

PIPING AND INSTRUMENT DIAGRAM LEGEND - UNIT ONE

VENTS AND DRAINS TO RADIOACTIVE WASTE SYSTEMS

DWD - DIRTY WASTE DRAIN TANK
ABS - AUXILIARY BUILDING SUMP
RBS - REACTOR BUILDING SUMP
PCQ - PRIMARY COOLANT QUENCH TANK
RBD - REACTOR BUILDING EQUIPMENT DRAIN HEADER
ABD - AUXILIARY BUILDING EQUIPMENT DRAIN HEADER
RBV - REACTOR BUILDING VENT HEADER
ABV - AUXILIARY BUILDING VENT HEADER
GCH - GAS COLLECTION HEADER

PIPING DESIGNATIONS

PRESSURE
MATERIAL
CLASS (NUCLEAR / NON)
SIZE
SYSTEM LOCATION

PENETRATION AND CONNECTION SYMBOLS

PIPING PENETRATION AT REACTOR BUILDING (SEE DRAWING C-108)
PIPING CONNECTIONS AT CONDENSERS E-11A & B (SEE WESTINGHOUSE DRAWING 720J986, VP M5-11).
PIPING CONNECTIONS AT TURBINE-GENERATOR (K1) (SEE WESTINGHOUSE DRAWING 720J114, VP M4-4).

DWG. NO.	INSTR. NO.	PIPING & INSTRUMENT DIAGRAMS
M-200		PIPING SYMBOLS AND DRAWING INDEX
M-201		INSTRUMENT SYMBOLS AND IDENTIFICATION
M-202	6600-6799	MAIN STEAM
M-203	6800-6999	REHEAT STEAM
M-204	2800-2999	CONDENSATE AND FEEDWATER
M-205	3000-3199	EXTRACTION STEAM HEATER VENTS AND DRAINS
M-206	2600-2799	STEAM GENERATOR SECONDARY SYSTEM
M-207	3200-3399	CONDENSATE DEMINERALIZER
M-208	3400-3599	CONDENSATE DEMINERALIZER RESIN REGENERATION SYSTEM
M-209	3600-3799	CIRCULATING WATER AND INTAKE STRUCTURE EQUIPMENT
M-210	3800-3999	SERVICE WATER
M-211	4000-4199	AUXILIARY COOLING WATER
M-212	4200-4399	PLANT MAKEUP AND DOMESTIC WATER SYSTEMS
M-213	4400-4599	DIRTY LIQUID AND LAUNDRY RADIOACTIVE WASTE
M-214	4600-4799	CLEAN LIQUID RADIOACTIVE WASTE
M-215	4800-4999	GASEOUS RADIOACTIVE WASTE
M-216	5000-5199	LUBE OIL
M-217	5200-5399	EMERGENCY DIESEL GENERATORS AND FUEL OIL SYSTEM
M-218	5400-5599	INSTRUMENT AND SERVICE AIR
M-219	5600-5799	FIRE WATER, HALON FIRE SUPPRESSION, TURBINE CO ₂ SYSTEMS
M-220	5800-5999	PLANT HEATING AND STARTUP BOILER
M-221	6000-6199	CHILLED WATER SYSTEM, CONTROL RM, ELECT AREAS AND ADMIN BUILDING
M-222	6200-6299	CHILLED WATER SYSTEM, REACTOR AND AUXILIARY BUILDING, MAIN CHILLER CLG WTR
M-223	6400-6499	TURBINE SAMPLING SYSTEM
M-224	6200-6299	CHLORINATION SYSTEM
M-225	8300-8399	GAS SYSTEMS
M-226	8400-8499	SEAL OIL, MAIN TURBINE AND FEEDWATER PUMP BEARING LUBE OIL SYSTEM
M-227	8300-8399	ELECTRO-HYDRAULIC FLUID AND EMERGENCY TRIP HP OIL SYSTEMS
M-230	1000-1199	REACTOR COOLANT SYSTEM
M-231	1200-1399	MAKEUP AND PURIFICATION SYSTEM
M-232	1400-1599	DECAY HEAT REMOVAL SYSTEM
M-233	1600-1799	CHEMICAL ADDITION SYSTEM
M-234	2200-2399	INTERMEDIATE COOLING SYSTEM
M-235	2000-2099	SPENT FUEL COOLING SYSTEM
M-236	2400-2599	REACTOR BUILDING SPRAY AND CORE FLOODING SYSTEM
M-237	1800-1999	SAMPLING SYSTEM
M-238	6500-6599	CONTROL ROD DRIVES AND MISCELLANEOUS REACTOR COOLANT PUMP CONNECTIONS
M-240	3600	OILY WATER TREATMENT
M-258		SEE NOTE 6
M-259	7000-7199	AIR FLOW DIAGRAM ADMINISTRATION BUILDING
M-260	7200-7399	AIR FLOW DIAGRAM TURBINE BUILDING, BOILER RM, AND MISCELLANEOUS AREAS
M-261	7400-7599	AIR FLOW DIAGRAM REACTOR BUILDING
M-262	7600-7599	AIR FLOW DIAGRAM AUXILIARY BUILDING AND RADWASTE AREAS
M-263	7800-7999	AIR FLOW DIAGRAM AUXILIARY BUILDING, CONTROL RM, ELEC AND CLEAN AREAS
M-264	2100-2199	AIR FLOW DIAGRAM CONTAINMENT PENETRATION RM VENTILATION SYSTEM
M-500		INSTRUMENT IDENTIFICATION

- NOTES:
- SEE ENGINEERING STANDARD DGG-001 FOR P&ID FORMAT, COMPONENT REPRESENTATION AND EXPLANATION OF SYMBOLS.
 - SEE M-200 SH.2 AND SH.3 FOR SYMBOLS (FIG.1-256).
 - VALVE POSITIONS DEPICTED ARE TYPICAL POWER OPERATION (MODE D) VALVE POSITIONS. ACTUAL VALVE POSITIONS ARE CONTROLLED BY OPERATIONAL PROCEDURES.
 - VALVE HAS 1/2 THREADED PIPE CONNECTION. TUBING IS CONNECTED VIA PIPE-TO-TUBE CONNECTOR, AND ROUTED TO NEAREST CONTAMINATED FLOOR DRAIN OR FUNNEL.
 - THE PENNANT SYMBOL (P) INDICATES THAT THE ASSOCIATED PIPING AND COMPONENTS ARE SEISMIC CATEGORY 1 PER THE REQUIREMENTS OF SECTION C-1 OF NRC REGULATORY GUIDE 1.29. THE FLAG SYMBOL (F) INDICATES THE NON-Q LISTED PIPING HAS BEEN ANALYZED AND DESIGNED TO WITHSTAND SEISMIC LOADS IN ACCORDANCE WITH SECTION C-2 OF REG. GUIDE 1.29. BY CONVENTION THESE SYMBOLS ARE ONLY SHOWN ON UNIT 2 P&ID'S AND NOT ON UNIT 1 P&ID'S.
 - M-258: FIRE DAMPER INVENTORY.

PIPING AND INSTRUMENT DIAGRAM LEGEND - UNIT TWO

VENTS AND DRAINS TO RADIOACTIVE WASTE SYSTEMS

DWD - DIRTY WASTE DRAIN TANK
ABS - AUXILIARY BUILDING SUMP
RBS - REACTOR BUILDING SUMP
PCQ - PRIMARY COOLANT QUENCH TANK
RBD - REACTOR BUILDING EQUIPMENT DRAIN HEADER
ABD - AUXILIARY BUILDING EQUIPMENT DRAIN HEADER
RBV - REACTOR BUILDING VENT HEADER
ABV - AUXILIARY BUILDING VENT HEADER
GCH - GAS COLLECTION HEADER

PIPING DESIGNATIONS

UNIT 2
PRESSURE
MATERIAL
CLASS (NUCLEAR / NON)
SIZE
SYSTEM LOCATION

PENETRATION AND CONNECTION SYMBOLS

PIPING PENETRATION AT REACTOR BUILDING (SEE DRAWING C-2112)
PIPING CONNECTIONS AT CONDENSERS ZE-11A & B (SEE SOUTHWESTERN ENGINEERING DRAWINGS: ZE-72605, ZE-72621) (VP M2005-10 & M2005-11).
PIPING CONNECTIONS AT TURBINE-GENERATOR (2K1) (SEE GENERAL ELECTRIC DRAWINGS: 2135K758, 233A6530) (VP M2004-17 & M2004-18).

DWG. NO.	INSTR. NO.	PIPING & INSTRUMENT DIAGRAMS
M-2200		PIPING SYMBOLS AND DRAWING INDEX
M-2201		INSTRUMENT SYMBOLS AND IDENTIFICATION
M-2202	0200-0399	MAIN STEAM
M-2203	0400-0599	REHEAT STEAM
M-2204	0600-0799	CONDENSATE AND FEEDWATER
M-2205	0800-0999	EXTRACTION STEAM HEATER VENTS AND DRAINS
M-2206	1000-1199	STEAM GENERATOR SECONDARY SYSTEM
M-2208	9600-9799	TURBINE-GENERATOR AUXILIARY SYSTEM
M-2209	1200-1399	MAIN FEEDWATER AUXILIARY SYSTEM
M-2210	1400-1599	CIRCULATING WATER SYSTEM
M-2211	1600-1799	SERVICE WATER
M-2212	1800-1999	AUXILIARY COOLING WATER
M-2213	2000-2199	PLANT MAKEUP AND DOMESTIC WATER
M-2214	2200-2399	LIQUID RADIOACTIVE WASTE
M-2215	2400-2599	BORON MANAGEMENT
M-2216	2600-2799	GASEOUS RADIOACTIVE WASTE
M-2217	2800-2999	LUBE OIL
M-2218	3000-3199	EMERGENCY DIESEL AND FUEL OIL SYSTEM
M-2219	3200-3399	INSTRUMENT AND SERVICE AIR
M-2220	3400-3599	FIRE WATER, HALON FIRE SUPPRESSION, TURBINE CO ₂ SYSTEMS
M-2221	3600-3799	PLANT HEATING SYSTEM
M-2222	3800-3999	CHILLED WATER CONTROL ROOM ELECTRICAL AREA
M-2223	4000-4199	CHILLED WATER CONTAINMENT, AUXILIARY AND TURBINE BUILDINGS
M-2224	4200-4299	SECONDARY SAMPLING SYSTEM
M-2225	4300-4399	SOLID RADWASTE SYSTEM
M-2226	4400-4499	TURBINE BUILDING SUMP AND DOMESTIC WATER
M-2227	4400-4499	REGENERATIVE WASTE PROCESSING SYSTEM
M-2228	4400-4499	STARTUP AND BLOWDOWN DEMINERALIZER SYSTEM
M-2229	4600-4799	REACTOR COOLANT SYSTEM
M-2230	4800-4999	CHEMICAL AND VOLUME CONTROL SYSTEM
M-2231	5000-5199	SAFETY INJECTION SYSTEM
M-2232	6600-6699	REACTOR COOLANT PUMP OIL COLLECTION SYSTEM
M-2233	5200-5399	COMPONENT COOLING WATER
M-2234	5400-5599	FUEL POOL SYSTEM
M-2235	5600-5799	CONTAINMENT SPRAY SYSTEM
M-2236	5800-5999	SAMPLING SYSTEM
M-2237	6000-6199	REACTOR COOLANT PUMP CONNECTIONS
M-2238	6200-6399	HYDROGEN AND NITROGEN ADDITION SYSTEM
M-2239	6400-6599	FEEDWATER CHEMICAL FEED SYSTEM
M-2258		SEE NOTE 6
M-2259	7800-7999	AIR FLOW AND CONTROL DIAGRAM AUXILIARY BUILDING EXTENSION
M-2260	8000-8199	AIR FLOW AND CONTROL DIAGRAM TURB BLDG, SEC PLANT EQUIP AREA, MISC AREA
M-2261	8200-8399	AIR FLOW AND CONTROL DIAGRAM CONTAINMENT BUILDING
M-2262	8400-8599	AIR FLOW AND CONTROL DIAGRAM AUXILIARY BUILDING AND WASTE MANAGEMENT AREA
M-2263	8600-8799	AIR FLOW AND CONTROL DIAGRAM AUX BLDG, CONT RM, ELEC AND CLEAN LAB AREAS
M-2264	8800-8899	AIR FLOW AND CONTROL DIAGRAM CONTAINMENT PENETRATION RMS, VENT SYSTEMS
	8900-8999	AREA RADIATION MONITORS (SK-M-2266-2271)
	9000-9199	C.E. REACTOR INSTRUMENTATION
	9200-9368	G.E. INSTRUMENTS
	9369-9399	AMERTAP SYSTEM
	9400-9499	G.E. INSTRUMENTS ASSOCIATED WITH BORIC ACID CONCENTRATOR
	9500-9599	G.E. INSTRUMENTS ASSOCIATED WITH WASTE CONCENTRATOR
M-2265	9800-9999	RADIOLGICAL DOSE ASSESSMENT COMPUTER SYSTEM
M-2266		LOW LEVEL RADIOACTIVE WASTE STORAGE BUILDING AIR FLOW AND CONTROL DIAGRAM

DRAFTING NOTE
IF THIS DRAWING IS REVISED,
THEN REVISE M-200 ALSO.
(TYPICAL ALL SHEETS)

- NOTES:
- SEE ENGINEERING STANDARD GES-01 FOR P&ID FORMAT, COMPONENT REPRESENTATION AND EXPLANATION OF SYMBOLS.
 - SEE M-2200 SH.2 AND SH.3 FOR SYMBOLS (FIG.1-256).
 - VALVE POSITIONS DEPICTED ARE TYPICAL POWER OPERATION (MODE D) VALVE POSITIONS. ACTUAL VALVE POSITIONS ARE CONTROLLED BY OPERATIONAL PROCEDURES (LICENSING COMMITMENT-OCAN068809).
 - VALVE HAS 1/2 THREADED PIPE CONNECTION. TUBING IS CONNECTED VIA PIPE-TO-TUBE CONNECTOR, AND ROUTED TO NEAREST CONTAMINATED FLOOR DRAIN OR FUNNEL.
 - THE PENNANT SYMBOL (P) INDICATES THAT THE ASSOCIATED PIPING AND COMPONENTS ARE SEISMIC CATEGORY 1 PER THE REQUIREMENTS OF SECTION C-1 OF NRC REGULATORY GUIDE 1.29. THE FLAG SYMBOL (F) INDICATES THE NON-Q LISTED PIPING HAS BEEN ANALYZED AND DESIGNED TO WITHSTAND SEISMIC LOADS IN ACCORDANCE WITH SECTION C-2 OF REG. GUIDE 1.29. BY CONVENTION, THESE SYMBOLS ARE ONLY SHOWN ON UNIT 2 P&ID'S AND NOT ON UNIT 1 P&ID'S.
 - M-2258: UNIT 2 FIRE DAMPER INVENTORY.

ARKANSAS NUCLEAR ONE UNIT 2 RUSSELLVILLE, ARKANSAS		
PIPING & INSTRUMENT DIAGRAM INSTRUMENT AND COMPONENT SYMBOLS		
DRAWING NO	SHEET	REVISION
LRA-M-2200	1	0

2 BASED ON M-2200 SH 1 REV 191

RED "X" IF ORIGINAL

D-06