



- NOTES:
1. VALVE FAILS WITH FLOW TO VOLUME CONTROL TANK.
 2. SPRING LOADED CHECK VALVE, SET FOR 200 PSIG.
 3. 3-WAY VALVE MUST BE ORIENTED IN PIPING AS SHOWN ON FLOW DIAGRAM.
 4. PRESSURIZER LOW LEVEL SIGNAL CLOSURES THESE VALVES.
 5. HIGH POINT OF PIPING.
 6. LOW POINT OF PIPING.
 7. VALVE POWERED BY STANDBY SHUTDOWN FACILITY DIESEL.
 8. CONSTRUCTION VENTS AND DRAINS WILL NOT NECESSARILY BE SHOWN ON PIPING ISOMETRICS.
 9. PROVISIONAL CONNECTOR FOR PRESSURE CONTROLLER PER VN CE-8724. LINE MAY ALSO SERVE AS A VENT.
 10. INV14 TO BE LOCATED AT LEAST 30 FEET DOWNSTREAM OF LETDOWN ORIFICE IN A HORIZONTAL RUN OF PIPING.
 11. INLET PIPING TO THIS VALVE SHALL BE KEPT AS SHORT AS POSSIBLE.
 12. LOCATE BLOCK VALVE NEAR VALVE INV15A.
 13. VENT AND DRAIN VALVES SHALL BE LOCATED NEAR INV17.
 14. THERE SHALL BE NO SOCKET WELDED FITTINGS USED BETWEEN THE FIRST AND VENT HEADS OF THE LETDOWN ORIFICES. USE OF 30 AND 30 BENDS OR BUTT WELDED FITTINGS IS REQUIRED.

DESIGN PARAMETERS

LINE LISTING	PIPE SPEC.	PRESSURE	TEMPERATURE	CLASS	MATERIAL
81	2081.2	2700 PSIA	500°F	B	SS
82	2081.2	2500 PSIA	500°F	A	SS
83	2081.1	2000 PSIA	500°F	A	SS
84	2081.1	2700 PSIA	500°F	A	SS
85	2081.4	2000 PSIA	225°F	E	SS
86	681.2	615 PSIA	400°F	B	SS
87	151.2	165 PSIA	225°F	B	SS
88	151.4	165 PSIA	200°F	B	SS
38	2081.2	2700 PSIA	500°F	B	SS
42	2081.2	2500 PSIA	500°F	B	SS
46	2081.2	2500 PSIA	500°F	B	SS

DESIGN FLOW

NO.	FLOW
81	65 GPM
82	75 GPM
83	65 GPM
84	12 GPM
85	45 GPM
86	85 GPM

NO.	REVISIONS	DRN	CHKD	DATE	APPR	DATE	CIVIL	BLK	INSPECTED
22	REV PER CN-11416/00 IMP. DATE 5-17-02	VDC	EDS	5-17-02	CL1	5-17-02	ROW	5-17-02	BEK
21	REV PER CE-8924 (11-3-97)	VDC	EDS	11-3-97	BAL	11-3-97	ROW	11-3-97	BEK
20	REV PER CE-7946 (5-12-95)	RFF	EDS	5-12-95	EDS	5-12-95	KAM	5-12-95	BEK
19	REV PER CN-11343/00 (3-22-95)	RFF	EDS	3-22-95	AEC	3-22-95	KLE	3-22-95	BEK
18	REV PER CE-5063 (3-27-95)	RFF	EDS	3-27-95	TVM	3-27-95	KLE	3-27-95	BEK
17	REV PER CE-5063 (3-14-95)	EDS	EDS	3-14-95	TVM	3-14-95	KLE	3-14-95	BEK
16	REV PER CE-68183	EDS	EDS	10-18-94	DM	10-18-94	KLE	10-18-94	BEK
15	REV PER CE-68183	EDS	EDS	10-18-94	RWH	10-18-94	KLE	10-18-94	BEK

QA CONDITION 2
QA CONDITION 1

DUKE POWER COMPANY
CATAMBA NUCLEAR STATION UNIT 1

FLOW DIAGRAM OF
CHEMICAL AND VOLUME CONTROL
SYSTEM (NV)

DESIGNER: B. BUCKY DATE: 6-27-74
DRAWN: J. TUCKER DATE: 6-28-74
CHECKED: M. HILL DATE: 6-28-74
APPROVED: W. W. W. DATE: 6-28-74

DWG. NO. CN-1554-1.0

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