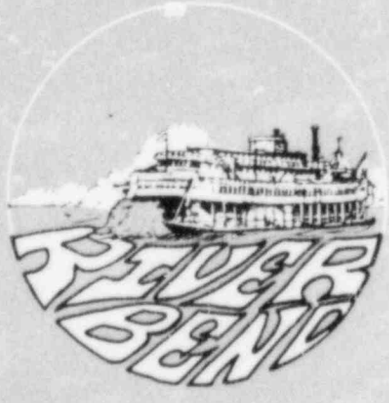
ENVIRONMENTAL QUALIFICATION DOCUMENT

Remove and replace existing pages, including the front and back covers and the spine, with the new material provided.

With this amendment, The Environmental Qualification Document is no longer part of the FSAR and is considered a separate document.

RIVER BEND STATION ENVIRONMENTAL QUALIFICATION DOCUMENT

RIVER BEND STATION ENVIRONMENTAL QUALIFICATION DOCUMENT



RIVER BEND STATION ENVIRONMENTAL QUALIFICATION DOCUMENT

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SECTION 1

INTRODUCTION

The purpose of this document is to establish the methodologies and summarize the results of the environmental qualification program for River Bend Station. The information supports Section 3.11 of the Final Safety Analysis Report (FSAR) and is provided in accordance with 10CFR50.49 and the guidance of Appendix E, NUREG 0588, Interim Staff Position on Environmental Qualification of Safety-Related Electrical Equipment, December 1979.

SECTION 2

ENVIRONMENTAL CONDITIONS

The Environmental Design Criteria (EDC)[1] document specifies the indoor environmental design conditions for River Bend Station for normal, abnormal, and accident conditions.

The scope of the EDC is limited to establishing the environmental conditions of temperature, pressure, humidity, and radiation (beta, gamma, and neutron). Seismic and hydrodynamic loading conditions are not within the scope of the EDC.

The data of this document summarize the environmental conditions which have been used to establish the design basis for the plant. The data do not contain margin.

Tables 2-1, 2-2, and 2-3 list and describe the harsh and mild environmental zones. Illustrations of the physical zones are provided in the environmental zone maps, Figures 2-1 through 2-4.

The environmental data for temperature, pressure, humidity, and radiation are defined in the EDC for each building zone. Data are listed for normal operating conditions, abnormal operating conditions, and for the accident event that impacts the zone ambient environment. Normal conditions list maximum, minimum, and applicable average conditions. The duration column is applicable to the abnormal and accident conditions. Frequency is indicated for the abnormal condition only.

TABLE 2-1

STANDARDIZED HARSH ENVIRONMENTAL ZONE DESCRIPTIONS

Zone	Description
Drywell	
DW-1	Outside RPV Shield Wall, Outside DW-2 (El 81'-3/4" to 162'-3")
DW-2	Outside RPV Shield Wall, to a radius of 17'-0" from RPV centerline (El 110'-0" to 122'-0")
DW-3	Under RPV (El 73'-1/4" to 102'-0")
DW-4	Drywell Dome (El 162'-3" to 175'-3 3/4")
DW-5	Outside RPV Skirt (El 100'-8" to 108'-6")
DW-6	Between RPV Insulation and Primary (Biological) Shield Wall (El 108'-6" to 147'-6")
Containment	
CT-1	Upper Containment Dome (El 235'-0" to 256'-3")
CT-2	Immediately Above Suppression Pool (El 90'-0" to 114'-0")
CT-3	HCU Floor (El 114'-0" to 141'-0")
CT-4	SLCS Areas (El 141'-0" to 162'-3")
CT-5	WCS Area - Backwash Receiving Tank and Pump Cubicles (El 141'-0" and 162'-3")
CT-5A	Walkway Adjacent to Zone CT-5
CT-6	Drywell Personnel Hatch Area (El 130'-7")
CT-7	WCS Heat Exchanger Cubicle (El 141'-0" to 162'-3", AZ-327° to 33°)
CT-7A	Walkway Adjacent to Zone CT-7
CT-8	Fuel Transfer Tube, Isolation Valve Room (El 128'-1 3/4")
CT-9	Inside Main Steam Tunnel (El 114'-0")
CT-10	SFC Pipe and Valve Room (El 130'-7" and El 162'-3")
CT-11	WCS - Filter Cubicles (El 162'-3")
CT-SP	Suppression Pool (El 70'-0" to 90'-0")
CT-G*	General Area (El 114'-0", 141'-0", 162'-3", and 186'-3")
Annulus	
AN-1	All Areas El 114'-0" and Above
AN-2	All Areas Immediately Below El 114'-0"
AN-3	Vicinity of SFC Piping (El 114'-0" to 141'-0", AZ-155° to 185°)

TABLE 2-1 (Cont)

Zone	Description
Auxiliary Building	
Elevation: 70'-0"	
AB-070-1	CSL Area
AB-070-2	RHS-P1A Pump Room
AB-070-3*	ICS Pump Room
AB-070-4	RHS-P1C Pump Room
AB-070-5	RHS-P1B Pump Room
AB-070-6	HPCS Pump Room
AB-070-7	Elevator Area
AB-070-8	RPCCW Area
AB-070-G	General Area
Elevation: 95'-9"	
AB-095-1	CSL Hatch Area
AB-095-2	RHS Heat Exchanger Area (West)
AB-095-3*	WCS Area
AB-095-4	Hoist Area
AB-095-5	RHS Heat Exchanger Area (East)
AB-095-6	HPCS Hatch Area
AB-095-7	Elevator Area
AB-095-8	RPCCW Area
AB-095-9	CRD Work Area
AB-095-10*	Main Steam Tunnel
AB-095-G	General Area
Elevation: 114'-0"	
AB-114-1	MCC Area (West)
AB-114-2*	Main Steam Tunnel (North)
AB-114-3	MCC Area (East)
AB-114-4	Post Accident Sampling Station
AB-114-5	Elevator Room
AB-114-6	RPCCW Area
AB-114-7*	Main Steam Tunnel (Loops)
AB-114-8	RHS Equipment Removal Cubicle
AB-114-G	General Area
Elevation: 141'-0"	
AB-141-1	Equipment Area (West)
AB-141-2	Equipment Area (East)
AB-141-3	Elevator Area

TABLE 2-1 (Cont)

Zone	Description
AB-141-4	RPCCW Area
AB-141-5	Standby Gas Treatment Filter (West)
AB-141-6	Standby Gas Treatment Area (East)
AB-141-G	General Area
Elevation: 170'-0"	
AB-170-1	Annulus Mixing System Fan Area
AB-170-3	Elevator Machine Room
Fuel Building	
Elevation: 70'-0"	
FB-070-1	Fuel Pool Cooling Pumps and Heat Exchanger
FB-070-2	SFT Drain Tank Area
FB-070-3	Backwash Receiving Room
FB-070-4	Fuel Pool Purification
Elevation: 95'-0"	
FB-095-1	Fuel Pool Demineralizer Filter and Tank Rooms
FB-095-2	SFC Heat Exchanger Cubicles
FB-095-G	General Area
Elevation: 113'-0"	
FB-113-1	Cask Loading and Shipping Area
FB-113-3	Pipe Chase
FB-113-4	Fuel Transfer Tube Mid-Support Room
FB-113-G	General Area
Elevation: 148'-0"	
FB-148-1	Charcoal Filter Rooms
FB-148-G	General Area
Radwaste Building	
Elevation: 65'-0"	
RW-065-1	Tank Rooms
RW-065-2	Valve and Pump Rooms
RW-065-G	General Area

TABLE 2-1 (Cont)

Zone	Description
Elevation: 90'-0"	
RW-090-1	Tank Area
RW-090-2	Valve and Pump Rooms
Elevation: 106'-0"	
RW-106-4	Cask Fill and Storage Area
RW-106-5	Valve and Pump Area
RW-106-6	Waste Sludge Tank Area
Elevation: 117'-0", 120'-0", and 128'-6"	
RW-117-1	Valve and Pump Area
RW-117-2	Filter and Demineralizer Cubicles
RW-120-1	Valve and Pump Room
RW-128-1	Clean Cask Storage
Elevation: 136'-0"	
RW-136-1	Bridge Crane Area
RW-136-2	Evaporator and Reboiler Areas
RW-136-4	Flat Bed Filter and Pump Area
Elevation: 166'-0"	
RW-166-1	HVW Filter Room
RW-166-2	Evaporator Area
Turbine Building Including Off-Gas Area	
Elevation: 67'-6"	
TB-067-1	Heater Bay Cubicles
TB-067-3	Turbine and Condenser Area
Elevation: 95'-0"	
TB-095-1	Heater Bay Cubicles
TB-095-2	Moisture Separator and Reheat Area
TB-095-3	Turbine and Condenser Area
TB-095-4	Air Ejector Cubicle
TB-095-5	Decontamination Area
TB-095-6	Steam Packing Exhauster Area

TABLE 2-1 (Cont)

Zone	Description
Elevation:	123'-6" and 180'-0"
TB-123-1	Moisture Separator and Reheat Area
TB-123-2	Turbine Shield Wall Well Area
TB-123-3	Steam Seal Evaporator Cubicle
TB-123-4	Radwaste Reboiler Cubicle
TB-123-5	HVT Filter Room
TB-123-G	General Area
TB-180-G	Area Immediately Below Turbine Building Roof
Elevation:	67'-6"
OG-067-1	Condensate Demineralizer Regeneration Area
Elevation:	95'-0"
OG-095-1	Condensate Demineralizer Area
Elevation:	123'-6"
OG-123-1	Sample Rooms
OG-123-2	Off-Gas Equipment Areas
OG-123-3	Charcoal Adsorber Cubicle
Elevation:	148'-6"
OG-148-1	Charcoal Adsorbers
OG-148-2	Holdup Pipe Room
OG-148-3	Filter Area
Piping Tunnels	
PT-2	Tunnel Bordered by AB, RB, and RW Buildings
PT-3	AB Tunnel
PT-7	Tunnel Bordered by RW and AC Buildings

*Contains high-energy piping; failure is postulated.

TABLE 2-2

STANDARDIZED MILD ENVIRONMENTAL ZONE DESCRIPTIONS

Zone	Description
Auxiliary Building	
AB-170-2	Continuous Filter Room
AB-170-G	General Area
Fuel Building	
Elevation: 70'-0"	
FB-070-G	General Area
Elevation: 113'-0"	
FB-113-2	Fuel Handling - Operating Floor
Elevation: 148'-0"	
FB-148-2	Equipment Area
Control Building	
Elevation: 70'-0"	
CB-070-1	Cable Vault Area
CB-070-2	HVAC Rooms
CB-070-G	General Area
Elevation: 98'-0"	
CB-098-1	Switchgear Area
CB-098-2	Mechanical Equipment Room
CB-098-G	General Area
Elevation: 115'-0"	
CB-115-1	HVAC Rooms
CB-115-G	General Area
Elevation: 116'-0"	
CB-116-1	Battery Room
CB-116-2	Cable Vent and Switchgear, Inverter Rooms
CB-116-G	General Area

TABLE 2-2 (Cont)

Zone	Description
Elevation: 136'-0"	
CB-136-1	Control Room
CB-136-G	General Area
Radwaste Building	
Elevation: 90'-0"	
RW-090-G	General Area
Elevation: 106'-0"	
RW-106-1	Solid Waste Treatment Area
RW-106-2	Solid Waste Compacting and Storage Area
RW-106-3	Sample Room
RW-106-G	General Area
Elevation: 117'-0"	
RW-117-G	General Area
Elevation: 136'-0"	
RW-136-3	Laundry Room
RW-136-G	General Area
Elevation: 166'-0"	
RW-166-G	General Area
Turbine Building Including Off-Gas Area	
Elevation: 67'-6"	
TB-067-2	Sample Room
TB-067-4	Reactor Feed Pump Area
TB-067-G	General Area
Elevation: 95'-0"	
TB-095-G	General Area

TABLE 2-2 (Cont)

Zone	Description
Elevation:	123'-6"
TB-123-6	Passageway
Elevation:	67'-6"
OG-067-G	General Area
Elevation:	95'-0"
OG-095-G	General Area
Elevation:	123'-6"
OG-123-G	General Area
Elevation:	148'-6"
OG-148-G	General Area
Diesel Generator Building	
Elevation:	98'-0"
DG-098-1	Diesel Operating Area
DG-098-2	Diesel Generator Control Rooms
DG-098-G	General Area
Normal Switchgear Building	
Elevation:	67'-6", 98'-0", and 123'-6"
NS-067-1	Cable Tray Room
NS-098-1	Normal Switchgear and Load Center
NS-098-2	Passageway - Normal Switchgear
NS-123-1	Battery Rooms
NS-123-2	Computer Rooms
NS-123-3	Mechanical Equipment and Switchgear Rooms
NS-123-4	Passageway - Normal Switchgear

TABLE 2-2 (Cont)

Zone	Description
Auxiliary Boiler Building	
Elevation: 95'-0" and 123'-6"	
BA-095-1	Auxiliary Boiler Area
BA-095-2	Switchgear Area
BA-123-1	Deaerator Area
Auxiliary Control Building	
Elevation: 95'-0"	
AC-095-1	Hot Machine Shop
AC-095-2	Passageway
AC-095-3	Decontamination Room
AC-095-4	I & C Electrical Hot Shop
Elevation: 123'-6"	
AC-123-1	Mechanical Equipment
AC-123-2	Passageway
AC-123-3	Auxiliary Control Room
Standby Service Water Pumphouse	
SW-1	Standby Service Water Pump Rooms
SW-2	Transformer Rooms
SW-3	Remote Air Intake Room
Administration Complex	
AD-1	Office Building
AD-2	Warehouse
AD-3	Cafeteria/Lockers/Offices
AD-4	Lab/Health Physics/Decontamination Areas
AD-5	Mechanical Room
AD-6	Machine Shops
AD-7	Electrical Load Center
AD-8	Primary Access Point
AD-9	Auxiliary Access Point
AD-10	Technical Support Center (TSC)
Fire Pumphouse Building	
FP-1	Fire Pumphouse

TABLE 2-2 (Cont)

Zone	Description
Makeup Water Intake Structure	
MK-1	Battery Rooms
MK-2	Pump Room
MK-3	Switchgear Room
Circulating Water Pumphouse	
CW-1	Circulating Water Pumphouse
MG Set Building	
MG-1	MG Set
Water Treatment Building	
WT-1	Water Treatment
Transformer Yard 2A	
TY-1	Fire Protection Sprinkler Building
Hypochlorite Area	
HA-1	Switchgear House
Blowdown Area	
BP-1	Blowdown Pit
Cooling Tower	
CL-1	Switchgear House (1A)
CL-2	Switchgear House (1B)
CL-3	Switchgear House (1C)
CL-4	Switchgear House (1D)
Clarifier Area	
CA-1	Switchgear House
CA-2	Tank Room
Demineralized Water Building	
DI-1	Demineralized Water Pumphouse

TABLE 2-2 (Cont)

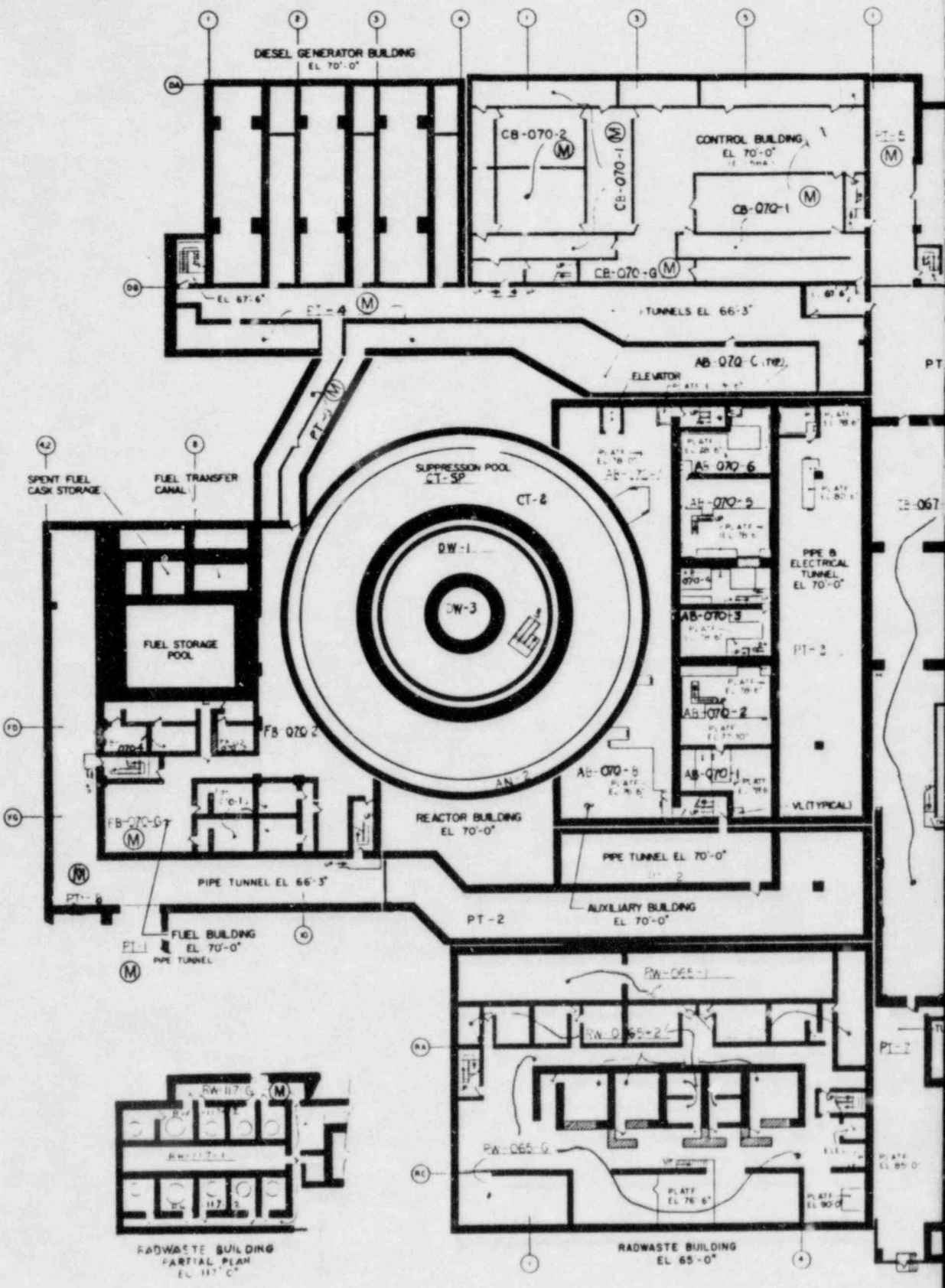
Zone	Description
Piping Tunnels	
PT-1	Standby Service Water Tower Tunnel
PT-4	Tunnel Bordered by AB, CB, and DG Buildings
PT-5	Tunnel Bordered by NS and CB Buildings
PT-6	Tunnel Bordered by TB and NS Buildings
PT-8	Tunnel Bordered by FB Building
PT-9	Tunnel Bordered by FB and RB Buildings

TABLE 2-3

PLANT ZONES

The following plant zones are mild environment plant zones served by the special control room charcoal air filters:

CB-136-1	Control Room
CB-136-G	General Area



Ⓜ - MILD ENVIRONMENT

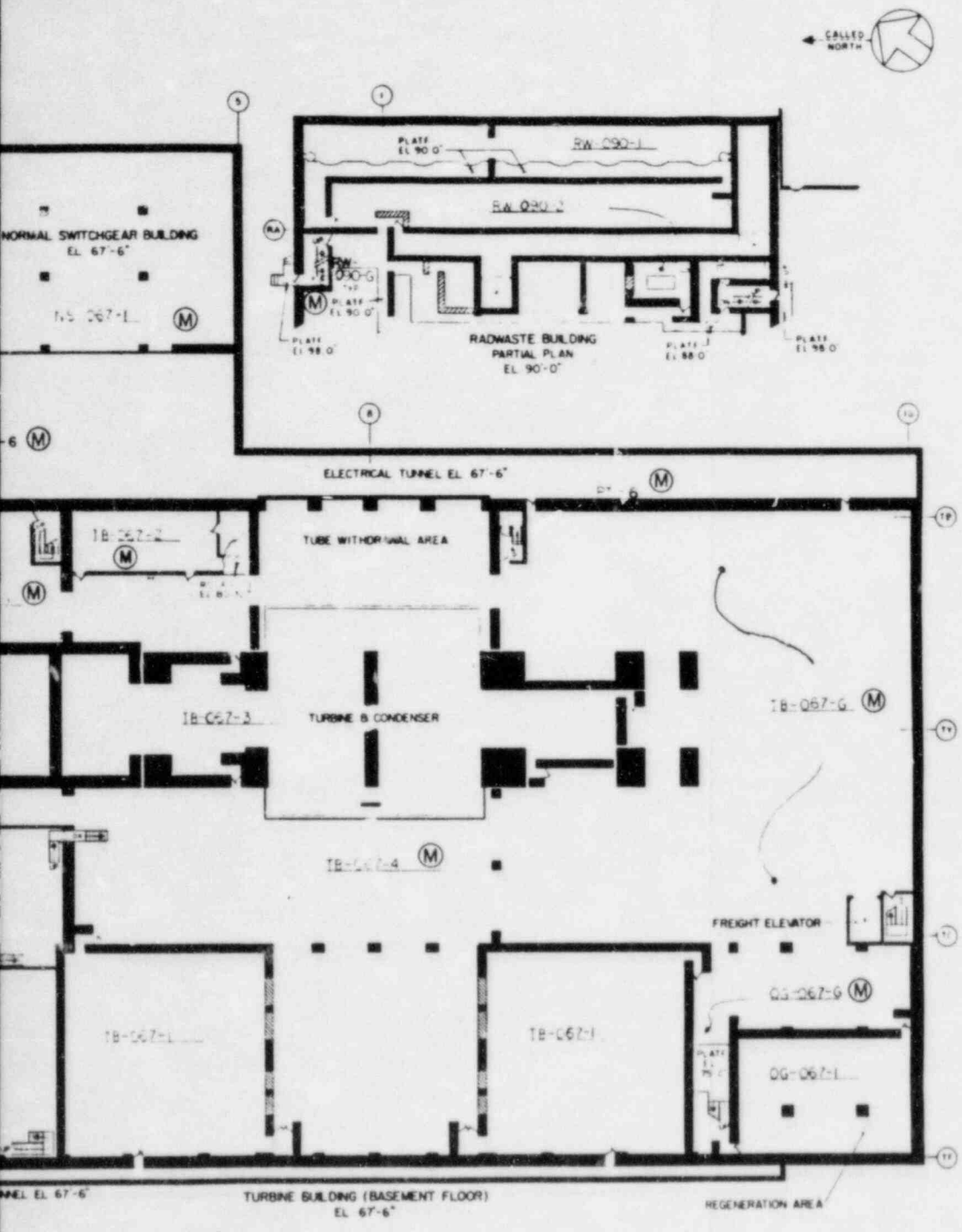


FIGURE 2-1

ENVIRONMENTAL ZONE MAP

RIVER BEND STATION

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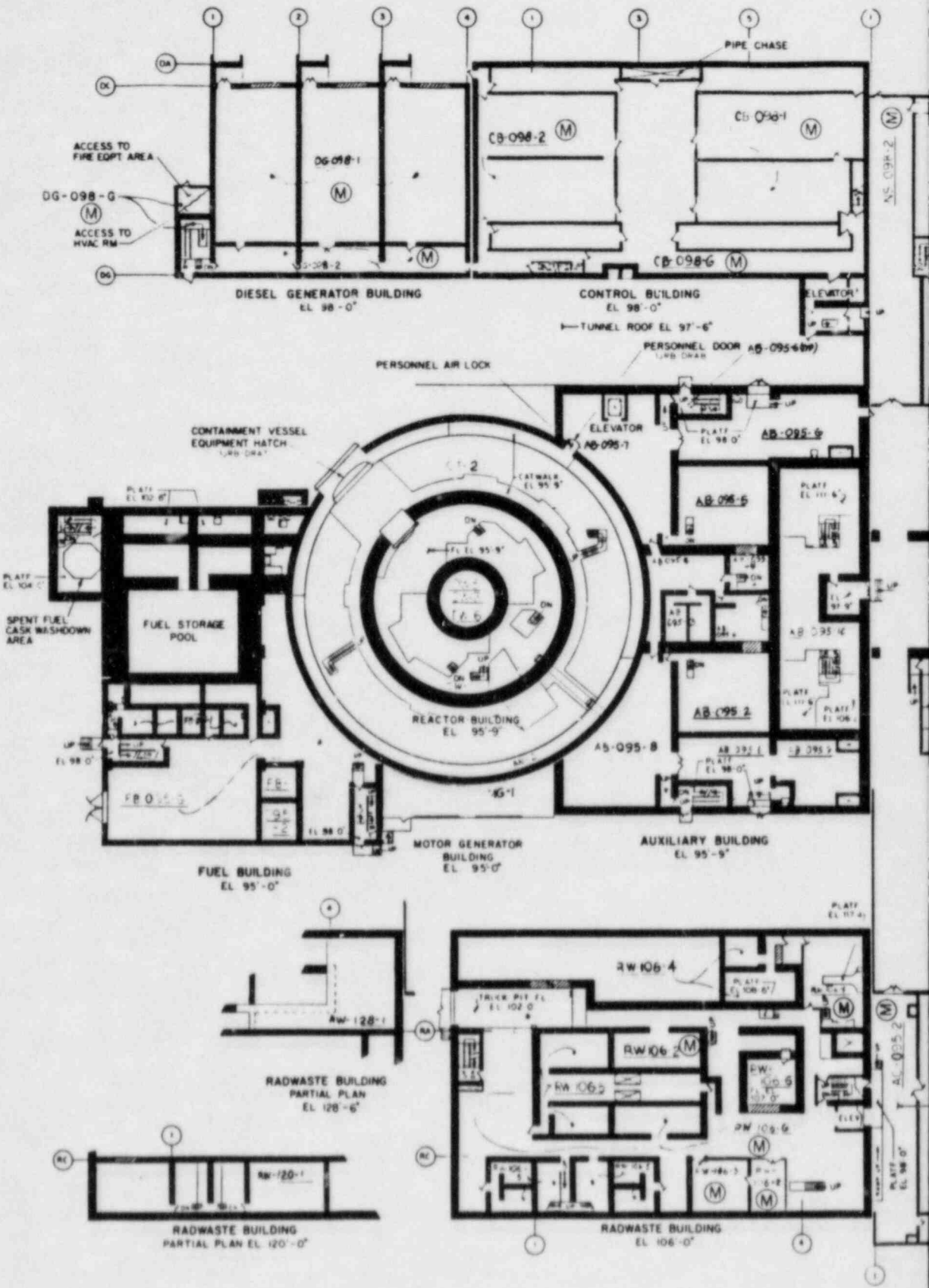
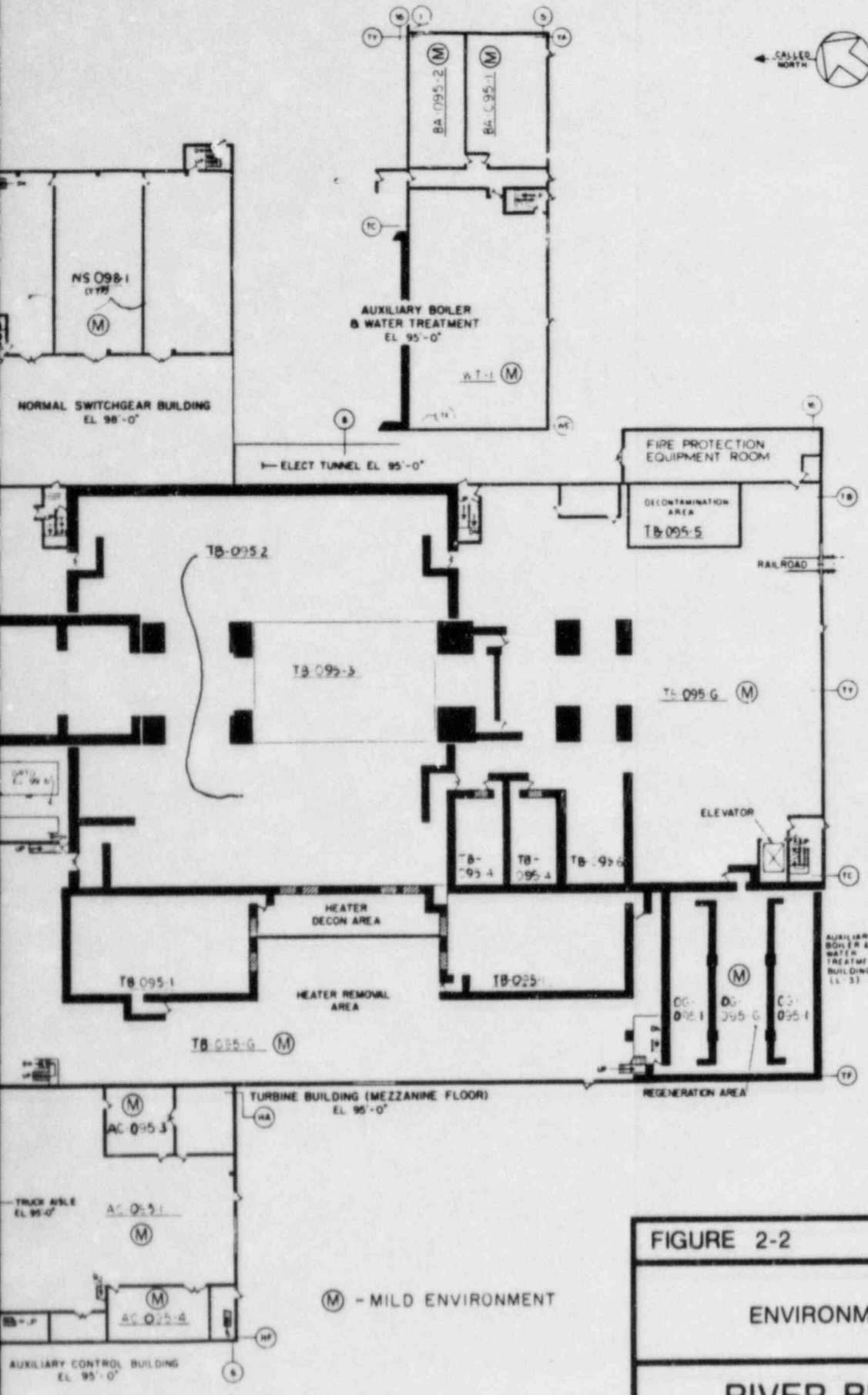

PIPE CHASE
ACCESS TO FIRE EQPT AREA
DG-098-G
ACCESS TO HVAC RM
DG-098-1
CB-098-2
CB-098-1
CB-098-6
DIESEL GENERATOR BUILDING
EL 98'-0"
CONTROL BUILDING
EL 98'-0"
TUNNEL ROOF EL 97'-6"
ELEVATOR
PERSONNEL DOOR
PERSONNEL AIR LOCK
CONTAINMENT VESSEL EQUIPMENT HATCH
ELEVATOR
AB-095-9
AB-095-6
AB-095-5
AB-095-8
CATWALK EL 99'-9"
REACTOR BUILDING
EL 95'-9"
SPENT FUEL CASK WASHDOWN AREA
FUEL STORAGE POOL
FUEL BUILDING
EL 95'-0"
MOTOR GENERATOR BUILDING
EL 95'-0"
AUXILIARY BUILDING
EL 95'-9"
RW-128-1
RADWASTE BUILDING
PARTIAL PLAN
EL 128'-6"
RW-120-1
RADWASTE BUILDING
PARTIAL PLAN EL 120'-0"
RW-106-4
RW-106-2
RW-106-6
RADWASTE BUILDING
EL 106'-0"



Also Available On Aperture Card

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Ⓜ - MILD ENVIRONMENT

FIGURE 2-2

ENVIRONMENTAL ZONE MAP

RIVER BEND STATION

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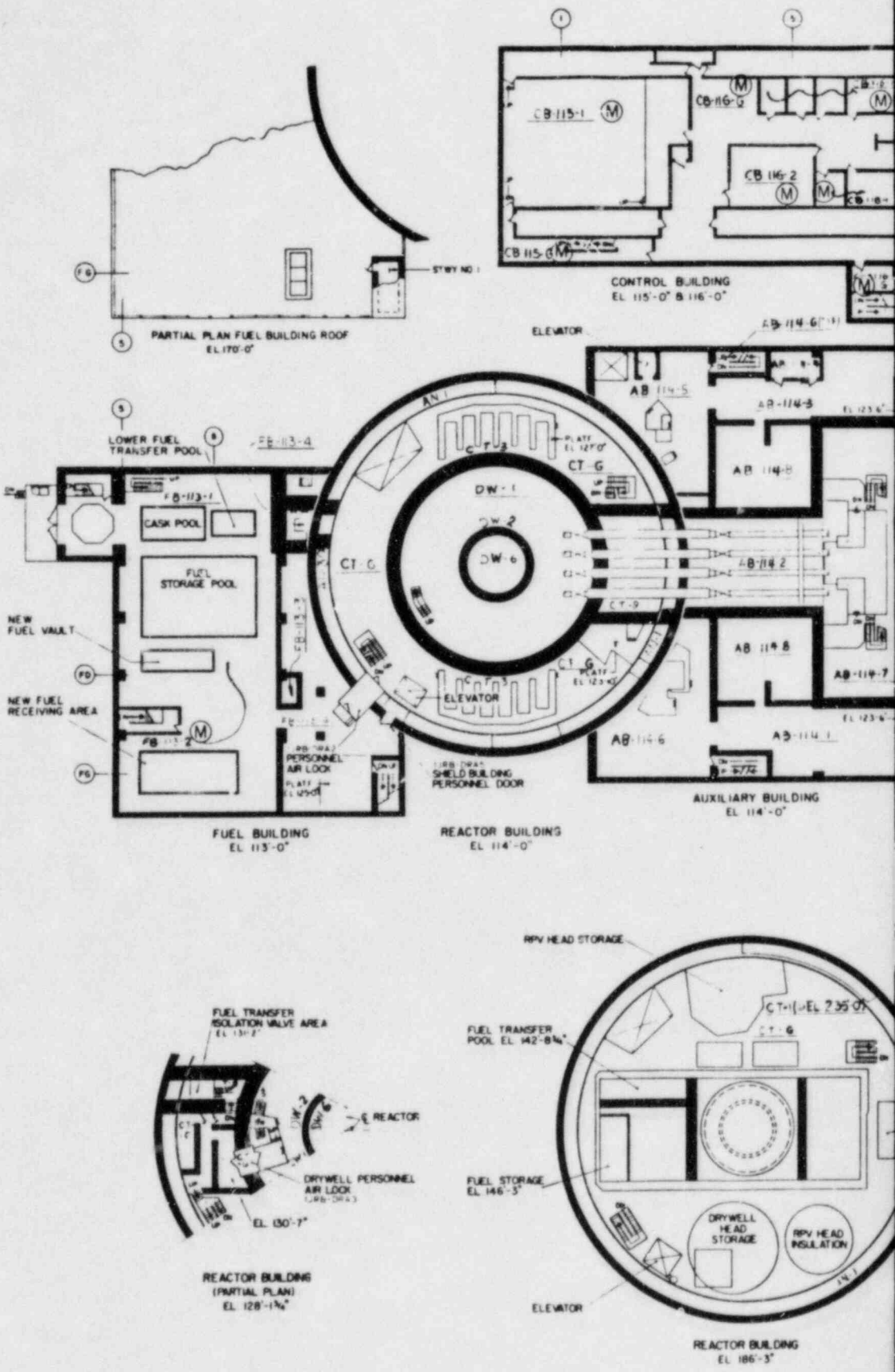

PARTIAL PLAN FUEL BUILDING ROOF
EL 170'-0"
CONTROL BUILDING
EL 115'-0" & 116'-0"
CB-115-1
CB-116-2
ELEVATOR
AB-114-5
AB-114-8
AB-114-2
AB-114-7
AB-114-6
LOWER FUEL TRANSFER POOL
FB-113-4
FB-113-1
CASK POOL
FUEL STORAGE POOL
NEW FUEL VAULT
NEW FUEL RECEIVING AREA
PERSONNEL AIR LOCK
SHIELD BUILDING PERSONNEL DOOR
ELEVATOR
CT-G
DW-1
DW-2
DW-6
FUEL BUILDING
EL 113'-0"
REACTOR BUILDING
EL 114'-0"
AUXILIARY BUILDING
EL 114'-0"
FUEL TRANSFER ISOLATION VALVE AREA
EL 130'-7"
DRYWELL PERSONNEL AIR LOCK
REACTOR BUILDING
(PARTIAL PLAN)
EL 128'-1¾"
RPV HEAD STORAGE
FUEL TRANSFER POOL EL 142'-8¾"
FUEL STORAGE EL 146'-3"
DRYWELL HEAD STORAGE
RPV HEAD INSULATION
ELEVATOR
REACTOR BUILDING
EL 186'-3"

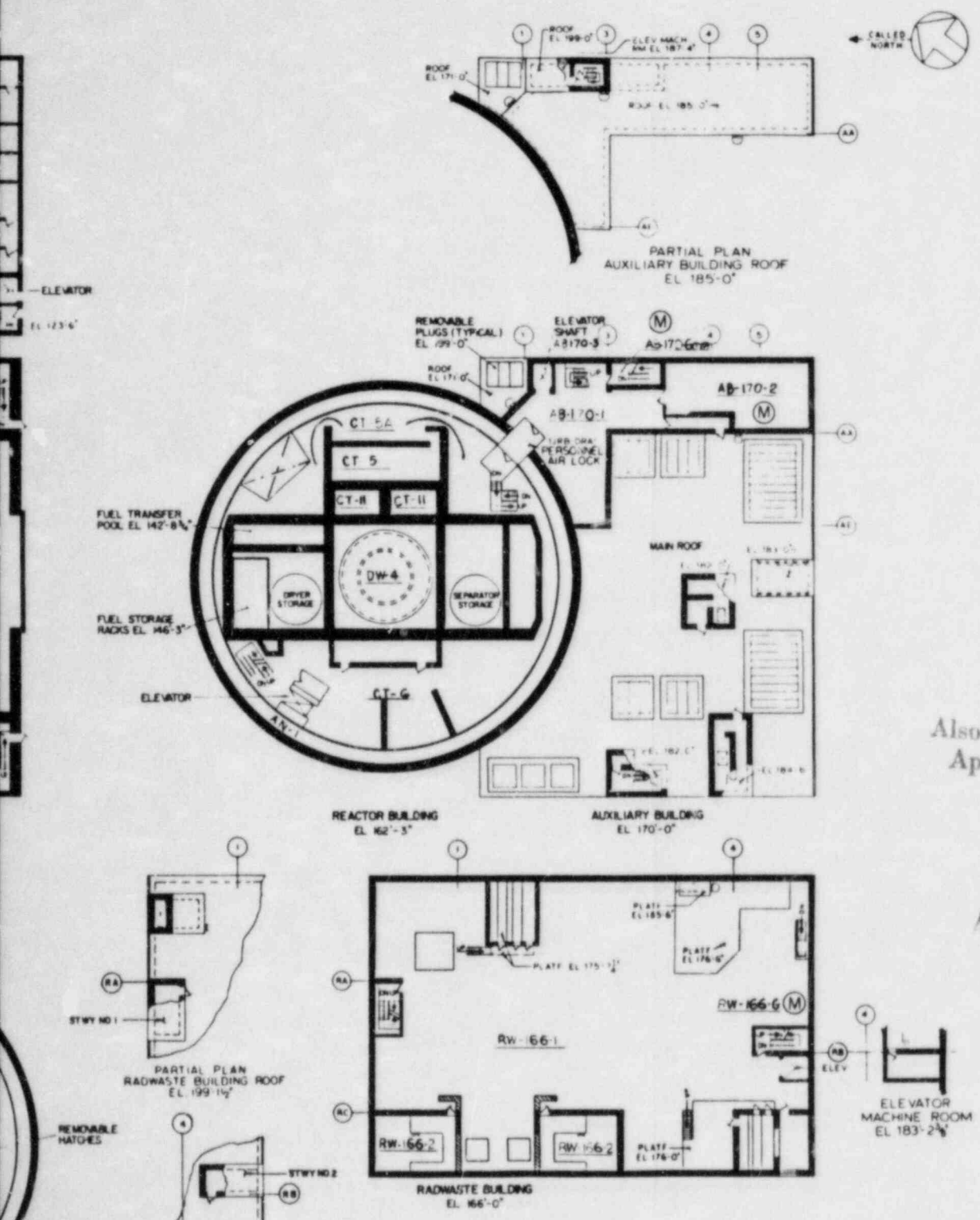
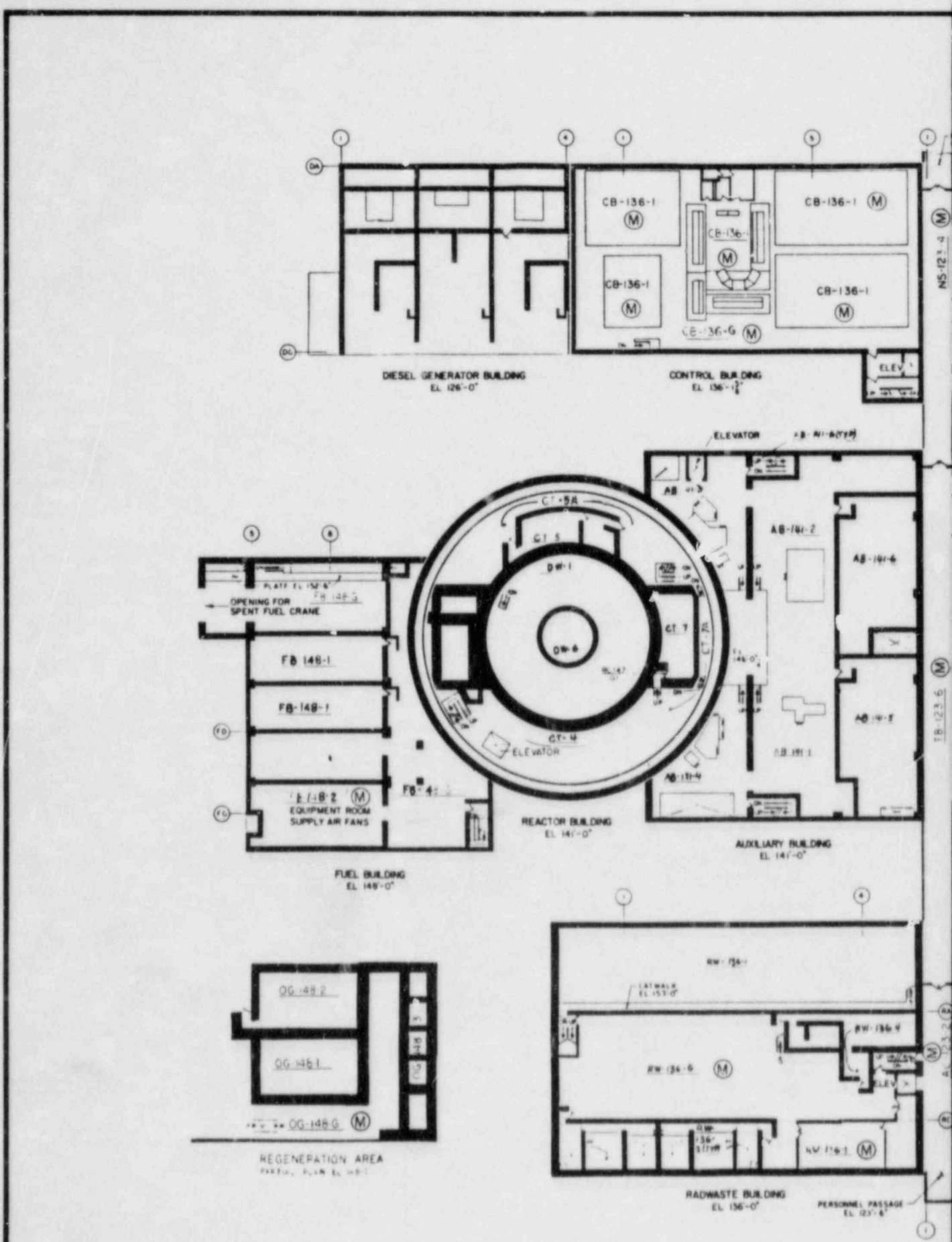


FIGURE 2-3

ENVIRONMENTAL ZONE MAP

RIVER BEND STATION

ENVIRONMENTAL QUALIFICATION DOCUMENT


DIESEL GENERATOR BUILDING
EL 126'-0"
CONTROL BUILDING
EL 136'-0"
CB-136-1
CB-136-G
ELEV.
NS-123.4
ELEVATOR
AB-141-2
AB-141-6
AB-141-5
AB-131-4
AB-191-1
TB-123.6
CT-5A
CT-5
CT-7
CT-4
DW-1
DW-4
ELEVATOR
REACTOR BUILDING
EL 141'-0"
AUXILIARY BUILDING
EL 141'-0"
OPENING FOR
SPENT FUEL CRANE
FB-148-1
FB-149-1
EQUIPMENT ROOM
SUPPLY AIR FANS
FUEL BUILDING
EL 148'-0"
OG-149.2
OG-148.1
OG-148.G
REGENERATION AREA
RW-136-1
CATWALK
EL 153'-0"
RW-136-4
RW-136-6
RW-116-1
RADWASTE BUILDING
EL 136'-0"
PERSONNEL PASSAGE
EL 123'-6"

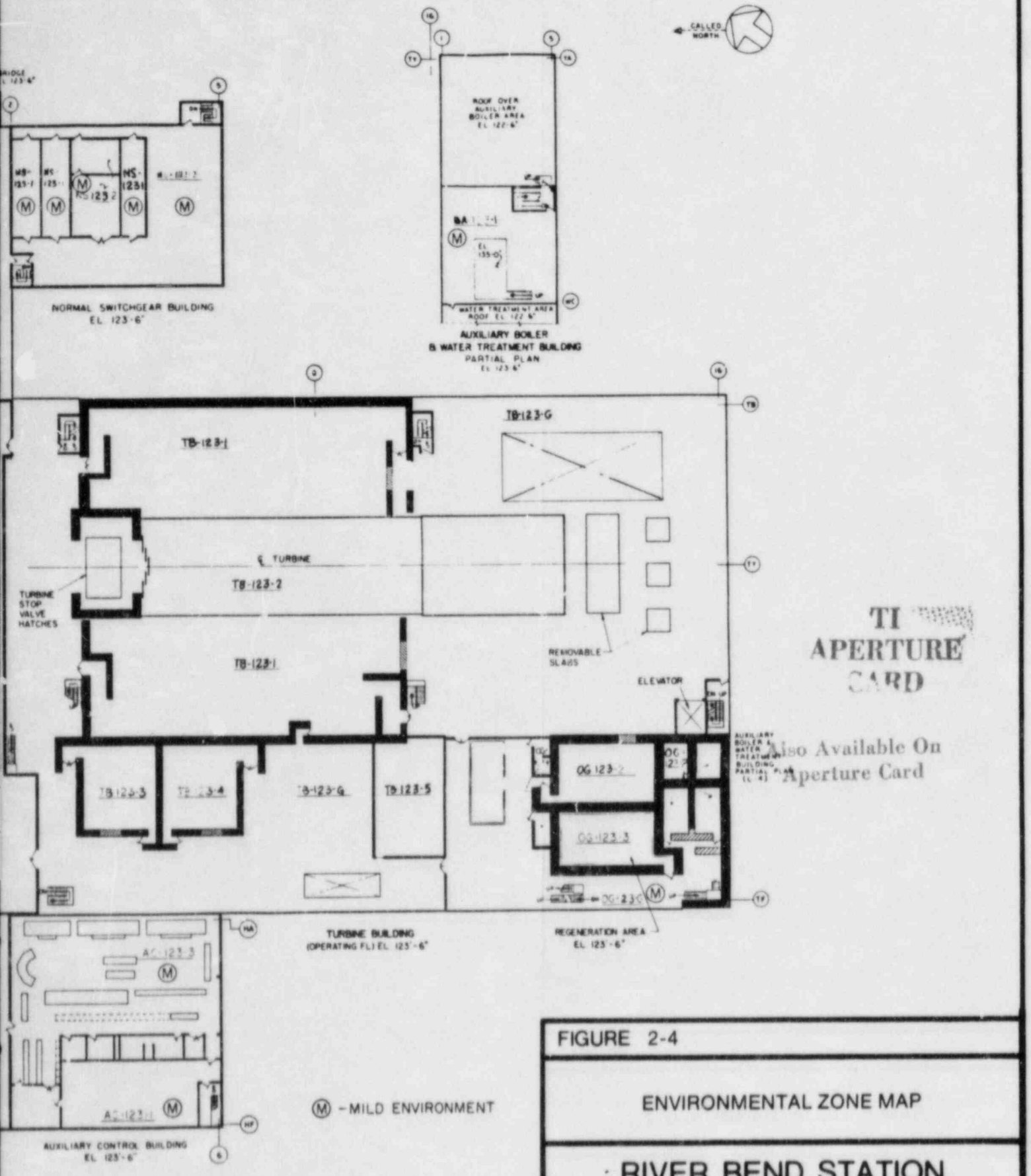


FIGURE 2-4

ENVIRONMENTAL ZONE MAP

RIVER BEND STATION
ENVIRONMENTAL QUALIFICATION DOCUMENT

2.1 TEMPERATURE, PRESSURE, HUMIDITY ENVIRONMENT

The plant ventilation/air-conditioning system is designed to maintain maximum normal operating temperature and pressure conditions for all normal reactor operating modes, including startup, power range, hot-standby, shutdown, and refueling. Average (expected) normal temperatures are also listed in the EQD. However, the humidity is uncontrolled unless otherwise specified. The normal conditions are assumed to persist continuously (i.e., steady state) until an abnormal or accident condition occurs, in which case the abnormal or accident condition persists for the duration specified. After the abnormal or accident condition is terminated, normal conditions are again assumed to exist.

Abnormal operating conditions are any reasonably expected or anticipated deviations from normal conditions (excluding accident conditions). Abnormal operating conditions include:

1. Transients that result from a single HVAC equipment malfunction or a single operator action which was not planned, such as:

   a. Pump, fan, or chiller inadvertently tripped by operator or tripped on overload

   b. Main steam isolation valve isolation event (loss of condenser vacuum, turbine trip, MSIV closure including stuck open relief valve)

   c. Unplanned loss of non-Class 1E HVAC

2. Transients caused by loss of offsite power for a duration of 4 hr. Five of these transients are assumed to occur during the life of the plant.

An accident is defined in FSAR Chapter 15 and is postulated for analysis purposes to occur from unlikely but possible situations and that has the potential to cause a release of radioactivity to the environs which could endanger public safety if not mitigated. A reactor coolant pressure boundary rupture is an example of an accident.

Failure of high energy and moderate piping has been postulated in accordance with NRC Regulatory Guide 1.46, Branch Technical Positions MEB 3-1 and APCSB 3-1.

2.2 RADIATION ENVIRONMENT

Integrated radiation environments are specified in terms of rads for gamma and beta radiation. The gamma values are based on energy deposition in tissue (rads) or exposure in air (roentgen). However, the corresponding absorbed dose which would occur in equipment materials (e.g., carbon) when exposed to the environment would differ only slightly in magnitude. For equipment qualification testing, the equivalence of 1 rad to 1 roentgen is an appropriate assumption. The beta environment is stated in terms of a surface air dose and does not account for any shielding between the airborne or plateout activity and the material of interest. The total integrated dose equals the normal plus the accident conditions. Neutron environments are specified in terms of neutron fluence (neutrons/cm^2) for that portion of the spectrum ≥1 Mev.

For normal operating condition, the radiological environments are specified as doses integrated over a 40-yr plant life for gamma and beta radiation. A plant capacity factor of 0.8 is used to develop the integrated doses for all equipment which operates in conjunction with normal reactor operation. Expected operation time over the 40-yr life of the plant is used to determine integrated doses in the vicinity of other auxiliary systems and equipment, such as radwaste and fuel handling systems. Radiation dose contributions due to abnormal conditions that are expected during the life of the plant are included in the 40-yr normal operating conditions.

For abnormal condition, radiation dose contributions due to abnormal conditions are for the MSIV isolation event resulting from a transient caused by a loss of condenser vacuum, an MSIV closure, or a turbine trip. The integrated dose contribution from this event is included in the normal 40-yr values.

For accident conditions, accident radiological doses are in addition to normal operational conditions. The accident dose contribution is determined for the single most limiting accident. Dose profiles as a function of time (t) following the accident are specified. The actual accident dose is determined based on the required operation time of the equipment following an accident. In most cases, the post-LOCA (DBA) environmental conditions will be the basis for the radiological requirements. High energy pipe breaks and fuel handling accidents are also considered. Accident integrated doses include combined dose contributions from airborne and contained sources and represent the maximum dose for the area specified.

2.3 CHEMICAL ENVIRONMENT

Engineered Safety Feature (ESF) systems are designed to perform their safety functions in the temperature, pressure, and humidity conditions described in the EDC.

River Bend Station does not utilize any chemical additives to the water recirculated by the ECCS during normal or accident conditions.

Following an accident, the containment and drywell atmospheres are maintained below 4 percent (by volume) hydrogen, as discussed in FSAR Section 6.2.5.

The water in these systems is not chemically inhibited. The maximum limits for the suppression pool water are compatible with those of the primary coolant and are listed as follows:

Parameter	Reactor Water Limits Shutdown Condition	Pressure Suppression Pool Water Quality Expected	Suppression Pool Water Maximum Limit
Conductivity	≤10 umho/cm @ 25°C	≤3 umho/cm @ 25°C	≤10 umho/cm @ 25°C
Chlorides (as Cl-)	≤0.5 ppm	≤0.2 ppm	≤0.2 ppm
pH	5.3 to 8.6 @ 25°C	5.3 to 8.6 @ 25°C	5.3 to 8.6 @ 25°C
Total suspended solids		≤1 ppm	≤5 ppm

During reactor shutdown cooling, the RHR system is lined up with the reactor coolant pressure boundary (RCPB). The shutdown cooling piping and equipment in the RHR system are flushed with demineralized water from the condensate storage tank prior to commencing shutdown cooling.

During layup, the RHR system is filled with water of the following limits:

Parameter	RHR System Maximum Limit
Conductivity	≤ 3 umho/cm @ 25°C
Chlorides (as Cl-)	≤0.05 ppm
pH	5.3 to 7.5 @ 25°C

2.4 SUBMERGENCE

The approach to design of River Bend Station is to locate devices above expected submergence levels. At the present time, the flood levels are being determined for the buildings, and for the compartments within the buildings, for the natural phenomena and accident conditions that could cause flooding, in order to verify that the electrical equipment is above submergence levels. Upon completion of the analyses, if any Class 1E electrical equipment is found to be located at or below the submergence level, an analysis will be performed to determine the safety significance of the failure of this electrical equipment and the effect on its Class 1E electrical power source as a result of such submergence. If the results of this analysis show a detrimental effect on the safety system, the electrical equipment will be relocated. If it is not possible to relocate the electrical equipment above the submergence level, it will be demonstrated to be qualified to withstand submergence, or it will be appropriately protected and a qualification by test or analysis will be used to demonstrate the adequacy of such protection.

Table 2.4-1 identifies known equipment subjected to submergence.

TABLE 2.4-1

CLASS 1E EQUIPMENT SUBJECTED TO SUBMERGENCE
ZONES CT-SP, CT-2

Mark No.	Description	Manufacturer	Remarks
1E22*LTN055C	Level Transmitter	GE/Barton	
1E22*LTN055G	Level Transmitter	GE/Barton	
1CMS*RTD24A	RTD	PYCO	
1CMS*RTD24B	RTD	PYCO	
1CMS*RTD24C	RTD	PYCO	
1CMS*RTD24D	RTD	PYCO	
1CMS*RTD24E	RTD	PYCO	
1CMS*RTD24F	RTD	PYCO	
1CMS*RTD24G	RTD	PYCO	
1CMS*RTD24H	RTD	PYCO	
1CMS*RTD24J	RTD	PYCO	
1CMS*RTD24K	RTD	PYCO	
1CMS*RTD40A	RTD	PYCO	
1CMS*RTD40B	RTD	PYCO	
1CMS*RTD40C	RTD	PYCO	
1CMS*RTD40D	RTD	PYCO	
1CMS*RTD42B	RTD	PYCO	
1CMS*RTD42C	RTD	PYCO	
1E51*LTN036A	Level Transmitter	GE	
1E51*LTN036E	Level Transmitter	GE	

SECTION 3

FUNCTIONAL PERFORMANCE REQUIREMENTS

3.1 ACCIDENT/SYSTEM MATRIX

The systems and subsystems required to mitigate an accident are listed in Table 3.1-1. The accident/system matrix is given in Table 3.1-2.

The system and accident descriptions are consistent with the descriptions provided in Table 3.1-2 and Chapter 15 of the FSAR. They are provided in this document to clarify the RBS equipment identification as listed in Appendix A.

Some of the systems are described as follows. The only portion of the HVY system which is required to operate for an accident is the portion servicing the standby service water pumphouse to ensure that an adequate environment is provided for the SWP pumps and associated components.

The SFC system is indicated as being required for all accidents since it must operate to remove decay heat whenever spent fuel is stored in the spent fuel pool. It is not required to directly mitigate the consequences of any of the listed accidents. In addition, the HVF system must operate to ensure an adequate environment for the SFC system, and to maintain secondary containment integrity.

The SLS system is required to operate only in the event the normal scram system (RPS) or control rods do not function to shut down the reactor. Since each accident listed results in a scram, the SLS is not required for all accidents, but is considered to be available.

The containment isolation system includes the containment isolation valves associated with the systems listed in Table 3.1-3. The SWEC/GE system cross reference is given in Table 3.1-4.

The standby power system is capable of supplying ac power for electrical loads which are required for safe shutdown of the reactor. The systems included in the SPS are listed in Table 3.1-5.

The remote shutdown system includes the Divisions I and II remote shutdown panels, and is designed to achieve safe shutdown from either panel. The RSS utilizes some of the existing systems used for normal reactor shutdown operation to shut down the reactor from outside the main control room.

TABLE 3.1-1

SYSTEMS AND SUBSYSTEMS REQUIRED TO MITIGATE ACCIDENT

CSH	High Pressure Core Spray (HPCS) System
CSL	Low Pressure Core Spray (LPCS) System
RHS	Residual Heat Removal (LPCI, SPCM, SCM) System
SVV	Nuclear Boiler (Main Steam Safety and Relief Valves, Automatic Depressurization (ADS) System)
ICS	Reactor Core Isolation Cooling (RCIC) System
RPS	Reactor Protection System
MSI	Main Steam Positive Leakage Control System
LSV	Penetration Valve Leakage Control System
RPC	Reactor (Rod Pattern Control) System
NMS	Neutron Monitoring System
SWP	Standby Service Water and Normal Service Water Systems
SLS	Standby Liquid Control System
GTS	Standby Gas Treatment System
HVR	Containment, Drywell, and Auxiliary Building Ventilation, Annulus Mixing, Annulus Pressure Control, Containment and Drywell Purge (Reactor Plant Ventilation) System
CMS	Containment Atmosphere Monitoring System
CPM	Combustible Gas Control (Hydrogen Mixing) System
HCS	Combustible Gas Control (Hydrogen Recombiner) System
SFC	Fuel Pool Cooling and Cleanup System
EGF	Fuel Oil Storage and Transfer (Emergency Generator Fuel) System

TABLE 3.1-1 (Cont)

EGA	Diesel Generator (Air Startup - Standby Diesel Generator) Systems
HVC	Control Building Ventilation Air Conditioning System
HVK	Control Building Chilled Water System
HVN	Ventilation Chilled Water System
HVF	Fuel Building Ventilation System
HVP	Diesel Generator (Diesel Generator Building Ventilation) Systems
HVY	Standby Service Water Pumphouse Ventilation (Yard Structures Ventilation) System
RMS	Process and Area Radiation Monitoring Systems
SPS	Standby Electrical Power (Diesel Generator System)
CCP	Reactor Plant Component Cooling Water System
SSR	Reactor Plant Sampling System (Post Accident Sampling System)
LDS	Leak Detection System
RSS	Remote Shutdown System
CPP	Combustible Gas Control (Containment Hydrogen Purge) System
CES	Residual Heat Removal (LPCI, SPCM, SCM) System Auxiliary AC Power Systems (Class 1E) 125-Volt DC Power Systems (Class 1E)

TABLE 3.1-2

ACCIDENT/SYSTEM MATRIX

Accidents	Systems Required to Mitigate Accident														
	HPCS	LPCS	LPCI	ADS	RCIC	CIS	RPS	MSI	LSV	RPCS	NMS	SPCM	SWP	SLS	SCM
1. Steam Line Break Outside Containment	X	X	X	X	X	X	X						X	X	X
2. Feedwater Line Break Outside Containment	X	X	X	X	X	X	X						X	X	X
3. LOCA	X	X	X	X		X	X	X	X			X	X	X	
4. High Energy Line Break Outside Containment (RWCU/RCIC)						X	X						X		
5. Rod Drop	X	X	X	X	X	X	X			X	X		X	X	X
6. Fuel Handling													X		
7. Recirculation Pump Seizure	X	X	X	X	X		X						X	X	X
8. Recirculation Pump Shaft Break	X	X	X	X	X		X						X	X	X
9. Main Condenser Gas Treatment System Failure				X	X		X						X	X	X

TABLE 3.1-2 (Cont)

Accidents	Systems Required to Mitigate Accident																
	GTS	HVR	CMS	CPM	HCS	SFC	EGF	EGA	SPS	HVK	HVC	HVF	HVP	HVY	RMS	LDS	PAM
1. Steam Line Break Outside Containment	X	X	X			X	X	X	X	X	X	X	X	X	X		
2. Feedwater Line Break Outside Containment						X	X	X	X	X	X	X	X	X	X		
3. LOCA	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X		X
4. High Energy Line Break Outside Containment (RWCU/RCIC)	X	X				X			X	X	X			X	X	X	
5. Rod Drop	X	X	X			X	X	X	X	X	X	X	X	X	X		
6. Fuel Handling						X	X	X	X	X	X	X	X	X	X		
7. Recirculation Pump Seizure	X	X	X			X	X	X	X	X	X	X	X	X	X		
8. Recirculation Pump Shaft Break	X	X	X			X	X	X	X	X	X	X	X	X	X		
9. Main Condendser Gas Treatment System Failure		X	X			X	X	X	X	X	X	X	X	X	X		

TABLE 3.1-2 (Cont)

Accidents	Systems Required to Mitigate Accident HVN	CCP	SSR	CPP	RSS	CES
1. Steam Line Break Outside Containment					X	X
2. Feedwater Line Break Outside Containment					X	X
3. LOCA	X	X	X	X	X	X
4. High Energy Line Break Outside Containment (RWCU/RCIC)					X	X
5. Rod Drop					X	X
6. Fuel Handling						X
7. Recirculation Pump Seizure					X	X
8. Recirculation Pump Shaft Break					X	X
9. Main Condenser Gas Treatment System Failure					X	X

TABLE 3.1-3

SWEC/GE SYSTEM CROSS REFERENCE

SWEC	GE
MSS	B21
FWS	B21
SVV	B21
DTM	B21
RDS	C11
SLS	C41
RHS	E12
CSL	E21
CSH	E22
MSI	E33
ICS	E51
WCS	G33
RCS	B33
LDS	E31

TABLE 3.1-4

SYSTEMS ASSOCIATED WITH CONTAINMENT ISOLATION

MSS	Nuclear Boiler System - Power Conversion (Main Steam) System
MSI	Main Steam Positive Leakage Control System
DTM	Nuclear Boiler (Turbine Plant Miscellaneous Drains) System
FWS	Nuclear Boiler (Feedwater) System
RHS	Residual Heat Removal System
WCS	Reactor Water Cleanup System
CSH	High Pressure Core Spray (HPCS) System
CSL	Low Pressure Core Spray (LPCS) System
ICS	Reactor Core Isolation Cooling (RCIC) System
SFC	Fuel Pool Cooling and Cleanup System
RDS	CRD Hydraulic (Control Rod Drive) System
HVR	Containment, Drywell, and Auxiliary Building Ventilation, Annulus Mixing, Annulus Pressure Control, Containment and Drywell Purge (Reactor Plant Ventilation) System
CPP	Combustible Gas Control (Containment Hydrogen Purge) System
DFR	Equipment and Floor Drainage (Reactor Plant Floor Drains) System
DER	Equipment and Floor Drainage (Reactor Building Equipment Drains) System
FPW	Fire Protection - Water System
SAS	Service Air System
IAS	Instrument Air System
CCP	Reactor Plant Component Cooling Water System

TABLE 3.1-4 (Cont)

SWP	Standby Service Water and Normal Service Water Systems
SVV	Nuclear Boiler (Main Steam Safety and Relief Valves, Automatic Depressurization) System
CMS	Containment Atmosphere Monitoring System
LMS	Containment Leakage Monitoring System
LSV	Penetration Valve Leakage Control System
HVN	Ventilation Chilled Water System
CNS	Condensate Makeup and Drawoff System

TABLE 3.1-5

SYSTEMS INCLUDED IN THE STANDBY POWER SYSTEM

EGS	Emergency Diesel Generator System
EJS	Standby 480-V Electrical System
ENB	Standby 125-V DC Control Supply
ENS	Standby 4.16-kV Electrical System
RCP	Reactor Containment Electrical Penetrations
SCM	Station Control Monitoring (Vital) - Indication
SCV	Station Control Bus (Vital) - Ac supply including transformer and transfer switch
VBS	Vital Bus System (incoming supply from inverter)

3.2 POST-ACCIDENT OPERABILITY TIME

Equipment must be qualified for the length of time it is required to perform its safety function and must remain in a safe mode after the function is performed. The length of time the equipment is required to function following the onset of an accident is its post-accident operability time (PAOT).

The required PAOT is determined by an analysis of the functional performance requirements of a device for each applicable event listed in FSAR Chapter 15. For each device, the required active function time, based upon the intended safety function, is determined. The determined operability time ranges from very short periods, where safety functions are performed early in the event and subsequent actions are not called for, to longer periods of time where process variables are stabilized. For long periods of required operability, the parameters selected to environmentally qualify needed products assure the capability to bring the reactor to, and maintain a safe shutdown condition.

For equipment within the BOP scope of supply, an accident/system matrix, described in Section 3.1, has been developed to determine the PAOT as explained above.

The PAOT is provided in the EQD Master List (see Table 5.1-1).

SECTION 4

QUALIFICATION METHODOLOGY

4.1 HARSH ENVIRONMENT

4.1.1 BOP Equipment

4.1.1.1 Electrical

The methodology established for the RBS equipment qualification program is in accordance with the guidelines provided in NUREG-0588 for Category I plants, and in compliance with the regulation of 10CFR50.49. The methodology consists of developing the Environmental Design Criteria (EDC)(1), which establishes the temperature, pressure, humidity, and radiation dose levels, for normal, abnormal, and accident conditions. Post-accident operability time is developed to assure that the equipment will be qualified to maintain a safety function during a post-accident event.

These requirements are included in the procurement specification for the electrical equipment important to safety. The specification mandates that the qualification will be accomplished in accordance with IEEE 323-1974 and in accordance with the quality assurance program referenced in 10CFR50 Appendix B.

Based on these requirements the equipment manufacturer develops an equipment qualification program.

The environmental qualification documents for the equipment are obtained for engineering evaluation from equipment vendors, equipment manufacturers and/or testing facilities. These documents, in the form of qualification procedures, reports, and supplementary information, are evaluated in accordance with NUREG-0588, IEEE 323-1974. Review of these documents includes assurance that they are technically adequate and conform to the environmental qualification requirements of the applicable emergency conditions, operability times, and service conditions.

As each vendor qualification document is reviewed and assessed, a Supplier Document Data Form (SDDF) number is assigned. This number, as well as numbers of other support documents, is referenced on the System Component Evaluation Work (SCEW) Sheet where the results of the review of the

qualification documents are summarized for each equipment listed on the Master List (ML). Support documentation for qualification of any ML item can be accessed through the equipment number on the ML which references the SCEW sheet, or through the manufacturer/model designation of the SCEW sheet itself.

Aging

The effects of age are documented as part of the qualification program.

Arrhenius aging methodology is the preferred method for evaluating equipment aging and in general is used as a basis for determining qualified life. When other methods are used, appropriate justification is provided. The thermal aging methodology used for qualifying BOP safety-related devices is described in the qualification test reports referenced in the SCEW sheets.

Prior to simulating seismic and DBA event, equipment or its age-sensitive components were preconditioned to their end-of-qualified life condition.

If it was known that aging improved performance capability, new or partially aged devices were used in testing.

Advanced life conditioning was accomplished by applying an appropriate combination of operational and environmental cycling to simulate the expected service listed in the equipment specification and by subjecting the device to physical and chemical stresses that are known to degrade the device. Normal cycling of in-plant conditions was performed in any combination aging procedure.

In the case where accelerated aging was used, the procedure employed considered the expected application and design life of the device being tested.

Synergistic effects were considered when these effects were known to have a significant effect on equipment performance.

Where required, a maintenance or replacement schedule consistent with qualified life is provided as part of the support documentation and is referenced on the SCEW sheets.

When type testing was selected as the qualification method, the type test was run on the device(s) in a specified sequence that was set down as part of the written test procedure. All sequential testing was performed on the same

unit(s), including aging. The sequence given in IEEE 323-1974, paragraph 6.3.2, is generally used. However, other sequences used are justifiable on the basis that it is severe enough to verify that the device qualified will perform its intended functions within the requirements of the purchase specification before, during, and after a design basis accident. The test specimen has been subjected to all normal manufacturing and QA procedures and is representative of the devices supplied.

Margin

Margins are not included in the parameters given in the equipment specifications. However, the specification does include an insert which requires that margin be added to comply with IEEE 323-1974 requirements.

Qualification type test results were reviewed to verify that adequate margin exists between the most severe specified service conditions for the equipment and the conditions used in type testing. Margins are in addition to any conservatism applied during the derivation of local environmental conditions of the equipment. Margin accounts for production variations of equipment and inaccuracies in test instrumentation. Increased levels of testing, number of test cycles, and test duration are among the methods used for ensuring adequate margin.

Some equipment is required by the design to perform its safety function only within the first 10 hrs of an accident. For this equipment in general, a time margin of at least 1 hr in excess of the time assumed in the accident analysis was used.

Dose Rate and Synergistic Effects

Qualification for radiation was based on the calculated total integrated dose. Safety-related electrical equipment qualified for use in a nuclear radiation environment was exposed to radiation which simulated the conservatively calculated integrated dose (normal and accident) that the equipment is expected to withstand prior to completion of its intended safety function. In general, a gamma radiation source, typically CO-60, is used to simulate expected radiation exposure. Where beta and gamma radiation exposure is expected, beta radiation is taken into account either during simulated exposure (directly or as a gamma equivalent) or during evaluation of the results. Reduction in the total beta dose was allowed only after considering appropriate shielding factors. If the beta radiation dose

contribution to the equipment or component was calculated to be less than 10 percent of the total gamma radiation dose to which the equipment or component had been qualified, then the equipment or component was considered qualified for the beta and gamma radiation environment.

Dose rate effects were considered when these effects were known to have a significant effect on equipment performance.

The dose rate, energy spectrum, or particle type was addressed to arrive at a gamma equivalent total dose to which the equipment must be exposed. Actual testing using dose rate, energy spectrum, or particle type as qualification parameters was not considered.

Therefore, synergistic effects involving dose rate are not addressed. However; where synergistic effects of radiation and temperature were identified prior to the initiation of qualification, they are included in the program.

4.1.1.2 Mechanical

The Mechanical Equipment Qualification (MEQ) Program provides a documented analysis of the nonmetallic materials, used in active safety-related mechanical equipment, to demonstrate that the environmental effects due to plant operation and postulated accidents would not degrade these materials in such a way as to prevent this equipment from performing its required safety function.

The MEQ Program details the environmental design conformance review of active safety-related mechanical equipment located in the harsh environment identified in Table 2-1. The conformance review includes nonmetallic subcomponents of active mechanical equipment. Equipment categories included in this review are listed in Table 4.1-1. Active safety-related mechanical equipment is detailed in Appendix A.3. Environmental conditions listed in the EDC are used as the basis for the MEQ review.

Generally, mechanical equipment has not been shown to be as sensitive to radiation exposure as electrical components. Metallic portions of the equipment are particularly resistant to radiation. Nonmetallic parts of mechanical equipment, while more sensitive to radiation and temperature, are used in the equipment so that the degradation of mechanical properties will not substantially affect the required active safety function of the component.

Methodology

The review consists of the following five-step process.

1. Identification of active safety-related mechanical equipment
2. Identification of nonmetallic components
3. Identification of environmental design conditions
4. Identification of nonmetallic material capabilities
5. Evaluation of environmental effects

The MEQ Program consists of analyses of active safety-related equipment located in systems required for the following functions:

1. Emergency reactor shutdown
2. Emergency core cooling (short term)
3. Reactor core cooling (long term post accident)
4. Primary containment isolation
5. Containment integrity
6. Prevention of release of radioactive material

To accomplish the above functions, complete systems and portions of systems are included in the MEQ Program.

Category I active mechanical equipment within those systems that are located in a harsh environment, and required for performance of the above functions, are included in the MEQ Program. The review is performed by using the specifications, SWEC drawings, vendor drawings, and manuals.

Of the environmental conditions (temperature, pressure, humidity, and radiation) only radiation and temperature were considered in the review. Pressure and humidity were not considered relevant since the design of nonmetallic portions of mechanical equipment for these parameters is governed by system process conditions which have been addressed in the specification.

Each material identified was examined to determine the effect of the environmental conditions on the material

properties. For initial screening, it was conservatively chosen to use the threshold radiation level and maximum service temperature. Materials handbooks, textbooks, and industry and government reports were researched to obtain material data. In some cases vendor data were utilized to supplement the above sources.

A conservative initial screening of the nonmetallic components was made by the comparison of the material capabilities (threshold radiation level and maximum service temperature) with the maximum postulated environmental conditions. Those items which were not shown to be acceptable based on the comparison were evaluated in further detail considering:

1. Degree of material degradation

2. Material properties affected

3. Equipment/component function

4. Degree of functional degradation

Acceptance Criteria

In order to be considered acceptable, nonmetallic portions of mechanical equipment must either be shown to be acceptable for the plant environment by:

1. Exhibiting threshold radiation values and maximum service temperatures above the maximum postulated environmental conditions.

2. Demonstrating that the safety function of the component is not compromised and noted as "Justified."

4.1.2 NSSS Equipment

4.1.2.1 Electrical

Safety-related electric NSSS equipment located in a harsh environment includes all three categories of 10CFR50.49(b). A Master List of this equipment is provided in Appendix A.2.

Category 1, 10CFR50.49(b) equipment is that equipment classified by the NSSS vendor as safety-related in the Master Parts List (MPL). Category 2, 10CFR50.49(b) equipment has been identified through review of the electrical connections for all equipment classified as

nonsafety-related in the MPL. Those items connected to ESF or RPS power without being electrically separated in accordance with Regulatory Guide 1.75 are included in the qualification program[3] Category 3, 10CFR50.49(b) equipment has been identified and is included in the qualification program.

The approach taken by General Electric to environmentally qualify safety-related equipment within the NSSS Scope of Supply for RBS to a level consistent with NUREG-0588 is described in the GE Licensing Topical Report NEDE-24326-1-P[4]. This report has been approved by the NRC. The methodology described in this report is consistent with applicable Regulations (10CFR50 Appendix A); applicable Regulatory Guides; and with applicable consensus national standards (ANSI and IEEE). The work performed under this guidance is controlled in a manner consistent with the commitments contained in the NRC-approved GE Licensing Topical Report on Quality Assurance.

The approach to qualification described in NEDE-24326-1-P[4] is predicated on type testing being the preferred approach. Depending upon either the unique characteristics of the specific devices or on the availability of other sources of qualification data, other approaches such as partial type test with justification by analysis, operating experience, analysis or combination of the above mentioned approaches may be used. For any of these approaches the eventual approach used is justified in the accompanying qualification report. This justification is based on the demonstrated ability of the product to meet its intended safety function.

Where type testing is performed, the approach taken is to assure the device is functional under normal conditions as well as under extremes of such conditions; the devices next age to an end-of-qualified life condition, next the device is subjected to dynamic simulation; next the device is subjected to design basis event conditions and post design basis event conditions; and lastly the device is inspected for failures which may not have been apparent during the operational testing which occurs during each exposure to an environmental extreme. When a product is tested, where practical, the interface associated with the product is included in the test. The specific sequences of environments applied during the testing are determined, using engineering judgment, to best select the sequence to which the product would be subjected during actual installation. Furthermore, where synergisms between environments are known, these effects are taken into consideration during the planning and conducting of the

test. All tests that are conducted include adequate margins as required in NUREG-0588. NRC personnel from the Region IV Office of Inspection Enforcement have routinely audited General Electric's environmental qualification efforts and have found no indication that what was being performed for RBS did not demonstrate adequate qualification.

Following the completion of the tests all of the associated documentation that led to the test and was generated during the test is formally assembled into a qualification report. That report is available for NRC audit.

For devices not qualified by test (e.g., devices classified as safety-related solely because they perform a pressure boundary function; devices that perform their safety function prior to the onset of harsh environments in which they do not contribute to the mitigation of the event after performance of the intended safety function, etc) qualification reports are also prepared demonstrating the adequacy of their qualification. As with devices qualified by test, these qualification reports are in an auditable form. The last step of qualification is to ensure that the device tested is similar to the device installed in the field. Therefore, before full qualification can be assured, there is a verification of the similarity between the tested device and the installed device.

4.1.2.2 Mechanical

The NSSS mechanical equipment qualification program encompasses all safety-related active pumps and valves supplied by the NSSS vendor. A Master List (ML) of this equipment is provided in Appendix A.4.

The qualification program is based on a review of the nonmetallic materials in each of the items identified on the ML. The review also determines the functional requirements of the equipment and defines the contribution of each nonmetallic part to the equipment safety function.

Material data necessary to support the qualification evaluation are obtained from the NSSS vendor files or from original equipment vendors. The data are incorporated into the qualification evaluation as necessary to support qualification conclusions.

Using the RBS specific ambient environmental conditions as reported in the EDC(1), a qualification evaluation is performed as follows:

1. Define the environment that exists locally to all nonmetallic parts.

2. Examine part capability relative to the threshold for degradation. Parts for which the environmental exposure is less than the threshold require no further evaluation.

3. Parts that cannot be exempted by the evaluation under paragraph 2 are evaluated in detail. If failure can be tolerated, no further evaluation is required. If failure cannot be tolerated, acceptability is demonstrated by analysis or test data, or a combination of both, that proves the part will support the equipment safety function when exposed to normal, abnormal, and accident environments.

For each item shown on the ML a qualification evaluation report is prepared which includes the following information:

1. Summary statement of the results of the evaluation and qualification status.

2. Definition of any recommended maintenance or other conditions necessary to maintain qualification.

3. Definition of the applicable RBS environmental conditions.

4. Equipment safety function and function time.

5. Nonmetallic material lists related to the equipment item.

6. Analysis performed.

7. Reference material not commonly available.

The report is maintained in an auditable file as described in Section 5.3.

TABLE 4.1-1

ACTIVE SAFETY-RELATED MECHANICAL EQUIPMENT CATEGORIES

Fans
Dampers
Air Treatment Units
Hydrogen Recombiner
Unit Coolers
Pumps
Valves - Relief
Valves - Check
Valves - Motor Operated
Valves - Air Operated

4.2 MILD ENVIRONMENT

Mild environment plant areas are listed in Table 2-2. These areas or zones were selected based on the following guidelines and criteria:

1. Safety-related equipment in these zones is located outside of containment, and is not subject to accident environments due to a LOCA or pipe breaks.

2. Environmental conditions: 10CFR50.49 paragraph c. (iii) defines a mild environment as: An environment that would at no time be significantly more severe than the environment that would occur during normal plant operation, including anticipated operational occurrences. Anticipated operational occurrences, as defined in 10CFR50 Appendix A means those conditions of normal operation which are expected to occur one or more times during the life of the nuclear power unit and include, but are not limited to, loss of power to all recirculation pumps, tripping of the turbine generator set, isolation of the main condenser, and loss of all offsite power.

   There is no significant change in environmental conditions, except radiation, in these zones during an accident.

   a. Temperature, pressure, and humidity: The accident environments are no worse and, in many cases, are less severe than the maximum normal or abnormal conditions. The maximum normal or abnormal conditions include and envelop conditions of anticipated operational occurrences.

   b. Radiation: The total integrated dose for normal 40-yr service plus 180-days accident is less than 10^4 rads, which is lower than the threshold damage level for organic materials. Electronic components in particular metal oxide semiconductor devices, may have a threshold damage level at somewhat lower doses. Justification for the use of these electronic components in the specified radiation environment shall be provided. Plant zones listed in Table 2-3 are served by the special control room charcoal air filters and will not experience any significant

increase in radiation during normal 40-yr service or accident; therefore, the use of electronic equipment in these zones is considered justified.

Equipment located in the zones listed in Table 2-2 are not exposed to environmental conditions that may cause common mode failures due to environmental conditions during DBE. Immediate access following a DBE is not required other than normal and periodic maintenance. Therefore, these plant zones may be considered mild environment areas.

4.2.1 BOP Equipment

Safety-related equipment located in a mild environment meeting the following requirements is considered adequately qualified.

1. A Certificate of Compliance (C of C) which incorporates the qualification requirements specified and states that the functional requirements of the equipment subjected to the specified RBS environmental conditions have been met.

2. The C of C shall identify the supplied equipment by equipment mark number.

3. The equipment has been manufactured in accordance with a quality assurance program that meets the requirements of 10CFR50, Appendix B and states compliance with 10CFR21.

4. The requirements for any scheduled surveillance, maintenance calibration, periodic tests, and parts replacements necessary to maintain qualification.

4.2.2 NSSS Equipment

Safety-related NSSS vendor-supplied equipment that is located in a mild environment is considered qualified if:

1. The equipment manufacturer's design environmental parameters envelop the RBS specific environment.

2. The equipment manufacturer's design functional characteristics envelop the RBS application specific functional performance requirements.

3. The NSSS vendor provides a Product Quality Certification (PQC) in accordance with NEDO 11209[5].

The PQC establishes a tie between the supplied item and the respective equipment purchase part drawing which in turn provides further reference to the applicable environmental and functional performance specifications.

SECTION 5

QUALIFICATION DOCUMENTATION

5.1 MASTER LISTS (ML)

The equipment and components that are within the scope of 10CFR50.49(b) and require qualification on RBS are listed in the ML, Appendix A.

This list includes and identifies 10CFR50.49(b) equipment categories 1, 2, and 3.

One important feature of the ML is its capability to identify all qualification documentation associated with any of the listed safety-related electrical equipment or components through reference to the associated System Component Evaluation Work (SCEW) sheets for that particular equipment or component (see Section 5.2). The identity of any qualification document associated with any of the listed items can be accessed through either the individual equipment identification number such as service water pump 1SWP*P2A or through a generic equipment manufacturer and model number such as Rosemount 1153B pressure transmitter.

Examples of documentation accessible through this ML reference to the SCEW sheets are purchase specifications, vendor records such as test plans and test reports, and SWEC-generated documentation such as aging analyses of mechanical equipment and equipment operability periods.

The ML contains the majority of the required summary qualification information such as operability period, operability code, location, equipment specification, and other pertinent information, as shown in Appendix A.

For each device, the ML provides a summary of the key elements of the Environmental Qualification Program. Table 5.1-1 and Figure 5.1-1 contain the heading for the ML, with a description of each entry. The first four characters of the device indicate the unit number and the major system in which the device is used. The subsequent characters are used to further segregate the devices by specific type and number. Tables 5.1-2 through 5.1-5 define the various codes used in the ML.

TABLE 5.1-1

ENVIRONMENTAL QUALIFICATION DATA MASTER LIST

Number	Title	Description
1	MARK NO.	Indicates identifying number of SWEC equipment (the first four characters of which correspond to the unit number and major system in which the equipment is used).
2	EQUIPMENT DESCRIPTION	Brief description of equipment.
3	VENDOR	Indicates supplier filling purchase order.
4	PANEL/RACK	Mark Number of the panel/rack in which instruments are located.
5	SPEC. NO.	Indicates procurement specification number.
6	MAKE/MANUFACTURER	A four-digit code indicating the manufacturer (not necessarily the same as the vendor) (Table 5.1-2 of this document).
7	MODEL/ CATALOG NO.	Manufacturer's Identification Number.
8	REMARKS	Indicates where special notes or further data may be entered concerning the device and its qualification.

TABLE 5.1-1 (Cont)

Number	Title	Description
9	ENV ZONE	Indicates environmental condition associated with the device.
10	SUBMRG	Indicates if equipment is subjected to submergence.
11	EMRGCN	Indicates harsh environmental condition through which the device must be operable to perform the safety function (Table 5.1-3).
12	ENVTYP	Indicates type of environment, i.e., harsh, mild.
13	SFN1 SFN2 SFN3	Indicates the safety functions of the device when exposed to harsh environments (Table 5.1-4). Although three code lines are provided, there may not be three safety functions per device. A dash provided in the space indicates that the extra safety function spaces do not apply.
14	OPTIME	Indicates period of time following the onset of an accident during which the device must remain capable of performing its safety function (operability time).

TABLE 5.1-1 (Cont)

Number	Title	Description
15	OC	Indicates the operability code category associated with the device with regard to Appendix E, NUREG 0588, Item 2 (Table 5.1-5).
16	QRN1 QRN2 QRN3	Indicates the qualification reference number of the SCEW (System Component Evaluation Work Sheet) applicable to the device.

TABLE 5.1-2

MANUFACTURER NAMES AND MANUFACTURER CODES

Manufacturer Name	Manufacturer Code
American Corp/CP Div.	
American Air Filter	AAFC
Anaconda	ANAC
Asco	ASCO
Atlas COPCO Turbinetics	ACOT
Atwood-Morrill	ATMO
Borg Warner	BORG
Brand Rex	BNRX
Brown Boveri Electric	BRBO
Buffalo Forge	BFRG
Carrier	CARR
Ceramic	CRMC
COMSIP Inc.	COMS
Conax	CONX
Copes Vulcan Inc.	COVI
Crane-Deming	CRDE
Delaval	DLVL
Electro-Mechanics	ELEC
Elgar	ELGR
E. P. Porter	PRTC
Foxboro	FOXB
Fisher Controls	FCTL
Fluid Components Inc.	FCII
General Electric	GECO
General Atomic Corp.	GACO
Gould	GLDI
Goulds Pumps	GLDP
Haywood-Tyler	HATY
Indeeco	INDC
Jamesbury	JMSB
Limitorque	LMTQ
Mercury	MERC
Namco	NMCO
Nelson Elect.	NELE
Nu-therm	NUTH
Okonite	OKON
Posi-Seal	POSI
Power Conversion Products, Inc.	PCPI
Powell Electric Corp.	PECP
Pyco	PYCO
Quality Air Design	QADE
Reliance	RELI

TABLE 5.1-2 (Cont)

Manufacturer Name	Manufacturer Code
Rockbestos	ROCK
Rosemount	RSMT
RTE Delta	RTED
Siemens Allis	SALS
Southern Transformers	SXFR
Square D	SQRD
Super Pressure	SUPR
Target Rock	TRCP
Technology for Energy Corp.	TEEC
Thermexchanger	THRM
Transamerica Delaval	TRND
Velan	VLAN
Westinghouse	WEST

TABLE 5.1-3

EMERGENCY CONDITION CODES

Condition	Code
Normal	NORM
Abnormal	ABNO
High-energy line breaks inside and outside of containment:	
Inside containment	HLBI
Outside containment	HLBO
Fuel handling accident	FHA
Main steam line break	MSLB
Transient caused by HLBI or HLBO (radiation and temperature)	TRNS

TABLE 5.1-4

SAFETY FUNCTION CODES

Code	Description
ADS	Automatic Depressurization System
BCNT	System Boundary Control
CCGC	Containment Combustible Gas Control
CISL	Containment Isolation
DISP	Safety-related Display Instrumentation
EMPW	Emergency Power/Electrical Distribution
ESA	Engineered Safeguards Actuation
HPCS	High-pressure Core Spray
HVAC	Ventilation, Heat, A/C (general/safety-related)
HVC	Main Control Room HVAC
HVR	Containment Ventilation
LCS	Leakage Control System
LPCI	Low-Pressure Coolant Injection
LPCS	Low-Pressure Core Spray
MSI	Main Steam Isolation
PAM	Post-Accident Monitoring
PANL	Panel - Seismic Support, Protection, Termination and Display Point for Class 1E Devices
PNET	Electrical Penetration
RACK	Seismic Support, Protection, and Termination of Class 1E Devices
RCIC	Reactor Core Isolation Cooling
RHR	Residual Heat Removal
RMS	Radiation Monitoring System
RPRT	Reactor Protection
RTRP	Reactor Trip
SFC	Spent Fuel Cooling
SGTS	Standby Gas Treatment System
SW	Service Water

TABLE 5.1-5

OPERABILITY CODES
(NUREG 0588, Appendix E, Section 2 Categories)

Operability Code	Equipment Type
A	Equipment that will experience environmental conditions of design basis accidents for which it must function to mitigate such accidents and that will be qualified to demonstrate operability in the accident environment for the time required for accident mitigation with safety margin to failure.
B	Equipment that will experience environmental conditions of design basis accidents through which it need not function for mitigation of such accidents but through which it must not fail in a manner detrimental to plant safety or accident mitigation and that will be qualified to demonstrate the capability to withstand any accident environment for the time during which it must not fail with safety margin to failure.
C	Equipment that will experience environmental conditions of design basis accidents through which it need not function for mitigation of such accidents and whose failure (in any mode) is deemed not detrimental to plant safety or accident mitigation and need not be qualified for any accident environment.

NOTE: If Categories B and C are found to be necessary, a "basis" for inclusion in those categories has been developed on a case-by-case basis.

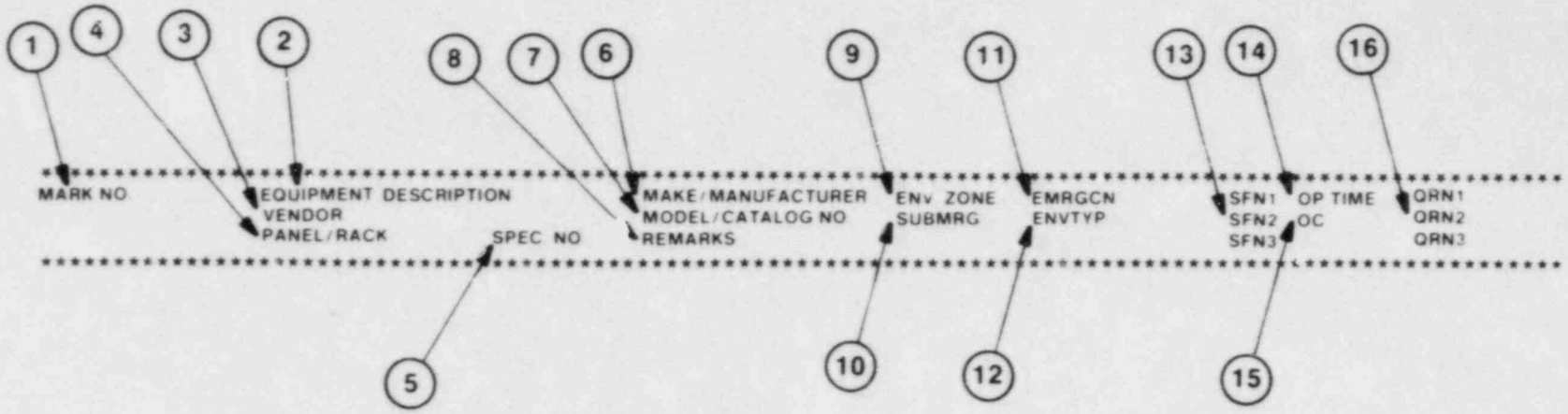


FIGURE 5.1-1

RBS EQD
MASTER LIST HEADING
FORMAT

RIVER BEND STATION

ENVIRONMENTAL QUALIFICATION DOCUMENT

5.2 SYSTEM COMPONENT EVALUATION WORK (SCEW) SHEET

The SCEW sheet presents a description of the individual equipment and its location. A comparison is made, in summary, of the actual environmental zone specified, with the environmental parameters encompassed in the qualification program. It also contains references to all of the supportive environmental qualification documents which demonstrate that the equipment is qualified to perform its safety function in the postulated environmental conditions.

The SCEW sheet format is shown on Figure 5.2-1.

Reference to the qualification documents which contain detailed supporting information, including test data, can be found listed in the individual equipment or component SCEW sheet.

Documents that are referenced are test reports, maintenance/surveillance documents, Certificates of Compliance (C of C), and other such items that are retained in Supplier's Document Data Form (SDDF) files. Other documents which may be referenced are equipment specifications (SPEC), calculations (CALC) of composite environmental zone profiles, qualified life and supplemental analyses.

The SCEW sheets are compiled in Appendix B.

RIVER BEND STATION - UNIT 1
DOCKET NUMBER 50-458

SYSTEM COMPONENT EVALUATION WORK SHEET

SHEET 1
OF

QUAL REF #_____ REV _

EQUIPMENT DESCRIPTION	ENVIRONMENTAL CONDITIONS AND QUALIFICATION						
	PARAMETER	SPECIFIED VALUE	QUALIFIED VALUE	DOCUMENT REFERENCE SPECIFIED	DOCUMENT REFERENCE QUALIFIED	QUAL METHOD	MARGIN DEMO	REMARKS
EQUIP NO.:	OP. TIME:							
SPEC NO.:	TEMP (F):							NOTE 1
SYSTEM:	NORMAL							
	ABNORMAL							
TYPE: (DESCRIPTION:	ACCIDENT							
	PRESS (PSIG)							NOTE 1
	NORMAL							
MANUFACTURER:	ABNORMAL							
	ACCIDENT							
MODEL NO.:	RH (%):							NOTE 1
	NORMAL							
SAFETY FUNCTION: - - -	ABNORMAL							
	ACCIDENT							
	RADIATION:							NOTE 1,2
OP. CODE:	NORM GAMMA							
	ACC GAMMA							
	NORM BETA							
ACCURACY - -	ACC BETA							
SPEC:	NEUTRON							
DEMO:	SPRAY							
	SUBMERGENCE							
ZONE NO.:	PREPARED BY: _____ DATE _____							
	REVIEWED BY: _____ DATE _____							

DOCUMENT REFERENCE:

NOTES: 1. FOR COMPLETE ENVIRONMENTAL CONDITIONS, SEE THE DOCUMENT REFERENCED.

2. SEE CALCULATION FOR EQUIVALENT TID GAMMA.

FLOOD LEVEL ELEVATION: _____
ABOVE FLOOD LEVEL? _____

DOCUMENTATION ACCEPTABILITY: _____ NUREG 0588,CAT I

MAINT/SURVEILL - - -
REFERENCE: _____

QUALIFIED LIFE - - -
(YEARS): _____
REFERENCE: _____

4/24

FIGURE 5.2-1

EQD SCAN SHEET

RIVER BEND STATION
ENVIRONMENTAL QUALIFICATION DOCUMENT

5.3 AUDITABLE FILE

LATER

SECTION 6

MAINTENANCE AND SURVEILLANCE

LATER

SECTION 7

REFERENCES

1. Environmental Design Criteria (EDC) for River Bend Station - Unit 1. Stone & Webster Engineering Corporation, Document No. 215.150, Revision 2, 1984.

2. Title 10, Code of Federal Regulations, Paragraph 50.49, Environmental Qualification of Electric Equipment Important to Safety for Nuclear Power Plants. Federal Register, Vol. 48, No. 15. January 21, 1983.

3. Regulatory Guide 1.75, Physical Independence of Electric Systems, Rev. 2, September 1978.

4. Shirley, N.C. et al. General Electric Qualification Program, Licensing Topical Report NEDE-24326-1-P, January 1983.

5. General Electric Nuclear Energy Business Group, BWR Quality Assurance Program, NEDO-11209-04A, March 1978.

APPENDIX A.1

SAFETY-RELATED ELECTRICAL EQUIPMENT - BOP

RBS-ENVIRONMENTAL QUALIFICATION DATA MASTER LIST
SORTED BY MARK NO - HARSH ENVIRONMENT ONLY

MARK NO	EQUIPMENT DESCRIPTION / VENDOR / PANEL/RACK	SPEC.NO	MAKE/MANUFACTURER / MODEL/CATALOG NO. / REMARKS	ENV. ZONE / SUBNRG	ENRGCN / ENVTYP	SFN1 / SFN2 / SFN3	OP TIME / QC BASIS	QRN1 / QRN2 / QRN3
B21 NUCLEAR BOILER STEAM								
1B21*AOVF032A	AIR OPERATED VALVE ATWOOD&MORRILL	228.218	AB-114-2 N/R FOR SAFETY FUNCTION		HARSH			N/R
1B21*AOVF032B	AIR OPERATED VALVE ATWOOD & MORRILL	228.218	AB-114-2 N/R FOR SAFETY FUNCTION		HARSH			N/R
1B21*MOVF001	MOTOR OPERATED VALVE VELAN	228.214	LMTQ SMB-000-5 N/R FOR SAFETY FUNCTION	DW-1	HLBI HARSH	BCNT - -	N/R A -	
1B21*MOVF002	MOTOR OPERATED VALVE VELAN	228.214	LMTQ SMB-000-5 N/R FOR SAFETY FUNCTION	DW-1	HLBI HARSH	BCNT - -	N/R A -	
1B21*MOVF005	MOTOR OPERATED VALVE VELAN	228.214	LMTQ SMB-000-2 N/R TO CLOSE	DW-1	HLBI HARSH	BCNT - -	N/R A -	
1B21*MOVF016	MOTOR OPERATED VALVE VELAN	228.212	LMTQ SB-00-10	DW-1	HLBI HARSH	CISL - -	1 HR A -	
1B21*MOVF019	MOTOR OPERATED VALVE VELAN	228.212	LMTQ SB-00-10	AB-114-2	HLBO HARSH	CISL - -	1 HR A -	
1B21*MOVF027A	MOTOR OPERATED VALVE VELAN	228.214	LMTQ SMC-04-2	AB-114-2	HLBO HARSH	LCS - -	1 HR A -	
1B21*MOVF027B	MOTOR OPERATED VALVE VELAN	228.214	LMTQ SMC-04-2	AB-114-2	HLBO HARSH	LCS - -	1 HR A -	
1B21*MOVF027C	MOTOR OPERATED VALVE VELAN	228.214	LMTQ SMC-04-2	AB-114-2	HLBO HARSH	LCS - -	1 HR A -	

MARK NO	EQUIPMENT DESCRIPTION VENDOR PANEL/RACK SPEC.NO	MAKE/MANUFACTURER MODEL/CATALOG NO. REMARKS	ENV. ZONE SUBNRG	ENVRGN ENVTYP	SFN1 OP TIME QRN1 SFN2 OC BASIS QRN2 SFN3 QRN3
B21 NUCLEAR BOILER STEAM					
1B21*MOVF027D	MOTOR OPERATED VALVE VELAN 228.214	LMTQ SMC-04-2	AB-114-2	HLBO HARSH	LCS 1 HR - A - -
1B21*MOVF065A	MOTOR OPERATED VALVE VELAN 228.212	LMTQ SMB-4-250	AB-114-7	HLBO HARSH	BCNT 1 HR - A - -
1B21*MOVF065B	MOTOR OPERATED VALVE VELAN 228.212	LMTQ SMB-4-250	AB-114-7	HLBO HARSH	BCNT 1 HR - A - -
1B21*MOVF067A	MOTOR OPERATED VALVE VELAN 228.214	LMTQ SB-00-5	AB-114-2	HLBO HARSH	BCNT 1 HR - A - -
1B21*MOVF067B	MOTOR OPERATED VALVE VELAN 228.214	LMTQ SB-00-5	AB-114-2	HLBO HARSH	BCNT 1 HR - A - -
1B21*MOVF067C	MOTOR OPERATED VALVE VELAN 228.214	LMTQ SB-00-5	AB-114-2	HLBO HARSH	BCNT 1 HR - A - -
1B21*MOVF067D	MOTOR OPERATED VALVE VELAN 228.214	LMTQ SB-00-5	AB-114-2	HLBO HARSH	BCNT 1 HR - A - -
1B21*MOVF085	MOTOR OPERATED VALVE VELAN 228.212	LMTQ SMB-00-10	AB-114-2	HLBO HARSH	CISL 1 HR - A - -
1B21*MOVF086	MOTOR OPERATED VALVE VELAN 228.212	LMTQ SMB-00-10	AB-114-7	HLBO HARSH	CISL 1 HR - A - -
1B21*MOVF098A	MOTOR OPERATED VALVE VELAN 228.212	LMTQ SMB-4-250	AB-114-7	HARSH	1 HR

MARK NO	EQUIPMENT DESCRIPTION VENDOR PANEL/RACK	SPEC.NO	MAKE/MANUFACTURER MODEL/CATALOG NO. REMARKS	ENV. ZONE SUBNRG	ENVRGN ENVTYP	SFN1 SFN2 SFN3	OP TIME QC BASIS	QTN1 QTN2 QTN3
B21 NUCLEAR BOILER STEAM								
1B21*MOVF098B	MOTOR OPERATED VALVE VELAN	228.212	LMTQ SMB-4-250	AB-114-7	HARSH		1 HR	
1B21*MOVF098C	MOTOR OPERATED VALVE VELAN	228.212	LMTQ SMB-4-250	AB-114-7	HARSH		1 HR	
1B21*MOVF098D	MOTOR OPERATED VALVE VELAN	228.212	LMTQ SMB-4-250	AB-114-7	HARSH		1 HR	
B33 REACTOR RECIRC VALVE FLOW CONTROL								
1B33*AOVF019	AIR OPERATED VALVE FISHER CONTROLS	247.491	FCTL,NMCO DBQ,EA180	DW-1	HLBI HARSH	BCNT	1 HR	
1B33*AOVF020	AIR OPERATED VALVE FISHER CONTROLS	247.491	FCTL,NMCO DBQ,EA180	CT-3	HLBI HARSH	BCNT	1 HR	
1B33*SOVF019	SOLENOID VALVE FISHER CONTROLS	247.491	ASCO NP8320	DW-1	HLBI HARSH	BCNT	1 HR	
1B33*SOVF020	SOLENOID VALVE FISHER CONTROLS	247.491	ASCO NP8320	CT-3	HLBI HARSH	BCNT	1 HR	
CCP COMPONENT COOLING - PRIMARY CONTAINMENT OR REACTOR								
1CCP*MOV129	MOTOR OPERATED VALVE JAMESBURY	228.243	LMTQ SMB-000-5	AB-070-8	HARSH		100D	
1CCP*MOV130	MOTOR OPERATED VALVE JAMESBURY	228.243	LMTQ SMB-000-5	AB-070-8	HARSH		100D	

MARK NO	EQUIPMENT DESCRIPTION VENDOR PANEL/RACK SPEC.NO	MAKE/MANUFACTURER MODEL/CATALOG NO. REMARKS	ENV. ZONE SUBNRG	EMRGCN ENVTYP	SFN1 SFN2 SFN3	OP TIME OC BASIS	QRN1 QRN2 QRN3
CCP COMPONENT COOLING - PRIMARY CONTAINMENT OR REACTOR							
1CCP*MOV138	MOTOR OPERATED VALVE VELAN 228.212	LMTQ SMB-0-25	AB-114-6	HLBO HARSH	CISL - -	1HR A	- -
1CCP*MOV142	MOTOR OPERATED VALVE JAMESBURY 228.243	LMTQ SMB-000-2	CT-G	HARSH		1HR	
1CCP*MOV143	MOTOR OPERATED VALVE JAMESBURY 228.243	LMTQ SMB-000-2	CT-G	HARSH		1HR	
1CCP*MOV144	MOTOR OPERATED VALVE JAMESBURY 228.243	LMTQ SMB-000-2	DW-1	HARSH		1HR	
1CCP*MOV158	MOTOR OPERATED VALVE VELAN 228.212	LMTQ SMB-0-25	CT-G	HLBI HARSH	CISL - -	1HR A	- -
1CCP*MOV159	MOTOR OPERATED VALVE VELAN 228.212	LMTQ SMB-0-25	AB-114-6	HLBO HARSH	CISL - -	1HR A	- -
1CCP*MOV16A	MOTOR OPERATED VALVE JAMESBURY 228.243	LMTQ SMB-000-5	AB-070-8	HARSH		100D	
1CCP*MOV16B	MOTOR OPERATED VALVE JAMESBURY 228.243	LMTQ SMB-000-5	AB-070-8	HARSH		100D	
1CCP*MOV163	MOTOR OPERATED VALVE VELAN 228.214	LMTQ SMB-000-2	FB-070-G	HLBO HARSH	BCNT - -	100D A	- -
1CCP*MOV169	MOTOR OPERATED VALVE VELAN 228.214	LMTQ SMB-000-2	FB-070-G	HLBO HARSH	BCNT - -	100D A	- -

MARK NO	EQUIPMENT DESCRIPTION VENDOR PANEL/RACK SPEC.NO	MAKE/MANUFACTURER MODEL/CATALOG NO. REMARKS	ENV. ZONE SUBNRG	ENRGCN ENVTYP	SFN1 OP TIME GRN1 SFN2 OC BASIS GRN2 SFN3 GRN3
CCP	COMPONENT COOLING - PRIMARY CONTAINMENT OR REACTOR				
1CCP*MOV335	MOTOR OPERATED VALVE JAMESBURY 228.243	LMTQ SMB-000-5	AB-070-8	HLBO HARSH	BCNT 100D - A - -
1CCP*MOV336	MOTOR OPERATED VALVE JAMESBURY 228.243	LMTQ SMB-000-5	AB-070-8	HLBO HARSH	BCNT 100D - A - -
1CCP*PT1A	PRESSURE TRANSMITTER ROSEMOUNT 247.481	RSMT 1153G37	AB-070-8	HLBO HARSH	BCNT 100D - A - -
1CCP*PT1B	PRESSURE TRANSMITTER ROSEMOUNT 247.481	RSMT 1153G37	AB-070-8	HLBO HARSH	BCNT 100D - A - -
1CCP*PT1C	PRESSURE TRANSMITTER ROSEMOUNT 247.481	RSMT 1153GB7	AB-070-8	HLBO HARSH	BCNT 100D - A - -
1CCP*PT1D	PRESSURE TRANSMITTER ROSEMOUNT 247.481	RSMT 1153GB7	AB-070-8	HLBO HARSH	BCNT 100D - A - -
1CCP*PT1E	PRESSURE TRANSMITTER ROSEMOUNT 247.481	RSMT 1153GB7	AB-070-8	HLBO HARSH	BCNT 100D - A - -
1CCP*PT1F	PRESSURE TRANSMITTER ROSEMOUNT 247.481	RSMT 1153GB7	AB-070-8	HLBO HARSH	BCNT 100D - A - -
1CCP*PT1G	PRESSURE TRANSMITTER ROSEMOUNT 247.481	RSMT 1153GB7	AB-070-8	HLBO HARSH	BCNT 100D - A - -
1CCP*PT1H	PRESSURE TRANSMITTER ROSEMOUNT 247.481	RSMT 1153GB7	AB-070-8	HLBO HARSH	BCNT 100D - A - -

MARK NO	EQUIPMENT DESCRIPTION VENDOR PANEL/RACK	SPEC.NO	MAKE/MANUFACTURER MODEL/CATALOG NO. REMARKS	ENV. ZONE SUBNRG	ENVIRGCN ENVTYP	SFN1 SFN2 SFN3	OP TIME OC BASIS	QRN1 QRN2 QRN3
CMS CONTAINMENT ATMOSPHERE MONITORING								
1CMS*AI25A	HYDROG. ANALYZER INDICATOR COMSIP 1CMS*PNL12A	247.421	API 7045-N5-4702-0000	AB-141-1	HLBO HARSH	DISP - -	30 D B	A
1CMS*AI25B	HYDROG ANALYZER INDICATOR COMSIP 1CMS*PNL10B	247.421	API 7045-N5-4702-0000	AB-141-1	HLBO HARSH	DISP - -	30 D B	A
1CMS*AT25A	HYDROG. ANALYZER IND. TRANSM. COMSIP 1CMS*PNL10A	247.421	DELP B5 REG.G.1.97	AB-141-1	HLBO HARSH	PAM - -	30 D A	-
1CMS*AT25B	HYDROG. ANALYZER IND. TRANSM. COMSIP 1CMS*PNL10B	247.421	DELP B5 REG.G.1.97	AB-141-1	HLBO HARSH	PAM - -	30 D A	-
1CMS*LT23A	LEVEL TRANS & REMOTE SEAL ROSEMOUNT	247.481	RSMT 1153DB5FG, 1159C60A REG.G.1.97	CT-2	HARSH		100D	
1CMS*LT23B	LEVEL TRANS & REMOTE SEAL ROSEMOUNT	247.481	RSMT 1153DB5FG, 1159C60A REG.G.1.97	CT-2	HARSH		100D	
1CMS*PDT29A	DIFF PRESSURE TRANSMITTER ROSEMOUNT 1JPB*RAK4	247.481	RSMT 1153DB6	AB-141-2	HLBO HARSH	PAM - -	100D A	-
1CMS*PDT29B	DIFF PRESSURE TRANSMITTER ROSEMOUNT 1JPB*RAK3	247.481	RSMT 1153DB6	AB-141-2	HLBO HARSH	PAM - -	100D A	-
1CMS*PNL10A	REMOTE CABINET COMSIP	247.421	COMS NONE,UNIQUE	AB-141-1	HLBO HARSH	PANL - -	100D A	-
1CMS*PNL10B	REMOTE CABINET COMSIP	247.421	COMS NONE,UNIQUE	AB-141-1	HLBO HARSH	PANL - -	100D A	-

RBS-ENVIRONMENTAL QUALIFICATION DATA MASTER LIST
SORTED BY MARK NO - HARSH ENVIRONMENT ONLY

MARK NO	EQUIPMENT DESCRIPTION / VENDOR / PANEL/RACK	SPEC.NO	MAKE/MANUFACTURER / MODEL/CATALOG NO. / REMARKS	ENV. ZONE / SUBMRG	EMRGCN / ENVTYP	SFN1 / SFN2 / SFN3	OP TIME / QC BASIS	CRN1 / CRN2 / CRN3
CMS CONTAINMENT ATMOSPHERE MONITORING								
1CMS*PNL12A	LOCAL CONTROL CAB. COMSIP	247.421	COMS NONE, UNIQUE	AB-141-1	 HARSH		100D	
1CMS*PNL12B	PANEL ELECTROMECHANICS	247.421		AB-141-1	 HARSH		100D	
1CMS*PT2A	PRESSURE TRANSMITTER ROSEMOUNT 1JPB*RAK4	247.481	RSMT 1153AB6 REG.G.1.97	AB-141-2	HLBO HARSH	PAM - -	100D A - 	
1CMS*PT2B	PRESSURE TRANSMITTER ROSEMOUNT 1JPB*RAK3	247.481	RSMT 1153AB6 REG.G.1.97	AB-141-2	HLBO HARSH	PAM - -	100D A - 	
1CMS*PT4A	PRESSURE TRANSMITTER ROSEMOUNT 1JPB*RAK4	247.481	RSMT 1153AB6 REG.G.1.97	AB-141-2	HLBO HARSH	PAM - -	100D A - 	
1CMS*PT4B	PRESSURE TRANSMITTER ROSEMOUNT 1JPB*RAK3	247.481	RSMT 1153AB6 REG.G.1.97	AB-141-2	HLBO HARSH	PAM - -	100D A - 	
1CMS*RTD24A	RTD PYCO	247.461	PYCO 122-3046-12	CT-2	HLBI HARSH	DISP - -	100D A - 	
1CMS*RTD24B	RTD PYCO	247.461	PYCO 122-3046-12	CT-2	HLBI HARSH	DISP - -	100D A - 	
1CMS*RTD24C	RTD PYCO	247.461	PYCO 122-3046-12	CT-2	HLBI HARSH	DISP - -	100D A - 	
1CMS*RTD24D	RTD PYCO	247.461	PYCO 122-3046-04 122-3046-12	CT-2	HLBI HARSH	DISP - -	100D A - 	

MARK NO	EQUIPMENT DESCRIPTION VENDOR PANEL/RACK	SPEC.NO	MAKE/MANUFACTURER MODEL/CATALOG NO. REMARKS	ENV. ZONE SUBZONE	ENVSCN ENVTYP	SFN1 SFN2 SFN3	OP TIME QC BASIS	QRN1 QRN2 QRN3
CMS CONTAINMENT ATMOSPHERE MONITORING								
1CMS*RTD24E	RTD PYCO	247.461	PYCO 122-3046-12	CT-2	HLBI HARSH	DISP - -	100D A	- -
1CMS*RTD24F	RTD PYCO	247.461	PYCO 122-3046-12	CT-2	HLBI HARSH	DISP - -	100D A	- -
1CMS*RTD24G	RTD PYCO	247.461	PYCO 122-3046-12	CT-2	HLBI HARSH	DISP - -	100D A	- -
1CMS*RTD24H	RTD PYCO	247.461	PYCO 122-3046-12	CT-2	HLBI HARSH	DISP - -	100D A	- -
1CMS*RTD24J	RTD PYCO	247.461	PYCO 122-3046-12	CT-2	HLBI HARSH	DISP - -	100D A	- -
1CMS*RTD24K	RTD PYCO	247.461	PYCO 122-3046-12	CT-2	HLBI HARSH	DISP - -	100D A	- -
1CMS*RTD40A	RTD PYCO	247.461	PYCO 122-3046-12 REG.G.1.97	CT-2	HLBI HARSH	PAM - -	100D A	- -
1CMS*RTD40B	RTD PYCO	247.461	PYCO 122-3046-12	CT-2	HLBI HARSH	PAM - -	100D A	- -
1CMS*RTD40C	RTD PYCO	247.461	PYCO 122-3046-12	CT-2	HLBI HARSH	PAM - -	100D A	- -
1CMS*RTD40D	RTD PYCO	247.461	PYCO 122-3046-12 REG.G.1.97	CT-2	HLBI HARSH	PAM - -	100D A	- -

MARK NO	EQUIPMENT DESCRIPTION VENDOR PANEL/RACK	SPEC.NO	MAKE/MANUFACTURER MODEL/CATALOG NO. REMARKS	ENV. ZONE SUBNRG	ENVRGN ENVTYP	SEN1 SEN2 SEN3	OP TIME QC BASIS	QRN1 QRN2 QRN3
CMS CONTAINMENT ATMOSPHERE MONITORING								
1CMS*RTD41A	RTD PYCO	247.461	PYCO 122-3046-12 REG.G.1.97	DW-1	HLBI HARSH	PAM - -	100D A	- -
1CMS*RTD41B	RTD PYCO	247.461	PYCO 122-3046-12 REG.G.1.97	DW-1	HLBI HARSH	PAM - -	100D A	- -
1CMS*RTD41C	RTD PYCO	247.461	PYCO 122-3046-12	DW-1	HLBI HARSH	PAM - -	100D A	- -
1CMS*RTD41D	RTD PYCO	247.461	PYCO 122-3046-12	DW-1	HLBI HARSH	PAM - -	100D A	- -
1CMS*RTD42A	RTD PYCO	247.461	PYCO 122-3046-12	CT-G	HLBI HARSH	PAM - -	100D A	- -
1CMS*RTD42B	RTD PYCO	247.461	PYCO 122-3046-12	CT-2	HLBI HARSH	PAM - -	100D A	- -
1CMS*RTD42C	RTD PYCO	247.461	PYCO 122-3046-12	CT-2	HLBI HARSH	PAM - -	100D A	- -
1CMS*RTD42D	RTD PYCO	247.461	PYCO 122-3046-12	CT-G	HLBI HARSH	PAM - -	100D A	- -
1CMS*RTD42E	RTD PYCO	247.461	PYCO 122-3046-12	CT-3	HLBI HARSH	PAM - -	100D A	- -
1CMS*RTD42F	RTD PYCO	247.461	PYCO 122-3046-12	CT-3	HLBI HARSH	PAM - -	100D A	- -

MARK NO	EQUIPMENT DESCRIPTION VENDOR PANEL/RACK	SPEC.NO	NAME/MANUFACTURER MODEL/CATALOG NO. REMARKS	ENV. ZONE SUBNRG	ENVRGN ENVTYP	SFN1 SFN2 SFN3	OP TIME QC BASIS	QRN1 QRN2 QRN3
CMS CONTAINMENT ATMOSPHERE MONITORING								
1CMS*RTD42G	RTD PYCO	247.461	PYCO 122-3046-12	CT-G	HLBI HARSH	PAM - -	100D A	-
1CMS*RTD42H	RTD PYCO	247.461	PYCO 122-3046-12	CT-G	HLBI HARSH	PAM - -	100D A	-
1CMS*RTD42J	RTD PYCO	247.461	PYCO 122-3046-12	CT-3	HLBI HARSH	PAM - -	100D A	-
1CMS*RTD42K	RTD PYCO	247.461	PYCO 122-3046-12	CT-G	HLBI HARSH	PAM - -	100D A	-
1CMS*RTD43A	RTD PYCO	247.461	PYCO 122-3046-12	DW-1	HLBI HARSH	PAM - -	100D A	-
1CMS*RTD43B	RTD PYCO	247.461	PYCO 122-3046-12	DW-1	HLBI HARSH	PAM - -	100D A	-
1CMS*RTD43C	RTD PYCO	247.461	PYCO 122-3046-12	DW-1	HLBI HARSH	PAM - -	100D A	-
1CMS*RTD43D	RTD PYCO	247.461	PYCO 122-3046-12	DW-1	HLBI HARSH	PAM - -	100D A	-
1CMS*RTD43E	RTD PYCO	247.461	PYCO 122-3046-12	DW-1	HLBI HARSH	PAM - -	100D A	-
1CMS*RTD43F	RTD PYCO	247.461	PYCO 122-3046-12	DW-1	HLBI HARSH	PAM - -	100D A	-

RBS-ENVIRONMENTAL QUALIFICATION DATA MASTER LIST
SORTED BY MARK NO - HARSH ENVIRONMENT ONLY

MARK NO	EQUIPMENT DESCRIPTION VENDOR PANEL/RACK	SPEC.NO	MAKE/MANUFACTURER MODEL/CATALOG NO. REMARKS	ENV. ZONE SUBNRS	ENVGCN ENVTYP	SFN1 SFN2 SFN3	OP TIME QC BASIS	QRN1 QRN2 QRN3
CMS CONTAINMENT ATMOSPHERE MONITORING								
1CMS*SOV31A	SOLENOID VALVE TARGET ROCK	247.501	TRCP 77HK-002	AB-114-6	HLBO HARSH	CISL PAM -	30 D A	-
1CMS*SOV31B	SOLENOID VALVE TARGET ROCK	247.501	TRCP 77HK-002	AB-141-3	HLBO HARSH	CISL PAM -	30 D A	-
1CMS*SOV31C	SOLENOID VALVE TARGET ROCK	247.501	TRCP 77HK-002	AB-114-6	HLBO HARSH	CISL PAM -	30 D A	-
1CMS*SOV31D	SOLENOID VALVE TARGET ROCK	247.501	TRCP 77HK-002	AB-141-3	HLBO HARSH	CISL PAM -	30 D A	-
1CMS*SOV32A	SOLENOID VALVE TARGET ROCK	247.501	TRCP 77HK-002	CT-G	HLBI HARSH	PAM - -	100D A	-
1CMS*SOV32G	SOLENOID VALVE TARGET ROCK	247.501	TRCP 77HK-002	CT-G	HLBI HARSH	PAM - -	100D A	-
1CMS*SOV33A	SOLENOID VALVE TARGET ROCK	247.501	TRCP 77HK-003	CT-1	HLBI HARSH	PAM - -	100D A	-
1CMS*SOV33AA	SOLENOID VALVE TARGET ROCK	247.501	TRCP 77HK-003	CT-2	HLBI HARSH	PAM - -	100D A	-
1CMS*SOV33B	SOLENOID VALVE TARGET ROCK	247.501	TRCP 77HK-003	CT-1	HLBI HARSH	PAM - -	100D A	-
1CMS*SOV33BB	SOLENOID VALVE TARGET ROCK	247.501	TRCP 77HK-003	CT-2	HLBI HARSH	PAM - -	100D A	-

MARK NO	EQUIPMENT DESCRIPTION VENDOR PANEL/RACK	SPEC.NO	MAKE/MANUFACTURER MODEL/CATALOG NO. REMARKS	ENV. ZONE SUBNRG	ENVGEN ENVTYP	SFN1 SFN2 SFN3	OP TIME QC BASIS	QRN1 QRN2 QRN3
CMS CONTAINMENT ATMOSPHERE MONITORING								
1CMS*SOV33C	SOLENOID VALVE TARGET ROCK	247.501	TROP 77NK-003	CT-1	HLBI HARSH	PAM - -	100D A	- -
1CMS*SOV33D	SOLENOID VALVE TARGET ROCK	247.501	TROP 77NK-003	CT-1	HLBI HARSH	PAM - -	100D A	- -
1CMS*SOV33E	SOLENOID VALVE TARGET ROCK	247.501	TROP 77NK-003	CT-1	HLBI HARSH	PAM - -	100D A	- -
1CMS*SOV33F	SOLENOID VALVE TARGET ROCK	247.501	TROP 77NK-003	CT-1	HLBI HARSH	PAM - -	100D A	- -
1CMS*SOV33G	SOLENOID VALVE TARGET ROCK	247.501	TROP 77NK-003	CT-5	HLBI HARSH	PAM - -	100D A	- -
1CMS*SOV33H	SOLENOID VALVE TARGET ROCK	247.501	TROP 77NK-003	CT-5	HLBI HARSH	PAM - -	100D A	- -
1CMS*SOV33J	SOLENOID VALVE TARGET ROCK	247.501	TROP 77NK-003	CT-10	HLBI HARSH	PAM - -	100D A	- -
1CMS*SOV33K	SOLENOID VALVE TARGET ROCK	247.501	TROP 77NK-003	CT-10	HLBI HARSH	PAM - -	100D A	- -
1CMS*SOV33S	SOLENOID VALVE TARGET ROCK	247.501	TROP 77NK-003	CT-5	HLBI HARSH	PAM - -	100D A	- -
1CMS*SOV33T	SOLENOID VALVE TARGET ROCK	247.501	TROP 77NK-003	CT-5	HLBI HARSH	PAM - -	100D A	- -

MARK NO	EQUIPMENT DESCRIPTION VENDOR PANEL/RACK	SPEC.NO	MAKE/MANUFACTURER MODEL/CATALOG NO. REMARKS	ENV. ZONE SUBNRG	ENVGCN ENVTYP	SFN1 SFN2 SFN3	OP TIME QC BASIS	QRN1 QRN2 QRN3
CMS CONTAINMENT ATMOSPHERE MONITORING								
1CMS*SOV33U	SOLENOID VALVE TARGET ROCK	247.501	TRCP 77MK-003	CT-7	HLBI HARSH	PAM - -	100D A	- -
1CMS*SOV33V	SOLENOID VALVE TARGET ROCK	247.501	TRCP 77MK-003	CT-7	HLBI HARSH	PAM - -	100D A	- -
1CMS*SOV33W	SOLENOID VALVE TARGET ROCK	247.501	TRCP 77MK-003	CT-G	HLBI HARSH	PAM - -	100D A	- -
1CMS*SOV33X	SOLENOID VALVE TARGET ROCK	247.501	TRCP 77MK-003	CT-G	HLBI HARSH	PAM - -	100D A	- -
1CMS*SOV33Y	SOLENOID VALVE TARGET ROCK	247.501	TRCP	CT-6	HLBI HARSH	PAM - -	100D A	- -
1CMS*SOV33Z	SOLENOID VALVE TARGET ROCK	247.501	TRCP	CT-6	HLBI HARSH	PAM - -	100D A	- -
1CMS*SOV34A	SOLENOID VALVE TARGET ROCK	247.501	TRCP 77MK-003	CT-G	HLBI HARSH	PAM - -	100D A	- -
1CMS*SOV34B	SOLENOID VALVE TARGET ROCK	247.501	TRCP 77MK-003	CT-G	HLBI HARSH	PAM - -	100D A	- -
1CMS*SOV34C	SOLENOID VALVE TARGET ROCK	247.501	TRCP 77MK-003	CT-G	HLBI HARSH	PAM - -	100D A	- -
1CMS*SOV34D	SOLENOID VALVE TARGET ROCK	247.501	TRCP 77MK-003	CT-G	HLBI HARSH	PAM - -	100D A	- -

MARK NO	EQUIPMENT DESCRIPTION VENDOR PANEL/RACK	SPEC.NO	MAKE/MANUFACTURER MODEL/CATALOG NO. REMARKS	ENV. ZONE SUBHRG	ENVRGN ENVTYP	SFN1 OP TIME QRN1 SFN2 OC BASIS QRN2 SFN3 QRN3
CHS CONTAINMENT ATMOSPHERE MONITORING						
1CHS*SOV35A	SOLENOID VALVE TARGET ROCK	247.501	TROP 77HK-002	CT-G	HLBI HARSH	CISL 30 D PAM A - -
1CHS*SOV35B	SOLENOID VALVE TARGET ROCK	247.501	TROP 77HK-002	CT-G	HLBI HARSH	CISL 30 D PAM A - -
1CHS*SOV35C	SOLENOID VALVE TARGET ROCK	247.501	TROP 77HK-002	CT-G	HLBI HARSH	CISL 30 D PAM A - -
1CHS*SOV35D	SOLENOID VALVE TARGET ROCK	247.501	TROP 77HK-002	CT-G	HLBI HARSH	CISL 30 D PAM A - -
CNS CONDENSATE - MAKE-UP AND DRAHOFF						
1CNS*MOV125	MOTOR OPERATED VALVE VELAN	228.212	LMTQ SMB-00-10	AB-114-6	HLBC HARSH	CISL 1HR LCS A - -
1CNS*MOV130	MOTOR OPERATED VALVE VELAN	228.212	LMTQ SMB-00-10	AB-114-6	HLBO HARSH	CISL 1HR LCS A - -
CPH CONTAINMENT HYDROGEN MIXING						
1CPH*FN1A	FAN MOTOR BUFFALO FORGE	215.400	WEST TBFC 145T	CT-G	HLBI HARSH	BCNT 30 D - A - -
1CPH*FN1B	FAN MOTOR BUFFALO FORGE	215.400	WEST TBFC 145T	CT-G	HLBI HARSH	BCNT 30 D - A - -
1CPH*MOV1A	MOTOR OPERATED VALVE POSI-SEAL	228.241	LMTQ SMB-000-2	CT-G	HARSH	1 HR

MARK NO	EQUIPMENT DESCRIPTION VENDOR PANEL/RACK	SPEC.NO	MAKE/MANUFACTURER MODEL/CATALOG NO. REMARKS	ENV. ZONE SUBNRG	ENVRGN ENVTYP	SFN1 SFN2 SFN3	OP TIME OC BASIS	QRN1 QRN2 QRN3
CPH CONTAINMENT HYDROGEN MIXING								
1CPH*MOV1B	MOTOR OPERATED VALVE POSI-SEAL	228.241	LMTQ SNB-000-2	CT-G	HARSH		1 HR	
1CPH*MOV2A	MOTOR OPERATED VALVE POSI-SEAL	228.241	LMTQ SNB-000-2	CT-G	HARSH		1 HR	
1CPH*MOV2B	MOTOR OPERATED VALVE POSI-SEAL	228.241	LMTQ SNB-000-2	CT-G	HARSH		1 HR	
1CPH*MOV3A	MOTOR OPERATED VALVE POSI-SEAL	228.241	LMTQ SNB-000-2	CT-G	HARSH		1 HR	
1CPH*MOV3B	MOTOR OPERATED VALVE POSI-SEAL	228.241	LMTQ SNB-000-2	CT-G	HARSH		1 HR	
1CPH*MOV4A	MOTOR OPERATED VALVE POSI-SEAL	228.241	LMTQ SNB-000-2	CT-G	HARSH		1 HR	
1CPH*MOV4B	MOTOR OPERATED VALVE POSI-SEAL	228.241	LMTQ SNB-000-2	CT-G	HARSH		1 HR	
CPP CONTAINMENT PURGE								
1CPP*MOV104	MOTOR OPERATED VALVE VELAN	228.212	LMTQ SNB-000-5	CT-G	HLBI HARSH	BCNT - -	N/R A -	
1CPP*MOV105	MOTOR OPERATED VALVE VELAN	228.212	LMTQ SNB-000-5	CT-G	TRNS HARSH	BCNT - -	N/R A -	

MARK NO	EQUIPMENT DESCRIPTION VENDOR PANEL/RACK	SPEC.NO	NAME/MANUFACTURER MODEL/CATALOG NO. REMARKS	ENV. ZONE SUBMRG	ENVRSON ENVTYP	SFN1 SFN2 SFN3	OP TIME OC BASIS	QRN1 QRN2 QRN3
CPP CONTAINMENT PURGE								
1CPP*PNL102	PANEL ELECTROMECHANICS	242.444	ELEC NONE,UNIQUE	AB-141-3	HLBO HARSH	PANL - -	N/A A	- -
1CPP*SOV140	SOLENOID VALVE TARGET ROCK	247.501	TRCP 77HK-004	AB-114-6	HLBO HARSH	CISL - -	100D A	- -
CSH CORE SPRAY - HIGH PRESSURE								
1CSH*SOV103	SOLENOID VALVE ATWOOD & MORRILL	228.218	DW-1 WITH 1E22*AOVF005 N/R FOR SAFETY FUNCTION		HARSH		N/R	
CSL CORE SPRAY - LOW PRESSURE								
1CSL*SOV103	SOLENOID VALVE ATWOOD & MORRILL	228.218	DW-1 WITH 1E21*AOVF006 N/R FOR SAFETY FUNCTION		HARSH		N/R	
C11 CONTROL ROD DRIVE HYDRAULIC CONTROL SYSTEM								
1C11*MOVF083	MOTOR OPERATED VALVE VELAN	228.216	LMTQ SMB-000-5	FB-113-G	FHA HARSH	CISL - -	1 HR A	- -
C41 STANDBY LIQUID CONTROL SYSTEM								
1C41*MOVF001A	MOTOR OPERATED VALVE VELAN	228.216	LMTQ SMB-000-2	DW-1	HLBI HARSH	BCNT - -	1 HR A	- -
1C41*MOVF001B	MOTOR OPERATED VALVE VELAN	228.216	LMTQ SMB-000-2	DW-1	HLBI HARSH	BCNT - -	1 HR A	- -

MARK NO	EQUIPMENT DESCRIPTION VENDOR PANEL/RACK	SPEC.NO	MAKE/MANUFACTURER MODEL/CATALOG NO. REMARKS	ENV. ZONE SUBMRG	ENVCON ENVTYP	SFN1 SFN2 SFN3	OP TIME QC BASIS	QRN1 QRN2 QRN3
DER DRAINS - REACTOR BLDG EQUIPMENT								
1DER*AOV126	AIR OPERATED VALVE FISHER CONTROLS	247.491	FCTL,NMCO ET,EA180 QUAL FOR LMTS 33-1DERB03 ONLY	CT-3	HLBI HARSH	DISP - -	1HR A -	
1DER*AOV127	AIR OPERATED VALVE FISHER CONTROLS	247.491	FCTL,NMCO ET-EA180 QUAL FOR LMTS 33-1DERA03 ONLY	FB-113-G	FHA HARSH	DISP - -	1HR A -	
1DER*SOV126	SOLENOID VALVE FISHER CONTROLS	247.491	ASCO NP8320	CT-3	HLBI HARSH	CISL - -	1HR A -	
1DER*SOV127	SOLENOID VALVE FISHER CONTROLS	247.491	ASCO NP8320	FB-113-G	FHA HARSH	CISL - -	1HR A -	
DFR DRAINS - REACTOR PLANT FLOOR								
1DFR*AOV101	AIR OPERATED VALVE FISHER CONTROLS	247.491	FCTL,NMCO ET,EA180 QUAL FOR LMTS 33-1DFRB04 ONLY	CT-3	HLBI HARSH	DISP - -	1HR A -	
1DFR*AOV102	AIR OPERATED VALVE FISHER CONTROLS	247.491	FCTL,NMCO ET,EA180 QUAL FOR LMTS 33-1DFRA04 ONLY	AB-114-6	HLBO HARSH	DISP - -	1HR A -	
1DFR*LT134	LEVEL TRANSM & REMOTE SEAL ROSEMOUNT	247.481	RSMT 1153DB4PG, 1159C30A	AB-070-1	HARSH		1HR	
1DFR*LT135	LEVEL TRANSM & REMOTE SEAL ROSEMOUNT	247.481	RMST 1153DB4PG, 1159C30A	AB-070-2	HARSH		1HR	
1DFR*LT136	LEVEL TRANSM & REMOTE SEAL ROSEMOUNT	247.481	RSMT 1153DB4PG, 1159C30A	AB-070-3	HARSH		1HR	

MARK NO	EQUIPMENT DESCRIPTION VENDOR PANEL/RACK SPEC.NO	MAKE/MANUFACTURER MODEL/CATALOG NO. REMARKS	ENV. ZONE SUBMRG	ENVSCN ENVTYP	SFN1 SFN2 SFN3	OP TIME QC BASIS	QRN1 QRN2 QRN3
DFR DRAINS - REACTOR PLANT FLOOR							
1DFR*LT137	LEVEL TRANSM & REMOTE SEAL ROSEMOUNT 247.481	RSMT 1153DB4PG, 1159C30A	AB-070-4	HARSH		IHR	
1DFR*LT138	LEVEL TRANSM & REMOTE SEAL ROSEMOUNT 247.481	RSMT 1153DB4PG, 1159C30A	AB-070-5	HLBO HARSH	DISP	IHR A	
1DFR*LT139	LEVEL TRANSM & REMOTE SEAL ROSEMOUNT 247.481	RSMT 1153DB4PG, 1159C30A	AB-070-6	HLBO HARSH	DISP	IHR A	
1DFR*SOV101	SOLENOID VALVE FISHER CONTROLS 247.491	ASCO NP8320	CT-3	HLBI HARSH	CISL - -	IHR A -	
1DFR*SOV102	SOLENOID VALVE FISHER CONTROLS 247.491	ASCO NP 8320	AB-114-6	HLBO HARSH	CISL - -	IHR A -	
EHS MOTOR CONTROL CENTER STANDBY SYSTEM							
1EHS*MCC2A	STANDBY MOTOR CONTROL CENTERS GOULD INC 242.562	GLDI SERIES 5600	AB-141-4	HLBO HARSH	EMPW - -	100D A -	
1EHS*MCC2B	STANDBY MOTOR CONTROL CENTERS GOULD INC 242.562	GLDI SERIES 5600	AB-141-2	HLBO HARSH	EMPW - -	100D A -	
1EHS*MCC2C	STANDBY MOTOR CONTROL CENTERS GOULD INC 242.562	GLDI SERIES 5600	AB-141-4	HLBO HARSH	EMPW - -	100D A -	
1EHS*MCC2D	STANDBY MOTOR CONTROL CENTERS GOULD INC 242.562	GLDI SERIES 5600	AB-141-2	HLBO HARSH	EMPW - -	100D A -	

MARK NO	EQUIPMENT DESCRIPTION VENDOR PANEL/RACK SPEC.NO	MAKE/MANUFACTURER MODEL/CATALOG NO. REMARKS	ENV. ZONE SUBMRG	EMRGCN ENVTYP	SEN1 SEN2 SEN3	OP TIME OC BASIS	QRN1 QRN2 QRN3
EHS MOTOR CONTROL CENTER STANDBY SYSTEM							
1EHS*MCC2E	STANDBY MOTOR CONTROL CENTERS GOULD INC 242.562	GLDI SERIES 5600	AB-114-1	HLBO HARSH	EMPW - -	100D A	- -
1EHS*MCC2F	STANDBY MOTOR CONTROL CENTERS GOULD INC 242.562	GLDI SERIES 5600	AB-114-3	HLBO HARSH	EMPW - -	100D A	- -
1EHS*MCC2G	STANDBY MOTOR CONTROL CENTERS GOULD INC 242.562	GLDI SERIES 5600	AB-114-1	HLBO HARSH	EMPW - -	100D A	- -
1EHS*MCC2H	STANDBY MOTOR CONTROL CENTERS GOULD INC 242.562	GLDI SERIES 5600	AB-114-3	HLBO HARSH	EMPW - -	100D A	- -
1EHS*MCC2J	STANDBY MOTOR CONTROL CENTERS GOULD INC 242.562	GLDI SERIES 5600	AB-141-1	HLBO HARSH	EMPW - -	100D A	- -
1EHS*MCC2K	STANDBY MOTOR CONTROL CENTERS GOULD INC 242.562	GLDI SERIES 5600	AB-141-2	HLBO HARSH	EMPW - -	100D A	- -
1EHS*MCC2L	STANDBY MOTOR CONTROL CENTERS GOULD INC 242.562	GLDI SERIES 5600	AB-141-1	HLBO HARSH	EMPW - -	100D A	- -
EJS UNIT SUBSTATION STANDBY SYSTEM							
1EJS*LDC2A	STANDBY 480V LOAD CENTERS POWELL ELECTRIC CORP 242.533	PECP AKDG	AB-141-1	HLBO HARSH	EMPW - -	100D A	- -
1EJS*LDC2B	STANDBY 480V LOAD CENTERS POWELL ELECTRIC CORP 242.533	PECP AKDG	AB-141-2	HLBO HARSH	EMPW - -	100D A	- -

MARK NO	EQUIPMENT DESCRIPTION VENDOR PANEL/RACK	SPEC.NO	MAKE/MANUFACTURER MODEL/CATALOG NO. REMARKS	ENV. ZONE SUBMRG	ENVCON ENVTYP	SFN1 SFN2 SFN3	OP TIME OC BASIS	QRN1 QRN2 QRN3
ENB SNGR STANDBY 4160V - DC CONTROL SUPPLY								
1ENB*MCC1	STANDBY MOTOR CONTROL CENTERS GOULD INC	242.562	GLDI SERIES 5600	AB-095-8	HLBO HARSH	ENPW - -	A -	
ENS SNGR STANDBY 4160V - SYSTEM								
1ENS*SNG3A	SWITCHGEAR GOULD-BROWN BOVERI	242.521		FB-095-G	HARSH		1HR	
1ENS*SNG3B	SWITCHGEAR GOULD-BROWN BOVERI	242.521		AB-114-6	HARSH		1HR	
1ENS*SNG4A	SWITCHGEAR GOULD-BROWN BOVERI	242.521		FB-095-G	HARSH		1HR	
1ENS*SNG4B	SWITCHGEAR GOULD-BROWN BOVERI	242.521		AB-114-6	HARSH		1HR	
E12 RESIDUAL HEAT REMOVAL								
1E12*AOVF041A	AIR OPERATED VALVE	228.218	N/R FOR SAFETY FUNCTION	DW-1	HARSH		N/R	
1E12*AOVF041B	AIR OPERATED VALVE	228.218	N/R FOR SAFETY FUNCTION	DW-1	HARSH		N/R	
1E12*AOVF041C	AIR OPERATED VALVE	228.218	N/R FOR SAFETY FUNCTION	DW-1	HARSH		N/R	
1E12*AOVF098	AIR OPERATED VALVE	228.218	N/R FOR SAFETY FUNCTION	AB-095-5	HARSH		N/R	

MARK NO	EQUIPMENT DESCRIPTION VENDOR PANEL/RACK SPEC.NO	MAKE/MANUFACTURER MODEL/CATALOG NO. REMARKS	ENV. ZONE SUBNRG	ENVIRON ENVTYP	SEN1 OP TIME ORN1 SEN2 OC BASIS ORN2 SEN3 ORN3
E12 RESIDUAL HEAT REMOVAL					
1E12*MOVF003A	MOTOR OPERATED VALVE VELAN 228.212	LMTQ	AB-070-2	HLBO HARSH	RHR 100D - A - -
1E12*MOVF003B	MOTOR OPERATED VALVE VELAN 228.212	LMTQ	AB-070-5	HLBO HARSH	RHR 100D - A - -
1E12*MOVF004A	MOTOR OPERATED VALVE VELAN 228.212	LMTQ SNB-0-25 N/R FOR SAFETY FUNCTION	AB-070-7	HLBO HARSH	RHR N/R - A - -
1E12*MOVF004B	MOTOR OPERATED VALVE VELAN 228.212	LMTQ SNB-0-25 N/R FOR SAFETY FUNCTION	AB-070-7	HLBO HARSH	RHR N/R - A - -
1E12*MOVF006A	MOTOR OPERATED VALVE VELAN 228.212	LMTQ SNB-0-25 N/R FOR SAFETY FUNCTION	AB-070-2	HLBO HARSH	RHR N/R - A - -
1E12*MOVF006B	MOTOR OPERATED VALVE VELAN 228.212	LMTQ SNB-0-25 N/R FOR SAFETY FUNCTIONS	AB-070-5	HLBO HARSH	RHR N/R - A - -
1E12*MOVF008	MOTOR OPERATED VALVE VELAN 228.212	LMTQ SB-C-60 N/R FOR SAFETY FUNCTION	AB-114-2	HLBO HARSH	RHR N/R - A - -
1E12*MOVF009	MOTOR OPERATED VALVE VELAN 228.212	LMTQ SB-2-60 N/R FOR SAFETY FUNCTIONS	DW-1	HLBO HARSH	RHR N/R - A - -
1E12*MOVF011A	MOTOR OPERATED VALVE VELAN 228.212	LMTQ SNB-00-5 N/R FOR SAFETY FUNCTION	AB-095-8	HLBO HARSH	RHR N/R - A - -
1E12*MOVF011B	MOTOR OPERATED VALVE VELAN 228.212	LMTQ SNB-00-5 N/R FOR SAFETY FUNCTION	AB-095-7	HLBO HARSH	RHR N/R - A - -

MARK NO	EQUIPMENT DISCRIPTION VENDOR PANEL/RACK SPEC.NO	MAKE/MANUFACTURER MODEL/CATALOG NO. REMARKS	ENV. ZONE SUBNRS	ENVGCN ENVTYP	SFN1 OP TIME QRN1 SFN2 OC BASIS QRN2 SFN3 QRN3
E12 RESIDUAL HEAT REMOVAL					
1E12*MOVF021	MOTOR OPERATED VALVE VELAN 228.212	LMTQ SB-3-60 N/R FOR SAFETY FUNCTION	AB-095-7	HLBO HARSH	RHR N/R - A - -
1E12*MOVF023	MOTOR OPERATED VALVE VELAN 228.212	LMTQ SB-00S-5 N/R FOR SAFETY FUNCTION	AB-095-4	HLBO HARSH	RHR N/R - A - -
1E12*MOVF024A	MOTOR OPERATED VALVE VELAN 228.212	LMTQ SMB-1-60	AB-095-8	HLBO HARSH	RHR 100D - A - -
1E12*MOVF024B	MOTOR OPERATED VALVE VELAN 228.212	LMTQ SMB-1-60	AB-095-7	HLBO HARSH	RHR 100D - A - -
1E12*MOVF026A	MOTOR OPERATED VALVE VELAN 228.212	LMTQ SMB-00-10 N/R FOR SAFETY FUNCTION	AB-070-2	HLBO HARSH	RHR N/R - A - -
1E12*MOVF026B	MOTOR OPERATED VALVE VELAN 228.212	LMTQ SMB-00-10 N/R FOR SAFETY FUNCTION	AB-070-5	HLBO HARSH	RHR N/R - A - -
1E12*MOVF027A	MOTOR OPERATED VALVE VELAN 228.212	LMTQ SMB-0-40 N/R FOR SAFETY FUNCTION	AB-114-6	HLBO HARSH	RHR N/R - A - -
1E12*MOVF027B	MOTOR OPERATED VALVE VELAN 228.212	LMTQ SMB-0-40 N/R FOR SAFETY FUNCTION	AB-114-5	HLBO HARSH	RHR N/R - A - -
1E12*MOVF037A	MOTOR OPERATED VALVE VELAN 228.212	LMTQ SMB-1-25 N/R FOR SAFETY FUNCTION	CT-G	HLBI HARSH	RHR N/R - A - -
1E12*MOVF037B	MOTOR OPERATED VALVE VELAN 228.212	LMTQ SMB-1-25 N/R FOR SAFETY FUNCTION	CT-G	HLBI HARSH	RHR N/R - A - -

MARK NO	EQUIPMENT DESCRIPTION / VENDOR / PANEL/RACK	SPEC.NO	MAKE/MANUFACTURER / MODEL/CATALOG NO. / REMARKS	ENV. ZONE / SUBNRG	ENRGCN / ENVTYP	SFN1 / SFN2 / SFN3	OP TIME / OP BASIS	QRN1 / QRN2 / QRN3
E12 RESIDUAL HEAT REMOVAL								
1E12*MOVF040	MOTOR OPERATED VALVE VELAN	228.212	LMTQ SB-00S-15 N/R FOR SAFETY FUNCTION	AB-070-2	HLBO HARSH	RHR - -	N/R A	- -
1E12*MOVF042A	MOTOR OPERATED VALVE VELAN	228.212	LMTQ SB-2-60	CT-G	HLBI HARSH	RHR - -	100D A	- -
1E12*MOVF042B	MOTOR OPERATED VALVE VELAN	228.212	LMTQ SB-2-60	CT-G	HLBI HARSH	RHR - -	100D A	- -
1E12*MOVF042C	MOTOR OPERATED VALVE VELAN	228.212	LMTQ SB-2-60	AB-114-5	HLBO HARSH	RHR - -	100D A	- -
1E12*MOVF047A	MOTOR OPERATED VALVE VELAN	228.212	LMTQ SMB-1-40	AB-095-2	HLBO HARSH	RHR - -	100D A	- -
1E12*MOVF047B	MOTOR OPERATED VALVE VELAN	228.212	LMTQ SMB-1-40	AB-095-5	HLBO HARSH	RHR - -	100D A	- -
1E12*MOVF048A	MOTOR OPERATED VALVE VELAN	228.212	LMTQ SMB-3-60	AB-070-2	HLBO HARSH	RHR - -	100D A	- -
1E12*MOVF048B	MOTOR OPERATED VALVE VELAN	228.212	LMTQ SMB-3-60	AB-070-5	HLBO HARSH	RHR - -	100D A	- -
1E12*MOVF049	MOTOR OPERATED VALVE VELAN	228.212	LMTQ SB-00S-15 N/R FOR SAFETY FUNCTION	AB-070-2	HLBO HARSH	RHR - -	N/R A	- -
1E12*MOVF052A	MOTOR OPERATED VALVE VELAN	228.212	LMTQ SMB-2-40 N/R FOR SAFETY FUNCTION	AB-114-8	HLBO HARSH	RHR - -	N/R A	- -

MARK NO	EQUIPMENT DESCRIPTION		MAKE/MANUFACTURER	ENV. ZONE	ENVSCN	SFN1	OP TIME	CRN1
	VENDOR		MODEL/CATALOG NO.	SUBNRG	ENVTYP	SFN2	OC BASIS	CRN2
	PANEL/RACK	SPEC.NO	REMARKS			SFN3		CRN3

E12 RESIDUAL HEAT REMOVAL

1E12*MOVF050B	MOTOR OPERATED VALVE		LMTQ	AB-114-8	HLBO	RHR	N/R
	VELAN		SNB-2-40		HARSH	-	A -
		228.212	N/R FOR SAFETY FUNCTION			-	
1E12*MOVF053A	MOTOR OPERATED VALVE		LMTQ	AB-095-2	HLBO	RHR	N/R
	VELAN		SNB-3-80		HARSH	-	A -
		228.212	N/R FOR SAFETY FUNCTION			-	
1E12*MOVF053B	MOTOR OPERATED VALVE		LMTQ	AB-095-5	HLBO	RHR	N/R
	VELAN		SNB-3-80		HARSH	-	A -
		228.212	N/R FOR SAFETY FUNCTION			-	
1E12*MOVF064A	MOTOR OPERATED VALVE		LMTQ	AB-070-2	HLBO	RHR	1000
	VELAN		SB-00S-10		HARSH	-	A -
		228.212				-	
1E12*MOVF064B	MOTOR OPERATED VALVE		LMTQ	AB-070-5	HLBO	RHR	1000
	VELAN		SB-00S-10		HARSH	-	A -
		228.212				-	
1E12*MOVF064C	MOTOR OPERATED VALVE		LMTQ	AB-070-4	HLBO	RHR	1000
	VELAN		SB-00S-10		HARSH	-	A -
		228.212				-	
1E12*MOVF068A	MOTOR OPERATED VALVE		LMTQ	PT-3	HLBO	RHR	1000
	JAMESBURY		SNB-00-10		HARSH	BONT	A -
		228.243				-	
1E12*MOVF068B	MOTOR OPERATED VALVE		LMTQ	PT-3	HLBO	RHR	1000
	JAMESBURY		SNB-00-10		HARSH	BONT	A -
		228.243				-	
1E12*MOVF073A	MOTOR OPERATED VALVE		LMTQ	AB-095-8	HLBO	RHR	N/R
	VELAN		SNB-000-2		HARSH	-	A -
		228.214	N/R FOR SAFETY FUNCTION			-	
1E12*MOVF073B	MOTOR OPERATED VALVE		LMTQ	AB-095-7	HLBO	RHR	N/R
	VELAN		SNB-000-2		HARSH	-	A -
		228.214	N/R FOR SAFETY FUNCTION			-	

RBS-ENVIRONMENTAL QUALIFICATION DATA MASTER LIST
SORTED BY MARK NO - MARSH ENVIRONMENT ONLY

MARK NO	EQUIPMENT DESCRIPTION		NAME/MANUFACTURER	ENV. ZONE	ENVCON	SFN1	OP TIME	QTY1
	VENDOR		MODEL/CATALOG NO.	MARSH	ENVTYP	SFN2	QC BASIS	QTY2
	PANEL/RACK	SPEC.NO	REMARKS			SFN3		QTY3

E12 RESIDUAL HEAT REMOVAL

1E12-MOVF074A	MOTOR OPERATED VALVE		LMTQ	AB-095-2	MLSO	RHR	N/R
	VELAN		[illegible]-000-2		MARSH	-	A -
		228.214	N/R FOR SAFETY FUNCTION			-	
1E12-MOVF074B	MOTOR OPERATED VALVE		LMTQ	AB-095-5	MLSO	RHR	N/R
	VELAN		SMB-000-2		MARSH	-	A -
		228.214	N/R FOR SAFETY FUNCTION			-	
1E12-MOVF087A	MOTOR OPERATED VALVE		LMTQ	AB-114-8	MLSO	RHR	N/R
	VELAN		SD-2-48		MARSH	-	A -
		228.212	N/R FOR SAFETY FUNCTION			-	
1E12-MOVF087B	MOTOR OPERATED VALVE		LMTQ	AB-114-8	MLSO	RHR	N/R
	VELAN		SD-2-48		MARSH	-	A -
		228.212	N/R FOR SAFETY FUNCTION			-	
1E12-MOVF094	MOTOR OPERATED VALVE		LMTQ	AB-095-5	MLSO	RHR	100D
	VELAN		SMB-0-15		MARSH	-	A -
		228.212				-	
1E12-MOVF096	MOTOR OPERATED VALVE		LMTQ	AB-095-5	MLSO	RHR	100D
	VELAN		SMB-0-25		MARSH	-	A -
		228.212				-	
1E12-MOVF105	MOTOR OPERATED VALVE		LMTQ	AB-070-7	MLSO	RHR	N/R
	VELAN		SMB-0-25		MARSH	-	A -
		228.212	N/R FOR SAFETY FUNCTION			-	
1E12-PC003	RHR ECCS SUBSYSTEM FILL PUMP		WEST	AB-070-4	MLSO	RHR	100D
	SOULDS PUMPS		FRAME 184T - TEFC		MARSH	-	A -
		237.160				-	
1E12-SOVF051A	SOLENOID VALVE		ASCO	AB-114-8			100D
	FISHER CONTROLS		NP8320		MARSH		
		247.491					
1E12-SOVF051B	SOLENOID VALVE		ASCO	AB-114-8			100D
	FISHER CONTROLS		NP8320		MARSH		
		247.491					

MARK NO	EQUIPMENT DESCRIPTION VENDOR PANEL/RACK	SPEC.NO	MAKE/MANUFACTURER MODEL/CATALOG NO. REMARKS	ENV. ZONE SUBNRG	ENDCON ENVTYP	SFN1 SFN2 SFN3	QP TIME QC BASIS	QRN1 QRN2 QRN3
E12 RESIDUAL HEAT REMOVAL								
1E12*SOVF060A	SOLENOID VALVE TARGET ROCK	247.501	TRCP 77KK-001	AB-070-2	HLBO HARSH	RHR BCNT	100D A	
1E12*SOVF060B	SOLENOID VALVE TARGET ROCK	247.501	TRCP 77KK-001	AB-070-5	HLBO HARSH	RHR BCNT	100D A	
1E12*SOVF065A	SOLENOID VALVE FISHER CONTROLS	247.491	ASCO NP8320	AB-070-5	HARSH		100D	
1E12*SOVF065B	SOLENOID VALVE FISHER CONTROLS	247.491	ASCO NP8320	AB-070-5	HARSH		100D	
1E12*SOVF075A	SOLENOID VALVE TARGET ROCK	247.501	TRCP 77KK-001	AB-070-2	HLBO HARSH	RHR BCNT	100D A	
1E12*SOVF075B	SOLENOID VALVE TARGET ROCK	247.501	TRCP 77KK-001	AB-070-5	HLBO HARSH	RHR BCNT	100D A	
1E12*SOVF095	SOLENOID VALVE TARGET ROCK	247.501	TRCP 77KK-001	AB-070-6	TR HARSH	LTR	100D L	
E21 CORE SPRAY - LOW PRESSURE								
1E21*AOVF006	AIR OPERATED VALVE ATWOOD & MORRILL	228.218	N/R FOR SAFETY FUNCTION	DW-1	HARSH		N/R	
1E21*MOVF001	MOTOR OPERATED VALVE VELAN	228.212	LMTQ SMB-0-25	AB-070-8	HLBO HARSH	LPCS - -	N/R A -	

MARK NO	EQUIPMENT DESCRIPTION VENDOR PANEL/RACK	SPEC.NO	MAKE/MANUFACTURER MODEL/CATALOG NO. REMARKS	ENV. ZONE SUBZONE	ENVCON ENVTYP	SEN1 SEN2 SEN3	OP TIME QC BASIS	QRN1 QRN2 QRN3
E21 CORE SPRAY - LOW PRESSURE								
1E21*MOVF005	MOTOR OPERATED VALVE VELAN	228.212	LMTQ SS-2-60	AB-114-6	HLBO HARSH	LPCS - -	100D A	- -
1E21*MOVF011	MOTOR OPERATED VALVE VELAN	228.212	LMTQ SMB-00-10	AB-095-8	HLBO HARSH	LPCS - -	100D A	- -
1E21*MOVF012	MOTOR OPERATED VALVE VELAN	228.212	LMTQ SMB-2-25	AB-095-8	HLBO HARSH	LPCS - -	1 HR A	- -
1E21*PC002	LPCS ECCS SUBSYSTEM FILL PUMP GOULDS PUMPS	237.160	WEST FRAME 184T - TEFC	AB-070-1	HLBO HARSH	LPCS - -	100D A	- -
E22 CORE SPRAY - HIGH PRESSURE								
1E22*AOVF005	AIR OPERATED VALVE ATHOOD & MORRILL	228.218	N/R FOR SAFETY FUNCTION	DW-1	HARSH		N/R	
1E22*PC003	HPCS ECCS SUBSYSTEM FILL PUMP GOULDS PUMPS	237.160	WEST FRAME 213T - TEFC	AB-070-6	HLBO HARSH	HPCS - -	100D A	- -
E33 MAIN STEAM ISOLATION VALVE SEALS								
1E33*MOVF005	MOTOR OPERATED VALVE VELAN	228.214	LMTQ SMB-000-5	AB-114-6	HLBO HARSH	LCS - -	100D A	- -
1E33*MOVF006	MOTOR OPERATED VALVE VELAN	228.214	LMTQ SMB-000-2	AB-114-6	HLBO HARSH	LCS - -	100D A	- -
1E33*MOVF007	MOTOR OPERATED VALVE VELAN	228.214	LMTQ SMB-000-5	AB-114-2	HLBO HARSH	LCS - -	100D A	- -

MARK NO	EQUIPMENT DESCRIPTION VENDOR PANEL/RACK	SPEC.NO	MAKE/MANUFACTURER MODEL/CATALOG NO. REMARKS	ENV. ZONE SUBNRG	ENVSCN ENVTYP	SEN1 SEN2 SEN3	OP TIME QC BASIS	QRN1 QRN2 QRN3
E33 MAIN STEAM ISOLATION VALVE SEALS								
1E33*MOVF008	MOTOR OPERATED VALVE VELAN	228.214	LMTQ SNB-000-5	AB-114-2	HLBO HARSH	LCS - -	100D A	- -
1E33*MOVF005	MOTOR OPERATED VALVE VELAN	228.214	LMTQ SNB-000-5	AB-114-3	HLBO HARSH	LCS - -	100D A	- -
1E33*MOVF026	MOTOR OPERATED VALVE VELAN	228.214	LMTQ SNB-000-2	AB-114-8	HLBO HARSH	LCS - -	100D A	- -
1E33*MOVF027	MOTOR OPERATED VALVE VELAN	228.214	LMTQ SNB-000-5	AB-114-7	HLBO HARSH	LCS - -	100D A	- -
1E33*MOVF028	MOTOR OPERATED VALVE VELAN	228.214	LMTQ SNB-000-5	AB-114-7	HLBO HARSH	LCS - -	100D A	- -
1E33*PVF002	CONTROL VALVE FISHER CONTROLS	247.497	FCTL, BORG EC ELECTRONICS(CB-116-2)	AB-114-8	HLBO HARSH	LCS	30 D A	
1E33*PVF022	CONTROL VALVE FISHER CONTROLS	247.497	FCTL, BORG EC ELECTRONICS(CB-116-2)	AB-114-8	HLBO HARSH	LCS	30 D A	
1E33*SOVF014	SOLENOID VALVE TARGET ROCK	247.501	TRCP 77NK-005	AB-141-3	HLBO HARSH	LCS BCNT	30 D A	
1E33*SOVF034	SOLENOID VALVE TARGET ROCK	247.501	TRCP 77NK-005	AB-141-3	HLBO HARSH	LCS BCNT	30 D A	

MARK NO	EQUIPMENT DESCRIPTION VENDOR PANEL/RACK	SPEC.NO	MAKE/MANUFACTURER MODEL/CATALOG NO. REMARKS	ENV. ZONE SUBNRG	ENRGCN ENVTYP	SFN1 SFN2 SFN3	OP TIME QC BASIS	QRN1 QRN2 QRN3
E51 REACTOR CORE ISOLATION COOLING SYSTEM								
1E51*AOVF004	CONTROL VALVE FISHER CONTROLS	247.491	FCTL,NMCO ES, EA180 QUAL FOR LMTS ONLY	AB-070-3	HLBO HARSH	DISP	70 M A	
1E51*AOVF005	CONTROL VALVE FISHER CONTROLS	247.491	FCTL,NMCO ES, EA180 QUAL FOR LMTS ONLY	AB-070-3	HLBO HARSH	DISP	70 M A	
1E51*AOVF025	CONTROL VALVE FISHER CONTROLS	247.491	FCTL,NMCO DBQ, EA180 QUAL FOR LMTS ONLY	AB-070-3	HLBO HARSH	DISP	70 M A	
1E51*AOVF026	CONTROL VALVE FISHER CONTROLS	247.491	FCTL,NMCO DBQ, EA180 QUAL FOR LMTS ONLY	AB-070-3	HLBO HARSH	DISP	70 M A	
1E51*AOVF054	CONTROL VALVE FISHER CONTROLS	247.491	FCTL,NMCO DBQ, EA180 QUAL FOR LMTS ONLY	AB-070-3	HLBO HARSH	DISP	70 M A	
1E51*AOVF065	AIR OPERATED VALVE ATWOOD & MORRILL	228.218	N/R FOR SAFETY FUNCTION	AB-114-2	HARSH		N/R	
1E51*AOVF066	AIR OPERATED VALVE ATWOOD & MORRILL	228.218	N/R FOR SAFETY FUNCTION	DW-4	HARSH		N/R	
1E51*MOVF010	MOTOR OPERATED VALVE VELAN	228.212	LMTQ SMB-00-10 N/R FOR SAFETY FUNCTION	AB-070-3	HLBO HARSH	RCIC - -	N/R A -	
1E51*MOVF013	MOTOR OPERATED VALVE VELAN	228.212	LMTQ SMB-0-40	AB-095-3	HLBO HARSH	RCIC - -	1 HR A -	
1E51*MOVF019	MOTOR OPERATED VALVE VELAN	228.214	LMTQ SMB-00-10 N/R FOR SAFETY FUNCTION	AB-095-G	HLBO HARSH	RCIC - -	N/R A -	

MARK NO	EQUIPMENT DESCRIPTION VENDOR PANEL/RACK SPEC.NO	MAKE/MANUFACTURER MODEL/CATALOG NO. REMARKS	ENV. ZONE SUBNRG	EHRGCN ENVTYP	SFN1 OP TIME GRN1 SFN2 OC BASIS GRN2 SFN3 GRN3
E51 REACTOR CORE ISOLATION COOLING SYSTEM					
1E51*MOVF022	MOTOR OPERATED VALVE VELAN 228.212	LMTQ SMB-0-10	AB-070-3	HLBO HARSH	RCIC 1 HR - A - -
1E51*MOVF031	MOTOR OPERATED VALVE VELAN 228.212	LMTQ SMB-00-10	AB-070-8	HLBO HARSH	RCIC 1 HR - A - -
1E51*MOVF045	MOTOR OPERATED VALVE VELAN 228.212	LMTQ SMB-0-10	AB-070-3	HLBO HARSH	RCIC 1 HR - A - -
1E51*MOVF046	MOTOR OPERATED VALVE VELAN 228.214	LMTQ SMB-00-5	AB-070-3	HLBO HARSH	RCIC 1 HR - A - -
1E51*MOVF059	MOTOR OPERATED VALVE VELAN 228.212	LMTQ SMB-0-10	AB-070-3	HLBO HARSH	RCIC 1 HR - A - -
1E51*MOVF063	MOTOR OPERATED VALVE VELAN 228.212	LMTQ SB-1-60	CT-9	HLBI HARSH	RCIC 1 HR - A - -
1E51*MOVF064	MOTOR OPERATED VALVE VELAN 228.212	LMTQ SB-1-60	AB-114-2	HLBO HARSH	RCIC 1 HR - A - -
1E51*MOVF068	MOTOR OPERATED VALVE VELAN 228.212	LMTQ SMB-0-15	AB-095-7	HLBO HARSH	RCIC 1 HR - A - -
1E51*MOVF076	MOTOR OPERATED VALV. VELAN 228.214	LMTQ SMB-000-2 N/R FOR SAFETY FUNCTION	CT-G	HLBI HARSH	RCIC N/R - A - -
1E51*MOVF077	MOTOR OPERATED VALVE VELAN 228.214	LMTQ SMB-000-2	AB-095-G	HLBO HARSH	RCIC 1 HR - A - -

MARK NO	EQUIPMENT DESCRIPTION VENDOR PANEL/RACK SPEC.NO	MAKE/MANUFACTURER MODEL/CATALOG NO. REMARKS	ENV. ZONE SUBNRG	EMRGCN ENVTYP	SFN1 OP TIME GRN1 SFN2 OC BASIS GRN2 SFN3 GRN3
E51 REACTOR CORE ISOLATION COOLING SYSTEM					
1E51*MOVF078	MOTOR OPERATED VALVE VELAN 228.212	LMTQ SMB-000-2	AB-095-G	HLBO HARSH	RCIC 1 HR - A - -
1E51*PCVF015	PRESSURE CONTROL VALVE TARGET ROCK 247.501		AB-070-3	HARSH	70 M
1E51*PC003	RCIC SUBSYSTEM FILL PUMP GOULDS PUMPS 237.160	WEST FRAME 213T - TEFC	AB-070-3	HLBO HARSH	RCIC 70 M - A - -
1E51*SOVF004	SOLENOID VALVE FISHER CONTROLS 247.491	ASCO NP8320	AB-070-3	HLBO HARSH	RCIC 70M A A
1E51*SOVF005	SOLENOID VALVE FISHER CONTROLS 247.491	ASCO NP8320	AB-070-3	HLBO HARSH	RCIC 70 M A A
1E51*SOVF025	SOLENOID VALVE FISHER CONTROLS 247.491	ASCO NP8320	AB-070-3	HLBO HARSH	RCIC 70 M A A
1E51*SOVF026	SOLENOID VALVE FISHER CONTROLS 247.491	ASCO NP8320	AB-070-3	HLBO HARSH	RCIC 70 M A A
1E51*SOVF054	SOLENOID VALVE FISHER CONTROLS 247.491	ASCO NP8320	AB-070-3	HLBO HARSH	RCIC 70 M A A
FPW FIRE PROTECTION - WATER					
1FPW*MOV121	MOTOR OPERATED VALVE VELAN 228.212	LMTQ SMB-00-10	AB-141-3	HLBO HARSH	CISL 1 HR - A - -

MARK NO	EQUIPMENT DESCRIPTION VENDOR PANEL/RACK	SPEC.NO	MAKE/MANUFACTURER MODEL/CATALOG NO. REMARKS	ENV. ZONE SUBNRG	ENRGCN ENVTYP	SYN1 SYN2 SYN3	OP TIME OC BASIS	QRN1 QRN2 QRN3
FPW FIRE PROTECTION - WATER								
1FPW*MOV122	MOTOR OPERATED VALVE VELAN	228.212	LMTQ SMB-00-10	AB-141-3	HLBO HARSH	CISL - -	1 HR A	- -
FWS FEEDWATER SYSTEM								
1FWS*MOV7A	MOTOR OPERATED VALVE VELAN	228.212	LMTQ SMB-4-200	AB-114-7	HLBO HARSH	MSI - -	1HR A	- -
1FWS*MOV7B	MOTOR OPERATED VALVE VELAN	228.212	LMTQ SMB-4-200	AB-114-7	HLBO HARSH	MSI - -	1HR A	- -
GTS GAS TREATMENT STANDBY								
1GTS*AOD1A	AIR OPERATED DAMPER QUALITY AIR DESIGN	215.480	ASCO,NAMCO NP8321,EA740	AB-141-5	HLBO HARSH	DISP - -	100D A	- -
1GTS*AOD1B	AIR OPERATED DAMPER QUALITY AIR DESIGN	215.480	ASCO,NAMCO NP8321,EA740	AB-141-6	HLBO HARSH	DISP - -	100D A	- -
1GTS*AOD21A	AIR OPERATED DAMPER QUALITY AIR DESIGN	215.480	ASCO,NAMCO NP8321,EA740	AB-141-5	HLBO HARSH	DISP - -	100D A	- -
1GTS*AOD21B	AIR OPERATED DAMPER QUALITY AIR DESIGN	215.480	ASCO,NAMCO NP8321,EA740	AB-141-6	HLBO HARSH	DISP - -	100D A	- -
1GTS*AOD22A	AIR OPERATED DAMPER QUALITY AIR DESIGN	215.480	ASCO,NAMCO NP8321,EA740	AB-141-5	HLBO HARSH	DISP - -	100D A	- -
1GTS*AOD22B	AIR OPERATED DAMPER QUALITY AIR DESIGN	215.480	ASCO,NAMCO NP8321,EA740	AB-141-6	HLBO HARSH	DISP - -	100D A	- -

MARK NO	EQUIPMENT DESCRIPTION VENDOR PANEL/RACK	SPEC.NO	MAKE/MANUFACTURER MODEL/CATALOG NO. REMARKS	ENV. ZONE SUBHRG	EMRGLN ENVTYP	SFN1 SFN2 SFN3	OP TIME OC BASIS	QRN1 QRN2 QRN3
GTS GAS TREATMENT STANDBY								
1GTS*AOD23A	AIR OPERATED DAMPER QUALITY AIR DESIGN	215.480	ASCO,NAMCO NP8321,EA740	AB-141-5	HLBO HARSH	DISP - -	100D A	- -
1GTS*AOD23B	AIR OPERATED DAMPER QUALITY AIR DESIGN	215.480	ASCO,NAMCO NP8321,EA740	AB-141-6	HLBO HARSH	DISP - -	100D A	- -
1GTS*AOD3A	AIR OPERATED DAMPER QUALITY AIR DESIGN	215.480	ASCO,NAMCO NP8321,EA740	AB-141-5	HLBO HARSH	DISP - -	100D A	- -
1GTS*AOD3B	AIR OPERATED DAMPER QUALITY AIR DESIGN	215.480	ASCO,NAMCO NP8321,EA740	AB-141-6	HLBO HARSH	DISP - -	100D A	- -
1GTS*AOD4A	AIR OPERATED DAMPER QUALITY AIR DESIGN	215.480	ASCO,NAMCO NP8321,EA740	AB-141-5	HLBO HARSH	DISP - -	100D A	- -
1GTS*AOD4B	AIR OPERATED DAMPER QUALITY AIR DESIGN	215.480	ASCO,NAMCO NP8321,EA740	AB-141-6	HLBO HARSH	DISP - -	100D A	- -
1GTS*FE24A	FLOW ELEMENT FLUID COMPONENTS	247.433	FCI FR72-4R	AB-141-5	HARSH		100D	
1GTS*FE24B	FLOW ELEMENT FLUID COMPONENTS	247.433	FCI FR72-4R	AB-141-6	HARSH		100D	
1GTS*FN1A	FAN MOTOR BUFFALO FORGE	215.400	WEST	AB-141-5	HLBO HARSH	SGTS - -	100D A	- -
1GTS*FN1B	FAN MOTOR BUFFALO FORGE	215.400	WEST	AB-141-6	HLBO HARSH	SGTS - -	100D A	- -

MARK NO	EQUIPMENT DESCRIPTION VENDOR PANEL/RACK	SPEC.NO	MAKE/MANUFACTURER MODEL/CATALOG NO. REMARKS	ENV. ZONE SUBNRG	ENVSCN ENVTYP	SFN1 SFN2 SFN3	OP TIME OC BASIS	QRN1 QRN2 QRN3
GTS GAS TREATMENT STANDBY								
1GTS*FN2A	FAN MOTOR BUFFALO FORGE	215.400	WEST TBFC 143T	AB-141-5	HLBO HARSH	SGTS - -	100D A	- -
1GTS*FN2B	FAN MOTOR BUFFALO FORGE	215.400	WEST TBFC 143T	AB-141-6	HLBO HARSH	SGTS - -	100D A	- -
1GTS*FS2A	FLOW SWITCH AMERICAN AIR FILTER	225.220		AB-141-5	HARSH		100D	
1GTS*FS2B	FLOW SWITCH AMERICAN AIR FILTER	225.220		AB-141-6	HARSH		100D	
1GTS*FS24A	FLOW SWITCH NOT YET PURCHASED	247.433	FCI FR72-4R	AB-141-5	HLBO HARSH	SGTS - -	100D A	- -
1GTS*FS24B	FLOW SWITCH NOT YET PURCHASED	247.433	FCI FR72-4R	AB-141-6	HLBO HARSH	SGTS - -	100D A	- -
1GTS*PT15A	PRESSURE TRANSMITTER ROSEMOUNT	247.481	RSMT 1153GB3	AB-141-5	HARSH		100D	
1GTS*PT15B	PRESSURE TRANSMITTER ROSEMOUNT	247.481	RSMT 1153GB3	AB-141-6	HARSH		100D	
1GTS*RTD18A	RTD PYCO	247.461	PYCO 122-4030-04	AB-141-5	HLBO HARSH	SGTS - -	100D A	- -
1GTS*RTD18B	RTD PYCO	247.461	PYCO 122-4030-04	AB-141-6	HLBO HARSH	SGTS - -	100D A	- -

MARK NO	EQUIPMENT DESCRIPTION VENDOR PANEL/RACK	SPEC.NO	MAKE/MANUFACTURER MODEL/CATALOG NO. REMARKS	ENV. ZONE SUBHRG	EMRGCN ENVTYP	SFN1 SFN2 SFN3	OP TIME OC BASIS	QRN1 QRN2 QRN3
GTS GAS TREATMENT STANDBY								
1GTS*RTD27A	RTD PYCO	247.461	PYCO 122-4030-04	AB-141-5	HLBO HARSH	SGTS - -	100D A -	
1GTS*RTD27B	RTD PYCO	247.461	PYCO 122-4030-04	AB-141-6	HLBO HARSH	SGTS - -	100D A -	
1GTS*SOV1A	SOLENOID VALVE QUALITY AIR DESIGN	215.480	ASCO NP8321A5E	AB-141-5	HARSH		100D	
1GTS*SOV1B	SOLENOID VALVE QUALITY AIR DESIGN	215.480	ASCO NP8321A5E	AB-141-6	HARSH		100D	
1GTS*SOV21A	SOLENOID VALVE QUALITY AIR DESIGN	215.480	ASCO NP8321A5E	AB-141-5	HARSH		100D	
1GTS*SOV21B	SOLENOID VALVE QUALITY AIR DESIGN	215.480	ASCO NP8321A5E	AB-141-6	HARSH		100D	
1GTS*SOV22A	SOLENOID VALVE QUALITY AIR DESIGN	215.480	ASCO NP8321A5E	AB-141-5	HARSH		100D	
1GTS*SOV22B	SOLENOID VALVE QUALITY AIR DESIGN	215.480	ASCO NP8321A5E	AB-141-6	HARSH		100D	
1GTS*SOV23A	SOLENOID VALVE QUALITY AIR DESIGN	215.480	ASCO NP8321A5E	AB-141-5	HARSH		100D	
1GTS*SOV23B	SOLENOID VALVE QUALITY AIR DESIGN	215.480	ASCO NP8321A5E	AB-141-6	HARSH		100D	

MARK NO	EQUIPMENT DESCRIPTION VENDOR PANEL/RACK	SPEC.NO	MAKE/MANUFACTURER MODEL/CATALOG NO. REMARKS	ENV. ZONE SUBNRS	ENVRSCN ENVTYP	SFN1 SFN2 SFN3	OP TIME QC BASIS	QRN1 QRN2 QRN3
GTS GAS TREATMENT STANDBY								
1GTS*SOV3A	SOLENOID VALVE QUALITY AIR DESIGN	215.480	ASCO NP8321A5E	AB-141-5	HARSH			100D
1GTS*SOV3B	SOLENOID VALVE QUALITY AIR DESIGN	215.480	ASCO NP8321A5E	AB-141-6	HARSH			100D
1GTS*SOV4A	SOLENOID VALVE QUALITY AIR DESIGN	215.480	ASCO NP8321A5E	AB-141-5	HARSH			100D
1GTS*SOV4B	SOLENOID VALVE QUALITY AIR DESIGN	215.480	ASCO NP8321A5E	AB-141-6	HARSH			100D
1GTS*TS35A	TEMPERATURE SWITCH AMERICAN AIR FILTER	225.220		AB-141-5	HARSH			100D
1GTS*TS35B	TEMPERATURE SWITCH AMERICAN AIR FILTER	225.220		AB-141-6	HARSH			100D
1GTS*TS5A	TEMPERATURE SWITCH AMERICAN AIR FILTER	225.220		AB-141-5	HARSH			100D
1GTS*TS5B	TEMPERATURE SWITCH AMERICAN AIR FILTER	225.220		AB-141-6	HARSH			100D
G33 REACTOR WATER CLEAN-UP								
1G33*MOVF001	MOTOR OPERATED VALVE VELAN	228.212	LMTQ SB-1-25	DH-1	HLBI HARSH	ESA CISL -	1 HR A	- -

MARK NO	EQUIPMENT DESCRIPTION VENDOR PANEL/RACK SPEC.NO	MAKE/MANUFACTURER MODEL/CATALOG NO. REMARKS	ENV. ZONE SUBNRG	ENRGCN ENVTYP	SFN1 SFN2 SFN3	OP TIME QC BASIS	QRN1 QRN2 QRN3
G33 REACTOR WATER CLEAN-UP							
1G33*MOVF004	MOTOR OPERATED VALVE VELAN 228.212	LMTQ SB-1-40	AB-114-2	HLBO HARSH	ESA CISL -	1 HR A	- -
1G33*MOVF028	MOTOR OPERATED VALVE VELAN 228.212	LMTQ SB-00S-10	CT-7	HLBI HARSH	ESA CISL -	1 HR A	- -
1G33*MOVF031	MOTOR OPERATED VALVE VELAN 228.212	LMTQ SNB-0-10 N/R FOR SAFETY FUNCTION	CT-7	HLBI HARSH	ESA - -	N/R A	- -
1G33*MOVF034	MOTOR OPERATED VALVE VELAN 228.212	LMTQ SB-00S-10	AB-114-2	HLBO HARSH	ESA CISL -	1 HR A	- -
1G33*MOVF035	MOTOR OPERATED VALVE VELAN 228.212	LMTQ SNB-0-7.5 N/R FOR SAFETY FUNCTION	AB-114-7	HLBO HARSH	ESA - -	N/R A	- -
1G33*MOVF039	MOTOR OPERATED VALVE VELAN 228.212	LMTQ SB-0-25	AB-114-2	HLBO HARSH	ESA CISL -	1 HR A	- -
1G33*MOVF040	MOTOR OPERATED VALVE VELAN 228.212	LMTQ SB-0-25	CT-7	HLBI HARSH	ESA CISL -	1 HR A	- -
1G33*MOVF042	MOTOR OPERATED VALVE VELAN 228.212	LMTQ SNB-1-25 N/R FOR SAFETY FUNCTION	CT-7	HLBI HARSH	ESA - -	N/R A	- -
1G33*MOVF044	MOTOR OPERATED VALVE VELAN 228.212	LMTQ SNB-0-10 N/R FOR SAFETY FUNCTION	CT-7	HLBI HARSH	ESA - -	N/R A	- -
1G33*MOVF046	MOTOR OPERATED VALVE VELAN 228.212	LMTQ SNB-0-7.5 N/R FOR SAFETY FUNCTION	AB-114-7	HLBO HARSH	ESA - -	N/R A	- -

MARK NO	EQUIPMENT DESCRIPTION VENDOR PANEL/RACK SPEC.NO	MAKE/MANUFACTURER MODEL/CATALOG NO. REMARKS	ENV. ZONE SUBNRG	EHRGCN ENVTYP	SFN1 SFN2 SFN3	OP TIME OC BASIS	QRN1 QRN2 QRN3
G33 REACTOR WATER CLEAN-UP							
1G33*MOVF053	MOTOR OPERATED VALVE VELAN 228.212	LMTQ SB-0-15	CT-7	HLBI HARSH	ESA CISL -	1 HR A	- -
1G33*MOVF054	MOTOR OPERATED VALVE VELAN 228.212	LMTQ SB-0-15	AB-114-2	HLBO HARSH	ESA CISL -	1 HR A	- -
1G33*MOVF100	MOTOR OPERATED VALVE VELAN 228.212	LMTQ SMB-00-10 N/R FOR SAFETY FUNCTION	DW-1	HLBI HARSH	ESA - -	N/R A	- -
1G33*MOVF101	MOTOR OPERATED VALVE VELAN 228.212	LMTQ SMB-00-10 N/R FOR SAFETY FUNCTION	DW-1	HLBI HARSH	ESA - -	N/R A	- -
1G33*MOVF102	MOTOR OPERATED VALVE VELAN 228.212	LMTQ SMB-0-15 N/R FOR SAFETY FUNCTION	DW-1	HLBI HARSH	ESA - -	N/R A	- -
1G33*MOVF104	MOTOR OPERATED VALVE VELAN 228.212	LMTQ SMB-0-10 N/R FOR SAFETY FUNCTION	CT-7	HLBI HARSH	ESA - -	N/R A	- -
1G33*MOVF106	MOTOR OPERATED VALVE VELAN 228.212	LMTQ SMB-000-15 N/R FOR SAFETY FUNCTION	DW-1	HLBI HARSH	ESA - -	N/R A	- -
1G33*MOVF107	MOTOR OPERATED VALVE VELAN 228.212	LMTQ SMB-1-15 N/R FOR SAFETY FUNCTION	CT-7	HLBI HARSH	ESA - -	N/R A	- -
1G33*SOVF041	SOLENOID VALVE TARGET ROCK 247.501	TRCP1 77KK-001	AB-114-6	HLBO HARSH		1 HR	

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HCS HYDROGEN RECOMBINER								
1HCS*PNRS1A	POWER SOURCE PANEL WESTINGHOUSE	224.520	WEST MODEL B	AB-141-1	HLBO HARSH	PANL EMPH -	17 D A	- -
1HCS*PNRS1B	POWER SOURCE PANEL WESTINGHOUSE	224.520	WEST MODEL B	AB-141-1	HLBO HARSH	PANL EMPH -	17 D A	- -
1HCS*RBNR1A	HYDROGEN RECOMBINER WESTINGHOUSE	224.520	WEST MODEL B	CT-G	HLBI HARSH	GCNT - -	17 D A	- -
1HCS*RBNR1B	HYDROGEN RECOMBINER WESTINGHOUSE	224.520	WEST MODEL B	CT-G	HLBI HARSH	GCNT - -	17 D A	- -
HVF VENTILATION - FUEL BUILDING								
1HVF*AOD102	AIR OPERATED DAMPER QUALITY AIR DESIGN	215.480	ASCO,NAMCO NP8321,EA740	FB-148-G	FHA HARSH	DISP - -	1 HR A	- -
1HVF*AOD104	AIR OPERATED DAMPER QUALITY AIR DESIGN	215.480	ASCO,NAMCO NP8321,EA740 REG.G.1.97	FB-148-G	FHA HARSH	DISP - -	1 HR A	- -
1HVF*AOD112	AIR OPERATED DAMPER QUALITY AIR DESIGN	215.480	ASCO,NAMCO NP8321,EA740	FB-148-G	FHA HARSH	DISP - -	1 HR A	- -
1HVF*AOD137	AIR OPERATED DAMPER QUALITY AIR DESIGN	215.480	ASCO,NAMCO NP8321,EA740 REG.G.1.97	FB-148-G	FHA HARSH	DISP - -	1 HR A	- -
1HVF*AOD20A	AIR OPERATED DAMPER QUALITY AIR DESIGN	215.480	ASCO,NAMCO NP8321,EA740	FB-148-1	FHA HARSH	DISP - -	24 HR A	- -

MARK NO	EQUIPMENT DESCRIPTION VENDOR PANEL/RACK	SPEC.NO	MAKE/MANUFACTURER MODEL/CATALOG NO. REMARKS	ENV. ZONE SUBNRG	ENVIRON ENVTYP	SEISMIC SEN1 SEN2 SEN3	OP TIME OC BASIS	QUALIFICATION QRN1 QRN2 QRN3
HVF VENTILATION - FUEL BUILDING								
1HVF*AOD20B	AIR OPERATED DAMPER QUALITY AIR DESIGN	215.480	ASCO,NAMCO NP8321,EA740	FB-148-1	FHA HARSH	DISP - -	24 HR A	- -
1HVF*AOD3A	AIR OPERATED DAMPER QUALITY AIR DESIGN	215.480	ASCO,NAMCO NP8321,EA740	FB-148-1	FHA HARSH	DISP - -	24 HR A	- -
1HVF*AOD3B	AIR OPERATED DAMPER QUALITY AIR DESIGN	215.480	ASCO,NAMCO NP8321,EA740	FB-148-1	FHA HARSH	DISP - -	24 HR A	- -
1HVF*AOD31A	AIR OPERATED DAMPER QUALITY AIR DESIGN	215.480	ASCO,NAMCO NP8321,EA740	FB-148-1	FHA HARSH	DISP - -	24 HR A	- -
1HVF*AOD31B	AIR OPERATED DAMPER QUALITY AIR DESIGN	215.480	ASCO,NAMCO NP8321,EA740	FB-148-1	FHA HARSH	DISP - -	24 HR A	- -
1HVF*AOD33A	AIR OPERATED DAMPER QUALITY AIR DESIGN	215.480	ASCO,NAMCO NP8321,EA740	FB-148-1	FHA HARSH	DISP - -	24 HR A	- -
1HVF*AOD33B	AIR OPERATED DAMPER QUALITY AIR DESIGN	215.480	ASCO,NAMCO NP8321,EA740	FB-148-1	FHA HARSH	DISP - -	24 HR A	- -
1HVF*FE109	FLOW ELEMENT FLUID COMPONENTS	247.433	FCI FR72-4R	FB-148-1	 HARSH		24 HR	
1HVF*FE32A	FLOW ELEMENT FLUID COMPONENTS	247.433	FCI FR72-4R	FB-148-1	 HARSH		24 HR	
1HVF*FE32B	FLOW ELEMENT FLUID COMPONENTS	247.433	FCI FR72-4R	FB-148-1	 HARSH		24 HR	

MARK NO	EQUIPMENT DESCRIPTION VENDOR PANEL/RACK	SPEC.NO	MAKE/MANUFACTURER MODEL/CATALOG NO. REMARKS	ENV. ZONE SUBNRG	EHRGCN ENVTYP	SFN1 SFN2 SFN3	OP TIME QC BASIS	QRN1 QRN2 QRN3
HVF VENTILATION - FUEL BUILDING								
1HVF*FN3A	FAN MOTOR BUFFALO FORGE	215.400	WEST	FB-148-1	FHA HARSH	HVAC - -	24 HR A	- -
1HVF*FN3B	FAN MOTOR BUFFALO FORGE	215.400	WEST	FB-148-1	FHA HARSH	HVAC - -	24 HR A	- -
1HVF*FN7A	FAN MOTOR BUFFALO FORGE	215.400	WEST	FB-148-1	FHA HARSH	HVAC - -	24 HR A	- -
1HVF*FN7B	FAN MOTOR BUFFALO FORGE	215.400	WEST TBFC 143T	FB-148-1	FHA HARSH	HVAC - -	24 HR A	- -
1HVF*FS109	FLOW SWITCH FLUID COMPONENTS	247.433		FB-148-1	FHA HARSH	HVAC - -	24 HR A	- -
1HVF*FS19A	FLOW SWITCH AMERICAN AIR FILTER	225.220	FCI FR72-4R	FB-148-1	HARSH		100D	
1HVF*FS19B	FLOW SWITCH AMERICAN AIR FILTER	225.220		FB-148-1	HARSH		100D	
1HVF*FS32A	FLOW SWITCH FLUID COMPONENTS	247.433	FCI FR72-4R	FB-148-1	FHA HARSH	HVAC - -	24 HR A	- -
1HVF*FS32B	FLOW SWITCH FLUID COMPONENTS	247.433	FCI FR72-4R	FB-148-1	FHA HARSH	HVAC - -	24 HR A	- -
1HVF*PT38A	PRESSURE TRANSMITTER ROSEMOUNT	247.481	RSMT 1153GB3	FB-148-1	FHA HARSH	HVAC - -	24 HR A	- -

MARK NO	EQUIPMENT DESCRIPTION VENDOR PANEL/RACK	SPEC.NO	MAKE/MANUFACTURER MODEL/CATALOG NO. REMARKS	ENV. ZONE SUBNRG	EMRGCN ENVTYP	SFN1 OP TIME QRN1 SFN2 OC BASIS QRN2 SFN3 QRN3
HVF VENTILATION - FUEL BUILDING						
1HVF*PT38B	PRESSURE TRANSMITTER ROSEMOUNT	247.481	RSMT 1153GB3	FB-148-1	FHA HARSH	HVAC 24 HR - A - -
1HVF*RTD1A	RTD PYCO	247.461	PYCO 122-4030-04	FB-148-1	FHA HARSH	HVAC 24 HR - A - -
1HVF*RTD1B	RTD PYCO	247.461	PYCO 122-4030-04	FB-148-1	FHA HARSH	HVAC 24 HR - A - -
1HVF*RTD30A	RTD PYCO	247.461	PYCO 122-4030-04	FB-148-1	FHA HARSH	HVAC 24 HR - A - -
1HVF*RTD30B	RTD PYCO	247.461	PYCO 122-4030-04	FB-148-1	FHA HARSH	HVAC 24 HR - A - -
1HVF*SOV102	SOLENOID VALVE QUALITY AIR DESIGN	215.480	ASCO NP8321A5E	FB-148-G	HARSH	1 HR
1HVF*SOV104	SOLENOID VALVE QUALITY AIR DESIGN	215.480	ASCO NP8321A5E	FB-148-G	HARSH	1 HR
1HVF*SOV112	SOLENOID VALVE QUALITY AIR DESIGN	215.480	ASCO NP8321A5E	FB-148-G	HARSH	1 HR
1HVF*SOV137	SOLENOID VALVE QUALITY AIR DESIGN	215.480	ASCO NP8321A5E	FB-148-G	HARSH	1 HR
1HVF*SOV20A	SOLENOID VALVE QUALITY AIR DESIGN	215.480	ASCO NP8321A5E	FB-148-1	HARSH	24 HR

MARK NO	EQUIPMENT DESCRIPTION VENDOR PANEL/RACK	SPEC.NO	MAKE/MANUFACTURER MODEL/CATALOG NO. REMARKS	ENV. ZONE SUBHRG	ENRGCN ENVTYP	SFN1 SFN2 SFN3	OP TIME QC BASIS	QRN1 QRN2 QRN3
HVF VENTILATION - FUEL BUILDING								
1HVF*SOV20B	SOLENOID VALVE QUALITY AIR DESIGN	215.480	ASCO NP8321A5E	FB-148-1	HARSH		24 HR	
1HVF*SOV3A	SOLENOID VALVE QUALITY AIR DESIGN	215.480	ASCO NP8321A5E	FB-148-1	HARSH		24 HR	
1HVF*SOV3B	SOLENOID VALVE QUALITY AIR DESIGN	215.480	ASCO NP8321A5E	FB-148-1	HARSH		24 HR	
1HVF*SOV31A	SOLENOID VALVE QUALITY AIR DESIGN	215.480	ASCO NP8321A5E	FB-148-1	HARSH		24 HR	
1HVF*SOV31B	SOLENOID VALVE QUALITY AIR DESIGN	215.480	ASCO NP8321A5E	FB-148-1	HARSH		24 HR	
1HVF*SOV33A	SOLENOID VALVE QUALITY AIR DESIGN	215.480	ASCO NP8321A5E	FB-148-1	HARSH		24 HR	
1HVF*SOV33B	SOLENOID VALVE QUALITY AIR DESIGN	215.480	ASCO NP8321A5E	FB-148-1	HARSH		24 HR	
1HVF*TS23A	TEMPERATURE SWITCH AMERICAN AIR FILTER	225.220		FB-148-1	HARSH		100D	
1HVF*TS23B	TEMPERATURE SWITCH AMERICAN AIR FILTER	225.220		FB-148-1	HARSH		100D	
1HVF*TS5A	TEMPERATURE SWITCH AMERICAN AIR FILTER	225.220		FB-148-1	HARSH		100D	

MARK NO	EQUIPMENT DESCRIPTION VENDOR PANEL/RACK	SPEC.NO	MAKE/MANUFACTURER MODEL/CATALOG NO. REMARKS	ENV. ZONE SUBNRG	ENRGCN ENVTYP	SFN1 SFN2 SFN3	OP TIME OC BASIS	QRN1 QRN2 QRN3
HVF VENTILATION - FUEL BUILDING								
1HVF*TS5B	TEMPERATURE SWITCH AMERICAN AIR FILTER	225.220		FB-148-1	HARSH		100D	
1HVF*TT1A	TEMP TRANSMITTER ELECTROMECHANICS	242.444		FB-148-1	HARSH		24 HR	
1HVF*TT1B	TEMP TRANSMITTER ELECTROMECHANICS	242.444		FB-148-1	HARSH		24 HR	
1HVF*TT30A	TEMP TRANSMITTER ELECTROMECHANICS	242.444		FB-148-1	HARSH		24 HR	
1HVF*TT30B	TEMP TRANSMITTER ELECTROMECHANICS	242.444		FB-148-1	HARSH		24 HR	
1HVF*TY1A	TEMP RELAY ELECTROMECHANICS	242.444		FB-148-1	HARSH		24 HR	
1HVF*TY1B	TEMP RELAY ELECTROMECHANICS	242.444		FB-148-1	HARSH		24 HR	
HVN CHILLED WATER - VENTILATION								
1HVN*MOV102	MOTOR OPERATED VALVE VELAN	228.212	LMTQ SNB-00-15	AN-1	NORM HARSH	HVAC - -	1 HR D -	
1HVN*MOV127	MOTOR OPERATED VALVE VELAN	228.212	LMTQ SNB-00-15	AB-141-4	NORM HARSH	HVAC - -	1 HR D -	

MARK NO	EQUIPMENT DESCRIPTION VENDOR PANEL/RACK	SPEC.NO	MAKE/MANUFACTURER MODEL/CATALOG NO. REMARKS	ENV. ZONE SUBHRG	EHRGCN ENVTYP	SFN1 SFN2 SFN3	OP TIME QC BASIS	QRN1 QRN2 QRN3
HVN CHILLED WATER - VENTILATION								
1HVN*MOV128	MOTOR OPERATED VALVE VELAN	228.212	LMTQ SMB-00-15	AB-141-4	NORM HARSH	HVAC - -	1 HR D	- -
1HVN*MOV129	MOTOR OPERATED VALVE VELAN	228.212	LMTQ SMB-00-15	AB-141-4	NORM HARSH	HVAC - -	1 HR D	- -
1HVN*MOV130	MOTOR OPERATED VALVE VELAN	228.212	LMTQ SMB-00-15	AB-141-4	NORM HARSH	HVAC - -	1 HR D	- -
1HVN*MOV22A	MOTOR OPERATED VALVE VELAN	228.212	LMTQ SMB-00-10	CT-G	NORM HARSH	HVAC - -	1 HR D	- -
1HVN*MOV22B	MOTOR OPERATED VALVE VELAN	228.212	LMTQ SMB-00-10	CT-G	NORM HARSH	HVAC - -	1 HR D	- -
1HVN*SOV5A	SOLENOID VALVE FISHER CONTROLS	247.491	ASCO NP8320	CT-3	HLBI HARSH	BCNT - -	1 HR A	- -
1HVN*SOV5B	SOLENOID VALVE FISHER CONTROLS	247.491	ASCO NP8320	CT-3	HLBI HARSH	BCNT - -	1 HR A	- -
HVR VENTILATION - REACTOR PLANT								
1HVR*AOD10A	AIR OPERATED DAMPER QUALITY AIR DESIGN	215.480	ASCO,NAMCO NP8321,EA740	AB-141-2	HLBO HARSH	DISP - -	1 HR A	- -
1HVR*AOD10B	AIR OPERATED DAMPER QUALITY AIR DESIGN	215.480	ASCO,NAMCO NP8321,EA740	AB-141-2	HLBO HARSH	DISP - -	1 HR A	- -

MARK NO	EQUIPMENT DESCRIPTION VENDOR PANEL/RACK	SPEC.NO	MAKE/MANUFACTURER MODEL/CATALOG NO. REMARKS	ENV. ZONE SUBMRG	ENVRGCN ENVTYP	SFN1 SFN2 SFN3	OP TIME QC BASIS	QRN1 QRN2 QRN3
HVR VENTILATION - REACTOR PLANT								
1HVR*AOD142	AIR OPERATED DAMPER QUALITY AIR DESIGN	215.480	ASCO,NMCO NP8321,EA740 REG.G.1.97	AB-141-6	HLBO HARSH	DISP - -	1 HR A	- -
1HVR*AOD143	AIR OPERATED DAMPER QUALITY AIR DESIGN	215.480	ASCO,NMCO NP8321,EA740	AB-141-1	HLBO HARSH	DISP - -	1 HR A	- -
1HVR*AOD161	AIR OPERATED DAMPER QUALITY AIR DESIGN	215.480	ASCO,NMCO NP8321,EA740	AB-141-2	HLBO HARSH	DISP - -	1 HR A	- -
1HVR*AOD162	AIR OPERATED DAMPER QUALITY AIR DESIGN	215.480	ASCO,NMCO NP8321,EA740	AB-141-2	HLBO HARSH	DISP - -	1 HR A	- -
1HVR*AOD164	AIR OPERATED DAMPER QUALITY AIR DESIGN	215.480	ASCO,NMCO NP8321,EA740	AB-141-1	HLBO HARSH	DISP - -	1 HR A	- -
1HVR*AOD18A	AIR OPERATED DAMPER QUALITY AIR DESIGN	215.480	ASCO,NMCO NP8321,EA740	AB-141-2	HLBO HARSH	DISP - -	100D A	- -
1HVR*AOD18B	AIR OPERATED DAMPER QUALITY AIR DESIGN	215.480	ASCO,NMCO NP8321,EA740	AB-141-2	HLBO HARSH	DISP - -	100D A	- -
1HVR*AOD214	AIR OPERATED DAMPER QUALITY AIR DESIGN	215.480	ASCO,NMCO NP8321,EA740 REG.G.1.97	AB-141-6	HLBO HARSH	DISP - -	1 HR A	- -
1HVR*AOD22A	AIR OPERATED DAMPER QUALITY AIR DESIGN	215.480	ASCO,NMCO NP8321,EA740	AB-141-3	HLBO HARSH	DISP - -	100D A	- -
1HVR*AOD22B	AIR OPERATED DAMPER QUALITY AIR DESIGN	215.480	ASCO,NMCO NP8321,EA740	AB-141-3	HLBO HARSH	DISP - -	100D A	- -

MARK NO	EQUIPMENT DESCRIPTION VENDOR PANEL/RACK	SPEC.NO	MAKE/MANUFACTURER MODEL/CATALOG NO. REMARKS	ENV. ZONE SUBMRG	ENVRGCN ENVTYP	SFN1 SFN2 SFN3	OP TIME OC BASIS	QRN1 QRN2 QRN3
HVR VENTILATION - REACTOR PLANT								
1HVR*AOD23A	AIR OPERATED DAMPER QUALITY AIR DESIGN	215.480	ASCO,NMCO NP8321,EA740	AB-141-2	HLBO HARSH	DISP - -	1 HR A	- -
1HVR*AOD23B	AIR OPERATED DAMPER QUALITY AIR DESIGN	215.480	ASCO,NMCO NP8321,EA740	AB-141-2	HLBO HARSH	DISP - -	1 HR A	- -
1HVR*AOD245	AIR OPERATED DAMPER QUALITY AIR DESIGN	215.480	ASCO,NMCO NP8321,EA740	AB-141-2	HLBO HARSH	DISP - -	1 HR A	- -
1HVR*AOD249	AIR OPERATED DAMPER QUALITY AIR DESIGN	215.480	ASCO,NMCO NP8321,EA740	AB-141-2	HLBO HARSH	DISP - -	1 HR A	- -
1HVR*AOD261	AIR OPERATED DAMPER QUALITY AIR DESIGN	215.480	ASCO,NMCO NP8321,EA740 REG.C.1.97	AB-141-6	HLBO HARSH	DISP - -	1 HR A	- -
1HVR*AOD262	AIR OPERATED DAMPER QUALITY AIR DESIGN	215.480	ASCO,NMCO NP8321,EA740 REG.G.1.97	AB-141-6	HARSH		1 HR	
1HVR*AOD263	AIR OPERATED DAMPER QUALITY AIR DESIGN	215.480	ASCO,NMCO NP8321,EA740 REG.G.1.97	AB-141-5	HARSH		1 HR	
1HVR*AOD264	AIR OPERATED DAMPER QUALITY AIR DESIGN	215.480	ASCO,NMCO NP8321,EA740 REG.G.1.97	AB-141-5	HARSH		1 HR	
1HVR*AOD51A	AIR OPERATED DAMPER QUALITY AIR DESIGN	215.480	ASCO,NMCO NP8321,EA740	AB-141-1	HLBO HARSH	DISP - -	100D A	- -
1HVR*AOD51B	AIR OPERATED DAMPER QUALITY AIR DESIGN	215.480	ASCO,NMCO NP8321,EA740	AB-141-2	HLBO HARSH	DISP - -	100D A	- -

MARK NO	EQUIPMENT DESCRIPTION VENDOR PANEL/RACK	SPEC.NO	MAKE/MANUFACTURER MODEL/CATALOG NO. REMARKS	ENV. ZONE SUBMRG	EMRGCN ENVTYP	SFN1 SFN2 SFN3	OP TIME OC BASIS	QRN1 QRN2 QRN3
HVR VENTILATION - REACTOR PLANT								
1HVR*AOD53A	AIR OPERATED DAMPER QUALITY AIR DESIGN	215.480	ASCO,NAMCO NP8321,EA740	AB-170-1	HLBO HARSH	DISP - -	100D A -	
1HVR*AOD53B	AIR OPERATED DAMPER QUALITY AIR DESIGN	215.480	ASCO,NAMCO NP8321,EA740	AB-170-1	HLBO HARSH	DISP - -	100D A -	
1HVR*AOV123	AIR OPERATED VALVE POSI-SEAL	228.241		CT-G	HARSH		1 HR	
1HVR*AOV125	AIR OPERATED VALVE POSI-SEAL	228.241	NAMCO EA740-50100	CT-G	HARSH		1 HR	
1HVR*AOV126	AIR OPERATED VALVE POSI-SEAL	228.241	NAMCO EA740-50100	CT-G	HARSH		1 HR	
1HVR*AOV128	AIR OPERATED VALVE POSI-SEAL	228.241	NAMCO EA740-50100	CT-G	HARSH		1 HR	
1HVR*AOV147	AIR OPERATED VALVE POSI-SEAL	228.241	NAMCO EA740-50100	CT-G	HARSH		1 HR	
1HVR*AOV148	AIR OPERATED VALVE POSI-SEAL	228.241	NAMCO EA740-50100	CT-G	HARSH		1 HR	
1HVR*AOV165	AIR OPERATED VALVE POSI-SEAL	228.241	NAMCO EA740-50100	AB-141-4	HARSH		1 HR	
1HVR*AOV166	AIR OPERATED VALVE POSI-SEAL	228.241	NAMCO EA740-50100	AB-141-3	HARSH		1 HR	

MARK NO	EQUIPMENT DESCRIPTION VENDOR PANEL/RACK	SPEC.NO	MAKE/MANUFACTURER MODEL/CATALOG NO. REMARKS	ENV. ZONE SUBNRG	ENRSCN ENVTYP	SFN1 SFN2 SFN3	OP TIME QC BASIS	QRN1 QRN2 QRN3
HVR VENTILATION - REACTOR PLANT								
1HVR*FE111	FLOW ELEMENT FLUID COMPONENT	247.433	FCI FR72-4R	AB-141-4	HARSH		100D	
1HVR*FE113	FLOW ELEMENT FLUID COMPONENT	247.433	FCI FR72-4R	AB-141-2	HARSH		100D	
1HVR*FE163	FLOW ELEMENT FLUID COMPONENT	247.433	FCI FR72-4R	AB-141-2	HARSH		100D	
1HVR*FE28A	FLOW ELEMENT FLUID COMPONENTS	247.433	FCI FR72-4R	CT-G	HARSH		100D	
1HVR*FE28B	FLOW ELEMENT FLUID COMPONENTS	247.433	FCI FR72-4R	CT-G	HARSH		100D	
1HVR*FE28C	FLOW ELEMENT FLUID COMPONENTS	247.433	FCI FR72-4R	CT-G	HARSH		100D	
1HVR*FE29A	FLOW ELEMENT FLUID COMPONENTS	247.433	FCI FR72-4R	AB-170-1	HARSH		100D	
1HVR*FE29B	FLOW ELEMENT FLUID COMPONENTS	247.433	FCI F272-4R	AB-170-1	HARSH		100D	
1HVR*FE56A	FLOW ELEMENT FLUID COMPONENTS	247.433	FCI FR72-4R	AB-141-1	HARSH		100D	
1HVR*FE56B	FLOW ELEMENT FLUID COMPONENTS	247.433	FCI F272-4R	AB-141-1	HARSH		100D	

MARK NO	EQUIPMENT DESCRIPTION VENDOR PANEL/RACK	SPEC.NO	MAKE/MANUFACTURER MODEL/CATALOG NO. REMARKS	ENV. ZONE SUBNRG	ENRGCN ENVTYP	SFN1 SFN2 SFN3	OP TIME QC BASIS	QRN1 QRN2 QRN3
HVR VENTILATION - REACTOR PLANT								
1HVR*FN11A	FAN MOTOR BUFFALO FORGE	215.400	WEST TBDP 445TS	AB-170-1	HLBO HARSH	HVAC - -	100D A	- -
1HVR*FN11B	FAN MOTOR BUFFALO FORGE	215.400	WEST TBDP 445TS	AB-170-1	HLBO HARSH	HVAC - -	100D A	- -
1HVR*FS29A	FLOW SWITCH FLUID COMPONENTS	247.433	FCI FR72-4R	AB-170-1	HLBO HARSH	ESA - -	100D A	- -
1HVR*FS29B	FLOW SWITCH FLUID COMPONENTS	247.433	FCI FR72-4R	AB-170-1	HLBO HARSH	ESA - -	100D A	- -
1HVR*FS56A	FLOW SWITCH FLUID COMPONENTS	247.433	FCI FR72-4R	AB-141-2	HARSH		100D	
1HVR*FS56B	FLOW SWITCH FLUID COMPONENTS	247.433	FCI FR72-4R	AB-141-2	HARSH		100D	
1HVR*PDT60A	DIFF PRESSURE TRANSMITTER ROSEMOUNT 1JPB*RAK4	247.481	RSMT 1153DB3PA	AB-141-2	HLBO HARSH	HVR - -	100D A	- -
1HVR*PDT60B	DIFF PRESSURE TRANSMITTER ROSEMOUNT 1JPB*RAK3	247.481	RSMT 1153DB3PA	AB-141-2	HLBO HARSH	HVR - -	100D A	- -
1HVR*PDT60C	DIFF PRESSURE TRANSMITTER ROSEMOUNT 1JPB*RAK4	247.481	RSMT 1153DB3PA	AB-141-2	HLBO HARSH	HVR - -	100D A	- -
1HVR*PDT60D	DIFF PRESSURE TRANSMITTER ROSEMOUNT 1JPB*RAK3	247.481	RSMT 1153DB3PA	AB-141-2	HLBO HARSH	HVR - -	100D A	- -

RBS-ENVIRONMENTAL QUALIFICATION DATA MASTER LIST
SORTED BY MARK NO - HARSH ENVIRONMENT ONLY

MARK NO	EQUIPMENT DESCRIPTION / VENDOR / PANEL/RACK	SPEC.NO	MAKE/MANUFACTURER / MODEL/CATALOG NO. / REMARKS	ENV. ZONE / SUBNRG	EMRGCN / ENVTYP	SFN1 / SFN2 / SFN3	OP TIME / OC BASIS	QRN1 / QRN2 / QRN3
HVR VENTILATION - REACTOR PLANT								
1HVR*PDT60E	DIFF PRESSURE TRANSMITTER ROSEMOUNT 1JPB*RAK4	247.481	RSMT 1153DB3PA	AB-141-2	HLBO HARSH	HVR - -	100D A -	
1HVR*PDT60F	DIFF PRESSURE TRANSMITTER ROSEMOUNT 1JPB*RAK3	247.481	RSMT 1153DB3PA	AB-141-2	HLBO HARSH	HVR - -	100D A -	
1HVR*SOV10A	SOLENOID VALVE QUALITY AIR DESIGN	215.480	ASCO NP8321A5E	AB-141-2	HARSH		1 HR	
1HVR*SOV10B	SOLENOID VALVE QUALITY AIR DESIGN	215.480	ASCO NP8321A5E	AB-141-2	HARSH		1 HR	
1HVR*SOV123	SOLENOID VALVE POSI-SEAL	228.241	ASCO HV-206-832-6F	CT-G	HARSH		1 HR	
1HVR*SOV125	SOLENOID VALVE POSI-SEAL	228.241	ASCO HV-206-832-6F	CT-G	HARSH		1 HR	
1HVR*SOV126	SOLENOID VALVE POSI-SEAL	228.241	ASCO HV-206-832-6F	CT-G	HARSH		1 HR	
1HVR*SOV128	SOLENOID VALVE POSI-SEAL	228.241	ASCO HV-206-832-6F	CT-G	HARSH		1 HR	
1HVR*SOV142	SOLENOID VALVE QUALITY AIR DESIGN	215.480	ASCO NP8321A5E	AB-141-6	HARSH		1 HR	
1HVR*SOV143	SOLENOID VALVE QUALITY AIR DESIGN	215.480	ASCO NP8321A5E	AB-141-1	HARSH		1 HR	

MARK NO	EQUIPMENT DESCRIPTION VENDOR PANEL/RACK	SPEC.NO	MAKE/MANUFACTURER MODEL/CATALOG NO. REMARKS	ENV. ZONE SUBNRG	ENRGCN ENVTYP	SFN1 SFN2 SFN3	OP TIME OC BASIS	QRN1 QRN2 QRN3
HVR VENTILATION - REACTOR PLANT								
1HVR*SOV147	SOLENOID VALVE POSI-SEAL	228.241	ASCO HV-206-832-6F	CT-G	HARSH		1 HR	
1HVR*SOV148	SOLENOID VALVE POSI-SEAL	228.241	ASCO HV-206-832-6F	CT-G	HARSH		1 HR	
1HVR*SOV161	SOLENOID VALVE QUALITY AIR DESIGN	215.480	ASCO NP8321A5E	AB-141-2	HARSH		1 HR	
1HVR*SOV162	SOLENOID VALVE QUALITY AIR DESIGN	215.480	ASCO NP8321A5E	AB-141-2	HARSH		1 HR	
1HVR*SOV164	SOLENOID VALVE QUALITY AIR DESIGN	215.480	ASCO NP8321A5E	AB-141-4	HARSH		1 HR	
1HVR*SOV165	SOLENOID VALVE POSI-SEAL	228.241	ASCO HV-206-832-6F	AB-141-4	HARSH		1 HR	
1HVR*SOV166	SOLENOID VALVE POSI-SEAL	228.241	ASCO HV-206-832-6F	AB-141-3	HARSH		1 HR	
1HVR*SOV18A	SOLENOID VALVE QUALITY AIR DESIGN	215.480	ASCO NP8321A5E	AB-141-2	HARSH		100D	
1HVR*SOV18B	SOLENOID VALVE QUALITY AIR DESIGN	215.480	ASCO NP832A15E	AB-141-2	HARSH		100D	
1HVR*SOV214	SOLENOID VALVE QUALITY AIR DESIGN	215.480	ASCO NP8321A5E	AB-141-6	HARSH		1 HR	

MARK NO	EQUIPMENT DESCRIPTION VENDOR PANEL/RACK	SPEC.NO	MAKE/MANUFACTURER MODEL/CATALOG NO. REMARKS	ENV. ZONE SUBMRG	ENVSCN ENVTYP	SFN1 SFN2 SFN3	OP TIME OC BASIS	QRN1 QRN2 QRN3
HVR VENTILATION - REACTOR PLANT								
1HVR*SOV22A	SOLENOID VALVE QUALITY AIR DESIGN	215.480	ASCO NP8321A5E	AB-141-3	HARSH		100D	
1HVR*SOV22B	SOLENOID VALVE QUALITY AIR DESIGN	215.480	ASCO NP8321A5E	AB-141-3	HARSH		100D	
1HVR*SOV23A	SOLENOID VALVE QUALITY AIR DESIGN	215.480	ASCO NP8321A5E	AB-141-2	HARSH		1 HR	
1HVR*SOV23B	SOLENOID VALVE QUALITY AIR DESIGN	215.480	ASCO NP8321A5E	AB-141-2	HARSH		1 HR	
1HVR*SOV245	SOLENOID VALVE QUALITY AIR DESIGN	215.480	ASCO NP8321A5E	AB-141-2	HARSH		1 HR	
1HVR*SOV249	SOLENOID VALVE QUALITY AIR DESIGN	215.480	ASCO NP8321A5E	AB-141-2	HARSH		1 HR	
1HVR*SOV261	SOLENOID VALVE QUALITY AIR DESIGN	215.480	ASCO NP8321A5E	AB-141-6	HARSH		1 HR	
1HVR*SOV262	SOLENOID VALVE QUALITY AIR DESIGN	215.480	ASCO NP8321A5E	AB-141-6	HARSH		1 HR	
1HVR*SOV263	SOLENOID VALVE QUALITY AIR DESIGN	215.480	ASCO NP8321A5E	AB-141-5	HARSH		1 HR	
1HVR*SOV264	SOLENOID VALVE QUALITY AIR DESIGN	215.480	ASCO NP8321A5E	AB-141-5	HARSH		1 HR	

MARK NO	EQUIPMENT DESCRIPTION VENDOR PANEL/RACK	SPEC.NO	MAKE/MANUFACTURER MODEL/CATALOG NO. REMARKS	ENV. ZONE SUBNRG	EMRGCN ENVTYP	SFN1 SFN2 SFN3	OP TIME OC BASIS	QRN1 QRN2 QRN3
HVR VENTILATION - REACTOR PLANT								
1HVR*SOV51A	SOLENOID VALVE QUALITY AIR DESIGN	215.480	ASCO NP8321A5E	CT-G	HARSH		100D	
1HVR*SOV51B	SOLENOID VALVE QUALITY AIR DESIGN	215.480	ASCO NP8321A5E	CT-G	HARSH		100D	
1HVR*SOV53A	SOLENOID VALVE QUALITY AIR DESIGN	215.480	ASCO NP8321A5E	AB-170-1	HARSH		100D	
1HVR*SOV53B	SOLENOID VALVE QUALITY AIR DESIGN	215.480	ASCO NP8321A5E	AB-170-1	HARSH		100D	
1HVR*UC1A	UNIT COOLER MOTOR BUFFALO FORGE	215.252	WEST 445TCZ	CT-G	HLBI HARSH	HVAC - -	100D A	- -
1HVR*UC1B	UNIT COOLER MOTOR BUFFALO FORGE	215.252	WEST 445TCZ	CT-G	HLBI HARSH	HVAC - -	100D A	
1HVR*UC10	UNIT COOLER MOTOR BUFFALO FORGE	215.252	WEST 213TCZ	AB-114-3	HLBO HARSH	HVAC - -	100D A	- -
1HVR*UC11A	UNIT COOLER MOTOR BUFFALO FORGE	215.252	WEST 405TCZ	AB-141-4	HLBO HARSH	HVAC - -	100D A	- -
1HVR*UC11B	UNIT COOLER MOTOR BUFFALO FORGE	215.252	WEST 405TCZ	AB-141-4	HLBO HARSH	HVAC - -	100D A	- -
1HVR*UC2	UNIT COOLER MOTOR BUFFALO FORGE	215.252	WEST 213TCZ NO SAFETY FUNCTION	AB-095-G	HLBO HARSH	HVAC - -	N/R A	- -

MARK NO	EQUIPMENT DESCRIPTION VENDOR PANEL/RACK SPEC.NO	MAKE/MANUFACTURER MODEL/CATALOG NO. REMARKS	ENV. ZONE SUBZRG	ENRGCN ENVTYP	SFN1 OP TIME QRN1 SFN2 OC BASIS QRN2 SFN3 QRN3
HVR VENTILATION - REACTOR PLANT					
1HVR*UC3	UNIT COOLER MOTOR BUFFALO FORGE 215.252	WEST 215TCZ	AB-095-8	HLBO HARSH	HVAC 100D - A - -
1HVR*UC4	UNIT COOLER MOTOR BUFFALO FORGE 215.252	WEST 215TCZ	AB-095-7	HLBO HARSH	HVAC 100D - A - -
1HVR*UC5	UNIT COOLER MOTOR BUFFALO FORGE 215.252	WEST 326TCZ	AB-114-5	HLBO HARSH	HVAC 100D - A - -
1HVR*UC6	UNIT COOLER MOTOR BUFFALO FORGE 215.252	WEST 326TCZ	AB-114-8	HLBO HARSH	HVAC 100D - A - -
1HVR*UC7	UNIT COOLER MOTOR BUFFALO FORGE 215.252	WEST 256TCZ	AB-114-1	HLBO HARSH	HVAC 100D - A - -
1HVR*UC8	UNIT COOLER MOTOR BUFFALO FORGE 215.252	WEST 256TCZ	AB-114-5	HLBO HARSH	HVAC 1 HR - A - -
1HVR*UC9	UNIT COOLER MOTOR BUFFALO FORGE 215.252	WEST 324TCZ	AB-114-8	HLBO HARSH	HVAC 100D - A - -
IAS INSTRUMENT AIR					
1IAS*MOV106	MOTOR OPERATED VALVE VELAN 228.212	LMTQ SMB-000-5	AB-114-6	HLBO HARSH	CISL 1HR LCS A - -
1IAS*MOV107	MOTOR OPERATED VALVE VELAN 228.212	LMTQ SMB-000-5	AB-114-6	HLBO HARSH	CISL 1HR LCS A - -

MARK NO	EQUIPMENT DESCRIPTION VENDOR PANEL/RACK SPEC.NO	MAKE/MANUFACTURER MODEL/CATALOG NO. REMARKS	ENV. ZONE SUBHRG	EHRGCN ENVTYP	SFN1 SFN2 SFN3	OP TIME OC BASIS	QRN1 QRN2 QRN3
IAS INSTRUMENT AIR							
1IAS*PT39A	PRESSURE TRANSMITTER ROSEMOUNT 247.481	RSMT 1153GB7 QA CAT II ALARM ONLY	AB-141-5	HLBO HARSH	N/A - -	1HR B	
1IAS*PT39B	PRESSURE TRANSMITTER ROSEMOUNT 247.481	RSMT 1153GB7 QA CAT II ALARM ONLY	AB-141-6	HLBO HARSH	N/A - -	1HR B	
1IAS*PT43A	PRESSURE TRANSMITTER ROSEMOUNT 247.481	RSMT 1153GB7 QA CAT II ALARM ONLY	FB-148-G	FHA HARSH	N/A - -	1HR B	
1IAS*PT43B	PRESSURE TRANSMITTER ROSEMOUNT 247.481	RSMT 1153GB7 QA CAT II ALARM ONLY	FB-148-G	FHA HARSH	N/A - -	1HR B	
1IAS*PT48A	PRESSURE TRANSMITTER ROSEMOUNT 247.481	RSMT 1153GB7	AB-141-5	HLBO HARSH	BCNT - -	1HR A -	
1IAS*PT48B	PRESSURE TRANSMITTER ROSEMOUNT 247.481	RSMT 1153GB7	AB-141-6	HLBO HARSH	BCNT - -	1HR A -	
1IAS*PT49A	PRESSURE TRANSMITTER ROSEMOUNT 247.481	RSMT 1153GB7	FB-143-G	FHA HARSH	BCNT - -	1HR A -	
1IAS*PT49B	PRESSURE TRANSMITTER ROSEMOUNT 247.481	RSMT 1153GB7	FB-148-G	FHA HARSH	BCNT - -	1HR A -	
1IAS*SOV41A	SOLENOID VALVE TARGET ROCK 247.501	TRCP 77HK-005	AB-141-1	HLBO HARSH	BCNT - -	1HR A -	
1IAS*SOV41B	SOLENOID VALVE TARGET ROCK 247.501	TRCP 77HK-005	AB-141-1	HLBO HARSH	BCNT - -	1HR A -	

MARK NO	EQUIPMENT DESCRIPTION VENDOR PANEL/RACK	SPEC.NO	MAKE/MANUFACTURER MODEL/CATALOG NO. REMARKS	ENV. ZONE SUBHRG	ENVRGN ENVTYP	SFN1 SFN2 SFN3	OP TIME QC BASIS	QRN1 QRN2 QRN3
IAS INSTRUMENT AIR								
1IAS*SOV45A	SOLENOID VALVE TARGET ROCK	247.501	TRCP 77KK-005	FB-095-1	FHA HARSH	BCNT - -	1HR A	- -
1IAS*SOV45B	SOLENOID VALVE TARGET ROCK	247.501	TRCP 77KK-005	FB-095-1	FHA HARSH	BCNT - -	1HR A	- -
ICS REACTOR CORE ISOLATION COOLING								
1ICS*SOV102	SOLENOID VALVE ATWOOD & MORRILL	228.218	N/R FOR SAFETY FUNCTION	AB-114-2	HARSH		N/R	
1ICS*SOV103	SOLENOID VALVE ATWOOD & MORRILL	228.218	N/R FOR SAFETY FUNCTION	DW-4	HARSH		N/R	
ISC			*					
1ISC*PT101	PRESSURE TRANSMITTER ROSEMOUNT	247.481	RSMT 1153GB9PA N/R FOR POST ACCIDENT	CT-G	HARSH		N/R	
JPB SUPERSTRUCTURE - PRIMARY AUXILIARY BUILDING								
1JPB*RAK1	INSTRUMENT RACK MERCURY	247.411	MERC NONE,UNIQUE	AB-095-6	HLBO HARSH		100D	
1JPB*RAK2	INSTRUMENT RACK MERCURY	247.411	MERC NONE,UNIQUE	AB-095-6	HLBO HARSH	RACK - -	100D A	- -
1JPB*RAK3	INSTRUMENT RACK MERCURY	247.411	MERC NONE,UNIQUE	AB-141-2	HLBO HARSH	RACK - -	100D A	- -

MARK NO	EQUIPMENT DESCRIPTION VENDOR PANEL/RACK	SPEC.NO	MAKE/MANUFACTURER MODEL/CATALOG NO. REMARKS	ENV. ZONE SUBMRG	ENRGCN ENVTYP	SFN1 OP TIME QRN1 SFN2 OC BASIS QRN2 SFN3 QRN3
JPB SUPERSTRUCTURE - PRIMARY AUXILIARY BUILDING						
1JPB*RAK4	INSTRUMENT RACK MERCURY	247.411	HERC NONE,UNIQUE	AB-141-1	HLBO HARSH	RACK 100D - A - -
JRB SUPERSTRUCTURE - REACTOR BUILDING						
1JRB*DRA1(JBE)	DOOR ACCESS GRAVER	219.711		CT-G	HARSH	100D
1JRB*DRA1(JBF)	DOOR ACCESS GRAVER	219.711		CT-G	HARSH	100D
1JRB*DRA2(JBE)	DOOR ACCESS GRAVER	219.711		CT-G	HARSH	100D
1JRB*DRA2(JBF)	DOOR ACCESS GRAVER	219.711		CT-G	HARSH	100D
1JRB*SOV15	SOLENOID VALVE GRAVER	219.711		AB-170-1	HARSH	1HR
1JRB*SOV25	SOLENOID VALVE GRAVER	219.711		FB-113-G	HARSH	1HR
1JRB*ZS16	POSITION SWITCH GRAVER	219.711		AB-170-1	HARSH	1HR
1JRB*ZS17	POSITION SWITCH GRAVER	219.711		AB-170-1	HARSH	1HR

RBS-ENVIRONMENTAL QUALIFICATION DATA MASTER LIST
SORTED BY MARK NO - HARSH ENVIRONMENT ONLY

MARK NO	EQUIPMENT DESCRIPTION / VENDOR / PANEL/RACK	SPEC.NO	MAKE/MANUFACTURER / MODEL/CATALOG NO. / REMARKS	ENV. ZONE / SUBNRG	EMRGCN / ENVTYP	SFN1 / SFN2 / SFN3	OP TIME / OC BASIS	QRN1 / QRN2 / QRN3
JRB SUPERSTRUCTURE - REACTOR BUILDING								
1JRB*ZS26	POSITION SWITCH GRAVER	219.711		FB-113-G	HARSH		1HR	
1JRB*ZS27	POSITION SWITCH GRAVER	219.711		FB-113-G	HARSH		1HR	
LDS LEAK DETECTION SYSTEM								
1LDS*RTD1A	RTD PYCO	211.161	PYCO 122-3046-04	AB-095-10	HARSH		1 HR	
1LDS*RTD1B	RTD PYCO	211.161	PYCO 122-3046-04	AB-095-10	HARSH		1 HR	
1LDS*RTD1C	RTD PYCO	211.161	PYCO 122-3046-04	AB-095-10	HARSH		1 HR	
1LDS*RTD1D	RTD PYCO	211.161	PYCO 122-3046-04	AB-095-10	HARSH		1 HR	
1LDS*RTD2A	RTD PYCO	211.161	PYCO 122-3046-04	AB-095-10	HARSH		1 HR	
1LDS*RTD2B	RTD PYCO	211.161	PYCO 122-3046-04	AB-095-10	HARSH		1 HR	
1LDS*RTD2C	RTD PYCO	211.161	PYCO 122-3046-04	AB-095-10	HARSH		1 HR	

RBS-ENVIRONMENTAL QUALIFICATION DATA MASTER LIST
SORTED BY MARK NO - HARSH ENVIRONMENT ONLY

MARK NO	EQUIPMENT DESCRIPTION VENDOR PANEL/RACK	SPEC.NO	MAKE/MANUFACTURER MODEL/CATALOG NO. REMARKS	ENV. ZONE SUBNRG	EMRGCN ENVTYP	SFN1 SFN2 SFN3	OP TIME OC BASIS	QRN1 QRN2 QRN3
LDS LEAK DETECTION SYSTEM								
1LDS*RTD2D	RTD PYCO	211.161	PYCO 122-3046-04	AB-095-10	HARSH		1 HR	
1LDS*RTD3A	RTD PYCO	211.161	PYCO 122-3046-04	AB-114-2	HARSH		1 HR	
1LDS*RTD3B	RTD PYCO	211.161	PYCO 122-3046-04	AB-114-2	HARSH		1 HR	
1LDS*RTD3C	RTD PYCO	211.161	PYCO 122-3046-04	AB-114-2	HARSH		1 HR	
1LDS*RTD3D	RTD PYCO	211.161	PYCO 122-3046-04	AB-114-2	HARSH		1 HR	
1LDS*RTD4A	RTD PYCO	211.161	PYCO 122-3046-04	AB-114-7	HARSH		1 HR	
1LDS*RTD4B	RTD PYCO	211.161	PYCO 122-3046-04	AB-114-7	HARSH		1 HR	
1LDS*RTD4C	RTD PYCO	211.161	PYC9 122-3046-04	AB-114-7	HARSH		1HR	
1LDS*RTD4D	RTD PYCO	211.161	PYCO 122-3046-04	AB-114-7	HARSH		1 HR	

MARK NO	EQUIPMENT DESCRIPTION VENDOR PANEL/RACK	SPEC.NO	MAKE/MANUFACTURER MODEL/CATALOG NO. REMARKS	ENV. ZONE SUBHRG	EHRGCN ENVTYP	SFN1 SFN2 SFN3	OP TIME QC BASIS	QRN1 QRN2 QRN3

LSV LEAKAGE CONTROL - PENETRATION VALVE

1LSV*C3A	COMPRESSOR SUPERPRESSURE,INC.	221.512		AB-141-2	HARSH		100 D	
1LSV*C3B	COMPRESSOR SUPERPRESSURE,INC.	221.512		AB-141-3	HARSH		100 D	
1LSV*FE20A	FLOW ELEMENT FLUID COMPONENTS	247.433	FCI FR72-4R	AB-141-2	HARSH		30 D	
1LSV*FE20B	FLOW ELEMENT FLUID COMPONENTS	247.433	FCI FR72-4R	AB-141-2	HARSH		30 D	
1LSV*FS20A	FLOW SWITCH FLUID COMPONENTS	247.433	FCI FR72-4R	AB-141-2	HLBO HARSH	LCS - -	30 D A	- -
1LSV*HOV11A	MOTOR OPERATED VALVE VELAN	228.214	LMTQ SMC-04-2	AB-141-2	HLBO HARSH	LCS BCNT -	30 D A	- -
1LSV*HOV11B	MOTOR OPERATED VALVE VELAN	228.214	LMTQ SMC-04-2	AB-141-2	HLBO HARSH	LCS BCNT -	30 D A	- -
1LSV*HOV13A	MOTOR OPERATED VALVE VELAN	228.214	LMTQ SMC-04-2	AB-141-2	HLBO HARSH	LCS BCNT -	30D A	- -
1LSV*HOV13B	MOTOR OPERATED VALVE VELAN	228.214	LMTQ SMC-04-2	AB-141-2	HLBO HARSH	LCS BCNT -	30 D A	- -
1LSV*HOV15A	MOTOR OPERATED VALVE VELAN	228.214	LMTQ SMC-04-3	AB-095-10	HLBO HARSH	LCS BCNT -	30 D A	- -

MARK NO	EQUIPMENT DESCRIPTION VENDOR PANEL/RACK SPEC.NO	MAKE/MANUFACTURER MODEL/CATALOG NO. REMARKS	ENV. ZONE SUBMRG	ENRGCN ENVTYP	SFN1 OP TIME QRN1 SFN2 OC BASIS QRN2 SFN3 QRN3
LSV LEAKAGE CONTROL - PENETRATION VALVE					
1LSV*MOV15B	MOTOR OPERATED VALVE VELAN 228.214	LMTQ SMC-04-3	AB-141-2	HLBO HARSH	LCS 30 D BCNT A - -
1LSV*MOV16A	MOTOR OPERATED VALVE VELAN 228.214	LMTQ SMC-04-3	AB-095-10	HLBO HARSH	LCS 30 D BCNT A - -
1LSV*MOV16B	MOTOR OPERATED VALVE VELAN 228.214	LMTQ SMC-04-3	AB-141-2	HLBO HARSH	LCS 30 D BCNT A - -
1LSV*MOV19A	MOTOR OPERATED VALVE VELAN 228.214	LMTQ SMB-000-2	AB-141-2	HLBO HARSH	LCS 30 D BCNT A - -
1LSV*MOV19B	MOTOR OPERATED VALVE VELAN 228.214	LMTQ SMB-000-2	AB-141-2	HLBO HARSH	LCS 30 D BCNT A - -
1LSV*M2A	MOTOR TO DRIVE COMPRESSOR SUPERPRESSURE INC. 1LSV*SKD9A 221.512	RELI 254T	AB-141-2	HLBO HARSH	LCS 100D - A - -
1LSV*M2B	MOTOR TO DRIVE COMPRESSOR SUPERPRESSURE INC. 1LSV*SKD9B 221.512	RELI 254T	AB-141-3	HLBO HARSH	LCS 100D - A - -
1LSV*PT10A	PRESSURE TRANSMITTER ROSEMOUNT 247.481	RSMT 1153GB7	AB-141-2	HLBO HARSH	LCS 30 D - A - -
1LSV*PT10B	PRESSURE TRANSMITTER ROSEMOUNT 247.481	RSMT 1153GB7	AB-141-2	HLBO HARSH	LCS 30 D - A - -
1LSV*PT12A	PRESSURE TRANSMITTER ROSEMOUNT 247.481	RSMT 1153GB7	AB-141-2	HLBO HARSH	LCS 30 D - A - -

MARK NO	EQUIPMENT DESCRIPTION VENDOR PANEL/RACK SPEC.NO	MAKE/MANUFACTURER MODEL/CATALOG NO. REMARKS	ENV. ZONE SUBNRG	ENVSCN ENVTYP	SFN1 OP TIME QRN1 SFN2 OC BASIS QRN2 SFN3 QRN3
LSV LEAKAGE CONTROL - PENETRATION VALVE					
1LSV*PT12B	PRESSURE TRANSMITTER ROSEMOUNT 247.481	RSMT 1153GB7	AB-141-2	HLBO HARSH	LCS 30 D - A - -
1LSV*PT14A	PRESSURE TRANSMITTER ROSEMOUNT 247.481	RSMT 1153GB7	AB-114-6	HLBO HARSH	LCS 30 D - A - -
1LSV*PT14B	PRESSURE TRANSMITTER ROSEMOUNT 247.481	RSMT 1153GP7	AB-141-2	HLBO HARSH	LCS 30 D - A - -
1LSV*PT17A	PRESSURE TRANSMITTER ROSEMOUNT 247.481	RSMT 1153GB7	AB-095-2	HLBO HARSH	LCS 30 D - A - -
1LSV*PT17B	PRESSURE TRANSMITTER ROSEMOUNT 247.481	RSMT 1153GB7	AB-141-2	HLBO HARSH	LCS 30 D - A - -
1LSV*PT21A	PRESSURE TRANSMITTER ROSEMOUNT 247.481	RSMT 1153GB7	AB-114-6	HLBO HARSH	LCS 30 D - A - -
1LSV*PT21B	PRESSURE TRANSMITTER ROSEMOUNT 247.481	RSMT 1153GB7	AB-114-5	HLBO HARSH	LCS 30 D - A - -
1LSV*PT22A	PRESSURE TRANSMITTER ROSEMOUNT 247.481	RSMT 1153GB7	AB-141-2	HLBO HARSH	LCS 30 D - A - -
1LSV*PT22B	PRESSURE TRANSMITTER ROSEMOUNT 247.481	RSMT 1153GB7	AB-114-3	HLBO HARSH	LCS 30 D - A - -
1LSV*PT26A	PRESSURE TRANSMITTER ROSEMOUNT 247.481	RSMT 1153GB7PA	AB-141-2	HARSH	30 D

MARK NO	EQUIPMENT DESCRIPTION VENDOR PANEL/RACK	SPEC.NO	MAKE/MANUFACTURER MODEL/CATALOG NO. REMARKS	ENV. ZONE SUBNRG	ENRGCN ENVTYP	SFN1 SFN2 SFN3	OP TIME OC BASIS	QRN1 QRN2 QRN3
LSV LEAKAGE CONTROL - PENETRATION VALVE								
1LSV*PT26B	PRESSURE TRANSMITTER ROSEMOUNT	247.481	RSMT 1153GB7PA	AB-114-3	HARSH		30 D	
1LSV*PT9A	PRESSURE TRANSMITTER ROSEMOUNT	247.481	RSMT 1153GB7 REG.G.1.97	AB-141-2	HLBO HARSH	LCS - -	30 D A -	
1LSV*PT9B	PRESSURE TRANSMITTER ROSEMOUNT	247.481	RSMT 1153GP7 REG.G.1.97	AB-114-3	HLBO HARSH	LCS - -	30 D A -	
1LSV*PV10A	CONTROL VALVE FISHER CONTROLS	247.497	FCTL,BORG EC	AB-141-2	HLBO HARSH	LCS - -	30 D A -	
1LSV*PV10B	CONTROL VALVE FISHER CONTROLS	247.497	FCTL,BORG EC	AB-141-3	HLBO HARSH	LCS - -	30 D A -	
1LSV*SOVX26A	SOLENOID VALVE TARGET ROCK	247.501	TRCP 1115005-1	AB-141-2	HARSH		30D	
1LSV*SOVX26B	SOLENOID VALVE TARGET ROCK	247.501	TRCP 1115005-1	AB-141-3	HARSH		30D	
1LSV*SOVY26A	SOLENOID VALVE TARGET ROCK	247.501	TRCP 115005-1	AB-141-3	HARSH		30D	
1LSV*SOVY26B	SOLENOID VALVE TARGET ROCK	247.501	TRCP 1115005-1	AB-141-3	HARSH		30D	

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MARK NO	EQUIPMENT DESCRIPTION VENDOR PANEL/RACK	SPEC.NO	MAKE/MANUFACTURER MODEL/CATALOG NO. REMARKS	ENV. ZONE SUBNRG	ENRGCN ENVTYP	SFN' SFI SFN3	OP TIME OC BASIS	QRN1 QRN2 QRN3
NGP CABLE								
1NGP01	600 VOLT CONTROL CABLE OKONITE	241.240	OKON NONE	VARIOUS	N/A HARSH	N/A	100D A	-
1NGP02	600 VOLT CONTROL CABLE OKONITE	241.240	OKON NONE	VARIOUS	N/A HARSH	N/A	100D A	-
1NGP03	600 VOLT CONTROL CABLE OKONITE	241.240	OKON NONE	VARIOUS	N/A HARSH	N/A	100D A	-
1NGP04	600 VOLT CONTROL CABLE OKONITE	241.240	OKON NONE	VARIOUS	N/A HARSH	N/A	100D A	-
1NGP06	600 VOLT CONTROL CABLE OKONITE	241.240	OKON NONE	VARIOUS	N/A HARSH	N/A	100D A	-
1NGP11	600 VOLT CONTROL CABLE OKONITE	241.240	NONE	VARIOUS	N/A HARSH	N/A	100D A	-
1NGP12	600 VOLT CONTROL CABLE OKONITE	241.240	NONE	VARIOUS	N/A HARSH	N/A	100D A	-
1NGP13	600 VOLT CONTROL CABLE OKONITE	241.240	OKON1 NONE	VARIOUS	N/A HARSH	N/A	100D A	-
1NGP14	600 VOLT CONTROL CABLE OKONITE	241.240	OKON1 NONE	VARIOUS	N/A HARSH	N/A	100D A	-
1NGP15	600 VOLT CONTROL CABLE OKONITE	241.240	NONE	VARIOUS	N/A HARSH	N/A	100D A	-

MARK NO	EQUIPMENT DESCRIPTION VENDOR PANEL/RACK	SPEC.NO	MAKE/MANUFACTURER MODEL/CATALOG NO. REMARKS	ENV. ZONE SUBNRG	ENRGCN ENVTYP	SFN1 SFN2 SFN3	OP TIME OC BASIS	QRN1 QRN2 QRN3
NGP CABLE								
1NGP16	600 VOLT CONTROL CABLE OKONITE	241.240	NONE	VARIOUS	N/A HARSH	N/A	100D A	-
1NGP22	600 VOLT CONTROL CABLE OKONITE	241.240	OKON NONE	VARIOUS	N/A HARSH	N/A	100D A	-
1NGP24	600 VOLT CONTROL CABLE OKONITE	241.240	OKON NONE	VARIOUS	N/A HARSH	N/A	100D A	-
1NGP26	600 VOLT CONTROL CABLE OKONITE	241.240	OKON NONE	VARIOUS	N/A HARSH	N/A	100D A	-
1NGP27	600 VOLT CONTROL CABLE OKONITE	241.240	OKON NONE	VARIOUS	N/A HARSH	N/A	100D A	-
1NGP28	600 VOLT CONTROL CABLE OKONITE	241.240	OKON NONE	VARIOUS	N/A HARSH	N/A	100D A	-
1NGP30	600 VOLT CONTROL CABLE OKONITE	241.240	NONE	VARIOUS	N/A HARSH	N/A	100D A	-
1NGP32	600 VOLT CONTROL CABLE OKONITE	241.240	OKON NONE	VARIOUS	N/A HARSH	N/A	100D A	-
1NGP33	600 VOLT CONTROL CABLE OKONITE	241.240	OKON NONE	VARIOUS	N/A HARSH	N/A	100D A	-
1NGP36	600 VOLT CONTROL CABLE OKONITE	241.240		VARIOUS	HARSH		100D	

MARK NO	EQUIPMENT DESCRIPTION VENDOR PANEL/RACK SPEC.NO	MAKE/MANUFACTURER MODEL/CATALOG NO. REMARKS	ENV. ZONE SUBMRG	ENRGCN ENVTYP	SFN1 SFN2 SFN3	OP TIME OC BASIS	QRN1 QRN2 QRN3
NGP CABLE							
1NGP37	600 VOLT CONTROL CABLE OKONITE 241.240		VARIOUS	HARSH		100D	
1NGP42	600 VOLT CONTROL CABLE OKONITE 241.234		VARIOUS	HARSH		100D	
1NGP50	600 VOLT POWER CABLE OKONITE 241.234	OKON NONE	VARIOUS	N/A HARSH	N/A	100D A -	
1NGP51	600 VOLT POWER CABLE OKONITE 241.234	OKON NONE	VARIOUS	N/A HARSH	N/A	100D A -	
1NGP52	600 VOLT POWER CABLE OKONITE 241.234	OKON NONE	VARIOUS	N/A HARSH	N/A	100D A -	
1NGP53	600 VOLT POWER CABLE OKONITE 241.234	OKON NONE	VARIOUS	N/A HARSH	N/A	100D A -	
1NGP54	600 VOLT POWER CABLE OKONITE 241.234	OKON NONE	VARIOUS	N/A HARSH	N/A	100D A -	
1NGP55	600 VOLT POWER CABLE OKONITE 241.234	OKON NONE	VARIOUS	N/A HARSH	N/A	100D A -	
1NGP56	600 VOLT POWER CABLE OKONITE 241.234	OKON NONE	VARIOUS	N/A HARSH	N/A	100D A -	
1NGP57	600 VOLT POWER CABLE OKONITE 241.234	OKON NONE	VARIOUS	N/A HARSH	N/A	100D A -	

MARK NO	EQUIPMENT DESCRIPTION VENDOR PANEL/RACK	SPEC.NO	MAKE/MANUFACTURER MODEL/CATALOG NO. REMARKS	ENV. ZONE SUBNRG	EMRGCN ENVTYP	SFN1 SFN2 SFN3	OP TIME OC BASIS	QRN1 QRN2 QRN3
NGP CABLE								
1NGP58	600 VOLT POWER CABLE OKONITE	241.234	OKON NONE	VARIOUS	N/A HARSH	N/A	100D A	-
1NGP59	600 VOLT POWER CABLE OKONITE	241.234	OKON NONE	VARIOUS	N/A HARSH	N/A	100D A	-
1NGP61	ROCKBESTOS	241.242		VARIOUS	HARSH		100D	
1NGP62	ROCKBESTOS	241.242		VARIOUS	HARSH		100D	
1NGP63	SPECIAL INST. CABLE BRAND-REX	241.246		VARIOUS	HARSH		100D	
1NGP67	ROCKBESTOS	241.242		VARIOUS	HARSH		100D	
1NGP70	300 VOLT INSTRUMENTATION CABLE ROCKBESTOS	241.242	ROCK NONE	VARIOUS	N/A HARSH	N/A	100D A	-
1NGP71	300 VOLT INSTRUMENTATION CABLE ROCKBESTOS	241.242	ROCK NONE	VARIOUS	N/A HARSH	N/A	100D A	-
1NGP72	300 VOLT INSTRUMENTATION CABLE ROCKBESTOS	241.242	ROCK NONE	VARIOUS	N/A HARSH	N/A	100D A	-
1NGP73	300 VOLT INSTRUMENTATION CABLE ROCKBESTOS	241.242	ROCK NONE	VARIOUS	N/A HARSH	N/A	100D A	-

MARK NO	EQUIPMENT DESCRIPTION VENDOR PANEL/RACK	SPEC.NO	MAKE/MANUFACTURER MODEL/CATALOG NO. REMARKS	ENV. ZONE SUBNRG	ENRGCN ENVTYP	SFN1 SFN2 SFN3	OP TIME OC BASIS	QRN1 QRN2 QRN3
NGP	CABLE							
1NGP75	300 VOLT INSTRUMENTATION CABLE ROCKBESTOS	241.242	ROCK NONE	VARIOUS	N/A HARSH	N/A	100D A -	
1NGP76	300 VOLT INSTRUMENTATION CABLE ROCKBESTOS	241.242	ROCK NONE	VARIOUS	N/A HARSH	N/A	100D A -	
1NGP77	300 VOLT INSTRUMENTATION CABLE ROCKBESTOS	241.242	ROCK NONE	VARIOUS	N/A HARSH	N/A	100D A -	
1NGP78	300 VOLT INSTRUMENTATION CABLE ROCKBESTOS	241.242	ROCK NONE	VARIOUS	N/A HARSH	N/A	100D A -	
1NGP80	300 VOLT INSTRUMENTATION CABLE ROCKBESTOS	241.242	ROCK NONE	VARIOUS	N/A HARSH	N/A	100D A -	
1NGP81	300 VOLT INSTRUMENTATION CABLE ROCKBESTOS	241.242	ROCK NONE	VARIOUS	N/A HARSH	N/A	100D A -	
1NGP82	300 VOLT INSTRUMENTATION CABLE ROCKBESTOS	241.242	ROCK NONE	VARIOUS	N/A HARSH	N/A	100D A -	
1NGP84	300 VOLT INSTRUMENTATION CABLE ROCKBESTOS	241.242	ROCK NONE	VARIOUS	N/A HARSH	N/A	100D A -	
1NGP85	300 VOLT INSTRUMENTATION CABLE ROCKBESTOS	241.242	ROCK NONE	VARIOUS	N/A HARSH	N/A	100D A -	

RBS-ENVIRONMENTAL QUALIFICATION DATA MASTER LIST
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MARK NO	EQUIPMENT DESCRIPTION / VENDOR / PANEL/RACK	SPEC.NO	MAKE/MANUFACTURER / MODEL/CATALOG NO. / REMARKS	ENV. ZONE / SUBMRG	ENRGCN / ENVTYP	SFN1 / SFN2 / SFN3	OP TIME / OC BASIS	QRN1 / QRN2 / QRN3
NGR CABLE								
1NGR11	5KV POWER CABLE ANACONDA	241.232	NONE	VARIOUS	N/A HARSH	N/A	100D A	-
1NGR12	5KV POWER CABLE ANACONDA	241.232	NONE	VARIOUS	N/A HARSH	N/A	100D A	-
1NGR30	5KV POWER CABLE ANACONDA	241.232	NONE	VARIOUS	N/A HARSH	N/A	100D A	-
NGS CABLE								
1NGS01	THERMOCOUPLE EXT. WIRE CABLE ROCKBESTOS	241.243	ROCK NONE	VARIOUS	N/A HARSH	N/A	100D A	-
1NGS02	THERMOCOUPLE EXT. WIRE CABLE ROCKBESTOS	241.243	ROCK NONE	VARIOUS	N/A HARSH	N/A	100D A	-
1NGS03	THERMOCOUPLE EXT. WIRE CABLE ROCKBESTOS	241.243	ROCK NONE	VARIOUS	N/A HARSH	N/A	100D A	-
1NGS05	THERMOCOUPLE EXT. WIRE CABLE ROCKBESTOS	241.243	ROCK NONE	VARIOUS	N/A HARSH	N/A	100D A	-
1NGS06	THERMOCOUPLE EXT. WIRE CABLE ROCKBESTOS	241.243	ROCK NONE	VARIOUS	HARSH		100D	
1NGS11	SPECIAL INSTRUMENTATION CABLE BRAND REX	241.246	BNRX NONE	VARIOUS	N/A HARSH	N/A	100D A	-

RBS-ENVIRONMENTAL QUALIFICATION DATA MASTER LIST
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MARK NO	EQUIPMENT DESCRIPTION VENDOR PANEL/RACK SPEC.NO	MAKE/MANUFACTURER MODEL/CATALOG NO. REMARKS	ENV. ZONE SUBMRG	ENRGCN ENVTYP	SFN1 SFN2 SFN3	OP TIME OC BASIS	QRN1 QRN2 QRN3
NGS CABLE							
1NGS12	SPECIAL INSTRUMENTATION CABLE BRAND REX 241.246	BNRX NONE	VARIOUS	N/A HARSH	N/A	100D A -	
1NGS13	SPECIAL INSTRUMENTATION CABLE BRAND REX 241.246	BNRX NONE	VARIOUS	N/A HARSH	N/A	100D A -	
1NGS14	SPECIAL INSTRUMENTATION CABLE BRAND REX 241.246	BNRX NONE	VARIOUS	N/A HARSH	N/A	100D A -	
1NGS15	SPECIAL INSTRUMENTATION CABLE BRAND REX 241.246	BNRX NONE	VARIOUS	HARSH		100D	
1NGS17	SPECIAL INSTRUMENTATION CABLE BRAND REX 241.246	BNRX NONE	VARIOUS	N/A HARSH	N/A	100D A -	
1NGS18	SPECIAL INSTRUMENTATION CABLE BRAND REX 241.246	BNRX NONE	VARIOUS	N/A HARSH	N/A	100D A -	
1NGS20	SPECIAL INSTRUMENTATION CABLE BRAND REX 241.246	BNRX NONE	VARIOUS	N/A HARSH	N/A	100D A -	
1NGS21	SPECIAL INSTRUMENTAION CABLE BRAND REX 241.246	BNRX NONE	VARIOUS	N/A HARSH	N/A	100D A	
1NGS22	SPECIAL INSTRUMENTATION CABLE BRAND REX 241.246	BNRX NONE	VARIOUS	N/A HARSH	N/A	100D A -	
1NGS23	SPECIAL INSTRUMENTAITON CABLE BRAND REX 241.246	BNRX	VARIOUS	HARSH		100D	

MARK NO	EQUIPMENT DESCRIPTION VENDOR PANEL/RACK	SPEC.NO	MAKE/MANUFACTURER MODEL/CATALOG NO. REMARKS	ENV. ZONE SUBMRG	EMRGCN ENVTYP	SFN1 SFN2 SFN3	OP TIME OC BASIS	QRN1 QRN2 QRN3
NGS CABLE								
1NGS40	COAXIAL CABLE ROCKBESTOS	241.242	NONE	VARIOUS	N/A HARSH	N/A	100D A	-
1NGS41	COAXIAL CABLE ROCKBESTOS	241.242	NONE	VARIOUS	N/A HARSH	N/A	100D A	-
1NGS42	COAXIAL CABLE ROCKBESTOS	241.242	NONE	VARIOUS	N/A HARSH	N/A	100D A	-
1NGS43	COAXIAL CABLE ROCKBESTOS	241.242	NONE	VARIOUS	N/A HARSH	N/A	100D A	-
1NGS44	COAXIAL CABLE ROCKBESTOS	241.242	NONE	VARIOUS	N/A HARSH	N/A	100D A	-
1NGS45	COAXIAL CABLE ROCKBESTOS	241.242	NONE	VARIOUS	N/A HARSH	N/A	100D A	-
1NGS46	THINAXIAL CABLE ROCKBESTOS	241.242	NONE	VARIOUS	N/A HARSH	N/A	100D A	-
1NGS57	300 V INST. CABLE ROCKBESTOS	241.242		VARIOUS	HARSH		100D	
1NGS60	ROCKBESTOS	241.243		VARIOUS	HARSH		100D	
1NGS61	ROCKBESTOS	241.243		VARIOUS	HARSH		100D	

MARK NO	EQUIPMENT DESCRIPTION VENDOR PANEL/RACK	SPEC.NO	NAME/MANUFACTURER MODEL/CATALOG NO. REMARKS	ENV. ZONE SUBMRG	ENVSCN ENVTYP	SFN1 SFN2 SFN3	OP TIME OC BASIS	ORN1 ORN2 ORN3
NNS EMERGENCY 5KV ELECTRICAL SYSTEM								
1NNS*SNG5A	SWITCHGEAR GOULD-BROWN BOVERI	242.521	 CAT.II	FB-095-G	HARSH			N/R
1NNS*SNG5B	SWITCHGEAR GOULD-BROWN BOVERI	242.521	 CAT.II	AB-114-6	HARSH			N/R
RCP ELECTRICAL PENETRATIONS								
1RCP*LVC05	ELECTRICAL PENETRATION ASSY CONAX CORP	241.211	CONX NONE,UNIQUE HLBI FOR INBOARD END, REMAINGER TRNS	CT-G	HLBI HARSH	PNIT	100D A	
1RCP*LVC06	ELECTRICAL PENETRATION ASSY CONAX CORP	241.211	CONX NONE,UNIQUE HLBI FOR INBOARD END, REMAINDER TRNS	CT-G	HLBI HARSH	PNIT	100D A	
1RCP*LVC10A	ELECTRICAL PENETRATION ASSY CONAX CORP	241.211	CONX NONE, UNIQUE HLBI FOR INBOARD END, REMAINDER TRANS	CT-G	HLBI HARSH	PNIT	100D A	
1RCP*LVC11	ELECTRICAL PENETRATION ASSY CONAX CORP	241.211	CONX NONE, UNIQUE HLBI FOR INBOARD END, REMAINDER TRNS	CT-G	HLBI HARSH	PNIT	100D A	
1RCP*LVC11A	ELECTRICAL PENETRATION ASSY CONAX CORP	241.211	CONX NONE,UNIQUE HLBI FOR INBOARD END, REMAINDER TRNS	CT-G	HLBI HARSH	PNIT	100D A	
1RCP*LVC13A	ELECTRICAL PENETRATION ASSY CONAX CORP	241.211	CONX NONE,UNIQUE HLBI FOR INBOARD END, REMAINDER TRANS	CT-G	HLBI HARSH	PNIT	100D A	
1RCP*LVC18	ELECTRICAL PENETRATION ASSY CONAX CORP	241.211	CONX NONE,UNIQUE HLBI FOR INBOARD END, REMAINDER TRNS	CT-G	HLBI HARSH	PNIT	100D A	

MARK NO	EQUIPMENT DESCRIPTION VENDOR PANEL/RACK SPEC.NO	NAME/MANUFACTURER MODEL/CATALOG NO. REMARKS	ENV. ZONE SUBRS	ENVDCN ENVTYP	SFN1 OP TIME SFN2 OC BASIS SFN3	QRN1 QRN2 QRN3

RCP ELECTRICAL PENETRATIONS

1RCP*LVC18A	ELECTRICAL PENETRATION ASSY CONAX CORP 241.211	CONX NONE,UNIQUE HLBI FOR INBOARD END, REMAINDER TRNS	CT-G	HLBI HARSH	PNIT	100D A
1RCP*LVC19A	ELECTRICAL PENETRATION ASSY CONAX CORP 241.211	CONX NONE,UNIQUE HLBI FOR INBOARD END, REMAINDER TRNS	CT-G	HLBI HARSH	PNIT	100D A
1RCP*LVC20A	ELECTRICAL PENETRATION ASSY CONAX CORP 241.211	CONX NONE,UNIQUE HLBI FOR INBOARD END, REMAINDER TRNS	CT-G	HLBI HARSH	PNIT	100D A
1RCP*LVC21	ELECTRICAL PENETRATION ASSY CONAX CORP 241.211	CONX NONE,UNIQUE HLBI FOR INBOARD END, REMAINDER TRNS	CT-G	HLBI HARSH	PNIT	100D A
1RCP*LVC21A	ELECTRICAL PENETRATION ASSY CONAX CORP 241.211	CONX NONE,UNIQUE HLBI FOR INBOARD END, REMAINDER TRNS	CT-G	HLBI HARSH	PNIT	100D A
1RCP*LVI05A	ELECTRICAL PENETRATION ASSY CONAX CORP 241.211	CONX NONE,UNIQUE HLBI FOR INBOARD END, REMAINDER TRNS	CT-G	HLBI HARSH	PNIT	100D A
1RCP*LVI06A	ELECTRICAL PENETRATION ASSY CONAX CORP 241.211	CONX NONE,UNIQUE HLBI FOR INBOARD END, REMAINDER TRNS	CT-G	HLBI HARSH	PNIT	100D A
1RCP*LVI09C	ELECTRICAL PENETRATION ASSY CONAX CORP 241.211	CONX NONE,UNIQUE HLBI FOR INBOARD END, REMAINDER TRNS	CT-G	HLBI HARSH	PNIT - -	100D A -
1RCP*LVI12	ELECTRICAL PENETRATION ASSY CONAX CORP 241.211	CONX NONE,UNIQUE HLBI FOR INBOARD END, REMAINDER TRNS	CT-G	HLBI HARSH	PNIT	100D A
1RCP*LVI12A	ELECTRICAL PENETRATION ASSY CONAX CORP 241.211	CONX NONE,UNIQUE HLBI FOR INBOARD END, REMAINDER TRNS	CT-G	HARSH	PNIT	100D A

RES-ENVIRONMENTAL QUALIFICATION DATA MASTER LIST
SORTED BY MARK NO - HARSH ENVIRONMENT ONLY

MARK NO	EQUIPMENT DESCRIPTION VENDOR PANEL/RACK SPEC.NO	MAKE/MANUFACTURER MODEL/CATALOG NO. REMARKS	ENV. ZONE SUBMRG	ENVDCN ENVTYP	SFN1 SFN2 SFN3	OP TIME OC BASIS	QRN1 QRN2 QRN3
RCP ELECTRICAL PENETRATIONS							
1RCP*LVI13A	ELECTRICAL PENETRATION ASSY CONAX CORP 241.211	CONX NONE,UNIQUE HLBI FOR INBOARD END, REMAINDER TRNS	CT-G	HLBI HARSH	PNIT -	100D A	
1RCP*LVI14	ELECTRICAL PENETRATION ASSY CONAX CORP 241.211	NONE,UNIQUE HLBI FOR INBOARD END, REMAINDER TRNS	CT-G	HLBI HARSH	PNIT -	100D A	
1RCP*LVI14A	ELECTRICAL PENETRATION ASSY CONAX CORP 241.211	CONX NONE,UNIQUE HLBI FOR INBOARD END, REMAINDER TRNS	CT-G	HLBI HARSH	PNIT -	100D A	
1RCP*LVI15	ELECTRICAL PENETRATION ASSY CONAX CORP 241.211	CONX NONE,UNIQUE HLBI FOR INBOARD END, REMAINDER TRNS	CT-G	HLBI HARSH	PNIT -	100D A	
1RCP*LVI15A	ELECTRICAL PENETRATION ASSY CONAX CORP 241.211	CONX NONE,UNIQUE HLBI FOR INBOARD END, REMAINDER TRNS	CT-G	HLBI HARSH	PNIT -	100D A	
1RCP*LVI17	ELECTRICAL PENETRATION ASSY CONAX CORP 241.211	CONX	CT-G	HARSH		100D	
1RCP*LVI17B	ELECTRICAL PENETRATION ASSY CONAX CORP 241.211	CONX NONE,UNIQUE HLBI FOR INBOARD END, REMAINDER TRNS	CT-G	HLBI HARSH	PNIT -	100D A	
1RCP*LVI17C	ELECTRICAL PENETRATION ASSY CONAX CORP 241.211	CONX NONE,UNIQUE HLBI FOR INBOARD END, REMAINDER TRNS	CT-G	HLBI HARSH	PNIT -	100D A	
1RCP*LVI20A	ELECTRICAL PENETRATION ASSY CONAX CORP 241.211	CONX NONE,UNIQUE HLBI FOR INBOARD END, REMAINDER TRNS	CT-G	HLBI HARSH	PNIT -	100D A	
1RCP*LVI20D	ELECTRICAL PENETRATION ASSY CONAX CORP 241.211	CONX NONE,UNIQUE HLBI FOR INBOARD END, REMAINDER TRNS	CT-G	HLBI HARSH	PNIT - -	100D A -	

MARK NO	EQUIPMENT DESCRIPTION		NAME/MANUFACTURER	ENV. ZONE	ENVGCN	SFN1	OP TIME	QRN1
	VENDOR		MODEL/CATALOG NO.	SUBMRG	ENVTYP	SFN2	OC BASIS	QRN2
	PANEL/RACK	SPEC.NO	REMARKS			SFN3		QRN3
RCP ELECTRICAL PENETRATIONS								
1RCP*LVP03	ELECTRICAL PENETRATION ASSY		CONX	CT-G	HLBI	PNIT	100D	
	CONAX CORP		NONE,UNIQUE		HARSH	-	A	-
		241.211	HLBI FOR INBOARD END, REMAINDER TRNS			-		
1RCP*LVP03A	ELECTRICAL PENETRATION ASSY		CONX	CT-G	HLBI	PNIT	100D	
	CONAX CORP		NONE,UNIQUE		HARSH		A	
		241.211	HLBI FOR INBOARD END, REMAINDER TRNS					
1RCP*LVP04	ELECTRICAL PENETRATION ASSY		CONX	CT-G	HLBI	PNIT	100D	
	CONAX CORP		NONE,UNIQUE		HARSH	-	A	-
		241.211	HLBI FOR INBOARD END, REMAINDER TRNS			-		
1RCP*LVP04A	ELECTRICAL PENETRATION ASSY		CONX	CT-G	HLBI	PNIT	100D	
	CONAX CORP		NONE,UNIQUE		HARSH		A	
		241.211	HLBI FOR INBOARD END, REMAINDER TRNS					
1RCP*LVP07	ELECTRICAL PENETRATION ASSY		CONX	CT-G	HLBI	PNIT	100D	
	CONAX CORP		NONE,UNIQUE		HARSH		A	
		241.211	HLBI FOR INBOARD END, REMAINDER TRNS					
1RCP*LVP07A	ELECTRICAL PENETRATION ASSY		CONX	CT-G	HLBI	PNIT	100D	
	CONAX CORP		NONE,UNIQUE		HARSH	-	A	-
		241.211	HLBI FOR INBOARD END, REMAINDER TRNS			-		
1RCP*LVP08	ELECTRICAL PENETRATION ASSY		CONX	CT-G	HLBI	PNIT	100D	
	CONAX CORP		NONE,UNIQUE		HARSH		A	
		241.211	HLBI FOR INBOARD END, REMAINDER TRNS					
1RCP*LVP08A	ELECTRICAL PENETRATION ASSY		CONX	CT-G	HLBI	PNIT	100D	
	CONAX CORP		NONE,UNIQUE		HARSH	-	A	-
		241.211	HLBI FOR INBOARD END, REMAINDER TRNS			-		
1RCP*LVP09	ELECTRICAL PENETRATION ASSY		CONX	CT-G	HLBI	PNIT	100D	
	CONAX CORP		NONE,UNIQUE		HARSH		A	
		241.211	HLBI FOR INBOARD END, REMAINDER TRNS					
1RCP*LVP09A	ELECTRICAL PENETRATION ASSY		CONX	CT-G	HLBI	PNIT	100D	
	CONAX CORP		NONE,UNIQUE		HARSH		A	
		241.211	HLBI FOR INBOARD END, REMAINDER TRNS					

MARK NO	EQUIPMENT DESCRIPTION VENDOR PANEL/RACK	SPEC.NO	NAME/MANUFACTURER MODEL/CATALOG NO. REMARKS	ENV. ZONE SUBNRG	EHRSCN ENVTYP	SFN1 SFN2 SFN3	OP TIME QC BASIS	QTN1 QTN2 QTN3
RCP ELECTRICAL PENETRATIONS								
1RCP*LVP16	ELECTRICAL PENETRATION ASSY CONAX CORP	241.211	CONX NONE,UNIQUE HLBI FOR INBOARD END, REMAINDER TRNS	CT-G	HLBI HARSH	PNIT	100D A	
1RCP*LVP16A	ELECTRICAL PENETRATION ASSY CONAX CORP	241.211	CONX NONE,UNIQUE HLBI FOR INBOARD END, REMAINDER TRNS	CT-G	HLBI HARSH	PNIT	100D A	
1RCP*LVP22	ELECTRICAL PENETRATION ASSY CONAX CORP	241.211	CONX NONE,UNIQUE HLBI FOR INBOARD END, REMAINDER TRNS	CT-G	HLBI HARSH	PNIT	100D A	
1RCP*LVP22A	ELECTRICAL PENETRATION ASSY CONAX CORP	241.211	CONX NONE,UNIQUE HLBI FOR INBOARD END,REMAINDER TRNS	CT-G	HLBI HARSH	PNIT	100D A	
1RCP*MVP01	ELECTRICAL PENETRATION ASSY CONAX CORP	241.211	CONX NONE,UNIQUE HLBI FOR INBOARD END, REMAINDER TRNS	CT-G	HLBI HARSH	PNIT - -	100D A -	
1RCP*MVP02	ELECTRICAL PENETRATION ASSY CONAX CORP	241.211	CONX NONE,UNIQUE HLBI FOR INBOARD END, REMAINDER TRNS	CT-G	HLBI HARSH	PNIT - -	100D A -	
1RCP*MMS18	ELECTRICAL PENETRATION ASSY CONAX CORP	241.211	CONX NONE,UNIQUE HLBI FOR INBOARD END, REMAINDER TRNS	CT-G	HLBI HARSH	PNIT	100D A	
1RCP*MMS13	ELECTRICAL PENETRATION ASSY CONAX CORP	241.211	CONX NONE,UNIQUE HLBI FOR INBOARD END, REMAINDER TRNS	CT-G	HLBI HARSH	PNIT	100D A	
1RCP*MMS19	ELECTRICAL PENETRATION ASSY CONAX CORP	241.211	CONX NONE,UNIQUE HLBI FOR INBOARD END, REMAINDER TRNS	CT-G	HLBI HARSH	PNIT	100D A	
1RCP*MMS20	ELECTRICAL PENETRATION ASSY CONAX CORP	241.211	CONX NONE,UNIQUE HLBI FOR INBOARD END, REMAINDER TRNS	CT-G	HLBI HARSH	PNIT	100D A	

MARK NO	EQUIPMENT DESCRIPTION VENDOR PANEL/RACK	SPEC.NO	NAME/MANUFACTURER MODEL/CATALOG NO. REMARKS	ENV. ZONE SUBMRG	EMRGCN ENVTYP	SFN1 SFN2 SFN3	OP TIME QC BASIS	QRN1 QRN2 QRN3
RCP ELECTRICAL PENETRATIONS								
1RCP*TCA01	TERMINAL CABINET PECP	242.491	N/A	AB-114-6	HLBO HARSH	RACK - -	100D A	- -
1RCP*TCA02	TERMINAL CABINET PECP	242.491	N/A	AB-114-6	HLBO HARSH	RACK - -	100D A	- -
1RCP*TCA03	TERMINAL CABINET PECP	242.491	N/A	AB-114-6	HLBO HARSH	RACK - -	100D A	- -
1RCP*TCA04	TERMINAL CABINET PECP	242.491	N/A	AB-114-6	HLBO HARSH	RACK - -	100D A	- -
1RCP*TCA05	TERMINAL CABINET PECP	242.491	N/A N/R FOR SAFETY FUNCTION	AB-114-6	HLBO HARSH	RACK - -	N/R A	- -
1RCP*TCA06	TERMINAL CABINET PECP	242.491	N/A N/R FOR SAFETY FUNCTION	AB-114-5	HLBO HARSH	RACK - -	N/R A	- -
1RCP*TCA07	TERMINAL CABINET PECP	242.491	N/A N/R FOR SAFETY FUNCTION	AB-114-5	HLBO HARSH	RACK - -	N/R A	- -
1RCP*TCA08	TERMINAL CABINET PECP	242.491	N/A	AB-114-5	HLBO HARSH	RACK - -	100D A	- -
1RCP*TCA09	TERMINAL CABINET PECP	242.491	N/A	AB-114-5	HLBO HARSH	RACK - -	100D A	- -
1RCP*TCA10	TERMINAL CABINET PECP	242.491	N/A	AB-114-5	HLBO HARSH	RACK - -	100D A	- -

RBS-ENVIRONMENTAL QUALIFICATION DATA MASTER LIST
SORTED BY MARK NO - HARSH ENVIRONMENT ONLY

MARK NO	EQUIPMENT DESCRIPTION VENDOR PANEL/RACK	SPEC.NO	MAKE/MANUFACTURER MODEL/CATALOG NO. REMARKS	ENV. ZONE SUBHRG	ENVCON ENVTYP	SFN1 SFN2 SFN3	OP TIME OC BASIS	QRN1 QRN2 QRN3
RCP ELECTRICAL PENETRATIONS								
1RCP*TCA11	TERMINAL CABINET PECP	242.491	N/A N/R FOR SAFETY FUNCTION	AB-141-4	HLBO HARSH	RACK - -	N/R A -	
1RCP*TCA12	TERMINAL CABINET PECP	242.491	N/A	AB-141-4	HLBO HARSH	RACK - -	100D A -	
1RCP*TCA13	TERMINAL CABINET PECP	242.491	N/A N/R FOR SAETY FUNCTION	AB-141-4	HLBO HARSH	RACK - -	N/R A -	
1RCP*TCA14	TERMINAL CABINET PECP	242.491	N/A N/R FOR SAFETY FUNCTION	AB-141-3	HLBO HARSH	RACK - -	N/R A -	
1RCP*TCA15	TERMINAL CABINET PECP	242.491	N/A	AB-141-3	HLBO HARSH	RACK - -	100D A -	
1RCP*TCA16	TERMINAL CABINET PECP	242.491	N/A N/R FOR SAFETY FUNCTION	FB-113-G	HLBO HARSH	RACK - -	N/R A -	
1RCP*TCF01	TERMINAL CABINET PECP	242.491	N/A	FB-113-G	FHA HARSH	RACK - -	100D A -	
1RCP*TCF02	TERMINAL CABINET PECP	242.491	N/A N/R FOR SAFETY FUNCTION	FB-113-G	FHA HARSH	RACK - -	N/R A -	
1RCP*TCF03	TERMINAL CABINET PECP	242.491	N/A	FB-113-G	FHA HARSH	RACK - -	100D A -	
1RCP*TCF04	TERMINAL CABINET PECP	242.491	N/A	FB-113-G	FHA HARSH	RACK - -	100D A -	

RBS-ENVIRONMENTAL QUALIFICATION DATA MASTER LIST
SORTED BY MARK NO - HARSH ENVIRONMENT ONLY

MARK NO	EQUIPMENT DESCRIPTION		MAKE/MANUFACTURER	ENV. ZONE	ENRGCN	SFN1	OP TIME	QRN1
	VENDOR		MODEL/CATALOG NO.	SUBNRG	ENVTYP	SFN2	OC BASIS	QRN2
	PANEL/RACK	SPEC.NO	REMARKS			SFN3		QRN3
RCP ELECTRICAL PENETRATIONS								
1RCP*TCR01A	TERMINAL CABINET		N/A	CT-G	HLBI	RACK	N/R	
	PECP				HARSH	-	A	-
		242.491	N/R FOR SAFETY FUNCTION			-		
1RCP*TCR01F	TERMINAL CABINET		N/A	CT-G	HLBI	RACK	N/R	
	PECP				HARSH	-	A	-
		242.491	N/R FOR SAFETY FUNCTION			-		
1RCP*TCR02A	TERMINAL CABINET		N/A	CT-G	HLBI	RACK	N/R	
	PECP				HARSH	-	A	-
		242.491	N/R FOR SAFETY FUNCTION			-		
1RCP*TCR02F	TERMINAL CABINET		N/A	CT-G	HLBI	RACK	N/R	
	PECP				HARSH	-	A	-
		242.491	N/R FOR SAFETY FUNCTION			-		
1RCP*TCR03A	TERMINAL CABINET		N/A	CT-G	HLBI	RACK	N/R	
	PECP				HARSH	-	A	-
		242.491	N/R FOR SAFETY FUNCTION			-		
1RCP*TCR03F	TERMINAL CABINET		N/A	CT-G	HLBI	RACK	N/R	
	PECP				HARSH	-	A	-
		242.491	N/R FOR SAFETY FUNCTION			-		
1RCP*TCR04A	TERMINAL CABINET		N/A	CT-G	HLBI	RACK	N/R	
	PECP				HARSH	-	A	-
		242.491	N/R FOR SAFETY FUNCTION			-		
1RCP*TCR04F	TERMINAL CABINET		N/A	CT-G	HLBI	RACK	N/R	
	PECP				HARSH	-	A	-
		242.491	N/R FOR SAFETY FUNCTION			-		
1RCP*TCR05A	TERMINAL CABINET		N/A	CT-G	HLBI	RACK	N/R	
	PECP				HARSH	-	A	-
		242.491	N/R FOR SAFETY FUNCTION			-		
1RCP*TCR06A	TERMINAL CABINET		N/A	CT-G	HLBI	RACK	N/R	
	PECP				HARSH	-	A	-
		242.491	N/R FOR SAFETY FUNCTION			-		

MARK NO	EQUIPMENT DESCRIPTION		MAKE/MANUFACTURER	ENV. ZONE	ENVTYP	SFN1	OP TIME	QRN1
	VENDOR		MODEL/CATALOG NO.	SUBRG		SFN2	QC BASIS	QRN2
	PANEL/RACK	SPEC.NO	REMARKS			SFN3		QRN3
RCP ELECTRICAL PENETRATIONS								
1RCP*TCR07A	TERMINAL CABINET		N/A	CT-G	HLBI	RACK	N/R	
	PECP				HARSH	-	A	-
		242.491	N/R FOR SAFETY FUNCTION			-		
1RCP*TCR08A	TERMINAL CABINET		N/A	CT-G	HLBI	RACK	N/R	
	PECP				HARSH	-	A	-
		242.491	N/R FOR SAFETY FUNCTION			-		
1RCP*TCR09A	TERMINAL CABINET		N/A	CT-G	HLBI	RACK	N/R	
	PECP				HARSH	-	A	-
		242.491	N/R FOR SAFETY FUNCTION			-		
1RCP*TCR10A	TERMINAL CABINET		N/A	CT-G	HLBI	RACK	N/R	
	PECP				HARSH	-	A	-
		242.491	N/R FOR SAFETY FUNCTION			-		
1RCP*TCR11A	TERMINAL CABINET		N/A	CT-G	HLBI	RACK	N/R	
	PECP				HARSH	-	A	-
		242.491	N/R FOR SAFETY FUNCTION			-		
1RCP*TCR12A	TERMINAL CABINET		N/A	CT-G	HLBI	RACK	N/R	
	PECP				HARSH	-	A	-
		242.491	N/R FOR SAFETY FUNCTION			-		
1RCP*TCR13A	TERMINAL CABINET		N/A	CT-G	HLBI	RACK	N/R	
	PECP				HARSH	-	A	-
		242.491	N/R FOR SAFETY FUNCTION			-		
1RCP*TCR14A	TERMINAL CABINET		N/A	CT-G	HLBI	RACK	N/R	
	PECP				HARSH	-	A	-
		242.491	N/R FOR SAFETY FUNCTION			-		
1RCP*TCR15A	TERMINAL CABINET		N/A	CT-G	HLBI	RACK	N/R	
	PECP				HARSH	-	A	-
		242.491	N/R FOR SAFETY FUNCTION			-		
1RCP*TCR16A	TERMINAL CABINET		N/A	CT-G	HLBI	RACK	N/R	
	PECP				HARSH	-	A	-
		242.491	N/R FOR SAFETY FUNCTION			-		

MARK NO	EQUIPMENT DESCRIPTION VENDOR PANEL/RACK SPEC.NO	MAKE/MANUFACTURER MODEL/CATALOG NO. REMARKS	ENV. ZONE SUBNRG	ENVRGN ENVTYP	SFN1 SFN2 SFN3	OP TIME QC BASIS	QRN1 QRN2 QRN3
RCS REACTOR COOLANT							
1RCS*MOV58A	MOTOR OPERATED VALVE VELAN 228.216	LMTQ SMB-000-2	CT-G	HARSH		1HR	
1RCS*MOV58B	MOTOR OPERATED VALVE VELAN 228.216	LMTQ	CT-G	HARSH		1HR	
1RCS*MOV59A	MOTOR OPERATED VALVE VELAN 228.216	LMTQ SMB-000-2	CT-G	HARSH		1HR	
1RCS*MOV59B	MOTOR OPERATED VALVE VELAN 228.216	LMTQ SMB-000-2	CT-G	HARSH		1HR	
1RCS*MOV60A	MOTOR OPERATED VALVE VELAN 228.216	LMTQ SMB-000-2	CT-G	HLBI HARSH	CISL - -	1HR A	-
1RCS*MOV60B	MOTOR OPERATED VALVE VELAN 228.216	LMTQ SMB-000-2	CT-G	HLBI HARSH	CISL - -	1HR A	-
1RCS*MOV61A	MOTOR OPERATED VALVE VELAN 228.216	LMTQ SMB-000-2	CT-G	HLBI HARSH	CISL - -	1HR A	-
1RCS*MOV61B	MOTOR OPERATED VALVE VELAN 228.216	LMTQ SMB-000-2	CT-G	HLBI HARSH	CISL - -	1HR A	-
RHS RESIDUAL HEAT REMOVAL SYSTEM							
1RHS*FT15B	PRESSURE TRANSMITTER ROSEMOUNT 247.481	RSMT 1153DB6FA N/R FOR POST ACCIDENT	AB-095-6	HARSH		N/R	

MARK NO	EQUIPMENT DESCRIPTION / VENDOR / PANEL/RACK	SPEC.NO	MAKE/MANUFACTURER / MODEL/CATALOG NO. / REMARKS	ENV. ZONE / SUBNRG	ENRGCN / ENVTYP	SFN1 / SFN2 / SFN3	OP TIME / QC BASIS	QRN1 / QRN2 / QRN3
RHS RESIDUAL HEAT REMOVAL SYSTEM								
1RHS*FT15C	PRESSURE TRANSMITTER ROSEMOUNT	247.481	RSHT 1153DB6PA N/R FOR POST ACCIDENT	AB-095-3	HARSH			N/R
1RHS*LT119	PRESSURE TRANSMITTER ROSEMOUNT	247.481	RSHT 1153DBGPA N/R FOR POST ACCIDENT	CT-G	HARSH			N/R
1RHS*RTD47A	RTD PYCO	247.461	PYCO 122-4030-04 REG.G.1.97	AB-070-2	HARSH			100D
1RHS*RTD47B	RTD PYCO	247.461	PYCO 122-4030-04 REG.G.1.97	AB-070-5	HARSH			100 D
RMS RADIATION MONITORING								
1RMS*REX125	RADIOACTIVITY ELEMENT G A TECH	247.250		AB-170-1	HARSH			100D
1RMS*REX5A	RADIOACTIVITY ELEMENT G A TECH	247.250		FB-148-G	HARSH			100D
1RMS*RE11A	RADIOACTIVITY ELEMENT G A TECH	247.250		AB-170-1	HARSH			100D
1RMS*RE11B	RADIOACTIVITY ELEMENT G A TECH	247.250		AB-170-1	HARSH			100D
1RMS*RE111	RADIOACTIVITY ELEMENT G A TECH	247.250		CT-G	HARSH			100 D

MARK NO	EQUIPMENT DESCRIPTION VENDOR PANEL/RACK SPEC.NO	MAKE/MANUFACTURER MODEL/CATALOG NO. REMARKS	ENV. ZONE SUBMRG	ENVRGN ENVTYP	SEN1 SEN2 SEN3	OP TIME QC BASIS	QRN1 QRN2 QRN3

RMS RADIATION MONITORING

1RMS*RE112	RADIOACTIVITY ELEMENT G A TECH 247.250		CT-4	HARSH		100 D
1RMS*RE125	RADIOACTIVITY ELEMENT G A TECH 247.250	REG.G.1.97	AB-170-1	HARSH		100D
1RMS*RE15A	RADIOACTIVITY ELEMENT G A TECH 247.250		AB-095-6	HARSH		100D
1RMS*RE15B	RADIOACTIVITY ELEMENT G A TECH 247.250		AB-095-6	HARSH		100D
1RMS*RE16A	RADIOACTIVITY ELEMENT G A TECH 247.250	REG.G.1.97	CT-G	HARSH		100D
1RMS*RE16B	RADIOACTIVITY ELEMENT G A TECH 247.250	REG.G.1.97	CT-G	HARSH		100D
1RMS*RE20A	RADIOACTIVITY ELEMENT G A TECH 247.250	REG.G.1.97	DH-1	HARSH		100D
1RMS*RE20B	RADIOACTIVITY ELEMENT G A TECH 247.250	REG.G.1.97	DH-1	HARSH		100D
1RMS*RE21A	RADIOACTIVITY ELEMENT G A TECH 247.250		CT-G	HARSH		100D
1RMS*RE21B	RADIOACTIVITY ELEMENT G A TECH 247.250		CT-G	HARSH		100D

RBS-ENVIRONMENTAL QUALIFICATION DATA MASTER LIST
SORTED BY MARK NO - HARSH ENVIRONMENT ONLY

MARK NO	EQUIPMENT DESCRIPTION / VENDOR / PANEL/RACK	SPEC.NO	MAKE/MANUFACTURER / MODEL/CATALOG NO. / REMARKS	ENV. ZONE / SUBHRG	ENRGCN / ENVTYP	SFN1 / SFN2 / SFN3	OP TIME / OC BASIS	QRN1 / QRN2 / QRN3
RMS RADIATION MONITORING								
1RMS*RE5A	RADIOACTIVITY ELEMENT G A TECH	247.250	REG.G.1.97	FB-148-G	HARSH			100D
1RMS*RE5B	G A TECH	247.250	REG.G.1.97	FB-148-G	HARSH			100D
1RMS*RI21A	RADIOACTIVITY INDICATOR G A TECH	247.250		CT-G	HARSH			100D
1RMS*RI21B	RADIOACTIVITY INDICATOR G A TECH	247.250		CT-G	HARSH			100D
SAS SERVICE AIR								
1SAS*HOV102	MOTOR OPERATED VALVE VELAN	228.212	LMTQ SMB-000-5	AB-114-6	HLBO HARSH	CISL LCS -	1HR A	- -
1SAS*HOV103	MOTOR OPERATED VALVE VELAN	228.212	LMTQ SMB-000-5	AB-114-6	HLBO HARSH	CISL LCS -	1HR A	- -
SCV STA CONT BUS (VITAL) - AC SUPPLY INCL TFMR & TRANS SH								
1SCV*PNL2A1	STDBY DIST PNLBOARD 120 V AC SQUARE D COMPANY	242.421	SQRD NQOB	CT-G	HLBO HARSH	PANL - -	100D A	- -
1SCV*PNL2A2	STDBY DIST PNLBOARD 120 V AC SQUARE D COMPANY	242.421	SQRD NQOB	AN-3	HLBO HARSH	PANL - -	100D A	- -
1SCV*PNL2B1	STDBY DIST PNLBOARD 120 V AC SQUARE D COMPANY	242.421	SQRD NQOB	CT-G	HLBO HARSH	PANL - -	100D A	- -

MARK NO	EQUIPMENT DESCRIPTION		MAKE/MANUFACTURER	ENV. ZONE	ENRGCN	SFN1	OP TIME	QRN1
	VENDOR		MODEL/CATALOG NO.	SUBNRG	ENVTYP	SFN2	QC BASIS	QRN2
	PANEL/RACK	SPEC.NO	REMARKS			SFN3		QRN3
SCV STA CONT BUS (VITAL) - AC SUPPLY INCL TFMR & TRANS SH								
1SCV*PNL2B2	STDBY DIST PNLBOARD	120 V AC	SQRD	AB-141-2	HLBO	PANL	100D	
	SQUARE D COMPANY		NQOB		HARSH	-	A	
		242.421				-		
1SCV*PNL2C1	STDBY DIST PNLBOARD	120 V AC	SQRD	AB-141-4	HLBO	PANL	100D	
	SQUARE D COMPANY		NQOB		HARSH	-	A	-
		242.421				-		
1SCV*PNL2D1	STDBY DIST PNLBOARD	120 V AC	SQRD	AB-141-2	HLBO	PANL	100D	
	SQUARE D COMPANY		NQOB		HARSH	-	A	-
		242.421				-		
1SCV*PNL2E1	STDBY DIST PNLBOARD	120 V AC	SQRD	AB-114-1	HLBO	PANL	100D	
	SQUARE D COMPANY		NQOB		HARSH	-	A	-
		242.421				-		
1SCV*PNL2F1	STDBY DIST PNLBOARD	120 V AC	SQRD	AB-114-3	HLBO	PANL	100D	
	SQUARE D COMPANY		NQOB		HARSH	-	A	-
		242.421				-		
1SCV*PNL2G1	STDBY DIST PNLBOARD	120 V AC	SQRD	AB-114-1	HLBO	PANL	100D	
	SQUARE D COMPANY		NQOB		HARSH	-	A	-
		242.421				-		
1SCV*PNL2H1	STDBY DIST PNLBOARD	120 V AC	SQRD	AB-114-3	HLBO	PANL	100D	
	SQUARE D COMPANY		NQOB		HARSH	-	A	-
		242.421				-		
1SCV*PNL2J1	STDBY DIST PNLBOARD	120 V AC	SQRD	AB-141-3	HLBO	PANL	100D	
	SQUARE D COMPANY		NQOB		HARSH	-	A	-
		242.421				-		
1SCV*PNL2K1	STDBY DIST PNLBOARD	120 V AC	SQRD	AB-141-2	HLBO	PANL	100D	
	SQUARE D COMPANY		NQOB		HARSH	-	A	-
		242.421				-		
1SCV*PNL2L1	STDBY DIST PNLBOARD	120 V AC	SQRD	AB-141-1	HLBO	PANL	100D	
	SQUARE D COMPANY		NQOB		HARSH	-	A	-
		242.421				-		

MARK NO	EQUIPMENT DESCRIPTION VENDOR PANEL/RACK SPEC.NO	MAKE/MANUFACTURER MODEL/CATALOG NO. REMARKS	ENV. ZONE SUBZRG	ENVRGCN ENVTYP	SFN1 OP TIME QRN1 SFN2 OC BASIS QRN2 SFN3 QRN3
SCV STA CONT BUS (VITAL) - AC SUPPLY INCL TFMR & TRANS SH					
1SCV*PNL6A1	STDBY DIST PNLBOARD 120 V AC SQUARE D COMPANY 242.421	SQRD NQOB	FB-148-1	NORM HARSH	PANL 100D - D - -
1SCV*PNL6B1	STDBY DIST PNLBOARD 120 V AC SQUARE D COMPANY 242.421	SQRD NQOB	CB-098-1	NORM HARSH	PANL N/A - D - -
1SCV*XD2A1	MISC SML DRY TRANSFORMER STDBY SOUTHERN TRANSFORMER 242.132	SXFR 15 KVA	AB-141-4	HLBO HARSH	EMPH 100D - A - -
1SCV*XD2A2	MISC SML DRY TRANSFORMER STDBY SOUTHERN TRANSFORMER 242.132	SXFR 15 KVA	AB-141-4	HLBO HARSH	EMPH 100D - A - -
1SCV*XD2B1	MISC SML DRY TRANSFORMER STDBY SOUTHERN TRANSFORMER 242.132	SXFR 15 KVA	AB-141-3	HLBO HARSH	EMPH 100D - A - -
1SCV*XD2B2	MISC SML DRY TRANSFORMER STDBY SOUTHERN TRANSFORMER 242.132	SXFR 15 KVA	AB-141-2	HLBO HARSH	EMPH 100D - A - -
1SCV*XD2C1	MISC SML DRY TRANSFORMER STDBY SOUTHERN TRANSFORMER 242.132	SXFR 15 KVA	AB-141-4	HLBO HARSH	EMPH 100D - A - -
1SCV*XD2D1	MISC SML DRY TRANSFORMER STDBY SOUTHERN TRANSFORMER 242.132	SXFR 15 KVA	AB-141-2	HLBO HARSH	EMPH 100D - A - -
1SCV*XD2E1	MISC SML DRY TRANSFORMER STDBY SOUTHERN TRANSFORMER 242.132	SXFR 15 KVA	AB-114-1	HLBO HARSH	EMPH 100D - A - -
1SCV*XD2F1	MISC SML DRY TRANSFORMER STDBY SOUTHERN TRANSFORMER 242.132	SXFR 15 KVA	AB-114-3	HLBO HARSH	EMPH 100D - A - -

MARK NO	EQUIPMENT DESCRIPTION VENDOR PANEL/RACK SPEC.NO	MAKE/MANUFACTURER MODEL/CATALOG NO. REMARKS	ENV. ZONE SUBMRG	ENVSCN ENVTYP	SFN1 SFN2 SFN3	OP TIME OC BASIS	QRN1 QRN2 QRN3
SCV STA CONT BUS (VITAL) - AC SUPPLY INCL TFMR & TRANS SW							
1SCV*XD2G1	MISC SML DRY TRANSFORMER STDBY SOUTHERN TRANSFORMER 242.132	SXFR 15 KVA	AB-114-1	HLBO HARSH	EMPH - -	100D A	- -
1SCV*XD2H1	MISC SML DRY TRANSFORMER STDBY SOUTHERN TRANSFORMER 242.132	SXFR 15 KVA	AB-114-3	HLBO HARSH	EMPH - -	100D A	- -
1SCV*XD2J1	MISC SML DRY TRANSFORMER STDBY SOUTHERN TRANSFORMER 242.132	SXFR 15 KVA	AB-141-1	HLBO HARSH	EMPH - -	100D A	- -
1SCV*XD2K1	MISC SML DRY TRANSFORMER STDBY SOUTHERN TRANSFORMER 242.132	SXFR 15 KVA	AB-141-2	HLBO HARSH	EMPH - -	100D A	- -
1SCV*XD2L1	MISC SML DRY TRANSFORMER STDBY SOUTHERN TRANSFORMER 242.132	SXFR 15 KVA	AB-141-1	HLBO HARSH	EMPH - -	100D A	- -
1SCV*XD8A1	MISC SML DRY TRANSFORMER STDBY SOUTHERN TRANSFORMER 242.132	SXFR 15 KVA	FB-148-1	NORM HARSH	EMPH - -	100D D	- -
1SCV*XD8B1	MISC SML DRY TRANSFORMER STDBY SOUTHERN TRANSFORMER 242.132	SXFR 15 KVA	CB-098-1	NORM HARSH	EMPH - -	N/A D	- -
SFC SPENT FUEL POOL COOLING AND CLEAN-UP							
1SFC*LT11A	LEVEL TRANSM & REMOTE SEAL ROSEMOUNT 247.481	RSMT 1153DB4PG,1159C10A	CT-G	HARSH		100D	
1SFC*LT11B	LEVEL TRANSM & REMOTE SEAL ROSEMOUNT 247.481	RSMT 1153DB4PG,1159C10A	CT-G	HARSH		100D	

MARK NO	EQUIPMENT DESCRIPTION VENDOR PANEL/RACK SPEC.NO	MAKE/MANUFACTURER MODEL/CATALOG NO. REMARKS	ENV. ZONE SUBNRG	ENVRGN ENVTYP	SFN1 OP TIME QRN1 SFN2 OC BASIS QRN2 SFN3 QRN3
SFC SPENT FUEL POOL COOLING AND CLEAN-UP					
1SFC*LT28A	LEVEL TRANSM & REMOTE SEAL ROSEMOUNT 247.481	RSMT 1153DB4PG,1159C10A	FB-113-1	HARSH	100D
1SFC*LT28B	LEVEL TRANSM & REMOTE SEAL ROSEMOUNT 247.481	RSMT 1153DB4PG,1159C10A	FB-113-1	HARSH	100D
1SFC*MOV119	MOTOR OPERATED VALVE VELAN 228.216	LMTQ SMB-0-15	FB-113-G	HLBO HARSH	SFC 1 H CISL A - -
1SFC*MOV120	MOTOR OPERATED VALVE VELAN 228.216	LMTQ SMB-0-25	AN-3	HLBI HARSH	SFC 1 H CISL A - -
1SFC*MOV121	MOTOR OPERATED VALVE VELAN 228.216	LMTQ SMB-00-15	FB-113-G	HLBO HARSH	SFC 1 H CISL A - -
1SFC*MOV122	MOTOR OPERATED VALVE VELAN 228.216	LMTQ SMB-0-25	FB-113-G	HLBO HARSH	SFC 1 H CISL A - -
1SFC*MOV139	MOTOR OPERATED VALVE VELAN 228.216	LMTQ SMB-00-15	AN-3	HLBI HARSH	SFC 1 H CISL A - -
1SFC*P1A	MOTOR FOR FUEL POOL COOL. PUMP GOULDS PUMPS, INC. 223.311	RELI NONE,UNIQUE	FB-070-1	FHA HARSH	SFC 6.5 H - A - -
1SFC*P1B	MOTOR FOR FUEL POOL COOL. PUMP GOULDS PUMPS, INC. 223.311	RELI NONE,UNIQUE	FB-070-1	FHA HARSH	SFC 6.5 H - A - -
1SFC*RTD7A	RTD PYCO 247.461	PYCO 122-4030-04	FB-070-1	FHA HARSH	FLCL 100D - A - -

MARK NO	EQUIPMENT DESCRIPTION VENDOR PANEL/RACK	SPEC.NO	MAKE/MANUFACTURER MODEL/CATALOG NO. REMARKS	ENV. ZONE SUBNRG	EMRGCN ENVTYP	SFN1 SFN2 SFN3	OP TIME QC BASIS	QRN1 QRN2 QRN3
SFC SPENT FUEL POOL COOLING AND CLEAN-UP								
1SFC*RTD7B	RTD PYCO	247.461	PYCO 122-4030-04	FB-070-1	FHA HARSH	FLCL - -	100D A -	
SSR REACTOR PLANT SAMPLING SYSTEM								
1SSR*SOV130	SOLENOID VALVE TARGET ROD	247.501	TRCP 1011105	CT-G	HARSH		1H	
1SSR*SOV131	SOLENOID VALVE TARGET ROCK	247.501	TRCP 1011105	AB-141-4	HARSH		1H	
1SSR*SOV133	SOLENOID VALVE TARGET ROCK	247.501	TRCP 77KK-003	AB-114-6	HARSH		1H	
1SSR*SOV134	SOLENOID VALVE TARGET ROCK	247.501	TRCP 77KK-003	AB-114-6	HARSH		1H	
1SSR*SOV139	SOLENOID VALVE TARGET ROCK	247.501	TRCP 10350[illegible]-1	AB-095-8	HARSH		1H	
1SSR*SOV140	SOLENOID VALVE TARGET ROCK	247.501	TRCP 77KK-003	AB-114-6	HARSH		1H	
SVV STEAM VENTS - SAFETY VALVES								
1SVV*MOV1A	MOTOR OPERATED VALVE VELAN	228.216	LMTQ SMB-000-2	AB-114-6	HLBO HARSH	ADS BCNT -	100D A -	
1SVV*MOV1B	MOTOR OPERATED VALVE VELAN	228.216	LMTQ SMB-000-2	AB-114-5	HLBO HARSH	ADS BCNT -	100D A -	

MARK NO	EQUIPMENT DESCRIPTION / VENDOR / PANEL/RACK	SPEC.NO	MAKE/MANUFACTURER / MODEL/CATALOG NO. / REMARKS	ENV. ZONE / SUBNRG	ENVRGCN / ENVTYP	SFN1 / SFN2 / SFN3	OP TIME / OC BASIS	QRN1 / QRN2 / QRN3
SVV STEAM VENTS - SAFETY VALVES								
1SVV*SOV20A	SOLENOID VALVE TARGET ROCK	247.501	TROP 1021010-3	AB-141-2	HARSH	1HR		
1SVV*SOV20B	SOLENOID VALVE TARGET ROCK	247.501	TROP 1021010-3	AB-141-3	HARSH	1HR		
1SVV*SOV21A	SOLENOID VALVE TARGET ROCK	247.501	TROP 1021010-3	AB-141-2	HARSH	1HR		
1SVV*SOV21B	SOLENOID VALVE TARGET ROCK	247.501	TROP 1021010-3	AB-141-3	HARSH	1HR		
1SVV*SOV22A	SOLENOID VALVE TARGET ROCK	247.501	TROP 1021010-3	AB-141-2	HARSH	1HR		
1SVV*SOV22B	SOLENOID VALVE TARGET ROCK	247.501	TROP 1021010-3	AB-141-3	HARSH	1HR		
1SVV*ZE10A	PRIMARY POSITION ELEMENT TECH FOR ENERGY CORP	247.529	REG.G.1.97	DW-1	HARSH		100D	
1SVV*ZE10B	PRIMARY POSITION ELEMENT TECH FOR ENERGY CORP	247.529	REG.G.1.97	DW-1	HARSH		100D	
1SVV*ZE10C	PRIMARY POSITION ELEMENT TECH FOR ENERGY CORP	247.529	REG.G.1.97	DW-1	HARSH		100D	
1SVV*ZE10D	PRIMARY POSITION ELEMENT TECH FOR ENERGY CORP	247.529	REG.G.1.97	DW-1	HARSH		100D	

MARK NO	EQUIPMENT DESCRIPTION		MAKE/MANUFACTURER	ENV. ZONE	ENVSCN	SEN1	OP TIME	QRN1
	VENDOR		MODEL/CATALOG NO.	SUBNRG	ENVTYP	SEN2	OC BASIS	QRN2
	PANEL/RACK	SPEC.NO	REMARKS			SEN3		QRN3
SVV STEAM VENTS - SAFETY VALVES								
1SVV*ZE10E	PRIMARY POSITION ELEMENT			DH-1				100D
	TECH FOR ENERGY CORP				HARSH			
		247.529	REG.G.1.97					
1SVV*ZE10F	PRIMARY POSITION ELEMENT			DH-1				100D
	TECH FOR ENERGY CORP				HARSH			
		247.529	REG.G.1.97					
1SVV*ZE10G	PRIMARY POSITION ELEMENT			DH-1				100D
	TECH FOR ENERGY CORP				HARSH			
		247.529	REG.G.1.97					
1SVV*ZE10H	PRIMARY POSITION ELEMENT			DH-1				100D
	TECH FOR ENERGY CORP				HARSH			
		247.529	REG.G.1.97					
1SVV*ZE10J	PRIMARY POSITION ELEMENT			DH-1				100D
	TECH FOR ENERGY CORP				HARSH			
		247.529	REG.G.1.97					
1SVV*ZE10K	PRIMARY POSITION ELEMENT			DH-1				100D
	TECH FOR ENERGY CORP				HARSH			
		247.529	REG.G.1.97					
1SVV*ZE10L	PRIMARY POSITION ELEMENT			DH-1				100D
	TECH FOR ENERGY CORP				HARSH			
		247.529	REG.G.1.97					
1SVV*ZE10M	PRIMARY POSITION ELEMENT			DH-1				100D
	TECH FOR ENERGY CORP				HARSH			
		247.529	REG.G.1.97					
1SVV*ZE10N	PRIMARY POSITION ELEMENT			DH-1				100D
	TECH FOR ENERGY CORP				HARSH			
		247.529	REG.G.1.97					
1SVV*ZE10P	PRIMARY POSITION ELEMENT			DH-1				100D
	TECH FOR ENERGY CORP				HARSH			
		247.529	REG.G.1.97					

RBS-ENVIRONMENTAL QUALIFICATION DATA MASTER LIST
SORTED BY MARK NO - HARSH ENVIRONMENT ONLY

MARK NO	EQUIPMENT DESCRIPTION / VENDOR / PANEL/RACK	SPEC.NO	MAKE/MANUFACTURER / MODEL/CATALOG NO. / REMARKS	ENV. ZONE / SUBNRG	EMRGCN / ENVTYP	SFN1 / SFN2 / SFN3	OP TIME / OC BASIS	QRN1 / QRN2 / QRN3
SVV STEAM VENTS - SAFETY VALVES								
1SVV*ZE10Q	PRIMARY POSITION ELEMENT TECH FOR ENERGY CORP	247.529	 REG.G.1.97	DH-1	 HARSH		100D	
1SVV*ZE10R	PRIMARY POSITION ELEMENT TECH FOR ENERGY CORP	247.529	 REG.G.1.97	DH-1	 HARSH		100D	
SWP SERVICE WATER								
1SWP*AOV51A	AIR OPERATED VALVE FISHER CONTROLS	247.491	FCTL,NMCO EA180	AB-141-3	HLBO HARSH	DISP - -	100D A -	
1SWP*AOV51B	AIR OPERATED VALVE FISHER CONTROLS	247.491	FCTL,NMCO EA180	AB-141-3	HLBO HARSH	DISP - -	100D A -	
1SWP*FT59A	FLOW TRANSMITTER ROSEMOUNT	247.481	RSMT 1153DB4	FB-070-2	NORM HARSH	DISP - -	100D D -	
1SWP*FT59B	FLOW TRANSMITTER ROSEMOUNT	247.481	RSMT 1153DB4	FB-070-2	NORM HARSH	DISP - -	100D D -	
1SWP*FT60A	FLOW TRANSMITTER ROSEMOUNT	247.481	RSMT 1153DB4 REG.G.1.97	FB-070-2	NORM HARSH	DISP - -	100D D -	
1SWP*FT60B	FLOW TRANSMITTER ROSEMOUNT	247.481	RSMT 1153DB4 REG.G.1.97	FB-070-2	NORM HARSH	DISP - -	100D D -	
1SWP*FT64A	FLOW TRANSMITTER ROSEMOUNT	247.481	RSMT 1153DB5	AB-095-2	 HARSH		100D	

MARK NO	EQUIPMENT DESCRIPTION VENDOR PANEL/RACK SPEC.NO	MAKE/MANUFACTURER MODEL/CATALOG NO. REMARKS	ENV. ZONE SUBNRG	EMRGCN ENVTYP	SFN1 SFN2 SFN3	OP TIME OC BASIS	QRN1 QRN2 QRN3
SWP SERVICE WATER							
1SWP*FT64B	FLOW TRANSMITTER ROSEMOUNT 247.481	RSMT 1153DB5	AB-095-2	HARSH		100D	
1SWP*MOV171	MOTOR OPERATED VALVE JAMESBURY 228.243	LMTQ SMB-000-2	PT-3	HLBO HARSH	SW ESA -	100D A -	
1SWP*MOV172	MOTOR OPERATED VALVE JAMESBURY 228.243	LMTQ SMB-000-2	PT-3	HLBO HARSH	SW ESA -	100D A -	
1SWP*MOV173	MOTOR OPERATED VALVE JAMESBURY 228.243	LMTQ SMB-000-2	PT-3	HLBO HARSH	SW ESA -	100D A -	
1SWP*MOV174	MOTOR OPERATED VALVE JAMESBURY 228.243	LMTQ SMB-000-2	PT-3	HLBO HARSH	SW ESA -	100D A -	
1SWP*MOV4A	MOTOR OPERATED VALVE VELAN 228.212	LMTQ SMB-0-15	CT-G	HLBI HARSH	BCNT - -	100D A -	
1SWP*MOV4B	MOTOR OPERATED VALVE VELAN 228.212	LMTQ SMB-0-15	CT-G	HLBI HARSH	BCNT - -	100D A -	
1SWP*MOV5A	MOTOR OPERATED VALVE VELAN 228.212	LMTQ SMB-0-15	CT-G	HLBI HARSH	BCNT - -	100D A -	
1SWP*MOV5B	MOTOR OPERATED VALVE VELAN 228.212	LMTQ SMB-0-15	CT-G	HLBI HARSH	BCNT - -	100D A -	
1SWP*MOV501A	MOTOR OPERATED VALVE JAMESBURY 228.243	LMTQ SMB-00-10	PT-2	HLBO HARSH	BCNT - -	100D A -	

MARK NO	EQUIPMENT DESCRIPTION VENDOR PANEL/RACK SPEC.NO	MAKE/MANUFACTURER MODEL/CATALOG NO. REMARKS	ENV. ZONE SUBHRG	ENVRGN ENVTYP	SFN1 OP TIME GRN1 SFN2 OC BASIS GRN2 SFN3 GRN3
SHP SERVICE WATER					
1SHP*MOV501B	MOTOR OPERATED VALVE JAMESBURY 228.243	LMTQ SMB-00-10	PT-2	HLBO HARSH	BCNT 100D - A - -
1SHP*MOV502A	MOTOR OPERATED VALVE VELAN 228.212	LMTQ SMB-00-10	CT-G	HLBI HARSH	HVR 100D - A - -
1SHP*MOV502B	MOTOR OPERATED VALVE VELAN 228.212	LMTQ SMB-00-10	CT-G	HLBI HARSH	HVR 100D - A - -
1SHP*MOV503A	MOTOR OPERATED VALVE VELAN 228.212	LMTQ SMB-00-10	CT-G	HLBI HARSH	HVR 100D - A - -
1SHP*MOV503B	MOTOR OPERATED VALVE VELAN 228.212	LMTQ SMB-00-10	CT-G	HLBI HARSH	HVR 100D - A - -
1SHP*MOV504A	MOTOR OPERATED VALVE VELAN 228.212	LMTQ SMB-0-15	AB-070-8	HLBO HARSH	SW 100D ESA A - -
1SHP*MOV504B	MOTOR OPERATED VALVE VELAN 228.212	LMTQ SMB-0-15	AB-070-7	HLBO HARSH	SW 100D ESA A - -
1SHP*MOV506A	MOTOR OPERATED VALVE JAMESBURY 228.243	LMTQ SMB-000-2	PT-4	ABNO HARSH	ESA 100D - D - -
1SHP*MOV506B	MOTOR OPERATED VALVE JAMESBURY 228.243	LMTQ SMB-000-2	PT-4	ABNO HARSH	ESA 100D - D - -
1SHP*MOV507A	MOTOR OPERATED VALVE VELAN 228.212	LMTQ SMB-0-15	AB-114-6	HLBO HARSH	CISL 100D - A - -

MARK NO	EQUIPMENT DESCRIPTION VENDOR PANEL/RACK SPEC.NO	MAKE/MANUFACTURER MODEL/CATALOG NO. REMARKS	ENV. ZONE SUBHRG	ENVRGN ENVTYP	SFN1 OP TIME QRN1 SFN2 OC BASIS QRN2 SFN3 QRN3
SWP SERVICE WATER					
1SWP*MOV507B	MOTOR OPERATED VALVE VELAN 228.212	LHTQ SMB-0-15	AB-141-3	HLBO HARSH	CISL 100D - A - -
1SWP*MOV510A	MOTOR OPERATED VALVE VELAN 228.212	LHTQ SMB-0-15	AB-070-8	HLBO HARSH	ESA 100D - A - -
1SWP*MOV510B	MOTOR OPERATED VALVE VELAN 228.212	LHTQ SMB-0-15	AB-070-7	HLBO HARSH	ESA 100D - A - -
1SWP*MOV511A	MOTOR OPERATED VALVE JAMESBURY 228.243	LHTQ SMB-00-10	PT-2	HLBO HARSH	BCNT 100D - A - -
1SWP*MOV511B	MOTOR OPERATED VALVE JAMESBURY 228.243	LHTQ SMB-00-10	PT-2	HLBO HARSH	BCNT 100D - A - -
1SWP*MOV55A	MOTOR OPERATED VALVE JAMESBURY 228.243	LHTQ SMB-00-25	PT-1	NORM HARSH	SW 1HR ESA D - -
1SWP*MOV55B	MOTOR OPERATED VALVE JAMESBURY 228.243	LHTQ SMB-00-25	PT-1	NORM HARSH	SW 1HR ESA D - -
1SWP*MOV57A	MOTOR OPERATED VALVE JAMESBURY 228.243	LHTQ SMB-00-25	PT-3	NORM HARSH	BCNT 1HR - D - -
1SWP*MOV57B	MOTOR OPERATED VALVE JAMESBURY 228.243	LHTQ SMB-00-25	PT-3	NORM HARSH	BCNT 1HR - D - -
1SWP*MOV61A	MOTOR OPERATED VALVE JAMESBURY 228.243	LHTQ SMB-00-25	PT-1	NORM HARSH	SW 100D ESA D - -

MARK NO	EQUIPMENT DESCRIPTION / VENDOR / PANEL/RACK	SPEC.NO	MAKE/MANUFACTURER / MODEL/CATALOG NO. / REMARKS	ENV. ZONE / SUBNRG	EMRGCN / ENVTYP	SFN1 / SFN2 / SFN3	OP TIME / OC BASIS	QRN1 / QRN2 / QRN3
SWP SERVICE WATER								
1SWP*MOV61B	MOTOR OPERATED VALVE JAMESBURY	228.243	LMTQ SMB-00-25	PT-1	NORM HARSH	SW ESA -	100D D -	
1SWP*MOV73A	MOTOR OPERATED VALVE VELAN	228.212	LMTQ SMB-000-5	AB-114-5	HARSH		100D	
1SWP*MOV73B	MOTOR OPERATED VALVE VELAN	228.212	LMTQ SMB-000-5	AB-114-5	HARSH		100D	
1SWP*MOV74A	MOTOR OPERATED VALVE VELAN	228.212	LMTQ SMB-000-5	AB-114-5	HARSH		100D	
1SWP*MOV74B	MOTOR OPERATED VALVE VELAN	228.212	LMTQ SMB-000-5	AB-114-5	HARSH		100D	
1SWP*MOV77A	MOTOR OPERATED VALVE JAMESBURY	228.243	LMTQ SMB-000-2	PT-4	ABNO HARSH	SW ESA -	100D D -	
1SWP*MOV77B	MOTOR OPERATED VALVE JAMESBURY	228.243	LMTQ SMB-000-2	PT-4	ABNO HARSH	SW ESA -	100D D -	
1SWP*MOV81A	MOTOR OPERATED VALVE VELAN	228.212	LMTQ SMB-0-15	AB-114-6	HLBO HARSH	CISL - -	100D A -	
1SWP*MOV81B	MOTOR OPERATED VALVE VELAN	228.212	LMTQ SMB-0-15	AB-141-3	HLBO HARSH	CISL - -	100D A -	
1SWP*MOV96A	MOTOR OPERATED VALVE JAMESBURY	228.243	LMTQ SMB-00-25	PT-3	NORM HARSH	BCNT - -	1HR D -	

MARK NO	EQUIPMENT DESCRIPTION VENDOR PANEL/RACK	SPEC.NO	MAKE/MANUFACTURER MODEL/CATALOG NO. REMARKS	ENV. ZONE SUBMRG	ENRGCN ENVTYP	SFN1 SFN2 SFN3	OP TIME QC BASIS	QRN1 QRN2 QRN3
SWP SERVICE WATER								
1SWP*MOV96B	MOTOR OPERATED VALVE JAMESBURY	228.243	LMTQ SMB-00-25	PT-3	NORM HARSH	BCNT - -	1HR D	-
1SWP*PT21A	PRESSURE TRANSMITTER ROSEMOUNT 1JPB*RAK2	247.481	RSMT 1153GB7	PT-3	NORM HARSH	SW BCNT -	100D A	-
1SWP*PT21B	PRESSURE TRANSMITTER ROSEMOUNT 1JPB*RAK1	247.481	RSMT 1153GB7	PT-3	NORM HARSH	SW BCNT -	100D A	-
1SWP*PT21C	PRESSURE TRANSMITTER ROSEMOUNT 1JPB*RAK2	247.481	RSMT 1153GB7	PT-3	NORM HARSH	SW BCNT -	100D A	-
1SWP*PT21D	PRESSURE TRANSMITTER ROSEMOUNT 1JPB*RAK1	247.481	RSMT 1153GB7	PT-3	NORM HARSH	SW BCNT -	100D A	-
1SWP*PT21E	PRESSURE TRANSMITTER ROSEMOUNT 1JPB*RAK2	247.481	RSMT 1153GB7	PT-3	NORM HARSH	SW BCNT -	100D A	-
1SWP*PT21F	PRESSURE TRANSMITTER ROSEMOUNT 1JPB*RAK1	247.481	RSMT 1153GB7	PT-3	NORM HARSH	SW BCNT -	100D A	-
1SWP*PT21G	PRESSURE TRANSMITTER ROSEMOUNT 1JPB*RAK2	247.481	RSMT 1153GB7	PT-3	NORM HARSH	SW BCNT -	100D A	-
1SWP*PT21H	PRESSURE TRANSMITTER ROSEMOUNT 1JPB*RAK1	247.481	RSMT 1153GB7	PT-3	NORM HARSH	SW BCNT -	100D A	-
1SWP*SOV51A	SOLENOID VALVE FISHER CONTROLS	247.491	ASCO DBQ,NP8320	AB-141-2	HLBO HARSH	SW BCNT LCS	100D A	-

RBS-ENVIRONMENTAL QUALIFICATION DATA MASTER LIST
SORTED BY MARK NO - HARSH ENVIRONMENT ONLY

MARK NO	EQUIPMENT DESCRIPTION / VENDOR / PANEL/RACK	SPEC.NO	MAKE/MANUFACTURER / MODEL/CATALOG NO. / REMARKS	ENV. ZONE / SUBHRG	EHRGCN / ENVTYP	SFN1 / SFN2 / SFN3	OP TIME / QC BASIS	QRN1 / QRN2 / QRN3
SHP SERVICE WATER								
1SHP*SOV51B	SOLENOID VALVE FISHER CONTROLS	247.491	ASCO DBQ,NP8320	AB-141-3	HLBO HARSH	SH BCNT LCS	100D A	- -
WCS REACTOR WATER CLEAN-UP								
1WCS*MOV111	MOTOR OPERATED VALVE VELAN	228.212	LMTQ SMB-0-75	AB-114-2	HLBO HARSH	CISL LCS -	1HR A	- -
1WCS*MOV172	MOTOR OPERATED VALVE VELAN	228.212	LMTQ SMB-000-5	AB-114-2	HLBO HARSH	CISL - -	1HR A	- -
1WCS*MOV173	MOTOR OPERATED VALVE VELAN	228.212	LMTQ SMB-000-5	AB-114-2	HLBO HARSH	LCS - -	1HR A	- -
1WCS*MOV178	MOTOR OPERATED VALVE VELAN	228.212	LMTQ SMB-000-5	CT-7	HLBI HARSH	CISL - -	1HR A	- -

APPENDIX A.2

SAFETY-RELATED ELECTRICAL EQUIPMENT - NSSS

(LATER)

APPENDIX A.3

SAFETY-RELATED MECHANICAL EQUIPMENT - BOP

(LATER)

APPENDIX A.4

SAFETY-RELATED MECHANICAL EQUIPMENT - NSSS

(LATER)

APPENDIX B

SYSTEM COMPONENT EVALUATION WORK (SCEW) SHEETS

(LATER)