ABBREVIATIONS

VALVES

- HCV HAND CONTROL VALVE
- AOV AIR OPERATED VALVE
- AOD AIR OPERATED DAMPER
- MOV MOTOR OPERATED VALVE
- SOV SOLENOID OPERATED VALVE
- PCV PRESSURE CONTROL VALVE
- PRV SELF CONTAINED PRESSURE REGULATING VALVE
- LCV LEVEL CONTROL VALVE
- FCV FLOW CONTROL VALVE
- TCV TEMPERATURE CONTROL VALVE
- TRV AUTOMATIC DRAIN VALVE
- NRV NON-RETURN VALVE (LOAD)
- SV SAFETY VALVE
- RF RELIEF VALVE
- TV TRIP VALVE
- HV HAND VALVE
- CKV CHECK VALVE
- LC LOCKED CLOSED
- LO LOCKED OPEN
- EV EXPLOSIVE VALVE

INSTRUMENTATION

	FIRST POSITION	SECOND POSITION	THIRD POSITION
A		ALARM	ALARM
C	CONDUCTIVITY	CONTROL	CONTROL
D	DENSITY	DIFFERENTIAL	
E		ELEMENT	ELEMENT
F	FLOW		
G		GLASS	
H	HAND		HIGH
H2	HYDROGEN		
I		INDICATING	INDICATING
K		SQ.ROOT EXTRACT	
L	LEVEL		LOW
M	MOISTURE	MONITOR	
N	VIBRATION		
N2	NITROGEN		
O2	OXYGEN		
P	PRESSURE		
PH	PH		
Q		INTEGRATOR	
R	RADIATION	RECORDING	RECORDING
S	SPEED	SWITCH	SWITCH
T	TEMPERATURE	TRANSMITTER	TRANSMITTER
V	VISCOSITY	VALVE	VALVE
W		WELL	
X	MISCELLANEOUS	TEST POINT	
Y		ANALYZER RELAY OR MODIFIER	
Z	POSITION		

- T/C THERMOCOUPLE
- RTD RESISTANCE TEMPERATURE DETECTOR
- E/P VOLTAGE - PNEUMATIC CONVERTER
- I/P CURRENT - PNEUMATIC CONVERTER
- P/E PNEUMATIC - VOLTAGE CONVERTER
- P/I PNEUMATIC - CURRENT CONVERTER
- I/E CURRENT - VOLTAGE CONVERTER
- E/I VOLTAGE - CURRENT CONVERTER
- A/S AIR SUPPLY
- E/S ELECTRICAL POWER SUPPLY

EQUIPMENT

- D DEMINERALIZER
- E EVAPORATOR
- F FILTER
- H HEAT EXCHANGER
- P PUMP OR BLOWER
- R RECOMBINER
- T TANK
- Y MISCELLANEOUS EQUIP. SPECIALTIES
- C COIL,PREHEAT,REHEAT, COOLING
- A AIR HANDLING UNIT PACKAGE WITH COMPONENTS
- B BOILER
- S SUPPLY OR EXHAUST FAN
- G FILTER TRAIN
- W WATER REMOVAL
- M UNIT HEATER
- I REFRIGERATION UNIT
- V ROOF VENT
- EE ELECTRICAL EQUIPMENT
- ACCUM ACCUMULATOR

CONTROL SWITCH IDENTIFICATION

- SW CONTROL SWITCH-MAINTAINED CONTACTS
- SWSR CONTROL SWITCH-SPRING RETURN
- PB PUSHBUTTON-MAINTAINED CONTACTS
- PBSR PUSHBUTTON-SPRING RETURN

HVAC

- SAD SUPPLY AIR DIFFUSER
- SAR SUPPLY AIR REGISTER
- SAG SUPPLY AIR GRILLE
- RAG/RG RETURN AIR GRILLE
- RAR RETURN AIR REGISTER
- CD CIRCULAR DIFFUSER
- TR.R TRANSFER REGISTER
- TR.G TRANSFER GRILLE
- BOD BUTTOM OF DUCT
- FB BOTTOM OF DUCT KEPT FLAT
- FT TOP OF DUCT KEPT FLAT
- TH THROAT
- AD ACCESS DOOR
- FC FLEXIBLE CONNECTION
- OAI OUTSIDE AIR INTAKE
- SD SPLITTER DAMPER
- FD FIRE DAMPER
- WM WIRE MESH
- VE VOLUME EXTRACTORS
- AW WET CELL AIR WASHER
- BR/BG BOTTOM REGISTER OR GRILLE
- CR/GG CEILING REGISTER OR GRILLE
- EF EXHAUST FAN
- LD LOUVERED DOOR
- RF RECIRCULATING FANS
- SF SUPPLY FAN
- SR SUPPLY REGISTER
- SG SUPPLY GRILLE
- TR/TG TOP REGISTER OR GRILLE
- F FILTER
- HC HEATING COIL
- EHC ELECTRIC HEATING COIL
- CC COOLING COIL
- TR.R/TRG TRANSFER REGISTER OR GRILLE
- A.D. AUTOMATIC DAMPER
- FO FAIL OPEN
- FC FAIL CLOSE

PIPING MATERIAL ABBREVIATIONS

- CS CARBON STEEL
- SS STAINLESS STEEL
- RB RED BRASS

DIESEL GENERATOR

- BTPS BACKUP TURBOCHARGER OIL PRESSURE SWITCH
- COPS CIRCULATING OIL PRESSURE SWITCH
- ETC ENGINE WATER TANK CAP
- ETS ENGINE WATER TEMPERATURE SWITCH
- LOTS LOW OIL TEMPERATURE SWITCH
- LWS LOW WATER PRESSURE SWITCH
- MBI MAIN BEARING OIL PRESSURE SWITCH NO. 1
- MB2 MAIN BEARING OIL PRESSURE SWITCH NO. 2
- TC IMMERSION HEATER TEMPERATURE SWITCH
- TOPS TURBOCHARGER OIL PRESSURE SWITCH

LICENSE RENEWAL NOTES

1. THE LICENSE RENEWAL SCOPING DRAWINGS INDICATE SYSTEMS, STRUCTURES AND COMPONENTS (SSCS) IN SCOPE FOR LICENSE RENEWAL BY COLORING THE SSCS THAT ARE IN SCOPE. RED IDENTIFIES THE NON-SAFETY RELATED SSCS THAT ARE INCLUDED IN SCOPE BECAUSE THEY ARE EITHER ATTACHED AND PROVIDE STRUCTURAL SUPPORT TO SAFETY RELATED SSCS, OR THEY HAVE A POTENTIAL FOR SPATIAL INTERACTION WITH SAFETY RELATED SSCS DUE TO POSTULATED LEAKAGE OR SPRAY. GREEN IDENTIFIES THE SSCS THAT ARE REQUIRED TO PERFORM OR SUPPORT INTENDED FUNCTIONS TO MEET SCOPING CRITERIA 10CRF54.4(A)(1) OR 10CFR54.4(A)(3).

2. THE MECHANICAL SYSTEM PROCESS FLOWPATH WILL BE COLORED. SUPPLEMENTAL DRAWING INFORMATION SUCH AS COMPONENT IDENTIFICATION NAMES OR NUMBERS, LINE NUMBERS OR LINE SPECIFICATIONS, CLASS BREAKS, INSTRUMENT LOCATION INFORMATION, ETC, WILL NOT BE COLORED.

3. THE SITE PLAN LICENSE RENEWAL SCOPING DRAWING (LR-JC-19702) IS ADEQUATE TO IDENTIFY THE PLANT STRUCTURES IN SCOPE FOR LICENSE RENEWAL. THE ELECTRICAL SINGLE LINE LICENSE RENEWAL SCOPING DRAWING (LR-BR-3000) IDENTIFIES THE MAJOR POWER DISTRIBUTION EQUIPMENT IN SCOPE FOR LICENSE RENEWAL. ALL OTHER LICENSE RENEWAL SCOPING DRAWINGS WERE DEVELOPED FROM PLANT FLOW DIAGRAMS, AND IDENTIFY THE MECHANICAL SYSTEMS AND EQUIPMENT IN SCOPE FOR LICENSE RENEWAL.

4. INSTRUMENTATION TUBING, UP TO AND INCLUDING THE ASSOCIATED INSTRUMENTS CONNECTED TO THE IN SCOPE PRESSURE BOUNDARY PIPING, WILL BE COLORED AS IN SCOPE EVEN IF THE ASSOCIATED INSTRUMENT IS ACTIVE AND THEREFORE NOT SUBJECT TO AGING MANAGEMENT REVIEW.

5. CONTROL SCHEME REPRESENTATIONS THAT APPEAR ON THE LICENSE RENEWAL SCOPING DRAWINGS ARE NOT COLORED AS IN SCOPE. CONTROL SCHEME COMPONENTS IN SCOPE FOR LICENSE RENEWAL ARE EITHER ACTIVE OR ARE INCLUDED WITH ELECTRICAL COMMODITIES FOR APPLICABLE AGING MANAGEMENT REVIEW.

6. LICENSE RENEWAL SCOPING DRAWINGS USE THE EXISTING PLANT FLOW DIAGRAM NUMBERS, PREFIXED BY "LR-". CONTINUATION ARROWS THAT APPEAR ON THE LICENSE RENEWAL SCOPING DRAWINGS USE PLANT FLOW DIAGRAM NUMBERS, SO IT IS NECESSARY TO PREFIX THE DRAWING NUMBER WITH "LR-" TO IDENTIFY THE APPROPRIATE INTERFACING LICENSE RENEWAL DRAWING.

7. SYSTEM BOUNDARIES BETWEEN IN SCOPE SYSTEMS ARE IDENTIFIED WITH BOUNDARY FLAGS ON THE LICENSE RENEWAL SCOPING DRAWINGS. THE LICENSE RENEWAL SYSTEMS TABLE (SHOWN ON THIS DRAWING) IDENTIFIES THE LICENSE RENEWAL SYSTEM NAMES, AND THE ABBREVIATED SYSTEM CODES USED WITH THE SYSTEM FLAG IDENTIFICATION. THE TYPICAL BOUNDARY FLAG DETAIL (SHOWN ON THIS DRAWING) PROVIDES A TYPICAL EXAMPLE OF A LICENSE RENEWAL SYSTEM BOUNDARY FLAG.

8. BOUNDARY FLAGS MAY NOT BE INCLUDED IN THE FOLLOWING CASES WHERE THE BOUNDARY INTERFACE IS:
   - INTERFACE BETWEEN A MECHANICAL PIPING SYSTEM AND THE REACTOR VESSEL - THE INTERFACE OCCURS WHERE THE PIPING SYSTEM CONNECTS TO THE REACTOR VESSEL NOZZLE.
   - INTERFACE BETWEEN A PNEUMATIC AIR SUPPLY LINE AND AN AIR OPERATED VALVE OPERATOR.
   - INTERFACE BETWEEN MECHANICAL SYSTEMS AND STRUCTURES, SUCH AS BUILDING OR WALL PENETRATIONS, PRIMARY CONTAINMENT PENETRATIONS, OR PENETRATIONS WITH THE MAIN VENTILATION STACK.
   - INTERFACE BETWEEN A MECHANICAL SYSTEM AND A FLOOR OR EQUIPMENT DRAIN - THE INTERFACE IS INDICATED WITH TEXT INDICATING THE INTERFACE IS TO A DRAIN, OR BY USE OF A DRAIN SYMBOL.

9. SOME FLOW DIAGRAMS SHOW INTERFACING SYSTEMS AND EQUIPMENT THAT IS NOT CONSIDERED PART OF THE PRIMARY SYSTEM SHOWN ON THE DRAWING. THIS INFORMATION IS PROVIDED TO MAKE THE FLOW DIAGRAMS EASIER TO UNDERSTAND. THE INTERFACING SYSTEMS AND EQUIPMENT ARE PROVIDED AS BACKGROUND INFORMATION (SHOWN WITH DASHED LINES) BECAUSE THEY ALSO APPEAR ON THEIR OWN RESPECTIVE FLOW DIAGRAMS. THIS BACKGROUND INFORMATION WILL BE COLORED AS APPROPRIATE TO CLEARLY INDICATE SCOPE.

10. SCOPING OF PIPING INSULATION IS NOT SHOWN ON THE LICENSE RENEWAL SCOPING DRAWINGS. INSULATION INCLUDED IN SCOPE IS IDENTIFIED IN THE LICENSE RENEWAL APPLICATION.

11. SOLENOID VALVES THAT ARE IN SCOPE FOR LICENSE RENEWAL BUT DO NOT HAVE A PASSIVE PRESSURE BOUNDARY FUNCTION WILL NOT BE COLORED. THIS AVOIDS CONFUSION, AS THE INTERCONNECTING TUBING IN THESE APPLICATIONS IS NOT IN SCOPE.

12. IN MANY CASES, THE PLANT FLOW DIAGRAMS DO NOT PROVIDE THE LEVEL OF DETAIL TO SHOW ALL INSTRUMENT VALVES SUCH AS ROOT VALVES, DRAIN AND VENT VALVES, BLOCK VALVES, EQUALIZATION VALVES, ETC. FOR INSTRUMENTATION ASSOCIATED WITH PROCESS PIPING IN SCOPE FOR LICENSE RENEWAL, THESE INSTRUMENT VALVES ARE ALSO INCLUDED IN SCOPE EVEN THOUGH NOT EXPLICITLY IDENTIFIED ON THE LICENSE RENEWAL SCOPING DRAWINGS.

13. THIS DRAWING IS BASED ON BR 2001 SHEET 2 REVISION 16.

License Renewal Systems

License Renewal System Name	System Code	Scoping Drawing Reference- Primary System Drawings in Bold Drawing Number Suffix (-1,-2, etc.) Indicates Sheet Numbers for Multiple Sheet Drawings.
"C" Battery Room Heating & Ventilation	CBRV	**LR-BR-2009-1**
4160V Switchgear Room Ventilation	4KVV	**LR-BR-2009-1**
480V Switchgear Room Ventilation	SGRV	**LR-BR-2010-3**
Battery and MG Set Room Ventilation	BMGV	**LR-BR-2010-5**
Chlorination System	CL2	**LR-FP-SE-5419**,LR-BR-2005-4,6
Circulating Water System	CW	**LR-BR-2005-6**
Condensate System	CND	**LR-BR-2003-1**,LR-GE-148F437-12,LR-GE-148F444,LR-JC-147434-1
Condensate Transfer System	CT	**LR-BR-2004-2**,LR-BR-2003-1,LR-BR-2004-1,LR-BR-2007-2,3,LR-GE-148F444, LR-GE-237E487,LR-GE-237E756,LR-GE-885D781,LR-JC-147434-1,LR-JC-19479-3
Containment Inerting System	CI	**LR-SN-13432.19-1**,LR-BR-2011-2,LR-GU-3E-243-21-1000
Containment Spray System	CS	**LR-GE-148F740**,LR-BR-2005-4,LR-GU-3E-243-21-1000
Containment Vacuum Breakers	CVB	**LR-GU-3E-243-21-1000**,LR-BR-2004-1
Control Rod Drive System	CRD	**LR-GE-197E871,LR-GE-237E487**,LR-BR-2004-2,LR-GE-148F712
Control Room HVAC	CRV	**LR-BR-2010-4**
Core Spray System	CSS	**LR-GE-885D781**,LR-BR-2004-2,LR-BR-M0012,LR-GE-148F712,LR-GU-3E-243-21-1000
Drywell Floor and Equipment Drains	DFED	**LR-JC-147434-2,3** LR-BR-2002-1,LR-GE-107C5339,LR-GE-148F444,LR-GE-237E756, LR-GE-237E798
Emergency Diesel Generator and Auxiliary System	EDG	**LR-GU-3E-861-21-1000**,LR-GU-3E-861-21-1001,LR-GU-3E-861-21-1002, LR-GU-3E-862-21-1000
Emergency Service Water System	ESW	**LR-BR-2005-4**,LR-BR-2005-2
Feedwater System	FW	**LR-BR-2003-1**
Fire Protection System	FP	**LR-JC-19479-1,2,3,LR-JC-19629-1,2**,LR-BR-2004-2,LR-GE-885D781
Hardened Vent System	HV	**LR-SN-13432.19-1**
Heating & Process Steam System	HPS	**LR-BR-2015-2,3,4,6**
Hydrogen & Oxygen Monitoring System	HOM	**LR-GU-3E-666-21-1000**,LR-BR-M0012,LR-GU-3E-243-21-1000,LR-OC-010520
Instrument (Control) Air System	IA	**LR-BR-2013-5,6,7**,LR-BR-2002-1,2,LR-BR-2004-2,LR-BR-2011-2 LR-GU-3E-243-1000,LR-GU-3E-822-21-1000,LR-SN-13432.19-1,LR-GE-148F732
Isolation Condenser System	IC	**LR-GE-148F262**,LR-BR-2002-2,LR-BR-2004-2
Main Condenser	MC	**LR-BR-2002-3**,LR-BR-2002-2,4,LR-BR-2007-1,2,LR-BR-2008-1,LR-BR-2005-6,LR-BR-2003-1
Main Fuel Oil Storage & Transfer	FO	**LR-BR-2015-5**,LR-BR-2015-3
Main Generator and Auxiliary Systems	MGA	**LR-GE-234R166,LR-GE-865D741**
Main Steam System	MS	**LR-BR-2002-1,2**,LR-BR-2008-1,LR-GE-148F712,LR-GE-713E802,LR-JC-19616
Main Turbine and Auxiliary Systems	MTA	LR-BR-2002-2,3,4,LR-BR-2007-1,2,3,4,LR-BR-2014-1,LR-GE-713E802,LR-SN-13432.19-1
Miscellaneous Floor and Equipment Drain System	MFED	**LR-JC-147434-2,3**,LR-BR-2006-5,LR-BR-2007-1,3,LR-BR-2015-6,LR-GE-148F437-2,12
Nitrogen Supply System	NS	**LR-SN-13432.19-1**,LR-BR-2013-6
Noble Metals Monitoring System	NMM	**LR-GE-148F444**
Nuclear Boiler Instrumentation	NBI	**LR-GE-148F712**,LR-GE-237E798
Post-Accident Sampling System	PASS	**LR-BR-M0012**,LR-GE-148F723
Process Sampling System	PS	LR-BR-2002-2,LR-BR-2003-1,LR-BR-2004-1,LR-BR-M0012,LR-GE-148F444, LR-GU-3E-551-21-1000,LR-GU-3E-551-21-1001
Radiation Monitoring System	RMS	**LR-GU-3E-666-21-1000**
Radwaste Area Heating and Ventilation System	RV	**LR-BR-2012-1**,LR-BR-2009-2
Reactor Building Closed Cooling Water System	RBCW	**LR-BR-2006-1**,2,3,5,7,LR-BR-M0012,LR-GE-107C5339,LR-GE-148F444, LR-GU-3E-551-21-1001,LR-JC-147434-2
Reactor Building Floor and Equipment Drains	RFED	**LR-JC-147434-2,3**,LR-BR-2002-2,LR-BR-2006-1,LR-BR-M0012,LR-GE-148F262, LR-GE-148F437-2,LR-GE-148F444,LR-GE-148F711,LR-GE-197E871,LR-GE-237E487, LR-GE-237E756,LR-GE-885D781
Reactor Building Ventilation System	RBV	**LR-BR-2011-2**,LR-BR-2009-2,LR-GU-3E-243-21-1000
Reactor Head Cooling System	RHC	**LR-GE-237E487**,LR-BR-2002-1
Reactor Recirculation System	RR	**LR-GE-237E798**,LR-BR-M0012,LR-GE-107C5339,LR-GE-148F262,LR-BR-2006-5
Reactor Water Cleanup System	RWCU	**LR-GE-148F444**,LR-BR-2003-1,LR-BR-2004-2,LR-BR-2013-6,LR-GE-237E798, LR-GU-3E-243-21-1000
Roof Drains and Overboard Discharge System	RDOD	**LR-BR-2005-2**
Service Water System	SW	**LR-BR-2005-2,4,6**,LR-FP-SE-5419
Shutdown Cooling System	SDC	**LR-GE-148F711**,LR-BR-2006-2,LR-BR-2015-2,LR-BR-M0012,LR-GE-237E798
Spent Fuel Pool Cooling System	SFPC	**LR-GE-237E756**
Standby Gas Treatment System	SGTS	**LR-GU-3E-822-21-1000**,LR-BR-2011-2
Standby Liquid Control System	SLC	**LR-GE-148F723**,LR-GE-148F712
Traveling In-Core Probe System	TIP	**LR-SN-13432.19-1**
Turbine Building Closed Cooling Water System	TBCW	**LR-BR-2006-4,5**,LR-GE-234R166,LR-GU-3E-551-21-1000,LR-JC-19479-3
Water Treatment & Distribution System	WT	**LR-BR-2004-1**,LR-BR-2006-1,5,LR-BR-2015-4,LR-GE-148F723, LR-GE-234R166,LR-GU-3E-871-21-1000-1,2

TYPICAL BOUNDARY FLAG DETAIL

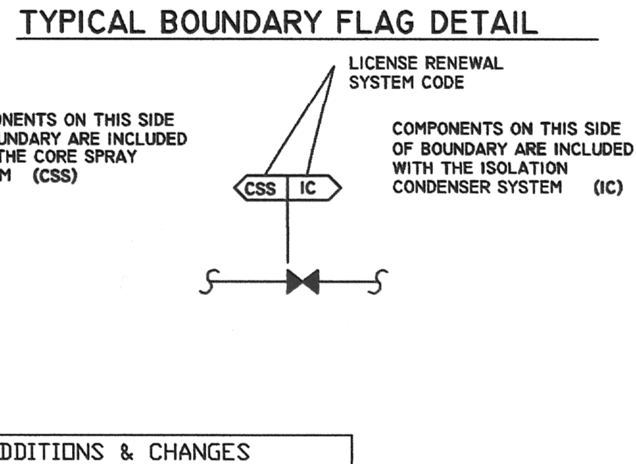

TABLE OF ADDITIONS & CHANGES

NO	DATE	DESCRIPTION	REV'D	CHK'D	APP'D
0	7 22 05	INITIAL ISSUE FOR LICENSE RENEWAL	JNV	MJM	KPM

MECHANICAL

LICENSE RENEWAL SCOPING DRAWING MECHANICAL NOTES & ABBREVIATIONS

OYSTER CREEK
AmerGen

SHEET 2 OF 2 LR-BR-2001 REV 0

DWG. NO. LR-BR-2001 SH. 2 OF 2

D03