

A

B

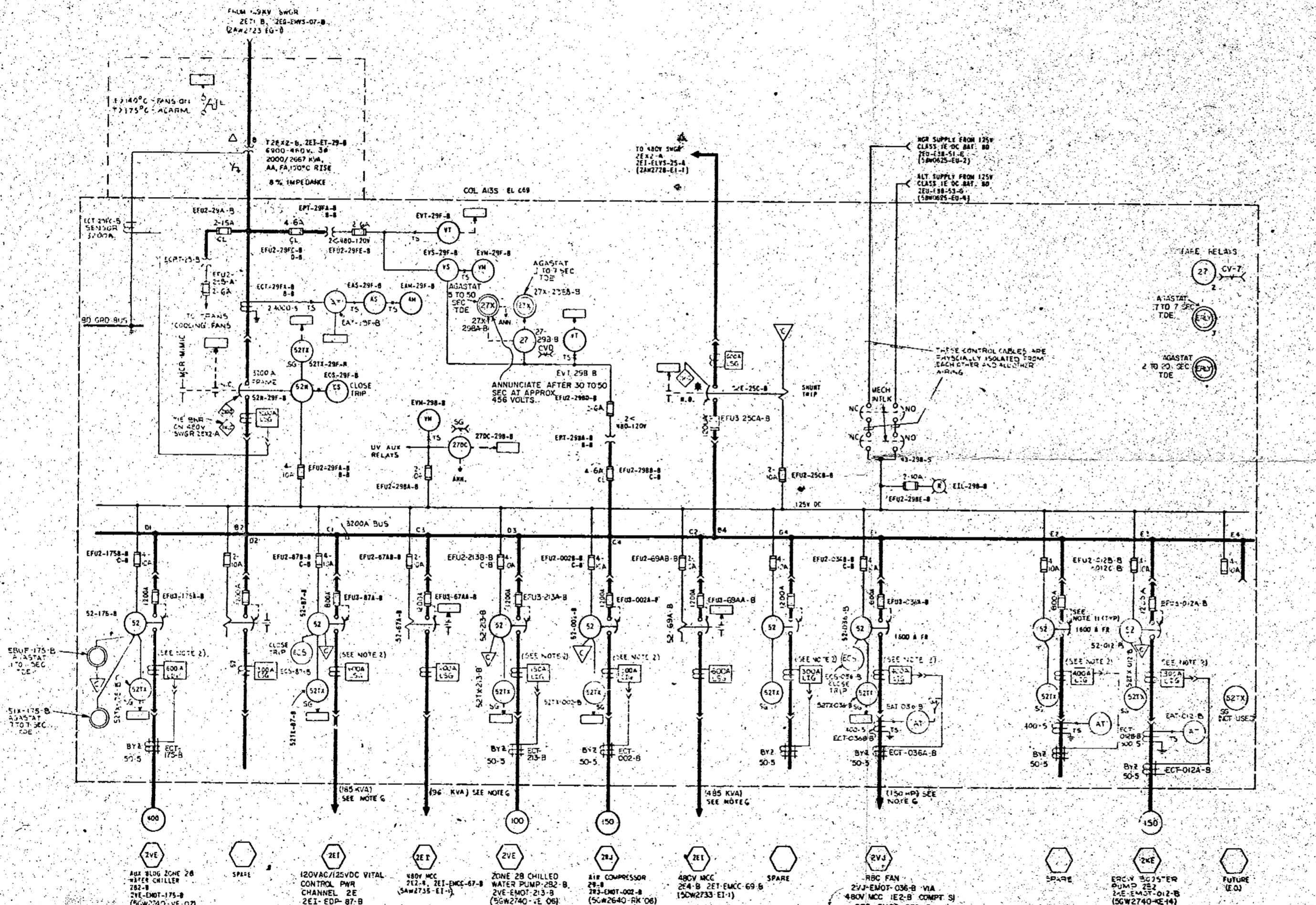
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D

E

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G



REF: 2000-01-02	
DRAWING NUMBER	TITLE
45W720-4	PLANT 2E1-ELVS-29-B SYSTEM SCHEMATIC

- NOTES:
- 480V SWGR PROVIDED ON CONTRACT NO. 22-3-8552G.
 - ALL CKT BRKRS ARE 3-POLE BRKRS WITH REAR MOUNTED CURRENT LIMITING FUSE ON LINE SIDE OF EACH POLE, EXCEPT AS NOTED.
500A FR BRKRS HAVE 2000/2000A RMS SYM INTERRUPTING RATING AT 480V.
1500A FR BRKRS HAVE 3000/3000A RMS SYM INTERRUPTING RATING AT 480V.
2500A FR BRKRS HAVE 45,000A RMS SYM INTERRUPTING RATING AT 480V.
AS NOTED, BRKRS ARE EQUIPPED WITH ELECTRICAL LOCKOUT ATTACHMENT.
ALL LOCKOUT DEVICES ARE TRIERED AUTOMATICALLY BY THE BRKRS.
 - RELAYS SHALL BE THE TYPES SHOWN ON THIS DRAWING OR THE APPROVED EQUAL.
 - THIS SWGR IS SUBJECT TO ALL REQUIREMENTS FOR CLASS 1E ELEC EPT.
 - EACH DEVICE ASSOCIATED WITH THE SWGR BUS, TRANSFORMER, AND THE WGR ON THE CAT BARS, IS PART OF THE 480V CLASS 1E AC BUS PWR DISTRIBUTION SYS WITH UNIT AND SYS DESIGNATION. THE DEVICE UNIT IS SHOWN BY PREFIXING THE DESIGNATIONS SHOWN ON THE DGN WITH 2E1. EXCEPT AS NOTED, ALL OTHER BRKS WITH THEIR ASSOCIATED DEVICES ARE PART OF THE SYS WHICH THEY SUPPLY. THE UNIT IS FORMED BY PREFIXING THE DESIGNATIONS SHOWN ON THE DGN WITH THE UNIT AND SYS DESIGNATION SHOWN IN THE HEXAGON SYMBOL, EXCEPT AS NOTED. THE SWGR PWR. UNID DESIGNATIONS ARE FORMED AS FOLLOWS (USING THE PWR. INDEX): AND THE TRAIL DESIGNATION (Y) ON B. 2E1-ELVS-29X-Y.
 - KVA LOADS SHOWN ARE ESTIMATED MAXIMUM DEMAND.
 - SEE DWG 2080/14-RY FOR LOADS THAT REQUIRE DIESEL PWR.
 - BLEWN FUSE TRIPS BREAKER.

- SYMBOLS:
- RED INDICATING LIGHT
 - THIS FUNCTION TO BE MONITORED BY ONE OR MORE ANNUNCIATION OR ALARM SYSTEMS.
 - WHEN BREAKER IS RACKED OUT (DISCONNECTED) POSITION USE SHIPPING BRACKET TO INSURE STABILITY. DO NOT LEAVE BREAKER IN TEST POSITION.
 - SOLID STATE TRIP DEVICE WITH SENSOR RATING SHOWN
 - L - LONG TIME DELAY (OVERLOAD)
 - S - SHORT TIME DELAY (SELECTIVE TRIP)
 - X - INSTANTANEOUS (FAULT CURRENT)
 - INTERFACE FOR STATUS, ENVIRONMENTAL, AND ALARM MONITORING SYS (SEAMS)
 - CONNECTION TO REMOTE METER. (UNIT (CHINA) ROOM)
 - INTERFACE FOR REMOTE CONTROL.
 - PRIMARY CONTAINMENT PENETRATION
 - KEY INTERLOCK
 - UNIT AND SYS DESIGNATION (SEE NOTE 5)

REV	NO	DESCRIPTION	DATE
1	1	ISSUED	11/22/83
2	1	REPLACED 3 AMP FUSE WITH 6 AMP FUSE MINOR CHANGES	11/22/83
3	1	REPLACED CVT RELAY WITH QVD RELAY AND REPLACED 7 TO 7 SEC TDE AGASSTAT WITH 5 TO 50 SEC TDE AGASSTAT MINOR CHANGES	11/22/83
4	1	REPLACED 1500A FR BRKRS WITH 2500A FR BRKRS DISCONNECTED UNDERVOLTAGE LOCK-OUT RELAYS PER ECH 345. RELOCATED TWO ELEC OPERATED MECH INTLK CKT BRK FEEDERS WITH ONE ELEC OPERATED CKT BRK FEEDER PER ECH 245. ADDED ERW MASTER PUMP BRK ECH 220.	11/22/83
5	1	REPLACED 500A FR BRKRS WITH 1500A FR BRKRS ON PENL PER ECH 105. INCORPORATED SEAMS PER ECH 14-VARIOUS. NEW HT REM CAR PER ECH 85. INCORPORATED 100 A 125V PER ECH 14-VARIOUS. LOCAL CHANGES PER ECH 154.	11/22/83
6	1	REPLACED COOLING FANS TO 480V SWGR XTRMS PER ECH 20. ENHANCED LOAD ON 125V HTX BRK FEEDER FROM 240KVA TO 444KVA PER ECH 18.	11/22/83
7	1	480V DISTR SYS FROM DELTA TO 480 VTR AND ADDED GRD FAULT PROT. PER ECH 12. REV LOADS PER ECH 25. ADDED PRESS HTX BRK PER ECH 12.	11/22/83

Doc # 50-438
 8304050536
 3-25-83
 REGULATORY DOCKET FILE

PRC
 APERTURE
 CARD

AUXILIARY BUILDING	
UNIT 2	
SINGLE LINE DIAGRAM	
480V SWITCHGEAR 2E1-ELVS-29-B	
Bellefonte Nuclear Plant	
TENNESSEE VALLEY AUTHORITY	
DIVISION OF ENGINEERING DESIGN	
DESIGNED BY	REVIEWED BY
APPROVED BY	
KNOXVILLE 2-9-78	
45W720-4	

INSPECTED AND APPROVED FOR ISSUE
 R.M. Hodges
 DESIGN PROJECT MANAGER