



- NOTES:
1. LOCATE PRESSURE INDICATORS TO BE VISIBLE FROM TOP OF PUMP SHT CR-4
 2. TOP OF SEAL LOOP MUST BE 34 FT BELOW LAST JOINT CONNECTION
 3. CLASS F PIPE FROM LAST SUPPORT IN TRENCH
 4. BEFORE AIX BLOOD PENETRATION
 5. LOCATE VALVE SCALPS AT CONNECTION TO RC SYSTEM PIPE IN TR TO BE EMBEDDED IN TR RASEMENT FLOOR, VALVE AND RC SYSTEM CONNECTION TO BE PROTECTED BY CONCRETE ENCLOSURE.
 6. TEST DRAIN USED FOR FUNCTIONAL TEST OF CHECK VALVE. DISCHARGE TO BE VISIBLE TO VERIFY FLOW
 7. POWERED FROM SSP 25W-125VDC SYSTEM
 8. EXCESSIVE VALVES ARE UNACCEPTABLE FOR THIS APPLICATION
 9. 2CA128, 2CA129, 2CA130, 2CA131, 2CA132, 2CA133, 2CA134, 2CA135, 2CA136, 2CA137, 2CA138, 2CA139, 2CA140, 2CA141, 2CA142, 2CA143, 2CA144, 2CA145, 2CA146, 2CA147, 2CA148, 2CA149, 2CA150, 2CA151, 2CA152, 2CA153, 2CA154, 2CA155, 2CA156, 2CA157, 2CA158, 2CA159, 2CA160, 2CA161, 2CA162, 2CA163, 2CA164, 2CA165, 2CA166, 2CA167, 2CA168, 2CA169, 2CA170, 2CA171, 2CA172, 2CA173, 2CA174, 2CA175, 2CA176, 2CA177, 2CA178, 2CA179, 2CA180, 2CA181, 2CA182, 2CA183, 2CA184, 2CA185, 2CA186, 2CA187, 2CA188, 2CA189, 2CA190, 2CA191, 2CA192, 2CA193, 2CA194, 2CA195, 2CA196, 2CA197, 2CA198
 10. LUBE OIL (SHELL SIDE) OF HEAT EXCHANGER IS CONNECTED WITH AUX FWD PUMP TURBINE LUBE OIL SYSTEM WHICH IS NOT SHOWN ON ANY FLOW DIAGRAM. CONSULT AUX FWD TURBINE INSTRUMENT MANUAL FOR DETAILS.
 11. THROTTLING VALVE 2CA215 TO MAINTAIN APPROXIMATELY 0.5°F DIFFERENTIAL WATER TEMPERATURE SC2023 TURBINE LUBE OIL COOLER WITH TURBINE COOLER. MAINTAIN APPROXIMATELY 0.5°F OPERATING AT RATED CONDITIONS. OPEN VALVE 2CA215 AN ADDITIONAL INCH TO REDUCE TURBINE BEARING TEMPERATURE IF RECOMMENDED TEMPERATURE IS EXCEEDED.
 12. PIPING IS CLASS F IN TURBINE BLDG. TRENCH.
 13. POWERED FROM SSP AC NORMAL AUXILIARY POWER SYSTEM.
 14. NO PIPING SHOWN ON THIS FLOW DIAGRAM REQUIRES INSULATION.
 15. CHECK VALVE INTERNALS REMOVED.
 16. PURPOSE OF THIS VALVE TO BE LOCATED OUTSIDE CA TURBINE CONTROL ROOM. BODY IS TO BE CONNECTED TO CA LINE WITH RC CHEMISTRY WATER AFTER CLEAN FLUSH.
 17. FUTURE CONNECTION FOR NON-CN-2592-2.2
 18. MOTOR OPERATOR BREAKER TO BE DISCONNECTED WITH VALVE FULLY OPEN.

DESIGN PARAMETERS

LINE LISTING	PIPE SPEC	PRESSURE	TEMPERATURE	CLASS	MATERIAL
01	2500.2	1000 PSIA	160°F	C	CS
02	1500.2	2000 PSIA	160°F	C	CS
03	1500.2	165 PSIA	160°F	C	CS
04	1500.2	165 PSIA	160°F	C	CS
05	1500.2	165 PSIA	160°F	C	CS
06	1500.2	165 PSIA	160°F	C	CS
07	1500.2	165 PSIA	160°F	C	CS
08	1500.2	165 PSIA	160°F	C	CS
09	1500.2	165 PSIA	160°F	C	CS
10	1500.2	165 PSIA	160°F	C	CS
11	1500.2	165 PSIA	160°F	C	CS
12	1500.2	165 PSIA	160°F	C	CS
13	1500.2	165 PSIA	160°F	C	CS
14	1500.2	165 PSIA	160°F	C	CS
15	1500.2	165 PSIA	160°F	C	CS

ANSTEC APERTURE CARD

OA CONDITION 4
OA CONDITION 1

NO.	REV.	PER	DATE	CHG	DATE	APPR	DATE	CITL	ELEC	NEED	TESTS
16	REV PER NSM CN-2592-2.0	NSM	12/14/78	ADD	12/14/78	NSM	12/14/78	NSM	NSM	NSM	NSM
15	REV PER NSM CN-2592-2.0	NSM	12/14/78	ADD	12/14/78	NSM	12/14/78	NSM	NSM	NSM	NSM
14	REV PER NSM CN-2592-2.0	NSM	12/14/78	ADD	12/14/78	NSM	12/14/78	NSM	NSM	NSM	NSM
13	REV PER NSM CN-2592-2.0	NSM	12/14/78	ADD	12/14/78	NSM	12/14/78	NSM	NSM	NSM	NSM
12	REV PER NSM CN-2592-2.0	NSM	12/14/78	ADD	12/14/78	NSM	12/14/78	NSM	NSM	NSM	NSM
11	REV PER NSM CN-2592-2.0	NSM	12/14/78	ADD	12/14/78	NSM	12/14/78	NSM	NSM	NSM	NSM
10	REV PER NSM CN-2592-2.0	NSM	12/14/78	ADD	12/14/78	NSM	12/14/78	NSM	NSM	NSM	NSM
9	REV PER NSM CN-2592-2.0	NSM	12/14/78	ADD	12/14/78	NSM	12/14/78	NSM	NSM	NSM	NSM
8	REV PER NSM CN-2592-2.0	NSM	12/14/78	ADD	12/14/78	NSM	12/14/78	NSM	NSM	NSM	NSM
7	REV PER NSM CN-2592-2.0	NSM	12/14/78	ADD	12/14/78	NSM	12/14/78	NSM	NSM	NSM	NSM
6	REV PER NSM CN-2592-2.0	NSM	12/14/78	ADD	12/14/78	NSM	12/14/78	NSM	NSM	NSM	NSM
5	REV PER NSM CN-2592-2.0	NSM	12/14/78	ADD	12/14/78	NSM	12/14/78	NSM	NSM	NSM	NSM
4	REV PER NSM CN-2592-2.0	NSM	12/14/78	ADD	12/14/78	NSM	12/14/78	NSM	NSM	NSM	NSM
3	REV PER NSM CN-2592-2.0	NSM	12/14/78	ADD	12/14/78	NSM	12/14/78	NSM	NSM	NSM	NSM
2	REV PER NSM CN-2592-2.0	NSM	12/14/78	ADD	12/14/78	NSM	12/14/78	NSM	NSM	NSM	NSM
1	REV PER NSM CN-2592-2.0	NSM	12/14/78	ADD	12/14/78	NSM	12/14/78	NSM	NSM	NSM	NSM

ERNHC000THN

DWG. NO. CN-2592-1.0

DUKE POWER COMPANY
CATAWBA NUCLEAR STATION UNIT 2
FLOW DIAGRAM OF
AUXILIARY FEEDWATER SYSTEM
(CA)

DESIGNER: NSM DATE: 12/14/78
DRAWN: J. B. BROWN DATE: 12/14/78
CHECKED: NSM DATE: 12/14/78
APP. DATE: 12/14/78
CITL: NSM
ELEC: NSM
NEED: NSM
TESTS: NSM

PDR RIDS

Q10031900H

