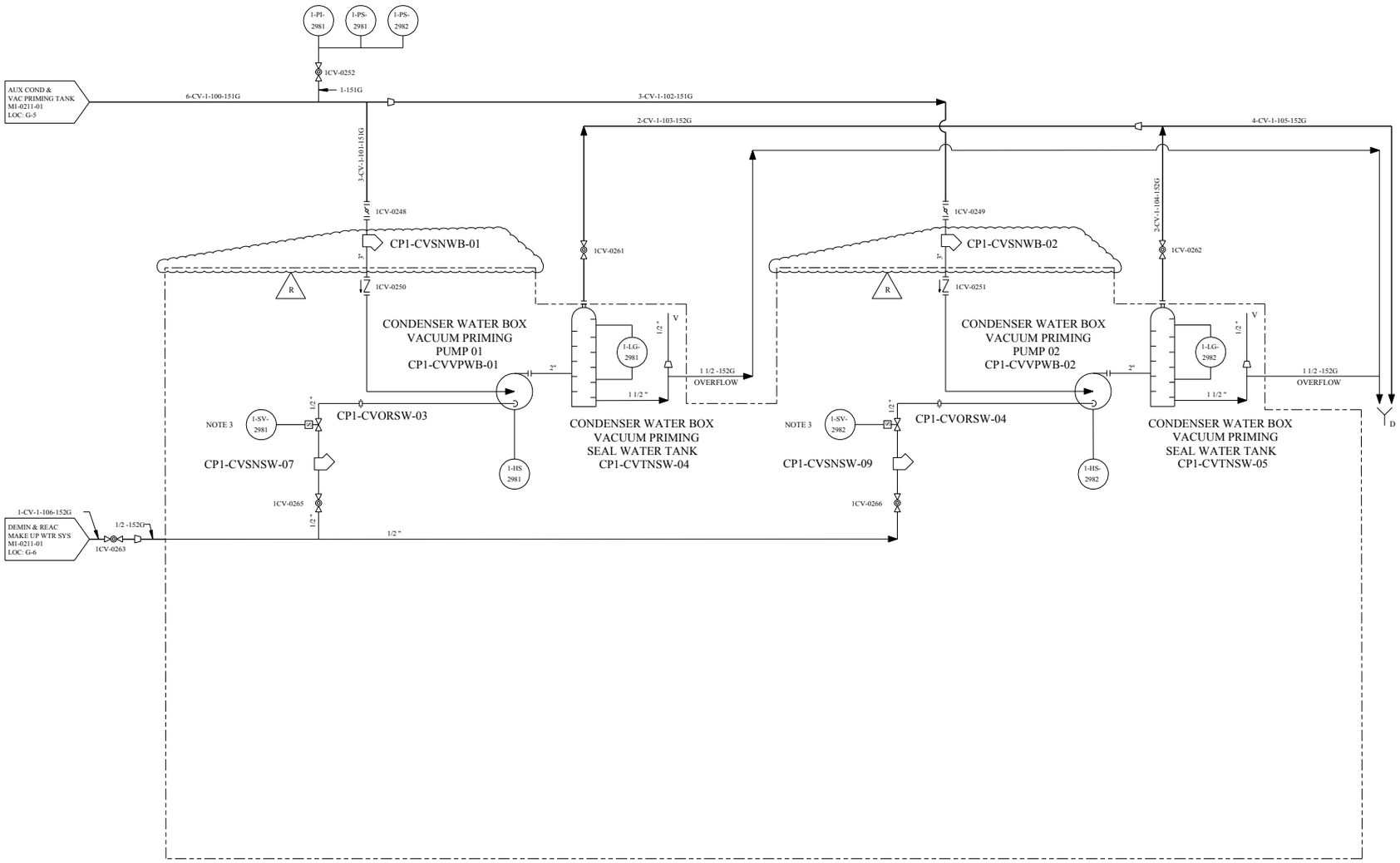
| DWG. NO. | SH. NO. | REV. |
|---|---|---|
| M1-0211 | 01 | CP-22 |

< FINAL PRINT >

REF CKD CP-15 5/1/98

$$$$$$$DATE$$$$$$

me910200.dgn A M1-0211-01 B C D E F G H




| REV | DWN | CHKD | APVD | REMARKS |
|---|---|---|---|---|
| CP-7 | JRMC 10-29 2008 | SM 10-29 2008 | | THIS DRAWING REVISED TO INCORPORATE DESIGN CHANGE FDA-2005-004951-02-01 PER SK-0036-05-004951-02-00. |

NOTES:

1. FOR MECH. SYMBOLS AND NOTES SEE DWG. M1-0200.
2. ALL DRAINS TO BE COLLECTED BY LOCAL FLOOR DRAIN SYSTEM, UNLESS OTHERWISE NOTED.
3. SOLENOID VALVE HAS A MANUAL OPERATION FEATURE TO ALLOW OR STOP FLOW WHEN DE-ENERGIZED.

REFERENCE DRAWINGS

1. M1-2211-03 ICD
2. E1-0071-95 SCHEMATIC DIAGRAM
3. 14-9827 VENDOR WIRING DIAGRAM

FSAR FIGURE 10.4-3

THIS DRAWING CREATED ELECTRONICALLY

NON–SAFETY

LUMINANT
CPNPP
GLEN ROSE, TEXAS

**FLOW DIAGRAM CONDENSER VACUUM & WATER BOX PRIMING SYSTEM**

| DWG. NO. | SH. NO. | REV. |
|---|---|---|
| M1-0211 | 02 | CP-7 |

REF CHKD 07-15-2002

$$$$$$$$DATE$$$$$$$$

me906000.dgn M1-0211-02 < FINAL PRINT >

| REV | DWN | CHKD | APVD | REMARKS |
|---|---|---|---|---|
| CP-29 | SM 11-10 2009 | JRMC 11-10 2009 | | THIS DRAWING REVISED TO INCORPORATE DESIGN CHANGE FDA 2003-002540-08-00 PER SK-0002-03-002540-08-00. |

NOTES:

1. BY CONDENSER VACUUM PUMP SUPPLIER.
2. FOR CONDENSER INSTRUMENTATION SEE DRAWING M2-0210.
3. DELETED
4. DELETED
5. (4) VENDOR CONNECTION NUMBER (TYPICAL).
6. DELETED
7. FOR MECH SYMBOLS AND NOTES SEE DRAWING M1-0200.
8. ALL VALVE MATERIAL FOR VALVES 2" INCHES AND SMALLER ASSOCIATED WITH PIPING CATEGORY '100G WILL BE BRONZE WITH SCREWED ENDS.
9. ALL DRAINS TO BE COLLECTED BY LOCAL FLOOR DRAIN SYSTEM. UNLESS OTHERWISE NOTED.

FSAR FIGURE 10.4-3

THIS DRAWING CREATED ELECTRONICALLY

DRAWING 2323-M2-0211 REV CP-2
HAS BEEN SPLIT INTO THE FOLLOWING SHEETS:
M2-0211
M2-0211-01

CLASS II

LUMINANT
CPNPP
GLEN ROSE, TEXAS

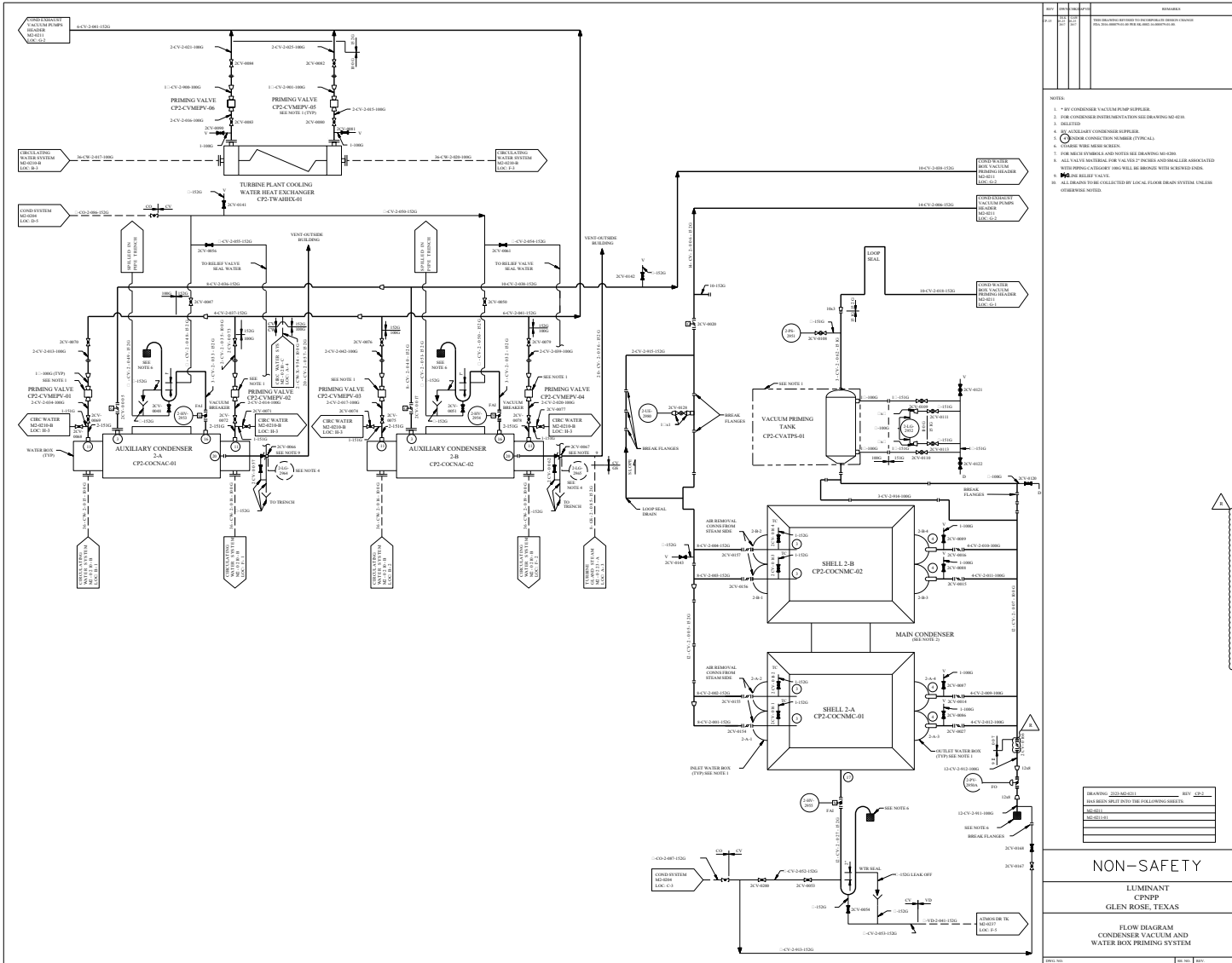
FLOW DIAGRAM
CONDENSER VACUUM AND
WATER BOX PRIMING SYSTEM

DWG. NO. M2-0211 | SH. NO. - | REV. CP-29

REF CHKD 07-24-2002

$$$$$$$$DATE$$$$$$

me962100.dgn M2-0211 < FINAL PRINT >




| REV | DRWN | DES/ENGR | APP'D | REMARKS |
|---|---|---|---|---|
| CP-15 | MAY 2017 | MAY 2017 | | THIS DRAWING REVISED TO INCORPORATE DESIGN CHANGE FDA-2016-0005793-01 PER DCARD 16-00005793-00. |

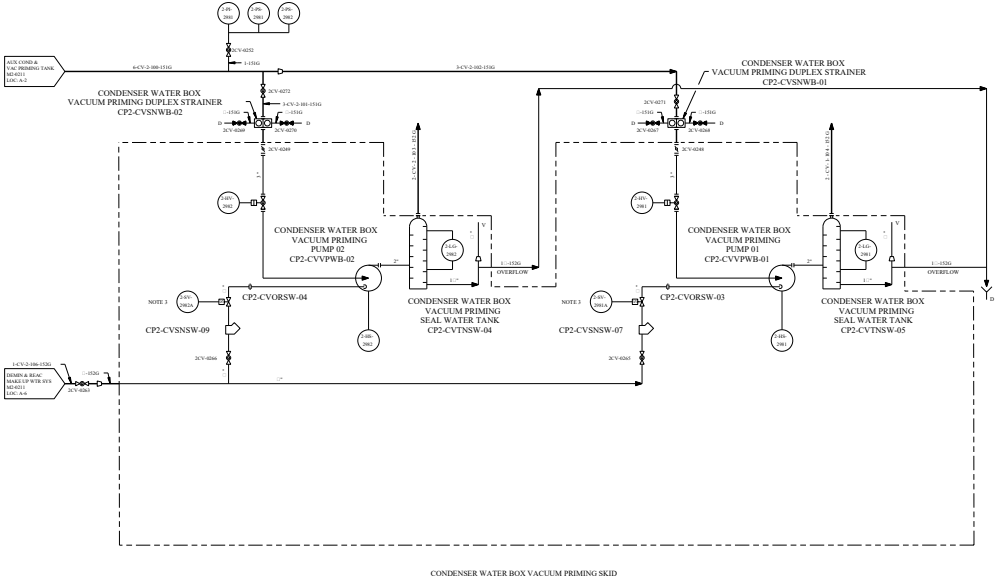
NOTES:

1. * BY CONDENSER VACUUM PUMP SUPPLIER.
2. FOR CONDENSER INSTRUMENTATION SEE DRAWING M2-0210.
3. DELETED
4. SV AUXILIARY CONDENSER SUPPLIER.
5. (1) INDOR CONNECTION NUMBER (TYPICAL).
6. ⊠ STAINL WIRE MESH SCREEN.
7. FOR MECH SYMBOLS AND NOTES SEE DRAWING M5-0200.
8. ALL VALVE MATERIAL FOR VALVES 2" INCHES AND SMALLER ASSOCIATED WITH PIPING CATEGORY 108G WILL BE BRONZE WITH SCREWED ENDS.
9. ⊠ INE RELIEF VALVE.
10. ALL DRAINS TO BE COLLECTED BY LOCAL FLOOR DRAIN SYSTEM. UNLESS OTHERWISE NOTED.

DRAWING 2323-M2-0211 REV CP-2 HAS BEEN SPLIT INTO THE FOLLOWING SHEETS:
M2-0211
M2-0211-01

FSAR FIGURE 10.4-3

THIS DRAWING CONTAINS LASER SENSITIVE INK




| REV | DSN'D | DRN'D | CHK'D | REMARKS |
|---|---|---|---|---|
| CP-6 | TCE 9/28/12 | TCE 9/28/12 | TMW 9/28/12 | THIS DRAWING REVISED HISTORICALLY TO ADD FSAR FIGURE NUMBER |

NOTES:

1. FOR MECH SYMBOLS AND NOTES SEE DWG M1-0200.
2. ALL DRAINS TO BE COLLECTED BY LOCAL FLOOR DRAIN SYSTEM, UNLESS OTHERWISE NOTED.
3. SOLENOID VALVE HAS A MANUAL OPERATION FEATURE TO ALLOW OR STOP FLOW WHEN DE-ENERGIZED.

REFERENCE DRAWINGS:

1. M2-2211-03 ICD
2. E2-0071-95 SCHEMATIC DIAGRAM
3. 14-0027 VENDOR WIRING DIAGRAM

FSAR FIGURE 10.4-3

THIS DRAWING CREATED ELECTRONICALLY

NON–SAFETY

LUMINANT
CPNPP
GLEN ROSE, TEXAS

FLOW DIAGRAM
CONDENSER VACUUM AND
WATER BOX PRIMING SYSTEM

| DWG. NO. | REV. NO. | REV |
|---|---|---|
| M2-0211 | 02 | CP-6 |

FINAL PRINT

REF: CSKD 07-15-2012 CP-3

| REV | DWN | CHKD | APVD | REMARKS |
|---|---|---|---|---|
| CP-18 | GLK 06-02-2005 | MM 06-02-2005 | | THIS DRAWING REVISED TO INCORPORATE DESIGN CHANGE FDA 2004-001830-01-00 PER SK-0001-04-001830-01-00. |

NOTES:

1. ALL ITEMS SHOWN IN PHANTOM INSIDE THIS BOUNDARY ARE SUPPLIED BY UPC. SHOWN WITH FULL LINES ARE PROVIDED BY TU ELECTRIC.
2. LOOP SEALS SHALL BE ARRANGED WITH 3 FEET 3.37 INCHES OF VERTICAL LOOP.
3. REPRI SENTS DRAIN CONNECTIONS SHOWN ON DRAWING M1-0237-01A.
4. LOOP SEAL FILL CONNECTIONS (AS NOTED) WILL BE PROVIDED WITH A THREADED CAP FOR LOOP FILL.
5. FOR MECHANICAL SYMBOLS AND NOTES SEE DRAWING M1-0200.

FSAR FIGURE 10.4-4

THIS DRAWING CREATED ELECTRONICALLY

| DRAWING 2323-M1-0223 REV CP-5 HAS BEEN SPLIT INTO THE FOLLOWING SHEETS: |
|---|
| M1-0223 |
| M1-0223-A |

# CLASS II

TXU POWER
CPSES
GLEN ROSE, TEXAS

FLOW DIAGRAM
TURBINE GLAND STEAM SYSTEM

| DWG. NO. | SH. NO. | REV. |
|---|---|---|
| M1-0223 | - | CP-18 |

FINAL PRINT

REF CKD CP-16 6-23-98

me677000.dgn A M1-0223 B C D E F G H

| REV | DWN | CHKD | APVD | REMARKS |
|---|---|---|---|---|
| CP-10 | DLK 05-01 2018 | GAW 05-02 2018 | MHP 05-03 2018 | THIS DRAWING REVISED TO INCORPORATE EDITORIAL CHANGES PER AI-CR-2018-003023-1. |

NOTES:

1. ALL ITEMS SHOWN IN PHANTOM INSIDE THIS BOUNDARY ARE SUPPLIED BY G.E. PIPING, INSTRUMENTS, AND VALVES INSIDE THIS BOUNDARY WHICH ARE SHOWN WITH FULL LINES ARE PROVIDED BY TU ELECTRIC.
2. LOOP SEALS SHALL BE ARRANGED WITH 3 FEET 3.37 INCHES OF VERTICAL LOOP.
3. REPRESENTS DRAIN CONNECTIONS SHOWN ON DRAWING M1-0237-01A.
4. LOOP SEAL FILL CONNECTIONS (AS NOTED) WILL BE PROVIDED WITH A THREADED CAP FOR LOOP FILL.
5. FOR MECHANICAL SYMBOLS AND NOTES SEE DRAWING M1-0200.

FSAR FIGURE 10.4-4

THIS DRAWING CREATED ELECTRONICALLY

DRAWING 2323-M1-0223 REV CP-5
HAS BEEN SPLIT INTO THE FOLLOWING SHEETS:

| |
|---|
| M1-0223 |
| M1-0223-A |
| |
| |
| |

CLASS II

LUMINANT
CPNPP
GLEN ROSE, TEXAS

FLOW DIAGRAM
TURBINE GLAND STEAM SYSTEM

| DWG. NO. | SH. NO. | REV. |
|---|---|---|
| M1-0223 | A | CP-10 |

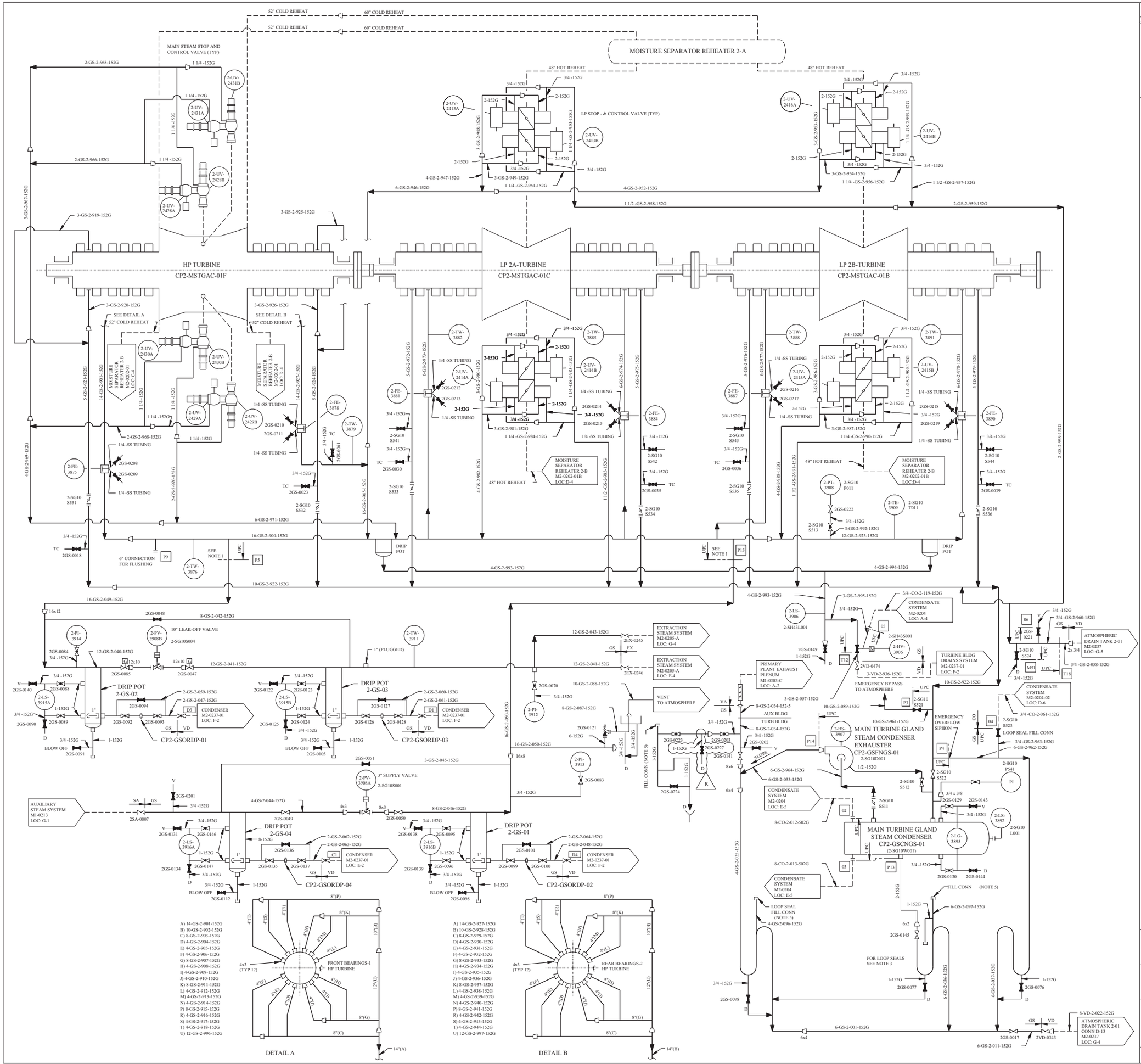
REF CKD 4-26-2018 CP-11

me891000.dgn M1-0223-A FINAL PRINT

| REV | DWN | CHK | APVD | REMARKS |
|---|---|---|---|---|
| CP-13 | GLK 06-02-2005 | MM 06-02-2005 | | THIS DRAWING REVISED TO INCORPORATE DESIGN CHANGE FDA 2004-001830-01-00 PER SK-0002-04-001830-01-00. |

NOTES:

1. ALL ITEMS SHOWN IN PHANTOM INSIDE THIS BOUNDARY WILL BE SUPPLIED BY UPC. INSTRUMENTS AND VALVES INSIDE THIS BOUNDARY WHICH ARE SHOWN IN FULL LINES WILL BE PROVIDED BY TU ELECTRIC.
2. P1 UPC CONNECTION NUMBER (TYPICAL.)
3. LOOP SEALS SHALL BE ARRANGED WITH 3 FEET 3.37 INCHES OF VERTICAL LEG.
4. RP REPRESENTS DRAIN CONNECTIONS SHOWN ON DRAWING M2-0237-01.
5. LOOP SEAL FILL CONNECTIONS WILL BE PROVIDED WITH A THREADED CAP FOR LOOP FILL.
6. UNLESS OTHERWISE NOTED ALL DRAINS TO BE COLLECTED BY LOCAL DRAIN SYSTEM.
7. DELETED
8. FOR MECHANICAL SYMBOLS AND NOTES SEE DRAWING M1-0200.




A) 14-GS-2-901-152G
B) 10-GS-2-902-152G
C) 8-GS-2-903-152G
D) 4-GS-2-904-152G
E) 4-GS-2-905-152G
F) 4-GS-2-906-152G
G) 8-GS-2-907-152G
H) 4-GS-2-908-152G
I) 4-GS-2-909-152G
J) 4-GS-2-910-152G
K) 8-GS-2-911-152G
L) 4-GS-2-912-152G
M) 4-GS-2-913-152G
N) 4-GS-2-914-152G
P) 8-GS-2-915-152G
R) 4-GS-2-916-152G
S) 4-GS-2-917-152G
T) 4-GS-2-918-152G
U) 12-GS-2-996-152G

A) 14-GS-2-927-152G
B) 10-GS-2-928-152G
C) 8-GS-2-929-152G
D) 4-GS-2-930-152G
E) 4-GS-2-931-152G
F) 4-GS-2-932-152G
G) 8-GS-2-933-152G
H) 4-GS-2-934-152G
I) 4-GS-2-935-152G
J) 4-GS-2-936-152G
K) 8-GS-2-937-152G
L) 4-GS-2-938-152G
M) 4-GS-2-939-152G
N) 4-GS-2-940-152G
P) 8-GS-2-941-152G
R) 4-GS-2-942-152G
S) 4-GS-2-943-152G
T) 4-GS-2-944-152G
U) 12-GS-2-997-152G

DRAWING 2323-M2-0223 REV CP-2
HAS BEEN SPLIT INTO THE FOLLOWING SHEETS:

| |
|---|
| M2-0223 |
| M2-0223-A |

FSAR FIGURE 10.4-4

THIS DRAWING CREATED ELECTRONICALLY

NON–SAFETY

LUMINANT
CPSES
GLEN ROSE, TEXAS

FLOW DIAGRAM
TURBINE GLAND STEAM SYSTEM

| DWG. NO. | SH. NO. | REV. |
|---|---|---|
| M2-0223 | - | CP-13 |

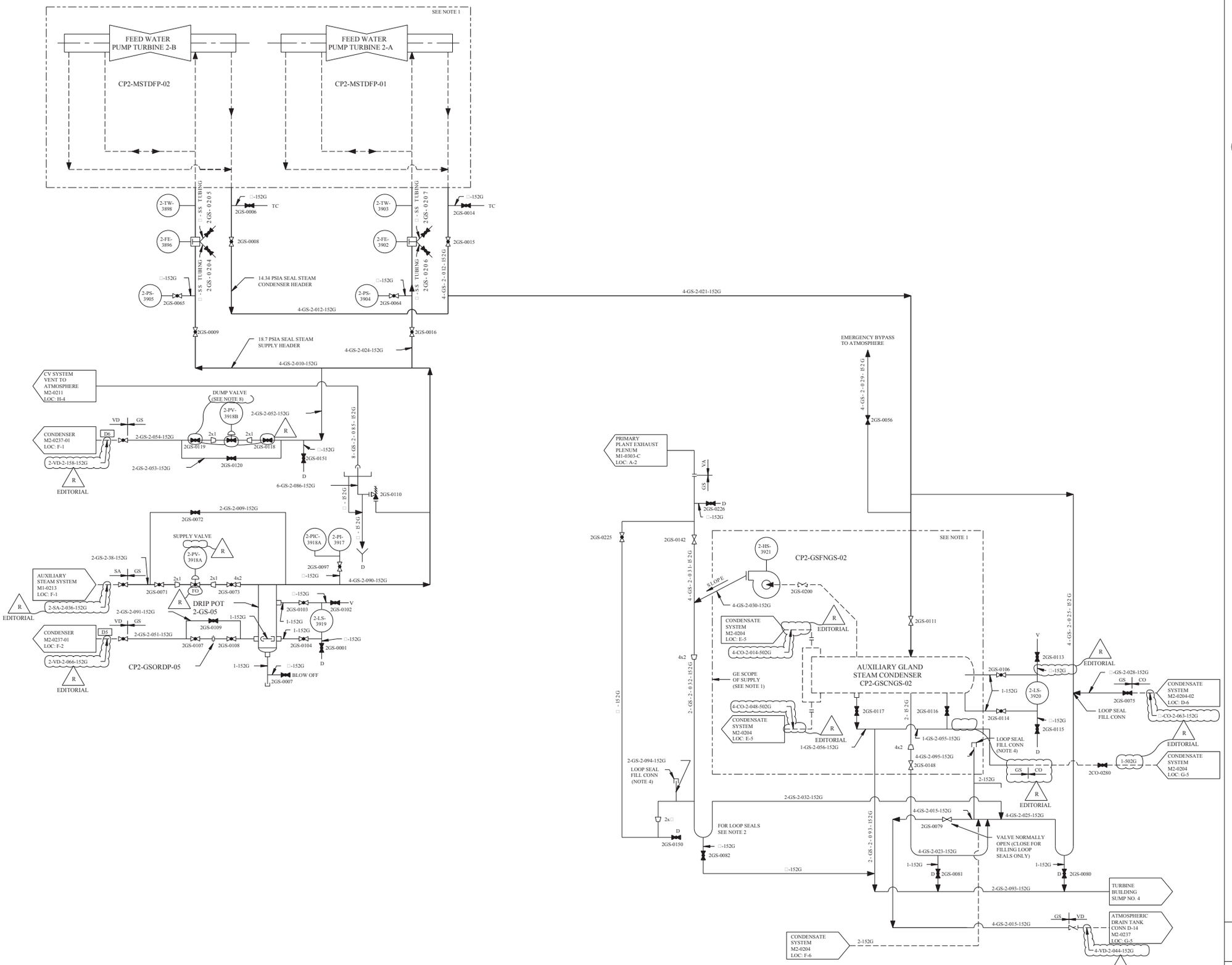
REF CKD 1-29-98

| REV | DWN | CHK | APVD | REMARKS |
|---|---|---|---|---|
| CP-8 | DLK 01-05-2012 | MM 01-13-2012 | | THIS DRAWING REVISED TO INCORPORATE DESIGN CHANGE FDA 2005-004990-02-00 PER SK-0004-05-004990-02-00. EDITORIAL CHANGES AS NOTED. |

NOTES:

1. ALL ITEMS SHOWN IN PHANTOM INSIDE THIS BOUNDARY WILL BE SUPPLIED BY GE. PIPING INSTRUMENTS AND VALVES INSIDE THIS BOUNDARY WHICH ARE SHOWN WITH FULL LINES WILL BE PROVIDED BY TU ELECTRIC.
2. LOOP SEALS SHALL BE ARRANGED WITH 3 FEET 3.37 INCHES OF VERTICAL LEG.
3. R REPRESENTS DRAIN CONNECTIONS SHOWN ON DRAWING M2-0237-01.
4. LOOP SEAL FILL CONNECTIONS WILL BE PROVIDED WITH A THREADED CAP FOR LOOP FILL. AN ANTI-SIPHON TELL TALE CONNECTION SHALL BE LOCATED 6 INCHES ABOVE THE CENTER LINE OF THE UPPER LOOP.
5. UNLESS OTHERWISE NOTED ALL DRAINS TO BE COLLECTED BY LOCAL DRAIN SYSTEM.
6. DELETED
7. FOR MECHANICAL SYMBOLS AND NOTES SEE DRAWING M1-0200.
8. VALVE 2-PV-3918B ABANDON IN PLACE, REF FDA 2005-004990-02.

R




DRAWING 2323-M2-0223 REV CP-2
HAS BEEN SPLIT INTO THE FOLLOWING SHEETS:

| |
|---|
| M2-0223 |
| M2-0223-A |

FSAR FIGURE 10.4-4

THIS DRAWING CREATED ELECTRONICALLY

NON–SAFETY

LUMINANT
CPNPP
GLEN ROSE, TEXAS

FLOW DIAGRAM
TURBINE GLAND STEAM SYSTEM

| DWG. NO. | SH. NO. | REV. |
|---|---|---|
| M2-0223 | A | CP-8 |

$$$$$$$DATE$$$$$$$

| REV | DWN | CHKD | APVD | REMARKS |
|---|---|---|---|---|
| CP-32 | DLK 01-26-2017 | MM 01-26-2017 | MHF 02-01-2017 | THIS DRAWING REVISED TO INCORPORATE AI-TR-2016-008010-20 TO EDITORIALLY CORRECTED OUTFALL NUMBER FROM 101 TO 004. EDITORIAL CHANGE (WMS TO WM) AS NOTED. |

NOTES:

1. MANUFACTURERS CONNECTION POINTS ON THE MAIN CONDENSERS ARE REPRESENTED BY ENCIRCLED NUMBERS CORRESPONDING TO THE VENDOR'S DRAWINGS.
4. HEAT EXCHANGER CHANNEL RELIEF VALVE SUPPLIED BY MANUFACTURER.
5. UNLESS OTHERWISE NOTED ALL DRAINS COLLECTED BY LOCAL DRAIN SYSTEM.
6. FOR MECHANICAL NOTES AND SYMBOLS SEE DRAWING M1-0200.

TABLE III

| AUX CONDENSERS (DETAIL A) | | LG | A | B | C | D |
|---|---|---|---|---|---|---|
| CP1-COCNAC-01 | INLET | 1-LG-2873 | 1CV-0068 | 1CW-0099 | 1CW-0132 | 1CW-0133 |
| | OUTLET | 1-LG-2874 | 1CV-0071 | 1CW-0109 | 1CW-0134 | 1CW-0135 |
| CP1-COCNAC-02 | INLET | 1-LG-2875 | 1CV-0074 | 1CW-0110 | 1CW-0136 | 1CW-0137 |
| | OUTLET | 1-LG-2876 | 1CV-0077 | 1CW-0111 | 1CW-0022 | 1CW-0026 |

CONDENSER WATER BOX

DETAIL A

FSAR FIGURE 10.4-5

THIS DRAWING CREATED ELECTRONICALLY

DRAWING 2323-M1-0210 REV CP-10
HAS BEEN SPLIT INTO THE FOLLOWING SHEETS:
M1-0210
M1-0210-A

DRAWING M1-0210 REV CP-13
HAS BEEN SPLIT INTO THE FOLLOWING SHEETS:
M1-0210
M1-0210-B

NON-SAFETY

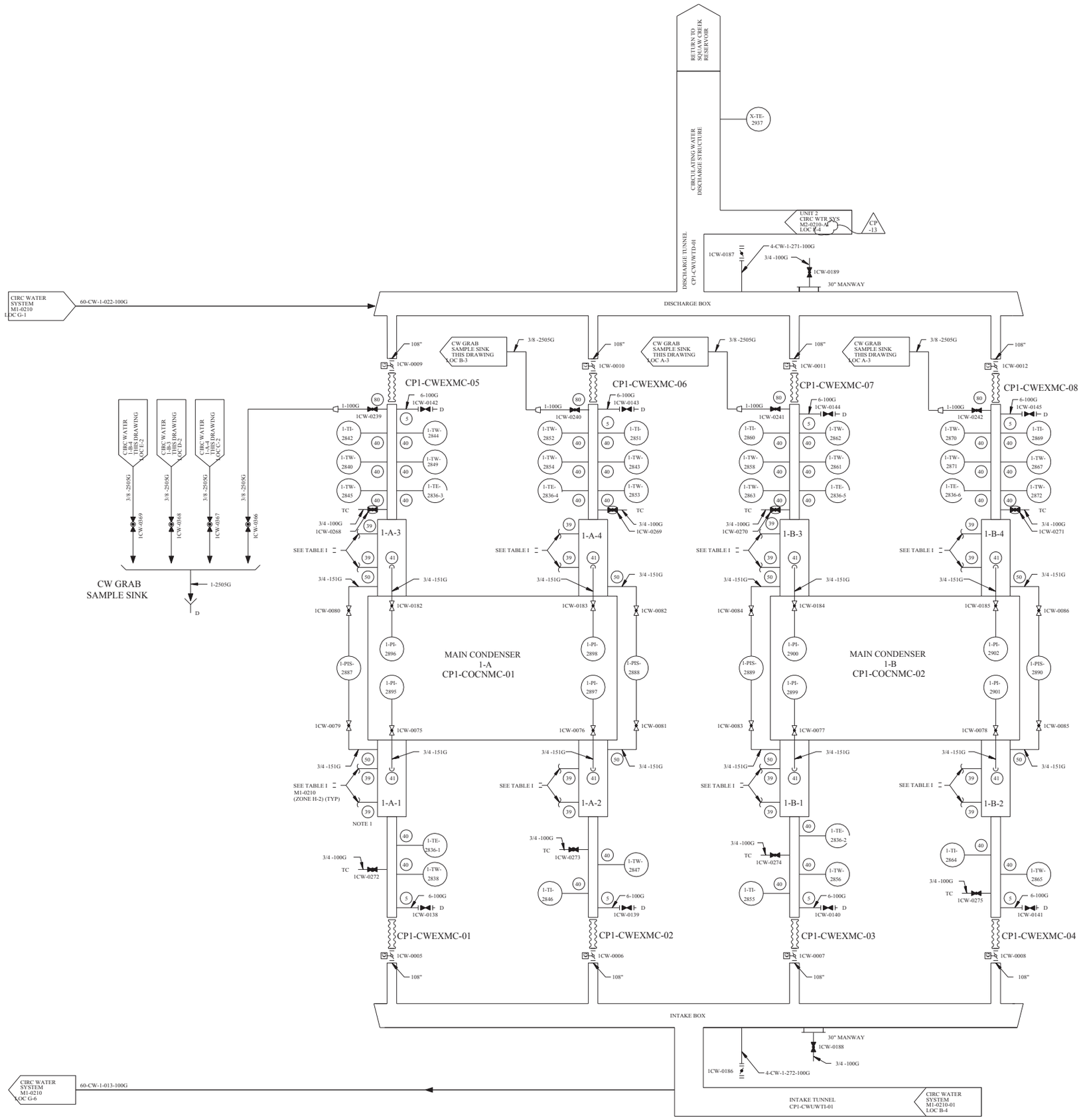
LUMINANT
CPNPP
GLEN ROSE, TEXAS

FLOW DIAGRAM
CIRCULATING WATER SYSTEM

| DWG. NO. | SH. NO. | REV. |
|---|---|---|
| M1-0210 | - | CP-32 |

REF CHKD 9-16-2014 CP-31

mc890700.dgn A M1-0210 FINAL PRINT



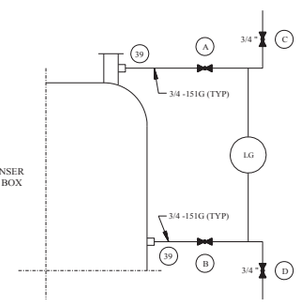

| REV | DWN | CHK | APVD | REMARKS |
|---|---|---|---|---|
| CP-13 | DLK 08-17 2010 | | | THIS DRAWING REVISED TO EDITORIALLY CORRECT DRAWING REFERENCE PER CR-2010-007600. |

NOTES:

1. MANUFACTURERS CONNECTION POINTS ON THE MAIN CONDENSERS ARE REPRESENTED BY ENCIRCLED NUMBERS CORRESPONDING TO THE VENDOR'S DRAWINGS.
2. UNLESS OTHERWISE NOTED ALL DRAINS COLLECTED BY LOCAL DRAIN SYSTEM.
3. FOR MECHANICAL NOTES AND SYMBOLS SEE DRAWING M1-0200.
4. DELETED

TABLE I

| | | MAIN CONDENSER (DETAIL "A") | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| | | CP1-COCNMC-01 | | | | CP1-COCNMC-02 | | | |
| | | INLET | | OUTLET | | INLET | | OUTLET | |
| | | 1-A-1 | 1-A-2 | 1-A-3 | 1-A-4 | 1-B-1 | 1-B-2 | 1-B-3 | 1-B-4 |
| LG | | 1-LG-2877 | 1-LG-2879 | 1-LG-2878 | 1-LG-2880 | 1-LG-2881 | 1-LG-2883 | 1-LG-2882 | 1-LG-2884 |
| VALVES | A | 1CW-0067 | 1CW-0069 | 1CW-0087 | 1CW-0089 | 1CW-0071 | 1CW-0073 | 1CW-0091 | 1CW-0093 |
| | B | 1CW-0068 | 1CW-0070 | 1CW-0088 | 1CW-0090 | 1CW-0072 | 1CW-0074 | 1CW-0092 | 1CW-0094 |
| | C | 1CW-0036 | 1CW-0038 | 1CW-0044 | 1CW-0055 | 1CW-0120 | 1CW-0122 | 1CW-0124 | 1CW-0126 |
| | D | 1CW-0037 | 1CW-0043 | 1CW-0054 | 1CW-0095 | 1CW-0121 | 1CW-0123 | 1CW-0125 | 1CW-0127 |




DETAIL "A"

FSAR FIGURE 10.4-5

THIS DRAWING CREATED ELECTRONICALLY

DRAWING 2323-M1-0210 REV CP-10
HAS BEEN SPLIT INTO THE FOLLOWING SHEETS:
M1-0210
M1-0210-A

NON–SAFETY

LUMINANT
CPNPP
GLEN ROSE, TEXAS

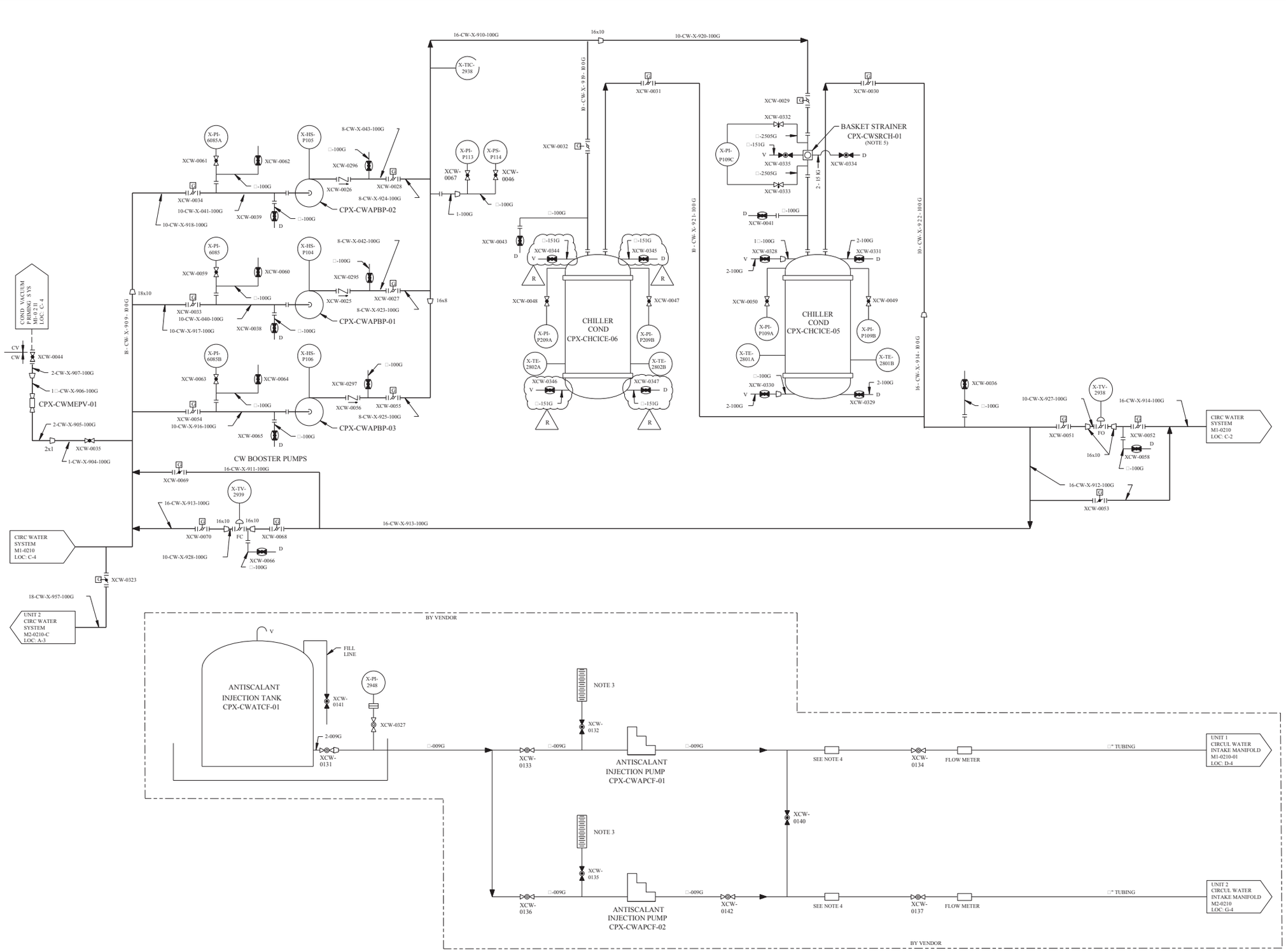
FLOW DIAGRAM
CIRCULATING WATER SYSTEM

| DWG. NO. | SH. NO. | REV. |
|---|---|---|
| M1-0210 | A | CP-13 |

| REV | DWN | CHKD | APVD | REMARKS |
|---|---|---|---|---|
| CP-17 | JRMC 04-10-2012 | DJL 04-11-2012 | | THIS DRAWING REVISED TO INCORPORATE DESIGN CHANGE FDA-2012-000048-01-00 PER SK-0001-12-00048-01-00. |

NOTES:

1. FOR MECHANICAL NOTES AND SYMBOLS SEE DWG M1-0200.
2. UNLESS OTHERWISE NOTED ALL DRAINS COLLECTED BY LOCAL DRAIN SYSTEM.
3. GRADUATED CALIBRATION CYLINDER.
4. ANTI-SIPHON DEVICE/SURGE SUPPRESSOR BY VENDOR.
5. BASKET STRAINER DESIGNED FOR BACKFLUSH SERVICE. REFERENCE FDA-2008-003750-02.




FSAR FIGURE 10.4-5

THIS DRAWING CREATED ELECTRONICALLY

DRAWING M1-0210 REV CP-13
HAS BEEN SPLIT INTO THE FOLLOWING SHEETS:
M1-0210
M1-0210-B

NON-SAFETY

LUMINANT
CPNPP
GLEN ROSE, TEXAS

FLOW DIAGRAM
CIRCULATING WATER SYSTEM

| DWG. NO. | SH. NO. | REV. |
|---|---|---|
| M1-0210 | B | CP-17 |

$$$$$$$$DATE$$$$$$ REF CKD 04-09-98 CP-9

me991200.dgn A M1-0210-B

< FINAL PRINT >

| REV | DWN | CHKD | APVD | REMARKS |
|---|---|---|---|---|
| CP-40 | DLK 11-16 2016 | MM 11-22 2016 | MBF 12-14 2016 | THIS DRAWING REVISED TO INCORPORATE EDITORIAL CHANGES AS NOTED PER AI-TR-2016-009510-1. |

NOTES:

1. CIRCULATING WATER PUMP MOTOR BEARING COOLER BY GENERAL ELECTRIC.
2. PRIMING VALVE 1 □*.
3. DELETED
4. SUBMERGED LINES 4-CW-1-261-110G THROUGH 4-CW-1-266-110G TO HAVE EXTERIOR COATING OF PLASITE PRIOR TO INSTALLATION.
5. DELETED
6. UNLESS OTHERWISE NOTED ALL DRAINS COLLECTED BY LOCAL DRAIN SYSTEM.
7. FOR MECHANICAL SYMBOLS AND NOTES SEE DRAWING M1-0200.
8. TUBING TO BE INSTALLED THROUGH BALL VALVE AND SEALED WITH A COMPRESSION FITTING.
9. FOR INSTALLATION DETAIL AS IT RELATES TO HEAT TRACE SEE E1-1500 SHEETS 006 AND 008.
10. BYPASS CONNECTIONS PROVIDED FOR MAINTENANCE OF THE DUPLEX STRAINER USING ENGINEERING REVIEWED PIPING WITH SUITABLE FILTRATION TO ENSURE PROPER FLOW TO THE HEADER.
11. BALL VALVES ARE APPROVED FOR VALVES A, B, C, AND D. (REF FDA-2007-001117-01-00/DCN 09013) UPDATE MEL ONCE THE BALL VALVES ARE INSTALLED.

TABLE II

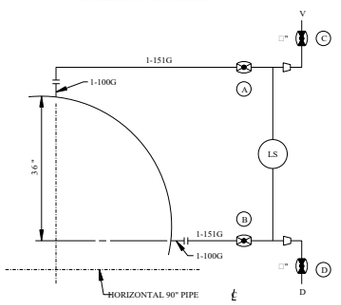
| PIPING AND INSTRUMENTS ON THE CIRCULATING WATER PUMP DISCHARGE SIDE (DETAIL B) | | | | |
|---|---|---|---|---|
| VALVE | CP1-CWAPCW -01 | CP1-CWAPCW -02 | CP1-CWAPCW -03 | CP1-CWAPCW -04 |
| A | 1CW-0219 | 1CW-0220 | 1CW-0221 | 1CW-0222 |
| B | 1CW-0223 | 1CW-0224 | 1CW-0225 | 1CW-0226 |
| C | 1CW-0227 | 1CW-0228 | 1CW-0229 | 1CW-0230 |
| D | 1CW-0231 | 1CW-0232 | 1CW-0233 | 1CW-0234 |
| | | | | |
| INSTS LS | 1-LS-2812 | 1-LS-2813 | 1-LS-2814 | 1-LS-2815 |

TABLE IV

| TRAVELING SCREEN TAG | | ISO VALVE | LINE | FLEX HOSE TAG |
|---|---|---|---|---|
| CP1-CWTSTS-01 | 1-HS-2925 | 1CW-0061 | 4-CW-1-101-151G | CP1-CWFHSC-01 |
| CP1-CWTSTS-02 | 1-HS-2926 | 1CW-0062 | 4-CW-1-102-151G | CP1-CWFHSC-02 |
| CP1-CWTSTS-03 | 1-HS-2927 | 1CW-0063 | 4-CW-1-103-151G | CP1-CWFHSC-03 |
| CP1-CWTSTS-04 | 1-HS-2928 | 1CW-0064 | 4-CW-1-104-151G | CP1-CWFHSC-04 |
| CP1-CWTSTS-05 | 1-HS-2929 | 1CW-0065 | 4-CW-1-105-151G | CP1-CWFHSC-05 |
| CP1-CWTSTS-06 | 1-HS-2930 | 1CW-0066 | 4-CW-1-106-151G | CP1-CWFHSC-06 |

DETAIL B

SEE TABLE II FOR TAG NUMBERS




FSAR FIGURE 10.4-5

THIS DRAWING CREATED ELECTRONICALLY

NON-SAFETY

LUMINANT
CPNPP
GLEN ROSE, TEXAS

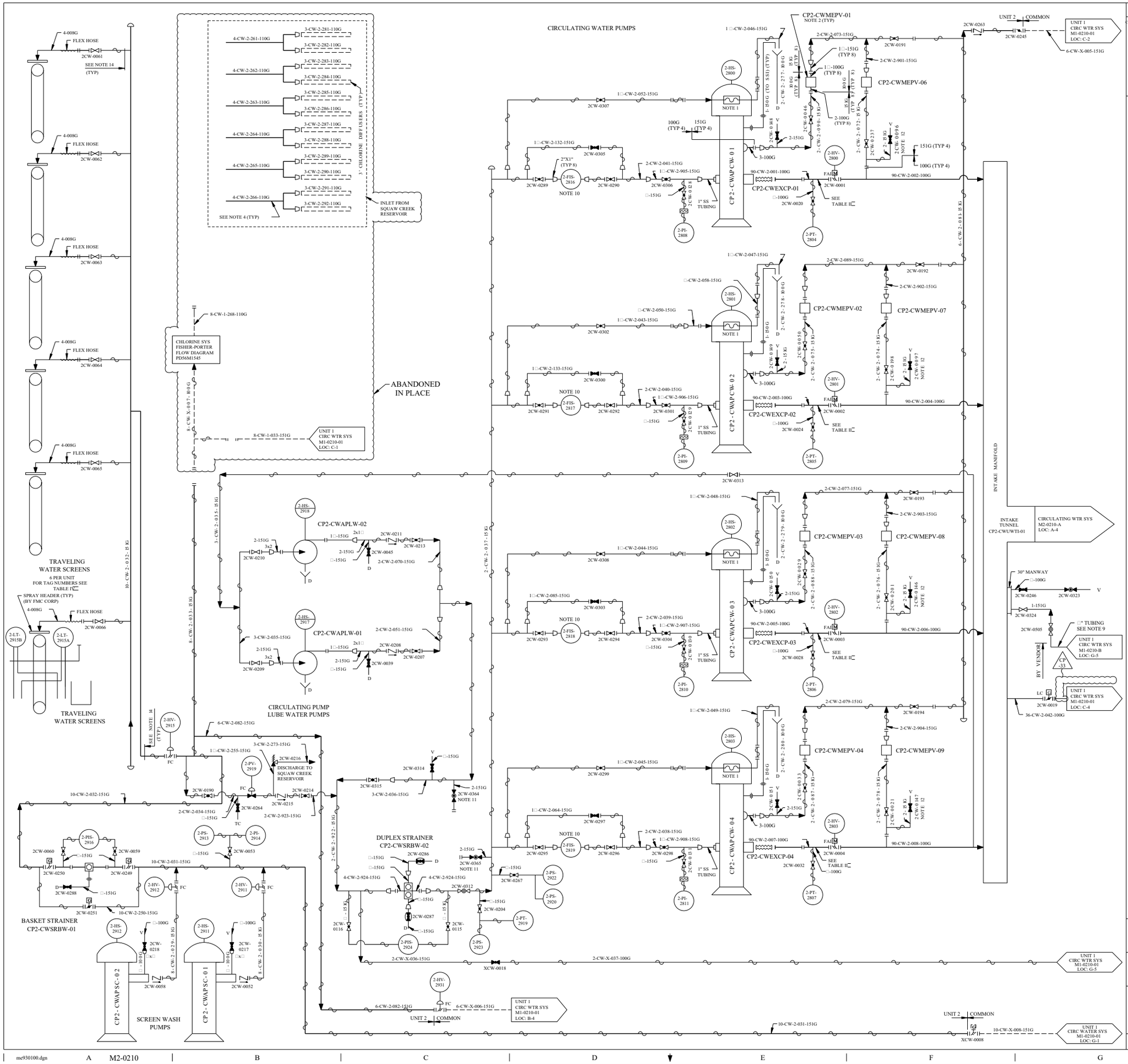
FLOW DIAGRAM
CIRCULATING WATER SYSTEM

| DWG. NO. | SH. NO. | REV. |
|---|---|---|
| M1-0210 | 01 | CP-40 |

FINAL PRINT

REF CHKD 05/10/2001

mc930300.dgn A M1-0210-01




| REV | DWN | CHKD | APVD | REMARKS |
|---|---|---|---|---|
| CP-33 | DLK 02-17-2016 | MM 02-17-2016 | GAW 02-17-2016 | THIS DRAWING REVISED TO INCORPORATE AI-CR-2016-001409.1 TO EDITORIALLY REMOVE UNIT 1 LINE NUMBER 36-CW-1-042-100G DOWNSTREAM OF 2CW-0019. |

NOTES:

1. CIRCULATING WATER PUMP MOTOR BEARING COOLER BY GENERAL ELECTRIC.
2. PRIMING VALVE 1□.
3. DELETED
4. SUBMERGED LINES 4-CW-2-261-110G THRU 4-CW-2-266-110G TO HAVE EXTERIOR COATING OF PLASITE PRIOR TO INSTALLATION.
5. DELETED
6. FOR MECHANICAL SYMBOLS AND NOTES SEE DRAWING M1-0200.
7. UNLESS OTHERWISE NOTED DRAINS COLLECTED BY LOCAL DRAIN SYSTEM.
8. DELETED
9. TUBING TO BE INSTALLED THROUGH THE VALVE AND SEALED WITH A COMPRESSION FITTING.
10. FOR INSTALLATION DETAIL AS IT RELATES TO HEAT TRACE SEE E2-1506 SHEETS 002, 014, 015 AND 017.
11. BYPASS CONNECTIONS PROVIDED FOR MAINTENANCE OF THE DUPLEX STRAINER USING ENGINEERING REVIEWED PIPING WITH SUITABLE FILTRATION TO ENSURE PROPER FLOW TO THE HEADER.
12. A BLANK FLANGE MAY BE INSTALLED AS REQUIRED PER FDA-2006-003493-01.
13. BALL VALVES ARE APPROVED FOR VALVES A, B, C, AND D. (REF FDA-2007-001117-01-00/DCN 09013) UPDATE MEL ONCE THE BALL VALVES ARE INSTALLED.
14. TRAVELING SCREENS WASH PIPING HEAT TRACE IS REQUIRED ONLY ABOVE THE CWIS DECK.

TABLE II

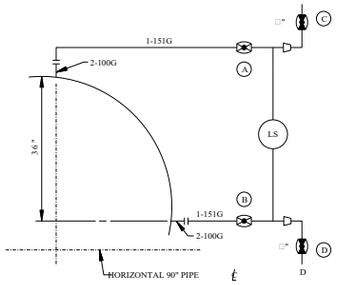
| PIPING AND INSTRUMENTS ON THE CIRCULATING WATER PUMP DISCHARGE SIDE (DETAIL B) | | | | | |
|---|---|---|---|---|---|
| VALVE | | CP2-CWAPCW-01 | CP2-CWAPCW-02 | CP2-CWAPCW-03 | CP2-CWAPCW-04 |
| A | | 2CW-0219 | 2CW-0220 | 2CW-0221 | 2CW-0222 |
| B | | 2CW-0223 | 2CW-0224 | 2CW-0225 | 2CW-0226 |
| C | | 2CW-0227 | 2CW-0228 | 2CW-0229 | 2CW-0230 |
| D | | 2CW-0231 | 2CW-0232 | 2CW-0233 | 2CW-0234 |
| | | | | | |
| INSTS | LS | 2-LS-2812 | 2-LS-2813 | 2-LS-2814 | 2-LS-2815 |

TABLE IV

| TRAVELING SCREEN TAG | | ISO VALVE | LINE | FLEX HOSE TAG |
|---|---|---|---|---|
| CP2-CWTSTS-01 | 2-HS-2925 | 2CW-0061 | 4-CW-2-101-151G | CP2-CWFHSC-01 |
| CP2-CWTSTS-02 | 2-HS-2926 | 2CW-0062 | 4-CW-2-102-151G | CP2-CWFHSC-02 |
| CP2-CWTSTS-03 | 2-HS-2927 | 2CW-0063 | 4-CW-2-103-151G | CP2-CWFHSC-03 |
| CP2-CWTSTS-04 | 2-HS-2928 | 2CW-0064 | 4-CW-2-104-151G | CP2-CWFHSC-04 |
| CP2-CWTSTS-05 | 2-HS-2929 | 2CW-0065 | 4-CW-2-105-151G | CP2-CWFHSC-05 |
| CP2-CWTSTS-06 | 2-HS-2930 | 2CW-0066 | 4-CW-2-106-151G | CP2-CWFHSC-06 |

DETAIL B

SEE TABLE II FOR TAG NUMBERS




| DRAWING 2323-M2-0210 REV CP-3 HAS BEEN SPLIT INTO THE FOLLOWING SHEETS: |
|---|
| M2-0210 |
| M2-0210-A |
| M2-0210-B |
| M2-0210-C |
| |

FSAR FIGURE 10.4-5

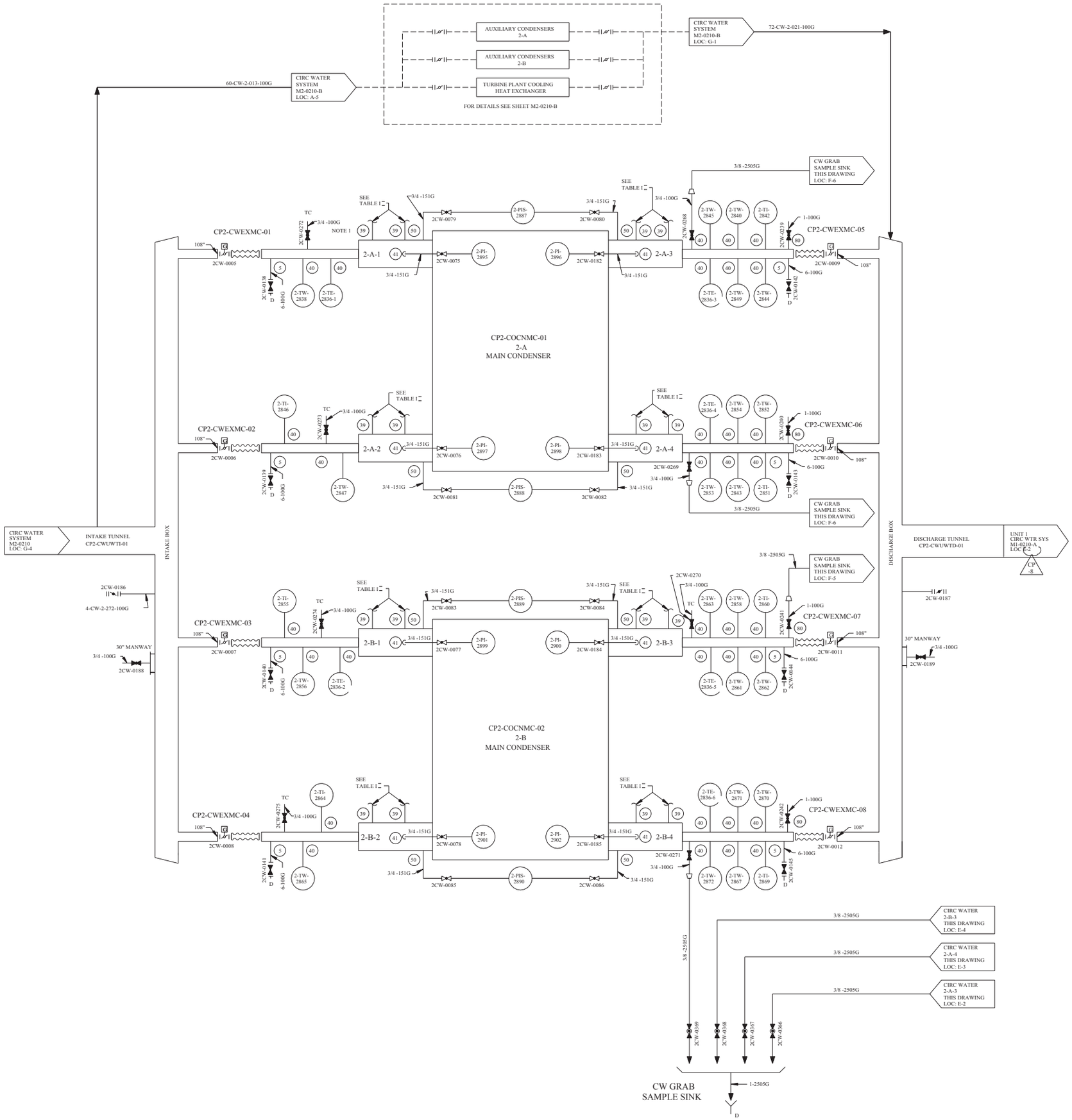
THIS DRAWING CREATED ELECTRONICALLY

NON-SAFETY

LUMINANT
CPNPP
GLEN ROSE, TEXAS

FLOW DIAGRAM
CIRCULATING WATER SYSTEM

| DWG. NO. | SH. NO. | REV. |
|---|---|---|
| M2-0210 | - | CP-33 |



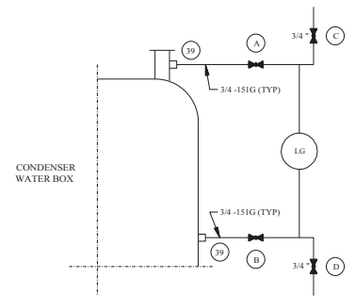

| REV | DWN | CHK | APVD | REMARKS |
|---|---|---|---|---|
| CP-8 | DLK 08-17 2010 | | | THIS DRAWING REVISED TO EDITORIALLY CORRECT DRAWING REFERENCE PER CR-2010-007600. |

NOTES:

1. MANUFACTURERS CONNECTION POINTS ON THE MAIN CONDENSERS ARE REPRESENTED BY ENCIRCLED NUMBERS CORRESPONDING TO THE VENDORS DRAWINGS.
2. FOR MECHANICAL SYMBOLS AND NOTES SEE DRAWING M1-0200.
3. UNLESS OTHERWISE NOTED DRAINS COLLECTED BY LOCAL DRAIN SYSTEM.

TABLE I

| | | MAIN CONDENSER (SEE DETAIL A) | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| | | CP2-COCNMC-01 | | | | CP2-COCNMC-02 | | | |
| | | INLET | | OUTLET | | INLET | | OUTLET | |
| | | 2-A-1 | 2-A-2 | 2-A-3 | 2-A-4 | 2-B-1 | 2-B-2 | 2-B-3 | 2-B-4 |
| LG | | 2-LG-2877 | 2-LG-2879 | 2-LG-2878 | 2-LG-2880 | 2-LG-2881 | 2-LG-2883 | 2-LG-2882 | 2-LG-2884 |
| V-M-LVIS | A | 2CW-0067 | 2CW-0069 | 2CW-0087 | 2CW-0089 | 2CW-0071 | 2CW-0073 | 2CW-0091 | 2CW-0093 |
| | B | 2CW-0068 | 2CW-0070 | 2CW-0088 | 2CW-0090 | 2CW-0072 | 2CW-0074 | 2CW-0092 | 2CW-0094 |
| | C | 2CW-0036 | 2CW-0038 | 2CW-0044 | 2CW-0055 | 2CW-0120 | 2CW-0122 | 2CW-0124 | 2CW-0126 |
| | D | 2CW-0037 | 2CW-0043 | 2CW-0054 | 2CW-0095 | 2CW-0121 | 2CW-0123 | 2CW-0125 | 2CW-0127 |




DETAIL "A"

FSAR FIGURE 10.4-5

THIS DRAWING CREATED ELECTRONICALLY

DRAWING 2323-M2-0210 REV CP-3
HAS BEEN SPLIT INTO THE FOLLOWING SHEETS:

- M2-0210
- M2-0210-A
- M2-0210-B
- M2-0210-C

NON–SAFETY

LUMINANT
CPNPP
GLEN ROSE, TEXAS

FLOW DIAGRAM
CIRCULATING WATER SYSTEM

| DWG. NO. | SH. NO. | REV. |
|---|---|---|
| M2-0210 | A | CP-8 |

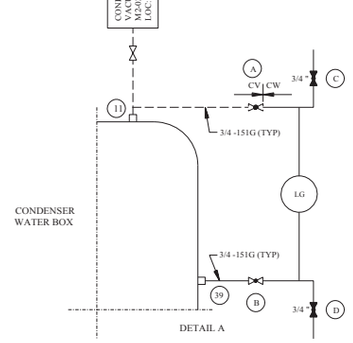
| REV | DWN | CHK | APVD | REMARKS |
|---|---|---|---|---|
| CP-16 | DJL 09-07-2007 | JRMC 09-07-2007 | | THIS DRAWING REVISED TO INCORPORATE DESIGN CHANGE FDA-2003-002540-05-00 PER SK-0002-03-002540-05-00. |

NOTES:

1. HEAT EXCHANGER CHANNEL RELIEF VALVE SUPPLIED BY MANUFACTURER.
2. FOR MECHANICAL SYMBOLS AND NOTES SEE DRAWING M1-0200.
3. UNLESS OTHERWISE NOTED DRAINS COLLECTED BY LOCAL DRAIN SYSTEM.

TABLE III

| | | LG | A | B | C | D |
|---|---|---|---|---|---|---|
| AUX. CONDENSERS (DETAIL "A") | | | | | | |
| CP2-COCNAC-01 | INLET | 2-LG-2873 | 2CV-0068 | 2CW-0099 | 2CW-0132 | 2CW-0133 |
| | OUTLET | 2-LG-2874 | 2CV-0071 | 2CW-0109 | 2CW-0134 | 2CW-0135 |
| CP2-COCNAC-02 | INLET | 2-LG-2875 | 2CV-0074 | 2CW-0110 | 2CW-0136 | 2CW-0137 |
| | OUTLET | 2-LG-2876 | 2CV-0077 | 2CW-0111 | 2CW-0022 | 2CW-0026 |




FSAR FIGURE 10.4-5

THIS DRAWING CREATED ELECTRONICALLY

DRAWING 2323-M2-0210 REV CP-3
HAS BEEN SPLIT INTO THE FOLLOWING SHEETS:

- M2-0210
- M2-0210-A
- M2-0210-B
- M2-0210-C

NON–SAFETY

LUMINANT
CPSES
GLEN ROSE, TEXAS

FLOW DIAGRAM
CIRCULATING WATER SYSTEM

DWG. NO. M2-0210 | SH. NO. B | REV. CP-16

FINAL PRINT

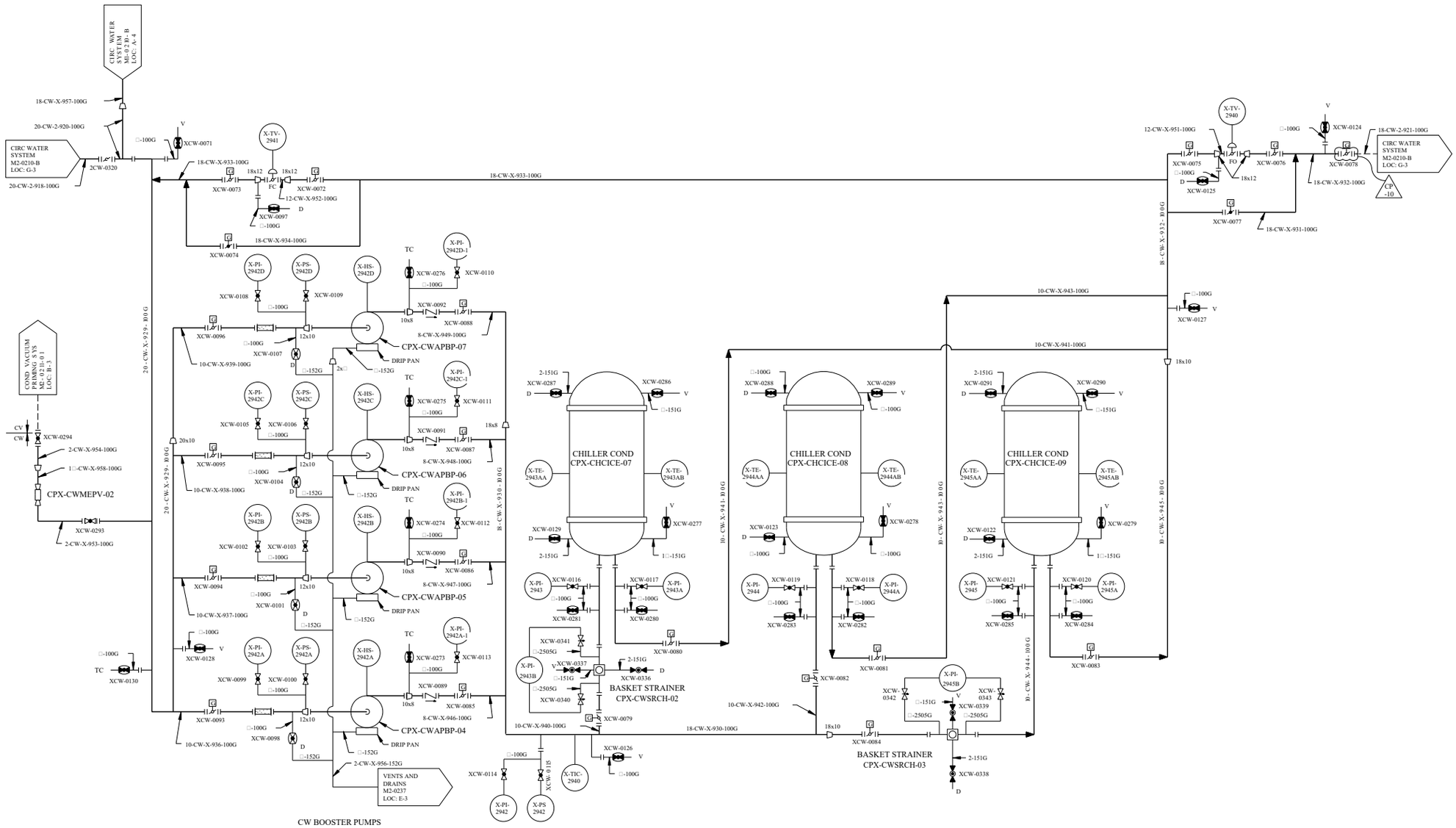
REFERENCES CHECKED 5/8/97 CP-8

me861600.dgn A M2-0210-B

| REV | DWN | CHKD | APVD | REMARKS |
|---|---|---|---|---|
| CP-10 | DCK 12-08 2016 | MM 12-09 2016 | MHF 12-12 2016 | THIS DRAWING REVISED TO INCORPORATE AL-TR-2016-010212-1 TO EDITORIALLY CORRECT VALVE SYMBOL FOR XCW-0078. |

NOTES:

1. FOR MECHANICAL NOTES AND SYMBOLS SEE DRAWING M1-0200.
2. UNLESS OTHERWISE NOTED ALL DRAINS COLLECTED BY LOCAL DRAIN SYSTEM.




DRAWING 2323-M2-0210 REV CP-3
HAS BEEN SPLIT INTO THE FOLLOWING SHEETS:

| |
|---|
| M2-0210 |
| M2-0210-A |
| M2-0210-B |
| M2-0210-C |
| |

NON–SAFETY

LUMINANT
CPNPP
GLEN ROSE, TEXAS

FLOW DIAGRAM
CIRCULATING WATER SYSTEM

| DWG. NO. | SH. NO. | REV. |
|---|---|---|
| M2-0210 | C | CP-10 |

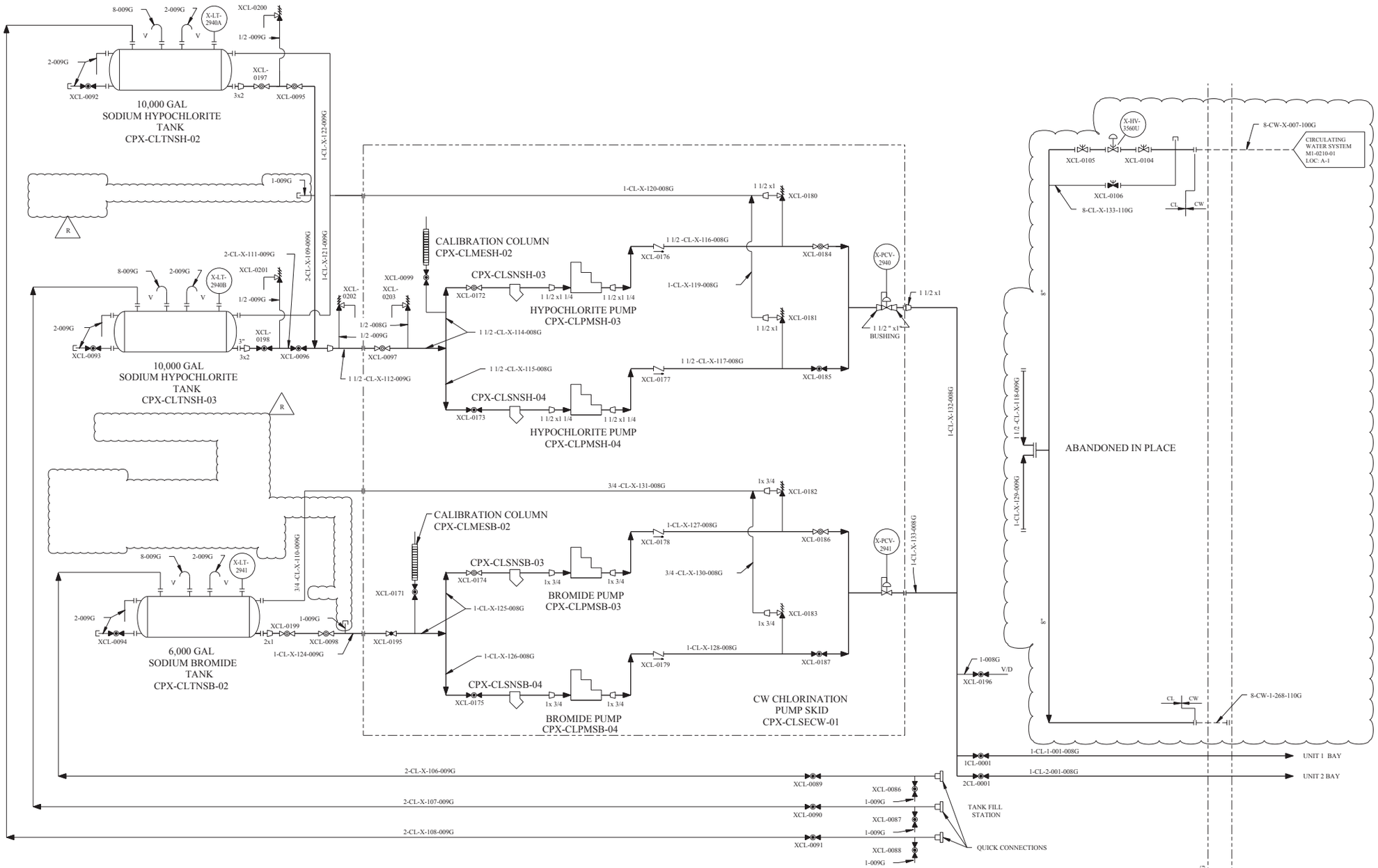
FSAR FIGURE 10.4-5

THIS DRAWING CREATED ELECTRONICALLY

| REV | DWN | CHK | DAPVD | REMARKS |
|---|---|---|---|---|
| CP-13 | DLK 03-24-2010 | MM 06-24-2010 | | THIS DRAWING REVISED TO INCORPORATE DESIGN CHANGE FDA 2007-003115-01-00 PER SK-0054-07-003115-01-00. |

NOTES:

1. FOR MECHANICAL SYMBOLS AND NOTES SEE DRAWING M1-0200.
2. UNLESS OTHERWISE NOTED ALL DRAINS COLLECTED BY LOCAL DRAIN SYSTEM.
3. SIX INCHES OF 1/2 " DIA KYNAR AT PUMP SUCTION AND DISCHARGE.




CIRCULATING WATER CHLORINATION SYSTEM

FSAR FIGURE 10.4-6

THIS DRAWING CREATED ELECTRONICALLY

REF CKD CP-6/9/1897

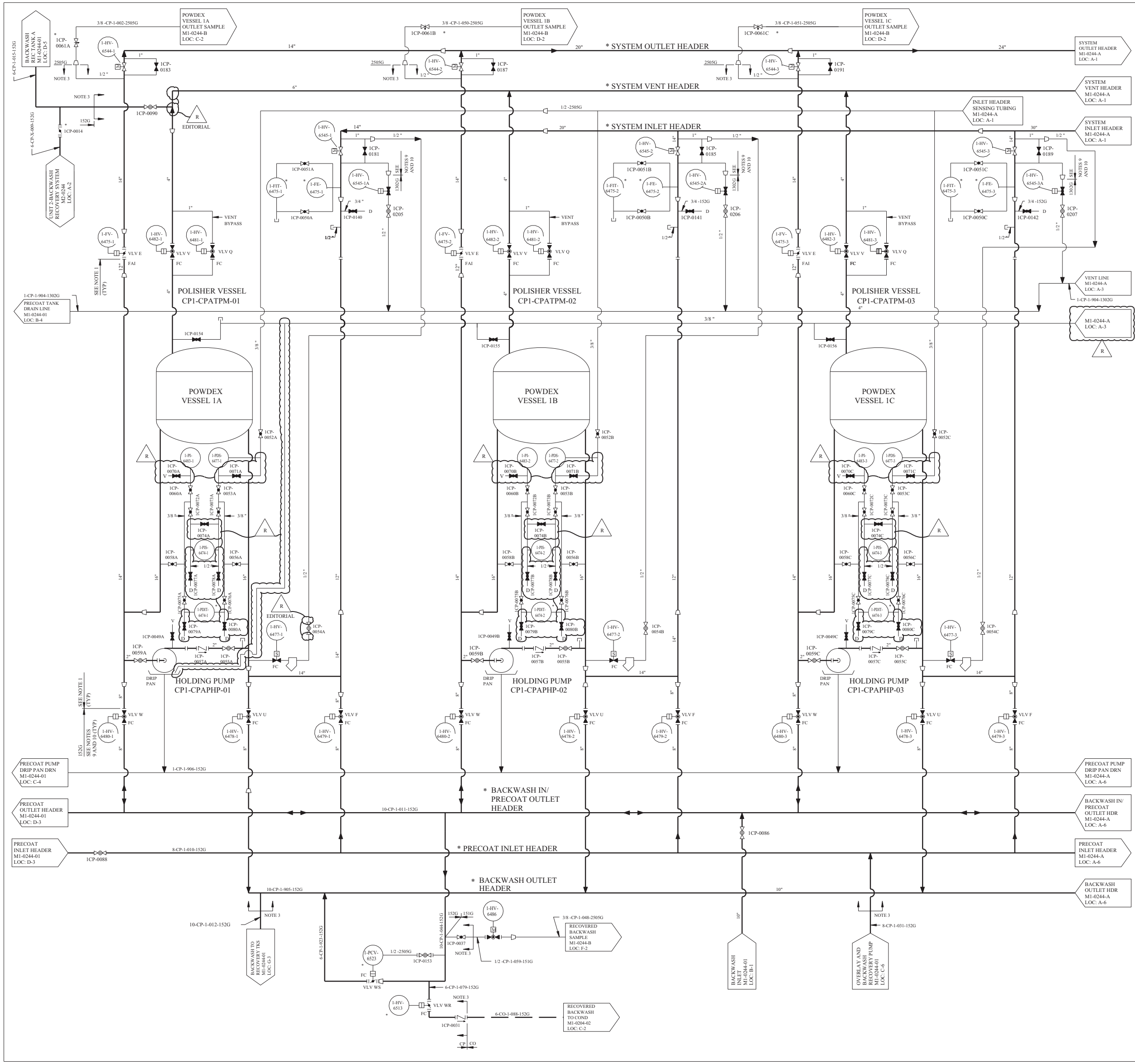
NON–SAFETY

LUMINANT
CPNPP
GLEN ROSE, TEXAS

FLOW DIAGRAM
CHLORINATION SYSTEM

| DWG. NO. | SH. NO. | REV. |
|---|---|---|
| M1-0240 | 01 | CP-13 |

FINAL PRINT




| REV | DWN | CHKD | APVD | REMARKS |
|---|---|---|---|---|
| CP-15 | DLK 08-08 2001 | EES 08-14 2001 | | THIS DRAWING REVISED TO INCORPORATE DESIGN CHANGE FDA 2001-001845-01-00 PER SK-0001-01-001845-01-00. EDITORIAL CHANGES AS NOTED. |

NOTES:

1. ALL EQUIPMENT SHOWN ARE SHOP-ASSEMBLED SKIDDED MODULES SUPPLIED BY GRAVER.
2. ALL ITEMS DENOTED BY * SUPPLIED BY GRAVER.
3. ALL PIPING/HEADERS WHICH TERMINATE OR ORIGINATE WITHIN MODULES TO POINTS DENOTED BY SUPPLIED BY GRAVER. SEE NOTES 9 AND 10.
4. FOR MECHANICAL SYMBOLS AND NOTES SEE DWG M1-0200.
5. ALL EQUIPMENT FOR BACKWASH RECOVERY SUBSYSTEM IS SUPPLIED BY GRAVER WITH THE EXCEPTION OF PIPING.
6. WORK THIS DRAWING WITH M1-0244-01, -01A, -A AND -B.
7. DELETED
8. DELETED
9. UNLESS OTHERWISE NOTED, PIPE AND FITTINGS 2" AND SMALLER ARE SOCKET WELDED USING SCHEDULE 80 PIPE AND 3000 LB FITTINGS. PIPE AND FITTINGS 2 1/2 " AND LARGER ARE BUTT WELDED, EXCEPT FLANGED AT VALVES, PUMPS AND PRECOAT TANK CONNECTIONS. WALL THICKNESS IS STANDARD WEIGHT FOR SIZES 2 1/2 " TO 16" AND SCHEDULE 30 FOR SIZES 18" TO 30".
10. UNLESS OTHERWISE NOTED, PIPE MATERIAL IS A-106 GR B FOR SIZES 24" AND SMALLER AND A-155 GR KC60 (MIN) CLASS I FOR 30" SIZE. FITTING MATERIAL IS A-105 GR II OR A-105 GR 71 FOR SIZES 2" AND SMALLER, A-234 GR WPB FOR SIZES 2 1/2 " TO 24" AND A-234 GR WPC OR A-515 GR60 MIN (100% X-RAY) FOR 30" SIZE.

DRAWING M1-0244 REV CP-6 HAS BEEN SPLIT INTO THE FOLLOWING SHEETS:

- M1-0244
- M1-0244-A
- M1-0244-B

FSAR FIGURE 10.4-7

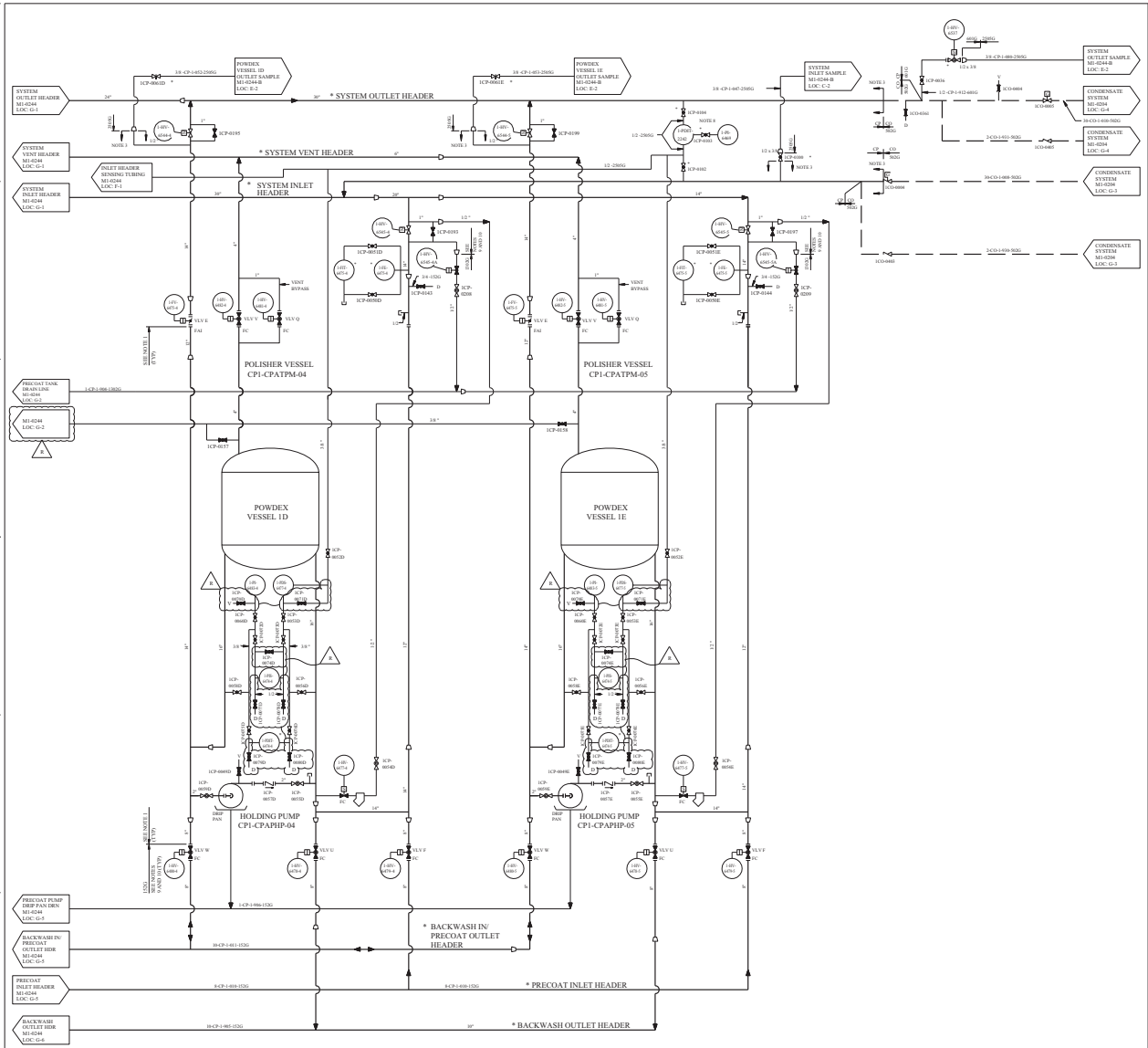
THIS DRAWING CREATED ELECTRONICALLY

NON-SAFETY

TXU ENERGY
CPSES
GLEN ROSE, TEXAS

FLOW DIAGRAM
CONDENSATE POLISHING
SYSTEM

DWG. NO. M1-0244 | SH. NO. - | REV. CP-15




NOTES:

1. ALL EQUIPMENT SHOWN ARE SHOP-ASSEMBLED SKIDDED MODULES SUPPLIED BY GRAVER.
2. ALL ITEMS DENOTED BY * SUPPLIED BY GRAVER.
3. ALL PIPING/HEADERS WHICH TERMINATE OR ORIGINATE WITHIN MODULES TO POINTS DENOTED BY SUPPLIED BY GRAVER. SEE NOTES 9 AND 10.
4. FOR MECHANICAL SYMBOLS AND NOTES SEE DWG M1-0286
5. ALL EQUIPMENT FOR BACKWASH RECOVERY SUBSYSTEM IS SUPPLIED BY GRAVER WITH THE EXCEPTION OF PIPING.
6. WORK THIS DRAWING WITH M1-0244, M1-0244-B, M1-0244-01, AND M1-0244-01A.
7. DELETED
8. HIGH DIFFERENTIAL PRESSURE SIGNAL FROM 1-PDIT-2242 OPENS CONDENSATE POLISHING SYSTEM BYPASS VALVE 1-PV-2242 SHOWN ON M1-0204 LOC: F-3, SEE ALSO M1-2204-04 FOR CONTROL SCHEMATIC.
9. UNLESS OTHERWISE NOTED, PIPE AND FITTINGS 2" AND SMALLER ARE SOCKET WELDED USING SCHEDULE 80 PIPE AND 3000 LB FITTINGS. PIPE AND FITTINGS 2 1/2 " AND LARGER ARE BUTT WELDED, EXCEPT FLANGED AT VALVES, PUMPS AND PRECOAT TANK CONNECTIONS. WALL THICKNESS IS STANDARD WEIGHT FOR SIZES 2 1/2 " TO 16" AND SCHEDULE 30 FOR SIZES 18" TO 30".
10. UNLESS OTHERWISE NOTED, PIPE MATERIAL IS A-106 GR B FOR SIZES 24" AND SMALLER AND A-155 GR KC60 (MIN) CLASS 1 FOR 30" SIZE. FITTING MATERIAL IS A-105 GR II OR A-105 GR 71 FOR SIZES 2" AND SMALLER, A-234 GR WPB FOR SIZES 2 1/2 " TO 24" AND A-234 GR WPC OR A-515 GR60 MIN (100% X-RAY) FOR 30" SIZE.

| REV | DRWN | DSGN | APVD | REMARKS |
|---|---|---|---|---|
| CP-8 | MM/DD/YY | MM/DD/YY | MM/DD/YY | THIS DRAWING REVISED TO INCORPORATE DESIGN CHANGE PDA 2010-2035163-01-00 PER SR-2035131-001R01-01-00. |

USAR FIGURE 10.4-7

DRAWING 2323-M1-0244 REV CP-8
HAS BEEN SPLIT INTO THE FOLLOWING SHEETS:

| |
|---|
| M1-0244 |
| M1-0244-A |
| M1-0244-B |
| |
| |

THIS DRAWING CAD SYSTEM IS TECHNICALLY

NON-SAFETY

TXU ENERGY
CPSES
GLEN ROSE, TEXAS

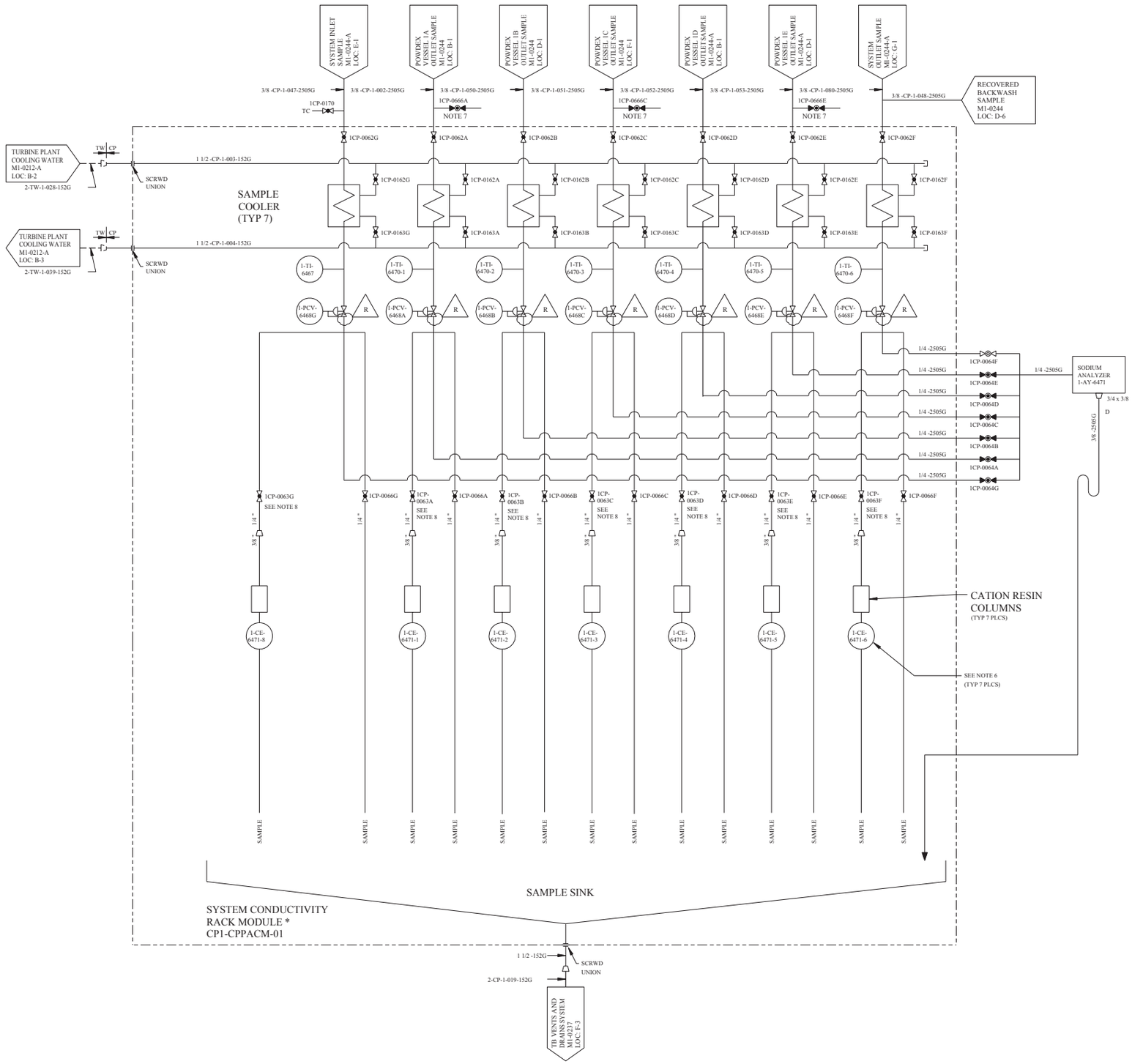
FLOW DIAGRAM
CONDENSATE POLISHING SYSTEM

| DRWG. NO. | SH. NO. | REV |
|---|---|---|
| M1-0244 | A | CP-8 |

M1-0244-A

REF 1: CKT1-CP-6 - 10/20/97

ISSUED/DATE/ISSUED




| REV | DWN | CHKD | APVD | REMARKS |
|---|---|---|---|---|
| CP-11 | DLK 06-22 2010 | MM 06-22 2010 | | THIS DRAWING REVISED TO INCORPORATE DESIGN CHANGE FDA 2010-000103-01-00 PER SK-0001-10-000103-01-00. |

NOTES:

1. ALL EQUIPMENT SHOWN WITHIN DASHED LINES WAS SUPPLIED AS SHOP-ASSEMBLED SKIDDED MODULES.
2. ALL EQUIPMENT DENOTED BY * WAS SUPPLIED BY GRAVER.
3. FOR MECHANICAL SYMBOLS AND NOTES SEE DWG M1-0200.
4. DELETED
5. WORK THIS DWG WITH M1-0244, M1-0244-A, -01 AND -01A.
6. CONDUCTIVITY RECORDER INPUTS:

| | |
|---|---|
| 1-CE-6471-1 | VESSEL 1A EFFLUENT |
| 1-CE-6471-2 | VESSEL 1B EFFLUENT |
| 1-CE-6471-3 | VESSEL 1C EFFLUENT |
| 1-CE-6471-4 | VESSEL 1D EFFLUENT |
| 1-CE-6471-5 | VESSEL 1E EFFLUENT |
| 1-CE-6471-6 | SYSTEM INFLUENT |
| 1-CE-6471-8 | SYSTEM EFFLUENT/BACKWASH REC |
| 1-AY-6471 | LEAD BED SODIUM ANALYZER |

7. VESSEL AUXILIARY SAMPLING POINTS.
8. CHEMISTRY THROTTLES VALVES ON IN SERVICE VESSELS.

FSAR FIGURE 10.4-7

THIS DRAWING CREATED ELECTRONICALLY

DRAWING 2323-M1-0244 REV CP-6
HAS BEEN SPLIT INTO THE FOLLOWING SHEETS:

| |
|---|
| M1-0244 |
| M1-0244-A |
| M1-0244-B |

NON-SAFETY

LUMINANT
CPNPP
GLEN ROSE, TEXAS

FLOW DIAGRAM
CONDENSATE POLISHING
SYSTEM

| DWG. NO. | SH. NO. | REV. |
|---|---|---|
| M1-0244 | B | CP-11 |

| REV | DWN | CHKD | APVD | REMARKS |
|---|---|---|---|---|
| CP-25 | DLK 04-05 2016 | MIF 04-05 2016 | | THIS DRAWING REVISED TO INCORPORATE DESIGN CHANGE FDA-2016-000034-01-00 PER SK-0001-16-000034-01-00. EDITORIAL CHANGE AS NOTED. |

NOTES:

1. ALL EQUIPMENT SHOWN WITHIN DASHED LINES AS SHOP-ASSEMBLED SKIDDED MODULES.
2. ALL ITEMS DENOTED BY * WERE SUPPLIED BY GRAVER.
3. ALL PIPING/HEADERS WHICH TERMINATE OR ORIGINATE WITHIN MODULES TO POINTS DENOTED BY SUPPLIED BY GRAVER. THE HEADERS AND EQUIPMENT MOUNTED THEREON ARE FIELD INSTALLED.
4. FOR MECHANICAL SYMBOLS AND NOTES SEE DWG M1-0200.
5. ALL EQUIPMENT FOR BACKWASH RECOVERY SUBSYSTEM IS SUPPLIED BY GRAVER WITH THE EXCEPTION OF PIPING.
6. THIS LINE IS FLANGED FOR POSSIBLE FUTURE USE IN DISPOSAL OF CHEMICAL CLEANING WASTES FROM THIS SYSTEM.
7. WORK THIS DWG WITH M1-0244, -A, -B AND -01A.
8. DELETED
9. UNLESS OTHERWISE NOTED, PIPE AND FITTINGS 2" AND SMALLER ARE SOCKET WELDED USING SCHEDULE 80 PIPE AND 3000 LB FITTINGS. PIPE AND FITTINGS 2□" AND LARGER ARE BUTT WELDED, EXCEPT FLANGED AT VALVES, PUMPS AND PRECOAT TANK CONNECTIONS. WALL THICKNESS IS STANDARD WEIGHT FOR SIZES 2□" TO 16" AND SCHEDULE 30 FOR SIZES 18" TO 30".
10. UNLESS OTHERWISE NOTED, PIPE MATERIAL IS A-106 GR B FOR SIZES 24" AND SMALLER AND A-155 GR KC60 (MIN) CLASS I ÉOR 30" SIZE. FITTING MATERIAL IS A-105 GR II OR A-105 GR71 FOR SIZES 2" AND SMALLER, A-234 GR WPB FOR SIZES 2□" TO 24" AND A-234 GR WPC OR A-515 GR 60 MIN (100% X-RAY) FOR 30" SIZE.
11. FC ON LOSS OF POWER AND FAI ON LOSS OF AIR.
12. HOOKUP CONNECTIONS FOR METERED PRECOAT SKID.
13. DELETED

DRAWING ECE-M1-0244-01 REV CP-5
HAS BEEN SPLIT INTO THE FOLLOWING SHEETS:
M1-0244-01
M1-0244-01A

NON-SAFETY

LUMINANT
CPNPP
GLEN ROSE, TEXAS

FLOW DIAGRAM
CONDENSATE POLISHING SYSTEM

DWG. NO. M1-0244 | SH. NO. 01 | REV. CP-25

FSAR FIGURE 10.4-7

THIS DRAWING CREATED ELECTRONICALLY

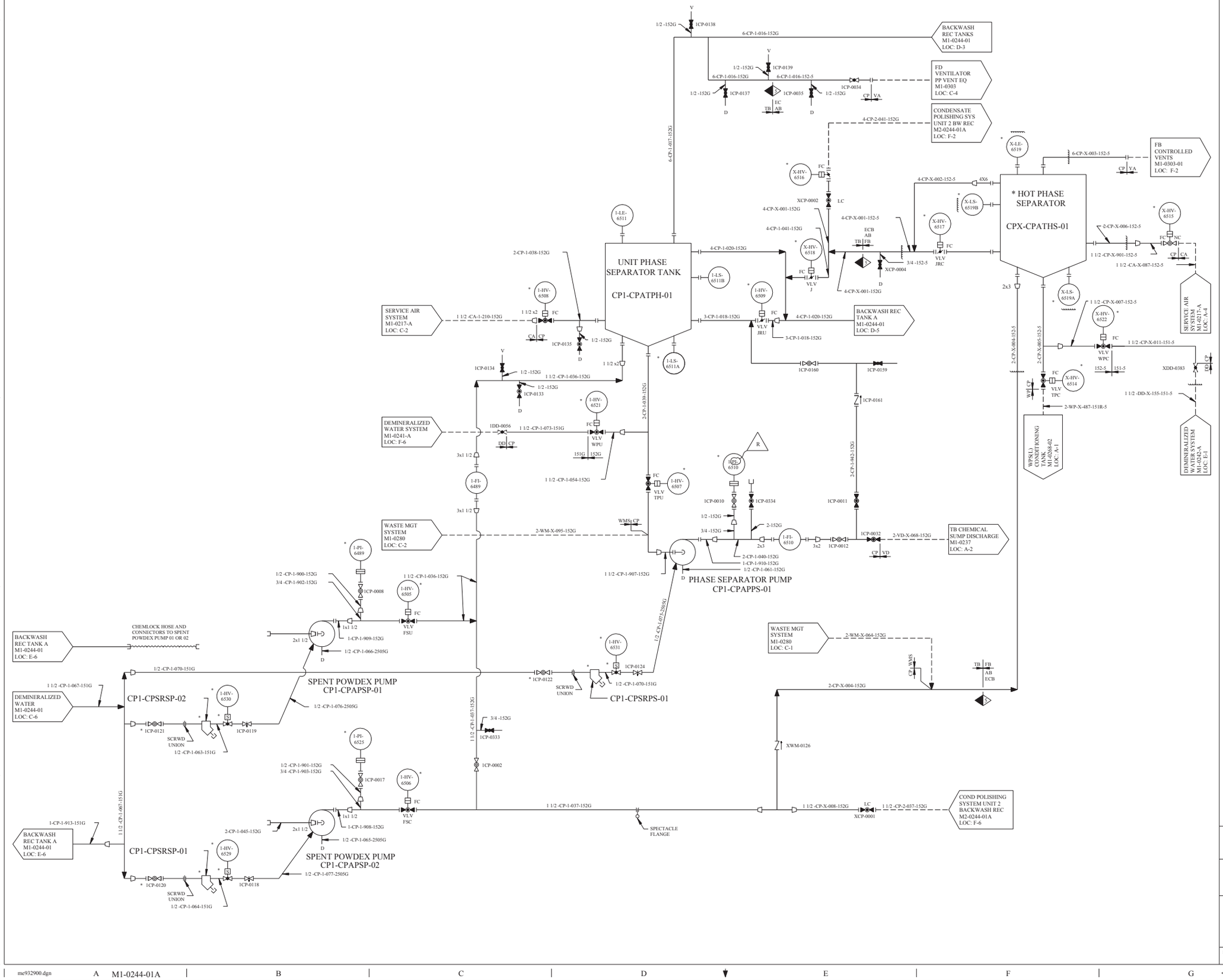
REF CKD 04-03-98 CP-21

me373700.dgn M1-0244-01 FINAL PRINT

| REV | DWN | CHKD | APVD | REMARKS |
|---|---|---|---|---|
| CP-14 | JSSC 01-07 2009 | SM 01-26 2009 | | THIS DRAWING REVISED TO INCORPORATE DESIGN CHANGE FDA-2009-001033-01-00 PER SK-0001-09-001033-01-00. |

NOTES:

1. ALL EQUIPMENT DENOTED BY * WAS SUPPLIED BY GRAVER.
2. FOR MECHANICAL SYMBOLS AND NOTES SEE DWG M1-0200.
3. ALL EQUIPMENT FOR BACKWASH RECOVERY SUBSYSTEM IS SUPPLIED BY GRAVER WITH THE EXCEPTION OF PIPING.
4. WORK THIS DWG WITH M1-0244, M1-0244-A, M1-0244-B AND M1-0244-01A.
5. DELETED




DRAWING ECE-M1-0244-01 REV CP-5
HAS BEEN SPLIT INTO THE FOLLOWING SHEETS:
M1-0244-01
M1-0244-01A

CLASS II

LUMINANT
CPNPP
GLEN ROSE, TEXAS

FLOW DIAGRAM
CONDENSATE POLISHING SYSTEM

DWG. NO. M1-0244 | SH. NO. 01A | REV. CP-14

FSAR FIGURE 10.4-7

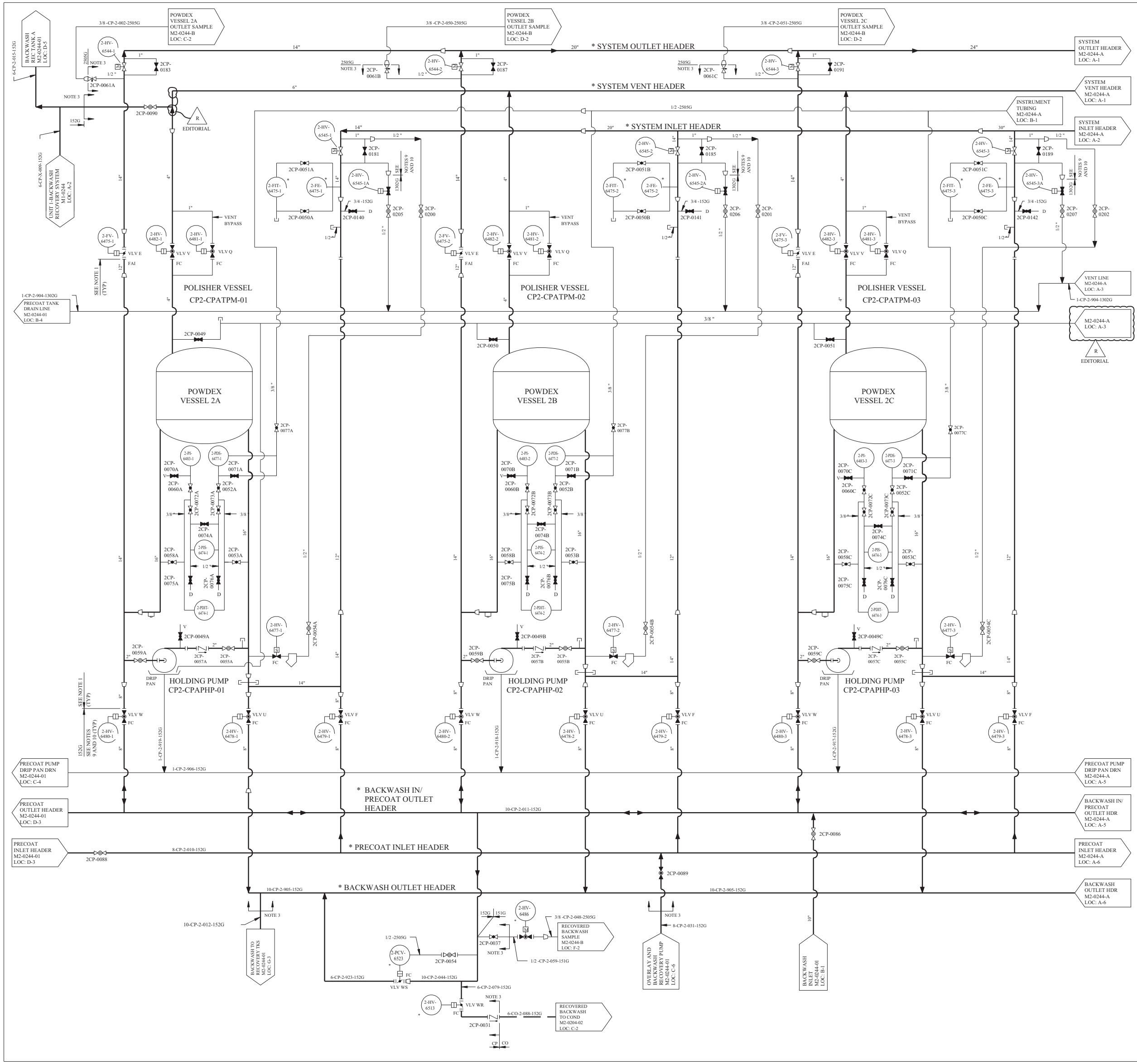
THIS DRAWING CREATED ELECTRONICALLY

REF CHRD 10/23/2000

$$$$$$$DATA$$$$$$

me932900.dgn

< FINAL PRINT >




| REV | DWN | CHKD | APVD | REMARKS |
|---|---|---|---|---|
| CP-12 | DLK 10-03 2001 | SS 10-03 2001 | | THIS DRAWING REVISED TO INCORPORATE DESIGN CHANGE FDA 2001-001845-01-00 PER SK-0003-01-001845-01-00. |

NOTES:

1. ALL EQUIPMENT SHOWN ARE SHOP-ASSEMBLED SKIDDED MODULES SUPPLIED BY GRAVER.
2. ALL ITEMS DENOTED BY * SUPPLIED BY GRAVER.
3. ALL PIPING/HEADERS WHICH TERMINATE OR ORIGINATE WITHIN MODULES TO POINTS DENOTED BY SUPPLIED BY GRAVER. SEE NOTES 9 AND 10.
4. FOR MECHANICAL SYMBOLS AND NOTES SEE DWG M1-0200.
5. ALL EQUIPMENT FOR BACKWASH RECOVERY SUBSYSTEM IS SUPPLIED BY GRAVER WITH THE EXCEPTION OF PIPING.
6. WORK THIS DRAWING WITH M2-0244-01, M2-0244-01A, M2-0244-A AND M2-0244-B.
7. DELETED
8. UNLESS OTHERWISE NOTED, PIPE AND FITTINGS 2" AND SMALLER ARE SOCKET WELDED USING SCHEDULE 80 PIPE AND 3000 LB FITTINGS. PIPE AND FITTINGS 2 1/2 " AND LARGER ARE BUTT WELDED, EXCEPT FLANGED AT VALVES, PUMPS AND PRECOAT TANK CONNECTIONS. WALL THICKNESS IS STANDARD WEIGHT FOR SIZES 2 1/2 " TO 16" AND SCHEDULE 30 FOR SIZES 18" TO 30".
9. UNLESS OTHERWISE NOTED, PIPE MATERIAL IS A-106 GR B FOR SIZES 24" AND SMALLER AND A-155 GR KC60 (MIN) CLASS I FOR 30" SIZE. FITTING MATERIAL IS A-105 GR II OR A-105 GR 71 FOR SIZES 2" AND SMALLER, A-234 GR WPB FOR SIZES 2 1/2 " TO 24" AND A-234 GR WPC OR A-515 GR60 MIN (100% X-RAY) FOR 30" SIZE.

| DRAWING M2-0244 REV CP-4 HAS BEEN SPLIT INTO THE FOLLOWING SHEETS: |
|---|
| M2-0244 |
| M2-0244-A |
| M2-0244-B |
| M2-0244-01 |
| M2-0244-01A |

FSAR FIGURE 10.4-7

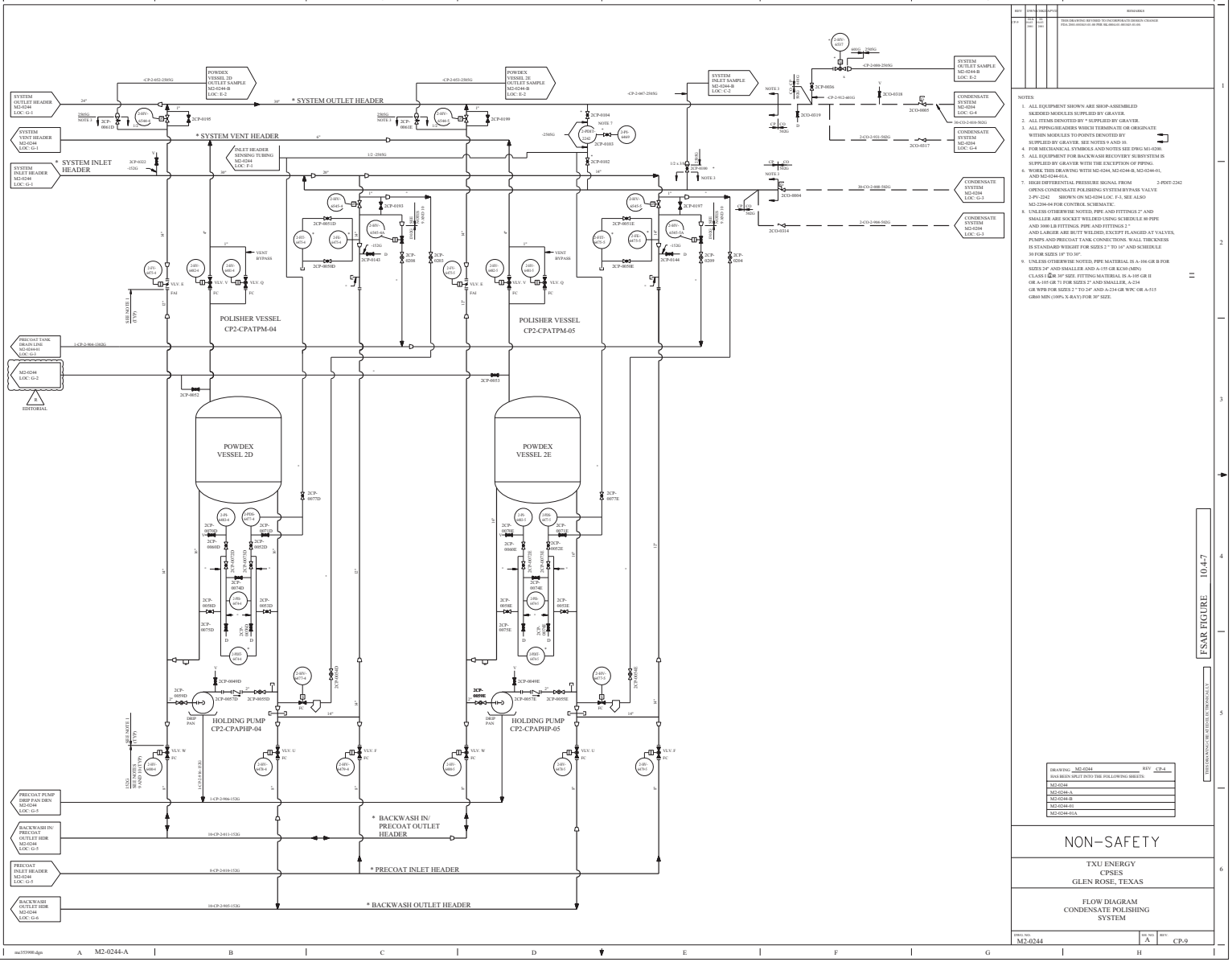
THIS DRAWING CREATED ELECTRONICALLY

NON-SAFETY

TXU ENERGY
CPSES
GLEN ROSE, TEXAS

FLOW DIAGRAM
CONDENSATE POLISHING
SYSTEM

| DWG. NO. | SH. NO. | REV. |
|---|---|---|
| M2-0244 | - | CP-12 |




NOTES:

1. ALL EQUIPMENT SHOWN ARE SKID-ASSEMBLED SKIDDED MODULES SUPPLIED BY GRAVER.
2. ALL ITEMS DENOTED BY * SUPPLIED BY GRAVER.
3. ALL PIPING/HEADERS WHICH TERMINATE OR ORIGINATE WITHIN MODULES TO POINTS DENOTED BY SUPPLIED BY GRAVER. SEE NOTES 9 AND 10.
4. FOR MECHANICAL SYMBOLS AND NOTES SEE DWG M1-0200.
5. ALL EQUIPMENT FOR BACKWASH RECOVERY SUBSYSTEM IS SUPPLIED BY GRAVER WITH THE EXCEPTION OF PIPING.
6. WORK THIS DRAWING WITH M2-0244, M2-0244-B, M2-0244-01, AND M2-0244-01A.
7. HIGH DIFFERENTIAL PRESSURE SIGNAL FROM 2-PDIT-2242 OPENS CONDENSATE POLISHING SYSTEM BYPASS VALVE. 2-PV-2242 SHOWN ON M2-0204 LOC: F-3, SEE ALSO M2-2204-04 FOR CONTROL SCHEMATIC
8. UNLESS OTHERWISE NOTED, PIPE AND FITTINGS 2" AND SMALLER ARE SOCKET WELDED USING SCHEDULE 80 PIPE AND 3000 LB FITTINGS. PIPE AND FITTINGS 2 " AND LARGER ARE BUTT WELDED, EXCEPT FLANGED AT VALVES, PUMPS AND PRECOAT TANK CONNECTIONS. WALL THICKNESS IS STANDARD WEIGHT FOR SIZES 2 " TO 16" AND SCHEDULE 30 FOR SIZES 18" TO 30".
9. UNLESS OTHERWISE NOTED, PIPE MATERIAL IS A-106 GR B FOR SIZES 24" AND SMALLER AND A-155 GR KC60 (MIN) CLASS 1 FOR 30" SIZE. FITTING MATERIAL IS A-105 GR II OR A-105 GR 71 FOR SIZES 2" AND SMALLER, A-234 GR WPB FOR SIZES 2 " TO 24" AND A-234 GR WPC OR A-515 GR60 MIN (100% X-RAY) FOR 30" SIZE.

| REV | DWN | CHKD | APVD | REMARKS |
|---|---|---|---|---|
| CP-9 | | | | THIS DRAWING REVISED TO INCORPORATE DESIGN CHANGE FDA_DSG-0003/01.01 PER NL-0814-01 AND 02-01. |

FSAR FIGURE 10.4-7

THIS DRAWING WAS CREATED IN CROSSVALUE

| DRAWING M2-0244 HAS BEEN SPLIT INTO THE FOLLOWING SHEETS: | REV CP-4 |
|---|---|
| M2-0244 | |
| M2-0244-A | |
| M2-0244-B | |
| M2-0244-01 | |
| M2-0244-01A | |

NON-SAFETY

TXU ENERGY
CPSES
GLEN ROSE, TEXAS

FLOW DIAGRAM
CONDENSATE POLISHING
SYSTEM

| DWG NO. | REV. |
|---|---|
| M2-0244 | CP-9 |

ma155900.dgn A M2-0244-A

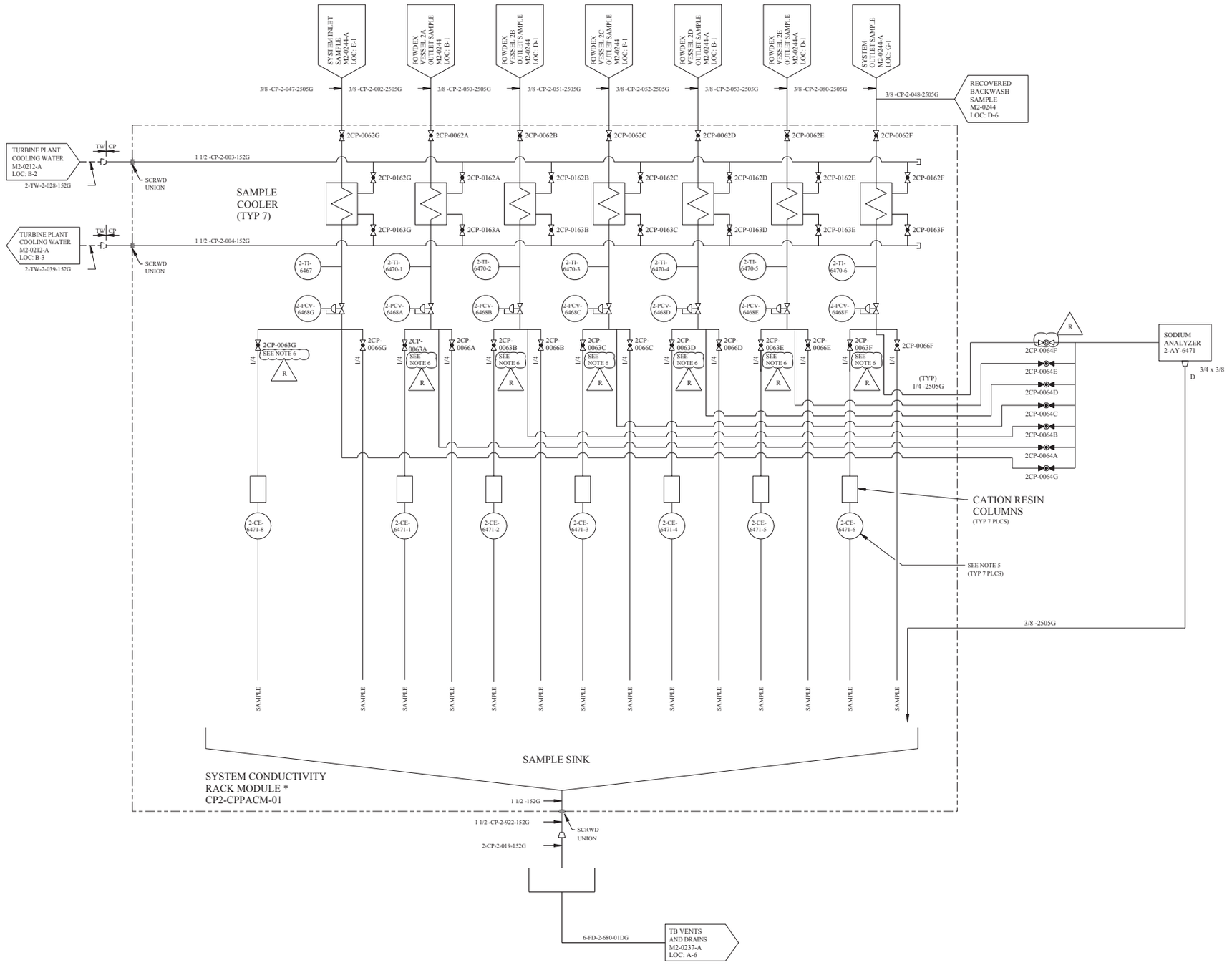
| REV | DWN | CHKD | APVD | REMARKS |
|---|---|---|---|---|
| CP-9 | DLK 06-29-2004 | MM 07-07-2004 | | THIS DRAWING REVISED TO INCORPORATE DESIGN CHANGE FDA 2000-003261-02-00 PER SK-0002-00-003261-02-00. |

NOTES:

1. ALL EQUIPMENT SHOWN WITHIN DASHED LINES WAS SUPPLIED AS SHOP-ASSEMBLED SKIDDED MODULES.
2. ALL EQUIPMENT DENOTED BY * WAS SUPPLIED BY GRAVER.
3. FOR MECHANICAL SYMBOLS AND NOTES SEE DWG M1-0200.
4. WORK THIS DWG WITH M2-0244, M2-0244-A, -01 AND -01A.
5. CONDUCTIVITY RECORDER INPUTS:

| | |
|---|---|
| 2-CE-6471-1 | VESSEL 2A EFFLUENT |
| 2-CE-6471-2 | VESSEL 2B EFFLUENT |
| 2-CE-6471-3 | VESSEL 2C EFFLUENT |
| 2-CE-6471-4 | VESSEL 2D EFFLUENT |
| 2-CE-6471-5 | VESSEL 2E EFFLUENT |
| 2-CE-6471-6 | SYSTEM INFLUENT |
| | |
| 2-CE-6471-8 | SYSTEM EFFLUENT/BACKWASH REC |

6. CHEMISTRY THROTTLES VALVES ON IN SERVICE VESSELS. R




FSAR FIGURE 10.4-7

THIS DRAWING CREATED ELECTRONICALLY

DRAWING M2-0244 REV CP-4
HAS BEEN SPLIT INTO THE FOLLOWING SHEETS:

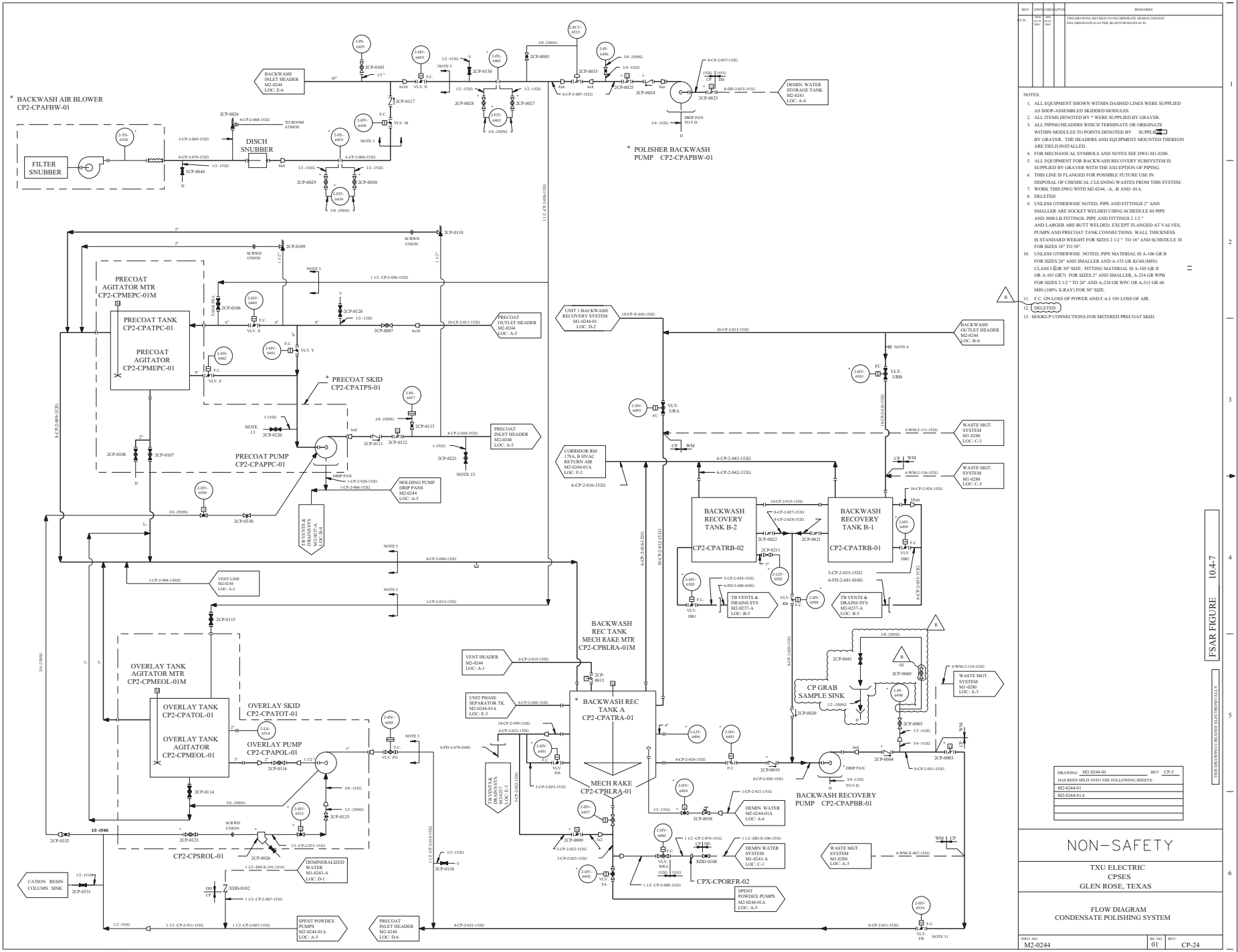
| |
|---|
| M2-0244 |
| M2-0244-A |
| M2-0244-B |
| M2-0244-01 |
| M2-0244-01A |

NON-SAFETY

LUMINANT
CPSES
GLEN ROSE, TEXAS

FLOW DIAGRAM
CONDENSATE POLISHING
SYSTEM

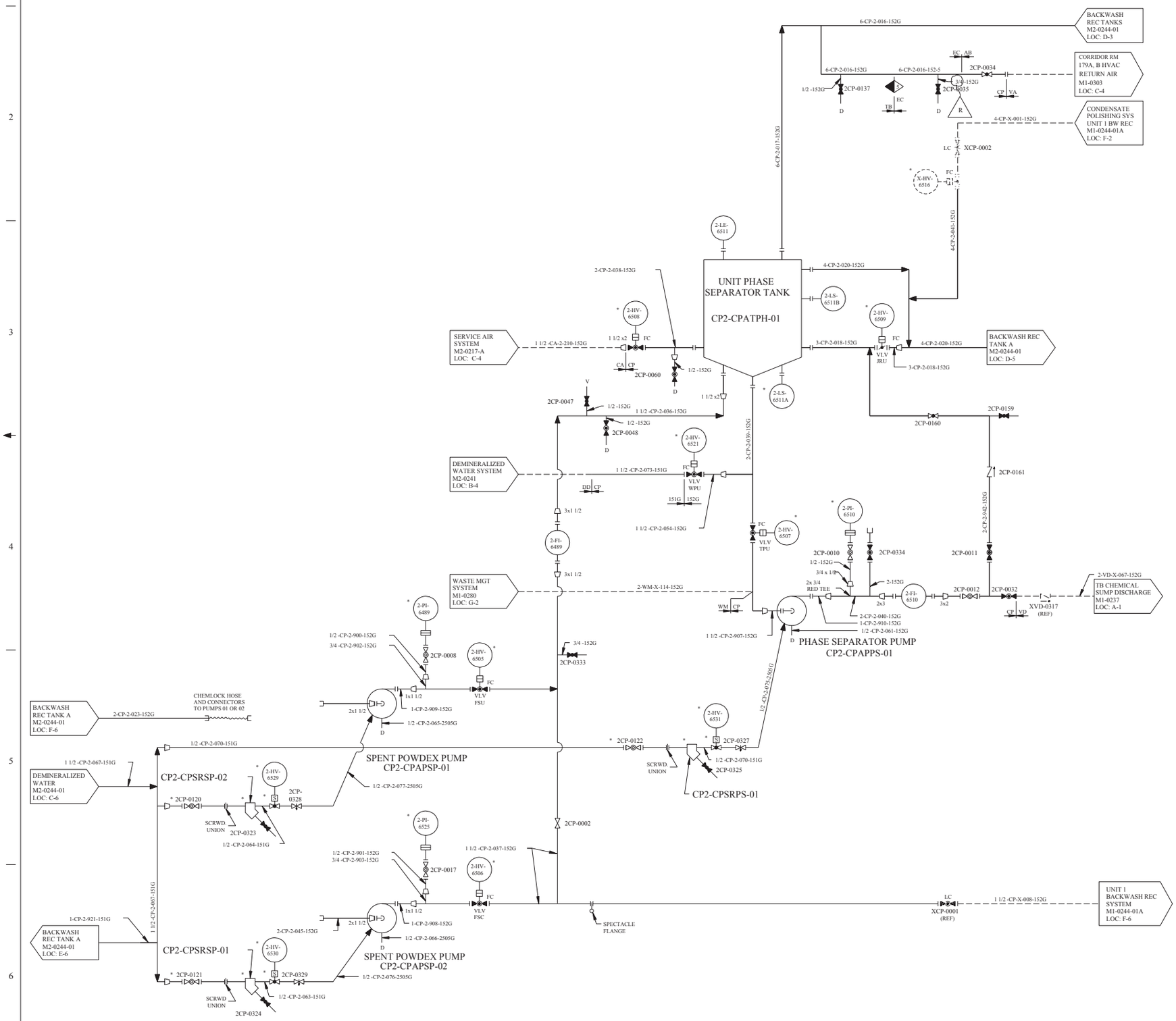
| DWG. NO. | SH. NO. | REV. |
|---|---|---|
| M2-0244 | B | CP-9 |


BACKWASH AIR BLOWER CP2-CPAFBW-01
FILTER SNUBBER
DISCH SNUBBER
TO ROOM ATMOS.
BACKWASH INLET HEADER M2-0244 LOC: E-6
DEMIN. WATER STORAGE TANK M2-0241 LOC: A-4
POLISHER BACKWASH PUMP CP2-CPAPBW-01
DRIP PAN TO F.D.
PRECOAT AGITATOR MTR CP2-CPMEPC-01M
PRECOAT TANK CP2-CPATPC-01
PRECOAT AGITATOR CP2-CPMEPC-01
PRECOAT SKID CP2-CPATPS-01
PRECOAT OUTLET HEADER M2-0244 LOC: A-5
PRECOAT INLET HEADER M2-0244 LOC: A-5
PRECOAT PUMP CP2-CPAPPC-01
HOLDING PUMP DRIP PANS M2-0244 LOC: A-5
TB VENTS & DRAINS SYS M2-0237-A LOC: B-4
VENT LINE M2-0244 LOC: A-2
OVERLAY TANK AGITATOR MTR CP2-CPMEOL-01M
OVERLAY TANK CP2-CPATOL-01
OVERLAY TANK AGITATOR CP2-CPMEOL-01
OVERLAY SKID CP2-CPATOT-01
OVERLAY PUMP CP2-CPAPOL-01
CP2-CPSROL-01
DEMINERALIZED WATER M1-0241-A LOC: D-1
CATION RESIN COLUMN SINK
SPENT POWDEX PUMPS M2-0244-01A LOC: A-5
PRECOAT INLET HEADER M2-0244 LOC: D-6
UNIT 1 BACKWASH RECOVERY SYSTEM M1-0244-01 LOC: D-2
CORRIDOR RM 179A, B HVAC RETURN AIR M2-0244-01A LOC: F-2
BACKWASH OUTLET HEADER M2-0244 LOC: B-6
WASTE MGT. SYSTEM M1-0280 LOC: C-3
BACKWASH RECOVERY TANK B-2 CP2-CPATRB-02
BACKWASH RECOVERY TANK B-1 CP2-CPATRB-01
TB VENTS & DRAINS SYS M2-0237-A LOC: B-5
BACKWASH REC TANK MECH RAKE MTR CP2-CPBLRA-01M
VENT HEADER M2-0244 LOC: A-1
UNIT PHASE SEPARATOR TK. M2-0244-01A LOC: E-3
BACKWASH REC TANK A CP2-CPATRA-01
MECH RAKE CP2-CPBLRA-01
CP GRAB SAMPLE SINK
BACKWASH RECOVERY PUMP CP2-CPAPBR-01
DEMIN. WATER M2-0244-01A LOC: A-6
DEMIN WATER SYSTEM M1-0241-A LOC: C-1
CPX-CPORFR-02
SPENT POWDEX PUMPS M2-0244-01A LOC: A-5
WASTE MGT. SYSTEM M1-0280 LOC: A-3
NOTES:
1. ALL EQUIPMENT SHOWN WITHIN DASHED LINES WERE SUPPLIED AS SHOP-ASSEMBLED SKIDDED MODULES.
2. ALL ITEMS DENOTED BY * WERE SUPPLIED BY GRAVER.
3. ALL PIPING/HEADERS WHICH TERMINATE OR ORIGINATE WITHIN MODULES TO POINTS DENOTED BY * SUPPLIED BY GRAVER. THE HEADERS AND EQUIPMENT MOUNTED THEREON ARE FIELD INSTALLED.
4. FOR MECHANICAL SYMBOLS AND NOTES SEE DWG M1-0200.
5. ALL EQUIPMENT FOR BACKWASH RECOVERY SUBSYSTEM IS SUPPLIED BY GRAVER WITH THE EXCEPTION OF PIPING.
6. THIS LINE IS FLANGED FOR POSSIBLE FUTURE USE IN DISPOSAL OF CHEMICAL CLEANING WASTES FROM THIS SYSTEM.
7. WORK THIS DWG WITH M2-0244, -A, -B AND -01-A.
8. DELETED
9. UNLESS OTHERWISE NOTED, PIPE AND FITTINGS 2" AND SMALLER ARE SOCKET WELDED USING SCHEDULE 80 PIPE AND 3000 LB FITTINGS. PIPE AND FITTINGS 2 1/2 " AND LARGER ARE BUTT WELDED, EXCEPT FLANGED AT VALVES, PUMPS AND PRECOAT TANK CONNECTIONS. WALL THICKNESS IS STANDARD WEIGHT FOR SIZES 2 1/2 " TO 16" AND SCHEDULE 30 FOR SIZES 18" TO 30".
10. UNLESS OTHERWISE NOTED, PIPE MATERIAL IS A-106 GR B FOR SIZES 24" AND SMALLER AND A-155 GR KC60 (MIN) CLASS I &OR 30" SIZE. FITTING MATERIAL IS A-105 GR II OR A-105 GR71 FOR SIZES 2" AND SMALLER, A-234 GR WPB FOR SIZES 2 1/2 " TO 24" AND A-234 GR WPC OR A-515 GR 60 MIN (100% X-RAY) FOR 30" SIZE.
11. F.C. ON LOSS OF POWER AND F.A.I. ON LOSS OF AIR.
12. DELETED
13. HOOKUP CONNECTIONS FOR METERED PRECOAT SKID.
REV DWN CHKD APVD REMARKS
CP-24 BCK 04-19-2001 SEH 04-22-2001 THIS DRAWING REVISED TO INCORPORATE DESIGN CHANGE FDA 2000-001858-01-01 PER SK-0659-00-001-E0-01-01.
DRAWING M2-0244-01 REV CP-3 HAS BEEN SPLIT INTO THE FOLLOWING SHEETS:
M2-0244-01
M2-0244-01A
NON-SAFETY
TXU ELECTRIC
CPSES
GLEN ROSE, TEXAS
FLOW DIAGRAM
CONDENSATE POLISHING SYSTEM
DWG. NO. M2-0244
SH. NO. 01
REV. CP-24
FSAR FIGURE 10.4-7
THIS DRAWING CREATED ELECTRONICALLY
REF CKD CP-19 10/17/97
$$$$$$$DATE$$$$$$$
mc373800.dgn
M2-0244-01

| REV | DWN | CHK'D | APVD | REMARKS |
|---|---|---|---|---|
| CP-15 | JHMC 11-23 2009 | DJL 11-23 2009 | | THIS DRAWING REVISED TO INCORPORATE DESIGN CHANGE FDA-2009-006303-01-00 PER SK-0001-09-006303-01-00. |

NOTES

1. DELETED
2. ALL EQUIPMENT DENOTED BY * WAS SUPPLIED BY GRAVER.
3. FOR MECHANICAL SYMBOLS AND NOTES SEE DWG M1-0200.
4. ALL EQUIPMENT FOR BACKWASH RECOVERY SUBSYSTEM IS SUPPLIED BY GRAVER WITH THE EXCEPTION OF PIPING.
5. WORK THIS DWG WITH M2-0244, M2-0244-A, M2-0244-B AND M2-0244-01.




DRAWING M2-0244-01 REV CP-3
HAS BEEN SPLIT INTO THE FOLLOWING SHEETS:
M2-0244-01
M2-0244-01A

FSAR FIGURE 10.4-7

THIS DRAWING CREATED ELECTRONICALLY

CLASS II

LUMINANT
CPNPP
GLEN ROSE, TEXAS

FLOW DIAGRAM
CONDENSATE POLISHING SYSTEM

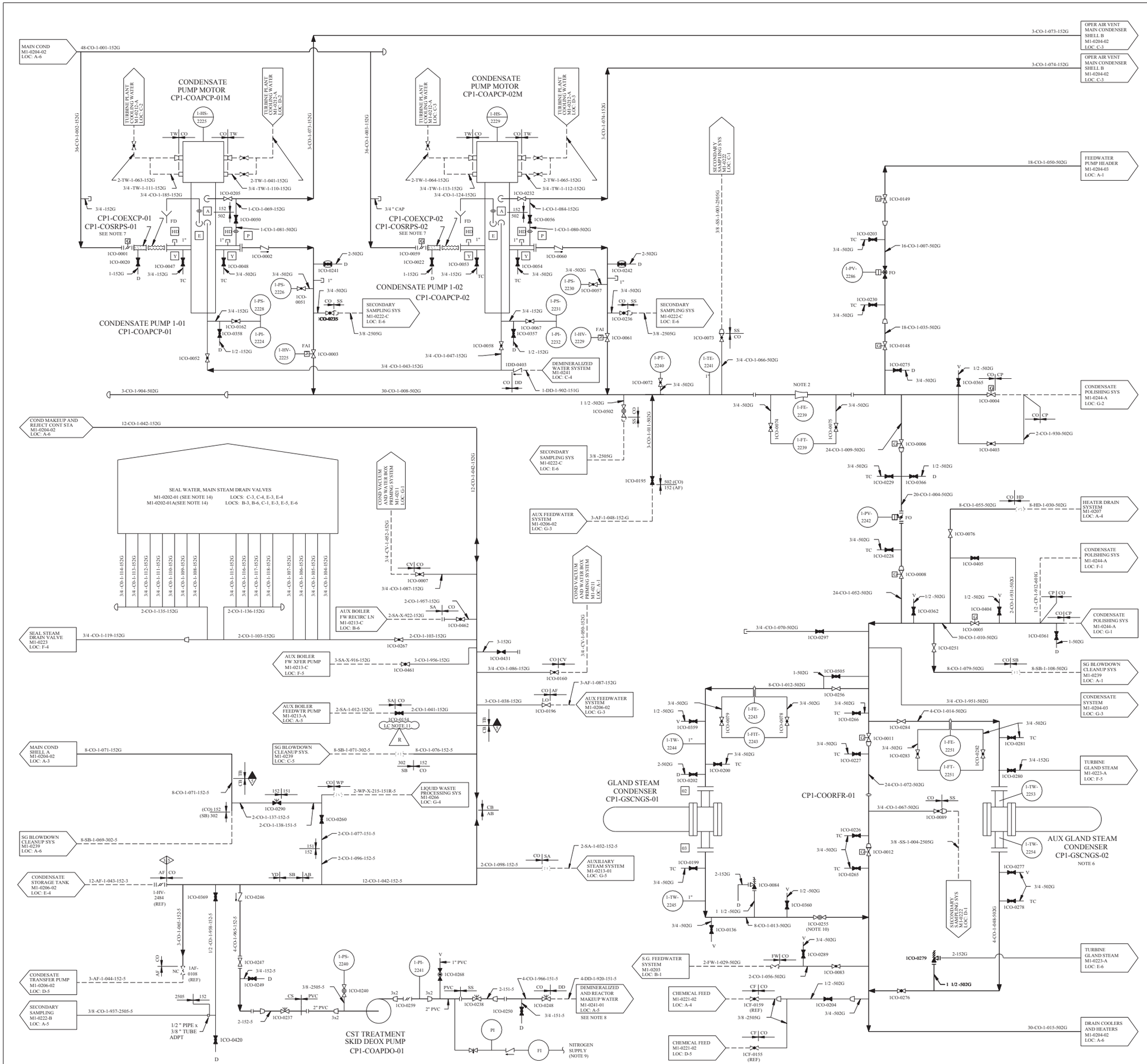
| DWG. NO. | SH. NO. | REV. |
|---|---|---|
| M2-0244 | 01A | CP-15 |

REF DWG CP10 11-1-96

SSSSSSDATESSSSS

me965200.dgn A M2-0244-01A

< FINAL PRINT >




| REV | DWN | CHK | APVD | REMARKS |
|---|---|---|---|---|
| CP-39 | JSAC 09-14-2011 | DLS 09-15-2011 | | THIS DRAWING REVISED TO INCORPORATE DESIGN CHANGE FDA 2009-003957-01-00 PER SK-0003-09-003957-01-00. |

NOTES:

1. FOR MECHANICAL SYMBOLS AND NOTES SEE DRAWING M1-0200.
2. VENTURI FLOW ELEMENTS FITTED IN SPOOL PIECES WHICH ARE FACTORY CALIBRATED. SPOOL PIECES FLANGED INTO PIPING.
3. GLAND STEAM CONDENSER SUPPLIED BY ALLIS-CHALMERS POWER SYSTEMS INC.
4. TYPICAL CUSTOMERS PIPING CONNECTIONS ARE INDICATED AS FOLLOWS:
   CONDENSATE PUMPS 1-E
   GLAND STEAM COND. ACISI
5. DELETED
6. AUXILIARY GLAND STEAM CONDENSER SUPPLIED BY GENERAL ELECTRIC.
7. TEMPORARY STRAINER INSTALLED IN SPOOL PIECE DURING FLUSHING OPERATIONS AND INITIAL START-UP. THE TEMPORARY STRAINERS ARE TO BE REMOVED AFTER THE EXTRACTION STEAM AND HEATER DRAIN SYSTEMS ARE PUT INTO OPERATION. TEMPORARY STRAINERS CAN BE RE-INSTALLED FOR POST MAINTENANCE ACTIVITY.
8. CST TREATMENT SKID DEOX PUMP PIPING CONFIGURATION ALSO SHOWN ON AUXILIARY FEEDWATER FLOW DIAGRAM M1-0206-02 LOC: E-4 FOR CLARITY.
9. NITROGEN SUPPLY TO CONSIST OF LOW PRESSURE DEWARS CANISTERS.
10. 1CO-0255 IS A V-BALL VALVE WHICH DOES NOT SEAL AGAINST REVERSE FLOW.
11. VALVE 1CO-0154 IS LOCKED CLOSED TO ISOLATE THE ABANDONED IN PLACE ELECTRIC AUXILIARY BOILER.

R

THIS DRAWING CREATED ELECTRONICALLY

CLASS II

LUMINANT
CPNPP
GLEN ROSE, TEXAS

FLOW DIAGRAM
CONDENSATE SYSTEM

| DWG. NO. | SH. NO. | REV. |
|---|---|---|
| M1-0204 | - | CP-39 |

me103150.dgn A M1-0204

FINAL PRINT

| REV | DWN | CHKD | APVD | REMARKS |
|---|---|---|---|---|
| CP-36 | JRMC 12-10 2008 | EES 12-10 2008 | | THIS DRAWING REVISED TO INCORPORATE DESIGN CHANGE FDA 2008-000795-02-00 PER SK-0001-08-000795-02-00. |

NOTES:

1. FOR MECHANICAL NOTES AND SYMBOLS SEE DRAWING M1-0200.
2. VENTURI FLOW ELEMENTS FITTED IN SPOOL PIECES ARE FACTORY CALIBRATED. SPOOL PIECES FLANGED INTO PIPE.
3. HEATERS 5 AND 6, DRAIN COOLER BYPASS AND ISOLATION VALVES ARE CONTROLLED BY SHELL SIDE LEVEL SWITCHES, SHOWN ON M1-0207-A.
4. TYPICAL CUSTOMER'S PIPING CONNECTIONS ARE INDICATED AS FOLLOWS:

| | |
|---|---|
| FEEDWATER HEATERS | SWC |
| AUX. COND. | I-R |
| MAIN COND. | W-HTD |
| DRAIN COOLERS | |

5. 10'-0" LENGTH SPOOL PIECE FOR INSERTION OF FLOW MEASUREMENT SECTION DURING INITIAL PERFORMANCE TESTING.
6. * INDICATED RELIEF VALVES BY STRUTHERS WELLS CORP.
7. DELETED
8. LINE SHALL SLOPE CONTINUOUSLY DOWNWARD TOWARD CONDENSER.
9. VALVE FAILS CLOSED ON LOSS OF SIGNAL AND OPENS ON LOSS OF AIR.

FSAR FIGURE 10.4-8

THIS DRAWING CREATED ELECTRONICALLY

NON–SAFETY

LUMINANT
CPNPP
GLEN ROSE, TEXAS

FLOW DIAGRAM
CONDENSATE SYSTEM

| DWG. NO. | SH. NO. | REV. |
|---|---|---|
| M1-0204 | 02 | CP-36 |

REF CKD CP-22 11/15/96

$$$$$$$DATE$$$$$$

| REV | DWN | CHKD | APVD | REMARKS |
|---|---|---|---|---|
| CP-20 | DLK 09-21 2008 | MM 09-21 2008 | | THIS DRAWING REVISED TO INCORPORATE DESIGN CHANGE FDA-2006-003080-20-01 PER SK-0001-06-003080-20-01. EDITORIAL CHANGES AS NOTED. |

NOTES:

1. FOR MECHANICAL NOTES AND SYMBOLS SEE DRAWING M1-0200.
2. VENTURI FLOW ELEMENTS FITTED IN SPOOL PIECES ARE FACTORY CALIBRATED, SPOOL PIECES FLANGED INTO PIPING.
3. * INDICATES RELIEF VALVES BY STRUTHERS WELLS CORPORATION.
4. TYPICAL CUSTOMER'S PIPING CONNECTIONS ARE INDICATED AS FOLLOWS:

FEEDWATER HEATERS ⬡ SWC.

FSAR FIGURE 10.4-8

THIS DRAWING CREATED ELECTRONICALLY

NON–SAFETY

LUMINANT
CPNPP
GLEN ROSE, TEXAS

FLOW DIAGRAM
CONDENSATE SYSTEM

| DWG. NO. | SH. NO. | REV. |
|---|---|---|
| M1-0204 | 03 | CP-20 |

REF CHKD 6/18/2001

SSSSSSSDATESSSSSS

me904500.dgn M1-0204-03 < FINAL PRINT >

| REV | DWN | CHK | APVD | REMARKS |
|---|---|---|---|---|
| CP-29 | JSAC 09-14-2011 | DLK 09-15-2011 | | THIS DRAWING REVISED TO INCORPORATE DESIGN CHANGE FDA-2009-003957-01-00 PER SK-0010-09-003957-01-00. EDITORIAL CHANGES AS NOTED. |

NOTES:

1. VENTURI FLOW ELEMENTS WILL BE FITTED IN SPOOL PIECES WHICH WILL BE FACTORY CALIBRATED. SPOOL PIECES WILL THEN BE FLANGED INTO PIPING.
2. TYPICAL CUSTOMERS PIPING CONNECTIONS ARE INDICATED AS FOLLOWS:

| | | |
|---|---|---|
| ⬡ | SWC | FEEDWATER HEATERS |
| □ | I-R | AUXILIARY CONDENSERS |
| ○ | W-HTD | MAIN CONDENSER |
| □ | A-CPSI | GLAND STEAM CONDENSER |
| □ | B-W | CONDENSATE PUMP |

3. DELETED
4. AUXILIARY GLAND STEAM CONDENSER TO BE SUPPLIED BY GENERAL ELECTRIC.
5. TEMPORARY STRAINER INSTALLED IN SPOOL PIECE DURING FLUSHING OPERATIONS ONLY, MUST BE REMOVED PRIOR TO PLANT START-UP. TEMPORARY STRAINERS CAN BE RE-INSTALLED FOR POST MAINTENANCE ACTIVITY.
6. UNLESS OTHERWISE NOTED ALL DRAINS COLLECTED BY LOCAL DRAIN SYSTEM.
7. FOR MECHANICAL SYMBOLS AND NOTES SEE DRAWING M1-0200.
8. GLAND STEAM CONDENSER SUPPLIED BY ALLES-CHAMBERS POWER SYSTEMS INC.
9. VALVE MECHANICALLY SECURED IN THROTTLED POSITION. AIR OPERATOR RENDERED INOPERABLE, REFERENCE DCN 10158.
10. CST TREATMENT SKID DEOX PUMP PIPING CONFIGURATION ALSO SHOWN ON AUXILIARY FEEDWATER SYSTEM FLOW DIAGRAM M2-0206-02 LOC: E-4 FOR CLARITY.
11. NITROGEN SUPPLY TO CONSIST OF LOW PRESSURE DEWARS CANISTERS.
12. VALVE 2CO-0154 IS LOCKED CLOSED TO ISOLATE THE ABANDONED IN PLACE ELECTRIC AUXILIARY BOILER.

R

DRAWING M2-0204 REV CP-5 HAS BEEN SPLIT INTO THE FOLLOWING SHEETS:

- M2-0204
- M2-0204-02
- M2-0202-03

# CLASS II

LUMINANT
CPNPP
GLEN ROSE, TEXAS

FLOW DIAGRAM
CONDENSATE SYSTEM

| DWG. NO. | SH. NO. | REV. |
|---|---|---|
| M2-0204 | - | CP-29 |

FSAR FIGURE 10.4-8

THIS DRAWING CREATED ELECTRONICALLY

REF CKD CP-16 6-30-98

me103160.dgn M2-0204 FINAL PRINT

| REV | DWN | CHKD | APVD | REMARKS |
|---|---|---|---|---|
| CP-31 | JRMC 05-02-2011 | DLK 05-16-2011 | | THIS DRAWING REVISED TO INCORPORATE DESIGN CHANGE FDA-2011-000079-01-00 PER SK-0001-11-000079-01-00. |

NOTES:

1. HEATERS 5 AND 6 BYPASS AND ISOLATION VALVES ARE CONTROLLED BY SHELL SIDE LEVEL SWITCHES SHOWN ON M2-0205.
2. TYPICAL CUSTOMERS PIPING CONNECTIONS ARE INDICATED AS FOLLOWS:
   - SWC — FEEDWATER HEATERS
   - I-R — AUXILIARY CONDENSERS
   - W-HTD — MAIN CONDENSER
   - A-CPSI — GLAND STEAM CONDENSER
   - B-W — CONDENSATE PUMP
3. DELETED
4. TUBE SIDE FEEDWATER HEATER RELIEF VALVES (INDICATED BY *) TO BE SUPPLIED BY STRUTHERS WELLS CO.
5. DELETED
6. LINE SHALL SLOPE CONTINUOUSLY DOWNWARD TOWARDS CONDENSER.
7. UNLESS OTHERWISE NOTED ALL DRAINS COLLECTED BY LOCAL DRAIN SYSTEM.
8. FOR MECHANICAL NOTES AND SYMBOLS SEE DRAWING M1-0200.
9. VALVE FAILS CLOSED ON LOSS OF SIGNAL AND OPEN ON LOSS OF AIR.
10. DELETED

FSAR FIGURE 10.4-8

THIS DRAWING CREATED ELECTRONICALLY

DRAWING M2-0204 REV CP-5 HAS BEEN SPLIT INTO THE FOLLOWING SHEETS:

| |
|---|
| M2-0204 |
| M2-0204-02 |
| M2-0204-03 |

NON–SAFETY

LUMINANT
CPNPP
GLEN ROSE, TEXAS

FLOW DIAGRAM
CONDENSATE SYSTEM

| DWG. NO. | SH. NO. | REV. |
|---|---|---|
| M2-0204 | 02 | CP-31 |

FINAL PRINT

REF CKD CP-18 12/12/97

me102200.dgn A M2-0204-02 B C D E F G H

| REV | DWN | CHKD | APVD | REMARKS |
|---|---|---|---|---|
| CP-14 | SM 04-17-2011 | PLH 04-17-2011 | | THIS DRAWING REVISED TO INCORPORATE DESIGN CHANGE FDA-2008-001394-01-00 PER SK-0003-08-001394-01-00. |

NOTES:

1. TYPICAL CUSTOMERS PIPING CONNECTIONS ARE INDICATED AS FOLLOWS:

| | | |
|---|---|---|
| ⬡ | SWC | FEEDWATER HEATERS |
| □ | I-R | AUXILIARY CONDENSERS |
| ○ | W-HTD | MAIN CONDENSER |
| □ | A-CPSI | GLAND STEAM CONDENSER |
| □ | B-W | CONDENSATE PUMP |

2. VENTURI FLOW ELEMENTS WILL BE FITTED IN SPOOL PIECES WHICH WILL BE FACTORY CALIBRATED. SPOOL PIECES WILL THEN BE FLANGED INTO PIPING.
3. TUBE SIDE FEEDWATER HEATER RELIEF VALVES (INDICATED BY *) TO BE SUPPLIED BY STRUTHERS WELLS COPY.
4. AUXILIARY GLAND STEAM CONDENSER TO BE SUPPLIED BY GENERAL ELECTRIC.
5. UNLESS OTHERWISE NOTED ALL DRAINS COLLECTED BY LOCAL DRAIN SYSTEM.
6. FOR MECHANICAL SYMBOLS AND NOTES SEE DWG M1-0200.

FSAR FIGURE 10.4-8

THIS DRAWING CREATED ELECTRONICALLY

DRAWING M2-0204 REV CP-5
HAS BEEN SPLIT INTO THE FOLLOWING SHEETS:

| |
|---|
| M2-0204 |
| M2-0204-02 |
| M2-0204-03 |
| |
| |

NON–SAFETY

LUMINANT
CPNPP
GLEN ROSE, TEXAS

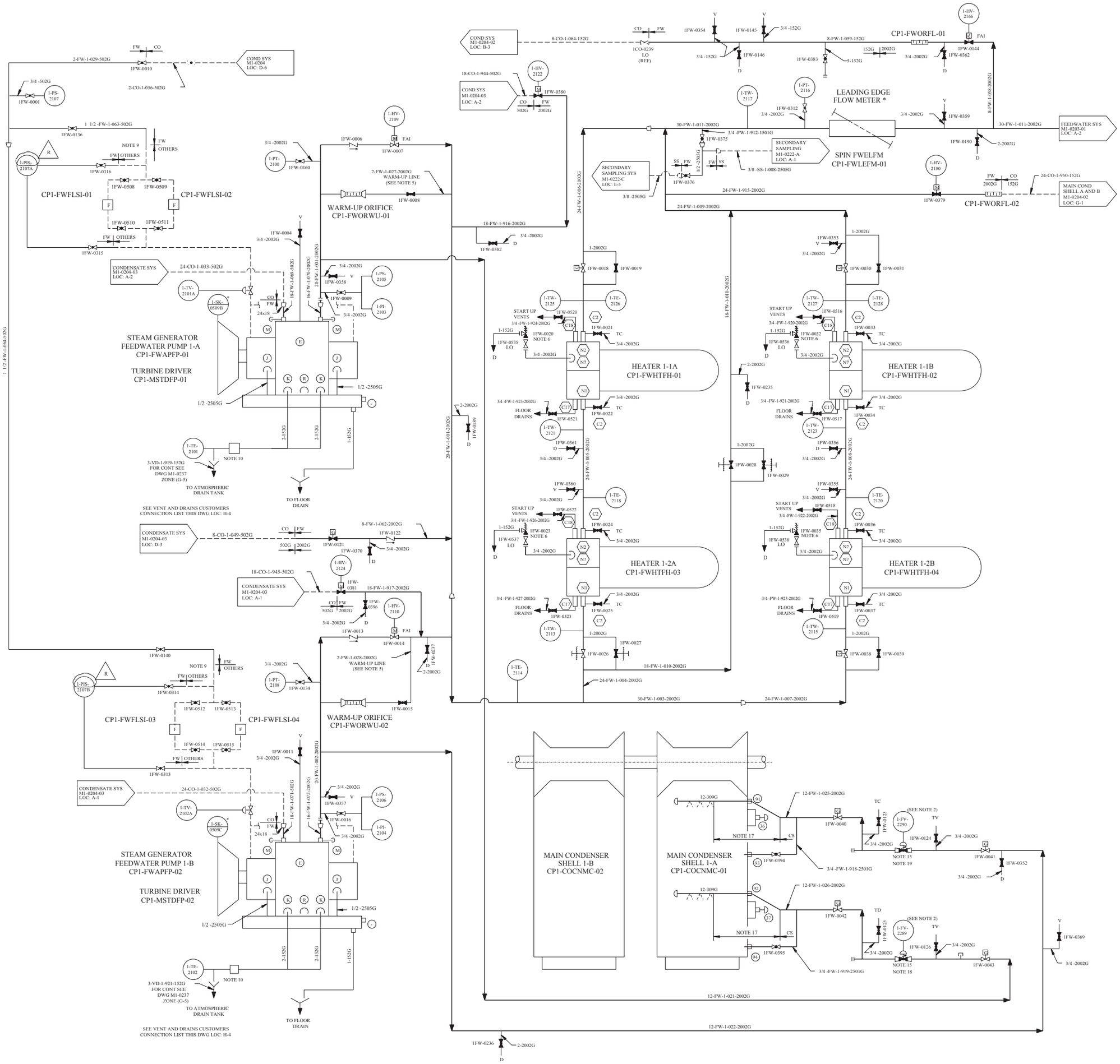
FLOW DIAGRAM
CONDENSATE SYSTEM

| DWG. NO. | SH. NO. | REV. |
|---|---|---|
| M2-0204 | 03 | CP-14 |

FINAL PRINT



REF: CKD 12/3/97 CP-30




| REV | DWN | CHKD | APVD | REMARKS |
|---|---|---|---|---|
| CP-29 | DLK 09-14 2005 | MM 09-14 2005 | | THIS DRAWING REVISED TO INCORPORATE DESIGN CHANGE FDA 2005-003545-01-00 PER SK-0001-05-003545-01-00. |

NOTES:

1. INSTRUMENTS AND DEVICES IDENTIFIED WITH * ARE TO BE PROVIDED BY WESTINGHOUSE-SEE DWG 105D452 FOR BLOCK DIAGRAM.
2. SEE DWG M1-0204-03 FOR FLOW ELEMENT AND TRANSMITTER (LOC B-1, C-1 AND B-2, C-2).
3. DELETED
4. DESIGN CONDITIONS (FROM FEEDWATER PUMPS UP TO AND INCLUDING FEEDWATER ISOLATION VALVES): PRESSURE-1800 PSIG TEMPERATURE-400°-500° F.
5. WARM-UP BREAKDOWN ORIFICE TO BE SUPPLIED BY PUMP MANUFACTURER.
6. TUBE SIDE FEEDWATER HEATER RELIEF VALVES TO BE SUPPLIED BY STRUTHERS WELLS CORP.
7. DELETED
8. FOR MECHANICAL SYMBOLS AND NOTES SEE DWG M1-0200.
9. CUSTOMER'S 1 1/2 " SCH 40 PIPING CONNECTS TO PUMP MANUFACTURER'S SEAL INJECTION SYSTEM (1 1/2 " SW x 1 1/2 " NPT ADAPTER BY FIELD).
10. PROVISION FOR INSERTION OF PUMP MANUFACTURER'S SEAL INJECTION SYSTEM THERMOWELL IN CUSTOMER'S DRAIN PIPING.
11. DRAIN LINE TO SLOPE CONTINUOUSLY TO AUXILIARY DRAINS TANK.
12. TYPICAL CUSTOMER'S PIPING CONNECTIONS ARE INDICATED AS FOLLOWS:
    - FEEDWATER HEATERS
    - MAIN CONDENSER
    - STEAM GENERATOR FEEDWATER PUMPS
13. DELETED
14. DELETED
15. RECIRCULATION VALVES SUPPLIED WITH 12"x8" REDUCERS.
16. DELETED
17. PIPE AND FITTINGS TO BE 12" A335 GRADE P22 AND A234 GRADE WP22 SCH 140 RESPECTIVELY. PIPE END CONNECTION TO CONDENSER SPARGER SHALL BE BORED TO 12" STANDARD WALL.
18. VALVE FAILS CLOSED ON LOSS OF SIGNAL AND OPEN ON LOSS OF AIR. VALVE OPENS ON LOSS OF SIGNAL IN CONJUNCTION WITH LOW FLOW VIA 1-FS-2289.
19. VALVE FAILS CLOSED ON LOSS OF SIGNAL AND OPEN ON LOSS OF AIR. VALVE OPENS ON LOSS OF SIGNAL IN CONJUNCTION WITH LOW FLOW VIA 1-FS-2290.

## CUSTOMER CONNECTION LIST

| CONN | NOTES | DESCRIPTION OF SERVICE |
|---|---|---|
| (E) | 3/4 " SOCKET WELD | VENT CONNECTION - 3/4 " SCH 80 PIPE WITH PROTECTIVE CAP |
| | | |
| (J) | 1/2 " NPT x 3/4 " SW ADAPTER - BY FIELD | AUXILIARY (SECONDARY) STUFFING BOX LEAKAGE CONNECTIONS |
| (K) | 2" NPT x 2" SW ADAPTER - BY FIELD | PRIMARY STUFFING BOX LEAKAGE CONNECTION |
| (M) | 3/4 " NPT - CAPPED | GAUGE CONNECTION |
| (N) | 1/2 " NPT - PLUGGED | INSPECTION LOCATION |
| (R) | 3/4 " NPT - PLUGGED | CASE DRAIN CONNECTION LEFT PLUGGED AT OWNERS REQUEST |
| (-) | 1" NPT - PLUGGED TYPICAL BY FIELD | TROUGH DRAIN |

FSAR FIGURE 10.4-9

THIS DRAWING CREATED ELECTRONICALLY

NON-SAFETY

TXU POWER
CPSES
GLEN ROSE, TEXAS

FLOW DIAGRAM
STEAM GENERATOR
FEEDWATER SYSTEM

| DWG. NO. | SH. NO. | REV. |
|---|---|---|
| M1-0203 | - | CP-29 |

REF CKD 5-19-98 CP-26

| REV | DWN | CHKD | APVD | REMARKS |
|---|---|---|---|---|
| CP-25 | SJL 07-11-2005 | GJW 05-12-2006 | | THIS DRAWING REVISED TO INCORPORATE DESIGN CHANGE FDA-2005-000224-02-00 PER SK-0015-05-000224-02-00. EDITORIAL CHANGES AS NOTED. |

NOTES:

1. INSTRUMENTS AND DEVICES IDENTIFIED WITH * ARE TO BE PROVIDED BY WESTINGHOUSE. SEE DWG 1OSD452 FOR BLOCK DIAGRAM.

2. FEEDWATER SYSTEM PIPING FROM MOMENT RESTRAINTS UPSTREAM OF CHECK VALVES AND FEEDWATER ISOLATION VALVES TO STEAM GENERATOR FEEDWATER INLET NOZZLES IS DESIGNATED NUCLEAR SAFETY CLASS 2.

3. DESIGN CONDITIONS (FROM FEEDWATER PUMPS UP TO AND INCLUDING FEEDWATER ISOLATION VALVES. ) PRESSURE 1800 PSIG TEMP 400° F-500° F.

4. DELETED

5. FOR MECHANICAL SYMBOLS AND NOTES SEE DWG M1-0200.

6. FEEDWATER ISOLATION VALVE FAILS CLOSED ON LOSS OF HYDRAULIC FLUID, ON LOSS OF ELECTRIC POWER IT DOES NOT FAIL CLOSED.

7. DELETED

8. UNLESS OTHERWISE NOTED, ALL DRAINS COLLECTED BY LOCAL DRAIN SYSTEM.

9. THESE THERMOWELLS ARE PROVIDED WITH THREADED PLUGS.

10. THE FOLLOWING HEATERS ARE EXTERNAL ELECTRIC RESISTANCE HEATERS USED TO MAINTAIN THE CORRESPONDING VALVE BODY ABOVE THE LOW TEMPERATURE BRITTLE FRACTURE THRESHOLD DURING FEEDWATER SYSTEM START-UP CONDITIONS.

| HEATER | VALVE | TEMPERATURE INDICATOR |
|---|---|---|
| CP1-HTEHNB-01 | 1-HV-2134 | 1-TI-2152-1 |
| CP1-HTEHNB-02 | 1-HV-2135 | 1-TI-2152-2 |
| CP1-HTEHNB-03 | 1-HV-2136 | 1-TI-2152-3 |
| CP1-HTEHNB-04 | 1-HV-2137 | 1-TI-2152-4 |

11. REFER TO DCN-8010 AND ONE FORM 94-0718 FOR INSTALLED PIPING CATEGORY DOWNSTREAM OF MOMENT RESTRAINTS CP1-FWSSMR-13 , CP1-FWSSMR-14 , CP1-FWSSMR-15 AND CP1-FWSSMR-16 .

12. LOCKED CLOSED IN MODES 1-3 TO ENSURE AFW SYSTEM OPERABILITY. LOCKED CLOSED IN MODES 1-4 FOR CONTAINMENT ISOLATION.

FSAR FIGURE 10.4-9

THIS DRAWING CREATED ELECTRONICALLY

DRAWING 2323-M1-0203-01 REV CP-5
HAS BEEN SPLIT INTO THE FOLLOWING SHEETS:
M1-0203-01
M1-0203-01A

CLASS I
(NUCLEAR SAFETY-RELATED)
SAFETY CLASS 1 — SEISMIC CATEGORY I
SAFETY CLASS 2 — CLASS 1E
SAFETY CLASS 3 — ASSOCIATED CIRCUITS

LUMINANT
CPSES
GLEN ROSE, TEXAS

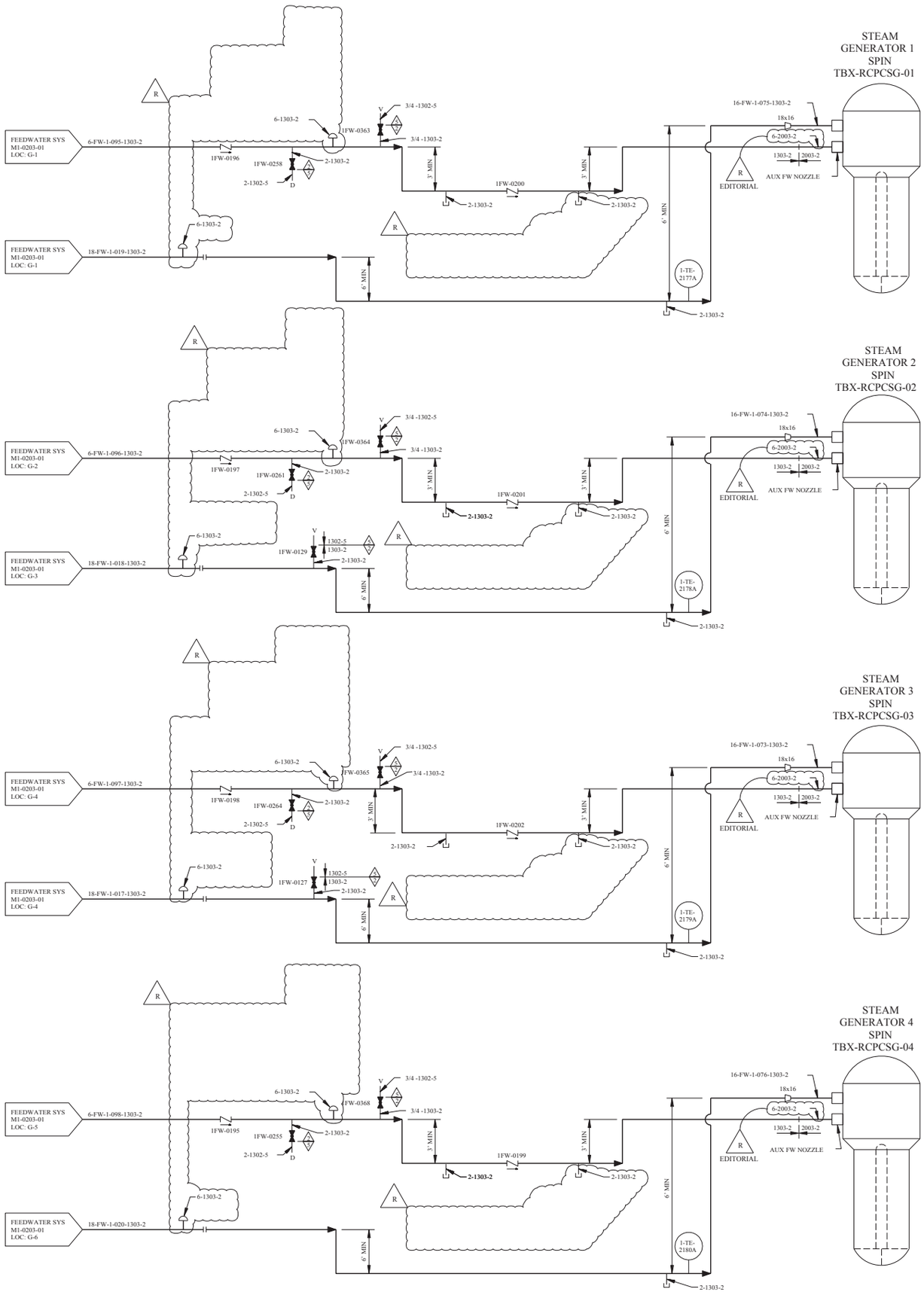
FLOW DIAGRAM
STEAM GENERATOR
FEEDWATER SYSTEM

DWG. NO. M1-0203 | SH. NO. 01 | REV. CP-25

FINAL PRINT

REF CHKD 11/27/2000 CP-22

me765300.dgn M1-0203-01




| REV | DWN | CHKD | APVD | REMARKS |
|---|---|---|---|---|
| CP-15 | DJS 04-17-2007 | DLS 04-17-2007 | | THIS DRAWING REVISED TO INCORPORATE DESIGN CHANGE FDA-2005-000224-02-00 PER SK-0016-05-000224-02-00. EDITORIAL CHANGES AS NOTED. |

NOTES:

1. FEEDWATER SYSTEM PIPING FROM MOMENT RESTRAINTS UPSTREAM OF CHECK VALVES AND FEEDWATER ISOLATION VALVES TO STEAM GENERATOR FEEDWATER INLET NOZZLES IS DESIGNATED NUCLEAR SAFETY CLASS 2.
2. FOR MECHANICAL SYMBOLS AND NOTES SEE DRAWING M1-0200.
3. UNLESS OTHERWISE NOTED, ALL DRAINS COLLECTED BY LOCAL DRAIN SYSTEM.
4. DELETED

FSAR FIGURE 10.4-9

THIS DRAWING CREATED ELECTRONICALLY

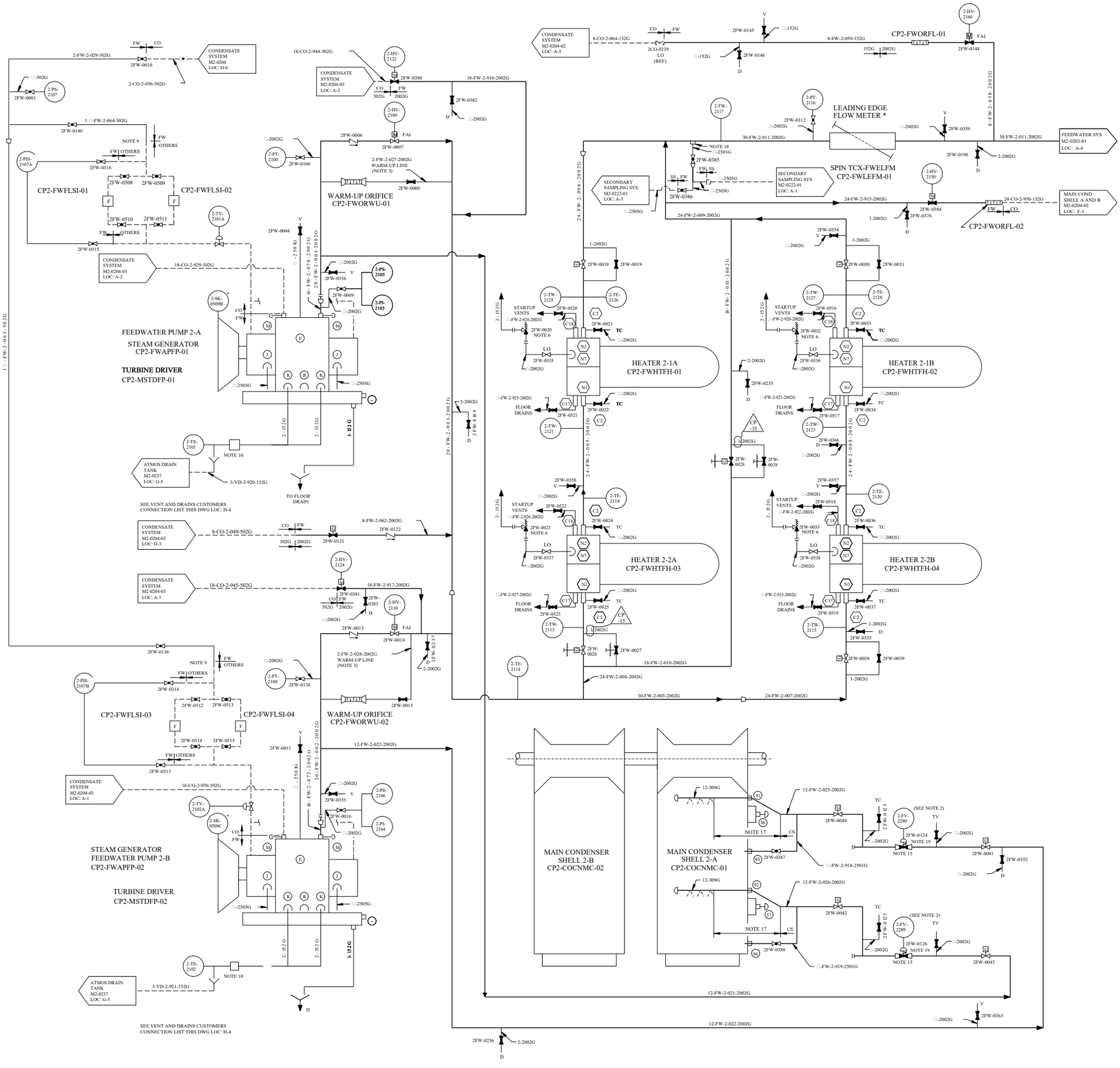
DRAWING 2323-M1-0203-01 REV CP-5
HAS BEEN SPLIT INTO THE FOLLOWING SHEETS:
M1-0203-01
M1-0203-01A

CLASS I
(NUCLEAR SAFETY-RELATED)
SAFETY CLASS 1 — SEISMIC CATEGORY I
SAFETY CLASS 2 — CLASS 1E
SAFETY CLASS 3 — ASSOCIATED CIRCUITS

LUMINANT
CPSES
GLEN ROSE, TEXAS

FLOW DIAGRAM
STEAM GENERATOR
FEEDWATER SYSTEM

| DWG. NO. | SH. NO. | REV. |
|---|---|---|
| M1-0203 | 01A | CP-15 |




| REV | DWN | CHKD | APVD | REMARKS |
|---|---|---|---|---|
| CP-15 | DLK 03-21-2016 | MM 03-21-2016 | MHF 03-21-2016 | THIS DRAWING REVISED TO INCORPORATE A1-CR-2016-002451-1 TO EDITORIALLY CORRECT BY-PASS LINE SIZE ON FROM 2-2002G TO 1-2002G. |

NOTES:

1. INSTRUMENTS AND DEVICES IDENTIFIED WITH * ARE TO BE PROVIDED BY WESTINGHOUSE SEE DWG 10SD452 FOR BLOCK DIAGRAM.
2. SEE DWG M2-0204-03 (LOC: C-1, C-2) FOR FLOW ELEMENT AND TRANSMITTER.
3. DELETED
4. DESIGN CONDITIONS (FROM FEEDWATER PUMPS UP TO AND INCLUDING FEEDWATER ISOLATION VALVES): PRESSURE-1800 PSIG, TEMPERATURE-400□-500□ F.
5. WARM-UP BREAKDOWN ORIFICE TO BE SUPPLIED BY PUMP MANUFACTURER.
6. TUBE SIDE FEEDWATER HEATER RELIEF VALVES TO BE SUPPLIED BY STRUTHERS WELLS CORP.
7. DELETED
8. FOR MECHANICAL SYMBOLS AND NOTES SEE DWG M1-0200.
9. CUSTOMER'S 1□" SCH 40 PIPING CONNECTS TO PUMP MANUFACTURER'S SEAL INJECTION SYSTEM (1□" SW X 1□" NPT ADAPTER BY FIELD).
10. PROVISION FOR INSERTION OF PUMP MANUFACTURER'S SEAL INJECTION SYSTEM THERMOWELL IN CUSTOMER'S DRAIN PIPING.
11. DRAIN LINE TO SLOPE CONTINUOUSLY TO AUXILIARY DRAINS TANK.
12. TYPICAL CUSTOMER'S PIPING CONNECTIONS ARE INDICATED AS FOLLOWS:
    - FEEDWATER HEATERS
    - MAIN CONDENSER
    - (K) STEAM GENERATOR FEEDWATER PUMPS
13. DELETED
14. DELETED
15. RECIRCULATION VALVES SUPPLIED WITH 12"x8" REDUCERS.
16. DELETED
17. PIPE AND FITTINGS TO BE 12"A335 GRADE P22 AND A234 GRADE WP22 SCH 140 RESPECTIVELY. PIPE END CONNECTION TO CONDENSER SPARGER SHALL BE BORED TO 12" STANDARD WALL.
18. □" 2501G SAMPLING TAP TO BE FINISHED WITH 45□ OPEN END AND PROTRUDED FROM BELOW □" VERTICALLY INSIDE THE 30" 2002G PIPE THROUGH A □" 6000 LB A105 HALF COUPLING SERVED AS REINFORCEMENT. THE CHAMFERRED SURFACE OF THE OPEN END SHOULD BE ORIENTED FAVORABLY UPSTREAM TO FACILITATE SAMPLE FLOW.
19. VALVE FAILS CLOSED ON LOSS OF SIGNAL AND OPEN ON LOSS OF AIR. VALVE OPENS ON LOSS OF SIGNAL IN CONJUNCTION WITH LOW FLOW VIA 2-FS-2289 AND 90.

## CUSTOMER CONNECTION LIST

| CONN | NOTES | DESCRIPTION OF SERVICE |
|---|---|---|
| (E) | □" SOCKET WELD | VENT CONNECTION - □" SCH 80 PIPE WITH PROTECTIVE CAP |
| | | |
| (J) | □" NPT x □" SW ADAPTER - BY FIELD | AUXILIARY (SECONDARY) STUFFING BOX LEAKAGE CONNECTIONS |
| (K) | 2" NPT x 2" SW ADAPTER - BY FIELD | PRIMARY STUFFING BOX LEAKAGE CONNECTION |
| (M) | □" NPT - CAPPED | GAUGE CONNECTION |
| (N) | □" NPT - PLUGGED | INSPECTION LOCATION |
| (R) | □" NPT - PLUGGED | CASE DRAIN CONNECTION LEFT PLUGGED AT OWNERS REQUEST |
| (·) | 1" NPT - PLUGGED TYPICAL BY FIELD | TROUGH DRAIN |

FSAR FIGURE 10.4-9

THIS DRAWING CREATED ELECTRONICALLY

NON-SAFETY

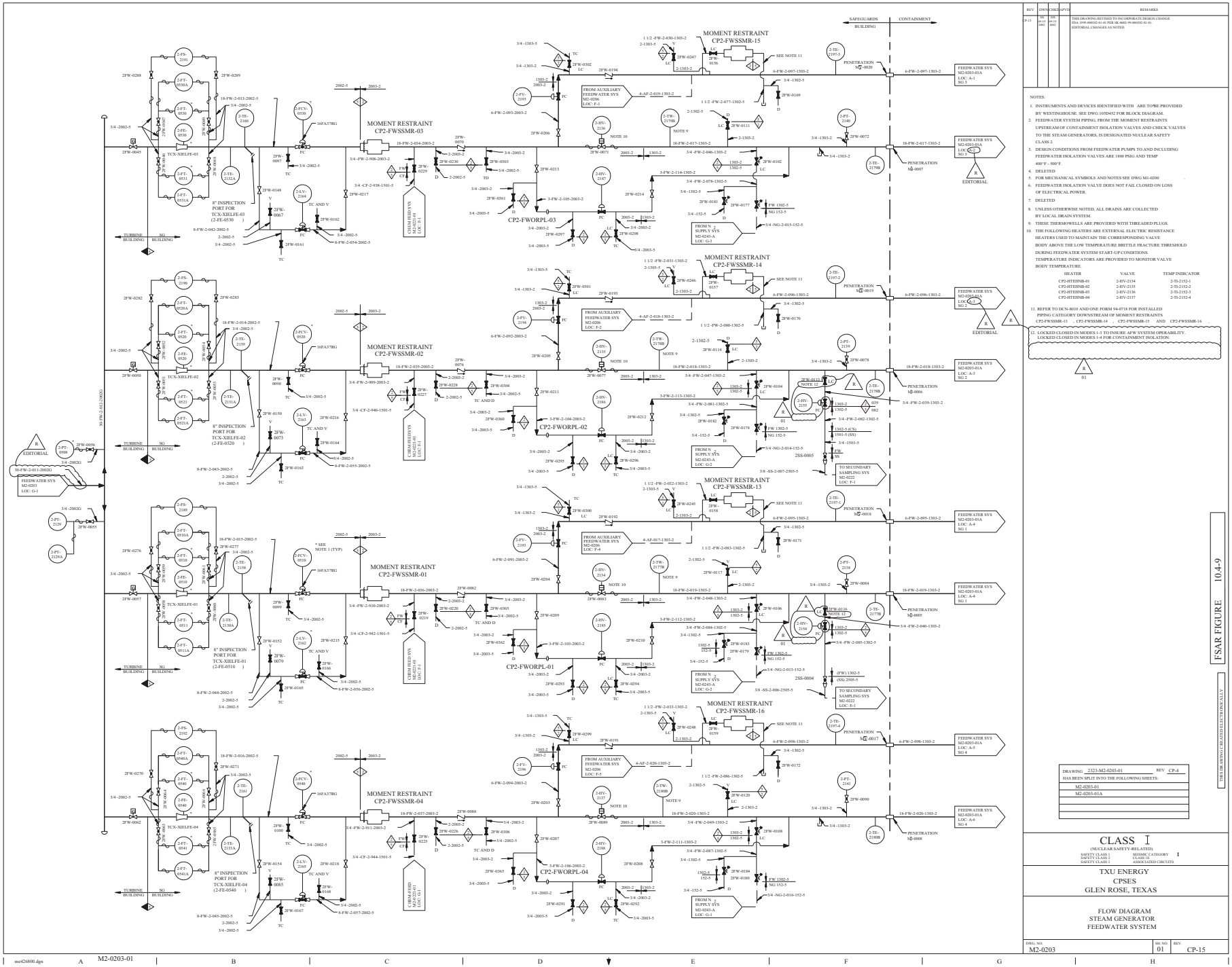
LUMINANT
CPNPP
GLEN ROSE, TEXAS

FLOW DIAGRAM
STEAM GENERATOR
FEEDWATER SYSTEM

| DWG. NO. | SH. NO. | REV. |
|---|---|---|
| M2-0203 | - | CP-15 |

REF CKD 05/13/97 CP-12

mc0000nr.dgn A M2-0203 FINAL PRINT




| REV | DWN | CKD | APVD | REMARKS |
|---|---|---|---|---|
| P-11 | SK 06-18-2002 | DMC 06-19-2002 | | THIS DRAWING REVISED TO INCORPORATE DESIGN CHANGE FDA 1999-000102-01-01 PER SK-0002-99-000102-01-01. EDITORIAL CHANGES AS NOTED. |

NOTES:

1. INSTRUMENTS AND DEVICES IDENTIFIED WITH ARE TO BE PROVIDED BY WESTINGHOUSE. SEE DWG 1605D452 FOR BLOCK DIAGRAM.
2. FEEDWATER SYSTEM PIPING, FROM THE MOMENT RESTRAINTS UPSTREAM OF CONTAINMENT ISOLATION VALVES AND CHECK VALVES TO THE STEAM GENERATORS, IS DESIGNATED NUCLEAR SAFETY CLASS 2.
3. DESIGN CONDITIONS FROM FEEDWATER PUMPS TO AND INCLUDING FEEDWATER ISOLATION VALVES ARE 1800 PSIG AND TEMP 400°F - 500°F.
4. DELETED
5. FOR MECHANICAL SYMBOLS AND NOTES SEE DWG M1-0200
6. FEEDWATER ISOLATION VALVE DOES NOT FAIL CLOSED ON LOSS OF ELECTRICAL POWER.
7. DELETED
8. UNLESS OTHERWISE NOTED, ALL DRAINS ARE COLLECTED BY LOCAL DRAIN SYSTEM.
9. THESE THERMOWELLS ARE PROVIDED WITH THREADED PLUGS.
10. THE FOLLOWING HEATERS ARE EXTERNAL ELECTRIC RESISTANCE HEATERS USED TO MAINTAIN THE CORRESPONDING VALVE BODY ABOVE THE LOW TEMPERATURE BRITTLE FRACTURE THRESHOLD DURING FEEDWATER SYSTEM START-UP CONDITIONS. TEMPERATURE INDICATORS ARE PROVIDED TO MONITOR VALVE BODY TEMPERATURE.

| HEATER | VALVE | TEMP INDICATOR |
|---|---|---|
| CP2-HTEHNB-01 | 2-HV-2134 | 2-TI-2152-1 |
| CP2-HTEHNB-02 | 2-HV-2135 | 2-TI-2152-2 |
| CP2-HTEHNB-03 | 2-HV-2136 | 2-TI-2152-3 |
| CP2-HTEHNB-04 | 2-HV-2137 | 2-TI-2152-4 |

11. REFER TO DCN-8010 AND ONE FORM 94-0718 FOR INSTALLED PIPING CATEGORY DOWNSTREAM OF MOMENT RESTRAINTS CP2-FWSSMR-13 , CP2-FWSSMR-14 , CP2-FWSSMR-15 AND CP2-FWSSMR-16
12. LOCKED CLOSED IN MODES 1-3 TO INSURE AFW SYSTEM OPERABILITY. LOCKED CLOSED IN MODES 1-4 FOR CONTAINMENT ISOLATION.

FSAR FIGURE 10.4-9

THIS DRAWING CREATED ELECTRONICALLY

DRAWING: 2323-M2-0203-01 REV CP-4
HAS BEEN SPLIT INTO THE FOLLOWING SHEETS:
M2-0203-01
M2-0203-01A

CLASS I
(NUCLEAR SAFETY-RELATED)
SAFETY CLASS 1 SAFETY CLASS 2 SAFETY CLASS 3
SEISMIC CATEGORY I
CLASS 1E ASSOCIATED CIRCUITS

TXU ENERGY
CPSES
GLEN ROSE, TEXAS

FLOW DIAGRAM
STEAM GENERATOR
FEEDWATER SYSTEM

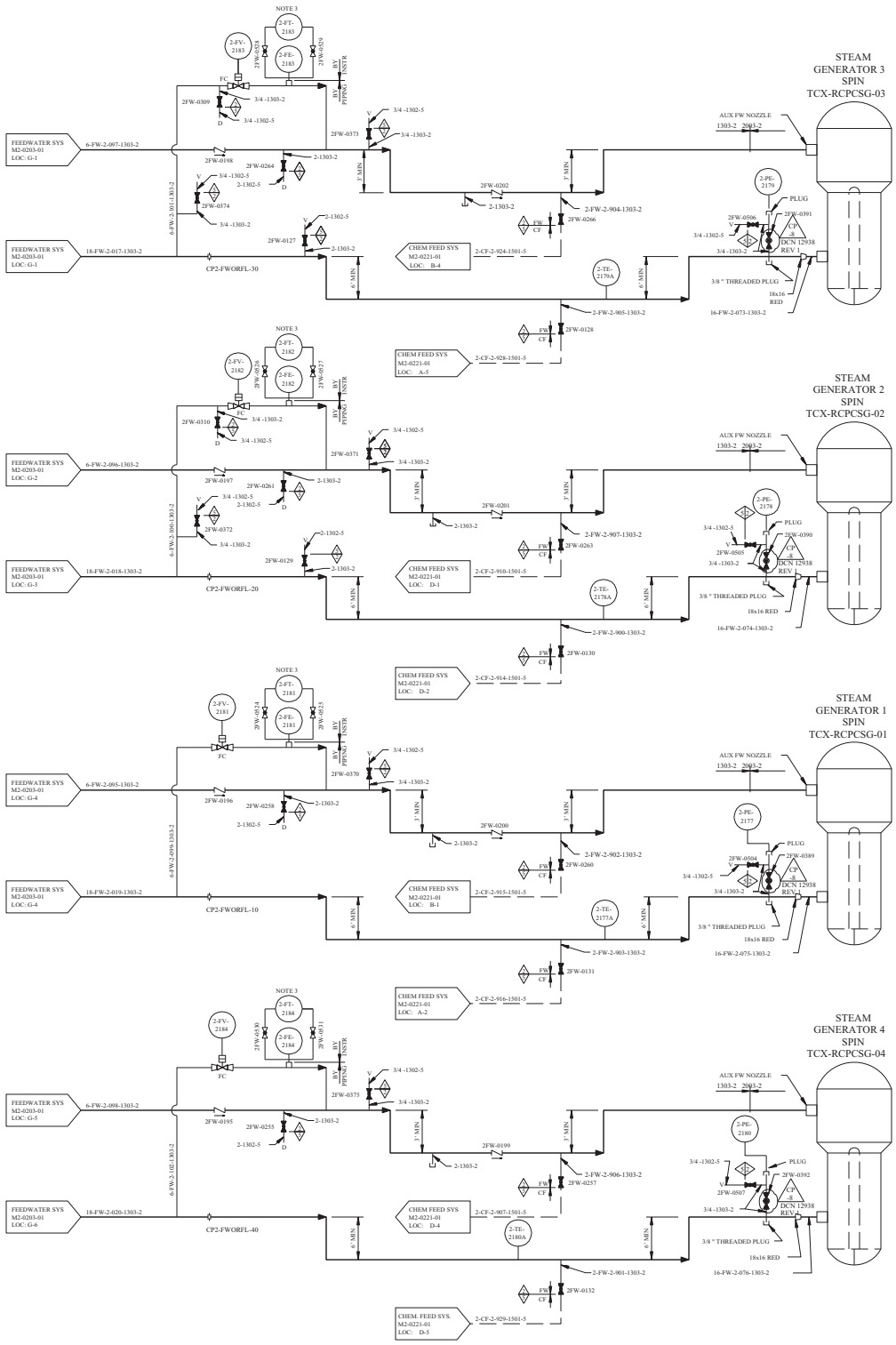
| DWG NO. | SH. NO. | REV. |
|---|---|---|
| M2-0203 | 01 | CP-15 |

REF CKD 1 (2/2300 CP-14

$$$$$$$DATA$$$$$$$

mo426800.dgn

M2-0203-01




| REV | DWN | CHK | APVD | REMARKS |
|---|---|---|---|---|
| CP-6 | RG 08/15/1999 | | | THIS DRAWING REVISED TO INCORPORATE DESIGN CHANGE DCN 12938 REV 1. |

NOTES

1. FEEDWATER SYSTEM PIPING, FROM THE MOMENT RESTRAINTS UPSTREAM OF CONTAINMENT ISOLATION VALVES AND CHECK VALVES TO THE STEAM GENERATORS, IS DESIGNATED NUCLEAR SAFETY CLASS 2.
2. FOR MECHANICAL SYMBOLS AND NOTES SEE DWG M1-0200.
3. INSTRUMENT VALVES FOR 2-FT-2181 , 2182 , 2183 AND 2184 ARE TO BE PROVIDED BY INSTRUMENTATION.
4. UNLESS OTHERWISE NOTED ALL DRAINS ARE COLLECTED BY LOCAL DRAIN SYSTEM.

FSAR FIGURE 10.4-9

THIS DRAWING CREATED ELECTRONICALLY

DRAWING 2323-M2-0203-01 REV CP-4
HAS BEEN SPLIT INTO THE FOLLOWING SHEETS:
M2-0203-01
M2-0203-01A

CLASS I
(NUCLEAR SAFETY-RELATED)
SAFETY CLASS 1 SEISMIC CATEGORY I
SAFETY CLASS 2 CLASS 1E
SAFETY CLASS 3 ASSOCIATED CIRCUITS

TXU ELECTRIC
CPSES
GLEN ROSE, TEXAS

FLOW DIAGRAM
STEAM GENERATOR
FEEDWATER SYSTEM

| DWG. NO. | SH. NO. | REV. |
|---|---|---|
| M2-0203 | 01A | CP-8 |

$$$$$$$$TA\TESSSSS

me00011d1.dgn

| REV | DWN | CHK | APVD | REMARKS |
|---|---|---|---|---|
| CP-27 | JRMC 07-28-2004 | DJL 07-28-2004 | | THIS DRAWING REVISED TO INCORPORATE DESIGN CHANGE FDA 2003-001603-01-01 PER SK-0002-03-001603-01-01. |

NOTES:

1. FOR MECHANICAL SYMBOLS AND NOTES, SEE DRAWING M1-0200.
2. ITEMS INDICATED ARE SUPPLIED BY HEAT EXCHANGER MANUFACTURER.
3. DENOTES RADIOACTIVE WASTE MANAGEMENT SYSTEM - CONTINUES ON IDENTIFIED DRAWING.
4. FLUID SYSTEM CONNECTED TO THE SHELL SIDE OF THE STEAM GENERATOR BLOWDOWN HEAT EXCHANGER AND ALL PIPING CONNECTIONS ATTACHED OR LEADING THERETO ARE NOT PART OF THE RWMS.
5. ** DENOTES EQUIPMENT USED IN MITIGATION OF HELB.
6. * DENOTES INSTRUMENT VALVES FURNISHED WITH FLOW ELEMENT.
7. INDICATES EQUIPMENT SUPPLIED BY DEMINERALIZER MANUFACTURER.

STEAM GENERATOR BLOWDOWN HEAT EXCHANGER CP1-SBAHSB-01

STEAM GENERATOR BLOWDOWN FILTER CP1-SBFLSB-02

STEAM GENERATOR BLOWDOWN FILTER CP1-SBFLSB-01

S G BLOWDOWN MIX BED RESIN TRAP CP1-SBSRRT-02

FSAR FIGURE 10.4-10

THIS DRAWING CREATED ELECTRONICALLY

CLASS II

LUMINANT
CPSES
GLEN ROSE, TEXAS

FLOW DIAGRAM
STEAM GENERATOR BLOWDOWN
CLEANUP SYSTEM

| DWG. NO. | SH. NO. | REV. |
|---|---|---|
| M1-0239 | - | CP-27 |

FINAL PRINT

REF CHECKED CP-23 05/25/99

me620000.dgn M1-0239

| REV | DWN | CHK | APVD | REMARKS |
|---|---|---|---|---|
| CP-17 | DLK 05-03 2017 | MM 05-04 2017 | MHF 05-08 2017 | THIS DRAWING REVISED TO EDITORIALLY CORRECT DRAWING PER AI-TR-2017-005929-1. |

NOTES:

1. SYSTEM VALVES ARE ARRANGED FOR NORMAL OPERATION. DEMINERALIZERS ARE BYPASSED WHEN EFFLUENT FLOWS TO CONDENSER.
2. INDICATES ITEM SUPPLIED BY DEMINERALIZER MANUFACTURER.
3. FOR MECHANICAL SYMBOLS AND NOTES SEE DRAWING M1-0200.
4. DENOTES RADIOACTIVE WASTE MANAGEMENT SYSTEM CONTINUES ON DRAWING IDENTIFIED.
5. DELETED

FSAR FIGURE 10.4-10

THIS DRAWING CREATED ELECTRONICALLY

CLASS II

LUMINANT
CPNPP
GLEN ROSE, TEXAS

FLOW DIAGRAM
STEAM GENERATOR BLOWDOWN
CLEANUP SYSTEM

| DWG. NO. | SH. NO. | REV. |
|---|---|---|
| M1-0239 | 01 | CP-17 |

mc371100.dgn A M1-0239-01 FINAL PRINT

| REV | DWN | CHK | APVD | REMARKS |
|---|---|---|---|---|
| CP-18 | DLK 09-30 2015 | MM 09-30 2015 | MHF 10-01 2015 | THIS DRAWING REVISED TO INCORPORATE AI-CR-2015-008786-1 TO EDITORIALLY ADD ROOT VALVE LOCATION (TAG) 2SB-0174 FOR 2-PT-5183. |

LEGEND:

F - FILTER

S - STRAINER

R - VENDOR NOZZLE NUMBER

NOTES:

1. ITEMS INDICATED ARE SUPPLIED BY DEMINERALIZER MANUFACTURER.
2. FOR MECHANICAL SYMBOLS AND NOTES, SEE DRAWING M1-0200.
3. ITEMS INDICATED ARE SUPPLIED BY HEAT EXCHANGER MANUFACTURER.
4. DENOTES RADIOACTIVE WASTE MANAGEMENT SYSTEM CONTINUES ON IDENTIFIED DRAWING.
5. THE FLUID SYSTEM CONNECTED TO THE SHELL SIDE OF THE STEAM GENERATOR BLOWDOWN HEAT EXCHANGER AND ALL PIPING CONNECTED ATTACHED TO OR LEADING THERE TO ARE NOT PART OF THE RWMS.
6. FLOW AT ALL TEST CONNECTIONS, VENTS, AND DRAINS SHOULD BE DIRECTED AWAY FROM THE PROCESS PIPING.
7. ** DENOTES EQUIPMENT USED IN MITIGATION OF HELB.
8. * INDICATES INSTRUMENT VALVES FURNISHED WITH FLOW ELEMENT.
9. INCORPORATION OF UNIT 1 DM 89-09.
10. INCORPORATION OF UNIT 1 DM 89-101.
11. JOINT HAS BEEN TEAM LEAKED BUT IS NO LONGER TRACKED UNDER THE TEMP MOD PROCESS. ANY FURTHER REWORK SHOULD BE ADDRESSED BY THE NORMAL WORK ORDER PROCESS.

STEAM GENERATOR BLOWDOWN HEAT EXCHANGER CP2-SBAHSB-01

STEAM GENERATOR BLOWDOWN FILTER CP2-SBFLSB-01

STEAM GENERATOR BLOWDOWN FILTER CP2-SBFLSB-02

STEAM GENERATOR BLOWDOWN MIX BED RESIN TRAP CP2-SBSRRT-02

DRAWING 2323-M2-0239 REV CP-3
HAS BEEN SPLIT INTO THE FOLLOWING SHEETS:
M2-0239
M2-0239-01

THIS DRAWING CREATED ELECTRONICALLY

FSAR FIGURE 10.4-10

CLASS II

LUMINANT
CPNPP
GLEN ROSE, TEXAS

FLOW DIAGRAM
STEAM GENERATOR BLOWDOWN
CLEANUP SYSTEM

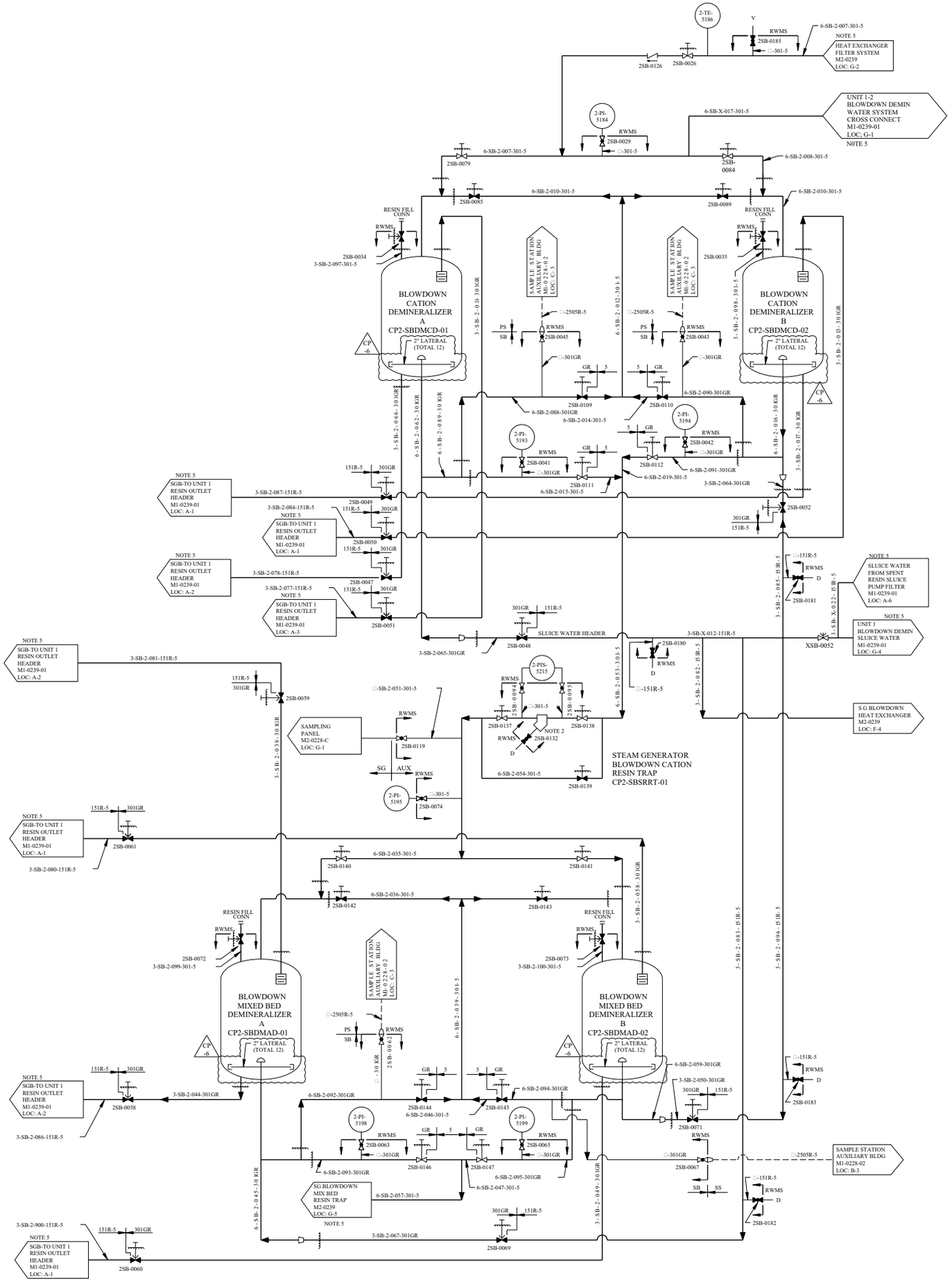
DWG. NO. M2-0239 | SH. NO. - | REV. CP-18

< FINAL PRINT >

me102170.dgn M2-0239

REF CKD CP9 11-1-96

$$$$$$$$DATE$$$$$$




| REV | DWN | CHK | APVD | REMARKS |
|---|---|---|---|---|
| CP-6 | DLK 05-03-2017 | MM 05-04-2017 | MHF 05-08-2017 | THIS DRAWING REVISED TO EDITORIALLY CORRECT DRAWING PER AI-TR-2017-005929-1. |

CP -6

NOTES:

1. SYSTEM VALVES ARE ARRANGED FOR NORMAL OPERATION, DEMINERALIZERS ARE BYPASSED WHEN EFFLUENT FLOWS TO CONDENSER.
2. ITEMS INDICATED ARE SUPPLIED BY DEMINERALIZER MANUFACTURER.
3. FOR MECHANICAL SYMBOLS AND NOTES, SEE DRAWING M1-0200.
4. **ITEMS INDICATED ARE SUPPLIED BY HEAT EXCHANGER MANUFACTURER.**
5. DENOTES RADIOACTIVE WASTE MANAGEMENT SYSTEM CONTINUES ON IDENTIFIED DRAWING.

FSAR FIGURE 10.4-10

THIS DRAWING CREATED ELECTRONICALLY

DRAWING 2323-M2-0239 REV CP-3
HAS BEEN SPLIT INTO THE FOLLOWING SHEETS:

| |
|---|
| M2-0239 |
| M2-0239-01 |
| |
| |
| |

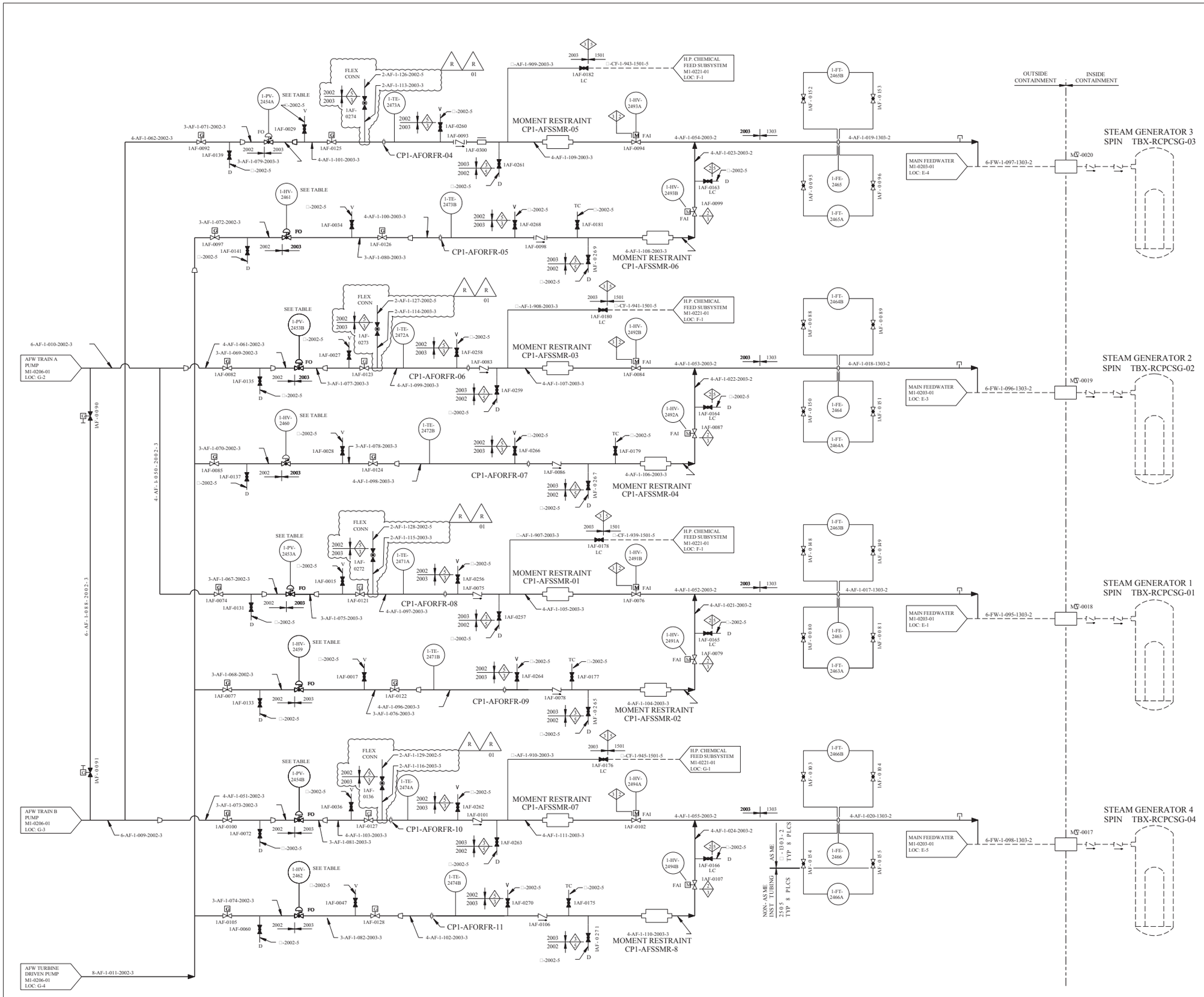
CLASS II

LUMINANT
CPNPP
GLEN ROSE, TEXAS

FLOW DIAGRAM
STEAM GENERATOR BLOWDOWN
CLEANUP SYSTEM

| DWG. NO. | SH. NO. | REV. |
|---|---|---|
| M2-0239 | 01 | CP-6 |

FINAL PRINT




| REV. | DWN | CHK | APVD | REMARKS |
|---|---|---|---|---|
| CP-21 | DLK 08-27-2014 | MM 09-02-2014 | | THIS DRAWING REVISED TO INCORPORATE DESIGN CHANGE FDA 2013-000008-01-01 PER SK-0001-13-000008-01-01. |

NOTES:

1. FOR MECHANICAL SYMBOLS AND NOTES SEE DRAWING M1-0200.
2. CAPS WILL NOT BE PROVIDED ON VENT AND DRAIN LINES UNLESS OTHERWISE NOTED.
3. UNLESS OTHERWISE NOTED, DRAINS COLLECTED BY LOCAL DRAIN SYSTEM UNDER ADMINISTRATIVE CONTROL.
4. DELETED
5. REMOVE CHECK VALVE INTERNALS, ABANDON VALVE BODY 1AF-0300 IN PLACE.

R R 01

TABLE

| CONTROL VALVE | SAFETY CLASS 3 AIR ACCUMULATOR |
|---|---|
| 1-HV-2461 | CP1-CIATAF-01<br>CP1-CIATAF-11 |
| 1-PV-2454A | CP1-CIATAF-02<br>CP1-CIATAF-16 |
| 1-PV-2454B AND 1-FV-2457 | CP1-CIATAF-03<br>CP1-CIATAF-15 |
| 1-HV-2462 | CP1-CIATAF-04<br>CP1-CIATAF-12 |
| 1-HV-2460 | CP1-CIATAF-05<br>CP1-CIATAF-09 |
| 1-HV-2459 | CP1-CIATAF-06<br>CP1-CIATAF-10 |
| 1-PV-2453A | CP1-CIATAF-07<br>CP1-CIATAF-14 |
| 1-PV-2453B AND 1-FV-2456 | CP1-CIATAF-08<br>CP1-CIATAF-13 |

FSAR FIGURE 10.4-11

THIS DRAWING CREATED ELECTRONICALLY

DRAWING 2323-M1-0206 REV CP-5
HAS BEEN SPLIT INTO THE FOLLOWING SHEETS:

| |
|---|
| M1-0206 |
| M1-0206-01 |
| M1-0206-02 |

CLASS I
(NUCLEAR SAFETY-RELATED)
SAFETY CLASS 1 SEISMIC CATEGORY I
SAFETY CLASS 2 CLASS 1E
SAFETY CLASS 3 ASSOCIATED CIRCUITS

LUMINANT
CPNPP
GLEN ROSE, TEXAS

FLOW DIAGRAM
AUXILIARY FEEDWATER
SYSTEM

| DWG. NO. | SH. NO. | REV. |
|---|---|---|
| M1-0206 | - | CP-21 |

$$$$$$$DATE$$$$$$$ REF CKD CP- R 6-22-98

me765400.dgn A M1-0206 < FINAL PRINT >

| REV | DWN | CHKD | APVD | REMARKS |
|---|---|---|---|---|
| CP-19 | GAW 30-06-2015 | MHF 30-06-2015 | | THIS DRAWING REVISED TO INCORPORATE DESIGN CHANGE FDA 2010-000172-82-01 PER SK-0007-10-000172-82-01. |

NOTES:

1. BREAKDOWN ORIFICE TO BE SUPPLIED BY PUMP MANUFACTURER.
2. TURBINE-DRIVEN AUXILIARY FEEDWATER PUMP LUBRICATING OIL COOLER TO BE SUPPLIED BY PUMP MANUFACTURER.
3. AUXILIARY FEEDWATER PUMP TURBINE DRIVER STEAM SUPPLY SYSTEM SHOWN ON DRAWING M1-0202, LOC: D-6.
4. FOR MECHANICAL SYMBOLS AND NOTES SEE DRAWING M1-0200.
5. HIGH POINT LEAKOFF CONNECTION FOR DETERMINATION OF SERVICE WATER IN-LEAKAGE.
6. CAPS WILL NOT BE PROVIDED ON VENT AND DRAIN LINES UNLESS OTHERWISE NOTED.
7. CLASS BREAK (CLASS 3 TO CLASS 5) IS DOWNSTREAM OF ALL VENT, DRAIN AND LEAK OFF VALVES.
8. TEMPORARY STRAINERS CP1-AFSRTS-01,02,03 ARE REQUIRED FOR SYSTEM FLUSHING. THE TEMPORARY STRAINERS CAN BE RE-INSTALLED FOR POST MAINTENANCE ACTIVITY.
9. REMOVE CHECK VALVE INTERNALS FROM VALVES 1AF-0045 , 1AF-0057 , AND 1AF-0069 AND ABANDON BODIES IN PLACE PER DCN 6538 REV 0.
10. AFW SECONDARY CONNECTION INSTALLED WITH HOSE FOLLOWING A BEYOND DESIGN BASIS EXTERNAL EVENT.
11. FLEX CONNECTION - MAY BE A PIPE CAP OR STORZ FITTING.
12. AFW SECONDARY CONNECTION INSTALLED WITH HOSE FOLLOWING A BEYOND DESIGN BASIS EXTERNAL EVENT. FOR NORMAL OPERATION SEE NOTE 10.
13. VALVE CLOSED AND DE-ENERGIZED (ONLY REQUIRED IN MODES 1 THROUGH 4). REF FDA-2010-000172-82.

AUX FEEDWATER PUMP TRAIN A (MOTOR DRIVEN) CP1-AFAPMD-01

AUX FEEDWATER PUMP TRAIN B (MOTOR DRIVEN) CP1-AFAPMD-02

AUX FEEDWATER PUMP (TURBINE DRIVEN) CP1-AFAPTD-01 NOTES 2,3

CP1-AFORBO-01 (SEE NOTE 1)

CP1-AFORBO-02 (SEE NOTE 1)

CP1-AFORBO-03 (SEE NOTE 1)

CP1-AFORFR-01

CP1-AFORFR-02

CP1-AFORFR-03

COND STG TK M1-0206-02 LOC: A-6

SERV WTR SYS M1-0234 LOC: G-6

SERV WTR SYS M1-0234 LOC: G-1

COND STG TK M1-0206-02 LOC: A-5

STM GENERATORS M1-0206 LOC: A-2

STM GENERATORS M1-0206 LOC: A-5

STM GENERATORS M1-0206 LOC: A-6

COND STG TK M1-0206-02 LOC: A-5

FLEX CONN SEE NOTE 10

FLEX CONN SEE NOTES 11 AND 12

FLEX CONN SEE NOTE 11

FLOOR DRAIN

LUBE OIL COOLER

SEE NOTE 8

SEE NOTE 13

HIGH POINT LEAKOFF TO FLOOR DRAIN (NOTE 5)

LOW POINT LEAKOFF TO FLOOR DRAIN

" FLOW RESTRICTOR

4-FD-1-142-010R-5

4-FD-1-143-010R-5

4-FX-1-002-602-5

SG BLDG

YARD

1FX-0002

1FX-0001

CLASS I

(NUCLEAR SAFETY-RELATED)

SAFETY CLASS 1 SAFETY CLASS 2 SAFETY CLASS 3 — SEISMIC CATEGORY I CLASS 1E ASSOCIATED CIRCUITS

LUMINANT
CPNPP
GLEN ROSE, TEXAS

FLOW DIAGRAM
AUXILIARY FEEDWATER SYSTEM
PUMP TRAINS

| DWG. NO. | SH. NO. | REV. |
|---|---|---|
| M1-0206 | 01 | CP-19 |

FSAR FIGURE 10.4-11

THIS DRAWING CREATED ELECTRONICALLY

$$$$$$$$DATE$$$$$$$$

me970000.dgn A M1-0206-01 < FINAL PRINT >

| REV | DWN | CHKD | APVD | REMARKS |
|---|---|---|---|---|
| CP-22 | CWG 11-26-2014 | MHF 11-26-2014 | | THIS DRAWING REVISED TO INCORPORATE DESIGN CHANGE FDA 2013-000008-13-00 PER SK-0005-13-000008-13-00. |

NOTES:

1. CONDENSATE STORAGE TANK IS SEISMIC CATEGORY 1 STRUCTURE AND NUCLEAR SAFETY CLASS 3.
2. FOR MECHANICAL SYMBOLS AND NOTES SEE DRAWING M1-0200.
3. CARBON STEEL WELD NECK FLANGE TO HAVE 150 LB RF RATING TO MATCH STAINLESS STEEL FLANGE ON VALVE.
4. TANK PENETRATIONS SUPPLIED BY OTHERS.
5. CAPS WILL NOT BE PROVIDED ON VENT AND DRAIN LINES UNLESS OTHERWISE NOTED.
6. UNLESS OTHERWISE NOTED, DRAINS COLLECTED BY LOCAL DRAIN SYSTEM UNDER ADMINISTRATIVE CONTROL.
7. CP1-AFORFR-12 HAS BEEN REPLACED WITH A PADDLE BLIND
8. VALVE 1AF-0198 IS USED BY CHEMISTRY FOR EVACUATION FROM UNDER THE BLADDER AND INJECTION OF NITROGEN AS REQUIRED.
9. NITROGEN SUPPLY TO CONSIST OF LOW PRESSURE DEWARS CANISTERS.
10. FLEX CONNECTION - MAY BE A PIPE CAP OR STORZ FITTING.

R

FSAR FIGURE 10.4-11

THIS DRAWING CREATED ELECTRONICALLY

CLASS I
(NUCLEAR SAFETY-RELATED)
SAFETY CLASS 1 — SEISMIC CATEGORY I
SAFETY CLASS 2 — CLASS 1E
SAFETY CLASS 3 — ASSOCIATED CIRCUITS

LUMINANT
CPNPP
GLEN ROSE, TEXAS

FLOW DIAGRAM
AUXILIARY FEEDWATER SYSTEM
YARD LAYOUT

| DWG. NO. | SH. NO. | REV. |
|---|---|---|
| M1-0206 | 02 | CP-22 |

< FINAL PRINT >

$$$$$$$$DATE$$$$$$$$ CIKD REF 9/17/2001

me997900.dgn A M1-0206-02

| REV | DWN | CHK | APVD | REMARKS |
|---|---|---|---|---|
| CP-15 | DK K 09-29-2014 | MM 10-01-2014 | | THIS DRAWING REVISED TO INCORPORATE DESIGN CHANGE FDA 2013-000008-02-00 PER SK-0001-13-000008-02-00. |

NOTES:

1. FOR MECHANICAL SYMBOLS AND NOTES SEE DWG M1-0200.
2. DELETED
3. ADDED TO FACILITATE TESTING OF BORG/WARNER CHECK VALVES.
4. REMOVE CHECK VALVES INTERNALS, ABANDON VALVE BODIES 2AF-0327 AND 2AF-0328 IN PLACE.

TABLE

| CONTROL VALVE | SAFETY CLASS 3 AIR ACCUMULATOR |
|---|---|
| 2-HV-2461 | CP2-CIATAF-01 CP2-CIATAF-11 |
| 2-PV-2454A | CP2-CIATAF-02 CP2-CIATAF-16 |
| 2-PV-2454B AND 2-FV-2457 | CP2-CIATAF-03 CP2-CIATAF-15 |
| 2-HV-2462 | CP2-CIATAF-04 CP2-CIATAF-12 |
| 2-HV-2460 | CP2-CIATAF-05 CP2-CIATAF-09 |
| 2-HV-2459 | CP2-CIATAF-06 CP2-CIATAF-10 |
| 2-PV-2453A | CP2-CIATAF-07 CP2-CIATAF-14 |
| 2-PV-2453B AND 2-FV-2456 | CP2-CIATAF-08 CP2-CIATAF-13 |

FSAR FIGURE 10.4-11

THIS DRAWING CREATED ELECTRONICALLY

| DRAWING 2323-M2-0206 REV CP-6 |
|---|
| HAS BEEN SPLIT INTO THE FOLLOWING SHEETS: |
| M2-0206 |
| M2-0206-01 |
| M2-0206-02 |

CLASS I

(NUCLEAR SAFETY-RELATED)

| | |
|---|---|
| SAFETY CLASS 1 | SEISMIC CATEGORY I |
| SAFETY CLASS 2 | CLASS 1E |
| SAFETY CLASS 3 | ASSOCIATED CIRCUITS |

LUMINANT
CPNPP
GLEN ROSE, TEXAS

FLOW DIAGRAM
AUXILIARY FEEDWATER
SYSTEM

| DWG. NO. | SH. NO. | REV. |
|---|---|---|
| M2-0206 | - | CP-15 |

$$$$$$$DATE$$$$$$

REF CKD 1 27/98 CP-E

me459000.dgn A M2-0206 B C D E F G < FINAL PRINT > H

| REV | DWN | CHK | APVD | REMARKS |
|---|---|---|---|---|
| CP-14 | DLK 03-25-2015 | JKG 03-25-2015 | | THIS DRAWING REVISED TO INCORPORATE DESIGN CHANGE FDA 2013-000008-02-00 PER SK-0002-13-000008-02-00 |

NOTES:

1. BREAKDOWN ORIFICE TO BE SUPPLIED BY PUMP MANUFACTURER.
2. TURBINE-DRIVEN AUXILIARY FEEDWATER PUMP LUBRICATING OIL COOLER TO BE SUPPLIED BY PUMP MANUFACTURER.
3. AUXILIARY FEEDWATER PUMP TURBINE DRIVEN STEAM SUPPLY SYSTEM SHOWN ON DRAWING M2-0202.
4. FOR MECHANICAL SYMBOLS AND NOTES SEE DWG M1-0200.
5. HIGH-POINT LEAKOFF CONNECTION FOR DETERMINATION OF SERVICE WATER IN-LEAKAGE.
6. TEMPORARY STRAINERS CP2-AFSRTS-01 . CP2-AFSRTS-02 CP2-AFSRTS-03 ARE REQUIRED FOR SYSTEM FLUSHING. THE TEMPORARY STRAINERS CAN BE RE-INSTALLED FOR POST MAINTENANCE ACTIVITY.
7. VALVE INTERNALS REMOVED.
8. AUXILIARY FEEDWATER PUMP TURBINE LUBE OIL EQUALIZING LINE DRAIN VALVE (2AF-0326) IS LOCATED BELOW THE GOVERNOR VALVE ON THE NORTHWEST CORNER OF THE PUMP SKID. REFER TO TERRY DRAWING 1024620 FOR THE OIL PIPING SCHEMATIC.
9. VALVE CLOSED AND DE-ENERGIZED (ONLY REQUIRED IN MODES 1 THROUGH 4), REF FDA-2010-000172-82.
10. FLEX CONNECTION - WITH PIPE CAP.
11. AFW SECONDARY CONNECTION INSTALLED WITH HOSE FOLLOWING A BEYOND DESIGN BASIS EXTERNAL EVENT. FOR NORMAL OPERATION SEE NOTE 9.
12. AFW SECONDARY CONNECTION INSTALLED WITH HOSE FOLLOWING A BEYOND DESIGN BASIS EXTERNAL EVENT.

R

FSAR FIGURE 10.4-11

THIS DRAWING CREATED ELECTRONICALLY

DRAWING 2323-M2-0206 REV CP-6
HAS BEEN SPLIT INTO THE FOLLOWING SHEETS:

| |
|---|
| M2-0206 |
| M2-0206-01 |
| M2-0206-02 |
| |
| |

CLASS I

LUMINANT
CPNPP
GLEN ROSE, TEXAS

FLOW DIAGRAM
AUXILIARY FEEDWATER SYSTEM
PUMP TRAINS

| DWG. NO. | SH. NO. | REV. |
|---|---|---|
| M2-0206 | 01 | CP-14 |

$$$$$$$DATES$$$$$$

me682900.dgn M2-0206-01 < FINAL PRINT >

| REV | DWN | CHK'D | APVD | REMARKS |
|---|---|---|---|---|
| CP-12 | DUK 10-08-2014 | MM 10-10-2014 | | THIS DRAWING REVISED TO INCORPORATE DESIGN CHANGE FDA 2013-000008-16-00 PER SK-0001-13-000008-16-00. |

NOTES:

1. CONDENSATE STORAGE TANK IS SEISMIC CATEGORY 1 STRUCTURE NUCLEAR SAFETY CLASS 3.
2. FOR MECHANICAL SYMBOLS AND NOTES SEE DRAWING M1-0200.
3. CARBON STEEL WELD NECK FLANGE TO HAVE 150 LB RF RATING TO MATCH STAINLESS STEEL FLANGE ON VALVE.
4. TANK PENETRATIONS SUPPLIED BY OTHERS.
5. DELETED
6. 2CO-0196 LOCKED OPEN TO PREVENT OVER PRESSURIZATION OF 12-151G AUXILIARY FEEDWATER LINES.
7. CP2-AFORFR-12 HAS BEEN REPLACED WITH A PADDLE BLIND
8. VALVE 2AF-0198 IS USED BY CHEMISTRY FOR EVACUATION FROM UNDER THE BLADDER AND INJECTION OF NITROGEN AS REQUIRED.
9. NITROGEN SUPPLY TO CONSIST OF LOW PRESSURE DEWARS CANISTERS.
10. FLEX CONNECTION - MAY BE A PIPE CAP OR STORZ FITTING.

FSAR FIGURE 10.4-11

THIS DRAWING CREATED ELECTRONICALLY

DRAWING 2323-M2-0206 REV CP-6
HAS BEEN SPLIT INTO THE FOLLOWING SHEETS:

| |
|---|
| M2-0206 |
| M2-0206-01 |
| M2-0206-02 |

CLASS I
(NUCLEAR SAFETY-RELATED)
SAFETY CLASS 1 SEISMIC CATEGORY I
SAFETY CLASS 2 CLASS 1E
SAFETY CLASS 3 ASSOCIATED CIRCUITS

LUMINANT
CPNPP
GLEN ROSE, TEXAS

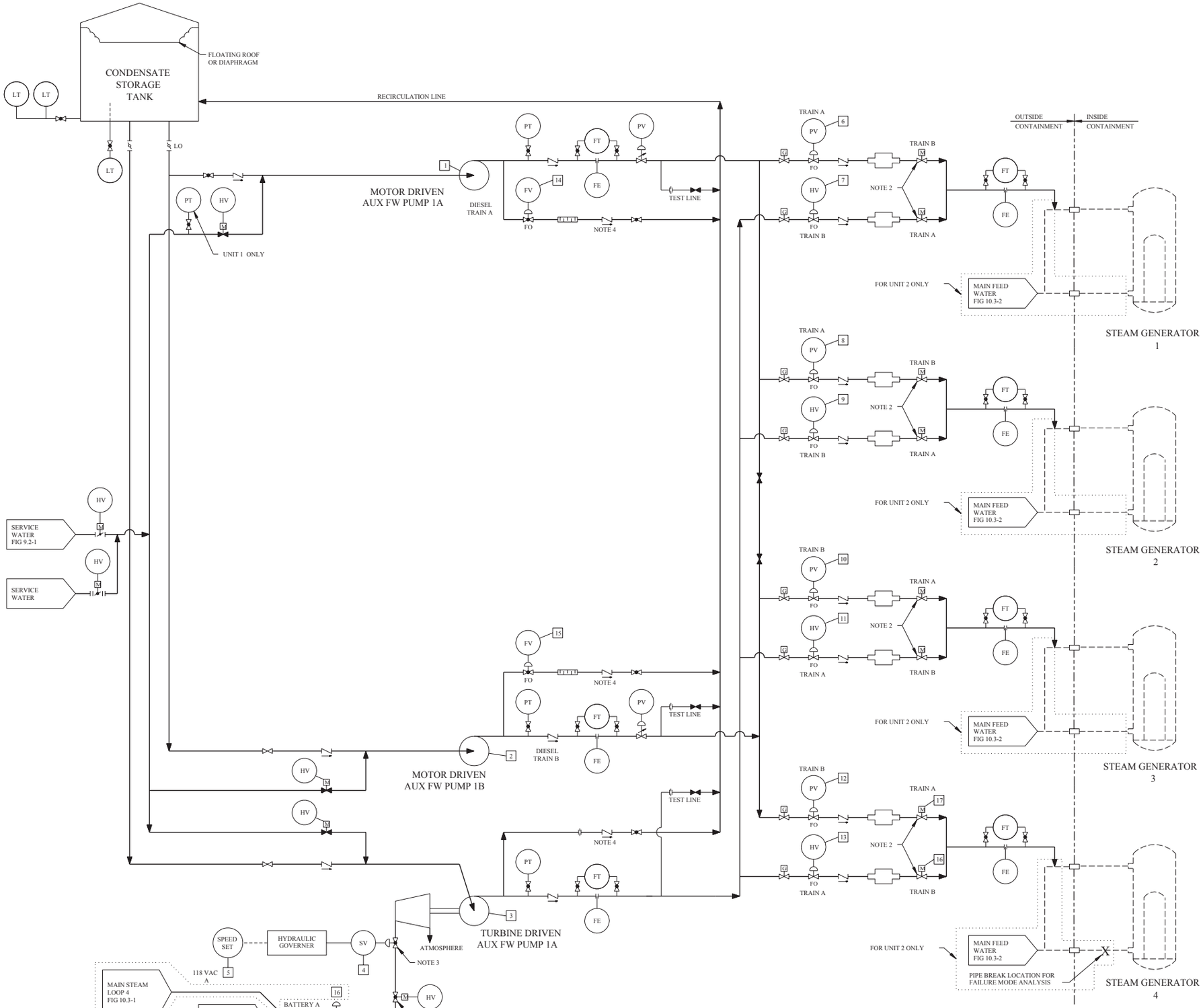
FLOW DIAGRAM
AUXILIARY FEEDWATER SYSTEM
YARD LAYOUT

DWG. NO. M2-0206 | SH. NO. 02 | REV. CP-12

CPE | A | B | C | D | E | F | G | H

me998000.dgn A M2-0206-02 | < FINAL PRINT >

SSSSSSSDATESSSSSS CHKD REF 9/17/2001




NOTES

1. NUMBERS IN ARH ITEM NUMBERS REFERENCED IN FAILURE MODE ANALYSIS.
2. NO - BLOCK VALVE UNDER ADMINISTRATIVE CONTROL (KEY SWITCH).
3. VALVE SHOWN IS THE GOVERNOR VALVE.
4. VALVE INTERNALS REMOVED.
5. TRIP THROTTLE VALVE IS LATCHED OPEN. THE MOTOR IS ABANDONED.

# Amendment 102

FIGURE GENERATED FOR FSAR ONLY
BASED ON DRAWING
M1-0206

COMANCHE PEAK S.E.S.
FINAL SAFETY ANALYSIS REPORT
UNITS 1 AND 2

AUXILIARY FEEDWATER
FAILURE MODE ANALYSIS
FLOW DIAGRAM

FIGURE 10.4-12

FSAR10412.DGN

| REV | DWN | CHK'D | APV'D | REMARKS |
|---|---|---|---|---|
| CP-20 | JMC 11-16-2006 | DJL 11-17-2006 | | THIS DRAWING REVISED TO INCORPORATE DESIGN CHANGE FDA 2004-003813-01-00 PER SK-0003-04-003813-01-00. |

NOTES:

1. 1/2 " PIPING USED FOR RADIOACTIVE TRACER SAMPLE AND INJECTION LINES IN THE CONDENSER NECK SHALL BE SCH XXS.
2. THE EXTRACTION STEAM SYSTEM IS NON-NUCLEAR SAFETY CLASS.
3. ALL INSTRUMENTATION, DRAINS AND TEST CONNECTION VALVES ARE 3/4 " UNLESS OTHERWISE NOTED.
4. FEEDWATER HEATER SHELL SIDE RELIEF VALVES (IDENTIFIED BY * ) TO BE SUPPLIED BY STRUTHERS WELLS CORP.
5. RADIOACTIVE TRACER INJECTION POINTS (INDICATED AS I.P.) AND SAMPLING POINTS (INDICATED AS S.P.) WILL BE 3/4 " C.S. EXCEPT FOR PIPING AND VALVES AT CONDENSER NECK WILL BE 1/2 " S.S.
6. SYSTEM ORIFICES ARE PLUG RESISTANT.
7. FEEDWATER HEATER EXTRACTION STEAM INLET NOZZLES ARE FITTED WITH PRESSURE TEST AND TEST WELL CONNECTIONS. ALL CONNECTIONS NOT USED WILL BE CAPPED AS INDICATED.
8. FEEDWATER HEATER CUSTOMER PIPE CONNECTIONS, AS SUPPLIED BY STRUTHERS WELLS CORP. ARE INDICATED BY ⬡.
9. CUSTOMER'S TB-PIPE CONNECTIONS, AS SUPPLIED BY ACPSI, ARE INDICATED BY □.
10. FOR MECHANICAL SYMBOLS AND NOTES SEE DRAWING M1-0200.
11. CUSTOMER'S CONDENSER PIPE CONNECTIONS AS SUPPLIED BY WESTINGHOUSE, ARE INDICATED BY ○.
12. □ REPRESENTS DRAIN CONNECTIONS SHOWN ON F.D. M1-0237-01.
13. DELETED
14. UNLESS OTHERWISE NOTED, ALL DRAINS COLLECTED BY LOCAL DRAIN SYSTEM.
15. VALVE MAY BE PARTIALLY OPEN.

FSAR FIGURE 10.4-13

THIS DRAWING CREATED ELECTRONICALLY

DRAWING 2323-M1-0205 REV CP-5
HAS BEEN SPLIT INTO THE FOLLOWING SHEETS:
M1-0205
M1-0205 SH A

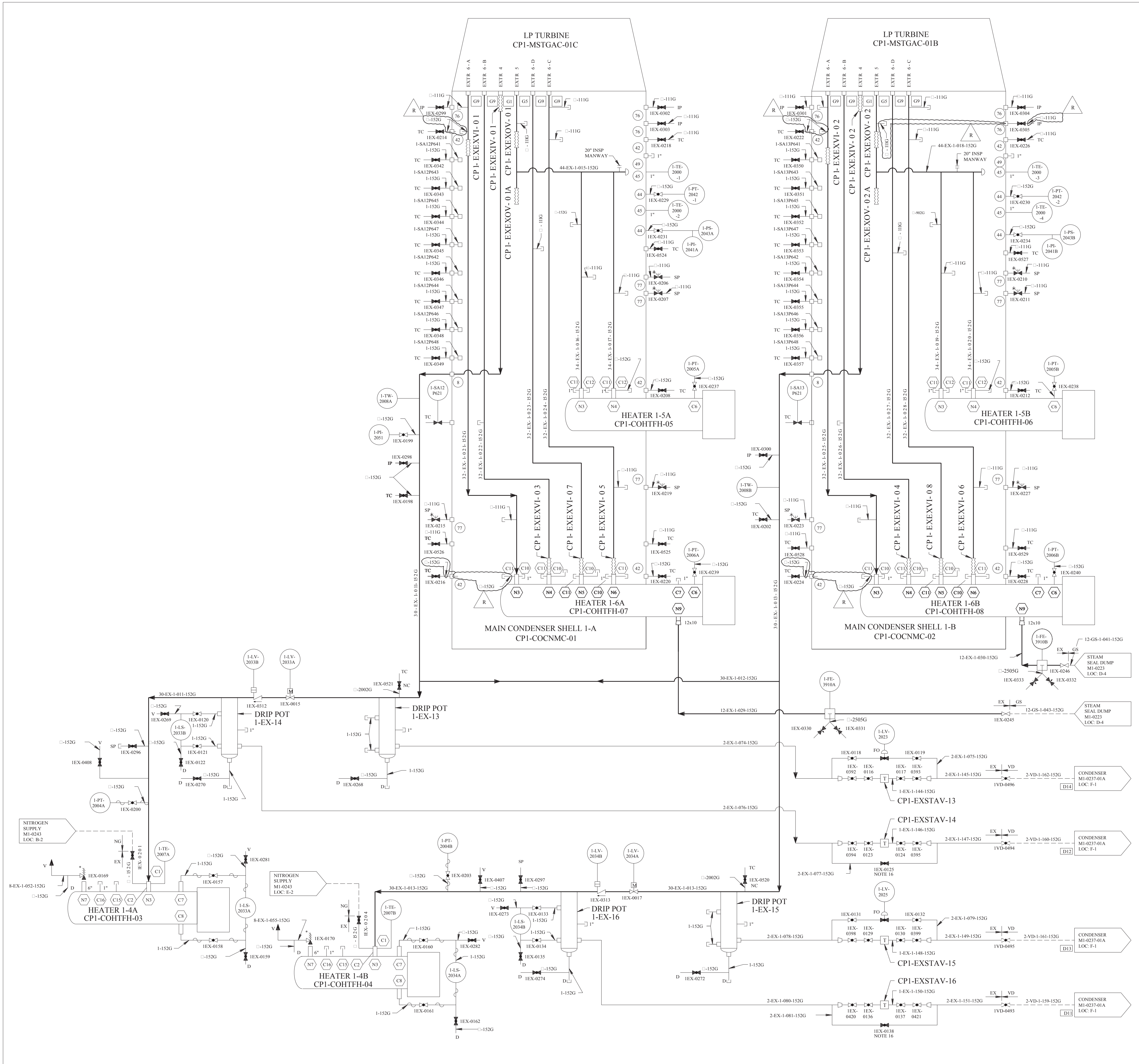
NON–SAFETY

LUMINANT
CPSES
GLEN ROSE, TEXAS

FLOW DIAGRAM
EXTRACTION STEAM SYSTEM

| DWG. NO. | SH. NO. | REV. |
|---|---|---|
| M1-0205 | - | CP-20 |

me839700.dgn A M1-0205 FINAL PRINT




| REV | DWN | CHKD | APVD | REMARKS |
|---|---|---|---|---|
| CP-21 | JRMC 08-21 2012 | DLK 09-12 2012 | | THIS DRAWING REVISED TO INCORPORATE DESIGN CHANGE FDA 2012-000114-01-00 PER SK-0001-12-000114-01-00. |

NOTES:

1. □" PIPING USED FOR RADIOACTIVE TRACER SAMPLE AND INJECTION LINES IN THE CONDENSER NECK SHALL BE SCH XXS.
2. THE EXTRACTION STEAM SYSTEM IS NON-NUCLEAR SAFETY CLASS.
3. ALL INSTRUMENTATION, DRAINS AND TEST CONNECTION VALVES ARE □" UNLESS OTHERWISE NOTED.
4. FEEDWATER HEATER SHELL SIDE RELIEF VALVES (IDENTIFIED BY * ) TO BE SUPPLIED BY STRUTHERS WELLS CORP.
5. RADIOACTIVE TRACER INJECTION POINTS (INDICATED AS IP) AND SAMPLING POINTS (INDICATED AS SP) WILL BE □" CS EXCEPT FOR PIPING AND VALVES AT CONDENSER NECK WILL BE □" SS.
6. SYSTEM ORIFICES ARE PLUG RESISTANT.
7. FEEDWATER HEATER EXTRACTION STEAM INLET NOZZLES ARE FITTED WITH PRESSURE TEST AND TEST WELL CONNECTIONS. ALL CONNECTIONS NOT USED WILL BE CAPPED AS INDICATED.
8. FEEDWATER HEATER CUSTOMER PIPE CONNECTIONS, AS SUPPLIED BY STRUTHERS WELLS CORP. ARE INDICATED BY ⬡.
9. CUSTOMER'S TB-PIPE CONNECTIONS, AS SUPPLIED BY ACPSI, ARE INDICATED BY □.
10. FOR MECHANICAL SYMBOLS AND NOTES SEE DRAWING M1-0200.
11. CUSTOMER'S CONDENSER PIPE CONNECTIONS AS SUPPLIED BY WESTINGHOUSE, ARE INDICATED BY ○.
12. □ REPRESENTS DRAIN CONNECTIONS SHOWN ON FD M1-0237-01.
13. DELETED
14. UNLESS OTHERWISE NOTED, ALL DRAINS COLLECTED BY LOCAL DRAIN SYSTEM.
15. FOR VENDOR TEST CONNECTIONS ON LP TURBINE EXTRACTION STEAM LINES REFER TO VENDOR DWG (UPC) 54-401-128-401.
16. VALVE MAY BE PARTIALLY OPEN.

FSAR FIGURE 10.4-13

THIS DRAWING CREATED ELECTRONICALLY

DRAWING 2323-M1-0205 REV CP-5
HAS BEEN SPLIT INTO THE FOLLOWING SHEETS:
M1-0205
M1-0205-A

NON-SAFETY

LUMINANT
CPNPP
GLEN ROSE, TEXAS

FLOW DIAGRAM
EXTRACTION STEAM SYSTEM

DWG. NO. M1-0205 | SH. NO. A | REV. CP-21

< FINAL PRINT >



$$$$$$$DATE$$$$$$

| REV | DWN | CHKD | APVD | REMARKS |
|---|---|---|---|---|
| CP-13 | SM 11-19 2009 | JRMC 11-19 2009 | | THIS DRAWING REVISED TO INCORPORATE DESIGN CHANGE FDA 2004-003813-01-00 PER SK-0001-04-003813-01-00. |

NOTES:

1. FEEDWATER HEATER SHELL SIDE RELIEF VALVES (IDENTIFIED BY * ) TO BE SUPPLIED BY STRUTHERS WELLS CORP.
2. SYSTEM ORIFICES ARE PLUG RESISTANT.
3. FEEDWATER HEATER EXTRACTION STEAM INLET NOZZLES ARE FITTED WITH PRESSURE TEST AND TEST WELL CONNECTIONS. ALL CONNECTIONS NOT USED WILL BE CAPPED AS INDICATED.
4. FEEDWATER HEATER CUSTOMER PIPE CONNECTIONS, AS SUPPLIED BY STRUTHERS WELLS ARE INDICATED BY .
5. CUSTOMER'S TB-PIPE CONNECTIONS, AS SUPPLIED BY ACPSI, ARE INDICATED BY
6. FOR MECHANICAL SYMBOLS AND NOTES SEE DRAWING M1-0200.
7. REPRESENTS DRAIN CONNECTIONS SHOWN ON M2-0237-01.
8. UNLESS OTHERWISE NOTED, ALL DRAINS COLLECTED BY LOCAL DRAIN SYSTEM.
9. VALVE MAY BE PARTIALLY OPEN.

DRAWING 2323-M2-0205 REV CP-4
HAS BEEN SPLIT INTO THE FOLLOWING SHEETS:
M2-0205
M2-0205 SH A

FSAR FIGURE 10.4-13

THIS DRAWING CREATED ELECTRONICALLY

NON–SAFETY

LUMINANT
CPNPP
GLEN ROSE, TEXAS

FLOW DIAGRAM
EXTRACTION STEAM SYSTEM

| DWG. NO. | SH. NO. | REV. |
|---|---|---|
| M2-0205 | - | CP-13 |

$$$$$$$$DATE$$$$$$$$

me962700.dgn A M2-0205 < FINAL PRINT >

| REV | DWN | CHKD | APVD | REMARKS |
|---|---|---|---|---|
| CP-14 | SM 10-13-2012 | KM 10-13-2012 | | THIS DRAWING REVISED TO INCORPORATE DESIGN CHANGE FDA 2012-000114-01-01 PER SK-0002-12-000114-01-01. |

NOTES:

1. FEEDWATER HEATER SHELL SIDE RELIEF VALVES (IDENTIFIED BY * ) TO BE SUPPLIED BY STRUTHERS WELLS CORP.
2. SYSTEM ORIFICES ARE PLUG RESISTANT.
3. FEEDWATER HEATER EXTRACTION STEAM INLET NOZZLES ARE FITTED WITH PRESSURE TEST AND TEST WELL CONNECTIONS. ALL CONNECTIONS NOT USED WILL BE CAPPED AS INDICATED.
4. FEEDWATER HEATER CUSTOMER PIPE CONNECTIONS, AS SUPPLIED BY STRUTHERS WELLS CORP. ARE INDICATED BY ⬡.
5. CUSTOMER'S TB-PIPE CONNECTIONS, AS SUPPLIED BY ACPSI, ARE INDICATED BY □.
6. FOR MECHANICAL SYMBOLS AND NOTES SEE DRAWING M1-0200.
7. CUSTOMER'S CONDENSER PIPE CONNECTIONS AS SUPPLIED BY WESTINGHOUSE, ARE INDICATED BY ○.
8. □ REPRESENTS DRAIN CONNECTIONS SHOWN ON M2-0237-01.
9. UNLESS OTHERWISE NOTED, ALL DRAINS COLLECTED BY LOCAL DRAIN SYSTEM.
10. VALVE MAY BE PARTIALLY OPEN.

FSAR FIGURE 10.4-13

THIS DRAWING CREATED ELECTRONICALLY

DRAWING 2323-M2-0205 REV CP-4
HAS BEEN SPLIT INTO THE FOLLOWING SHEETS:
M2-0205
M2-0205-A

NON-SAFETY

LUMINANT
CPNPP
GLEN ROSE, TEXAS

FLOW DIAGRAM
EXTRACTION STEAM SYSTEM

DWG. NO. M2-0205 | SH. NO. A | REV. CP-14

< FINAL PRINT >

SSSSSSSDATESSSSSS

me101840.dgn

M2-0205-A

| REV | DWN | CHKD | APVD | REMARKS |
|---|---|---|---|---|
| CP-28 | JESC 05-21-2014 | DJL 05-21-2014 | | THIS DRAWING REVISED TO INCORPORATE DESIGN CHANGE FDA-2014-000131-01-00 PER SK-0001-14-000131-01-00. |

NOTES:

1. * BY OTHERS.
2. HEATER CUSTOMER PIPE CONNECTIONS AS SUPPLIED BY STRUTHERS WELLS ARE INDICATED BY .
3. SAMPLING CONNECTIONS ARE FOR THE TURBINE HEAT RATE TEST.
4. FOR MECHANICAL SYMBOLS AND NOTES SEE DRAWING M1-0200.
5. ◯ REPRESENTS CONDENSER PENETRATION.
6. ALL I&C CHANNEL NUMBERS WILL HAVE PREFIX 1.E. 1-TE-2323 .
7. UNLESS OTHERWISE NOTED, ALL DRAINS TO BE COLLECTED BY LOCAL DRAIN SYSTEM TO TURBINE BUILDING SUMP.
8. SEAL WATER INJECTION EAST AND WEST FILTERS WILL BE ALIGNED PER PROCEDURE SOP-308B.
9. 1-PV-2609 AND 1-PV-2610 DO NOT FULLY CLOSE DUE TO MECHANICAL STOP TO MAINTAIN MINIMUM FLOW (REF FDA-2014-000131-01).

R

FSAR FIGURE 10.4-14

THIS DRAWING CREATED ELECTRONICALLY

DRAWING M1-0207 REV CP-21
HAS BEEN SPLIT INTO THE FOLLOWING SHEETS:
M1-0207
M1-0207-B

DRAWING 2323-M1-0207 REV CP-5
HAS BEEN SPLIT INTO THE FOLLOWING SHEETS:
M1-0207
M1-0207-A

NON-SAFETY

LUMINANT
CPNPP
GLEN ROSE, TEXAS

FLOW DIAGRAM
HEATER DRAINS SYSTEM

DWG. NO. M1-0207 | SH. NO. - | REV. CP-28

< FINAL PRINT >

me104350.dgn A M1-0207 B C D E F G H

$$$$$$$$DATE$$$$$$$$

| REV | DWN | CHK | APVD | REMARKS |
|---|---|---|---|---|
| CP-14 | DLK 09-17 2012 | MM 09-18 2012 | | THIS DRAWING REVISED TO INCORPORATE DESIGN CHANGE FDA 2012-000087-02-00 PER SK-0001-12-000087-02-00. |

NOTES:

1. * BY OTHERS.
2. HEATER CUSTOMER PIPE CONNECTIONS AS SUPPLIED BY STRUTHERS WELLS ARE INDICATED BY ⬡
3. SAMPLING CONNECTIONS ARE FOR THE TURBINE HEAT RATE TEST.
4. FOR MECHANICAL SYMBOLS AND NOTES SEE DRAWING M1-0200.
5. ◯ REPRESENTS CONDENSER PENETRATION.
6. UNLESS OTHERWISE NOTED, ALL DRAINS TO BE COLLECTED BY LOCAL DRAIN SYSTEM TO TURBINE BUILDING SUMP.

FSAR FIGURE 10.4-14

THIS DRAWING CREATED ELECTRONICALLY

DRAWING 2323-M1-0207 REV CP-5
HAS BEEN SPLIT INTO THE FOLLOWING SHEETS:
M1-0207
M1-0207-A

NON–SAFETY

LUMINANT
CPNPP
GLEN ROSE, TEXAS

FLOW DIAGRAM
HEATER DRAINS SYSTEM

| DWG. NO. | SH. NO. | REV. |
|---|---|---|
| M1-0207 | A | CP-14 |



SSSSSSSDATESSSSSS

| REV | DWN | CHKD | APVD | REMARKS |
|---|---|---|---|---|
| CP-6 | DLK 03-18-2010 | MM 03-18-2010 | | THIS DRAWING REVISED TO INCORPORATE DESIGN CHANGE FDA 2010-000027-01-00 PER SK-0003-10-000027-01-00. |

NOTES:

1. HEATER CUSTOMER PIPE CONNECTIONS AS SUPPLIED BY STRUTHERS WELLS ARE INDICATED BY .
2. SAMPLING CONNECTIONS ARE FOR THE TURBINE HEAT RATE TEST.
3. FOR MECHANICAL SYMBOLS AND NOTES SEE DRAWING M1-0200.
4. ALL I&C CHANNEL NUMBERS WILL HAVE PREFIX. I.E. 1-TE-2323 .
5. UNLESS OTHERWISE NOTED, ALL DRAINS TO BE COLLECTED BY LOCAL DRAIN SYSTEM TO TURBINE BUILDING SUMP.

FSAR FIGURE 10.4-14

THIS DRAWING CREATED ELECTRONICALLY

DRAWING M1-0207 REV CP-21
HAS BEEN SPLIT INTO THE FOLLOWING SHEETS:

| |
|---|
| M1-0207 |
| M1-0207-B |

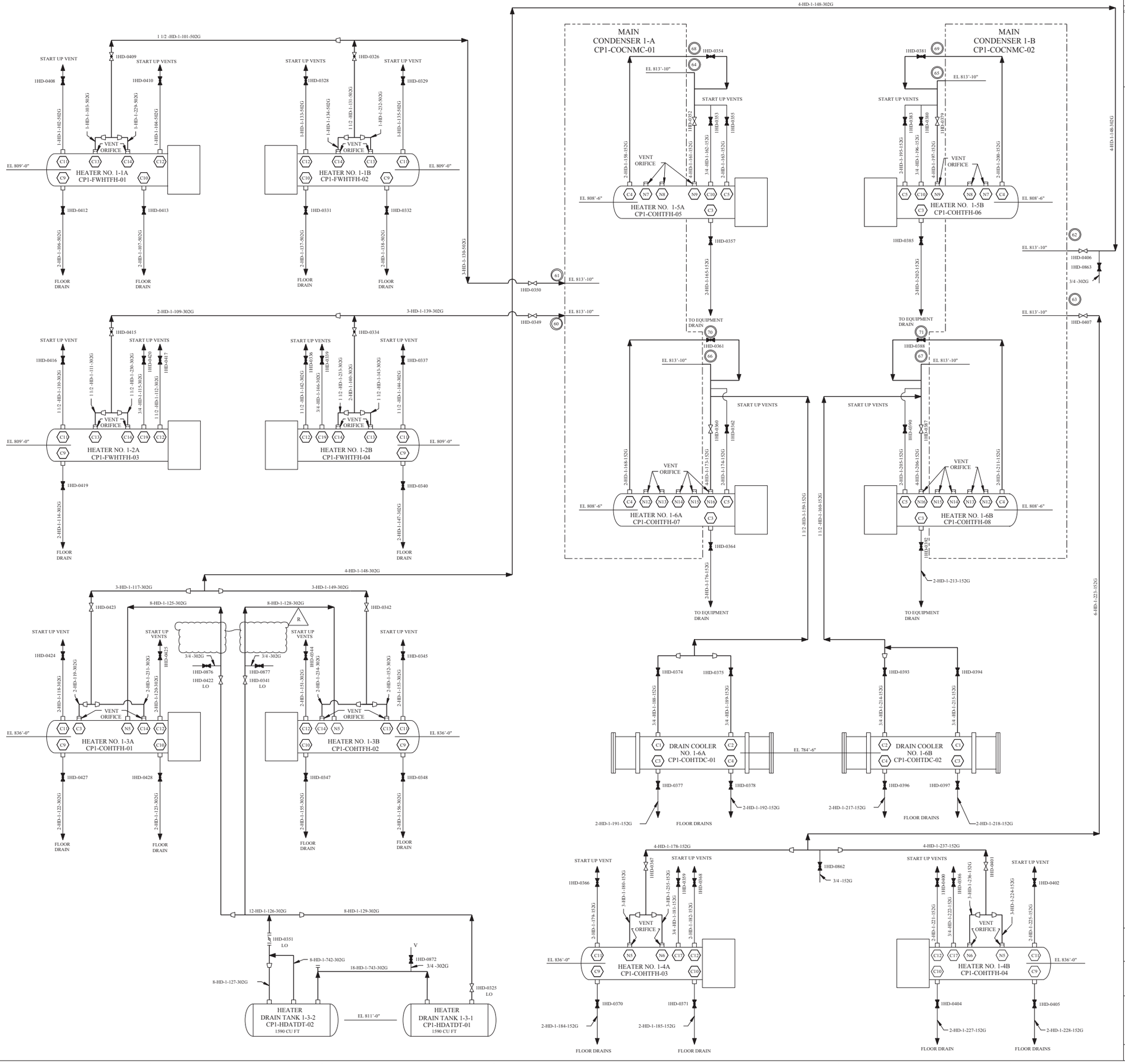
CLASS II

LUMINANT
CPNPP
GLEN ROSE, TEXAS

FLOW DIAGRAM
HEATER DRAINS SYSTEM

| DWG. NO. | SH. NO. | REV. |
|---|---|---|
| M1-0207 | B | CP-6 |

me970900.dgn A M1-0207-B B C D E F G FINAL PRINT H




| REV | DWN | CHKD | APVD | REMARKS |
|---|---|---|---|---|
| CP-13 | DLK 03-19-2008 | MM 03-20-2008 | | THIS DRAWING REVISED TO INCORPORATE DESIGN CHANGE FDA 2006-003080-12-00 PER SK-0018-06-003080-12-00 |

NOTES:

1. FOR NOZZLE CONNECTION SYMBOLS REFER TO THE STRUTHERS WELLS DRAWINGS.

| | | |
|---|---|---|
| HEATER NO. | 1-1A & 1-1B: | 1-74-06-32419D1 |
| HEATER NO. | 1-2A & 1-2B: | 1-74-06-32420D1 |
| HEATER NO. | 1-3A & 1-3B: | 1-74-06-32421D1 |
| HEATER NO. | 1-4A & 1-4B: | 1-74-06-32422D1 |
| HEATER NO. | 1-5A & 1-5B: | 1-74-06-32423D1 |
| HEATER NO. | 1-6A & 1-6B: | 1-74-06-324124D1 |
| HEATER NO. | 1-6A & 1-6B: | DRAIN COOLERS: 3-74-06-324125D1 |

2. DELETED R

REFERENCES:

FOR GENERAL NOTES & SYMBOLS SEE DRAWING M1-0200.

REPRESENTS PENETRATION TO CONDENSER.

FSAR FIGURE 10.4-14

THIS DRAWING CREATED ELECTRONICALLY

NON–SAFETY

LUMINANT
CPNPP
GLEN ROSE, TEXAS

FLOW DIAGRAM
HEATER DRAINS SYSTEM

| DWG. NO. | SH. NO. | REV. |
|---|---|---|
| M1-0208 | - | CP-13 |

$$$$$$$DATE$$$$$$

me901900.dgn A M1-0208 < FINAL PRINT >

| REV | DWN | CHKD | APVD | REMARKS |
|---|---|---|---|---|
| CP-33 | GLK 04-02-2009 | MHF 04-02-2009 | | THIS DRAWING REVISED TO INCORPORATE DESIGN CHANGE FDA-2009-000992-01-00 PER SK-0001-09-000992-01-00. EDITORIAL CHANGE AS NOTED. |

NOTES:

1. ALL DRAINS ENTERING DRAIN TANKS ENTER AT THE TOP OF THE TANK.
2. DRAIN TANKS DESIGNED TO ASME BOILER AND PRESSURE VESSEL CODE SECTION VIII, DIVISION 1.
3. FOR MECHANICAL SYMBOLS AND NOTES SEE DRAWING M1-0200.
4. * BY ACPSI.
5. NOZZLE TO NOZZLE CONNECTION.
6. DELETED
7. ◯ REPRESENTS MSR AND DRAIN TANKS PENETRATION PER SOUTHWESTERN ENGINEERING DRAWING DM-94191.
8. EACH REHEATER DRAIN TANK DRAIN INLET NOZZLE IS PROVIDED WITH ONE 1" SIZE PIPE COUPLING FOR A-CPSI SUPPLIED MSR HEMI-HEAD LEVEL TRANSMITTER.
9. UNLESS OTHERWISE NOTED ALL DRAINS COLLECTED BY LOCAL DRAIN SYSTEM.

MOISTURE SEPARATOR REHEATER 1-B
CP1-MSTGAC-01E

SEPARATOR DRAIN TANK 1-B
CP1-HDATMS-01
156 CU FT

SHELL DRAIN TANK 1-B
CP1-HDATSD-01
100 CU FT

REHEATER DRAIN TANK 1-B1
CP1-HDATRD-01
180 CU FT

REHEATER DRAIN TANK 1-B2
CP1-HDATRD-04

CP1-HDORRD-02

WARM-UP ORIFICE
CP1-HDORFR-06

HP TURBINE EXHAUST M1-0202-01A LOC: G-6

CONDENSER 1-B M1-0207-A LOC: G-3

HEATER DRAIN TANK 1-3-1 M1-0207-B LOC: A-4

CONDENSER 1-A M1-0207-A LOC: A-3

HEATER 1-1B M1-0207 LOC: G-1

12-HD-1-923-1302G 4TH PASS DRAIN LINE

4-HD-1-924-1302G 4TH PASS VENT LINE

FSAR FIGURE 10.4-14

THIS DRAWING CREATED ELECTRONICALLY

DRAWING 2323-M1-0209 REV CP-2
HAS BEEN SPLIT INTO THE FOLLOWING SHEETS:
M1-0209
M1-0209-A

NON–SAFETY

LUMINANT
CPNPP
GLEN ROSE, TEXAS

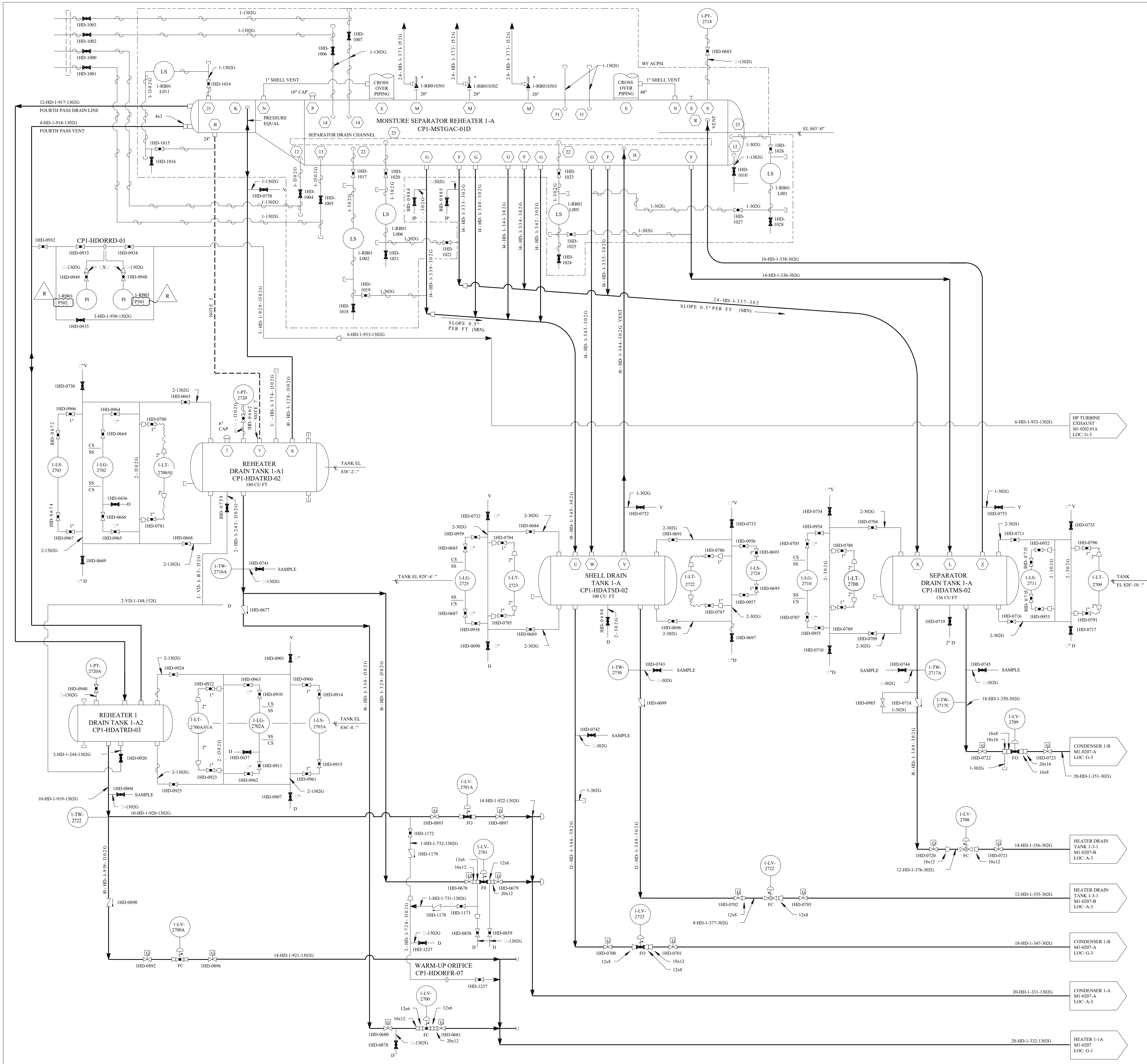
FLOW DIAGRAM
HEATER DRAINS SYSTEM

DWG. NO. M1-0209 | SH. NO. - | REV. CP-33

REF CK'D 03/07/02 CP-31

$$$$$$$DATE$$$$$$

me927600.dgn A M1-0209




| REV | DWN | CHKD | APVD | REMARKS |
|---|---|---|---|---|
| CP-27 | DLK 07-19 2017 | GAW 07-19 2017 | | THIS DRAWING REVISED TO INCORPORATE DESIGN CHANGE FDA 2017-000111-01-00 PER SK-0001-17-000111-01-00. |

NOTES:

1. ALL DRAINS ENTERING DRAIN TANKS ENTER AT THE TOP OF THE TANK.
2. DRAIN TANKS DESIGNED TO ASME BOILER AND PRESSURE VESSEL CODE SECTION VIII, DIVISION 1.
3. FOR MECHANICAL SYMBOLS AND NOTES SEE DRAWING M1-0200.
4. * BY UPC.
5. NOZZLE TO NOZZLE CONNECTION.
6. DELETED
7. ⬡ REPRESENTS MSR AND DRAIN TANKS PENETRATION PER SOUTHWESTERN ENGINEERING DRAWING NUMBER DM-94191.
8. EACH REHEATER DRAIN TANK DRAIN INLET NOZZLE IS PROVIDED WITH ONE 1" SIZE PIPE COUPLING FOR A-CPSI SUPPLIED MSR HEMI-HEAD LEVEL TRANSMITTER.
9. UNLESS OTHERWISE NOTED ALL DRAINS COLLECTED BY LOCAL DRAIN SYSTEM.

FSAR FIGURE 10.4-14

THIS DRAWING CREATED ELECTRONICALLY

DRAWING 2323-M1-0209 REV CP-2
HAS BEEN SPLIT INTO THE FOLLOWING SHEETS:
M1-0209
M1-0209-A

NON-SAFETY

LUMINANT
CPNPP
GLEN ROSE, TEXAS

FLOW DIAGRAM
HEATER DRAINS SYSTEM

DWG. NO. M1-0209 | SH. NO. A | REV. CP-27

FINAL PRINT

| REV | DWN | CHK | APVD | REMARKS |
|---|---|---|---|---|
| CP-19 | JRMC 05-21 2014 | DJL 05-21 2014 | | THIS DRAWING REVISED TO INCORPORATE DESIGN CHANGE FDA-2014-000131-01-00 PER SK-0003-14-000131-01-00. |

NOTES:

1. * BY OTHERS.
2. HEATER CUSTOMER PIPE CONNECTIONS AS SUPPLIED BY STRUTHERS WELLS ARE INDICATED BY .
3. SAMPLING CONNECTIONS ARE FOR THE TURBINE HEAT RATE TEST.
4. FOR MECHANICAL SYMBOLS AND NOTES SEE DRAWING M1-0200.
5. SEAL WATER INJECTION EAST AND WEST FILTERS WILL BE ALIGNED PER PROCEDURE SOP-305B.
6. 2-PV-2609 AND 2-PV-2610 DO NOT FULLY CLOSE DUE TO MECHANICAL STOP TO MAINTAIN MINIMUM FLOW (REF FDA-2014-000131-01).

R

FSAR FIGURE 10.4-14

THIS DRAWING CREATED ELECTRONICALLY

DRAWING M2-0207 REV CP-13
HAS BEEN SPLIT INTO THE FOLLOWING SHEETS:
M2-0207
M2-0207-B

DRAWING 2323-M2-0207 REV CP-2
HAS BEEN SPLIT INTO THE FOLLOWING SHEETS:
M2-0207
M2-0207-A

NON-SAFETY

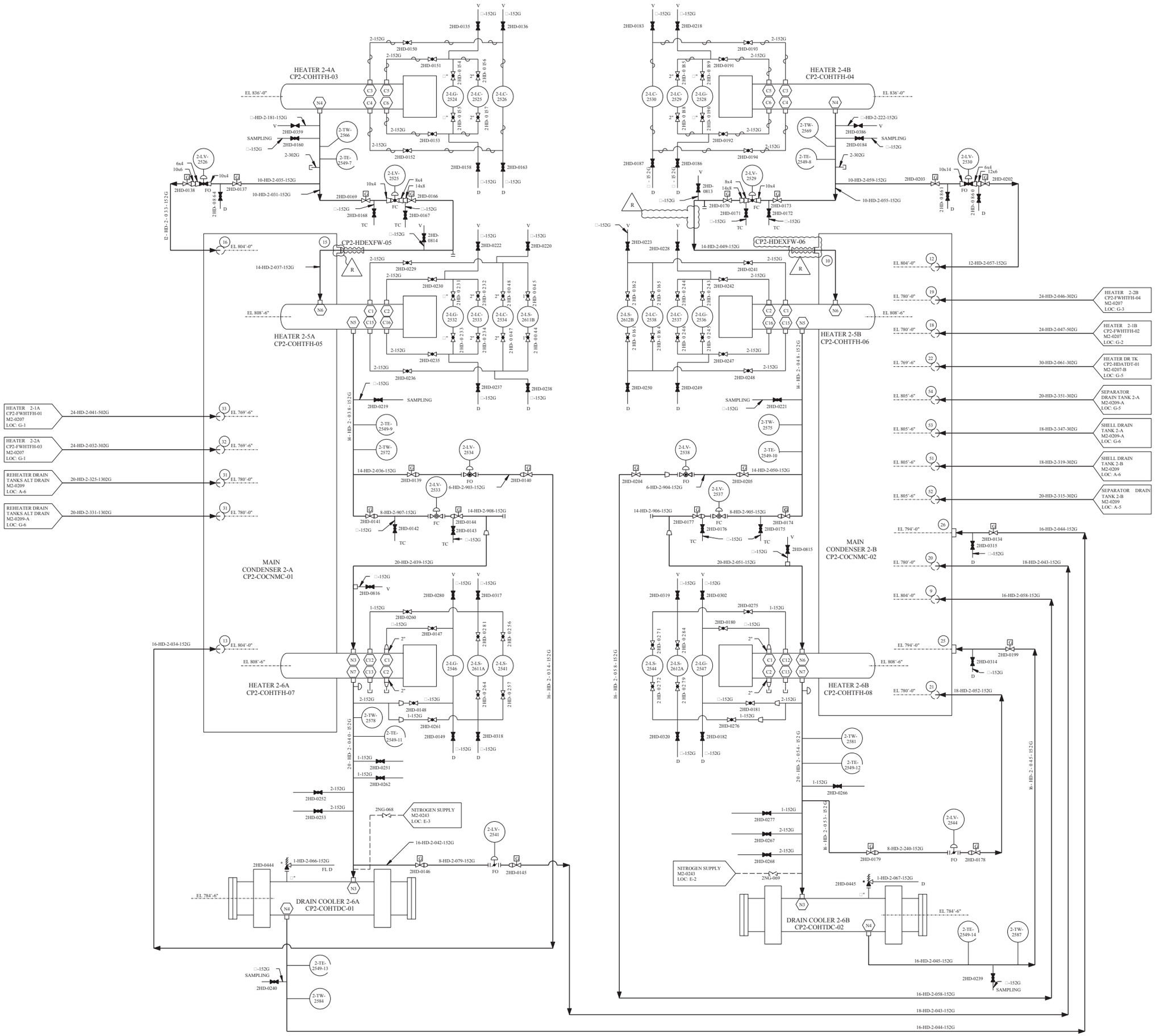
LUMINANT
CPNPP
GLEN ROSE, TEXAS

FLOW DIAGRAM
HEATER DRAINS SYSTEM

DWG. NO. M2-0207 | SH. NO. - | REV. CP-19

$$$$$$$DATE$$$$$$$ REF CHK 12/05/97 CP-B

me101960.dgn A M2-0207 B C D E F G < FINAL PRINT > H




| REV | DWN | CHKD | APVD | REMARKS |
|---|---|---|---|---|
| CP-13 | DLK 05-16-2012 | MM 05-16-2012 | | THIS DRAWING REVISED TO INCORPORATE DESIGN CHANGE FDA 2012-000087-01-00 PER SK-0003-12-000087-01-00. |

NOTES:

1. * BY OTHERS.
2. HEATER CUSTOMER PIPE CONNECTIONS AS SUPPLIED BY STRUTHERS WELLS ARE INDICATED BY ⬡
3. SAMPLING CONNECTIONS ARE FOR THE TURBINE HEAT RATE TEST.
4. FOR MECHANICAL SYMBOLS AND NOTES SEE DRAWING M1-0200.
5. ◯ REPRESENTS CONDENSER PENETRATION.

FSAR FIGURE 10.4-14

THIS DRAWING CREATED ELECTRONICALLY

DRAWING 2323-M2-0207 REV CP-2
HAS BEEN SPLIT INTO THE FOLLOWING SHEETS:
M2-0207
M2-0207-A

NON–SAFETY

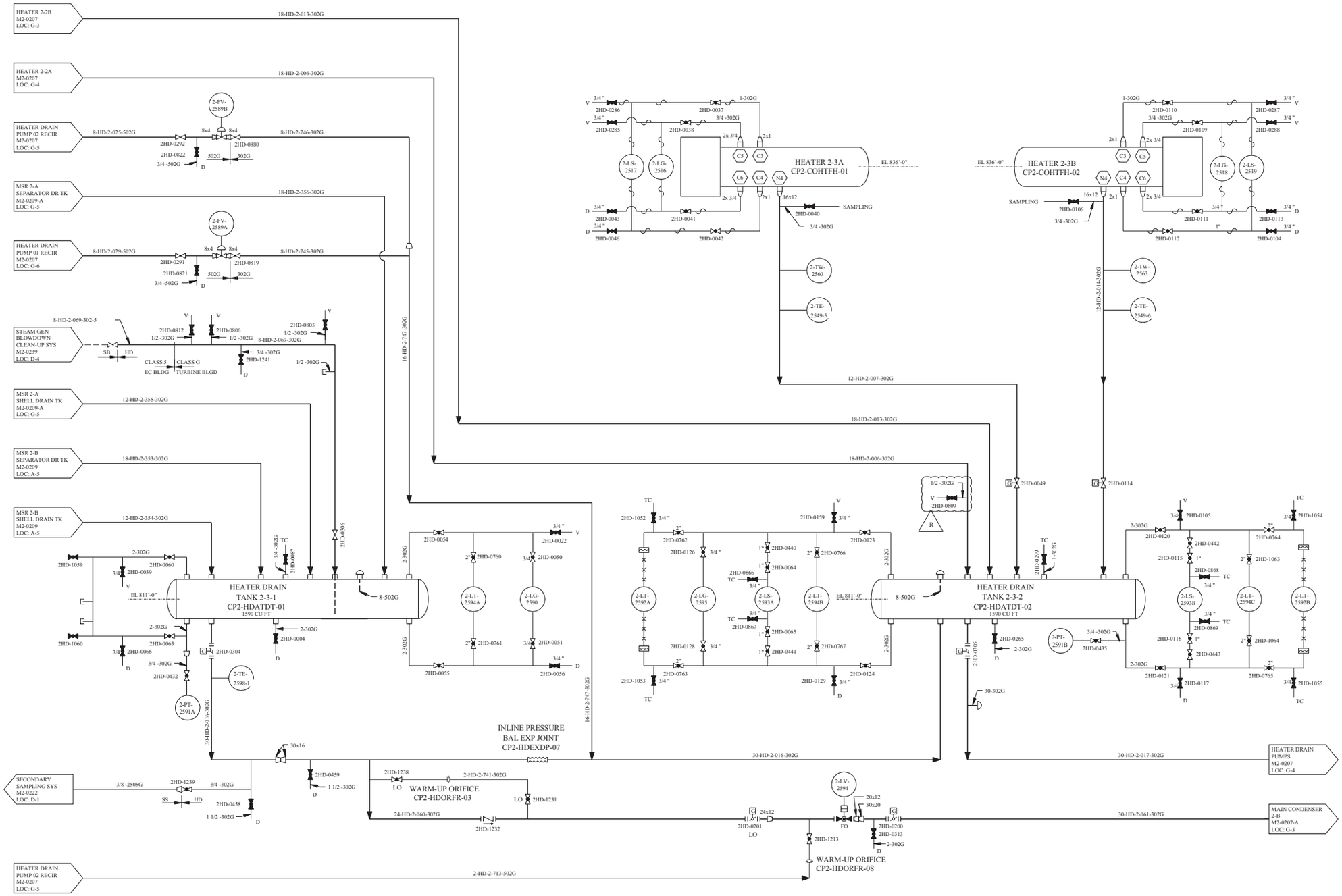
LUMINANT
CPNPP
GLEN ROSE, TEXAS

FLOW DIAGRAM
HEATER DRAINS SYSTEM

| DWG. NO. | SH. NO. | REV. |
|---|---|---|
| M2-0207 | A | CP-13 |

SSSSSSSDATESSSSSS

me958800.dgn A M2-0207-A B C D E F G < FINAL PRINT > H




| REV | DWN | CHK | APVD | REMARKS |
|---|---|---|---|---|
| CP-3 | DLK 11-01-2011 | MM 11-01-2011 | | THIS DRAWING REVISED TO INCORPORATE DESIGN CHANGE FDA 2011-000205-01-00 PER SK-0001-11-000205-01-00. |

NOTES:

1. HEATER CUSTOMER PIPE CONNECTIONS AS SUPPLIED BY STRUTHERS WELLS ARE INDICATED BY ⬡
2. SAMPLING CONNECTIONS ARE FOR THE TURBINE HEAT RATE TEST.
3. FOR MECHANICAL SYMBOLS AND NOTES SEE DRAWING M1-0200.
4. ALL I&C CHANNEL NUMBERS WILL HAVE PREFIX. I.E. 2-TE-2323
5. UNLESS OTHERWISE NOTED, ALL DRAINS TO BE COLLECTED BY LOCAL DRAIN SYSTEM TO TURBINE BUILDING SUMP.

FSAR FIGURE 10.4-14

THIS DRAWING CREATED ELECTRONICALLY

DRAWING M2-0207 REV CP-13
HAS BEEN SPLIT INTO THE FOLLOWING SHEETS:
M2-0207
M2-0207-B

CLASS II

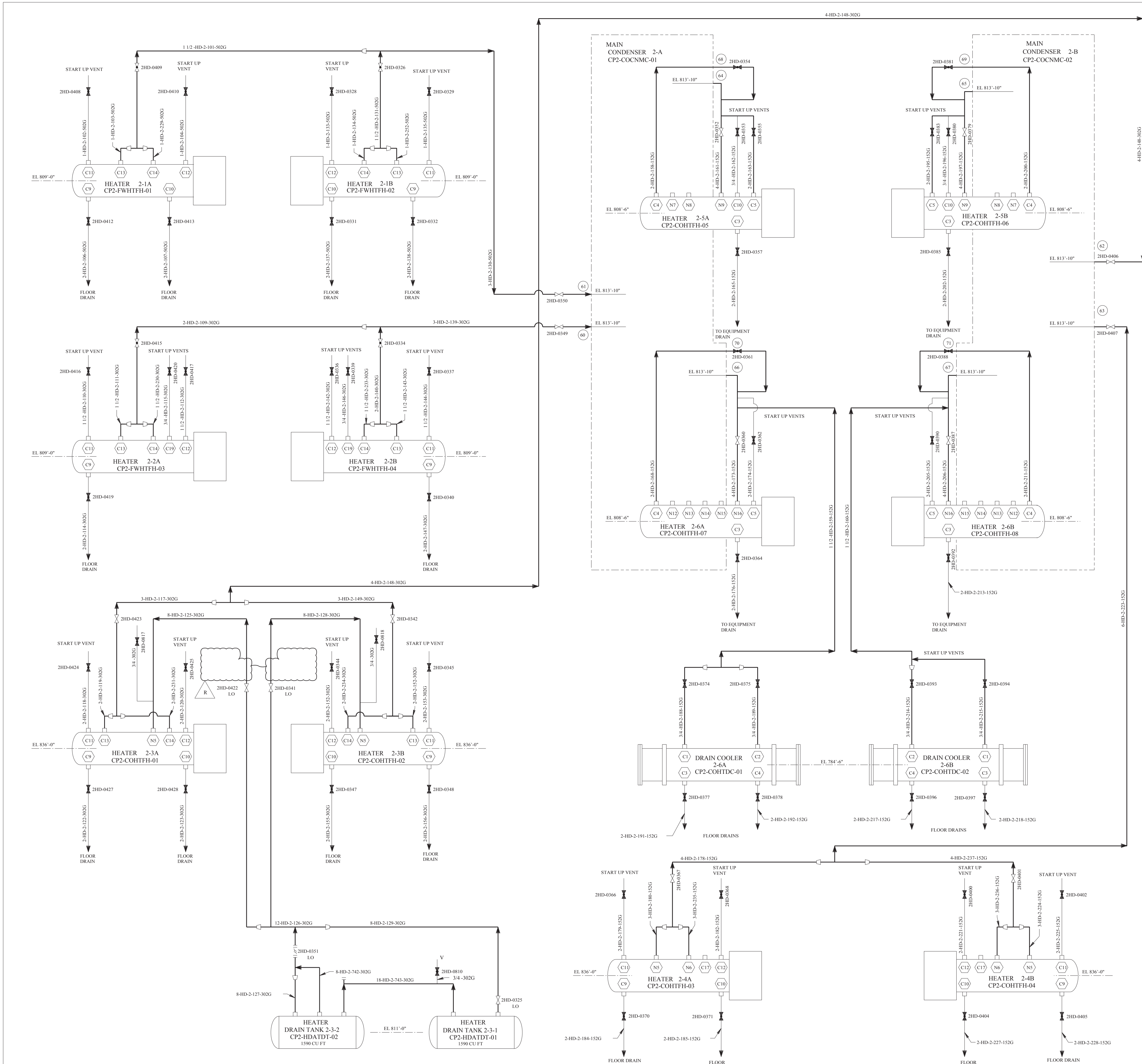
LUMINANT
CPNPP
GLEN ROSE, TEXAS

FLOW DIAGRAM
HEATER DRAINS SYSTEM

DWG. NO. M2-0207 | SH. NO. B | REV. CP-3

FINAL PRINT

| REV | DWN | CHKD | APVD | REMARKS |
|---|---|---|---|---|
| CP-10 | DLK 12-11 2008 | MM 12-29 2008 | | THIS DRAWING REVISED TO INCORPORATE DESIGN CHANGE FDA 2006-003080-40-00 PER SK-0028-06-003080-40-00. |




NOTES:

1. FOR NOZZLE CONNECTION SYMBOLS REFER TO THE STRUTHERS WELLS DRAWINGS.

| | | |
|---|---|---|
| HEATER | 2-1A AND 2-1B: | 1-74-06-32419D1 |
| HEATER | 2-2A AND 2-2B: | 1-74-06-32420D1 |
| HEATER | 2-3A AND 2-3B: | 1-74-06-32421D1 |
| HEATER | 2-4A AND 2-4B: | 1-74-06-32422D1 |
| HEATER | 2-5A AND 2-5B: | 1-74-06-32423D1 |
| HEATER | 2-6A AND 2-6B: | 1-74-06-32424D1 |
| HEATER | 2-6A AND 2-6B | DRAIN COOLERS: 3-74-06-324125D1 |

2. THE FOLLOWING NOZZLE ORIFICE ARE SUPPLIED BY STRUTHERS WELLS:

| HEATER | ORIFICE SIZE | NOZZLE CONNECTION |
|---|---|---|
| 2-1A AND 2-1B | 5/32 INCH DIA | C13, C14 |
| 2-2A AND 2-2B | 7/32 INCH DIA | C13, C14 |
| 2-3A AND 2-3B | 5/16 INCH DIA | N5, N6 |
| 2-4A AND 2-4B | 3/8 INCH DIA | N5, N6 |
| 2-5A AND 2-5B | 1/2 INCH DIA | N7, N8, N9 |
| 2-6A AND 2-6B | 3/4 INCH DIA | N12, N13, N14, N15, N16 |

3. DELETED R

REFERENCES:

FOR GENERAL NOTES AND SYMBOLS SEE DRAWING M1-0200.

◯ REPRESENTS PENETRATION TO CONDENSER.

FSAR FIGURE 10.4-14

THIS DRAWING CREATED ELECTRONICALLY

NON-SAFETY

LUMINANT
CPNPP
GLEN ROSE, TEXAS

FLOW DIAGRAM
HEATER DRAINS SYSTEM

DWG. NO. M2-0208 | SH. NO. - | REV. CP-10

| REV | DWN | CHKD | APVD | REMARKS |
|---|---|---|---|---|
| CP-19 | GLK 04-02-2009 | MH 04-02-2009 | | THIS DRAWING REVISED TO INCORPORATE DESIGN CHANGE FDA-2009-000992-01-00 PER SK-0003-09-000992-01-00. EDITORIAL CHANGE AS NOTED. |

NOTES:

1. ALL DRAINS ENTERING DRAIN TANKS ENTER AT THE TOP OF THE TANK.
2. DRAIN TANKS DESIGNED TO ASME BOILER AND PRESSURE VESSEL CODE SECTION VIII, DIVISION 1.
3. FOR MECHANICAL SYMBOLS AND NOTES SEE DRAWING M1-0200.
4. * BY ACPSI
5. NOZZLE TO NOZZLE CONNECTION.
6. ⬡ REPRESENTS MSR AND DRAIN TANKS PENETRATION PER SOUTHWESTERN ENGINEERING DRAWING DM-94191.
7. EACH REHEATER DRAIN TANK DRAIN INLET NOZZLE IS PROVIDED WITH ONE 1" SIZE PIPE COUPLING FOR A-CPSI SUPPLIED MSR HEMI-HEAD LEVEL TRANSMITTER.
8. DELETED

FSAR FIGURE 10.4-14

THIS DRAWING CREATED ELECTRONICALLY

DRAWING 2323-M2-0209 REV CP-1
HAS BEEN SPLIT INTO THE FOLLOWING SHEETS:

- M2-0209
- M2-0209-A

NON–SAFETY

LUMINANT
CPNPP
GLEN ROSE, TEXAS

FLOW DIAGRAM
HEATER DRAINS SYSTEM

DWG. NO. M2-0209 | SH. NO. - | REV. CP-19

REF CHK 12/597 CP-11

SSSSSSDATESSSSSS

me927400.dgn

| REV | DWN | CHK | APVD | REMARKS |
|---|---|---|---|---|
| CP-18 | GLK 04-02-2009 | MHF 04-02-2009 | | THIS DRAWING REVISED TO INCORPORATE DESIGN CHANGE FDA-2009-000992-01-00 PER SK-00004-09-000992-01-00. EDITORIAL CHANGES AS NOTED. |

NOTES:

1. ALL DRAINS ENTERING DRAIN TANKS ENTER AT THE TOP OF THE TANK.
2. DRAIN TANKS DESIGNED TO ASME BOILER AND PRESSURE VESSEL CODE SECTION VIII, DIVISION 1.
3. FOR MECHANICAL SYMBOLS AND NOTES SEE DRAWING M1-0200.
4. * BY ACPSI
5. NOZZLE TO NOZZLE CONNECTION.
6. R REPRESENTS MSR AND DRAIN TANKS PENETRATION PER SOUTHWESTERN ENGINEERING DRAWING NUMBER DM-94191.
7. EACH REHEATER DRAIN TANK DRAIN INLET NOZZLE IS PROVIDED WITH ONE 1" SIZE PIPE COUPLING FOR ACPSI SUPPLIED MSR HEMI-HEAD LEVEL TRANSMITTER.
8. DELETED

MOISTURE SEPARATOR REHEATER 2-A
CP2-MSTGAC-01D

REHEATER DRAIN TANK 2-A1
CP2-HDATRD-01
180 CU FT

REHEATER DRAIN TANK 2-A2
CP2-HDATRD-03

SHELL DRAIN TANK 2-A
CP2-HDATSD-01
100 CU FT

SEPARATOR DRAIN TANK 2-A
CP2-HDATMS-01
156 CU FT

CP2-HDORRD-01

WARM-UP ORIFICE
CP2-HDORFR-07

STEAM GENERATOR FEED PUMP TURBINE M2-0202-01B LOC: A-6

FROM HP TURBINE EXHAUST M2-0202-01A

CONDENSER 2-B M2-0207-A LOC: G-3

CONDENSER 2-A M2-0207-A LOC: A-3

HEATER DRAIN TANK 2-3-1 M2-0207-B LOC: A-2

HEATER DRAIN TANK 2-3-1 M2-0207-B LOC: A-3

HEATER 2-1A M2-0207 LOC: G-1

DRAWING 2323-M2-0209 REV CP-1
HAS BEEN SPLIT INTO THE FOLLOWING SHEETS:
M2-0209
M2-0209-A

NON–SAFETY

LUMINANT
CPNPP
GLEN ROSE, TEXAS

FLOW DIAGRAM
HEATER DRAINS SYSTEM

DWG. NO. M2-0209 | SH. NO. A | REV. CP-18

FSAR FIGURE 10.4-14

THIS DRAWING CREATED ELECTRONICALLY

REF CHK 12/5/97 CP-8

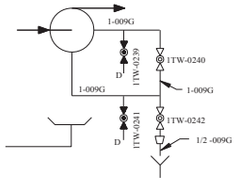
$$$$$$$DATE$$$$$$

me927700.dgn M2-0209-A

| REV | DWN | CHK | APVD | REMARKS |
|---|---|---|---|---|
| CP-32 | JRMC 04-14 2009 | SM 04-14 2009 | | THIS DRAWING REVISED TO INCORPORATE DESIGN CHANGE FDA 2008-003429-01-00 PER SK-0001-08-003429-01-00. |

NOTES:

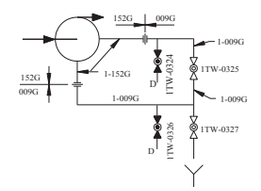
1. DELETED
2. FOR MECHANICAL SYMBOLS AND NOTES SEE DWG M1-0200.
3. HEAT EXCHANGER SHELL RELIEF VALVE SUPPLIED BY MANUFACTURER.
4. DELETED
5. HEAT EXCHANGER TUBE SIDE RELIEF VALVE SUPPLIED BY CAM INDUSTRIES.
6. * DENOTES SUPPLIED BY EQUIPMENT MANUFACTURER.
7. UNLESS OTHERWISE NOTED ALL DRAINS COLLECTED BY LOCAL DRAIN SYSTEM.
8. DELETED
9. VALVE TAG NUMBERS: 1TW-0239 , 1TW-0240 , 1TW-0241 , 1TW-0242 , 1TW-0324 , 1TW-0325 , 1TW-0326 AND 1TW-0327 ARE PVC OR CPVC TRUE UNION BALL VALVES.
10. PERMANENTLY INSTALLED BLANK.




TURBINE PLANT COOLING WATER PUMP CP1-TWAPTP-02

SEAL LEAKOFF DETAIL

SEE NOTE 9




TURBINE PLANT COOLING WATER PUMP CP1-TWAPTP-01

SEAL LEAKOFF DETAIL

SEE NOTE 9

FSAR FIGURE 10.4-15

THIS DRAWING CREATED ELECTRONICALLY

| DRAWING 2323-M1-0212 REV CP-7 |
|---|
| HAS BEEN SPLIT INTO THE FOLLOWING SHEETS: |
| M1-0212 |
| M1-0212-A |
| M1-0212-B |
| |
| |

NON–SAFETY

LUMINANT
CPNPP
GLEN ROSE, TEXAS

FLOW DIAGRAM
TURBINE PLANT
COOLING WATER SYSTEM

| DWG. NO. | SH. NO. | REV. |
|---|---|---|
| M1-0212 | - | CP-32 |

FINAL PRINT

RIF CKD CP25 10/25/96

me105060.dgn

| REV | DWN | CHKD | APVD | REMARKS |
|---|---|---|---|---|
| CP-28 | DLK 09-21-2009 | MM 09-21-2009 | | THIS DRAWING REVISED TO INCORPORATE DESIGN CHANGE FDA 2008-003429-01-00 PER SK-0002-08-003429-01-00. |

NOTES:

1. FOR MECHANICAL SYMBOLS AND NOTES SEE DWG M1-0200.
2. UNLESS OTHERWISE NOTED ALL DRAINS COLLECTED BY LOCAL DRAIN SYSTEM.
3. PERMANENTLY INSTALLED BLANK.

FSAR FIGURE 10.4-15

THIS DRAWING CREATED ELECTRONICALLY

DRAWING 2323-M1-0212 REV CP-7
HAS BEEN SPLIT INTO THE FOLLOWING SHEETS:

- M1-0212
- M1-0212-A
- M1-0212-B

NON–SAFETY

LUMINANT
CPNPP
GLEN ROSE, TEXAS

FLOW DIAGRAM
TURBINE PLANT
COOLING WATER SYSTEM

DWG. NO. M1-0212 | SH. NO. A | REV. CP-28

FINAL PRINT

REF CKD CP-14 10/25/96

me105070.dgn A M1-0212-A B C D E F G H

CPE

| REV | DWN | CHK | APVD | REMARKS |
|---|---|---|---|---|
| CP-37 | DLK 10-13 2009 | MM 10-06 2010 | | THIS DRAWING REVISED TO INCORPORATE DESIGN CHANGE FDA 2009-003957-01-00 PER SK-00002-09-003957-01-00. |

NOTES:

1. COMMON DEVICES ARE PREFIXED WITH X.
2. FOR MECHANICAL SYMBOLS AND NOTES SEE DRAWING M1-0200.
3. VALVE 1TW-0048 HAS A REMOTE CHAIN OPERATOR ATTACHMENT
4. * DENOTES SUPPLIED BY EQUIPMENT MANUFACTURER.
5. UNLESS OTHERWISE NOTED ALL DRAINS COLLECTED BY LOCAL DRAIN SYSTEM.
6. VALVE OPEN WHEN COMPRESSOR IS ON. VALVE CLOSED WHEN COMPRESSOR IS OFF.
7. VALVE CLOSED WHEN UNIT 2 TPCW IS ALIGNED TO THE COMMON LOAD HEADER.
8. FILTER ISOLATION VALVES ARE ALIGNED PER OPERATIONS PROCEDURES MAINTAINING UNIT ISOLATION.
9. VALVES XTW-0042 AND XTW-0043 ARE LOCKED CLOSED TO ISOLATE THE ABANDONED IN PLACE ELECTRIC AUXILIARY BOILER.

R

FSAR FIGURE 10.4-15

THIS DRAWING CREATED ELECTRONICALLY

DRAWING 2323-M1-0212 REV CP-7
HAS BEEN SPLIT INTO THE FOLLOWING SHEETS:

- M1-0212
- M1-0212-A
- M1-0212-B

CLASS II

LUMINANT
CPNPP
GLEN ROSE, TEXAS

FLOW DIAGRAM
TURBINE PLANT
COOLING WATER SYSTEM

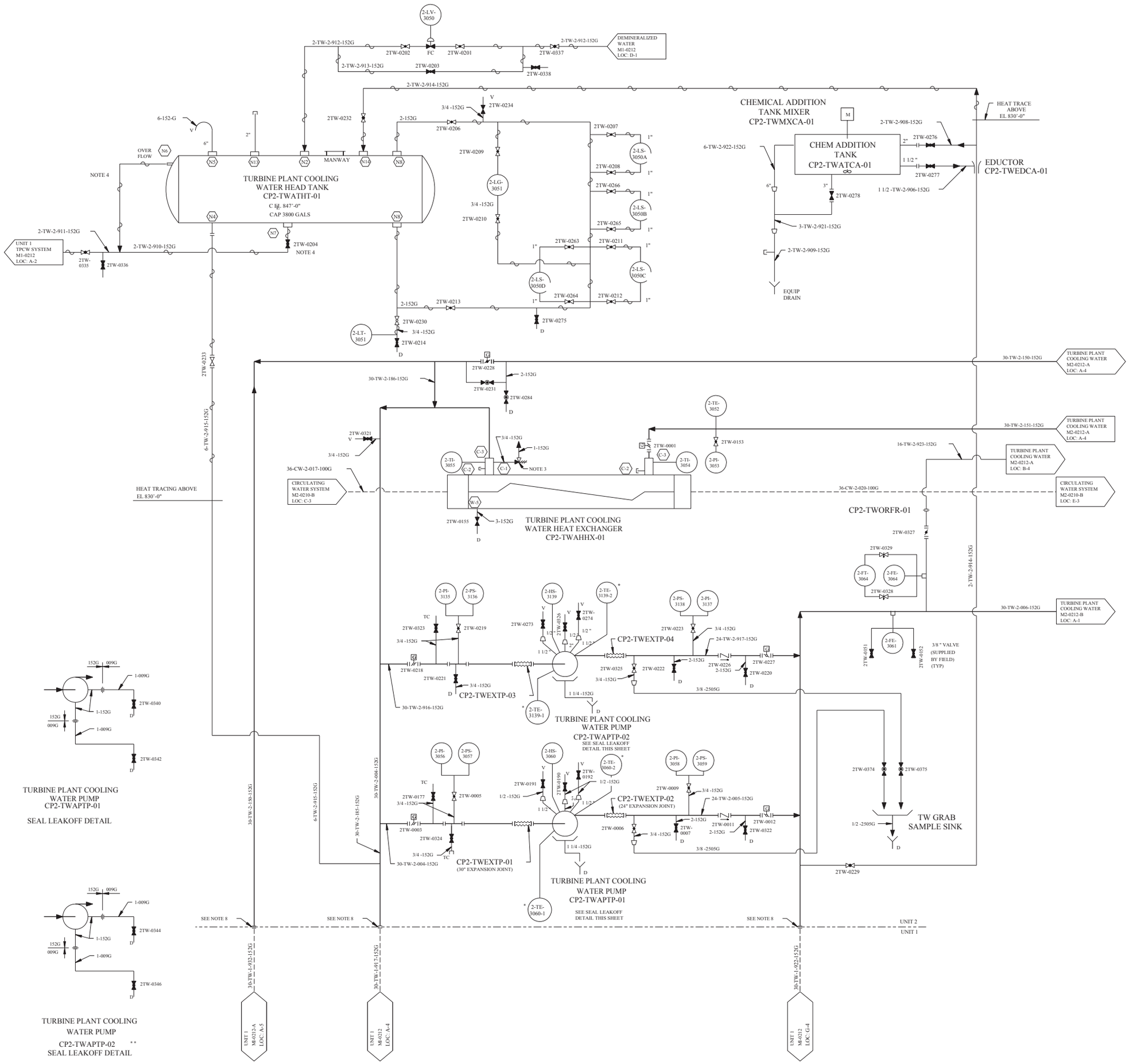
DWG. NO. M1-0212 | SH. NO. B | REV. CP-37

FINAL PRINT

REF CKD CP-21 2/25/98

me103100.dgn

M1-0212-B




| REV | DWN | CHK | APVD | REMARKS |
|---|---|---|---|---|
| CP-18 | JHAC 09-11 2006 | DJL 09-11 2006 | | THIS DRAWING REVISED TO INCORPORATE DESIGN CHANGE FDA-2004-000897-01-01 PER SK-0009-04-000897-01-01. EDITORIAL CHANGES AS NOTED. |

NOTES:

1. DELETED
2. FOR MECHANICAL SYMBOLS AND NOTES SEE DWG M1-0200.
3. HEAT EXCHANGER SHELL RELIEF VALVE SUPPLIED BY MANUFACTURER.
4. HEAT TRACING IS NOT REQUIRED ON THE OVER FLOW LINE OR THE DRAIN LINE DOWN STREAM OF DRAIN VALVE 2TW-0204. MAINTENANCE MAY ABANDON IN PLACE.
5. DELETED
6. * DENOTES SUPPLIED BY EQUIPMENT MANUFACTURER.
7. DELETED
8. PERMANENTLY INSTALLED BLANK.

⬡ INDICATES NOZZLE CONNECTIONS PER VENDOR TANK DRAWING.

FSAR FIGURE 10.4-15

THIS DRAWING CREATED ELECTRONICALLY

DRAWING 2323-M2-0212 REV CP-4
HAS BEEN SPLIT INTO THE FOLLOWING SHEETS:

- M2-0212
- M2-0212-A
- M2-0212-B

NON–SAFETY

TXU POWER
CPSES
GLEN ROSE, TEXAS

FLOW DIAGRAM
TURBINE PLANT
COOLING WATER SYSTEM

DWG. NO. M2-0212 | SH. NO. - | REV. CP-18

REF CKD CP-13 11/24/97

me703600.dgn A M2-0212 B C D E F G FINAL PRINT H

| REV | DWN | CHKD | APVD | REMARKS |
|---|---|---|---|---|
| CP-23 | MM 05-16-2017 | DLK 05-16-2017 | MBF 05-17-2017 | THIS DRAWING REVISED TO INCORPORATE EDITORIAL CHANGES PER AI-IR-2017-006461-1. |

NOTES:

1. FOR MECHANICAL SYMBOLS AND NOTES SEE DRAWING M1-0200.
2. NO DISCHARGE PIPING REQUIRED (SUPPLIED BY ACPSI).
3. DELETED
4. * DENOTES SUPPLIED BY EQUIPMENT MANUFACTURER.

FSAR FIGURE 10.4-15

THIS DRAWING CREATED ELECTRONICALLY

| DRAWING 2323-M2-0212 REV CP-4 |
|---|
| HAS BEEN SPLIT INTO THE FOLLOWING SHEETS: |
| M2-0212 |
| M2-0212-A |
| M2-0212-B |

NON–SAFETY

LUMINANT
CPNPP
GLEN ROSE, TEXAS

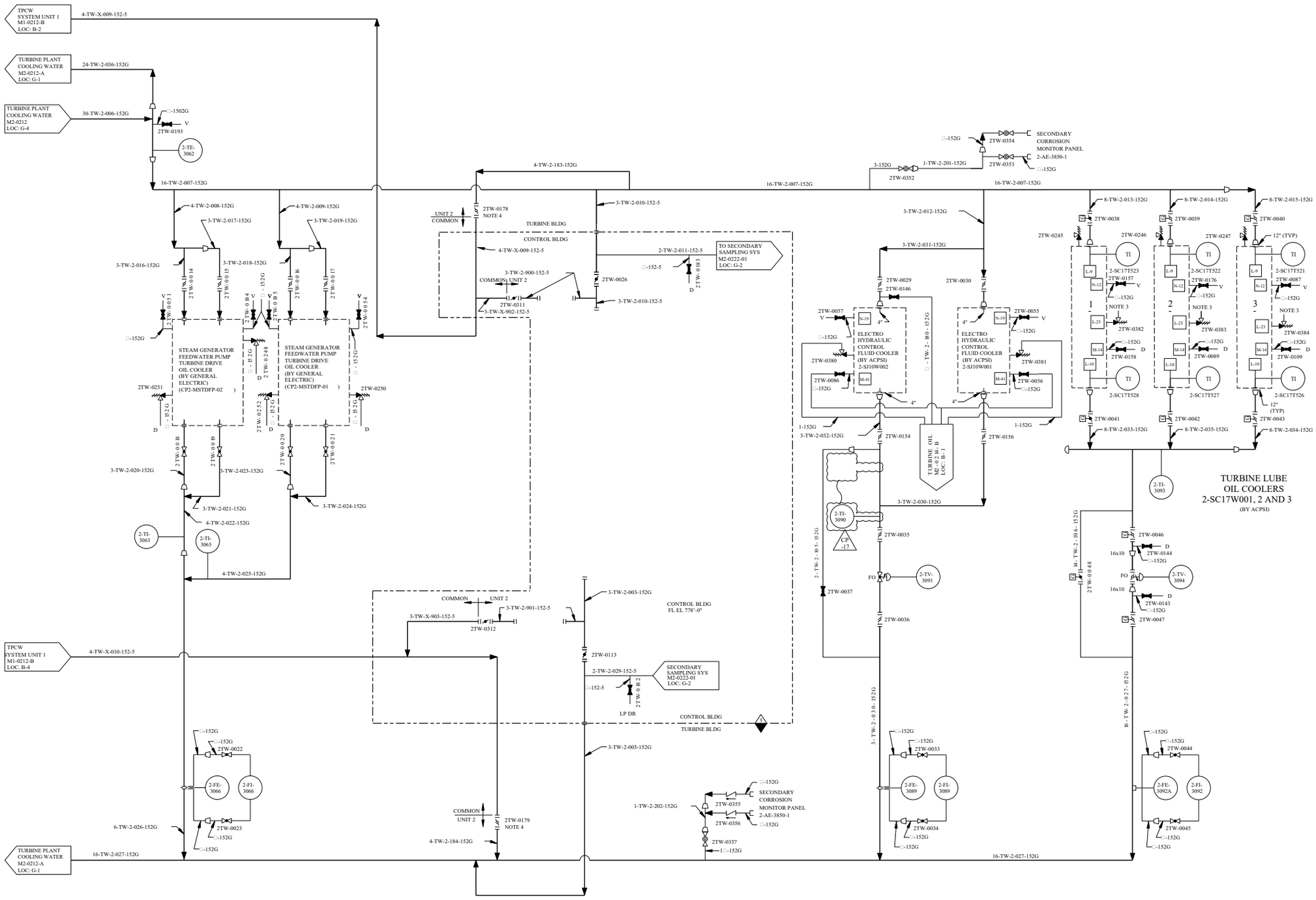
FLOW DIAGRAM
TURBINE PLANT
COOLING WATER SYSTEM

| DWG. NO. | SH. NO. | REV. |
|---|---|---|
| M2-0212 | A | CP-23 |

FINAL PRINT

me961700.dgn A M2-0212-A

TURBINE PLANT COOLING WATER M2-0212-B LOC: A-5
TURBINE PLANT COOLING WATER M2-0212-B LOC: A-1
$H_2$ GAS DRYER THERMEK COOLER M2-0249-05 LOC: A-2
TURBINE PLANT COOLING WATER M2-0212 LOC: G-2
TURBINE PLANT COOLING WATER M2-0212 LOC: F-3
TURBINE PLANT COOLING WATER M2-0212 LOC: G-3
CONDENSATE POLISHING SYS M2-0244-B LOC: B-2
SECONDARY CORROSION MONITOR PANEL 2-AE-3850-4
ISO PHASE BUS COOLING UNIT CP2-EPIBHX-01
HEATER DRAIN PUMP 2-02 LUBE OIL COOLER PUMP: CP2-HDAPDP-02 REF: M2-0207 (BY BINGHAM WILLIAMETTE)
HEATER DRAIN PUMP 2-01 LUBE OIL COOLER PUMP: CP2-HDAPDP-01 REF: M2-0207 (BY BINGHAM WILLIAMETTE)
CONDENSATE PUMP MOTOR BEARING COOLER CP2-COCCCP-01 REF: M2-0204 (BY ELECTRIC MACHINERY)
CONDENSATE PUMP MOTOR BEARING COOLER CP2-COCCCP-02 REF: M2-0204 (BY ELECTRIC MACHINERY)
EXCITER AIR COOLER 2-01 2-SR16W501 (BY ACPSI)
EXCITER AIR COOLER 2-02 2-SR16W502 (BY ACPSI)
HYDROGEN COOLER 1 2-SP11W508
HYDROGEN COOLER 2 2-SP11W504
HYDROGEN COOLER 3 2-SP11W505
HYDROGEN COOLER 4 2-SP11W501
HYDROGEN COOLER 5 2-SP11W502
HYDROGEN COOLER 6 2-SP11W506
HYDROGEN COOLER 7 2-SP11W503
HYDROGEN COOLER 8 2-SP11W507
PRIMARY WATER COOLER REF: M2-0249-02A (BY ACPSI)
PRIMARY WATER LEAKAGE UNIT REF: M2-0249-02A LOC: D-4 (BY ACPSI)
GENERATOR SEAL OIL UNIT REF: M2-0249-04A (BY SIEMENS)




| REV | DWN | CHKD | APVD | REMARKS |
|---|---|---|---|---|
| CP-17 | DLK 08-09-2016 | MM 08-09-2016 | MHF 08-09-2016 | THIS DRAWING REVISED TO INCORPORATE AI-CR-2016-007287-1 TO EDITORIALLY CORRECT THE LOCATION OF 2-TI-3090. |

NOTES:

1. COMMON DEVICES ARE PREFIXED WITH X.
2. FOR MECHANICAL SYMBOLS AND NOTES SEE DRAWING M1-0200.
3. NO DISCHARGE PIPING REQUIRED (SUPPLIED BY ACPSI).
4. VALVE CLOSED WHEN UNIT 1 TPCW IS ALIGNED TO THE COMMON LOAD HEADER.
5. * DENOTES SUPPLIED BY EQUIPMENT MANUFACTURER.
6. DELETED

FSAR FIGURE 10.4-15

THIS DRAWING CREATED ELECTRONICALLY

DRAWING 2323-M2-0212 REV CP-4
HAS BEEN SPLIT INTO THE FOLLOWING SHEETS:

| |
|---|
| M2-0212 |
| M2-0212-A |
| M2-0212-B |
| |
| |

CLASS II

LUMINANT
CPNPP
GLEN ROSE, TEXAS

FLOW DIAGRAM
TURBINE PLANT
COOLING WATER SYSTEM

| DWG. NO. | SH. NO. | REV. |
|---|---|---|
| M2-0212 | B | CP-17 |

REF CKD CP-11 3/13/98

me101890.dgn A M2-0212-B B C D E F G FINAL PRINT H

| REV | DWN | CHKD | APVD | REMARKS |
|---|---|---|---|---|
| CP-23 | Mal 04-05-2005 | DLK 04-08-2005 | | THIS DRAWING REVISED TO INCORPORATE DESIGN CHANGE FDA-2003-003096-01-00 PER SK-0001-03-003096-01-00. |

NOTES:

1. ALL * MARKED PIPES AND VALVES IN CAM'S SCOPE TO BE SUPPLIED BY TU ELECTRIC.
2. FOR MECHANICAL SYMBOLS AND NOTES, SEE DRAWING M1-0200.
3. FOR AUTOMATIC CONTROL OF AUXILIARY BOILER SEE CAM DRAWING NUMBER C12033-4.
4. OPERATION LOGIC FOR 1-LS-2035 SEE ICD M1-2205-05.
5. ALL INSTRUMENT ROOT VALVES SUPPLIED BY TU ELECTRIC ARE 3/4 " UNLESS OTHERWISE NOTED.
6. ALL PIPING AND TUBING (EXCEPT STEAM OUTLET ELBOW, LEVEL GAUGE PIPING AND PORTION OF BLOWDOWN LINE) IN CAMS SCOPE TO BE SUPPLIED BY TU ELECTRIC ALL VALVES TO BE SUPPLIED BY CAM.
7. DELETED
8. VENDOR SUPPLIED CHEMICAL FEED SYSTEM INCLUDES SUCTION PIPING.
9. FIELD TO INSTALL 1/4 -2505G TUBING BETWEEN BOTH THE BOILER CONNECTION AND STEAM OUTLET ROOT VALVE XSA-0098 AND THE CAM PANEL PER CAM DRAWING C12023-1.
10. FIELD TO INSTALL 3/8 -2505G TUBING BETWEEN THE HYDRAULIC CYLINDER AND THE HYDRAULIC POWER UNIT PER CAM DRAWING C12023-1.
11. THE CAM SUPPLIED CONDUCTIVITY CELL (BECKMAN TYPE CEL-VK-T 1" NPT FITTING) WILL BE INSTALLED IN A 2x2x2 THREADED TEE.
12. ** EQUIPMENT USED FOR MITIGATION OF HELB.

| DRAWING M1-0213 REV CP-6 |
|---|
| HAS BEEN SPLIT INTO THE FOLLOWING SHEETS: |
| M1-0213 |
| M1-0213-01 |
| M1-0213-A |
| M1-0213-B |
| M1-0213-C |

CLASS II

TXU POWER
CPSES
GLEN ROSE, TEXAS

FLOW DIAGRAM
AUXILIARY STEAM SYSTEM

| DWG. NO. | SH. NO. | REV. |
|---|---|---|
| M1-0213 | - | CP-23 |

FSAR FIGURE 10.4-16

THIS DRAWING CREATED ELECTRONICALLY

REF CKD CP-20 10/26/96

me650200.dgn A M1-0213 B C D E F G FINAL PRINT H

| REV | DWN | CHK | APVD | REMARKS |
|---|---|---|---|---|
| CP-11 | JRMC 01-05-2012 | DJL 01-05-2012 | | THIS DRAWING REVISED TO INCORPORATE DESIGN CHANGE FDA-2011-000018-01-00 PER SK-0001-11-000018-01-00. |

NOTES:

1. ALL * MARKED PIPES AND VALVES IN CAM'S SCOPE SUPPLIED BY TU ELECTRIC.
2. FOR MECHANICAL SYMBOLS AND NOTES SEE DRAWING M1-0200.
3. FOR AUTOMATIC CONTROL OF AUXILIARY BOILER SEE CAM DRAWING NUMBER C12033-4.
4. OPERATION LOGIC FOR 1-LS-2035 SEE ICD M1-2205-05
5. ALL INSTRUMENT ROOT VALVES SUPPLIED BY TU ELECTRIC ARE 3/4 " UNLESS OTHERWISE NOTED.
6. ALL PIPING AND TUBING (EXCEPT STEAM OUTLET ELBOW, LEVEL GAUGE PIPING AND PORTION OF BLOWDOWN LINE) IN CAMS SCOPE SUPPLIED BY TU ELECTRIC. ALL VALVES SUPPLIED BY CAM.
7. DELETED
8. VENDOR SUPPLIED CHEMICAL FEED SYSTEM INCLUDES SUCTION PIPING.
9. 1/4 -2505G TUBING BETWEEN BOTH THE BOILER CONNECTION AND STEAM OUTLET ROOT VALVE XSA-0098 AND THE CAM PANEL PER CAM DRAWING C12023-1.
10. 3/8 -2505G TUBING BETWEEN THE HYDRAULIC CYLINDER AND THE HYDRAULIC POWER UNIT PER CAM DRAWING C12023-1.
11. THE CAM SUPPLIED CONDUCTIVITY CELL (BECKMAN TYPE CEL-VK-T 1" NPT FITTING) INSTALLED IN A 2X2X2 THREADED TEE.
12. DELETED
13. CHANGE TO NO (NORMALLY OPEN) FROM LO (LOCK OPEN) WHILE EQUIPMENT IS ABANDONED SO THAT XSA-0040 CAN BE REMOVED FROM THE REQUIREMENTS TO VERIFY LOCKED VALVE POSITION. IF CPX-SABOAB-01 IS EVER RETURNED TO SERVICE, XSA-0040 MUST BE RETURNED TO LO.

DRAWING M1-0213 REV CP-6
HAS BEEN SPLIT INTO THE FOLLOWING SHEETS:

| |
|---|
| M1-0213 |
| M1-0213-01 |
| M1-0213-A |
| M1-0213-B |
| M1-0213-C |

FSAR FIGURE 10.4-16

THIS DRAWING CREATED ELECTRONICALLY

NON–SAFETY

LUMINANT
CPNPP
GLEN ROSE, TEXAS

FLOW DIAGRAM
AUXILIARY STEAM SYSTEM

| DWG. NO. | SH. NO. | REV. |
|---|---|---|
| M1-0213 | A | CP-11 |

FINAL PRINT

me105330.dgn M1-0213-A

| REV | DWN | CHKD | APVD | REMARKS |
|---|---|---|---|---|
| CP-13 | CWG 08-12-2013 | MM 08-12-2013 | | THIS DRAWING REVISED TO INCORPORATE DESIGN CHANGE FDA 2015-000091-01-00 PER SK-0001-15-000091-01-00. |

NOTES:

1. EQUIPMENT AND FLOOR DRAINS BY PURCHASER.
2. BURNER CONTROL AND FLAME SAFEGUARD SYSTEM FOR PIPING, INSTRUMENTATION AND ELECTRICAL CONTROL DETAILS SEE DWG. 0500-606 PO 665-02951.
3. FOR MECHANICAL SYMBOLS AND NOTES SEE DRAWING M1-0200.
4. NATIONWIDE BOILER INC. PO 665-02951.
5. DURING DRY LAYUP FUEL OIL LINE MUST BE DISCONNECTED AND PIPE CAPS/PLUGS INSTALLED.

REFERENCES:

1. DWG M1-0216
2. NATIONWIDE BOILER INCORPORATED BOILER B 289 - MANUAL PO 665-02951

DETAIL A

DRAWING M1-0213 REV CP-6
HAS BEEN SPLIT INTO THE FOLLOWING SHEETS:

| |
|---|
| M1-0213 |
| M1-0213-01 |
| M1-0213-A |
| M1-0213-B |
| M1-0213-C |

NON-SAFETY

LUMINANT
CPNPP
GLEN ROSE, TEXAS

FLOW DIAGRAM
AUXILIARY STEAM SYSTEM

DWG. NO. M1-0213 | SH. NO. B | REV. CP-13

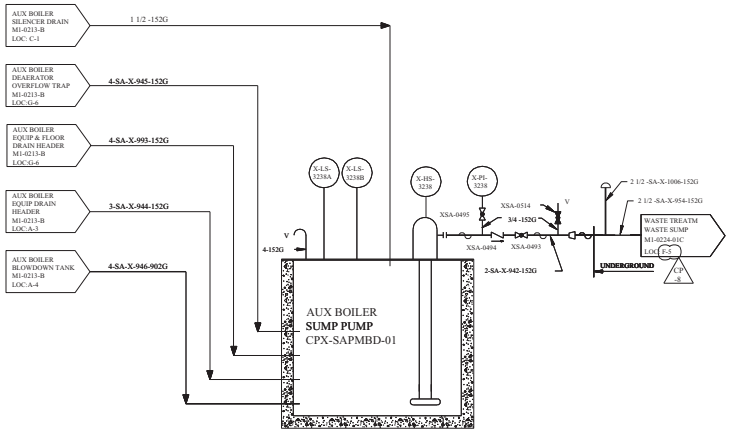
FSAR FIGURE 10.4-16

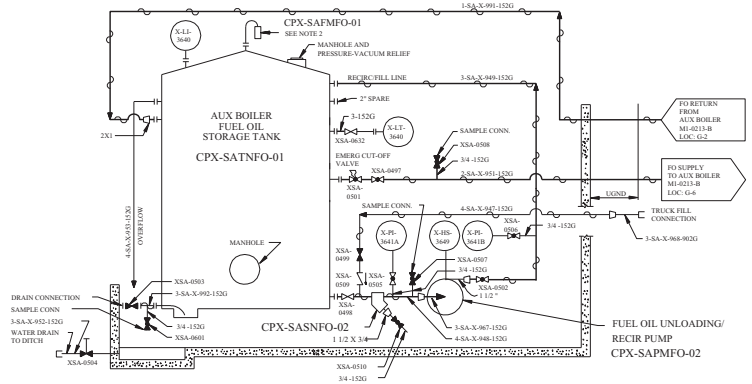
THIS DRAWING CREATED ELECTRONICALLY

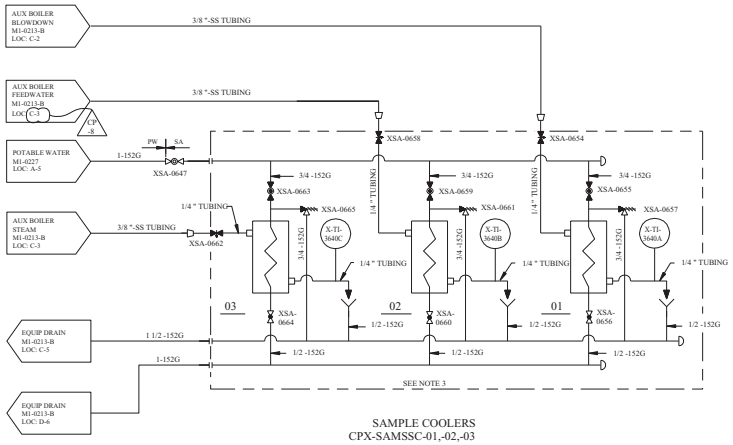
REF CKD 05/31/05 CP-11

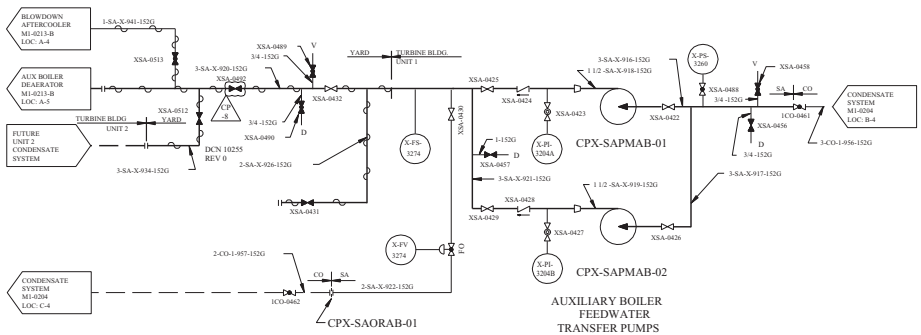
mc623300.dgn A M1-0213-B

FINAL PRINT




| REV | DWN | CHKD | APVD | REMARKS |
|---|---|---|---|---|
| CP-8 | JEM 10-24-1996 | | | THIS DRAWING REVISED TO INCORPORATE DESIGN CHANGE DCN 10255 REV 0. EDITORIAL CHANGES AS NOTED. |

NOTES:

1. FOR MECHANICAL SYMBOLS AND NOTES SEE DRAWING M1-0200.
2. FLAME ARRESTER SUPPLIED BY TANK MANUFACTURER.
3. WATERS EQUIPMENT CO DWG B-WC070000, PO 665-071490.
4. UNLESS OTHERWISE NOTED, DRAIN TO BE LOCALLY COLLECTED UNDER ADMINISTRATIVE CONTROL.

FSAR FIGURE 10.4-16

THIS DRAWING CREATED ELECTRONICALLY

| DRAWING M1-0213 REV CP-6 HAS BEEN SPLIT INTO THE FOLLOWING SHEETS: |
|---|
| M1-0213 |
| M1-0213-01 |
| M1-0213-A |
| M1-0213-B |
| M1-0213-C |

NON-SAFETY

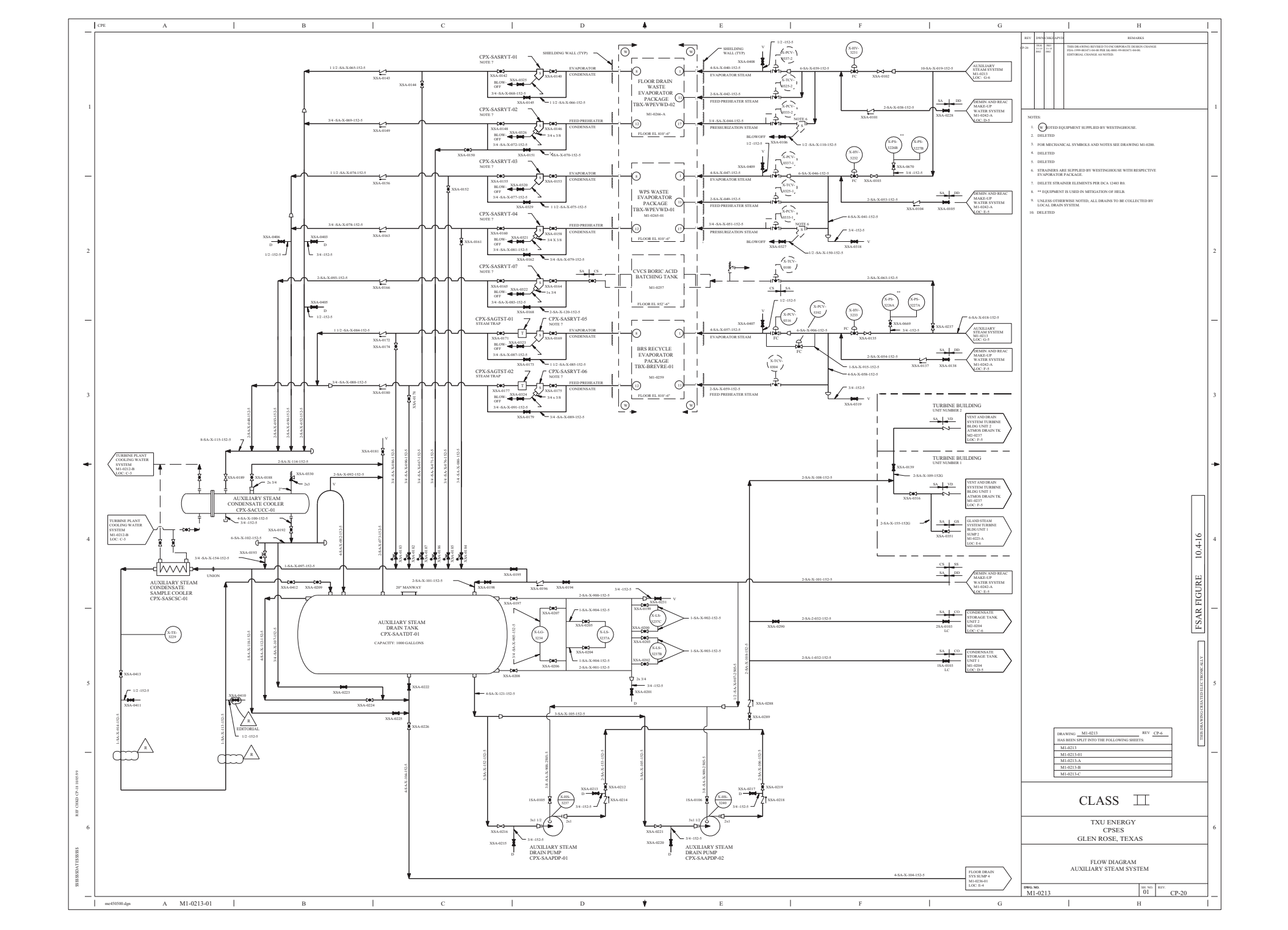
TXU ELECTRIC
CPSES
GLEN ROSE, TEXAS

FLOW DIAGRAM
AUXILIARY STEAM SYSTEM

| DWG. NO. | SH. NO. | REV. |
|---|---|---|
| M1-0213 | C | CP-8 |

vs0000s8.dgn

$$$$$$$$DA ITESSSSS




| REV | DWN | CHK | APVD | REMARKS |
|---|---|---|---|---|
| CP-16 | HAK 11/15/2002 | SWO 11/15/2002 | | THIS DRAWING REVISED TO INCORPORATE DESIGN CHANGE EDA-1999-00247-144-00 PER SK-0001-99-00267I-04-00. EDITORIAL CHANGE AS NOTED. |

NOTES:

1. (W) NOTED EQUIPMENT SUPPLIED BY WESTINGHOUSE.
2. DELETED
3. FOR MECHANICAL SYMBOLS AND NOTES SEE DRAWING M1-0200.
4. DELETED
5. DELETED
6. STRAINERS ARE SUPPLIED BY WESTINGHOUSE WITH RESPECTIVE EVAPORATOR PACKAGE.
7. DELETE STRAINER ELEMENTS PER DCA 12483 R0.
8. ** EQUIPMENT IS USED IN MITIGATION OF HELB.
9. UNLESS OTHERWISE NOTED, ALL DRAINS TO BE COLLECTED BY LOCAL DRAIN SYSTEM.
10. DELETED

DRAWING M1-0213 REV CP-6
HAS BEEN SPLIT INTO THE FOLLOWING SHEETS:

| |
|---|
| M1-0213 |
| M1-0213-01 |
| M1-0213-A |
| M1-0213-B |
| M1-0213-C |

CLASS II

TXU ENERGY
CPSES
GLEN ROSE, TEXAS

FLOW DIAGRAM
AUXILIARY STEAM SYSTEM

DRG. NO. M1-0213 | SH. NO. 01 | REV. CP-20

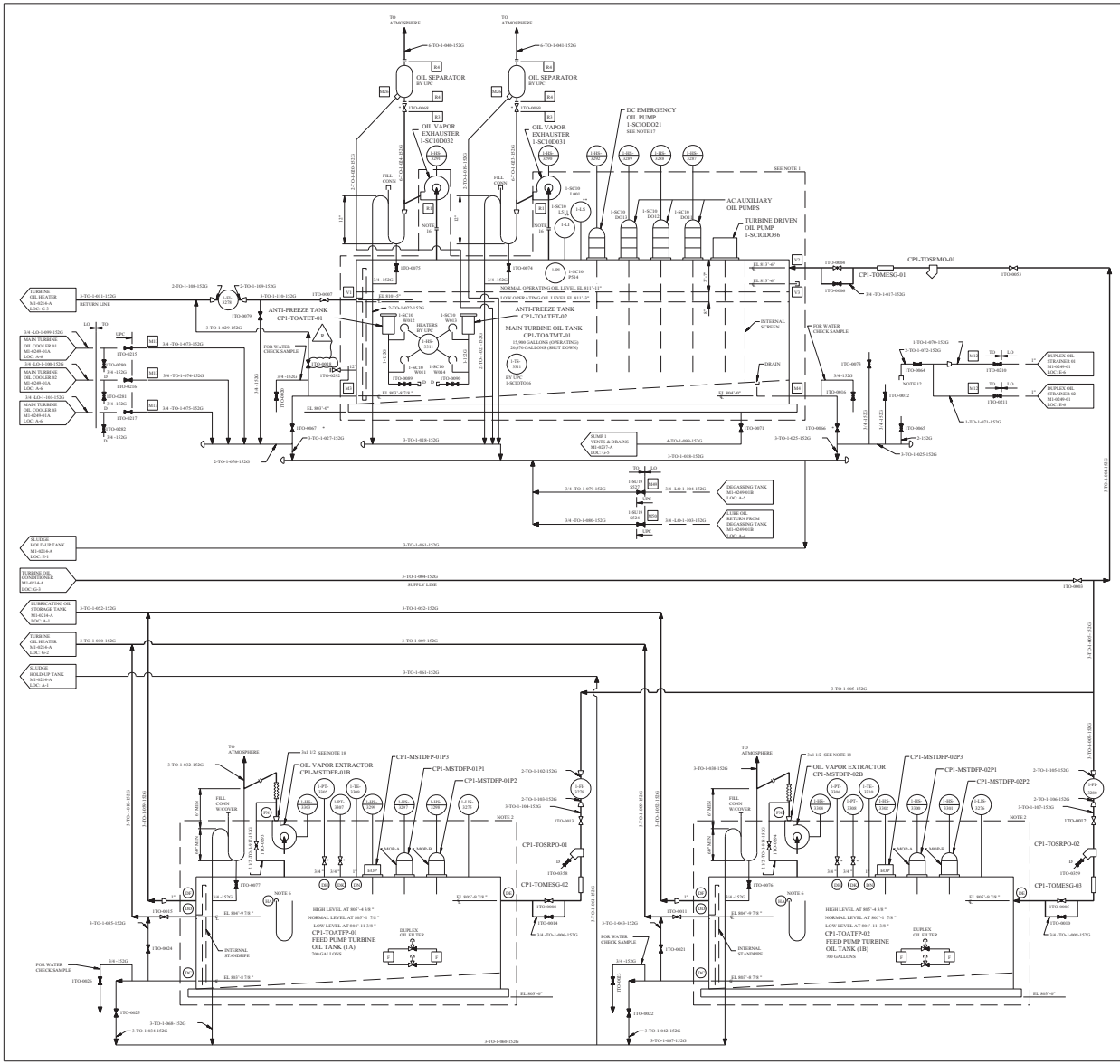
FSAR FIGURE 10.4-16

THIS DRAWING CREATED ELECTRONICALLY

me450500.dgn A M1-0213-01

REF CHSD CP-16 10/18/99

SSSSSSDATSSSSS




| REV | DWN | CHKD | APVD | REMARKS |
|---|---|---|---|---|
| 19-24 | Scott Dunn | Dan Smith | | THIS DRAWING REVISED TO INCORPORATE DESIGN CHANGE FDA-2004-0015010; SUPER SIL-0015-16-003/16-0136. |

NOTES:

1. SUPPLIED BY UTILITY POWER COMPANY EXCEPT FOR INDICATED PIPING AND CONTROLS BEARING I&C CHANNEL NUMBERS. SEE UPC MEASURING POINT LIST FOR INSTRUMENTATION AND CONTROLS PROVIDED BY UPC. FOR ADDITIONAL UPC PIPING SEE M1-0249-01.
2. SUPPLIED BY GENERAL ELECTRIC.
3. DELETED
4. VALVES MARKED * ARE SUPPLIED BY EQUIPMENT MANUFACTURER.
5. DELETED
6. INTERNAL PRESSURE INDICATION MANOMETER FURNISHED BY GENERAL ELECTRIC AND MOUNTED BY CUSTOMER.
7. DELETED
8. DELETED
9. DELETED
10. UPC CUSTOMERS PIPING CONNECTION TAG NUMBERS ARE SHOWN (TYPICAL) 1/2
11. DELETED
12. UPC DUPLEX OIL STRAINER DRAINS USE TEMPORARY PIPING BETWEEN VALVES ITO-0664 AND ITO-0665
13. DELETED
14. INSTRUMENTS MARKED ** SUPPLIED BY VENDORS.
15. FOR MECHANICAL SYMBOLS AND NOTES SEE DRAWING MI-0200.
16. INSTALLATION OF CLOSURE DISC AND/OR BLIND FLANGE IS REQUIRED ONLY WHEN EXHAUSTER IS REMOVED.
17. FOR DETAILS OF TURBINE LUBE OIL SUPPLY REFER TO DIAGRAM OF LUBRICATION OIL PIPING (DWG TAG-98678 CP-0002).
18. A REDUCING BUSHING CAN BE ADDED, AS REQUIRED, TO THE INLET AND/OR OUTLET OF THE BLOWER TO MATCH THAT WHICH THE VENDOR PROVIDED. THIS BUSHING IS TO BE A HEX HEAD BUSHING, A-305 MATERIAL 3000 LB.

FSAR FIGURE 10.4-17

THIS DRAWING OR SPECIFICATION IS PROPRIETARY

DRAWING 3353-MI-0214 REV CP-6
HAS BEEN SPLIT INTO THE FOLLOWING SHEETS:
MI-0214
MI-0214-A

NON-SAFETY

TXU POWER
CPSES
GLEN ROSE, TEXAS

FLOW DIAGRAM
TURBINE OIL PURIFICATION

| DWG. NO. | SH. NO. | REV. |
|---|---|---|
| M1-0214 | 1 | CP-24 |

REF CKD 324/97 CN 19

$$$$$$$$DATE$$$$$$$$

tne517100.dgn

M1-0214

| REV | DWN | CHKD | APVD | REMARKS |
|---|---|---|---|---|
| CP-23 | DLK 04-11 2010 | MM 04-12 2010 | | THIS DRAWING REVISED TO INCORPORATE DESIGN CHANGE FDA 2010-000056-01-00 PER SK-0001-10-000056-01-00. |

NOTES:

1. SUPPLIED BY UTILITY POWER COMPANY EXCEPT FOR INDICATED PIPING AND CONTROLS BEARING I&C CHANNEL NUMBERS. SEE UPC MEASURING POINT LIST FOR INSTRUMENTATION AND CONTROLS PROVIDED BY UPC. FOR ADDITIONAL UPC PIPING SEE M1-0249-01.
2. DELETED
3. PURIFICATION EQUIPMENT TO BE SUPPLIED BY OTHERS, WITH ALL SUPERVISORY AND CONTROL INSTRUMENTATION EXCEPT AS OTHERWISE NOTED MOUNTED ON LOCAL CONTROL PANEL.
4. VALVES MARKED * ARE SUPPLIED BY EQUIPMENT MANUFACTURER.
5. CONDITIONER FEED PUMP AND LUBE OIL STORAGE TANK DRAIN PUMP EQUIPPED WITH INTERNAL RELIEF VALVES.
6. DELETED
7. LOCAL CONTROL PANEL TO BE SUPPLIED BY OTHERS AND MOUNTED ON HEATER SKID.
8. SUPPLIED BY OTHERS - INTERLOCK WITH 1-LV-3286A AND B. SEE NOTE 3 ON DWG M1-2214-01.
9. DRAINAGE PROVIDED BY DRUM OR PORTABLE PUMP USING TEMPORARY PIPING.
10. DELETED
11. TWO 5"-150 FF FLANGES ARE PROVIDED FOR THE FUTURE INSTALLATION OF TWO (2) CHROMALOX TMI-630 ELECTRIC HEATERS.
12. DELETED
13. DIP STICK SUPPLIED BY CLEAN LUBRICATING OIL STORAGE TANK MANUFACTURER. DO NOT STORE DIPSTICK IN FILL CONNECTION. THIS WILL MAKE VALVE 1TO-0343 INOPERABLE
14. INSTRUMENTS MARKED ** SUPPLIED BY VENDORS.
15. FOR MECHANICAL SYMBOLS AND NOTES SEE DRAWING M1-0200.
16. DRAIN PUMP EQUIPPED WITH INTERNAL RELIEF VALVES.
17. TANK HAS BEEN REMOVED FROM SERVICE, ABANDONED IN PLACE AND FILLED WITH INERT SOLIDS.

DRAWING M1-0214-A REV CP-4
HAS BEEN SPLIT INTO THE FOLLOWING SHEETS:
M1-0214-A
M1-0214-B

DRAWING 2323-M1-0214 REV CP-6
HAS BEEN SPLIT INTO THE FOLLOWING SHEETS:
M1-0214
M1-0214-A

FSAR FIGURE 10.4-17

THIS DRAWING CREATED ELECTRONICALLY

NON–SAFETY

LUMINANT
CPNPP
GLEN ROSE, TEXAS

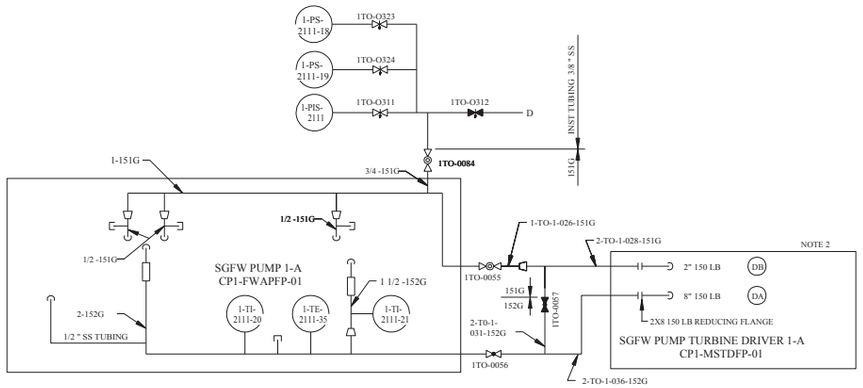
FLOW DIAGRAM
TURBINE OIL PURIFICATION

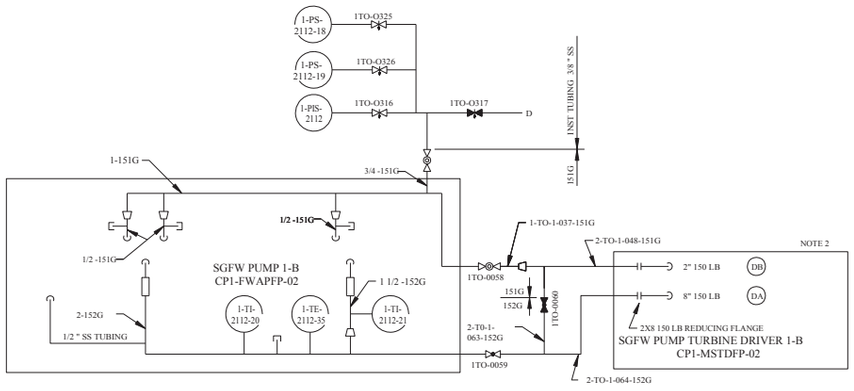
DWG. NO. M1-0214 | SH. NO. A | REV. CP-23

FINAL PRINT

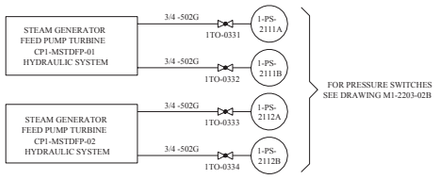
REF CKD 4/19/97 CP-13

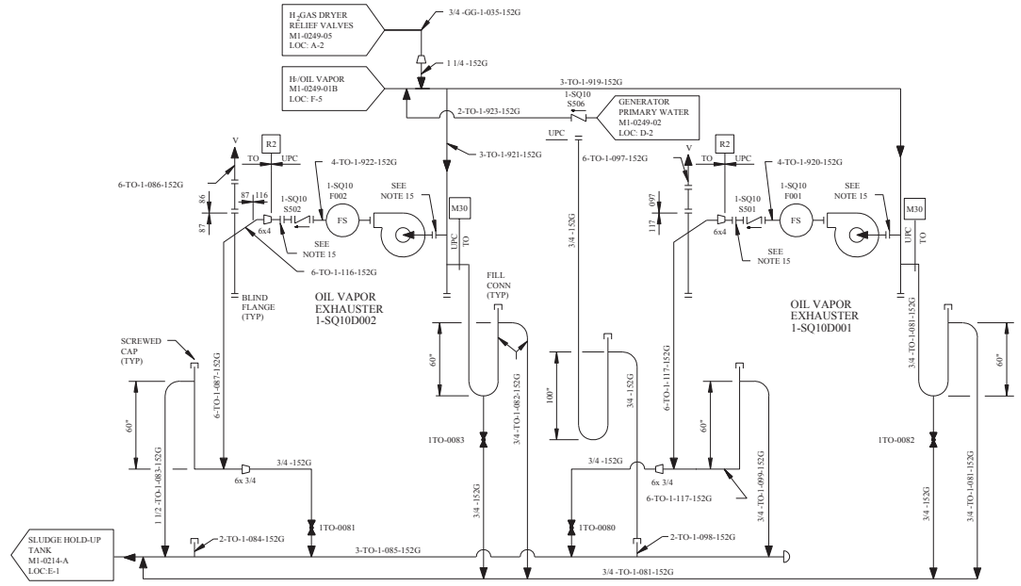
me971700.dgn A M1-0214-A



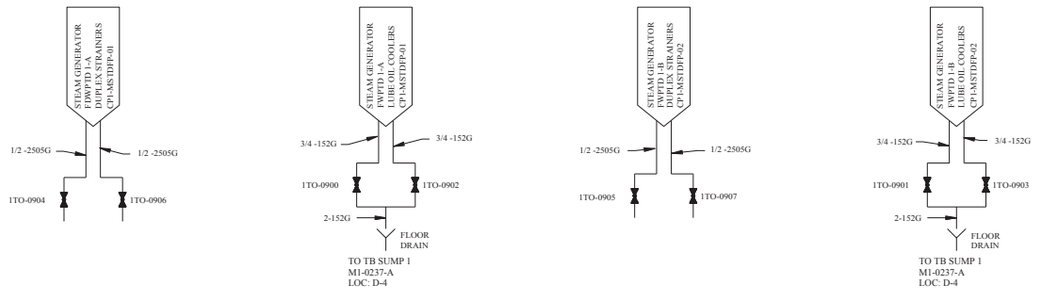




FEEDWATER-TURBINE LUBE OIL INTERFACES

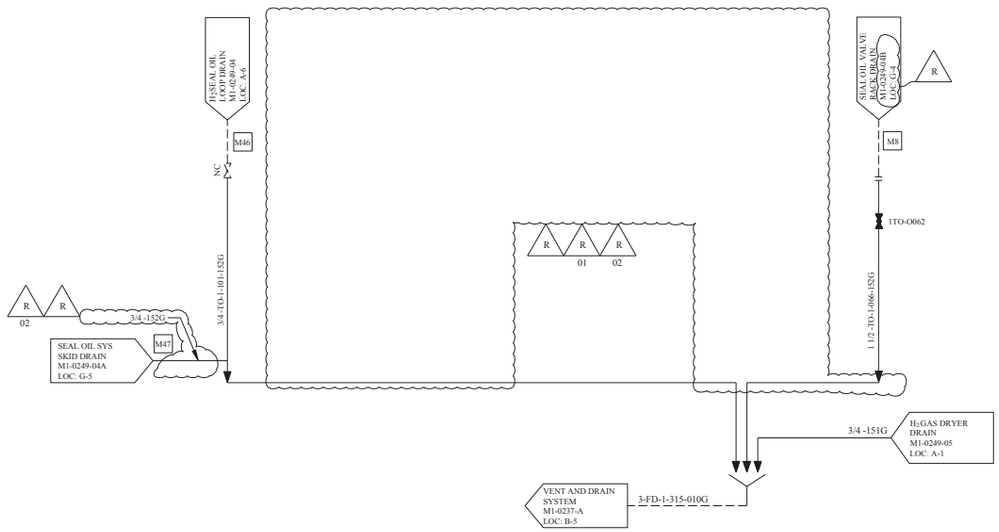



GENERATOR BEARING EXHAUSTERS




SGFW PUMPS MISC DRAINS




SEAL OIL DRAINS

| REV | DWN | CHK | APVD | REMARKS |
|---|---|---|---|---|
| CP-15 | MM 06-11 2007 | MHF 06-11 2007 | | THIS DRAWING REVISED TO INCORPORATE DESIGN CHANGE FDA-2004-002055-01-05 PER SK-0002-04-002055-01-02. |

NOTES:

1. SUPPLIED BY UTILITY POWER COMPANY EXCEPT FOR INDICATED PIPING AND CONTROLS BEARING I&C CHANNEL NUMBERS. SEE UPC MEASURING POINT LIST FOR INSTRUMENTATION AND CONTROLS PROVIDED BY UPC. FOR ADDITIONAL UPC PIPING SEE M1-0249-01.
2. SUPPLIED BY GENERAL ELECTRIC.
3. DELETED
4. DELETED
5. DELETED
6. DELETED
7. DELETED
8. DELETED
9. DELETED
10. UPC CUSTOMERS PIPING CONNECTION TAG NUMBERS ARE SHOWN (TYP). V2
11. DELETED
12. DELETED
13. DELETED
14. FOR MECHANICAL SYMBOLS AND NOTES SEE DRAWING M1-0200.
15. INSTALLATION OF CLOSURE DISC AND OR BLIND FLANGE IS REQUIRED ONLY WHEN EXHAUSTER IS REMOVED.

FSAR FIGURE 10.4-17

THIS DRAWING CREATED ELECTRONICALLY

| DRAWING M1-0214-A REV CP-4 |
|---|
| HAS BEEN SPLIT INTO THE FOLLOWING SHEETS: |
| M1-0214-A |
| M1-0214-B |

NON–SAFETY

LUMINANT
CPSES
GLEN ROSE, TEXAS

FLOW DIAGRAM
TURBINE OIL PURIFICATION

| DWG. NO. | SH. NO. | REV. |
|---|---|---|
| M1-0214 | B | CP-15 |

REF CHK CP-1 I 12/03/96

| REV | DWN | CHKD | APVD | REMARKS |
|---|---|---|---|---|
| CP-12 | DLK 04-03 2006 | MM 04-03 2006 | | THIS DRAWING REVISED TO INCORPORATE DESIGN CHANGE FDA-2004-000773-08-00 PER SK-0078-04-000773-08-00. |

NOTES:

1. USE 6 DIAMETER BENDS WHERE SHOWN.
2. DRILL HOLES OR ARC GOUGE IN CURB PLATES FOR DRIP PAN DRAIN LINES FROM CONTROL FLUID SUPPLY RACKS.
3. WELD BACK TO BACK 90 BW ELLS TO FLANGE CONNECTION AT HYDRAULIC CONTROL EQUIPMENT RACK DRIP PAN DRAIN; NOTCH CURB PLATE AS NEEDED.
4. ALL DRAINS WILL BE COLLECTED LOCALLY UNDER ADMINISTRATIVE CONTROL, UNLESS OTHERWISE NOTED.

REFERENCE DRAWINGS:

| | |
|---|---|
| 1. MECHANICAL SYMBOLS AND NOTES | M1-0200 |
| 2. CONTROL FLUID PIPING COMPOSITE | BRP-CL-1-92021 |
| 3. CONTROL FLUID PIPING COMPOSITE | BRP-CL-2-92021 |
| 4. ICD M1-2214-06A | |
| 5. E1-0012-A | |
| 6. E2-0012-A | |
| 7. E1-0069 SHEET 0 | |

FSAR FIGURE 10.4-17

THIS DRAWING CREATED ELECTRONICALLY

NON–SAFETY

TXU POWER
CPSES
GLEN ROSE, TEXAS

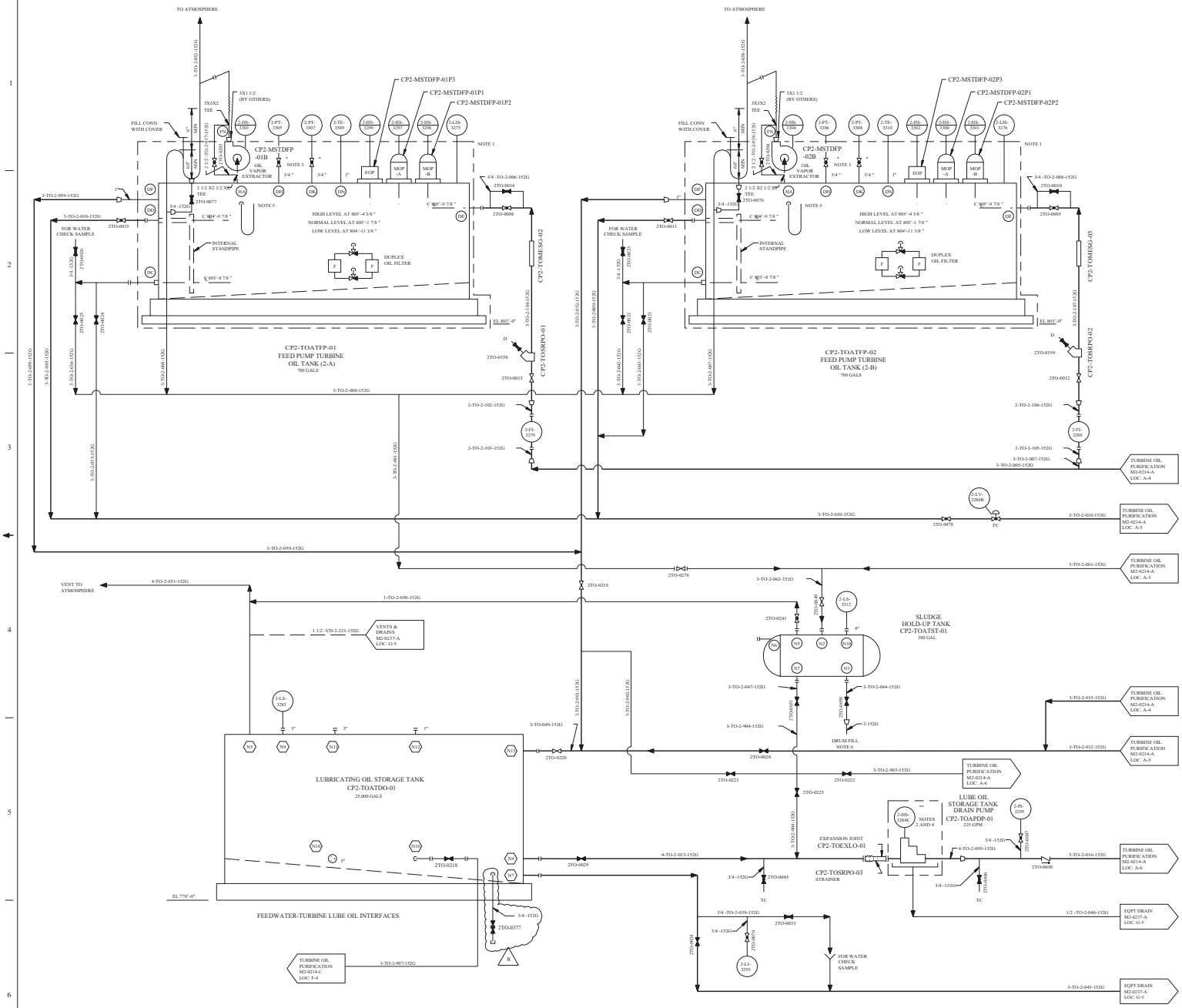
FLOW DIAGRAM
CONTROL FLUID
HOLD UP SYSTEM

| DWG. NO. | SH. NO. | REV. |
|---|---|---|
| M1-0214 | 01 | CP-12 |

REF CHKD 05-13-2003

me724000.dgn A M1-0214-01

FINAL PRINT




| REV | DWN | CHK | APVD | REMARKS |
|---|---|---|---|---|
| CP-13 | RS 10/17/2003 | CA 10/17/2003 | | THIS DRAWING REVISED TO INCORPORATE DESIGN CHANGE FDA-2001-002347-01-00 PER SE-0006-01-00247-01-00. |

NOTES:

1. SUPPLIED BY GENERAL ELECTRIC.
2. PURIFICATION EQUIPMENT TO BE SUPPLIED BY OTHERS, WITH ALL SUPERVISORY AND CONTROL INSTRUMENTATION EXCEPT AS OTHERWISE NOTED MOUNTED ON LOCAL CONTROL PANEL.
3. VALVES MARKED * ARE SUPPLIED BY EQUIPMENT MANUFACTURER.
4. PURIFIER FEED PUMP AND DRAIN PUMP EQUIPPED WITH INTERNAL RELIEF VALVES.
5. INTERNAL PRESSURE INDICATION MANOMETER FURNISHED BY G E AND MOUNTED BY CUSTOMER.
6. DRAINAGE PROVIDED BY DRUM OR PORTABLE PUMP USING TEMPORARY PIPING.
7. INSTRUMENTS MARKED WITH ** SUPPLIED BY VENDORS.
8. FOR MECHANICAL SYMBOLS AND NOTES SEE DRAWING M1-0200.

DRAWING 2323-M2-0214 REV CP-3
HAS BEEN SPLIT INTO THE FOLLOWING SHEETS:

| |
|---|
| M2-0214 |
| M2-0214-A |
| M2-0214-B |
| M2-0214-C |

FSAR FIGURE 10.4-17

THIS DRAWING CREATED ELECTRONICALLY

NON–SAFETY

TXU ELECTRIC
CPSES
GLEN ROSE, TEXAS

FLOW DIAGRAM
TURBINE OIL PURIFICATION

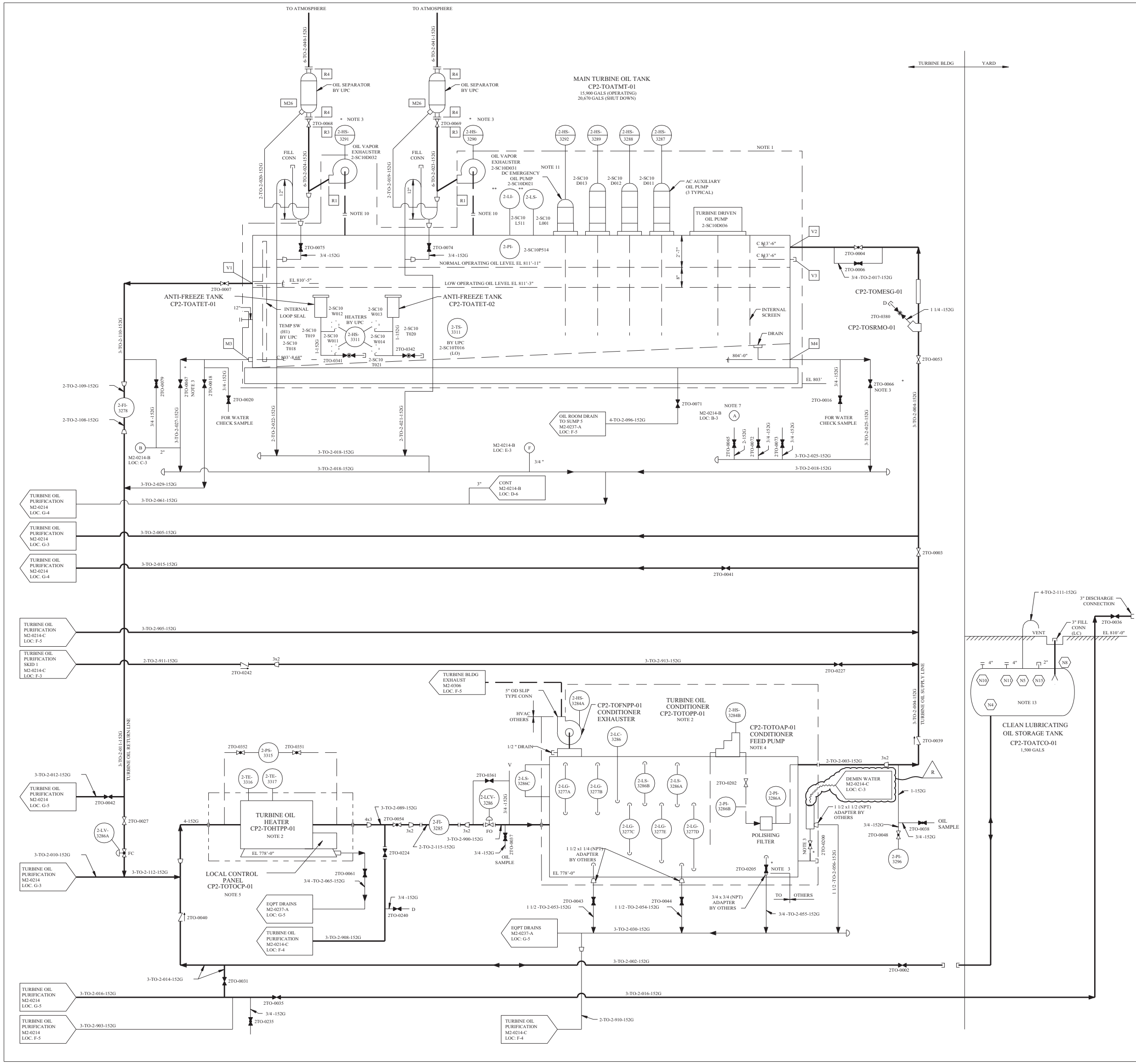
| DWG. NO. | SH. NO. | REV. |
|---|---|---|
| M2-0214 | - | CP-13 |

$$$$$$$DATE$$$$$$

REF CKD 3/20/97 CP-11

mc387900.dgn

M2-0214




| REV | DWN | CHKD | APVD | REMARKS |
|---|---|---|---|---|
| CP-22 | SJL 09-15 2003 | DJL 09-16 2003 | | THIS DRAWING REVISED TO INCORPORATE DESIGN CHANGE FDA 2003-001533-01-00 PER SK-0002-03-001533-01-00. |

NOTES:

1. SUPPLIED BY UTILITY POWER COMPANY EXCEPT FOR INDICATED PIPING AND CONTROLS BEARING I & C CHANNEL NUMBERS, SEE UPC MEASURING POINT LIST FOR INSTRUMENTATION AND CONTROLS PROVIDED BY UPC.
2. PURIFICATION EQUIPMENT TO BE SUPPLIED BY OTHERS, WITH ALL SUPERVISORY AND CONTROL INSTRUMENTATION EXCEPT AS OTHERWISE NOTED MOUNTED ON LOCAL CONTROL PANEL.
3. VALVES MARKED * ARE SUPPLIED BY EQUIPMENT MANUFACTURER.
4. CONDITIONER FEED PUMP AND DRAIN PUMP EQUIPPED WITH INTERNAL RELIEF VALVES.
5. LOCAL CONTROL PANEL TO BE SUPPLIED BY OTHERS AND MOUNTED ON HEATER SKID.
6. UPC CUSTOMERS PIPING CONNECTION TAG NUMBERS ARE SHOWN V2 (TYPICAL).
7. UPC DUPLEX OIL STRAINER DRAINS USE TEMPORARY PIPING BETWEEN VALVES 2TO-0064 AND 2TO-0065
8. DIP STICK SUPPLIED BY CLEAN LUBRICATING OIL STORAGE TANK MANUFACTURER. DO NOT STORE DIPSTICK IN FILL CONNECTION. THIS WILL MAKE VALVE 2TO-0343 INOPERABLE.
9. INSTRUMENTS MARKED ** SUPPLIED BY VENDOR.
10. INSTALLATION OF CLOSURE DISC AND/OR BLIND FLANGE IS REQUIRED ONLY WHEN EXHAUSTER IS REMOVED.
11. FOR DETAILS OF TURBINE LUBE OIL SUPPLY REFER TO DIAGRAM OF LUBRICATION OIL PIPING (DWG 7163-90200, CP-003).
12. FOR MECHANICAL SYMBOLS AND NOTES SEE DRAWING M1-0200.
13. TANK HAS BEEN REMOVED FROM SERVICE, ABANDONED IN PLACE AND FILLED WITH INERT SOLIDS.

FSAR FIGURE 10.4-17

THIS DRAWING CREATED ELECTRONICALLY

| DRAWING 2323-M2-0214 REV CP-3 |
|---|
| HAS BEEN SPLIT INTO THE FOLLOWING SHEETS: |
| M2-0214 |
| M2-0214-A |
| M2-0214-B |
| M2-0214-C |

NON-SAFETY

TXU ENERGY
CPSES
GLEN ROSE, TEXAS

FLOW DIAGRAM
TURBINE OIL PURIFICATION

DWG. NO. M2-0214 | SH. NO. A | REV. CP-22

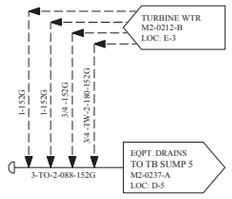
REF CKD 4/29/97 CP-13

$$$$$$DATE$$$$$$

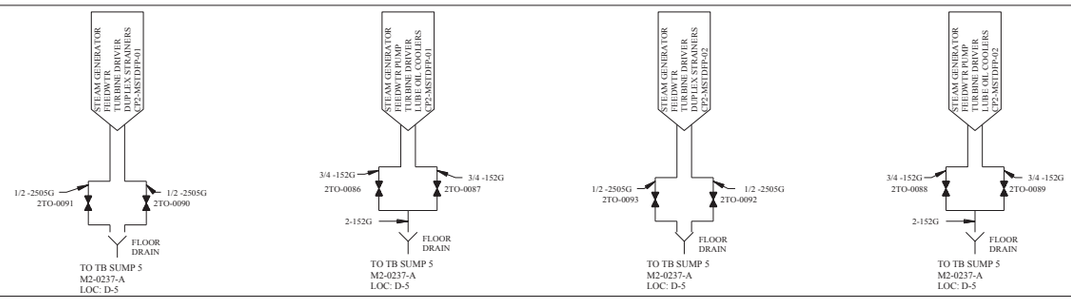
me476900.dgn M2-0214-A

UPC OIL SYSTEM DRAINS

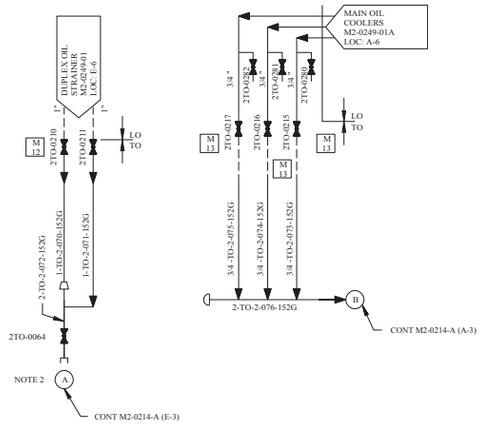
## CONTROL FLUID DRAINS




## SGFW PUMPS MISC DRAINS

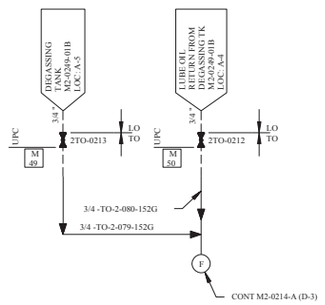



## TURBINE LUBRICATING OIL DRAINS

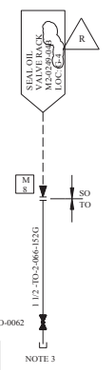


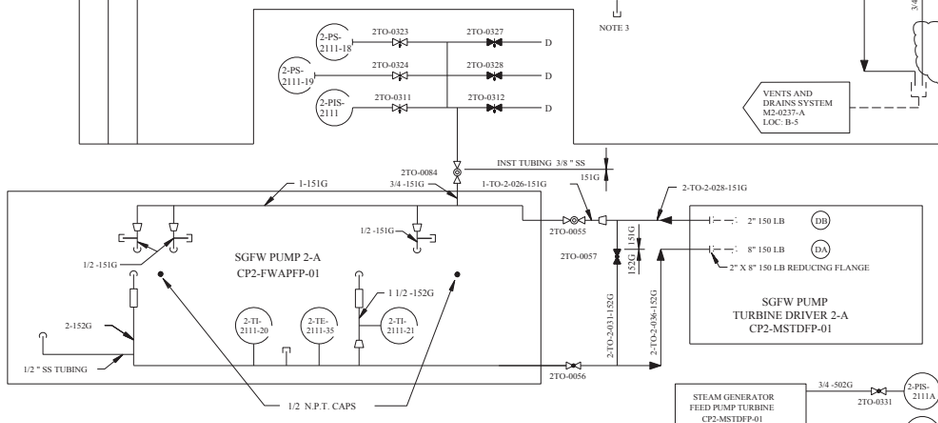


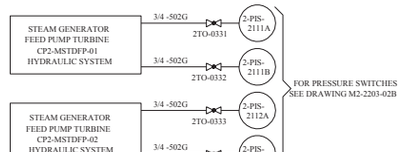


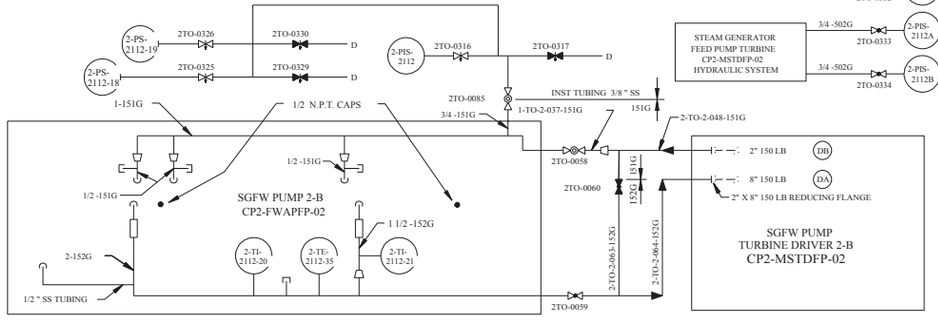


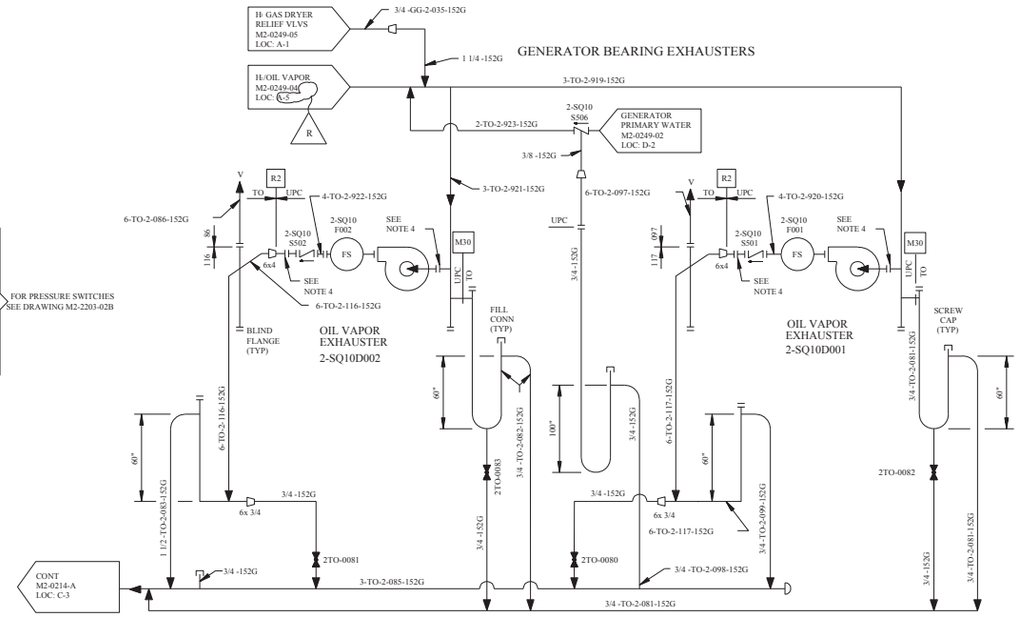

## SEAL OIL DRAINS






| REV | DWN | CHK | APVD | REMARKS |
|---|---|---|---|---|
| CP-14 | DLK 06-27-2007 | MM 07-03-2007 | | THIS DRAWING REVISED TO INCORPORATE DESIGN CHANGE FDA 2004-002055-06-00 PER SK-0060-04-002055-06-00. |

NOTES:

1. UPC CUSTOMERS PIPING CONNECTION TAG NUMBERS ARE SHOWN (XX) TYPICAL).
2. UPC DUPLEX OIL STRAINER DRAINS USE TEMPORARY PIPING BETWEEN VALVES 2TO-0064 AND 2TO-0065 .
3. SCREWED CAP TO REMAIN IN PLACE EXCEPT WHILE OIL IS BEING COLLECTED.
4. INSTALLATION OF CLOSURE DISC AND/OR BLIND FLANGE IS REQUIRED ONLY WHEN EXHAUSTER IS REMOVED.

FSAR FIGURE 10.4-17

THIS DRAWING CREATED ELECTRONICALLY

| DRAWING 2323-M2-0214 REV CP-3 HAS BEEN SPLIT INTO THE FOLLOWING SHEETS: |
|---|
| M2-0214 |
| M2-0214-A |
| M2-0214-B |
| M2-0214-C |

NON–SAFETY

LUMINANT
CPSES
GLEN ROSE, TEXAS

FLOW DIAGRAM
TURBINE OIL PURIFICATION

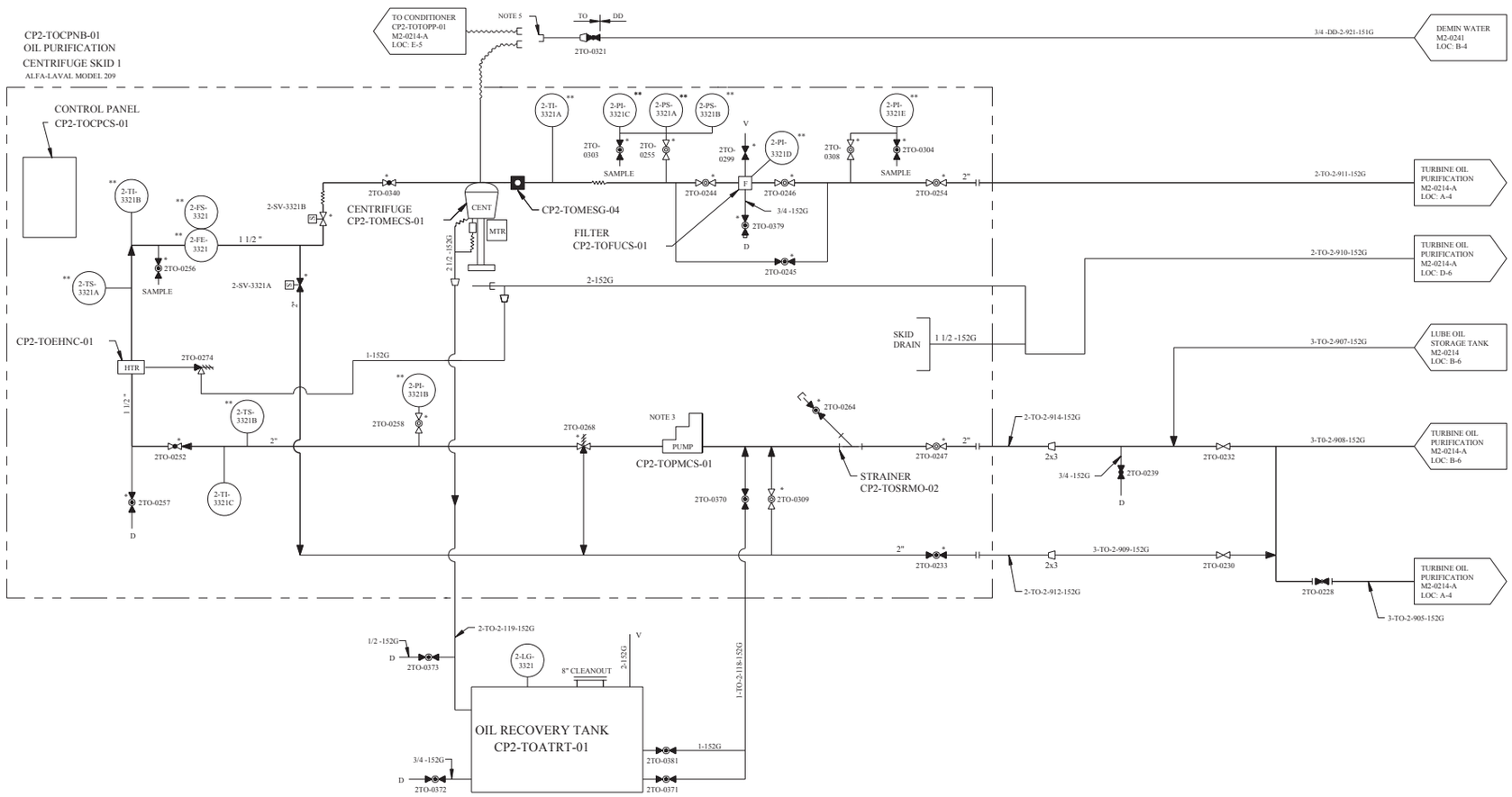
| DWG. NO. | SH. NO. | REV. |
|---|---|---|
| M2-0214 | B | CP-14 |

REF CKD 2/27/97 CP-9

| REV | DWN | CHKD | APVD | REMARKS |
|---|---|---|---|---|
| CP-14 | DJS 01-31 2005 | MHF 01-31 2005 | | THIS DRAWING REVISED TO INCORPORATE DESIGN CHANGE FDA-2003-001388-01-00 PER SK-0002-03-001388-01-00. |

NOTES

1. PURIFICATION EQUIPMENT TO BE SUPPLIED BY OTHERS, WITH ALL SUPERVISORY AND CONTROL INSTRUMENTATION EXCEPT AS OTHERWISE NOTED MOUNTED ON LOCAL CONTROL PANEL.
2. VALVES MARKED * ARE SUPPLIED BY EQUIPMENT MANUFACTURER.
3. PURIFIER FEED PUMP EQUIPPED WITH INTERNAL RELIEF VALVE.
4. INSTRUMENTS MARKED ** SUPPLIED BY VENDOR.
5. THIS HOSE CONNECTION MAY BE UTILIZED TO MAKE UP WATER TO TURBINE CONDITIONER CP2-TOTOPP-01 OR OIL PURIFICATION CENTRIFUGE SKID CP2-TOCPNB-01.




FSAR FIGURE 10.4-17

THIS DRAWING CREATED ELECTRONICALLY

| DRAWING 2323-M2-0214 REV CP-3 |
|---|
| HAS BEEN SPLIT INTO THE FOLLOWING SHEETS: |
| M2-0214 |
| M2-0214-A |
| M2-0214-B |
| M2-0214-C |
| |

NON–SAFETY

TXU POWER
CPSES
GLEN ROSE, TEXAS

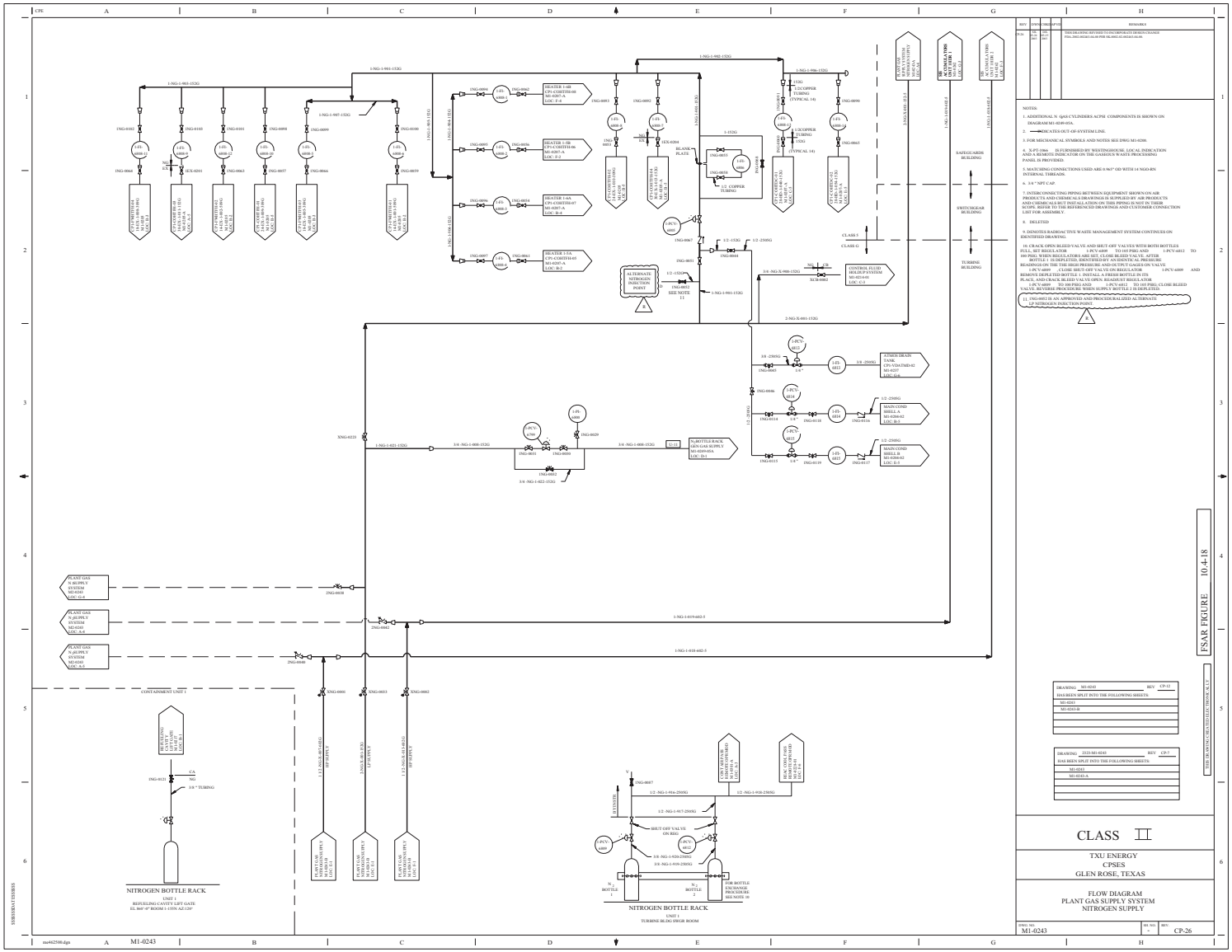
FLOW DIAGRAM
TURBINE OIL PURIFICATION

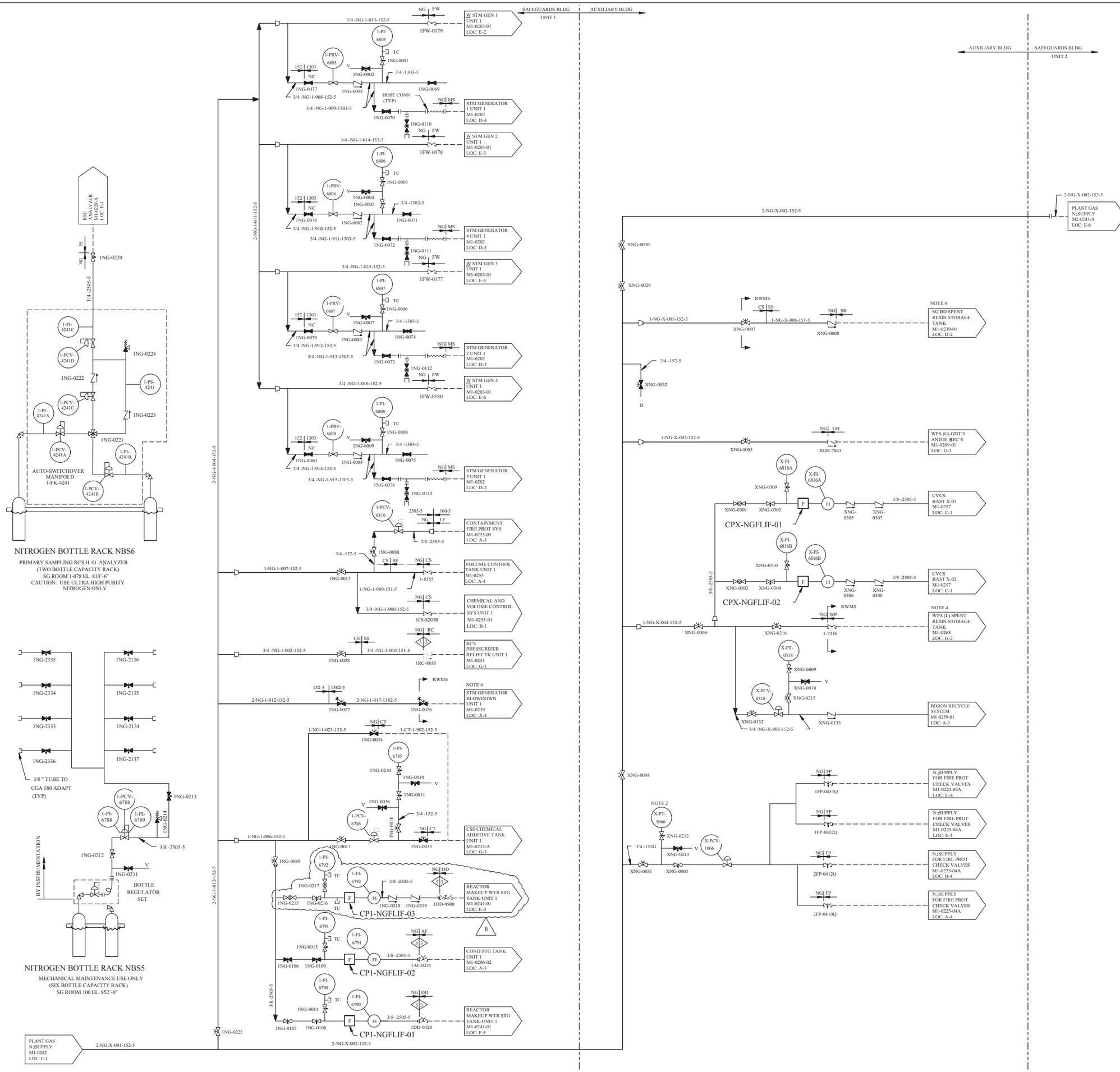
| DWG. NO. | SH. NO. | REV. |
|---|---|---|
| M2-0214 | C | CP-14 |

REF CKD 1/7/98 CP-8

me697000.dgn A M2-0214-C

FINAL PRINT


CLASS II
TXU ENERGY
CPSES
GLEN ROSE, TEXAS
FLOW DIAGRAM
PLANT GAS SUPPLY SYSTEM
NITROGEN SUPPLY
DRWG NO. M1-0243
REV CP-26
NOTES:
1. ADDITIONAL N2 QAS CYLINDERS ACPSI COMPONENTS IS SHOWN ON DIAGRAM M1-0238-05A.
2. INDICATES OUT-OF-SYSTEM LINE.
3. FOR MECHANICAL SYMBOLS AND NOTES SEE DWG M1-0200.
4. X-PT-106A IS FURNISHED BY WESTINGHOUSE, LOCAL INDICATION AND A REMOTE INDICATOR ON THE GASKRUCK WASTE PROCESSING PANEL IS PROVIDED.
5. MATCHING CONNECTIONS USED ARE 0.963" OD WITH 14 NGO-RN INTERNAL THREADS.
6. 3/4 " NPT CAP.
7. INTERCONNECTING PIPING BETWEEN EQUIPMENT SHOWN ON AIR PRODUCTS AND CHEMICALS DRAWINGS IS SUPPLIED BY AIR PRODUCTS AND CHEMICALS BUT INSTALLATION ON THIS PIPING IS NOT IN THEIR SCOPE. REFER TO THE REFERENCED DRAWINGS AND CUSTOMER CONNECTION LIST FOR ASSEMBLY.
8. DELETED
9. DENOTES RADIOACTIVE WASTE MANAGEMENT SYSTEM CONTINUES ON IDENTIFIED DRAWING.
10. CRACK OPEN BLEED VALVE AND SHUT-OFF VALVES WITH BOTH BOTTLES FULL, SET REGULATOR 1-PCV-6009 TO 185 PSIG AND 1-PCV-6012 TO 100 PSIG. WHEN REGULATORS ARE SET, CLOSE BLEED VALVE. AFTER BOTTLE 1 IS DEPLETED, IDENTIFIED BY AN ISONTICAL PRESSURE READINGS ON THE THE HIGH PRESSURE AND OUTPUT GAGES ON VALVE 1-PCV-6009 CLOSE SHUT-OFF VALVE ON REGULATOR 1-PCV-6009 AND REMOVE DEPLETED BOTTLE 1. INSTALL A FRESH BOTTLE IN ITS PLACE AND OPEN SHUT-OFF VALVE ON REGULATOR 1-PCV-6009 AND 1-PCV-6012 TO 185 PSIG AND 1-PCV-6012 TO 100 PSIG. CLOSE BLEED VALVE. REVERSE PROCEDURE WHEN SUPPLY BOTTLE 2 IS DEPLETED.
11. 1NG-0002 IS AN APPROVED AND PROCEDURALIZED ALTERNATE LP NITROGEN INJECTION POINT.
NITROGEN BOTTLE RACK
UNIT 1
REFUELING CAVITY LIFT GATE
EL 860'-0" ROOM 1-155N AZ 120°
NITROGEN BOTTLE RACK
UNIT 1
TURBINE BLDG SWGR ROOM
CONTAINMENT UNIT 1
DRAWING M1-0240 REV CP-12
HAS BEEN SPLIT INTO THE FOLLOWING SHEETS:
M1-0243
M1-0243-B
DRAWING 2323-M1-0243 REV CP-7
HAS BEEN SPLIT INTO THE FOLLOWING SHEETS:
M1-0243
M1-0243-A
FSAR FIGURE 10.4-18
THIS DRAWING CREATED USING PRODUCT RX 3.7
M1-0243
M1-0243
CP-26




| REV | DWN | CHK | APVD | REMARKS |
|---|---|---|---|---|
| CP-26 | JRMC 12-06 2004 | DJL 12-07 2004 | | THIS DRAWING REVISED TO INCORPORATE DESIGN CHANGE FDA-2004-002128-01-00 PER SK-0004-04-002128-01-00. |

NOTES:

1. FOR MECHANICAL SYMBOLS AND NOTES SEE DWG M1-0200.
2. X-PT-1066 IS FURNISHED BY WESTINGHOUSE. LOCAL INDICATION AND A REMOTE INDICATOR ON THE GASEOUS WASTE PROCESSING PANEL IS PROVIDED.
3. DELETED
4. DENOTES RADIOACTIVE WASTE MANAGEMENT SYSTEM CONTINUES ON THE IDENTIFIED DRAWING.

FSAR FIGURE 10.4-18

THIS DRAWING CREATED ELECTRONICALLY

DRAWING M1-0243-A REV CP-10
HAS BEEN SPLIT INTO THE FOLLOWING SHEETS:
M1-0243-A
M2-0243-A

DRAWING 2323-M1-0243 REV CP-7
HAS BEEN SPLIT INTO THE FOLLOWING SHEETS:
M1-0243
M1-0243-A

CLASS II

LUMINANT
CPSES
GLEN ROSE, TEXAS

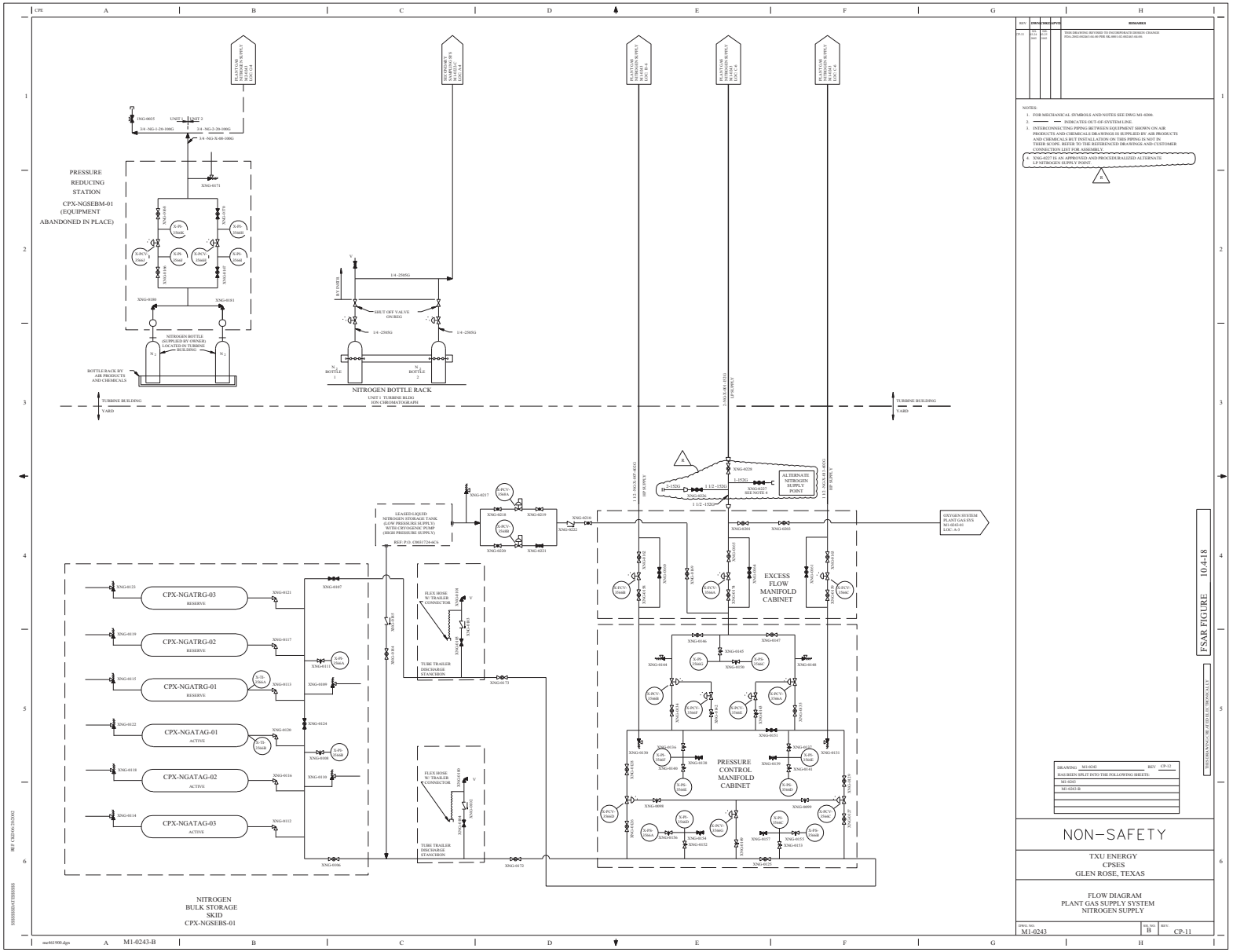
FLOW DIAGRAM
PLANT GAS SUPPLY SYSTEM
NITROGEN SUPPLY

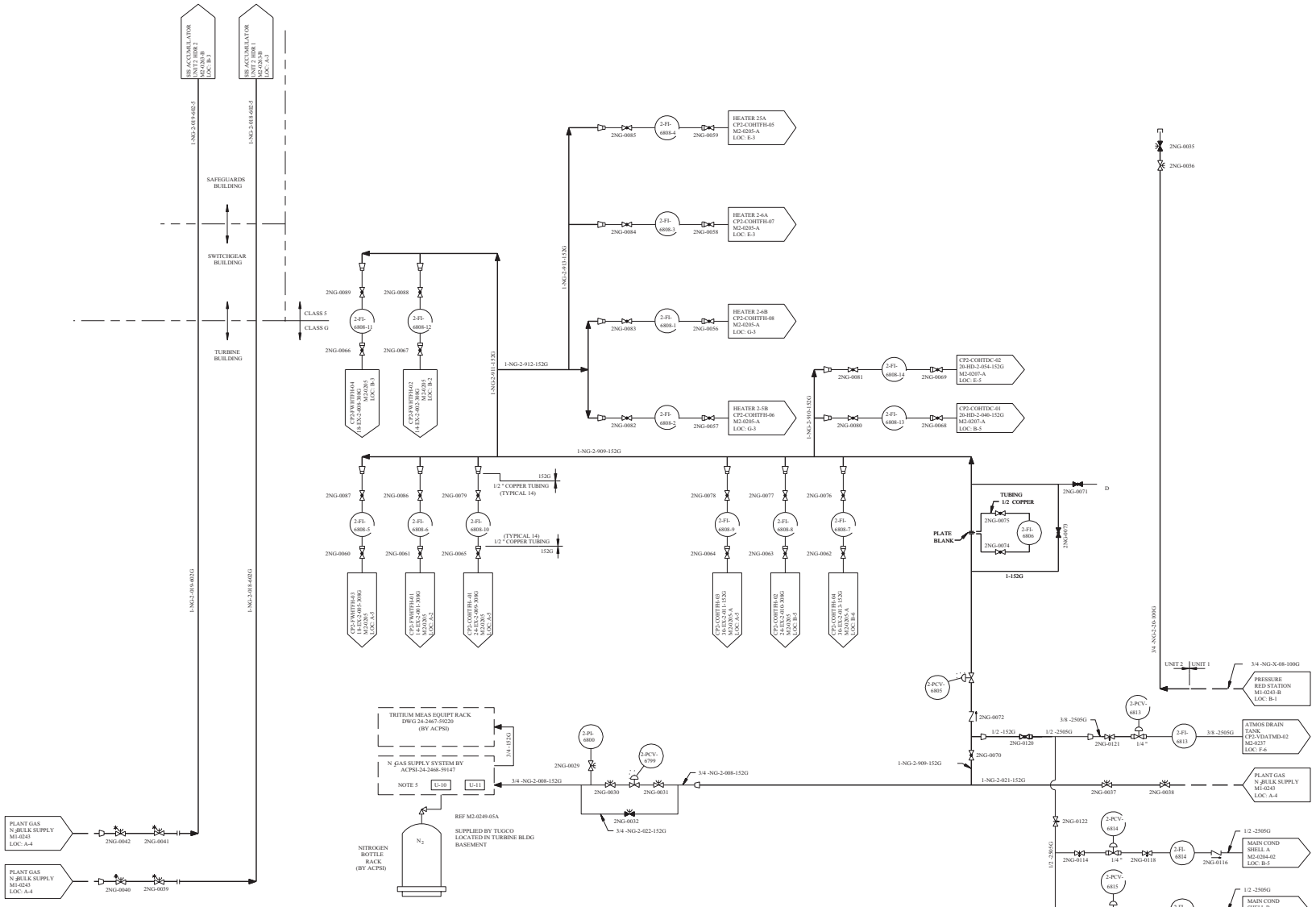
DWG NO. M1-0243 | SH. NO. A | REV. CP-26

FINAL PRINT

REF CKD CP-20 01/10/97

me623500.dgn A M1-0243-A


PRESSURE REDUCING STATION CPX-NGSEBM-01 (EQUIPMENT ABANDONED IN PLACE)
NITROGEN BOTTLE RACK
NITROGEN BULK STORAGE SKID CPX-NGSEBS-01
CPX-NGATRG-03 RESERVE
CPX-NGATRG-02 RESERVE
CPX-NGATRG-01 RESERVE
CPX-NGATAG-01 ACTIVE
CPX-NGATAG-02 ACTIVE
CPX-NGATAG-03 ACTIVE
LEASED LIQUID NITROGEN STORAGE TANK (LOW PRESSURE SUPPLY) WITH CRYOGENIC PUMP (HIGH PRESSURE SUPPLY)
REF P.O. C0031724-6CS
EXCESS FLOW MANIFOLD CABINET
PRESSURE CONTROL MANIFOLD CABINET
ALTERNATE NITROGEN SUPPLY POINT
OXYGEN SYSTEM PLANT GAS SYS M1-0243-01 LOC A-3
TURBINE BUILDING
YARD
NON-SAFETY
TXU ENERGY
CPSES
GLEN ROSE, TEXAS
FLOW DIAGRAM
PLANT GAS SUPPLY SYSTEM
NITROGEN SUPPLY
DWG NO. M1-0243
REV. B
REV: CP-11
FSAR FIGURE 10.4-18




| REV. | DWN | CHKD | APVD | REMARKS |
|---|---|---|---|---|
| CP-9 | RME 05/24/96 | | | THIS DRAWING REVISED TO ADD THE FSAR FIGURE NUMBER AS AN EDITORIAL CHANGE. |

NOTES

1. ADDITIONAL N GAS CYLINDERS ACPSI COMPONENTS IS SHOWN ON DIAGRAM M1-0249-05A.
2. ——4N——INDICATES OUT-OF-SYSTEM LINE.
3. FOR MECHANICAL SYMBOLS AND NOTES SEE DWG M1-0200.
4. X-PT-1066 IS FURNISHED BY WESTINGHOUSE. LOCAL INDICATION AND A REMOTE INDICATOR ON THE GASEOUS WASTE PROCESSING PANEL IS PROVIDED.
5. MATCHING CONNECTIONS USED ARE 0.965" OD WITH 14 NGO-RN INTERNAL THREADS.
6. DELETED
7. 3/4 " NPT CAP.
8. INTERCONNECTING PIPING BETWEEN EQUIPMENT SHOWN ON AIR PRODUCTS AND CHEMICALS DRAWINGS IS SUPPLIED BY AIR PRODUCTS AND CHEMICALS BUT INSTALLATION ON THIS PIPING IS NOT IN THEIR SCOPE. REFER TO THE REFERENCED DRAWINGS AND CUSTOMER CONNECTION LIST FOR ASSEMBLY.
9. DELETED
10. DENOTES RADIOACTIVE WASTE MANAGEMENT SYSTEM CONTINUES ON IDENTIFIED DRAWING.
11. CRACK OPEN BLEED VALVE AND SHUT-OFF VALVES WITH BOTH BOTTLES FULL; SET REGULATOR 2-PCV-6809 TO 105 PSIG AND 2-PCV-6810 TO 100 PSIG. WHEN REGULATORS ARE SET, CLOSE BLEED VALVE. AFTER BOTTLE 1 IS DEPLETED, IDENTIFIED BY AN IDENTICAL PRESSURE READINGS ON THE THE HIGH PRESSURE AND OUTPUT GAGES ON VALVE 2-PCV-6809 CLOSE SHUT-OFF VALVE ON REGULATOR 2-PCV-6809 AND REMOVE DEPLETED BOTTLE 1. INSTALL A FRESH BOTTLE IN ITS PLACE, AND CRACK BLEED VALVE OPEN. READJUST REGULATOR 2-PCV-6809 TO 100 PSIG AND 2-PCV-6810 TO 105 PSIG; CLOSE BLEED VALVE. REVERSE PROCEDURE WHEN SUPPLY BOTTLE 2 IS DEPLETED.

CP-9

FSAR FIGURE 10.4-18

THIS DRAWING CREATED ELECTRONICALLY

| DRAWING M1-0243 REV CP-12 |
|---|
| HAS BEEN SPLIT INTO THE FOLLOWING SHEETS: |
| M1-0243 |
| M1-0243-B |
| M2-0243 |

NON-SAFETY

TXU ELECTRIC
CPSES
GLEN ROSE, TEXAS

FLOW DIAGRAM
PLANT GAS SUPPLY SYSTEM
NITROGEN SUPPLY

| DWG. NO. | SH. NO. | REV. |
|---|---|---|
| M2-0243 | - | CP-9 |

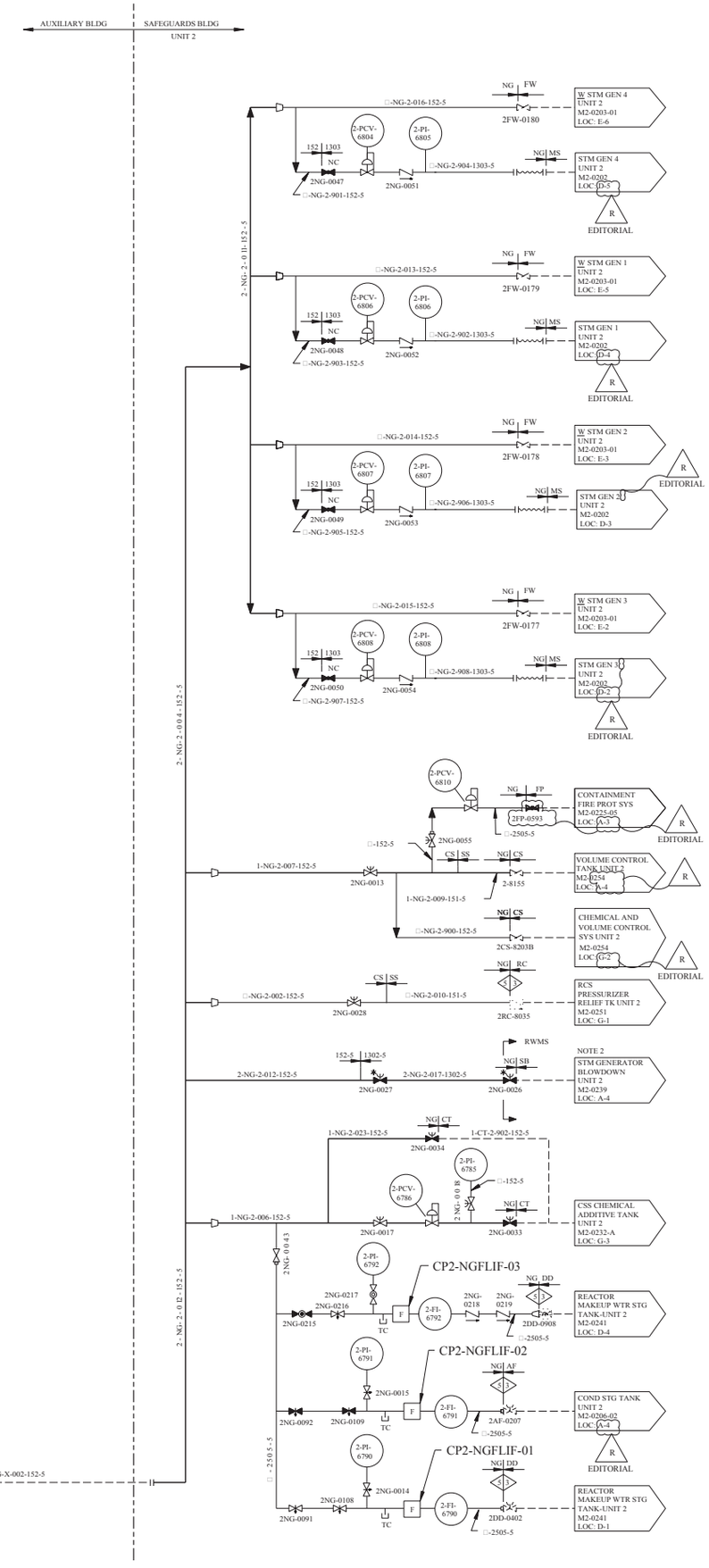
SSSSSSSTA ITESSSSS

vs0000bp.dgn

| REV | DWN | CHKD | APVD | REMARKS |
|---|---|---|---|---|
| CP-11 | IRK 05-29 2012 | | | THIS DRAWING REVISED TO EDITORIALLY CORRECT DRAFTING ERROR PER AI-CR-2012-005087-1. THIS ERROR OCCURRED WHEN THE UNIT 2 PORTIONS OF THE DRAWING WAS SPLIT FROM M1-0243-A REV CP-10 IN 6/27/1991. THE CONTINUATION BLOCK WAS NEVER VERIFIED TO THE CORRESPONDING FLOW DIAGRAM. |

NOTES:

1. FOR MECHANICAL SYMBOLS AND NOTES SEE DWG M1-0200.
2. DENOTES RADIOACTIVE WASTE MANAGEMENT SYSTEM CONTINUES ON THE IDENTIFIED DRAWING.




FSAR FIGURE 10.4-18

THIS DRAWING CREATED ELECTRONICALLY

DRAWING M1-0243-A REV CP-10
HAS BEEN SPLIT INTO THE FOLLOWING SHEETS:

| |
|---|
| M1-0243-A |
| M2-0243-A |
| |
| |
| |

CLASS II

LUMINANT
CPNPP
GLEN ROSE, TEXAS

FLOW DIAGRAM
PLANT GAS SUPPLY SYSTEM
NITROGEN SUPPLY

| DWG. NO. | SH. NO. | REV. |
|---|---|---|
| M2-0243 | A | CP-11 |

SSSSSSSDATESSSSSSS

| REV | DWN | CHKD | APVD | REMARKS |
|---|---|---|---|---|
| CP-24 | MBF 11-21-2016 | GAW 11-21-2016 | | THIS DRAWING REVISED TO INCORPORATE DESIGN CHANGE FDA-2016-000155-01-00 PER SK-0001-16-000155-01-00. |

NOTES:

1. SEE DWG M1-0249-05A FOR BACK-UP H2 BOTTLE SUPPLY WHICH IS NOT LOCATED IN PLANT GAS STORAGE AREA.
2. FOR MECHANICAL SYMBOLS AND NOTES SEE DWG M1-0200.
3. DELETED
4. CAPS WILL NOT BE PROVIDED ON VENTS AND DRAINS LINES.
5. PT-1065 IS FURNISHED BY WESTINGHOUSE. LOCAL INDICATION AND A REMOTE INDICATOR ON THE GASEOUS WASTE PROCESSING PANEL IS PROVIDED.
6. AIR PRODUCTS CONNECTION 1.□" OD
7. MANIFOLD CONNECTION IS THE STANDARD COMPRESSED GAS ASSOCIATION HEADER VALVE FITTING CGA350; MANIFOLD BY AIR PRODUCTS AND CHEMICALS.
8. DELETED
9. ARGON PURGE IS FOR GASEOUS STORAGE VESSELS ONLY.
10. PORTIONS OF THIS SYSTEM HAVE BEEN SEISMICALLY ANALYZED AND SUPPORTED SO THAT PIPING FAILURE DURING A SEISMIC EVENT WOULD NOT YIELD UNACCEPTABLE HYDROGEN CONCENTRATIONS IN SAFETY RELATED PLANT AREAS.
11. SPECTACLE FLANGE SHOWN IN THE OPEN POSITION.
12. 1HG-0010 IS AN APPROVED AND PROCEDURALIZED ALTERNATE HYDROGEN INJECTION POINT.

FSAR FIGURE 10.4-19

THIS DRAWING CREATED ELECTRONICALLY

DRAWING M1-0243-02 REV CP-10
HAS BEEN SPLIT INTO THE FOLLOWING SHEETS:
M1-0243-02
M2-0243-02

CLASS II

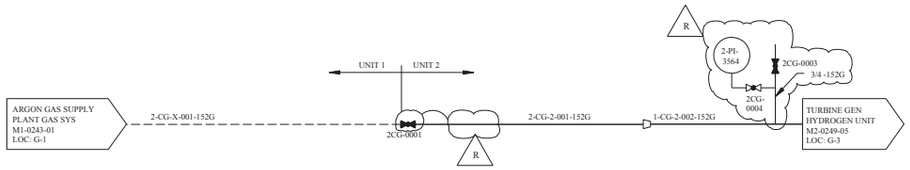
LUMINANT
CPNPP
GLEN ROSE, TEXAS

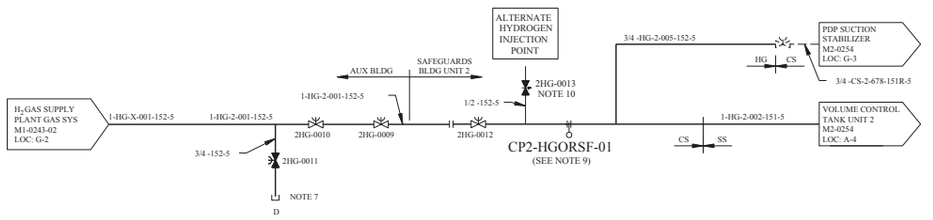
FLOW DIAGRAM
PLANT GAS SUPPLY SYSTEM
HYDROGEN SUPPLY

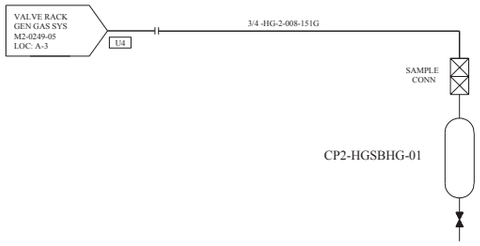
DWG. NO. M1-0243 | SH. NO. 02 | REV. CP-24

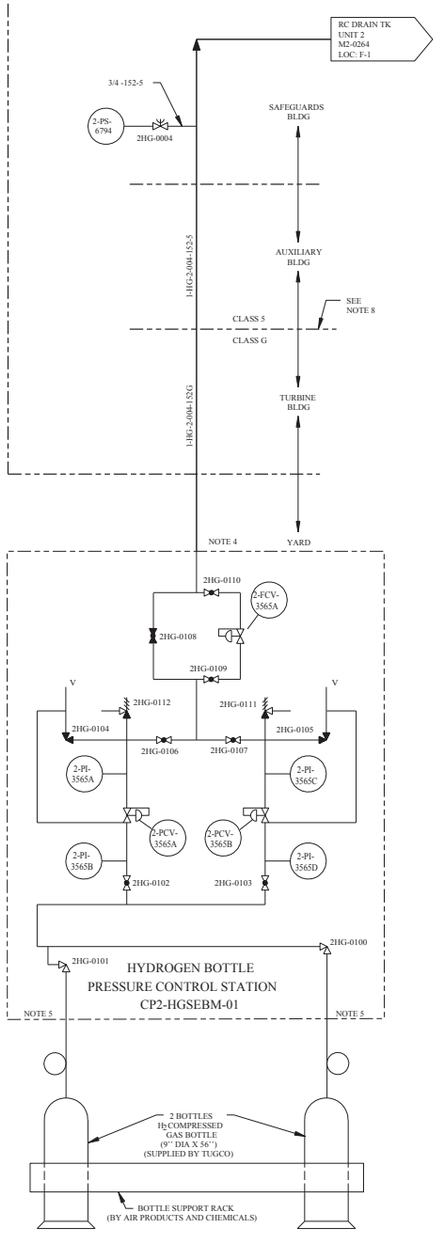
FINAL PRINT

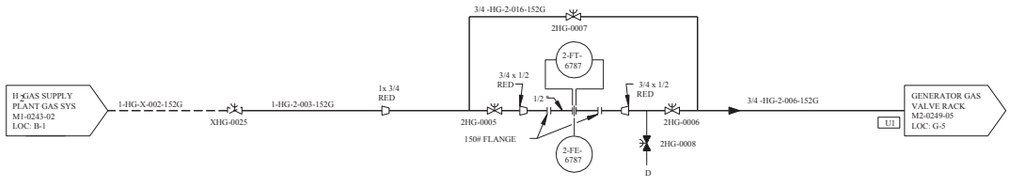
me871300.dgn A M1-0243-02

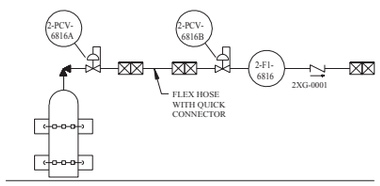



ARGON BOTTLE RACK
UNIT 2 SAFEGUARDS ROOM 2-078
ARGON INJECTION TO VOLUME CONTROL TANK
(REF M2-0228-A (G-4) AND NOTE 21)

| REV | DWN | CHKD | APVD | REMARKS |
|---|---|---|---|---|
| CP-14 | EES 05-20-2008 | DLK 05-20-2008 | | THIS DRAWING REVISED TO INCORPORATE DESIGN CHANGE FDA-2001-001214-02-04 PER SK-0059-01-001214-02-00. |

NOTES:

1. SEE DWG M2-0249-05A FOR BACK-UP H2 BOTTLE SUPPLY WHICH IS NOT LOCATED IN PLANT GAS STORAGE AREA.
2. FOR MECHANICAL SYMBOLS AND NOTES SEE DWG M1-0200.
3. DELETED
4. AIR PRODUCTS CONNECTION 1 1/8 " OD
5. MANIFOLD CONNECTION IS THE STANDARD COMPRESSED GAS ASSOCIATION HEADER VALVE FITTING CGA350; MANIFOLD BY AIR PRODUCTS AND CHEMICALS.
6. DELETED
7. 3/4 INCH NPT CAP.
8. PORTIONS OF THIS SYSTEM HAVE BEEN SEISMICALLY ANALYZED AND SUPPORTED SO THAT PIPING FAILURE DURING A SEISMIC EVENT WOULD NOT YIELD UNACCEPTABLE HYDROGEN CONCENTRATIONS IN SAFETY RELATED PLANT AREAS.
9. SPECTACLE FLANGE SHOWN IN THE OPEN POSITION.
10. 2HG-0013 IS AN APPROVED AND PROCEDURALIZED ALTERNATE HYDROGEN INJECTION POINT.

FSAR FIGURE 10.4-19

THIS DRAWING CREATED ELECTRONICALLY

DRAWING M1-0243-02 REV CP-10
HAS BEEN SPLIT INTO THE FOLLOWING SHEETS:
M1-0243-02
M2-0243-02

CLASS II

LUMINANT
CPNPP
GLEN ROSE, TEXAS

FLOW DIAGRAM
PLANT GAS SUPPLY SYSTEM
ARGON AND HYDROGEN SUPPLY

DWG. NO. M2-0243 | SH. NO. 02 | REV. CP-14

SSSSSSSDATESSSSSS

| REV | DWN | CHK | APVD | REMARKS |
|---|---|---|---|---|
| CP-23 | DLK 10-02-2012 | | | THIS DRAWING REVISED TO EDITORIALLY CORRECT THE OUTLET SAMPLE COOLERS CP1-SSAHSC-01 THRU -03 RELIEF VALVE LOCATIONS PER A1-CR-2012-00962-1. THESE CHANGES WILL BE IN AGREEMENT WITH VENDOR DWG 51011 OF TECH MANUAL CP-0155-001, FIELD WALK DOWN VERIFICATION AND WITH UNIT 2 FLOW DIAGRAM M2-0222 REV CP-21 WHICH WAS UPDATED PER APPROVED DESIGN DOCUMENT DCA 96500 REV 0. EDITORIALLY REVISED CONTINUATION BLOCKS. |

NOTES:

1. ORIGINAL EQUIPMENT CP1-SSPASS-01 SAMPLE PANEL SUPPLIED BY DELPHI INDUSTRIES, EXCEPT FOR SAMPLE 1.
2. FOR MECHANICAL SYMBOLS AND NOTES SEE DRAWING M1-0200.
3. FOR NUMBERS SHOWN IN (XX) SEE BILL OF MATERIAL DELPHI DRAWING 19100 SH 1 THRU 5.
4. [XXXX] - REFERS TO DELPHI INSTRUMENT DESIGNATION ON ELECTRICAL DRAWING 019131 SH 1 THRU 18.
5. VALVES 1SS-0343 AND 1SS-0344 ARE □" WHITEY VALVES, MODEL SS-1RS6.

FSAR FIGURE 10.4-20

THIS DRAWING CREATED ELECTRONICALLY

| DRAWING 2323-M1-0222 REV CP-6 |
|---|
| HAS BEEN SPLIT INTO THE FOLLOWING SHEETS: |
| M1-0222 |
| M1-0222-B |

CLASS II

LUMINANT
CPNPP
GLEN ROSE, TEXAS

FLOW DIAGRAM
SECONDARY SAMPLING
SYSTEM

| DWG. NO. | SH. NO. | REV. |
|---|---|---|
| M1-0222 | - | CP-23 |

< FINAL PRINT >

$$$$$$$$DATE$$$$$$$$ REF CKD CP-23 10/3/12

me572500.dgn M1-0222

| REV | DWN | CHKD | APVD | REMARKS |
|---|---|---|---|---|
| CP-14 | DLK 10-02-2012 | | | THIS DRAWING REVISED TO EDITORIALLY CORRECT THE OUTLET SAMPLE COOLERS CP1-SSAHSC-04 THRU -09 RELIEF VALVE LOCATIONS PER AI-CR-2012-009862-1. THESE CHANGES WILL BE IN AGREEMENT WITH VENDOR DWG 51011 OF TECH MANUAL CP-0155-001, FIELD WALK DOWN VERIFICATION AND WITH UNIT 2 FLOW DIAGRAM M2-0222-01 REV CP-21 WHICH WAS UPDATED PER APPROVED DESIGN DOCUMENT DCA 56500 REV 0. EDITORIALLY REVISED CONTINUATION BLOCKS, LINE AND VALVE NUMBERS. |

NOTES:

1. ORIGINAL EQUIPMENT CP1-SSPASS-01 SAMPLE PANEL SUPPLIED BY DELPHI INDUSTRIES.
2. FOR MECHANICAL SYMBOLS AND NOTES SEE DRAWING M1-0200.
3. FOR NUMBERS SHOWN IN (XX) SEE BILL OF MATERIAL DELPHI DRAWING 19100 SH 1 THRU 5.
4. [XXXX] - REFERS TO DELPHI INSTRUMENT DESIGNATION ON ELECTRICAL DRAWING 019131 SH 1 THRU 18.

MAIN FEED AFTER HIGH PRESS FEED WATER HTRS MI-0203 LOC: E-1

MAIN STEAM AFTER TRBN MI-0202-01A LOC: G-5

CONDENSATE SYSTEM MI-0204-03 LOC: G-3

CP1-SSMSDC-01

CP1-SSMSDC-02

1MS-0689

MS SS

1FW-0375

1SS-0319

CP -14

FW SS

□-SS-1-957-2505G

□-SS-1-958-2505G

□"-SS-1-959-2505G

□-SS-1-008-2505G

□-SS-1-009-2505G

□-SS-1-010-2505G

□-SS-1-011-2505G

□-SS-1-012-2505G

□-SS-1-013-2505G

MAIN STEAM 1 MI-0202 LOC: G-4

MAIN STEAM 2 MI-0202 LOC: G-3

MAIN STEAM 3 MI-0202 LOC: G-2

MAIN STEAM 4 MI-0202 LOC: G-5

1MS-0028

1MS-0065

1MS-0291

1MS-0136

DELPHI SAMPLE 9

DELPHI SAMPLE 10

DELPHI SAMPLE 11

DELPHI SAMPLE 12

DELPHI SAMPLE 13

DELPHI SAMPLE 14

SEE NOTE 1

CP1-SSPASS-01

COOLING WATER M1-0222 LOC: G-3

PRESSURE RELIEF M1-0222 LOC: G-4

DRAIN HEADER M1-0222 LOC: G-4

ISS-0100 (45)

ISS-0102 (45)

ISS-0103

ISS-0104

CP1-SSAHSC-04

ISS-0098

ISS-0099

F

CP1-SSFLSF-09

1-PCV-3804L (34)

1SS-0105 (35)

1-TE-3806D (29)

ISS-0112 (45)

ISS-0110 (45)

ISS-0114

ISS-0115

CP1-SSAHSC-05

ISS-0203

ISS-0204

CP1-SSFLSF-08

1-PCV-3804J (34)

1SS-0116 (35)

1-TE-3806E (29)

ISS-0123 (45)

ISS-0124

ISS-0125

ISS-0126

CP1-SSAHSC-06

ISS-0122 (45)

1-PCV-3804K (34)

1SS-0127 (35)

1-TE-3806F (29)

1SS-0136

ISS-0134 (45)

ISS-0135

CP1-SSAHSC-07

ISS-0133 (45)

1-PCV-3804L (34)

1SS-0138 (35)

1-TE-3806G (29)

ISS-0145

ISS-0146

ISS-0147

CP1-SSAHSC-08

ISS-0144 (45)

1-PCV-3804M (34)

1SS-0148 (35)

1-TE-3806H (29)

PRIMARY COOLER SAFETY VALVE (TYP)

ISS-0154 (45)

ISS-0155

ISS-0156

ISS-0157

CP1-SSAHSC-09 SAMPLE COOLER (TYP)

ISS-0143 (45)

1-PCV-3804N (34)

1SS-0158 (35)

1-TE-3806I (29)

1-TI-3817

1-TE-3817 (51)

1-TV-3817 (51)

ISS-0153 (45)

ISS-0152 (45)

ISS-0151 (45)

ISS-0150 (45)

ISS-0149 (45)

ISS-0148 (45)

ISS-0147 (45)

ISS-0146 (45)

ISS-0145 (45)

ISS-0144 (45)

ISS-0143 (45)

ISS-0142 (45)

ISS-0141 (45)

ISS-0140 (45)

ISS-0139 (45)

ISS-0138 (45)

ISS-0137 (45)

ISS-0136 (45)

ISS-0135 (45)

ISS-0134 (45)

ISS-0133 (45)

ISS-0132 (45)

ISS-0131 (45)

ISS-0130 (45)

ISS-0129 (45)

ISS-0128 (45)

ISS-0127 (45)

ISS-0126 (45)

ISS-0125 (45)

ISS-0124 (45)

ISS-0123 (45)

ISS-0122 (45)

ISS-0121 (45)

ISS-0120 (45)

ISS-0119 (45)

ISS-0118 (45)

ISS-0117 (45)

ISS-0116 (45)

ISS-0115 (45)

ISS-0114 (45)

ISS-0113 (45)

ISS-0112 (45)

ISS-0111 (45)

ISS-0110 (45)

ISS-0109 (45)

ISS-0108 (45)

ISS-0107 (45)

ISS-0106 (45)

ISS-0105 (45)

ISS-0104 (45)

ISS-0103 (45)

ISS-0102 (45)

ISS-0101 (45)

ISS-0100 (45)

ISS-0099 (45)

ISS-0098 (45)

ISS-0097 (45)

ISS-0096 (45)

ISS-0095 (45)

ISS-0094 (45)

ISS-0093 (45)

ISS-0092 (45)

ISS-0091 (45)

ISS-0090 (45)

ISS-0089 (45)

ISS-0088 (45)

ISS-0087 (45)

ISS-0086 (45)

ISS-0085 (45)

ISS-0084 (45)

ISS-0083 (45)

ISS-0082 (45)

ISS-0081 (45)

ISS-0080 (45)

ISS-0079 (45)

ISS-0078 (45)

ISS-0077 (45)

ISS-0076 (45)

ISS-0075 (45)

ISS-0074 (45)

ISS-0073 (45)

ISS-0072 (45)

ISS-0071 (45)

ISS-0070 (45)

ISS-0069 (45)

ISS-0068 (45)

ISS-0067 (45)

ISS-0066 (45)

ISS-0065 (45)

ISS-0064 (45)

ISS-0063 (45)

ISS-0062 (45)

ISS-0061 (45)

ISS-0060 (45)

ISS-0059 (45)

ISS-0058 (45)

ISS-0057 (45)

ISS-0056 (45)

ISS-0055 (45)

ISS-0054 (45)

ISS-0053 (45)

ISS-0052 (45)

ISS-0051 (45)

ISS-0050 (45)

ISS-0049 (45)

ISS-0048 (45)

ISS-0047 (45)

ISS-0046 (45)

ISS-0045 (45)

ISS-0044 (45)

ISS-0043 (45)

ISS-0042 (45)

ISS-0041 (45)

ISS-0040 (45)

ISS-0039 (45)

ISS-0038 (45)

ISS-0037 (45)

ISS-0036 (45)

ISS-0035 (45)

ISS-0034 (45)

ISS-0033 (45)

ISS-0032 (45)

ISS-0031 (45)

ISS-0030 (45)

ISS-0029 (45)

ISS-0028 (45)

ISS-0027 (45)

ISS-0026 (45)

ISS-0025 (45)

ISS-0024 (45)

ISS-0023 (45)

ISS-0022 (45)

ISS-0021 (45)

ISS-0020 (45)

ISS-0019 (45)

ISS-0018 (45)

ISS-0017 (45)

ISS-0016 (45)

ISS-0015 (45)

ISS-0014 (45)

ISS-0013 (45)

ISS-0012 (45)

ISS-0011 (45)

ISS-0010 (45)

ISS-0009 (45)

ISS-0008 (45)

ISS-0007 (45)

ISS-0006 (45)

ISS-0005 (45)

ISS-0004 (45)

ISS-0003 (45)

ISS-0002 (45)

ISS-0001 (45)

ISOTHERMAL BATH AND COILS CP1-SSAHSS-01

1-TCV-3821 (31)

1-TCV-3822 (31)

1-TCV-3823 (31)

1-TCV-3825 (31)

1-TCV-3828 (31)

1-TCV-3829 (31)

HIGH TEMP SOLENOID SHUTOFF VALVE (FC) (TYP)

ISS-0208

ISS-0209

ISS-0210

ISS-0211

ISS-0212

ISS-0213 (31)

1SS-0106 (24)

1SS-0117 (24)

1SS-0128 (24)

1SS-0139 (24)

1SS-0149 (24)

1SS-0159 (24)

1-PI-3805I (25)

1-PI-3805J (25)

1-PI-3805K (25)

1-PI-3805L (25)

1-PI-3805M (25)

1-PI-3805N (25)

1-TI-3807I (28)

1-TI-3807J (28)

1-TI-3807K (28)

1-TI-3807L (28)

1-TI-3807M (28)

1-TI-3807N (28)

□-2505G

SECONDARY SAMPLING SYS M1-0222-C LOC: B-1 DELPHI SAMPLE 9

SECONDARY SAMPLING SYS M1-0222-C LOC: A-6 DELPHI SAMPLE 9

SECONDARY SAMPLING SYS M1-0222-C LOC: C-1 DELPHI SAMPLE 10

SECONDARY SAMPLING SYS M1-0222-C LOC: A-6 DELPHI SAMPLE 10

SECONDARY SAMPLING SYS M1-0222-C LOC: D-1 DELPHI SAMPLE 11

SECONDARY SAMPLING SYS M1-0222-C LOC: E-1 DELPHI SAMPLE 12

SECONDARY SAMPLING SYS M1-0222-C LOC: F-1 DELPHI SAMPLE 13

SECONDARY SAMPLING SYS M1-0222-C LOC: F-1 DELPHI SAMPLE 14

DELPHI SAMPLE 22

1SS-0163 (79)

1SS-0012

2-SS-1-014-152G

2-TW-1-011-152-5

TURBINE PLANT COOLING WATER SYSTEM M1-0212-B LOC: D-2

DELPHI SAMPLE 21

1SS-0165 (79)

1SS-0166 (80)

1SS-0167 (79)

1SS-0013

2-SS-1-015-152G

2-TW-1-029-152-5

TURBINE PLANT COOLING WATER SYSTEM M1-0212-B LOC: D-4

DELPHI SAMPLE 18

1□-152G

1SS-0172 (47)

1□"x2" RED

1SS-0014 (46)

1□"x1" RED

2-SS-2-016-152-5

UNIT 2 SYS M2-0222-01 LOC: G-3

2-SS-1-016-152-5

PLANT CHILLED WATER SYS M1-0307 LOC: F-1

1-152G

1SS-0025

□x1

CP1-SSRCOR-01 (46)

CP1-SSAPCW-01

1SS-0023

1-152G

1□-152G

DELPHI SAMPLE 17

2-SS-1-017-152-5

1SS-0170

1SS-0015

1SS-0018

PLANT CHILLED WATER SYS M1-0307 LOC: F-1

1□"x1" RED

1□"x2" RED

2-SS-2-017-152-5

UNIT 2 SYS M2-0222-01 LOC: G-4

DELPHI SAMPLE 20

2-SS-1-022-152-5

1-SS-1-029-152-5

VENTS AND DRAINS SYS M1-0236-01A LOC: A-6

2-SS-1-024-152-5

VENTS AND DRAINS SYS M1-0236-01A LOC: A-6

2-SS-1-018-152-5

SECONDARY SAMPLING SYS M1-0222-C LOC: G-4

RELIEF HEADER

BLOW DOWN HEADER

FSAR FIGURE 10.4-20

THIS DRAWING CREATED ELECTRONICALLY

DRAWING ECE-M1-0222-A REV CP-1

HAS BEEN SPLIT INTO THE FOLLOWING SHEETS:

M1-0222-A

M1-0222-C

CLASS II

LUMINANT
CPNPP
GLEN ROSE, TEXAS

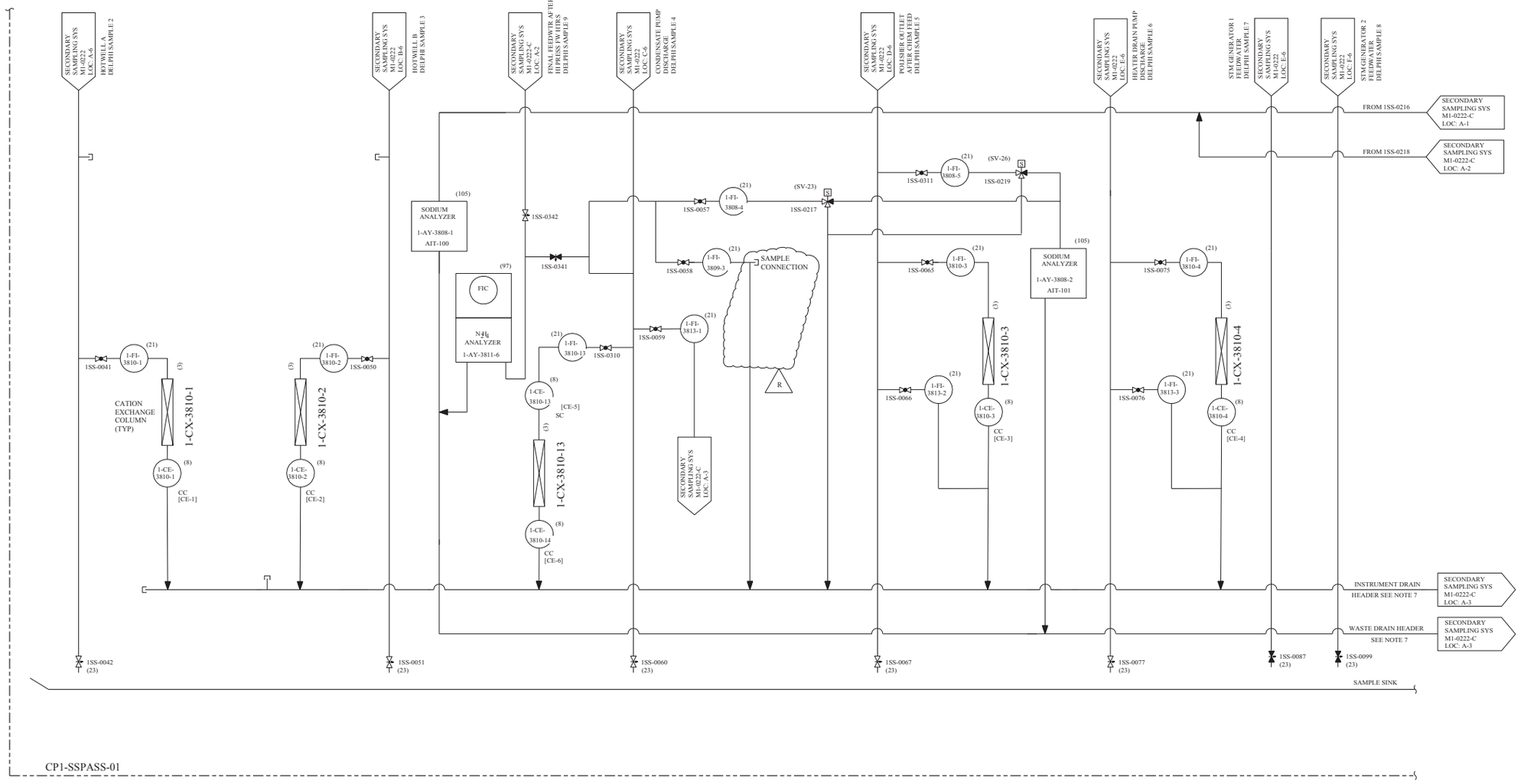
FLOW DIAGRAM
SECONDARY SAMPLING
SYSTEM

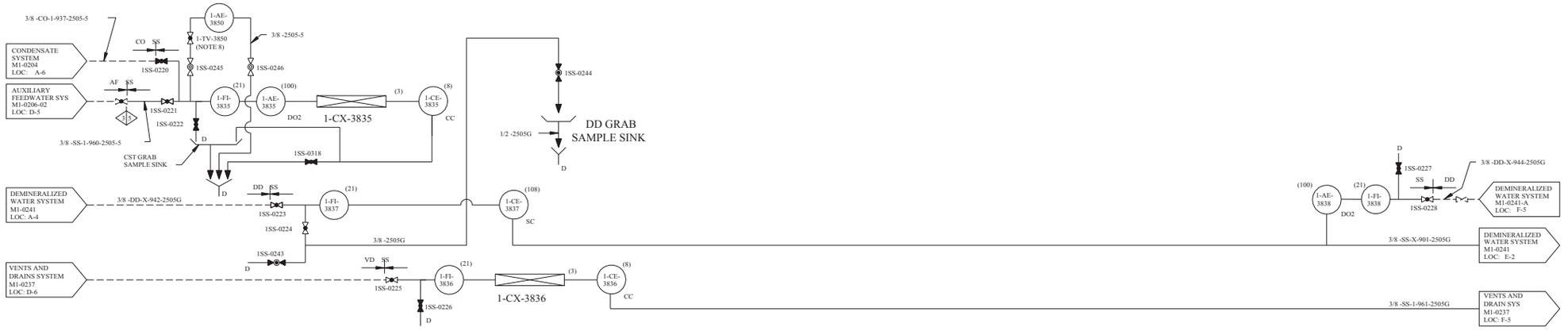
DWG. NO. M1-0222 | SH. NO. A | REV. CP-14

< FINAL PRINT >

$$$$$$$DATE$$$$$$$ REF CKD CP-14 10/3/12

me587800.dgn A M1-0222-A




| REV | DWN | CHKD | APVD | REMARKS |
|---|---|---|---|---|
| CP-16 | JRMC 07-21 2009 | DJL 07-21 2009 | | THIS DRAWING REVISED TO INCORPORATE DESIGN CHANGE FDA 2003-000239-02-02 PER SK-0019-03-000239-02-00. |

NOTES:

1. ORIGINAL EQUIPMENT CP1-SSPASS-01 SAMPLE PANEL SUPPLIED BY DELPHI INDUSTRIES.
2. FOR MECHANICAL SYMBOLS AND NOTES SEE DRAWING M1-0200.
3. DELETED
4. FOR NUMBERS SHOWN IN (XX) SEE BILL OF MATERIAL DELPHI DRAWING 19100 SH 1 THRU 5.
5. ABREVIATIONS:
   - CC - CATION CONDUCTIVITY
   - SC - SPECIFIC CONDUCTIVITY
   - pH - PH
   - $DO_2$ - DISSOLVED OXYGEN
   - CL - CHLORIDE
   - Na - SODIUM
6. [XXXX] - REFERS TO DELPHI INSTRUMENT DESIGNATION ON ELECTRICAL DRAWING 019131 SH 1 THRU 18.
7. ROUTING OF SAMPLE PANEL DRAINS TO THE SAMPLE SINK OR TO THE DRAIN HEADERS AS SHOWN HERE MAY NOT REFLECT ACTUAL PLANT CONFIGURATION.
8. THERMAL SHUT-OFF VALVE BY SENTRY EQUIPMENT CORPORATION.

FSAR FIGURE 10.4-20

THIS DRAWING CREATED ELECTRONICALLY

| DRAWING 2323-M1-0222 REV CP-6 |
|---|
| HAS BEEN SPLIT INTO THE FOLLOWING SHEETS: |
| M1-0222 |
| M1-0222-B |

CLASS II

LUMINANT
CPNPP
GLEN ROSE, TEXAS

FLOW DIAGRAM
SECONDARY SAMPLING
SYSTEM

| DWG. NO. | SH. NO. | REV. |
|---|---|---|
| M1-0222 | B | CP-16 |

REF CKD CP-9 4/30/98

$$$$$$$DATE$$$$$$$

me932700.dgn A M1-0222-B B C D E F G < FINAL PRINT > H

| REV | DWN | CHKD | APVD | REMARKS |
|---|---|---|---|---|
| CP-22 | JRMC 07-21 2009 | DJL 07-21 2009 | | THIS DRAWING REVISED TO INCORPORATE DESIGN CHANGE FDA-2003-000239-02-02 PER SK-0015-03-000239-02-00. |

NOTES:

1. ORIGINAL EQUIPMENT CP1-SSPASS-01 SAMPLE PANEL SUPPLIED BY DELPHI INDUSTRIES.
2. DELETED
3. FOR MECHANICAL SYMBOLS AND NOTES SEE DRAWING M1-0200.
4. FOR NUMBERS SHOWN IN (XX) SEE BILL OF MATERIAL DELPHI DRAWING 19100 SH 1 THRU 5.
5. ABBREVIATIONS:
   - CC - CATION CONDUCTIVITY
   - SC - SPECIFIC CONDUCTIVITY
   - pH - PH
   - DO ≠ DISSOLVED OXYGEN
   - CL - CHLORIDE
   - Na - SODIUM
6. [XXXX] - REFERS TO DELPHI INSTRUMENT DESIGNATION ON ELECTRICAL DRAWING 019131 SH 1 THRU 18.
7. ROUTING OF SAMPLE PANEL DRAINS TO THE SAMPLE SINK OR TO THE DRAIN HEADERS AS SHOWN HERE MAY NOT REFLECT ACTUAL PLANT CONFIGURATION.

FSAR FIGURE 10.4-20

THIS DRAWING CREATED ELECTRONICALLY

DRAWING ECE-M1-0222-A REV CP-1
HAS BEEN SPLIT INTO THE FOLLOWING SHEETS:
- M1-0222-A
- M1-0222-C

NON-SAFETY

LUMINANT
CPNPP
GLEN ROSE, TEXAS

FLOW DIAGRAM
SECONDARY SAMPLING
SYSTEM

DWG NO. M1-0222 | SH NO. C | REV. CP-22

REF CKD CP-11 1/8/97

$$$$$$$DATE$$$$$$

me932500.dgn

< FINAL PRINT >

| REV | DWN | CHKD | APVD | REMARKS |
|---|---|---|---|---|
| CP-21 | SM 09-17 2009 | JRMC 09-17 2009 | | THIS DRAWING REVISED TO INCORPORATE DESIGN CHANGE FDA 2003-001127-01-00 PER SK-0031-03-001127-01-00. |

NOTES:

1. ALL EQUIPMENT WITHIN LINE SUPPLIED BY DELPHI INDUSTRIES.
2. FOR MECHANICAL SYMBOLS AND NOTES SEE DRAWING M1-0200.
3. FOR NUMBERS SHOWN IN (XX) SEE BILL OF MATERIAL DELPHI DWG 19100 SHT 1 THRU 5.
4. SIGNAL TO Na + ANALYZERS SOLENOID.
5. DELETED
6. ABBREVIATIONS:
   CC - CATION CONDUCTIVITY
   SC - SPECIFIC CONDUCTIVITY
   PH - PH
   DO - DISSOLVED OXYGEN
   C - CHLORIDE
   CLSP - CONDENSATE STORAGE TANK SAMPLE PANEL
   ALSP - ATMOSPHERIC DRAIN TANK LOCAL SAMPLE PANEL
7. [XXXX]- REFERS TO DELPHI INSTRUMENT DESIGNATIONS ON ELECTRICAL DWGS.
8. DELPHI DRAWING 19120 SHEETS 1, 2, AND 3 FOR REFERENCE ONLY.
9. FOR PNEUMATIC CONTROL LOGIC SEE ICD'S M2-2222-01.
10. FLOW INDICATED AT ALL TEST CONNECTIONS, VENTS AND DRAINS SHOULD BE DIRECTED AWAY FROM THE PROCESS PIPING.
11. ROUTING OF SAMPLE PANEL DRAINS TO THE SAMPLE SINK OR TO THE DRAIN HEADERS AS SHOWN HERE MAY NOT REFLECT ACTUAL PLANT CONFIGURATION.
12. VALVES 2SS-0343 AND 2SS-0344 ARE 3/8 " WHITEY VALVES, MODEL SS-1RS6.
13. THERMAL SHUT-OFF VALVE BY SENTRY EQUIPMENT CORPORATION.

FSAR FIGURE 10.4-20

THIS DRAWING CREATED ELECTRONICALLY

2323-M2-0222 CP-2
DRAWING TNE-M2-0222-01 REV CP-2
HAVE BEEN REDRAWN INTO THE FOLLOWING:
M2-0222
M2-0222-01

CLASS II

LUMINANT
CPNPP
GLEN ROSE, TEXAS

FLOW DIAGRAM
SECONDARY SAMPLING
SYSTEM

DWG. NO. M2-0222 | SH. NO. - | REV. CP-21

$$$$SSD ATES$$$$

me939400.dgn A M2-0222 B C D E F G < FINAL PRINT > H

| REV | DWN | CHKD | APVD | REMARKS |
|---|---|---|---|---|
| CP-22 | JRMC 09-09 2014 | DJL 09-09 2014 | | THIS DRAWING REVISED TO INCORPORATE DESIGN CHANGE FDA-2014-000192-01-00 PER SK-0001-14-000192-01-00. |

NOTES:

1. ALL EQUIPMENT WITHIN LINE SUPPLIED BY DELPHI INDUSTRIES.
2. FOR MECHANICAL SYMBOLS & NOTES SEE DWG M1-0200.
3. FOR NUMBERS SHOWN IN (XX) SEE BILL OF MATERIAL DELPHI DWG 19100 SHT 1-5.
4. SIGNAL TO Na + ANALYZERS SOLENOID.
5. DELETED
6. ABBREVIATIONS:
   CC - CATION CONDUCTIVITY
   SC - SPECIFIC CONDUCTIVITY
   PH - PH
   DO - DISSOLVED OXYGEN
   C - CHLORIDE
7. [XXXX]- REFERS TO DELPHI INSTRUMENT DESIGNATIONS ON ELECTRICAL DWGS.
8. DELPHI DRAWING 19120 SHEETS 1, 2, AND 3 FOR REFERENCE ONLY.
9. FOR PNEUMATIC CONTROL LOGIC SEE ICD'S M2-2222-01.
10. ROUTING OF SAMPLE PANEL DRAINS TO THE SAMPLE SINK OR TO THE DRAIN HEADERS AS SHOWN HERE MAY NOT REFLECT ACTUAL PLANT CONFIGURATION.

| 2323-M2-0222 | REV CP-2 |
|---|---|
| DRAWING TNE-M2-0222-01 | REV CP-2 |
| HAVE REDRAWN INTO THE FOLLOWING: | |
| M2-0222 | REV CP-3 |
| M2-0222-01 | REV CP-3 |

FSAR FIGURE 10.4-20

THIS DRAWING CREATED ELECTRONICALLY

CLASS II

LUMINANT
CPNPP
GLEN ROSE, TEXAS

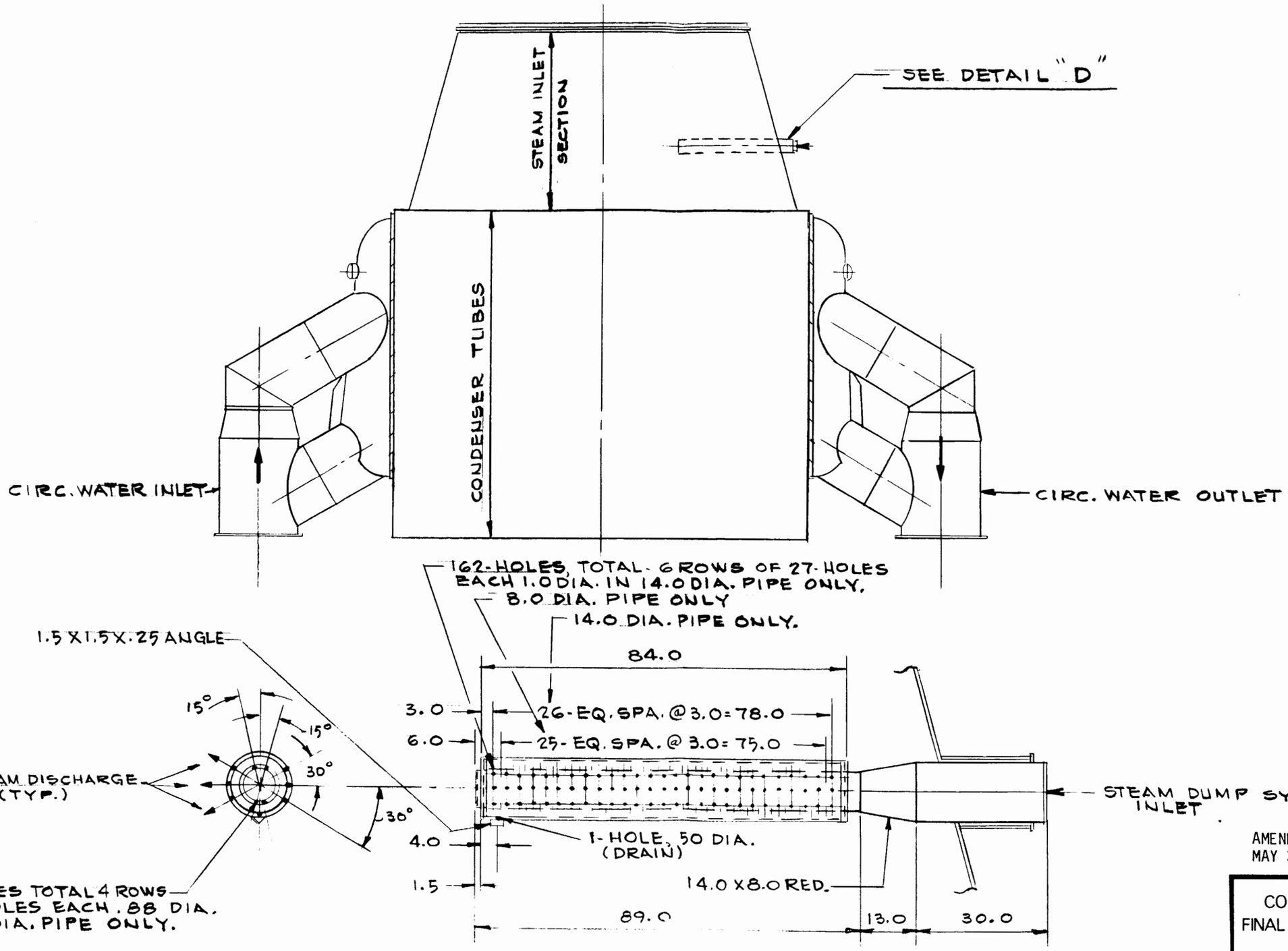
FLOW DIAGRAM
SECONDARY SAMPLING
SYSTEM

| DWG. NO. | SH. NO. | REV. |
|---|---|---|
| M2-0222 | 01 | CP-22 |

< FINAL PRINT >

SSSSSSSDATESSSSSS REF CKD CP II 2-96

me939500.dgn A M2-0222-01 B C D E F G H




DETAIL "D"

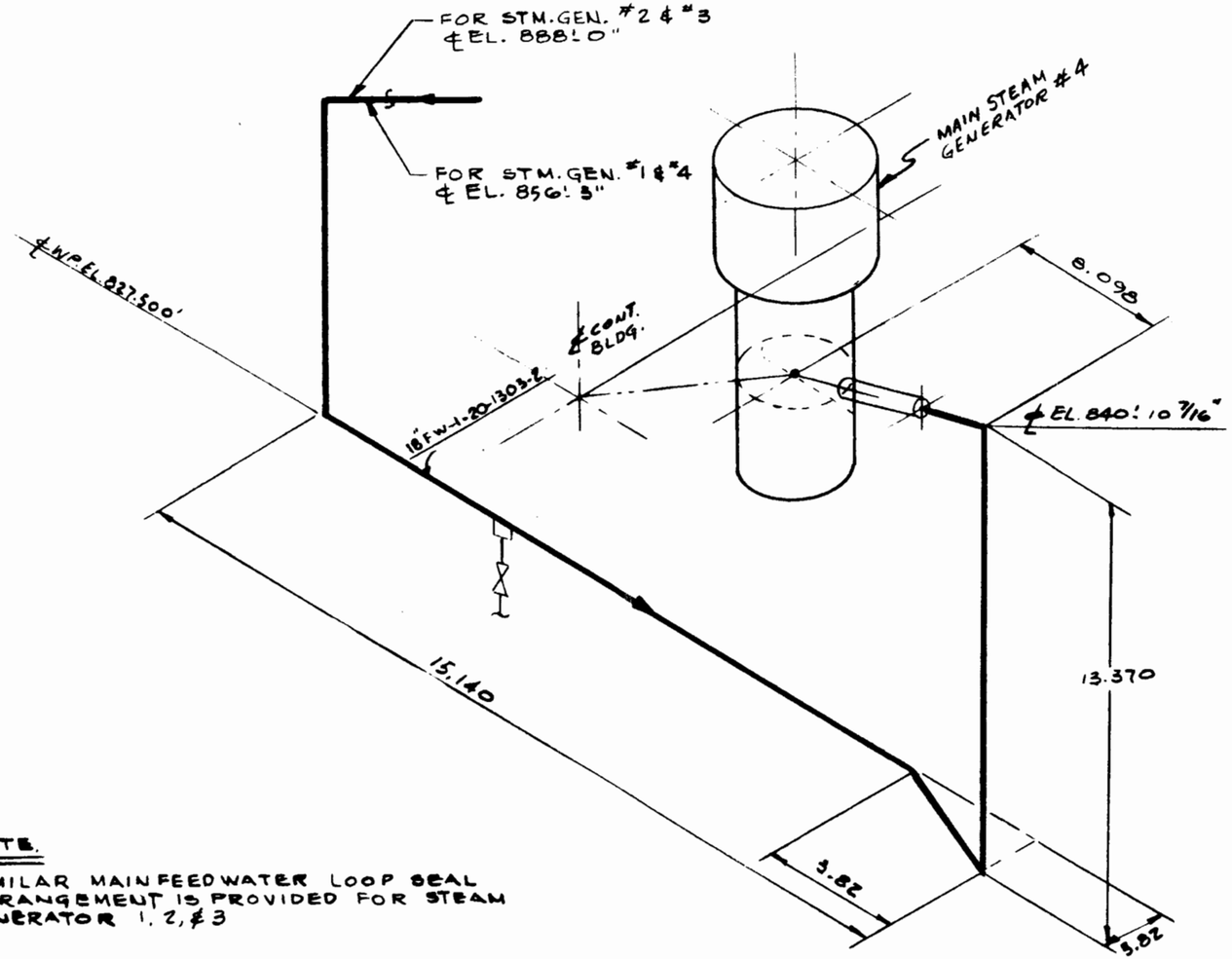
AMENDMENT 6
MAY 31, 1979

COMANCHE PEAK S.E.S.
FINAL SAFETY ANALYSIS REPORT
UNITS 1 and 2

Steam Dump System
Discharge Into Condenser

FIGURE 10.4-21

S/78




NOTE.

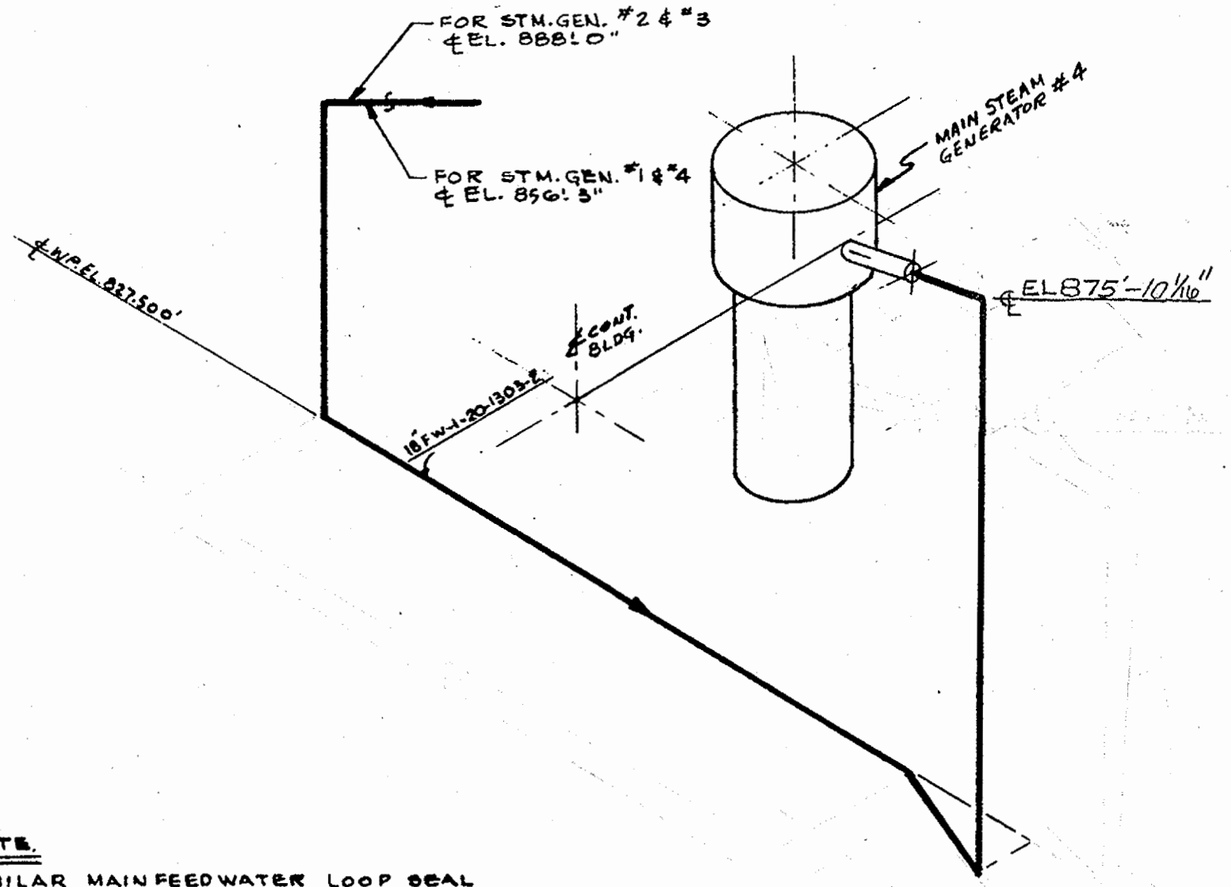
SIMILAR MAIN FEEDWATER LOOP SEAL ARRANGEMENT IS PROVIDED FOR STEAM GENERATOR 1, 2, & 3

AMENDMENT 10
MARCH 31, 1980

COMANCHE PEAK S.E.S.
FINAL SAFETY ANALYSIS REPORT
UNITS 1 and 2

MAIN FEEDWATER
LOOP SEAL ARRANGEMENT

FIGURE 10.4-22




NOTE.

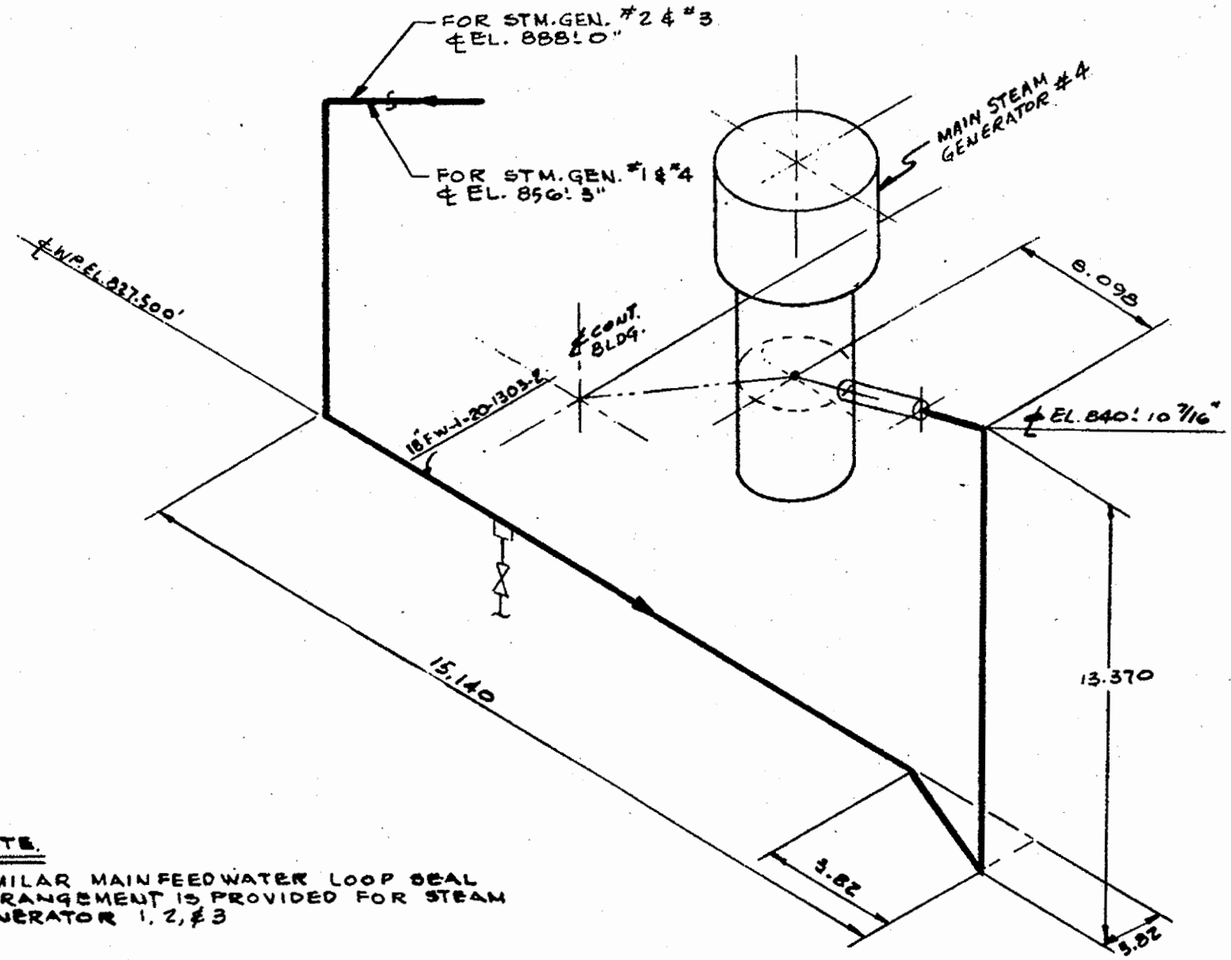
SIMILAR MAIN FEEDWATER LOOP SEAL ARRANGEMENT IS PROVIDED FOR STEAM GENERATOR 1, 2, & 3

Amendment 102

COMANCHE PEAK S.E.S.
FINAL SAFETY ANALYSIS REPORT
UNIT 1

MAIN FEEDWATER
LOOP SEAL ARRANGEMENT

FIGURE 10.4-22A




NOTE.

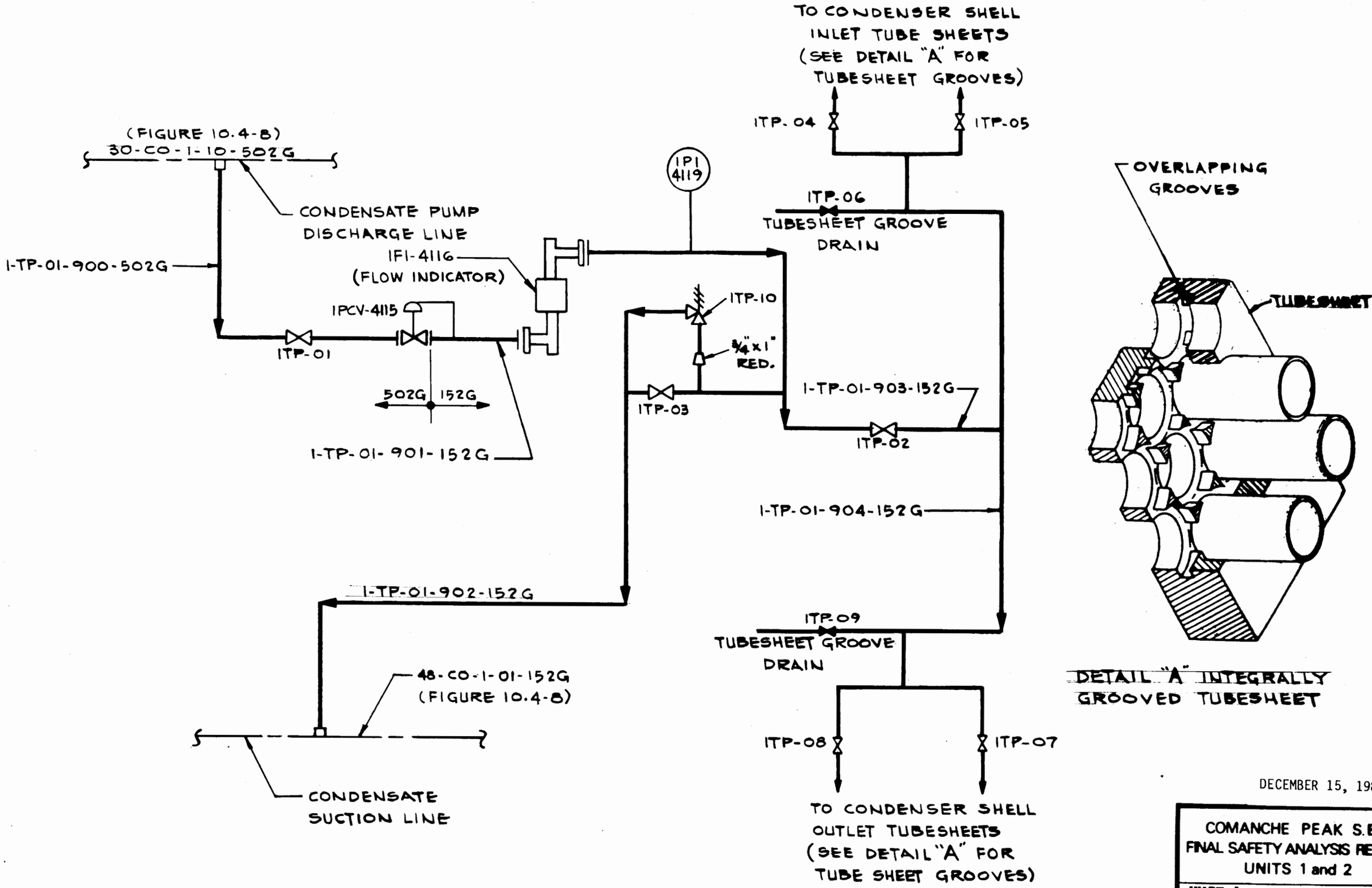
SIMILAR MAIN FEEDWATER LOOP SEAL ARRANGEMENT IS PROVIDED FOR STEAM GENERATOR 1, 2, & 3

Amendment 102

COMANCHE PEAK S.E.S.
FINAL SAFETY ANALYSIS REPORT
UNIT 2

MAIN FEEDWATER
LOOP SEAL ARRANGEMENT

FIGURE 10.4-22B




REF. DCA-4028 IMO-799

DECEMBER 15, 1980

COMANCHE PEAK S.E.S.
FINAL SAFETY ANALYSIS REPORT
UNITS 1 and 2

UNIT 1
INTEGRALLY GROOVED TUBE SHEET PRESSURIZATION SYS.

FIGURE 10.4-23

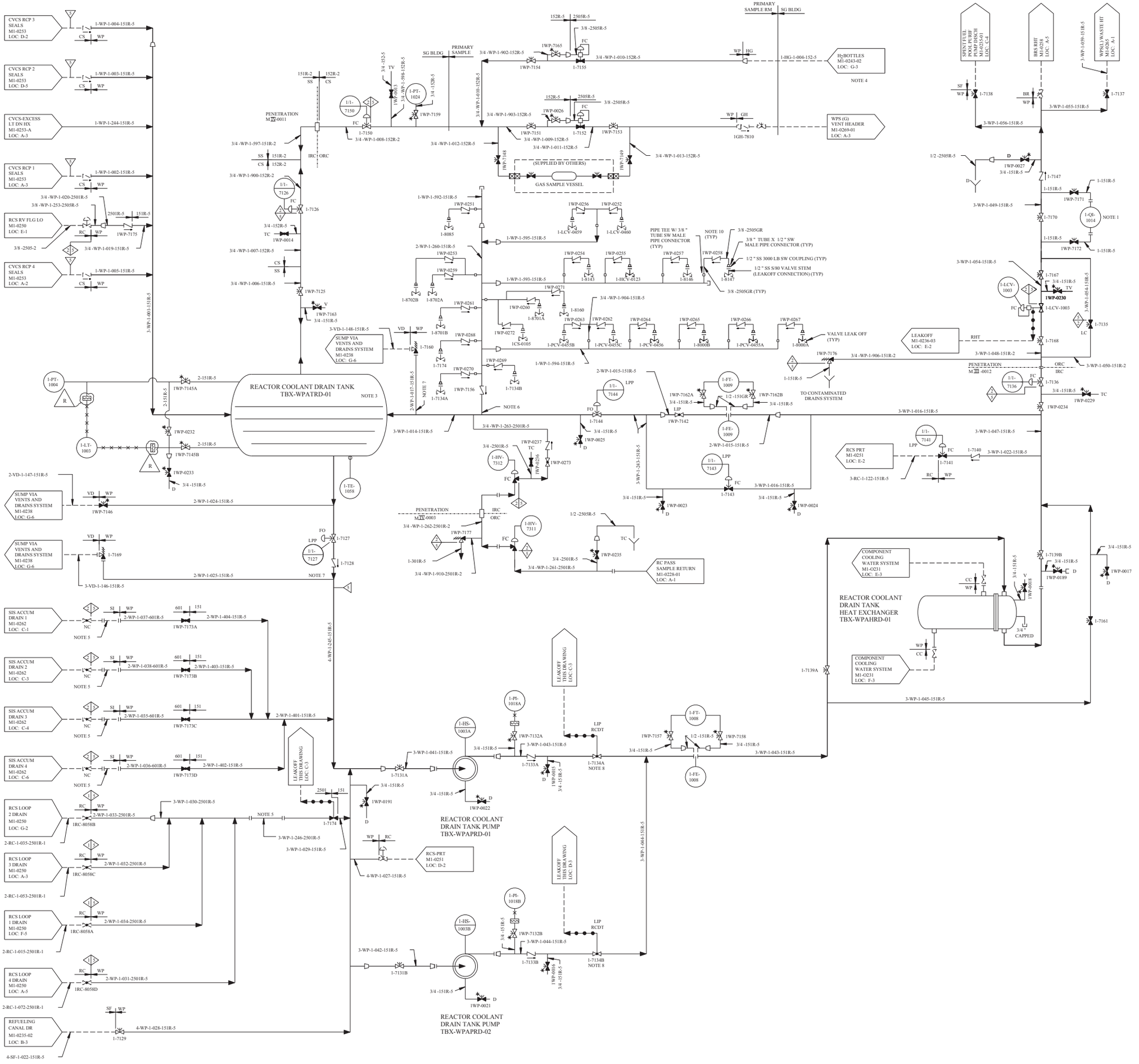
FIGURE 11.2-1 HAS BEEN DELETED. 77



COMANCHE PEAK S.E.S.
FINAL SAFETY ANALYSIS REPORT
UNITS 1 and 2

PROCESS FLOW SHEET

FIGURE 11.2-1




| REV | DWN | CHK | APVD | REMARKS |
|---|---|---|---|---|
| CP-19 | GLC 09-13 2005 | MM 09-13 2005 | | THIS DRAWING REVISED TO INCORPORATE DESIGN CHANGE FDA 2003-002730-01-00 PER SK-0006-03-002730-01-00. |

NOTES:

1. FOR PERIODIC PLANT LEAKAGE EVALUATION.
2. THIS PORTION OF THE LWPS IS FOR UNIT 1. IDENTICAL EQUIPMENT IS FURNISHED FOR UNIT 2.
3. TANK INLET AND RECIRCULATION CONNECTION ARE BELOW THE NORMAL WATER LEVEL.
4. LIMIT AVAILABLE H SUPPLY TO TWO STANDARD BOTTLES. PRESSURE REGULATOR SUPPLIED ON BOTTLES TO BE SET AT 5 PSIG. PROVIDE A RELIEF VALVE AT EXIT OF THE REGULATOR AND SET AT 100 PSIG.
5. SPOOL PIECE NORMALLLY REMOVED. ONLY TO BE INSTALLED WHEN DRAINING AFTER DEPRESSURIZATION.
6. PIPE LENGTH DOWNSTREAM OF THIS POINT TO BE AS LONG AS PRACTICABLE.
7. MAKE CONNECTION ON SIDE OR BOTTOM.
8. THROTTLE VALVE TO PREVENT PUMP RUNOUT DURING DRAIN.
9. INDICATES HERMETICALLY SEALED VALVE.
10. CHECK VALVE MUST BE INSTALLED IN A HORIZONTAL RUN WITH THE UNION NUT ON TOP.

REFERENCE NOTES

THIS FLOW DIAGRAM HAS BEEN REDRAWN FROM WESTINGHOUSE DRAWING 1138E99 REV 5 WITH EXCEPTIONS AS FOLLOWS:

A. VALVES AND LINE NUMBERS HAVE BEEN ADDED.

B. CONTROL LOOPS HAVE BEEN DELETED EXCEPT FOR THE PRIMARY AND THE FINAL ELEMENTS. THE DETAILS OF THE CONTROL LOOPS WILL BE SHOWN ON INSTRUMENTATION AND CONTROL DIAGRAM.

C. PLANT SPECIFIC ADDITIONS TO THE WESTINGHOUSE DIAGRAM HAVE BEEN MADE.

FSAR FIGURE 11.2-2

THIS DRAWING CREATED ELECTRONICALLY

CLASS I
(NUCLEAR SAFETY-RELATED)
SAFETY CLASS 1 — SEISMIC CATEGORY I
SAFETY CLASS 2 — CLASS 1E
SAFETY CLASS 3 — ASSOCIATED CIRCUITS

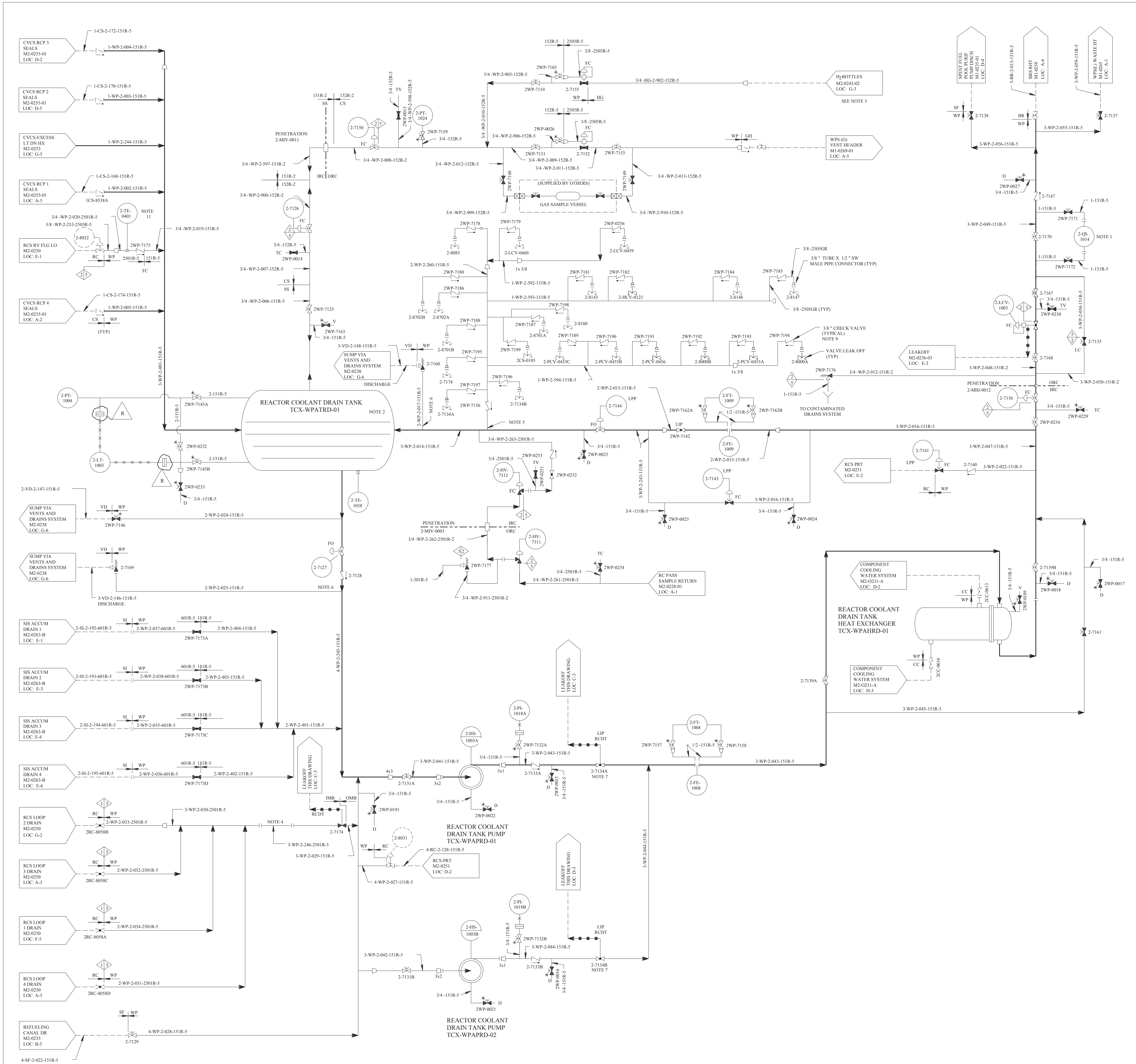
LUMINANT
CPSES
GLEN ROSE, TEXAS

LIQUID WASTE PROCESSING
FLOW DIAGRAM
REACTOR COOLANT
DRAIN TANK SUBSYSTEM

| DWG. NO. | SH. NO. | REV. |
|---|---|---|
| M1-0264 | - | CP-19 |

REF CKD 2/6/97 CP-16

me619200.dgn A M1-0264 B C D E F G FINAL PRINT H




| REV | DWN | CHKD | APVD | REMARKS |
|---|---|---|---|---|
| CP-11 | DLK 09-13 2005 | MM 09-13 2005 | | THIS DRAWING REVISED TO INCORPORATE DESIGN CHANGE FDA 2003-002730-01-00 PER SK-0007-03-002730-01-00. |

NOTES:

1. FOR PERIODIC PLANT LEAKAGE EVALUATION.
2. TANK INLET AND RECIRCULATION CONNECTIONS ARE BELOW THE NORMAL WATER LEVEL.
3. LIMIT AVAILABLE H SUPPLY TO TWO STANDARD BOTTLES. PRESSURE REGULATOR SUPPLIED ON BOTTLES TO BE SET AT 5 PSIG. PROVIDE A RELIEF VALVE AT EXIT OF THE REGULATOR AND SET AT 100 PSIG.
4. SPOOL PIECE NORMALLY REMOVED. ONLY TO BE INSTALLED WHEN DRAINING AFTER DEPRESSURIZATION.
5. PIPE LENGTH DOWNSTREAM OF THIS POINT TO BE AS LONG AS PRACTICABLE.
6. MAKE CONNECTION ON SIDE OR BOTTOM.
7. THROTTLE VALVE TO PREVENT PUMP RUNOUT DURING DRAIN.
8. FOR GENERAL AND MECHANICAL NOTES SEE DWG M1-0200.
9. CHECK VALVE MUST BE INSTALLED IN A HORIZONTAL RUN WITH THE UNION NUT ON TOP.
10. UNLESS OTHERWISE NOTED ALL DRAINS COLLECTED BY LOCAL DRAIN SYSTEM.
11. STRAP-ON (SURFACE MOUNTED) RTD LOCATED AT BOTTOM OF PIPE AND LOCATED AS CLOSE TO VALVE 2-8032 AS PRACTICABLE.

REFERENCES

THIS FLOW DIAGRAM HAS BEEN REDRAWN FROM WESTINGHOUSE DWG 1138E99 REV 7 WITH EXCEPTIONS AS FOLLOWS:

a. VALVES AND LINE NUMBERS HAVE BEEN ADDED.
b. CONTROL LOOPS HAVE BEEN DELETED EXCEPT FOR THE PRIMARY AND THE FINAL ELEMENTS. THE DETAILS OF THE CONTROL LOOPS WILL BE SHOWN ON THE INSTRUMENTATION AND CONTROL DIAGRAM.
c. PLANT SPECIFIC ADDITIONS TO THE WESTINGHOUSE DIAGRAM HAVE BEEN MADE.

FSAR FIGURE 11.2-2

THIS DRAWING CREATED ELECTRONICALLY

CLASS I

(NUCLEAR SAFETY-RELATED)

SAFETY CLASS 1 SEISMIC CATEGORY I
SAFETY CLASS 2 CLASS 1E
SAFETY CLASS 3 ASSOCIATED CIRCUITS

LUMINANT
CPSES
GLEN ROSE, TEXAS

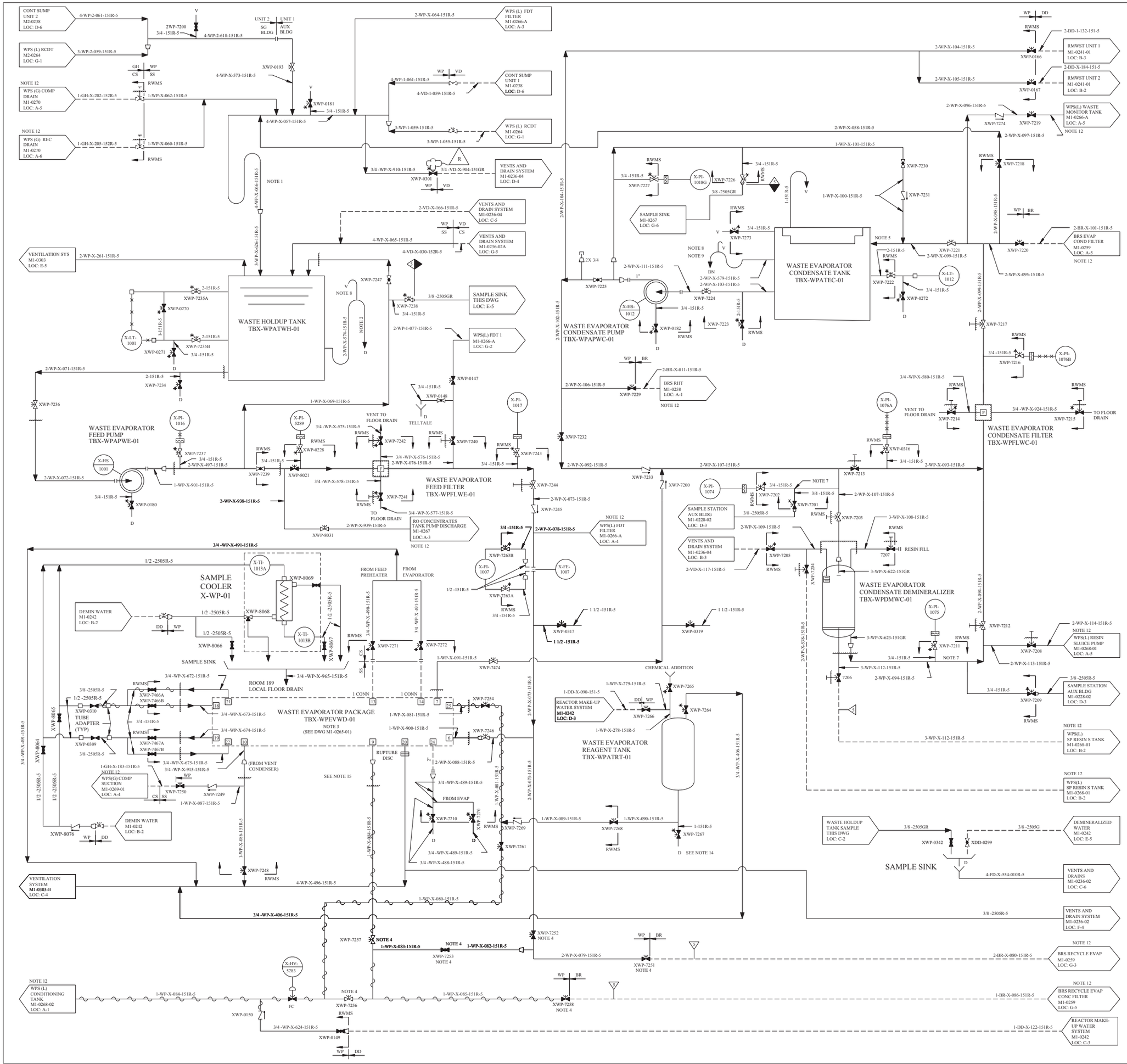
LIQUID WASTE PROCESSING
FLOW DIAGRAM
REACTOR COOLANT
DRAIN TANK SUBSYSTEM

| DWG. NO. | SH. NO. | REV. |
|---|---|---|
| M2-0264 | - | CP-11 |

FINAL PRINT

REF CKD 2/5/97 CP-8

me619400.dgn M2-0264




| REV | DWN | CHK | APVD | REMARKS |
|---|---|---|---|---|
| CP-31 | Mkd 06-23-2005 | DLK 06-23-2005 | | THIS DRAWING REVISED TO INCORPORATE DESIGN CHANGE FDA-2004-000686-01-00 PER SK-0001-04-000686-01-00. |

NOTES:

1. LOOP SEAL TO EXTEND 12 INCHES BELOW AND ABOVE PIPE.
2. LOWER LOOP TO EXTEND 12 INCHES BELOW OVERFLOW CONNECTION AND TOP LOOP TO EXTEND TO TOP OF TANK.
3. FOR DETAILS REGARDING LINE SIZES AND NUMBER OF CONNECTIONS REFER TO WESTINGHOUSE DRAWING 730J376. NUMBERS INDICATED THUS ☐ REFER TO WESTINGHOUSE DRAWING NUMBER 4667D55.
4. LOCATE THESE VALVES AS CLOSE TOGETHER AS POSSIBLE.
5. CONNECTION LOCATED NEAR TANK BOTTOM TO PREVENT FLOW IMPINGEMENT ON DIAPHRAGM.
6. EQUIPMENT SHOWN IS COMMON FOR UNIT 1 AND UNIT 2.
7. LOCATE SAMPLE LINE CLOSE TO PROCESS LINE FOR REPRESENTATIVE SAMPLE.
8. SIPHON BREAKER LOCATED TOP OF TOP LOOP.
9. LOWER LOOP TO EXTEND 12 INCHES BELOW OVERFLOW CONNECTION AND TOP LOOP TO EXTEND 6 INCHES BELOW DIAPHRAGM FLANGE.
10. FOR MECHANICAL NOTES AND SYMBOLS SEE DRAWING M1-0200.
11. DELETED
12. DENOTES RADIOACTIVE WASTE MANAGEMENT SYSTEM CONTINUES ON IDENTIFIED DRAWING.
13. UNLESS OTHERWISE NOTED, ALL DRAINS COLLECTED BY LOCAL DRAIN SYSTEM TO DRAIN CHANNEL B.
14. DRAIN TO BE LOCALLY COLLECTED UNDER ADMINISTRATIVE CONTROL AND TRANSFERRED TO CHEMICAL SUMP IN TURBINE BUILDING.
15. WHEN LINES IN THE WASTE PROCESSING SYSTEM ARE NOT BEING USED FOR THE TRANSFER OF LIQUID CONTAINING CONCENTRATED BORIC ACID (UP TO 12% BY WEIGHT PER DBD-ME-0264), THE HEAT TRACING SET POINT MAY BE LOWER THAN 170 DEGREES F. SETPOINTS MAY BE SET FOR FREEZE PROTECTION WHEN THE LINE IS NOT IN USE, OR CONTAINS BORIC ACID SOLUTION (4% BY WEIGHT OR LESS).

REFERENCE DRAWINGS

THIS FLOW DIAGRAM HAS BEEN REDRAWN FROM WESTINGHOUSE DRAWING 1139E00 SHEET 1 OF 4, REV 5 WITH EXCEPTIONS AS FOLLOWS:

a. VALVE AND LINE NUMBERS HAVE BEEN ADDED.

b. CONTROL LOOPS HAVE BEEN DELETED EXCEPT FOR THE PRIMARY AND FINAL ELEMENTS. DETAILS OF THE CONTROL LOOPS WILL BE SHOWN ON INSTRUMENTATION AND CONTROL DIAGRAM.

c. PLANT SPECIFIC ADDITIONS TO THE ABOVE WESTINGHOUSE DIAGRAM HAVE BEEN MADE.

FSAR FIGURE 11.2-3

THIS DRAWING CREATED ELECTRONICALLY

# CLASS II

LUMINANT
CPSES
GLEN ROSE, TEXAS

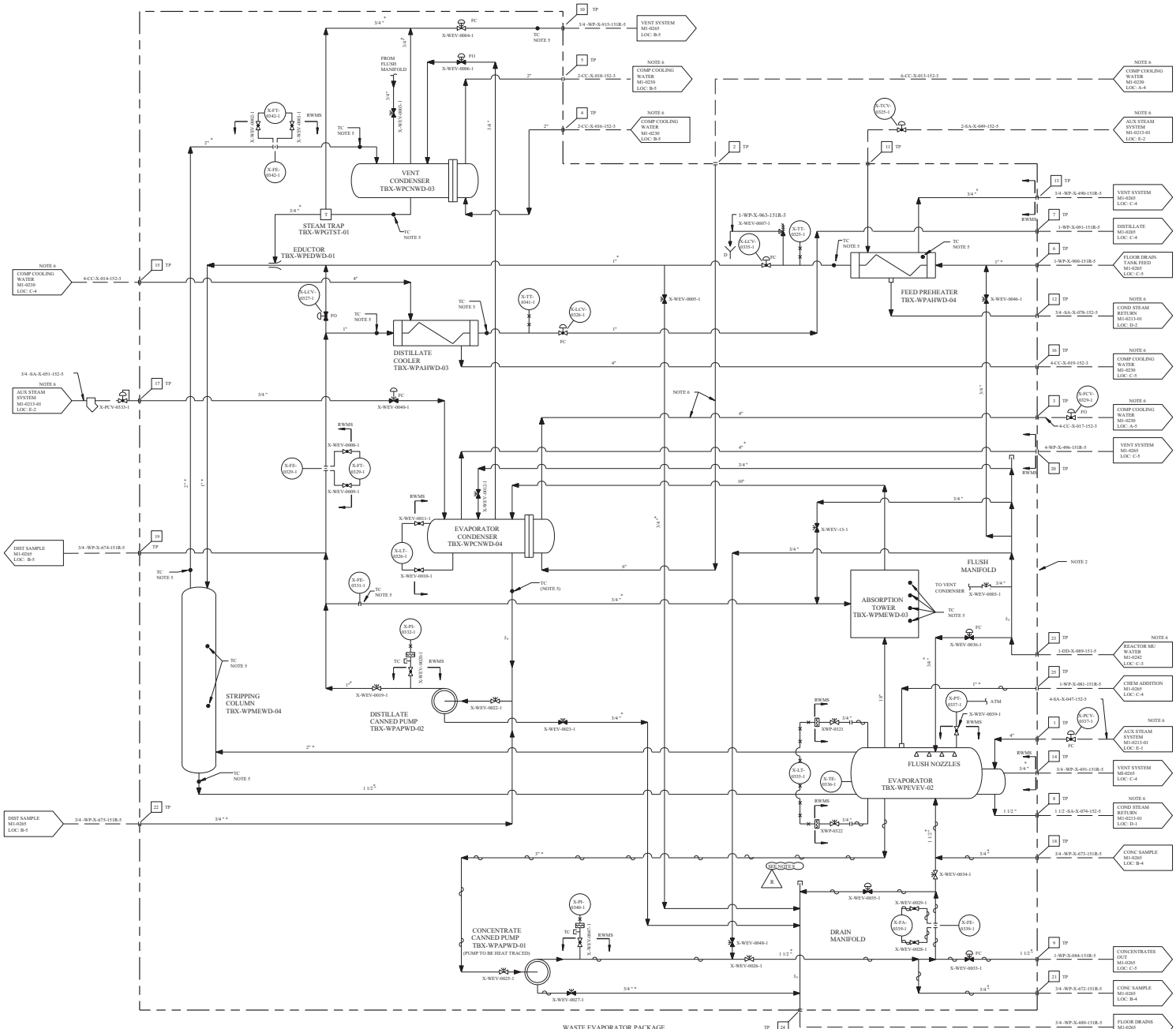
FLOW DIAGRAM
LIQUID WASTE PROCESSING
DRAIN CHANNEL A

| DWG. NO. | SH. NO. | REV. |
|---|---|---|
| M1-0265 | - | CP-31 |

FINAL PRINT

REF CKD CP-27 10/17/97

me609300.dgn A M1-0265 B C D E F G H




| REV | DWN | CHKD | APVD | REMARKS |
|---|---|---|---|---|
| CP-11 | BD 04/07/2003 | BD 04/07/2003 | | THIS DRAWING REVISED TO INCORPORATE DESIGN CHANGE FDA-2001-000701-01-00 PER SK-0000-01-000701-01-00. |

NOTES:

1. FOR MECHANICAL NOTES AND SYMBOLS, SEE DRAWING M1-0200.
2. 15 GPM WASTE EVAPORATOR SUPPLY BY WESTINGHOUSE, DRAWING 4607055, PIPING AND EQUIPMENT SUPPLIED ON A SKID, SHOP ORDER NO. 232, WNES SPIN NO. TBX-WPEVWD-01.
3. ALL LINES MARKED WITH * ARE CLASS 151R. THIS IS A DESIGNATION ONLY AND NO ADDITIONAL INSPECTION HAS BEEN PERFORMED ON THIS PIPING. ALL OTHER PIPE IS CLASS 151.
4. TP INDICATES TERMINAL POINT AND NOZZLE NUMBER ON EVAPORATOR, SEE WESTINGHOUSE DRAWING 7303376, R-10.
5. TC INDICATES TEST CONNECTIONS FOR FIELD TEST, 1/2 " NPT PLUGGED BOSSES.
6. VD, CC, SA, DD SYSTEMS, INTERFACING WITH WP SYSTEM, ARE NOT PART OF THE RADIOACTIVE WASTE MANAGEMENT SYSTEM (RWMS).
7. FOR INSTALLATION DETAILS OF INSTRUMENTATION FOR THE EVAPORATOR SKID, SEE WESTINGHOUSE DRAWING 7371885, R-1A.
8. FOR EQUIPMENT LOGIC DIAGRAM, SEE INSTRUMENTATION AND CONTROL DIAGRAM NO. TNE-M1-2265-SERIES.
9. WHEN LINES IN THE WASTE PROCESSING SYSTEM ARE NOT BEING USED FOR THE TRANSFER OF LIQUID CONTAINING CONCENTRATED BORIC ACID (UP TO 12% BY WEIGHT PER DBD-ME-0264), THE HEAT TRACING SET POINT MAY BE LOWER THAN 170 DEGREES F. SETPOINTS MAY BE SET FOR FREEZE PROTECTION WHEN THE LINE IS NOT IN USE, OR CONTAINS BORIC ACID SOLUTION (4% BY WEIGHT OR LESS).

FSAR FIGURE 11.2-3

THIS DRAWING IS RELATED ELECTRONICALLY

CLASS I
(NUCLEAR SAFETY-RELATED)
SAFETY CLASS 1 — SEISMIC CATEGORY I
SAFETY CLASS 2 — CLASS 1E ASSOCIATED CIRCUITS
SAFETY CLASS 3

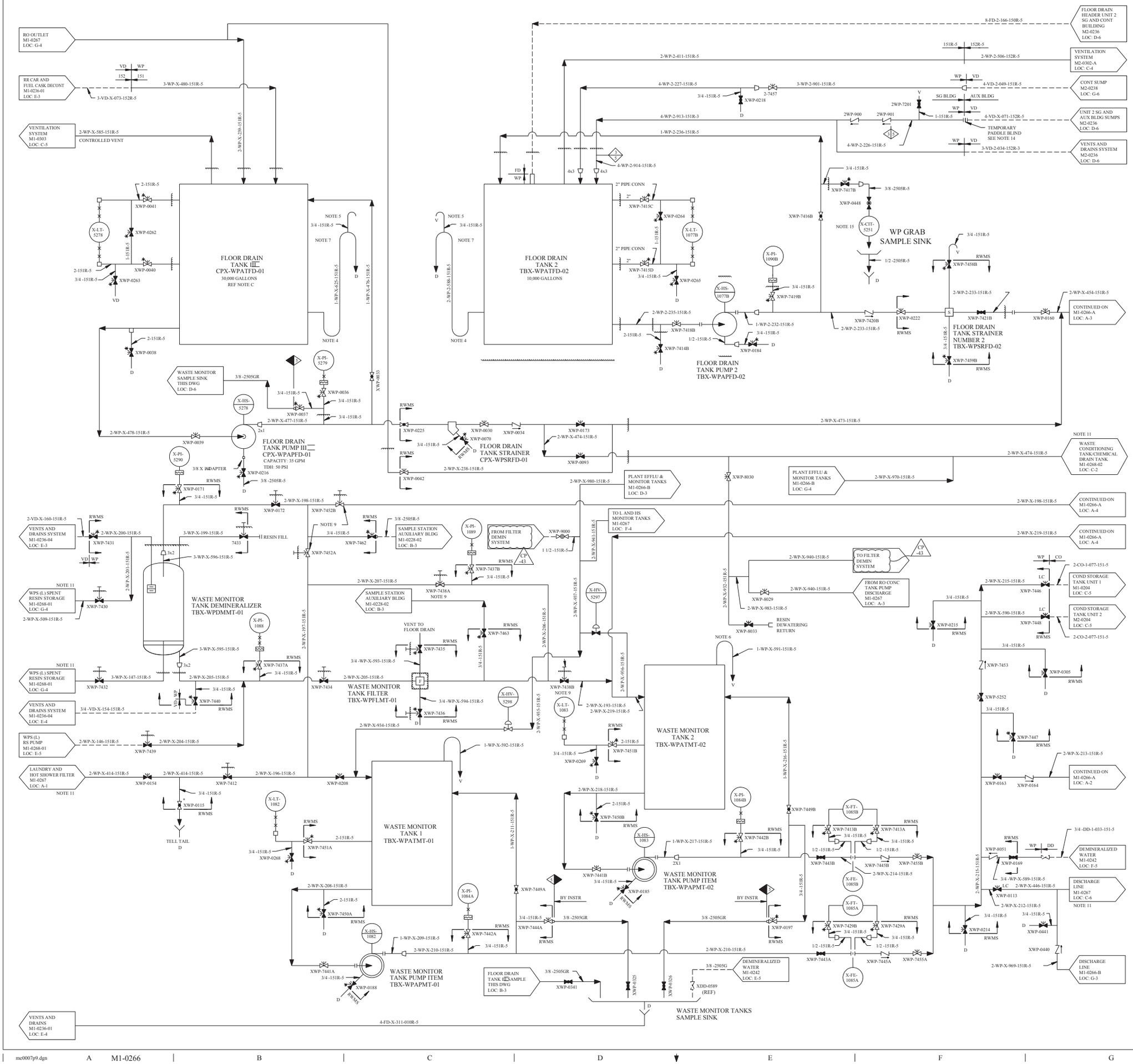
TXU ELECTRIC
CPSES
GLEN ROSE, TEXAS

FLOW DIAGRAM
LIQUID WASTE PROCESSING
DRAIN CHANNEL A

| DWG. NO. | SH. NO. | REV. |
|---|---|---|
| M1-0265 | 01 | CP-11 |

mc340100.dgm A M1-0265-01

$$$$$$$DATE$$$$$$$




| REV | DWN | CHKD | APVD | REMARKS |
|---|---|---|---|---|
| CP-43 | HAC 12-09-2010 | | | THIS DRAWING REVISED TO INCORPORATE EDITORIAL CHANGES AS NOTED AND AI-2010-01019-1. |

NOTES:

1. FOR MECHANICAL SYMBOLS AND NOTES SEE DRAWING M1-0200.
2. DELETED
3. THESE VALVES ARE OF THE HERMETICALLY-SEALED TYPE.
4. LOWER LOOP TO EXTEND 12 INCHES BELOW CONNECTION AND TOP LOOP TO EXTEND ABOVE HIGHEST ELEVATION OF OVERFLOW.
5. LOCATE SIPHON AT TOP OF LOOP.
6. VENT LINE TO BE NOT MORE THAN 12 INCHES ABOVE FLOOR.
7. ASSURE PIPING IS AT HIGHER ELEVATION THAN TANK TO PREVENT DRAINING TANK.
8. EQUIPMENT ON THIS DRAWING IS COMMON TO UNITS 1 AND 2, WITH THE EXCEPTION OF EQUIPMENT PER NOTE 2.
9. LOCATE THESE VALVES AS CLOSE TOGETHER AS POSSIBLE.
10. DELETED
11. INDICATES RADIOACTIVE WASTE MANAGEMENT SYSTEM CONTINUES ON IDENTIFIED DRAWING.
12. UNLESS OTHERWISE NOTED, DRAINS COLLECTED BY LOCAL DRAINS SYSTEM.
13. DELETED
14. THIS PADDLE BLIND TO BE REMOVED ONLY AT THE DIRECTION OF NUCLEAR OPERATIONS.
15. CONDUCTIVITY ANALYZER MAY BE USED IN LIEU OF GRAB SAMPLE.

REFERENCE NOTE:

THIS FLOW DIAGRAM HAS BEEN REDRAWN FROM WESTINGHOUSE DRAWING 1139E00 SH 3 AND 4 OF 4 REV 5 WITH EXCEPTIONS AS FOLLOWS:

a. VALVES AND LINE NUMBERS HAVE BEEN ADDED.

b. CONTROL LOOPS HAVE BEEN DELETED EXCEPT FOR THE PRIMARY AND FINAL ELEMENTS. DETAIL OF THE CONTROL LOOPS WILL BE SHOWN ON INSTRUMENTATION AND CONTROL DIAGRAM.

c. PLANT SPECIFIC ADDITIONS TO THE ABOVE REFERENCED WESTINGHOUSE DIAGRAM HAVE BEEN MADE.

DRAWING M1-0266 REV CP-20
HAS BEEN SPLIT INTO THE FOLLOWING SHEETS:
M1-0266
M1-0266-B

DRAWING 2323-M1-0266 REV CP-8
HAS BEEN SPLIT INTO THE FOLLOWING SHEETS:
M1-0266
M1-0266-A

**CLASS I**
(NUCLEAR SAFETY-RELATED)
SAFETY CLASS 1 — SEISMIC CATEGORY I
SAFETY CLASS 2 — CLASS 1E
SAFETY CLASS 3 — ASSOCIATED CIRCUITS

LUMINANT
CPNPP
GLEN ROSE, TEXAS

FLOW DIAGRAM
LIQUID WASTE PROCESSING
DRAIN CHANNEL B

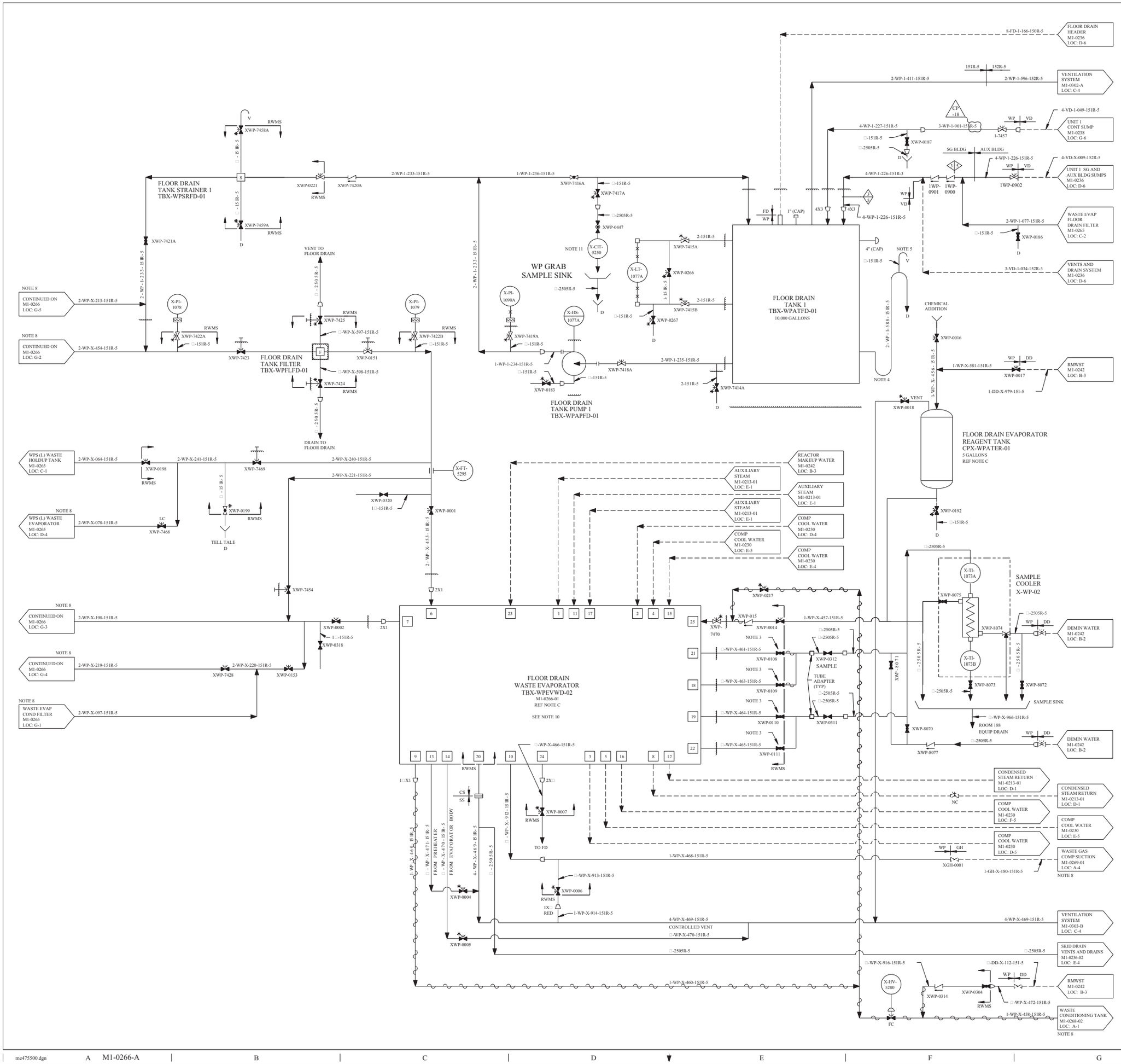
DWG. NO. M1-0266 | SH. NO. - | REV. CP-43

FSAR FIGURE 11.2-4

THIS DRAWING CREATED ELECTRONICALLY

REF CHKD 8-19-2003

me0007p9.dgn | M1-0266 | FINAL PRINT




| REV | DWN | CHK | APVD | REMARKS |
|---|---|---|---|---|
| CP-18 | DLK 10-28-2015 | GAW 10-28-2015 | MHF 10-29-2015 | THIS DRAWING REVISED TO INCORPORATE AI-CR-2015-010410-1 TO EDITORIALLY ADD R TO LINE NUMBER 3-WP-1-901-151-5. |

NOTES:

1. FOR MECHANICAL SYMBOLS AND NOTES SEE DRAWING M1-0200.
2. VALVES XWP-7468 AND XWP-7469 (LOCATION B-3) ARE Q-VALVES WHICH REPLACED WESTINGHOUSE ORIGINALLY SUPPLIED NON-Q VALVES, XWP-0202 AND XWP-7427 RESPECTIVELY.
3. * THESE VALVES ARE OF THE HERMETICALLY-SEALED TYPE.
4. LOWER LOOP TO EXTEND 12 INCHES BELOW CONNECTION AND TOP LOOP TO EXTEND ABOVE HIGHEST ELEVATION OF OVERFLOW.
5. LOCATE SIPHON BREAKER AT TOP OF LOOP.
6. DELETED
7. EQUIPMENT ON THIS DRAWING IS COMMON TO UNITS 1 AND 2.
8. INDICATES RADIOACTIVE WASTE MANAGEMENT SYSTEM CONTINUES ON IDENTIFIED DRAWING.
9. UNLESS OTHERWISE NOTED, DRAINS COLLECTED BY LOCAL DRAINING SYSTEM.
10. WHEN LINES IN THE WASTE PROCESSING SYSTEM ARE NOT BEING USED FOR THE TRANSFER OF LIQUID CONTAINING CONCENTRATED BORIC ACID (UP TO 12% BY WEIGHT PER DBD-ME-0264), THE HEAT TRACING SET POINT MAY BE LOWER THAN 170 DEGREES F. SETPOINTS MAY BE SET FOR FREEZE PROTECTION WHEN THE LINE IS NOT IN USE, OR CONTAINS BORIC ACID SOLUTION ( 4% BY WEIGHT OR LESS).
11. CONDUCTIVITY ANALYZER MAY BE USED IN LIEU OF GRAB SAMPLE.

REFERENCE NOTE:

THIS FLOW DIAGRAM HAS BEEN REDRAWN FROM WESTINGHOUSE DRAWING 1139E00 SH 3 AND 4 OF 4 REV 5 WITH EXCEPTIONS AS FOLLOWS:

A) VALVES AND LINE NUMBERS HAVE BEEN ADDED.

B) CONTROL LOOPS HAVE BEEN DELETED EXCEPT FOR THE PRIMARY AND FINAL ELEMENTS. DETAIL OF THE CONTROL LOOPS WILL BE SHOWN ON INSTRUMENTATION AND CONTROL DIAGRAM.

C) PLANT SPECIFIC ADDITIONS TO THE ABOVE REFERENCED WESTINGHOUSE DIAGRAM HAVE BEEN MADE.

FSAR FIGURE 11.2-4

THIS DRAWING CREATED ELECTRONICALLY

DRAWING 2323-M1-0266 REV CP-8
HAS BEEN SPLIT INTO THE FOLLOWING SHEETS:

M1-0266
M1-0266-A

CLASS I
(NUCLEAR SAFETY-RELATED)
SAFETY CLASS 1 SEISMIC CATEGORY I
SAFETY CLASS 2 CLASS 1E
SAFETY CLASS 3 ASSOCIATED CIRCUITS

LUMINANT
CPNPP
GLEN ROSE, TEXAS

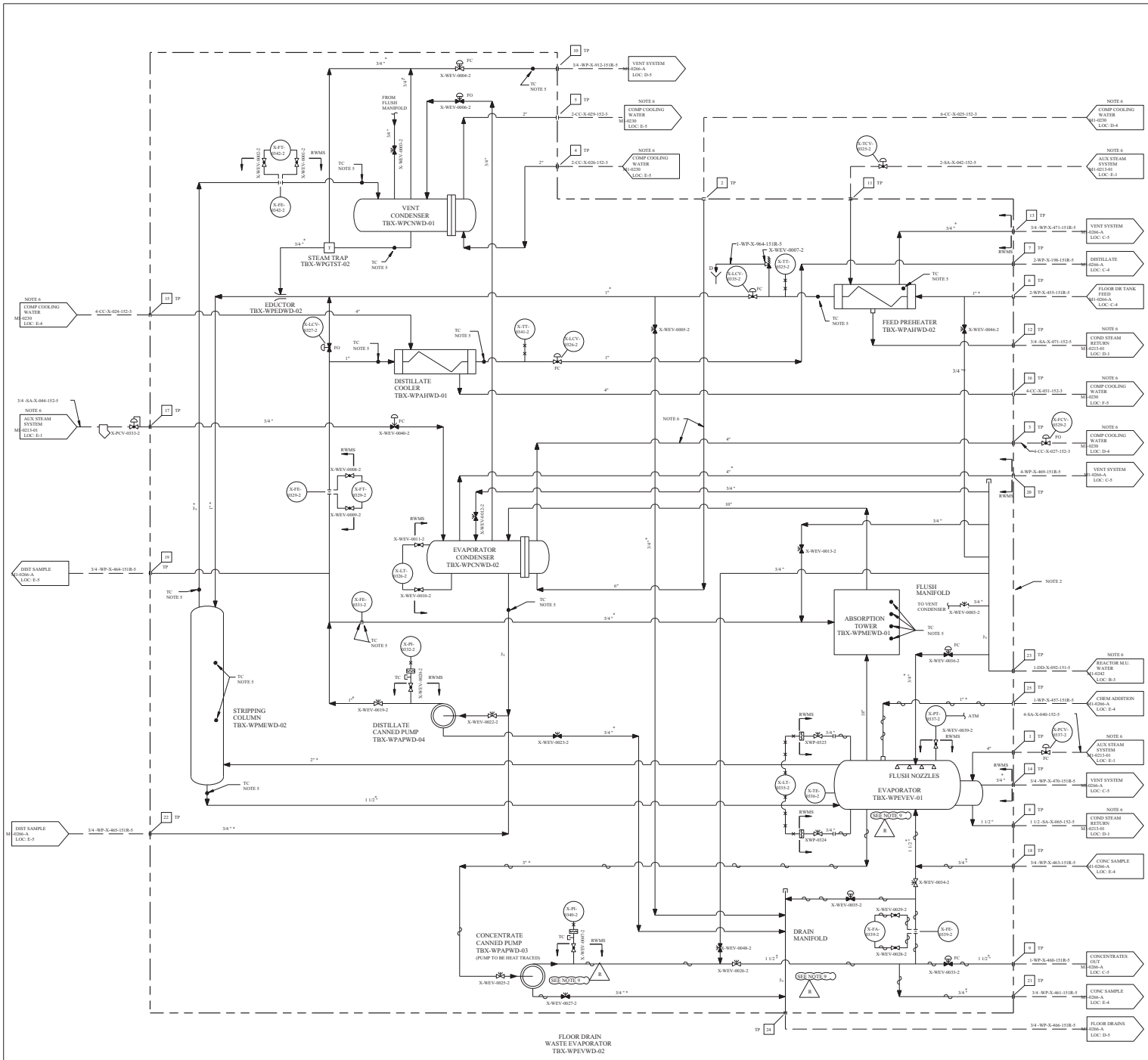
FLOW DIAGRAM
LIQUID WASTE PROCESSING
DRAIN CHANNEL B

| DWG. NO. | SH. NO. | REV. |
|---|---|---|
| M1-0266 | A | CP-18 |

$$$$$$$ DATE $$$$$$$ REF CKD 9/10/97 CP-13

me475500.dgn A M1-0266-A

< FINAL PRINT >




| REV | DWN | CHK | APVD | REMARKS |
|---|---|---|---|---|
| CP-12 | RO 2001 | EH 2001 | | THIS DRAWING REVISED TO INCORPORATE DESIGN CHANGE FDA-2001-000701-01-00 PER SIL-000-01-000701-01-00. |

NOTES:

1. FOR MECHANICAL NOTES AND SYMBOLS SEE DRAWING M1-0200.
2. 15 GPM WASTE EVAPORATOR SUPPLY BY WESTINGHOUSE DRAWING 466TD34, PIPING AND EQUIPMENT SUPPLIED ON A SKID, SHOP ORDER NUMBER 232, WNES SPIN NUMBER TBX-WPEVWD-02.
3. ALL LINES MARKED WITH * ARE CLASS 151R. THIS IS A DESIGNATION ONLY AND NO ADDITIONAL INSPECTION HAS BEEN PERFORMED ON THIS PIPING. ALL OTHER PIPE IS CLASS 151.
4. TP [N] INDICATES "TERMINAL POINT" AND NOZZLE NUMBER ON EVAPORATOR, SEE WESTINGHOUSE DRAWING 7303376, R-10.
5. TC INDICATES "TEST CONNECTIONS" FOR FIELD TEST, 1/2 " NPT PLUGGED BOSSES.
6. VD, CC, SA, DD SYSTEMS, INTERFACING WITH WP SYSTEM, ARE NOT PART OF THE RADIOACTIVE WASTE MANAGEMENT SYSTEM (RWMS).
7. FOR INSTALLATION DETAILS OF INSTRUMENTATION FOR THE EVAPORATOR SKID, SEE WESTINGHOUSE DRAWING 7373085-UNIT-1, R-1A.
8. FOR EQUIPMENT LOGIC DIAGRAM SEE INSTRUMENTATION AND CONTROL DIAGRAM M1-2266-SERIES.
9. WHEN LINES IN THE WASTE PROCESSING SYSTEM ARE NOT BEING USED FOR THE TRANSFER OF LIQUID CONTAINING CONCENTRATED BORIC ACID (UP TO 12% BY WEIGHT PER DBD-ME-020-0, THE HEAT TRACING SET POINT MAY BE LOWER THAN 170 DEGREES F. SETPOINTS MAY BE SET FOR FREEZE PROTECTION WHEN THE LINE IS NOT IN USE, OR CONTAINS BORIC ACID SOLUTION 4% BY WEIGHT OR LESS).

R

FSAR FIGURE 11.2-4

THIS DRAWING CAD-BASED ELECTRONICALLY

CLASS I
(NUCLEAR SAFETY-RELATED)
SAFETY CLASS 1 SEISMIC CATEGORY I
SAFETY CLASS 2 CLASS 1E
SAFETY CLASS 3 ASSOCIATED CIRCUITS

TXU ELECTRIC
CPSES
GLEN ROSE, TEXAS

FLOW DIAGRAM
LIQUID WASTE PROCESSING
DRAIN CHANNEL B

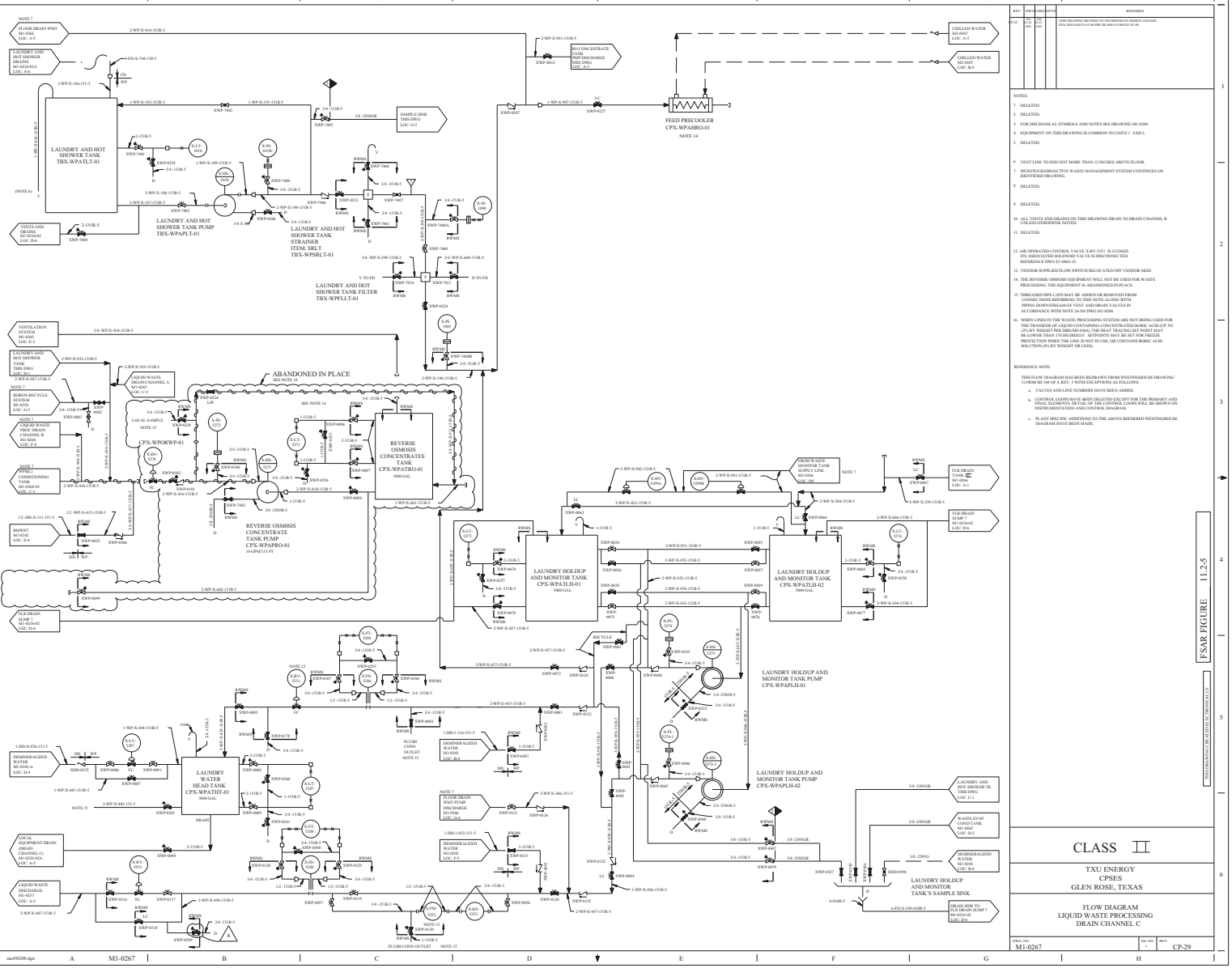
| DWG. NO. | SH. NO. | REV. |
|---|---|---|
| M1-0266 | 01 | CP-12 |

$$$$$$$DATE$$$$$$

REF CKD 11/5/99 CP-1

mc343900.dgn

M1-0266-01




| REV. | DWN | CHKD | APVD | REMARKS |
|---|---|---|---|---|
| CP-29 | TJA 10/05 | TBS 10/05 | | THIS DRAWING REVISED TO INCORPORATE DESIGN CHANGE PDA-2002-0042-01-00 PER NL-0002-03-00-021-01-00. |

NOTES:

1. DELETED.
2. DELETED.
3. FOR MECHANICAL SYMBOLS AND NOTES SEE DRAWING MI-0200.
4. EQUIPMENT ON THIS DRAWING IS COMMON TO UNITS 1 AND 2.
5. DELETED.
6. VENT LINE TO END NOT MORE THAN 12 INCHES ABOVE FLOOR.
7. DENOTES RADIOACTIVE WASTE MANAGEMENT SYSTEM CONTINUES ON IDENTIFIED DRAWING.
8. DELETED.
9. DELETED.
10. ALL VENTS AND DRAINS ON THIS DRAWING DRAIN TO DRAIN CHANNEL B UNLESS OTHERWISE NOTED.
11. DELETED.
12. AIR OPERATED CONTROL VALVE X-RV-5251 IS CLOSED. ITS ASSOCIATED SOLENOID VALVE IS DISCONNECTED. REFERENCE DWG E1-0465-21.
13. VENDOR SUPPLIED FLOW SWITCH RELOCATED OFF VENDOR SKID.
14. THE REVERSE OSMOSIS EQUIPMENT WILL NOT BE USED FOR WASTE PROCESSING. THE EQUIPMENT IS ABANDONED IN PLACE.
15. THREADED PIPE CAPS MAY BE ADDED OR REMOVED FROM CONNECTIONS REFERRING TO THIS NOTE ALONG WITH PIPING DOWNSTREAM OF VENT AND DRAIN VALVES IN ACCORDANCE WITH NOTE 24 ON DWG M1-0200.
16. WHEN LINES IN THE WASTE PROCESSING SYSTEM ARE NOT BEING USED FOR THE TRANSFER OF LIQUID CONTAINING CONCENTRATED BORIC ACID (UP TO 12% BY WEIGHT PER DRD-ME-0265), THE HEAT TRACING SET POINT MAY BE LOWER THAN 178 DEGREES F. SETPOINTS MAY BE SET FOR FREEZE PROTECTION WHEN THE LINE IS NOT IN USE, OR CONTAINS BORIC ACID SOLUTION (4% BY WEIGHT OR LESS).

REFERENCE NOTE:

THIS FLOW DIAGRAM HAS BEEN REDRAWN FROM WESTINGHOUSE DRAWING 1176830 SH 144 OF 4, REV. 5 WITH EXCEPTIONS AS FOLLOWS:

a. VALVES AND LINE NUMBERS HAVE BEEN ADDED.

b. CONTROL LOOPS HAVE BEEN DELETED EXCEPT FOR THE PRIMARY AND FINAL ELEMENTS. DETAIL OF THE CONTROL LOOPS WILL BE SHOWN ON INSTRUMENTATION AND CONTROL DIAGRAM.

c. PLANT SPECIFIC ADDITIONS TO THE ABOVE REFERRED WESTINGHOUSE DIAGRAM HAVE BEEN MADE.

FSAR FIGURE 11.2-5

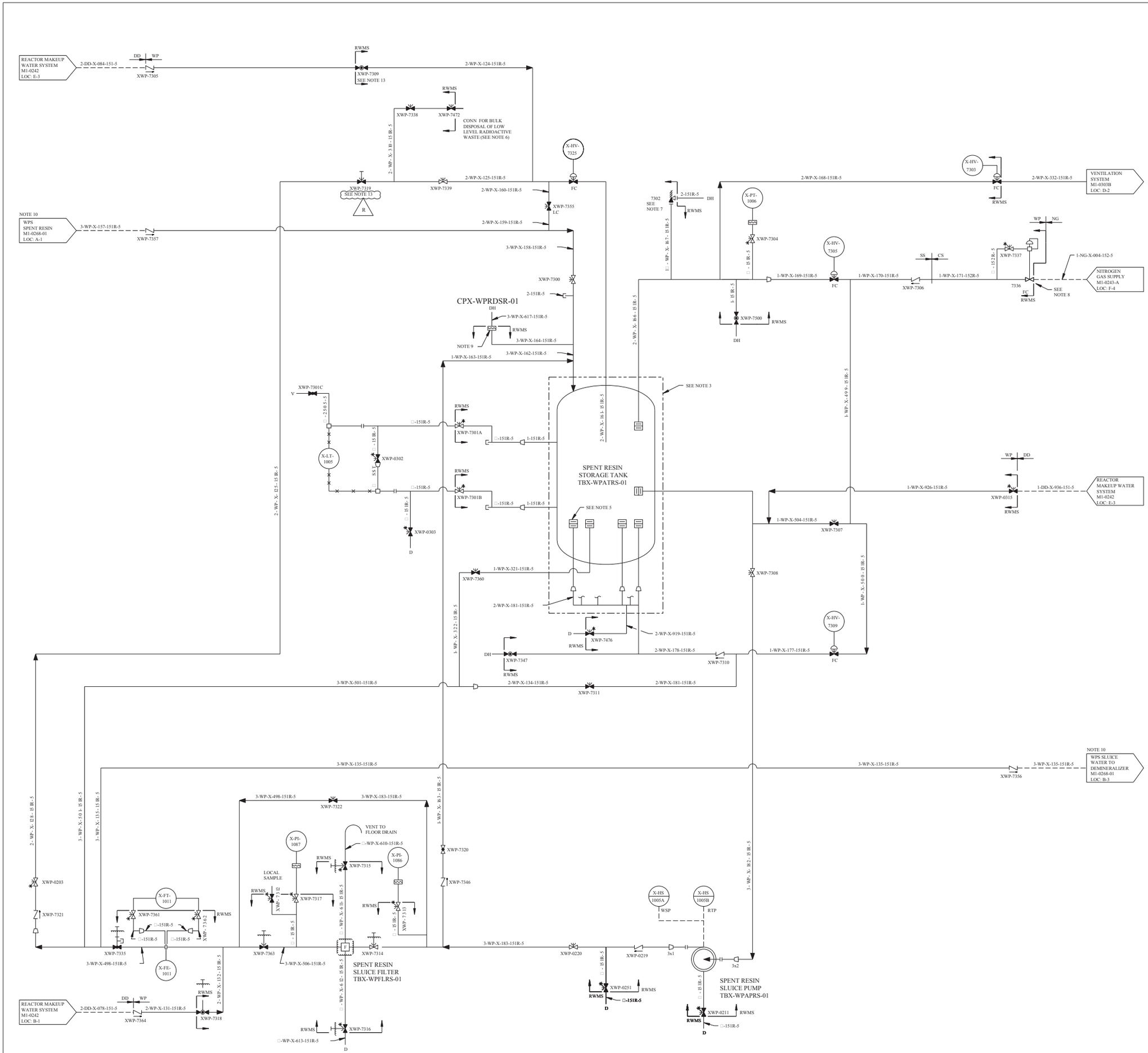
THIS DRAWING CONFORMS TO ASME Y14.100

CLASS II

TXU ENERGY
CPSES
GLEN ROSE, TEXAS

FLOW DIAGRAM
LIQUID WASTE PROCESSING
DRAIN CHANNEL C

| DWG. NO. | REV. |
|---|---|
| M1-0267 | CP-29 |




| REV | DWN | CHK | APVD | REMARKS |
|---|---|---|---|---|
| CP-26 | DLK 10-16-2013 | MM 11-14-2013 | | THIS DRAWING REVISED TO INCORPORATE DESIGN CHANGE FDA 2013-000144-01-00 PER SK-0001-13-000144-01-00 |

NOTES:

1. FOR MECHANICAL SYMBOLS AND NOTES SEE DRAWING M1-0200.
2. TEMPERATURE SENSOR THERMETICALLY CONTROLLED HEATERS ARE SUPPLIED BY MANUFACTURER OF BATCHING TANK.
3. BOUNDARY ON SPENT RESIN TANK CUBICLE.
4. MAKE CONNECTIONS TOP SIDE OF HEADER, RUN VERTICAL FOR 18 INCHES.
5. TANK FURNISHED WITH SIX (6) □" AND ONE (1) SW CPLG SPARGER CONNECTIONS TO BE PIPED IN FIELD.
6. LOCATE BRANCH IN TOP OF MAIN HEADER.
7. LOCATE THIS VALVE CLOSE TO TANK.
8. LOCATE THIS VALVE CLOSE TO THE NITROGEN SUPPLY.
9. PROVIDE RUPTURE DISC WITH DIAMETER OF AT LEAST 1.5 IN., BURST PRESSURE LESS THAN 150 PSIG.
10. INDICATES RADIOACTIVE WASTE MANAGEMENT SYSTEM CONTINUES ON IDENTIFIED DRAWING.
11. DRAIN LINES ROUTED TO FLOOR DRAINS.
12. WSP = WASTE SOLIDIFICATION PANEL X-LV-13
    RTP = RESIN TRANSFER PANEL X-LV-12
13. VALVE XWP-7337 REMOTE CHAIN OPERATOR ATTACHMENT, REFERENCE FDA-2013-000144-01.

VALVE XWP-7337 REMOTE CHAIN OPERATOR ATTACHMENT, REFERENCE FDA-2013-000144-01.

R

GENERAL NOTE:

THIS FLOW DIAGRAM REDRAWN TO SEPARATE SYSTEM FUNCTION, FOR SOLIDIFICATION FUNCTION SEE M1-0268-02.

HISTORICAL NOTE:

THIS FLOW DIAGRAM HAS BEEN REDRAWN FROM WESTINGHOUSE DRAWING 1139E00 SH 2 OF 4 REV 3 WITH EXCEPTIONS AS FOLLOWS:

a. VALVES AND LINE NUMBERS HAVE BEEN ADDED.

b. CONTROL LOOPS HAVE BEEN DELETED EXCEPT FOR THE PRIMARY AND FINAL ELEMENTS. DETAIL OF THE CONTROL LOOPS WILL BE SHOWN ON INSTRUMENTATION AND CONTROL DIAGRAM.

c. PLANT SPECIFIC ADDITIONS TO THE ABOVE REFERENCED WESTINGHOUSE DIAGRAM HAVE BEEN MADE.

FSAR FIGURE 11.2-6

THIS DRAWING CREATED ELECTRONICALLY

CLASS II

LUMINANT
CPNPP
GLEN ROSE, TEXAS

FLOW DIAGRAM
LIQUID WASTE PROCESSING
SPENT RESIN HANDLING
SUBSYSTEM

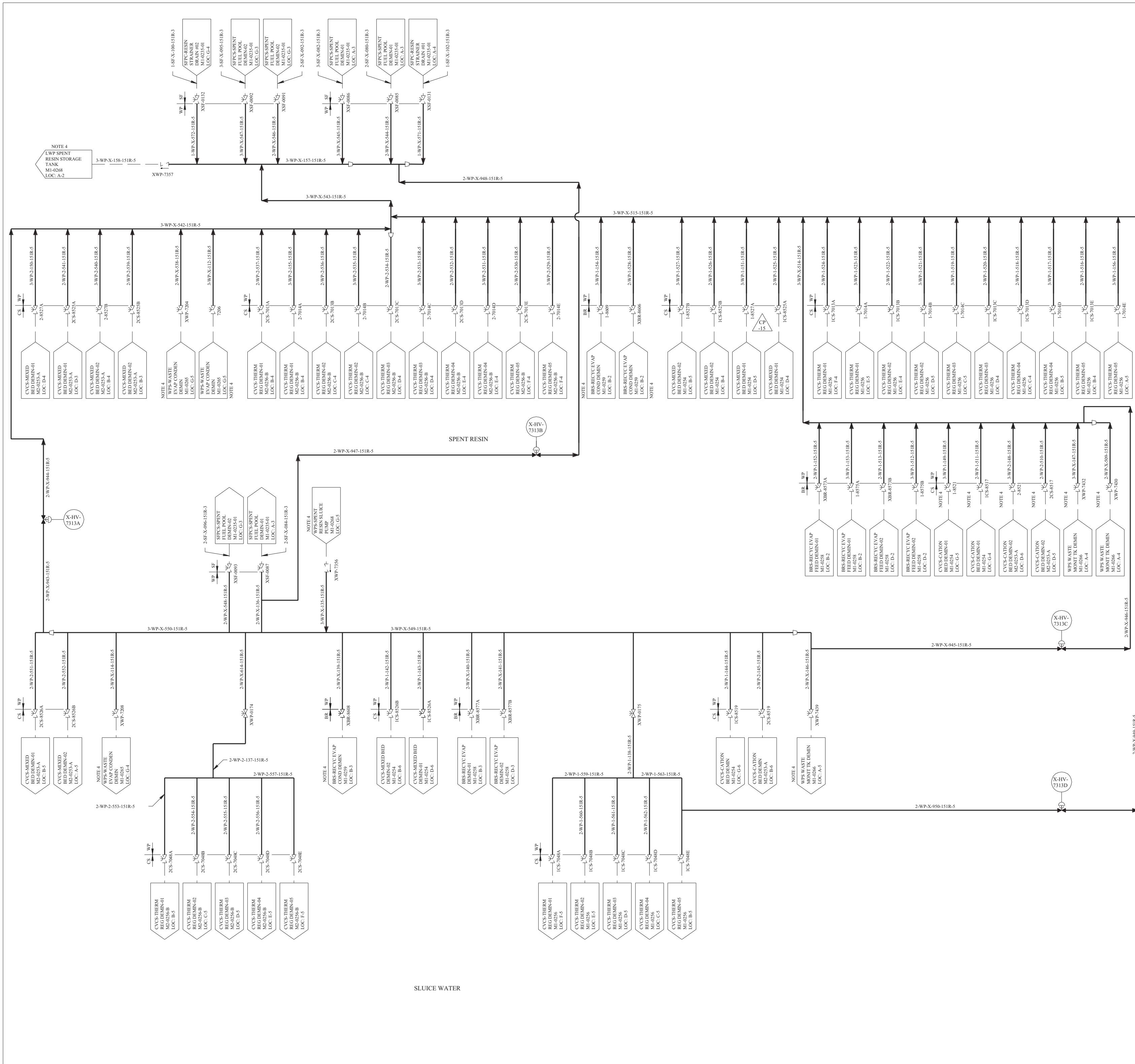
| DWG. NO. | SH. NO. | REV. |
|---|---|---|
| M1-0268 | - | CP-26 |

< FINAL PRINT >

REF CKD 8/4/97 CP-19

$$$$$$$$DATE$$$$$$$

me472800.dgn M1-0268




| REV | DWN | CHKD | APVD | REMARKS |
|---|---|---|---|---|
| CP-16 | RME 06-04 1996 | | | THIS DRAWING REVISED TO ADD THE FSAR FIGURE NUMBER AS AN EDITORIAL CHANGE. |

NOTES:

1. PIPE BENDS SHALL BE USED WHERE POSSIBLE.
2. HEADER SHALL SLOPE CONTINUOUSLY DOWNWARD TO SPENT RESIN STORAGE TANK.
3. HEADER LOW POINT TRAPS AND POCKETS SHALL BE AVOIDED.
4. SPENT RESIN HEADER AND SLUICE WATER HEADER ARE WITHIN THE RADIOACTIVE WASTE MANAGEMENT SYSTEM (RWMS) AND CONTINUE ON IDENTIFIED INTERFACING DRAWINGS.
5. FOR MECHANICAL SYMBOLS AND NOTES SEE DRAWING M1-0200.
6. DELETED
7. DELETED

FSAR FIGURE 11.2-7

CP 16

THIS DRAWING CREATED ELECTRONICALLY

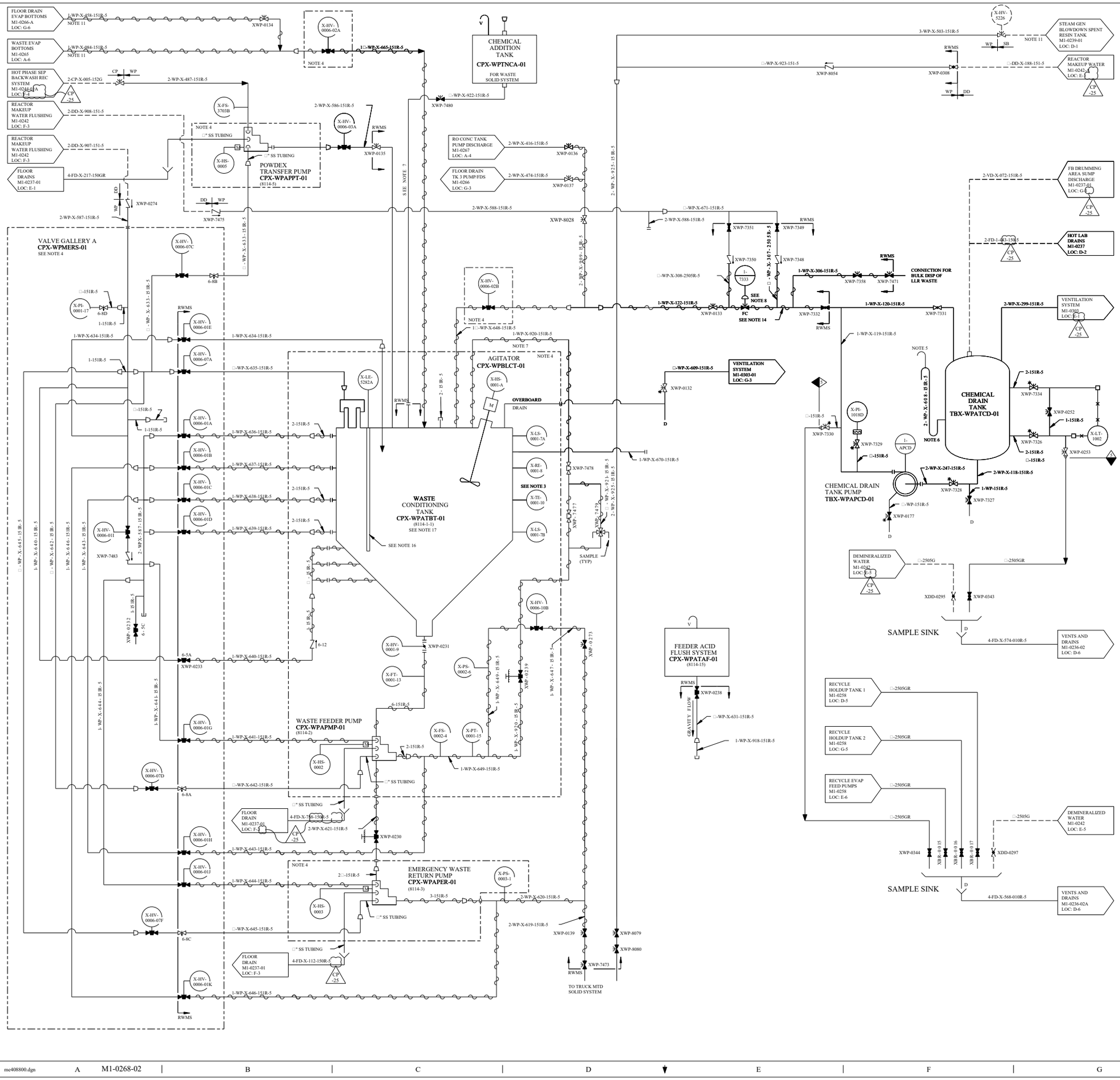
CLASS II

TXU ELECTRIC
CPSES
GLEN ROSE, TEXAS

FLOW DIAGRAM
LIQUID WASTE PROCESSING
DISPOSAL SUBSYSTEM

DWG. NO. M1-0268 | SH. NO. 01 | REV. CP-16

vs0000ip.dgn




| REV | DWN | CHKD | APVD | REMARKS |
|---|---|---|---|---|
| CP-25 | IRK 03-14 2018 | MM 03-21 2018 | MHP 03-26 2018 | THIS DRAWING REVISED TO INCORPORATE EDITORIAL CHANGES PER AI-CR-2018-001969-1. |

NOTES:

1. FOR MECHANICAL SYMBOLS AND NOTES SEE DRAWING M1-0200.
2. DELETED
3. TEMPERATURE SENSOR THERMOSTATICALLY CONTROLLED HEATER IS SUPPLIED BY ATCOR.
4. EQUIPMENT AND PIPING WITHIN THE BOUNDARIES SHOWN IS SUPPLIED BY ATCOR.
5. SIPHON LOCATED AT TOP OF LOOP.
6. LOWER LOOP TO EXTEND 12 INCHES BELOW OVERFLOW AND TOP LOOP TO TOP OF TANK.
7. CONNECTION INTO TANK AND PIPING PROVIDED BY PURCHASER.
8. LOCATE FLUSH CONNECTIONS AS CLOSE TO VALVE AS POSSIBLE.
9. EQUIPMENT ON THIS DRAWING IS COMMON TO UNIT 1 AND 2.
10. LEVEL INSTRUMENT IS FURNISHED BY TANK SUPPLIER.
11. INDICATES RADIOACTIVE WASTE MANAGEMENT SYSTEM CONTINUES ON IDENTIFIED DRAWING
12. EMERGENCY WASTE RETURN PUMP PROVIDED TO RETURN:
    a. SPENT RESINS TO RESPECTIVE SPENT RESIN STORAGE TANK.
    b. CHEMICAL DRAIN LIQUIDS TO THE CHEMICAL DRAIN TANK.
    c. EVAPORATOR BOTTOMS AND POWDEX RESIN TO THE TRUCK CONNECTION.
13. UNLESS OTHERWISE NOTED DRAINS TO BE LOCALLY COLLECTED UNDER ADMINISTRATIVE CONTROL.
14. HEAT TRACE AND INSULATE LINE IN THE FUEL BUILDING AND AUXILIARY BUILDING WHERE ACCESSIBLE.
15. DELETED
16. X-LE-5282A SUPPLIED BY FLUID COMPONENT INCORPORATED UNDER PO 665-71225.
17. WHEN LINES IN THE WASTE PROCESSING SYSTEM ARE NOT BEING USED FOR THE TRANSFER OF LIQUID CONTAINING CONCENTRATED BORIC ACID (UP TO 12% BY WEIGHT PER DBD-ME-0264), THE HEAT TRACING SET POINT MAY BE LOWER THAN 170 DEGREES F. SETPOINTS MAY BE SET FOR FREEZE PROTECTION WHEN THE LINE IS NOT IN USE, OR CONTAINS BORIC ACID SOLUTION (4% BY WEIGHT OR LESS).

REFERENCE NOTE:

THIS FLOW DIAGRAM HAS BEEN REDRAWN FROM WESTINGHOUSE DRAWING 1139E00, SH 2 OF 4, REV. 3 WITH EXCEPTIONS AS FOLLOWS:

a. VALVES AND LINE NUMBERS HAVE BEEN ADDED.
b. CONTROL LOOPS HAVE BEEN DELETED EXCEPT FOR THE PRIMARY AND FINAL ELEMENTS. DETAIL OF THE CONTROL LOOPS WILL BE SHOWN ON INSTRUMENTATION AND CONTROL DIAGRAMS.
c. PLANT SPECIFIC ADDITIONS TO THE ABOVE REFERENCED WESTINGHOUSE DIAGRAM HAVE BEEN MADE.

GENERAL NOTE:

THIS FLOW DIAGRAM PREPARED TO INCLUDE THE CONTENTS OF ATCOR FLOW DIAGRAM 8114-D-01 AND THE RADIOACTIVE WASTE SOLIDIFICATION SYSTEM FROM DRAWING M1-0268, CP-3.

FSAR FIGURE 11.2-8

THIS DRAWING CREATED ELECTRONICALLY

CLASS II

LUMINANT
CPNPP
GLEN ROSE, TEXAS

FLOW DIAGRAM
LIQUID WASTE PROCESSING
DISPOSAL SUBSYSTEM

| DWG. NO. | SH. NO. | REV. |
|---|---|---|
| M1-0268 | 02 | CP-25 |

REF CKD 3 / M / 20 R CP-25

me408800.dgn A M1-0268-02 B C D E F G FINAL PRINT H

| REV | DWN | CHK | APVD | REMARKS |
|---|---|---|---|---|
| CP-5 | DLK 12-09 2010 | | | THIS DRAWING REVISED TO INCORPORATE EDITORIAL CHANGE AS NOTED AND AI-2010-011019-1. |

NOTES:

1. FOR MECHANICAL SYMBOLS AND NOTES SEE DRAWING M1-0200.
2. UNLESS OTHERWISE NOTED, DRAINS COLLECTED BY LOCAL DRAINS SYSTEM.
3. ALL PIPING AND/OR TUBING DOWNSTREAM OF ROOT, SAMPLE, VENT OR DRAIN VALVES ARE EXEMPT FROM THE REQUIREMENTS OF 2323-MS-100, APPENDIX D, SECTION III.
4. INDICATES RADIOACTIVE WASTE MANAGEMENT SYSTEM CONTINUES ON IDENTIFIED DRAWING.

MANWAY
1/2 "
1/2 "
2 1/2 -WP-X-975-151GR
2 1/2 -WP-X-975-151R-5
1-WP-X-982-151R-5
RWMS
XWP-0414
XWP-0415
CHEMICAL ADDITION
MIXING TEE
3/4 -151R-5
XWP-0413
RWMS
3/8 -2505-5
EFFLUENT SAMPLE SINK THIS DRAWING LOC: E-6
X-PI-5300A
RWMS
XWP-0410
XWP-0407
3/4 -151R-5
XWP-0405
XWP-0404
XWP-0406
3X1 1/2
2 1/2 X1
4-WP-X-973-151GR
3-WP-X-967-151GR
3-WP-X-967-151R-5
XWP-0402
XWP-0403
4-WP-X-976-151GR
PLANT EFFLUENT HOLDUP AND MONITOR TANK CPX-WPTNPE-01
PLANT EFFLUENT HOLDUP AND MONITOR PUMP CPX-WPPMPE-01
HOLDUP AND MONITOR TK 2 THIS DWG LOC: D-6
X-LI-5300A
X-LS-5300A
X-LS-5300C
X-LS-5300E
2-WP-X-977-151R-5
RWMS
RWMS
XWP-0409
1-151R-5
XWP-0408
2-WP-X-978-151R-5
FUEL BLDG SUMP 2 M1-0237-01 LOC: F-3
2-WP-X-978-151GR
RWMS
4-WP-X-976-151R-5
FUEL BLDG SUMP 2 M1-0237-01 LOC: F-3
4-WP-X-976-151GR
X-HV-5300-1
XWP-0401
2-WP-X-979-151GR
2-WP-X-979-151R-5
FLUSH CONN 1-151R-5
RWMS
XWP-0442
NOTE 4
FILTER DEMIN SYSTEM M1-0266 LOC: D-3
XWP-0400
2-WP-X-980-151R-5
2-WP-X-980-151R-5
3-WP-X-986-151R-5
2 1/2 -WP-X-968-151R-5
V
RWMS
XWP-0412
3/4 -151R-5
DISCHARGE M1-0266 LOC: G-6
NOTE 4
XWP-0435 LC
X-FT-5300
RWMS
XWP-0434
XWP-0433
3/4 X 1/2
3/4 X 1/2
X-FE-5300
2-WP-X-969-151R-5
1/2 -151R-5
1/2 -151R-5
2 1/2 -WP-X-968-151R-5
2-WP-X-970-151R-5
XWP-0436
XWP-0445
FILTER DEMIN SYSTEM M1-0266 LOC: E-3
CP -5
NOTE 4
3/4 -151R-5
XWP-0446
RWMS
D
X-HV-5300-2
XWP-0420
2-WP-X-972-151GR
2-WP-X-972-151R-5
XWP-0429
2 1/2 -WP-X-985-151R-5
4-WP-X-983-151GR
4-WP-X-973-151R-5
FUEL BLDG VENT DUCT M1-0303-01 LOC: F-5
RWMS
MANWAY
1/2 "
1/2 "
2 1/2 -WP-X-974-151GR
2 1/2 -WP-X-974-151R-5
1-WP-X-981-151R-5
RWMS
XWP-0431
XWP-0432
CHEMICAL ADDITION
MIXING TEE
3/4 -151R-5
XWP-0430
RWMS
3/8 -2505-5
X-PI-5300B
RWMS
XWP-0439
XWP-0426
3/4 -151R-5
XWP-0424
XWP-0423
XWP-0425
1/2 " PLUG
TC
2 1/2 X1
3X1 1/2
4-WP-X-984-151GR
3-WP-X-971-151GR
3-WP-X-971-151R-5
XWP-0421
XWP-0422
PLANT EFFLUENT HOLDUP AND MONITOR TANK CPX-WPTNPE-02
PLANT EFFLUENT HOLDUP AND MONITOR PUMP CPX-WPPMPE-02
X-LI-5300B
X-LS-5300B
X-LS-5300D
X-LS-5300F
RWMS
XWP-0428
1-151R-5
2-WP-X-977-151R-5
XWP-0427
RWMS
2-WP-X-977-151GR
THIS DWG LOC: C-2
THIS DRAWING LOC: G-2
3/8 -2505-5
DEMINERALIZED WATER M1-0242-A LOC: G-1
3/8 -2505-5
XDD-0413 (RED)
XWP-0443
XWP-0444
EFFLUENT SAMPLE SINK
D
VENTS AND DRAINS M1-0237-01 LOC: F-4
YARD
FUEL BUILDING
151GR
151R-5

DRAWING M1-0266 REV CP-20
HAS BEEN SPLIT INTO THE FOLLOWING SHEETS:
M1-0266
M1-0266-B

FSAR FIGURE 11.2-9

THIS DRAWING CREATED ELECTRONICALLY

CLASS II

LUMINANT
CPNPP
GLEN ROSE, TEXAS

FLOW DIAGRAM
PLANT EFFLUENT
HOLDUP AND MONITOR TANKS

DWG. NO. M1-0266 | SH. NO. B | REV. CP-5

me0007pa.dgn A M1-0266-B FINAL PRINT

| REV | DWN | CHK | APVD | REMARKS |
|---|---|---|---|---|
| CP-24 | Mbf 08-01-2011 | DFB 08-11-2011 | MWT PE,LSE 11-3-11 | THIS DRAWING REVISED TO INCORPORATE DESIGN CHANGE FDA-2011-000130-01-00 PER SK-0985-11-000130-01-00. EDITORIAL CHANGES AS NOTED. |

NOTES:

1. FOR GENERAL NOTES AND SYMBOLS SEE DRAWING M1-0200.
2. DRAWING IS COMMON TO UNITS 1 AND 2.
3. WASTE GAS COMPRESSOR PACKAGE TBX-GHAPCP-01 BY THE NASH ENG CO DRAWING 75-0044 SHEET 02.
4. WASTE GAS COMPRESSOR PACKAGE TBX-GHAPCP-02 BY THE NASH ENG CO DRAWING 75-0044 SHEET 03.
5. DENOTES RADIOACTIVE WASTE MANAGEMENT SYSTEM CONTINUES ON IDENTIFIED DRAWING.

FSAR FIGURE 11.3-1

THIS DRAWING CREATED ELECTRONICALLY

DRAWING 2323-M1-0269 REV CP-10
HAS BEEN SPLIT INTO THE FOLLOWING SHEETS:
M1-0269
M1-0269 SH A
M1-0269 SH B

CLASS II

LUMINANT
CPNPP
GLEN ROSE, TEXAS

FLOW DIAGRAM
WASTE PROCESSING
SYSTEM (GAS)

DWG. NO. M1-0269 | SH. NO. - | REV. CP-24

FINAL PRINT

REF CKD 10/97 CP-22

me103670.dgn M1-0269

| REV | DWN | CHKD | APVD | REMARKS |
|---|---|---|---|---|
| CP-19 | JRMC 08-04 2014 | DJL 08-04 2014 | | THIS DRAWING REVISED TO INCORPORATE DESIGN CHANGE FDA 2014-000152-01-00 PER SK-0001-14-000152-01-00. |

NOTES:

1. FOR GENERAL NOTES AND SYMBOLS SEE DRAWING M1-0200.
2. DRAWING IS COMMON TO UNITS 1 AND 2.
3. CATALYTIC RECOMBINER TBX-GHRECA-01 AND GAS ANALYZER RACK TBX-GHAZGR-01 BY AIR PRODUCTS DRAWING 00-1-2403-55.10 SH 3 AND 4, CP-2, CP-0001 S/0-230.
4. CATALYTIC RECOMBINERS TERMINAL POINTS COORDINATED WITH AIR PRODUCTS DRAWING 300044 CP-0001 S/0-230.
5. DENOTES RADIOACTIVE WASTE MANAGEMENT SYSTEM CONTINUES ON IDENTIFIED DRAWINGS.
6. CHEMICAL DRAIN TO BE UNDER ADMINISTRATIVE CONTROL AND NORMALLY ROUTED TO A "RAD" DRAIN.
7. FOR ADDITIONAL INFORMATION ON ZERO GAS AND PURGE GAS TO ANALYZERS AND BOTTLE RACKS, SEE VENDOR TECHNICAL MANUAL CP-0001-011 AND -012
8. CHEMICAL DRAIN TO BE UNDER ADMINISTRATIVE CONTROL AND NORMALLY ROUTED TO A "NON-RAD" DRAIN.

FSAR FIGURE 11.3 - 1

THIS DRAWING CREATED ELECTRONICALLY

DRAWING 2323-M1-0269 REV CP-10
HAS BEEN SPLIT INTO THE FOLLOWING SHEETS:
M1-0269
M1-0269-A
M1-0269-B

CLASS II

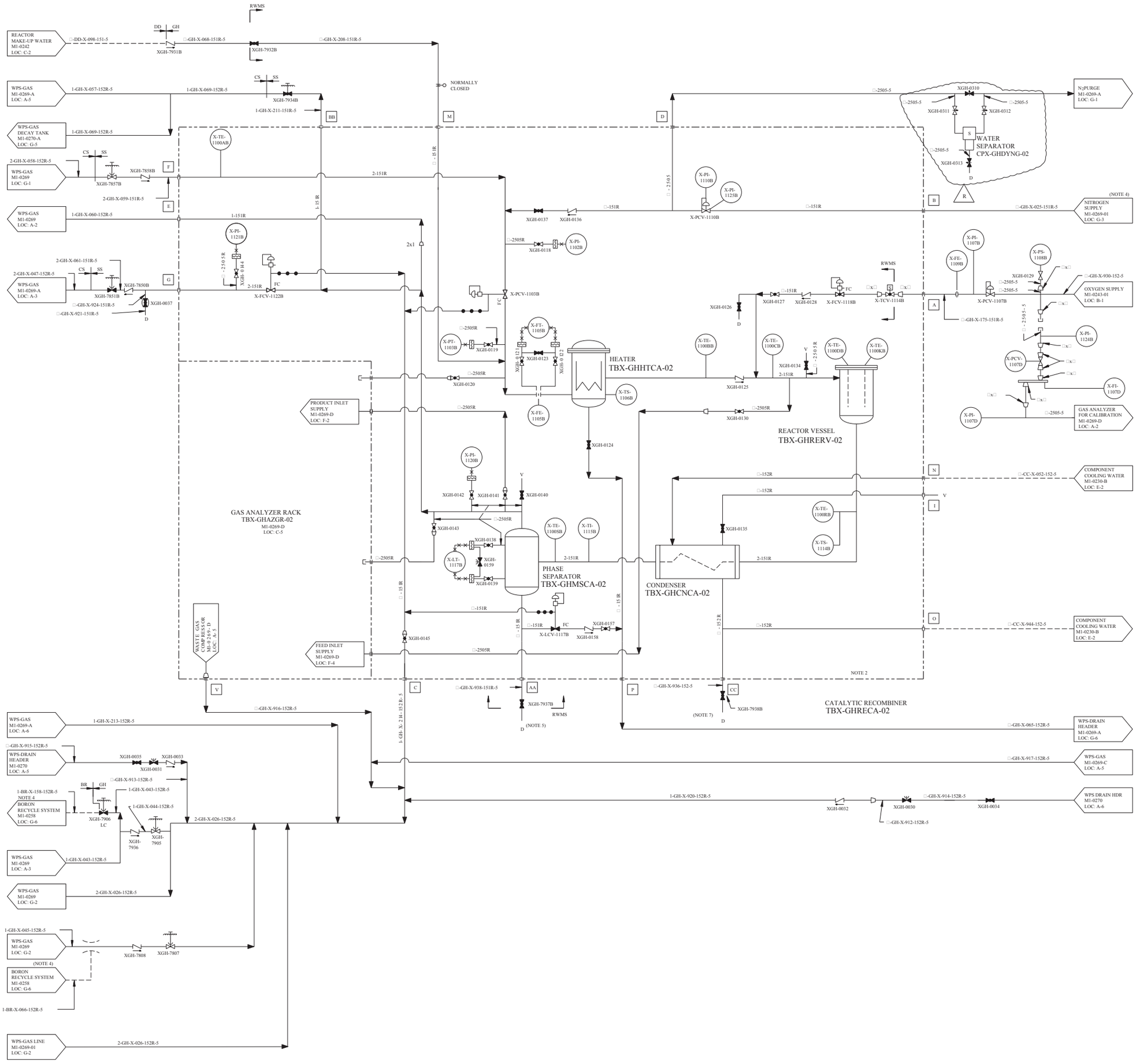
LUMINANT
CPNPP
GLEN ROSE, TEXAS

FLOW DIAGRAM
WASTE PROCESSING
SYSTEM (GAS)

DWG. NO. M1-0269 | SH. NO. A | REV. CP-19

SSSSSSSDATESSSSSS REF CKD 8/ 19/ 97 CP-13

me610400.dgn A M1-0269-A B C D E F G < FINAL PRINT > H




| REV | DWN | CHKD | APVD | REMARKS |
|---|---|---|---|---|
| CP-21 | JRMC 06-04 2014 | DJL 06-04 2014 | | THIS DRAWING REVISED TO INCORPORATE DESIGN CHANGE FDA-2014-000152-01-00 PER SK-0002-14-000152-01-00. |

NOTES:

1. DELETED
2. CATALYTIC RECOMBINER TBX-GHRECA-02 AND GAS ANALYZER RACK TBX-GHAZGR-02 BY AIR PRODUCTS DRAWING 00-1-2403-55.10 SHEETS 5 AND 6. CP-2, CP-0001 S/0-230.
3. CATALYTIC RECOMBINERS TERMINAL POINTS . COORDINATED WITH AIR PRODUCTS DRAWING NO 300044 CP-0001 S/0-230.
4. DENOTES RADIOACTIVE WASTE MANAGEMENT SYSTEM CONTINUES ON IDENTIFIED DRAWING.
5. CHEMICAL DRAIN TO BE UNDER ADMINISTRATIVE CONTROL AND NORMALLY ROUTED TO A "RAD" DRAIN.
6. FOR GENERAL NOTES AND SYMBOLS SEE DRAWING M1-0200.
7. CHEMICAL DRAIN TO BE UNDER ADMINISTRATIVE CONTROL AND NORMALLY ROUTED TO A "NON-RAD" DRAIN.

FSAR FIGURE 11.3 - 1

THIS DRAWING CREATED ELECTRONICALLY

DRAWING 2323-M1-0269 REV CP-10
HAS BEEN SPLIT INTO THE FOLLOWING SHEETS:

| |
|---|
| M1-0269 |
| M1-0269 SH A |
| M1-0269 SH B |
| |
| |

CLASS II

LUMINANT
CPNPP
GLEN ROSE, TEXAS

FLOW DIAGRAM
WASTE PROCESSING
SYSTEM (GAS)

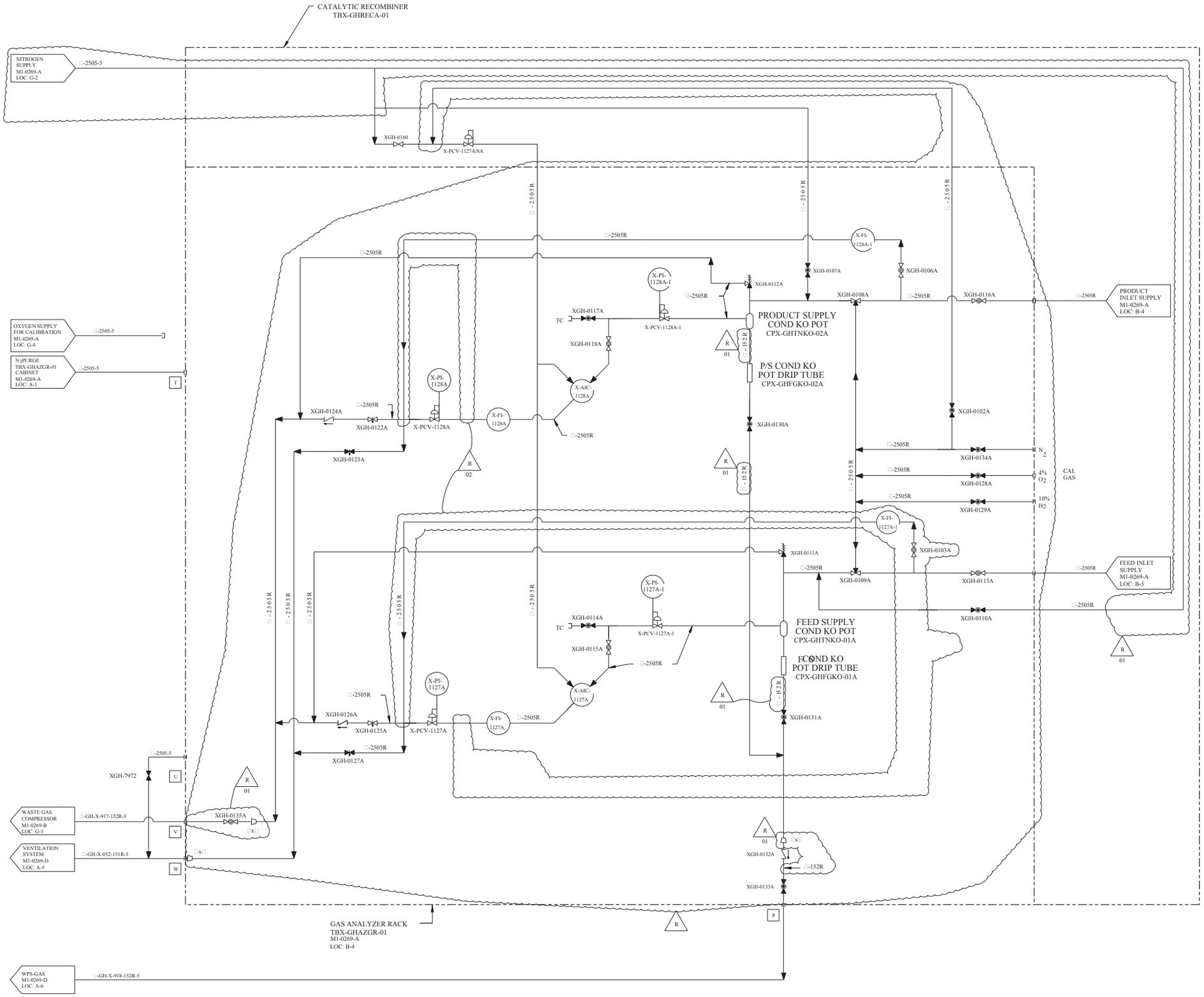
| DWG. NO. | SH. NO. | REV. |
|---|---|---|
| M1-0269 | B | CP-21 |

REF CKD 8/19/97 CP-15

$$$$$$$ DATE $$$$$$$

me103630.dgn A M1-0269-B

< FINAL PRINT >




| REV | DWN | CHKD | APVD | REMARKS |
|---|---|---|---|---|
| CP-1 | SJL 09-16 2002 | DJL 09-17 2002 | | THIS DRAWING CREATED TO INCORPORATE DESIGN CHANGE FDA-1999-001202-01-03 PER SK-0003-99-001202-01-02. |

NOTES

1. FOR GENERAL NOTES AND SYMBOLS SEE DRAWING M1-0200.
2. DRAWING IS COMMON TO UNITS 1 AND 2.
3. CATALYTIC RECOMBINER TBX-GHRECA-01 AND GAS ANALYZER RACK TBX-GHAZGR-01 BY AIR PRODUCTS DRAWING 00-1-2403-55.10.
4. CATALYTIC RECOMBINERS TERMINAL POINTS COORDINATED WITH AIR PRODUCTS DRAWING 300044.

FSAR FIGURE 11.3-1

THIS DRAWING CREATED ELECTRONICALLY

DRAWING M1-0269-A REV CP-14
HAS BEEN SPLIT INTO THE FOLLOWING SHEETS:
M1-0269-A
M1-0269-C

CLASS II

LUMINANT
CPNPP
GLEN ROSE, TEXAS

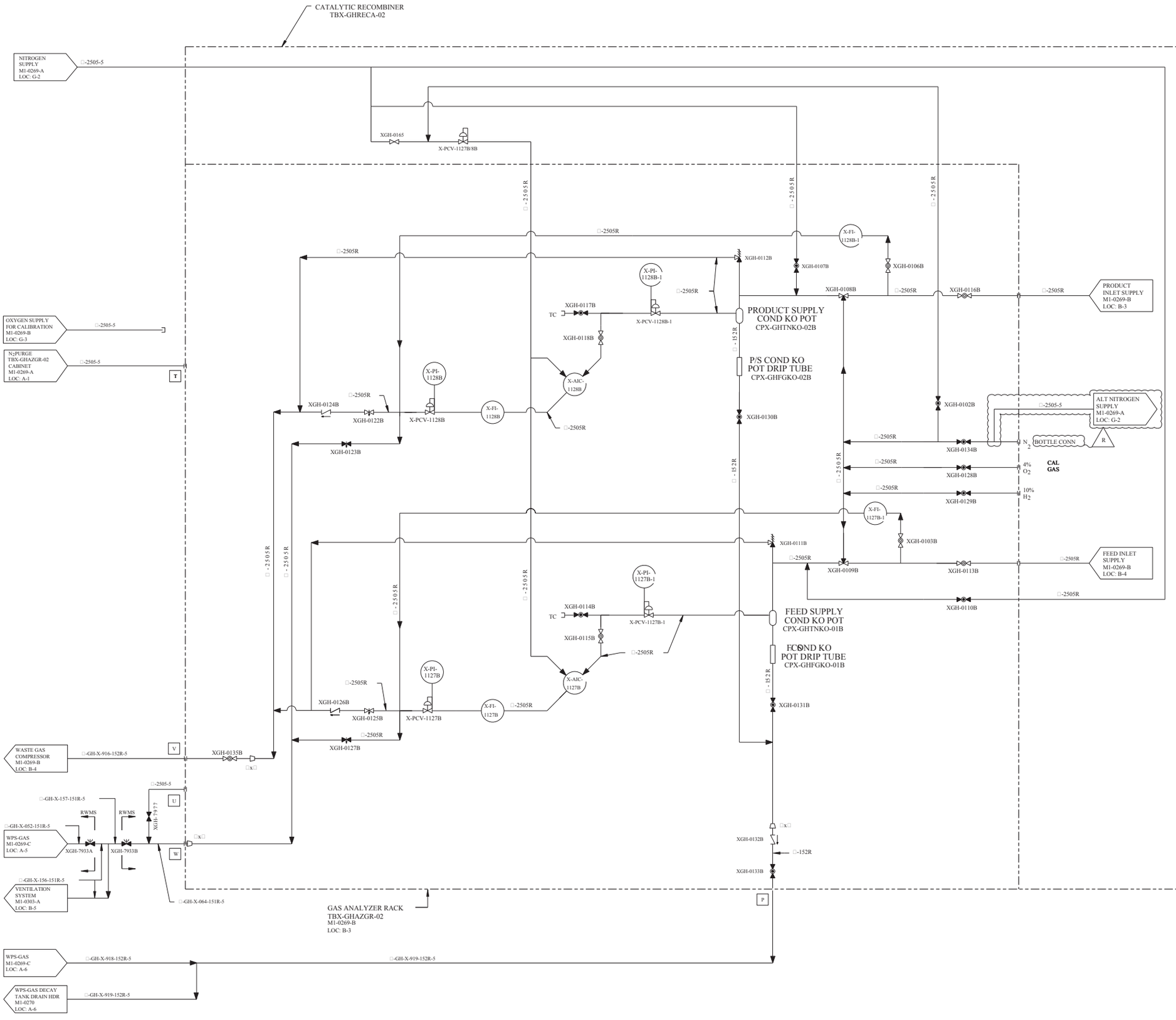
FLOW DIAGRAM
WASTE PROCESSING
SYSTEM (GAS)

DWG. NO. M1-0269 | SH. NO. C | REV. CP-1

$$$$$$$DATE$$$$$$ REF CHKD 03/20/2001

me423800.dgn A M1-0269-C

< FINAL PRINT >




| REV | DWN | CHKD | APVD | REMARKS |
|---|---|---|---|---|
| CP-2 | DLK 04-25 2014 | MHF 04-25 2014 | | THIS DRAWING REVISED TO INCORPORATE DESIGN CHANGE FDA 2014-000106-01-00 PER SK-0001-14-000106-01-00. |

NOTES:

1. FOR GENERAL NOTES AND SYMBOLS SEE DRAWING M1-0200.
2. DRAWING IS COMMON TO UNITS 1 AND 2.
3. CATALYTIC RECOMBINER TBX-GHRECA-02 AND GAS ANALYZER RACK TBX-GHAZGR-02 BY AIR PRODUCTS DRAWING 00-1-2403-55.10.
4. CATALYTIC RECOMBINERS TERMINAL POINTS COORDINATED WITH AIR PRODUCTS DRAWING 300044.

FSAR FIGURE 11.3-1

THIS DRAWING CREATED ELECTRONICALLY

| DRAWING M1-0269-B REV CP-16 |
|---|
| HAS BEEN SPLIT INTO THE FOLLOWING SHEETS: |
| M1-0269-B |
| M1-0269-D |

CLASS II

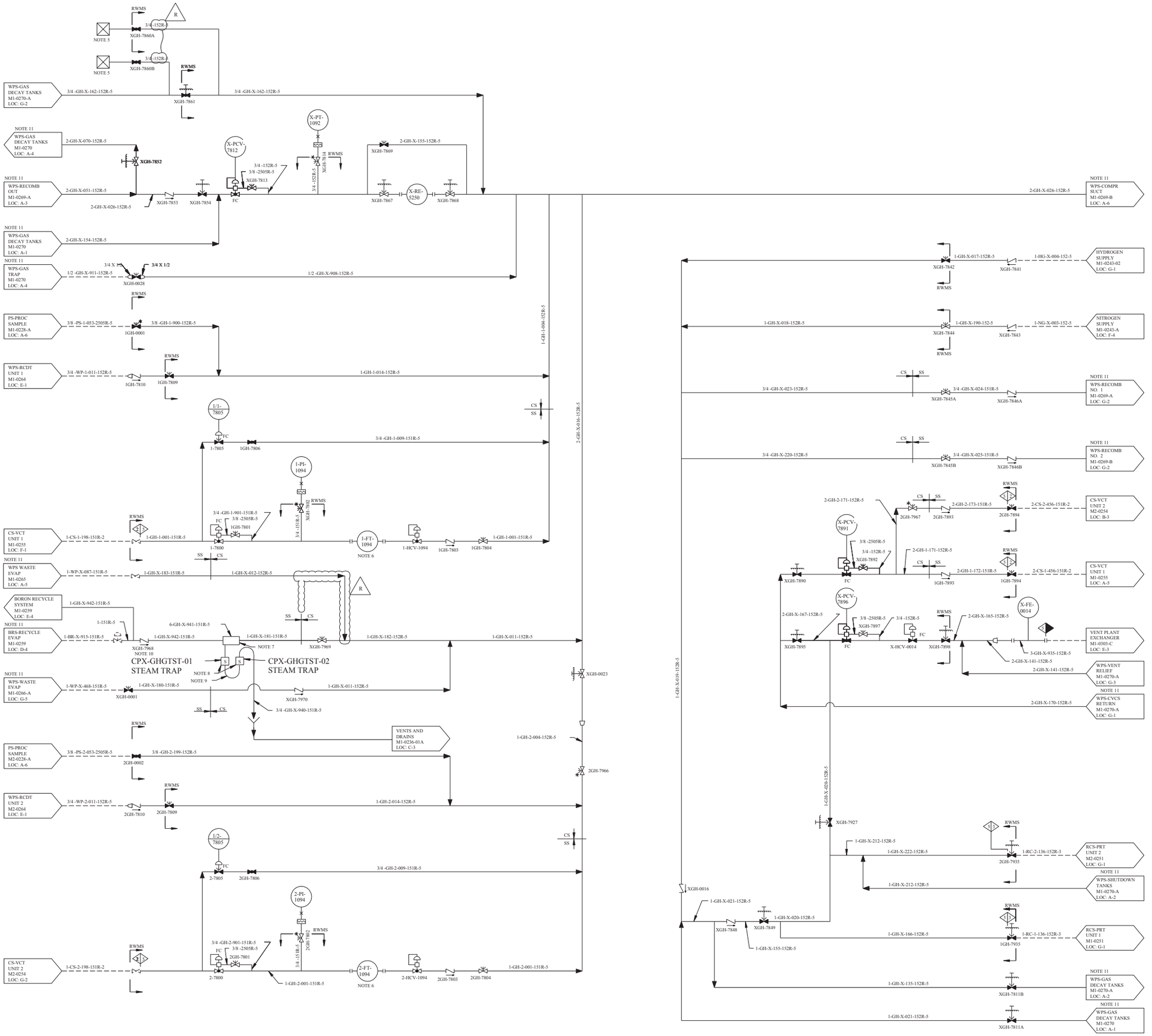
LUMINANT
CPNPP
GLEN ROSE, TEXAS

FLOW DIAGRAM
WASTE PROCESSING
SYSTEM (GAS)

| DWG. NO. | SH. NO. | REV. |
|---|---|---|
| M1-0269 | D | CP-2 |

$$$$$$$$DATE$$$$$$ REF CHKD 3/22/2001

me445200.dgn M1-0269-D < FINAL PRINT >




| REV | DWN | CHK | APVD | REMARKS |
|---|---|---|---|---|
| CP-22 | MM 08-15-2011 | DLK 09-19-2011 | | THIS DRAWING REVISED TO INCORPORATE DESIGN CHANGE FDA-2011-000130-01-00 PER SK-0006-11-000130-01-00. |

NOTES:

1. FOR GENERAL NOTES AND SYMBOLS SEE DRAWING M1-0200.
2. DRAWING IS COMMON TO UNITS 1 AND 2.
3. FLOW DIAGRAM REDRAWN FROM WESTINGHOUSE DRAWING 114E71 SHEET 1, R-5 AND 114E71 SHEET 2, R-5.
4. GH-SYSTEM IS WITHIN RADIOACTIVE WASTE MANAGEMENT SYSTEM BOUNDARIES.
5. WELDED COUPLINGS AND TUBING ADAPTER TO RECEIVE PLANT GAS SAMPLING VESSEL.
6. PROTECT TURBINE METER FROM CONDENSATE DRAINAGE BY INSTALLING AT A LOCAL HIGH POINT; SLOPE INLET AND OUTLET PIPING DOWNWARD FROM METER.
7. VAPOR/LIQUID SEPARATOR FIELD FABRICATED FROM 6" DIA x 12" SS PIPE SECTION. INSTALLED HORIZONTAL AT ELEVATION 822'-8".
8. BALL FLOAT STEAM TRAPS (SUBMERGED).
9. 8'-0" DEPTH LOOP SEAL. TOP OF LOOP SEAL 1'-0" BELOW VAPOR/ LIQUID SEPARATOR AND 1'-0" ABOVE STEAM TRAPS.
10. REMOVE INTERNAL SPRING FROM XGH-7968 .
11. DENOTES RADIOACTIVE WASTE MANAGEMENT SYSTEM CONTINUES ON IDENTIFIED DRAWING.

FSAR FIGURE 11.3-1

THIS DRAWING CREATED ELECTRONICALLY

CLASS I
(NUCLEAR SAFETY-RELATED)
SAFETY CLASS 1 — SEISMIC CATEGORY I
SAFETY CLASS 2 — CLASS 1E
SAFETY CLASS 3 — ASSOCIATED CIRCUITS

LUMINANT
CPNPP
GLEN ROSE, TEXAS

FLOW DIAGRAM
WASTE PROCESSING SYSTEM
(GAS)

| DWG. NO. | SH. NO. | REV. |
|---|---|---|
| M1-0269 | 01 | CP-22 |

FINAL PRINT

REF CKD 10/20/97 CP-21

me103610.dgn A M1-0269-01

WPS-VENT RELIEF M1-0269-01 LOC: G-6
1-GH-X-021-152R-5
WPS-RELIEF HEADER M1-0269 LOC: A-2
2-GH-X-217-152R-5
WPS-RAD MONITOR M1-0269-01 LOC: A-2
2-GH-X-154-152R-5
XGH-7815
XGH-7816
XGH-7825
XGH-7824
2-GH-X-105-152R-5
2-GH-X-116-152R-5
2-GH-X-944-152R-5
3/4 -GH-X-162-152R-5
3/4 -GH-X-088-152R-5
3/4 -GH-X-095-152R-5
3/4 -GH-X-102-152R-5
2-GH-X-109-152R-5
2-GH-X-116-152R-5
WPS RELIEF M1-0270-A LOC: A-6
2-GH-X-154-152R-5
WPS-CVCS RETURN M1-0270-A LOC: A-1
XGH-7835
XGH-7834
2-GH-X-136-152R-5
WPS-H 2 SUPPLY M1-0270-A LOC: A-3
3/4 -GH-X-112-152R-5
WPS-SAMPLE SYSTEM M1-0270-A LOC: A-2
2-GH-X-082-152R-3
XGH-0006
RWMS
XGH-7817A
2-GH-X-089-152R-3
XGH-0007
XGH-7817B
2-GH-X-096-152R-3
XGH-0008
XGH-7817C
2-GH-X-103-152R-3
XGH-0009
XGH-7817D
2-GH-X-110-152R-3
XGH-0010
XGH-7827A
2-GH-X-219-152R-5
2-GH-X-085-152R-5
2-GH-X-092-152R-5
2-GH-X-099-152R-5
2-GH-X-109-152R-5
1-GH-X-904-152R-3
1-GH-X-905-152R-3
1-GH-X-902-152R-3
1-GH-X-903-152R-3
1-GH-X-900-152R-3
2x1
3/4 -GH-X-080-153R-3
3/4 -GH-X-087-153R-3
3/4 -GH-X-094-153R-3
3/4 -GH-X-101-153R-3
3/4 -GH-X-111-153R-3
XGH-7821A
XGH-7821B
XGH-7821C
XGH-7821D
XGH-7831A
X-PT-1036
X-PT-1037
X-PT-1038
X-PT-1039
X-PT-1052
3/4 -152R-3
XGH-7822A
XGH-7822B
XGH-7822C
XGH-7822D
XGH-7832A
1-GH-X-077-152R-3
1-GH-X-084-152R-3
1-GH-X-091-152R-3
1-GH-X-098-152R-3
1-GH-X-108-152R-3
GAS DECAY TANK 1 TBX-GHATGD-01
GAS DECAY TANK 2 TBX-GHATGD-02
GAS DECAY TANK 3 TBX-GHATGD-03
GAS DECAY TANK 4 TBX-GHATGD-04
GAS DECAY TANK 5 TBX-GHATGD-05
2-GH-X-079-152R-3
2-GH-X-086-152R-3
2-GH-X-093-152R-3
2-GH-X-100-152R-3
2-GH-X-110-152R-3
1-GH-X-076-152R-3
1-GH-X-083-152R-3
1-GH-X-090-152R-3
1-GH-X-097-152R-3
1-GH-X-107-152R-3
XGH-7826A
XGH-7820A
XGH-7826B
XGH-7820B
XGH-7826C
XGH-7820C
XGH-7826D
XGH-7820D
XGH-7836A
XGH-7830A
2-GH-X-153-152R-5
2-GH-X-184-152R-5
2-GH-X-185-152R-5
2-GH-X-186-152R-5
1-GH-X-074-152R-5
1-GH-X-075-152R-5
R
2-GH-X-187-152R-5
2-GH-X-073-152R-5
WPS-RECOMB OUT M1-0269-01 LOC: A-1
2-GH-X-070-152R-5
1-GH-X-943-152R-5
XGH-7819
XGH-7818
XGH-7828
XGH-7829
GAS DECAY TANKS M1-0270-A LOC: A-5
EDITORIAL
2-GH-X-071-152R-5
2-GH-X-072-152R-5
WPS-COMPR DISCHARGE M1-0269 LOC: A-2
SHUTDOWN GAS DECAY TANK 9 M1-0270-A LOC: A-5
1-GH-X-161-152R-5
CS
SS
XGH-7840
XGH-7954
1-GH-X-160-151R-5
2-GH-X-188-152R-5
SHUTDOWN GAS DECAY TK 10 M1-0270-A LOC: A-5
WPS-COMPR SUCTION M1-0269-01 LOC: A-2
1/2 -GH-X-911-152R-5
1-GH-X-193-151R-5
XGH-7952
GAS DECAY TANKS DRAIN PUMP TBX-GHAPGD-01
3/4 -151R-5
XGH-0014
RWMS
X-PI-1093
XGH-7962
2-GH-X-187-152R-5
NOTE 5
T
GAS TRAP TBX-GHGTBT-01
2-GH-X-191-152R-5
1x 3/4
XGH-7951
1-GH-X-194-151R-5
XGH-7950
X-QT-1091
1-GH-X-195-151R-5
XGH-7953
2-GH-X-192-151R-5
XGH-0005
1 1/2 -GH-X-910-152R-5
1-GH-X-909-152R-5
XGH-7955
XGH-7956
GAS TRAP TBX-GHGTAT-01
DD
GH
REACTOR MAKE-UP M1-0242 LOC: E-1
1-DD-X-103-151-5
LC
XGH-7838
XGH-7839
1-GH-X-159-151R-5
1-GH-X-195-151R-5
XGH-7966
XGH-7963
1-GH-X-200-151R-5
1-BR-X-124-151R-5
BRS REC HOLDUP TANK M1-0258 LOC: A-5
BR
WPS-COMP SUCTION M1-0269-B LOC: A-5
3/4 -GH-X-915-152R-5
X-PI-5291
XGH-4004
AUX BLDG
SG BLDG UNIT 2
TEMP BLIND FLANGE SEE NOTE 10
1-GH-2-200-151R-2
WPS-DRAIN HEADER M1-0269 LOC: A-6
1-GH-X-202-152R-5
XGH-7957
XGH-7959
1-GH-X-221-152R-5
1-GH-X-203-151R-5
1-GH-X-196-151R-5
XGH-0021
1-CS-2-200-151R-2
CVCS-VOL CONTR TANK M2-0254 LOC: A-3
WASTE GAS DRAIN FILTER TBX-GHFLGD-01
2GH-7964
2GH-7965
NOTE 6
1-GH-2-198-151R-5
GAS TRAP TBX-GHGTAT-03
WPS-WASTE HOLDUP M1-0265 LOC: A-1
1-WP-X-062-151R-5
XGH-0015
1-GH-X-202-152R-5
WPS-RECOMB DH M1-0269-A LOC: G-6
1-GH-X-206-152R-5
WP
SS
GH
CS
206
205
1-GH-X-206-152R-5
XGH-7961
1GH-7964
1GH-7965
1-GH-1-197-151R-2
1-GH-1-198-151R-5
NOTE 6
1-CS-1-200-151R-2
CVCS-VOL CONTR TANK M1-0255 LOC: D-3
GAS TRAP TBX-GHGTAT-02
WPS-GA DRAIN HEADER M1-0269-D LOC: A-6
3/4 -GH-X-919-152R-5
WPS-COMP SUCTION M1-0269-B LOC: G-5
3/4 -GH-X-914-152R-5
WPS-WASTE HOLDUP M1-0265 LOC: A-1
1-WP-X-060-151R-5
XGH-7960
1-GH-X-205-151R-5

| REV | DWN | CHKD | APVD | REMARKS |
|---|---|---|---|---|
| CP-20 | Mkf 08-01-2011 | BLK 08-11-2011 | | THIS DRAWING REVISED TO INCORPORATE DESIGN CHANGE FDA-2011-000130-01-00 PER SK-0001-11-000130-01-00. EDITORIAL CHANGE AS NOTED. |

NOTES:

1. FOR GENERAL NOTES AND SYMBOLS SEE M1-0200.
2. DRAWING IS COMMON TO UNITS 1 AND 2.
3. CONNECTION TO GAS DECAY TANKS AS SPECIFIED BY WESTINGHOUSE DRAWING 1099E31 R-6.
4. FLOW DIAGRAM REDRAWN FROM WESTINGHOUSE DRAWINGS 1141E71 SHEET 1 R-5 AND 1141E71 SHEET 2 R-5.
5. TRAPS MUST BE LOCATED BELOW DRAIN SOURCE AND WITHOUT LOOP SEAL IN INLET PIPING.
6. VALVES 2GH-7964 AND 2GH-7965 MUST BE LOCATED NEAR VOLUME CONTROL TANK.
7. GH-SYSTEM IS WITHIN RADIOACTIVE WASTE MANAGEMENT SYSTEM BOUNDARIES.
8. DELETED
9. FOR INSTRUMENTATION AND CONTROL SEE 2200 SERIES I & C DIAGRAM.
10. THIS BLIND FLANGE TO BE REMOVED ONLY AT THE DIRECTION OF NUCLEAR OPERATIONS.
11. DELETED

FSAR FIGURE 11.3-1

THIS DRAWING CREATED ELECTRONICALLY

DRAWING 2323-M1-0270 REV CP-6
HAS BEEN SPLIT INTO THE FOLLOWING SHEETS:
M1-0270
M1-0270-A

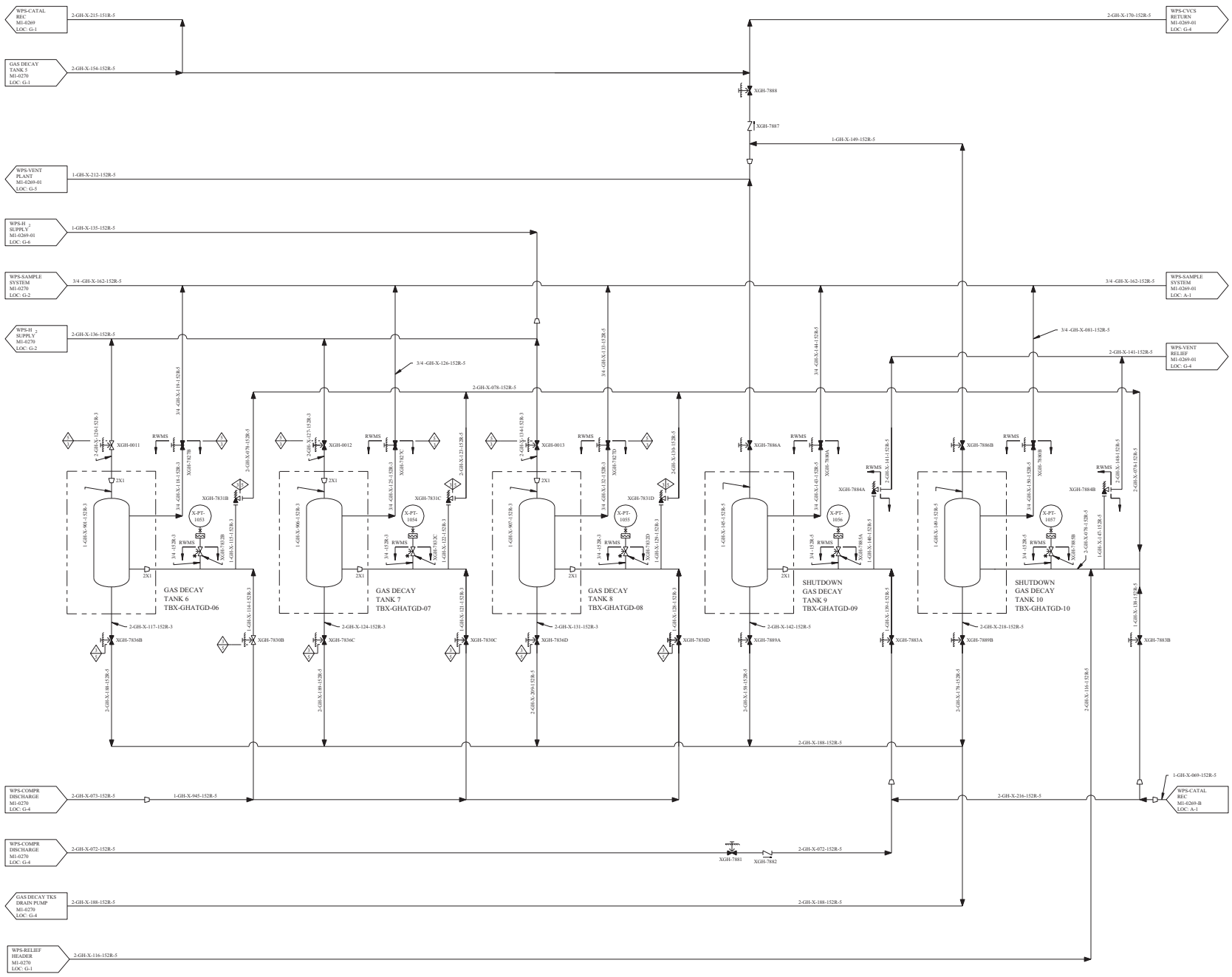
CLASS I
(NUCLEAR SAFETY-RELATED)
SAFETY CLASS 1 — SEISMIC CATEGORY I
SAFETY CLASS 2 — CLASS 1E
SAFETY CLASS 3 — ASSOCIATED CIRCUITS

LUMINANT
CPNPP
GLEN ROSE, TEXAS

FLOW DIAGRAM
WASTE PROCESSING SYSTEM
(GAS)

DWG. NO. M1-0270 | SH. NO. - | REV. CP-20

REF CHKD 3/21/2001




| REV. | DRWN | CHKD | APVD | REMARKS |
|---|---|---|---|---|
| CP-6 | RME 05/14/1996 | | | THIS DRAWING REVISED TO ADD THE FSAR FIGURE NUMBER AS AN EDITORIAL CHANGE. |

NOTES:

1. FOR GENERAL NOTES AND SYMBOLS SEE M1-0200.
2. DRAWING IS COMMON TO UNITS 1 AND 2.
3. CONNECTION TO GAS DECAY TANKS AS SPECIFIED BY WESTINGHOUSE DRAWING 1099E31 R6.
4. FLOW DIAGRAM REDRAWN FROM WESTINGHOUSE DRAWING NUMBERS 1141E71 SH 1 R5 AND 1141E71 SH 2 R5
5. GH SYSTEM IS WITHIN RADIOACTIVE WASTE MANAGEMENT BOUNDARIES.
6. FOR INSTRUMENTATION AND CONTROL SEE 2200 SERIES I&C DIAGRAM.

FSAR FIGURE 11.3-1

CP 0

THIS DRAWING CREATED ELECTRONICALLY

DRAWING 2323-M1-0270 REV CP-6
HAS BEEN SPLIT INTO THE FOLLOWING SHEETS:
M1-0270
M1-0270-A

CLASS I
(NUCLEAR SAFETY-RELATED)
SAFETY CLASS 1 SEISMIC CATEGORY I
SAFETY CLASS 2 CLASS 1E
SAFETY CLASS 3 ASSOCIATED CIRCUITS

TXU ELECTRIC
CPSES
GLEN ROSE, TEXAS

FLOW DIAGRAM
WASTE PROCESSING SYSTEM
(GAS)

| DWG. NO. | SH. NO. | REV. |
|---|---|---|
| M1-0270 | A | CP-6 |

$$$$$$$D\TESSSSS

vs0000ge.dgn

FIGURE 11.3-2

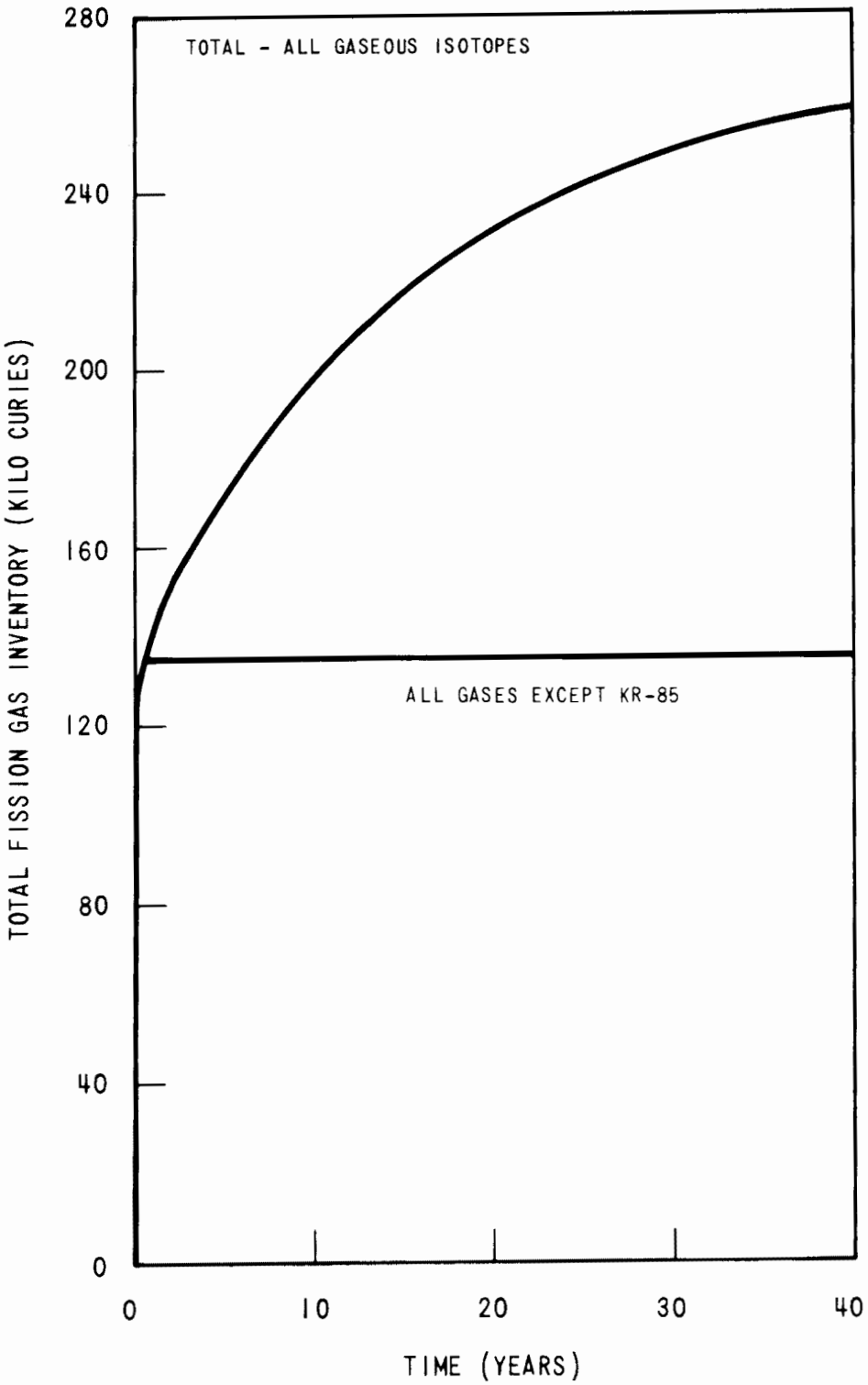
96

This Figure has been deleted

FIGURE 11.3-3

96

This Figure has been deleted




Note: Based on continuous core operation at 3565 Mwt with 1 percent fuel defects, stripping efficiency of 100 percent (refer to Table 11.1-1).

COMANCHE PEAK S.E.S.
FINAL SAFETY ANALYSIS REPORT
UNITS 1 and 2

GWPS Fission Gas Accumulation

FIGURE 11.3-4

UNITED STATES OF AMERICA
NUCLEAR REGULATORY COMMISSION

BEFORE THE ATOMIC SAFETY AND LICENSING BOARD

| | | |
|---|---|---|
| In the Matter of | ) | |
| | ) | |
| TEXAS UTILITIES GENERATING COMPANY, et al. | ) | Docket Nos. 50-445- and 50-446 |
| | ) | |
| (Comanche Peak Steam Electric Station, Units 1 and 2) | ) | |

STIPULATION

In consideration of the following Stipulation, Citizens for Fair Utility Regulation ("CFUR") hereby voluntarily withdraws Contention 9 from litigation in this proceeding. It is agreed that this Stipulation is contingent upon its acceptance by the NRC Staff and upon dismissal of Contention 9 by the Licensing Board. It is also agreed that nothing in this Stipulation shall prevent modification of the Stipulation and/or the operating criteria for Comanche Peak if NRC Regulations change or if Applicants determine that there is a better method than that outlined below to achieve the objective.

It is agreed between CFUR and Applicants that Applicants will operate Comanche Peak such that dose commitments from planned gaseous radioactive batch releases are as low as is reasonably achievable. Applicants shall take meterology, demography and batch characteristics into consideration in



achieving this objective. Applicants will include this Stipulation in the Final Safety Analysis Report for Comanche Peak.

Citizens for Fair Utility Regulation

Counsel for Applicants

Date: November 20, 1981





COMANCHE PEAK S.E.S.
FINAL SAFETY ANALYSIS REPORT
UNITS 1 and 2

ALARA STIPULATION
(CFUR)

FIGURE 11.3-5

CPSES/FSAR
FIGURE 11.4-1

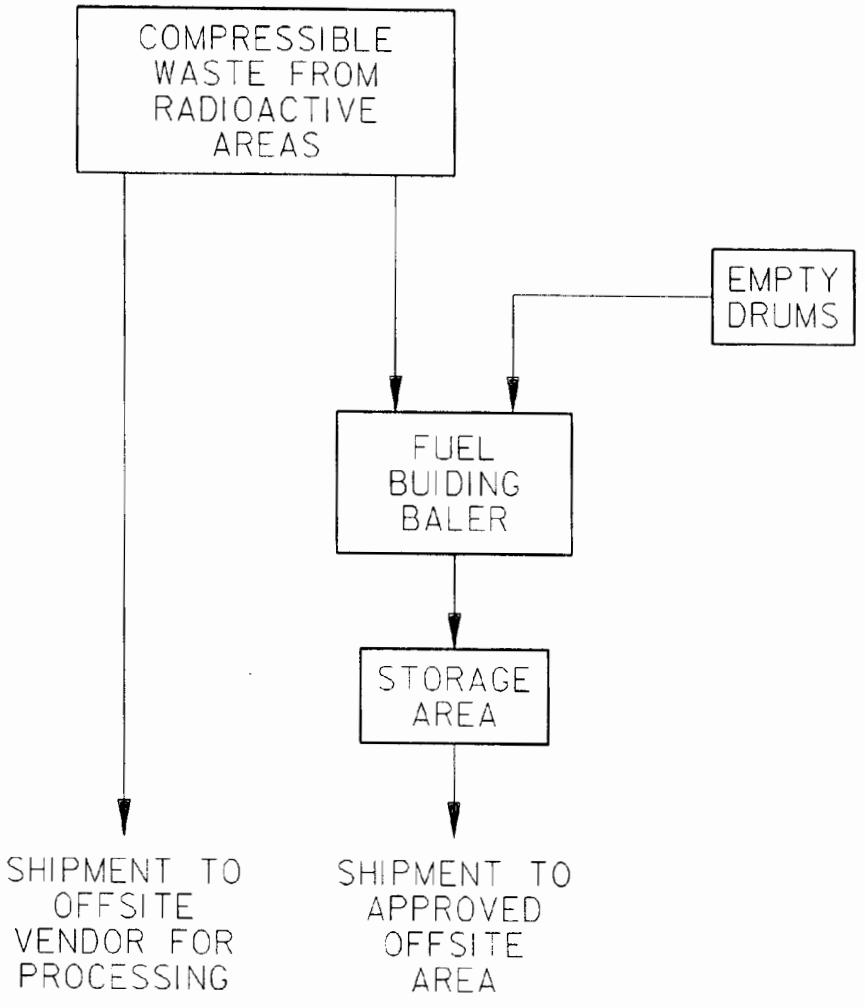
(DELETED)

JANUARY 21, 1985

COMANCHE PEAK S.E.S.
FINAL SAFETY ANALYSIS REPORT
UNITS 1 and 2

FLOW DIAGRAM - RADIOACTIVE
WASTE SOLIDIFICATION SYSTEM

FIGURE 11.4-1




**AMENDMENT 86**
**AUGUST 31, 1992**

COMANCHE PEAK S E S
FINAL SAFETY ANALYSIS REPORT
UNITS 1 AND 2

FLOW SHEET
BALER - SUBSYSTEM

FIGURE 11.4-2

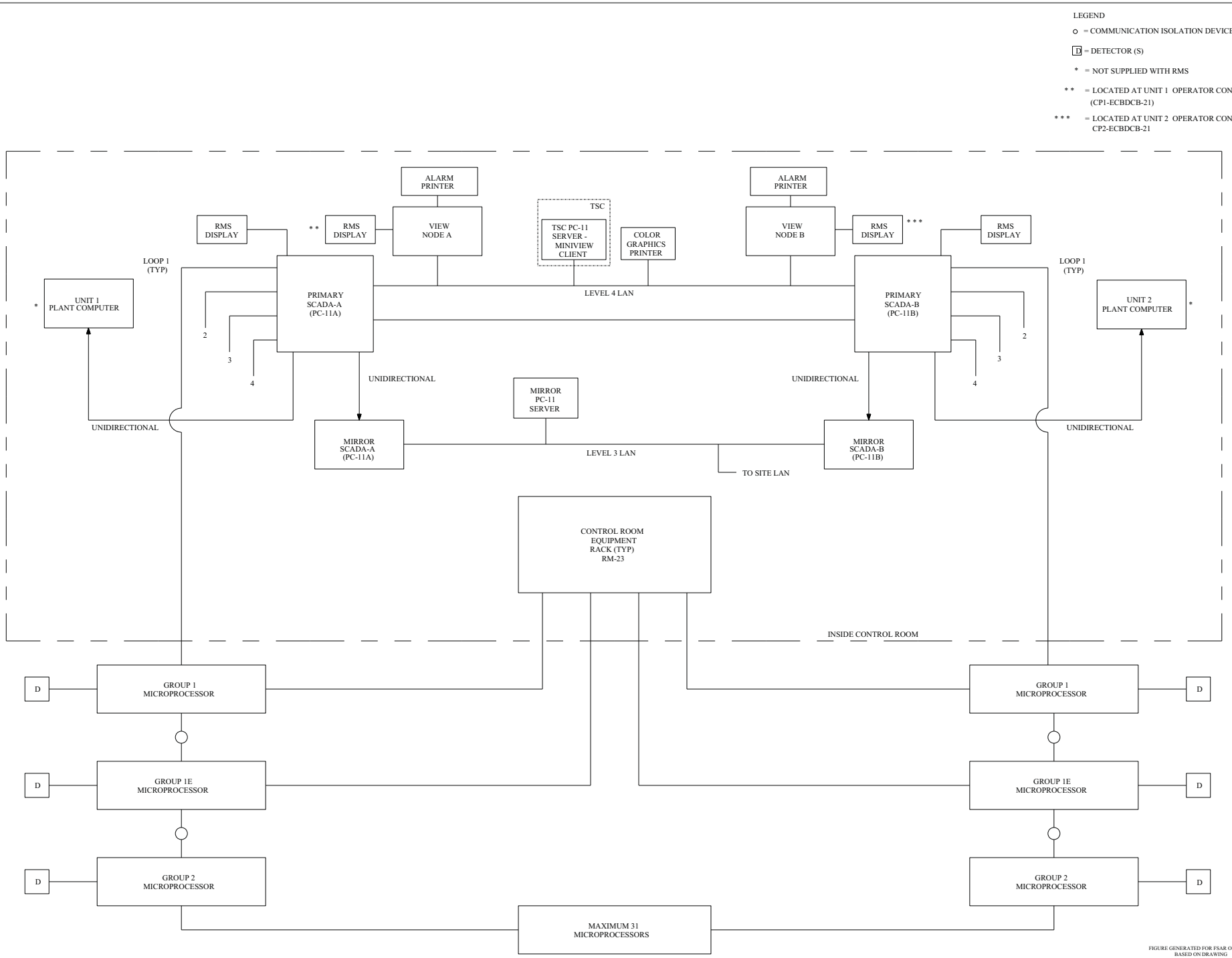



FIGURE GENERATED FOR FSAR ONLY
BASED ON DRAWING

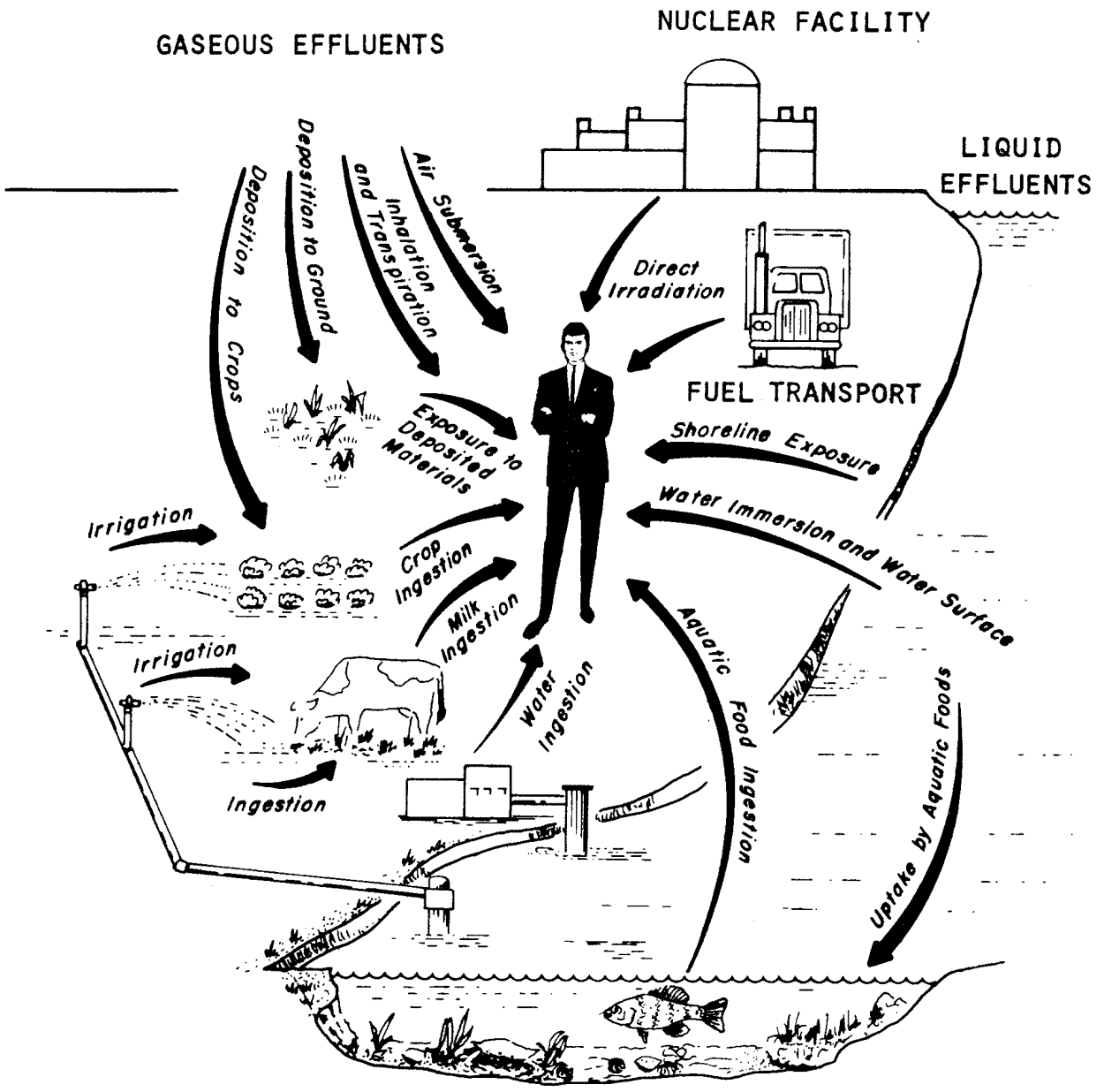
COMANCHE PEAK N.P.P.
FINAL SAFETY ANALYSIS REPORT
UNITS 1 AND 2

BLOCK DIAGRAM
DIGITAL RADIATION
MONITORING SYSTEM

FIGURE 11.5-1

Amendment No. 105

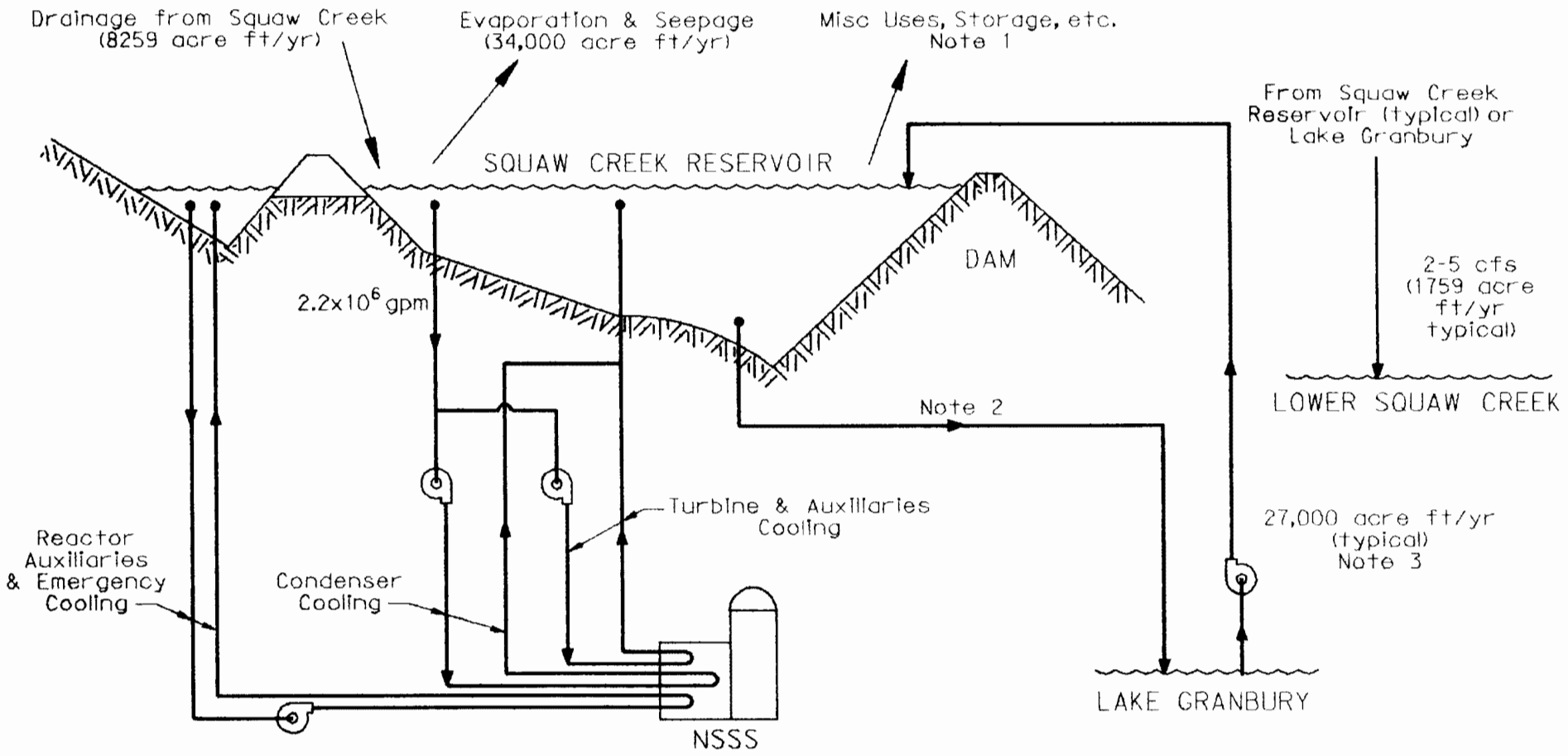
07-24-2012
FIG001151.DGN




COMANCHE PEAK S.E.S.
FINAL SAFETY ANALYSIS REPORT
UNITS 1 and 2

EXPOSURE PATHWAYS TO MAN

FIGURE 11A-1




Notes:

(1) Negligible net volume removed from Squaw Creek Reservoir per year.

(2) Return flow to Lake Granbury from Squaw Creek Reservoir is not a typical flow path.

(3) Water is pumped from Lake Granbury to Squaw Creek Reservoir to maintain water level in reservoir. This amount of water varies, but is based on drainage from Squaw Creek, evaporation, release to lower Squaw Creek, etc.

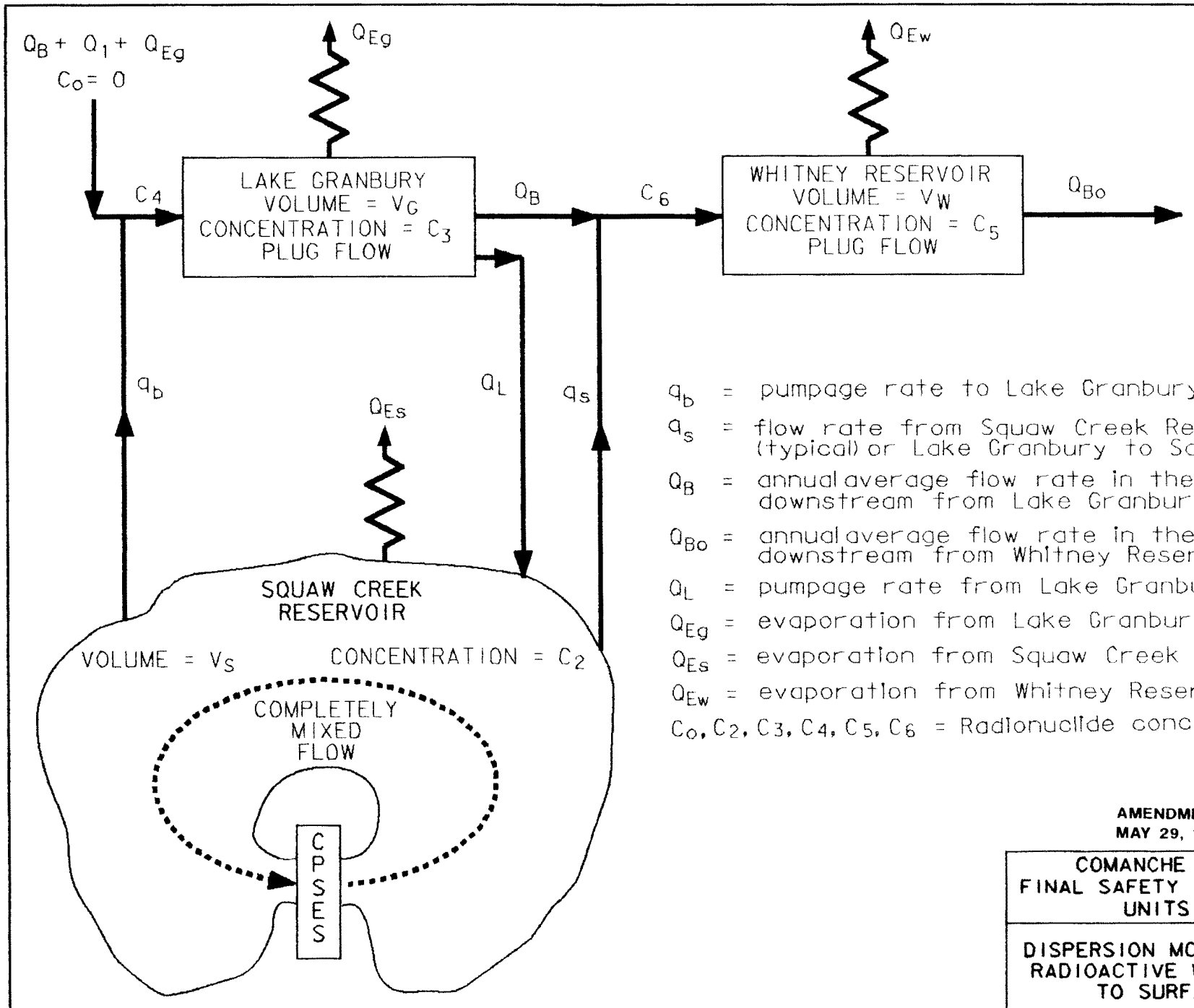
DS1392029

**AMENDMENT 85**
**MAY 29, 1992**

**COMANCHE PEAK S.E.S.**
**FINAL SAFETY ANALYSIS REPORT**
**UNITS 1 AND 2**

**RESERVOIR - CPSES FLOW PATH**

**FIGURE 11A-2**




$q_b$ = pumpage rate to Lake Granbury

$q_s$ = flow rate from Squaw Creek Reservoir (typical) or Lake Granbury to Squaw Creek

$Q_B$ = annual average flow rate in the Brazos River downstream from Lake Granbury

$Q_{Bo}$ = annual average flow rate in the Brazos River downstream from Whitney Reservoir

$Q_L$ = pumpage rate from Lake Granbury

$Q_{Eg}$ = evaporation from Lake Granbury

$Q_{Es}$ = evaporation from Squaw Creek Reservoir

$Q_{Ew}$ = evaporation from Whitney Reservoir

$C_o, C_2, C_3, C_4, C_5, C_6$ = Radionuclide concentrations

DS1392029

AMENDMENT 85
MAY 29, 1992

COMANCHE PEAK S.E.S.
FINAL SAFETY ANALYSIS REPORT
UNITS 1 AND 2

DISPERSION MODEL FOR NORMAL RADIOACTIVE WATER RELEASES TO SURFACE WATER

FIGURE 11A-3