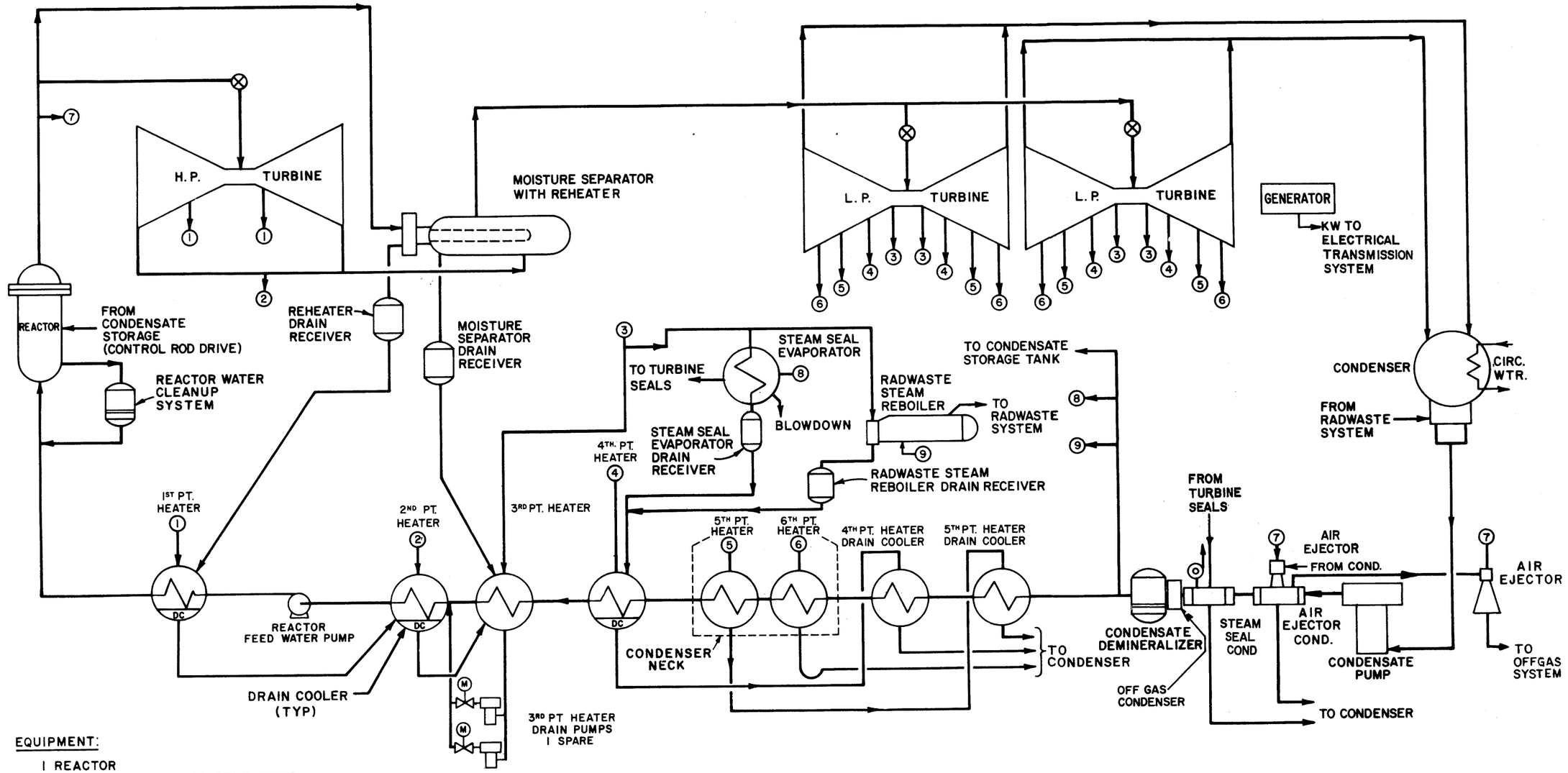


EQUIPMENT:

- 1 REACTOR
- 2 MOISTURE SEPARATOR REHEATERS
- 3 33% REACTOR FEED WATER PUMPS
- 1 STEAM SEAL CONDENSER
- 2 100% AIR EJECTORS
- 10 CONDENSATE DEMINERALIZER ION EXCHANGERS (2 SPARES)
- 4 50% 3RD PT. HEATER DRAIN PUMPS (2 IN SPARES)
- 1 SEALING STEAM EVAPORATOR
- 1 RADWASTE STEAM REBOILER
- 3 50 % CONDENSATE PUMPS
- 2 STRINGS OF HEATERS (HEATERS 1-6 PLUS 4th & 5th PT. HEATER DRAIN COOLER)

NOTE:
SAFETY CLASSES ARE SHOWN ON THE SPECIFIC SYSTEM DIAGRAMS.

FIGURE 10.1-1

PLANT POWER CYCLE

RIVER BEND STATION
UPDATED SAFETY ANALYSIS REPORT

(THIS FIGURE HAS BEEN DELETED)

FIGURE 10.1-2a

EXTRACTION STEAM SYSTEM
P&ID

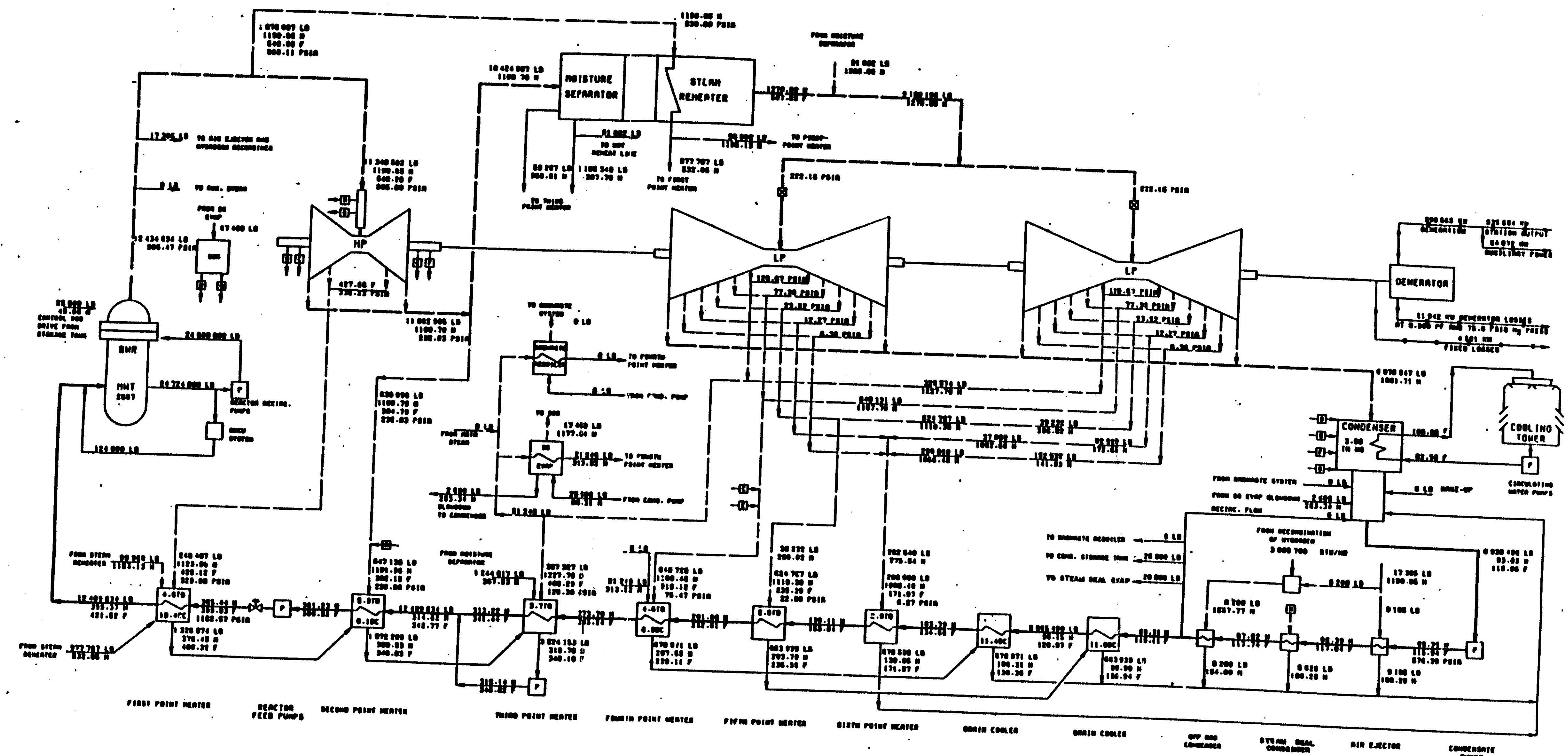
RIVER BEND STATION
UPDATED SAFETY ANALYSIS REPORT

(THIS FIGURE HAS BEEN DELETED)

FIGURE 10.1-2b

EXTRACTION STEAM SYSTEM
P&ID

RIVER BEND STATION
UPDATED SAFETY ANALYSIS REPORT



CONDENSER PRESSURE IN HG	CIRCULATING WATER TEMPERATURE F	TURBINE BACK PRESSURE IN HG	GENERATION KW	UNIT OUTPUT KW	NET TURBINE HEAT RATE BTU/KW-HR	GROSS TURBINE HEAT RATE BTU/KW-HR	UNIT HEAT RATE BTU/KW-HR
1.00	37.14	1.56	996 100	940 206	10006.00	9839.14	10477.10
2.00	67.01	2.00	996 061	940 070	10056.38	9831.68	10460.80
2.50	75.00	2.50	994 540	930 072	10071.75	9864.83	10463.05
3.00	82.50	3.00	990 565	935 094	10112.93	9944.48	10527.02
3.50	90.11	3.50	984 900	930 122	10171.16	10000.75	10590.00
4.00	92.90	4.00	977 376	922 513	10251.75	10070.65	10670.04
5.0:	101.20	5.00	959 965	904 409	10440.70	10260.94	10881.79

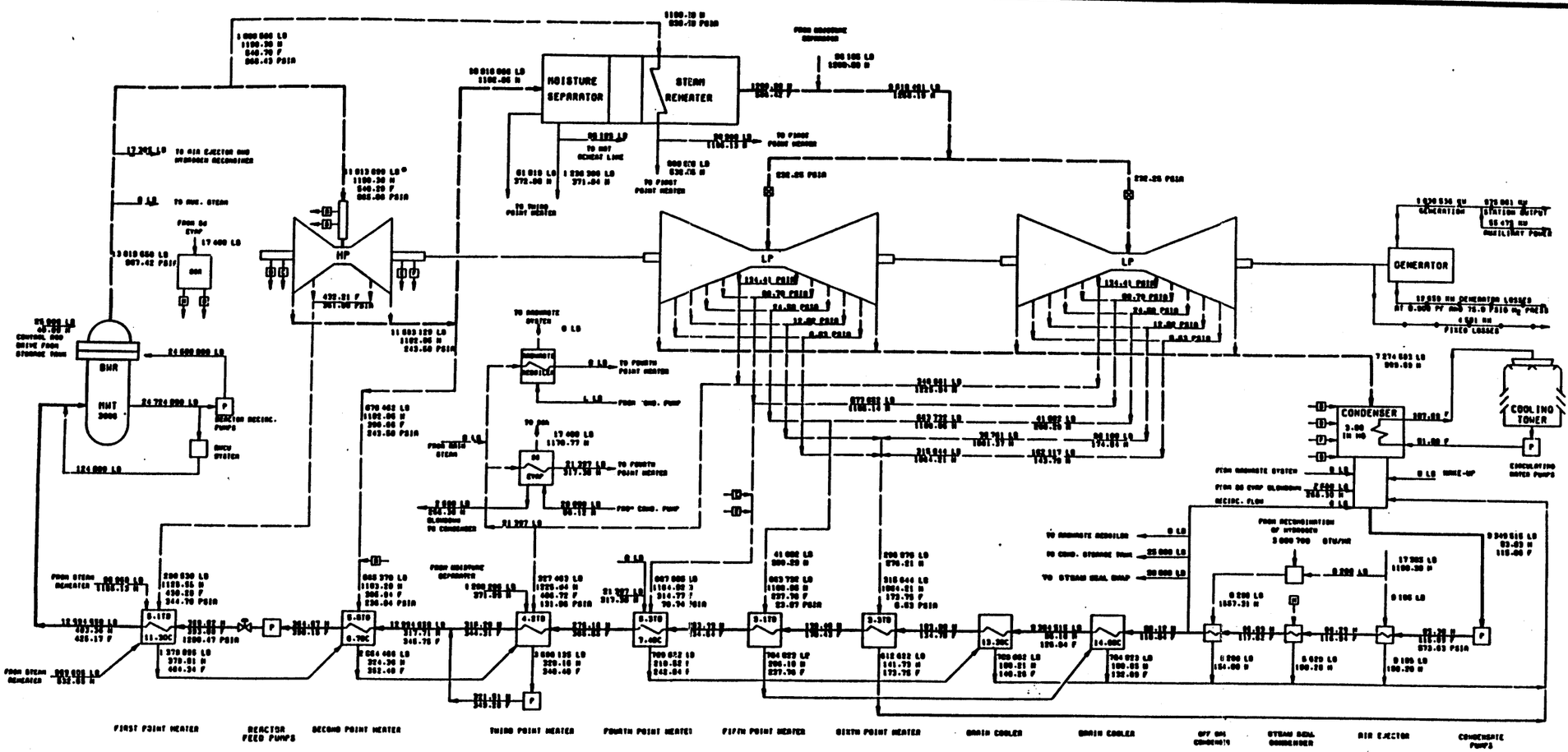
TYPICAL – REFER TO SUPPLIERS DOCUMENT DATA FORM (SDDF) #0231.502-001-020A FOR CURRENT HEAT BALANCE VALUES.

FIGURE 10.1-3

HEAT BALANCE-RATED FLOWS FOR TURBINE GUARANTEE

RIVER BEND STATION

UPDATED SAFETY ANALYSIS REPORT



BASIS OF HEAT BALANCE CALCULATIONS

ELEVATION - APPROXIMATELY 90 FEET ABOVE MEAN SEA LEVEL

PRESSURE DROPS - PRESSURE DROPS FOR THE MAIN STEAM, MOISTURE SEPARATORS, REHEATERS, COLD REHEAT, HOT REHEAT, AND ALL TURBINE EXTRACTIONS WERE CALCULATED AT ALL LOADS.

PRESSURES - TURBINE FLANGE PRESSURES ARE SHOWN ON EXTRACTION LINES ADJACENT TO THE TURBINE. HEATER INLET PRESSURES ARE SHOWN ADJACENT TO THE HEATERS.

CIRCULATING WATER - CIRCULATING WATER FLOW FOR THIS HEAT BALANCE IS 800,000 GPM.

VALVES FOR THROTTLE FLOW ARE TAKEN FROM THE TURBINE MANUAL, ALL ARE CONNECTED TO RETURN, CALCULATED THROTTLE CONDITIONS WITH A REACTOR OUTLET MOISTURE OF 0.0 G/G (0.40 G/G FOR TWO).

HEAT RATE IS BASED ON THE REACTOR THERMAL POWER.

THE REACTOR THERMAL POWER = CORE THERMAL POWER + PUMPING POWER - CLEANUP DEMIN. AND OTHER LOSSES

AUXILIARY POWER REQUIREMENTS ARE CALCULATED FOR ALL EQUIPMENT. THE REQUIREMENTS OF THE FOLLOWING MAJOR EQUIPMENT VARY WITH LOAD

2 HEATER DRAIN PUMPS	1 644 KW
3 CONDENSATE PUMPS	6 936 KW
2 CONSTANT SPEED REACTOR FEED PUMPS	17 001 KW

THE FOLLOWING ARE IMPORTANT AUXILIARY POWER ITEMS WHICH ARE CONSIDERED NOT TO VARY WITH LOAD. AUXILIARY POWER FOR SWGR AND OTHER SMALL EQUIPMENT ITEMS HAS BEEN BASED ON OPERATING DAILY REQUIREMENTS.

REACTOR RECIRC. PUMPS	0.740 KW
CIRCULATING WATER PUMPS	10.320 KW
COOLING TOWER EQUIPMENT	4.824 KW
MISCELLANEOUS MECHANICAL EQUIPMENT	0.421 KW

ALL HEAT BALANCE RESULTS HERE PRODUCED BY A COMPUTER PROGRAM PROCESSED ON AN IBM 370 MODEL 168 COMPUTER.

CALCULATIONS ARE BASED ON 1967 ASME STEAM TABLES

NET TURBINE HEAT RATE = (STEAM GENERATOR DUTY − RECIRCULATION PUMP POWER) / (GROSS ELEC. − FEED PUMP POWER) = 10110.07 BTU/KWHR

GROSS TURBINE HEAT RATE = STEAM GENERATOR DUTY / GENERATOR = 10061.03 BTU/KWHR

UNIT HEAT RATE = STEAM GENERATOR DUTY / UNIT OUTPUT = 10010.14 BTU/KWHR

CONDENSER PRESSURE IN HG	CIRCULATING WATER TEMPERATURE F	TURBINE BACK PRESSURE IN HG	GENERATION KW	UNIT OUTPUT KW	NET TURBINE HEAT RATE BTU/KW-HR	GROSS TURBINE HEAT RATE BTU/KW-HR	UNIT HEAT RATE BTU/KW-HR
1.00	72.75	1.02	1 072 904	970 486	10065.16	9919.33	10401.93
2.00	83.01	2.00	1 074 704	970 290	10078.04	9911.06	10472.62
2.50	71.39	2.00	1 074 882	970 302	10087.79	9918.00	10468.20
3.00	81.00	3.00	1 030 536	970 061	10110.07	9961.03	10010.14
3.50	81.74	3.00	1 075 403	969 893	10100.76	10001.16	10073.09
4.00	81.84	4.00	1 010 845	963 979	10240.02	10060.06	10640.00
5.00	81.94	5.00	1 000 939	945 661	10423.23	10246.19	10847.20

* VWO IS DEFINED TO BE 100% OF RATED STEAM FLOW DELIVERED TO THE HIGH PRESSURE TURBINE

TYPICAL – REFER TO SUPPLIERS DOCUMENT DATA FORM (SDDF) #0231.502-001-020A FOR CURRENT HEAT BALANCE VALUES.

LEAKAGES

	FLOW	ENTHALPY
A	0 000	1190.38
B	3 000	1190.38
C	5 317	1102.05
D	4 047	1102.05
E	5 017	1102.05
F	4 047	1102.05
G	11 700	1170.77
H	5 020	1170.77

LEGEND

- STEAM
- WATER
- POWER
- LB — FLOW, POUNDS PER HOUR
- H — ENTHALPY, BTU PER POUND
- F — TEMPERATURE, DEGREES F
- TD — TERMINAL DIFFERENCE, DEGREES F
- DC — DRAIN COOLER APPROACH, DEGREES F
- Kw — POWER, KILOWATTS
- IN HG — PRESSURE, IN OF MERCURY, ABS.
- PSIA — PRESSURE, LB PER SQ.INC IN. ABS.
- THROTTLE OR INTERCEPT VALVE
- CONTROL VALVE

FIGURE 10.1-4

HEAT BALANCE-VALVES WIDE OPEN (VWO) FLOW*

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UPDATED SAFETY ANALYSIS REPORT

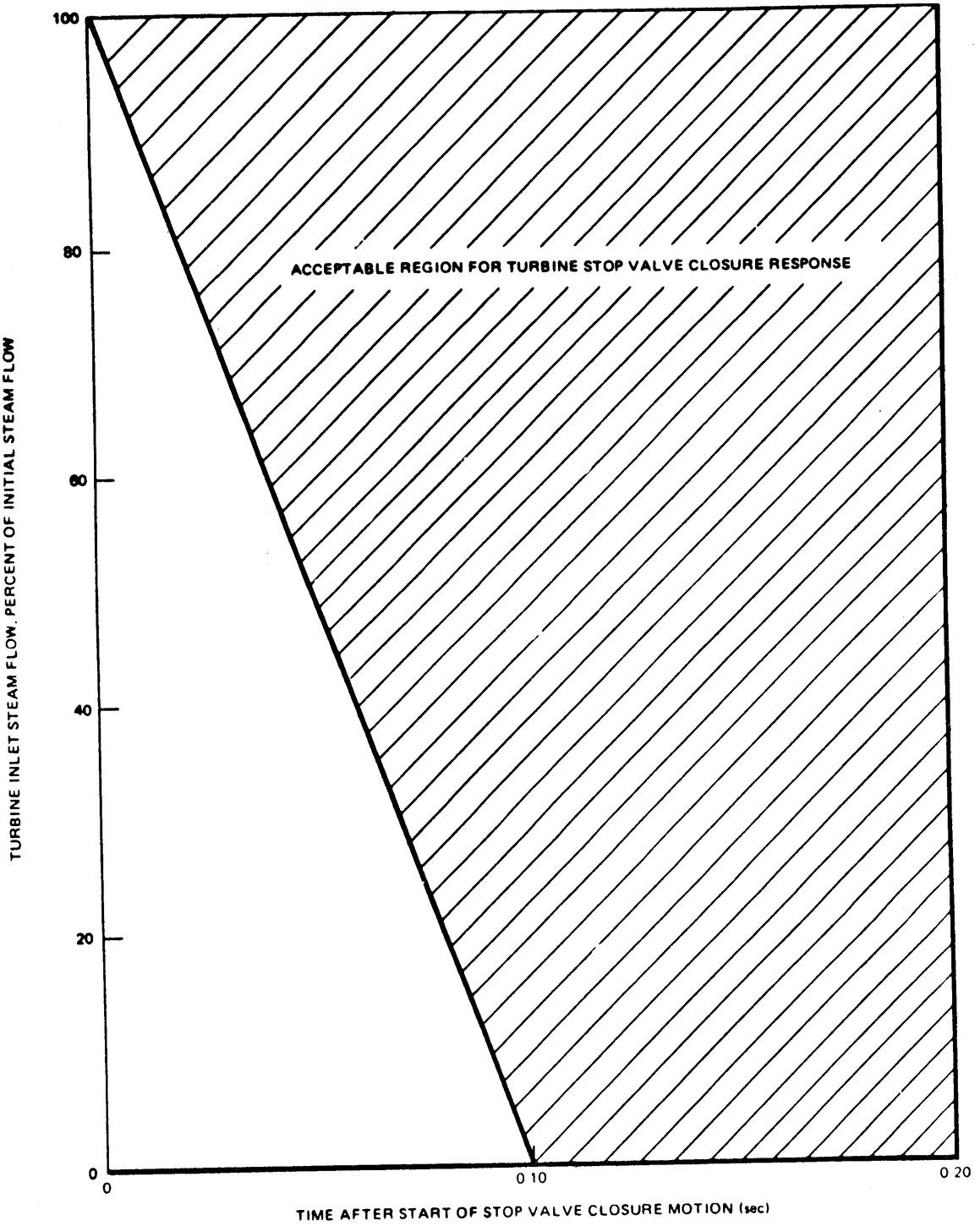


FIGURE 10.2-1

MAIN TURBINE
STOP VALVE
CLOSURE CHARACTERISTIC

RIVER BEND STATION
UPDATED SAFETY ANALYSIS REPORT

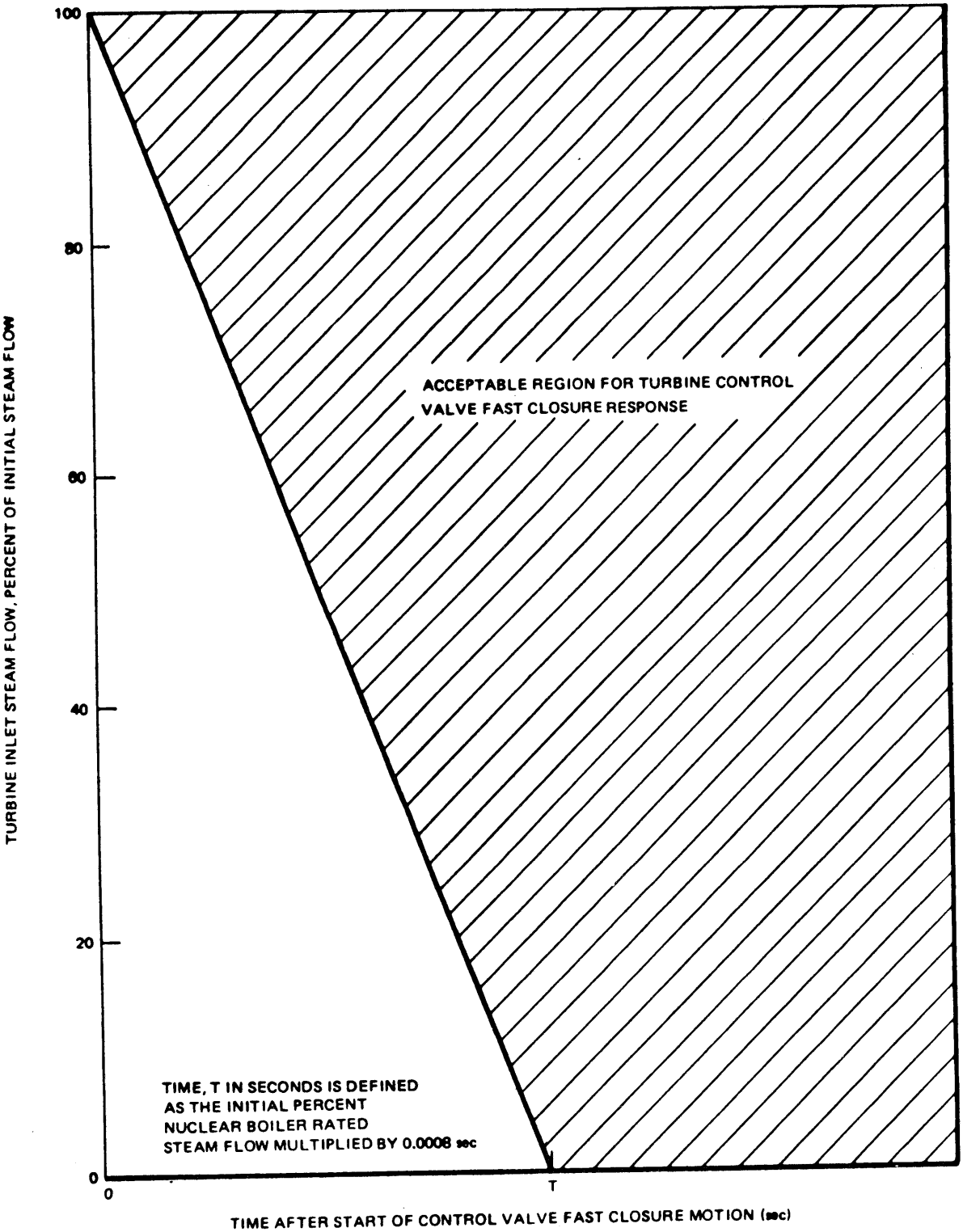


FIGURE 10.2-2

MAIN TURBINE CONTROL
VALVE FAST
CLOSURE CHARACTERISTIC

RIVER BEND STATION
UPDATED SAFETY ANALYSIS REPORT

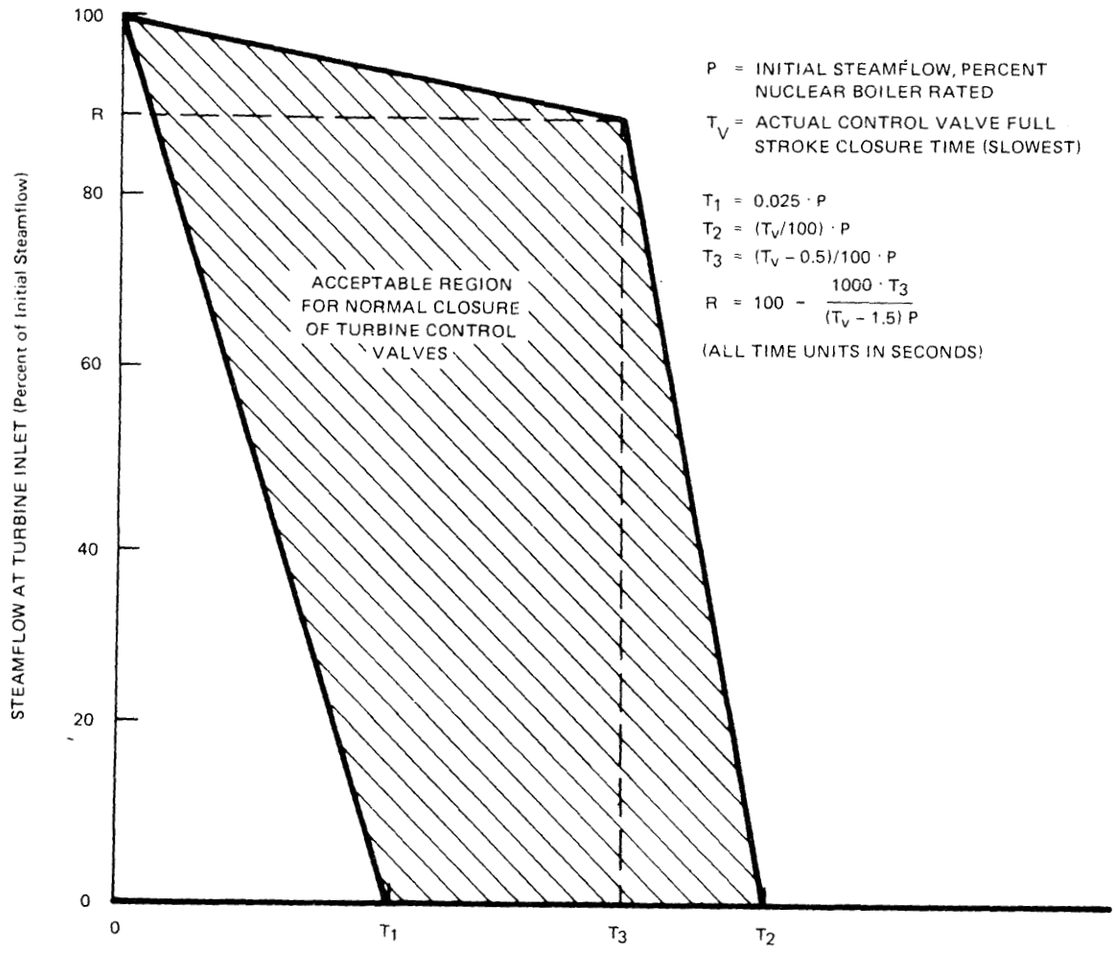
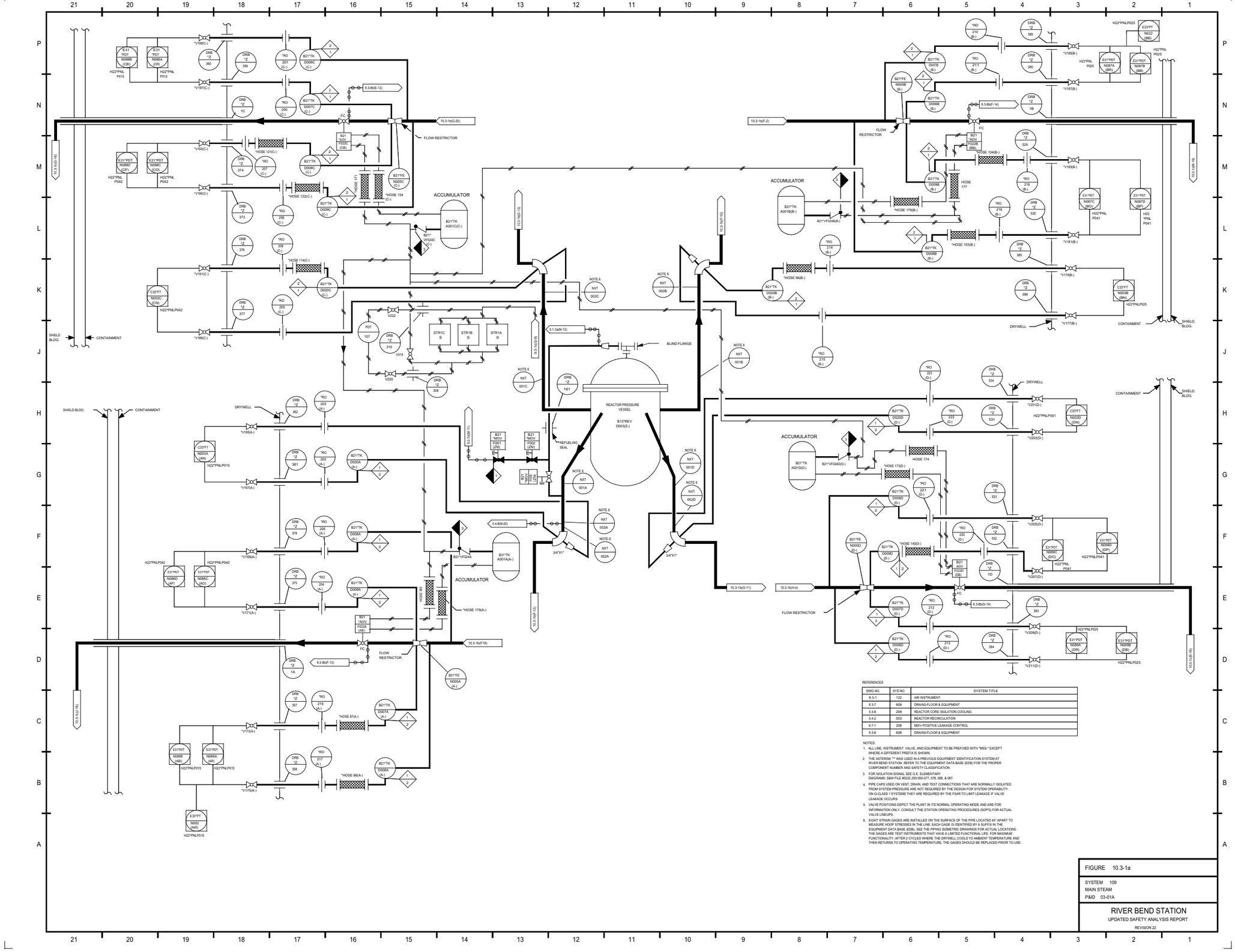


FIGURE 10.2-3

ACCEPTABLE RANGE FOR MAIN TURBINE CONTROL VALVE NORMAL CLOSURE MOTION

RIVER BEND STATION

UPDATED SAFETY ANALYSIS REPORT



REFERENCES

DWG NO.	SYS NO.	SYSTEM TITLE
9.3-1	122	AIR INSTRUMENT
9.3-7	609	DRAINS-FLOOR & EQUIPMENT
5.4-8	209	REACTOR CORE ISOLATION COOLING
5.4-2	053	REACTOR RECIRCULATION
6.7-1	208	MSIV POSITIVE LEAKAGE CONTROL
9.3-8	609	DRAINS-FLOOR & EQUIPMENT

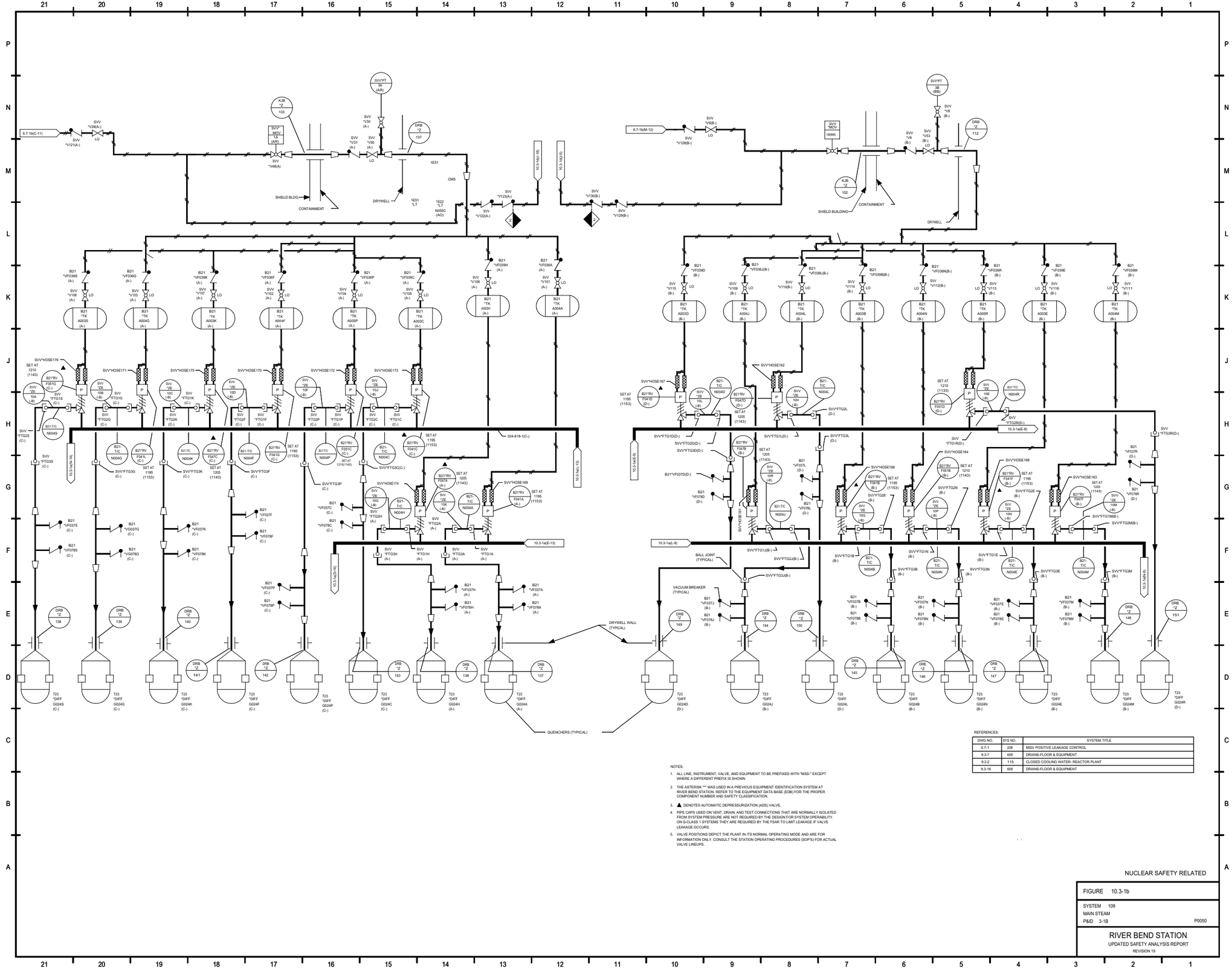
NOTES:

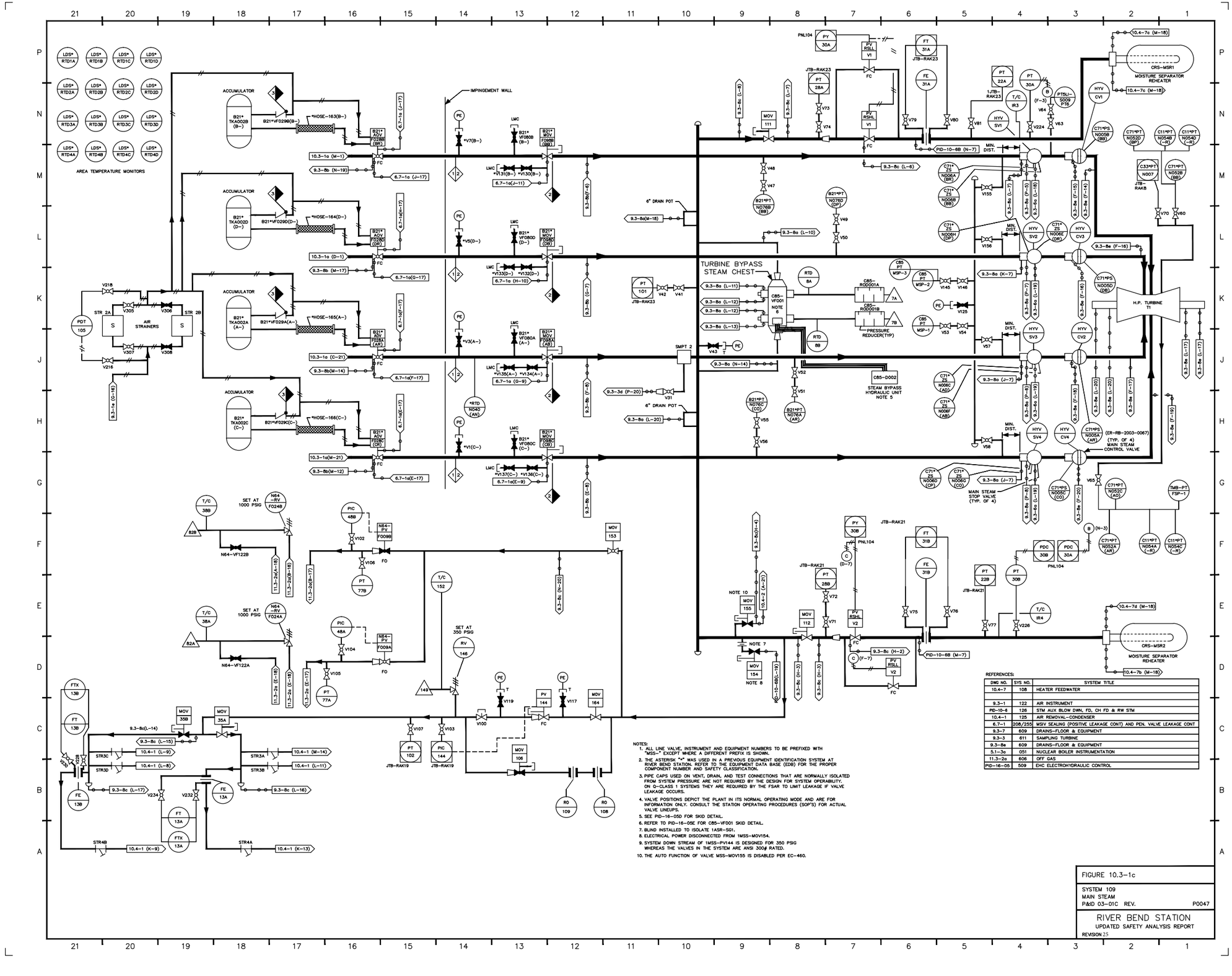
1. ALL LINE, INSTRUMENT, VALVE, AND EQUIPMENT TO BE PREFIXED WITH "MSS-" EXCEPT WHERE A DIFFERENT PREFIX IS SHOWN.
2. THE ASTERISK "*" WAS USED IN A PREVIOUS EQUIPMENT IDENTIFICATION SYSTEM AT RIVER BEND STATION. REFER TO THE EQUIPMENT DATA BASE (EDB) FOR THE PROPER COMPONENT NUMBER AND SAFETY CLASSIFICATION.
3. FOR ISOLATION SIGNAL SEE G.E. ELEMENTARY DIAGRAMS: S&W FILE #G22.200-005-077, 078, 086, & 087.
4. PIPE CAPS USED ON VENT, DRAIN, AND TEST CONNECTIONS THAT ARE NORMALLY ISOLATED FROM SYSTEM PRESSURE ARE NOT REQUIRED BY THE DESIGN FOR SYSTEM OPERABILITY. ON Q-CLASS 1 SYSTEMS THEY ARE REQUIRED BY THE FSAR TO LIMIT LEAKAGE IF VALVE LEAKAGE OCCURS.
5. VALVE POSITIONS DEPICT THE PLANT IN ITS NORMAL OPERATING MODE AND ARE FOR INFORMATION ONLY. CONSULT THE STATION OPERATING PROCEDURES (SOPS) FOR ACTUAL VALVE LINEUPS.
6. EIGHT STRAIN GAGES ARE INSTALLED ON THE SURFACE OF THE PIPE LOCATED 45° APART TO MEASURE HOOP STRESSES IN THE LINE. EACH GAGE IS IDENTIFIED BY A SUFFIX IN THE EQUIPMENT DATA BASE (EDB). SEE THE PIPING ISOMETRIC DRAWINGS FOR ACTUAL LOCATIONS. THE GAGES ARE TEST INSTRUMENTS THAT HAVE A LIMITED FUNCTIONAL LIFE. FOR MAXIMUM FUNCTIONALITY, AFTER 2 CYCLES WHERE THE DRYWELL COOLS TO AMBIENT TEMPERATURE AND THEN RETURNS TO OPERATING TEMPERATURE, THE GAGES SHOULD BE REPLACED PRIOR TO USE.

FIGURE 10.3-1a

SYSTEM 109
MAIN STEAM
P&ID 03-01A

RIVER BEND STATION
UPDATED SAFETY ANALYSIS REPORT
REVISION 22


SHIELD BLDG
CONTAINMENT
DRYWELL
CMS
1E51
1E22 *LT N055C (AO)
1E51 *LT
SHIELD BUILDING
DRYWELL WALL (TYPICAL)
BALL JOINT (TYPICAL)
VACUUM BREAKER (TYPICAL)
QUENCHERS (TYPICAL)
REFERENCES:
DWG NO. | SYS NO. | SYSTEM TITLE
6.7-1 | 208 | MSIV POSITIVE LEAKAGE CONTROL
9.3-7 | 609 | DRAINS-FLOOR & EQUIPMENT
9.2-2 | 115 | CLOSED COOLING WATER- REACTOR PLANT
9.3-16 | 609 | DRAINS-FLOOR & EQUIPMENT
NOTES:
1. ALL LINE, INSTRUMENT, VALVE, AND EQUIPMENT TO BE PREFIXED WITH "MSS-" EXCEPT WHERE A DIFFERENT PREFIX IS SHOWN.
2. THE ASTERISK "*" WAS USED IN A PREVIOUS EQUIPMENT IDENTIFICATION SYSTEM AT RIVER BEND STATION. REFER TO THE EQUIPMENT DATA BASE (EDB) FOR THE PROPER COMPONENT NUMBER AND SAFETY CLASSIFICATION.
3. ▲ DENOTES AUTOMATIC DEPRESSURIZATION (ADS) VALVE.
4. PIPE CAPS USED ON VENT, DRAIN, AND TEST CONNECTIONS THAT ARE NORMALLY ISOLATED FROM SYSTEM PRESSURE ARE NOT REQUIRED BY THE DESIGN FOR SYSTEM OPERABILITY. ON Q-CLASS 1 SYSTEMS THEY ARE REQUIRED BY THE FSAR TO LIMIT LEAKAGE IF VALVE LEAKAGE OCCURS.
5. VALVE POSITIONS DEPICT THE PLANT IN ITS NORMAL OPERATING MODE AND ARE FOR INFORMATION ONLY. CONSULT THE STATION OPERATING PROCEDURES (SOPS) FOR ACTUAL VALVE LINEUPS.
NUCLEAR SAFETY RELATED
FIGURE 10.3-1b
SYSTEM 109
MAIN STEAM
P&ID 3-1B
P0050
RIVER BEND STATION
UPDATED SAFETY ANALYSIS REPORT
REVISION 19



REFERENCES:

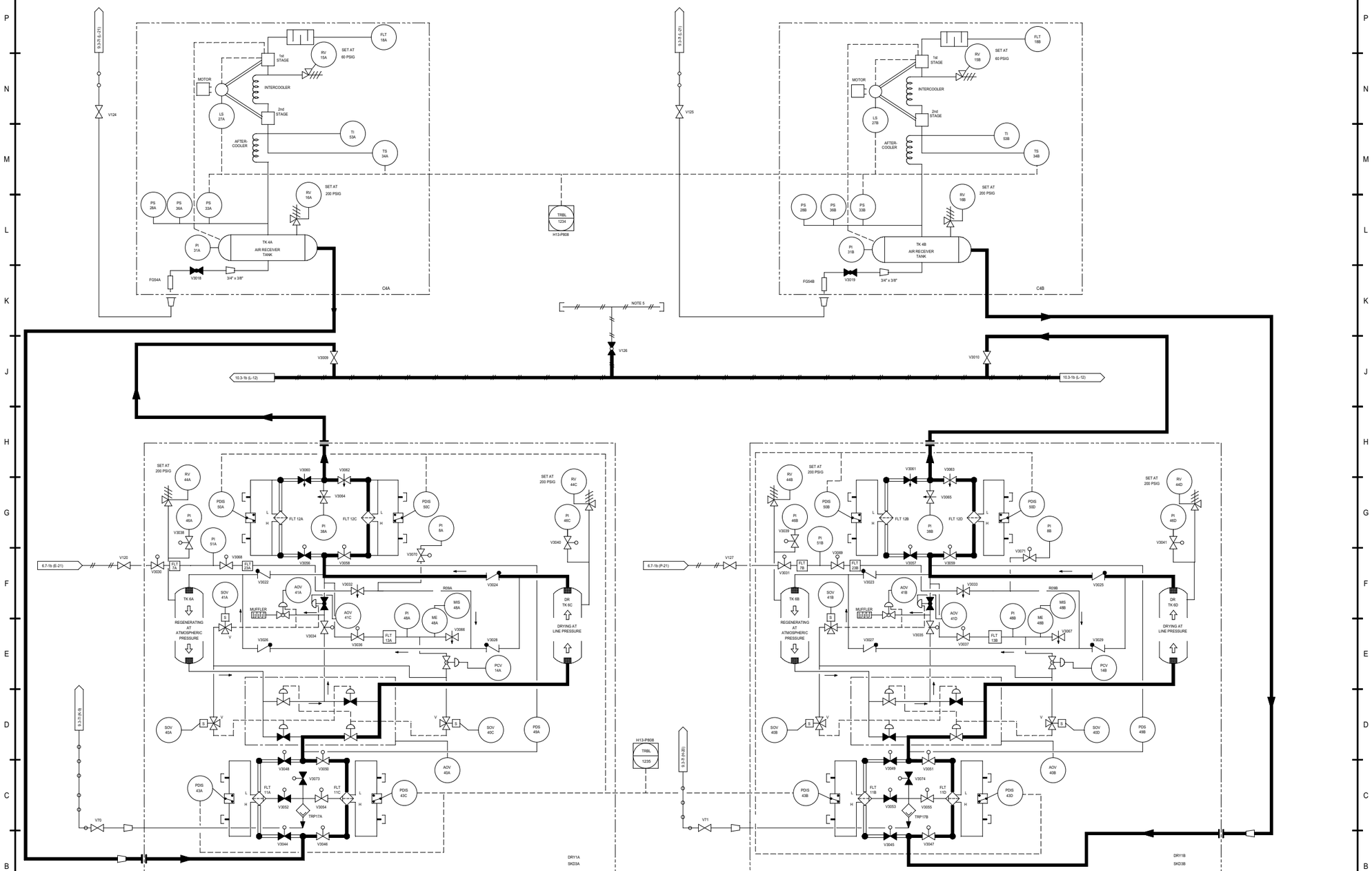
DWG NO.	SYS NO.	SYSTEM TITLE
10.4-7	108	HEATER FEEDWATER
9.3-1	122	AIR INSTRUMENT
PID-10-8	126	STM AUX BLOW DWN., FD, CH FD & RW STM
10.4-1	125	AIR REMOVAL-CONDENSER
6.7-1	208/255	MSIV SEALING (POSITIVE LEAKAGE CONT) AND PEN. VALVE LEAKAGE CONT
9.3-7	609	DRAINS-FLOOR & EQUIPMENT
9.3-3	611	SAMPLING TURBINE
9.3-8a	609	DRAINS-FLOOR & EQUIPMENT
5.1-3a	051	NUCLEAR BOILER INSTRUMENTATION
11.3-2a	606	OFF GAS
PID-16-05	509	EHC ELECTROHYDRAULIC CONTROL

NOTES:
1. ALL LINE VALVE, INSTRUMENT AND EQUIPMENT NUMBERS TO BE PREFIXED WITH "MSS-" EXCEPT WHERE A DIFFERENT PREFIX IS SHOWN.
2. THE ASTERISK "*" WAS USED IN A PREVIOUS EQUIPMENT IDENTIFICATION SYSTEM AT RIVER BEND STATION. REFER TO THE EQUIPMENT DATA BASE (EDB) FOR THE PROPER COMPONENT NUMBER AND SAFETY CLASSIFICATION.
3. PIPE CAPS USED ON VENT, DRAIN, AND TEST CONNECTIONS THAT ARE NORMALLY ISOLATED FROM SYSTEM PRESSURE ARE NOT REQUIRED BY THE DESIGN FOR SYSTEM OPERABILITY. ON Q-CLASS 1 SYSTEMS THEY ARE REQUIRED BY THE FSAR TO LIMIT LEAKAGE IF VALVE LEAKAGE OCCURS.
4. VALVE POSITIONS DEPICT THE PLANT IN ITS NORMAL OPERATING MODE AND ARE FOR INFORMATION ONLY. CONSULT THE STATION OPERATING PROCEDURES (SOP'S) FOR ACTUAL VALVE LINEUPS.
5. SEE PID-16-05D FOR SKID DETAIL.
6. REFER TO PID-16-05E FOR C85-YF001 SKID DETAIL.
7. BLIND INSTALLED TO ISOLATE 1ASR-SG1.
8. ELECTRICAL POWER DISCONNECTED FROM 1MSS-MOV154.
9. SYSTEM DOWN STREAM OF 1MSS-PV144 IS DESIGNED FOR 350 PSIG WHEREAS THE VALVES IN THE SYSTEM ARE ANSI 300# RATED.
10. THE AUTO FUNCTION OF VALVE MSS-MOV155 IS DISABLED PER EC-460.

FIGURE 10.3-1c

SYSTEM 109
MAIN STEAM
P&ID 03-01C REV. P0047

RIVER BEND STATION
UPDATED SAFETY ANALYSIS REPORT
REVISION 25



NOTES:

1. ALL LINE, INSTRUMENT, VALVE, AND EQUIPMENT NUMBERS TO BE PREFIXED WITH "SVV-" EXCEPT WHERE A DIFFERENT PREFIX IS SHOWN.
2. THE ASTERISK "*" WAS USED IN A PREVIOUS EQUIPMENT IDENTIFICATION SYSTEM AT RIVER BEND STATION. REFER TO THE COMPONENT DATA BASE (CDB) FOR THE PROPER COMPONENT NUMBER AND SAFETY CLASSIFICATION.
3. PIPE CAPS USED ON VENT, DRAIN, AND TEST CONNECTIONS THAT ARE NORMALLY ISOLATED FROM SYSTEM PRESSURE ARE NOT REQUIRED BY THE DESIGN FOR SYSTEM OPERABILITY. ON Q-CLASS 1 SYSTEMS THEY ARE REQUIRED BY THE FSAR TO LIMIT LEAKAGE IF VALVE LEAKAGE OCCURS.
4. VALVE POSITIONS DEPICT THE PLANT IN ITS NORMAL OPERATING MODE AND ARE FOR INFORMATION ONLY. CONSULT THE STATION OPERATING PROCEDURES (SOPS) FOR ACTUAL VALVE LINEUPS.
5. THIS TUBING NO LONGER SERVES A SYSTEM FUNCTION AND HAS BEEN SPARED IN PLACE.

REFERENCES:

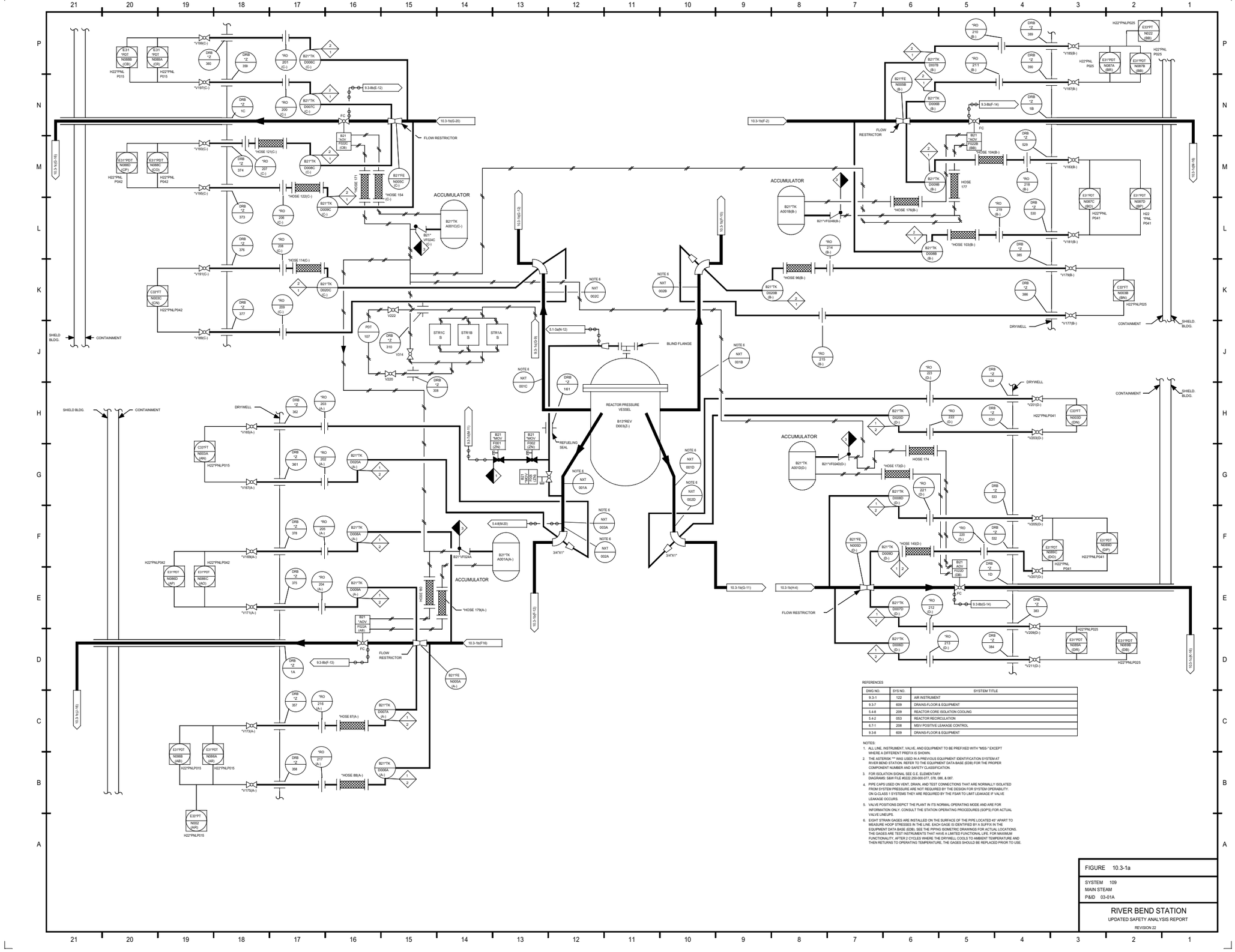
DWG NO.	SYS NO.	SYSTEM TITLE
6.7-1b	208	MSIV POSITIVE LEAKAGE CONTROL
9.3-7	609	DRAINS - FLOOR & EQUIPMENT

NUCLEAR SAFETY RELATED

FIGURE 10.3-1d

SYSTEM 202
SVV COMPRESSOR/DRYERS
P&ID 03-01D REV. 4 PO190

RIVER BEND STATION
UPDATED SAFETY ANALYSIS REPORT
REVISION 16 MARCH 2003



REFERENCES

DWG NO.	SYS NO.	SYSTEM TITLE
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9.3-7	609	DRAINS-FLOOR & EQUIPMENT
5.4-8	209	REACTOR CORE ISOLATION COOLING
5.4-2	053	REACTOR RECIRCULATION
6.7-1	208	MSIV POSITIVE LEAKAGE CONTROL
9.3-8	609	DRAINS-FLOOR & EQUIPMENT

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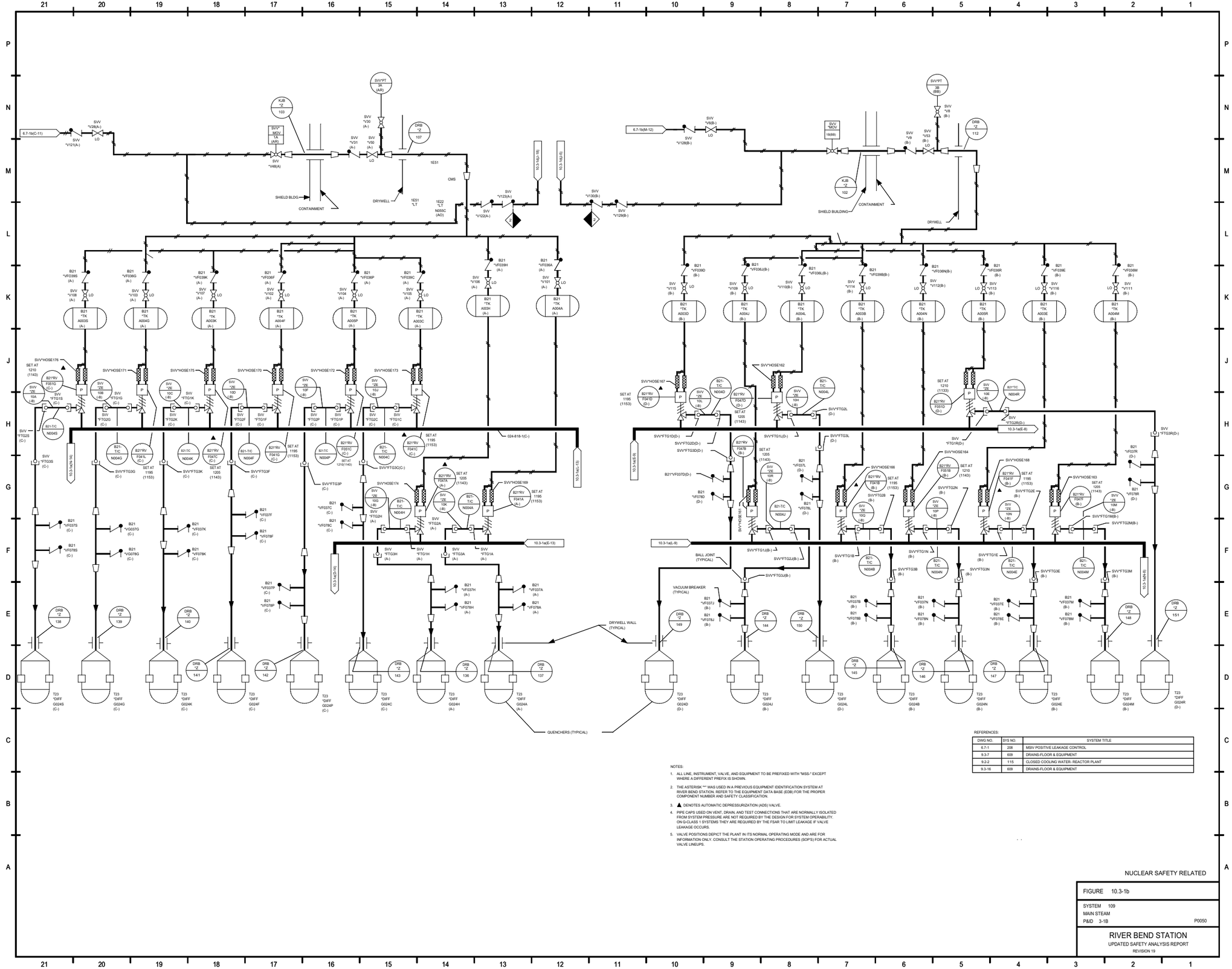
6. EIGHT STRAIN GAGES ARE INSTALLED ON THE SURFACE OF THE PIPE LOCATED 45° APART TO MEASURE HOOP STRESSES IN THE LINE. EACH GAGE IS IDENTIFIED BY A SUFFIX IN THE EQUIPMENT DATA BASE (EDB). SEE THE PIPING ISOMETRIC DRAWINGS FOR ACTUAL LOCATIONS. THE GAGES ARE TEST INSTRUMENTS THAT HAVE A LIMITED FUNCTIONAL LIFE. FOR MAXIMUM FUNCTIONALITY, AFTER 2 CYCLES WHERE THE DRYWELL COOLS TO AMBIENT TEMPERATURE AND THEN RETURNS TO OPERATING TEMPERATURE, THE GAGES SHOULD BE REPLACED PRIOR TO USE.

FIGURE 10.3-1a

SYSTEM 109
MAIN STEAM
P&ID 03-01A

RIVER BEND STATION
UPDATED SAFETY ANALYSIS REPORT
REVISION 22


SHIELD BLDG
CONTAINMENT
DRYWELL
CMS
1E51
1E22 *LT N055C (AO)
1E51 *LT
SHIELD BUILDING
DRYWELL WALL (TYPICAL)
BALL JOINT (TYPICAL)
VACUUM BREAKER (TYPICAL)
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REFERENCES:
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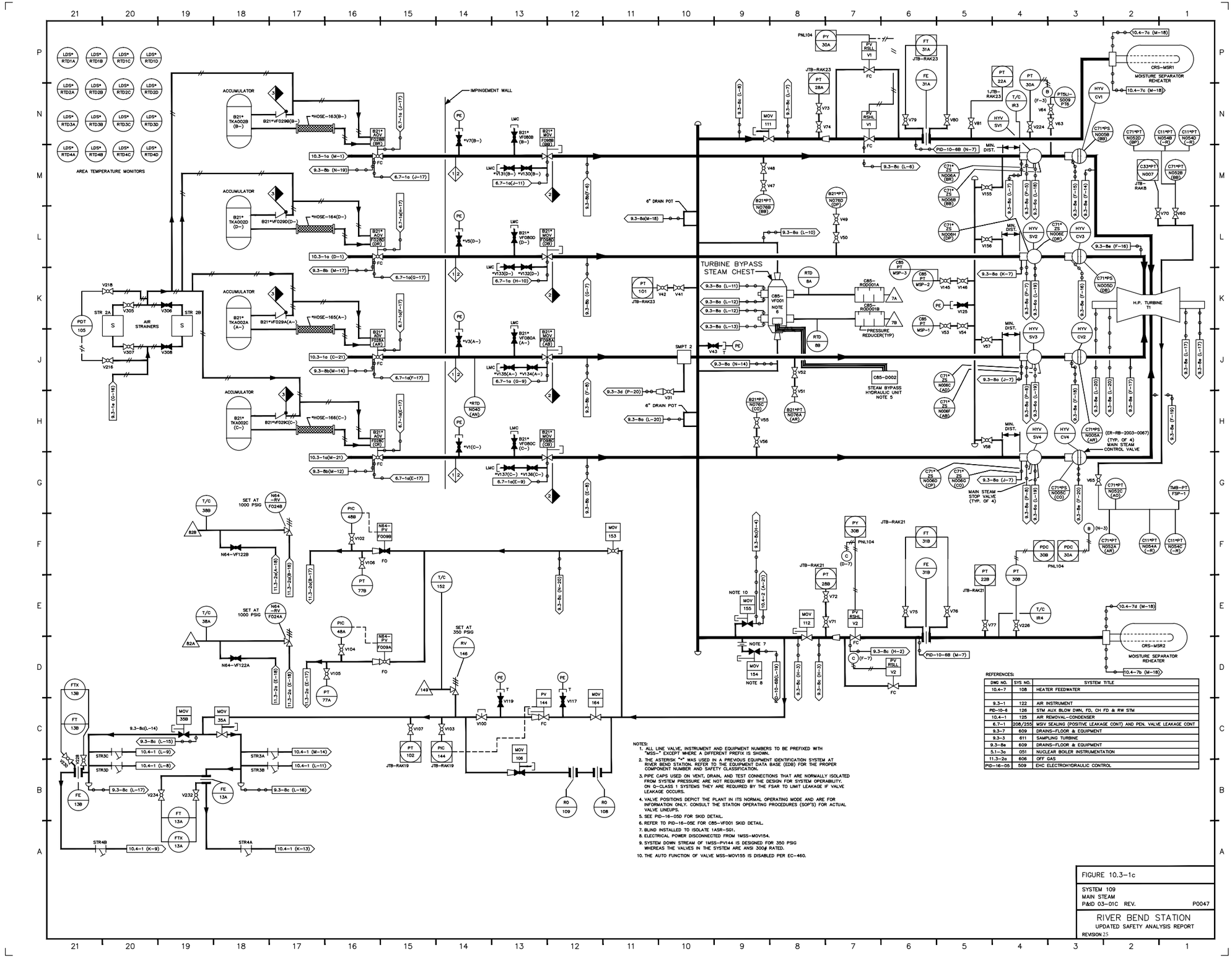
NUCLEAR SAFETY RELATED
FIGURE 10.3-1b
SYSTEM 109
MAIN STEAM
P&ID 3-1B
P0050
RIVER BEND STATION
UPDATED SAFETY ANALYSIS REPORT
REVISION 19



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9.3-3	611	SAMPLING TURBINE
9.3-8a	609	DRAINS-FLOOR & EQUIPMENT
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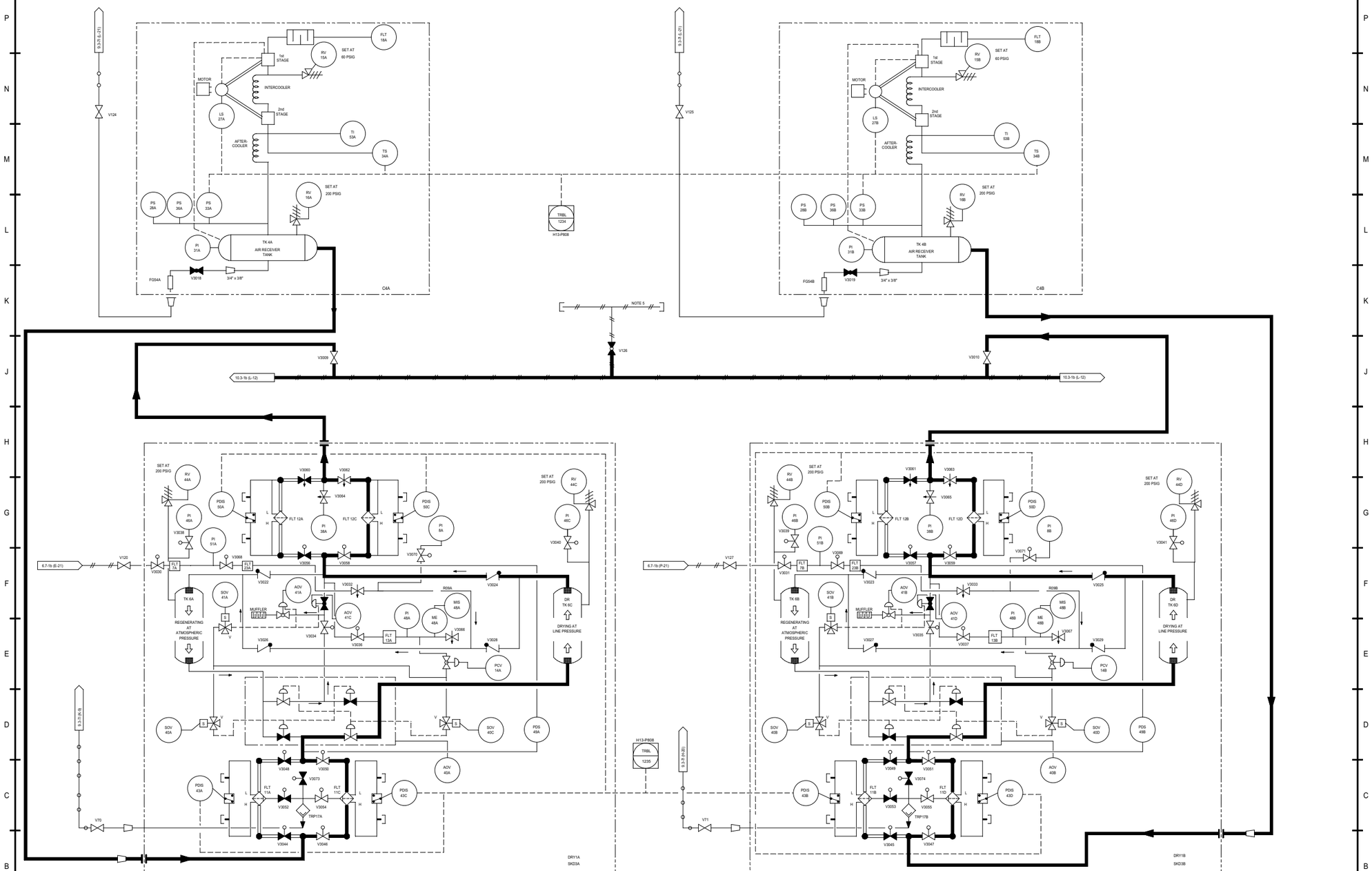
3. PIPE CAPS USED ON VENT, DRAIN, AND TEST CONNECTIONS THAT ARE NORMALLY ISOLATED FROM SYSTEM PRESSURE ARE NOT REQUIRED BY THE DESIGN FOR SYSTEM OPERABILITY. ON Q-CLASS 1 SYSTEMS THEY ARE REQUIRED BY THE FSAR TO LIMIT LEAKAGE IF VALVE LEAKAGE OCCURS.
4. VALVE POSITIONS DEPICT THE PLANT IN ITS NORMAL OPERATING MODE AND ARE FOR INFORMATION ONLY. CONSULT THE STATION OPERATING PROCEDURES (SOP'S) FOR ACTUAL VALVE LINEUPS.
5. SEE PID-16-05D FOR SKID DETAIL.
6. REFER TO PID-16-05E FOR C85-YF001 SKID DETAIL.
7. BLIND INSTALLED TO ISOLATE 1ASR-SG1.
8. ELECTRICAL POWER DISCONNECTED FROM 1MSS-MOV154.
9. SYSTEM DOWN STREAM OF 1MSS-PV144 IS DESIGNED FOR 350 PSIG WHEREAS THE VALVES IN THE SYSTEM ARE ANSI 300# RATED.
10. THE AUTO FUNCTION OF VALVE MSS-MOV155 IS DISABLED PER EC-460.

FIGURE 10.3-1c

SYSTEM 109
MAIN STEAM
P&ID 03-01C REV. P0047

RIVER BEND STATION
UPDATED SAFETY ANALYSIS REPORT
REVISION 25



NOTES:

1. ALL LINE, INSTRUMENT, VALVE, AND EQUIPMENT NUMBERS TO BE PREFIXED WITH "SVV-" EXCEPT WHERE A DIFFERENT PREFIX IS SHOWN.
2. THE ASTERISK "*" WAS USED IN A PREVIOUS EQUIPMENT IDENTIFICATION SYSTEM AT RIVER BEND STATION. REFER TO THE COMPONENT DATA BASE (CDB) FOR THE PROPER COMPONENT NUMBER AND SAFETY CLASSIFICATION.
3. PIPE CAPS USED ON VENT, DRAIN, AND TEST CONNECTIONS THAT ARE NORMALLY ISOLATED FROM SYSTEM PRESSURE ARE NOT REQUIRED BY THE DESIGN FOR SYSTEM OPERABILITY. ON Q-CLASS 1 SYSTEMS THEY ARE REQUIRED BY THE FSAR TO LIMIT LEAKAGE IF VALVE LEAKAGE OCCURS.
4. VALVE POSITIONS DEPICT THE PLANT IN ITS NORMAL OPERATING MODE AND ARE FOR INFORMATION ONLY. CONSULT THE STATION OPERATING PROCEDURES (SOPS) FOR ACTUAL VALVE LINEUPS.
5. THIS TUBING NO LONGER SERVES A SYSTEM FUNCTION AND HAS BEEN SPARED IN PLACE.

REFERENCES:

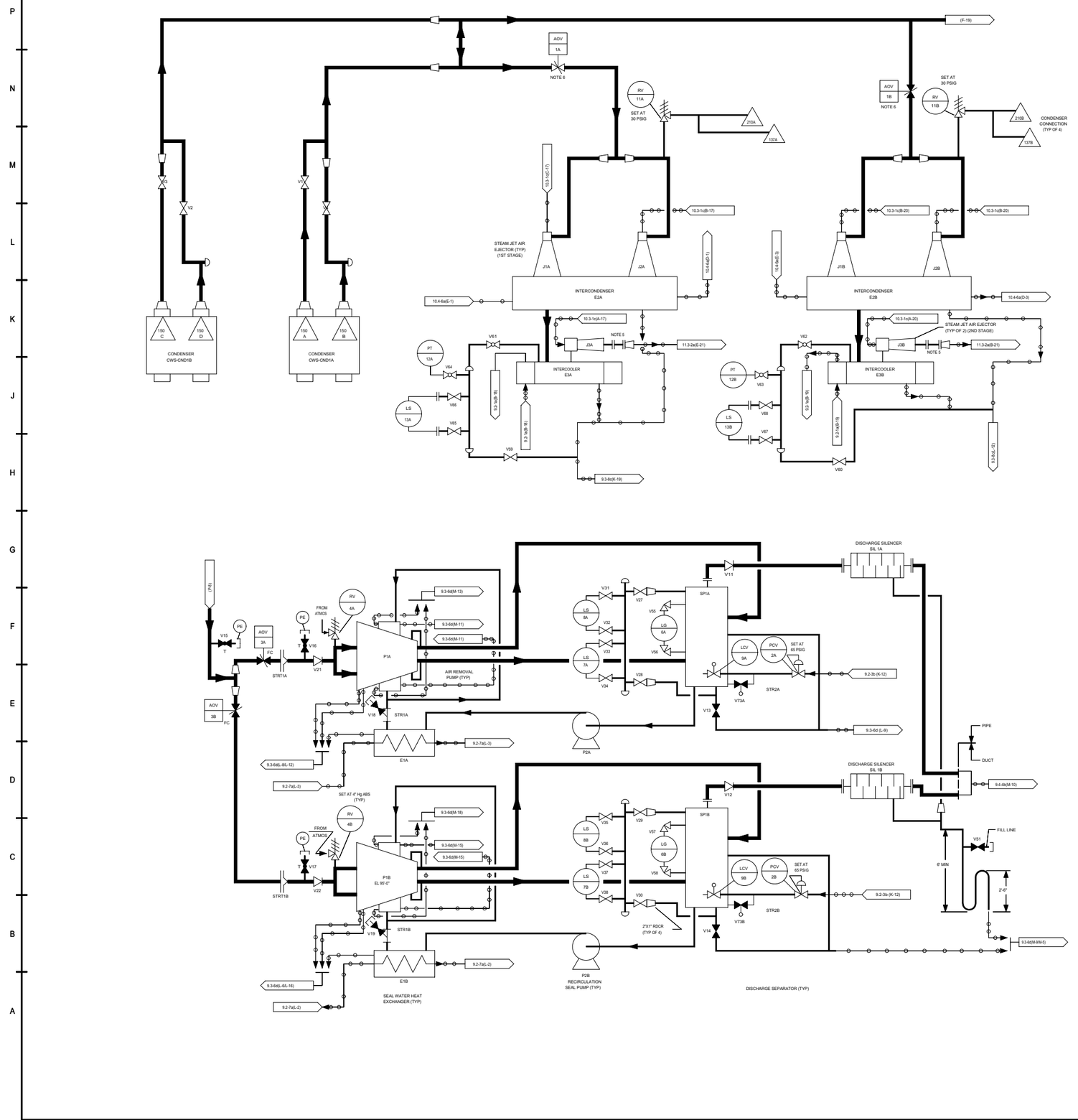
DWG NO.	SYS NO.	SYSTEM TITLE
6.7-1b	208	MSIV POSITIVE LEAKAGE CONTROL
9.3-7	609	DRAINS - FLOOR & EQUIPMENT

NUCLEAR SAFETY RELATED

FIGURE 10.3-1d

SYSTEM 202
SVV COMPRESSOR/DRYERS
P&ID 03-01D REV. 4 PO190

RIVER BEND STATION
UPDATED SAFETY ANALYSIS REPORT
REVISION 16 MARCH 2003



REFERENCES:

DWG NO.	SYS NO.	SYSTEM TITLE
10.4-6	104	CONDENSATE
10.3-1	109	MAIN STEAM
9.2-7	116	CLOSED COOLING WATER-TURBINE PLANT
9.2-1	118	SERVICE WATER-NORMAL
9.4-4	408	HVAC-TURBINE BUILDING
11.3-2	606	OFF GAS
9.3-6	609	DRAINS-FLOOR AND EQUIPMENT
9.2-3	659	MAKE-UP WATER SYSTEM

NOTES:

1. ALL LINE, INSTRUMENT, VALVE, AND EQUIPMENT NUMBERS TO BE PREFIXED WITH "ARC-" EXCEPT WHERE A DIFFERENT PREFIX IS SHOWN.
2. THE ASTERISK "*" WAS USED IN A PREVIOUS EQUIPMENT IDENTIFICATION SYSTEM AT RIVER BEND STATION. REFER TO THE EQUIPMENT DATA BASE (EDB) FOR THE PROPER COMPONENT NUMBER AND SAFETY CLASSIFICATION.
3. PIPE CAPS USED ON VENT, DRAIN, AND TEST CONNECTIONS THAT ARE NORMALLY ISOLATED FROM SYSTEM PRESSURE ARE NOT REQUIRED BY THE DESIGN FOR SYSTEM OPERABILITY. ON G-CLASS 1 SYSTEMS THEY ARE REQUIRED BY THE FSAR TO LIMIT LEAKAGE IF VALVE LEAKAGE OCCURS.
4. VALVE POSITIONS DEPICT THE PLANT IN ITS NORMAL OPERATING MODE AND ARE FOR INFORMATION ONLY. CONSULT THE STATION OPERATING PROCEDURES (SOP'S) FOR ACTUAL VALVE LINEUPS.
5. REMOVABLE SPOOL FOR CLEANING AND TESTING.
6. VALVES FAIL IN PLACE ON LOSS OF POWER OR AIR SUPPLY.

FIGURE 10.4-1

SYSTEM 125
AIR REMOVAL-CONDENSER
P&ID 05-01A P0093

RIVER BEND STATION
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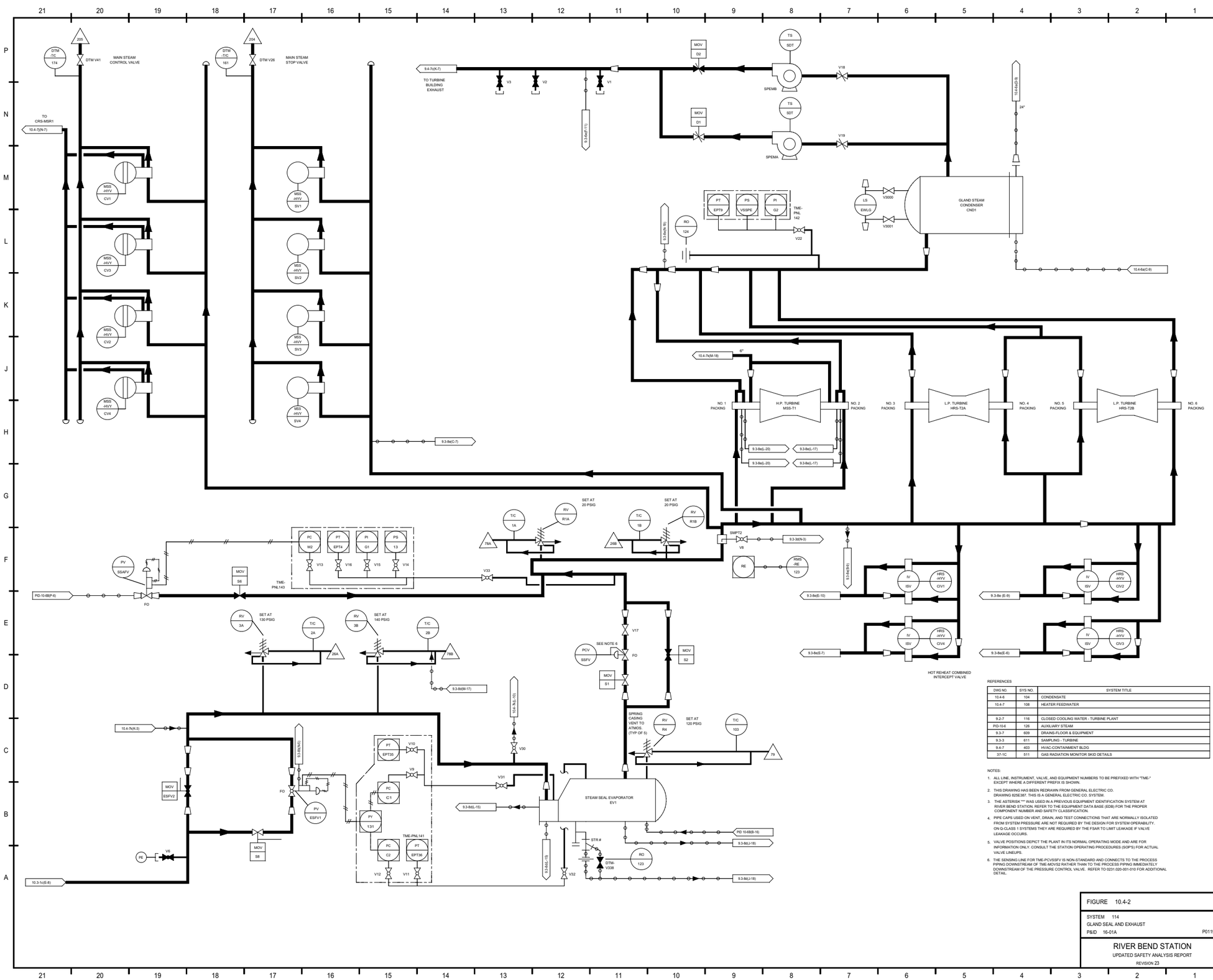
REVISION 20



DWG NO.	SYS NO.	SYSTEM TITLE
10.4-6	104	CONDENSATE
10.4-7	108	HEATER FEEDWATER
9.2-7	116	CLOSED COOLING WATER - TURBINE PLANT
PID-10-6	126	AUXILIARY STEAM
9.3-7	609	DRAINS-FLOOR & EQUIPMENT
9.3-3	611	SAMPLING - TURBINE
9.4-7	403	HVAC-CONTAINMENT BLDG
37-1C	511	GAS RADIATION MONITOR SKID DETAILS

FIGURE 10.4-2

SYSTEM 114
GLAND SEAL AND EXHAUST
P&ID 16-01A P0119

RIVER BEND STATION
UPDATED SAFETY ANALYSIS REPORT
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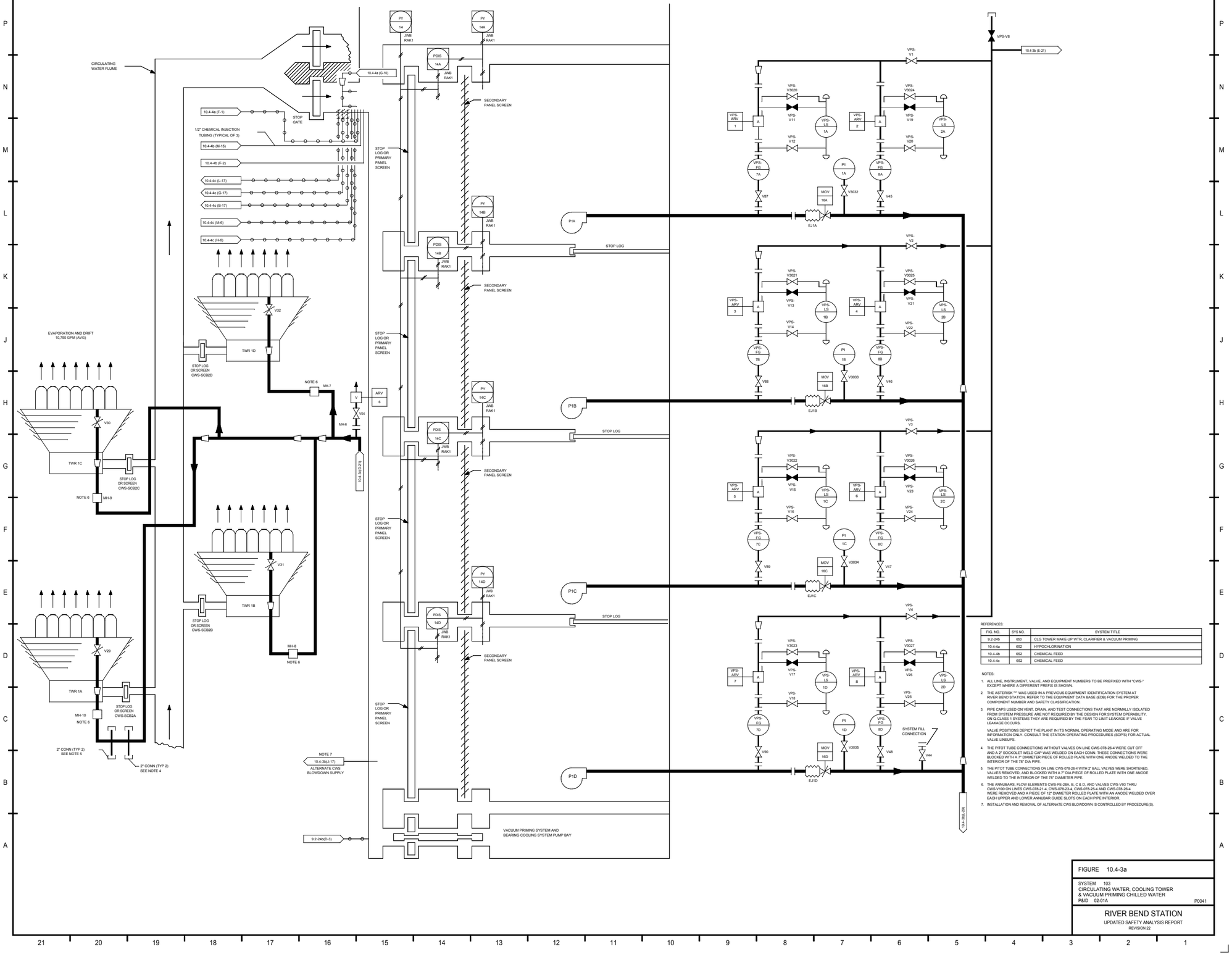


REFERENCES:

FIG. NO.	SYS NO.	SYSTEM TITLE
9.2-24b	653	CLG TOWER MAKE-UP WTR, CLARIFIER & VACUUM PRIMING
10.4-4a	652	HYPOCHLORINATION
10.4-4b	652	CHEMICAL FEED
10.4-4c	652	CHEMICAL FEED

NOTES:

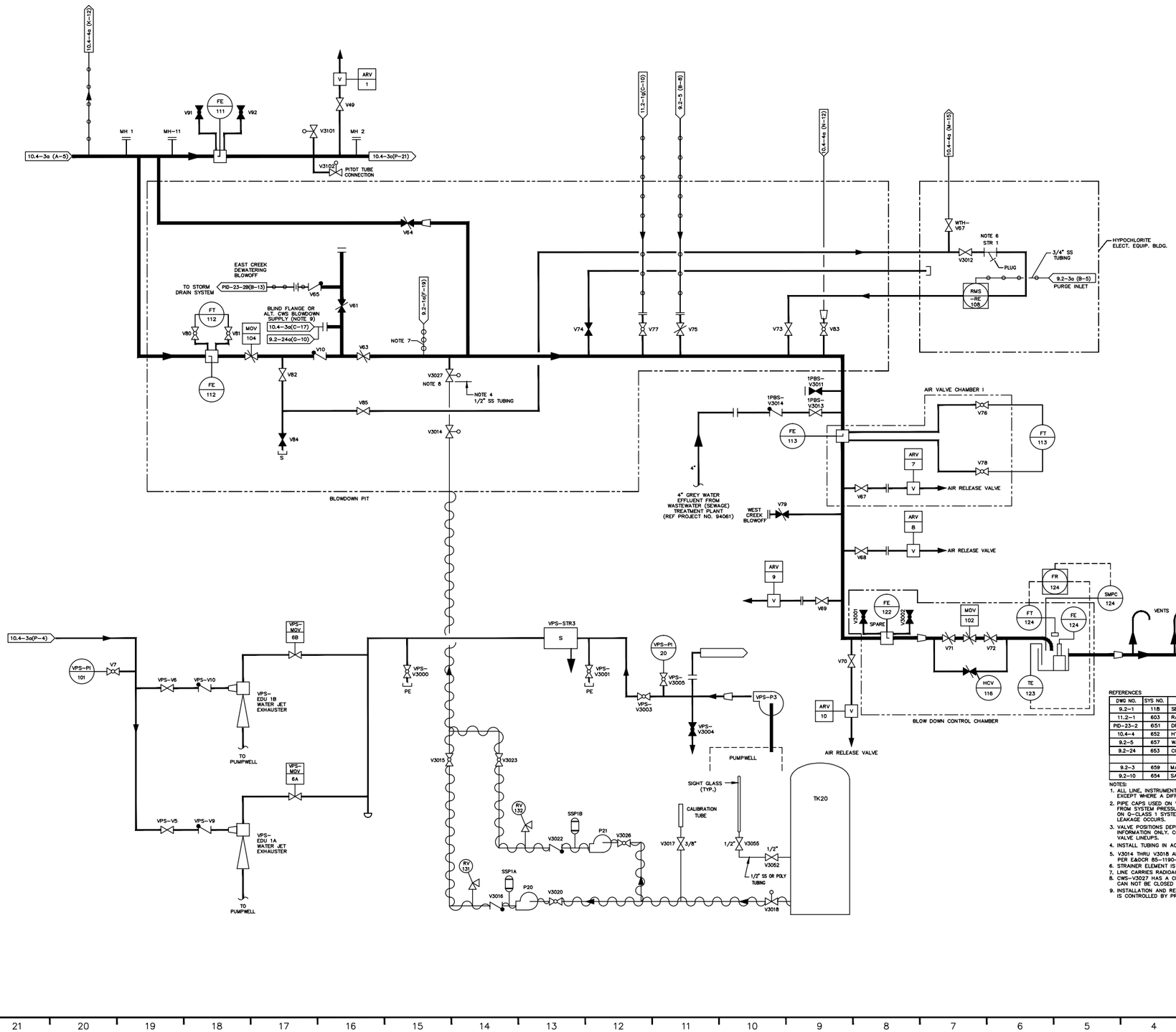
1. ALL LINE, INSTRUMENT, VALVE, AND EQUIPMENT NUMBERS TO BE PREFIXED WITH "CWS-" EXCEPT WHERE A DIFFERENT PREFIX IS SHOWN.
2. THE ASTERISK "*" WAS USED IN A PREVIOUS EQUIPMENT IDENTIFICATION SYSTEM AT RIVER BEND STATION. REFER TO THE EQUIPMENT DATA BASE (EDB) FOR THE PROPER COMPONENT NUMBER AND SAFETY CLASSIFICATION.
3. PIPE CAPS USED ON VENT, DRAIN, AND TEST CONNECTIONS THAT ARE NORMALLY ISOLATED FROM SYSTEM PRESSURE ARE NOT REQUIRED BY THE DESIGN FOR SYSTEM OPERABILITY. ON Q-CLASS 1 SYSTEMS THEY ARE REQUIRED BY THE FSAR TO LIMIT LEAKAGE IF VALVE LEAKAGE OCCURS.

   VALVE POSITIONS DEPICT THE PLANT IN ITS NORMAL OPERATING MODE AND ARE FOR INFORMATION ONLY. CONSULT THE STATION OPERATING PROCEDURES (SOP'S) FOR ACTUAL VALVE LINEUPS.
4. THE PITOT TUBE CONNECTIONS WITHOUT VALVES ON LINE CWS-078-26-4 WERE CUT OFF AND A 2" SOCKOLET WELD CAP WAS WELDED ON EACH CONN. THESE CONNECTIONS WERE BLOCKED WITH A 7" DIAMETER PIECE OF ROLLED PLATE WITH ONE ANODE WELDED TO THE INTERIOR OF THE 78" DIA PIPE.
5. THE PITOT TUBE CONNECTIONS ON LINE CWS-078-26-4 WITH 2" BALL VALVES WERE SHORTENED, VALVES REMOVED, AND BLOCKED WITH A 7" DIA PIECE OF ROLLED PLATE WITH ONE ANODE WELDED TO THE INTERIOR OF THE 78" DIAMETER PIPE.
6. THE ANNUBARS, FLOW ELEMENTS CWS-FE-28A, B, C & D, AND VALVES CWS-V93 THRU CWS-V100 ON LINES CWS-078-21-4, CWS-078-23-4, CWS-078-25-4 AND CWS-078-26-4 WERE REMOVED AND A PIECE OF 12" DIAMETER ROLLED PLATE WITH AN ANODE WELDED OVER EACH UPPER AND LOWER ANNUBAR GUIDE SLOTS ON EACH PIPE INTERIOR.
7. INSTALLATION AND REMOVAL OF ALTERNATE CWS BLOWDOWN IS CONTROLLED BY PROCEDURE(S).

FIGURE 10.4-3a

SYSTEM 103
CIRCULATING WATER, COOLING TOWER & VACUUM PRIMING CHILLED WATER
P&ID 02-01A P0041

RIVER BEND STATION
UPDATED SAFETY ANALYSIS REPORT
REVISION 22



REFERENCES

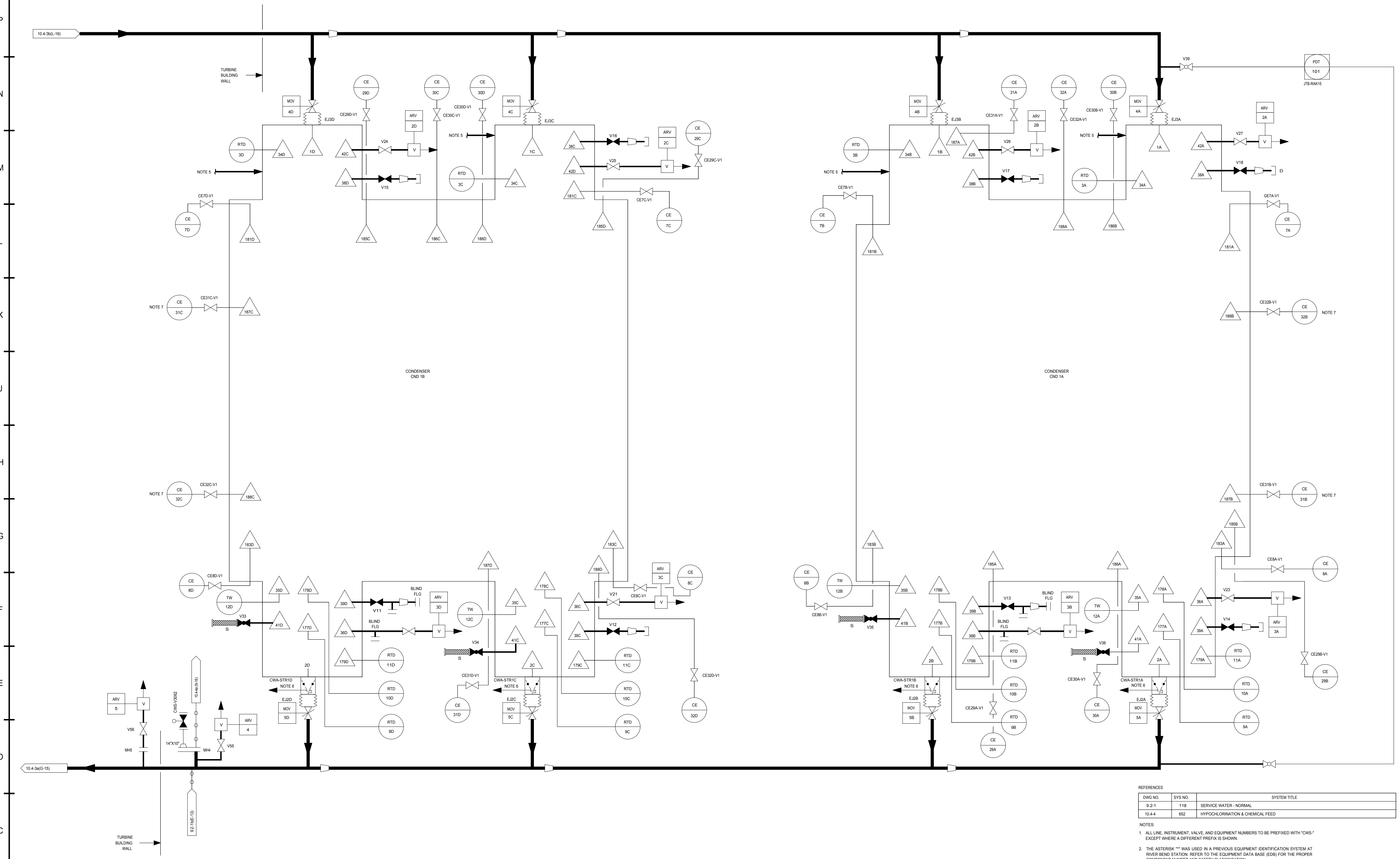
DWG NO.	SYS NO.	SYSTEM TITLE
9.2-1	118	SERVICE WATER-NORMAL
11.2-1	603	RADWASTE-LIQUID
PID-23-2	651	DRAINS-STORM AND ROOF
10.4-4	652	HYPOCHLORINATION AND CHEMICAL FEED
9.2-5	657	WASTE WATER TREATMENT
9.2-24	653	COOLING TWR. MAKEUP WATER, CLARIFIER & VACUUM PRIMING
9.2-3	659	MAKE-UP WATER
9.2-10	654	SANITARY SEWAGE TREATMENT

NOTES:
1. ALL LINE, INSTRUMENT, VALVE, AND EQUIPMENT NUMBERS TO BE PREFIXED WITH "CWS-" EXCEPT WHERE A DIFFERENT PREFIX IS SHOWN.
2. PIPE CAPS USED ON VENT, DRAIN, AND TEST CONNECTIONS THAT ARE NORMALLY ISOLATED FROM SYSTEM PRESSURE ARE NOT REQUIRED BY THE DESIGN FOR SYSTEM OPERABILITY. ON Q-CLASS 1 SYSTEMS THEY ARE REQUIRED BY THE FSAR TO LIMIT LEAKAGE IF VALVE LEAKAGE OCCURS.
3. VALVE POSITIONS DEPICT THE PLANT IN ITS NORMAL OPERATING MODE AND ARE FOR INFORMATION ONLY. CONSULT THE STATION OPERATING PROCEDURES (SOP'S) FOR ACTUAL VALVE LINEUPS.
4. INSTALL TUBING IN ACCORDANCE WITH SPEC 247.0000 .
5. V3014 THRU V3018 AND V3020 THRU V3026 ADDED FOR DECHLORINATION SYSTEM PER E&DCR 85-1190-02A.
6. STRAINER ELEMENT IS REMOVED.
7. LINE CARRIES RADIOACTIVE LIQUID WASTE.
8. CWS-V3027 HAS A CHEMICAL INJECTION QUILL INSERTED THROUGH THE VALVE. THE VALVE CAN NOT BE CLOSED WHEN THE QUILL IS INSERTED.
9. INSTALLATION AND REMOVAL OF BLIND FLANGE, AND ALTERNATE CWS BLOWDOWN IS CONTROLLED BY PROCEDURE(a).

FIGURE 10.4-3b

SYSTEM 103
CIRCULATING WATER, COOLING TOWER & VACUUM PRIMING CHILLED WATER
P&ID 02-01B REV. P0089

RIVER BEND STATION
UPDATED SAFETY ANALYSIS REPORT
REVISION 25



REFERENCES

DWG NO.	SYS NO.	SYSTEM TITLE
9.2-1	118	SERVICE WATER - NORMAL
10.4-4	652	HYPOCHLORINATION & CHEMICAL FEED

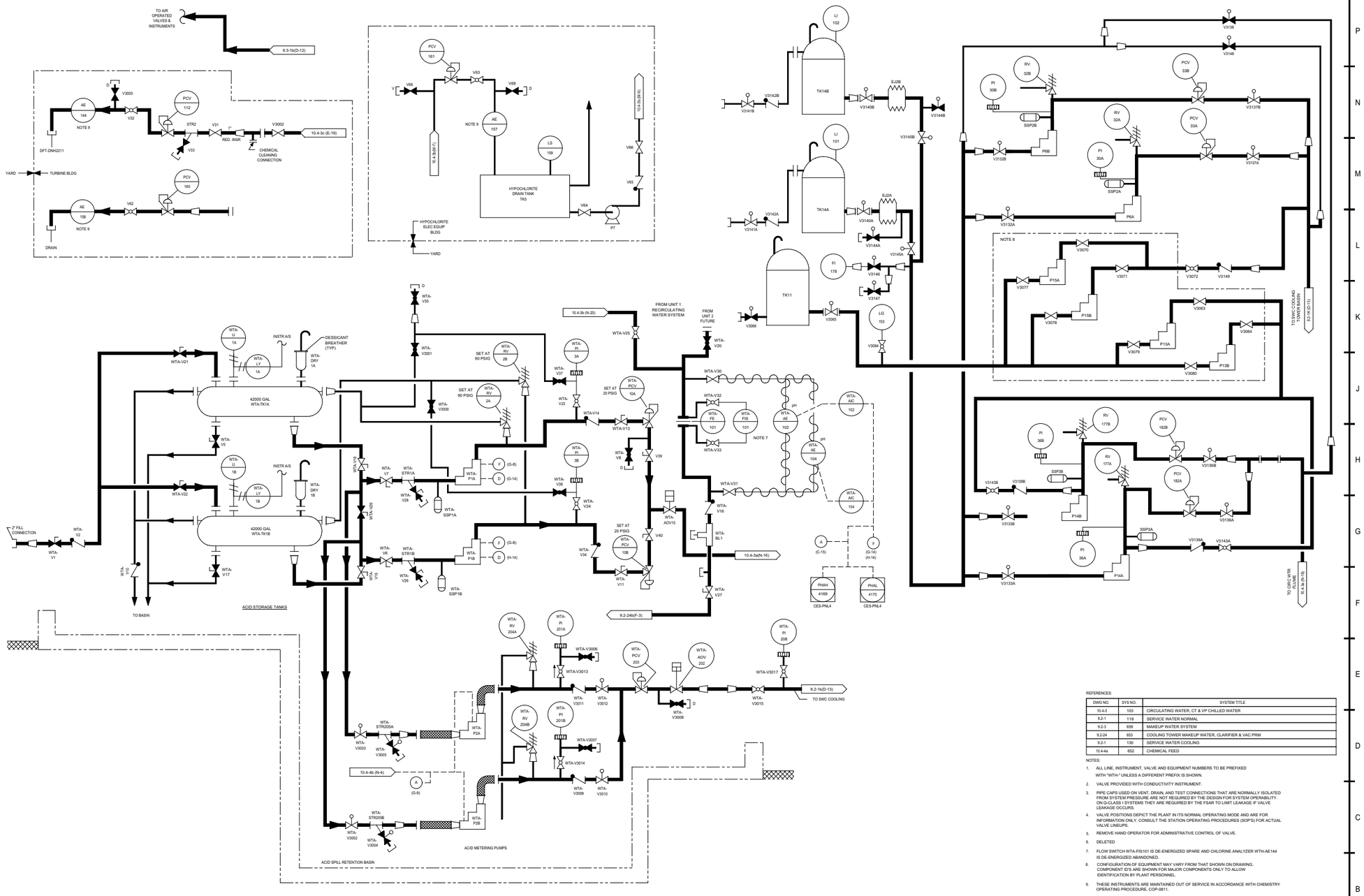
NOTES:

1. ALL LINE, INSTRUMENT, VALVE, AND EQUIPMENT NUMBERS TO BE PREFIXED WITH "CWS-" EXCEPT WHERE A DIFFERENT PREFIX IS SHOWN.
2. THE ASTERISK "*" WAS USED IN A PREVIOUS EQUIPMENT IDENTIFICATION SYSTEM AT RIVER BEND STATION. REFER TO THE EQUIPMENT DATA BASE (EDB) FOR THE PROPER COMPONENT NUMBER AND SAFETY CLASSIFICATION.
3. PIPE CAPS USED ON VENT, DRAIN, AND TEST CONNECTIONS THAT ARE NORMALLY ISOLATED FROM SYSTEM PRESSURE ARE NOT REQUIRED BY THE DESIGN FOR SYSTEM OPERABILITY ON Q-CLASS 1 SYSTEMS THEY ARE REQUIRED BY THE FSAR TO LIMIT LEAKAGE IF VALVE LEAKAGE OCCURS.
4. VALVE POSITIONS DEPICT THE PLANT IN ITS NORMAL OPERATING MODE AND ARE FOR INFORMATION ONLY. CONSULT THE STATION OPERATING PROCEDURES (SOP'S) FOR ACTUAL VALVE LINEUPS.
5. FROM CONDENSER TUBE CLEANING SYSTEM, PID-2-2A AND PID-2-2B.
6. TO CONDENSER TUBE CLEANING SYSTEM, PID-2-2A AND PID-2-2B.
7. CELLS SERVE NO ACTIVE SYSTEM FUNCTION: SPARED IN PLACE PER MR94-0099.

FIGURE 10.4-3c

SYSTEM 103
CIRCULATING WATER, COOLING TOWER
& VACUUM PRIMING CHILLED WATER
P&ID 02-01C P0051

RIVER BEND STATION
UPDATED SAFETY ANALYSIS REPORT
REVISION 22



REFERENCES:

DWG NO.	SYS NO.	SYSTEM TITLE
10.4-3	103	CIRCULATING WATER, CT & VP CHILLED WATER
9.2-1	118	SERVICE WATER NORMAL
9.2-3	659	MAKEUP WATER SYSTEM
9.2-24	653	COOLING TOWER MAKEUP WATER, CLARIFIER & VAC.PRM
9.2-1	130	SERVICE WATER COOLING
10.4-4a	652	CHEMICAL FEED

NOTES:

1. ALL LINE, INSTRUMENT, VALVE AND EQUIPMENT NUMBERS TO BE PREFIXED WITH "WTH-" UNLESS A DIFFERENT PREFIX IS SHOWN.
2. VALVE PROVIDED WITH CONDUCTIVITY INSTRUMENT.
3. PIPE CAPS USED ON VENT, DRAIN, AND TEST CONNECTIONS THAT ARE NORMALLY ISOLATED FROM SYSTEM PRESSURE ARE NOT REQUIRED BY THE DESIGN FOR SYSTEM OPERABILITY. ON Q-CLASS I SYSTEMS THEY ARE REQUIRED BY THE FSAR TO LIMIT LEAKAGE IF VALVE LEAKAGE OCCURS.
4. VALVE POSITIONS DEPICT THE PLANT IN ITS NORMAL OPERATING MODE AND ARE FOR INFORMATION ONLY. CONSULT THE STATION OPERATING PROCEDURES (SOP'S) FOR ACTUAL VALVE LINEUPS.
5. REMOVE HAND OPERATOR FOR ADMINISTRATIVE CONTROL OF VALVE.
6. DELETED
7. FLOW SWITCH WTA-FIS101 IS DE-ENERGIZED SPARE AND CHLORINE ANALYZER WTH-AE144 IS DE-ENERGIZED ABANDONED.
8. CONFIGURATION OF EQUIPMENT MAY VARY FROM THAT SHOWN ON DRAWING. COMPONENT ID'S ARE SHOWN FOR MAJOR COMPONENTS ONLY TO ALLOW IDENTIFICATION BY PLANT PERSONNEL.
9. THESE INSTRUMENTS ARE MAINTAINED OUT OF SERVICE IN ACCORDANCE WITH CHEMISTRY OPERATING PROCEDURE, COP-0811.

FIGURE 10.4-4a

SYSTEM 652
HYPOCHLORINATION & CHEMICAL FEED SYSTEM
P&ID 13-04A P0102

RIVER BEND STATION
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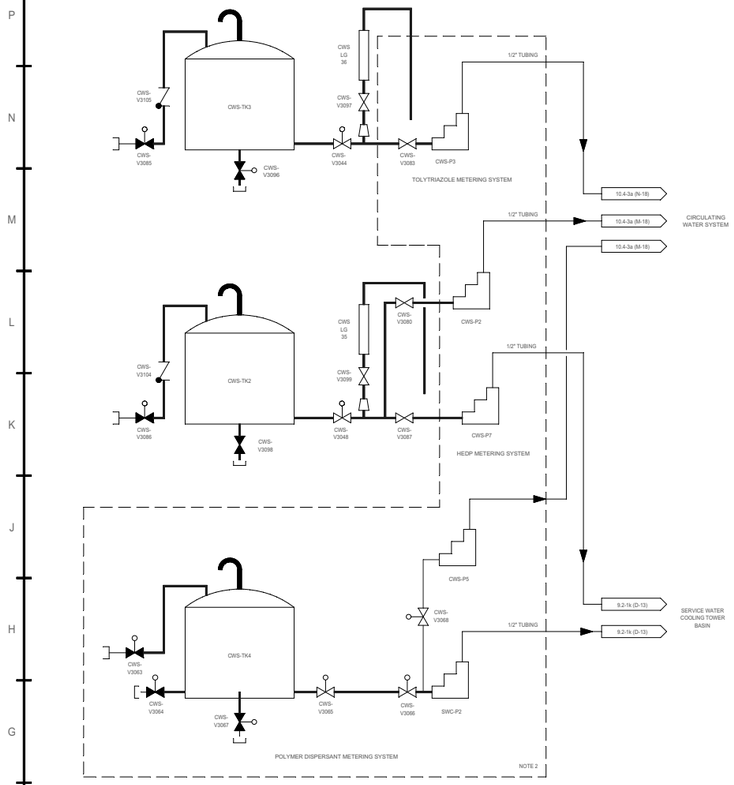
REVISION 20



REFERENCES

FIG NO.	SYS NO.	SYSTEM TITLE
10.4-3	103	CIRCULATION WATER
9.2-1h	118	SERVICE WATER-NORMAL
9.2-1j	130	SERVICE WATER-COOLING
10.4-4a	652	CHEMICAL FEED SYSTEM & CORROSION MONITORING

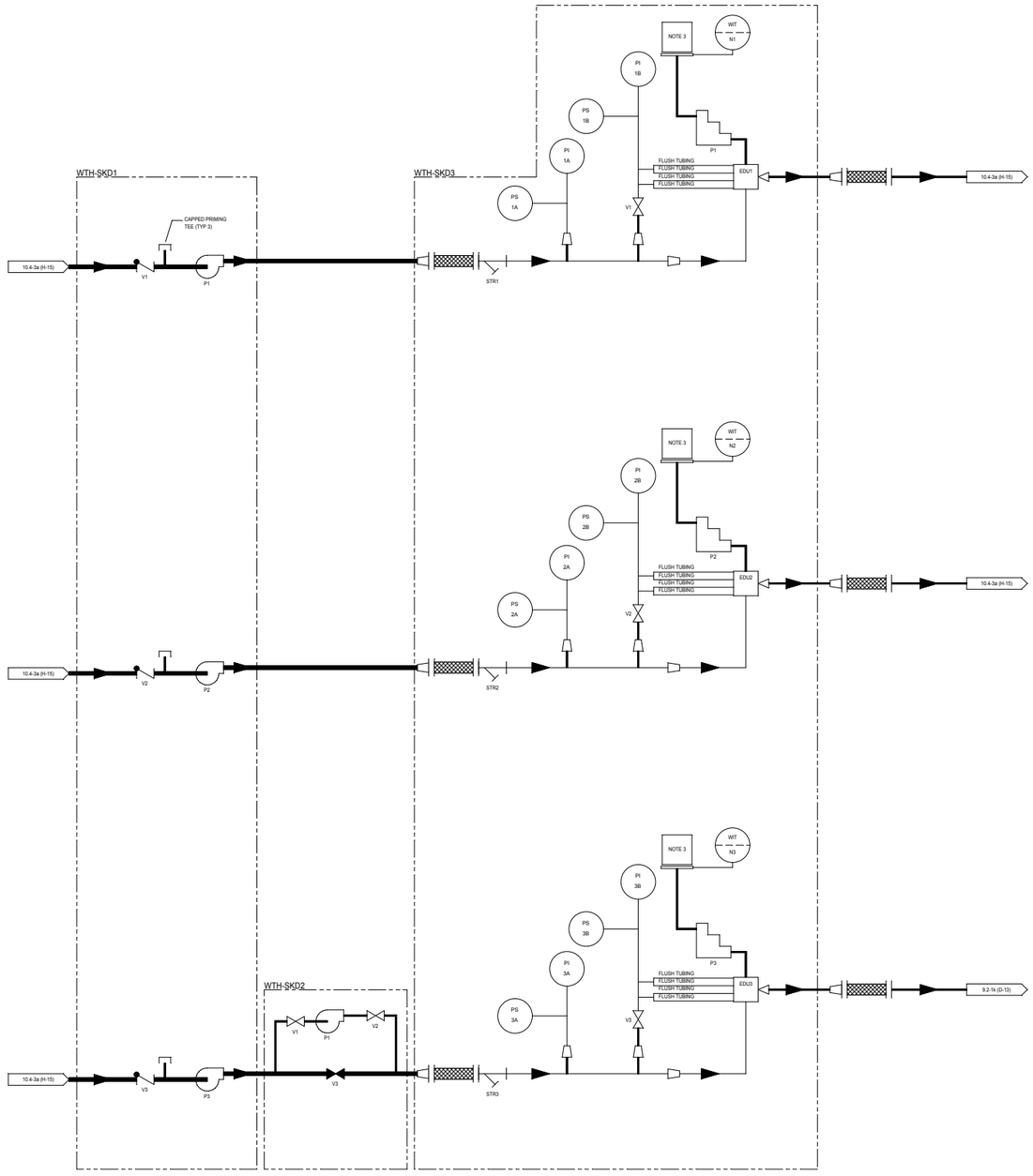
NOTES:

1. ALL LINE, INSTRUMENT, VALVE, AND EQUIPMENT NUMBERS TO BE PREFIXED WITH "SWC" EXCEPT WHERE A DIFFERENT PREFIX IS SHOWN.
2. CONFIGURATION OF EQUIPMENT MAY VARY FROM THAT SHOWN ON DRAWING. COMPONENT ID'S ARE SHOWN FOR MAJOR COMPONENTS TO ALLOW IDENTIFICATION BY PLANT PERSONNEL.
3. COMPONENTS ARE NOT PERMANENT PLANT EQUIPMENT. CHEMISTRY IS RESPONSIBLE FOR CONFIGURATION AND OPERATION.

FIGURE 10.4-4b

SYSTEM 652
HYPOCHLORINATION & CHEMICAL FEED SYSTEM
P&ID 13-04C REV. 2

RIVER BEND STATION
UPDATED SAFETY ANALYSIS REPORT
REVISION 16 MARCH 2003



NOTES:

1. ALL LINES, VALVES, INSTRUMENTS AND EQUIPMENT ARE TO BE PREFIXED BY THE SKID NUMBER (WTH-SKD1, WTH-SKD2 OR WTH-SKD3) UNLESS A DIFFERENT PREFIX IS SHOWN.
2. VALVE POSITIONS DEPICT THE PLANT IN NORMAL OPERATING MODE AND ARE FOR INFORMATION ONLY.
3. TEMPORARY TANKS REST ON SCALES. THE TANKS ARE REPLACED BY THE VENDOR AS NECESSARY.
4. CONFIGURATION OF EQUIPMENT MAY VARY FROM THAT SHOWN ON DRAWING. COMPONENT ID'S ARE SHOWN FOR MAJOR COMPONENTS ONLY TO ALLOW IDENTIFICATION BY PLANT PERSONNEL.

FIGURE 10.4-4c

SYSTEM 652
HYPOCHLORINATION & CHEMICAL FEED SYSTEM
P&ID 13-04D

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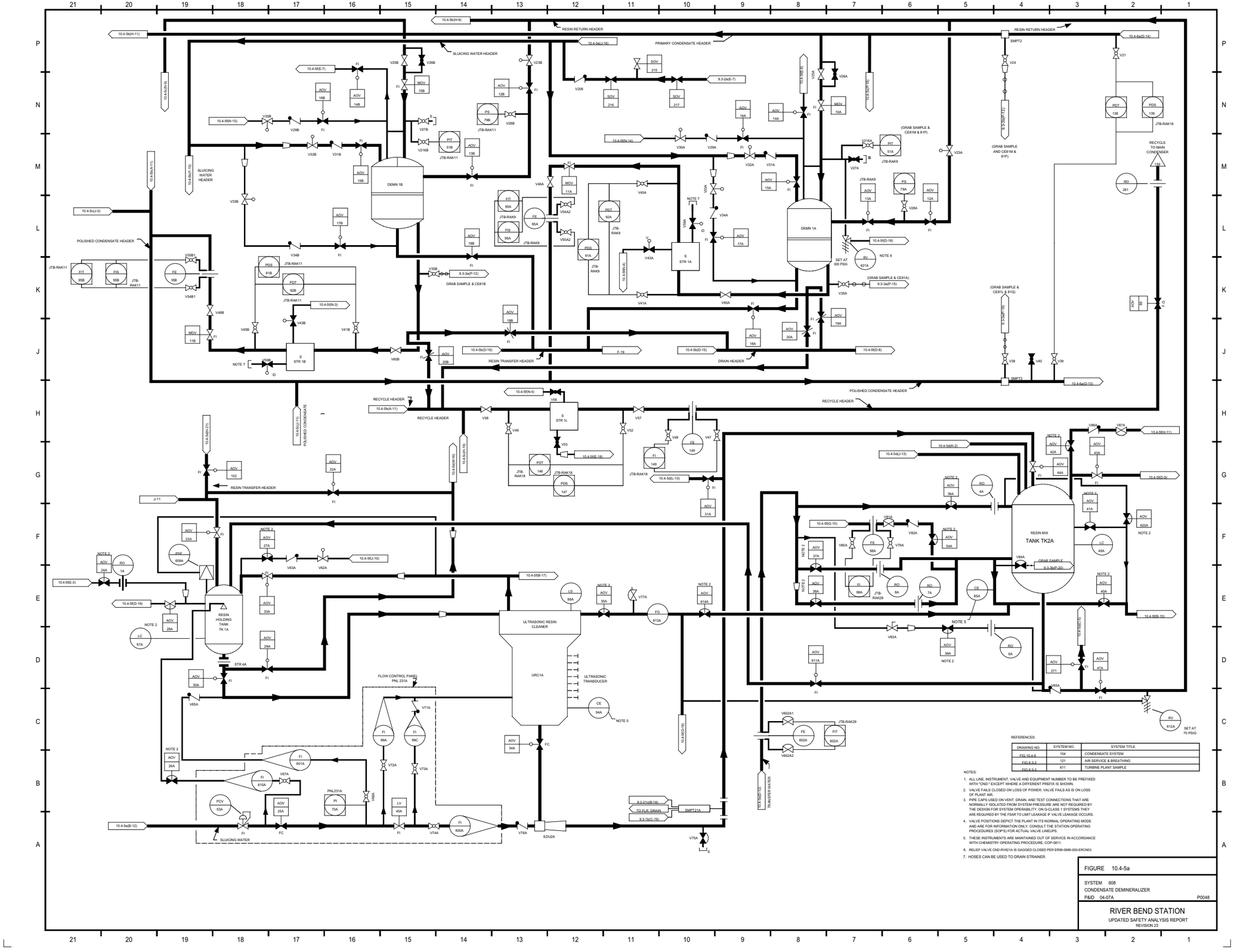

REFERENCES:

DRAWING NO.	SYSTEM NO.	SYSTEM TITLE
FIG.10.4-6	104	CONDENSATE SYSTEM
FIG.9.3-2	121	AIR SERVICE & BREATHING
FIG.9.3-3	611	TURBINE PLANT SAMPLE

NOTES:

1. ALL LINE, INSTRUMENT, VALVE AND EQUIPMENT NUMBER TO BE PREFIXED WITH "CND-" EXCEPT WHERE A DIFFERENT PREFIX IS SHOWN.
2. VALVE FAILS CLOSED ON LOSS OF POWER. VALVE FAILS AS IS ON LOSS OF PLANT AIR.
3. PIPE CAPS USED ON VENT, DRAIN, AND TEST CONNECTIONS THAT ARE NORMALLY ISOLATED FROM SYSTEM PRESSURE ARE NOT REQUIRED BY THE DESIGN FOR SYSTEM OPERABILITY. ON Q-CLASS 1 SYSTEMS THEY ARE REQUIRED BY THE FSAR TO LIMIT LEAKAGE IF VALVE LEAKAGE OCCURS.
4. VALVE POSITIONS DEPICT THE PLANT IN ITS NORMAL OPERATING MODE AND ARE FOR INFORMATION ONLY. CONSULT THE STATION OPERATING PROCEDURES (SOPS) FOR ACTUAL VALVE LINEUPS.
5. THESE INSTRUMENTS ARE MAINTAINED OUT OF SERVICE IN ACCORDANCE WITH CHEMISTRY OPERATING PROCEDURE, COP-0811.
6. RELIEF VALVE CND-RV621A IS GAGGED CLOSED PER ER99-0888-000-ERCN03.
7. HOSES CAN BE USED TO DRAIN STRAINER.

FIGURE 10.4-5a

SYSTEM 608
CONDENSATE DEMINERALIZER
P&ID 04-07A P0048

RIVER BEND STATION
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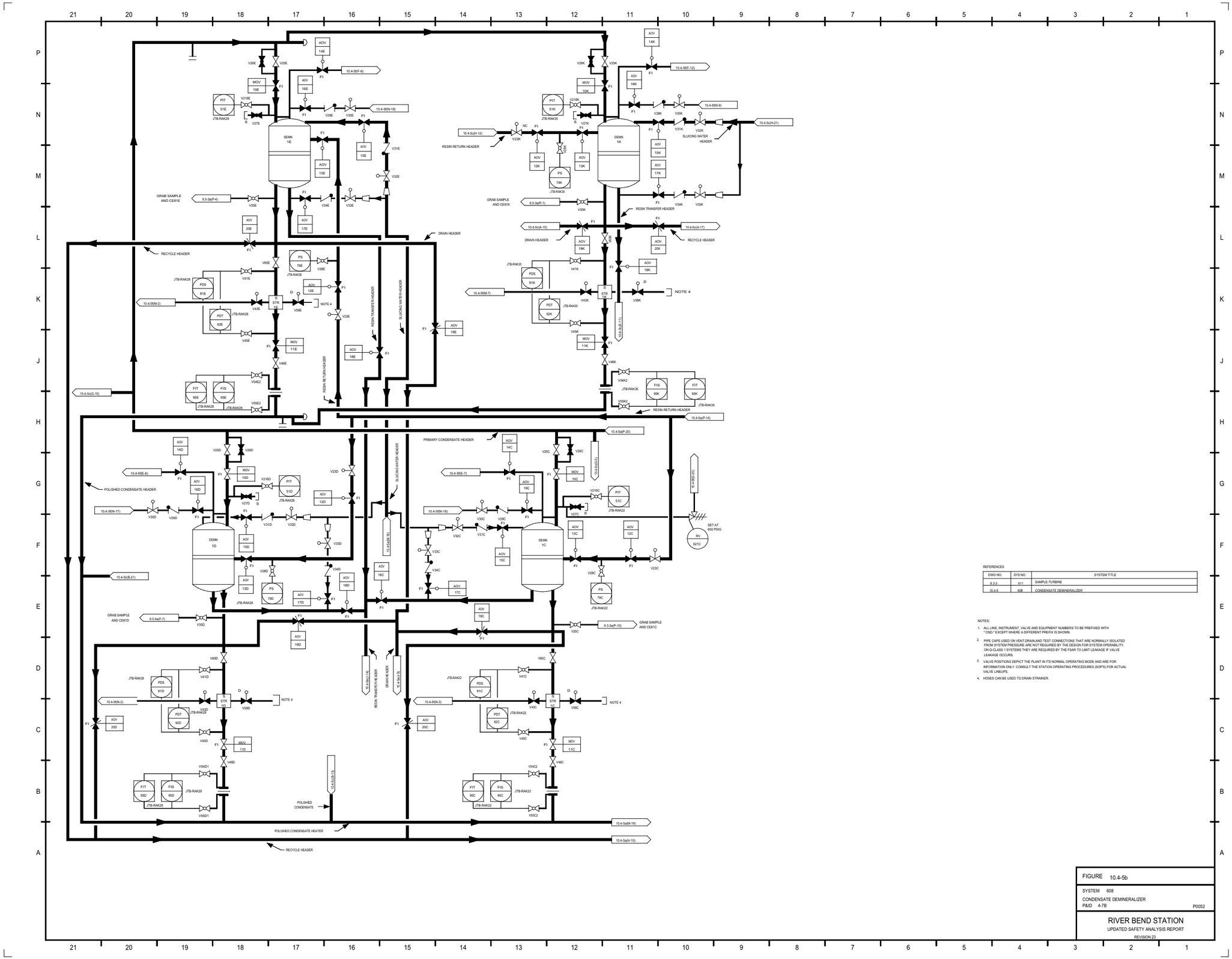
REVISION 23



REFERENCES

DWG NO.	SYS NO.	SYSTEM TITLE
9.3-3	611	SAMPLE-TURBINE
10.4-5	608	CONDENSATE DEMINERALIZER

NOTES:

1. ALL LINE, INSTRUMENT, VALVE AND EQUIPMENT NUMBERS TO BE PREFIXED WITH " CND." EXCEPT WHERE A DIFFERENT PREFIX IS SHOWN.
2. PIPE CAPS USED ON VENT,DRAIN,AND TEST CONNECTIONS THAT ARE NORMALLY ISOLATED FROM SYSTEM PRESSURE ARE NOT REQUIRED BY THE DESIGN FOR SYSTEM OPERABILITY. ON Q-CLASS 1 SYSTEMS THEY ARE REQUIRED BY THE FSAR TO LIMIT LEAKAGE IF VALVE LEAKAGE OCCURS.
3. VALVE POSITIONS DEPICT THE PLANT IN ITS NORMAL OPERATING MODE AND ARE FOR INFORMATION ONLY. CONSULT THE STATION OPERATING PROCEDURES (SOPS) FOR ACTUAL VALVE LINEUPS.
4. HOSES CAN BE USED TO DRAIN STRAINER.

FIGURE 10.4-5b

SYSTEM 608

CONDENSATE DEMINERALIZER

P&ID 4-7B P0052

RIVER BEND STATION

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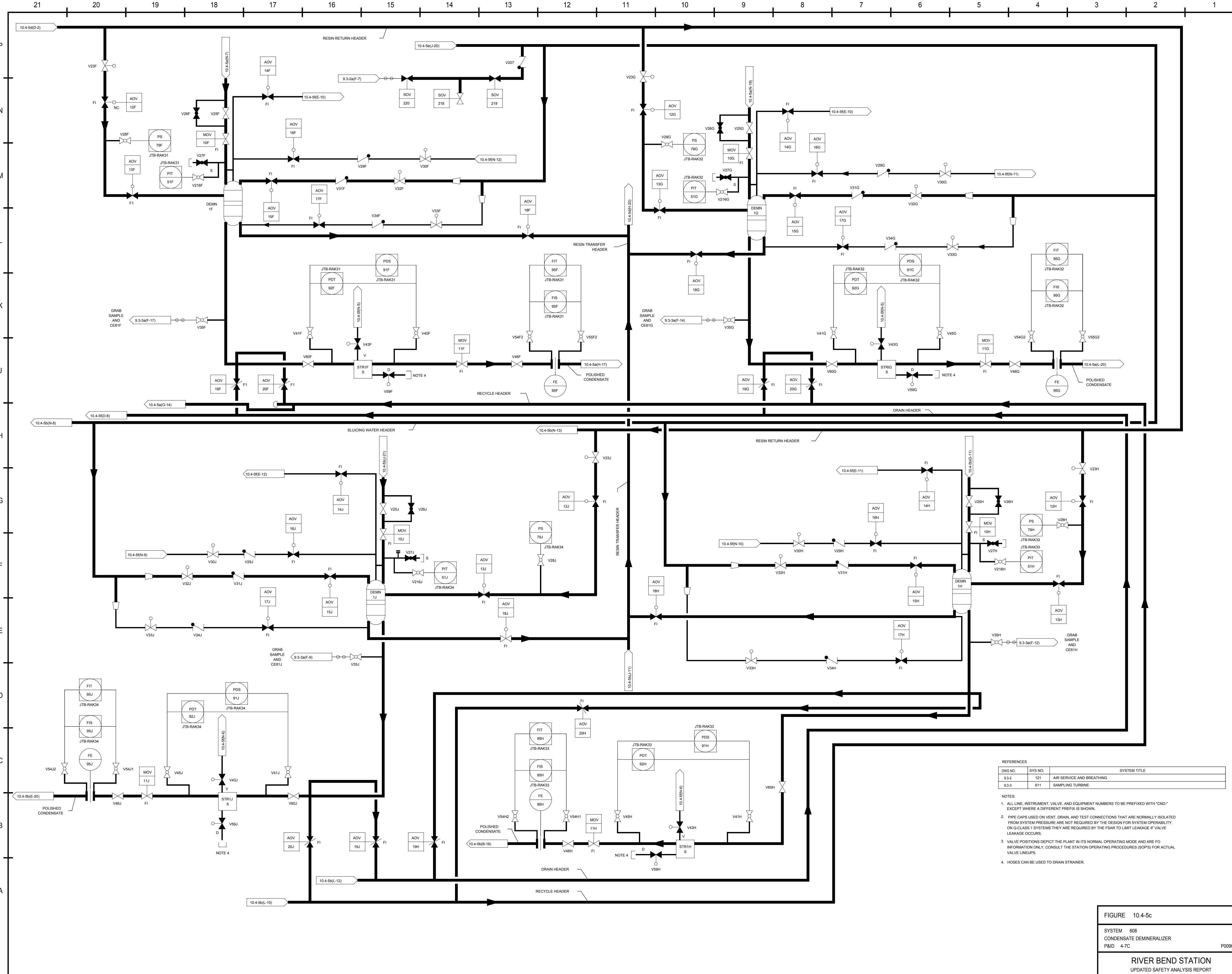


REFERENCES

DWG NO.	SYS NO.	SYSTEM TITLE
9.3-2	121	AIR SERVICE AND BREATHING
9.3-3	611	SAMPLING TURBINE

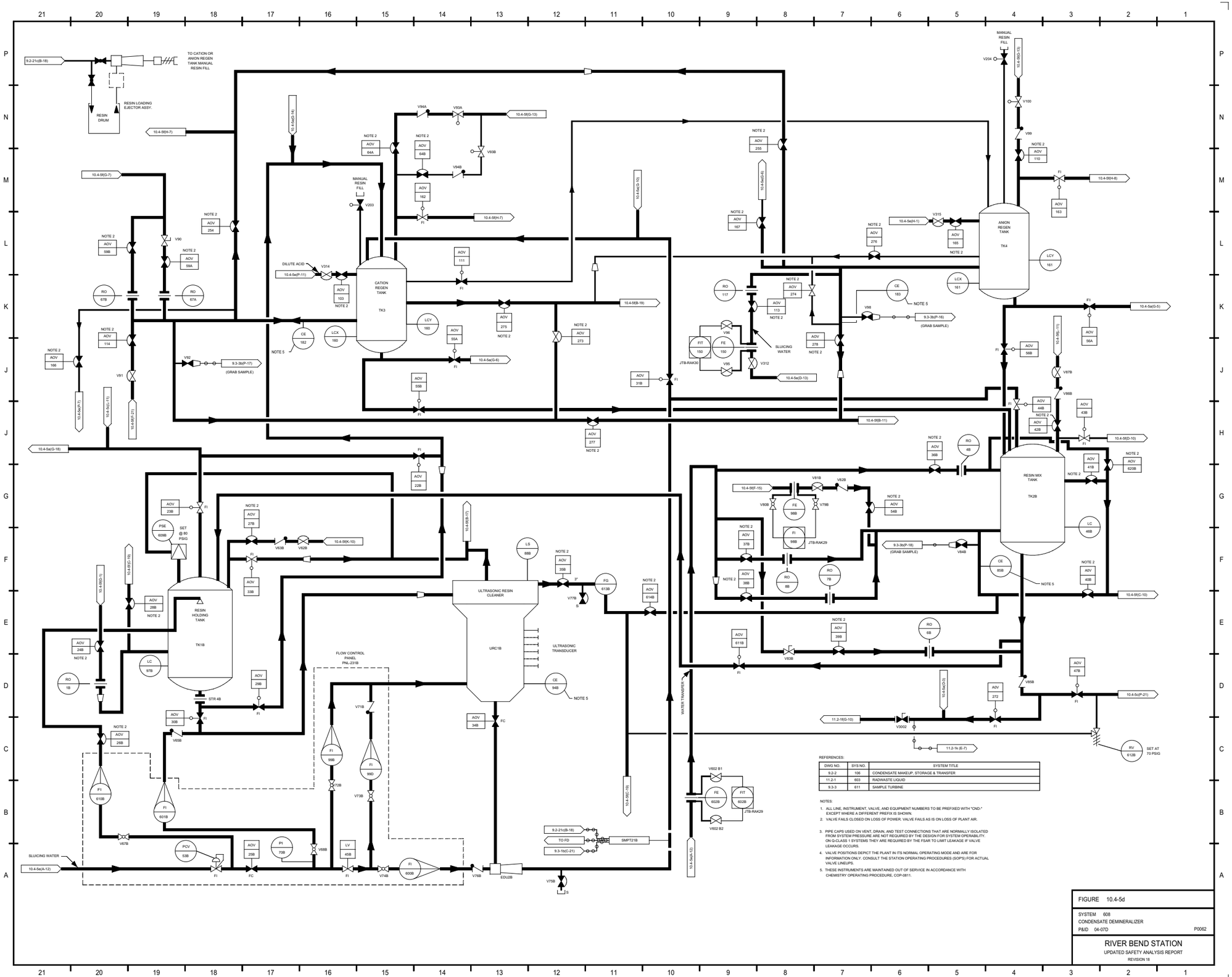
NOTES:

1. ALL LINE, INSTRUMENT, VALVE, AND EQUIPMENT NUMBERS TO BE PREFIXED WITH "CND-" EXCEPT WHERE A DIFFERENT PREFIX IS SHOWN.
2. PIPE CAPS USED ON VENT, DRAIN, AND TEST CONNECTIONS THAT ARE NORMALLY ISOLATED FROM SYSTEM PRESSURE ARE NOT REQUIRED BY THE DESIGN FOR SYSTEM OPERABILITY. ON Q-CLASS 1 SYSTEMS THEY ARE REQUIRED BY THE FSAR TO LIMIT LEAKAGE IF VALVE LEAKAGE OCCURS.
3. VALVE POSITIONS DEPICT THE PLANT IN ITS NORMAL OPERATING MODE AND ARE FO INFORMATION ONLY. CONSULT THE STATION OPERATING PROCEDURES (SOP'S) FOR ACTUAL VALVE LINEUPS.
4. HOSES CAN BE USED TO DRAIN STRAINER.

FIGURE 10.4-5c

SYSTEM 608
CONDENSATE DEMINERALIZER
P&ID 4-7C P0090

RIVER BEND STATION
UPDATED SAFETY ANALYSIS REPORT
REVISION 23



REFERENCES:

DWG NO.	SYS NO.	SYSTEM TITLE
9.2-2	106	CONDENSATE MAKEUP, STORAGE & TRANSFER
11.2-1	603	RADWASTE LIQUID
9.3-3	611	SAMPLE TURBINE

NOTES:

1. ALL LINE, INSTRUMENT, VALVE, AND EQUIPMENT NUMBERS TO BE PREFIXED WITH "CND-" EXCEPT WHERE A DIFFERENT PREFIX IS SHOWN.
2. VALVE FAILS CLOSED ON LOSS OF POWER. VALVE FAILS AS IS ON LOSS OF PLANT AIR.
3. PIPE CAPS USED ON VENT, DRAIN, AND TEST CONNECTIONS THAT ARE NORMALLY ISOLATED FROM SYSTEM PRESSURE ARE NOT REQUIRED BY THE DESIGN FOR SYSTEM OPERABILITY. ON Q-CLASS 1 SYSTEMS THEY ARE REQUIRED BY THE FSAR TO LIMIT LEAKAGE IF VALVE LEAKAGE OCCURS.
4. VALVE POSITIONS DEPICT THE PLANT IN ITS NORMAL OPERATING MODE AND ARE FOR INFORMATION ONLY. CONSULT THE STATION OPERATING PROCEDURES (SOP'S) FOR ACTUAL VALVE LINEUPS.
5. THESE INSTRUMENTS ARE MAINTAINED OUT OF SERVICE IN ACCORDANCE WITH CHEMISTRY OPERATING PROCEDURE, COP-0811.

FIGURE 10.4-5d

SYSTEM 608
CONDENSATE DEMINERALIZER
P&ID 04-07D P0062

RIVER BEND STATION
UPDATED SAFETY ANALYSIS REPORT
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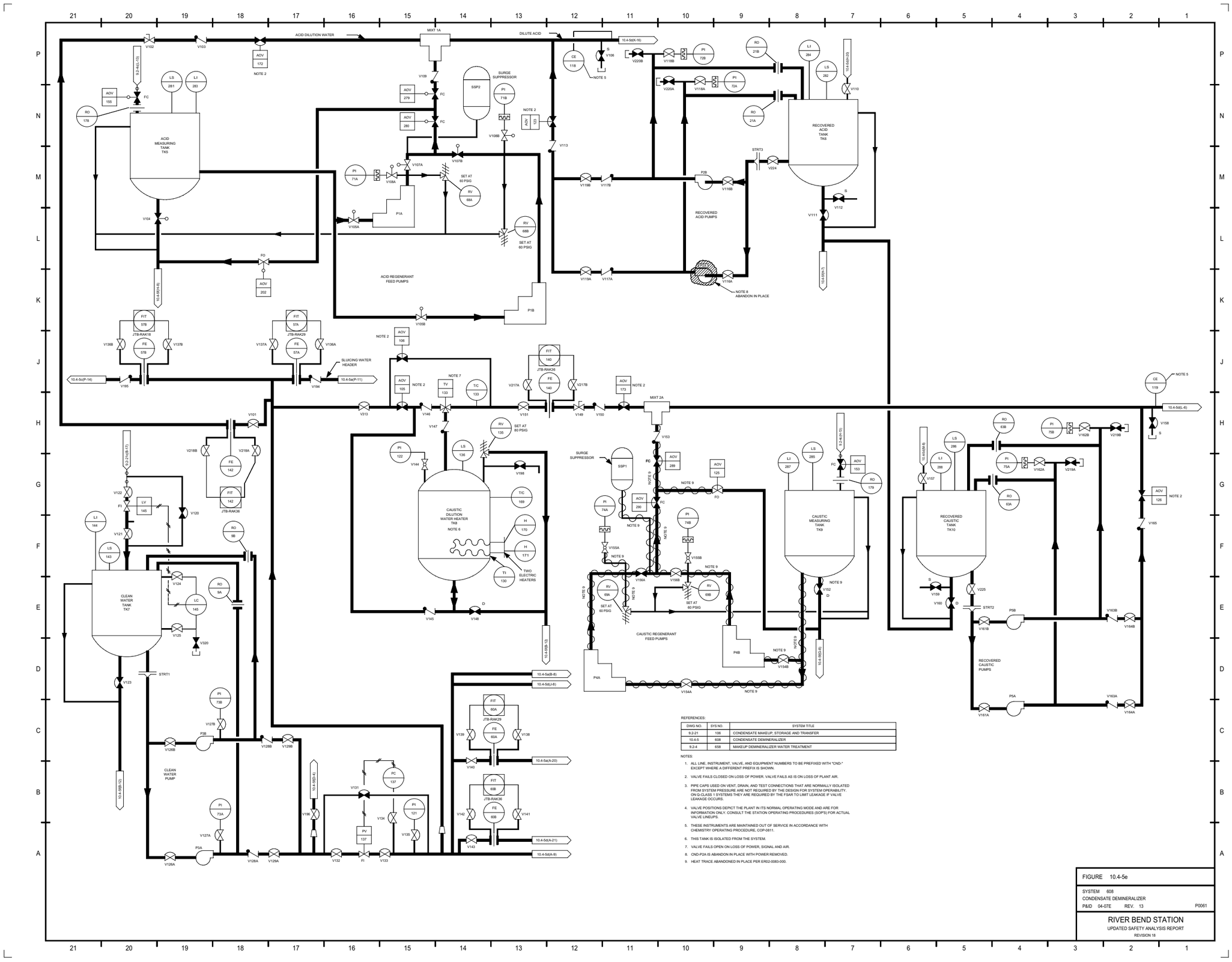


REFERENCES:

DWG NO.	SYS NO.	SYSTEM TITLE
9.2-21	106	CONDENSATE MAKEUP, STORAGE AND TRANSFER
10.4-5	608	CONDENSATE DEMINERALIZER
9.2-4	658	MAKEUP DEMINERALIZER WATER TREATMENT

NOTES:

1. ALL LINE, INSTRUMENT, VALVE, AND EQUIPMENT NUMBERS TO BE PREFIXED WITH "CND-" EXCEPT WHERE A DIFFERENT PREFIX IS SHOWN.
2. VALVE FAILS CLOSED ON LOSS OF POWER. VALVE FAILS AS IS ON LOSS OF PLANT AIR.
3. PIPE CAPS USED ON VENT, DRAIN, AND TEST CONNECTIONS THAT ARE NORMALLY ISOLATED FROM SYSTEM PRESSURE ARE NOT REQUIRED BY THE DESIGN FOR SYSTEM OPERABILITY. ON Q-CLASS 1 SYSTEMS THEY ARE REQUIRED BY THE FSAR TO LIMIT LEAKAGE IF VALVE LEAKAGE OCCURS.
4. VALVE POSITIONS DEPICT THE PLANT IN ITS NORMAL OPERATING MODE AND ARE FOR INFORMATION ONLY. CONSULT THE STATION OPERATING PROCEDURES (SOP'S) FOR ACTUAL VALVE LINEUPS.
5. THESE INSTRUMENTS ARE MAINTAINED OUT OF SERVICE IN ACCORDANCE WITH CHEMISTRY OPERATING PROCEDURE, COP-0811.
6. THIS TANK IS ISOLATED FROM THE SYSTEM.
7. VALVE FAILS OPEN ON LOSS OF POWER, SIGNAL AND AIR.
8. CND-P2A IS ABANDON IN PLACE WITH POWER REMOVED.
9. HEAT TRACE ABANDONED IN PLACE PER ER02-0083-000.

FIGURE 10.4-5e

SYSTEM 608
CONDENSATE DEMINERALIZER
P&ID 04-07E REV. 13 P0061

RIVER BEND STATION
UPDATED SAFETY ANALYSIS REPORT
REVISION 18

BDCR NO. 10.04-242
(REF. EC 29843)

PRESSURE REGULATOR
PCV615
AIR RECEIVER TANK TK14
SET AT 120 PSIG
AIR BLEED
PRESSURIZING AIR
SCRUBBING AIR
MIXING AIR
NOTE 4
NOTE 4
CHEMICAL WASTE SUMP TK11
CHEMICAL WASTE SUMP PUMPS
OFFGAS BLDG. EL. 67'-6"
VENT
DIRTY WASTE SUMP TK12
DIRTY WASTE SUMP PUMPS
OFFGAS BLDG EL 67'-6"
TUBING
TUBING
RECOVERED WATER SUMP TK13
RECOVERED WATER SUMP PUMPS
OFFGAS BLDG. EL. 67'-6"
RECOVERED WATER DISCHARGE HEADER

REFERENCES

DWG NO.	SYS NO.	SYSTEM TITLE
9.3-2	121	AIR SERVICE AND BREATHING
9.3-1	122	INSTRUMENT AIR
11.2-1	603	LIQUID RADWASTE
9.3-7	609	FLOOR AND EQUIPMENT DRAINS
10.4-5	608	CONDENSATE DEMINERALIZER
9.2-21	106	CONDENSATE MAKEUP STORAGE AND TRANSFER
11.3-2	606	OFF GAS

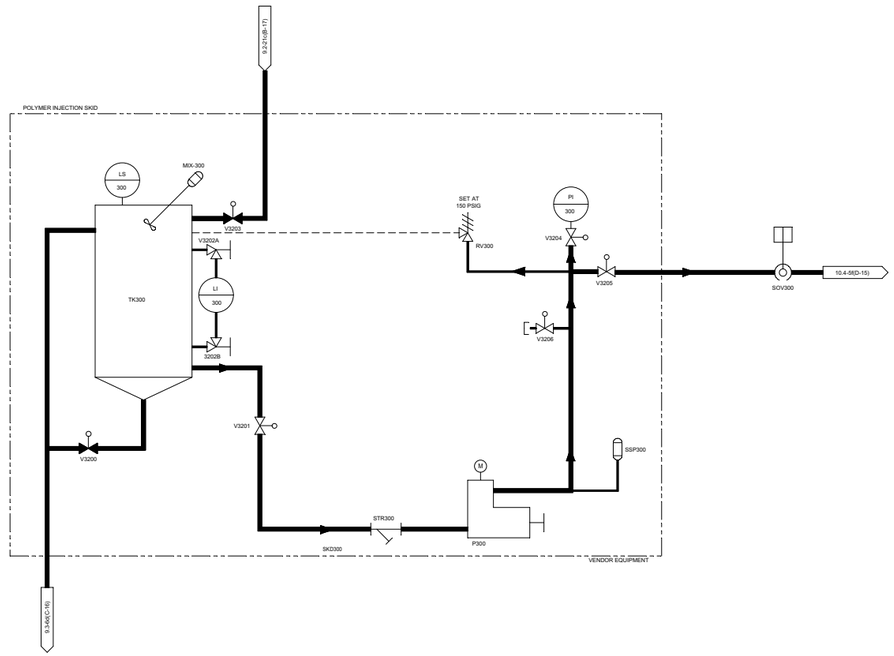
NOTES:

1. ALL LINE, INSTRUMENT, VALVE, AND EQUIPMENT NUMBERS TO BE PREFIXED WITH "CND-" EXCEPT WHERE A DIFFERENT PREFIX IS SHOWN.
2. PIPE CAPS USED ON VENT, DRAIN, AND TEST CONNECTIONS THAT ARE NORMALLY ISOLATED FROM SYSTEM PRESSURE ARE NOT REQUIRED BY THE DESIGN FOR SYSTEM OPERABILITY. ON Q-CLASS I SYSTEMS THEY ARE REQUIRED BY THE FSAR TO LIMIT LEAKAGE IF VALVE LEAKAGE OCCURS.
3. VALVE POSITIONS DEPICT THE PLANT IN ITS NORMAL OPERATING MODE AND ARE FOR INFORMATION ONLY. CONSULT THE STATION OPERATING PROCEDURES (SOP'S) FOR ACTUAL VALVE LINEUPS.
4. HOSES CAN BE USED TO VENT STRAINERS, CND-STR1A-1K.

FIGURE 10.4-5f

SYSTEM 608
CONDENSATE DEMINERALIZER
P&ID 04-07F P0060

RIVER BEND STATION
UPDATED SAFETY ANALYSIS REPORT
REVISION 23



NOTES:

1. ALL LINE, INSTRUMENT, VALVE, AND EQUIPMENT NUMBERS TO BE PREFIXED WITH "CND-" EXCEPT WHERE A DIFFERENT PREFIX IS SHOWN.
2. THE ASTERISK "*" WAS USED IN A PREVIOUS EQUIPMENT IDENTIFICATION SYSTEM AT RIVER BEND STATION. REFER TO THE EQUIPMENT DATA BASE (EDB) FOR THE PROPER COMPONENT NUMBER AND SAFETY CLASSIFICATION.
3. PIPE CAPS USED ON VENT, DRAIN, AND TEST CONNECTIONS THAT ARE NORMALLY ISOLATED FROM SYSTEM PRESSURE ARE NOT REQUIRED BY THE DESIGN FOR SYSTEM OPERABILITY. ON QI-CLASS 1 SYSTEMS THEY ARE REQUIRED BY THE FSAR TO LIMIT LEAKAGE IF VALVE LEAKAGE OCCURS.
4. VALVE POSITIONS DEPICT THE PLANT IN ITS NORMAL OPERATING MODE AND ARE FOR INFORMATION ONLY. CONSULT THE STATION OPERATING PROCEDURES (SOP'S) FOR ACTUAL VALVE LINEUPS.
5. VENDOR EQUIPMENT (SPEC) SUPPLIED VIA VCD 7229.500-000-004A.

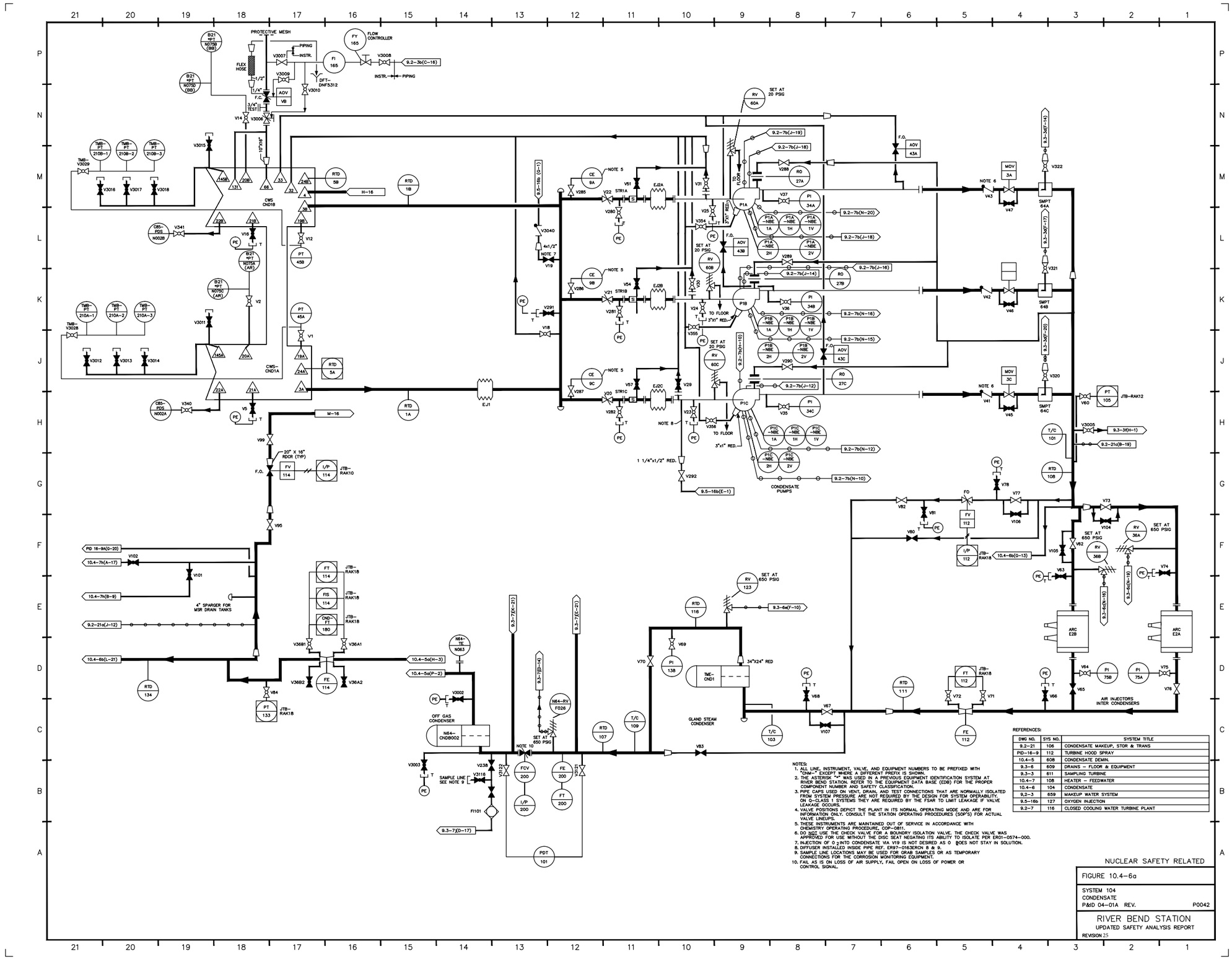
REFERENCES:

DWG. NO.	SYS NO.	SYSTEM TITLE
10.4-6b	104	CONDENSATE
10.4-5f	608	CONDENSATE DEMINERALIZER
9.3-6d	609	DRAINS - FLOOR & EQUIPMENT

FIGURE 10.4-5g

SYSTEM 608
CONDENSATE DEMINERALIZER
P&ID 04-07G P0042

RIVER BEND STATION
UPDATED SAFETY ANALYSIS REPORT
REVISION 13



REFERENCES:

DWG NO.	SYS NO.	SYSTEM TITLE
9.2-21	106	CONDENSATE MAKEUP, STOR & TRANS
PID-16-9	112	TURBINE HOOD SPRAY
10.4-5	608	CONDENSATE DEMIN.
9.3-6	609	DRAINS - FLOOR & EQUIPMENT
9.3-3	611	SAMPLING TURBINE
10.4-7	108	HEATER - FEEDWATER
10.4-6	104	CONDENSATE
9.2-3	659	MAKEUP WATER SYSTEM
9.5-16b	127	OXYGEN INJECTION
9.2-7	116	CLOSED COOLING WATER TURBINE PLANT

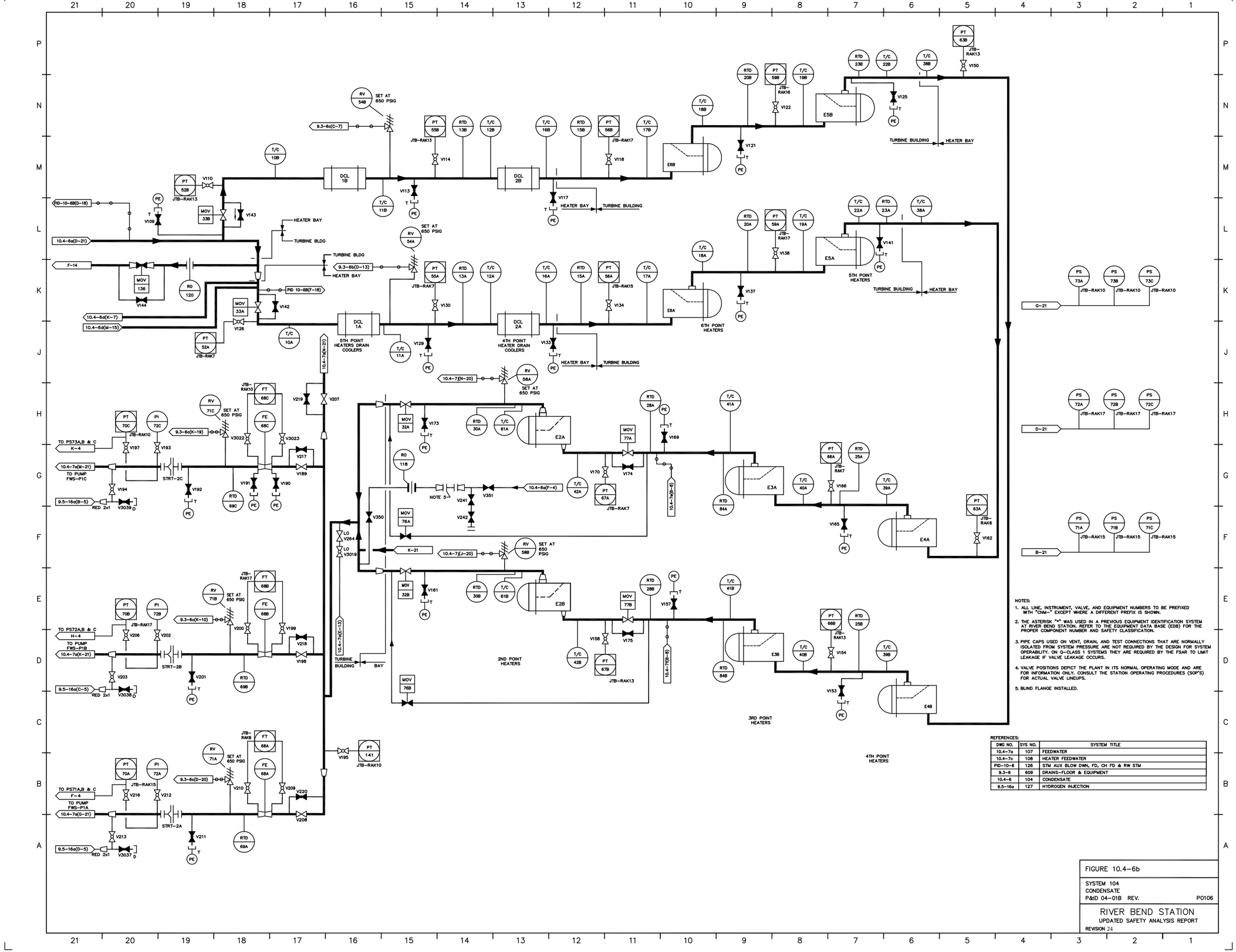
NOTES:
1. ALL LINE, INSTRUMENT, VALVE, AND EQUIPMENT NUMBERS TO BE PREFIXED WITH "CNM-" EXCEPT WHERE A DIFFERENT PREFIX IS SHOWN.
2. THE ASTERISK "*" WAS USED IN A PREVIOUS EQUIPMENT IDENTIFICATION SYSTEM AT RIVER BEND STATION. REFER TO THE EQUIPMENT DATA BASE (EDB) FOR THE PROPER COMPONENT NUMBER AND SAFETY CLASSIFICATION.
3. PIPE CAPS USED ON VENT, DRAIN, AND TEST CONNECTIONS THAT ARE NORMALLY ISOLATED FROM SYSTEM PRESSURE ARE NOT REQUIRED BY THE DESIGN FOR SYSTEM OPERABILITY. ON Q-CLASS 1 SYSTEMS THEY ARE REQUIRED BY THE FSAR TO LIMIT LEAKAGE IF VALVE LEAKAGE OCCURS.
4. VALVE POSITIONS DEPICT THE PLANT IN ITS NORMAL OPERATING MODE AND ARE FOR INFORMATION ONLY. CONSULT THE STATION OPERATING PROCEDURES (SOP'S) FOR ACTUAL VALVE LINEUPS.
5. THESE INSTRUMENTS ARE MAINTAINED OUT OF SERVICE IN ACCORDANCE WITH CHEMISTRY OPERATING PROCEDURE, COP-0811.
6. DO NOT USE THE CHECK VALVE FOR A BOUNDRY ISOLATION VALVE. THE CHECK VALVE WAS APPROVED FOR USE WITHOUT THE DISC SEAT NEGATING ITS ABILITY TO ISOLATE PER ER01-0574-000.
7. INJECTION OF O_2 INTO CONDENSATE VIA V19 IS NOT DESIRED AS O DOES NOT STAY IN SOLUTION.
8. DIFFUSER INSTALLED INSIDE PIPE REF. ER97-0163XERON 8 & 9.
9. SAMPLE LINE LOCATIONS MAY BE USED FOR GRAB SAMPLES OR AS TEMPORARY CONNECTIONS FOR THE CORROSION MONITORING EQUIPMENT.
10. FAIL AS IS ON LOSS OF AIR SUPPLY, FAIL OPEN ON LOSS OF POWER OR CONTROL SIGNAL.

NUCLEAR SAFETY RELATED

FIGURE 10.4-6a

SYSTEM 104
CONDENSATE
P&ID 04-01A REV. P0042

RIVER BEND STATION
UPDATED SAFETY ANALYSIS REPORT
REVISION 25



NOTES:

1. ALL LINE, INSTRUMENT, VALVE, AND EQUIPMENT NUMBERS TO BE PREFIXED WITH "CNM–" EXCEPT WHERE A DIFFERENT PREFIX IS SHOWN.
2. THE ASTERISK "*" WAS USED IN A PREVIOUS EQUIPMENT IDENTIFICATION SYSTEM AT RIVER BEND STATION. REFER TO THE EQUIPMENT DATA BASE (EDB) FOR THE PROPER COMPONENT NUMBER AND SAFETY CLASSIFICATION.
3. PIPE CAPS USED ON VENT, DRAIN, AND TEST CONNECTIONS THAT ARE NORMALLY ISOLATED FROM SYSTEM PRESSURE ARE NOT REQUIRED BY THE DESIGN FOR SYSTEM OPERABILITY. ON Q–CLASS 1 SYSTEMS THEY ARE REQUIRED BY THE FSAR TO LIMIT LEAKAGE IF VALVE LEAKAGE OCCURS.
4. VALVE POSITIONS DEPICT THE PLANT IN ITS NORMAL OPERATING MODE AND ARE FOR INFORMATION ONLY. CONSULT THE STATION OPERATING PROCEDURES (SOP'S) FOR ACTUAL VALVE LINEUPS.
5. BLIND FLANGE INSTALLED.

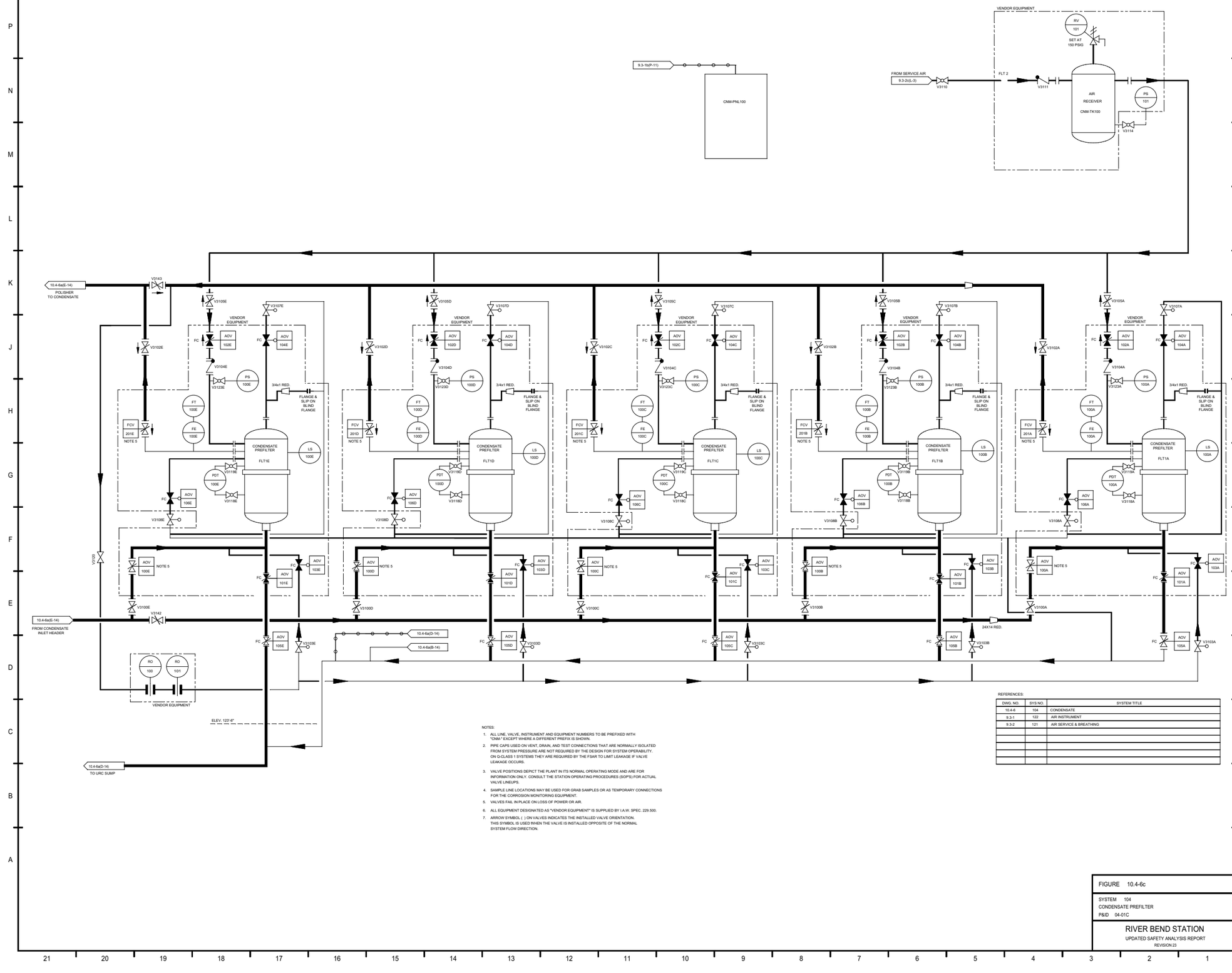
REFERENCES:

DWG NO.	SYS NO.	SYSTEM TITLE
10.4–7a	107	FEEDWATER
10.4–7c	108	HEATER FEEDWATER
PID–10–6	126	STM AUX BLOW DWN, FD, CH FD & RW STM
9.3–6	609	DRAINS–FLOOR & EQUIPMENT
10.4–6	104	CONDENSATE
9.5–16a	127	HYDROGEN INJECTION

FIGURE 10.4–6b

SYSTEM 104
CONDENSATE
P&ID 04–01B REV. P0106

RIVER BEND STATION
UPDATED SAFETY ANALYSIS REPORT
REVISION 24



REFERENCES:

DWG. NO.	SYS NO.	SYSTEM TITLE
10.4-6	104	CONDENSATE
9.3-1	122	AIR INSTRUMENT
9.3-2	121	AIR SERVICE & BREATHING

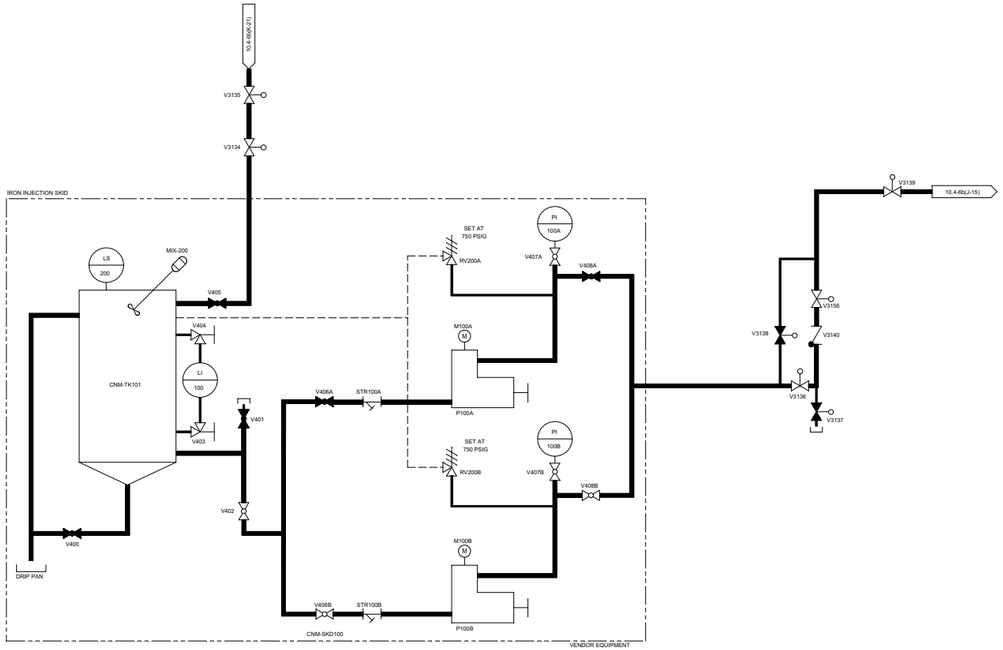
NOTES:

1. ALL LINE, VALVE, INSTRUMENT AND EQUIPMENT NUMBERS TO BE PREFIXED WITH "CNM." EXCEPT WHERE A DIFFERENT PREFIX IS SHOWN.
2. PIPE CAPS USED ON VENT, DRAIN, AND TEST CONNECTIONS THAT ARE NORMALLY ISOLATED FROM SYSTEM PRESSURE ARE NOT REQUIRED BY THE DESIGN FOR SYSTEM OPERABILITY. ON Q-CLASS 1 SYSTEMS THEY ARE REQUIRED BY THE FSAR TO LIMIT LEAKAGE IF VALVE LEAKAGE OCCURS.
3. VALVE POSITIONS DEPICT THE PLANT IN ITS NORMAL OPERATING MODE AND ARE FOR INFORMATION ONLY. CONSULT THE STATION OPERATING PROCEDURES (SOPS) FOR ACTUAL VALVE LINEUPS.
4. SAMPLE LINE LOCATIONS MAY BE USED FOR GRAB SAMPLES OR AS TEMPORARY CONNECTIONS FOR THE CORROSION MONITORING EQUIPMENT.
5. VALVES FAIL IN PLACE ON LOSS OF POWER OR AIR.
6. ALL EQUIPMENT DESIGNATED AS "VENDOR EQUIPMENT" IS SUPPLIED BY I.A.W. SPEC. 229.500.
7. ARROW SYMBOL ( ) ON VALVES INDICATES THE INSTALLED VALVE ORIENTATION. THIS SYMBOL IS USED WHEN THE VALVE IS INSTALLED OPPOSITE OF THE NORMAL SYSTEM FLOW DIRECTION.

FIGURE 10.4-6c

SYSTEM 104
CONDENSATE PREFILTER
P&ID 04-01C

RIVER BEND STATION
UPDATED SAFETY ANALYSIS REPORT
REVISION 23



NOTES:

1. ALL LINE, INSTRUMENT, VALVE, AND EQUIPMENT NUMBERS TO BE PREFIXED WITH "CNM-" EXCEPT WHERE A DIFFERENT PREFIX IS SHOWN.
2. THE ASTERISK "*" WAS USED IN A PREVIOUS EQUIPMENT IDENTIFICATION SYSTEM AT RIVER BEND STATION. REFER TO THE EQUIPMENT DATA BASE (EDB) FOR THE PROPER COMPONENT NUMBER AND SAFETY CLASSIFICATION.
3. PIPE CAPS USED ON VENT, DRAIN, AND TEST CONNECTIONS THAT ARE NORMALLY ISOLATED FROM SYSTEM PRESSURE ARE NOT REQUIRED BY THE DESIGN FOR SYSTEM OPERABILITY. ON QI-CLASS 1 SYSTEMS THEY ARE REQUIRED BY THE FSAR TO LIMIT LEAKAGE IF VALVE LEAKAGE OCCURS.
4. VALVE POSITIONS DEPICT THE PLANT IN ITS NORMAL OPERATING MODE AND ARE FOR INFORMATION ONLY. CONSULT THE STATION OPERATING PROCEDURES (SOP'S) FOR ACTUAL VALVE LINEUPS.
4. VENDOR EQUIPMENT (SPEC) SUPPLIED VIA VCD 7229.500-000-003A.

REFERENCES:

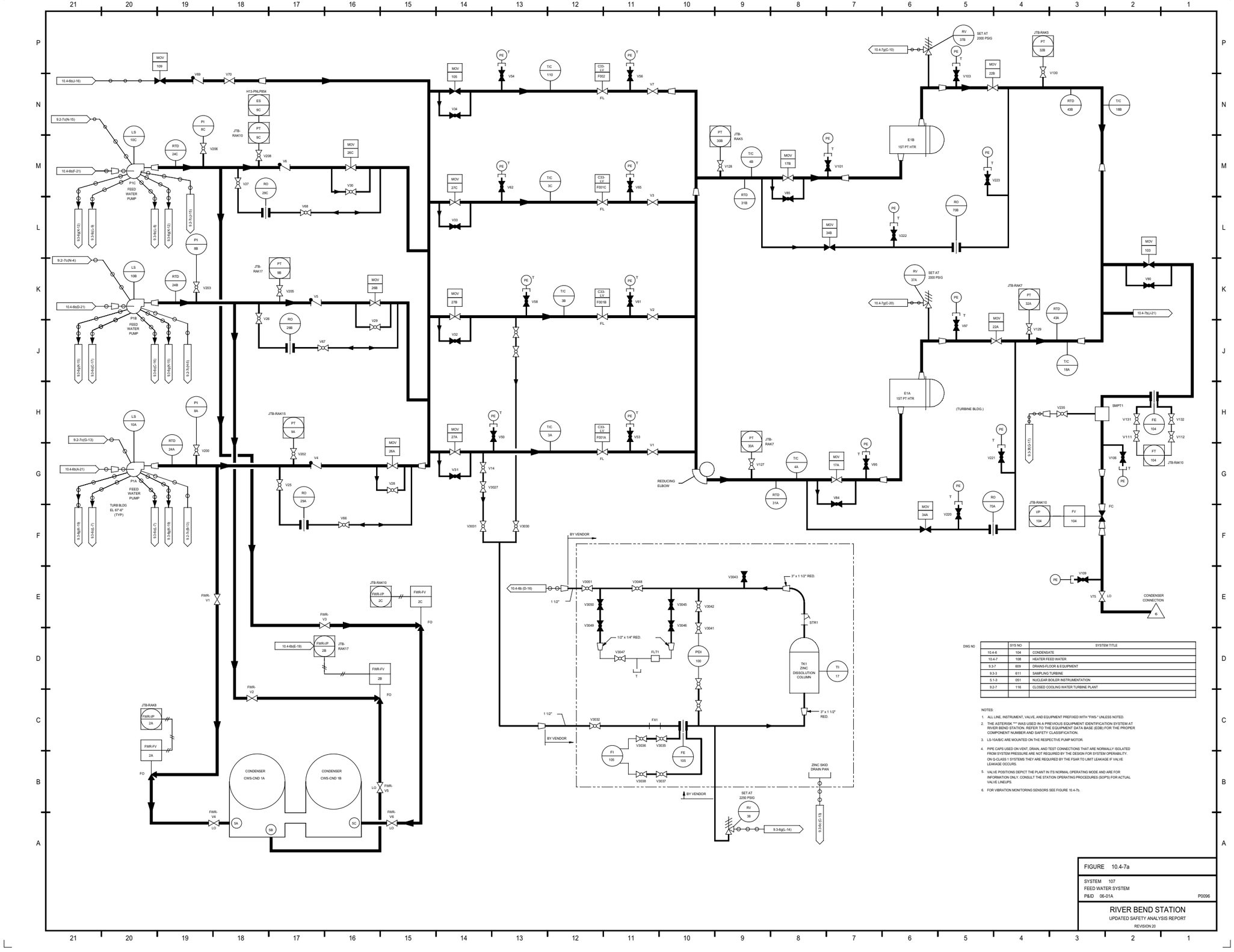
DWG. NO.	SYS NO.	SYSTEM TITLE
10.4-6b	104	CONDENSATE

NUCLEAR SAFETY RELATED

FIGURE 10.4-6d

SYSTEM 104
CONDENSATE
P&ID 04-01Ω REV. 0 P0042

RIVER BEND STATION
UPDATED SAFETY ANALYSIS REPORT
REVISION 17



DWG NO	SYS NO	SYSTEM TITLE
10.4-6	104	CONDENSATE
10.4-7	108	HEATER FEED WATER
9.3-7	609	DRAINS-FLOOR & EQUIPMENT
9.3-3	611	SAMPLING TURBINE
5.1-3	051	NUCLEAR BOILER INSTRUMENTATION
9.2-7	116	CLOSED COOLING WATER TURBINE PLANT

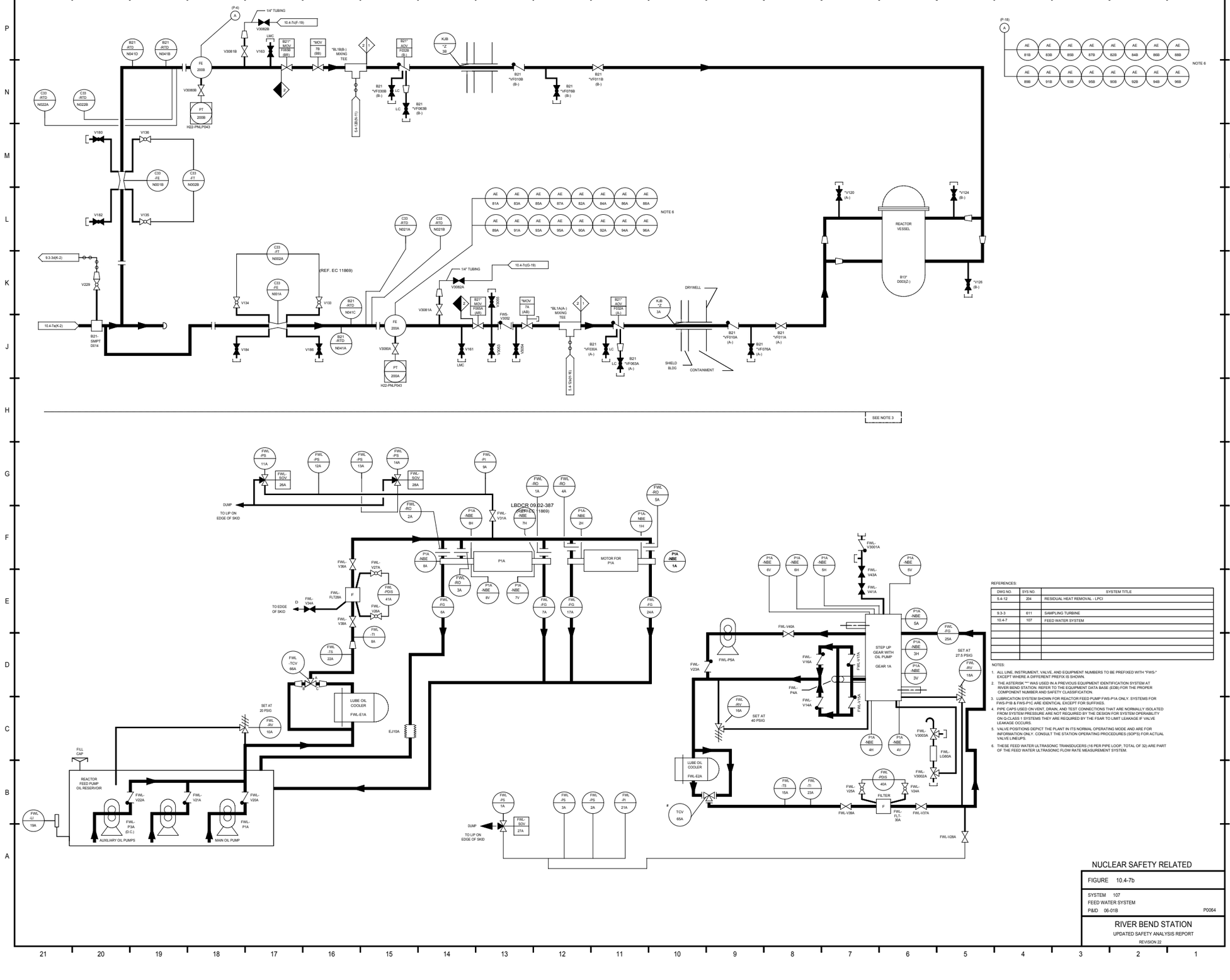
NOTES:

1. ALL LINE, INSTRUMENT, VALVE, AND EQUIPMENT PREFIXED WITH "FWS." UNLESS NOTED.
2. THE ASTERISK "*" WAS USED IN A PREVIOUS EQUIPMENT IDENTIFICATION SYSTEM AT RIVER BEND STATION. REFER TO THE EQUIPMENT DATA BASE (EDB) FOR THE PROPER COMPONENT NUMBER AND SAFETY CLASSIFICATION.
3. LS-10A/B/C ARE MOUNTED ON THE RESPECTIVE PUMP MOTOR.
4. PIPE CAPS USED ON VENT, DRAIN, AND TEST CONNECTIONS THAT ARE NORMALLY ISOLATED FROM SYSTEM PRESSURE ARE NOT REQUIRED BY THE DESIGN FOR SYSTEM OPERABILITY.
   ON Q-CLASS 1 SYSTEMS THEY ARE REQUIRED BY THE FSAR TO LIMIT LEAKAGE IF VALVE LEAKAGE OCCURS.
5. VALVE POSITIONS DEPICT THE PLANT IN ITS NORMAL OPERATING MODE AND ARE FOR INFORMATION ONLY. CONSULT THE STATION OPERATING PROCEDURES (SOPS) FOR ACTUAL VALVE LINEUPS.
6. FOR VIBRATION MONITORING SENSORS SEE FIGURE 10.4-7b.

FIGURE 10.4-7a

SYSTEM 107
FEED WATER SYSTEM
P&ID 06-01A P0096

RIVER BEND STATION
UPDATED SAFETY ANALYSIS REPORT
REVISION 20



REFERENCES:

DWG NO.	SYS NO.	SYSTEM TITLE
5.4-12	204	RESIDUAL HEAT REMOVAL - LPCI
9.3-3	611	SAMPLING TURBINE
10.4-7	107	FEED WATER SYSTEM

NOTES:

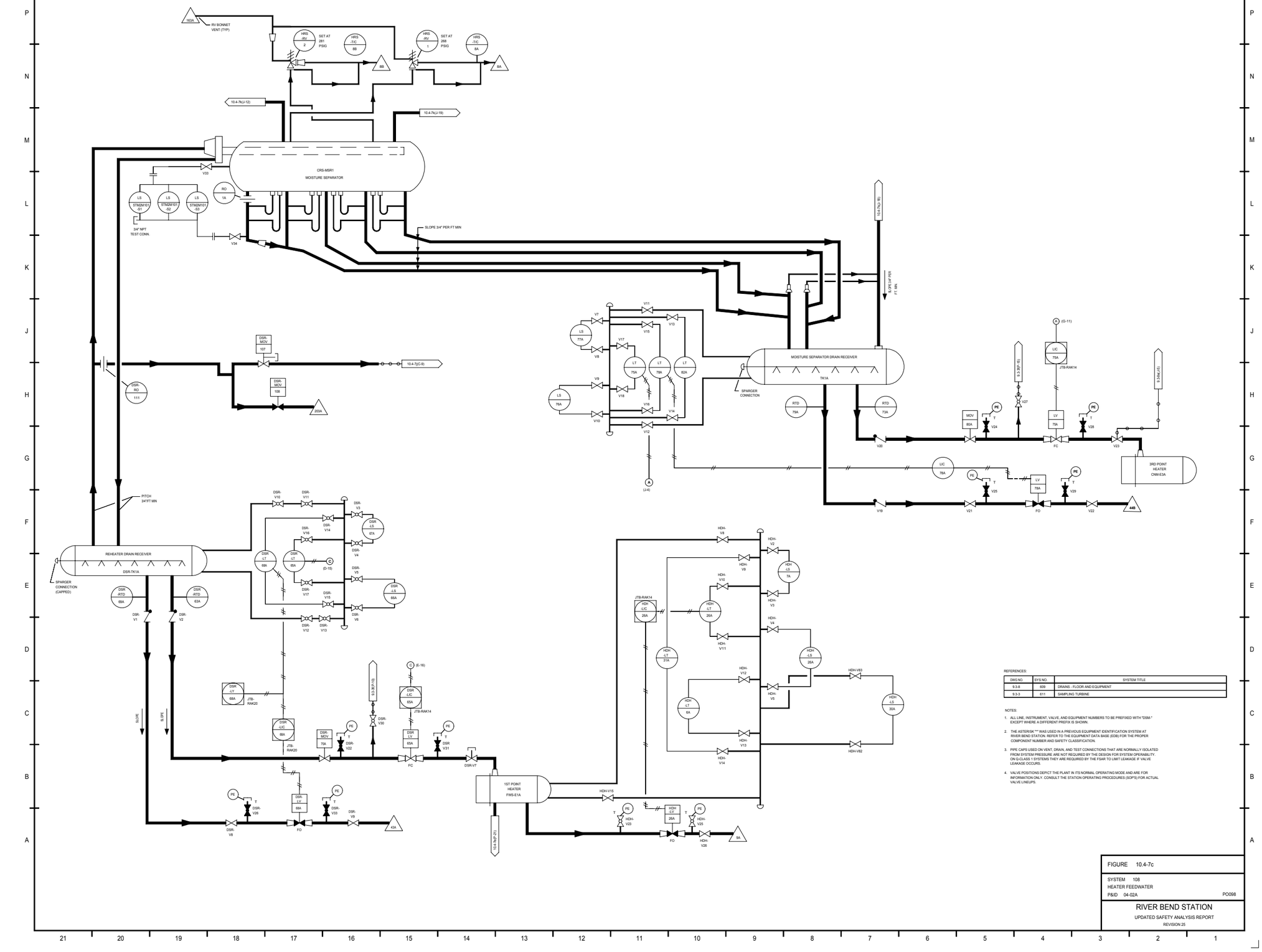
1. ALL LINE, INSTRUMENT, VALVE, AND EQUIPMENT NUMBERS TO BE PREFIXED WITH "FWS-" EXCEPT WHERE A DIFFERENT PREFIX IS SHOWN.
2. THE ASTERISK "*" WAS USED IN A PREVIOUS EQUIPMENT IDENTIFICATION SYSTEM AT RIVER BEND STATION. REFER TO THE EQUIPMENT DATA BASE (EDB) FOR THE PROPER COMPONENT NUMBER AND SAFETY CLASSIFICATION.
3. LUBRICATION SYSTEM SHOWN FOR REACTOR FEED PUMP FWS-P1A ONLY. SYSTEMS FOR FWS-P1B & FWS-P1C ARE IDENTICAL EXCEPT FOR SUFFIXES.
4. PIPE CAPS USED ON VENT, DRAIN, AND TEST CONNECTIONS THAT ARE NORMALLY ISOLATED FROM SYSTEM PRESSURE ARE NOT REQUIRED BY THE DESIGN FOR SYSTEM OPERABILITY ON Q-CLASS 1 SYSTEMS THEY ARE REQUIRED BY THE FSAR TO LIMIT LEAKAGE IF VALVE LEAKAGE OCCURS.
5. VALVE POSITIONS DEPICT THE PLANT IN ITS NORMAL OPERATING MODE AND ARE FOR INFORMATION ONLY. CONSULT THE STATION OPERATING PROCEDURES (SOPS) FOR ACTUAL VALVE LINEUPS.
6. THESE FEED WATER ULTRASONIC TRANSDUCERS (16 PER PIPE LOOP; TOTAL OF 32) ARE PART OF THE FEED WATER ULTRASONIC FLOW RATE MEASUREMENT SYSTEM.

NUCLEAR SAFETY RELATED

FIGURE 10.4-7b

SYSTEM 107
FEED WATER SYSTEM
P&ID 06-01B P0064

RIVER BEND STATION
UPDATED SAFETY ANALYSIS REPORT
REVISION 22



REFERENCES:

DWG NO.	SYS NO.	SYSTEM TITLE
9.3-8	609	DRAINS - FLOOR AND EQUIPMENT
9.3-3	611	SAMPLING TURBINE

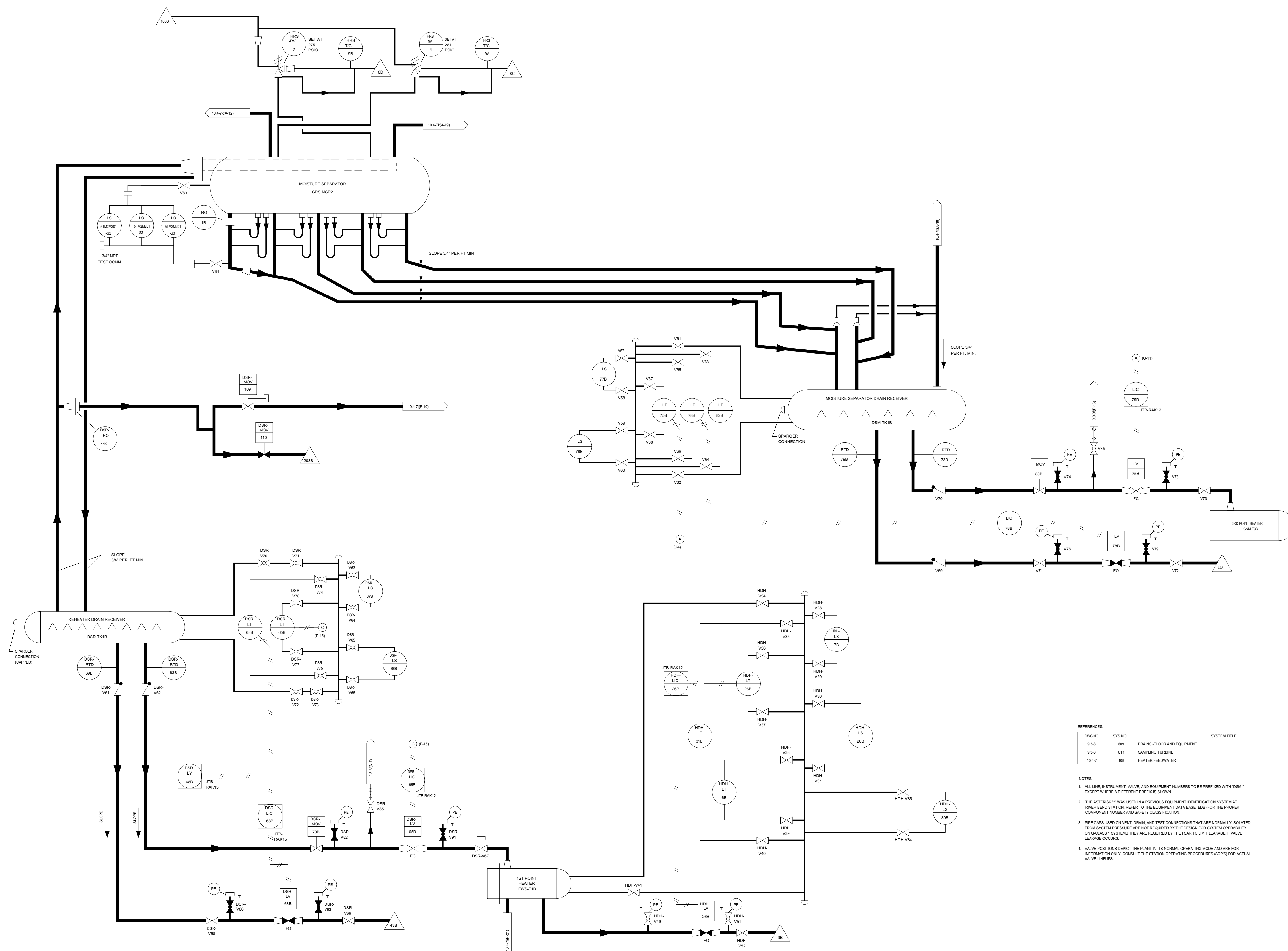
NOTES:

1. ALL LINE, INSTRUMENT, VALVE, AND EQUIPMENT NUMBERS TO BE PREFIXED WITH "DSM-" EXCEPT WHERE A DIFFERENT PREFIX IS SHOWN.
2. THE ASTERISK "*" WAS USED IN A PREVIOUS EQUIPMENT IDENTIFICATION SYSTEM AT RIVER BEND STATION. REFER TO THE EQUIPMENT DATA BASE (EDB) FOR THE PROPER COMPONENT NUMBER AND SAFETY CLASSIFICATION.
3. PIPE CAPS USED ON VENT, DRAIN, AND TEST CONNECTIONS THAT ARE NORMALLY ISOLATED FROM SYSTEM PRESSURE ARE NOT REQUIRED BY THE DESIGN FOR SYSTEM OPERABILITY ON Q-CLASS 1 SYSTEMS THEY ARE REQUIRED BY THE FSAR TO LIMIT LEAKAGE IF VALVE LEAKAGE OCCURS.
4. VALVE POSITIONS DEPICT THE PLANT IN ITS NORMAL OPERATING MODE AND ARE FOR INFORMATION ONLY. CONSULT THE STATION OPERATING PROCEDURES (SOP'S) FOR ACTUAL VALVE LINEUPS.

FIGURE 10.4-7c

SYSTEM 108
HEATER FEEDWATER
P&ID 04-02A PO098

RIVER BEND STATION
UPDATED SAFETY ANALYSIS REPORT
REVISION 25



REFERENCES:

DWG NO.	SYS NO.	SYSTEM TITLE
9.3-8	609	DRAINS -FLOOR AND EQUIPMENT
9.3-3	611	SAMPLING TURBINE
10.4-7	108	HEATER FEEDWATER

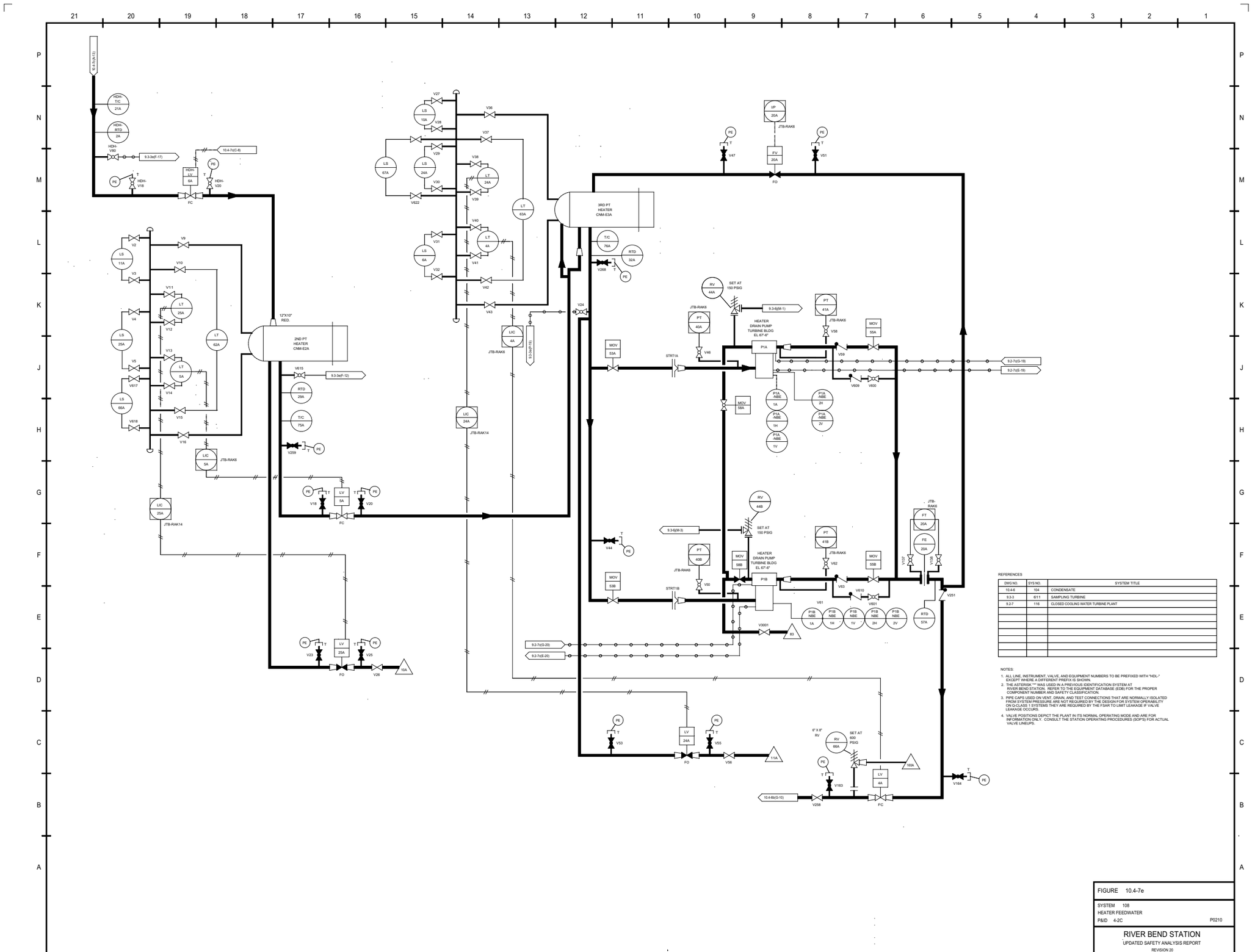
NOTES:

1. ALL LINE, INSTRUMENT, VALVE, AND EQUIPMENT NUMBERS TO BE PREFIXED WITH "DSM-" EXCEPT WHERE A DIFFERENT PREFIX IS SHOWN.
2. THE ASTERISK "*" WAS USED IN A PREVIOUS EQUIPMENT IDENTIFICATION SYSTEM AT RIVER BEND STATION. REFER TO THE EQUIPMENT DATA BASE (EDB) FOR THE PROPER COMPONENT NUMBER AND SAFETY CLASSIFICATION.
3. PIPE CAPS USED ON VENT, DRAIN, AND TEST CONNECTIONS THAT ARE NORMALLY ISOLATED FROM SYSTEM PRESSURE ARE NOT REQUIRED BY THE DESIGN FOR SYSTEM OPERABILITY ON Q-CLASS 1 SYSTEMS THEY ARE REQUIRED BY THE FSAR TO LIMIT LEAKAGE IF VALVE LEAKAGE OCCURS.
4. VALVE POSITIONS DEPICT THE PLANT IN ITS NORMAL OPERATING MODE AND ARE FOR INFORMATION ONLY. CONSULT THE STATION OPERATING PROCEDURES (SOP'S) FOR ACTUAL VALVE LINEUPS.

FIGURE 10.4-7d

SYSTEM 108
HEATER FEEDWATER
P&ID 04-02B PO092

RIVER BEND STATION
UPDATED SAFETY ANALYSIS REPORT
REVISION 25



REFERENCES

DWG NO.	SYS NO.	SYSTEM TITLE
10.4-6	104	CONDENSATE
9.3-3	611	SAMPLING TURBINE
9.2-7	116	CLOSED COOLING WATER TURBINE PLANT

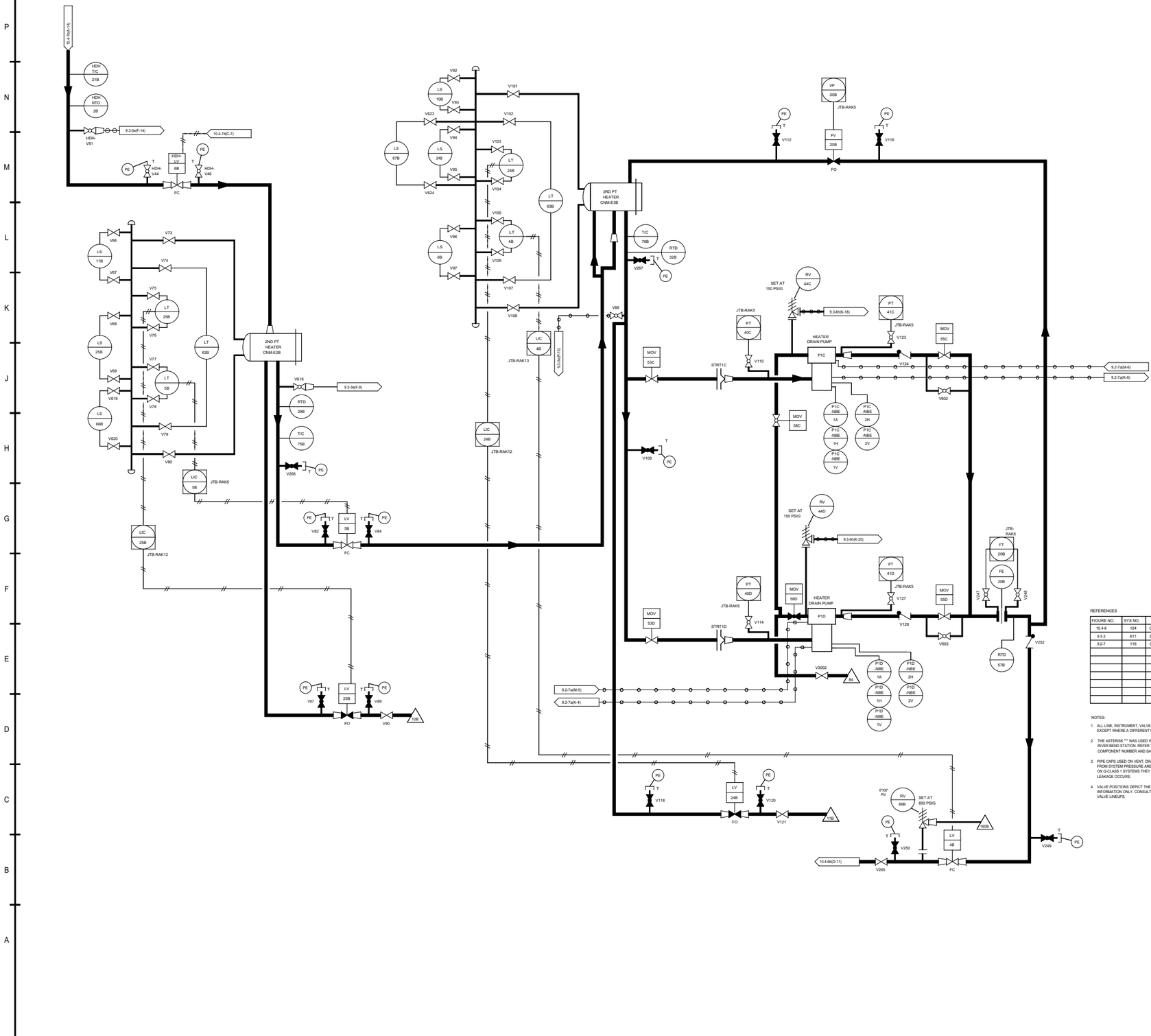
NOTES:

1. ALL LINE, INSTRUMENT, VALVE, AND EQUIPMENT NUMBERS TO BE PREFIXED WITH "HDL-" EXCEPT WHERE A DIFFERENT PREFIX IS SHOWN.
2. THE ASTERISK "*" WAS USED IN A PREVIOUS IDENTIFICATION SYSTEM AT RIVER BEND STATION. REFER TO THE EQUIPMENT DATABASE (EDB) FOR THE PROPER COMPONENT NUMBER AND SAFETY CLASSIFICATION.
3. PIPE CAPS USED ON VENT, DRAIN, AND TEST CONNECTIONS THAT ARE NORMALLY ISOLATED FROM SYSTEM PRESSURE ARE NOT REQUIRED BY THE DESIGN FOR SYSTEM OPERABILITY ON Q-CLASS 1 SYSTEMS THEY ARE REQUIRED BY THE FSAR TO LIMIT LEAKAGE IF VALVE LEAKAGE OCCURS.
4. VALVE POSITIONS DEPICT THE PLANT IN ITS NORMAL OPERATING MODE AND ARE FOR INFORMATION ONLY. CONSULT THE STATION OPERATING PROCEDURES (SOP'S) FOR ACTUAL VALVE LINEUPS.

FIGURE 10.4-7e

SYSTEM 108
HEATER FEEDWATER
P&ID 4-2C P0210

RIVER BEND STATION
UPDATED SAFETY ANALYSIS REPORT
REVISION 20



REFERENCES

FIGURE NO.	SYS NO.	SYSTEM TITLE
10.4-6	104	CONDENSATE
9.3-3	611	SAMPLING TURBINE
9.2-7	116	CLOSED COOLING WATER TURBINE PLANT

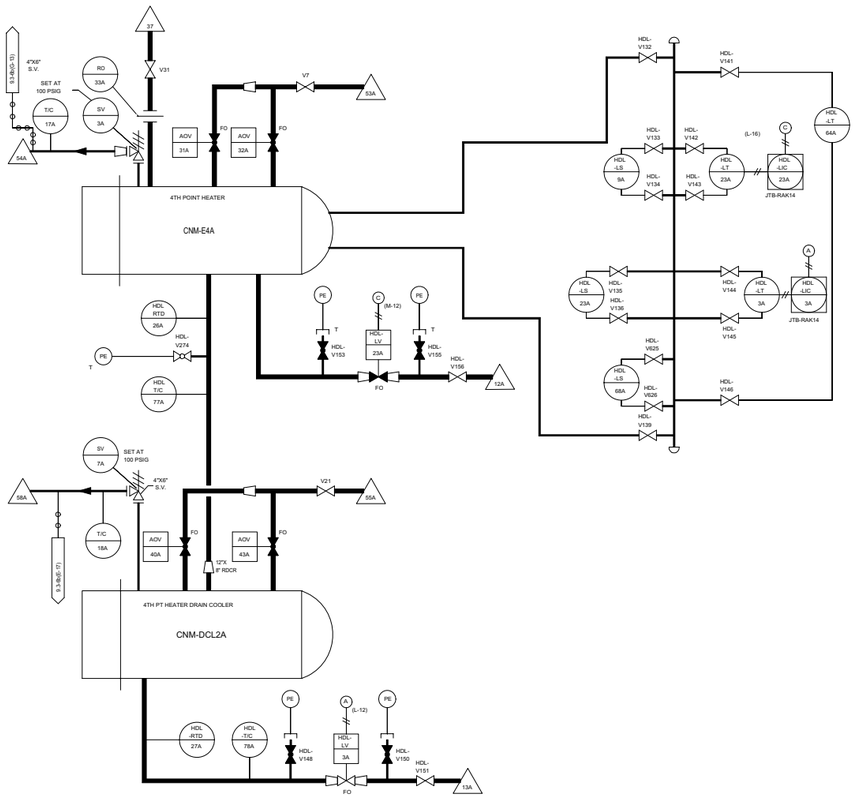
NOTES:

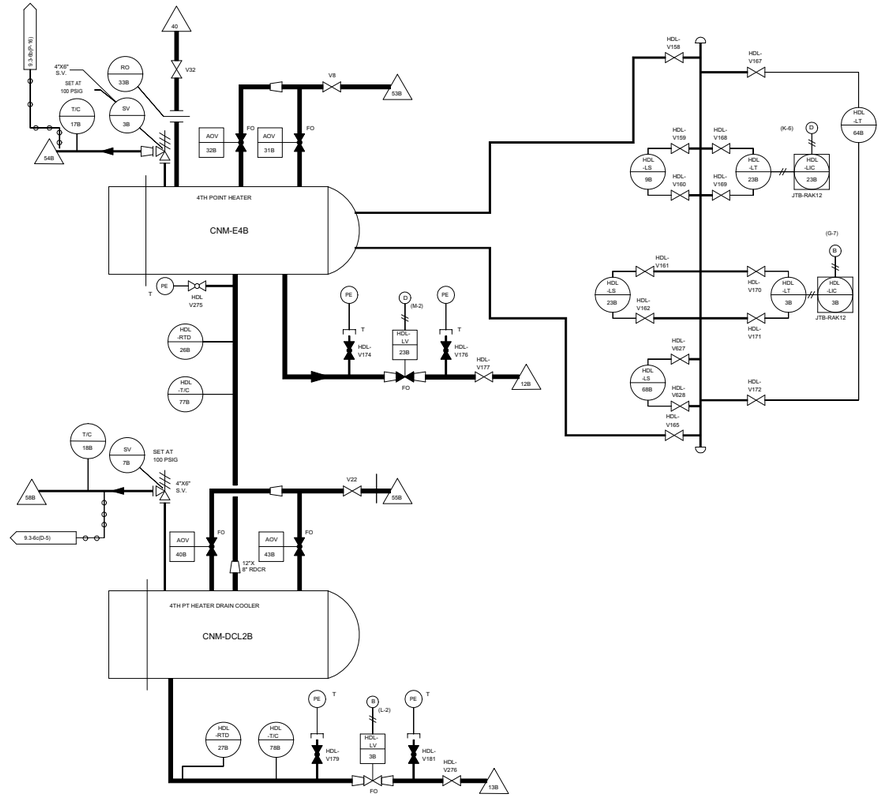
1. ALL LINE, INSTRUMENT, VALVE, AND EQUIPMENT NUMBERS TO BE PREFIXED WITH "HDL" EXCEPT WHERE A DIFFERENT PREFIX IS SHOWN.
2. THE ASTERISK "*" WAS USED IN A PREVIOUS EQUIPMENT IDENTIFICATION SYSTEM AT RIVER BEND STATION. REFER TO THE EQUIPMENT DATA BASE (EDB) FOR THE PROPER COMPONENT NUMBER AND SAFETY CLASSIFICATION.
3. PIPE CAPS USED ON VENT, DRAIN, AND TEST CONNECTIONS THAT ARE NORMALLY ISOLATED FROM SYSTEM PRESSURE ARE NOT REQUIRED BY THE DESIGN FOR SYSTEM OPERABILITY ON Q-CLASS 1 SYSTEMS THEY ARE REQUIRED BY THE FSAR TO LIMIT LEAKAGE IF VALVE LEAKAGE OCCURS.
4. VALVE POSITIONS DEPICT THE PLANT IN ITS NORMAL OPERATING MODE AND ARE FOR INFORMATION ONLY. CONSULT THE STATION OPERATING PROCEDURES (SOPS) FOR ACTUAL VALVE LINEUPS.

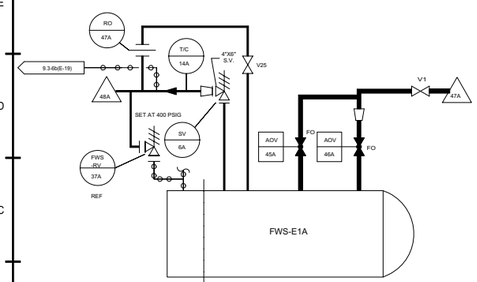
FIGURE 10.4-7f

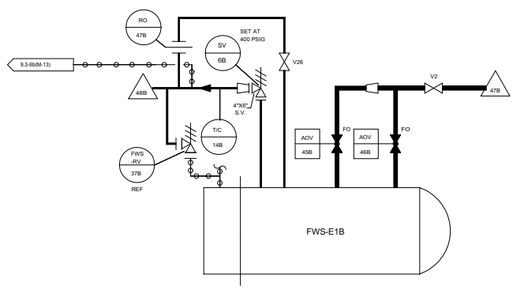
SYSTEM 108
HEATER FEEDWATER
P&ID 4-2D P0095

RIVER BEND STATION
UPDATED SAFETY ANALYSIS REPORT
REVISION 20









REFERENCES

DWG NO.	SYS NO.	SYSTEM TITLE
9.3-7	609	DRAINS-FLOOR & EQUIPMENT

NOTES:

1. ALL LINE, INSTRUMENT, VALVE, AND EQUIPMENT NUMBERS TO BE PREFIXED WITH "SVH-" EXCEPT WHERE A DIFFERENT PREFIX IS SHOWN.
2. THE ASTERISK "*" WAS USED IN A PREVIOUS EQUIPMENT IDENTIFICATION SYSTEM AT RIVER BEND STATION. REFER TO THE EQUIPMENT DATA BASE (EDB) FOR THE PROPER COMPONENT NUMBER AND SAFETY CLASSIFICATION.
3. PIPE CAPS USED ON VENT, DRAIN, AND TEST CONNECTIONS THAT ARE NORMALLY ISOLATED FROM SYSTEM PRESSURE ARE NOT REQUIRED BY THE DESIGN FOR SYSTEM OPERABILITY ON Q-CLASS 1 SYSTEMS THEY ARE REQUIRED BY THE FSAR TO LIMIT LEAKAGE IF VALVE LEAKAGE OCCURS.
4. VALVE POSITIONS DEPICT THE PLANT IN ITS NORMAL OPERATING MODE AND ARE FOR INFORMATION ONLY. CONSULT THE STATION OPERATING PROCEDURES (SOP'S) FOR ACTUAL VALVE LINEUPS.

FIGURE 10.4-7g

SYSTEM 108
HEATER FEEDWATER
P&ID 4-2E P0049

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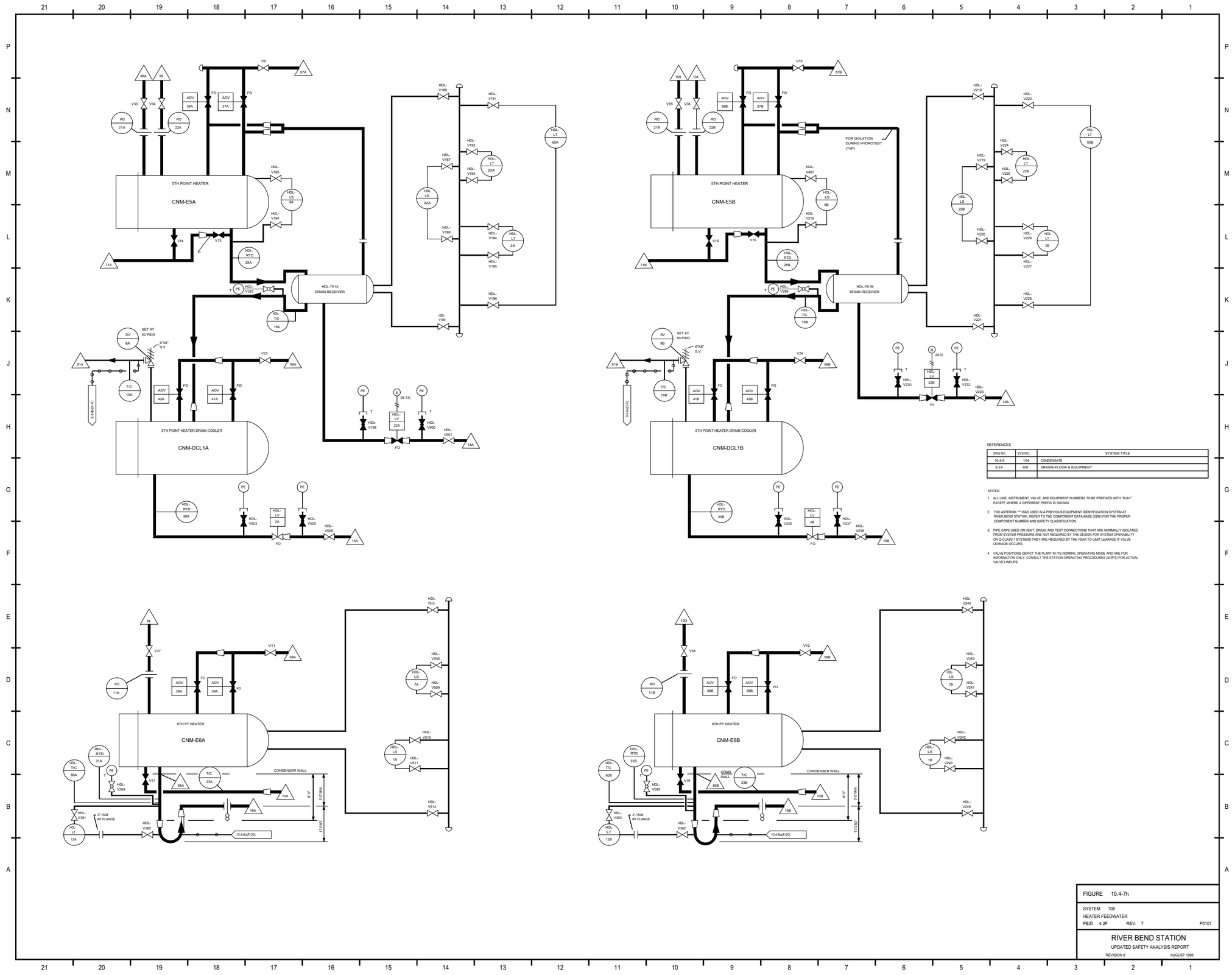

REFERENCES

DWG NO.	SYS NO.	SYSTEM TITLE
10.4-6	104	CONDENSATE
9.3-6	609	DRAINS-FLOOR & EQUIPMENT

NOTES:

1. ALL LINE, INSTRUMENT, VALVE, AND EQUIPMENT NUMBERS TO BE PREFIXED WITH "SVH-" EXCEPT WHERE A DIFFERENT PREFIX IS SHOWN.
2. THE ASTERISK "*" WAS USED IN A PREVIOUS EQUIPMENT IDENTIFICATION SYSTEM AT RIVER BEND STATION. REFER TO THE COMPONENT DATA BASE (CDB) FOR THE PROPER COMPONENT NUMBER AND SAFETY CLASSIFICATION.
3. PIPE CAPS USED ON VENT, DRAIN, AND TEST CONNECTIONS THAT ARE NORMALLY ISOLATED FROM SYSTEM PRESSURE ARE NOT REQUIRED BY THE DESIGN FOR SYSTEM OPERABILITY ON Q-CLASS 1 SYSTEMS THEY ARE REQUIRED BY THE FSAR TO LIMIT LEAKAGE IF VALVE LEAKAGE OCCURS.
4. VALVE POSITIONS DEPICT THE PLANT IN ITS NORMAL OPERATING MODE AND ARE FOR INFORMATION ONLY. CONSULT THE STATION OPERATING PROCEDURES (SOPS) FOR ACTUAL VALVE LINEUPS.

FIGURE 10.4-7h

SYSTEM 108
HEATER FEEDWATER
P&ID 4-2F REV. 7 P0101

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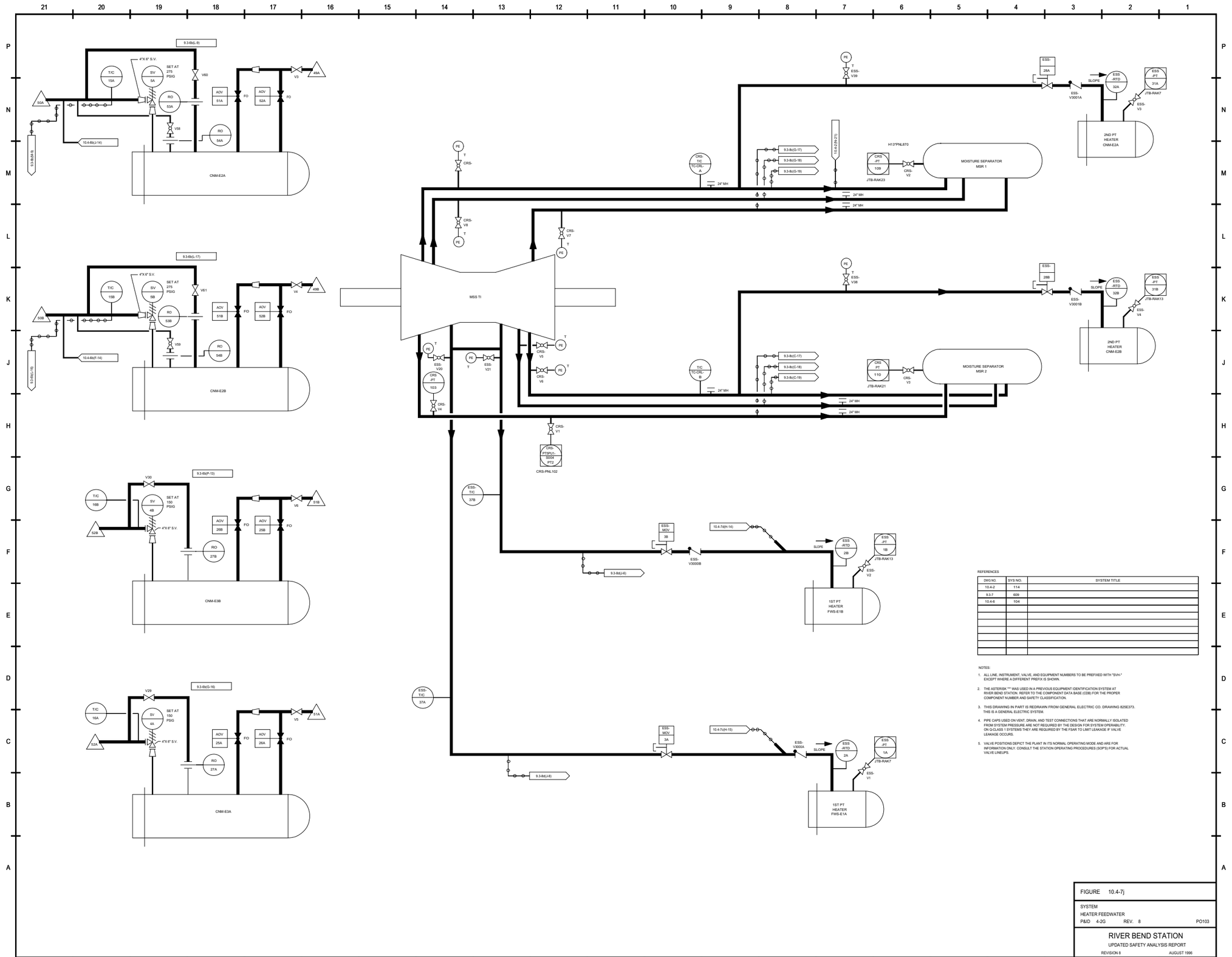

REFERENCES

DWG NO.	SYS NO.	SYSTEM TITLE
10.4-2	114	
9.3-7	609	
10.4-6	104	

NOTES:

1. ALL LINE, INSTRUMENT, VALVE, AND EQUIPMENT NUMBERS TO BE PREFIXED WITH "SVH-" EXCEPT WHERE A DIFFERENT PREFIX IS SHOWN.
2. THE ASTERISK "*" WAS USED IN A PREVIOUS EQUIPMENT IDENTIFICATION SYSTEM AT RIVER BEND STATION. REFER TO THE COMPONENT DATA BASE (CDB) FOR THE PROPER COMPONENT NUMBER AND SAFETY CLASSIFICATION.
3. THIS DRAWING IN PART IS REDRAWN FROM GENERAL ELECTRIC CO. DRAWING 825E373. THIS IS A GENERAL ELECTRIC SYSTEM.
4. PIPE CAPS USED ON VENT, DRAIN, AND TEST CONNECTIONS THAT ARE NORMALLY ISOLATED FROM SYSTEM PRESSURE ARE NOT REQUIRED BY THE DESIGN FOR SYSTEM OPERABILITY. ON Q-CLASS 1 SYSTEMS THEY ARE REQUIRED BY THE FSAR TO LIMIT LEAKAGE IF VALVE LEAKAGE OCCURS.
5. VALVE POSITIONS DEPICT THE PLANT IN ITS NORMAL OPERATING MODE AND ARE FOR INFORMATION ONLY. CONSULT THE STATION OPERATING PROCEDURES (SOP'S) FOR ACTUAL VALVE LINEUPS.

FIGURE 10.4-7j

SYSTEM
HEATER FEEDWATER
P&ID 4-2G REV. 8 PO103

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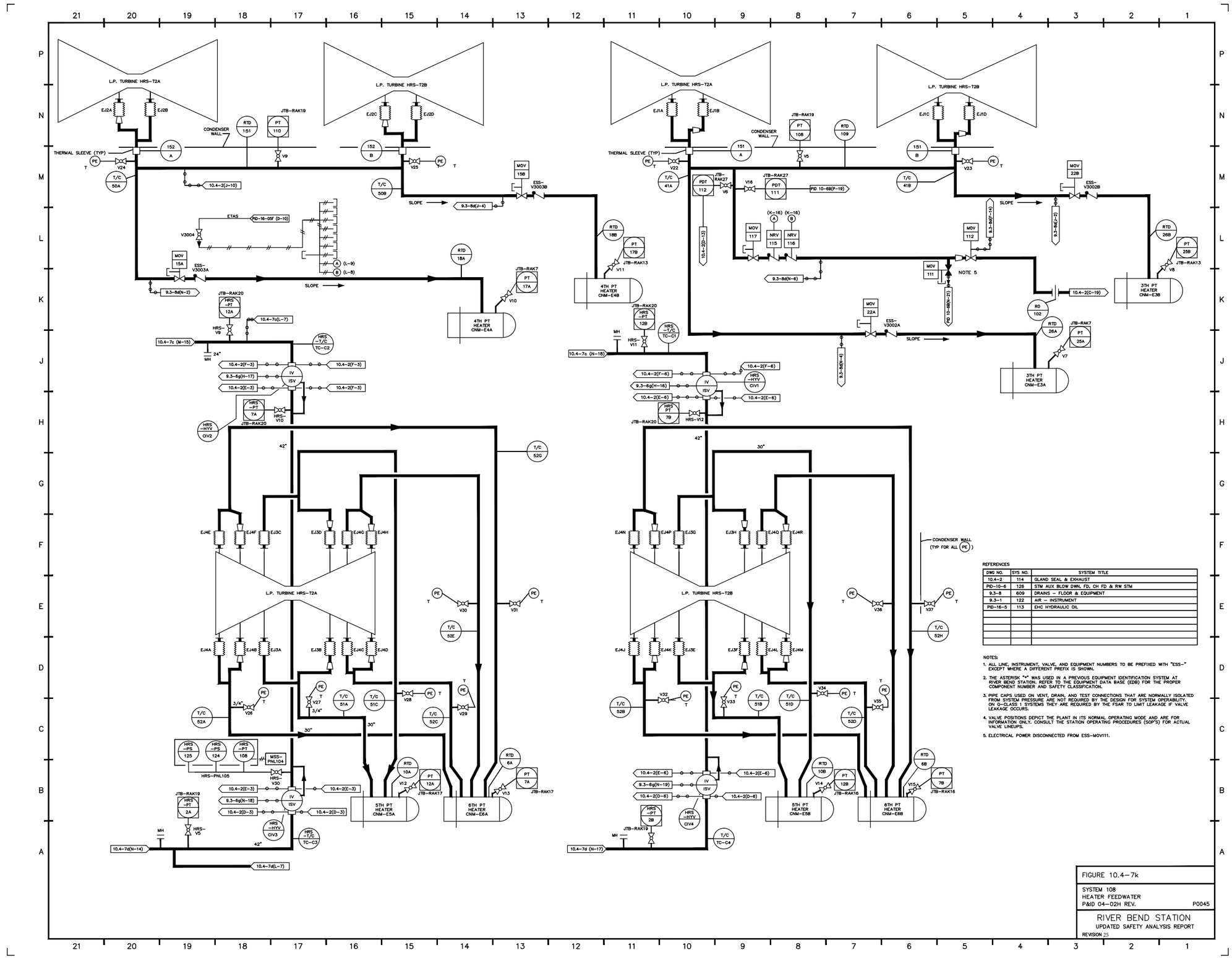
REVISION 8 AUGUST 1996



REFERENCES

DWG NO.	SYS NO.	SYSTEM TITLE
10.4-2	114	GLAND SEAL & EXHAUST
PID-10-6	126	STM AUX BLOW DWN, FD, CH FD & RW STM
9.3-8	609	DRAINS – FLOOR & EQUIPMENT
9.3-1	122	AIR – INSTRUMENT
PID-16-5	113	EHC HYDRAULIC OIL

NOTES:

1. ALL LINE, INSTRUMENT, VALVE, AND EQUIPMENT NUMBERS TO BE PREFIXED WITH "ESS-" EXCEPT WHERE A DIFFERENT PREFIX IS SHOWN.
2. THE ASTERISK "*" WAS USED IN A PREVIOUS EQUIPMENT IDENTIFICATION SYSTEM AT RIVER BEND STATION. REFER TO THE EQUIPMENT DATA BASE (EDB) FOR THE PROPER COMPONENT NUMBER AND SAFETY CLASSIFICATION.
3. PIPE CAPS USED ON VENT, DRAIN, AND TEST CONNECTIONS THAT ARE NORMALLY ISOLATED FROM SYSTEM PRESSURE ARE NOT REQUIRED BY THE DESIGN FOR SYSTEM OPERABILITY. ON Q-CLASS 1 SYSTEMS THEY ARE REQUIRED BY THE FSAR TO LIMIT LEAKAGE IF VALVE LEAKAGE OCCURS.
4. VALVE POSITIONS DEPICT THE PLANT IN ITS NORMAL OPERATING MODE AND ARE FOR INFORMATION ONLY. CONSULT THE STATION OPERATING PROCEDURES (SOP'S) FOR ACTUAL VALVE LINEUPS.
5. ELECTRICAL POWER DISCONNECTED FROM ESS-MOV111.

FIGURE 10.4-7k

SYSTEM 108
HEATER FEEDWATER
P&ID 04-02H REV. P0045

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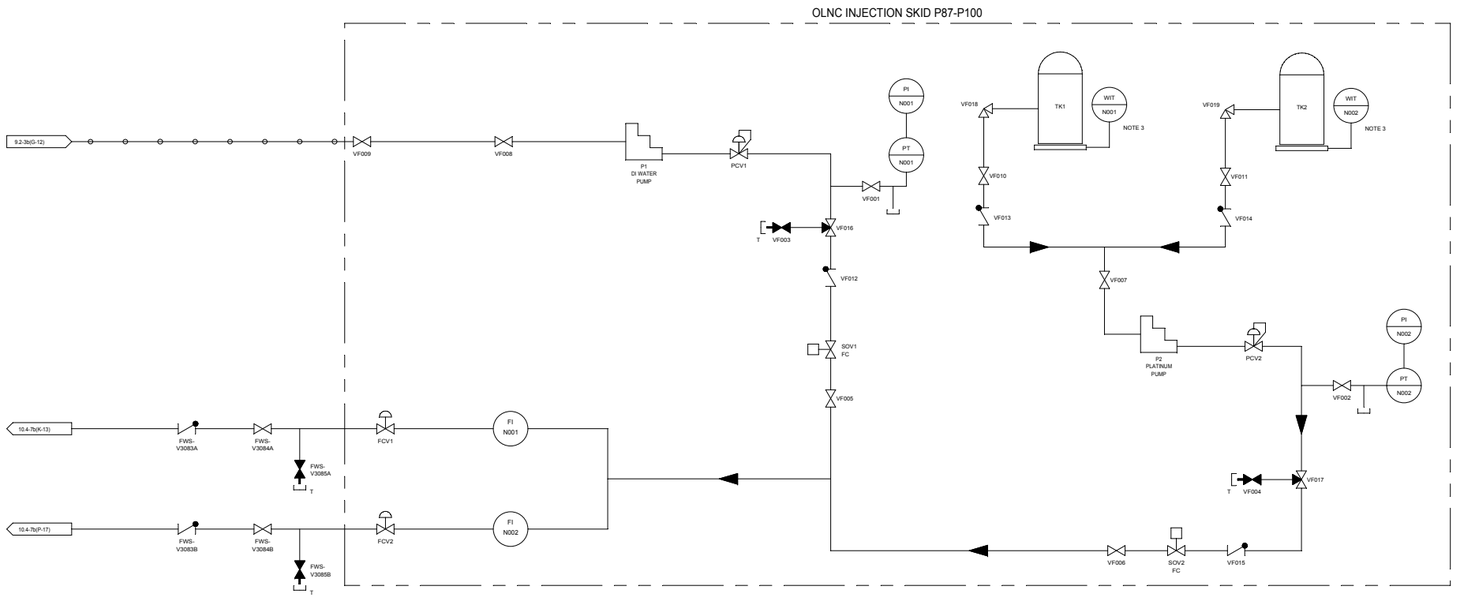

REFERENCES:

DWG NO.	SYS NO.	SYSTEM TITLE
9.2-3	659	MAKEUP WATER SYSTEM

NOTES:

1. ALL LINE, INSTRUMENT, VALVE, AND EQUIPMENT NUMBERS TO BE PREFIXED WITH "P87-" EXCEPT WHERE A DIFFERENT PREFIX IS SHOWN.
2. VALVE POSITIONS DEPICT THE PLANT IN ITS NORMAL OPERATING MODE AND ARE FOR INFORMATION ONLY. CONSULT THE STATION OPERATING PROCEDURES (SOPS) FOR ACTUAL VALVE LINEUPS.
3. P87-TK1 AND TK2 REST ON SCALES P87-WITN001 AND N002 RESPECTIVELY. P87-TK1 AND TK2 ARE DESIGNED WITH THE CAPABILITY TO BE REMOVED FROM THEIR NORMALLY INSTALLED LOCATIONS FOR REFILLING, CLEANING AND/OR SCALE CALIBRATION.

FIGURE 10.4-7m

SYSTEM 107
FEED WATER SYSTEM OLNC INJECTION SKID
P&ID 06-01C

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