



- NOTES:**
1. DELETED
 2. ALL VENT, DRAIN, LEAK TEST & INSTRUMENT CONNECTION RATED AT 1500 POUNDS SHALL HAVE DOUBLE VALVE ISOLATION.
 3. UNLESS OTHERWISE NOTED, ALL DRAIN CONNECTIONS ARE 1" AND ALL VENT CONNECTIONS 3/4". LINE IDENTIFICATION SAME AS HEADER.
 4. SYSTEMS FUNCTIONS SHOWN ARE FOR NORMAL PLANT OPERATION UNDER FULL LOAD.
 5. FOR GENERAL NOTES, PIPING SYMBOLS AND P & ID INDEX SEE DRAWING M-001.
 6. FOR INSTRUMENTATION SYMBOLS SEE DRAWING M-002.
 7. DELETED
 8. TEST CONNECTIONS ARE 3/4" UNLESS OTHERWISE NOTED.
 9. CHECK VALVES M106, M107 & M108 WILL BE LOCATED AS CLOSE TO M1 TANK AS POSSIBLE.
 10. FOR M1 PUMP INSTRUMENTATION SEE BECHTEL DRAWING 7749-M-516-30 (B & V) DRAWING 1731952.
 11. DELETED
 12. FOR TYPICAL HEAT TRACING CIRCUIT SEE P & ID M-045. FOR HEAT TRACING INSTRUMENTATION AND DETAILS SEE THERMION DRAWING 14-147A.
 13. ISOLATION VALVE AND HOSE CONNECTION, FOR CONTAINMENT ISOLATION AIR VOLUME TANK TO BE LOCATED OUTSIDE NEGATIVE PRESSURE AREA.
 14. DELETED
 15. DELETED
 16. DELETED
 17. THE ONLY VENT OR DRAIN LINE CAPS REQUIRED TO BE SHOWN ON PIPING AND INSTRUMENTATION DIAGRAMS ARE THOSE CONTROLLED UNDER DB-OP-00009 (FORMERLY AD1839.03). THE ACTUAL TERMINATION OF ALL OTHER VENTS OR DRAINS ARE NOT SHOWN AND INSTEAD, AN OPEN ENDED PIPE IS DISPLAYED.
 18. CERTAIN COMPONENTS WITHIN THIS BOUNDARY REQUIRED FOR EMERGENCY FEED AND BLEED COOLING WERE PURCHASED TO LESS STRINGENT QUALITY REQUIREMENTS PRIOR TO UPDATING OF THIS FUNCTION VIA FOR 86-0452 AND 86-0453. THESE COMPONENTS WILL BE DESIGNATED AS QUALITY CLASS AA UNTIL SUCH TIME AS THEY ARE REPLACED. REFER TO THE QUALITY CLASSIFICATION LIST, PROCEDURE DB-OP-01139 (CLASSIFICATION RULES 2.2.1, 2.3.3-A AND 2.3.6-B) AND INTRA-COMPANY MEMORANDUM NEN-91-10215 "FEED AND BLEED SYSTEM DESIGN CRITERIA" FOR FURTHER DETAILS.
 19. DELETED
 20. WHERE NOTED THE TANK CAPACITY IS NOMINAL, WHERE APPLICABLE, SEE DB-OP-00705 (TANK LEVEL CALIBRATION CURVES) FOR INDICATED LEVEL VS. VOLUME RELATIONSHIP. (REF: PCMR 96-09761).
 21. VALVES P108 AND P109 ARE DISABLED IN THE CLOSED POSITION. REFERENCE M05-0050.
 22. SOME VALVES NUMBERED WITH A "PM" DESIGNATION (I.E. P102) ARE BEING USED TO SUPPLY DEMINERALIZED WATER. REFERENCE M05-0050.

LR NOTES:

A. FOR GENERAL LICENSE RENEWAL NOTES REFER TO

B. LINE CONTRIBUTION INFORMATION WAS CHANGED BY REV. 02 TO P&ID M-031A.

LICENSE RENEWAL BOUNDARY DRAWING
LR-0031A REV. 3

SYSTEMS SHOWN ON THIS DRAWING:
01: REACTOR COOLANT
02: MAKEUP & PURIFICATION
03: COMPONENT COOLING & DEMINERALIZED WATER STORAGE
04: REACTOR COOLANT VENT & DRAIN
05: SAMPLING
06: NON-SAFETY AFFECTING SAFETY
07: BORON RECOVERY

BECHTEL ASSOCIATES
PROFESSIONAL CORPORATION (OHIO)
GAITHERSBURG, MARYLAND
DAVIS-BESSE NUCLEAR POWER STATION
UNIT NO. 1
THE TOLEDO Edison COMPANY

PIPING & INSTRUMENT DIAGRAM
MAKE UP & PURIFICATION SYSTEM

JOB NO.	DRAWING NO.	REV.
12501	M-031A	50

THIS DRAWING REV. 0 SUPERSEDES IN PART DWS. M-031 REV. 45. WORK THIS DWS. WITH M-031B.

DATE: 10-30-07
BY: 30344
P&ID: 011

D03