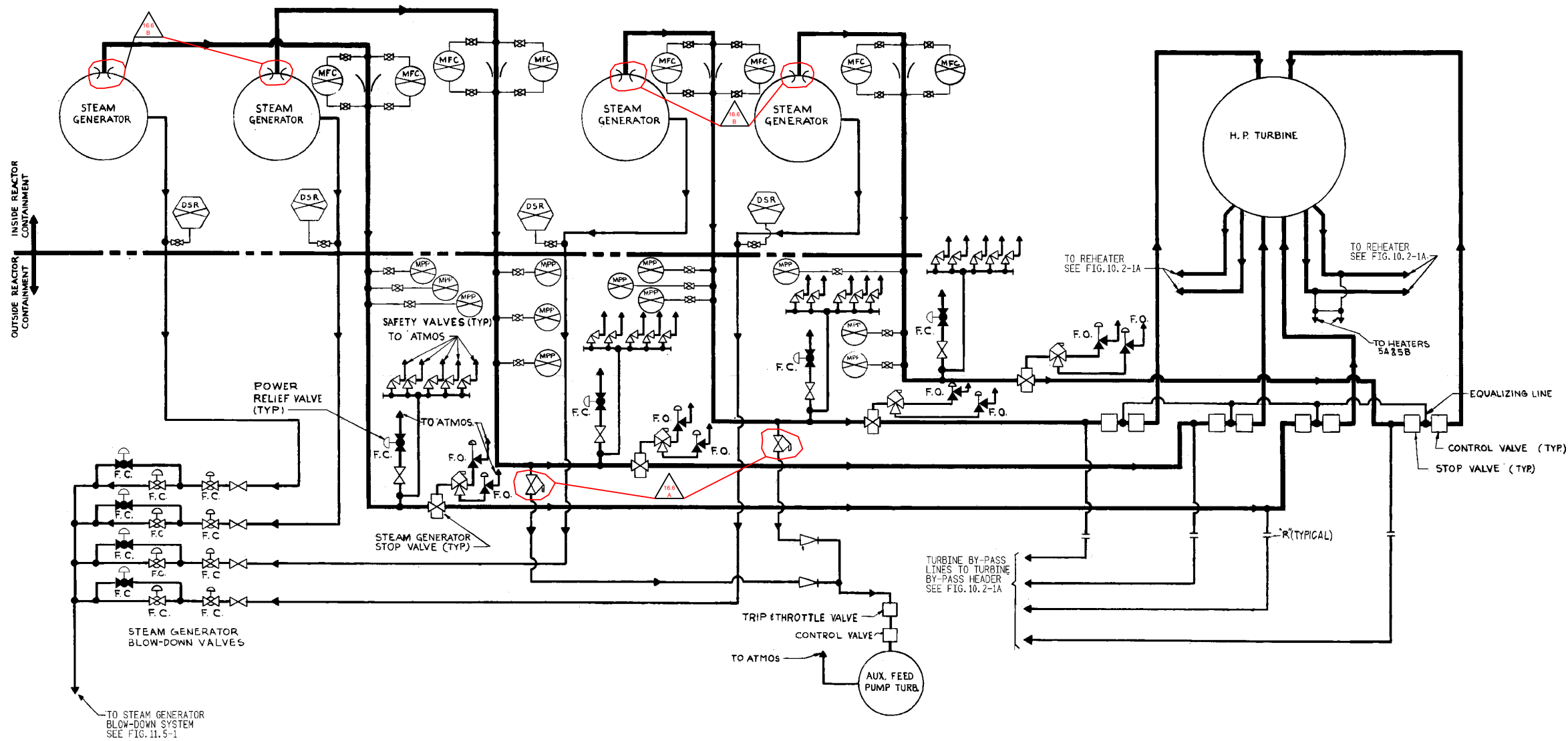


UFSAR Revision 30.0

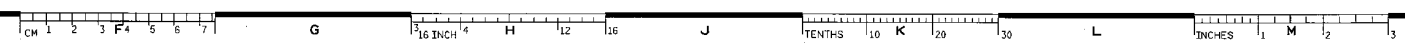
DWG. NO. FSAR FIG. 10.2-1



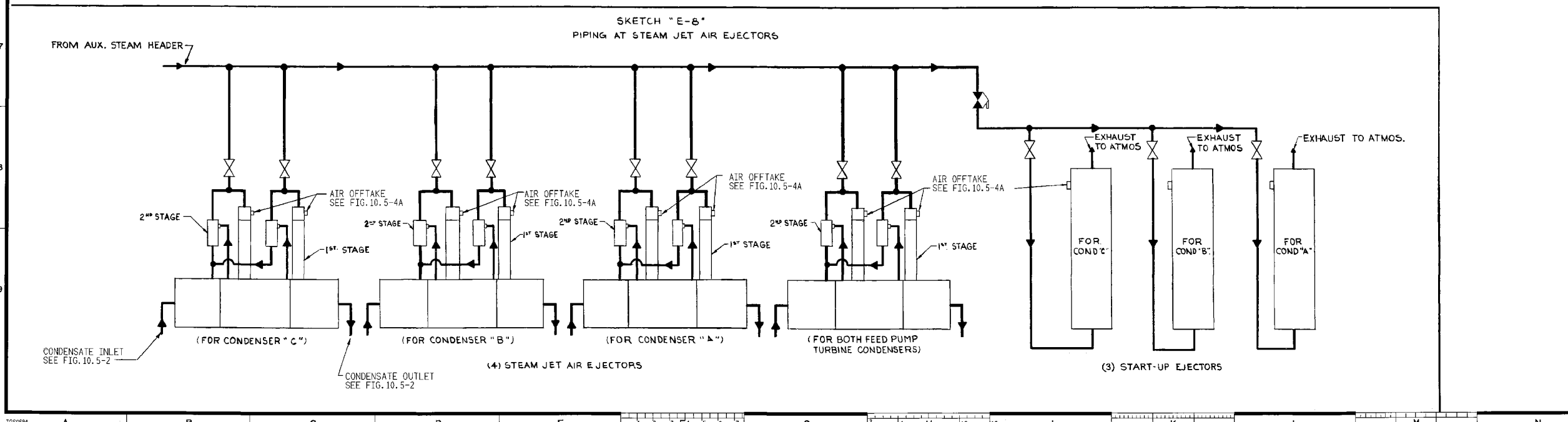
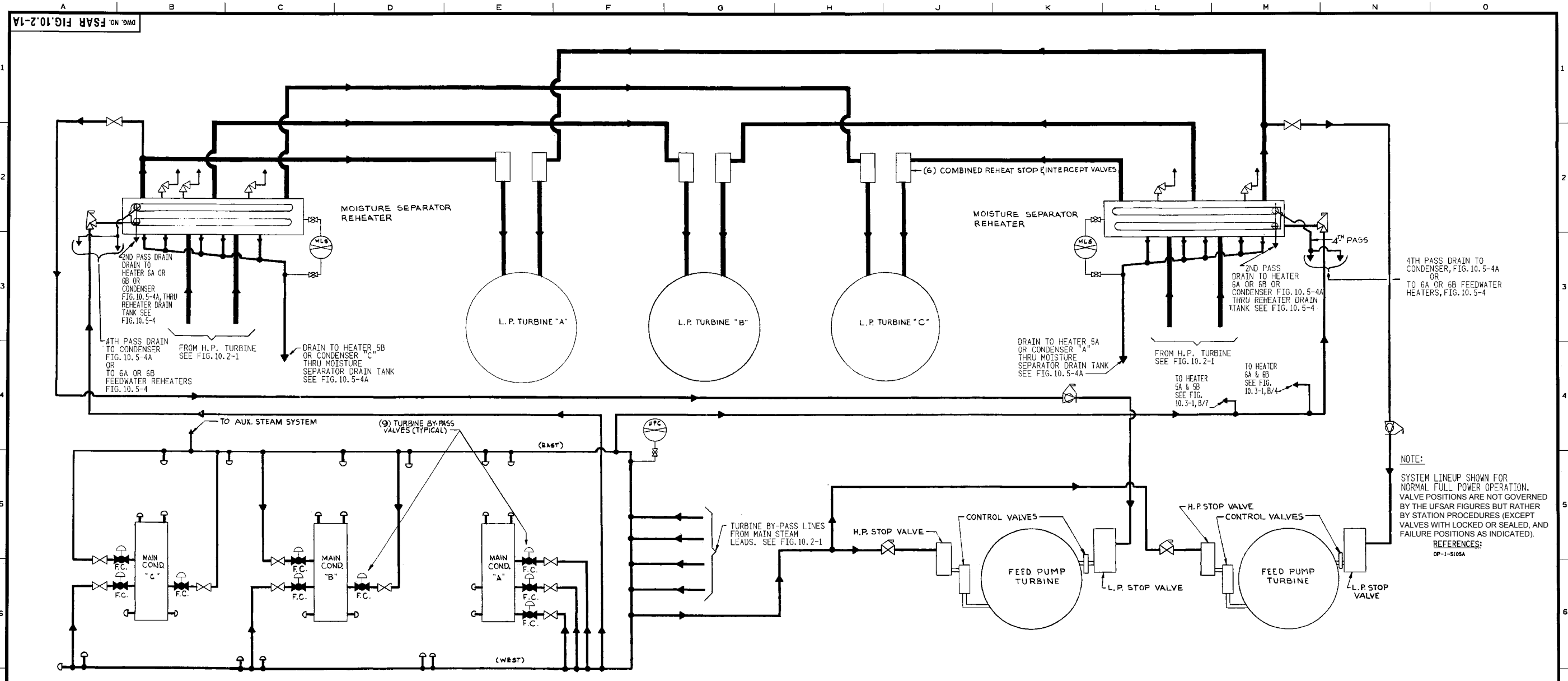
NOTE:  
SYSTEM LINEUP SHOWN FOR  
NORMAL FULL POWER OPERATION.  
VALVE POSITIONS ARE NOT GOVERNED BY  
THE UFSAR FIGURES BUT RATHER BY  
STATION PROCEDURES (EXCEPT FAILURE  
WITH LOCKED OR SEALED, AND FAILURE  
POSITIONS AS INDICATED).

REFERENCES:  
OP-1-5105

DATE	NO.	DESCRIPTION	APPD.
<b>REVISIONS</b>			
FILENAME: fsar-fig-10-2-1-163 (drawing title): fsar-fig-10-2-1-163.dwg			
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<b>INDIANA MICHIGAN POWER COMPANY</b> <b>DONALD C. COOK</b> NUCLEAR PLANT BRIDGMAN MICHIGAN			
<b>MAIN STEAM UNIT NO. 1</b>			
DWG. NO. FSAR FIG. 10.2 - 1			
ARCH	ELEC	MECH	STR
SCALE:	DR:		
DATE:	DW:		
DESIGN ENGINEERING DIVISION			
		AEP SERVICE CORP. 1 RIVERSIDE PLAZA COLUMBUS, OH 43215	

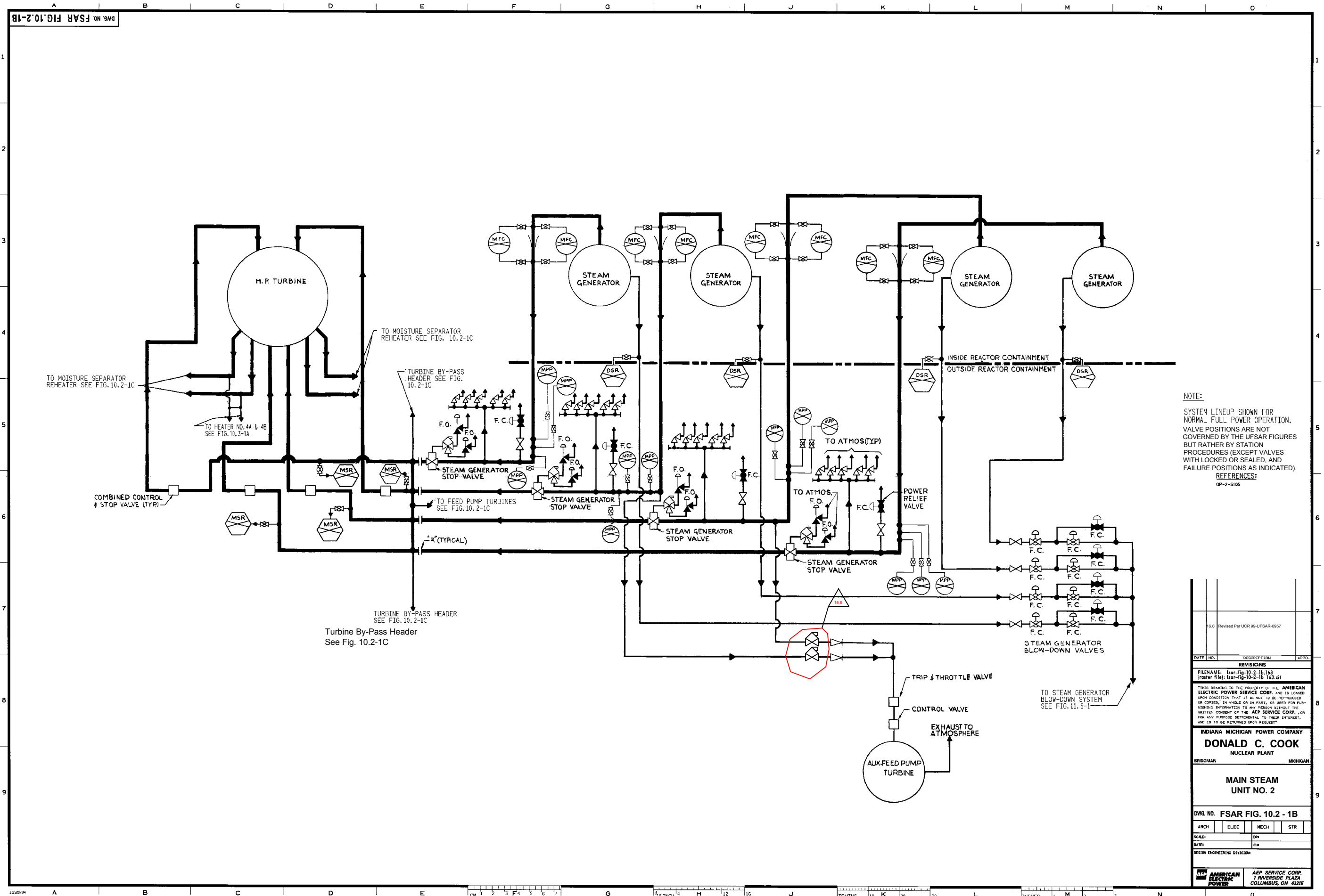


UFSAR Revision 30.0



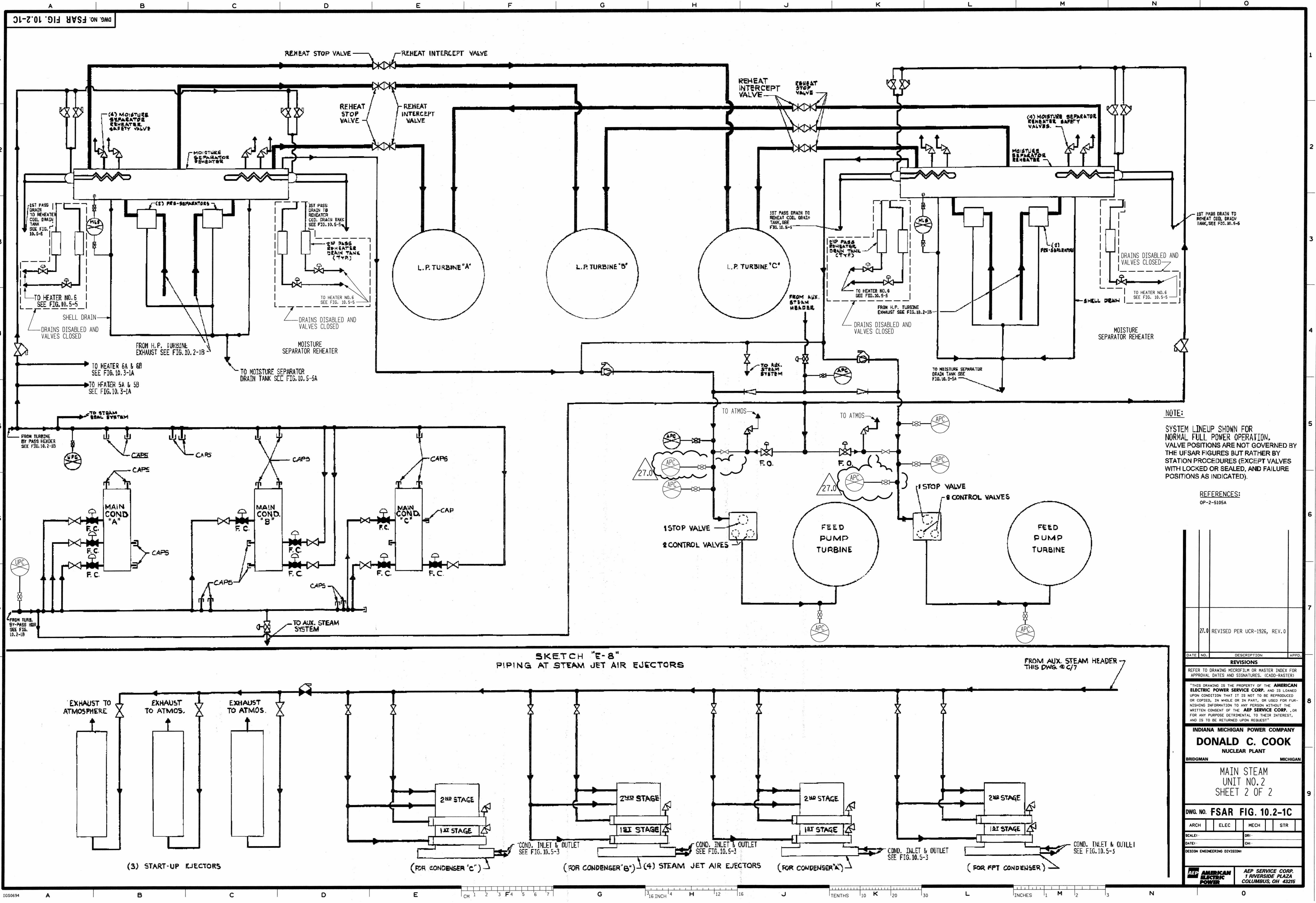
DATE	IND.	DESCRIPTION	APPROV.
REVISIONS			
FILENAME: fsar-fig-10.2-1a-143 (master file); fsar-fig-10.2-1a-143.dwg			
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INDIANA MICHIGAN POWER COMPANY <b>DONALD C. COOK</b> NUCLEAR PLANT			
BRIDGMAN MICHIGAN			
MAIN STEAM UNIT NO. 1 SHEET 2 OF 2			
DWG. NO. FSAR FIG. 10.2 - 1A			
ARCH	ELEC	MECH	STR
SCALE:		OR:	
DATE:		OR:	
DESIGN ENGINEERING DIVISION			
AEP AMERICAN ELECTRIC POWER		AEP SERVICE CORP. 1 RIVERSIDE PLAZA COLUMBUS, OH 43215	

UFSAR Revision 30.0



**NOTE:**  
 SYSTEM LINEUP SHOWN FOR  
 NORMAL FULL POWER OPERATION.  
 VALVE POSITIONS ARE NOT  
 GOVERNED BY THE UFSAR FIGURES  
 BUT RATHER BY STATION  
 PROCEDURES (EXCEPT VALVES  
 WITH LOCKED OR SEALED, AND  
 FAILURE POSITIONS AS INDICATED).  
**REFERENCES:**  
 OP-2-5105

10.0000		10.0000	
FILE # Revised Per UCR 99-UFSAR-0057 REVISIONS FILENAME: fsar-fig-10.2-1b.163 (router file): fsar-fig-10.2-1b.163.clt "THIS DRAWING IS THE PROPERTY OF THE AMERICAN ELECTRIC POWER SERVICE CORP. AND IS LOANED UPON CONDITION THAT IT IS NOT TO BE REPRODUCED OR COPIED, IN WHOLE OR IN PART, OR USED FOR FURNISHING INFORMATION TO ANY PERSON WITHOUT THE WRITTEN CONSENT OF THE AEP SERVICE CORP., OR FOR ANY PURPOSE DETRIMENTAL TO THEIR INTEREST, AND IS TO BE RETURNED UPON REQUEST." <b>INDIANA MICHIGAN POWER COMPANY</b> <b>DONALD C. COOK</b> NUCLEAR PLANT BRIDGMAN MICHIGAN <b>MAIN STEAM</b> <b>UNIT NO. 2</b> DWG. NO. FSAR FIG. 10.2 - 1B ARCH:    ELEC:    MECH:    STR: SCALE:    DR: DATE:    CR: DESIGN ENGINEERING DIVISION AEP SERVICE CORP. 7 RIVERSIDE PLAZA COLUMBUS, OH 43218			

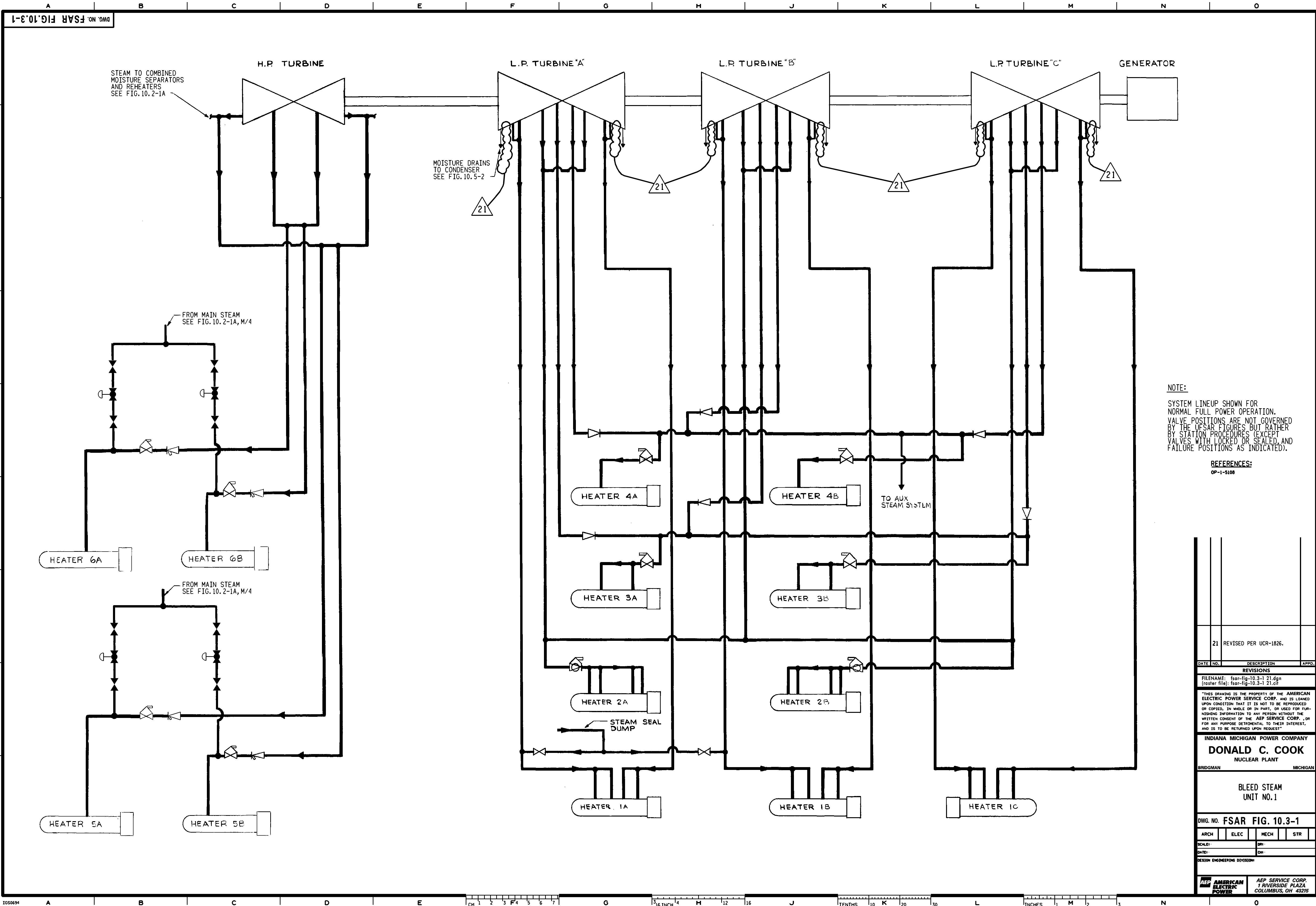


**NOTE:**  
SYSTEM LINEUP SHOWN FOR NORMAL FULL POWER OPERATION. VALVE POSITIONS ARE NOT GOVERNED BY THE UFSAR FIGURES BUT RATHER BY STATION PROCEDURES (EXCEPT VALVES WITH LOCKED OR SEALED, AND FAILURE POSITIONS AS INDICATED).

**REFERENCES:**  
OP-2-5105A

DATE NO.	DESCRIPTION	APPD.
27.0	REVISED PER UCR-1926, REV. 0	
REVISIONS		
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INDIANA MICHIGAN POWER COMPANY <b>DONALD C. COOK</b> NUCLEAR PLANT BRIDGMAN MICHIGAN		
MAIN STEAM UNIT NO. 2 SHEET 2 OF 2		
DWG. NO. FSAR FIG. 10.2-1C		
ARCH	ELEC	MECH STR
SCALE:	DR:	CH:
DATE:	CH:	
DESIGN ENGINEERING DIVISION		
AEP AMERICAN ELECTRIC POWER		AEP SERVICE CORP. 7 RIVERSIDE PLAZA COLUMBUS, OH 43215



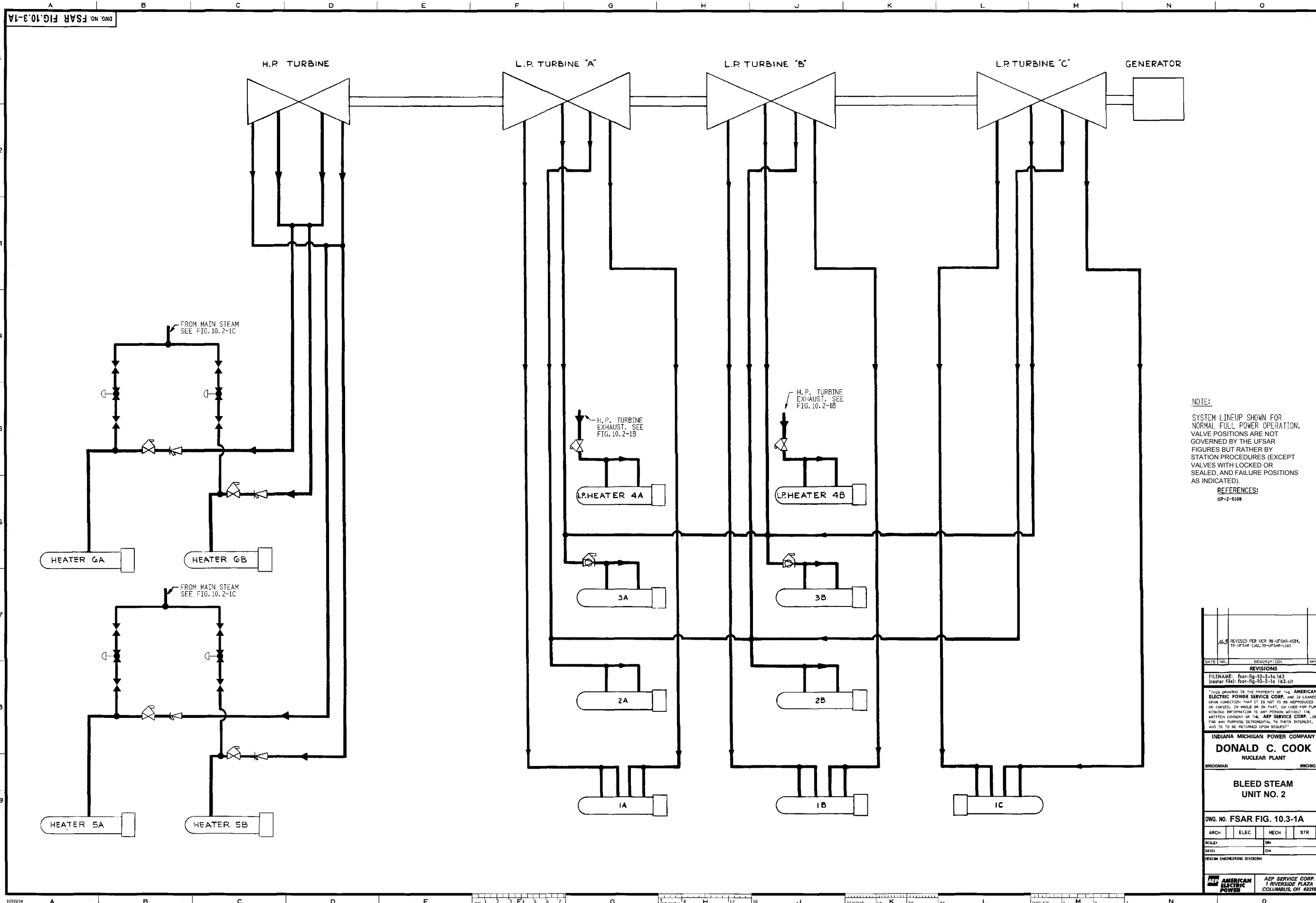


**NOTE:**  
 SYSTEM LINEUP SHOWN FOR  
 NORMAL FULL POWER OPERATION.  
 VALVE POSITIONS ARE NOT GOVERNED  
 BY THE UFSAR FIGURES BUT RATHER  
 BY STATION PROCEDURES (EXCEPT  
 VALVES WITH LOCKED OR SEALED, AND  
 FAILURE POSITIONS AS INDICATED).

**REFERENCES:**  
 OP-1-5108

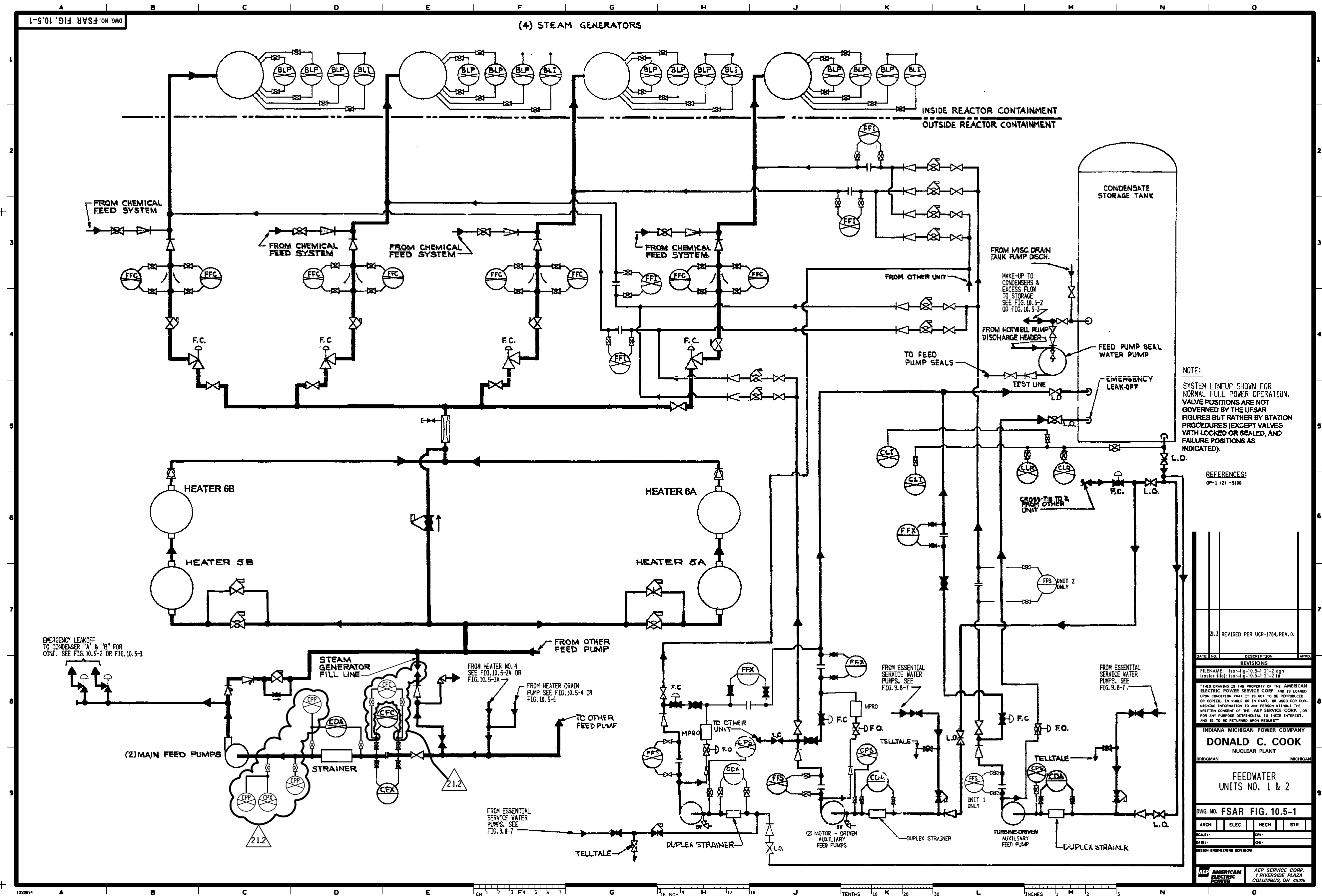
21 REVISED PER UCR-1826.	
DATE NO.	DESCRIPTION
<b>REVISIONS</b> FILENAME: fsar-fig-10.3-1 21.dgn (oster file): fsar-fig-10.3-1 21.dgn	
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INDIANA MICHIGAN POWER COMPANY <b>DONALD C. COOK</b> NUCLEAR PLANT BRIDGMAN MICHIGAN	
BLEED STEAM UNIT NO. 1	
DWG. NO. FSAR FIG. 10.3-1	
ARCH	ELEC
MECH	STR
SCALE:	DR:
DATE:	CR:
DESIGN ENGINEERING DIVISION:	
AEP SERVICE CORP. ELECTRIC POWER	AEP SERVICE CORP. RIVERSIDE PLAZA COLUMBUS, OH 43215

UFSAR Revision 30.0



NOTE:  
 SYSTEM LINEUP SHOWN FOR  
 NORMAL FULL POWER OPERATION.  
 VALVE POSITIONS ARE NOT  
 GOVERNED BY THE UFSAR  
 FIGURES BUT RATHER BY  
 STATION PROCEDURES (EXCEPT  
 VALVES WITH LOCKED OR  
 SEALED, AND FAILURE POSITIONS  
 AS INDICATED).  
 REFERENCES:  
 OP-2-5108

REVISED PER UCR 88-UFSAR-0584, 89-UFSAR-1182, 90-UFSAR-1183	
DATE	DESCRIPTION
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INDIANA MICHIGAN POWER COMPANY <b>DONALD C. COOK</b> NUCLEAR PLANT BRIDGMAN MICHIGAN	
<b>BLEED STEAM                  UNIT NO. 2</b>	
DWG. NO. FSAR FIG. 10.3-1A	
ARCH	ELEC MECH STR
SCALE	DN
DATE	DN
DESIGN ENGINEERING DIVISION	
AEP AMERICAN ELECTRIC POWER	AEP SERVICE CORP. 1 RIVERSIDE PLAZA COLUMBUS, OH 43276

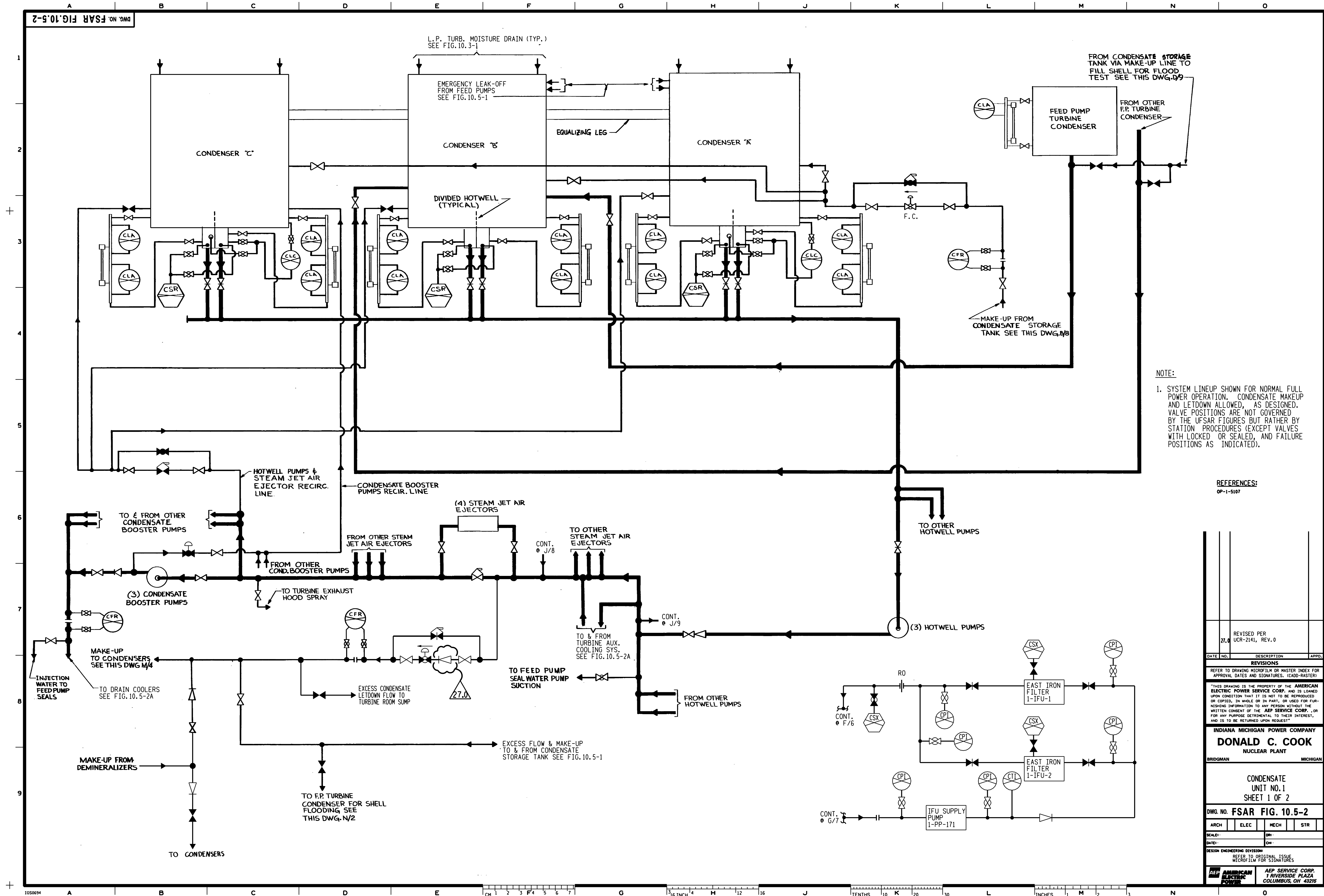


NOTE:  
SYSTEM LINEUP SHOWN FOR  
NORMAL FULL POWER OPERATION.  
VALVE POSITIONS ARE NOT  
GOVERNED BY THE UFSAR  
FIGURES BUT RATHER BY STATION  
PROCEDURES (EXCEPT VALVES  
WITH LOCKED OR SEALED, AND  
FAILURE POSITIONS AS  
INDICATED).

REFERENCES:  
OP-1 (2) -5106

DATE	NO.	DESCRIPTION	APPROVED
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INDIANA MICHIGAN POWER COMPANY <b>DONALD C. COOK</b> NUCLEAR PLANT BRIDGMAN MICHIGAN			
FEEDWATER UNITS NO. 1 & 2			
DWG. NO. FSAR FIG. 10.5-1			
ARCH	ELEC	MECH	STR
DATE:	BY:	CHK:	
DESIGN ENGINEERING DIVISION			
AEP AMERICAN ELECTRIC POWER		AEP SERVICE CORP. 1 RIVERSIDE PLAZA COLUMBUS, OH 43215	

DWG. NO. FSAR FIG. 10.5-2



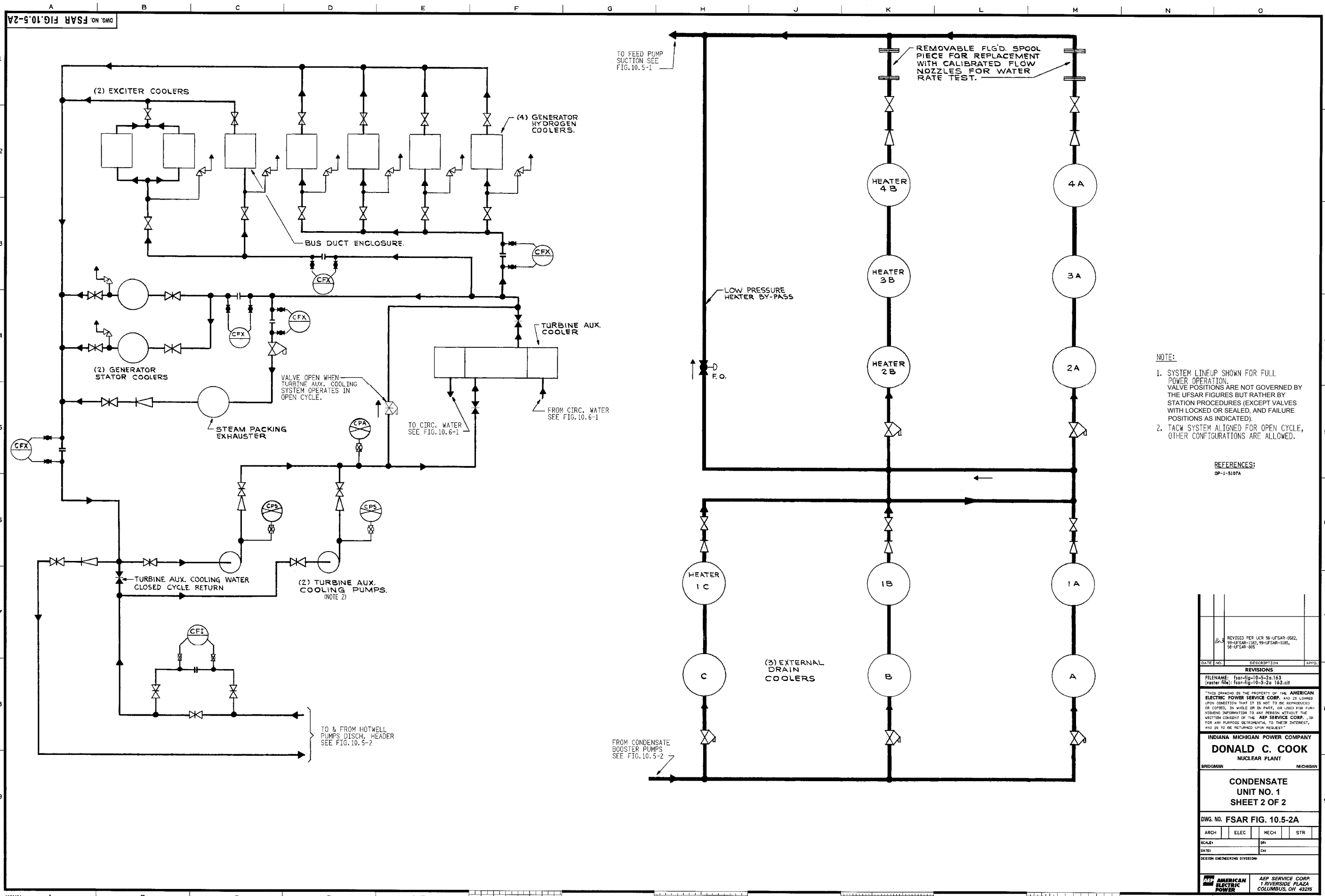
NOTE:  
 1. SYSTEM LINEUP SHOWN FOR NORMAL FULL POWER OPERATION. CONDENSATE MAKEUP AND LETDOWN ALLOWED, AS DESIGNED. VALVE POSITIONS ARE NOT GOVERNED BY THE UFSAR FIGURES BUT RATHER BY STATION PROCEDURES (EXCEPT VALVES WITH LOCKED OR SEALED, AND FAILURE POSITIONS AS INDICATED).

REFERENCES:  
 OP-1-5107

REVISED PER	UCR-2141, REV. 0		
DATE	NO.	DESCRIPTION	APPRO.
REVISIONS REFER TO DRAWING MICROFILM OR MASTER INDEX FOR APPROVAL DATES AND SIGNATURES. (GADD-RASTER)			
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INDIANA MICHIGAN POWER COMPANY <b>DONALD C. COOK</b> NUCLEAR PLANT BRIDGMAN MICHIGAN			
CONDENSATE UNIT NO. 1 SHEET 1 OF 2			
DWG. NO. FSAR FIG. 10.5-2			
ARCH	ELEC	MECH	STR
SCALE:	DR:		
DATE:	CR:		
DESIGN ENGINEERING DIVISION REFER TO ORIGINAL ISSUE MICROFILM FOR SIGNATURES			
AEP SERVICE CORP. RIVERSIDE PLAZA COLUMBUS, OH 43216		AEP SERVICE CORP. RIVERSIDE PLAZA COLUMBUS, OH 43216	



UFSAR Revision 30.0

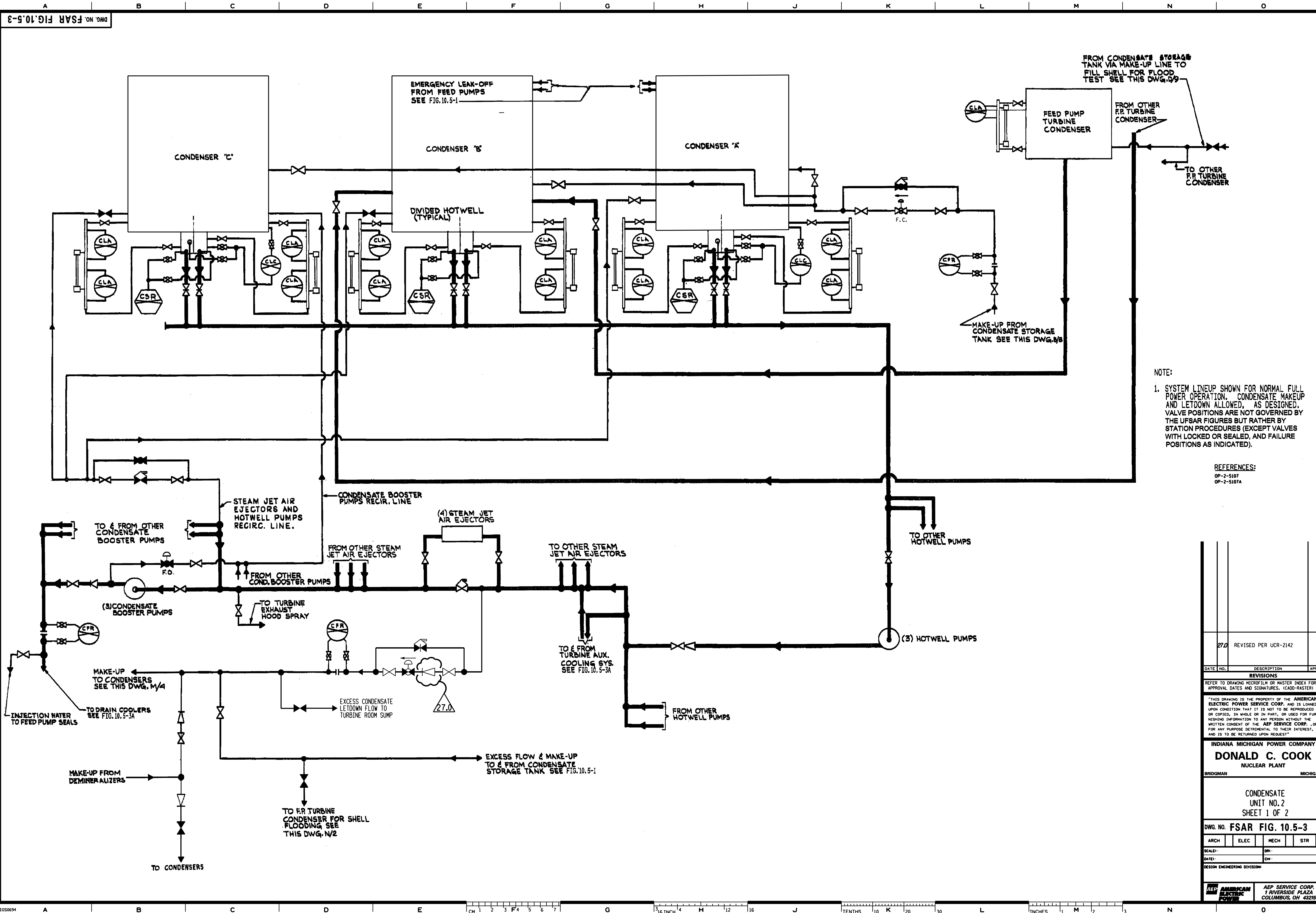


**NOTE:**

1. SYSTEM LINEUP SHOWN FOR FULL POWER OPERATION. VALVE POSITIONS ARE NOT GOVERNED BY THE UFSAR FIGURES BUT RATHER BY STATION PROCEDURES (EXCEPT VALVES WITH LOCKED OR SEALED, AND FAILURE POSITIONS AS INDICATED).
2. TACW SYSTEM ALIGNED FOR OPEN CYCLE, OTHER CONFIGURATIONS ARE ALLOWED.

**REFERENCES:**  
OP-1-5107A

DATE	NO.	DESCRIPTION	APPROV.
<b>REVISIONS</b>			
FILENAME: fsar-fig-10-5-2a.163 (raster file): fsar-fig-10-5-2a.163.ct			
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<b>INDIANA MICHIGAN POWER COMPANY</b> <b>DONALD C. COOK</b> NUCLEAR PLANT BRIDGMAN MICHIGAN			
<b>CONDENSATE UNIT NO. 1</b> <b>SHEET 2 OF 2</b>			
DWG. NO. FSAR FIG. 10.5-2A			
ARCH	ELEC	NECH	STR
SCALE:	DR:		
DATE:	CHK:		
SECTION ENGINEERING DIVISION			
AMERICAN ELECTRIC POWER		AEP SERVICE CORP. 1 RIVERSIDE PLAZA COLUMBUS, OH 43215	

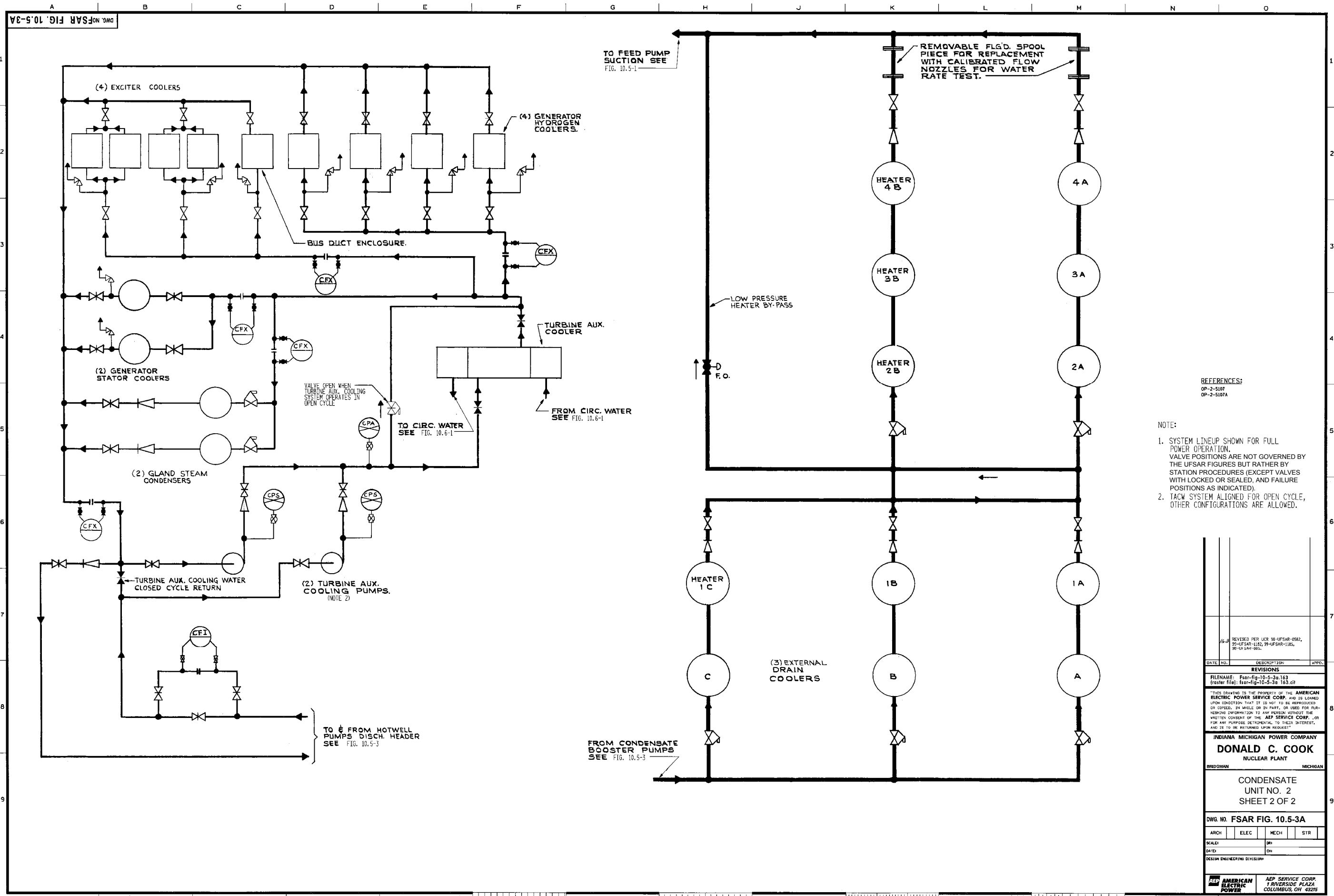


NOTE:  
 1. SYSTEM LINEUP SHOWN FOR NORMAL FULL POWER OPERATION. CONDENSATE MAKEUP AND LETDOWN ALLOWED, AS DESIGNED. VALVE POSITIONS ARE NOT GOVERNED BY THE UFSAR FIGURES BUT RATHER BY STATION PROCEDURES (EXCEPT VALVES WITH LOCKED OR SEALED, AND FAILURE POSITIONS AS INDICATED).

REFERENCES:  
 OP-2-5107  
 OP-2-5107A

DATE	NO.	DESCRIPTION	APPROV.
27.0		REVISED PER UCR-2142	
<b>REVISIONS</b> REFER TO DRAWING MICROFILM OR MASTER INDEX FOR APPROVAL DATES AND SIGNATURES. (G400-RASTER)			
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INDIANA MICHIGAN POWER COMPANY <b>DONALD C. COOK</b> NUCLEAR PLANT BRIDGMAN MICHIGAN			
CONDENSATE UNIT NO. 2 SHEET 1 OF 2			
DWG. NO. FSAR FIG. 10.5-3			
ARCH	ELEC	MECH	STR
SCALE:	DR:		
DATE:	CR:		
DESIGN ENGINEERING DIVISION			
AEP AMERICAN ELECTRIC POWER		AEP SERVICE CORP. RIVERSIDE PLAZA COLUMBUS, OH 43215	

UFSAR Revision 30.0



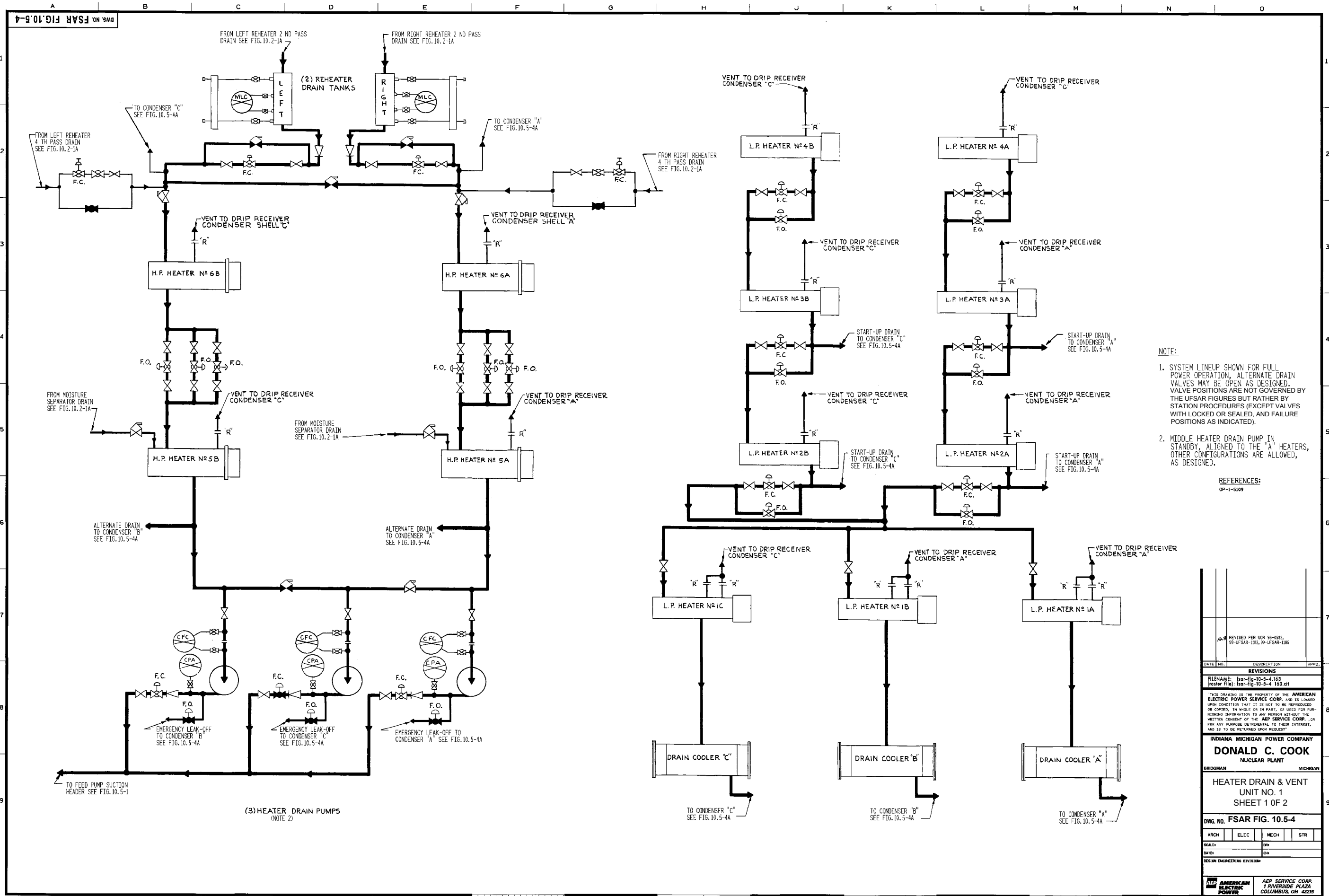
**REFERENCES:**  
 OP-2-5107  
 OP-2-5107A

**NOTE:**

1. SYSTEM LINEUP SHOWN FOR FULL POWER OPERATION. VALVE POSITIONS ARE NOT GOVERNED BY THE UFSAR FIGURES BUT RATHER BY STATION PROCEDURES (EXCEPT VALVES WITH LOCKED OR SEALED, AND FAILURE POSITIONS AS INDICATED).
2. TACW SYSTEM ALIGNED FOR OPEN CYCLE, OTHER CONFIGURATIONS ARE ALLOWED.

REVERSED PER UCR 98-UFSAR-0582, 25-UFSAR-1102, 29-UFSAR-1105, 30-13 SAM-003.		
DATE	NO.	DESCRIPTION
REVISIONS FILENAME: fSar-Fig-10.5-3a.163 (Folder file): fSar-Fig-10.5-3a.163.ctb		
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INDIANA MICHIGAN POWER COMPANY <b>DONALD C. COOK</b> NUCLEAR PLANT		
BRIDGMAN	MICHIGAN	
CONDENSATE UNIT NO. 2 SHEET 2 OF 2		
DWG. NO. FSAR FIG. 10.5-3A		
ARCH	ELEC	MECH STR
SCALE:	DIM	
DATE:	DH	
DESIGN ENGINEERING DIVISION		
AEP AMERICAN ELECTRIC POWER 1 RIVERSIDE PLAZA COLUMBUS, OH 43215		

UFSAR Revision 30.0

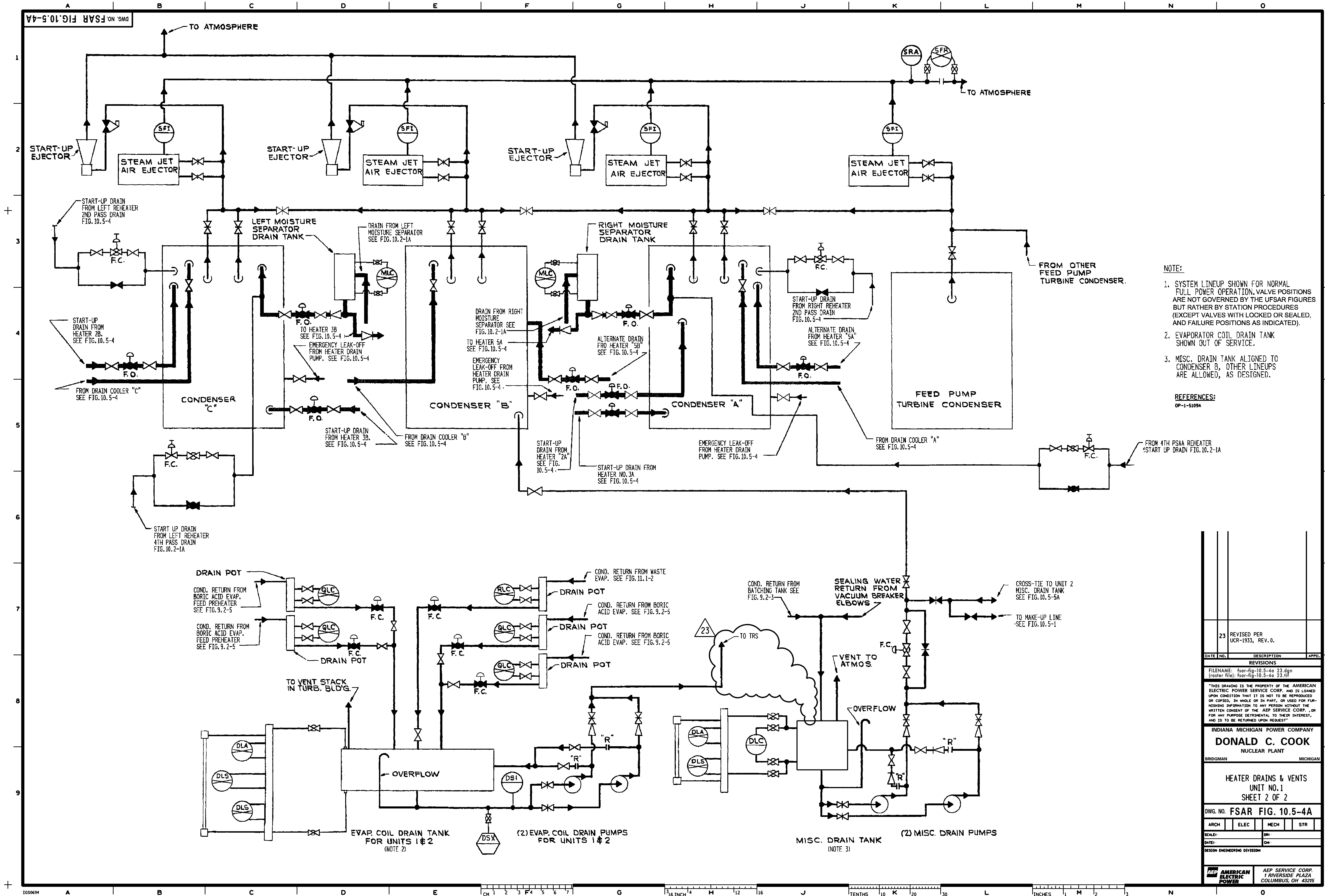


- NOTE:**
1. SYSTEM LINEUP SHOWN FOR FULL POWER OPERATION. ALTERNATE DRAIN VALVE POSITIONS ARE NOT GOVERNED BY THE UFSAR FIGURES BUT RATHER BY STATION PROCEDURES (EXCEPT VALVES WITH LOCKED OR SEALED, AND FAILURE POSITIONS AS INDICATED).
  2. MIDDLE HEATER DRAIN PUMP IN STANDBY, ALIGNED TO THE "A" HEATERS, OTHER CONFIGURATIONS ARE ALLOWED, AS DESIGNED.

REFERENCES:  
OP-1-5109

REVISED PER UCR 99-0582, 99-UFSAR-102, 99-UFSAR-105	
DATE	DESCRIPTION
<p><b>REVISIONS</b></p> <p>FILENAME: 99-fig-10-5-4.163 (master file): 99-fig-10-5-4.163.cit</p>	
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<p><b>INDIANA MICHIGAN POWER COMPANY</b> <b>DONALD C. COOK</b> NUCLEAR PLANT</p>	
BRIDGMAN	MICHIGAN
<p><b>HEATER DRAIN &amp; VENT UNIT NO. 1</b> <b>SHEET 1 OF 2</b></p>	
<p>DWG. NO. <b>FSAR FIG. 10.5-4</b></p>	
ARCH	ELEC
MECH	STR
SCALE	DR
DATE	DR
DESIGN ENGINEERING DIVISION	
<p><b>AEP AMERICAN ELECTRIC POWER</b>      <b>AEP SERVICE CORP.</b> 1 RIVERSIDE PLAZA COLUMBUS, OH 43215</p>	



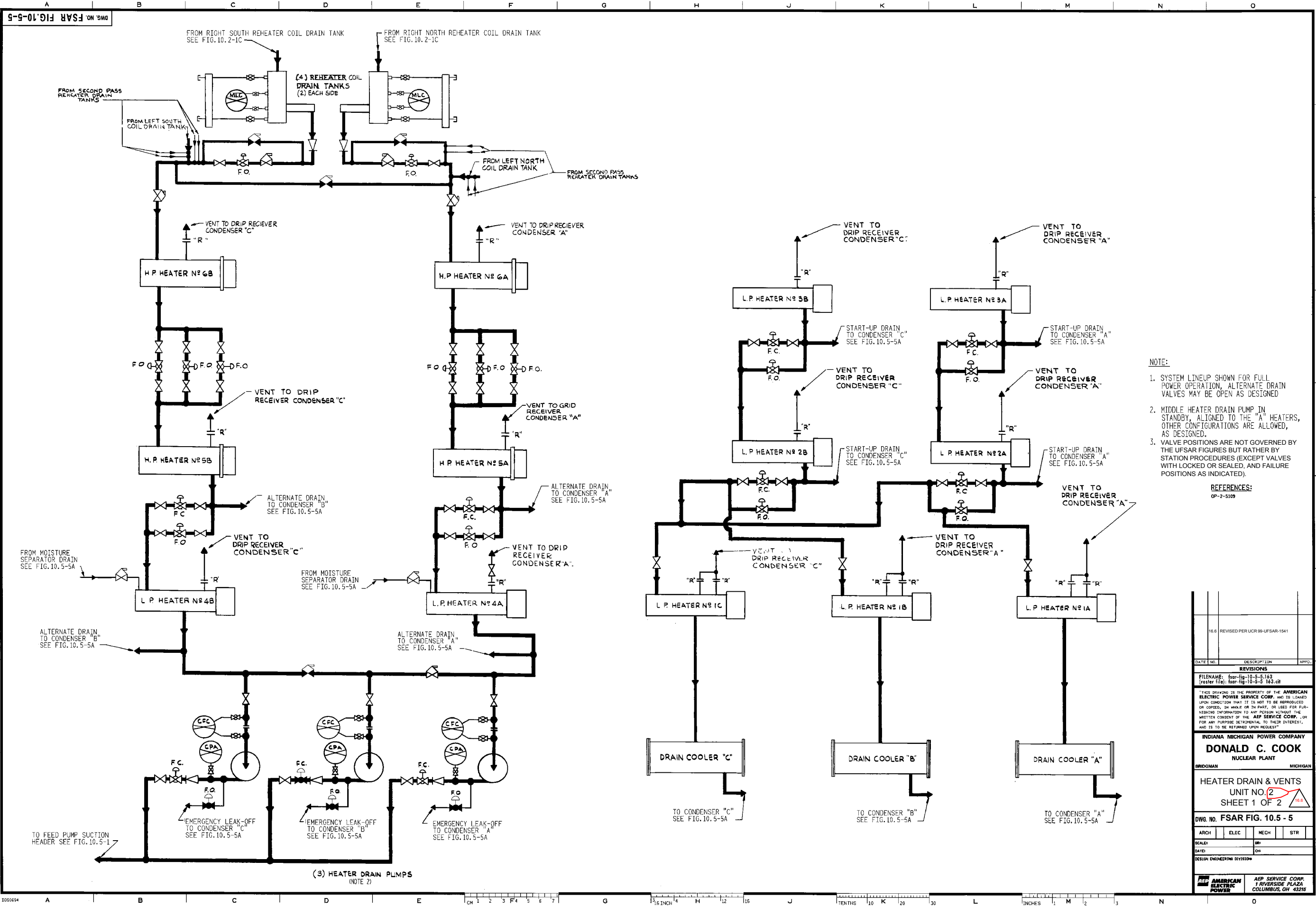


- NOTE:**
1. SYSTEM LINEUP SHOWN FOR NORMAL FULL POWER OPERATION. VALVE POSITIONS ARE NOT GOVERNED BY THE UFSAR FIGURES BUT RATHER BY STATION PROCEDURES (EXCEPT VALVES WITH LOCKED OR SEALED, AND FAILURE POSITIONS AS INDICATED).
  2. EVAPORATOR COIL DRAIN TANK SHOWN OUT OF SERVICE.
  3. MISC. DRAIN TANK ALIGNED TO CONDENSER B, OTHER LINEUPS ARE ALLOWED, AS DESIGNED.

**REFERENCES:**  
OP-1-5109A

DATE	NO.	REVISIONS	APPRO.
23		REVISED PER UCR-1933, REV. 0.	
REVISIONS FILENAME: fsar-fig-10.5-4a 23.dgn (aster file): fsar-fig-10.5-4a 23.tif			
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INDIANA MICHIGAN POWER COMPANY <b>DONALD C. COOK</b> NUCLEAR PLANT BRIDGMAN MICHIGAN			
HEATER DRAINS & VENTS UNIT NO. 1 SHEET 2 OF 2			
DWG. NO. FSAR FIG. 10.5-4A			
ARCH	ELEC	MECH	STR
SCALE:	DR:	OR:	
DATE:	DE:	DE:	
DESIGN ENGINEERING DIVISION			
AEP AMERICAN ELECTRIC POWER		AEP SERVICE CORP. 7 OVERSIDE PLAZA COLUMBUS, OH 43215	

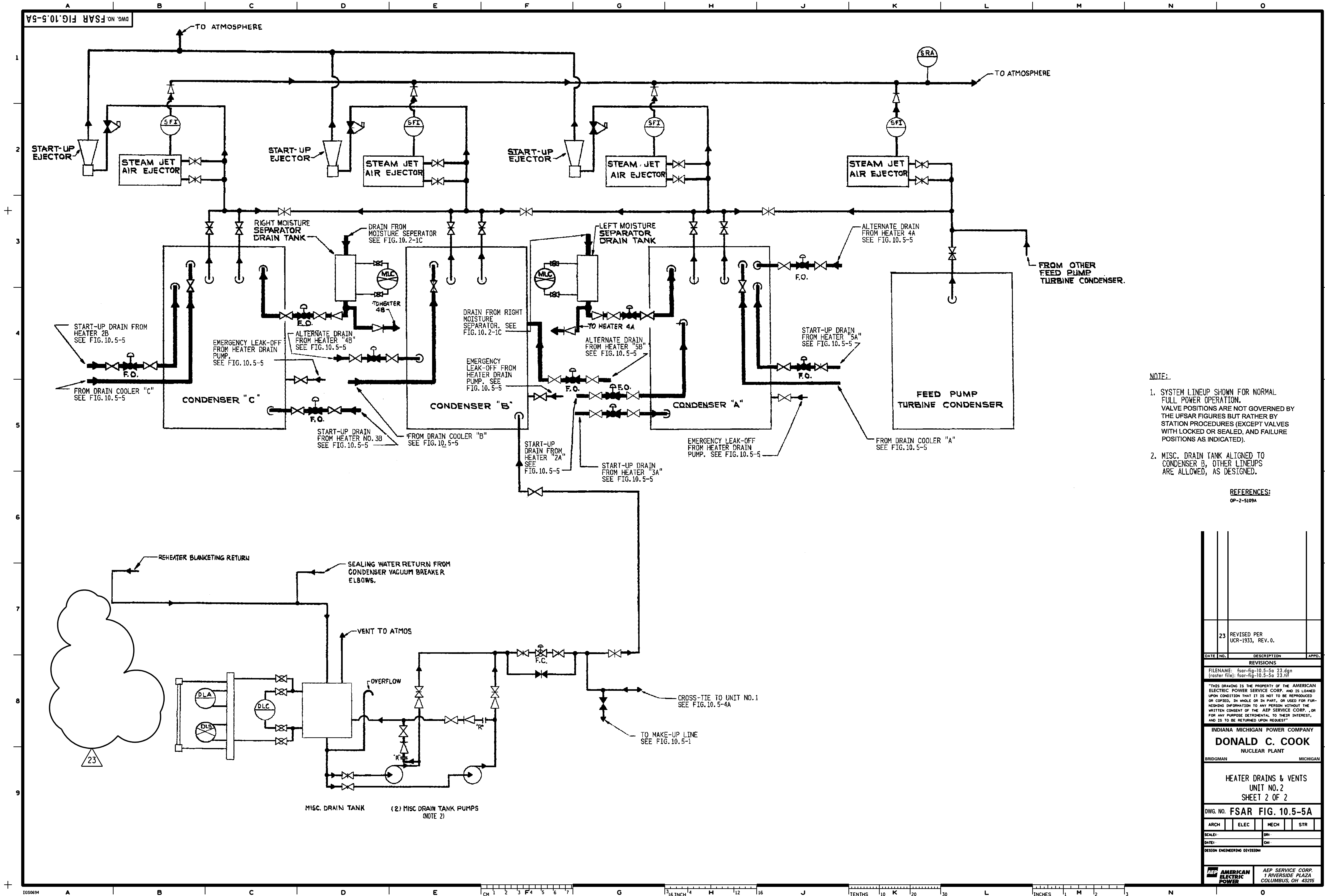
UFSAR Revision 30.0



- NOTE:**
1. SYSTEM LINEUP SHOWN FOR FULL POWER OPERATION, ALTERNATE DRAIN VALVES MAY BE OPEN AS DESIGNED
  2. MIDDLE HEATER DRAIN PUMP IN STANDBY, ALIGNED TO THE "A" HEATERS, OTHER CONFIGURATIONS ARE ALLOWED, AS DESIGNED.
  3. VALVE POSITIONS ARE NOT GOVERNED BY THE UFSAR FIGURES BUT RATHER BY STATION PROCEDURES (EXCEPT VALVES WITH LOCKED OR SEALED, AND FAILURE POSITIONS AS INDICATED).

**REFERENCES:**  
OP-2-5109

16.6 REVISED PER UCR 99-UFSAR-1541		
DATE	DESCRIPTION	APP'D.
<b>REVISIONS</b>		
FILENAME: fsar-fig-10-5-5-163 (master file): fsar-fig-10-5-5-163.dtl		
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<b>INDIANA MICHIGAN POWER COMPANY</b>		
<b>DONALD C. COOK</b>		
NUCLEAR PLANT		
BRIDGMAN MICHIGAN		
<b>HEATER DRAIN &amp; VENTS</b>		
UNIT NO. 2		
SHEET 1 OF 2		
DWG. NO. FSAR FIG. 10.5-5		
ARCH	ELEC	MECH
SCALE:	DATE:	DESIGN ENGINEERING DIVISION

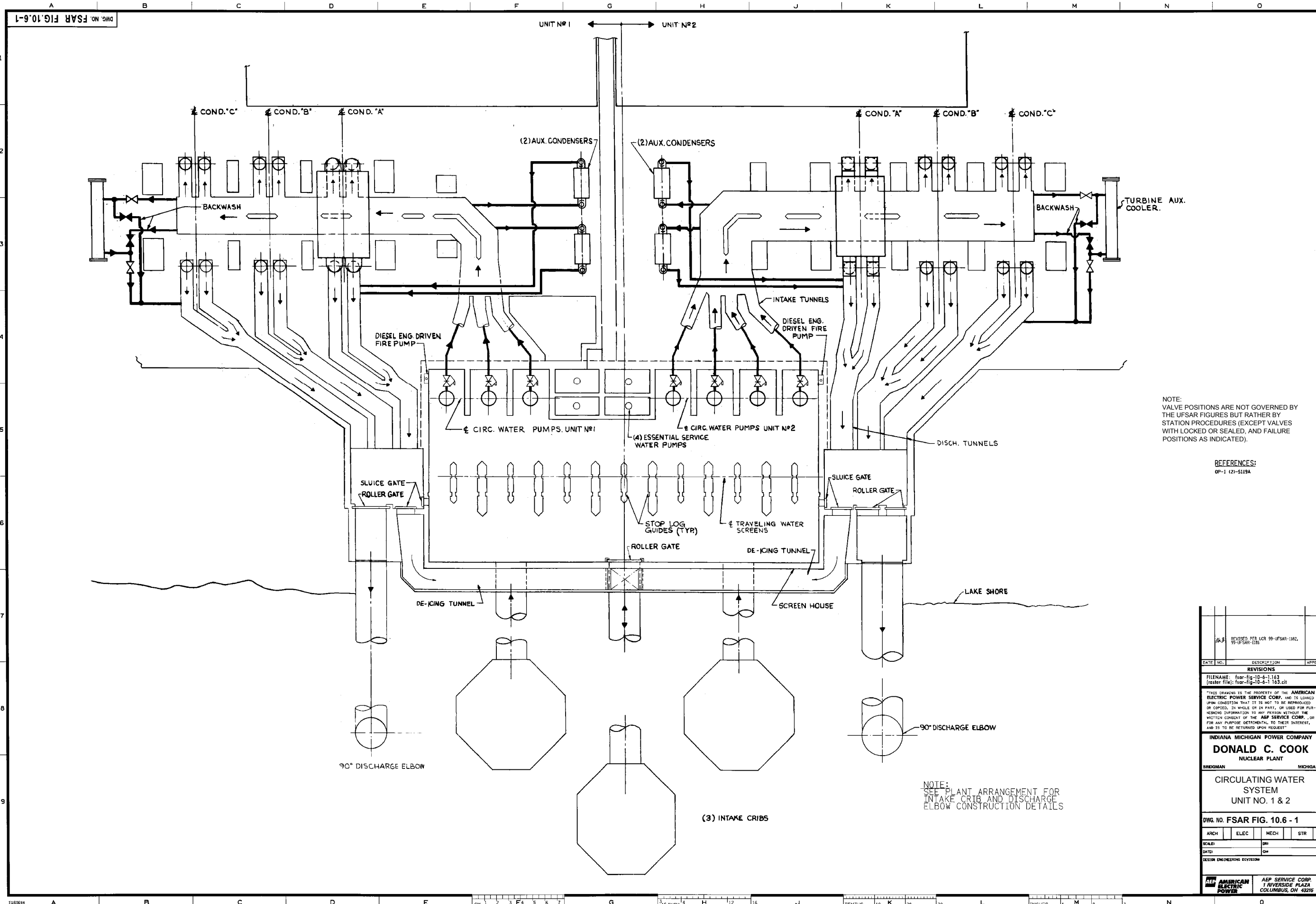


- NOTE:**
1. SYSTEM LINEUP SHOWN FOR NORMAL FULL POWER OPERATION. VALVE POSITIONS ARE NOT GOVERNED BY THE UFSAR FIGURES BUT RATHER BY STATION PROCEDURES (EXCEPT VALVES WITH LOCKED OR SEALED, AND FAILURE POSITIONS AS INDICATED).
  2. MISC. DRAIN TANK ALIGNED TO CONDENSER B, OTHER LINEUPS ARE ALLOWED, AS DESIGNED.

**REFERENCES:**  
OP-2-5109A

23	REVISED PER UCR-1933, REV. 0.	
REVISIONS		
DATE	NO.	DESCRIPTION
FILENAME: fsar-fig-10.5-5a-23.dgn (raster file): fsar-fig-10.5-5a-23.tif		
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INDIANA MICHIGAN POWER COMPANY <b>DONALD C. COOK</b> NUCLEAR PLANT BRIDGMAN MICHIGAN		
HEATER DRAINS & VENTS UNIT NO. 2 SHEET 2 OF 2		
DWG. NO. FSAR FIG. 10.5-5A		
ARCH	ELEC	MECH STR
SCALE:	DR:	CR:
DATE:	DR:	CR:
DESIGN ENGINEERING DIVISION		
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UFSAR Revision 30.0



NOTE: VALVE POSITIONS ARE NOT GOVERNED BY THE UFSAR FIGURES BUT RATHER BY STATION PROCEDURES (EXCEPT VALVES WITH LOCKED OR SEALED, AND FAILURE POSITIONS AS INDICATED).

REFERENCES:  
OP-1 (2)-5119A

NOTE:  
SEE PLANT ARRANGEMENT FOR INTAKE CRIB AND DISCHARGE ELBOW CONSTRUCTION DETAILS

DATE NO.		DESCRIPTION	APPRO.
<b>REVISIONS</b>			
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<b>INDIANA MICHIGAN POWER COMPANY</b>			
<b>DONALD C. COOK</b>			
NUCLEAR PLANT			
BREDIGMAN		MICROGMAN	
CIRCULATING WATER SYSTEM UNIT NO. 1 & 2			
DWG. NO. FSAR FIG. 10.6 - 1			
ARCH	ELEC	MECH	STR
SCALE:	DWG		
DATE:	DWG		
DESIGN ENGINEERING DIVISION			
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