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April 25, 1979

Mr. Olan D. Parr, Chief
Light Water Reactors - Branch No. 3
Division of Project Management
U.S. Nuclear Regulatory Commission
Washington, D. C. 20555

Subject: Reevaluation of Equipment Qualification
for Seismic and Hydrodynamic Loads -
LaSalle County Station, Units 1 and 2
NRC Docket Nos. 50-373 and 50-374

Reference (a): R. S. Boyd letter to B. Lee, Jr.
dated February 23, 1979.

Dear Mr. Parr:

In response to the discussion and request for information contained in Reference (a), Commonwealth Edison has participated along with the other designated "Mark II Lead Plants" in discussions with the NRC Staff to resolve the issues raised in the referenced letter. A meeting was held on April 10, 1979 with Mr. R. Bosnak and other members of the Mechanical Engineering Branch, as well as Mr. A. Bournia of your staff to review the approach proposed to be taken for LaSalle County and the other Lead Plants to resolve the issue of dynamic qualification.

After lengthy discussion, the utility position with which Commonwealth Edison agrees, was summarized as follows:

1. Much of the qualification review is now complete.
 - A. The ROP equipment evaluation for the three lead plants is nearing completion, with IEEE-344 (1975) as the standard.
 - B. All NSSS equipment has been evaluated against original design criteria.

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- C. Although the record search has not been completed, it is judged that much of the NSSS equipment can be shown to meet IEEE-344 (1975) by reference to qualifications on equipment in other product lines.
 - D. In-Situ testing is currently planned for both Zimmer and LaSalle County Stations. These tests should preclude the need for further in situ confirmatory testing.
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- 2. An audit of the General Electric dynamic qualification records for NSSS equipment should be conducted as soon as possible: (A) to verify to the satisfaction of the NRC Staff that the requirements of IEEE-344 (1971) have been satisfied, and (B) to determine what additional effort is required to complete the reevaluation of the NSSS equipment.
 - 3. The lead plants will transmit to the NRC a list of all Category I equipment by April 25, 1979, identifying which items are required for safe-shutdown, based upon the scenarios submitted on the individual lead plant dockets (See Attachment).
 - 4. The lead plants are dedicated to the prompt resolution of the issue of dynamic qualification. In this regard the lead plants judge that reasonable requirements in advance of receipt of an operating license would be limited to:
 - A. Demonstration that BOP equipment satisfies the 1975 standards.
 - B. Demonstration that NSSS equipment satisfies the 1971 standards.
 - C. Identification of those NSSS components which meet the 1975 standards by reference to other components qualified more recently.
 - D. Identification of a defined action plan, with schedular milestones for the reevaluation of the balance of NSSS equipment.

- E. Demonstration of utility commitment by completion of those milestones scheduled prior to fuel load.

Specifically, the balance of plant equipment has been reviewed against the IEE E 344-1975 criteria. The results of that review are included in Table 3.9-37 of the LaSalle FSAR. This evaluation is continuing; it is expected that additional qualification data will be provided as it becomes available. The loads against which the equipment were evaluated includes those utilized in the MK II containment evaluation (Table 3.9-25) as approved under the Kennedy/Newmark criteria for structures, piping systems, and equipment. These include the seismic and hydrodynamic loads outlined in Reference (a).

For LaSalle, the NSSS "new loads" assessment has been completed, and these same MK II-approved loading combinations were used to assess the adequacy of the NSSS equipment. The NSSS equipment was qualified to the IEEE 344-1971 criteria as a condition of the purchase specifications prior to the promulgation of the 1975 standard. Subsequent to the definition of the hydrodynamic loads and an acceptable load combination scheme, the LaSalle NSSS equipment, RPV, and piping were re-evaluated. Although an entire records search of the results has not been completed, it is believed that all of the NSSS equipment meets the 1971 criteria and that most of it can qualify under the 1975 criteria by reference to BWR-6, BOP, or other vendor qualification efforts on similar equipment. The audit of the NSSS equipment records to be conducted the week of May 14, 1979 at San Jose will validate the qualification basis via the records and identify what, if any, additional qualification efforts are needed. The LaSalle FSAR includes NSSS seismic qualification data in Tables 3.9-2 through 3.9-22 and in Table 3.9-37 for mechanical equipment; for electrical equipment and instrumentation, the seismic qualification summary is shown in Tables 3.10-1 through 3.10-4. Corresponding text in FSAR Sections 3.9 and 3.10 explains these tabular summaries.

To further assist the NRC Staff review, the following additional information is provided separately:

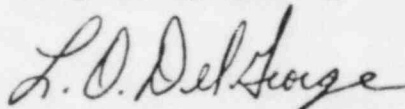
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1. The compilation of bounding floor response spectra for the MK II approved loading combinations covering the locations where seismic category 1 equipment is mounted.
2. A list of all seismic category 1 equipment (See Attachment).
3. The LaSalle safe shutdown scenario included in Amendment 45 in response to Question 111.74.

Upon the conclusion of the NRC audit of NSSS equipment scheduled for May, 1979 and the other information delineated above, the NRC can proceed with the LaSalle County SQRT audit without further delay. Furthermore, it is judged that a management level meeting with the NRC should be scheduled for May 1979 after the NSSS audit in order to better define the scope of the reevaluation process. Your assistance in setting a date for such a meeting would be appreciated.

If you have any questions, please direct them to this office.

Very truly yours,



L. O. DelGeorge
Nuclear Licensing Administrator

LA SALLE COUNTY STATION

LIST OF BOP SAFETY-RELATED EQUIPMENT

TAG NOS.	EQUIPMENT NAME	QUALIFICATION METHOD	REQUIRED FOR SHUTDOWN	LOCATION	AVAILABLE FOR INSPECTION
1PM01J, to 07J, 10J,13J,16J 0PM11J,12J	Main Control Boards	Dynamic Analysis		Aux. Bldg. 768'-0"	Yes
1PM01J,04J 1H13-P601,604, 607,636	Door & Closure Connecting Sections	Dynamic Analysis	COLD	Aux. Bldg. 768'-0"	Yes
	G.E. Type 180 Vertical Indicator	Test: Single Axis, Single Frequency			
	Westronics M11E Temperature Recorder	Test: Single Axis, Single Frequency		Aux. Bldg. 768'-0"	Yes
	G.E. Type SBM Control Switch	Test: Single Axis, Single Frequency		Aux. Bldg. 768'-0"	Yes
	G.E. CR2940 Push-button & Selector Switches	Test: Single Axis, Single Frequency		Aux. Bldg. 768'-0"	Yes
	G.E. ET-16 Indicating Lights			Aux. Bldg. 768'-0"	Yes
	Westinghouse Type FT-1 Test Switches				
	Westinghouse Type S-14 Lamps			Aux. Bldg. 768'-0"	Yes
1DC01E	250 VDC Battery	Test: Bi-Axial, Multi-Frequency,		Aux. Bldg. 710'-6"	Yes
1DC07E,14E	125 VDC Battery 1A,1B	Random Motion	COLD	Aux. Bldg. 731'-0"	Yes
1DC31E to 34E	24 VDC Battery 1A,B C,D; 2A,B,C,D			Aux. Bldg. 749'-0"	Yes
ODC04E	250 VDC Battery Charger Spare	Test: Bi-Axial, Multi-Frequency,		Aux. Bldg. 710'-6"	No
ODC17E	125 VDC Battery Charger Spare	Random Motion		Aux. Bldg. 731'-0"	No
1DC03E	250 VDC Battery Charger 1			Aux. Bldg. 710'-6"	Yes

TAG NOS.	EQUIPMENT NAME	QUALIFICATION METHOD	REQUIRED FOR SHUTDOWN	LOCATION	AVAILABLE FOR INSPECTION
1DC09E, 16E	125 VDC Battery Charger 1A&1B			Aux. Bldg. 731'-0"	Yes 16E Not Mounted
1DC35E to 38E	24 VDC Battery Charger 1A,B,C,D			Aux. Bldg. 749'-0"	Yes
	G.E. Type AB40: Synchroscope Voltmeter Ammeter Wattmeter Varmeter	Test: Single Axis, Single Frequency		Aux. Bldg. 768'-0"	Yes
	Westronics Type 511E Recorder			Aux. Bldg. 768'-0"	Yes
	Leeds & Northrup Freq. Transducer			Aux. Bldg. 768'-0"	Yes
	G.E. Type JVA-0 Transducer			Aux. Bldg. 768'-0"	Yes
	Westinghouse Type 3G Relay			Aux. Bldg. 768'-0"	Yes
	Scientific Columbus AMP Transducer CT-S10A2 Watt Trans ducer XL31KSA2 Type XLV51K5A-2-4 Var. Transducer	Test: Single Axis, Single Frequency		Aux. Bldg. 768'-0"	Yes
	G.E. Type DSW-63 Watthour Meter			Aux. Bldg. 768'-0"	Yes
	G.E. Type PD-55F Printing Demand Meter			Aux. Bldg. 768'-0"	Yes
	G.E. Type C16 Clock			Aux. Bldg. 768'-0"	Yes
	G.E. Type SST-3 Totalizer			Aux. Bldg. 768'-0"	Yes
	G.E. Type MR-3 ISO. Relay			Aux. Bldg. 768'-0"	Yes
	G.E. Type S-7 Current. Sens. Re- lay			Aux. Bldg. 768'-0"	Yes

TAG NOS.	EQUIPMENT NAME	QUALIFICATION METHOD	REQUIRED FOR SHUTDOWN	LOCATION	AVAILABLE FOR INSPECTION
1PA13J, 14J	G.E. Type R-10 Load Relay			Aux. Bldg. 768'-0"	Yes
	Westronics M11E Temp. Recorder				Yes
	Westronics T4E Recorder NSSS Isol. Logic Aux. Rel. Cabinet				
1AP01E, 02E, 08E, 09E	6900 (7-5 KV) Vac. Switchgear (15HKS.G (I.T.E.))			Aux. Bldg. "01E, 08E" 710'-6" "02E, 09E" 731'-6"	Yes
1AP03E, 04E, 05E, 06E	4160 (4.16KV) Vac. Switchgear (I.T.E)		COLD	Aux. Bldg. 04E 710'-5" 06E 731'-6"	Yes
01DG01K	Non. Seg. Phase Bus Ducts				
	Stewart & Stevenson Standby Diesel Generator	Dynamic Analysis	COLD	Aux. Bldg. 710'-6"	Yes
0, 1DG02JA, 02JB, 03J	Generator Engine Control Panels	Test: Bi-Axial, Multi-Frequency, Random Motion	COLD	Aux. Bldg. 710'-6"	Yes
0, 1DG04J	Transformer Panels	Test: Bi-Axial, Multi-Frequency, Random Motion	COLD	Aux. Bldg. 710'-6"	Yes
0, 1DG01A	Diesel Generator Cooler			Aux. Bldg. 710'-6"	Yes
0, 1DG01D	Diesel Silencer			Aux. Bldg. 710'-6"	Yes
0DG01P	Diesel Cooling Water Pump			Aux. Bldg. 710'-6"	Yes

TAG NOS.	EQUIPMENT NAME	QUALIFICATION METHOD	REQUIRED FOR SHUTDOWN	LOCATION	AVAILABLE FOR INSPECTION
0,1DG01S	Diesel Air Compressor			Aux. Bldg. 710'-6"	Yes
0,1DG02F	DG-0 Intake Air Filter/Silencer			Aux. Bldg. 710'6"	Yes
0,1DG05J	Standby Eng. Terminal Box		COLD	Aux. Bldg. 710'-6"	Yes
0,1DG06J	Standby Exc. Fld. Terminal Box		COLD	Aux. Bldg. 710'6"	Yes
0,1DG07J	Standby Gen. Sp. Htr. Terminal Box		COLD	Aux. Bldg. 710'-6"	Yes
	Eagle Timer-HP5 Series	Test: Single Axis, Single Frequency			
1AP19E,20E,21E,22E	480 Volt Unit Substations (G.E.)	Test: Single Axis, Multi-Frequency Sweep	COLD	Aux. Bldg. "19E,20E" 710'-0"	Yes
				"21E,22E" 731'-0"	Yes
	1000 KVA Dry-Type Transformer (480 V Unit Subs. Transf.) (G.E.)	Test: Bi-Axial, Multi-Frequency,		Aux. Bldg. "19E,20E" 710'-0"	No
				"21E,22E" 731"-0"	
1AP71E	RX Bldg. 480 Vac. PP	Test: Bi-Axial Single Frequency	COLD	Reactor Bldg. 761'-0"	No
1AP72E,73E,80E,81E	Aux. Bldg. 480 Vac. Motor Control Center	Test: Bi-Axial, Single Frequency	COLD	Aux. Bldg. "72E,73E" 710'6"	Yes
				"80E,81E" 731'-0"	Yes
1AP75E,76E,78E,82E,83E	RX. Bldg. 480 Vac. Motor Control Center	Test: Bi-Axial, Single Frequency	COLD	Reactor Bldg. "75E,83E" 740'-0"	75E No
				"76E,82E" 710'-6"	Yes
				"78E 820'-6"	Yes

TAG NOS.	EQUIPMENT NAME	QUALIFICATION METHOD	REQUIRED FOR SHUTDOWN	LOCATION	AVAILABLE FOR INSPECTION
1DC02E	250 VDC Distr. " Bus. 1	Test: Bi-Axial, Single		Aux. Bldg. 710'-6"	Yes
1DC06E	250 VDC Motor Control Center			Reactor Bldg. 694'-6"	Yes
1DC08E, 15E	125VDC Distr. Bus 1A, B			Aux. Bldg. 08E 710'-6"	Yes
				15E 710'-0"	Yes
1DC11E, 13E	125 VDC Distr. Panel		COLD	11E	Yes
1DC39E, 40E	48/24 VDC Distr. Panel			Aux. Bldg. 749'-0"	Yes
OPM17J	138 KV Control Panel				
1PLF5J, 6J	Supp. Pool Temp. Monitoring				
1PLF7J, 8J	Containment Mont. System ESS-1&2				
1PL17J	Standby Gas Treatment Control Panel			Reactor Bldg. 786'-6"	No
1S33-S301, 302	Recirc. Motor (A&B) Elect. Penetration	Combined Static Analysis & Dynamic Analysis		Reactor Containment 786'-6"	No
1C51-S301 to S304 1C11-S301 to S304	Neutron Mon. NA Elect. Penetration	Min. Nat. Freq.=7.7 Hz Test: Proof Test of Bushing Included			No
1AP96E to 99E	Low Volt. Pwr. (A&D) Elec. Penetration				No
1LV94E & 95E	Instru. (A to B) Elec. Penetration & LV Contr. (A to D) Elec. Pen.				No

TAG NOS.	EQUIPMENT NAME	QUALIFICATION METHOD	REQUIRED FOR SHUTDOWN	LOCATION	AVAILABLE FOR INSPECTION
1VP05E to 10E	Cont. Vess. Personnel & Escape Locks Lighting & Com. Pen.	Static Analysis Min. Nat. Freq. From Search Test = 37.4 Hz			
OPL15J, 16J, 42J, 43J, 1PL27JA, B OPA09J, 10J	HVAC Control Panels Free Standing	Static Analysis (Rigid Panels) Dynamic Analysis (Flex. Panels) Min. Nat. Freq.=10.6Hz		Aux. Bldg. "15J, 16J, 42J, 43J, 786'-6" "27JA, 27JB" 815'-0" "09J, 10J"	Yes Yes
OPL17J 1PL24J, 25J, 29J, 30J, 31J, 32J, 33J, 34J, 35J, 73J, 74J	HVAC Control Panels Wall Mounted			Aux. Bldg. "17J, 24J, 25J, 73J, 74J" "736'-6" "29J" 710'-6" "30J" 731'-0" "31J" 749'-0" Reactor Bldg. "32J to 35J 690'-0"	Yes Yes Yes Yes Yes
	Time Delay Relays Agastat Model 7012AD	Test: Bi-Axial, Multi-Frequency, Random Motion			
	Control Relay G.E. Models HFA51A49 HMA11B11				
	Control Switch SRM Model 103 (G.E.)				
	Differential Pressure Switch Solon Model 7PS11ADW				

TAG NOS.	EQUIPMENT NAME	QUALIFICATION METHOD	REQUIRED FOR SHUTDOWN	LOCATION	AVAILABLE FOR INSPECTION
	<p>Love Controller Model #54</p> <p>Pressure Switch Solon Model 7PS</p> <p>RTD Weed 601-1-A-3-C-6-2-1</p> <p>Limit Switch By NAMCO</p> <p>Damper Motors I.T.T. AH95 & 91</p> <p>Smoke Detector Pyrotronics Model CDA-2</p> <p>Chlorine Detector Wallace Mernan Model 15-125</p> <p>Temperature Switch United Electric 300 Series 103</p> <p>Solenoid Valves ASCO 8320</p> <p>Low Range Diff. Pressure Transmitter Hays 252A</p> <p>Power Supplies Kepco PCX-72-03</p> <p>Thermocouple Alarms Transmission 610A</p> <p>Pressure Gauge Dwyer 2000</p> <p>Signal Invertors Rochester SC-1300 & SC-300</p> <p>Elec. Humidstat Penn W-43A</p>				

TAG NOS.	EQUIPMENT NAME	QUALIFICATION METHOD	REQUIRED FOR SHUTDOWN	LOCATION	AVAILABLE FOR INSPECTION
	SCR Controller Rubicon Series 425				
	High Temp. Stat. Penn AL9				
	High Temp. Indicator G.E. DB40, 4-20 mrdc				
	Resistance Temp. Det. Powers 981-661 981-344				
	Elec. Humidity Transmitter				
	Pilot Lights G.E. H-3500				
Control Rm. HVAC, D-G Rm. Vent, Elec. Equip HVAC, Laboratory HVAC, Rad'te Facil. HVAC, P.C. HVAC, Reactor Bldg. HVAC, ESSC Equip. Cooling	Opposed Type, Butterfly, Gravity Shutter Dampers	Static Anal- ysis			
	HVAC Damper Opera- tors	TEST: Bi-Axial, Multi-frequency random motion			
1E12-D301A,B,C 1E21-D302 1E22-D302	24" Suppression Suction Strainers	Static Coeffi- cient Analy- sis	COLD	Suppression Pool	No
1PT-CM055 1PT-CM056	Pressure Trans- mitter 'Rosemount' Models 1151DPSA & 1152DPSA	Test: Bi-Axial Multi-Fre- quency, Random Motion		Local	No
1LSDO-003,004, 010,011 0LSDO-003,004	Liquid Level Con- trol 'Magnetrol' Model A153	Test: Bi-Axial Multi-Fre- quency, Random Motion		Local	No
1LSH-HG024 1LSL-HG025	Liquid Level Con- trol 'Magnetrol' Model 291	Test: Bi-Axial Multi-Fre- quency Random Motion		Local	No

TAG NOS.	EQUIPMENT NAME	QUALIFICATION METHOD	REQUIRED FOR SHUTDOWN	LOCATION	AVAILABLE FOR INSPECTION
	Differential Pres-Gage 'ITT-Barton' Model 227-80984	Test: Bi-Axial Multi-Frequency Random Motion		Local	No
1G33-D300A,B,C 1D009M,10M	2" Diesel Oil System Strainers	Static Coefficient Analysis Nat.Freq.= 206 Hz		Diesel Generator Room	Yes
1IN09MA,B	Instr. Nitrogen Manifolds			Local	No
1E51-D300	Supp. Pool Suction Strainers			Supp. Pool	No
1D002T	30,000 Gal. Diesel Fuel Storage Tank	Static Coefficient Nat. Freq. = 17.27 Hz		Aux. Bldg 710'-6"	Yes
OD001T 1D001T	40,000 Gal. Diesel Fuel Storage Tank	Static Analysis Nat. Freq. = 195.2 Hz		Aux. Bldg 710'-6"	Yes
OVC02AA & AB OVE02AA & AB	C.R. Coil Cabinets Aux. Elec. Equip. Rm. Coil Cabinets	Static Analysis for Heat Exchanger Components Nat. Freq. = 34.5 Hz Airfoil Dampers: Test: Bi-Axial Multi-Freq. Rand. Motion		Aux. Bldg. 786'-6"	Yes
1VY01A to 04A	CSCS Equip. Area Cooling Coil Cabinets	Static Analysis for Heat Exchangers Components Cabinet Nat. Freq. = 35.7Hz Airfoil Dampers: Bi-Axial, Multi-Freq. Random Motion Test	COLD	Reactor Bldg. 694'-6"	Yes
1VG01S	SGTS Equipment Train (Filter Units)	Static Analysis Min. Nat. Freq. = 21 Hz		Reactor Bldg. 820'-6"	Yes

TAG NOS.	EQUIPMENT NAME	QUALIFICATION METHOD	REQUIRED FOR SHUTDOWN	LOCATION	AVAILABLE FOR INSPECTION
1VG01C,02C	SGTS Primary Fan & Cooling Fan	Static Analy- Nat. Freq. = 45 Hz		Reactor Bldg. 820'-6"	Yes
1VG01A	SGTS Elect. Htg. Coil HEPA Filters	Static Analysis		"	"
	Charcoal Absorbers	Static Analysis			
	Deluge System	Static Analysis			
	Moisture Separator Prefilter				
	Temperature Indi- cator Mounting				
	Temperature Switch				
	Pressure Differen- tial Transmitter 'Rosemount' Model 1152	Test: Single Axis, Single Freq.			
	Pressure Differen- tial Switch				
	Temperature Trans- mitter 'Rosemount' Model	Test: Single Axis Single Freq.			
OVC01SA,SB	Control Rm. HVAC Emerg. Make-up Fil- ter Unit	Static Analy- sis Min. Nat. Freq.=25 Hz		Aux. Bldg. 802'-0"	Yes
C03CA,B	Control Rm. HVAC Emerg. Make-up Air Fan			"	"
OVC01FA,B	Control Rm. HVAC Supply Air Filter Unit	Static Analysis Min. Nat. Freq. = 29 Hz		Aux. Bldg. 786'-6"	Yes
	Charcoal Adsorber Deluge System Prefilter Pressure Differen- tial Switch				

TAG NOS.	EQUIPMENT NAME	QUALIFICATION METHOD	REQUIRED FOR SHUTDOWN	LOCATION	AVAILABLE FOR INSPECTION
OVCO1AA,B	Control Rm. HVAC Emerg. Make-up Air Filter HTG Coil Electric Heater Prefilter Moisture Separator Hepa Filter Charcoal Adsorber Cooling Fan Deluge System Temperature Indica- tor Mounting Temperature Switch Pressure Differen- tial Transmitter Pressure Differen- tial Switch	Static Analysis		Aux. Bldg. 802'0"	Yes
OVE01FA,B	Aux. Elec. Equip. Rm. HVAC Supply Air Filter Unit Charcoal Adsorber Deluge System Prefilter Pressure Differen- tial Transmitter Pressure Differen- tial Switch	Static Analysis Min. Nat. Freq = 28.2 Hz		Aux. Bldg. 786'-6"	Yes
OPLB9JA&B	'VC','VE','VG' SYS Filter Trains A&B Pot Power SPLY Panel			Aux. Bldg. 786'-6"	No
1VR08Y to 14Y	Steam Tunnel Check Dampers & Limit Control Switches 'NAMCO'	Dampers: Static Analy- sis Min. Nat. Freq. = 309 Hz Switches: Single Fre- quency, Bi- Axial Test		Reactor Bldg. 696'-9"	Partial In No

TAG NOS.	EQUIPMENT NAME	QUALIFICATION METHOD	REQUIRED FOR SHUTDOWN	LOCATION	AVAILABLE FOR INSPECTION
1VG04Y 1VQ03Y OVR027Y, 029Y OVC043Y, 045Y	Isolation Dampers & Fan Check Dampers	Static Analysis Min. Nat. Freq. = 578 Hz		Reactor Bldg. 820'-6"	No
OVC01YA, B	Tornado Check Dampers	Static Analysis Min. Nat. Freq. = 358 Hz		Control Room Aux. Bldg. 786'-6"	Not Installed Yes
1VR04YA, B, 05YA, B	S.C. Isolation Dampers			Aux. Bldg. 786'-6"	Partial Installed No
1VT79YA, B, C	Steam Tunnel Check Dampers Solenoid Valves Actuators			With Dampers With Dampers	Yes Yes
1VY01C to 04C	CSCS Ventilation Fans (Horizontal)	Static Analysis Min. Nat. Freq. = 61.9 Hz		Reactor Bldg. 694'-6"	Yes
OVC01CA, B OVC02CA, B OVC04CA, B	Control Room HVAC Ventilation Fans	Static Analysis Min. Nat. Freq. = 54.8 Hz		Aux. Bldg. 786'-6" 802'-0"	Yes "
1VD03C, 05C, 07C	D.G. Vent Fans			Aux. Bldg. 687' / 736'-6"	Partial Installed Yes No
OVE01CA, B OVE02CA, B OVE03CA, B	Aux. Elec. Equip. Room Vent. Fans			Aux. Bldg. 786'-6" 786'-6" 802'-0"	Yes Yes
1VX01C, 04C	ESS SWGR Rm. Vent. Fans			Aux. Bldg. 710'-0" 731'-0"	"01" Not Installed Yes
1VY05C, 06C	CSCS Vent Fans			Aux. Bldg. 736'-6"	Yes

TAG NOS.	EQUIPMENT NAME	QUALIFICATION METHOD	REQUIRED FOR SHUTDOWN	LOCATION	AVAILABLE FOR INSPECTION
0,1VD01C 0VD03C	D.G. Rm. Ventilation Fans (Vertically Mounted)	Static Analysis Min. Nat. Freq. = 65.6 Hz		Aux. Bldg. 736'-6"	Yes No
1VX02C,03C, 03C,06C, 05C	ESS SWGR. Rm. Cen- trifugal Fans	Static Analysis Min. Nat. Freq. = 59.4 Hz		Aux. Bldg. 710'-0" 749'-0" 731'-0"	"05C" Not Installed Yes Yes
0VD02C 1VD02C,04C 06C	D.G. Vent. Fans			Aux. Bldg. 687'-0"	No No Yes
1VX07C	ESS SWGR. Rm. Fan				Not In
VP02CA,B	Primary Cont. Vent Supp. Fan				
OVE02AA,02AB	Aux. Elec. Equip. Room Air Cooled Condensing Units	Dynamic Analy- sis Min. Nat. Freq. = 28.7 Hz		Aux. Bldg. 802'-0"	Yes
0VC03A,B	Control Rm. HVAC Air Cooled Con- densing Unit				
0VC05CA,B	Control Rm. HVAC Refrig. Liquid Re- ceived			Aux. Bldg. 802'-0"	Yes
OVE04CA,B	Aux. Equip. Rm. HVAC Refrigerant Receivers			Aux. Bldg. 802'-0"	Yes
	Refrigeration Com- pressor/Motor & Control Panel Unit	Test: Bi- Axial, Multi- Frequency, Random Motion		Aux. Bldg. 802'-0"	Yes
0VC01TA,B	Control Rm. HVAC Refrig. Liq. Re- ceiver				

TAG NOS.	EQUIPMENT NAME	QUALIFICATION METHOD	REQUIRED FOR SHUTDOWN	LOCATION	AVAILABLE FOR INSPECTION
OVE01TA,B	Aux. Elec. Equip. Rm. HVAC Refrig. Liq. Rec.				
	Opposed Type Dam- pers, Fire Dampers, Gravity Shutter Dampers & Grilles (Zack Co.)	Simplified Dynamic Analy- sis Min. Nat.Freq. = 4.9 Hz. Dampers Tested Also: Bi- Axial, Multi- Freq., Ran- dom Motion		All	Partial In
	Humidifiers, De- humidifiers, Duct Silencers, Air Fil- ters, Expansion Valves, Liq. Solenoid Valves, Hot Gas Bypass Valves			All	Partial In
OD001P ID001P	Diesel Oil Transfer Pumps	Dynamic Analy- sis Nat. Freq. = 81.4 Hz		Aux. Bldg. 663'-0"	Yes
ODG01P	D-G Cooling Water Pump	Static Analysis Nat. Freq. = 47.9 Hz	COLD	Aux. Bldg. 710'-6"	Yes
IDG01P	D-G Cooling Water Pump	Static Analysis Nat. Freq. = 46.1 Hz		Aux. Bldg. 673'-4"	Yes
1E21-C002 1E22-C003 1E12-C003 1E51-C003	LPCS Waterleg Pump HPCS Waterleg Pump RHR Waterleg Pump RCIC Waterleg Pump	Static Analysis Nat. Freq. = 52.8 Hz	COLD	Reactor Bldg. 673'-4"	Yes
1FC03PA,B	Fuel Pool Emergency Make-Up Pumps	Static Co- efficient Analysis Nat. Freq. = 24.96 Hz		Reactor Bldg. 673'-4"	Yes
1E12-C300A to D	RHR Service Water Pumps	Static Analysis Nat. Freq. = 47.9 Hz	COLD	Reactor Bldg. 673'-4"	Yes

TAG NOS.	EQUIPMENT NAME	QUALIFICATION METHOD	REQUIRED FOR SHUTDOWN	LOCATION	AVAILABLE FOR INSPECTION
ODG01F	Diesel Cooling Water Strainer	Dynamic Analysis	COLD	Diesel G.R. 736'-6"	Yes
1E22-D300	HPCS Diesel Cooling Water Strainers	Dynamic Analysis	COLD	Diesel G.R. 673'-4"	Yes
1E12-D300A/B	RHR Service Water Strainer	Dynamic Analysis	COLD	Diesel G.R. 736'-6"	Yes
1DG01F	Diesel Cooling Water Strainer	Dynamic Analysis		Diesel G.R. 756'-0"	Yes
OD002T OD005T	Diesel Generator Day Tanks	Dynamic Analysis		Diesel G.R. 674'-0"	Yes
1D004T	HPCS Diesel Oil Day Tank	Dynamic Analysis		Diesel G.R. 760'-6"	Yes
1HG01A	Post-LOCA Hydrogen recombiner package	TEST: Bi-Axial, multi-frequency, random motion sine beat superimposed 1-10 Hz			
1PA12J 1PLF3J	Control Panels for hydrogen recombiner			Aux. Bldg. 768'0"	No
L76J, 77J	Post-accident P.C. monitoring panels	-		Reactor Bldg. 786'6"	No
1PL78J, 79J	PAPC humidity monitoring panels	-		React. Bldg. 786'6"	No
OPM15J, 16J	Control Rm. radiation monitor	-		React. Bldg. 768'-0"	No
OPL58JA, B	SGTS vent monitor	-		Aux. Bldg. 815'-0"	No
1D18-N451A, B, C, D 1D18-K751A, B, C, D	Area radiation monitors	-		React. Bldg. 768'0"	No
	Strong motion seismic instrumentation			Cont. Bldg. 673'4" to 843'-6" React. Bldg. 731'0" Aux. Bldg. 731'0"	Yes

TAG NOS.	EQUIPMENT NAME	QUALIFICATION METHOD	REQUIRED FOR SHUTDOWN	LOCATION	AVAILABLE FOR INSPECTION
1B21-F388	3/4" GLOBE VALVE (Manual)				
1B21-F387A,B; 429A,B,C,D	1" GLOBE VALVE (Manual)	-			
1B21-F020	3" GLOBE VALVE (Mq)	STATIC ANALYSIS NAT. FREQ. = 118HZ			
1B21-F418A,B	18" GATE VALVE (Mq)	-			
1PC001A to E	30" VACUUM RELIEF VALVE (Manual)	-			
LPCS SYSTEM	6"				
RHR SYSTEM	2" VACUUM RELIEF VALVE	-			
RI SYSTEM	1"				
CONTROL ROD POST IND.					
1RFO12,013	2" CONTROL VALVE/AO	HYDRO LEAK TEST: BIAXIAL, MULTI-FREQ, RANDOM MOTION NOZZLE STRESS ANALYSIS			
1RE024,025					
1N001A,B	2.5" CONTROL VALVE/AO				
1E12-F065A,B	4" CONTROL VALVE/AO				
1RE026,029	1" CONTROL VALVE/AO				
1B33-F019,20	3/4" CONTROL VALVE/AO	STATIC ANALYSIS			
1E12-F327A,B,C					
1E21-F333					
1E22-F354					
1E51-F354,355					
1E51-F004,005, 054	2" CONTROL VALVE/AO	STATIC ANALYSIS			
1E12-F051A,B	6" CONTROL VALVE/AO	STATIC ANALYSIS			
1C41-F017	1.5" MANIFESTR (Manual)	STATIC ANALYSIS			
1N017,074,075	2" CONTROL VALVE (AO)	-			
1E51-F025,026					
1N62-F019A,B,C					
1C41-F001A,B; 002A,B; 014	3" PACKLESS GLOBE VALVES (Motor oper.)	-			
1B21-F070,072, 070,083,085	(Manual) (Motor oper.) (Manual)				
REACTOR RECIRC., STANDBY LIO. CONT., RHR, LPCS, HPCS, & REACTOR CORE ISOL. COOLING SYSTEMS	3/4", 1", 1 1/2", 2" PACKLESS GLOBE VALVES				
1B21-F029A to D	3/4" CHECK VALVES	-			
RHR, LPCS, HPCS, REACTOR WATER CLEAN-UP, REACTOR RECIRC., P.C. PURGE, CONT. MONITORING SYSTEMS	3/4" EXFL. CHECK VALVES	-			

TAG NOS.	EQUIPMENT NAME	QUALIFICATION METHOD	REQUIRED FOR SHUTDOWN	LOCATION	AVAILABLE FOR INSPECTION
1E12-F024A,B	18" GLOBE VALVES (MOTOR OPER.)	STATIC ANALYSIS NAT. FREQ. = 125 HZ	COLD		
1FC037	20" GATE VALVE (MANUAL)	STATIC ANALYSIS NAT. FREQ. = 82.4 HZ			
1E21-F001 1E12-F004A,B,C	24" GATE VALVE (MOTOR OP.)	STATIC ANALYSIS NAT. FREQ. = 61 HZ	COLD		
1E12-F003A,B; 005A,B; 047A,B	18" GATE VALVE (MOTOR OP.)	STATIC ANALYSIS NAT. FREQ. = 105 HZ	COLD		
1DG003,004 1E22-F311,312	10" GATE VALVE (MANUAL)	STATIC ANALYSIS NAT. FREQ. = 144 HZ			
1E51-F068	10" GATE VALVE (MOP)	STATIC ANALYSIS NAT. FREQ. = 162 HZ			
1E51-F059	4" GATE VALVE (MOTOR OP.)	STATIC ANALYSIS NAT. FREQ. = 252 HZ			
1E12-F340	16" GLOBE VALVE (MANUAL)	STATIC ANALYSIS NAT. FREQ. = 161 HZ			
1E51-F010,031	8" GATE VALVE (MOTOR OP.)	STATIC ANALYSIS NAT. FREQ. = 141 HZ			
1E21-F012	14" GLOBE VALVE (MOTOR OP.)	STATIC ANALYSIS NAT. FREQ. = 110 HZ			
1DG005,007 1DG005,017 1E22-F313,325 1E51-F009,016	8" GATE VALVES (Manual) " " "				
1E51-F063,064,068	10" GATE VALVES (MOTOR OP.)	-			
1E12-F012A,B,C; 092A,B,C 1E21-F005 1E22-F038	12" GATE VALVES (MOP) (Manual) (Motor oper.) (Manual) "	- - - "			
1FC019; 139A,B; 148 1E12-F402	14" GATE VALVES (Manual) (Manual) "	- - "			
1E12-F016A,B; 017A,B	16" GATE VALVES (MOP)	STATIC ANALYSIS NAT. FREQ. = 143 HZ			
1E12-F067; 098A,B,C	18" GATE VALVES (MOP) (Manual)	-			
1E12-F008,009,033	20" GATE VALVES (MOP) (Manual)	-	COLD		
1B21-F065A,B	24" GATE VALVES (MOP)	-			
1FC111,118 1E12-F070 1E21-F025,305	3" GLOBE VALVES (Manual) " "	- - "			

TAG NOS.	EQUIPMENT NAME	QUALIFICATION METHOD	REQUIRED FOR SHUTDOWN	LOCATION	AVAILABLE FOR INSPECTION
1DG 009,020,024 0FC 025 1E22-F317 1E32-F012,013	4" GLOBE VALVES (Manual)))))))	-	-		
1FC 050A,B 1DG 006 1E22-F314	6" GLOBE VALVES (Manual) 8" GLOBE VALVES (Manual)))	- -	-		
1E12-F007,063A,B, C;071A,B;072A, B,C;096 1E21-F004,008 1E22-F003,019,026, 031 1E22-F003N	3" GATE (Manual))))) 3" GATE (Motor oper.)				
1FC 116 1E32-F001A,E,J,N; 002A,E,J,N;006;007	2 1/2" GATE VALVES (Motor oper.)	STATIC ANALYSIS NAT. FREQ. = 273 Hz			
1DG 007,008,011,019, 023 0DP 009-105 009,019 0FC 031,036 1FC 087,127 1HG 001A,B 1B21-F508A,B 1E12-F064A,B,C; 093;094 1E11-F011,052 1E22-F315,316,319 1E51-F008 1E51-F356 1G33-F040,100,101, 106	4" GATE VALVES (Manual))) 4" GATE VALVES (Motor oper.))))) 4" Gate Valve (Manual) 4" Gate Valve (Motor oper.)	- -	COLD		
1DG 032 1FC 040A,B;042A,B; 045A,B;046A,B; 047A,B 1HG 003 1WR 179,180 1E51-F012	6" GATE VALVES (Manual))))) 6" GATE VALVES (MO) (Motor oper.) 6" GATE VALVE (Manual)	-			

TAG NOS.	EQUIPMENT NAME	QUALIFICATION METHOD	REQUIRED FOR SHUTDOWN	LOCATION	AVAILABLE FOR INSPECTION
1E12 - F302,303 1DG001 1E22-F310	14" GATE VALVE (MANUAL)	STATIC ANALYSIS MIN. NAT. FREQ. = 61 HZ			
0DG009 1DG011 1E12 - F336A,B; 026A,B;027A,B 1G33 - F040	4" GATE VALVE (MOTOR OP.)	STATIC ANALYSIS MIN. NAT. FREQ. = 123 HZ			
1E12 - F049A,B	3" GATE VALVES (MOTOR OP.)	STATIC ANALYSIS NAT. FREQ. = 81 HZ	COLD		
1HG005A,B;006A,B 1HG009 1WR029,030	6" GATE VALVES (MOTOR OP.)	STATIC ANALYSIS NAT. FREQ. = 294 HZ			
1E51 - F013 1G33 - F001,004	6" GATE VALVES (MOTOR OP.)	STATIC ANALYSIS NAT. FREQ. = 294 HZ			
1E12 - F015A,B,C	8" GATE VALVES (MANUAL)	STATIC ANALYSIS NAT. FREQ. = 165 HZ			
1VP053A,B;063A,B	8" GATE VALVES (MOTOR OP.)	STATIC ANALYSIS NAT. FREQ. = 262 HZ			
1FC086,115	10" GATE VALVES (MANUAL)	STATIC ANALYSIS NAT. FREQ. = 277 HZ			
1E12 - F070A,B 0DG003,004	12" GATE VALVES (MANUAL)	STATIC ANALYSIS NAT. FREQ. = 98 HZ			
0DG001 1E12 - F332A,B,D	16" GATE VALVES (MANUAL)	STATIC ANALYSIS NAT. FREQ. = 106 HZ			
1E12 - F330A,B,D	18" GATE VALVES (MANUAL)	STATIC ANALYSIS NAT. FREQ. = 62 HZ			
1B21 - F011A,B 1E12 - F014A,B;341 1FC - 140	24" GATE VALVES (MANUAL) 20" GATE VALVES (MANUAL)))	STATIC ANALYSIS MIN. NAT. FREQ. = 76 HZ			
1E12 - F068A,B	20" GATE VALVE (MOTOR OP.)	STATIC ANALYSIS NAT. FREQ. = 111 HZ	COLD		
1E22 - F302	24" GATE VALVE (MANUAL)	STATIC ANALYSIS NAT. FREQ. = 67 HZ			
1FC017	12" GLOBE VALVE (MOTOR OP.)	STATIC ANALYSIS NAT. FREQ. = 122 HZ			
1E021 1E016,017 1FC034 1SA042,046 1B21 - F016,019	3" GATE VALVES (MANUAL) 3" GATE VALVES (MOTOR OP.)	-			
1E22 - F002	24" CHECK VALVES	STATIC ANALYSIS NAT. FREQ. = 1534 HZ			
0FC032 1FC033,088	3" CHECK VALVES))	-			
1E21 - F009 1E22 - F025))))				
0FC024 1HG007,016	4" CHECK VALVES))	-			
1E51 - F030	8" CHECK VALVES	-			
1FC018,141	14" CHECK VALVES	-			
1E22 - F016	24" CHECK VALVES	-			

TAG NOS.	EQUIPMENT NAME	QUALIFICATION METHOD	REQUIRED FOR SHUTDOWN	LOCATION	AVAILABLE FOR INSPECTION
IFC044A,B	6" NOZZLE CHECK VALVES	-			
IE22 - F02B	10" NOZZLE CHECK VALVES	-			
IE12 - F331B,C,D	16" NOZZLE CHECK VALVES	-			
IE12 - F031C	18" NOZZLE CHECK VALVES	-			
1IN116,117 1VR062	3/4" GLOBE VALVES (Manual)))	-			
IES1 - F357	2" PACKLESS GLOBE VALVE (Manual)	-			
IES1 - F065,066	6" - 900" EXERCISABLE TILTING DISK CHECK VALVES WITH AIR CYLINDERS (Air operator)	STATIC ANALYSIS NAT. FREQ. = 1080 HZ " " = 39.4 HZ FOR MOUNTING BRACKET			
IE12 - F041A,B,C IE12 - F050A,B IE12 - F006 IE22 - F005 (X)	12" - 900" EXERCISABLE TILTING DISK CHECK VALVES WITH AIR CYLINDERS (Air operator)	STATIC ANALYSIS NAT. FREQ. = 787 HZ NAT. FREQ. = 184 HZ FOR MOUNTING BRACKET	(2) COLD		
IB21 - F032A&B	24" - 1500" EXERCISABLE TILTING DISK CHECK VALVES WITH AIR CYLINDERS	STATIC ANALYSIS NAT. FREQ. = 1150 HZ NAT. FREQ. = 68.3 HZ FOR MOUNTING BRACKET			
REACTOR CORE ISOLAT. COOLING SYSTEM	1 1/4" GLOBE VALVES	-			
DIESEL GEN., DIESEL FUEL OIL, RHR, LPCS	1 1/2" GLOBE VALVES	-			
DIESEL GEN., DIESEL FUEL OIL, FUEL PUMP COOL. & CLEAN-UP, P.C. COMBUSTIBLE GAS CONT., STANDBY LIQ. CONT., RHR, LPCS, ISOL. VALVE MAIN STEAM LEAK. CONTROL, REACTOR CORE ISOL. COOL. SYSTEMS	2" GLOBE VALVES	-			
DIESEL-GEN. SYSTEM	1 1/2" CHECK VALVES	-			
REAC. CORE ISOL. COOLING SYSTEM	2" CHECK VALVES	-			
RHR, LPCS SYSTEMS	3/4" STOP CHECK VALVES	-			
REACTOR RECIRO., RHR, LPCS, REACTOR CORE ISOL. COOLING SYST.	3/4" NOZZLE CHECK VALVES	-			
REACTOR CORE ISOL. COOLING SYSTEM	1 1/4" NOZZLE CHECK VALVES	-			
DIESEL FUEL OIL & STANDBY LIQ. CONTROL SYSTEMS	1 1/2" NOZZLE CHECK VALVES	-			
IE12 - F054A,B	4" MISSION DUO-CHEK CHECK VALVES	STATIC ANALYSIS NAT. FREQ. = 3335 HZ			
IES1 - F011	8" MISSION DUO-CHEK CHECK VALVES	STATIC ANALYSIS NAT. FREQ. = 2429 HZ			
1DG002 IES1 - F040	10" NOZZLE CHECK VALVES 10" CHECK VALVES	STATIC ANALYSIS NAT. FREQ. = 2209 HZ			

TRG NOS.	EQUIPMENT NAME	QUALIFICATION METHOD	REQUIRED FOR SHUTDOWN	LOCATION	AVAILABLE FOR INSPECTION
ODG-002	12" NOSL CHECK VALVES	STATIC ANALYSIS NAT. FREQ. = 1766 HZ			
1E12-F331A 1E21-F003	16" NOSL CHECK VALVES	STATIC ANALYSIS MIN. NAT. FREQ. = 1542 HZ	GOLD		
1E12-F031A,B	18" NOSL CHECK VALVES	STATIC ANALYSIS NAT. FREQ. = 1455 HZ	GOLD		
1E12-F021; 048A,B	18" GLOBE VALVES (MO)	—	GOLD		
1E12-F089	4" CHECK VALVES	—			
1E12-F046A,B,C	8" CHECK VALVES	—			
1E12-F387; 388A,B,C; 389	3" STOP CHECK VALVES	—			
1E12-F019	6" NOZZLE CHECK VALVES	—			
1E22-F024	16" NOZZLE CHECK VALVES	—	GOLD		
1B31-F010A,B	24" NOZZLE CHECK VALVES	—			
1E51-F045	4" GLOBE VALVES (MO)	STATIC ANALYSIS NAT. FREQ. = 76.8 HZ			
1E12-F023 1G33-F102	6" GLOBE VALVES (MO)	STATIC ANALYSIS MIN. NAT. FREQ. = 3782			
1E12-F052A,B	10" GLOBE VALVES (MOTOR OP.)	STATIC ANALYSIS MIN. NAT. FREQ. = 57112			
1E12-F053A,B	12" GLOBE VALVES (MOTOR OP.)	STATIC ANALYSIS MIN. NAT. FREQ. = 81 HZ	GOLD		
1E12-F087A,B	10" GLOBE VALVES (MO)	—			
CONTROL ROD POSITION INDICATOR SYS.	1/2" GLOBE VALVES	—			
CONTAINMENT MONITORING, DIESEL GENERATORS, DIESEL FUEL OIL, EXTRACTION STEAM, FUEL POOL COOLING & CLEAN-UP, P.C. COMBUSTIBLE GAS CONTROL, P.C. PURGE, REACT. REGR. CONTROL ROD POSIT. IND., RHR, LPCS, HPCS, LEAK DETECTION, ISOL. VALVE MAIN STEAM LEAK CONTROL, REACTOR CORE ISOL. COOL., REACTOR WATER CLEAN-UP SYSTEMS	3/4" GLOBE VALVES	—			
DIESEL FUEL OIL, INSTR. NITROGEN, REACTOR RESID., STANDBY LIQ. CONTROL SYSTEMS	1" GLOBE VALVES	—			

TAG NOS.	EQUIPMENT NAME	QUALIFICATION METHOD	REQUIRED FOR SHUTDOWN	LOCATION	AVAILABLE FOR INSPECTION
IVP113A,B; 114A,B IVQ042,043 IFC054A,B	8" BUTTERFLY VALVE/ MOTOR OP. 2) 8" BUTTERFLY VALVE/MAN. OP.	STATIC ANALYSIS MIN. NAT. FREQ. = 39.5 HZ			
IVG001,002,003 IFC138	20" BUTTERFLY VALVE/ MOTOR OP. 20" BUTTERFLY VALVE/ MAN. OP.				
IFC144	16" BUTTERFLY VALVE/MAN. OP.	—			
IVQ026,027,029, 030,031,034,036, 037,038,040,041	26" BUTTERFLY VALVE/ MOTOR OP.	STATIC ANALYSIS NAT. FREQ. = 34.5 HZ			
2-F345 ESI-F017 IFC105A,B IC41-F029A,B ODG014 IDG034	2/4" x 1" RELIEF VALVE MODELS: JBAK, JMB-WR, JBAK-B5	STATIC ANALYSIS MIN. NAT. FREQ. = 320 HZ			
IE12-F025A,B,C; 030;088A,C IE21-F031 IE22-F014,035	1" x 2" RELIEF VALVE MODELS: JB-36-TD, JB-26-TD, JB-25-TD, JBAK-25, JB-25-3-TD, JBAK-45	STATIC ANALYSIS MIN. NAT. FREQ. = 111 HZ			
IES1-F018	1 1/2" x 3" RELIEF VALVE MODEL J0-25-WR	STATIC ANALYSIS NAT. FREQ. = 230 HZ			
21-F018	3" x 4" RELIEF VALVE MODEL JB-36-TD	STATIC ANALYSIS NAT. FREQ. = 242 HZ			
IE12-F055A,B; 036A,B	4" x 6" RELIEF VALVE MODELS: JB-36-TD, JB-25-TD-WR	STATIC ANALYSIS MIN NAT. FREQ. = 111 HZ			
IE12-F005,088B INO45,046	1" x 2" RELIEF VALVE	—			
ID0024	2" GLOBE VALVE /S.O.	STATIC ANALYSIS			
IE12-F060A,B; 075A,B	3/4" GLOBE VALVE /S.O.	STATIC ANALYSIS			
REACTOR RECIRC. & CONTAINMENT MONITORING	1/2" GLOBE VALVE /S.O.	—			
REACTOR RECIRC., RHR, LEAK DETECTION, & INSTRUMENT NITROGEN	3/4" GLOBE VALVE /S.O.	—			
LEAK DETECTION & INSTRUMENT NITROG.	1" GLOBE VALVE /S.O.	—			

TAG NOS.	EQUIPMENT NAME	QUALIFICATION METHOD	REQUIRED FOR SHUTDOWN	LOCATION	AVAILABLE FOR INSPECTION
CONTAINMENT MONITORING & DIESEL FUEL OIL	1 1/2" GLOBE VALVE /S.O.	-			
DIESEL FUEL OIL	2" GLOBE VALVE /S.O.	-			
IN035,038	1" CONTROL VALVE (Manual)				
IE31-F015	2" CONTROL VALVE (A)				
IE22-F007	3/4" NOZZLE CHECK VALVE	STATIC ANALYSIS MIN. NAT. FREQ. = 136 HZ			
IN018	2" NOZZLE CHECK VALVE	STATIC ANALYSIS MIN. NAT. FREQ. = 117 HZ			
IB21-F036A to H, J,K,M,N,P,R,S,U,V F024 A to D F040C,D,E,R,S,U,V IN043,044	1 1/2", 1" PISTON CHECK VALVES	STATIC ANALYSIS MIN. NAT. FREQ. = 188 HZ			
IB21-F321A to D IB21-F322A to D IB21-F324A to D	3/4" PACKLESS GLOBE VALVES (Manual)	STATIC ANALYSIS NAT. FREQ. = 129 HZ			
IFC143 IHG017A,B; 020; 021	1 1/2", 2" GLOBE VALVES (MANUAL)	STATIC ANALYSIS MIN. NAT. FREQ. = 138 HZ			
PARTIAL LIST REACTOR RECIRC.	3/8" to 1 1/4" STOP CHECK VALVES	STATIC ANALYSIS MIN. NAT. FREQ. = 138 HZ			
IE22-F006	3/4" STOP CHECK VALVE (Manual)	STATIC ANALYSIS MIN. NAT. FREQ. = 136 HZ			
IE31-F022 IHG002A,B	4" GLOBE VALVE (M)	-			
IC41-F031 IE12-F040A, 040B	3" GLOBE VALVE (Motor oper.)	-	COLD		
RHR, LPCS, LEAK DETECTION, CONTAIN- MENT MONT., D-G, DIESEL FUEL OIL, FUEL POOL COOL. & CLEAN-UP, P.C. COMBUSTIBLE GAS CONT., INSTRUMENT NTC, P.C. PURGE, RB Closed Cooling Water, REAC. CORE ISOL. COOLING SYSTEMS	1", 3/4", 1", 1/2", 2" GLOBE VALVES	-			

TAG NOS.	EQUIPMENT NAME	QUALIFICATION METHOD	REQUIRED FOR SHUTDOWN	LOCATION	AVAILABLE FOR INSPECTION
REACTOR RECIRC, STANDBY LIQ. CONTROL, RWR, LPCS, HPCS, FUEL POOL Cool. 3.0 DRAIN-UP, REACTOR FEEDWATER, P.C., ISOL. VALVE MAIN STEAM LEAK. CONTROL, RX CORE ISOL. COOLING SYSTEMS	$\frac{3}{4}" \times \frac{3}{4}"$, $1\frac{1}{2}" \times \frac{3}{4}"$, $1" \times 1"$, $2" \times 2"$ Double Blocking Valve	—			
IC41-F310	$\frac{3}{4}"$ ANG. GLOBE VALVE (Manual)	—			

PRELIMINARY

SEISMIC CATEGORY I EQUIPMENT

FOR

LA SALLE, SHOREHAM AND ZIMMER

NOTES: Col. 3, "Safe Shutdown Equipment." Plant initials denote equipment required for shutdown scenario.

Col. 4, "Adequacy to Original Criteria." An "X" denotes seismic and hydrodynamic loads adequacy has been verified to original project criteria. "P" denotes such verification is in process. "AE" denotes components (installed in AE piping) for which capability level has been determined but requires AE evaluation to verify adequacy. Note that electrical items shipped "loose" (i.e., not mounted in GE rack or panel) require AE evaluation to verify adequacy. This includes condensing chambers.

REACTOR SYSTEM

<u>MPL ITEM NO.</u>	<u>DESCRIPTION</u>	<u>SAFE SHUTDOWN EQUIPMENT</u>	<u>ADEQUACY TO ORIGINAL CRITERIA</u>
B11 A001	REACTOR VESSEL		X
B11 D001	SHROUD		X
B11 D003	CORE SUPPORT		X
B11 D146	CONTROL ROD DRIVE		P
B11 D147	CONTROL ROD		P
B11 D193	POWER RANGE DETECTOR		X
B11 D233	JET PUMP		P
B11 D234	JET PUMP		P
B11 D235	JET PUMP INST PENET SEAL		P
B11 U001	REACTOR VESSEL SUPPORT		X
B11 U002	R.P.V. STABILIZER		X
B11 U004	CRD HOUSING SUPPORT		X
B13 D003	REACTOR VESSEL		X
B13 D004	CORE STRUCTURE (TOP GUIDE)		X
B13 D006	JET PUMP		P
B13 D007	JET PUMP		P
B13 D008	CONTROL ROD DRIVE		P
B13 D009	CONTROL ROD		P
B13 D071	CORE SUPPORT		X
B13 D096	JET PUMP INST PENET SEAL		P
B13 D191	DRY TUBE (PRM DETECTOR)		X
B13 D193	POWER RANGE DETECTOR		X
B13 D194	PRM INSTALLATION HARDWARE		X
B13 U002	RPV STABILIZER		X
B13 U004	CRD HOUSING SUPPORT		X

NUCLEAR BOILER SYSTEM

<u>MPL ITEM NO.</u>	<u>DESCRIPTION</u>	<u>SAFE SHUTDOWN EQUIPMENT</u>	<u>ADEQUACY TO ORIGINAL CRITERIA</u>
B21 D002	CONDENSING CHAMBER		X
B21 D004	CONDENSING CHAMBER		X
B21 D006	CONDENSING CHAMBER		X
B21 D007	CONDENSING CHAMBER		X
B21 D008	CONDENSING CHAMBER		X
B21 D009	CONDENSING CHAMBER		X
B21 F013	SAFETY/RELIEF VALVES	S, Z, L	X
B21 F022	ISOLATION VALVE AO	S, Z	X
B21 F028	ISOLATION VALVE AO	S, Z	X
B21 G001	PRIMARY STEAM PIPING		X
B21 G002	STEAM PIPE HANGERS		X
B21 G006	STEAM PIPE SNUBBERS		X
B21 K613	POWER SUPPLY		X
B21 N004	TEMP ELEMENT		X
B21 N005	FLOW ELEMENT		X
B21 N006	DIFF PRESS IND SW		X
B21 N007	DIFF PRESS IND SW		X
B21 N008	DIFF PRESS IND SW		X
B21 N009	DIFF PRESS IND SW		X
B21 N010	TEMP ELEMENT		X
B21 N014	TEMP ELEMENT		X
B21 N015	PRESS SWITCH		X
B21 N016	TEMP ELEMENT		X
B21 N020	PRESS SWITCH		X
B21 N021	PRESS SWITCH		X
B21 N023	PRESS SWITCH		X

VK:cas:qmm/21E

<u>MPL ITEM NO.</u>	<u>DESCRIPTION</u>	<u>SAFE SHUTDOWN EQUIPMENT</u>	<u>ADEQUACY TO ORIGINAL CRITERIA</u>
B21 N024	LEVEL IND SWITCH		X
B21 N025	LEVEL IND SWITCH		X
B21 N026	LEVEL IND TRANS SWITCH		X
B21 N027	LEVEL TRANS		X
B21 N031	LEVEL INDIC SWITCH		X
B21 N032	DIFF PRESS TRANS		X
B21 N033	FLOW TRANS		X
B21 N034	FLOW TRANS		X
B21 N036	LEVEL INDICATOR SW		X
B21 N037	LEVEL INDIC TRANS SW		X
B21 N038	LEVEL INDIC SWITCH		X
B21 N039	PRESSURE SWITCH		X
B21 N042	LEVEL IND SWITCH		X
B21 N044	LEVEL IND SWITCH		X
B21 N045	PRESSURE SWITCH		X
B21 N047	PRESSURE SWITCH		X
B21 N048	PRESSURE SWITCH		X
B21 N051	PRESSURE TRANS FLOW ELEMENT		X
B21 N055	PRESS TRANS		X
B21 N600	TEMP SWITCH		X
B21 N603	DIFF TEMP SWITCH		X
B21 R004	PRESS INDICATOR		X
B21 R005	DIFF PRESS IND		X

RECIRCULATION SYSTEM

<u>MPL ITEM NO.</u>	<u>DESCRIPTION</u>	<u>SAFE SHUTDOWN EQUIPMENT</u>	<u>ADEQUACY TO ORIGINAL CRITERIA</u>
B31 C001A	REACTOR RECIRC PUMP & MOTOR		P
B31 C001B	REACTOR RECIRC PUMP & MOTOR		P
B31 F023	GATE VALVE MO (SUCTION)	S	X
B31 F031	GATE VALVE MO	S	X
B31 G001	BYPASS LINE REPAIR		X
B31 G002	RECIRC LOOP HANGERS		X
B31 G003	RECIRC LP PIPE WHIP RESTR		X
B31 G006	RECIRC LOOP SNUBBERS		X
B31 K606	SQ ROOT CONVERTER		X
B31 K607	FLOW SUMMER		X
B31 K608	SQ ROOT CONVERTER		X
B31 K610	POWER SUPPLY		X
B31 N013	FLOW NOZZLE		X
B31 N014	FLOW TRANS		X
B31 N015	DIFF PRESS TRANS		X
B31 N018	PRESS SWITCH		X
B31 N023	TEMP ELEMENT		X
B31 N024	FLOW TRANSMITTER		X
B33 C001	RECIRC PUMP CONSTANT SPD		X
B33 C001	RECIRCULATION PUMP MOTOR		P
B33 F023	GATE VALVE MO		X
B33 F060	FLOW CONTROL VALVE		X
B33 F067	GATE VALVE		X
B33 F079	DIAPHRAGM VALVE		X
B33 G001	RECIRC LOOP PIPING		X
B33 G002	RECIRC LOOP HANGERS		X

<u>MPL ITEM NO.</u>	<u>DESCRIPTION</u>	<u>SAFE SHUTDOWN EQUIPMENT</u>	<u>ADEQUACY TO ORIGINAL CRITERIA</u>
B33 G003	RECIRC LOOP PIPING RESTR		X
B33 G006	RECIRC LOOP SNUBBERS		X
B33 K606	SQ ROOT CONVERTER		X
B33 K607	FLOW SUMMER		X
B33 K608	SQ ROOT CONVERTER		X
B33 K610	POWER SUPPLY		X
B33 N014	FLOW TRANSMITTER		X
B13 N015	D1TF PRESS TRANS		X
B33 N018	PRESS SWITCH		X
B33 N023	TMP ELE (DBL ELE PREC RTD)		X
B33 N024	FLOW TRANSMITTER		X
B33 N035	TEMP ELEMENT		X

CONTROL ROD DRIVE HYDRAULIC SYSTEM

<u>MPL ITEM NO.</u>	<u>DESCRIPTION</u>	<u>SAFE SHUTDOWN EQUIPMENT</u>	<u>ADEQUACY TO ORIGINAL CRITERIA</u>
C11 D001	HYDRAULIC CONTROL UNIT	L, S, Z	X
C11 F009	SOL VALVES FOR INSTR AIR		X
C11 F010	DIAPHRAGM-OPR VALVES	S, L	X
C11 F011	DIAPHRAGM-OPR VALVES	S, L	X
C11 F012	RELIEF VALVE		X
C11 N013	LEVEL SWITCH		X

FEEDWATER CONTROL SYSTEM

<u>MPL ITEM NO.</u>	<u>DESCRIPTION</u>	<u>SAFE SHUTDOWN EQUIPMENT</u>	<u>ADEQUACY TO ORIGINAL CRITERIA</u>
C32 N003	TRANSMITTER (DIFF PRESS)		X
C32 N004	TRANSMITTER (DIFF PRESS)		X
C32 N005	TRANSMITTER (PRESSURE)		X
C32 N008	TRANSMITTER (PRESS)		X
C32 N017	TRANSMITTER (DIFF PRESS)		X
C34 N003	TRANSMITTER (DIFF PRESS)		X
C34 N004	TRANSMITTER (DIFF PRESS)		X
C34 N005	TRANSMITTER (PRESSURE)		X
C34 N008	TRANSMITTER (PRESS)		X
C34 N017	TRANSMITTER (DIFF PRESS)		X

STANDBY LIQUID CONTROL SYSTEM

<u>MPL ITEM NO.</u>	<u>DESCRIPTION</u>	<u>SAFE SHUTDOWN EQUIPMENT</u>	<u>ADEQUACY TO ORIGINAL CRITERIA</u>
C41 A001	STORAGE TANK		X
C41 A003	STDBY LIQ CONT SYS ACCUM		X
C41 C001	STDBY LIQ CONT SYS PUMP		X
C41 F004	EXPLOSIVE VALVE		X
C41 R003	PRESS INDICATOR		X

NEUTRON MONITORING SYSTEM

<u>MPL ITEM NO.</u>	<u>DESCRIPTION</u>	<u>SAFE SHUTDOWN EQUIPMENT</u>	<u>ADEQUACY TO ORIGINAL CRITERIA</u>
C51 K002	VOLT PREAMPLIFIER		X
C51 K601	INTERMEDIATE RANGE MON		X
C51 K605	PWR RANGE NEUT MONIT INST		X
C51 N002	DETECTOR		P

REMOTE SHUTDOWN SYSTEM

<u>MPL ITEM NO.</u>	<u>DESCRIPTION</u>	<u>SAFE SHUTDOWN EQUIPMENT</u>	<u>ADEQUACY TO ORIGINAL CRITERIA</u>
C61 N001	FLOW TRANSMITTER		X
C61 N006	PRESS TRANSMITTER		X
C61 P001	REMOTE SHUTDOWN VB		X

REACTOR PROTECTION SYSTEM

<u>MPL ITEM NO.</u>	<u>DESCRIPTION</u>	<u>SAFE SHUTDOWN EQUIPMENT</u>	<u>ADEQUACY TO ORIGINAL CRITERIA</u>
C71 N002	PRIM CONT PRESS SWITCH		X
C71 N003	TURBINE FIRST STAGE PR SW		X
C71 N004	PRIMARY CONT PRESS SW		X

PROCESS RADIATION MONITORING SYSTEM

<u>MPL ITEM NO.</u>	<u>DESCRIPTION</u>	<u>SAFE SHUTDOWN EQUIPMENT</u>	<u>ADEQUACY TO ORIGINAL CRITERIA</u>
D11 N006	DETECTOR (STEAMLINE)		X
D13 N003	DETECTOR (MN STEAMLINE)		X
D13 N009	DETECTOR (R B VENT)		X
D18 N003	DETECTOR, INSULATED		X
D18 N009	SENSOR & CONVERTER		X

RESIDUAL HEAT REMOVAL SYSTEM

<u>MPL ITEM NO.</u>	<u>DESCRIPTION</u>	<u>SAFE SHUTDOWN EQUIPMENT</u>	<u>ADEQUACY TO ORIGINAL CRITERIA</u>
E11 B001	HEAT EXCHANGER-RHR	S	X
E11 C002	PUMP & MOTOR	S	X
E11 K600	SQ ROOT CONVERTER		X
E11 K603	POWER SUPPLY		X
E11 N009	TEMP ELEMENT		X
E11 N010	PRESS SWITCH		X
E11 N011	PRESS SWITCH		X
E11 N012	FLOW ORIFICE ASSEMBLY		AE
E11 N014	FLOW ORIFICE ASSEMBLY		AE
E11 N016	PRESS SWITCH		X
E11 N020	PRESS SWITCH		X
E11 N021	DIFF PRESS SWITCH		X
E11 N026	PRESS TRANS		X
E11 N030	TEMP ELEMENT		X
E11 N600	TEMP SWITCH		X
E11 N601	TEMP SWITCH		X
E11 R002	PRESS INDICATOR		X
E11 R003	PRESS INDICATOR		X
E12 B001	HEAT EXCHANGER-RHR SYSTEM	L, Z	X
E12 C002	RHR PUMPS	L, Z	X
E12 C002	MOTOR, VERTICAL (RHR)	L, Z	P
E12 N004	TEMP ELEMENT		X
E12 N005	TEMP ELEMENT		X
E12 N006	FLOW ORIFICE ASSEMBLY		AE

<u>MPL ITEM NO.</u>	<u>DESCRIPTION</u>	<u>SAFE SHUTDOWN EQUIPMENT</u>	<u>ADEQUACY TO ORIGINAL CRITERIA</u>
E12 N008	LEVEL TRANSMITTER		X
E12 N009	DIFF PRESS IND SWITCH		X
E12 N010	DIFF PRESS IND SWITCH		X
E12 N012	FLOW ORIFICE ASSEMBLY		AE
E12 N013	FLOW TRANSMITTER		X
E12 N014	FLOW ORIFICE ASSEMBLY		AE
E12 N015	FLOW TRANSMITTER		X
E12 N016	PRESS SWITCH		X
E12 N018	PRESS SWITCH		X
E12 N019	PRESS IND SWITCH		X
E12 N022	PRESS IND SWITCH		X
E12 N026	PRESS TRANSMITTER		X
E12 N027	TEMP ELEMENT		X
E12 N028	PRESS TRANSMITTER		X
E12 N029	DIFF PRESS SWITCH		X
E12 N031	TEMP ELEMENT		X
E12 N032	PRESSURE SWITCH		X
E12 N033	PRESSURE SWITCH		X
E12 N034	PRESSURE TRANS		X
E12 R002	PRESS INDICATOR		X

LOW PRESSURE CORE SPRAY SYSTEM

<u>MPL ITEM NO.</u>	<u>DESCRIPTION</u>	<u>SAFE SHUTDOWN EQUIPMENT</u>	<u>ADEQUACY TO ORIGINAL CRITERIA</u>
E21 C001	LPCS PUMP & MOTOR		X
E21 K600	POWER SUPPLY		X
E21 N001	PRESS TRANS		X
E21 N002	FLOW ORIFICE ASSEMBLY		AE
E21 N003	FLOW TRANS		X
E21 N004	DIFF PRESS IND SWITCH		X
E21 N005	DIFF PRESS IND SWITCH		X
E21 N006	FLOW IND SWITCH		X
E21 N007	PRESSURE SWITCH		X
E21 N008	PRESSURE TRANSMITTER		X
E21 N009	PRESSURE SWITCH		X
E21 N010	PRESSURE SWITCH		X
E21 R001	PRESSURE INDICATOR		X
E21 R002	PRESSURE INDICATOR		X

HIGH PRESSURE CORE SPRAY SYSTEM

<u>MPL ITEM NO.</u>	<u>DESCRIPTION</u>	<u>SAFE SHUTDOWN EQUIPMENT</u>	<u>ADEQUACY TO ORIGINAL CRITERIA</u>
E22 C001	HI PRESS CORE SPRAY PUMP & MOTOR	L, Z	X
E22 C002	HPCS DIESEL SERVWTR PUMP & MOTOR	L, Z	X
E22 F001	VALVE, GATE	L, Z	P
E22 F004	VALVE, GATE	L, Z	P
E22 F010	VALVE, GLOBE		P
E22 F011	VALVE, GLOBE		P
E22 F012	VALVE, GATE	L, Z	P
E22 F015	VALVE, GATE	L, Z	P
E22 F023	GLOBE, VALVE		P
E22 N001	LEVEL SWITCH	L, Z	X
E22 N002	LEVEL SWITCH		X
E22 N003	PRESS SWITCH		X
E22 N004	PRESS TRANSMITTER		X
E22 N005	FLOW TRANSMITTER		X
E22 N006	FLOW SWITCH		X
E22 N007	FLOW ORIFICE ASSEMBLY		AE
E22 N009	DIFF PRESS IND SW		X
E22 N012	PRESSURE SWITCH		X
E22 N013	PRESS IND SWITCH		X
E22 R001	PRESSURE INDICATOR		X
E22 R002	PRESSURE INDICATOR		X
E22 R003	PRESSURE INDICATOR		X
E22 S001	ENG-GEN FOR HPCS SYS	L, Z	X
E22 S002	MOTOR CONTROL CENTER HPCS	L, Z	X
E22 S003	ELECT TRANSFORMER, HPCS	L, Z	X
E22 S004	SWGR ELEC MET ENCL	L, Z	X

LEAK DETECTION SYSTEM

<u>MPL ITEM NO.</u>	<u>DESCRIPTION</u>	<u>SAFE SHUTDOWN EQUIPMENT</u>	<u>ADEQUACY TO ORIGINAL CRITERIA</u>
E31 K600	POWER SUPPLY		X
E31 K602	SQUARE ROOT CONVERTER		X
E31 K603	SQUARE ROOT CONVERTER		X
E31 K604	DIFF FLOW SUMMER		X
E31 K605	SQUARE ROOT CONVERTER		X
E31 N001	TEMP ELEMENT		X
E31 N002	TEMP ELEMENT		X
E31 N003	TEMP ELEMENT		X
E31 N004	TEMP ELEMENT		X
E31 N005	TEMP ELEMENT		X
E31 N006	TEMP ELEMENT		X
E31 N007	DIFF PRESS IND SWITCH		X
E31 N008	DIFF PRESS IND SWITCH		X
E31 N009	DIFF PRESS IND SWITCH		X
E31 N010	DIFF PRESS IND SWITCH		X
E31 N011	DIFF PRESS IND SWITCH		X
E31 N012	DIFF PRESS IND SWITCH		X
E31 N013	DIFF PRESS IND SWITCH		X
E31 N015	FLOW TRANSMITTER		X
E31 N018	TEMP ELEMENT		X
E31 N022	PRESS SWITCH		X
E31 N024	TEMP ELEMENT		X
E31 N025	TEMP ELEMENT		X
E31 N026	TEMP ELEMENT		X

<u>MPL ITEM NO.</u>	<u>DESCRIPTION</u>	<u>SAFE SHUTDOWN EQUIPMENT</u>	<u>ADEQUACY TO ORIGINAL CRITERIA</u>
E31 N027	TEMP ELEMENT		X
E31 N028	TEMP ELEMENT		X
E31 N029	TEMP ELEMENT		X
E31 N030	TEMP ELEMENT		X
E31 N031	TEMP ELEMENT		X
E31 N035	FLOW TRANSMITTER		X
E31 N036	FLOW TRANSMITTER		X
E31 N600	DIFF TEMP SWITCH		X
E31 N601	TEMP SWITCH		X
E31 N602	TEMP SWITCH		X
E31 N603	DIFF TEMP SWITCH		X
E31 N604	TEMP SWITCH		X
E31 N605	DIFF FLOW SWITCH		X
E31 N608	TEMP SWITCH		X
E31 N612	TEMP SWITCH		X
E31 N613	DIFF TEMP SWITCH		X
E31 N614	DIFF TEMP SWITCH		X
E31 N615	DIFF TEMP SWITCH		X
E31 R620	DIFF FLOW INDICATOR		X
E31 R621	TIME IND SWITCH		X

MSIV LEAKAGE CONTROL SYSTEM

<u>MPL ITEM NO.</u>	<u>DESCRIPTION</u>	<u>SAFE SHUTDOWN EQUIPMENT</u>	<u>ADEQUACY TO ORIGINAL CRITERIA</u>
E32 K601	POWER SUPPLY		X
E32 K602	POWER SUPPLY		X
E32 N050	PRESS TRANS		X
E32 N051	PRESS TRANS		X
E32 N053	FLOW TRANS		X
E32 N054	DIFF PRESS TRANS		X
E32 N055	PRESS TRANS		X
E32 N056	PRESS TRANS		X
E32 N058	PRESS TRANS		X
E32 N059	DIFF PRESS TRANS		X
E32 N060	PRESS TRANS		X
E32 N061	PRESS TRANS		X
E32 N600	TIME DELAY SWITCH		X
E32 N601	TIME DELAY SWITCH		X
E32 N602	TIME DELAY SWITCH		X
E32 N604	TIME DELAY SWITCH		X
E32 N650	PRESS SWITCH		X
E32 N651	PRESS SWITCH		X
E32 N653	FLOW SWITCH		X
E32 N654	DIFF PRESS SWITCH		X
E32 N655	PRESS SWITCH		X
E32 N656	PRESS SWITCH		X
E32 N658	PRESS SWITCH		X
E32 N659	DIFF PRESS SWITCH		X

<u>MPL ITEM NO.</u>	<u>DESCRIPTION</u>	<u>SAFE SHUTDOWN EQUIPMENT</u>	<u>ADEQUACY TO ORIGINAL CRITERIA</u>
E32 N660	PRESS SWITCH		X
E32 N661	PRESS SWITCH		X
E32 R601	MILLIVOLT TO CURRENT CONV		X
E32 R651	PRESS INDICATOR		X
E32 R653	FLOW INDICATOR		X
E32 R654	DIFF PRESS INDIC		X
E32 R655	PRESS INDICATOR		X
E32 R656	PRESS INDICATOR		X
E32 R658	PRESS INDICATOR		X
E32 R659	DIFF PRESS INDICATOR		X
E32 R660	PRESS INDICATOR		X
E32 R661	PRESS INDICATOR		X

REACTOR CORE ISOLATION COOLING SYSTEM

<u>MPL ITEM NO.</u>	<u>DESCRIPTION</u>	<u>SAFE SHUTDOWN EQUIPMENT</u>	<u>ADEQUACY TO ORIGINAL CRITERIA</u>
E41 C001	PUMP	S	P
E41 C002	TURBINE	S	X
E41 K600	POWER SUPPLY		X
E41 K601	SQ ROOT CONVERTER		X
E41 K603	INVERTER (DC/AC)		X
E41 N001	PRESSURE SWITCH		X
E41 N002	LEVEL SWITCH		X
E41 N003	LEVEL SWITCH		X
E41 N004	DIFF PRESS INDIC SWITCH		X
E41 N005	DIFF PRESS INDIC SWITCH		X
E41 N006	FLOW SWITCH		X
E41 N007	FLOW ORIFICE ASSEMBLY		AE
E41 N008	FLOW TRANS		X
E41 N009	PRESSURE TRANS		X
E41 N010	PRESSURE SWITCH		X
E41 N012	PRESSURE SWITCH		X
E41 N013	PRESSURE TRANS		X
E41 N014	LEVEL SWITCH		X
E41 N015	LEVEL SWITCH		X
E41 N016	PRESSURE TRANS		X
E41 N017	PRESSURE SWITCH		X
E41 N019	PRESS TRANS		X
E41 N024	TEMP ELEMENT		X
E41 N027	PRESSURE SWITCH		X

<u>MPL ITEM NO.</u>	<u>DESCRIPTION</u>	<u>SAFE SHUTDOWN EQUIPMENT</u>	<u>ADEQUACY TO ORIGINAL CRITERIA</u>
E41 N028	TEMP ELEMENT		X
E41 N029	TEMP ELEMENT		X
E41 N030	TEMP ELEMENT		X
E41 N031	PRESS SWITCH		X
E41 N032	PRESS IND SWITCH		X
E41 N600	TEMP SWITCH		X
E41 N601	TEMP SWITCH		X
E41 N602	TEMPERATURE SWITCH		X
E41 N603	TEMPERATURE SWITCH		X
E41 R001	PRESS IND		X
E41 R002	TEMP IND		X
E41 R003	PRESSURE IND		X
E41 R004	PRESSURE IND		X
E41 R005	PRESSURE IND		X
E41 R600	FLOW IND CONT		X
E51 C001	RCIC PUMP	S	X
E51 C002	TURBINE	S	X
E51 K600	POWER SUPPLY		X
E51 K601	SQ ROOT CONVERTER		X
E51 K603	INVERTER (DC TO AC)		X
E51 M602	TIME DELAY SWITCH		X
E51 M603	TIME DELAY SWITCH		X
E51 N001	FLOW ORIFICE ASSEMBLY		AE
E51 N002	FLOW SWITCH		X
E51 N003	FLOW TRANSMITTER		X

<u>MPL ITEM NO.</u>	<u>DESCRIPTION</u>	<u>SAFE SHUTDOWN EQUIPMENT</u>	<u>ADEQUACY TO ORIGINAL CRITERIA</u>
E51 N004	PRESS TRANSMITTER		X
E51 N005	PRESS TRANSMITTER		X
E51 N006	PRESS SWITCH		X
E51 N007	PRESS TRANSMITTER		X
E51 N008	PRESS TRANSMITTER		X
E51 N009	PRESS SWITCH		X
E51 N010	LEVEL SWITCH		X
E51 N011	TEMP ELEMENT		X
E51 N012	PRESS SWITCH		X
E51 N017	DIFF PRESS IND SWITCH		X
E51 N018	DIFF PRESS IND SWITCH		X
E51 N019	PRESS SWITCH		X
E51 N020	PRESS SWITCH		X
E51 N021	PRESS SWITCH		X
E51 N022	TEMP ELEMENT		X
E51 N023	TEMP ELEMENT		X
E51 N025	TEMP ELEMENT		X
E51 N026	TEMP ELEMENT		X
E51 N030	PRESS SWITCH		X
E51 N031	PRESS IND SWITCH		X
E51 N034	PRESS SWITCH		X
E51 N600	TEMP SWITCH		X
E51 N601	TEMP SWITCH		X
E51 N602	TEMP SWITCH		X
E51 N603	TEMP SWITCH		X

<u>MPL ITEM NO.</u>	<u>DESCRIPTION</u>	<u>SAFE SHUTDOWN EQUIPMENT</u>	<u>ADEQUACY TO ORIGINAL CRITERIA</u>
E51 N604	TEMP SWITCH		X
E51 R001	PRESS INDICATOR		X
E51 R002	PRESS INDICATOR		X
E51 R003	PRESS INDICATOR		X
E51 R004	PRESS INDICATOR		X
E51 R005	TEMP INDICATOR		X
E51 R600	FLOW INDICATOR CONT		X

FUEL SERVICING EQUIPMENT

<u>MPL ITEM NO.</u>	<u>DESCRIPTION</u>	<u>SAFE SHUTDOWN EQUIPMENT</u>	<u>ADEQUACY TO ORIGINAL CRITERIA</u>
F11 E001	FUEL PREP MACHINE		X
F11 E011	GENERAL PURPOSE GRAPPLE		X
F13 E002	STEAM LINE PLUG		X
F13 E008	DRYER & SEPARATOR SLING		X
F13 E009	HEAD STRONGBACK		X
F14 E002	CONTROL ROD GRAPPLE		X

REFUELING AND STORAGE EQUIPMENT

<u>MPL ITEM NO.</u>	<u>DESCRIPTION</u>	<u>SAFE SHUTDOWN EQUIPMENT</u>	<u>ADEQUACY TO ORIGINAL CRITERIA</u>
F15 E003	REFUELING PLATFORM EQUIP		X
F16 E002	SPENT FUEL STORAGE RACK		X
F16 E004	STORAGE RACK (CR&DEF FUEL)		P
F16 E008	IN VESSEL RACK		X
F16 E007	NEW FUEL STORAGE RACK		X
F16 E009	DEFECT FUEL STORAGE CONT		X
F16 E015	CURTAIN, FUEL STOR VAULT		X
F18 E001	FUEL PREP MACHINE		X
F18 E011	GENERAL PURPOSE GRAPPLE		X
F19 E002	STEAM LINE PLUG		X
F19 E008	DRYER & SEPARATOR SLING		X
F19 E009	HEAD STRONGBACK CAROUSEL		X
F20 E002	CONTROL ROD GRAPPLE		X
F21 E003	REFUELING PLATFORM EQUIP		X
F22 E009	DEFECT FUEL STORAGE CONT		X
F22 E011	EQUIPMENT STORAGE RACK		X
F22 E012	FUEL STORAGE VAULT		X

REACTOR WATER CLEANUP SYSTEM

<u>MPL ITEM NO.</u>	<u>DESCRIPTION</u>	<u>SAFE SHUTDOWN EQUIPMENT</u>	<u>ADEQUACY TO ORIGINAL CRITERIA</u>
G33 K600	POWER SUPPLY		X
G33 K602	SQ ROOT CONVERTER		X
G33 K603	SQ ROOT CONVERTER		X
G33 K604	5 INPUT SUMMER		X
G33 K605	SQ ROOT CONVERTER		X
G33 K606	POWER SUPPLY		X
G33 N011	FLOW ELEMENT		X
G33 N012	FLOW TRANS		X
G33 N016	TEMP ELEMENT		X
G33 N035	FLOW ELEMENT		X
G33 N036	FLOW TRANSMITTER		X
G33 N041	FLOW TRANS		X
G33 N042	TEMP ELEMENT		X
G33 N600	TEMP SWITCH		X
G33 N603	DIFF SLOW SWITCH		X
G33 R616	CYCLE TIMER		X

CONTROL ROOM PANELS

<u>MPL ITEM NO.</u>	<u>DESCRIPTION</u>	<u>SAFE SHUTDOWN EQUIPMENT</u>	<u>ADEQUACY TO ORIGINAL CRITERIA</u>
H11 P601	REACTOR CORE COOLING BB	S	X
H11 P602	REAC WTR CLNUP & RECIRC BB	S	X
H11 P603	REACTOR CONTROL BB	S	X
H11 P608	POWER RANGE MON CABINET	S	X
H11 P609	RPS DIV A1 & A2 LOGIC VB		X
H11 P611	RPS DIV B1 & B2 LOGIC VB		X
H11 P612	FW & RECIRC INSTR PNL	S	X
H11 P613	NSSS PROCESS INSTR PANEL	S	X
H11 P614	NSSS TEMP REC & LK DET VB	S	X
H11 P617	DIV I RHR RELAY VB	S	X
H11 P618	DIV II RHR RELAY VB	S	X
H11 P620	HP CORE SPRAY RELAY VB	S	X
H11 P621	REAC CORE ISLN CLG RLY VB	S	X
H11 P622	INBOARD VALVE RELAY VB	S	X
H11 P623	OUTBORAD VALVE RELAY VB	S	X
H11 P626	CORE SPRAY CH A RELAY VB	S	X
H11 P627	CORE SPRAY CH B RELAY VB	S	X
H11 P628	AUTO DEPRESS CH A RLY VB	S	X
H11 P631	AUTO DEPRESS CH B RLY VB	S	X
H11 P635	DIV 1&2 RADN MON INST PNL	S	X
H11 P636	DIV 1&2 RADN MON INST PNL	S	X
H11 P654	MSIV LKG DIV 2 CONT VB		X
H11 P655	MSIV LKG DIV 1 CONT VB		X
H13 P601	REACTOR CORE COOLING BB	Z, L	X

<u>MPL ITEM NO.</u>	<u>DESCRIPTION</u>	<u>SAFE SHUTDOWN EQUIPMENT</u>	<u>ADEQUACY TO ORIGINAL CRITERIA</u>
H13 P602	REAC WTR CLNUP & RECIRC BB	Z	X
H13 P603	REACTOR CONTROL BB	Z	X
H13 P608	POWER RANGE MON CABINET	Z	X
H13 P609	TRIP SYS A RPS VB RPS DIV A1 & A2 LOGIC VB	Z, L	X
H13 P611	TRIP SYS B RPS VB RPS DIV 3 & 4 LOGIC VB	Z, L	X
H13 P612	FW & RECIRC INSTR PNL	Z	X
H13 P613	NSSS PROCESS INSTR PANEL	Z	X
H13 P616	DIV 2 RHR RELAY VB	Z	X
H13 P621	REAC CORE ISLN CLG RLY VB	Z	X
H13 P622	INBOARD VALVE RELAY VB	Z	X
H13 P623	OUTBOARD VALVE RELAY VB	Z	X
H13 P624	AREA RADN COMMON MON PNL		X
H13 P625	HP CORE SPRAY RELAY VB	Z	X
H13 P628	AUTO DEP CH A RELAY VB DIV 1/2 PRT & ADS VB	Z, L	X
H13 P626	AUTO DEPRESS CH A RLY VB	Z, L	X
H13 P629	DIV 1 LPCS & RHR A REL VB	Z	X
H13 P631	AUTO DEP CH B RELAY VB DIV 1/2 PRT & ADS VB	Z	X
H13 P632	DIV 1 LEAK DETECTION VB		X
H13 P635	DIV 1 RAD MON INST PANEL	Z	X
H13 P636	DIV 2 RAD MON INST PANEL	Z	X
H13 P642	DIV 2 LEAK DETECTION VB	Z	X
H13 P654	MSIV LKG DIV 2 CONT VB		X
H13 P655	MSIV LKG DIV 1 CONT VB		X
H13 P865	DIV I FLAM COT PANEL		X
H13 P866	DIV II FLAM CONT PANEL		X

LOCAL PANELS

<u>MPL ITEM NO.</u>	<u>DESCRIPTION</u>	<u>SAFE SHUTDOWN EQUIPMENT</u>	<u>ADEQUACY TO ORIGINAL CRITERIA</u>
H21 P001	CS SYS LOCAL PANEL A	S	X
H21 P002	REAC WATER CLNUP LCL PNL	S	X
H21 P004	RV LVL & PRESS LCL PNL A	S	X
H21 P005	RV LVL & PRESS LCL PNL B	S	X
H21 P006	RECIRC PMP/MN ST FLW LP A	S	X
H21 P009	JET PUMP LOCAL PANEL A	S	X
H21 P010	JET PUMP LOCAL PANEL B	S	X
H21 P011	STAND LIQ CON SYS LCL PNL	S	X
H21 P014	HPCI SYS LOCAL PANEL B	S	X
H21 P015	MAIN STEAM FLOW LCL PNL B	S	X
H21 P016	CS/HPCI LEAK DET PANEL A	S	X
H21 P017	RCIC SYS LOCAL PANEL A	S	X
H21 P018	RHR SYS LOCAL PANEL A	S	X
H21 P019	CS SYS LOCAL PANEL B	S	X
H21 P021	RHR SYS LOCAL PANEL B	S	X
H21 P022	RECIRC PUMP B LOCAL PANEL	S	X
H21 P025	MAIN STEAM FLOW LCL PNL D	S	X
H21 P026	RV LVL & PRESS LCL PNL D	S	X
H21 P030	SRM & IRM PREAMP ENCL A-D	S	X
H21 P031	SRM & IRM PREAMP ENCL A-D	S	X
H21 P032	SRM & IRM PREAMP ENCL A-D	S	X
H21 P033	SRM & IRM PREAMP ENCL A-D	S	X
H21 P034	HPCI SYS LOCAL PANEL A	S	X
H21 P035	RCIC LEAK DET LOCAL PNL A	S	X

<u>MPL ITEM NO.</u>	<u>DESCRIPTION</u>	<u>SAFE SHUTDOWN EQUIPMENT</u>	<u>ADEQUACY TO ORIGINAL CRITERIA</u>
H21 P036	CS/HPCI LEAK DET PANEL B	S	X
H21 P037	RCIC SYS LOCAL PANEL B	S	X
H21 P038	RCIC LEAK DET LOCAL PNL B	S	X
H21 P041	MAIN STEAM FLOW LCL PNL C	S	X
H21 P073	MSIV LKG CONTROL DIV 1 LP		X
H21 P074	MSIV LKG CONTROL DIV 2 LP		X
H22 P001	LPCS INST PNL LPCS LOCAL PANEL	Z	X
H22 P002	REA WTR CLNUP INST PNL	Z	X
H22 P004	RV LEV & PRESS INSTR PNL A	Z	X
H22 P005	RV LEV & PRESS INST PNL C	Z	X
H22 P006	RECIRC PUMP A INST PNL RECIRC LOCAL PANEL A	Z	X
H22 P009	JET PUMP INST PNL B JET PUMP LOCAL PANEL B	Z	X
H22 P010	JET PUMP INST PNL A JET PUMP LOCAL PANEL A	Z	X
H22 P015	MAIN STEAM FLW INST PNL A MAIN STEAM FLW LCL PNL A	Z	X
H22 P017	RCIC INST PNL A RCIC LOCAL PANEL A	Z	X
H22 P018	DIV I RHR INST PNL RHR LOCAL PANEL A	Z	X
H22 P021	DIV II RHR INST PNL RHR LOCAL PANEL B	Z	X
H22 P022	RECIRC PUMP B INST PNL RECIRC LOCAL PANEL B	Z	X
H22 P024	HPCS INST PNL HPCS LOCAL PANEL	Z, L	X
H22 P025	MAIN STEAM FLW INST PNL C MAIN STEAM FLW LCL PNL D	Z, L	X

<u>MPL ITEM NO.</u>	<u>DESCRIPTION</u>	<u>SAFE SHUTDOWN EQUIPMENT</u>	<u>ADEQUACY TO ORIGINAL CRITERIA</u>
H22 P026	RV LEV & PRESS INST PNL D RV LVL & PRESS LCL PNL D	Z	X
H22 P027	RV LEV & PRESS INSTR PNL B RV LVL & PRESS LCL PNL B	Z	X
H22 P028	HPCS DESL GEN PROT RLY VB	L	P
H22 P029	RCIC INST PNL B RCIC LOCAL PANEL B		X
H22 P030	IRM & SRM PREAMP CABINET SRM & IRM PREAMP ENCL A-D	Z	X
H22 P031	IRM & SRM PREAMP CABINET SRM & IRM PREAMP ENCL A-D	Z	X
H22 P032	IRM & SRM PREAMP CABINET SRM & IRM PREAMP ENCL A-D	Z	X
H22 P033	IRM & SRM PREAMP CABINET SRM & IRM PREAMP ENCL A-D	Z	X
H22 P041	MAIN STEAM FLW INST PNL D	Z	X
H22 P073	MSIV LKG CONT DIV 1 LP		X
H22 P074	MSIV LKG CONT DIV 2 LP		X

FUEL

<u>MPL ITEM NO.</u>	<u>DESCRIPTION</u>	<u>SAFE SHUTDOWN EQUIPMENT</u>	<u>ADEQUACY TO ORIGINAL CRITERIA</u>
J11 D001	FUEL BUNDLE	>	X
J11 D002	FUEL BUNDLE		X
J11 D005	FUEL BUNDLE		X

CONTAINMENT ELECTRICAL PENETRATIONS

<u>MPL ITEM NO.</u>	<u>DESCRIPTION</u>	<u>SAFE SHUTDOWN EQUIPMENT</u>	<u>ADEQUACY TO ORIGINAL CRITERIA</u>
T23 ZEA1	REAC CNTMT ELEC PEN, LV	S	X
T23 ZEA2	REAC CNTMT ELEC PEN, MV	S	X
T23 ZEA3	REAC CNTMT ELEC PEN, LV	S	X
T23 ZEB2	REAC CNTMT ELEC PEN, LV	S	X
T23 ZEB3	REAC CNTMT ELEC PEN, LV	S	X
T23 ZEB5	REAC CNTMT ELEC PEN, LV	S	X
T23 ZEB6	REAC CNTMT ELEC PEN, LV	S	X
T23 ZEC5	REAC CNTMT ELEC PEN, LV	S	X
T23 ZEC6	REAC CNTMT ELEC PEN, LV	S	X
T23 ZED5	REAC CNTMT ELEC PEN, LV	S	X
T23 ZED6	REAC CNTMT ELEC PEN, LV	S	X
T23 ZWA2	REAC CNTMT ELEC PEN, MV	S	X
T23 ZWA3	REAC CNTMT ELEC PEN, MV	S	X
T23 ZWB1	REAC CNTMT ELEC PEN, LV	S	X
T23 ZWB2	REAC CNTMT ELEC PEN, LV	S	X
T23 ZWB4	REAC CNTMT ELEC PEN, LV	S	X
T23 ZWB5	REAC CNTMT ELEC PEN, LV	S	X
T23 ZWB6	REAC CNTMT ELEC PEN, LV	S	X
T23 ZWC4	REAC CNTMT ELEC PEN, LV	S	X
T23 ZWC5	REAC CNTMT ELEC PEN, LV	S	X
T23 ZWC6	REAC CNTMT ELEC PEN, LV	S	X
T23 ZWD1	REAC CNTMT ELEC PEN, LV	S	X
T23 ZWDZ	REAC CNTMT ELEC PEN, LV	S	X
T49 D001	FLAMMABILITY CONTROL		P