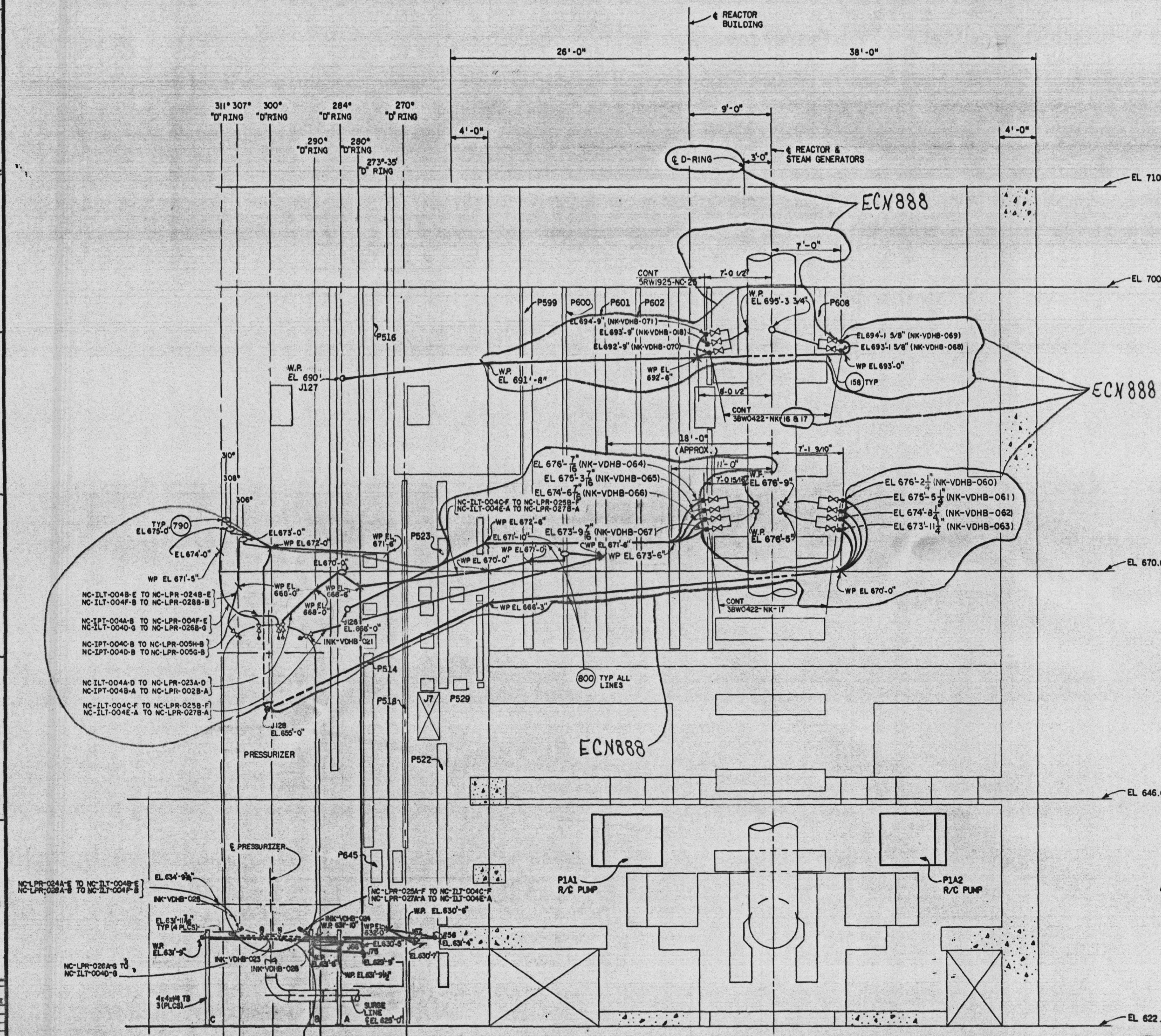
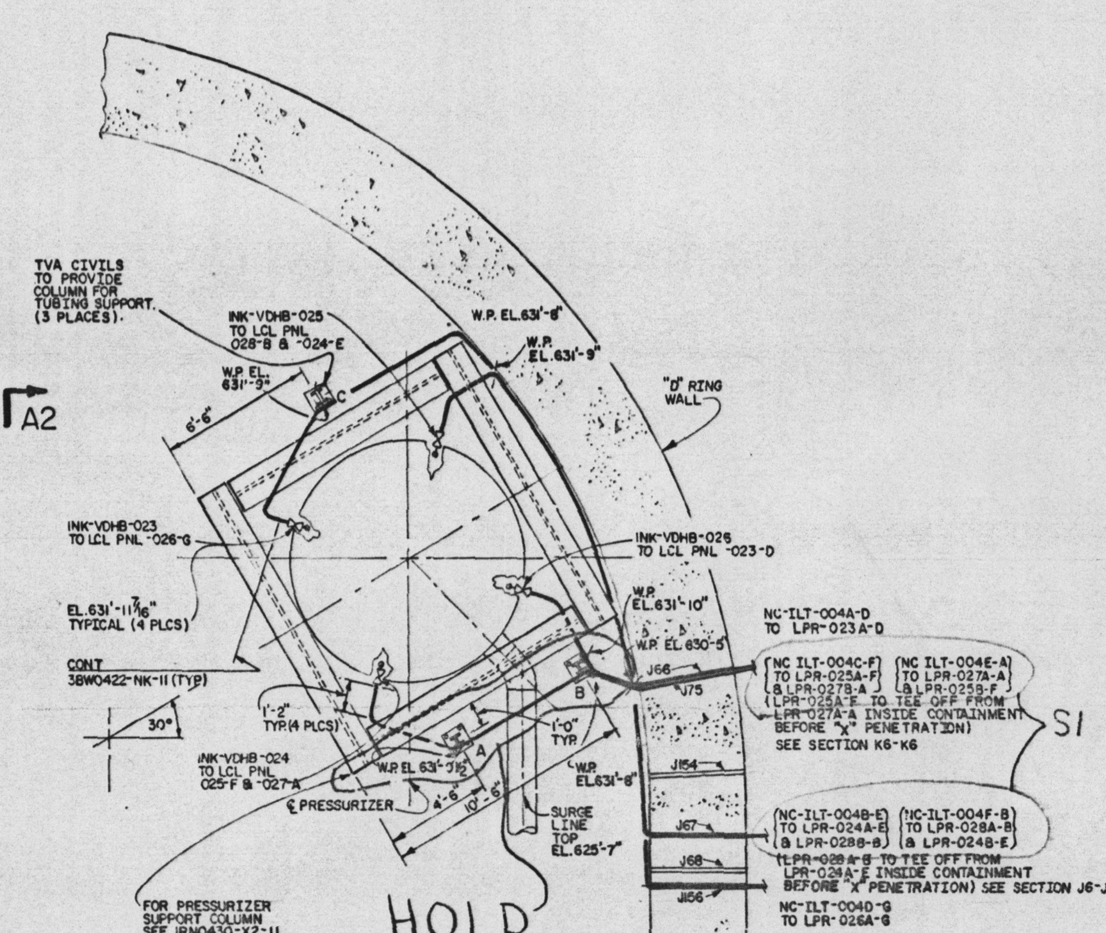


A2-A2
INTERIOR ELEVATION OF SHIELD WALL
SCALE: 3/16 = 1'-0"



A2 SECTION CONTINUES ALONG OUTSIDE WALL OF REACTOR ENCLOSURE

PART PLAN - EL.622.0'
SCALE: 1/4" = 1'-0"

HOLD
1-15-83

S1 — c) A SHORT PIECE OF MK NO. 852 (FOR VALVE REQUIRING CONTROL AIR) OR 900 (FOR VALVE REQUIRING ESSENTIAL AIR) MAY BE USED BETWEEN THE AIR REQUIRING DEVICE AND THE FLEX HOSE TO ALLOW FOR EASIER INSTALLATION.

23. THE FOLLOWING RELATIVE MOTIONS BETWEEN THE PRIMARY CONTAINMENT STRUCTURE AND THE REACTOR BUILDING INTERNAL STRUCTURE SHALL BE TAKEN INTO ACCOUNT IF ROUTED TUBING RUN IS ATTACHED TO BOTH: VERTICAL ±.0034", HORIZONTAL ±.027".

24. IN CERTAIN INSTANCES, TUBE ROUTING IS DEFINED AS BEING WITHIN THE BOUNDARIES OF AN EMBEDDED PLATE. WHERE THIS OCCURS AN ASTERISK (*) WILL BE USED TO IDENTIFY THE PLATE BEING USED AND AN ARROW WILL POINT TO THIS PLATE FOR CLARITY. THE TUBING SHALL BE ROUTED WITHIN THE PLATE BOUNDARIES AS DEFINED BY THE WORKING POINTS.

25. WORKING POINT TOLERANCE FOR DESIGNATED ROUTING OF INSTRUMENT SENSING LINES SHALL BE ±6" MAX. IF INCORPORATED IN SUCH A MANNER TO MAINTAIN THE REQUIRED SLOPE OF 1/8" PER FOOT IN THE DIRECTION SHOWN.

26. WHEN TUBING ADAPTERS ARE USED TO INTERFACE DIRECTLY WITH ROOT VALVES, THE ADAPTERS SHALL BE OF THE SAME SCHEDULE AND PIPING CLASS AS THE NIPPLE CONNECTING THE ROOT VALVE TO THE PROCESS PIPING.

S1 —

27. WORKING POINT AND/OR CONDENSATE POT LOCATION TOLERANCE FOR DESIGNATED ROUTING OF INSTRUMENT SENSING LINES SHALL BE ± 6" MAX HEIGHT AND ± 1° AZ IF INCORPORATED IN SUCH A MANNER TO MAINTAIN AT LEAST THE MINIMUM SLOPE OF 1/8" PER FOOT AND CLEAR ALL INTERFERENCES BETWEEN LOCATED ROOT VALVES, CONTAINMENT PENETRATIONS, AND INSTRUMENT PANELS.

28. REF. DWGS. FOR ISOLATION VALVES:
4RW0531-X2-17
5RW1925-NS-09
5RW0911-IO-10

29. FIELD SHALL USE MARK NO. 461 TO CONNECT SECTIONS OF (852) TUBING AND MK NO. 503 TO CONNECT SECTIONS OF (850) TUBING. EQUIVALENT CONNECTIONS SUCH AS ELBOWS MAY BE USED IF INSTALLATION REQUIREMENTS DICTATE.

NOTES CONTINUED FROM 5RW1925-NC-01:

12. SOURCE LINE ROUTING THAT IS FULLY DETAILED ON THE 5RW_925-_-SERIES REPRESENTS THE ROUTING OF TUBING FOR SAFETY RELATED INSTRUMENTATION & MUST BE ROUTED AS SHOWN TO MEET SEPARATIONS & IMPINGEMENT CRITERIA DEFINED BY APPLICABLE TVA DOCUMENTATION.

13. SEE DWG 5AW0911-IO-21 FOR DETAILS OF DRAIN LINE TO LOCAL PANEL INTERFACE & DRAIN LINE OR VENT LINE TO FLOOR DRAIN INTERFACE.

14. PANEL LOCATION TOLERANCE IS ±12" WITH MINIMAL NECESSARY MOVEMENT FROM THAT SPECIFIED.

15. FIELD TO DETERMINE MARK NUMBER OF FITTING NECESSARY TO INTERFACE ROOT VALVE PIPE STUB WITH 3/8" SOURCE LINE TUBING MK NO. 800 BY USING THE FOLLOWING TABLE:

PIPE OR TUBE STUB	FITTING MK. NO.
1/2" SCH 40	142, 778
1/2" SCH 80	155, 690
1/2" SCH 160	691
3/4" SCH 40	158, 692 — S1
3/4" SCH 160	694, (227)

PIPE OR TUBE STUB	FITTING MK. NO.
1" SCH 40	168, 143, 695
1" SCH 80	143, 696
1" SCH 160	156, 697
3/8" x .065 WALL	154, 518, 456, 508

FITTINGS SELECTED BY FIELD FROM THIS TABLE TAKE PRIORITY OVER ANY FITTING THAT MAY BE SHOWN ON ISSUED 5RW_925-_-SERIES DRAWINGS.

16. FIELD SHALL ROUTE SENSING LINES, AIR SUPPLY LINES AND AIR SIGNAL LINES TO ALLOW FOR THE FOLLOWING MOTION AS A MINIMUM, UNLESS OTHERWISE SPECIFIED.

INTERFACING COMPONENT	VERTICAL CIRCULAR PLANE	HORIZONTAL CIRCULAR PLANE
LOCAL PANELS (FLOOR OR WALL MTD)	1/64"	1/16"
PIPING	1/4"	1/4"
TANKS	1/4"	1/4"
PUMPS	1/4"	1/4"
VALVES	SEE NOTE 22	SEE NOTE 22

THESE VALUES REPRESENT MOTION CAUSED BY THERMAL EXPANSION, SEISMIC AND VIBRATION OR ANY COMBINATION OF THE THREE.

17. RELATIVE POSITION OF SOURCE LINES ON LOCAL PANEL IS SHOWN FOR INFORMATION ONLY. ACTUAL LOCATION MAY VARY FROM THAT SHOWN. FIELD TO CONNECT ROUTED SOURCE LINES TO INSTRUMENT SOURCE LINES BASED ON TAG NUMBERS ONLY AND NOT LOCATION.

18. FIELD TO DETERMINE MARK NUMBERS OF FITTING NECESSARY TO INTERFACE TUBING WITH THREADED CONNECTIONS SUCH AS CONTROL VALVE OR DAMPER FILTER REGULATORS, POSITIONERS OR SOLENOIDS, PRESSURE CONNECTIONS ETC. BY USING THE FOLLOWING TABLE. (EQUIVALENT CONNECTOR MAY BE USED IF INSTALLATION REQUIREMENTS DICTATE)

TUBING MARK NO.	COMPONENT CONNECTION (NPT FEMALE)	INTERFACING FITTING MARK NO.
800	1/8"	496
800	1/4"	401
800	3/8"	406
800	1/2"	407
852	1/8"	403
852	1/4"	404
852	3/8"	405
850	1/4"	414
850	3/8"	408
850	1/2"	409

FITTINGS SELECTED BY FIELD FROM THIS TABLE TAKE PRIORITY OVER ANY FITTING THAT MAY BE SHOWN ON ISSUED 5RW_925-_-SERIES DRAWINGS.

19. CONDENSATE POTS TO BE USED FOR UPPER LEVEL LEGS ONLY. SEE 5AW0911-IO-21, DETAIL O, FOR FABRICATION AND INSTALLATION.

21. WHERE TUBING ROUTING WORKING POINTS MEET, COMMON HANGERS SHALL BE USED IN CONJUNCTION WITH NC, NL & CF SYSTEMS.

22. AIR SIGNAL LINE CONNECTIONS-
a) FLEX HOSE - A FLEX HOSE SHALL BE USED TO CONNECT THE AIR SIGNAL LINE TO THE DEVICE WHICH RECEIVES THE SIGNAL FOR ALL APPLICATIONS EXCEPT WALL, FLOOR, COLUMN OR CEILING MOUNTED DEVICES. THE END OF THE SIGNAL LINE (MARK NO. 800 OR 852 AS SPECIFIED ON OTHER DESIGN DOCUMENTATION) SHALL BE LOCATED SO THAT THE FLEX HOSE MAY BE CONNECTED TO THE DEVICE USING ONE OF THE HOSE MANUFACTURER'S APPROVED CONFIGURATIONS WHICH ALLOW ± 5 INCHES MOVEMENT IN EACH OF THE X, Y, AND Z PLANES (NOTE: FOR HVAC DUCT MOUNTED DEVICES, HOSE CONFIGURATIONS WHICH ALLOW A MINIMUM OF ± 3 INCHES IN ALL THREE PLANES ARE ACCEPTABLE.) THE AIR SIGNAL LINE SHALL HAVE A FIXED SUPPORT NO FARTHER THAN 3 INCHES FROM THE POINT AT WHICH THE FLEX HOSE CONNECTS. ALL FLEX HOSES SHALL BE INSTALLED IN COMPLIANCE WITH GENERAL CONSTRUCTION SPECIFICATION G-43 AND THE MANUFACTURER'S INSTALLATION INSTRUCTIONS. ANY CONFLICTS BETWEEN G-43 AND THE MANUFACTURER'S INSTALLATION INSTRUCTIONS SHALL BE BROUGHT TO THE ATTENTION OF EN DES FOR RESOLUTION. FLEXHOSE MARK NO. 642 SHALL BE USED WITH AIR SIGNAL LINE 800 AND MARK NO. 640 SHALL BE USED WITH AIR SIGNAL LINE 852.
b) AIR SIGNAL LINES TO WALL, FLOOR COLUMN AND CEILING MOUNTED DEVICES DO NOT REQUIRE A FLEX HOSE CONNECTION AND SHALL BE INSTALLED AS DEFINED BY OTHER DESIGN DOCUMENTATION.

REV NO.	ECN NO.	DATE	DSGN	DRWN	CHKD	SUPV	ENGR	INSP	SUBM	RECM	APPR
1	S1, 1083	2-16-82								N/A	N/A
	ADDED NOTES 22-26; REVISED NOTES 14 & 15. REVISED PRESSURIZER INSTRUMENT SENSING LINE ROUTING. ADDED PART PLAN. MINOR REVISIONS.										
2	S1, 888										
	ADDED NOTE 27, 28, 29, & 22c. INC. ECN 888. MINOR REV.										

REVISIONS BY TVA

Docket # 50-438/439
Control # 8301060310
Date 12/23/82 of Document
REGULATORY DOCKET FILE

PRC APERTURE CARD

8301060322

FURTHER REVIEW
CEB R.O. Barnett
EEB N/A
MEB N/A
NEB George F. Dilworth
INSPECTED AND APPROVED FOR ISSUE
DESIGN PROJECT MANAGER

DSGN [signature]
DRWN [signature]
CHKD [signature]
SUPV E. B. Barnett Jr.
INSP
ENGINEER [signature]

REACTOR BUILDING
UNIT 1

INSTRUMENTS & CONTROLS
LCL PNLS 1IX-ILPR- -001-D THRU -004-E, -006-G, -007; -023-D THRU -028-B
INSTALLATION EL.622.0' TO 710.0'

BELLEFONTE NUCLEAR PLANT
TENNESSEE VALLEY AUTHORITY
DIVISION OF ENGINEERING DESIGN
Q

SUBMITTED [signature] RECOMMENDED [signature] APPROVED [signature]

KNOXVILLE 10-10-80 88 E 5RW1925-NC-02 R2
RECORD DRAWINGS AS CONSTRUCTED

PRINTS REQD-R
BR or PROJ | DWG | SIZE F H
ME EE CE AD CD ED MD BF SW BL PA