



- NOTES:
1. TEMPORARY STRAPPIES PLACED IN THE SPOOL PIECE DURING INITIAL TESTING OPERATIONS. STRAPPIES MUST BE REMOVED BEFORE AND 24 HRS. AFTER TESTING WITH CONSIDERABLE CARE TO PREVENT DAMAGE TO THE SPOOL.
 2. ALL TEST PIPES AND 24 HRS. AFTER TESTING WITH CONSIDERABLE CARE TO PREVENT DAMAGE TO THE SPOOL.
 3. ALL TEST PIPES AND 24 HRS. AFTER TESTING WITH CONSIDERABLE CARE TO PREVENT DAMAGE TO THE SPOOL.
 4. LOCATE AS CLOSE TO CONTAINMENT AS POSSIBLE.
 5. LOCATED CLOSED DRAINING PERFORMING.
 6. REFER TO DRAWING CN-2554-2.2 FOR PUMP COOLERS.
 7. PUMPING PIPE IS CONNECTED TO PRESSURE GAGE DURING INITIAL PUMPING OPERATIONS.
 8. OPERATIONAL CHECK VALVE FOR LINE 10 IS KEPT AS PRESSURE RELIEF FOR LOW PRESSURE PIPING.
 9. HIGH POINT OF PIPING.
 10. LOCATE VENT CLOSE TO VENTILATION EXHAUST DUCT IF POSSIBLE.
 11. SAFETY SWITCH REQUIRED IN CHEMICAL MIXING TANK AREA.
 12. SET TRIPPING POINT AND LOCK, IF RANGE REQUIRED, -A TO B.2.
 13. CHECK PUMP-TIME RELATIONSHIP OF EQUIPMENT.
 14. LOCATED AS CLOSE TO PUMP AS POSSIBLE.
 15. SAFETY INJECTION SYSTEM TO HAVE 15 SECOND TIME DELAY.
 16. VENT TO BE USED TO DRAIN SUCTION PUMP/SUCKER HEADS.
 17. SUCTION HEAD TANK IS MOUNTED ON RECIPROCATING COLUMN.
 18. TOP OF VENT SHALL BE AT ELEVATION OF 24V212.
 19. LOCAL OPERATOR AT OPERATIONAL MIXER. TANK ON ON.
 20. COLLECT LINE PRESSURE POINTS FOR NCP.
 21. INSPECTION AND REPAIR REQUIRED FUNCTIONAL PER UNIT SYSTEM MODIFICATION WORK ORDER.

| LINE LISTING | PIPE SPEC. | PRESSURE | TEMPERATURE | CLASS | MATERIAL | DESIGN FLOW |
|--------------|------------|-----------|-------------|-------|----------|-------------|
| 11 | 2541.2 | 2700 PSIA | 250°F | B | SS | 55 GPM |
| 12 | 151.7 | 180 PSIA | 200°F | C | SS | 15 GPM |
| 13 | 151.7 | 180 PSIA | 200°F | C | SS | 15 GPM |
| 14 | 151.7 | 180 PSIA | 200°F | C | SS | 15 GPM |
| 15 | 151.7 | 180 PSIA | 200°F | C | SS | 15 GPM |
| 16 | 2541.2 | 2700 PSIA | 250°F | B | SS | 55 GPM |
| 17 | 2541.2 | 2700 PSIA | 250°F | B | SS | 55 GPM |
| 18 | 151.7 | 180 PSIA | 200°F | C | SS | 15 GPM |
| 19 | 151.7 | 180 PSIA | 200°F | C | SS | 15 GPM |
| 20 | 151.7 | 180 PSIA | 200°F | C | SS | 15 GPM |
| 21 | 151.7 | 180 PSIA | 200°F | C | SS | 15 GPM |
| 22 | 151.7 | 180 PSIA | 200°F | C | SS | 15 GPM |
| 23 | 151.7 | 180 PSIA | 200°F | C | SS | 15 GPM |
| 24 | 151.7 | 180 PSIA | 200°F | C | SS | 15 GPM |
| 25 | 151.7 | 180 PSIA | 200°F | C | SS | 15 GPM |
| 26 | 151.7 | 180 PSIA | 200°F | C | SS | 15 GPM |
| 27 | 151.7 | 180 PSIA | 200°F | C | SS | 15 GPM |
| 28 | 151.7 | 180 PSIA | 200°F | C | SS | 15 GPM |
| 29 | 151.7 | 180 PSIA | 200°F | C | SS | 15 GPM |
| 30 | 151.7 | 180 PSIA | 200°F | C | SS | 15 GPM |
| 31 | 151.7 | 180 PSIA | 200°F | C | SS | 15 GPM |
| 32 | 151.7 | 180 PSIA | 200°F | C | SS | 15 GPM |
| 33 | 151.7 | 180 PSIA | 200°F | C | SS | 15 GPM |
| 34 | 151.7 | 180 PSIA | 200°F | C | SS | 15 GPM |
| 35 | 151.7 | 180 PSIA | 200°F | C | SS | 15 GPM |
| 36 | 151.7 | 180 PSIA | 200°F | C | SS | 15 GPM |
| 37 | 151.7 | 180 PSIA | 200°F | C | SS | 15 GPM |
| 38 | 151.7 | 180 PSIA | 200°F | C | SS | 15 GPM |
| 39 | 151.7 | 180 PSIA | 200°F | C | SS | 15 GPM |
| 40 | 151.7 | 180 PSIA | 200°F | C | SS | 15 GPM |

O. A. CONDITION 2
O. A. CONDITION 1

DUKE POWER COMPANY
CATAWBA NUCLEAR STATION UNIT 2

FLOW DIAGRAM OF
CHEMICAL & VOLUME
CONTROL SYSTEM (NV)

| NO. | REV. | DATE | BY | CHKD. | APP'D. | DESCRIPTION |
|-----|------|----------|-------------|-------|--------|-------------|
| 18 | REV | 10/19/68 | EDS | YTW | QCS | 1-7-74 |
| 9 | REV | NSM | CN-2054-1.1 | 24G | 53 | 2KR |
| 7 | REV | NSM | CN-2054-1.1 | 85 | 97 | 24G |
| 6 | REV | NSM | CN-2054-1.1 | 85 | 97 | 24G |
| 5 | REV | NSM | CN-2054-1.1 | 85 | 97 | 24G |
| 4 | REV | NSM | CN-2054-1.1 | 85 | 97 | 24G |
| 3 | REV | NSM | CN-2054-1.1 | 85 | 97 | 24G |
| 2 | REV | NSM | CN-2054-1.1 | 85 | 97 | 24G |
| 1 | REV | NSM | CN-2054-1.1 | 85 | 97 | 24G |

DESIGNED BY: _____ DATE: 10/19/68
CHECKED BY: _____ DATE: 10/19/68
APPROVED BY: _____ DATE: 10/19/68

FIG. NO. CN-2554-1.2

PDR RIDS

9403180011

