Unresolved Safety Issue (USI) A-46

Seismic Evaluation Report

(Attachment 1)

Davis-Besse Nuclear Power Station

Toledo Edison

August, 1995

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TABLE OF CONTENTS

TABLE OF CONTENTS
(Continued)

TABLE OF CONTENTS
(Continued)

LIST OF TABLES

LIST OF DRAWINGS

Section 1

INTRODUCTION

1.1 PURPOSE

The purpose of this report is to document the seismic evaluations performed to address Unresolved Safety Issue (USI) A-46 at the Davis-Besse Nuclear Power Station, using the Generic Implementation Procedure (GIP) developed by the Seismic Qualification Utility Group (SQUG). This report, Seismic Evaluation Report (Attachment 1), documents the development of the SQUG equipment list, and the results of the seismic evaluations. The relay evaluations associated with the resolution to USI A-46 are documented in report, Relay Evaluation Report, (Attachment 2).

1.2 PLANT DESCRIPTION

Davis-Besse Nuclear Power Station (DBNPS) consists of a single unit, 925MW pressurized water reactor located in Oak Harbor, Ohio. The Nuclear Steam Supply System was designed by Babcock and Wilcox, and Bechtel Power Corporation designed the balance of plant and was the construction manager. DBNPS began commercial operation in July, 1978. Toledo Edison, a subsidiary of Centerior Energy, is partial owner of and is responsible for the operation of the DBNPS.

1.3 BACKGROUND

Because of the extent of changes in the requirements for seismic qualification of equipment over the years, the U.S. Nuclear Regulatory Commission (NRC) initiated USI A-46, "Seismic Qualification of Equipment in Operating Nuclear Plants," in December 1980. The purpose of USI A-46 is to verify the seismic adequacy of essential equipment in operating plants which had not been qualified in accordance with more recent criteria.

In 1982, SQUG was formed to develop a practical approach for seismic qualification of equipment in operating plants. The approach developed by SQUG was to use experience with the performance of power plant and industrial equipment in actual earthquakes as the primary basis for evaluating the seismic ruggedness and functionality of essential equipment in nuclear power plants. In 1983, the NRC issued NUREG 1018 which includes a general endorsement of the use of experience data for verification of the seismic adequacy of equipment in nuclear plants.

In early 1987, the NRC issued Generic Letter (GL) 87-02 to owners of operating nuclear plants which were licensed prior to development of modern seismic qualification standards. The recipients of GL 87-02 are referred to as A-46 plants and include the Davis-Besse Nuclear Power Station. Essentially, all owners of A-46 plants, including Toledo Edison, are SQUG members. GL 87-02 requires owners to take action to verify the seismic adequacy of important equipment in their plants. The SQUG approach embodied in the Generic Implementation

Procedure (GIP) is explicitly recognized by the NRC as the preferred method for accomplishing this objective.

In 1992, the NRC issued Supplement No. 1 to GL 87-02 (Reference 2) which transmitted the Supplemental Safety Evaluation Report No. 2 on SQUG GIP, Revision 2, as corrected on February 14, 1992 (Reference 1). References 1 and 2 are the basis for the seismic evaluation described in this report.

In Reference 3, Toledo Edison described their approach for resolving USI A-46. This approach was accepted by the NRC in Reference 4.

1.4 REPORT ORGANIZATION

The remaining sections of this report are organized in accordance with Section II.9.4 of the GIP. These sections include the following:

- Section 2, "Safe Shutdown Earthquake": The Davis-Besse Ground Response Spectra (GRS) and In-Structure Response Spectra (IRS) are described. The bases for determining how seismic demand is determined for each equipment are provided in Section 5, and documented on the Screening Verification Data Sheets (SVDS) forms in Appendix D of this report.

- Section 3, "Project Team" : The Davis-Besse project team is discussed. Resumes for the Seismic Capability Engineers (SCE) are included in Appendix A of this report.

- Section 4, "Safe Shutdown Equipment List (SSEL)": This section contains information from the SSEL report recommended for submittal to the NRC, per Section II.9.2 of the GIP. Descriptions of the safe shutdown path selection, plant operation procedures used, and Toledo Edison Operations Department review of the SSEL are discussed. Lists of equipment on the Composite SSEL and Seismic Review SSEL are included in Appendices B and C of this report. The list of equipment included on the Relay Review SSEL is included in the Relay Report (Reference 5).

- Section 5, "Mechanical and Electrical Equipment Review": Screening Verification and Walkdown results for mechanical and electrical equipment are discussed, in addition to the SVDS forms provided in Appendix D. Instances in which the intent of a caveat is met without meeting the specific wording of the caveat rule are identified. A summary of outliers and their resolution is provided.

- Section 6, "Tanks and Heat Exchanger Review": Results of the tanks and heat exchangers review are discussed, including instances in which the intent, but not the letter, of a caveat is met. A summary of outliers and their resolution is provided.

- Section 7, "Cable and Conduit Raceway Review": Results of the raceway review, including bounding samples and outliers, are summarized.

- Section 8, "Plan for Addressing Unresolved Outliers": The plan and schedule for addressing remaining unresolved outliers are discussed.

- Section 9, "Significant or Programmatic Deviations from the GIP": A statement is made that no significant or programmatic deviations from the GIP are made at Davis-Besse.

- Section 10, "Third-Party Audit Summary": The Third-Party Audits are summarized, including resolution of recommendations made by the Auditors during the initial Audit. The Audit reports are included in Appendix E.

Section 2

SAFE SHUTDOWN EARTHQUAKE

2.1 GROUND RESPONSE SPECTRA

The maximum horizontal ground acceleration for the Maximum Probable Earthquake (SSE) at Davis-Besse is 0.15g. The design response spectra were developed from the ground motions using Professor N. M. Newmark's suggested method. The East-West accelerogram of the Helena, Montana earthquake of October 31, 1935 was used as the basis for development of the acceleration time-history for the design earthquake. The Helena record was modified to obtain an acceleration time-history having the required duration, maximum ground accelerations and the resulting response spectra with values generally greater than the Newmark design spectra.

Davis-Besse's ground response spectra is completely enveloped by the SQUG Bounding Spectrum at all frequencies, see Table 2-1.

2.2 IN-STRUCTURE RESPONSE SPECTRA

The following is a brief description of the three different in-structure response spectra used in the resolution to A-46.

2.2.1 Conservative, Design In-structure Response Spectra

Bechtel Power Corporation performed the original (licensing basis) seismic analysis. The design of the Seismic Category I structures has been based on the techniques of TID 7024 and the applicable sections of BC-TOP-4A. Lumped mass mathematical models were used to analyze the structures applying both time-history and spectral response techniques. Using the time-history technique, floor response spectra were developed at each floor level for three directions of earthquake excitation. The floor spectra were used to obtain seismic loads for the design of systems, subsystems, and components that are uncoupled with the building walls or slabs.

The NRC has reviewed and evaluated this in-structure response spectra (reference 2) and has determined that it is a "Conservative, design" spectra.

2.2.2 Realistic, Median-Centered In-structure Response Spectra

EQE International was contracted by Toledo Edison to generate in-structure response spectra for use in the resolution of seismic IPEEE and USI A-46. The IPEEE in-structure response spectra were generated for a Review Level Earthquake with a NUREG CR-0098 median rock spectral shape anchored to a 0.30g peak ground acceleration (PGA). Throughout the analysis process, analysis parameters such as soil properties, structural properties and analysis methodologies were chosen to reflect a median centered analysis philosophy. To perform a median centered analysis, soil-structure interaction (SSI) was also considered.

The best estimate structural models used for this analysis were based on the mathematical models used in the licensed based seismic analysis. These original models represent the structures as sets of two planar (two dimensional) models, and neglect the effects of coupling between the two horizontal directions and eccentricities in the structures. In order to better represent the dynamic behavior of the structures, three dimensional mathematical models of the structures were developed. These 3-D models were based on the licensing based 2-D models, supporting calculations to those models, and as-built drawings of the different structures. The raw spectra were then broadened +/- 15 %. The broadened spectra for each mass point degree of freedom were then enveloped for all three soil conditions.

The IPEEE in-structure response spectra were then scaled following the guidance of Section 4 of the GIP in order to create the A-46 in-structure response spectra. Four options are presented in the GIP for the definition of the ground response spectra with option B being selected. The ground motion, used to calculate the scale factor, was a NUREG CR-0098 84% non-exceedance probability (NEP) shape anchored to the site safe shutdown earthquake (SSE) peak ground acceleration of 0.15g. The value used for the scale factor was 0.697. The same scale factor was applied to all IPEEE spectral in order to develop the A-46 set of spectra.

Based on the criteria identified in the GIP, the above analysis can be classified as a Realistic, Median-Centered In-Structure Response Spectra.

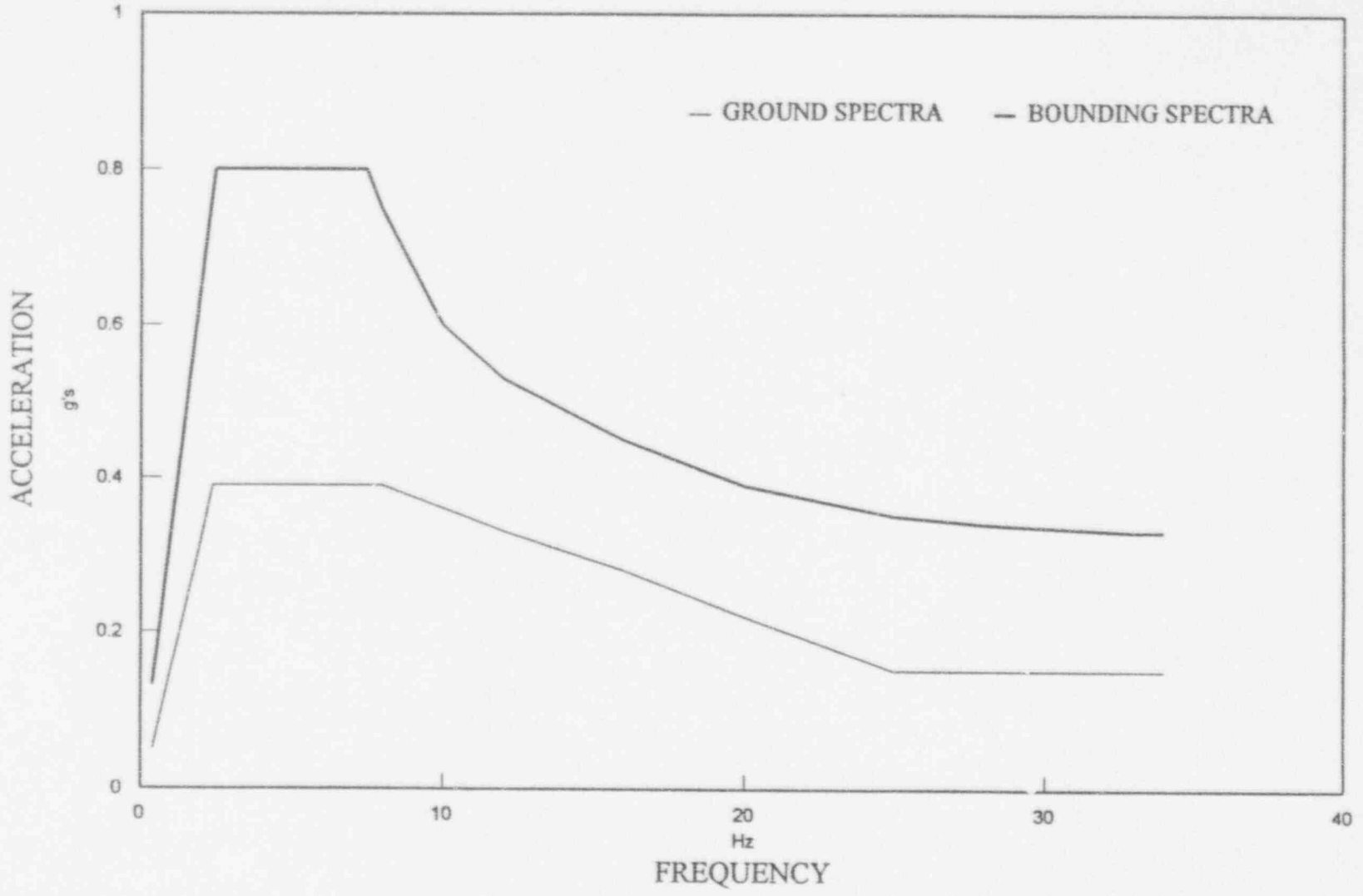
2.2.3 Conservative Design USI A-46 Spectra

EQE International was contracted by Toledo Edison to generate new conservative design spectra for the Auxiliary building areas 7 and 8 as an alternative method of determining the USI A-46 seismic demand.

The new conservative response spectra conforms to all applicable portions of the Standard Review Plan . A RG 1.60 shaped freefield ground response spectrum anchored to the site SSE peak ground acceleration (0.15g) was used. Modal Damping values used in the analysis were acceptable per RG 1.61 (7% damping for reinforced concrete structures). The responses for each degree of freedom were then enveloped for the three soil conditions, and the resulting spectra broadened by +/- 15%.

Based on the criteria identified in the GIP, the above analysis can be classified as a "Conservative, Design" In-Structure Response Spectra.

TABLE 2-1



SQUG BOUNDING SPECTRA vs. DAVIS-BESSE GROUND RESPONSE SPECTRA

Section 3

PROJECT TEAM

It was identified in the very early stages of planning for the SQUG project, that in would be in the best interest of Toledo Edison that as much of the work associated with the resolution of USI A-46 be performed in-house. The knowledge and experience gained through such a program would have long term benefits to Davis-Besse.

The Toledo Edison Seismic Capability Engineers were supplemented during the 8th and 9th Refueling Outages by qualified EQE International consultants.

3.1 UTILITY REPRESENTATIVES

3.1.1 The Safe Shutdown Equipment List (SSEL) was developed in house by Davis-Besse's Nuclear Engineering staff using the Operation Schematics and knowledge of the plant. The lead developer of the SSEL has had extensive operations experience (including Shift Supervisor) at Davis-Besse. In addition, the individuals responsible for the development of the SSEL attended the SQUG sponsored Safe Shutdown Equipment Selection training.

3.1.2 The relay review and evaluation was performed by two experienced Toledo Edison engineers. These individuals exceed the minimum requirements of Section II.2.1.3 of the GIP for the Lead Relay Reviewer. The résumés for the Lead Relay Reviewers can be found in Attachment 2, Relay Evaluation Report.

3.1.3 The SSEL was reviewed and accepted by operations representatives using the requirements identified in Section II.2.3 of the GIP. In addition, the equipment identified on the SSEL was used as a basis for training the site operators on the simulator for a seismic scenario and served as a confirmation to the ability of the SSEL to provide an adequate shutdown path.

3.1.4 EQE International developed the SQUG response spectra by scaling the IPEEE Review Level Earthquake for USI A-46 applications. In addition, they developed a conservative design spectra for a few areas of the plant.

3.2 SEISMIC CAPABILITY ENGINEERS

The Seismic Capability Engineers (SCEs) are the individuals responsible for implementing the seismic evaluations for the equipment on the Seismic Review Safe Shutdown Equipment List (Appendix C). These SCEs have acquired many years of formal and practical experience in the field of structural and seismic design and analysis. These individuals exceed the minimum qualification requirements identified in Section II.2.1.2 of the GIP. The résumés for all of the Seismic Capability Engineers (SCEs) along with their SQUG training certificates are included in Appendix A.

The following is a list of the on-site Toledo Edison individuals that comprised the seismic walkdown teams:
Jagdish C. Arora PE, Richard N. Bair PE, Thomas E. Dabrowiak PE, Jon G. Hook PE, Steven J. Osting PE, and Scott R. Saunders.

The following is a list of individuals supplied by EQE International that were used to supplement our in-house teams at various times during the 8th and 9th Refueling Outages:
James R. Disser, John O. Dizon PE, Steven J. Eder PE, Gayle S. Johnson PE, Omar Khemici PE, and Basilio Sumodobila PE

The SCEs were rotated amongst the different Seismic Review Teams to take advantage of their individual expertise. Many items were walked down with as many as 4 or 5 SCE. This was done early on in the walkdown phase to acclimate the team members as well as providing for good team interaction.

3.3 THIRD-PARTY AUDITORS

During the early stages of the walkdown program, two informal reviews were conducted by outside contractors. The purpose of these informal reviews was to assess the effectiveness of the walkdown teams in meeting the GIP requirements. In addition, two formal Third-Party Audits were conducted, the first was mid-way through the program and a final audit at the end of the program.

Dr. John D. Stevenson of Stevenson & Associates performed a formal audit midway through the program at the request of Davis-Besse's Q.A. Department. Dr. Stevenson has approximately 30 years of experience in the seismic area, has been a contributor and reviewer of the of the SQUG program and has performed SQUG walkdowns and Third-Party Audits at other nuclear facilities. Dr. Stevenson is an industry recognized expert in the seismic field.

Dr. James J. Johnson of EQE International performed his Third-Party Audit at the conclusion of the walkdown phase of the program. Dr. Johnson has over 20 years experience in the development, implementation and teaching of seismic issues. Dr. Johnson has played a significant role in the development of general and plant specific seismic evaluation procedures, including the SQUG program. Dr. Johnson has performed Third-Party Audits at other nuclear facilities. Dr. Johnson is an industry recognized expert in the seismic field.

The results of Drs. Stevenson's and Johnson's review can be found in Section 10, Third-Party Audit Summary.

Section 4

SAFE SHUTDOWN EQUIPMENT LIST

4.1 SAFE SHUTDOWN EQUIPMENT LIST PATH SELECTION

The Davis-Besse Safe Shutdown Equipment List (SSEL) was prepared in accordance with Section II.3 and Appendix A of the Generic Implementation Procedure (GIP) Revision 2, February 1992. The SSEL consists of components and equipment lineups which can be used following a Safe Shutdown Earthquake (SSE) to bring the plant from a normal operating condition to achieve and maintain a safe shutdown condition. The criteria used in the selection of the equipment is that the plant should be capable of being brought from normal operating conditions to hot shutdown condition during the first 72 hours following a SSE. Hot Shutdown is defined within the Technical Specifications as being k_{eff} less than 0.99 and average coolant temperature within the temperature range 200-280°F. The four safe shutdown functions of concern are reactor reactivity control, reactor coolant inventory control, reactor coolant pressure control, and decay heat removal.

The assumptions used in the identification of safe shutdown paths and required equipment are as follows:

1. Offsite power may not be available for up to 72 hours following the earthquake. The possibility of not losing offsite power is also considered where adverse effects may occur.

2. No other extraordinary events or accidents (e.g., LOCAs, HELBs, fire, floods, extreme winds, sabotage) are postulated to occur other than the SSE and loss of offsite power.

3. If achieving and maintaining safe shutdown is dependent on a single item of equipment whose failure to perform its active function, either due to seismic loads or random failure, would prevent accomplishment of any of the four essential safe shutdown functions, an alternative method to provide safe shutdown by use of a different path or a different item of equipment will be identified for seismic evaluation. An equipment failure is defined as the failure of the active functional capability of the equipment, not necessarily a failure of its structural integrity.

4. Where operator actions are relied upon to achieve and maintain safe shutdown, the selection of safe shutdown paths and equipment are based on normal and emergency operating procedures. Where necessary, additional guidance is provided in these procedures.

5. The equipment identified for seismic evaluation includes the following:

    a. Active mechanical and electrical equipment which operates or changes state to accomplish a safe shutdown function.

b. Active equipment in systems which support the operation of identified safe shutdown equipment; e.g., power supplies, control systems, cooling systems, lubrication systems.

c. Instrumentation needed to confirm that the four safe shutdown functions have been achieved and are being maintained. Instrumentation needed to operate the safe shutdown equipment.

d. Tanks and heat exchangers utilized within the identified safe shutdown paths.

e. Cable and conduit raceways which support electrical cable for the selected safe shutdown equipment.

6. The following equipment types were not identified for seismic evaluation.

a. Equipment which could possibly be operational, but is not necessary to operate due to failing in a desired position or state. This type of equipment is defined as passive for the purposes of this evaluation.

b. Passive equipment such as piping, filters, and electrical penetration assemblies.

c. Self-actuated check valves and manual valves.

d. Major items of equipment in the nuclear steam supply system, their supports, and components mounted on or within this equipment such as the reactor pressure vessel, reactor fuel assemblies, reactor internals, control rods and their drive mechanisms, reactor coolant pumps, steam generators, pressurizer, and reactor coolant piping.

7. The following types of equipment are identified for use in the relay evaluation procedure described in GIP Section 6:

a. Active, electrically-powered or controlled equipment.

b. Electrically-powered or controlled equipment considered passive but in which spurious operation due to relay chatter could adversely affect safe shutdown of the plant.

4.1.1 DISCUSSION OF SAFE SHUTDOWN FUNCTIONS AND SYSTEMS

Consistent with the preferred normal plant line up for the makeup system, plant train 2 equipment has been chosen as the primary safe shutdown path for the SQUG project. This choice was made because it was deemed less burdensome to Plant Operations rather than the use of alternative/standby systems. Also, the GIP requires the use of equipment in the normal mode, for the same reasons, where possible.

I. Reactivity Control

A. Safe Shutdown Function: Reactor Reactivity Control

B. Paths Available

1. Control Rod insertion for short term reactivity control.

2. Boron addition to the RCS for long term reactivity control using both borated water storage tank (BWST) and boric acid addition tanks (BAATs).

C. Primary/Backup Path Selection

1. Short Term Reactivity Control

The following major components comprise the equipment necessary for the primary and backup paths for short term reactivity control. Further details are listed on the SQUG drawings and SSEL.

a. Primary path: Manual reactor trip using one of the two manual reactor trip push-buttons

b. Backup path: Manual reactor trip using the other of the two manual reactor trip push-buttons

2. Long Term Reactivity Control

The following major components comprise the equipment necessary for the primary and backup paths for long term reactivity control. Further details are shown on the SQUG drawings and SSEL.

a. Primary path

i. BWST, Makeup Tank, and both BAATs

ii. Makeup Pump 2, Boric Acid Pump 2, Normal Makeup Injection Line

b. Backup path

i. BWST, Makeup Tank, and both BAATs

ii. Makeup Pump 1, Boric Acid Pump 1, Alternate Makeup Injection Line

D. Description of Primary and Backup Paths

As outlined above, short term reactivity control requirements are met by control rod insertion. This is accomplished via manual reactor trip utilizing HS-NI46 as the primary switch, and HS-NI45 as the backup switch.

Long term reactivity control requirements during plant cooldown are met via boric acid addition to the reactor coolant system (RCS). The Davis-Besse SSEL includes equipment required to place decay heat system in operation. As such, cold shutdown RCS boron concentrations are required. Accordingly, the makeup tank, boric acid pumps, and BAATs are required for long term reactivity control since the RCS contraction volume alone is insufficient in attaining adequate cold shutdown boron concentrations when borating solely from the BWST. It would be possible to borate solely from the BWST if a feed and bleed operation was established, but this would require undesirable bleed paths such as the PORV, or adding a significant number of non-seismic components to support the RCS letdown flow path. In addition, to support operation of the letdown line would also require component cooling water (CCW) to the letdown coolers and a flow path to the clean waste receiver tanks (CWRTs). Both BAATs are included in both the primary and backup paths because they are considered a common source during normal plant operations. Boron samples from the RCS will not be required to verify boric acid additions since the batch addition method can be confirmed using makeup tank and pressurizer level indications. Dilution sources for the addition of boric acid are not considered to be credible since these flow paths are normally isolated by manual valves and the makeup pumps will be taking their suction directly from either the BWST or the makeup tank.

E. Required Instrumentation

1. Short Term Reactivity Control

Primary instruments for verification of short term reactivity control include monitoring core neutron flux using channel 2 source range nuclear instrumentation.

Backup instruments for verification of short term reactivity control include monitoring core neutron flux using channel 1 source range nuclear instrumentation.

2. Long Term Reactivity Control

Primary instruments for verification of long term reactivity control will include channel 2 source range nuclear instrumentation, zero percent zone reference lights for all control rods, and temperature monitoring of RCS loop 2 cold leg temperature.

Backup instruments for verification of long term reactivity control will include channel 1 source range nuclear instrumentation, in limit zone reference lights for all control rods, and temperature monitoring of RCS loop 1 cold leg temperature. Instrumentation for verification of boric acid additions will include the makeup tank level and pressurizer level indications. BAAT level indication is not required because boric acid additions may be confirmed by an increasing level in the makeup tank during the batch addition and BAAT level may be estimated using the method described in Abnormal Procedure DB-OP-02528, Loss of Instrument Air, Rev. 2.

II. Inventory Control

A. Safe Shutdown Function: Reactor Coolant System Inventory Control

B. Paths Available

Inventory control is maintained by isolation of all non-essential discharge paths from the RCS to conserve RCS inventory. Additionally, water is added from the BWST with the makeup pumps to account for normal RCS leakage and the RCS contraction volume during RCS cooldown.

C. Primary/Backup Path Selection

The following major components comprise the equipment necessary for the primary and backup paths for the inventory control function. Further details are shown on the SQUG drawings and SSEL.

1. Primary path

a. BWST and Makeup Tank

b. Makeup Pump 2, Normal Makeup Injection Line, and Seal Injection (Valves MU-66A through D held open via air volume tanks)

c. Isolation of letdown will be accomplished by shutting valve MU-2B. Seal return will be maintained for the case in which offsite power is not lost, however, for a loss of offsite power, seal return may be isolated using the manual hand wheel to close MU-38.

2. Backup path

   a. BWST and Makeup Tank

   b. Makeup Pump 1, Alternate Makeup Injection Line, Seal injection (Valves MU-66A through D manually opened)

   c. Isolation of letdown will be accomplished by shutting valves MU-1A and MU-1B. Seal return will be maintained for the case in which offsite power is not lost, however, for a loss of offsite power, seal return may be isolated using the control room switch to close MU-38.

D. Description of Primary and Backup Paths

The RCS pressure boundary is made up primarily of passive components with the exception of the letdown and seal return paths. Seal injection and seal return are included in the SSEL for reactor coolant pump (RCP) seal integrity, which is considered part of the RCS pressure boundary. Assuming a loss of offsite power, seal return is desired, but not required if seal injection is maintained. However, in considering the effects of not losing offsite power, seal return is included in the SSEL to protect the running RCP. Since the makeup pump will primarily be running with suction from the BWST, it is judged that CCW will not be required for the seal return coolers. In defining the normal plant SQUG lineup, makeup pump 2 was assumed to be the initially running pump. Makeup pump recirculation flow, when mixed with the seal return flow, will provide sufficient cooling such that high makeup tank temperature will not be a problem. Makeup pump room cooling is not necessary for only one running makeup pump.

E. Required Instrumentation

Primary instrumentation for verification of inventory control will include both pressurizer level and makeup tank level indications powered by train 2 power supplies.

Backup instrumentation for verification of inventory control will include both pressurizer level and makeup tank level indications powered by train 1 power supplies.

III. Pressure Control

A. Safe Shutdown Function: Reactor Coolant System Pressure Control

B. Paths Available

1. The pressurizer heaters are used, as necessary, to raise saturation pressure within the pressurizer, and hence the RCS, by heat addition. Pressure reduction may be accomplished by use of the PORV in venting steam to the pressurizer quench tank.

RCS overpressure protection is also afforded by means of the pressurizer code safety valves which vent to the containment atmosphere.

2. Low temperature overpressure (LTOP) protection is satisfied by means of relief valve DH-4849. Valves DH-11 and DH-12 with the associated RCS pressure and pressurizer heater interlocks are required in establishing the necessary flow path with the RCS.

3. Containment air coolers and their associated service water heat exchangers are required for containment heat removal.

C. Primary/Backup Path Selection

The following major components comprise the equipment necessary for the primary and backup paths for the pressure control function. Further details are shown on the SQUG drawings and SSEL.

1. Primary path

   a. Pressurizer Quench Tank

   b. Pressurizer Heater Essential Bank 2, Quench Tank Relief Valve RC-207, Pressurizer Code Safety Valve RC-13A, Relief Valve DH-4849 for LTOP protection, and CAC 1-2

2. Backup path

   a. Pressurizer Quench Tank

   b. Pressurizer Heater Essential Bank 1, Pilot Operated Relief Valve (PORV), Pressurizer Quench Tank Rupture Disk PSE-226, Pressurizer Code Safety Valve RC-13B, Manual Use of PORV for LTOP Protection, and CAC 1-1

D. Description of Primary and Backup Paths

Maintaining temperature within the allowable pressure and temperature operating band will be accomplished using a combination of pressurizer heaters, the pressurizer vent line to the quench tank, the PORV (RC-2A), and the pressurizer code safety valves (RC-13A and RC-13B). The water level in the pressurizer will be maintained above the pressurizer heaters by means of equipment chosen for the RCS Inventory Control function. Additionally, LTOP protection for the RCS when below 280°F will be provided by an open flow path to the decay heat removal (DHR) system suction relief valve (DH-4849). The backup method for providing LTOP protection will be by manually controlling use of the PORV. The primary path for LTOP protection may require electrically cross-connecting MCC F11A and MCC E11B in order to remotely open valve DH-12. Energy released from the quench tank to containment through the

quench tank relief valve (RC-207) or rupture disk (PSE-226) will be removed by means of the containment air coolers (CACs) which are cooled by the service water system. Energy removal from containment may be required if entry into containment is performed to manually open DH-21 and DH-23 for the backup method of providing a Decay Heat Removal flow path. The containment energy removal equipment is arbitrarily included in the RCS Pressure Control function because this function implies a possible energy release from the RCS into containment.

E. Required Instrumentation

Primary instruments for verification of pressure control include indications for the following parameters: channel 2 pressurizer level, channel 2 RCS pressure, channel 2 RCS saturation temperature, RCS loop 2 cold leg temperature, CAC 1-2 suction temperature, and SFAS channel 2 containment pressure.

Backup instruments for verification of pressure control include indications for the following parameters: channel 1 pressurizer level, channel 1 RCS pressure, channel 1 RCS saturation temperature, RCS loop 1 cold leg temperature, CAC 1-1 suction temperature, and SFAS Channel 1 containment pressure.

IV. Decay Heat Removal

A. Safe Shutdown Function: Reactor Core Decay Heat Removal

B. Paths Available

With RCS pumps unavailable due to loss of offsite power, heat removal will be afforded by means of natural circulation with auxiliary feedwater (AFW) flow to the steam generators (SGs). AFW flow will be actuated by the Steam and Feedwater Rupture Control System (SFRCS) due to loss of all Reactor Coolant Pumps. Steam will be vented to atmosphere via either the main steam safety valves (MSSVs) or atmospheric vent valves (AVVs). Upon reaching a RCS temperature of 280°F, the DHR system will be placed in operation, in which decay heat will be removed from the DHR coolers via the CCW and service water (SW) systems.

C. Primary/Backup Path Selection

The following major components comprise the equipment necessary for the primary and backup paths for the decay heat removal function. Further details are shown on the SQUG drawings and SSEL.

1. Primary path: SG 2, Main Steam Line 2 MSSVs, Actuation of SFRCS for AFW Train 2, Manual Control of AVV ICS-11A, DHR train 2 via DH-11 and DH-12.

2. Backup path: SG 1, Main Steam Line 1 MSSVs, Actuation of SFRCS for AFW Train 1, Manual Control of AVV ICS-11B, DHR train 1 via DH-21 and DH-23.

D. Description of Primary and Backup Paths

Decay heat removal will be accomplished via natural circulation of the RCS with the AFW system adding feedwater to the steam generators. The SW system will be supplying feedwater to the AFW system since the condensate storage tanks are considered unavailable as a result of the seismic event. Steam from the steam generators will be discharged to the atmosphere through the MSSVs or the AVVs. This mode of heat removal will perform the decay heat removal function until RCS pressure and temperature conditions are established which will allow use of the DHR system. Because of this, the DHR system is included within the SSEL.

E. Required Instrumentation

Primary instruments for verification of decay heat removal include indications for the following parameters: RCS loop 2 hot leg and cold leg temperatures, incore thermocouple temperatures, channel 2 RCS pressure, channel 2 pressurizer level, SG 2 pressure, SG 2 startup level, and DHR loop 2 flow rate.

Backup instruments for verification of decay heat removal include indications for the following parameters: RCS loop 1 hot leg and cold leg temperatures, incore thermocouple temperatures, channel 1 RCS pressure, channel 1 pressurizer level, SG 1 pressure, SG 1 startup level, and DHR loop 1 flow rate.

4.1.2 SUPPORTING EQUIPMENT

Support equipment required for the primary and backup equipment identified for each of the four safe shutdown functions is included as a part of the SSEL. If the support equipment is only required for one of the safe shutdown functions, it has been included on the SSEL for that particular function. If the support equipment is needed for success of multiple shutdown functions, it is included on the SSEL as a support system. Additional discussion on individual support systems is discussed below.

A. Service Water System

The assumed initial lineup is as shown on SQUG drawing 5-001 with SW train 1 and pump supplying primary plant cooling loads, and train 2 and its associated pump supplying secondary plant loads. The return header flow path to the intake forebay is used to provide ultimate heat sink cooling.

Manual valves may be closed to demonstrate a flow diversion boundary isolation between the primary and backup SSEL trains (most of the system check valves have internals removed). However, since structural failure of passive components is not assumed, flow diversion pathways are not expecte

B. Emergency AC Power

In the event offsite power is lost as a result of the earthquake, backup AC power will be provided by at least one train of essential 4.16 KvAC via one of the emergency diesel generators (EDGs). The primary train is represented by EDG 1-2 and the backup train by EDG 1-1. In addition to the EDG fuel oil day tanks, long-term operation of the EDGs is supported by including each train's respective fuel oil storage tank and supporting equipment on the SSEL to allow the plant to achieve hot shutdown within the 72 hour mission time. It is assumed that following the seismic event, there is a sufficient quantity of air in the EDG air receivers to allow starting of the EDGs so that the starting air compressors are not required for support. In the event offsite power is lost as a result of the earthquake, backup AC power will be provided by one of the Emergency Diesel Generators (EDGs). The primary train is represented by EDG 1-2 and EDG 1-1 provides backup.

C. DC Power

DC power is supplied by either of the two trains (primary and backup) of batteries which each provide +125 vDC and -125 vDC supply of potential voltage. In the absence of load shedding, the batteries are estimated to remain operational for at least 2 to 4 hours.

D. Component Cooling Water System

The assumed initial lineup is as shown on SQUG drawing 5-002 with train 1 and its associated pump supplying primary plant cooling loads and train two and associated pump in a standby condition. CCW surge tank level indication is required to support system inventory requirements with makeup supplied by the SW system.

E. Control Room Emergency Ventilation System

The control room emergency ventilation system (CREVS) is required following the seismic event to support control room equipment cooling needs and personnel habitability. The normal control room ventilation system is non-seismic and requires the station air system as a support system. Since the station and instrument air system is not considered available following the seismic event due to seismic ruggedness and offsite power concerns, the normal control room ventilation system cannot be relied upon.

F. Miscellaneous Ventilation Systems

Other ventilation components have been added to the SSEL to support cooling requirements for the low voltage switch gear rooms, the emergency diesel generators, and both the CCW and SW pump rooms.

G. Instrument AC Power Sources

Electrical buses YAU (backup train) or YBU (primary train) are required to support plant instrumentation needs. All four 120 vAC essential instrumentation channels (via DC backup) are assumed necessary for support of both the primary and backup flow paths. Protection of all four channels is necessary to prevent spurious isolation of flow paths if two channels of SFAS or SFRCS were to trip due to the consequences of a seismic event

H. Safety Features Actuation System (SFAS)

In order to prevent SFAS trips due to a loss of power to a particular SFAS Channel, power is maintained via the DC system cross tie to an alternate source. All four SFAS Channels are required to prevent trips which may adversely affect desired system lineups for the various safe shutdown functions. The SFAS cabinets and system block switches are also included on the SSEL to support the RCS pressure control function.

4.2 DEVELOPMENT OF THE SAFE SHUTDOWN EQUIPMENT LIST (SSEL)

Based on the above discussion, the SSEL was compiled using the step-by-step procedure outlined in Appendix A of the GIP. The Operational Schematics (OSs) were chosen as the drawings in which to highlight both primary and backup flow paths since they directly show the electrical power supplies for most equipment. Manual vent valves, drain valves, and all sample points were not included in drawing highlights. All sample points were reviewed to ensure that a flow path diversion does not exist which could adversely impact a safe shutdown function. Electrical power supplies are included on the list at the level of detail shown on the appropriate OS drawing, e.g. power to a MOV or pump is shown traced back to the respective EDG, including breakers, MCCs, unit substations, etc. Not listed but required are the power supplies to the below listed components. The appropriate power supply dependencies are reviewed as a part of the relay evaluation:

a. Instrumentation (sensors, string components, indicators, etc.).

b. Solenoid valves.

c. Hand indicating switches and local switches which require a power supply to successfully operate.

Printouts of the SSEL database are included in Appendices B and C. Appendix B is a printout of the Composite SSEL with associated notes, which includes equipment requiring Seismic Reviews and Relay Reviews. Appendix C contains the Seismic Review SSEL.

4.3 OPERATIONS DEPARTMENT REVIEW OF THE SSEL

A review of the Safe Shutdown Equipment List (SSEL) utilizing the Operations Schematic based Seismic Qualification Utility Group (SQUG) figures and the appropriate Davis-Besse procedures was conducted by a representative of the Operations Section. The Operations' reviewer has held a Senior Reactor Operator license for approximately 10 years and has experience in both Operations and Training Sections at Davis-Besse. In addition, the reviewer is the procedure writer for Davis-Besse's Emergency Operating Procedure, DB-OP-02000, and has played an active role in the maintenance of Operation's procedures used for normal and abnormal events. The reviewer is familiar with the General Criteria and Governing Assumptions contained in Section 3.2 and the Scope of Equipment for the USI A-46 Program contained in Section 3.3 of the of the Generic Implementation Procedure (GIP) Rev 02.

A desk top review was conducted using the following sequence of events as the basis for the review:

1. A Main Turbine trip occurs due to vibration.

2. A Reactor trip occurs due to the Main Turbine trip.

3. Offsite power is lost.

4. The Steam and Feedwater Rupture Control System (SFRCS) actuates the Auxiliary Feedwater System due to the loss of all Reactor Coolant Pumps.

5. The SFRCS isolates Main Steam and Main Feedwater Systems due to Steam to Feedwater Differential Pressure Trip when Main Feed Pumps are lost due to loss of AC power.

6. No major primary or secondary (upstream of the Main Steam Isolation Valves) boundary failures occur.

Based on these events, the following is a summary of the procedures and the main steps that would be used to bring Davis-Besse to a safe shutdown condition.

1. Enter DB-OP-02000, RPS, SFAS, SFRCS, Trip or SG Tube Rupture, Immediate Actions. (Rev 04 used for review)

2. Complete Immediate Actions, steps 3.1 through 3.4.

3. Complete Supplemental Actions, steps 4.1 through 4.15. Step 4.15 will establish manual control of the Atmospheric Vent Valves (AVV) using Attachment 3.

4. Enter DB-OP-06910, Trip Recovery (Rev 00 used for review)

5. Complete step 3.1, routing to Section 4.0, Recovery from Reactor Trip and SFRCS Actuation.

6. Step 4.2 restores normal Makeup and Reactor Coolant Pump (RCP) Operation. Without offsite electrical power, RCP operation is not possible. This step allows shifting Makeup Pump suction to the Makeup tank, however, once the Reactor Coolant System (RCS) cooldown is started, the suction will be returned to the Borated Water Storage Tank (BWST) to accommodate RCS contraction.

7. Step 4.3 establishes Secondary Pressure control. Manual operation of the AVVs will be required. Condenser Vacuum can not be established without the Circulating Water System Pumps that are not available without offsite power.

8. Step 4.4 restores normal secondary inventory control if possible. Based on the seismic event, secondary inventory control will remain on Auxiliary Feedwater.

9. Step 4.5 establishes a normal electrical alignment. A majority of these steps can not be completed until offsite power is restored

10. Step 4.6 provides miscellaneous actions to be completed as time permits. A routing step to Section 5 is provided.

11. Section 5.0 provides direction to cooldown to the no load average temperature of 532° F and stabilize at Hot Standby.

12. Once the decision to continue the cooldown is reached or the plant begins to cooldown based on the decay heat rate, routing is provided to DB-OP-06903, Plant Shutdown and Cooldown.

13. Enter DB-OP-06903, Plant Shutdown and Cooldown, Section 7, Cooldown on Natural Circulation. (Rev 02 used for this review)

14. Section 7 is used in conjunction with Section 4, Cooldown of NSSS from Hot Standby Condition, and Section 5, NSS Cooldown by Decay Heat to Cold Shutdown, to cool the plant from 532°F to Cold Shutdown. These sections include steps that provide direction to establish operation of the Decay Heat Removal System.

This review concluded that a trained licensed operator, without a need for an operating procedure following a seismic event, can follow the existing Davis-Besse procedures and will be directed to use the Safe Shutdown Equipment and Instruments to cool the plant to Hot Shutdown conditions. Although direction to use Safe Shutdown Equipment and Instruments was not always provided as the primary procedure flowpath, no procedural flowpaths were identified that would prevent a trained licensed operator from completing the cooldown to the Hot Shutdown condition.

The Davis-Besse Simulator was utilized to confirm the results of this desk top review. Nuclear Operation Training developed a scenario (ORQ-SIM-S134) that limited operator response to only that equipment on the Safe Shutdown Equipment List. In addition, this scenario included a single failure (loss of one train of essential onsite AC power) that prevented the use of one train of essentially powered equipment. This scenario was presented to all six on-shift crews as well as all off-shift crews during normal Requalification Training (Cycle 95-04). No specific training was provided on seismic events or anticipated equipment response prior to presenting this scenario. This training session served as an introduction to the Safe Shutdown Equipment List for the Davis-Besse licensed operators.

Based on observations by the Simulator Instructors, this simulator scenario confirmed the results of the desk top review. In addition, this scenario demonstrated that normal crew size was sufficient. It should be noted that based on time constraints, the scenario did not include a cooldown to Hot Shutdown conditions, however control of equipment necessary to complete this cooldown was established.

Section 5

MECHANICAL AND ELECTRICAL EQUIPMENT REVIEW

5.1 SUMMARY OF REVIEW

The reviews of the seismic adequacy of mechanical and electrical equipment on the Davis-Besse Safe Shutdown Equipment List (SSEL) were performed in accordance with Section II.4 of the Generic Implementation Procedure (GIP).

The Seismic Review Safe Shutdown Equipment List (Appendix C) is a sort on the seismic field of the Composite Safe Shutdown Equipment List (SSEL) (Appendix B). The Seismic Review SSEL was reviewed for the "rule-of-the-box" items which were then deleted from the list. This list became the basis for the seismic walkdown list, i.e. the Screening Verification Data Sheets (SVDS) (Appendix D).

Each piece of mechanical and electrical equipment on the seismic walkdown list was walked down and evaluated by a minimum of two Seismic Capability Engineers (SCEs), one of which was a Professional Engineer. In many cases, the teams consisted of more than the minimum number of two SCE. In addition, each team consisted of at least one Toledo Edison engineer.

The walkdown portion of the SQUG program started just prior to our 8th Refueling Outage (Feb. 1992). The majority of the walkdowns were performed during the 8th and 9th Refueling Outages when access to the equipment was more available. During this time, craft assistance was used to provide access to various equipment to allow for an internal inspection and to perform anchor tightness checks.

Cabinets that contained essential relays were walked down with the Lead Relay Reviewer who identified the essential relays. The appropriate cabinet amplification factor was determined based on the relay(s) location, mounting configuration and the cabinet itself. This information was used by the Lead Relay Reviewer to establish the relay seismic demand.

The results of the seismic walkdown are documented on the Screening Verification Data Sheets (SVDSs) along with the SVDS Certificate which are contained in Appendix D.

5.1.1 Seismic Capacity vs. Demand

The Davis-Besse ground response spectra is enveloped by the SQUG Bounding Spectrum and the 1.5 times the Bounding Spectrum at all frequencies (see Table 2-1). The in-structure response spectra (Conservative, design and the Realistic, Median-centered spectra) is enveloped by the SQUG Bounding Spectrum at the lower elevations in the plant but not always at the higher elevations. The SCEs were cognizant of which areas in the plant were enveloped by the Bounding Spectrum, the 1.5 times the Bounding Spectrum and which areas were not.

The "effective grade" elevations, as defined in Section II.4.2.3 of the GIP varied for each structure at the site. The effective grade was established in accordance with the GIP by averaging the elevation of the ground surrounding the building along its perimeter.

The "effective grade" elevation for the buildings on-site that houses equipment on the SSEL are as follows:

Auxiliary Building Area 6	El. 573'	Containment Internal Structure	El 565'
Auxiliary Building Area 7	El 562'	Intake Structure	El 569'
Auxiliary Building Area 8	El 567'	Yard structures	El 585'

In cases where the equipment had a natural frequency of < 8 Hz and/or was located more than about 40 feet above the "effective grade", the seismic capacity was established by comparison to either the 1.5 times the Bounding Spectrum, the Generic Equipment Ruggedness Spectrum (GERS) or existing documentation.

Equipment that could not be screened using the GIP criteria are classified as outliers, and are discussed further at the end of this section.

5.1.2 Equipment Class Descriptions

The following is a brief description of the plant's SSEL equipment by equipment class.

Equipment Class 1 Motor Control Centers
MCCs are located in the Auxiliary Building Area 6, 7, and 8 as well as the Intake Structure. The maximum floor elevation at which MCCs are located is El. 603'. The manufacturer of the MCCs is Westinghouse Electric Corp. with the majority of the MCCs being Type W. The MCCs are all floor mounted with the majority of the MCCs either top braced with a structural channel or have several rigid conduits supported close to the top.

Equipment Class 2 Low Voltage Switchgear
The two Low Voltage Switchgears are floor mounted in the Auxiliary Building Area 6 at El. 603'. These Switchgears are supplied by General Electric.

Equipment Class 3 Medium Voltage Switchgear
The four Medium Voltage Switchgears are floor mounted in the Auxiliary Building Area 6 at El 585' and are supplied by Westinghouse Electric Corp.

Equipment Class 4 Transformers
The four transformers fall within two different sizes. The larger 4.16Kv units are located in the Auxiliary Building Area 6, El 603' and are supplied by General Electric.
The smaller 480-240V units are located in the Auxiliary Building Areas 7 and 8 at El 603'. These units are supplied by Square D.

Equipment Class 5 Horizontal Pumps

The horizontal pumps include the auxiliary feed pumps, boric acid pumps, borated water recirculating pumps, component cooling water pumps, containment spray pumps, decay heat pumps, high pressure injection pumps, and makeup pumps. These pumps are located in the Auxiliary Building Areas 7 and 8 at El 585' or below. The pumps are supplied by various manufacturers.

Equipment Class 6 Vertical Pumps

The service water pumps are located in the Intake Structure at El. 576' and are manufactured by Gould. The fuel oil transfer pumps are located in the yard area at El. 585' and are manufactured by Crane Chem Pump.

Equipment Class 7 Fluid-Operated Valves

Fluid-Operated Valves are located throughout the Auxiliary Building Areas 6, 7, and 8 as well as the Containment and are associated with a variety of systems. The maximum elevation these valves are located is El. 643' which are the main steam code safety valve and the atmospheric vent valves. A variety of manufacturers are used in supplying these fluid-operating valves.

Equipment Class 8A Motor-Operated Valves

Motor-operated valves are located throughout the Auxiliary Building Areas 6, 7, and 8 as well as the Containment Building and the Intake Structure. These valves are associated with a variety of manufacturers and systems.

Equipment Class 8B Solenoid-Operated Valves

The solenoid-operated valves included in this class are associated with the auxiliary feed pump system, control room air supply and the EDG air receiver system. These valves are located in the Auxiliary Building Areas 6 and 7 at a maximum elevation of 603'. A variety of manufacturers are used in supplying these solenoid-operated valves.

Equipment Class 9 Fans

Fans, when not included as a sub-set to Equipment Class 10 Air Handlers, are associated with the air intake or exhaust from the following rooms: auxiliary feed pump room; control room; battery room; component cooling water pump room; emergency diesel generator room; Intake Structure; and the switchgear room. These fans are located in the Auxiliary Building Areas 6 and 7 as well as the Intake Structure. The maximum elevation for these fans is 638'. A variety of manufacturers are used in supplying these fans.

Equipment Class 10 Air Handlers

Air Handlers class of equipment includes the containment air coolers, the ECCS room coolers and the control room emergency ventilation system. This equipment is located in the Auxiliary Building Areas 7 and 8 as well as the Containment. The maximum elevation of this equipment is the Auxiliary Building roof at El. 660'. A variety of manufacturers are used in supplying these air handlers.

Equipment Class 11 Chillers

There is no equipment class 11 on the SSEL.

Equipment Class 12 Air Compressors

The Air compressors on the SSEL are associated with the Emergency Diesel Generator air receiver skid. These compressors are located in the Auxiliary Building Area 6 at elevation 585'.

Equipment Class 13 Motor-Generators

There is no equipment class 13 on the SSEL.

Equipment Class 14 Distribution Panels

Distribution panels consist of essential distribution panels, essential instrumentation distribution panels, and the uninterrupted power instrumentation distribution panel. These panels are located through-out the Auxiliary Building Area 6, 7, and 8 as well as the Containment .

Equipment Class 15 Batteries on Racks

The Station batteries are the only batteries on racks that are identified on the SSEL. The station batteries are located in the Auxiliary Building area 6 at El. 603'. The manufacturer of the batteries is GNB Batteries Inc.

Equipment Class 16 Battery Chargers and Inverters

The battery chargers and inverters associated with the station batteries are located in the Auxiliary Building Area 6 at El. 603'.

Equipment Class 17 Engine-Generators

The Emergency Diesel Generators (EDG) are the only equipment class 17 components. The EDGs are located in the Auxiliary Building Area 6 at El. 585'. The manufacturer of the EDGs is General Motors Electro-Motive Division.

Equipment Class 18 Instruments on Racks

Instruments on Racks are located through-out the Auxiliary Building Areas 6, 7, and 8 as well as the Containment Building, and the Intake Structure. These instruments are manufactured by a variety of companies.

Equipment Class 19 Temperature Sensors

The temperature sensors on the SSEL are associated with the Reactor Coolant system. This equipment is located in the Containment Building at various elevations.

Equipment Class 20 Instrumentation and Control Panels and Cabinets

The equipment included in this class of equipment include the Control Room consoles and upright panels, control room emergency ventilation system cabinets, disconnect switch cabinets, EDG control panels, post accident equipment, relay cabinets, SFAS, SFRCS and small miscellaneous control panels. This equipment is located through-out the Auxiliary Building Areas 6, 7, and 8 as well as the Containment Building, Intake Structure and the Yard area.

Equipment Class 0 Other

When equipment identified on the SSEL do not fall within the criteria of one of the above equipment classes, it is classified as Other and becomes an Outlier. The following pieces of equipment have been reviewed and determined to fall within this category: motor operated and pneumatic operated HVAC dampers; Emergency Diesel generator air intake filter; power relief valve; safety rupture disks; service water strainers; and portable temperature indicators.

Table 5-6 is a listing of the individual equipment that falls within this category along with the corresponding outlier resolution.

5.1.3 Equipment Anchorage

Several different types of anchorage methods were used to anchor the equipment on the SSEL to the structure. The most popular type of anchorage used is the expansion anchor. However, cast-in-place J-Bolts, thru-bolts, as well as embedded channels were used.

Both stud and shell type expansion anchors were used for anchoring. The stud type anchors used are: Hilti Kwik Bolts, Phillips Wedge and the Wej-It wedge anchors. The shell type anchors used are: Hilti HDI, and the Phillips Self-Drilling anchors.

The appropriate capacity reduction factors were used including the SQUG recommended knockdown factor of 0.5 for Wej-it wedge anchors.

Per Section II.4.4.1 of the GIP, anchorage tightness checks were verified by one of the following methods:

- Anchors in tension, due to self weight, are not required to be checked
- A tug test was performed on small light weight equipment
- Forgo the tightness check if the anchorage was judged to be "robust" (i.e. installation exhibited large margin between the applied load and the anchorage capacity)
- Inaccessible anchors were verified adequate by either visual inspection of the installation (i.e. lock washer fully compressed under the nut) or judged to be adequate based on similar installations.
- The SCEs performed the tightness check with a wrench on the remainder of the anchors

A sample of shell type expansion anchors were inspected and found to be properly set.

Equipment whose anchors do not meet the GIP screening criteria are classified as outliers, and are discussed at the end of this section.

5.1.4 Seismic Interaction

The screening evaluations included evaluation for potential seismic interaction concerns, per GIP Section II.4.5 and Appendix D. Any seismic interaction concerns identified are classified as outliers, and are discussed at the end of the this section.

5.2 INSTANCES OF INTENT BUT NOT THE LETTER OF THE CAVEAT MET

Instances in which the intent of a caveat is met without meeting the specific wording of the caveat rule are identified in Table 5-1.

5.3 SUMMARY OF OUTLIERS

A total of 155 outliers were identified affecting 122 pieces of equipment out of 531 pieces of equipment identified on the Davis-Besse's SVDS. This includes 53 outliers affecting 53 pieces of equipment that did not fall within the SQUG's "20 Classes of Equipment" criteria. Several pieces of equipment may have had multiple outliers written against them. A short description of each equipment outlier and its resolution are provided in the following Tables:

Table 5-2	Anchorage Outlier Description and Resolution Summary
Table 5-3	Capacity Vs Demand Outlier Description and Resolution Summary
Table 5-4	Caveat Outlier Description and Resolution Summary
Table 5-5	Interaction Outlier Description and Resolution Summary
Table 5-6	"Other" Outlier Description and Resolution Summary

Table 5-1

Met the Intent, but Not the Letter of Caveat Summary

Equip No.	Letter of Caveat Not Met	Reason Intent of Caveat is Met
C3645	Cabinet installed with 1 1/4" expansion anchors GIP provides anchor allowables up to 1" diameter	1" anchor allowables were used in analysis and found acceptable
C3645	Cabinet contains programmable controllers	Programmable controllers were qualified in accordance with IEEE 344-75 and found acceptable
C4625	Cabinet installed with 1 1/4" expansion anchors GIP provides anchor allowables up to 1" diameter	1" anchor allowables were used in analysis and found acceptable
C4625	Cabinet contains programmable controllers	Programmable controllers were qualified in accordance with IEEE 344-75 and found acceptable
C73-1	Fan base isolators not evaluated in accordance with Section 4.4 of the GIP	The fan is suspended from the ceiling and does not resist lateral forces. Therefore, the concern identified in Section 4.4 of the GIP is not applicable.
C73-2	Fan base isolators not evaluated in accordance with Section 4.4 of the GIP	The fan is suspended from the ceiling and does not resist lateral forces. Therefore, the concern identified in Section 4.4 of the GIP is not applicable.
CC1467	Valve yoke made from cast iron	Actual stress on the cast iron is low , <20% of allowable with no interaction concerns. Therefore acceptable.

Table 5-1

Met the Intent, but Not the Letter of Caveat Summary

Equip No.	Letter of Caveat Not Met	Reason Intent of Caveat is Met
CC1469	Valve yoke made from cast iron	Actual stress on the cast iron is low , <20% of allowable with no interaction concerns. Therefore acceptable.
E-1	Cut outs on end panels of the switchgear exceed the allowable limit	End panels are stiffened by the transformers that are bolted to the switchgear.
F-1	Cut outs on end panels of the switchgear exceed the allowable limit	End panels are stiffened by the transformers that are bolted to the switchgear.
HIS NC133	Equipment installed with 1/4" expansion anchors GIP does not provide values for 1/4" anchors	Equipment is light. Anchorage adequacy was verified by Tug testing.
HIS NC252	Equipment installed with 1/4" expansion anchors GIP does not provide values for 1/4" anchors	Equipment is light. Anchorage adequacy was verified by Tug testing.
HIS NC253	Equipment installed with 1/4" expansion anchors GIP does not provide values for 1/4" anchors	Equipment is light. Anchorage adequacy was verified by Tug testing.
HIS NC254	Equipment installed with 1/4" expansion anchors GIP does not provide values for 1/4" anchors	Equipment is light. Anchorage adequacy was verified by Tug testing.
HIS NC315	Equipment installed with 1/4" expansion anchors GIP does not provide values for 1/4" anchors	Equipment is light. Anchorage adequacy was verified by Tug testing.
HIS NC751	Equipment installed with 1/4" expansion anchors GIP does not provide values for 1/4" anchors	Equipment is light. Anchorage adequacy was verified by Tug testing.
HIS NC752	Equipment installed with 1/4" expansion anchors GIP does not provide values for 1/4" anchor	Equipment is light. Anchorage adequacy was verified by Tug testing
HIS NC781	Equipment installed with 1/4" expansion anchors GIP does not provide values for 1/4" anchors	Equipment is light. Anchorage adequacy was verified by Tug testing.

Table 5-1

Met the Intent, but Not the Letter of Caveat Summary

Equip No.	Letter of Caveat Not Met	
HIS NC782	Equipment installed with 1/4" expansion anchors GIP does not provide values for 1/4" anchors	Equipment is light. Anchorage adequacy was verified by Tug testing.
K3-1	Pump/motor installed with 1 1/2 expansion anchors GIP provides anchor allowables up to 1'' diameter	1" anchor allowables were used in analysis.
K3-2	Pump/Motor installed with 1 1/2 expansion anchors GIP provides anchor allowables up to 1'' diameter	1" anchor allowables were used in analysis.
MU-19	Valve actuator and yoke are supported independently of pipe.	Actuator is supported on the wall three feet from where pipe is supported. Therefore relative motion is judged to be negligible.
MU-38	Valve actuator and yoke are supported independently of pipe.	Pipe is well supported close to the valve Relative motion is judged to be negligible.
MU-66A	Valve actuator and yoke are supported independently of pipe.	Original analysis showed that differential displacement is not a concern.
MU66B	Valve actuator and yoke are supported independently of pipe.	Original analysis showed that differential displacement is not a concern.
MU66C	Valve actuator and yoke are supported independently of pipe.	Original analysis showed that differential displacement is not a concern.
MU66D	Valve actuator and yoke are supported independently of pipe.	Original analysis showed that differential displacement is not a concern.

Table 5-1

Met the Intent, but Not the Letter of Caveat Summary

Equip No.	Letter of Caveat Not Met	Reason Intent of Caveat is Met
NV-55980	Instrument is anchored to the wall with thru-bolts This type of anchorage is not identified in the GIP.	Anchorage is acceptable due to low loads
P14-1	Pump/Motor installed with 1 1/2" expansion anchors GIP provides anchor allowables up to 1'' diameter	1" anchor allowables were used in analysis.
P14-2	Pump/Motor installed with 1 1/2" expansion anchors GIP provides anchor allowables up to 1'' diameter	1" anchor allowables were used in analysis.
PI-MU52A	Instrument is anchored to a blockwall. GIP does not provide anchor capacity when installed in blockwalls.	Equipment is light. Anchorage adequacy was verified by Tug testing,
PI-MU52B	Instrument is anchored to a blockwall. GIP does not provide anchor capacity when installed in blockwalls.	Equipment is light. Anchorage adequacy was verified by Tug testing.
RC 200	Valve actuator and yoke are supported independently of the pipe.	Actuator and pipe are both anchored to the same wall, and relative motion is judged to be negligible.
RC 239A	Valve actuator and yoke are supported independently of the pipe.	Actuator and pipe are both anchored to the same wall, and relative motion is judged to be negligible.
SS-598	Valve actuator and yoke are supported independently of pipe.	The piping analysis considered the independently supported actuator and the stresses are acceptable. Analyzed and stresses are within the allowables.

Table 5-1

Met the Intent, but Not the Letter of Caveat Summary

Equip No.	Letter of Caveat Not Met	Reason Intent of Caveat is Met
SS-598	Valve is on a pipe smaller than 1" in diameter	The piping system with the valve has been analyzed and stresses are within the allowables.
SS-607	Valve actuator and yoke are supported independently of pipe.	The piping analysis considered the independently supported actuator and the stress are acceptable.
SS-607	Valve is on a pipe smaller than 1" in diameter	The piping system with the valve has been analyzed and stresses are within the allowables
SW-5896	The GERS for equip, class 7 requires only carbon steel valves. The valve is made out of stainless steel.	The GIP's concern is with cast iron and not stainless steel. Therefore; this is acceptable
SW-5997	The GERS for equip, class 7 requires only carbon steel valves. The valve is made out of stainless steel.	The GIP's concern is with cast iron and not stainless steel. Therefore; this is acceptable
TE-5443	Instrument is anchored to the wall with thru-bolts This type of anchorage is not identified in the GIP.	Anchorage is acceptable due to low loads.
TIC 5443	Instrument is anchored to a blockwall. GIP does not provide anchor capacity when installed in blockwalls.	Anchorage is acceptable due to low loads
TIC 5444	Instrument is anchored to a blockwall. GIP does not provide anchor capacity when installed in blockwalls.	Anchorage is acceptable due to low loads
TS-4688	Instrument is anchored to the wall with thru-bolts This type of anchorage is not identified in the GIP.	Anchorage is acceptable due to low loads
TT-5443	Instrument is anchored to the wall with thru-bolts This type of anchorage is not identified in the GIP.	Anchorage is acceptable due to low loads

Table 5-2

Anchorage Outlier Description and Resolution Summary

Equipment ID	Location	Outlier Description	Outlier Resolution
C-2	Aux El. 585	Flexible base connections results in an inadequate load path	Relocate the relay and remove C-2 from the SSEL Ref. MOD 95-0023
C25-2	Aux El. 585	Expansion anchor did not meet the minimum embedment of the GIP.	A reduction factor was used and based on light loads the anchorage is acceptable.
C25-3	Aux El. 585	Expansion anchor did not meet the minimum embedment of the GIP.	A reduction factor was used and based on light loads the anchorage is acceptable.
C25-4	Aux El. 585	Expansion anchor did not meet the minimum embedment of the GIP.	A reduction factor was used and based on light loads the anchorage is acceptable.
C5755C	Aux El. 623	Anchorage for adjacent cabinet (C5755 E & F) is not adequate when C5755C is bolted to it to prevent cabinets from banging.	Modify existing anchorage Ref. MOD 95-0032
C5755D	Aux El. 623	Anchorage for adjacent cabinet (C5755E & F) is not adequate when C5755D is bolted to it to prevent cabinets from banging.	Modify existing anchorage Ref. MOD 95-0032
C5755G	Aux El. 623	Anchorage for adjacent cabinet (C5755E & F) is not adequate when C5755G is bolted to it to prevent cabinets from banging.	Modify existing anchorage Ref. MOD 95-0032

Table 5-2

Anchorage Outlier Description and Resolution Summary

Equipment ID	Location	Outlier Description	Outlier Resolution
C5756C	Aux El. 623	Anchorage for adjacent cabinet (C5756E & F) is not adequate when C5756C is bolted to it to prevent cabinets from banging.	Modify existing anchorage Ref. MOD 95-0032
C5756D	Aux El. 623	Anchorage for adjacent cabinet (C5756E & F) is not adequate when C5756D is bolted to it to prevent cabinets from banging.	Modify existing anchorage Ref. MOD 95-0032
C5762A	Aux El. 623	Anchorage for adjacent cabinet (C5762E & F) is not adequate when C5762A is bolted to it to prevent cabinets from banging.	Modify existing anchorage Ref. MOD 95-0032
C5762C	Aux El. 623	Anchorage for adjacent cabinet (C5762E & F) is not adequate when C5762C is bolted to it to prevent cabinets from banging.	Modify existing anchorage Ref. MOD 95-0032
C5762D	Aux El. 623	Anchorage for adjacent cabinet (C5762E & F) is not adequate when C5762D is bolted to it to prevent cabinets from banging.	Modify existing anchorage Ref. MOD 95-0032
C5763C	Aux El. 623	Anchorage for adjacent cabinet (C5763E & F) is not adequate when C5763C is bolted to it to prevent cabinets from banging.	Modify existing anchorage Ref. MOD 95-0032
C5763D	Aux El. 623	Anchorage for adjacent cabinet (C5763E & F) is not adequate when C5763D is bolted to it to prevent cabinets from banging.	Modify existing anchorage Ref. MOD 95-0032
C5792	Aux El. 623	The Existing Gap between the cabinet base and the concrete is greater than 1/4"	Analysis performed indicated that the anchor bolt stresses are less than the allowable. Therefore; accept as is.

Table 5-2

Anchorage Outlier Description and Resolution Summary

Equipment ID	Location	Outlier Description	Outlier Resolution
C5792A	Aux El. 623	The Existing Gap between the cabinet base and the concrete is greater than 1/4"	Analysis performed indicated that the anchor bolt stresses are less than the allowable. Therefore; accept as is.
C73-1	Aux El. 565	Expansion anchors installed in the Q-Decking which is not addressed in the GIP.	Analysis performed indicated that the anchor bolt stresses are less than the allowable. Therefore; accept as is.
C73-2	Aux El. 565	Expansion anchors installed in the Q-Decking which is not addressed in the GIP.	Analysis performed indicated that the anchor bolt stresses are less than the allowable. Therefore; accept as is.
C75-2	Aux El. 585	Gap under the base plate is greater than 1/4"	Analysis performed indicated that the anchor bolt and base plate stresses are less than the allowable. Therefore; accept as is.
C78-1	Aux El. 603	Expansion anchors installed in the Q-Decking which is not addressed in the GIP.	Analysis performed indicated that the anchor bolt stresses are less than the allowable. Therefore; accept as is.
C78-2	Aux El. 603	Expansion anchors installed in the Q-Decking which is not addressed in the GIP.	Analysis performed indicated that the anchor bolt stresses are less than the allowable. Therefore; accept as is.
D1NA	Aux El. 603	Embedded channel and weld do not meet GIP criteria	Modify existing anchorage Ref. MOD 95-0039
D1PA	Aux El. 603	Embedded channel and weld do not meet GIP criteria	Modify existing anchorage Ref. MOD 95-0039

Table 5-2

Anchorage Outlier Description and Resolution Summary

Equipment ID	Location	Outlier Description	Outlier Resolution
E1	Aux El. 603	Anchor bolts do not meet GIP allowables when all of the GIP reduction factors are applied	Modify existing anchorage Ref. MOD 95-0030
E12C	ITK. El. 576	MCC is anchored with Nelson studs with less than the minimum length specified	Analysis performed indicated that the existing anchorage detail is adequate. Therefore; accept as is.
E16B	Aux El. 623	MCC is anchored with Nelson studs with less than the minimum length specified	Analysis performed indicated that the existing anchorage detail is adequate. Therefore; accept as is.
E37-1	CTM El. 585	Embedment length of the J-Bolt is less than the GIP minimum value	Analysis performed indicated that the existing anchorage detail is adequate. Therefore; accept as is.
E37-2	CTM El. 585	Embedment length of the J-Bolt is less than the GIP minimum value	Analysis performed indicated that the existing anchorage detail is adequate. Therefore; accept as is.
E37-3	CTM El. 585	Embedment length of the J-Bolt is less than the GIP minimum value	Analysis performed indicated that the existing anchorage detail is adequate. Therefore; accept as is.
F1	Aux El. 603	Anchor bolts do not meet GIP allowables when all of the GIP reduction factors are applied	Modify existing anchorage Ref. MOD 95-0030
F12D	ITK El. 575	MCC is anchored with Nelson studs with less than the minimum length specified	Analysis performed indicated that the existing anchorage detail is adequate. Therefore; accept as is.

Table 5-2

Anchorage Outlier Description and Resolution Summary

Equipment ID	Location	Outlier Description	Outlier Resolution
F16A	Aux El. 623	MCC is anchored with Nelson studs with less than the minimum length specified	Analysis performed indicated that the existing anchorage detail is adequate. Therefore, accept as is.
F108-1	Aux El. 610	Anchorage capacity for the filter does not meet GIP allowables	Modify the existing anchorage Ref. MOD 95-0029
F108-2	Aux El. 610	Anchorage capacity for the filter does not meet GIP allowables	Modify the existing anchorage Ref. MOD 95-0029
HV-5261	Aux El. 638	Anchor bolts for the actuator support do not meet the GIP allowables	Modify the existing support Ref. MOD 94-0034
HV-5262	Aux El. 638	Anchor bolts for the actuator support do not meet the GIP allowables	Modify the existing support Ref. MOD 94-0034
TT-1356	Aux El. 585	Temp transmitter anchorage is loosely mounted	Bolts were tightened.
YVA	Aux El. 603	1/8" gaps are located under the base	Modify existing base. Ref. MOD 95-0033
YVA	Aux El. 603	Load path to the floor is not adequate. (weak way bending on base channel)	Modify existing base. Ref. MOD 95-0033
YVB	Aux El. 603	Load path to the floor is not adequate. (weak way bending on base channel)	Modify existing base. Ref. MOD 95-0033

Table 5-3

Capacity Vs Demand Outlier Description and Resolution Summary

Equipment ID	Location	Outlier Description	Outlier Resolution
C5759D	Aux El. 623	There is no existing documentation to establish seismic capacity	Remove the relay that is located inside the cabinet to a location with known seismic capacity. Ref. MOD 95-0019
HV-5261	Aux El. 638	Documentation to establish capacity based on actual installation is not available	Modify support to conform to documentation requirements Ref. MOD 94-0034
HV-5262	Aux El. 638	Documentation to establish capacity based on actual installation is not available	Modify support to conform to documentation requirements Ref. MOD 94-0034

Table 5-4

Caveat Outlier Description and Resolution Summary

Equipment ID	Location	Outlier Description	Outlier Resolution
C21-1	Aux El. 585	Base vibration isolators do not provide adequate restraint of overturning moment.	Modify existing anchorage Ref. MOD 95-0031
C21-2	Aux El. 585	Base vibration isolators do not provide adequate restraint of overturning moment.	Modify existing anchorage Ref. MOD 95-0031
C5703	Aux. El. 623	1 of 4 mounting bolts missing on two local instruments.	The missing bolts were replaced. Refer Work Request 94-1248
D2	Aux El. 585	The internal portion of the switchgear was not available for inspection	Relocate the relay and remove D2 from the SSEL Ref. MOD 95-0023
E1	Aux El. 603	Lifting hoist is free to slide which is not included in the GERS	Restrain the lifting hoist. Ref. MOD 95-0030
F1	Aux El. 603	Lifting hoist is free to slide which is not included in the GERS	Restrain the lifting hoist. Ref. MOD 95-0030
P3-1	ITK El. 576	The vertical pump shaft is 29 feet long which is greater than the GIP value of 20 ft.	Analysis performed indicated that the deflections and stresses were low. Therefore, accept as is.
P3-2	ITK El. 576	The vertical pump shaft is 29 feet long which is greater than the GIP value of 20 ft.	Analysis performed indicated that the deflections and stresses were low. Therefore, accept as is.
S31-1	Aux El. 638	Spring isolators are not adequate for side loading	Modify the existing support Ref. MOD 95-0046

Table 5-4

Caveat Outlier Description and Resolution Summary

Equipment ID	Location	Outlier Description	Outlier Resolution
S31-2	Aux El. 638	Spring isolators are not adequate for side loading	Modify the existing support Ref. MOD 95-0046

NOTE: Per the GIP criteria, any anchorage outlier is by definition an outlier against the Caveats as well. Since these anchorage outliers have already been identified in Table 5-2, they will not be duplicated in this table.

Table 5-5

Interaction Outlier Description and Resolution Summary

Equipment ID	Location	Outlier Description	Outlier Resolution
C5702	Aux El. 623	An unanchored bookcase could fall and strike the cabinet	Bookcase has been relocated
C5703	Aux El. 623	An unanchored bookcase could fall and strike the cabinet	Bookcase has been relocated
C5704	Aux El. 623	An unanchored bookcase could fall and strike the cabinet	Bookcase has been relocated
C5705	Aux El. 623	An unanchored bookcase could fall and strike the cabinet	Bookcase has been relocated
C5706	Aux El. 623	An unanchored bookcase could fall and strike the cabinet	Bookcase has been relocated
C5707	Aux El. 623	An unanchored bookcase could fall and strike the cabinet	Bookcase has been relocated
C5708	Aux El. 623	An unanchored bookcase could fall and strike the cabinet	Bookcase has been relocated
C5709	Aux El. 623	An unanchored bookcase could fall and strike the cabinet	Bookcase has been relocated
C5710	Aux El. 623	An unanchored bookcase could fall and strike the cabinet	Bookcase has been relocated
C5712	Aux El. 623	An unanchored bookcase could fall and strike the cabinet	Bookcase has been relocated

Table 5-5

Interaction Outlier Description and Resolution Summary

Equipment ID	Location	Outlier Description	Outlier Resolution
C5755C	Aux El. 623	Due to either a small or no gap, and the presence of essential relays in the cabinet striking with an adjacent cabinet could exist	Provide a restraint to prevent the adjacent cabinets from striking Ref. MOD 95-0032
C5755C	Aux El. 623	Suspended ceiling deficiencies noted	To be corrected
C5755D	Aux El. 623	Due to either a small or no gap, and the presence of essential relays in the cabinet striking with an adjacent cabinet could exist	Provide a restraint to prevent the adjacent cabinets from striking Ref. MOD 95-0032
C5755D	Aux El. 623	Suspended ceiling deficiencies noted	To be corrected
C5756C	Aux El. 623	Due to either a small or no gap, and the presence of essential relays in the cabinet striking with an adjacent cabinet could exist	Provide a restraint to prevent the adjacent cabinets from striking Ref. MOD 95-0032
C5756C	Aux El. 623	Suspended ceiling deficiencies noted	To be corrected
C5756D	Aux El. 623	Due to either a small or no gap, and the presence of essential relays in the cabinet striking with an adjacent cabinet could exist	Provide a restraint to prevent the adjacent cabinets from striking Ref. MOD 95-0032
C5756D	Aux El. 623	Suspended ceiling deficiencies noted	To be corrected
C5761A	Aux El. 623	Suspended ceiling deficiencies noted	To be corrected
C5762A	Aux El. 623	Due to either a small or no gap, and the presence of essential relays in the cabinet striking with an adjacent cabinet could exist	Provide a restraint to prevent the adjacent cabinets from striking Ref. MOD 95-0032
C5762A	Aux El. 623	Suspended ceiling deficiencies noted	To be corrected

Table 5-5

Interaction Outlier Description and Resolution Summary

Equipment ID	Location	Outlier Description	Outlier Resolution
C5762C	Aux El. 623	Due to either a small or no gap, and the presence of essential relays in the cabinet striking with an adjacent cabinet could exist	Provide a restraint to prevent the adjacent cabinets from striking Ref. MOD 95-0032
C5762C	Aux El. 623	Suspended ceiling deficiencies noted	To be corrected
C5762D	Aux El. 623	Due to either a small or no gap, and the presence of essential relays in the cabinet striking with an adjacent cabinet could exist	Provide a restraint to prevent the adjacent cabinets from striking Ref. MOD 95-0032
C5762D	Aux El. 623	Suspended ceiling deficiencies noted	To be corrected
C5763C	Aux El. 623	Due to either a small or no gap, and the presence of essential relays in the cabinet striking an adjacent cabinet could exist	Provide a restraint to prevent the adjacent cabinets from striking Ref. MOD 95-0032
C5763C	Aux El. 623	Suspended ceiling deficiencies noted	To be corrected
C5763C	Aux El. 623	Small cart adjacent to the cabinet could strike the cabinet	The cart has been relocated
C5763D	Aux El. 623	Due to either a small or no gap, and the presence of essential relays in the cabinet striking with an adjacent cabinet could exist	Provide a restraint to prevent the adjacent cabinets from striking Ref. MOD 95-0032
C5763D	Aux El. 623	Small cart adjacent to the cabinet could strike the cabinet	The cart has been relocated
C5763D	Aux El. 623	Suspended ceiling deficiencies noted	To be corrected
C5792	Aux El. 623	Suspended ceiling deficiencies noted	To be corrected

Table 5-5

Interaction Outlier Description and Resolution Summary

Equipment ID	Location	Outlier Description	Outlier Resolution
C5792A	Aux El. 623	Suspended ceiling deficiencies noted	To be corrected
CDE11D	Aux El. 565	Due to either a small or no gap, and the presence of essential relays in the cabinet striking with an adjacent cabinet could exist	Provide a restraint to prevent the adjacent cabinets from striking Ref. MOD 95-0041
CDF11A-2	Aux El. 603	Due to either a small or no gap, and the presence of essential relays in the cabinet striking with an adjacent cabinet could exist	Provide a restraint to prevent the adjacent cabinets from striking Ref. MOD 95-0040
D1N	Aux El. 603	Due to either a small or no gap, and the presence of essential relays in the cabinet striking with an adjacent cabinet could exist	Provide a restraint to prevent the adjacent cabinets from striking Ref. MOD 95-0039
D2P (See YV2)	Aux El. 603	Due to either a small or no gap, and the presence of essential relays in the cabinet striking with an adjacent cabinet could exist	Provide a restraint to prevent the adjacent cabinets from striking Ref. MOD 95-0038
E11B	Aux El. 585	Several breakers in the MCC have padlocks that are free to strike the MCC	Padlocks to be replaced with smaller ones and attached to the MCC
E11C	Aux. El. 585	A large portable frame is located behind the MCC that could strike the MCC	The frame has been relocated
E11D	Aux El. 565	An abandon cable tray support is in close proximity to the MCC, which could strike the MCC	Cable tray support removed
E12B (See YE1)	Aux El. 585	MCC is in contact with the support for a pipe restraint	Modify the existing pipe restraint Ref. MOD 95-0044

Table 5-5

Interaction Outlier Description and Resolution Summary

Equipment ID	Location	Outlier Description	Outlier Resolution
F11A	Aux El. 603	Several breakers in the MCC have padlocks that are free to strike the MCC	Padlocks to be replaced with smaller one and attached to the MCC
F11A	Aux El. 603	Due to either a small or no gap, and the presence of essential relays in the cabinet striking with an adjacent cabinet could exist	Provide a restraint to prevent the adjacent cabinets from striking Ref. MOD 95-0040
F11A	Aux El. 603	An adjacent electrical junction box is in close proximity to the MCC which could impact the MCC	Relocate/modify junction box Ref. MOD 95-0040
F11C	Aux El. 565	MCC is located next to a fire extinguisher that could strike the MCC	Provide a barrier to prevent impact Ref. FPR 95-0671-901.
HV 5261	Aux El. 638	Inadequate clearance between the operator and the HVAC support	Provide lateral support Ref. MOD 94-0034
HV 5262	Aux El. 638	Inadequate clearance between the operator and the HVAC support	Provide lateral support Ref. MOD 94-0034
LT-1402	Aux. El. 623	Instrument line from T12-I to LT-1402 is in contact with platform	Provide lateral support for the platform Ref. MOD 95-0037
LT-1403	Aux El. 623	Instrument line from T12-II to LT-1403 is in contact with platform	Provide lateral support for the platform Ref. MOD 95-0037
PSL 4928A	Aux El. 565	Chain from overhead hoist could strike PSL 4928A	Chain was secured
PSL 4928B	Aux El. 565	Chain from overhead hoist could strike PSL 4928B	Chain was secured

Table 5-5

Interaction Outlier Description and Resolution Summary

Equipment ID	Location	Outlier Description	Outlier Resolution
RC 2826	Aux El. 565	Unsecured hydrazine barrel is adjacent to the cabinet	Hydrazine barrel was removed and secured.
RC 3004	ITK El. 565	Rod-hung conduit support could swing and strike cabinet	Rework conduit support Ref. MOD 95-0042
RC 3701	Aux El. 585	Back of cabinet is in contact with pipe support	Rework cabinet/support Ref. MOD 95-0036
TS 5262	Aux El. 638	Instrument is in the arc of an unanchored MCC	Provide anchorage for the MCC Ref. MOD 95-0035
YE1 (See E12B)	Aux El. 585	MCC is in contact with the support for a pipe restraint	Modify the existing pipe restraint Ref. MOD 95-0044
YV2 (See D2P)	Aux El. 603	Due to either a small or no gap, and the presence of essential relays in the cabinet striking with an adjacent cabinet could exist	Provide a restraint to prevent the adjacent cabinets from striking Ref. MOD 95-0038
YV3	Aux El. 603	Due to either a small or no gap, and the presence of essential relays in the cabinet striking with an adjacent cabinet could exist	Provide a restraint to prevent the adjacent cabinets from striking Ref. MOD 95-0043
YV4	Aux El. 603	Existing gap between cabinet and the Containment is not sufficient to preclude striking	Increase the gap to prevent the cabinet from striking Ref. MOD 95-0034

Table 5-6

"Other" Outlier Description and Resolution Summary

Equipment ID	Location	Outlier Description	Outlier Resolution
F15-1	ITK El. 576	Service water strainers are not included in the SQUG's "20 Classes Of Equipment"	Comparison of existing documentation to the Conservative Response Spectra satisfied seismic capacity criteria
F15-2	ITK El. 576	Service water strainers are not included in the SQUG's "20 Classes Of Equipment"	Comparison of existing documentation to the Conservative Response Spectra satisfied seismic capacity criteria
HV-4906	Aux El. 656	HVAC damper actuators are not included in the SQUG's "20 Classes of Equipment"	Comparison of existing documentation to the Realistic, Medium-Centered Spectra satisfied seismic capacity criteria
HV-4907	Aux El. 656	HVAC damper actuators are not included in the SQUG's "20 Classes of Equipment"	Comparison of existing documentation to the Realistic, Medium-Centered Spectra satisfied seismic capacity criteria
HV-5261	Aux El. 638	HVAC damper actuators are not included in the SQUG's "20 Classes of Equipment"	Comparison of existing documentation to the Realistic, Medium-Centered Spectra satisfied seismic capacity criteria
HV-5262	Aux El. 638	HVAC damper actuators are not included in the SQUG's "20 Classes of Equipment"	Comparison of existing documentation to the Realistic, Medium-Centered Spectra satisfied seismic capacity criteria
HV-5301A	Aux El. 656	HVAC damper actuators are not included in the SQUG's "20 Classes of Equipment"	Comparison of existing documentation to the Realistic, Medium-Centered Spectra satisfied seismic capacity criteria

Table 5-6

"Other" Outlier Description and Resolution Summary

Equipment ID	Location	Outlier Description	Outlier Resolution
HV-5301B	Aux El. 656	HVAC damper actuators are not included in the SQUG's "20 Classes of Equipment"	Comparison of existing documentation to the Realistic, Medium-Centered Spectra satisfied seismic capacity criteria
HV-5301C	Aux El. 656	HVAC damper actuators are not included in the SQUG's "20 Classes of Equipment"	Comparison of existing documentation to the Realistic, Medium-Centered Spectra satisfied seismic capacity criteria
HV-5301D	Aux El. 638	HVAC damper actuators are not included in the SQUG's "20 Classes of Equipment"	Comparison of existing documentation to the Realistic, Medium-Centered Spectra satisfied seismic capacity criteria
HV-5301E	Aux El. 638	HVAC damper actuators are not included in the SQUG's "20 Classes of Equipment"	Comparison of existing documentation to the Realistic, Medium-Centered Spectra satisfied seismic capacity criteria
HV-5301F	Aux El. 638	HVAC damper actuators are not included in the SQUG's "20 Classes of Equipment"	Comparison of existing documentation to the Realistic, Medium-Centered Spectra satisfied seismic capacity criteria
HV-5301G	Aux El. 638	HVAC damper actuators are not included in the SQUG's "20 Classes of Equipment"	Comparison of existing documentation to the Realistic, Medium-Centered Spectra satisfied seismic capacity criteria
HV-54301H	Aux El. 638	HVAC damper actuators are not included in the SQUG's "20 Classes of Equipment"	Comparison of existing documentation to the Realistic, Medium-Centered Spectra satisfied seismic capacity criteria

Table 5-6

"Other" Outlier Description and Resolution Summary

Equipment ID	Location	Outlier Description	Outlier Resolution
HV5305	Aux El. 603	HVAC damper actuators are not included in the SQUG's "20 Classes of Equipment"	Comparison of existing documentation to the Realistic, Medium-Centered Spectra satisfied seismic capacity criteria
HV-5305A	Aux El. 603	HVAC damper actuators are not included in the SQUG's "20 Classes of Equipment"	Comparison of existing documentation to the Realistic, Medium-Centered Spectra satisfied seismic capacity criteria
HV-5305B	Aux El. 603	HVAC damper actuators are not included in the SQUG's "20 Classes of Equipment"	Comparison of existing documentation to the Realistic, Medium-Centered Spectra satisfied seismic capacity criteria
HV-5311A	Aux El. 638	HVAC damper actuators are not included in the SQUG's "20 Classes of Equipment"	Comparison of existing documentation to the Realistic, Medium-Centered Spectra satisfied seismic capacity criteria
HV-5311B	Aux El. 638	HVAC damper actuators are not included in the SQUG's "20 Classes of Equipment"	Comparison of existing documentation to the Realistic, Medium-Centered Spectra satisfied seismic capacity criteria
HV-5311C	Aux El. 638	HVAC damper actuators are not included in the SQUG's "20 Classes of Equipment"	Comparison of existing documentation to the Realistic, Medium-Centered Spectra satisfied seismic capacity criteria
HV-5311D	Aux El. 638	HVAC damper actuators are not included in the SQUG's "20 Classes of Equipment"	Comparison of existing documentation to the Realistic, Medium-Centered Spectra satisfied seismic capacity criteria

Table 5-6

"Other" Outlier Description and Resolution Summary

Equipment ID	Location	Outlier Description	Outlier Resolution
HV-5311E	Aux El. 638	HVAC damper actuators are not included in the SQUG's "20 Classes of Equipment"	Comparison of existing documentation to the Realistic, Medium-Centered Spectra satisfied seismic capacity criteria
HV-5311F	Aux El. 638	HVAC damper actuators are not included in the SQUG's "20 Classes of Equipment"	Comparison of existing documentation to the Realistic, Medium-Centered Spectra satisfied seismic capacity criteria
HV-5311G	Aux El. 638	HVAC damper actuators are not included in the SQUG's "20 Classes of Equipment"	Comparison of existing documentation to the Realistic, Medium-Centered Spectra satisfied seismic capacity criteria
HV-5311H	Aux El. 638	HVAC damper actuators are not included in the SQUG's "20 Classes of Equipment"	Comparison of existing documentation to the Realistic, Medium-Centered Spectra satisfied seismic capacity criteria
HV-5314	Aux El. 623	HVAC damper actuators are not included in the SQUG's "20 Classes of Equipment"	Comparison of existing documentation to the Realistic, Medium-Centered Spectra satisfied seismic capacity criteria
HV-5314A	Aux El. 603	HVAC damper actuators are not included in the SQUG's "20 Classes of Equipment"	Comparison of existing documentation to the Realistic, Medium-Centered Spectra satisfied seismic capacity criteria
HV-5329A	Aux El. 585	HVAC damper actuators are not included in the SQUG's "20 Classes of Equipment"	Comparison of existing documentation to the Realistic, Medium-Centered Spectra satisfied seismic capacity criteria

Table 5-6

"Other" Outlier Description and Resolution Summary

Equipment ID	Location	Outlier Description	Outlier Resolution
HV-5329B	Aux El. 585	HVAC damper actuators are not included in the SQUG's "20 Classes of Equipment"	Comparison of existing documentation to the Realistic, Medium-Centered Spectra satisfied seismic capacity criteria
HV-5329C	Aux El. 585	HVAC damper actuators are not included in the SQUG's "20 Classes of Equipment"	Comparison of existing documentation to the Realistic, Medium-Centered Spectra satisfied seismic capacity criteria
HV-5336A	Aux El. 585	HVAC damper actuators are not included in the SQUG's "20 Classes of Equipment"	Comparison of existing documentation to the Realistic, Medium-Centered Spectra satisfied seismic capacity criteria
HV-5336B	Aux El. 585	HVAC damper actuators are not included in the SQUG's "20 Classes of Equipment"	Comparison of existing documentation to the Realistic, Medium-Centered Spectra satisfied seismic capacity criteria
HV-5336C	Aux El. 585	HVAC damper actuators are not included in the SQUG's "20 Classes of Equipment"	Comparison of existing documentation to the Realistic, Medium-Centered Spectra satisfied seismic capacity criteria
HV-5361A	Aux El. 623	HVAC damper actuators are not included in the SQUG's "20 Classes of Equipment"	Comparison of existing documentation to the Realistic, Medium-Centered Spectra satisfied seismic capacity criteria
HV-5361B	Aux El. 623	HVAC damper actuators are not included in the SQUG's "20 Classes of Equipment"	Comparison of existing documentation to the Realistic, Medium-Centered Spectra satisfied seismic capacity criteria

Table 5-6

"Other" Outlier Description and Resolution Summary

Equipment ID	Location	Outlier Description	Outlier Resolution
HV-5362A	Aux El. 623	HVAC damper actuators are not included in the SQUG's "20 Classes of Equipment"	Comparison of existing documentation to the Realistic, Medium-Centered Spectra satisfied seismic capacity criteria
HV-5362B	Aux El. 623	HVAC damper actuators are not included in the SQUG's "20 Classes of Equipment"	Comparison of existing documentation to the Realistic, Medium-Centered Spectra satisfied seismic capacity criteria
HV-5443A	Aux El. 585	HVAC damper actuators are not included in the SQUG's "20 Classes of Equipment"	Comparison of existing documentation to the Realistic, Medium-Centered Spectra satisfied seismic capacity criteria
HV-5443B	Aux El. 585	HVAC damper actuators are not included in the SQUG's "20 Classes of Equipment"	Comparison of existing documentation to the Realistic, Medium-Centered Spectra satisfied seismic capacity criteria
HV-5443C	Aux El. 585	HVAC damper actuators are not included in the SQUG's "20 Classes of Equipment"	Comparison of existing documentation to the Realistic, Medium-Centered Spectra satisfied seismic capacity criteria
HV-5444A	Aux El. 585	HVAC damper actuators are not included in the SQUG's "20 Classes of Equipment"	Comparison of existing documentation to the Realistic, Medium-Centered Spectra satisfied seismic capacity criteria
HV-5444B	Aux El. 585	HVAC damper actuators are not included in the SQUG's "20 Classes of Equipment"	Comparison of existing documentation to the Realistic, Medium-Centered Spectra satisfied seismic capacity criteria
HV-5444C	Aux El. 585	HVAC damper actuators are not included in the SQUG's "20 Classes of Equipment"	Comparison of existing documentation to the Realistic, Medium-Centered Spectra satisfied seismic capacity criteria

Table 5-6

"Other" Outlier Description and Resolution Summary

Equipment ID	Location	Outlier Description	Outlier Resolution
HV-5597	Aux El. 603	HVAC damper actuators are not included in the SQUG's "20 Classes of Equipment"	Comparison of existing documentation to the Realistic, Medium-Centered Spectra satisfied seismic capacity criteria
HV-5598	Aux El. 603	HVAC damper actuators are not included in the SQUG's "20 Classes of Equipment"	Comparison of existing documentation to the Realistic, Medium-Centered Spectra satisfied seismic capacity criteria
PSE 226	CTM El. 565	Pressurizer Safety Valve Rupture Disks are not included in the SQUG's "20 Classes of Equipment"	Based on the function of the rupture disk it was judged to be adequate.
PSE 5461	CTM El. 565	Pressurizer Safety Valve Rupture Disks are not included in the SQUG's "20 Classes of Equipment"	Based on the function of the rupture disk it was judged to be adequate.
PSE 5462	CTM El. 565	Pressurizer Safety Valve Rupture Disks are not included in the SQUG's "20 Classes of Equipment"	Based on the function of the rupture disk it was judged to be adequate.
PSE 5463	CTM El. 565	Pressurizer Safety Valve Rupture Disks are not included in the SQUG's "20 Classes of Equipment"	Based on the function of the rupture disk it was judged to be adequate.
PSE 5464	CTM El. 565	Pressurizer Safety Valve Rupture Disks are not included in the SQUG's "20 Classes of Equipment"	Based on the function of the rupture disk it was judged to be adequate.

Table 5-6

"Other" Outlier Description and Resolution Summary

Equipment ID	Location	Outlier Description	Outlier Resolution
RC 2A	CTM El. 623	Pressurizer power relief valves (SOL pilot) are not included in the SQUG's "20 Classes of Equipment"	Comparison of existing documentation to the Realistic, Medium-centered spectra satisfied seismic capacity criteria.
TI-5503	Aux El. 585	Portable temperature indicator are not included in the SQUG's "20 Classes of Equipment"	Evaluation showed seismic capacity exceeded seismic demand.
TI-5504	Aux El. 585	Portable temperature indicator are not included in the SQUG's "20 Classes of Equipment"	Evaluation showed seismic capacity exceeded seismic demand.

Section 6

TANKS AND HEAT EXCHANGERS REVIEW

6.1 SUMMARY OF REVIEW

The tanks and heat exchangers on the Davis-Besse SSEL were evaluated in accordance with Section II.7 of the GIP.

A total of 19 tanks and heat exchangers were evaluated. The following is a brief description of each type.

Tanks--Horizontal
A total of eight horizontal tanks were evaluated, consisting of two of each of the following: Component cooling surge tanks, EDG fuel oil storage tanks, EDG day tanks, and the boric acid additions tanks. The EDG fuel oil tanks are buried in the yard and were not available for a complete inspection. Drawings and the qualification report were used to verify the backfill cover is sufficient to hold the tanks in place.

The Component Cooling Surge Tanks (T12-I and T12-II) were identified as outliers resulting from an interaction concern between two small pipes coming out of the tanks and a near-by access platform. Although the GIP does not specifically require the SCEs to investigate interaction concerns the SCEs were cognizant of the potential problem and identified it as an Outlier.

Tanks--Vertical
A total of 3 vertical tanks were evaluated consisting of the following: borated water storage tank, make-up tank and the spent fuel pool demineralizer tank. The make-up tank does not have a flat bottom, but a hemispherical bottom supported by a steel skirt. The spent fuel pool demineralizer tank has a hemispherical bottom supported by four legs and was not accessible for walkdown because it is located in a high radiation area.

The spent fuel pool demineralizer tank will require further analysis and a determination can not be made at this time if any modification is warranted.

Heat Exchangers
A total of 8 heat exchangers were evaluated consisting of the following: (3) component cooling water; (2) decay heat removal; (2) seal return cooler; and (1) borated water storage tank heater.

The component cooling water and the decay heat removal heat exchangers are currently undergoing further analysis and a determination can not be made at this time if any modification are warranted.

6.2 Summary of Outliers

A total of 12 outliers were identified affecting 10 tanks or heat exchangers. A short description of each tank or heat exchanger outlier and its resolution are provided in the following tables:

Table 6-1 Tank and Heat Exchanger Anchorage Outlier Description and Resolution Summary

Table 6-2 Tank and Heat Exchanger Interaction Outliers Description and Resolution Summary

Table 6-1

Tank and Heat Exchanger Anchorage Outlier Description and Resolution Summary

Equipment ID	Location	Outlier Description	Outlier Resolution
E22-1	Aux El. 585	Applied loads exceed the anchor bolt allowables	Re-evaluate the system loads and provide additional support if required.
E22-2	Aux El. 585	Applied loads exceed the anchor bolt allowables	Re-evaluate the system loads and provide additional support if required.
E22-3	Aux El. 585	Applied loads exceed the anchor bolt allowables	Re-evaluate the system loads and provide additional support if required.
E27-1	Aux El 545	Applied loads exceed the anchor bolt allowables	Re-evaluate the system loads and provide additional support if required.
E27-2	Aux El 545	Applied loads exceed the anchor bolt allowables	Re-evaluate the system loads and provide additional support if required.
T12-1	Aux El. 623	Embedment length of the J-Bolt is less than the GIP minimum value	Analysis performed indicated that the existing anchorage detail is adequate. Therefore; accept as is.
T12-2	Aux El. 623	Embedment length of the J-Bolt is less than the GIP minimum value	Analysis performed indicated that the existing anchorage detail is adequate. Therefore; accept as is.
T18	Aux. El. 565	Applied loads exceed the anchor bolt allowables	Re-evaluate the loads on the anchors.

Table 6-1

Tank and Heat Exchanger Anchorage Outlier Description and Resolution Summary

Equipment ID	Location	Outlier Description	Outlier Resolution
T7-1	Aux El 565	Embedment length of the J-Bolt is less than the GIP minimum value	Analysis performed indicated that the existing anchorage detail is adequate. Therefore, accept as is.
T7-2	Aux El 565	Embedment length of the J-Bolt is less than the GIP minimum value	Analysis performed indicated that the existing anchorage detail is adequate. Therefore, accept as is.

Table 6-2

Tank and Heat Exchanger Interaction Outlier Description and Resolution Summary

Equipment ID	Location	Outlier Description	Outlier Resolution
T12-I (See LT-1402)	Aux El 623	Instrument line from the tank is in contact with a platform	Provide lateral support for the platform Ref. MOD 95-0037
T12-II (See LT-1403)	Aux El 623	Instrument line from the tank is in contact with a platform	Provide lateral support for the platform Ref. MOD 95-0037

CABLE AND CONDUIT RACEWAY REVIEW

7.1 SUMMARY OF RACEWAY REVIEW

The review for cable tray and conduit systems at Davis-Besse was performed per the guidelines of Section II.8 of the Generic Implementation Procedure (GIP). Only the buildings that house the SSEL equipment were included in the walkdown. In general, all rooms in these buildings were walked down unless it was fairly certain that no cable trays or conduits associated with the SSEL were located or passed through the room. In a limited number of cases, access to rooms was limited due to radiation concerns. In all cases, the walkdown was performed by a minimum of 2 qualified Seismic Capability Engineers (SCE), with at least one of them being a Professional Engineer.

Conduits are the main routing method for cables at Davis-Besse, with the size varying up to and including 4" nominal diameter rigid steel. Cable trays, when used, are predominately 24" ladder and trough type construction.

Based on the SSEL equipment location, the majority of the cable trays and conduits are located in the cable spreading room, electrical penetration rooms, switchgear rooms, EDG room, and the hallways in the vicinity of the above rooms.

The cable and conduit raceway systems consist primarily of light steel strut frame construction manufactured by Unistrut Corporation. Supports for Q installations are generally quite robust with vertical members made from unistrut or structural steel members. Non-Q installations are usually supported by threaded rod. The strut hangers vary from the very simple single cantilever strut supporting one conduit to a multi-tier, three-dimensional strut frames supporting several cable trays and conduits. The cable trays and conduits are attached to the support using standard tray and conduit type clamps. The supports are attached to the structure using expansion anchors, or welded to structure steel or embeds. Supports can be found attached to the ceiling, walls, and the floor.

The SCEs were cognizant of the seismic joints throughout the Auxiliary Building and considered the building displacement along with the support flexibility in determining the adequacy of the supports. However, it should be noted that since the Auxiliary building is founded on rock that the building displacements are relatively small.

During the course of the walkdown, several housekeeping items were identified that should be corrected. Although the supports/raceway met the SQUG criteria, when corrected they would enhance the overall seismic capability of the support/raceway system. Since this action is in addition to the requirements of the GIP, it is not presented in this report.

In general the cable tray and conduit raceways are well supported.

7.2 EVALUATION OF BOUNDING SAMPLES

As part of the in-plant review, worst-case bounding samples of raceway supports were selected for further analytical reviews. The SCEs selected representative, worst-case bounding samples of the raceway supports based upon a thorough walkdown of the applicable areas. Bounding samples were selected to encompass the diversity of the plant's raceway support systems using the SCEs experience and technical judgment.

Some of the characteristics used by the SCEs in establishing the worst case bounding samples were:

- Most heavily loaded supports
- Unique support configuration or orientation
- High load to member size ratio
- High load to anchor bolt size ratio
- High load to span ratio

A total of 26 supports were selected for the Limited Analytical Review. Table 7-1 provides a brief description of each of the samples chosen.

Four supports did not pass the analytical review and are identified as outliers. The four supports are LAR 318-1, LAR 422A-1, LAR 501-1, and LAR 601-1.

Limited Analytical Review sample LAR 318-1 represents a cantilever conduit support mounted on a blockwall with a 2-bolt baseplate oriented horizontally. This support did not pass the analytical review due to reduced anchor bolt allowables. However, since this support is not required to meet the conduit spacing criteria, no fix is required. Further review showed that this is a unique support and other blockwall supports have extremely small loads or utilize thru-bolts.

Limited Analytical Review sample LAR 422A-1 represents a floor to ceiling cable tray support in which the base plate for a cantilever bracket exceeded the allowable value. Two additional samples were then selected (LAR 422A-2 and LAR 422A-3) that represented the next worst case (bounding) conditions. Both of these supports were analyzed and found to be acceptable.

Limited Analytical Review sample LAR 501-1 represents a heavily loaded wall mounted conduit support that did not pass the analytical review. Further evaluation showed that the existing conduit span is acceptable without the support attached to the wall. Therefore; no fix is required. The next worst case bounding sample was identified (LAR 110-1) and was found acceptable.

Limited Analytical Review sample LAR 601-1 support passed the analytical review however, the web of the structural beam in which it was attached did not meet the local bending stress criteria. Since this conduit support is unique in the plant, the next worst case (bounding) sample analysis is not applicable.

7.3 SUMMARY OF OUTLIERS

The SCEs, using the requirements of the Section 8 of the GIP checked the raceway systems for compliance with the "Inclusion Rules" , "Other Seismic Performance Concerns" and "Seismic Interaction". Conditions that did not meet the requirements were identified as Outliers.

In addition the SCEs searched out other installation configurations that could affect the seismic performance of the support/system that were not specifically identified in the GIP. In particular, the distance between the unistrut clamp and the free edge of the unistrut. The concern is that if the distance is to small, the clamp could slide off of the end of the unistrut.

A total of 31 Outliers were identified during the cable and conduit raceway walkdown. Table 7-2 provides a listing of each Outlier and the resolution.

Table 7-1

Cable and Conduit Raceway Limited Analytical Reviews

LAR	Location	Description	Justification
110A-1	Aux. Bldg. Area 7 Room 110A El. 555'	Wall mounted cantilevered cable tray and conduit support.	This support was chosen since it is the next worst case sample after 501-1.
110A-2	Aux. Bldg. Area 7 Room 110A El. 555'	Simple supported P1000 member.	Support exhibited large load and a long span.
113A-1	Aux. Bldg. Area 7 Room 113A El. 555'	Simple Supported P1000 member	Support exhibited large load and a long span.
124-1	Aux Bldg. Area 7 Room 124 El. 545'	Wall mounted conduits.	Support exhibited one of the largest eccentricities with minimal resisting moment.
209-1	Aux. Bldg. Area 8 Room 209 El. 565'	Ceiling mounted cantilevers	Ceiling mounted supports are governed by lateral seismic loads which exhibit large moments.
303-1	Aux. Bldg. Area 8 Room 303 El. 585'	Wall mounted cable tray	Support exhibited one of the largest eccentricities with minimal resisting moment.

Table 7-1

Cable and Conduit Raceway Limited Analytical Reviews

LAR	Location	Description	Justification
310-1	Aux. Bldg. Area 7 Room 310 El. 585'	Conduits crossing seismic joints	Support exhibits the least amount of flexibility for the given load.
313-1	Aux. Bldg. Area 7 Room 313 El. 585'	Ceiling mounted cantilevers	Ceiling mounted supports are governed by lateral seismic loads which exhibit large moments.
314-1	Aux. Bldg. Area 7 Room 314 El. 585'	Floor mounted cantilever	Floor mounted supports are governed by lateral seismic loads which exhibit large moments.
316-1	CTM Room 316 El. 585'	P1000 cantilever tray support	Bounding support for the Containment with typical Containment connections.
317-1	CTM Room 317 El. 585'	Electrical Penetration Box mounted to the Containment penetration	Heavily loaded electrical penetration box at the highest elevation.
318-1	Aux Bldg. Area 6 Room 318 El. 585'	Cantilever support attached to a blockwall	Expansion anchors have a high reduction capacity when installed in blockwalls This support did not pass. See Outlier discussion.

Table 7-1

Cable and Conduit Raceway Limited Analytical Reviews

LAR	Location	Description	Justification
325-1	Aux. Bldg. Area 6 Room 325 El 585'	Lateral braced support	Support does not have clip angles and has a small lateral capacity.
402-1	Aux. Bldg. Area 8 Room 402 El. 603'	Rod hung multi cable tray and conduit support	This support was chosen since rod hung supports exhibit the largest expansion anchor loads due to dead load.
404-1	Aux. Bldg. Area 8 Room 404 El. 603'	Rod hung multi cable tray and conduit support	This support was chosen since rod hung supports exhibit the largest expansion anchor loads due to dead load.
404-2	Aux. Bldg. Area 8 Room 404 El. 603'	Simple supported P1000 member	Support exhibited a large load and a long span.
422A-1	Aux. Bldg. Area 7 Room 422A El. 614'	Floor to ceiling tray supports	One of three worst case variations of the floor to ceiling support. Cantilever bracket failed, See Outlier discussion.
422A-2	Aux. Bldg. Area 7 Room 422A El. 614'	Floor to ceiling tray supports	Chosen as the next worst bounding type support for 424A-1.

Table 7-1

Cable and Conduit Raceway Limited Analytical Reviews

LAR	Location	Description	Justification
422A-3	Aux. Bldg. Area 7 Room 422A El. 614'	Floor to ceiling tray supports	Chosen as the next worst bounding type support for 422A-1.
422A-4	Aux. Bldg. Area 7 Room 422A El. 614'	Floor to ceiling tray supports	Second of three worst case variations of the floor to ceiling support.
422A-5	Aux. Bldg. Area 7 Room 422A El. 614'	Floor to ceiling tray supports	Third of three worst case variations of the floor to ceiling support.
427-1	Aux. Bldg. Area 7 Room 427 El. 603'	Rod hung multi cable tray and conduit support	This support was chosen since rod hung supports exhibit the largest expansion anchor loads due to dead load.
501-1	Aux Bldg. Area 7 Room 501 El. 623'	Wall mounted cantilevered conduit support.	This support was chosen since it is controlled by the dead load case. This support did not pass. See Outlier discussion.
501-2	Aux. Bldg. Area 7 Room 501 El. 623'	Conduits crossing seismic joints	Support exhibits the least amount of flexibility for the given load.

Table 7-1

Cable and Conduit Raceway Limited Analytical Reviews

LAR	Location	Description	Justification
601-1	Aux. Bldg. Area 5 Room 601 El. 643'	Unique cantilever support	Unique support. The support passed the analytical check, but the beam had local yielding of the web. See Outlier discussion

Table 7-2

Cable and Conduit Raceway Outlier Description and Resolution Summary

Outlier No.	Outlier Description	Outlier Resolution
101-1	Edge distance on conduit clamp to the edge of the unistrut channel is very small at six consecutive supports	Provide end restraints Refer to PCAQ 94-0011
105-1	Threaded rod to the overhead shell anchor is missing.	Install the missing threaded rod Refer to PCAQ 95-0567
209-1	2" conduit support beam clamp is not properly installed	Re-install support Refer to PCAQ 95-0567
218-1	Conduit 39242C is missing several conduit clamps.	Install the conduit missing clamps Work to be done during an outage. Refer to PCAQ 95-0567
218-2	Cable tray BCBD and BLBE are missing clamps to the tray	Install missing tray clamps Work to be done during an outage. Refer to PCAQ 95-0567
227-1	12" cable tray (ACEM15) has a 17' L-shape span without an acceptable intermediate support.	The lightly loaded tray (15 lb/ft) is contained in place by existing trays, piping, conduits, or supports, without damage to the tray or cables. Therefore; existing condition is acceptable as is.
236-1	3/4" conduit has a span greater than GIP allowable	Clamp the conduit to an adjacent existing support. Refer to PCAQ 95-0567

Table 7-2

Cable and Conduit Raceway Outlier Description and Resolution Summary

Outlier No.	Outlier Description	Outlier Resolution
240-1	1 1/2" conduit does not have an industry acceptable support creating a cantilever overspan condition	Install a new support Refer to PCAQ 95-0567
303-1	Inadequate flexibility for the differential building movement. Conduit has 6" span between the floor penetration and support.	Remove clamp for this conduit at the support to provide sufficient conduit flexibility. Refer to PCAQ 95-0567
304-1	Conduit support has horizontal member disconnected from the vertical member.	Install unistrut brackets for connection to the vertical member Refer to PCAQ 95-0567
304-2	Tray span of 11'-6" exceeds GIP allowable of 10'	Tray has less weight than permitted in GIP. In addition the trays are 6" deep in lieu of the 4" in the GIP. Therefore, acceptable as is.
304-3	Tray span of 11'-6" exceeds GIP allowable of 10'	Tray is lightly loaded (34 lb/ft in lieu of 50 lb/ft). In addition the trays are 6" deep in lieu of 4" in the GIP. Therefore, acceptable as is.
304-4	Tray span of 11'-6" exceeds GIP allowable of 10'	Tray has less weight than permitted in the GIP. In addition the trays are 6" deep in lieu of 4" in the GIP. Therefore, acceptable as is.

Table 7-2

Cable and Conduit Raceway Outlier Description and Resolution Summary

Outlier No.	Outlier Description	Outlier Resolution
314-1	Tray span of 11'- 8" exceeds GIP allowable of 10'	Tray is lightly loaded (18 lb/ft in lieu of 50 lb/ft). In addition the trays are 6" deep in lieu of 4" in the GIP. Therefore, acceptable as is.
314-2	Tray span of 11'- 8" exceeds GIP allowable of 10'	Tray is lightly loaded (11 lb/ft in lieu of 50 lb/ft). In addition the trays are 6" deep in lieu of 4" in the GIP. Therefore, acceptable as is.
314-3	Tray span of 12' exceeds GIP allowable of 10'	Tray is lightly loaded (21 lb/ft in lieu of 50 lb/ft). In addition the trays are 6" deep in lieu of 4" in the GIP. Therefore, acceptable as is.
314-4	Tray span of 12' exceeds GIP allowable of 10'	Tray is lightly loaded (22 lb/ft in lieu of 50 lb/ft). In addition the trays are 6" deep in lieu of 4" in the GIP. Therefore, acceptable as is.
318-1 (LAR 318-1)	Wall mounted support does not meet GIP dead load check	This support is redundant (i.e. not needed to meet spacing criteria) Therefore, acceptable as is.

Table 7-2

Cable and Conduit Raceway Outlier Description and Resolution Summary

Outlier No.	Outlier Description	Outlier Resolution
404-1	Tray span of 13' exceeds GIP allowable of 10'	Tray is lightly loaded (19 lb/ft in lieu of 50 lb/ft). In addition the trays are 6" deep in lieu of 4" in the GIP. Therefore, acceptable as is.
410-1	Conduit clamp is not properly engaged in the unistrut.	Rework the conduit clamp Refer to PCAQ 94-0011
410-2	Edge distance of cable tray clamp to the edge of the unistrut channel is small	Provide end restraints Refer to PCAQ 94-0011
422A-1	Tray span of 12'- 8" exceeds GIP allowable of 10'	Tray is lightly loaded (31 lb/ft in lieu of 50 lb/ft). In addition the trays are 6" deep in lieu of 4" in the GIP. Therefore, acceptable as is.
422A-2	Shell anchor for rod hanger has edge distance less than 1.5 d	Support would be supported by adjacent items with no adverse affects on raceway or cables. Therefore, acceptable as is.
422A-3 (LAR 422A-1)	Base plate on the cantilever bracket exceeds the allowables	Replace the cantilever plate/bracket Refer to MOD 95-0045

Table 7-2

Cable and Conduit Raceway Outlier Description and Resolution Summary

Outlier No.	Outlier Description	Outlier Resolution
428-1	1" conduit has a span of 15' which exceeds the GIP allowable of 12'	Based on existing routing configuration location of supports and adjacent raceways, the conduit can not fall or create a hazard Therefore, acceptable as is.
500-1	Support is not attached to beam which results in conduit exceeding the GIP span criteria.	Attach support to building structure. Refer to PCAQ 95-0567
500-2	NW expansion anchor would not tighten (spins) during anchor bolt tightness check	Support anchorage acceptable for loading as is.
501-1 (LAR 501-1)	Wall mounted cantilever support does not pass the Limited Analytical Review	This support is redundant (i.e. not needed to meet spacing criteria) Therefore, acceptable as is.
502-1	3/4" conduit has a span of 12' which is greater than the GIP allowable of 10'.	Provide support Refer to PCAQ 95-0567
515-1	Tray span of 12' exceeds GIP allowable of 10'	Tray is lightly loaded (16 lb/ft in lieu of 50 lb/ft). In addition the trays are 6" deep in lieu of 4" in the GIP. Therefore, acceptable as is.

Table 7-2

Cable and Conduit Raceway Outlier Description and Resolution Summary

Outlier No.	Outlier Description	Outlier Resolution
601-1	Local yielding at the beam attachment	This support will be stiffened Ref. MOD 95-0045

Section 8

PLAN FOR ADDRESSING UNRESOLVED OUTLIERS

Actions have been initiated to resolve all the outliers identified as a result of the SQUG program. Many outliers have already been satisfactorily resolved using analytical means, and several other outliers have been corrected. The remaining outliers will be addressed through DBNPS existing Modification (MOD) or Potential Condition Adverse to Quality (PCAQ) processes.

Toledo Edison has currently scheduled the remaining outliers to begin work in Cycle 10. However, not all of the equipment will be available during the operating cycle for outlier resolution. In addition, some designated trains are available only during a refueling outage with alternating trains available during alternating refueling outages. The time required to complete all of the identified SQUG outliers in a timely manner that corresponds to the equipment availability will be by the end of the 12 th Refueling Outage (12 RFO).

Section 9

SIGNIFICANT OR PROGRAMMATIC DEVIATION FROM THE GIP

Toledo Edison has not taken any significant or programmatic deviations from the GIP in the resolution to the USI A-46 program at Davis-Besse. As allowed in the GIP, Toledo Edison has made interpretations of the wording of the GIP caveats when appropriate while meeting the intent of the caveats. These have been identified in Table 5-1. All other equipment not listed in the table met the specific wording of the caveats identified in the GIP.

Section 10

THIRD-PARTY AUDIT SUMMARY

10.1 SUMMARY OF AUDITS

As required by Section I.2.2.7 of the GIP, a Third-Party Audit was performed by a qualified individual who was not part of the Seismic Review Teams (SRTs). The final Third-Party Audit report is included in Appendix E of this report.

Several audits were conducted at Davis-Besse by qualified individuals who were not part of the SRTs during the time the walkdowns were performed. These audits are briefly summarized below.

10.2 INFORMAL AUDITS

Two informal audits were conducted in the early stages of the implementation of the SQUG program by two separate consultants (Stevenson and Associates and EQE Consultants) not directly involved with the walkdowns or formal reviews. These activities included the review of the completed Screening Verification Work Sheets (SEWS); information gathering in the plant; review of engineering documentation and judgment. These informal audits confirmed that Toledo Edison was properly implementing the SQUG program in accordance with the GIP.

10.3 FORMAL AUDITS

Two formal audits were conducted at Davis-Besse by qualified individuals independent of the walkdown. These audits are described in further detail below.

10.3.1 Dr. John D. Stevenson

Dr. John D. Stevenson (Stevenson and Associates) performed a peer review of the A-46 activities at the request of Davis-Besse's Q.A. Department. Dr. Stevenson has approximately 30 years of experience in the seismic area, been a contributor and reviewer of the SQUG program and has performed SQUG walkdowns and Third-Party Audits at other nuclear facilities. Dr. Stevenson is an industry recognized expert in the seismic field. Dr. Stevenson's activities included a review of completed SEWS packages, and the inspection of the corresponding equipment in the plant. A total of 15 items were reviewed. The following statements were documented by Dr. Stevenson in his report:

> "It is my opinion that none of my observations or recommendations made concerning SEWS Items 1-15 reviewed would result in the invalidation of the conclusions reached by the SRT's in their preparation of the SEWS."
>
> "My basic conclusion is that the USI A-46 resolution effort at Davis-Besse NPS is

being performed using the SQUG developed Generic Implementation Procedure in a thoroughly competent and adequate manner. It should be understood that this program relies to a considerable extent on the judgment of the qualified SRT team consistent with the requirements of the GIP and therefore the judgment of a third part is not binding. I have some recommendations which I believe would enhance documentation and future performance of the program.

1) Pictures if feasible should be taken of all components and their anchorages and in instances where interaction has been identified.

2) A calibrated tug test (i.e. record approximate amount of tug in lbs and estimated weight of component) in cases where component in question has a frequency above 8.0 Hz and the component has a weight of 100 lbs. or less should be used to verify seismic adequacy rather than rely on more subjective or judgments or anchorage calculations as to anchorage capacity.

3) I also strongly recommended that the block wall seismic verification analysis be checked to insure walls with attached equipment and distribution systems were evaluated with these added masses."

10.3.2 Dr. James J. Johnson

Dr. James J. Johnson (EQE International) performed the final Third-Party Audit at the conclusion of the SQUG program. Dr. Johnson has over 20 years experience in the development, implementation and teaching of seismic issues. Dr. Johnson has played a significant role in the development of general and plant specific seismic evaluation procedures including the SQUG program.

Dr. Johnson's review of the SQUG program as implemented at Davis-Besse concluded that Toledo Edison implemented the GIP requirements "... in an appropriate and adequate fashion." In addition, Dr. Johnson agreed with the SRT's conclusion on the seismic adequacy of the equipment in which he reviewed.

Appendix E contains Dr. Johnson's letter to Toledo Edison that documents his review and conclusions on the SQUG program at Davis-Besse.

Section 11

REFERENCES

1. Generic Implementation Procedure (GIP) for Seismic Verification of Nuclear Plant Equipment, dated February 1992, copyright Seismic Qualification Utility Group (SQUG), Revision 2 corrected February 14, 1992.

2. USNRC, "Supplement No. 1 to Generic Letter (GL) 87-02 that transmits Supplemental Safety Evaluation Report No. 2 (SSER No.2) on SQUG Generic Implementation Procedure, Revision 2, as Corrected on February 14, 1992 (GIP-2)," dated May 22, 1992.

3. Letter to the NRC from Donald C. Shelton, dated Sept. 17, 1992 (Serial Number 2090)

4. Letter to Donald C. Shelton from the NRC dated December 8, 1992

5. USI A-46 Relay Evaluation Report (Attachment 2)

DAVIS-BESSE NUCLEAR POWER STATION

Unresolved Safety Issue (USI) A-46

Seismic Evaluation Report

APPENDIX A

Résumés for Seismic Capability Engineers (SCEs)

Jagdish C. Arora

EDUCATION: BSCE Indian Institute of Technology, Kharagpur, India - 1962

MSCE University of Minnesota - 1966

PROFESSIONAL REGISTRATION: Michigan, Minnesota

WORK EXPERIENCE:

February 1986 to Present	Toledo Edison, Senior Engineer - Nuclear Lead Engineer responsible for design, planning group assignments, directing assigned personnel and meeting cost and time schedules for various items related to modifications of structural steel and reinforced concrete. Attended training and participated in SQUG walkdowns and evaluations of plant equipment.
Nov. 1985 - Feb. 1986	American Electric Power Service Corp., Senior Engineer Responsible for the design of structural steel for the main buildings to convert Zimmer power plant from nuclear to fossil.
March 1973 to Nov. 1985	Bechtel Power Corporation, Senior Engineer, group leader, group supervisor In increasingly more responsible position, performed structural engineering functions in the design and construction of nuclear and fossil power plants, coal handling facilities, steam transmission line and modifications of operating power plants.
Feb. 1966 to march 1973	Giffels Associates, Inc., Engineer, Senior engineer Designed steel and concrete structures for projects ranging from auto plants, processing facilities, bulk mail handling facilities, office buildings, and heavy equipment plants.
Sept. 1962 to Sept. 1964	Heavy Engineering Corp., India - Engineer Designed and detailed structural steel and concrete structures for foundry forge plant.

Richard N. Bair
1800 McCord Road, Apt. 67
Toledo, Ohio 43615

EDUCATION: BSCE Michigan Technological University - 1974
Graduate Course - University of Michigan

PROFESSIONAL REGISTRATION: Michigan

WORK EXPERIENCE:

May 1988 to Present — Toledo Edison, Senior Engineer - Nuclear
Responsible for: Preparation of Plant Modification Packages (including Safety Evaluations), perform analysis and design of miscellaneous structural items (including: raceway supports, pipe supports, platforms, and equipment anchorages). Attended training and participated in SQUG and IPEEE walkdowns and evaluations of plant equipment and supports. Responsible engineer for the Dry Fuel Storage Facility Modification to augment the storage capacity of the spent fuel pool.

March 1980 - May 1988 — Bechtel Power Corporation, Senior Engineer
Responsible for: Design and construction of supports; raceway and piping, construction and outage support for Civil designs at Power Plant sites, analysis and design of miscellaneous structures; platforms and buildings, and equipment supports. Performed a variety of office and site assignments.

July 1979 - March 1980 — Giffels Associates, Inc., Field Representative
Responsible for: Reviewing all aspects of the industrial construction as the client's site representative. Assisted in resolving site construction problems, and the issuance of change orders.

June 1974 - July 1979 — Bechtel Power Corporation, Engineer
Responsible for: Field inspections of Civil/ Structural construction at industrial site. Perform design of structural steel for buildings and miscellaneous supports.

Thomas Dabrowiak
808 Lambkins St.
Saline Mi. 48176

EDUCATION: BSCE Purdue University - 1970

PROFESSIONAL REGISTRATION: California

WORK EXPERIENCE:

June 1991 to Present

Toledo Edison, Senior Engineer-Nuclear
Responsible for: Preparation of plant modifications, design of miscellaneous structural items, perform seismic analysis of piping systems. Attended training and participated in SQUG walkdowns and evaluations. Provided Civil/Structural response to the Electrical Distribution System Functional Inspection (EDSFI) program.

June 1973 to June 1991

Bechtel Power Corporation, Group Leader
Responsible for: Design of numerous structures at nuclear and fossil power plants. Performed dynamic analysis of fan foundations and flue gas ductwork. Analyzed and designed chimney and power block foundations and structural steel superstructures. Experience at construction sites as well as the design office.

June 1970 to June 1973

Sargent & Lundy, Engineer
Responsible for: Analysis and design of electrical substation superstructures and foundations.

Jon G. Hook
2640 Sequoia Rd.
Toledo, Ohio 43617

EDUCATION: **BSCE, Michigan Technological University - 1974**
Graduate Courses - University of Michigan

PROFESSIONAL REGISTRATION: **Michigan**

WORK EXPERIENCE:

June 1987 to Present	Toledo Edison, Senior Engineer - Nuclear Lead Engineer in the Civil/Structural Unit. Responsible for the seismic qualification of equipment, design criteria, procedures, modifications, architectural and civil site activities. Responsible engineer for the SQUG and IPEEE programs.
February 1978 - June 1987	Bechtel Power Corporation, Senior Engineer Responsible for: Design and construction of raceway and HVAC supports. Perform analysis and design of miscellaneous structures and platforms. Activities included writing specifications, evaluating bids, resolving various problems associated with construction of various nuclear power plants.
June 1976 - February 1978	Bechtel Power Corporation, Q.A. Engineer Responsible for performing inspections and audits of civil/structural activities during construction of a nuclear facility.
June 1974 - June 1976	Stone and Webster Engineering Corp. Q.C.Engineer Responsible for performing inspections and tests on the installation of soils, concrete, coatings and structural steel during construction of nuclear facilities.

Steven J. Osting
5247 Seaman Rd.
Oregon, Ohio 43616

EDUCATION:

General coursework- University of Cincinnati- 1975
Associate: Engineering Applied Science- Lima Technical College- 1978
Bachelor: Mechanical Engineering Technology- University of Dayton- 1980

PROFESSIONAL REGISTRATION: Ohio- 1990

WORK EXPERIENCE:

1976-1978 U.S.Fiber Corporation- QC lab technician.
Performed various Quality Control/ Testing functions for a major U.S. cellulose insulation manufacturer. Duties: in-lab chemical analysis and physical property testing to insure compliance with company standards, NFPA guidelines, and Underwriters Laboratories (UL) regulations; assisted in the development , operation and surveillance of manufacturing and installation equipment. Responsible for equipment performance reports and monitoring/reporting product test results.

1979 Mitchell & Jensen, Architect/ Engineers- Engineering Assistant
Worked in the Mechanical Engineering Dept. assisting in the design of HVAC and piping for newly designed commercial buildings in the Dayton, Ohio area. Duties: heating/ cooling load analysis, HVAC duct layout and design, miscellaneous drafting- HVAC/plumbing, water well location survey for future sitings.

1980-present Toledo Edison Co.- Senior Design Engineer
Provided technical support for the Davis Besse Nuclear Power Station. This involves daily problem resolution, long term planning/engineering design of process system enhancements or upgrades, performing modification design reviews and coordinating field implementation interface.
Specific duties: technical studies and cost benefit analysis; develop safety reviews and evaluations for equipment and system modifications; root cause analysis; and defective component analysis or justification of non-conforming conditions of installed components and systems; developing complete detailed engineering design packages and the supporting calculations/ drawings; interface with regulating bodies such as the Nuclear Regulatory Commission; participate in technical committees such as Owner's Groups. Involved heavily in the area of process piping stress analysis and pipe support design.
Completed the Seismic Qualification Utility Group (SQUG) walkdown screening and seismic evaluation course in November,1993.

Scott R. Saunders
3518 Lynnbrooke Lane
Oregon, Ohio 43616

EDUCATION: BSCE, The Ohio State University - 1983

WORK EXPERIENCE:

May 1985 - Present — Toledo Edison Company, Senior Engineer - Nuclear

Responsible for: Preparation of Plant Modification packages, safety reviews and evaluations; performing analysis of process piping systems, design and analysis of miscellaneous structural items and supports (piping, electrical raceway, HVAC, tubing); evaluation of non-conforming plant conditions including root cause analyses; participate as Core Committee member of the Snubber Utility Group (SNUG); attended training and participated in SQUG walkdowns and evaluations.

June 1984 - May 1985 — Jones & Henry Engineers, Limited, Design Engineer

Responsible for: Process design, layout of piping, equipment, and structures, cost estimating, specification and drawing development for wastewater treatment plant projects.

June 1980 - June 1984 — Toledo Edison Company, Student Engineer

Performed various duties in support of Maintenance Engineering staff at Acme and Bay Shore Stations including, procurement of new and replacement parts, implementing spare parts program, compiling equipment lubrication manual, computerized scheduling for major maintenance outages, financial reports and budgets.

JAMES R. DISSER

PROFESSIONAL HISTORY

EQE International, Stratham, New Hampshire, Project Engineer, 1993-present
Mitchell, Jobe & Company, Dallas, Texas, Senior Engineer, 1992-1993
TU Electric, Glen Rose, Texas, 1980-1992

PROFESSIONAL EXPERIENCE

Mr. Disser has approximately 13 years of experience in the nuclear engineering and construction industry which includes design, analysis, and project management experience.

As Project Engineer for EQE's Engineering Consultants, Mr. Disser is currently involved in the USI A-46 program at Carolina Power and Light (CP&L) Brunswick Steam Electric Plant (BSEP) and GPU Nuclear Oyster Creek Nuclear Generating Station. Prior to this, he has provided services at BSEP in support of the Material Condition Upgrade Project. He was responsible for providing innovative engineering resolutions to ensure short-term structural integrity (STSI) for a wide variety of plant equipment, including all structural elements of the plant buildings, all suspended systems, and mechanical and electrical equipment. STSI resolutions are provided using established plant short-term acceptance criteria; accepted USI A-46 methodology; and/or other creative, sound, short-term engineering qualification methods. The project scope includes in-plant walkdowns to identify potential material condition deficiencies; researching design documentation related to the identified concerns; evaluation of the structural condition, production, review, and design verification of supporting calculations; initiation of any modifications to support the STSI resolutions; and engineering support of construction or maintenance crews in the installation of the modifications. The project group is also responsible for follow-up engineering to provide long-term qualification of the STSI resolutions within the Plant Design Basis which may require additional engineering work or plant modifications for long-term qualification of the equipment and commodities involved. The project's STSI and long-term resolutions quality the equipment and commodities for operational, seismic, and postulated accident conditions as required by the Plant's current Design Basis.

Prior to EQE, Mr. Disser was Technical Manager of the Unit 2 Civil/Structural, Engineering Mechanics, and Suspended Support System Engineering Contract at the Comanche Peak Steam Electric Station (CPSES) in Glen Rose, Texas. The contract provided engineering services for CPSES Unit 2 for the civil, structural, engineering mechanics, seismic equipment qualification, protective coatings, HVAC supports, conduit and conduit supports, cable tray and cable tray supports, instrumentation tubing and supports, non-ASME piping and support, pipe rupture and commodity clearance disciplines. The contract also included a subcontract for the CPSES Unit 2 Seismic Category II/I Adequacy Evaluation. Mr. Disser was responsible for reviewing and approving budget; technical overview of the architect/engineer; conducting technical assessment; reviewing and approving technical criteria and process procedures; and interfacing with project

PROFESSIONAL EXPERIENCE (Continued)

management, construction, startup, Quality Assurance (QA)/Quality Control (QC), Unit 1, and the NRC. He was responsible for providing the A/E with design criteia and assuring that design basis commitment were met. He was also active in TU Electric engineering management of the Unit 2 ASME Pipe Stress and Support Engineer; the Unit 2 Mechanical and Electrical Systems Engineer and the NSSS supplier, Engineer and Analyst in the TU Electric Engineering Unit 2 scope of work; and Unit 1 Design Engineering group performing structural, engineering mechanics, pipe stress and supports, and I&C tubing and HVAC stress and supports engineering.

Mr. Disser provided engineering services for va.ious TU Electric, Comanche Peak, projects, specifically described below:

- ***Unit 2 Reactor Containment Structural Integrity Test (SIT) Milestone Manager.*** Responsible for all aspects of the Unit 2 SIT, including direction of all activities related to the SIT performed by the civil/structural engineer, startup, and construction. Responsible for schedule; budget; engineering specification; test procedures; pre-test preparations; engineering and startup activities; restoration of the Containment building after completion of the test, review and approval of the SIT test report; and interface with the Integrated Leakage Rate Test personnel.

- ***Original Project Engineer for the Unit 2 Construction Restart Estimating Project.*** Developed the engineering baseline scope, manhour estimate, and budget for the Unit 2 Completion Project that preceded restart of Unit 2 engineering activities in 1990. Responsibilities included development of the baseline scope for the ASME and non-ASME piping and supports analysis scope, the Unit 2 Seismic Category II/I Adequacy Evaluation, participation in the preparation of the baseline scope for the civil/structural, engineering mechanics, mechanical systems, and NSSS Engineering scopes of work.

- ***Engineer for the ERC Comanche Peak Review Team QA/QC Review in the Mechanical Safety Significance Evaluation Group.*** Responsibilities included evaluation of deviation reports generated by CPRT inspectors as a result of inspections for construction deviations from design requirements. The evaluations determined the safety significance of the deviations through research into design requirements in effect during the construction phase of Comanche Peak Unit 1, analysis of the design and construction evolution of the deviating item and performance of calculations, as required, to determine the effects of the deviation on the integrity of the item.

PROFESSIONAL EXPERIENCE (Continued)

Mr. Disser also provided services at the Beaver Valley 2 Nuclear Power Station, Duquesne Light Company. Specific projects are briefly described below:

- Responsible for final qualification of pipe stress calculations in support of the BVPS-2 ASME III N-5 Certification Program. Responsibilities included preparation and independent review of final stress calculations incorporating final design and as-built input for ASME III Class 2 and 3 piping. This included review of existing reconciled calculations for adequacy and conformance with the BVPS-2 criteria document, assessment of impact of revised final design input, assessment of accuracy of the NUPIPE model and analysis versus the as-built configuration, and incorporation of this review into the pipe stress calculations by statements of engineering judgment, hand calculations, or partial/complete restress, as required. Also performed analysis and calculation reviews for ASME buried piping.

- Responsible for special tasks related to pipe and duct supports. Responsibilities included maintenance of the pipe and duct support installation specifications, resolving construction problems, disposition of nonconformance, development and implementation of backfit construction and inspection programs, resolution of NRC Infractions and Open Items related to pipe supports, resolution of vendor problems, and supervision of all pipe support engineering activities of the Site Engineering Group.

- Responsible for site IE Bulletin 79-14 Stress Reconciliation Program activities. Responsibilities included assuring the quality and accuracy of as-installed piping and support information transmitted to the Boston office for stress reconciliation, development and implementation of procedures to achieve final issue of as-constructed documents to support the N-5 program.

- Responsible for pipe support engineering and design activities in the Boston office for BV-2. Responsibilities included redesign of supports in support of construction, support of licensing activities related to pipe supports, engineering support of the site instrumentation tubing stress analysis and support group, design support of the stress reconciliation program, and general pipe support engineering support of the Site Engineering Group, Toronto and New York offices. Also, BV-2 EMD System Turnover Coordinator, which entailed assuring the completion and quality of all pipe support engineering software prior to the scheduled turnover of systems to DLC. Responsible for the direction and supervision of all engineering and design personnel assigned to carry out these activities.

PROFESSIONAL EXPERIENCE (Continued)

- Responsible for pipe, duct, and instrumentation tubing support engineering activities at the BV-2 site. Also responsible for the instrumentation tubing stress analysis and support design program which was assigned to the BV-2 Site Engineering Group. Responsibilities included maintenance of the pipe, duct, and instrumentation tubing installation specifications, various field construction procedures, disposition and issue of design document changes and nonconformance reports, interface with other design offices, direct interface with client's engineering office and with the NRC on EMD related issues. Also responsible for technical direction and supervision of al lBV-2 site assigned EMD support engineers and all design personnel engaged in the instrumentation tubing stress analysis and support design effort.

- Responsible for technical direction of site pipe, duct, and instrumentation tubing support design personnel, maintenance, and development of field construction procedures and installation specifications for supports, generic resolution of construction problems with support installations, and interface with NRC personnel during site inspections.

As SWEC Assistant to the Manager of Engineering, Mr. Disser provided services to the Nuclear Construction Division at Duquesne Light Company, as follows:

- Assisted the Manager of Engineering in establishing the Engineering Department in the newly created Nuclear Construction Division. Responsibilities included developing and implementing Engineering Department procedures for review of the BV-2 FSAR and technical review of BV-2 licensing issues (NRC infractions, open items, etc.) and contractor correspondence.

- Responsible for assuring the technical quality of pipe support designs produced by the Site Engineering Group for BV-2. Developed and implemented project design criteria and supervised and provided design changes at the site for critical path piping. Assisted in the supervision of all project pipe support activities.

- Shoreham Nuclear Power Station, Long Island Lighting Company. ASME III Class 1 pipe stress analyst.

EDUCATION

UNIVERSITY OF MICHIGAN: B.S. Civil Engineering, 1980

PUBLICATION

With T. Roche, C. Abou-Jaoude, and J. P. Conoscente. 1993. "Comparison Between Analytical and Test Results for Transformer Base Details." ASME Pressure Vessel and Piping Conference, Seismic Engineering, July 1993.

JOHN O. DIZON

PROFESSIONAL HISTORY

EQE International, San Francisco, California, Associate, 1986-present
Engineering Decision Analysis Company, Cupertino, California, Project Engineer, 1984-1986
General Electric Company, San Jose, California, Senior Engineer, 1984
URS/John A. Blume Associates, San Francisco, California, Senior Engineer, 1982-1984; Associate Engineer, 1977-1980
Structural Systems Engineering, Inc., Lafayette, California, Senior Engineer, 1980-1982
Stanford University, John A. Blume Earthquake Engineering Center, Palo Alto, California, Teaching and Research Assistant, 1975-1977

PROFESSIONAL EXPERIENCE

Mr. Dizon has over 15 years of experience in seismic analyses and design assessments of primary structures and piping systems, and seismic qualification of mechanical and electrical systems for the nuclear power industry. As a Principal Engineer for EQE's Engineering Consultants Division, he has taken primary responsibility for the technical development of several seismic evaluation programs. These include acting as Group Manager for evaluating essential systems and components at the Savannah River Site; developing alternate analysis criteria for Category I small bore piping at the Donald C. Cook plant and alternate design criteria to the Tennessee Valley Authority for the Sequoyah Nuclear Plant; and providing guidance to the seismic equipment qualification program for the Plutonium Handling Facility at Lawrence Livermore National Laboratory.

As Group Manager for EQE at the Savannah River Site, Mr. Dizon is responsible for the seismic verification program of safety-related mechanical and electrical systems and components. His tasks include developing seismic evaluation criteria and procedures for restart and long-term seismic programs, consistent with the SQUG Generic Implementation Procedure for use in USI A-46 plants; managing the seismic walkdown and evaluation efforts; providing technical support in resolving seismic issues; and serving as an interface with the client.

Mr. Dizon has participated in the seismic evaluation of the High Flux Isotope Reactor at Oak Ridge National Laboratory. This project involved performing seismic analyses and upgrades for the primary coolant piping system and related equipment and the reactor and control buildings. He was responsible for the raceway evaluation program for Cooper Nuclear Station and Browns Ferry Nuclear Plant, and participated in the seismic piping reevaluation programs for Sequoyah Nuclear Plant and Comanche Peak Nuclear Plant where he performed plant walkdowns and pipe stress analyses for piping systems.

PROFESSIONAL EXPERIENCE (Continued)

With General Electric Company, Mr. Dizon was responsible for stress analysis and code conformation of main steam and recirculation piping systems for BWR power plants. He was involved in the evaluation and development work on a pipe support optimization program.

At EDAC, Mr. Dizon was responsible for the evaluation and development of a pipe support optimization program (OPTPIPE). He was responsible for the snubber reduction pilot program for Commonwealth Edison's La Salle County Station Unit 1. Other areas of his involvement consisted of finite element analyses of MX-missile launch tube components and systems for thermal and pressure loads, equipment qualification of major mechanical and electrical components, and seismic evaluation of cooling towers for the Vermont Yankee Power Plant.

At URS/Blume & Associates, Mr. Dizon was responsible for the development and maintenance of in-house computer programs for both linear and nonlinear analyses of structural and piping systems. He was also involved in the seismic analysis and evaluation of the reactor, turbine and administration buildings for Nine Mile Point Unit 1 in New York. He helped develop a soil-structure interaction computer program using a three-dimensional finite element technique to evaluate the dynamic response of structures due to arbitrary plane body and surface wave excitations. He performed a research study involving soil-structure interaction analysis using the finite element FLUSH program to investigate the dynamic response of typical containment structures due to underground blast excitations. He was also involved in the linear and nonlinear dynamic analyses, finite element modeling, and generation of floor response spectra for the containment and turbine buildings at the Diablo Canyon Nuclear Power plant near San Luis Obispo, California.

Mr. Dizon worked as a consultant to Bechtel Power Corporation with Structural Systems Engineering, Inc. He performed structural analyses and design assessments of the primary containment structure and the reactor/control buildings of Limerick Generating Station in Pennsylvania for various types of hydrodynamic loads. He was involved in the Limerick in-plant test procedures, data reduction and correlation study to determine the dynamic response, including soil-structure interaction of the reactor/control buildings during Mark II hydrodynamic load actuation in the primary containment.

At Stanford University, Mr. Dizon performed statistical analyses of earthquake acclerograms and various response parameters. He conducted seismic risk analyses and formulated seismic design criteria for Nicaragua. In addition, he was involved in the dynamic testing of structural models and equipment.

EDUCATION

STANFORD UNIVERSITY, Palo Alto, California: Engineer Degree, 1977
STANFORD UNIVERSITY, Palo Alto, California: M.S. Structural Engineering, 1975
MAPUA INSTITUTE OF TECHNOLOGY, Manila, Philippines: B.S. Civil Engineering, 1973

REGISTRATION

California: Civil Engineer
Philippines: Civil Engineer

PUBLICATIONS

With S. J. Eder. 1991. "Advancement in Design Standards for Raceway Supports and Its Applicability to Piping Systems." To be presented at the 1991 American Society of Mechanical Engineer (ASME) Pressure Vessel and Piping Division Conference, San Diego, California, June 1991.

With S. P. Harris, R. S. Hashimoto, and R. L. Stover. 1989. "Seismic, High Wind, and Probabilistic Risk Assessments of the High Flux Isotope Reactor." Second DOE Natural Phenomena Hazards Mitigation Conference.

With D. Ray and A. Kabir. 1979. "A 3-D Seismic Analysis for Arbitrary Plane Body and Surface Wave Excitations." American Society of Civil Engineers Nuclear Specialty Conference, Boston, Massachusetts.

With D. Ray and A. Zebarjadian. 1978. "Dynamic Response of Surface and Embedded Disk Foundations for SH, SV, P and Rayleigh Wave Excitations." Sixth Indian Symposium on Earthquake Engineering, Roorkee, India.

"A Statistical Analysis of Earthquake Acclerograms and Response Parameters." 1977. Thesis, Stanford University, Palo Alto, California,

With H. Shah, T. Zsutty, H. Krawinkler, and L. Padilla. 1977. "A Seismic Design Procedure for Nicaragua." Paper presented at the Sixth World Conference on Earthquake Engineering, New Delhi, India.

With H. Shah, T. Zsutty, H. Krawinkler, C. P. Mortgat, and A. Kiremidjian. 1976. "A Study of Seismic Risk for Nicaragua, Part II, Summary and Commentary." John A. Blume Earthquake Engineering Center, Report No. 12A and 12B. Stanford University, Palo Alto, California.

STEPHEN J. EDER

PROFESSIONAL HISTORY

EQE International, San Francisco, California, 1985-present
URS/John A. Blume & Associates, Engineers, San Francisco, California, 1982-1985
J. G. Bouwkamp, Inc., Structural Engineers, Berkeley, California, 1981-1982

PROFESSIONAL EXPERIENCE

Mr. Eder provides engineering and management consulting for safety evaluation of power plants, national laboratories, and industrial facilities. He is Vice President and Regional Manager for EQE Engineering Consultants' San Francisco regional office. His experience includes structural dynamic analyses, seismic evaluation and margin assessments, post-earthquake reconnaissance studies, and shake table and other dynamic tests and qualification. Mr. Eder provides technical direction to many projects, targeted at efficient balance of computational analysis and experience-based screening evaluations.

In support of the Seismic Qualification Utility Group (SQUG), Mr. Eder prepared and reviewed several sections of the SQUG Generic Implementation Procedure, and provides the Steering Group with ongoing technical and licensing support. As a SQUG subject matter expert, Mr. Eder prepared and overviews the development of several sections of the Unresolved Safety Issue A-46 (USI A-46) walkdown training course.

For the U.S. Department of Energy (DOE) Environmental, Safety, and Health programs, in conjunction with Lawrence Livermore National Laboratory (LLNL), Mr. Eder developed the field guide for walkthrough screening evaluation of DOE facilities. This included trial walkthroughs at LLNL and Stanford Linear Accelerator Center. He assisted in developing the Program Plan for evaluating existing DOE facilities. Mr. Eder was lead reviewer in support of the Tiger Team Technical Safety Appraisal of Los Alamos National Laboratory for the Natural Phenomena Hazard team.

Mr. Eder has provided a leading role in program plan development, criteria definition, program implementation, and configuration control design for DOE facilities. These projects include the Savannah River Site (SRS); K, L, and P reactors; Oak Ridge National Laboratory High Flux Isotope Reactor; and the LLNL Plutonium Facility. While at SRS, Mr. Eder was a member of the Senior Review Team for seismic issues in support of reactor restart.

Mr. Eder pioneered the development of the innovative raceway system seismic evaluation guidelines for SQUG, using earthquake experience data, test results, and fatigue analysis as a basis. To ensure applicability of the SQUG procedure for conduit and cable trays, he performed trial reviews for several nuclear power plants including Zion, Three Mile Island, Oyster Creek, Vermont Yankee, Prairie

PROFESSIONAL EXPERIENCE (Continued)

Island, Kewnaunee, Point Beach, Palisades, Yankee Rowe, Millstone, Calvert Cliffs, Beaver Valley, and Nine Mile Point.

In the capacity of a project manager and project engineer, Mr. Eder has been involved with cable tray and conduit system seismic evaluation programs at many nuclear power plants. His involvement includes plant-specific criteria development and review. He has supported raceway qualification at near-term operating license plants, including Seabrook Station, Watts Bar, Bellefonte, and Darlington. He performed raceway evaluations at several older operating plants including Tihange, Browns Ferry, Cooper Station, Sequoyah, Davis Besse, Robinson, Peach Bottom, and Hatch. He conducted raceway qualification training courses for engineers from General Public Utilities, Toledo Edison, Carolina Power and Light, and Southern Company Services, as well as generic courses for SQUG.

Mr. Eder participates in expansion of experienced-based evaluation techniques to technical areas outside of the scope of the USI A-46 program. Mr. Eder supported development of the evaluation program for piping systems at SRS and Oak Ridge National Laboratory. He assisted in developing design criteria for fire protection piping at SRS, Watts Bar, and Darlington. He has performed non-safety piping reviews in support of systems interaction reviews at Browns Ferry, Sequoyah, Watts Bar, Darlington, and Savannah River. He has supported development of duct system seismic evaluation guidelines for Brunswick, Browns Ferry, Bellefonte, and Comanche Peak. He also has contributed to anchorage design and evaluation criteria and procedure development programs for Savannah River and Beznau, and systems interaction programs at Watts Bar and Comanche Peak. At SRS, he provided consulting for the in-situ test program for lead cinch anchors.

Mr. Eder has supported miscellaneous component and equipment qualification efforts for several nuclear power and DOE facilities, including Rancho Seco, Browns Ferry, Duane Arnold, Robinson, Davis Besse, Fort Calhoun, Cooper Station, Beznau, Rocky Flats, Savannah River, and Oak Ridge National Laboratory.

At URS/Blume, Mr. Eder served as Project Engineer to assess the fragility of structures in St. Louis for a reoccurring New Madrid Earthquake. He also conducted seismic vulnerability assessment of processing facilities for Southern California Gas Company which included structures, pipelines, tanks, and equipment. Mr. Eder performed seismic analysis and design review of the Diablo Canyon Unit 1 and 2 turbine buildings. He also conducted seismic analyses of the Diablo Canyon Unit 1 containment building annulus structure and piping, and buildings at Millstone 3 Nuclear Plant.

Mr. Eder's research projects include development of decoupling criteria for piping and equipment systems dynamic models, and statistical evaluations to compare the validity of modal combination techniques used in dynamic analysis. He developed guidelines on nonlinear tubular strut behavior for seismic evaluation of offshore platforms, by correlative analysis of shake-table tests. He also performed correlative dynamic analyses of high-rise towers to evaluate the effects of modeling assumptions on predicting response for seismic design, and to assess earthquake building code practices.

EDUCATION

UNIVERSITY OF CALIFORNIA, Berkeley: M.Eng., Structural Engineering and Structural Mechanics, 1982
CLARKSON COLLEGE OF TECHNOLOGY, Potsdam, New York: B.S. Civil and Environmental Engineering, 1980
CANISIUS COLLEGE, Buffalo, New York: Engineering Science and Computer Science, 1978

REGISTRATION

California: Civil Engineer

AFFILIATIONS

American Society of Civil Engineers
ASCE Seismic Raceway Working Group
Earthquake Engineering Research Institute
Applied Technology Council
Structural Engineers Association of Northern California
SEAONC Seismology Subcommittee on Non-Building Structures and Building Components
Electric Power Research Institute's Post Earthquake Investigation Team
Tau Beta Pi National Engineering Honor Society
Phi Kappa Phi National Honor Society

PUBLICATIONS AND REPORTS

With M. W. Eli. 1991. "Use of Earthquake Experience Data." Prepared for the Third DOE Natural Phenomena Hazards Mitigation Conference, St. Louis, Missouri.

With M. W. Eli and L. J. Bragagnolo. 1991. "Walkthrough Screening Evaluation Field Guide, Natural Phenomena Hazards at Department of Energy Facilities." Special Release for 3rd DOE Natural Phenomena Hazard Mitigation Conference, October 1991, St. Louis, Missouri.

With J. O. Dizon. 1991. "Advancement in Design Standards for Raceway Supports and Its Applicability to Piping systems." PVP-Volume 210-1, Codes and Standards and Applications for Design and Analysis of Pressure Vessel and Piping Components. ASME 1991.

"Cable Tray and Conduit System Seismic Evaluation Guidelines." March 1991. EPRI Report NP-7151. Prepared for the Electric Power Research Institute. San Francisco, CA: EQE International.

With G. S. Johnson. March 1991. "The Performance of Raceway Systems in Strong-motion Earthquakes." EPRI Report NP-7150. Prepared for the Electric Power Research Institute. San Francisco, CA: EQE International.

PUBLICATIONS AND REPORTS (Continued)

With G. S. Johnson. March 1991. "Longitudinal Load Resistance in Seismic Experience Data Base Raceway Systems." EPRI Report NP-7153. Prepared for the Electric Power Research Institute. San Francisco, CA: EQE International.

With J. P. Conoscente and B. N. Sumodobila. March 1991. "Seismic Evaluation of Rod Hanger Supports for Electrical Raceway Systems." EPRI Report NP-7152. Prepared for the Electric Power Research Institute. San Francisco, CA: EQE International.

With Winston & Strawn, MPR Associates, Inc., etal. June 1991. "Generic Implementation Procedure (GIP) for Seismic Verification of Nuclear Plant Equipment." Revision 2. Prepared for the Seismic Qualification Utility Group.

With G. S. Johnson and T. R. Kipp. 1991. "Integrated Interaction Program Screening and Acceptance Criteria." Design Criteria WB-DC-20-32. Prepared for Tennessee Valley Authority.

With R. J. Hookway and T. R. Kipp. 1991. "Commodity Clearance Requirements." Engineering Specification N3C-941. Prepared for Tennessee Valley Authority.

With R. D. Hookway and T. R. Kipp. 1991. "Seismic Qualification of Category I(L) Fluid System Components and Electrical or Mechanical Equipment." Design Criteria WB-DC-40-31.13. Prepared for Tennessee Valley Authority.

With R. D. Hookway and T. R. Kipp. 1991. "Seismic Design Specification for Category I(L) Piping, Pipe Supports, and In-line Components." Engineering Specification N3C-943. Prepared for Tennessee Valley Authority.

With L. J. Bragagnolo and J. P. Conoscente. 1990. "A Proposed Methodology for the Seismic Design of Rectangular Duct Systems." Applied Technology Center (ATC) Seminar on Seismic Design and Performance of Equipment and Nonstructural Elements in Building and Industrial Structures, Irvine, California. ATC-29.

With J. J. Johnson and N. P. Smith. 1990. "Developments of the Seismic Qualification Utility Group. Applied Technology Center (ATC) Seminar on Seismic Design and Performance of Equipment and Nonstructural Elements in Building and Industrial Structures, Irvine, California. ATC-29.

With R. P. Kennedy, J. D. Stevenson, J. J. Johnson, W. R. Schmidt, and K. Collins. June 1990. "Watts Bar Civil Program Review." Prepared for Tennessee Valley Authority.

With W. Djordjevic, J. Eidinger, and F. Hettinger. 1990. "American Society of Civil Engineers Activities on Seismic Design of Electrical Raceways." Current Issues Related of Nuclear Power Plant Structures, Equipment, and Piping. Proceedings of the Third Symposium, Orlando, Florida, December 1990.

PUBLICATIONS AND REPORTS (Continued)

With H. L. Williams. 1990. "Qualification of Cable Tray Supports by Earthquake Experience Data: Application at H. B. Robinson Plant" Current Issues Related of Nuclear Power Plant Structures, Equipment, and Piping. Proceedings of the Third Symposium, Orlando, Florida, December 1990.

With J. P. Conoscente, B. N. Sumodobila, and S. P. Harris. 1989. "Seismic Fatigue Evaluation of Rod Hung Systems." Prepared for the *Tenth Conference on Structural Mechanics in Reactor Technology*, (SMiRT).

With J. O. Dizon and G. M. Zaharoff. 1989. "Evaluation of Seismic-induced Spray Hazards at Browns Ferry Nuclear Plant." Report No. 51001.02-R-001. Prepared for the Tennessee Valley Authority. San Francisco, CA: EQE Engineering.

"Seismic Evaluation of Cable Tray Systems at H. B. Robinson Plant, Unit 2." 1989. Report No. 50018.01-R-01. Prepared for Carolina Power & Light Company. San Francisco, CA: EQE Engineering.

With L. J. Bragagnolo, K. M. David, J. E. Hoekendijk, and G. M. Zaharoff. 1989. "Program Plan for the Seismic Evaluation of HVAC Duct at Brunswick Steam Electric Plant." Prepared for Carolina Power & Light Company. Project No. 52029.03. San Francisco, CA: EQE Engineering.

With P. D. Smith. 1989. "Trial Implementation of the SQUG Raceway Seismic Evaluation Guidelines at A-46 Plants." Report prepared for the Seismic Qualification Utilities Group. San Francisco: EQE Engineering.

With P. D. Smith and J. P. Conoscente. December 1988. "SQUG Cable Tray and Conduit Evaluation Procedure." Paper presented at the Second Symposium on Current Issues Related to Nuclear Power Plant Structures, Equipment and Piping, Orlando, FL.

With S. P. Harris, P. D. Smith, and J. E. Hoekendijk. October 1988. "Performance of Condensers and Main Steam Piping in Past Earthquakes." Report prepared for General Electric Nuclear Energy Boiling Water Reactor Owners Group. San Francisco: EQE Engineering.

With J. J. Johnson, G. S. Hardy, N. G. Horstman, G. Rigamonti, M. R. Reyne, and D. R. Ketcham. August 1988. "Technical Basis, Procedures and Guidelines for Seismic Characterization of Savannah River Plant Reactors." E. I. Dupont De Nemours & Co, Aiken, South Carolina.

With S. P. Harris, P. S. Hashimoto, J. O. Dizon, B. Sumodobila, G. M. Zaharoff, and L. J. Bragagnolo. March 1988. "Seismic Evaluation of the High Flux Isotope Reactor Primary Containment System." Report prepared for Martin Marietta Energy Systems, Inc. San Francisco: EQE Engineering.

With P. I. Yanev. 1988. "Evaluation of Cable Tray and Conduit Systems Using the Seismic Experience Data Base." *Nuclear Engineering and Design* (North-Holland, Amsterdam) 107: 149-153.

PUBLICATIONS AND REPORTS (Continued)

With S. W. Swan, "Summary of the Effects of the 1985 Mexico Earthquake to Power and Industrial Facilities." Proceedings of the American Society of Civil Engineers International Conference on the 1985 Mexico Earthquake, Factors Involved and Lessons Learned, Mexico City, Mexico, September 1986.

With A. F. Kabir and S. Bolourchi, "Seismic Response of Pipes Supported on Complex Framing Systems." Proceedings of the American Society of Civil Engineers Structures Congress, New Orleans, Louisiana, September 1986.

With S. W. Swan, "The Mexico Earthquake of September 19, 1985; Performance of Power and Industrial Facilities," Proceedings of the Third U. S. National Conference on Earthquake Engineering, Charleston, South Carolina, August 1986.

"Performance of Industrial Facilities in the Mexican Earthquake of September 19, 1985," Electric Power Research Institute Report No. NP-4605, Project 1707-30 Final Report, Palo Alto, California, June 1986, also presented at the IEEE Power Engineering Society Summer Meeting, Mexico City, Mexico, July 1986.

"Earthquake Response Analysis of a Braced Offshore Platform," Master of Engineering Thesis, University of California, Berkeley (June 1982), also presented at American Petroleum Institute Committee Hearing, October 1982, San Francisco, California.

GAYLE S. JOHNSON

PROFESSIONAL HISTORY

EQE Incorporated, San Francisco, California, Principal Engineer, 1986-1988; 1990-present

PMB Engineering Inc., San Francisco, California, and Oslo, Norway, Project Engineer, 1981-1986 and 1988-1990

SUMMARY

Mr. Johnson has over ten years of experience in seismic evaluations, seismic criteria development, structural design, linear and nonlinear analysis, and software development. He has participated in and managed several seismic evaluations of industrial facilities, seismic safety evaluations of nuclear facilities, and analysis and design projects in the offshore industry. Specific projects are briefly described as follows.

PROFESSIONAL EXPERIENCE

Industrial Facilities:

While with EQE and PMB, Mr. Johnson has managed and participated in several Risk Management and Prevention Program (RMPP) seismic evaluations, including the Unocal Refinery in Rodeo, California; the Shell Refinery in Martinez and Wilmington, California; the Tosco Refinery in Martinez, California; and PG&E Power Plants in San Francisco and Pittsburg, California. He was responsible for the evaluation of equipment and piping at the Oro Loma Sanitary District waste treatment facility in San Lorenzo, California. He is also managing seismic equipment qualification projects for the Rocky Flats Plant in Colorado. For Basic American Foods, he developed and evaluated seismic criteria on equipment and structures for the American I cogeneration plant, using seismic experience data.

Offshore Facilities:

While with PMB, Mr. Johnson managed and participated in numerous structural design and analysis projects. He was responsible for independent certification and verification (CVA) of the fatigue design for the Texaco Harvest platform. He was responsible for fatigue analysis and design of the Chevron Hidalgo platform and was lead engineer responsible for design wave analyses, fatigue analysis and design, transportation analysis, and seismic ductility analysis of the Cities Service Julius platform. He participated in the fatigue reevaluation of the Occidental Claymore platform, including analysis of the as-built and as-repaired conditions, calibration of actual damage to analytical results, and evaluations of existing and proposed repairs. He was also responsible for conceptual design and analysis of several structures in frontier technologies, such as proposed guyed and compliant towers for deep water (up to 3,000 feet water depth) sites. Tasks included conceptual design, foundation analysis, spectral fatigue analysis, time domain

PROFESSIONAL EXPERIENCE

fatigue analysis, seismic ductility analysis, reserve strength pushover analyses, risk analyses, cost estimating and scheduling, and fabrication/installation studies. He also developed methodologies and software to evaluate low frequency fatigue of compliant towers using time domain nonlinear analysis and rainflow cycle counting techniques.

While with PMB in Oslo, Norway, Mr. Johnson was Technical Manager responsible for marketing, managing, and engineering North Sea oil related projects. Specific projects included third-party fatigue review of Saga's Snorre TLP riser connections, pushover analysis of Statoil's Veslefrikk platform, and conceptual design, design analyses, and pile/sleeve wear evaluation of the Aker Concrete Compliant Tower. Mr. Johnson also converted a nonlinear soil/pile analysis program to a VAX computer for Norsk Hydro.

Earthquake Investigations:

Mr. Johnson has participated in numerous post-earthquake reconnaissance investigations to evaluate the performance of structures, piping, and equipment. Earthquakes include the 1989 Loma Prieta, 1987 Whittier, 1986 Chalfant Valley, 1985 Mexico, and 1984 Morgan Hill earthquakes.

Nuclear Facilities:

While with EQE Mr. Johnson has been involved with several seismic safety programs, including the evaluation of Category I(L) piping at Sequoyah, cable trays and conduit at Sequoyah and Browns Ferry, HVAC at Brunswick, seismic interaction at Salem and Comanche Peak, and tank qualification at Cooper Station. He has managed the data base development and criteria development for cable trays and conduit for the Seismic Qualification Utility Group (SQUG) and participated in the trial plant cable tray walkdown at Zion. He has participated in the development of the SQUG seismic evaluation training courses and has presented training segments at Three Mile Island.

EDUCATION

UNIVERSITY OF MINNESOTA, Minneapolis: B.S. Civil Engineering, 1980
UNIVERSITY OF CALIFORNIA, Berkeley: M.S. Civil Engineering, 1981

PROFESSIONAL AFFILIATIONS

Structural Engineers Association of Northern California
Earthquake Engineering Research Institute
Norwegian Earthquake Engineering Society

REGISTRATION

California: Civil Engineer

PUBLICATIONS

With M. K. Ravindra, W. H. Tong, and M. J. Griffin. 1991. "Seismic Assessment Under RMPP: Recent Applications." In *Proceedings for the HAZMACON 1991 Conference.* Santa Clara, CA.

With A. E. Hasle, and R. F. Figgers. 1989. "Evaluation of Wear in Compliant Tower Pile Systems." OTC 5912. Presented at the 21st Annual Offshore Technology Conference, Houston, Texas, May 1-4, 1989.

With P. I. Yanev and S. J. Eder. 1987. "Qualification of Nuclear Plant Raceway Systems Based on Earthquake Experience Data." Presented at the 9th SMiRT Conference, 1987.

OMAR KHEMICI

PROFESSIONAL HISTORY

EQE International, San Francisco, California, Principal Engineer, 1990-present
Ammann & Whitney Consulting Engineers, New York, New York, Senior Engineer, 1989-1990
EPI-Center, Palo Alto, California, Consultant, 1988-1989
Jack R. Benjamin & Associates, Mountain View, California, Senior Engineer, 1986-1989; Engineer, 1981-1982
University des Sciences et de la Technologie, Bab Ezzouar, Algeria, Assistant Professor, 1985-1986
Ecole Nationale d'Ingenieurs et Techniciens d'Algeria, B.E. Bahri, Algeria, Consulting Professor, 1982-1986

PROFESSIONAL EXPERIENCE

Dr. Khemici has over eight years of extensive professional experience in earthquake engineering. As a Principal Engineer for EQE Engineering Consultants Division, he provides technical direction and support to a variety of key projects. He is currently performing a one-year assignment for Consolidated Edison Company, in their New York City offices, to coordinate and support the implementation of the USI A-46 and IPEEE programs at Indian Point Nuclear Plant Unit 2. In this capacity, he supports resolution of several seismic issues for Consolidated Edison, including qualification of new and replacement equipment and parts. He has become a key individual in the Consolidated Edison engineering group, and the utility has estimated that his involvement has saved them several hundred thousand dollars in earthquake engineering costs at the Indian Point Plant. Dr. Khemici has completed both the SQUG-certified training for seismic walkdown screening evaluations (as a Seismic Capability Engineer) and the EPRI training for seismic margins assessment.

Dr. Khemici has assisted the criteria development activities for seismic assessment of raceway and HVAC duct systems for Texas Utilities, as well as the Tennessee Valley Authority. He is also conducting correlative studies of electrical switchyard earthquake performance with parameters of recorded time history records of the event. At Ammann & Whitney, Dr. Khemici was responsible for various projects including the following: defining the seismic provisions for the design of several structures according to the 1988 *Uniform Building Code* (UBC) and the *Tri-Services Manual*; generated response spectra to use in the design of the future extension of the Dulles International Airport Terminal, based on all existing Eastern United States strong-motion data and the ATC-14 recommendations; evaluated the seismic resistance of an existing unreinforced masonry (URM) laboratory and detailed upgrading schemes; specified characteristics of vibration isolators for large emergency generators in order to meet tolerances for human comfort; investigated crack damage due to dynamic overstress in a multi-story pedestrian bridge and prescribed repair work; and performed blast-resistant design.

PROFESSIONAL EXPERIENCE (Continued)

As Consultant for the EPI-Center, Dr. Khemici performed seismic risk analyses at large industrial facilities including the City of Los Angeles Wastewater Treatment System. The results of such studies provided the clients with the exposure of their facilities to earthquake hazards, an estimate of their potential losses from earthquakes, the cost-feasibility of earthquake insurance, and an earthquake risk mitigation and preparedness plan. He also performed plant walkthroughs to survey various buildings and equipment, and reviewed structural drawings.

At Jack R. Benjamin, Dr. Khemici performed the analytical work for an EPRI-sponsored study that involved the design of a methodology stipulating criteria for nuclear power plant shutdown following a potentially damaging earthquake. This study compiled strong-motion data of over 300 earthquake time histories and their corresponding site intensities as a way to investigate existing damage parameters and identify new ones. The Cumulative Absolute Velocity (CAV), a new and powerful damage indicator, was defined during the course of this work. In addition, he also studied the characterization of small magnitude earthquakes and their damage potential; developed and checked software for seismic hazard analyses for the central and Eastern United States; participated in probabilistic risk assessment studies of various nuclear power plants; and conducted linear and nonlinear dynamic analyses.

Dr. Khemici's academic experience included developing a graduate program; teaching various courses in structural dynamics, random vibrations, and earthquake engineering; supervising research programs.

EDUCATION

STANFORD UNIVERSITY, Palo Alto, CA: Ph.D. Civil Engineering, 1982
STANFORD UNIVERSITY, Palo Alto, CA: Degree of Engineering, 1980
STANFORD UNIVERSITY, Palo Alto, CA: M.S. Civil Engineering, 1978
POLYTECHNIC INSTITUTE OF ALGIERS, Algeria: B.S. Civil Engineering, 1975

AFFILIATIONS AND AWARDS

National Recipient of Graduate Scholarship

BASILIO N. SUMODOBILA, JR.

PROFESSIONAL HISTORY

EQE Incorporated, San Francisco, California, Principal Engineer, 1986-present
East Bay Municipal Utility District, Oakland, California, Associate Engineer, 1984-1986
URS/John A. Blume and Associates, San Francisco, California, Senior Engineer, 1982-1984
Bechtel Power Corporation, San Francisco, California, Senior Engineer 1979-1982
URS/John A. Blume and Associates, San Francisco, California, Senior Engineer, 1973-1979

PROFESSIONAL EXPERIENCE

Mr. Sumodobila has over 19 years of experience in seismic evaluations, structural dynamic analysis, seismic analysis, structural design, linear and nonlinear analysis, and finite element software development. As Principal Engineer for EQE's Engineering Consultants Division, he is currently providing support for the equipment qualification at the Savannah River Site in Georgia.

At EQE Mr. Sumodobila has performed various aspects of seismic evaluation and analysis of a variety of electrical, mechanical and structural components. He has extensive experience in seismic evaluation of electrical raceways and components, mechanical equipment, piping, and structures. He has also performed seismic interaction evaluations, including II/I interaction, and seismic-induced spray hazards evaluation. In addition, he has performed building structure analysis and evaluation, including soil-structure interaction effects. He is well versed with the actual performance of industrial components and structures in actual earthquake, and has applied the seismic experience approach in qualification of equipment.

For the Browns Ferry Nuclear Plant, Cooper Station, and Savannah River Plant, Mr. Sumodobila was involved with the seismic evaluation of electrical raceways. For the Browns Ferry Nuclear Plant, and Savannah River Plant he has performed II/I interaction hazards evaluation. For the Sequoyah Nuclear Power Plant, Beznau Nuclear Power Plant (Switzerland), High Flux Isotope Reactor (HFIR-Oakridge), and Savannah River Plant he has performed piping analysis and evaluation. For the Winfrith Generating Station (UK), and Savannah River Plant he was involved with the seismic evaluation of confinement system. For the Browns Ferry Nuclear Power Plant, he was involved with seismic induced spray hazards evaluation.

Mr. Sumodobila has also performed a number of seismic analysis of structures, including soil-structrure interaction effects. For the SRS 105-K, L, and P Reactors, he performed the structural analysis of the VTS monorail frames. He performed the seismic analysis including soil-structure interaction for the Tower Shielding Reactor (TSR-Oak Ridge), Surry Nuclear Power Plant, N-Reactor Intake Pump

PROFESSIONAL EXPERIENCE (Continued)

Structure, and the Bellene Nuclear Plant (Bulgaria). He also performed the seismic analysis and evaluation of the HFIR Reactor Building.

At East Bay Municipal Utility District, Mr. Sumodobila was responsible for seismic analysis of Water Storage Tanks. He developed a computer code for seismic analysis and design of water storage tanks per AWWA D-100 Code. He was also involved with layout of filter plants for the San Ramon Valley Filter Plant.

As a senior engineer at URS/Blume, he was responsible for the dynamic analysis of structures using finite element methods, which included mathematical modeling, calculation of structural response, and determination of critical sections. In addition, he provided modifications to structures to reduce stresses.

He completed the analysis of several nuclear power plant structures. For the Diablo Canyon Nuclear Plant, he completed the analysis of the Turbine Buildings for the Hosgri Earthquake load. As a lead engineer, his responsibilities included mathematical modeling for finite element analysis, time history analysis, calculation of dynamic time history response, generation of response spectra, preparation of calculations and reports, and supervision of other engineers working on the specified task. He was also responsible for the dynamic seismic analysis of the Turbine and Administration buildings of the Nine Mile Point Unit 1 Power Plant.

While employed at Bechtel Power Corporation, he completed several aspects of design, structural analysis, and stress evaluation for the Limerick Nuclear Power Plant. He was involved in the stress analysis of various structural components such as the containment primary structures, suppression chamber columns, downcomers and downcomer bracing system for dead, seismic and various hydrodynamic loads such as safety relief valve actuation, chugging, condensation oscillation and thermal loads. Tasks included the development of mathematical models for ANSYS, BSAP (a Bechtel program), STRUDL and NASTRAN computer programs. He also performed design assessment of these structural components and was responsible for the complete analysis and design of the downcomer bracing system constructed of stainless steel, which was designed by analysis iterative process due to the numerous loadings. Various methods were developed in the analysis for the hydrodynamic loads. Some unusual design approaches were used. He developed a computer program to check member stresses for numerous loading combinations for acceptability.

He was also involved in the stress evaluation of the concrete slab and walls for the spent fuel pool for the Limerick Plant for dead, seismic and thermal loads. Performed a finite element nonlinear analysis of the spent fuel pool to determine the stress distribution and the capacities of the critical sections in the concrete slab and walls of the spent fuel pool.

While employed at URS/Blume, he was responsible for the seismic and stress analysis of structures, equipment, and piping systems of nuclear facilities.

For the Diablo Canyon Nuclear Power Plant, he performed the dynamic analysis of the containment structure, (using axisymmetric finite element method) the

PROFESSIONAL EXPERIENCE (Continued)

auxiliary building, (including torsional modes of vibration) and the turbine building, as well as performing the seismic analysis of piping systems for the DE and DDE.

He was involved in the stress analysis of several underground waste storage tanks for the Hanford Reservation in Washington, for dead, live, and thermal loads and earthquake ground motions, and evaluated stresses at the steel tank shell in accordance with the ASME Section VIII Division 2 code.

Also, he assisted in the development and debugging of various computer programs for structural analysis. He developed a module for direct integration and modal superposition time history analysis for a piping analysis program and other algorithms for time series analysis.

In addition, he is proficient in the use of the following computer programs: SAPIV, ANSYS, BSAP, STRUDL, AXIDYN, NASTRAN, DRAIN-2D, STARDYNE.

EDUCATION

MAPUA INSTITUTE OF TECHNOLOGY, Manila, Philippines: B.S. Environmental Engineering, 1973
MAPUA INSTITUTE OF TECHNOLOGY, Manila, Philippines: B.S. Civil Engineering, 1970
U.C. BERKELEY EXTENSION: Courses in structural dynamics, design and computer programming

REGISTRATION

California: Civil Engineer
Philippines: Civil Engineer

HONORS

Philippine Board Examination for Civil Engineers, First Place, 1970
Philippine Association of Civil Engineers, Certificate of Merit, 1971

PUBLICATIONS

With J. J. Johnson and R. L. Stover. 1989 "Seismic and Cask Drop Excitation Evaluations of the Tower Shielding Reactor." Second DOE Natural Phenomena Hazards Mitigation Conference.

With S. J. Eder and J. P. Conoscente. 1989. "Seismic Fatigue Evaluation of Rod Hung Systems." Tenth Conference on Structural Mechanics in Reactor Technology.

PUBLICATIONS (Continued)

With S. P. Harris, P. S. Hashimoto, J. O. Dizon, G. M. Zaharoff, and L. J. Bragagnolo. March 1988. "Seismic Evaluation of the High Flux Isotope Reactor Primary Containment System." Report prepared for Martin Marietta Energy Systems, Inc. San Francisco: EQE Engineering.

SQUG

Certificate of Achievement

This is to Certify that

Jagdish Arora

has Completed the SQUG Walkdown Screening
and Seismic Evaluation Training Course
Held November 1–5, 1993

Neil P. Smith, Commonwealth Edison
SQUG Chairman

David A. Freed, MPR Associates
SQUG Training Coordinator

R. P. Kassawara, EPRI
SQUG Program Manager

SQUG

Certificate of Achievement

This is to Certify that

Richard N. Bair

has Completed the SQUG Walkdown Screening
and Seismic Evaluation Training Course
Held September 14–18, 1992

David A. Freed, MPR Associates
SQUG Training Coordinator

Neil P. Smith, Commonwealth Edison
SQUG Chairman

Robert P. Kassawara, EPRI
SQUG Program Manager

SQUG

Certificate of Achievement

This is to Certify that

Thomas Dabrowiak

has Completed the SQUG Walkdown Screening
and Seismic Evaluation Training Course
Held November 9–13, 1992

Neil P. Smith, Commonwealth Edison
SQUG Chairman

David A. Freed, MPR Associates
SQUG Training Coordinator

R. P. Kassawara, EPRI
SQUG Program Manager

SQUG

Certificate of Achievement

This is to Certify that

James R. Disser

has Completed the SQUG Walkdown Screening and Seismic Evaluation Training Course

January 10 - 15, 1994
Date of Course

Ronald L. Knott, Carolina Power & Light
SQUG Representative

Ron W. Cushing, EQE International
Training Course Administator

SQUG

Certificate of Achievement

This is to Certify that

John Dizon

has Completed the SQUG Walkdown Screening
and Seismic Evaluation Training Course
Held January 13–19, 1993

Neil P. Smith, Commonwealth Edison
SQUG Chairman

David A. Freed, MPR Associates
SQUG Training Coordinator

R.P. Kassawara
Robert P. Kassawara, EPRI
SQUG Program Manager

SQUG

Certificate of Achievement

This is to Certify that

Stephen J. Eder

has Completed the SQUG Walkdown Screening
and Seismic Evaluation Training Course
Held April 6–10, 1992

Neil P. Smith, Commonwealth Edison
SQUG Chairman

David A. Freed, MPR Associates
SQUG Training Coordinator

Robert P. Kassawara, EPRI
SQUG Program Manager

SQUG

Certificate of Achievement

This is to Certify that

Jon G. Hook

has Completed the SQUG Walkdown Screening
and Seismic Evaluation Training Course
Held September 14–18, 1992

David A. Freed, MPR Associates
SQUG Training Coordinator

Neil P. Smith, Commonwealth Edison
SQUG Chairman

Robert P. Kassawara, EPRI
SQUG Program Manager

SQUG

Certificate of Achievement

This is to Certify that

Gayle S. Johnson

has Completed the SQUG Walkdown Screening and Seismic Evaluation Training Course Held April 6–10, 1992

David A. Freed, MPR Associates
SQUG Training Coordinator

Neil P. Smith, Commonwealth Edison
SQUG Chairman

Robert P. Kassawara, EPRI
SQUG Program Manager

SQUG

Certificate of Achievement

This is to Certify that

Omar Khemiri

has Completed the SQUG Walkdown Screening
and Seismic Evaluation Training Course
Held February 1–5, 1993

David A. Freed, MPR Associates
SQUG Training Coordinator

Neil P. Smith, Commonwealth Edison
SQUG Chairman

Robert P. Kassawara, EPRI
SQUG Program Manager

SQUG

Certificate of Achievement

This is to Certify that

Steven J. Osting

has Completed the SQUG Walkdown Screening
and Seismic Evaluation Training Course
Held November 1–5, 1993

Neil P. Smith, Commonwealth Edison
SQUG Chairman

David A. Freed, MPR Associates
SQUG Training Coordinator

Robert P. Kassawara, EPRI
SQUG Program Manager

SQUG

Certificate of Achievement

This is to Certify that

Scott R. Saunders

has Completed the SQUG Walkdown Screening
and Seismic Evaluation Training Course
Held November 9–13, 1992

Neil P. Smith, Commonwealth Edison
SQUG Chairman

David A. Freed, MPR Associates
SQUG Training Coordinator

Robert P. Kassawara, EPRI
SQUG Program Manager

SQUG

Certificate of Achievement

This is to Certify that

Basilio Sumodobila

has Completed the SQUG Walkdown Screening
and Seismic Evaluation Training Course
Held January 13–19, 1993

Neil P. Smith, Commonwealth Edison
SQUG Chairman

David A. Freed, MPR Associates
SQUG Training Coordinator

R.P. Kassawara, EPRI
SQUG Program Manager

DAVIS-BESSE NUCLEAR POWER STATION

Unresolved Safety Issue (USI) A-46

Seismic Evaluation Report

APPENDIX B

COMPOSITE

SAFE SHUTDOWN EQUIPMENT LIST (SSEL)

Certification of the Safe Shutdown Equipment List

The information identifying the equipment required to bring the plant to a safe shutdown condition on this Safe Shutdown Equipment List (SSEL) is, to the best of our knowledge and belief, correct and accurate.

Print or Type Name/Title	Signature	Date
Robert J. Wolfgang, Associate Engr.	Robert J. Wolfgang	7/19/95
Anthony R. Stallard / Senior Operations Advisor		7/20/95

COMPOSITE SQUG SAFE SHUTDOWN EQUIPMENT LIST (SSEL)

Line No.	Train	Equip Class	Equipment ID Number	System/Equipment Description	Drawing Number	Bldg	Elev	Room No.	Eval Cat.	Note	Normal State	Desired State	Pwr Reqd	G.4 Form Number	Support System	RC	IC	PC	DH	SU
1	P	20	0%ZRL	0% ZONE REF LIGHTS - PANEL ZI3000	N/A	AUX	623	505	SR		ON	ON	Y	313	ELECTRICAL	1	0	0	0	0
554	B	15	1N	STATION BATTERY -125V dc	OS-060 SH 1	AUX	603	429B	S		ON	ON	N			0	0	0	0	1
555	B	15	1P	STATION BATTERY +125V dc	OS-060 SH 1	AUX	603	429B	S		ON	ON	N			0	0	0	0	1
556	P	15	2N	STATION BATTERY -125V dc	OS-060 SH 1	AUX	603	428A	S		ON	ON	N			0	0	0	0	1
557	P	15	2P	STATION BATTERY +125V dc	OS-060 SH 1	AUX	603	428A	S		ON	ON	N			0	0	0	0	1
558	P	3	AACD1	BUS D1, CUB 2 BRKR FRM BUS....	OS-058 SH 2	AUX	585	323	SR		OPN	OPN	N	292		0	0	0	0	1
559	B	3	ABDC1	BUS C1, CUB 2 BRKR FRM BUS...	OS-058 SH 1	AUX	585	325	SR		OPN	OPN	N	284		0	0	0	0	1
298	P	3	AC 111	HPI 1-1 BKR	OS-058 SH 1	AUX	585	325	S	68	OPN	R/O	Y	290	ELECTRICAL	0	0	1	0	0
560	B	3	AC-101	BREAKER FROM EDG 1	OS-041A SH 1	AUX	585	325	SR		OPN	CLS	Y	283	ELECTRICAL	0	0	0	0	1
2	B	3	AC-105	BRKR, MUP MTR 1-1 MP37-1	OS-002 SH 3	AUX	585	325	SR		OPN	CLS	Y	106	ELECTRICAL	1	0	0	0	0
184	B	3	AC-105	BRKR, MUP MTR 1-1 MP37-1	OS-002 SH 3	AUX	585	325	SR		OPN	CLS	Y	106	ELECTRICAL	0	1	0	0	0
561	B	3	AC-107	BUS C1 CUB 7 FDR BRKR FR SWP1-1	OS-020 SH 1	AUX	585	325	SR		CLS	CLS	N	287		0	0	0	0	1
562	B	3	AC-110	BUS C1, CUB 10 BRKR TO 4.16...	OS-058 SH 1	AUX	585	325	SR		CLS	OPN	Y	285	ELECTRICAL	0	0	0	0	1
563	P	3	AC-111	BRKR, HP INJ PMP MOTOR 1-1	OS-058 SH 1	AUX	585	325	SR	68	OPN	R/O	Y	290	ELECTRICAL	0	0	0	0	1
308	B	3	AC-112	BUS C1 CBCL 12 FDR BRKR FOR DH PMP 1-1	OS-004 SH 1	AUX	585	325	SR		OFF	ON	Y	288	ELECTRICAL	0	0	0	1	0
564	B	3	AC-113	BREAKER, CC PMP MTR 1-1 MP431	OS-021 SH 1	AUX	585	325	SR		CLS	CLS	N	289		0	0	0	0	1
565	B	3	AC-1CE11	BUS C1, CUB 4-FEED BRKR FRM...	OS-058 SH 1	AUX	585	325	SR		CLS	CLS	N	286		0	0	0	0	1
299	P	3	AD 111	HPI 1-2 BKR	OS-058 SH 2	AUX	585	323	S	68	OPN	R/O	Y	297	ELECTRICAL	0	0	1	0	0
566	P	3	AD-101	BUS D1, CUB 1-FD BRKR FRM EDG2	OS-041A SH 2	AUX	585	323	SR		OPN	CLS	Y	291	ELECTRICAL	0	0	0	0	1
3	P	3	AD-105	BRKR,MUP1-2 MP 37-2	OS-002 SH 3	AUX	585	323	SR		CLS	CLS	N	110		1	0	0	0	0
185	P	3	AD-105	BRKR,MUP1-2 MP 37-2	OS-002 SH 3	AUX	585	323	SR		CLS	CLS	N	110		0	1	0	0	0
567	P	3	AD-107	BUS D1 CBCLE 7-BRKR FR SWP1-2	OS-020 SH 1	AUX	585	323	SR		CLS	CLS	N	295		0	0	0	0	1
568	P	3	AD-110	BUS D1, CUB 10 BRKR FOR SWGR..	OS-058 SH 2	AUX	585	323	SR		CLS	OPN	Y	293	ELECTRICAL	0	0	0	0	1
569	P	3	AD-111	BUS D1 CUB 11-FD BRKR HPIP 1-2	OS-058 SH 2	AUX	585	323	SR	68	OPN	R/O	Y	297	ELECTRICAL	0	0	0	0	1
309	P	3	AD-112	BUS D1 CUB 12-FDR BRKR FR DH PMP 1-2	OS-004 SH 1	AUX	585	323	SR		OFF	ON	Y	296	ELECTRICAL	0	0	0	1	0
570	P	3	AD-113	BUS D1 CUB 13 BRKR FR CCPMP1-2	OS-021 SH 1	AUX	585	323	SR		OPN	CLS	Y	298	ELECTRICAL	0	0	0	0	1
571	P	3	AD-1DF12	BUS D1, CUB 4 BRKR FOR SUB....	OS-058 SH 2	AUX	585	323	SR		CLS	CLS	N	294		0	0	0	0	1
310	B	8A	AF-3869	AFP 1-1 TO STEAM GEN 1-2 STOP VALVE	OS-017A SH 1	AUX	565	237	R		CLS	CLS	N	169		0	0	0	1	0
311	B	8A	AF-3870	AFP 1-1 TO STEAM GEN 1-1 STOP VALVE	OS-017A SH 1	AUX	565	237	R		OPN	OPN	N	170		0	0	0	1	0
312	P	8A	AF-3871	AFP 1-2 TO STEAM GEN 1-1 STOP VALVE	OS-017A SH 1	AUX	565	238	R		CLS	CLS	N	171		0	0	0	1	0
313	P	8A	AF-3872	AFP 1-2 TO STEAM GEN 1-2 STOP VALVE	OS-017A SH 1	AUX	565	238	R		OPN	OPN	N	172		0	0	0	1	0
314	P	8A	AF-599	AUX FEED TO STEAM GEaf1-2 LINE STOP VLV	OS-017A SH 1	AUX	585	314	R		OPN	OPN	N	173		0	0	0	1	0
315	B	8A	AF-608	AUX FEED TO STEAM GEN 1-1 LINE STOP VLV	OS-017A SH 1	AUX	585	303	R		OPN	OPN	N	174		0	0	0	1	0
316	P	8B	AF-6451	AFP 1-2 SOL CONTROL VALVE	OS-017A SH 1	AUX	565	238	SR		OPN	THR	Y	308	ELECTRICAL	0	0	0	1	0
317	B	8B	AF-6452	AFP 1-1 SOL CONTROL VALVE	OS-017A SH 1	AUX	565	237	SR		OPN	THR	Y	309	ELECTRICAL	0	0	0	1	0
572	B	2	BCE 11	BUS E1 NORM FEED BRKR FROM....	OS-059 SH 1	AUX	603	429	SR		CLS	CLS	N	59		0	0	0	0	1
573	P	2	BDF 12	BUS F1 NORM FEED BRKR FROM...	OS-059 SH 1	AUX	603	428	SR		CLS	CLS	N	60		0	0	0	0	1
574	B	2	BE-106	FEEDER BREAKER FOR MCC E12A	OS-059 SH 1	AUX	603	429	SR		CLS	CLS	N	61		0	0	0	0	1
575	B	2	BE-107	FEEDER BREAKER FOR MCC E11A	OS-059 SH 1	AUX	603	429	SR		CLS	CLS	N	62		0	0	0	0	1
576	B	2	BE-110	FEEDER BREAKER FOR MCC E14	OS-059 SH 1	AUX	603	429	SR		CLS	CLS	N	63		0	0	0	0	1
318	B	2	BE-1106	BREAKER FOR LP INJ 1 VALVE, MVDH1B	OS-004 SH 1	AUX	565	209	SR		ON	ON	Y	78	ELECTRICAL	0	0	0	1	0
4	B	2	BE-1109	BREAKER FOR MVMU400	OS-002 SH 1	AUX	565	209	SR		CLS	CLS	N	80		1	0	0	0	0
577	B	2	BE-1120	FEEDER BREAKER FOR MCC E11B	OS-059 SH 1	AUX	565	209	SR		CLS	CLS	N	1		0	0	0	0	1
319	B	2	BE-1121	BREAKER FOR DH PUMP 1 SUC VALVE FRM BWST	OS-004 SH 1	AUX	565	209	SR		ON	ON	Y	81	ELECTRICAL	0	0	0	1	0
320	B	2	BE-1126	BREAKER FOR DH NORM SUC LINE 1 ISO VLV	OS-004 SH 1	AUX	565	227	SR		ON	ON	Y	83	ELECTRICAL	0	0	0	1	0
5	B	2	BE-1127	BRKR, RC MUP SUCTION VLV MOTOR	OS-002 SH 3	AUX	565	227	SR		CLS	CLS	N	85		1	0	0	0	0
179	B	2	BE-1127	BRKR, RC MUP SUCTION VLV MOTOR	OS-002 SH 3	AUX	565	227	SR		CLS	CLS	N	85		0	1	0	0	0
578	B	2	BE-1144	BRKR, CTRM EMERG VNT FAN1..VLV	OS-032B	AUX	585	304	SR		CLS	CLS	N	88		0	0	0	0	1

COMPOSITE SQUG SAFE SHUTDOWN EQUIPMENT LIST (SSEL)

Line No.	Train	Equip Class	Equipment ID Number	System/Equipment Description	Drawing Number	Bldg	Elev	Room No.	Eval Cat.	Note	Normal State	Desired State	Pwr Reqd	G.4 Form Number	Support System	RC	IC	PC	DH	SU
579	B	2	BE-1148	BRKR, CTRM EMERG STND BYPAS...	OS-032B	AUX	603	402	SR		CLS	CLS	N	90		0	0	0	0	1
580	B	2	BE-1150	FEEDER BREAKER TO MCC E11E	OS-059 SH 1	AUX	585	304	SR		CLS	CLS	N	4		0	0	0	0	1
581	B	2	BE-1151	BREAKER FOR FEED FROM MCC E11C	OS-059 SH 1	AUX	603	402	SR		CLS	CLS	N	6		0	0	0	0	1
582	B	2	BE-1154	BRKR, CC PMP RM VNT FAN 1...	OS-036 SH 1	AUX	585	304	SR		CLS	CLS	N	96		0	0	0	0	1
1149	B	2	BE-1162	BRKR FOR CFT 1 ISOLATION VALVE	OS-006	AUX	585	304	S	18	OPN	CLS	Y		MANUAL	0	1	0	0	0
583	B	2	BE-1166	BRKR FOR FEED TO MCC E11B	OS-059 SH 1	AUX	585	304	SR		CLS	CLS	N	3		0	0	0	0	1
111	B	2	BE-1172	RC LETDOWN ISO VALVE	OS-002 SH 1	AUX	585	304	SR		CLS	CLS	N	98		0	1	0	0	0
584	B	2	BE-1180	BREAKER FOR XYE2 FDR TO MCCYE2	OS-059 SH 1	AUX	585	304	SR		CLS	CLS	N	2		0	0	0	0	1
218	P	2	BE-1183	BREAKER FOR DH REMOVAL SUCT LN VLV MOTOR	OS-004 SH 1	AUX	585	304	SR		CLS	CLS	N	99		0	0	1	0	0
321	P	2	BE-1183	BREAKER FOR DH REMOVAL SUCT LN VLV MOTOR	OS-004 SH 1	AUX	585	304	SR		OFF	ON	Y	99	ELECTRICAL	0	0	0	1	0
6	B	2	BE-1185	BREAKER FOR BA PUMP 1 MP381	OS-046	AUX	565	227	SR		CLS	CLS	N	101		1	0	0	0	0
7	B	2	BE-1191	BRKR RC MUP1 MN OIL PMP MP371B	OS-002 SH 4	AUX	565	227	SR		CLS	CLS	N	103		1	0	0	0	0
194	B	2	BE-1191	BRKR RC MUP1 MN OIL PMP MP371B	OS-002 SH 4	AUX	565	227	SR		CLS	CLS	N	103		0	1	0	0	0
101	B	2	BE-1192	BKR FOR MUP1 AUX GEAR PMP MP371D	OS-002 SH 4	AUX	565	227	SR		CLS	CLS	N	105		1	0	0	0	0
196	B	2	BE-1192	BKR FOR MUP1 AUX GEAR PMP MP371D	OS-002 SH 4	AUX	565	227	SR		CLS	CLS	N	105		0	1	0	0	0
8	B	2	BE-1194	BRKR FOR CTMT IV MOTOR MU6421	OS-002 SH 3	AUX	565	227	SR		CLS	CLS	N	111		1	0	0	0	0
208	B	2	BE-1194	BRKR FOR CTMT IV MOTOR MU6421	OS-002 SH 3	AUX	565	227	SR		CLS	CLS	N	111		0	1	0	0	0
585	B	2	BE-1196	BREAKER FR FEEDER FRM MCC E11A	OS-059 SH 1	AUX	565	227	SR		CLS	CLS	N	5		0	0	0	0	1
586	B	2	BE-1201	BRKR, CR EMERG SYS STANDBY...	OS-032B	AUX	603	429	SR		CLS	CLS	N	92		0	0	0	0	1
587	B	2	BE-1202	FEEDER BREAKER TO MCC E12C	OS-059 SH 1	AUX	603	429	SR		CLS	CLS	N	7		0	0	0	0	1
588	B	2	BE-1205	BRKR, SW PMP VENT FAN 2 MC99-2	OS-038B	ITK	575	051	SR		CLS	CLS	N	118		0	0	0	0	1
589	B	2	BE-1208	BRKR, BAT RM 429B- ATM DAMP MO	OS-035	AUX	603	429	SR		CLS	CLS	N	112		0	0	0	0	1
590	B	2	BE-1209	BRKR, CTRL RM EMERG VENTILATN	OS-032B	AUX	603	429	SR		CLS	CLS	N	94		0	0	0	0	1
591	B	2	BE-1212	BRKR, SW PMP VENT FAN 1 MC99-1	OS-038B	ITK	575	051	SR		CLS	CLS	N	114		0	0	0	0	1
592	B	2	BE-1216	BRKR, CTRM EMERG COND UNT1 MTR	OS-032B	AUX	603	429	SR		CLS	CLS	N	74		0	0	0	0	1
593	B	2	BE-1217	BRKR, VNT FN 1 MTR L.V.S.G. RM	OS-035	AUX	603	429	SR		CLS	CLS	N	116		0	0	0	0	1
322	B	2	BE-1218	BREAKER FOR AFP 1 SUCTION VALVE MV1382	OS-017A SH 1	AUX	603	429	SR		CLS	CLS	N	120		0	0	0	1	0
323	B	2	BE-1222	BREAKR FOR AFP ROOM VENT FAN 1 MOTOR	OS-036 SH 1	AUX	603	429	SR		CLS	CLS	N	122		0	0	0	1	0
219	B	2	BE-1223	FEEDER BRKR FOR PRZR HTRS CH 1	OS-001A SH 2	AUX	603	429	SR		CLS	CLS	N	124		0	0	1	0	0
594	B	2	BE-1226	BREAKER, CCW DISCH LN ISO VLV	OS-021 SH 1	AUX	603	429	SR		CLS	CLS	N	126		0	0	0	0	1
595	B	2	BE-1232	BRKR, CTRM EMERG CNDS 1 VLV MO	OS-020 SH 1	AUX	603	429	SR		CLS	CLS	N	128		0	0	0	0	1
596	B	2	BE-1233	BREAKER FOR BATT CHARGER DBC1P	OS-060 SH 1	AUX	603	429	SR		CLS	CLS	N	10		0	0	0	0	1
597	B	2	BE-1234	FEEDER BREAKER FOR MCC E12E	OS-059 SH 1	AUX	603	429	SR		CLS	CLS	N	8		0	0	0	0	1
598	B	2	BE-1235	BREAKER FOR BATT CHARGER DBC1N	OS-060 SH 1	AUX	603	429	SR		CLS	CLS	N	9		0	0	0	0	1
599	B	2	BE-1240	BRKR, L.V.S.G. RM 429 VNT VLV	OS-035	AUX	603	429	SR		CLS	CLS	N	140		0	0	0	0	1
600	B	2	BE-1241	BRKR, L.V.S.G. RM VNT VLV MTR	OS-035	AUX	603	429	SR		CLS	CLS	N	141		0	0	0	0	1
601	B	2	BE-1255	BRKR, EDG RM 1 VENT FAN 1	OS-035	AUX	585	318	SR		CLS	CLS	N	130		0	0	0	0	1
602	B	2	BE-1256	BRKR, EDG RM 1 VENT FAN 2	OS-035	AUX	585	318	SR		CLS	CLS	N	131		0	0	0	0	1
1095	B	2	BE-1258	EDG 1 IMMERSION HEATER BREAKER	OS-041A	AUX	585	318	SR		CLS	CLS	N	276		0	0	0	0	1
603	B	2	BE-1259	BRKR, FDR TO 120VAC MCC YE1	OS-059 SH 1	AUX	585	318	SR		CLS	CLS	N	12		0	0	0	0	1
604	B	2	BE-1261	BRKR, EDG SOAK PMP MP1471	OS-041A SH 1	AUX	585	318	SR		CLS	CLS	N	132		0	0	0	0	1
1061	B	2	BE-1273	FEEDER BREAKER FOR MCC E12F	OS-059 SH 1	AUX	585	318	SR		CLS	CLS	N	11		0	0	0	0	1
605	B	2	BE-1274	BREAKER, SW PUMPSTRNR MF12-1	OS-020 SH 1	ITK	585	051	SR		CLS	CLS	N	134		0	0	0	0	1
606	B	2	BE-1275	BRKR, SW PMP STRNR DRAIN VALVE	OS-020 SH 1	ITK	585	051	SR		CLS	CLS	N	136		0	0	0	0	1
607	B	2	BE-1281	BREAKER, SW - INTAKE STRCT VLV	OS-020 SH 1	ITK	585	051	SR		CLS	CLS	N	138		0	0	0	0	1
608	B	2	BE-1282	BREAKER, SW TO CLNG TWR MU VLV	OS-020 SH 1	ITK	585	051	SR		CLS	CLS	N	139		0	0	0	0	1
609	B	2	BE-1284	BREAKER FR FEEDER FRM MCC E12A	OS-059 SH 1	ITK	585	051	SR		CLS	CLS	N	13		0	0	0	0	1
610	B	2	BE-1285	BRKR, BAT RM VENT FAN 1-1	OS-035	AUX	585	318	SR		CLS	CLS	N	142		0	0	0	0	1

COMPOSITE SQUG SAFE SHUTDOWN EQUIPMENT LIST (SSEL)

Line No.	Train	Equip Class	Equipment ID Number	System/Equipment Description	Drawing Number	Bldg	Elev	Room No.	Eval Cat.	Note	Normal State	Desired State	Pwr Reqd	G.4 Form Number	Support System	RC	IC	PC	DH	SU
611	B	2	BE-1289	BRKR, EDG1 AC TURBO OIL PMP MO	OS-041A SH 1	AUX	585	318	SR		CLS	CLS	N	144		0	0	0	0	1
612	B	2	BE-1291	BREAKER FOR FEEDER TO MCC E12A	OS-059 SH 1	AUX	545	101	SR		CLS	CLS	N	14		0	0	0	0	1
1070	B	2	BE-1292	BRKR FOR C31-4	OS-034 SH 2	AUX	545	101	SR		CLS	CLS	N	146		0	0	0	1	0
1071	B	2	BE-1293	BRKR FOR C31-5	OS-034 SH 2	AUX	545	101	SR		CLS	CLS	N	147		0	0	0	1	0
9	B	2	BE-1295	BRKR FOR MU-6419	OS-002 SH 3	AUX	545	101	SR		CLS	CLS	N	150		1	0	0	0	0
205	B	2	BE-1295	BRKR FOR MU-6419	OS-002 SH 3	AUX	545	101	SR		CLS	CLS	N	150		0	1	0	0	0
1062	B	2	BE-1297	FEEDER BREAKER TO MCC E12F	OS-059 SH 1	AUX	585	318	SR		CLS	CLS	N	15		0	0	0	0	1
613	B	2	BE-1298	BRKR, EDG FUEL OIL STRG & XFER	OS-041C	AUX	585	318	SR		CLS	CLS	N	151		0	0	0	0	1
220	B	2	BE-1401	HI & LO SPD STARTER FR CTMT AIR CLR FAN1	OS-033A	AUX	603	429	SR		CLS	CLS	N	167		0	0	1	0	0
221	B	14	BE12	ESNTL PZR HTR BNK 1 SPLY PNL	OS-001A SH 2	AUX	603	429	SR	63	ON	ON	Y	124	ELECTRICAL	0	0	1	0	0
614	P	2	BF-110	BRKR, MCC F14 (CTMT AIR CLR 2)	OS-059 SH 1	AUX	603	428	SR		CLS	CLS	N	65		0	0	0	0	1
1063	P	2	BF-1101	BRKR FOR FEEDER TO MCC YF2	OS-059 SH 1	AUX	603	427	SR		CLS	CLS	N	18		0	0	0	0	1
615	P	2	BF-1103	BRKR, CTRM EMERG SYS STNDBY...	OS-032B	AUX	603	427	SR		CLS	CLS	N	91		0	0	0	0	1
616	P	2	BF-1106	BRKR, CC WTR DISCH LN 2 ISOVLV	OS-021 SH 1	AUX	603	427	SR		CLS	CLS	N	127		0	0	0	0	1
617	P	2	BF-1112	BRKR, CC PMP RM VENT FAN 2	OS-036 SH 1	AUX	603	427	SR		CLS	CLS	N	97		0	0	0	0	1
1150	P	2	BF-1120	BRKR FOR CFT 2 ISOLATION VALVE	OS-006	AUX	603	427	S	18	OPN	CLS	Y		MANUAL	0	1	0	0	0
324	P	2	BF-1124	BREAKER FOR AFP TURB 1-2 MS INLET ISOVLV	OS-017B SH 1	AUX	603	427	SR		CLS	CLS	N	153		0	0	0	1	0
222	P	2	BF-1126	BREAKER FOR PRZR VAPOR SAMPLE LINE VALVE	OS-001A SH 2	AUX	603	427	SR		CLS	CLS	N	154		0	0	1	0	0
325	P	2	BF-1129	BREAKER FOR DH NORM SUCT LINE 2 ISO VLV	OS-004 SH 1	AUX	565	236	SR		ON	ON	Y	84	ELECTRICAL	0	0	0	1	0
223	P	2	BF-1130	BREAKER FOR DH REMOVAL SUCTION LN VALVE	OS-004 SH 1	AUX	603	427	SR		CLS	CLS	N	100		0	0	1	0	0
326	P	2	BF-1130	BREAKER FOR DH REMOVAL SUCTION LN VALVE	OS-004 SH 1	AUX	603	427	SR		OFF	ON	Y	100	ELECTRICAL	0	0	0	1	0
618	P	2	BF-1131	BRKR, CTRM EMERG COND UNT 2	OS-032B	AUX	603	427	SR		CLS	CLS	N	75		0	0	0	0	1
619	P	2	BF-1132	BREAKER, CTRM EMERG COND 2 VLV	OS-020 SH 1	AUX	603	427	SR		CLS	CLS	N	129		0	0	0	0	1
327	P	2	BF-1134	BREAKER FOR DH PMP 2 SUC VLV FRM BWST	OS-004 SH 1	AUX	565	236	SR		ON	ON	Y	82	ELECTRICAL	0	0	0	1	0
328	P	2	BF-1136	BREAKER FOR LP INJ 2 VALVE MVDH1A	OS-004 SH 1	AUX	565	236	SR		ON	ON	Y	79	ELECTRICAL	0	0	0	1	0
620	P	2	BF-1137	BREAKER FOR FEEDER TO MCC F11B	OS-059 SH 1	AUX	603	427	SR		CLS	CLS	N	19		0	0	0	0	1
621	P	2	BF-114	BREAKER FOR MCC F12A	OS-059 SH 1	AUX	603	428	SR		CLS	CLS	N	67		0	0	0	0	1
622	P	2	BF-1146	BREAKER FOR FEEDER TO MCC F11D	OS-059 SH 1	AUX	603	427	SR		CLS	CLS	N	17		0	0	0	0	1
623	P	2	BF-1149	BRKR, CTRM EMERG VENT SYS FAN2	OS-032B	AUX	603	427	SR		CLS	CLS	N	95		0	0	0	0	1
624	P	2	BF-115	BREAKER FOR MCC F11A	OS-059 SH 1	AUX	603	428	SR		CLS	CLS	N	68		0	0	0	0	1
625	P	2	BF-1162	BREAKER FOR FEEDER FRM MCCF11A	OS-059 SH 1	AUX	603	405	SR		CLS	CLS	N	20		0	0	0	0	1
10	P	2	BF-1167	BRKR FR RC MUP2 MN OIL PMP MOT	OS-002 SH 4	AUX	565	236	SR		CLS	CLS	N	107		1	0	0	0	0
197	P	2	BF-1167	BRKR FR RC MUP2 MN OIL PMP MOT	OS-002 SH 4	AUX	565	236	SR		CLS	CLS	N	107		0	1	0	0	0
102	P	2	BF-1168	BKR FOR MUP2 AUX GEAR PMP MP372D	OS-002 SH 4	AUX	565	236	SR		CLS	CLS	N	109		1	0	0	0	0
199	P	2	BF-1168	BKR FOR MUP2 AUX GEAR PMP MP372D	OS-002 SH 4	AUX	565	236	SR		CLS	CLS	N	109		0	1	0	0	0
11	P	2	BF-1169	BRKR FOR BA PMP 1-2 MP382	OS-046	AUX	565	227	SR		CLS	CLS	N	102		1	0	0	0	0
626	P	2	BF-1175	BREAKER FR FEEDER FRM MCC F11A	OS-059 SH 1	AUX	565	227	SR		CLS	CLS	N	21		0	0	0	0	1
329	P	2	BF-1177	BREAKER FOR AFP 2 SUC VLV MOTOR MV1383	OS-017A SH 1	AUX	565	236	SR		CLS	CLS	N	121		0	0	0	1	0
627	P	2	BF-118	BREAKER FOR MCC F16A	OS-059 SH 1	AUX	603	428	SR		CLS	CLS	N	69		0	0	0	0	1
628	P	2	BF-1186	BRKR, CTRM EMERG VENT FAN..VLV	OS-032B	AUX	603	405	SR		CLS	CLS	N	89		0	0	0	0	1
1085	P	2	BF-1189	BRKR FOR FEEDER TO MCC F11E	OS-059 SH 1	AUX	603	427	SR		CLS	CLS	N	16		0	0	0	0	1
1086	P	2	BF-1191	FEEDER BRKR FOR MCC F11E	OS-059 SH 1	AUX	545	101	SR		CLS	CLS	N	22		0	0	0	0	1
1068	P	2	BF-1192	BRKR FOR C31-1	OS-034 SH 2	AUX	545	101	SR		CLS	CLS	N	148		0	0	0	1	0
1069	P	2	BF-1193	BRKR FOR C31-2	OS-034 SH 2	AUX	545	101	SR		CLS	CLS	N	149		0	0	0	1	0
629	P	2	BF-1204	BRKR, VENT FAN 2 L.V.S.G. RM	OS-035	AUX	603	428	SR		CLS	CLS	N	117		0	0	0	0	1
330	P	2	BF-1205	BREAKER FOR AFP ROOM VENT FAN 2	OS-036 SH 1	AUX	603	428	SR		CLS	CLS	N	123		0	0	0	1	0
630	P	2	BF-1209	BREAKER FOR BATT CHRGER DBC2P	OS-060 SH 1	AUX	603	428	SR		CLS	CLS	N	23		0	0	0	0	1
631	P	2	BF-1210	BRKR, BATT RM 428A TO ATM DPR	OS-035	AUX	603	428	SR		CLS	CLS	N	113		0	0	0	0	1

COMPOSITE SQUG SAFE SHUTDOWN EQUIPMENT LIST (SSEL)

Line No.	Train	Equip Class	Equipment ID Number	System/Equipment Description	Drawing Number	Bldg	Elev	Room No.	Eval Cat.	Note	Normal State	Desired State	Pwr Reqd	G.4 Form Number	Support System	RC	IC	PC	DH	SU
632	P	2	BF-1211	BRKR, SW PMP VENT FAN 3 MC99-3	OS-038B	ITK	575	051	SR		CLS	CLS	N	115		0	0	0	0	1
633	P	2	BF-1212	BREAKER FOR BATT CHARGER DBC2N	OS-060 SH 1	AUX	603	428	SR		CLS	CLS	N	24		0	0	0	0	1
224	P	2	BF-1217	BREAKER FOR PRZR HTRS CH 2	OS-001A SH 2	AUX	428	603	SR		CLS	CLS	N	125		0	0	1	0	0
634	P	2	BF-1229	BRKR, CTRM EMERG SYS STNBY...	OS-032B	AUX	603	428	SR		CLS	CLS	N	93		0	0	0	0	1
635	P	2	BF-1230	BRKR, EDG FUEL OIL STOR & XFER	OS-041C	AUX	603	428	SR		CLS	CLS	N	152		0	0	0	0	1
636	P	2	BF-1236	BRKR, SW PMP VENT FAN 4 MC99-4	OS-038B	ITK	575	051	SR		CLS	CLS	N	119		0	0	0	0	1
112	P	2	BF-1237	RC LETDOWN COOLER 1-1 INLET ISO VALVE	OS-002 SH 1	AUX	603	428	SR		CLS	CLS	N	155		0	1	0	0	0
113	P	2	BF-1238	BREAKER FR LETDOWN COOLER 2 INLT VLV MTR	OS-002 SH 1	AUX	603	428	SR		CLS	CLS	N	156		0	1	0	0	0
637	P	2	BF-1239	BRKR, LOW VOLT SWGR RM VENT...	OS-035	AUX	603	428	SR		CLS	CLS	N	157		0	0	0	0	1
638	P	2	BF-1255	BRKR, EDG RM 2 VNTL FAN 3	OS-035	AUX	585	319	SR		CLS	CLS	N	158		0	0	0	0	1
639	P	2	BF-1256	BRKR, EDG RM 2 VNTL FAN 4	OS-035	AUX	585	319	SR		CLS	CLS	N	159		0	0	0	0	1
1096	P	2	BF-1258	EDG 2 IMMERSION HEATER BREAKER	OS-041A	AUX	585	319	SR		CLS	CLS	N	277		0	0	0	0	1
640	P	2	BF-1259	BRKR, BATT RM VENT FAN 1-2	OS-035	AUX	585	319	SR		CLS	CLS	N	143		0	0	0	0	1
641	P	2	BF-1261	BRKR, EDG 2 SOAK PUMP MP1472	OS-041A SH 2	AUX	585	319	SR		CLS	CLS	N	133		0	0	0	0	1
642	P	2	BF-1270	BREAKER FOR FEEDER TO MCC YF1	OS-059 SH 1	AUX	585	319	SR		CLS	CLS	N	25		0	0	0	0	1
643	P	2	BF-1274	BRKR, SW PUMP STRAINER MF15-2	OS-020 SH 1	ITK	585	052	SR		CLS	CLS	N	135		0	0	0	0	1
644	P	2	BF-1275	BRKR, SW PMP STRNR DRAIN VALVE	OS-020 SH 1	ITK	585	052	SR		CLS	CLS	N	137		0	0	0	0	1
645	P	2	BF-1277	BRKR, SW ISO VLV - COOLING WTR	OS-020 SH 1	ITK	585	052	SR		CLS	CLS	N	160		0	0	0	0	1
646	P	2	BF-1278	BREAKER FR FEEDER TO MCC F12D	OS-059 SH 1	ITK	585	052	SR		CLS	CLS	N	27		0	0	0	0	1
647	P	2	BF-1281	BREAKER, SW - INTK FOREBAY VLV	OS-020 SH 1	ITK	585	052	SR		CLS	CLS	N	161		0	0	0	0	1
648	P	2	BF-1282	BRKER, SW - COLLECT BASIN VLV	OS-020 SH 1	ITK	585	052	SR		CLS	CLS	N	162		0	0	0	0	1
649	P	2	BF-1284	BREAKER FR FEEDER FRM MCC F12A	OS-059 SH 1	ITK	585	052	SR		CLS	CLS	N	26		0	0	0	0	1
225	P	2	BF-1285	BREAKER FOR PRZR SMPL LINE TO...HDR VLV	OS-001A SH 2	AUX	603	428	SR		CLS	CLS	N	163		0	0	1	0	0
650	P	2	BF-1289	BRKR, EDG 2 AC TURBO OIL PUMP	OS-041A SH 2	AUX	585	319	SR		CLS	CLS	N	145		0	0	0	0	1
226	P	2	BF-1401	HI/LO SPD STARTER FOR CAC FAN 2	OS-033A	AUX	603	428	SR		CLS	CLS	N	168		0	0	1	0	0
12	P	2	BF-1617	BRKR FOR MUP SUCT VLV MV3971	OS-002 SH 3	AUX	603	428	SR		CLS	CLS	N	164		1	0	0	0	0
180	P	2	BF-1617	BRKR FOR MUP SUCT VLV MV3971	OS-002 SH 3	AUX	603	428	SR		CLS	CLS	N	164		0	1	0	0	0
227	P	14	BF12	ESNTL PZR HTR BNK 2 SPLY PNL	OS-001A SH 2	AUX	603	428	SR	63	ON	ON	Y	125	ELECTRICAL	0	0	1	0	0
13	P	2	BRKR-A	CRDM TRIP BRKR-A C4606	E-65B SH 14	AUX	603	428	SR		CLS	OPN	Y	183	ELECTRICAL	1	0	0	0	0
14	P	2	BRKR-B	CRDM TRIP BRKR-B C4603	E-65B SH 13	AUX	603	429	SR		CLS	OPN	Y	183	ELECTRICAL	1	0	0	0	0
15	B	2	BRKR-C	CRDM TRIP BRKR-C C4612	E-65B SH 16	AUX	603	428	SR		CLS	OPN	Y	183	ELECTRICAL	1	0	0	0	0
16	B	2	BRKR-D	CRDM TRIP BRKR-D C4806	E-65B SH 15	AUX	603	402	SR		CLS	OPN	Y	183	ELECTRICAL	1	0	0	0	0
462	P	20	C 5755C	SFAS CHANNEL 2	OS-001A SH 1	AUX	623	502	SR		ON	ON	Y	311	ELECTRICAL	0	0	0	1	0
463	B	20	C 5761A	SFRCS ACTUATION CHANNEL 1	N/A	AUX	623	502	SR		ON	ON	Y	312	ELECTRICAL	0	0	0	1	0
552	B	20	C 5762A	SFRCS ACTUATION CHANNEL 1	N/A	AUX	623	502	SR		ON	ON	Y	312	ELECTRICAL	0	0	0	1	0
461	B	20	C 5762C	SFAS CHANNEL 1	OS-001A SH 1	AUX	623	502	SR		ON	ON	Y	311	ELECTRICAL	0	0	0	1	0
464	P	20	C 5792	SFRCS ACTUATION CHANNEL 2	N/A	AUX	623	502	SR		ON	ON	Y	312	ELECTRICAL	0	0	0	1	0
553	P	20	C 5792A	SFRCS ACTUATION CHANNEL 2	N/A	AUX	623	502	SR		ON	ON	Y	312	ELECTRICAL	0	0	0	1	0
1043	B	3	C1	4.16 KV SWITCH GEAR	OS-058 SH 1	AUX	585	325	SR		ON	ON	Y	299	ELECTRICAL	0	0	0	0	1
228	B	10	C1-1	CAC 1-1 (AIR SIDE FUNCTION)	OS-033A	CTM	585	217	SR	66	FAST	FAST	Y	167	ELECTRICAL	0	0	1	0	0
229	P	10	C1-2	CAC 1-2 (AIR SIDE FUNCTION)	OS-033A	CTM	585	217	SR	66	FAST	FAST	Y	168	ELECTRICAL	0	0	1	0	0
651	P	9	C133	VENT FAN FOR L.V.S.G. ROOM	OS-035	AUX	603	428	SR	36	STB	O/O	Y	117	ELECTRICAL	0	0	0	0	1
1202	B	3	C2	4.16 KV SWITCH GEAR		AUX	585	325	S	4	ON	ON	Y		ELECTRICAL	0	0	0	0	1
652	B	10	C21-1	CNTRL RM EMERG VENT SYS FAN1-1	OS-032B	AUX	638	603	SR	36	OFF	ON	Y	94	ELECTRICAL	0	0	0	0	1
653	P	10	C21-2	CNTRL RM EMERG VENT SYS FAN1-2	OS-032B	AUX	638	603	SR	36	OFF	ON	Y	95	ELECTRICAL	0	0	0	0	1
654	B	9	C25-1	SUPPLY FAN 1-1	OS-035	AUX	585	318	SR	36	OFF	ON	Y	130	ELECTRICAL	0	0	0	0	1
655	B	9	C25-2	SUPPLY FAN 1-2	OS-035	AUX	585	318	SR	36	OFF	ON	Y	131	ELECTRICAL	0	0	0	0	1
656	P	9	C25-3	EDG RM SUPPLY FAN	OS-035	AUX	585	319	SR	36	OFF	ON	Y	158	ELECTRICAL	0	0	0	0	1

COMPOSITE SQUG SAFE SHUTDOWN EQUIPMENT LIST (SSEL)

Line No.	Train	Equip Class	Equipment ID Number	System/Equipment Description	Drawing Number	Bldg	Elev	Room No.	Eval Cat.	Note	Normal State	Desired State	Pwr Reqd	G.4 Form Number	Support System	RC	IC	PC	DH	SU
657	P	9	C25-4	EDG SUPPLY FAN 1-4	OS-035	AUX	585	319	SR	36	OFF	ON	Y	159	ELECTRICAL	0	0	0	0	1
658	B	20	C3017	SW STRNR 1-1 DRAIN/BCKWASH VLV CABINET	OS-020 SH 1	ITK	576	052	SR		AUT	AUT	Y	134	ELECTRICAL	0	0	0	0	1
659	P	20	C3018	SW STRNR 1-2 DRAIN/BCKWASH VLV CABINET	OS-020 SH 1	ITK	576	052	SR		AUT	AUT	Y	135	ELECTRICAL	0	0	0	0	1
1064	P	10	C31-1	ECCS RM CLR 1-1 FAN	OS-034 SH 2	AUX	545	115	SR	36	STB	O/O	Y	148	ELECTRICAL	0	0	0	1	0
1065	P	10	C31-2	ECCS RM CLR 1-2 FAN	OS-034 SH 2	AUX	545	115	SR	36	STB	O/O	Y	149	ELECTRICAL	0	0	0	1	0
1066	B	10	C31-4	ECCS RM CLR 1-4 FAN	OS-034 SH 2	AUX	545	105	SR	36	STB	O/O	Y	146	ELECTRICAL	0	0	0	1	0
1067	B	10	C31-5	ECCS RM CLR 1-5 FAN	OS-034 SH 2	AUX	545	105	SR	36	STB	O/O	Y	147	ELECTRICAL	0	0	0	1	0
1041	B	20	C3615	EDG 1 CONTROL PANEL	OS-041A SH 1	AUX	585	318	SR	102	ON	ON	Y	356	ELECTRICAL	0	0	0	0	1
1042	P	20	C3616	EDG 2 CONTROL PANEL	OS-041A SH 2	AUX	585	319	SR	102	ON	ON	Y	355	ELECTRICAL	0	0	0	0	1
1097	B	20	C3617	EDG 1-1 STATIC EXCITER VOLTAGE REG PNL	OS-041A	AUX	585	318	SR		ON	ON	Y	352	ELECTRICAL	0	0	0	0	1
1098	P	20	C3618	EDG 1-1 STATIC EXCITER VOLTAGE REG PNL	OS-041A	AUX	585	319	SR		ON	ON	Y	354	ELECTRICAL	0	0	0	0	1
660	B	20	C3621	EDG 1-1 ENGINE MNTD CTRL PNL	OS-041C	AUX	585	318	SR	46	ON	ON	Y	351	ELECTRICAL	0	0	0	0	1
1099	B	20	C3621A	EDG 1-1 IDLE START/STOP CONTROL PNL	OS-041B	AUX	585	318	SR		ON	ON	Y	351	ELECTRICAL	0	0	0	0	1
661	P	20	C3622	EDG 1-2 ENGINE MNTD CTRL PNL	OS-041C	AUX	585	319	SR	46	ON	ON	Y	353	ELECTRICAL	0	0	0	0	1
1100	P	20	C3622A	EDG 1-2 IDLE START/STOP CONTROL PNL	OS-041B	AUX	585	319	SR		ON	ON	Y	353	ELECTRICAL	0	0	0	0	1
1156	P	20	C3712	CABINET FOR PORTABLE RC TEMP IND TI5503		AUX	585	314	S		CLS	OPN	Y		MANUAL	1	0	1	1	0
1153	B	20	C3812	CABINET FOR PORTABLE RC TEMP IND TI5504		AUX	585	303	S		CLS	OPN	Y		MANUAL	1	0	1	1	0
281	C	20	C5755C	SFAS CHANNEL 2	OS-001A SH 1	AUX	623	502	SR		ON	ON	Y	311	ELECTRICAL	0	0	1	0	0
1187	P	20	C5755D	SFAS CHANNEL 2		AUX	623	502	S	4	ON	ON	Y		ELECTRICAL	0	0	0	0	1
1188	P	20	C5756C	SFAS CHANNEL 4		AUX	623	502	S	4	ON	ON	Y		ELECTRICAL	0	0	0	0	1
283	C	20	C5756D	SFAS CHANNEL 4	OS-001A SH 1	AUX	623	502	SR		ON	ON	Y	311	ELECTRICAL	0	0	1	0	0
1209	C	20	C5759D	CONTROL ROOM NON-NUCLEAR INST-X		AUX	623	502	S	4	ON	ON	Y		ELECTRICAL	0	0	0	0	1
1189	B	20	C5762A	SFRCS ACTUATION CHANNEL 1		AUX	623	502	S	4	ON	ON	Y		ELECTRICAL	0	0	0	0	1
280	C	20	C5762C	SFAS CHANNEL 1	OS-001A SH 1	AUX	623	502	SR		ON	ON	Y	311	ELECTRICAL	0	0	1	0	0
1192	B	20	C5762D	SFAS CHANNEL 1		AUX	623	502	S	4	ON	ON	Y		ELECTRICAL	0	0	0	0	1
1193	B	20	C5763C	SFAS CHANNEL 3		AUX	623	502	S	4	ON	ON	Y		ELECTRICAL	0	0	0	0	1
282	C	20	C5763D	SFAS CHANNEL 3	OS-001A SH1	AUX	623	502	SR		ON	ON	Y	311	ELECTRICAL	0	0	1	0	0
1185	P	20	C5792	SFRCS ACTUATION CHANNEL 2		AUX	623	502	S	4	ON	ON	Y		ELECTRICAL	0	0	0	0	1
662	B	9	C71-1	L.V.S.G. RM VENT FAN 1-1	OS-035	AUX	603	429	SR	36	STB	O/O	Y	116	ELECTRICAL	0	0	0	0	1
331	B	9	C73-1	AFP ROOM EXHAUST FAN	OS-036 SH 1	AUX	565	237	SR	92	STB	ON	Y	122	ELECTRICAL	0	0	0	1	0
332	P	9	C73-2	AFP ROOM EXHAUST FAN	OS-036 SH 1	AUX	565	238	SR	92	STB	ON	Y	123	ELECTRICAL	0	0	0	1	0
663	B	9	C75-1	CC PMP RM VENT FAN 1-1	OS-036 SH 1	AUX	585	328	SR	36	C/O	O/O	Y	96	ELECTRICAL	0	0	0	0	1
664	P	9	C75-2	CC PMP RM VENT FAN 1-2	OS-036 SH 1	AUX	585	328	SR	36	O/O	O/O	Y	97	ELECTRICAL	0	0	0	0	1
665	B	9	C78-1	BATTERY ROOM VENT FAN 1-1	OS-035	AUX	603	429B	SR	36	STB	O/O	Y	142	ELECTRICAL	0	0	0	0	1
666	P	9	C78-2	BATTERY ROOM VENT FAN 1-2	OS-035	AUX	603	428A	SR	36	STB	O/O	Y	143	ELECTRICAL	0	0	0	0	1
667	B	9	C99-1	EXHAUST FAN 1-1	OS-038B	ITK	585	52A	SR	36	O/O	O/O	Y	114	ELECTRICAL	0	0	0	0	1
668	B	9	C99-2	EXHAUST FAN 1-2	OS-038B	ITK	585	52A	SR	36	O/O	O/O	Y	118	ELECTRICAL	0	0	0	0	1
669	P	9	C99-3	EXHAUST FAN 1-3	OS-038B	ITK	585	52A	SR	36	O/O	O/O	Y	115	ELECTRICAL	0	0	0	0	1
670	P	9	C99-4	EXHAUST FAN 1-4	OS-038B	ITK	585	52A	SR	36	O/O	O/O	Y	119	ELECTRICAL	0	0	0	0	1
671	B	7	CC-1467	CCW FRM DH RMVL CLR 1-1...VLV	OS-021 SH 1	AUX	545	113	SR	33	CLS	OP/CL	Y	175	ELECTRICAL	0	0	0	0	1
672	P	7	CC-1469	CCW FRM DH RMVL CLR 1-2....VLV	OS-021 SH 1	AUX	545	113	SR	33	CLS	OP/CL	Y	176	ELECTRICAL	0	0	0	0	1
673	B	7	CC-1471	CC FRM EDG 1-1 SOL OUTLET VLV	OS-021 SH 1	AUX	585	318	SR	33	CLS	OP/CL	Y	177	ELECTRICAL	0	0	0	0	1
674	P	7	CC-1474	CC FRM EDG 1-2 SOL OUTLET VLV	OS-021 SH 1	AUX	585	319	SR	33	CLS	OP/CL	Y	178	ELECTRICAL	0	0	0	0	1
675	B	8A	CC-5095	CC LN 1 DISCH ISO VALVE	OS-021 SH 1	AUX	585	328	SR		OPN	OP/CL	Y	126	ELECTRICAL	0	0	0	0	1
676	P	8A	CC-5096	CC LN 2 DISCH ISO VALVE	OS-021 SH 1	AUX	585	328	SR		CLS	OP/CL	Y	127	ELECTRICAL	0	0	0	0	1
1197	B	20	CDE11C	DISCONNECT SWITCH CABINET		AUX	585	304	S	4	ON	ON	Y		ELECTRICAL	0	0	0	0	1
1166	B	20	CDE11D	DISCONNECT SWITCH CABINET		AUX	565	227	S	4	ON	ON	Y		ELECTRICAL	0	0	0	0	1
1159	B	20	CDE12A1	DISCONNECT SWITCH CABINET		AUX	603	429	S	4	ON	ON	Y		ELECTRICAL	0	0	0	0	1

COMPOSITE SQUG SAFE SHUTDOWN EQUIPMENT LIST (SSEL)

Line No.	Train	Equip Class	Equipment ID Number	System/Equipment Description	Drawing Number	Bldg	Elev	Room No.	Eval Cat.	Note	Normal State	Desired State	Pwr Reqd	G.4 Form Number	Support System	RC	IC	PC	DH	SU
1183	B	20	CDE12C	DISCONNECT SWITCH CABINET		ITK	576	051	S	4	ON	ON	Y		ELECTRICAL	0	0	0	0	1
1204	P	20	CDF11A2	DISCONNECT SWITCH CABINET		AUX	603	427	S	4	ON	ON	Y		ELECTRICAL	0	0	0	0	1
1169	P	20	CDF11C	DISCONNECT SWITCH CABINET		AUX	565	236	S	4	ON	ON	Y		ELECTRICAL	0	0	0	0	1
1184	P	20	CDF11D	DISCONNECT SWITCH CABINET		AUX	565	227	S	4	ON	ON	Y		ELECTRICAL	0	0	0	0	1
1162	P	20	CDF12A1	DISCONNECT SWITCH CABINET		AUX	603	428	S	4	ON	ON	Y		ELECTRICAL	0	0	0	0	1
1170	P	20	CDF12A2	DISCONNECT SWITCH CABINET		AUX	603	428	S	4	ON	ON	Y		ELECTRICAL	0	0	0	0	1
677	B	4	CE1-1	4.16 KV-480V TRANSFORMER	OS-059 SH 1	AUX	603	429	SR		ON	ON	Y	276	ELECTRICAL	0	0	0	0	1
1147	C	8A	CF-1A	CORE FLOOD TANK 2 ISO VLV	OS-006	CTM	565	217	S	18	OPN	CLS	Y		ELECTRICAL	0	1	0	0	0
1148	C	8A	CF-1B	CORE FLOOD TANK 1 ISO VLV	OS-006	CTM	565	214	S	18	OPN	CLS	Y		ELECTRICAL	0	1	0	0	0
230	B	8A	CV-2000B	RPS SFAS CH1 CTMT PRESS SWT CTMT ISO VLV	OS-033F	AUX	585	303	R		OPN	OPN	N	179		0	0	1	0	0
231	P	8A	CV-2001B	RPS SFAS CH2 CTMT PRESS SWT CTMT ISO VLV	OS-033F	AUX	603	427	R		OPN	OPN	N	180		0	0	1	0	0
300	C	8A	CV-2002B	RPS SFAS CH3 CTMT PRESS SWT CTMT ISO VLV	OS-033F	AUX	603	402	R		OPN	OPN	N	181		0	0	1	0	0
301	C	8A	CV-2003B	RPS SFAS CH4 CTMT PRESS SWT CTMT ISO VLV	OS-033F	AUX	585	314	R		OPN	OPN	N	182		0	0	1	0	0
1060	P	3	D1	4.16 KV SWITCH GEAR	OS-058 SH 2	AUX	585	323	SR		ON	ON	Y	350	ELECTRICAL	0	0	0	0	1
678	B	2	D101	BRKR FOR +125VDC DIST PNL D1P	OS-060 SH 1	AUX	603	429	SR		CLS	CLS	N	30		0	0	0	0	1
679	B	2	D102	BRKR FOR +125VDC DIST PNL D2P	OS-060 SH 1	AUX	603	429	SR	42	OPN	CLS	Y	31	ELECTRICAL	0	0	0	0	1
680	B	2	D103	BREAKER FOR + SUPPLY FRM DBC1P	OS-060 SH 1	AUX	603	429	SR		CLS	CLS	N	29		0	0	0	0	1
681	B	2	D104	BREAKER FOR STATION BATT 1P	OS-060 SH 1	AUX	603	429	SR		CLS	CLS	N	28		0	0	0	0	1
682	B	2	D111	BRKR FR EMERG LIGHT XFER SWT 1	OS-060 SH 1	AUX	603	429	SR		CLS	CLS	N	32		0	0	0	0	1
684	B	2	D112	BRKR FR EMERG LIGHT XFER SWT 3	OS-060 SH 1	AUX	603	429	SR		CLS	CLS	N	33		0	0	0	0	1
683	B	2	D116	BREAKER FOR INVERTER YVA	OS-060 SH 1	AUX	603	429	SR		CLS	CLS	N	34		0	0	0	0	1
103	B	2	D117	BKR FOR MUP1 DC OIL PMP	OS-002 SH 4	AUX	603	429	SR		CLS	CLS	N	104		1	0	0	0	0
195	B	2	D117	BKR FOR MUP1 DC OIL PMP	OS-002 SH 4	AUX	603	429	SR		CLS	CLS	N	104		0	1	0	0	0
685	B	2	D131	BREAKER FOR STATION BATT 1N	OS-060 SH 1	AUX	603	429	SR		CLS	CLS	N	35		0	0	0	0	1
686	B	2	D132	BRKR FOR -125VDC DIST PNL	OS-060 SH 1	AUX	603	429	SR		CLS	CLS	N	36		0	0	0	0	1
687	B	2	D133	BRKR FOR -125VDC DIST PNL D2N	OS-060 SH 1	AUX	603	429	SR	42	OPN	CLS	Y	37	ELECTRICAL	0	0	0	0	1
688	B	2	D134	BRKR FOR - SUPPLY FROM DBC1N	OS-060 SH 1	AUX	603	429	SR		CLS	CLS	N	43		0	0	0	0	1
333	B	2	D135	BREAKER FOR AFP TURB 1 MS INLT ISO VALVE	OS-017B SH 1	AUX	603	429	SR		CLS	CLS	N	250		0	0	0	1	0
703	B	2	D145	BRKR FOR D1NA	OS-060 SH 1	AUX	603	429	SR		CLS	CLS	N	38		0	0	0	0	1
689	C	14	D1N	ESSEN DIST PNL "D1N"	OS-060 SH 2	AUX	603	429A	SR		ON	ON	Y	53	ELECTRICAL	0	0	0	0	1
690	B	2	D1N 01	BREAKER FOR INCOMING DC MCC 1	OS-060 SH 2	AUX	603	429A	SR		CLS	CLS	N	53		0	0	0	0	1
691	P	2	D1N 02	BRKR FOR INCOMNG FRM DC MCC 2	OS-060 SH 2	AUX	603	429A	SR	41	OPN	CLS	Y	53	ELECTRICAL	0	0	0	0	1
692	C	2	D1N 03	BREAKER FOR INVERTER YV3	OS-060 SH 2	AUX	603	429A	SR		CLS	CLS	N	53		0	0	0	0	1
1103	P	20	D1N09	DISC SW FOR EDG 1-1 FUNCTION C3615 (ALT)		AUX	603	429A	SR		CLS	CLS	N	53		0	0	0	0	1
706	B	2	D1NA	ESSENTIAL -125VDC DIST PNL CH1	OS-060 SH 1	AUX	603	429	SR		ON	ON	Y	38	ELECTRICAL	0	0	0	0	1
694	C	14	D1P	ESSEN DIST PNL "D1P"	OS-060 SH 2	AUX	603	429	SR		ON	ON	Y	55	ELECTRICAL	0	0	0	0	1
695	B	2	D1P 01	BREAKER FOR DC MCC 1	OS-060 SH 2	AUX	603	429	SR		CLS	CLS	N	55		0	0	0	0	1
696	P	2	D1P 02	BREAKER FOR DC MCC 2	OS-060 SH 2	AUX	603	429	SR	41	OPN	CLS	Y	55	ELECTRICAL	0	0	0	0	1
697	C	2	D1P 03	BREAKER FOR INVERTER YV1	OS-060 SH 2	AUX	603	429	SR		CLS	CLS	N	55		0	0	0	0	1
1102	B	20	D1P09	DISC SW FOR EDG 1-1 FUNCTION C3615		AUX	603	429	SR		CLS	CLS	N	55		0	0	0	0	1
334	B	2	D1P20	CIRCUIT D1P20	OS-017B SH 1	AUX	603	429	SR		CLS	CLS	N	72		0	0	0	1	0
1190	B	14	D1PA	125/250 VDC MCC		AUX	603	429	S	4	ON	ON	Y		ELECTRICAL	0	0	0	0	1
1203	P	3	D2	4.16 KV SWITCH GEAR		AUX	585	323	S	4	ON	ON	Y		ELECTRICAL	0	0	0	0	1
699	P	2	D201	BRKR FOR +125VDC DISTR PNL D1P	OS-060 SH 1	AUX	603	428	SR	41	OPN	CLS	Y	41	ELECTRICAL	0	0	0	0	1
700	P	2	D202	BRKR FR +125VDC DIST PNL D2P	OS-060 SH 1	AUX	603	428	SR		CLS	CLS	N	42		0	0	0	0	1
701	P	2	D203	BREAKER FOR + SUPPLY FRM DBC2P	OS-060 SH 1	AUX	603	428	SR		CLS	CLS	N	40		0	0	0	0	1
702	P	2	D204	BRKR FOR INCOM PW FRM BATT 2P	OS-060 SH 1	AUX	603	428	SR		CLS	CLS	N	39		0	0	0	0	1
704	P	2	D212	BRKR FR EMERG LIGHT XFER SWT 4	OS-060 SH 1	AUX	603	428	SR		CLS	CLS	N	44		0	0	0	0	1

COMPOSITE SQUG SAFE SHUTDOWN EQUIPMENT LIST (SSEL)

Line No.	Train	Equip Class	Equipment ID Number	System/Equipment Description	Drawing Number	Bldg	Elev	Room No.	Eval Cat.	Note	Normal State	Desired State	Pwr Reqd	G.4 Form Number	Support System	RC	IC	PC	DH	SU
705	P	2	D216	BREAKER FOR INVERTER YVB	OS-060 SH 1	AUX	603	428	SR		CLS	CLS	N	45		0	0	0	0	1
104	P	2	D217	BKR FOR MUP2 DC OIL PMP	OS-002 SH 4	AUX	603	428	SR		CLS	CLS	N	108		1	0	0	0	0
198	P	2	D217	BKR FOR MUP2 DC OIL PMP	OS-002 SH 4	AUX	603	428	SR		CLS	CLS	N	108		0	1	0	0	0
707	P	2	D231	BREAKER FOR BATT STATION 2N	OS-060 SH 1	AUX	603	428	SR		CLS	CLS	N	49		0	0	0	0	1
708	P	2	D232	BRKR FR -125V DC DIST PNL D1N	OS-060 SH 1	AUX	603	428	SR	41	OPN	CLS	Y	46	ELECTRICAL	0	0	0	0	1
709	P	2	D233	BRKR FR -125V DC DIST PNL D2N	OS-060 SH 1	AUX	603	428	SR		CLS	CLS	N	47		0	0	0	0	1
710	P	2	D234	BRKR FOR - SUPPLY FRM DBC2N	OS-060 SH 1	AUX	603	428	SR		CLS	CLS	N	48		0	0	0	0	1
711	C	14	D2N	ESSEN DIST PNL "D2N"	OS-060 SH 2	AUX	603	428B	SR		ON	ON	Y	56	ELECTRICAL	0	0	0	0	1
712	P	2	D2N 01	BREAKER FOR DC MCC D1	OS-060 SH 2	AUX	603	428	SR		CLS	CLS	N	56		0	0	0	0	1
713	B	2	D2N 02	BREAKER FOR DC MCC D2	OS-060 SH 2	AUX	603	428	SR	42	OPN	CLS	Y	56	ELECTRICAL	0	0	0	0	1
714	C	2	D2N 03	BREAKER FOR INVERTER YV4	OS-060 SH 2	AUX	603	428	SR		CLS	CLS	N	56		0	0	0	0	1
1104	P	20	D2N09	DISC SW FOR EDG 1-2 FUNCTION C3616 (ALT)		AUX	603	428	SR		ON	ON	Y	56	ELECTRICAL	0	0	0	0	1
715	C	14	D2P	ESSNTL +125VDC DISTBTN PNL CH2	OS-060 SH 2	AUX	603	428	SR		ON	ON	Y	54	ELECTRICAL	0	0	0	0	1
716	P	2	D2P 01	BREAKER FOR DC MCC 2	OS-060 SH 2	AUX	603	428	SR		CLS	CLS	N	54		0	0	0	0	1
717	B	2	D2P 02	BREAKER FOR DC MCC 1	OS-060 SH 2	AUX	603	428	SR	42	OPN	CLS	Y	54	ELECTRICAL	0	0	0	0	1
718	C	2	D2P 03	BREAKER FOR INVERTER YV2	OS-060 SH 2	AUX	603	428	SR		CLS	CLS	N	54		0	0	0	0	1
1101	P	20	D2P09	DISC SW FOR EDG 1-2 FUNCTION C3616		AUX	603	428	SR		ON	ON	Y	54	ELECTRICAL	0	0	0	0	1
335	P	2	D2P20	CIRCUIT D2P20	OS-017B SH 1	AUX	603	428	SR		CLS	CLS	N	73		0	0	0	1	0
719	B	8B	DA-3783	EDG AIR RCVR 1-1-1 TO AIR..VLV	OS-041B	AUX	585	318	SR		OPN	CLS	Y	186	ELECTRICAL	0	0	0	0	1
720	B	8B	DA-3784	EDG AIR RCVR 1-1-2 TO AIR..VLV	OS-041B	AUX	585	318	SR		OPN	CLS	Y	187	ELECTRICAL	0	0	0	0	1
721	P	8B	DA-3785	EDG AIR RCVR 1-2-1 TO AIR..VLV	OS-041B	AUX	585	319	SR		OPN	CLS	Y	188	ELECTRICAL	0	0	0	0	1
722	P	8B	DA-3786	EDG AIR RCVR 1-2-2 TO AIR..VLV	OS-041B	AUX	585	319	SR		OPN	CLS	Y	189	ELECTRICAL	0	0	0	0	1
723	B	16	DBC1N	BATTERY CHARGER -125V dc	OS-060 SH 1	AUX	603	429	SR		ON	ON	Y	57	ELECTRICAL	0	0	0	0	1
724	B	16	DBC1P	BATT CHARGER FOR BATT 1P +125V	OS-060 SH 1	AUX	603	429	SR		ON	ON	Y	57	ELECTRICAL	0	0	0	0	1
725	P	16	DBC2N	BATTERY CHARGER 125V dc	OS-060 SH 1	AUX	603	428	SR		ON	ON	Y	57	ELECTRICAL	0	0	0	0	1
726	P	16	DBC2P	BATTERY CHARGER +125V	OS-060 SH 1	AUX	603	428	SR		ON	ON	Y	57	ELECTRICAL	0	0	0	0	1
693	B	14	DC MCC-1	DC BUS TRAIN 1	OS-060 SH 1	AUX	603	429	SR		ON	ON	Y	28	ELECTRICAL	0	0	0	0	1
698	P	14	DC MCC-2	DC BUS TRAIN 2	OS-060 SH 1	AUX	603	428	SR		ON	ON	Y	39	ELECTRICAL	0	0	0	0	1
727	P	4	DF1-2	4.16kV-480V TRANSFORMER	OS-059 SH 1	AUX	603	428	SR		ON	ON	Y	279	ELECTRICAL	0	0	0	0	1
336	C	R	DH-10	DH PMP 1-1 MIN COOLDOWN ISO VALVE	OS-004 SH 1	AUX	565	236		81	OPN	OP/CL	Y		MANUAL	0	0	0	1	0
17	C	8A	DH-11	RCS TO DH SYSTEM ISO VALVE	OS-004 SH 1	CTM	565	290	R		CLS	CLS	N	100		1	0	0	0	0
232	P	8A	DH-11	RCS TO DH SYSTEM ISO VALVE	OS-004 SH 1	CTM	565	290	SR	64	CLS	OPN	Y	100	ELECTRICAL	0	0	1	0	0
337	C	8A	DH-11	RCS TO DH SYSTEM ISO VALVE	OS-004 SH 1	CTM	565	290	SR		CLS	OPN	Y	100	ELECTRICAL	0	0	0	1	0
114	C	8A	DH-12	RCS TO DH SYSTEM ISO VALVE	OS-004 SH 1	CTM	565	290	R		CLS	CLS	N	99		0	1	0	0	0
233	P	8A	DH-12	RCS TO DH SYSTEM ISO VALVE	OS-004 SH 1	CTM	565	290	SR		CLS	OPN	Y	99	ELECTRICAL	0	0	1	0	0
338	C	8A	DH-12	RCS TO DH SYSTEM ISO VALVE	OS-004 SH 1	CTM	565	290	SR		CLS	OPN	Y	99	ELECTRICAL	0	0	0	1	0
339	P	7	DH-13A	DH COOLER 1-2 BYPASS FLOW CTRL VALVE	OS-004 SH 1	AUX	545	113	R		CLS	CLS	N	190		0	0	0	1	0
340	B	7	DH-13B	DH COOLER 1-1 BYPASS FLOW CTRL VALVE	OS-004 SH 1	AUX	545	113	R		CLS	CLS	N	191		0	0	0	1	0
341	P	7	DH-14A	DH COOLER 1-2 OUTLET FLOW CTRL VALVE	OS-004 SH 1	AUX	545	113	R		OPN	OPN	N	192		0	0	0	1	0
342	B	7	DH-14B	DH COOLER 1-1 OUTLET FLOW CTRL VAVLE	OS-004 SH 1	AUX	545	113	R		OPN	OPN	N	193		0	0	0	1	0
343	C	8A	DH-1517	DH PUMP 1-1 SUCTION FROM RCS VALVE	OS-004 SH 1	AUX	565	236	SR	88	CLS	OP/CL	Y	83	ELECTRICAL	0	0	0	1	0
344	C	8A	DH-1518	DH PUMP 1-2 SUCTION FROM RCS	OS-004 SH 1	AUX	565	236	SR	84	CLS	OP/CL	Y	84	ELECTRICAL	0	0	0	1	0
345	P	8A	DH-1A	DH COOLER 1-2 DISCH TO RCS ISO VALVE	OS-004 SH 1	AUX	565	236	SR	82	OPN	THR	Y	79	ELECTRICAL	0	0	0	1	0
346	B	8A	DH-1B	DH COOLER 1-1 DISCH TO RCS ISO VALVE	OS-004 SH 1	AUX	565	208	SR	87	OPN	THR	Y	78	ELECTRICAL	0	0	0	1	0
347	C	R	DH-21	RCS TO DH SYS ISO BYPASS VALVE	OS-004 SH 1	CTM	565	220		80	CLS	OP/CL	Y		MANUAL	0	0	0	1	0
348	C	R	DH-23	RCS TO DH SYS ISO VALVE	OS-004 SH 1	CTM	565	220		80	CLS	OP/CL	Y		MANUAL	0	0	0	1	0
349	C	R	DH-26	DH PMP 1-2 MIN COOLDOWN ISO VALVE	OS-004 SH 1	AUX	565	236		83	OPN	OP/CL	Y		MANUAL	0	0	0	1	0
350	B	8A	DH-2733	DH PMP 1-1 SUC (RWST OR EMERG SUMP) VLV	OS-004 SH 1	AUX	545	105	SR		OPN	CLS	Y	81	ELECTRICAL	0	0	0	1	0

COMPOSITE SQUG SAFE SHUTDOWN EQUIPMENT LIST (CSEL)

Line No.	Train	Equip Class	Equipment ID Number	System/Equipment Description	Drawing Number	Bldg	Elev	Room No.	Eval Cat.	Note	Normal State	Desired State	Pwr Reqd	G.4 Form Number	Support System	RC	IC	PC	DH	SU
351	P	8A	DH-2734	DH PMP 1-2 SUC (BWST OR EMERG SUMP) VLV	OS-004 SH 1	AUX	545	113	SR		OPN	CLS	Y	82	ELECTRICAL	0	0	0	1	0
18	C	8A	DH-2736	DH AUX SPRAY THRTL VALVE	OS-004 SH 1	AUX	484	314	R		CLS	CLS	N	194		1	0	0	0	0
352	P	8A	DH-2736	DH AUX SPRAY THRTL VALVE	OS-004 SH 1	AUX	484	314	R		CLS	CLS	N	194		0	0	0	1	0
234	P	7	DH-4849	DH COOLDOWN LN RELIEF TO EMERG SUMP VLV	OS-004 SH 1	CTM	565	220	S	68	CLS	OP/CL	N			0	0	1	0	0
353	P	8A	DH-63	DH PMP 1-2 DISCH TO HPI PMP 1-2 SUC VLV	OS-004 SH 1	AUX	545	115	R		CLS	CLS	N	195		0	0	0	1	0
354	B	8A	DH-64	DH PMP 1-1 DISCH TO HPI PUMP 1-1 SUL VLV	OS-004 SH 1	AUX	545	105	R		CLS	CLS	N	196		0	0	0	1	0
19	C	8A	DH-7A	BWST ISO VALVE (LN 2)	OS-004 SH 1	YRD	585	901	R		OPN	OPN	N	197		1	0	0	0	0
20	C	8A	DH-7B	BWST ISO VALVE (LN 1)	OS-004 SH 1	YRD	585	901	R		OPN	OPN	N	198		1	0	0	0	0
355	P	8A	DH-830	DH COOLER 1-1/1-2 XCONNECTION VALVE	OS-004 SH 1	AUX	545	113	R		CLS	CLS	N	199		0	0	0	1	0
356	B	8A	DH-831	DH COOLER 1-1/1-2 XCONNECTION VALVE	OS-004 SH 1	AUX	545	113	R		CLS	CLS	N	200		0	0	0	1	0
21	C	8A	DH-9A	DHP1-2 SCTN FRM EMER SUMP VLV	OS-004 SH 1	AUX	545	113		18	CLS	CLS	N			1	0	0	0	0
22	C	8A	DH-9B	DH PUMP 1-1 SUCT FRM EMER SUMP VLV	OS-004 SH 1	AUX	545	105		18	CLS	CLS	N			1	0	0	0	0
728	P	7	DW-2643	DEMIN WTR MU VLV TO CCW SYS MU	OS-021 SH 3	AUX	623	501	R		CLS	CLS	N	201		0	0	0	0	1
729	B	2	E1	480V ESSENTIAL UNIT SUBSTATION	OS-059 SH 1	AUX	603	429	SR		ON	ON	Y	59	ELECTRICAL	0	0	0	0	1
730	B	21	E10-1	EMERG DIESEL GEN JCKT HT XCHNG	OS-021 SH 1	AUX	585	318	S		ON	ON	N			0	0	0	0	1
731	P	21	E10-2	EDG JACKET CW HT XCHANGER 1-2	OS-021 SH 1	AUX	585	319	S		ON	ON	N			0	0	0	0	1
732	B	10	E106-1	COOLING COIL 1-1	OS-032B	AUX	638	603	S	34	ON	ON	N			0	0	0	0	1
733	P	10	E106-2	COOLING COIL 1-2	OS-032B	AUX	638	603	S	34	ON	ON	N			0	0	0	0	1
1044	B	1	E11A	480V ESSENTIAL MCC	OS-059 SH 1	AUX	565	209	SR		ON	ON	Y	62	ELECTRICAL	0	0	0	0	1
865	B	1	E11B	480V ESSENTIAL MCC	OS-059 SH 1	AUX	585	304	SR	86	ON	ON	Y	1	ELECTRICAL	0	0	0	0	1
1218	B	1	E11B	480V ESSENTIAL MCC	OS-059 SH 1	AUX	585	304	SR	86	ON	ON	Y	3	ELECTRICAL	0	0	0	0	1
866	B	1	E11C	480V ESSENTIAL MCC	OS-059 SH 1	AUX	585	304	SR		ON	ON	Y	62	ELECTRICAL	0	0	0	0	1
1046	B	1	E11D	480V ESSENTIAL MCC	OS-059 SH 1	AUX	565	227	SR		ON	ON	Y	5	ELECTRICAL	0	0	0	0	1
867	B	1	E11E	480V ESSENTIAL MCC	OS-059 SH 1	AUX	603	402	SR		ON	ON	Y	4	ELECTRICAL	0	0	0	0	1
1219	B	1	E11E	480V ESSENTIAL MCC	OS-059 SH 1	AUX	603	402	SR		ON	ON	Y	6	ELECTRICAL	0	0	0	0	1
868	B	1	E12A	480V ESSENTIAL MCC	OS-059 SH 1	AUX	603	429	SR		ON	ON	Y	61	ELECTRICAL	0	0	0	0	1
869	B	1	E12B	480V ESSENTIAL MCC	OS-059 SH 1	AUX	585	318	SR		ON	ON	Y	282	ELECTRICAL	0	0	0	0	1
870	B	1	E12C	480V ESSENTIAL MCC	OS-059 SH 1	ITK	576	051	SR		ON	ON	Y	7	ELECTRICAL	0	0	0	0	1
1220	B	1	E12C	480V ESSENTIAL MCC	OS-059 SH 1	ITK	576	051	SR		ON	ON	Y	13	ELECTRICAL	0	0	0	0	1
1048	B	1	E12E	480V ESSENTIAL MCC	OS-059 SH 1	AUX	545	101	SR		ON	ON	Y	8	ELECTRICAL	0	0	0	0	1
1221	B	1	E12E	480V ESSENTIAL MCC	OS-059 SH 1	AUX	545	101	SR		ON	ON	Y	14	ELECTRICAL	0	0	0	0	1
871	B	1	E12F	480V ESSENTIAL MCC	OS-059 SH 1	AUX	585	318	SR		ON	ON	Y	11	ELECTRICAL	0	0	0	0	1
1222	B	1	E12F	480V ESSENTIAL MCC	OS-059 SH 1	AUX	585	318	SR		ON	ON	Y	15	ELECTRICAL	0	0	0	0	1
872	B	1	E14	480V ESSENTIAL MCC	OS-059 SH 1	AUX	603	429	SR		ON	ON	Y	63	ELECTRICAL	0	0	0	0	1
1198	B	1	E16B	480V ESSENTIAL MCC		AUX	603	402	S	4	ON	ON	Y		ELECTRICAL	0	0	0	0	1
734	B	R	E197-1	CONT GAS ANAL SYS HT XCHNGR1-1	OS-021 SH 1	AUX	585	304			ON	ON	N			0	0	0	0	1
735	P	R	E197-2	CONT GAS ANALY SYS HT XCHGR1-2	OS-021 SH 1	AUX	585	304			ON	ON	N			0	0	0	0	1
736	B	21	E198-1	HP INJ PUMP BRG OIL COOLER 1-1	OS-021 SH 1	AUX	545	105	S		ON	ON	N			0	0	0	0	1
737	P	21	E198-2	HP INJ PUMP BRG OIL COOLER 1-2	OS-021 SH 1	AUX	545	115	S		ON	ON	N			0	0	0	0	1
738	B	21	E22-1	COMP. COOLING HEAT XCHANGR 1-1	OS-020 SH 1	AUX	585	328	S		ON	ON	N			0	0	0	0	1
1027	B	21	E22-1	COMP. COOLING HEAT XCHANGR 1-1	OS-021 SH 1	AUX	585	328	S		ON	ON	N			0	0	0	0	1
739	P	21	E22-2	COMP. COOLING HEAT XCHANGR 1-2	OS-020 SH 1	AUX	585	328	S		ON	ON	N			0	0	0	0	1
1029	P	21	E22-2	COMP. COOLING HEAT XCHANGR 1-2	OS-021 SH 1	AUX	585	328	S		ON	ON	N			0	0	0	0	1
740	B	21	E22-3	COMP. COOLING HEAT XCHANGR 1-3	OS-020 SH 1	AUX	585	328	S		ON	N/A	N			0	0	0	0	1
1028	B	21	E22-3	COMP. COOLING HEAT XCHANGR 1-3	OS-021 SH 1	AUX	585	328	S		ON	N/A	N			0	0	0	0	1
23	C	21	E26-1	SEAL RETURN COOLER 1-1	OS-002 SH 2	AUX	565	208	S		OFF	OFF	N			1	0	0	0	0
141	C	21	E26-1	SEAL RETURN COOLER 1-1	OS-002 SH 2	AUX	565	208	S		OFF	OFF	N			0	1	0	0	0
24	C	21	E26-2	SEAL RETURN COOLER 1-2	OS-002 SH 2	AUX	565	208	S		ON	N/A	N			1	0	0	0	0

COMPOSITE SQUG SAFE SHUTDOWN EQUIPMENT LIST (SSEL)

Line No.	Train	Equip Class	Equipment ID Number	System/Equipment Description	Drawing Number	Bldg	Elev	Room No.	Eval Cat.	Note	Normal State	Desired State	Pwr Reqd	G.4 Form Number	Support System	RC	IC	PC	DH	SU
142	C	21	E26-2	SEAL RETURN COOLER 1-2	OS-002 SH 2	AUX	565	208	S		ON	ON	N			0	1	0	0	0
25	C	21	E27-1	DECAY HEAT REMOVAL COOLER 1-1	OS-004 SH 1	AUX	545	113	S		ON	N/A	N			1	0	0	0	0
357	B	21	E27-1	DECAY HEAT REMOVAL COOLER 1-1	OS-004 SH 1	AUX	545	113	S	79	ON	ON	N			0	0	0	1	0
26	C	21	E27-2	DECAY HEAT REMOVAL COOLER 1-2	OS-004 SH 1	AUX	545	113	S		ON	N/A	N			1	0	0	0	0
358	P	21	E27-2	DECAY HEAT REMOVAL COOLER 1-2	OS-004 SH 1	AUX	545	113	S	79	ON	ON	N			0	0	0	1	0
27	C	21	E34	BWST HEATER	OS-007	AUX	565	209	S	99	ON	N/A	N			1	0	0	0	0
148	C	21	E34	BWST HEATER	OS-007	AUX	565	209	S	99	ON	N/A	N			0	1	0	0	0
235	B	10	E37-1	CAC COIL 1-1 (SW SIDE)	OS-033A	CTM	585	317	S	79	ON	ON	N			0	0	1	0	0
741	B	10	E37-1	CAC COIL 1-1 (SW SIDE)	OS-020 SH 1	CTM	585	317	S		ON	ON	N			0	0	0	0	1
236	P	10	E37-2	CAC COIL 1-2 (SW SIDE)	OS-033A	CTM	585	317	S	79	ON	ON	N			0	0	1	0	0
742	B	10	E37-2	CAC COIL 1-2 (SW SIDE)	OS-020 SH 1	CTM	585	317	S		ON	ON	N			0	0	0	0	1
743	B	10	E37-3	CTMT AIR COOLER 1-3	OS-020 SH 1	CTM	585	317	S		OFF	OFF	N			0	0	0	0	1
744	P	10	E42-1	ECCS ROOM COOLER COIL 1-1	OS-020 SH 1	AUX	545	115	S		ON	N/A	N			0	0	0	0	1
745	P	10	E42-2	ECCS ROOM COOLER COIL 1-2	OS-020 SH 1	AUX	545	115	S		ON	N/A	N			0	0	0	0	1
746	P	10	E42-3	ECCS ROOM COOLER COIL 1-3	OS-020 SH 1	AUX	545	113	S		ON	N/A	N			0	0	0	0	1
747	B	10	E42-4	ECCS ROOM COOLER COIL 1-4	OS-020 SH 1	AUX	545	105	S		ON	N/A	N			0	0	0	0	1
748	B	10	E42-5	ECCS ROOM COOLER COIL 1-5	OS-020 SH 1	AUX	545	105	S		ON	N/A	N			0	0	0	0	1
749	B	20	EI-4553	BUS Y1A VOLTMETER	OS-060 SH 2	AUX	623	505	SR		ON	ON	Y	52	ELECTRICAL	0	0	0	0	1
750	P	20	EI-4554	BUS Y2A VOLTMETER	OS-060 SH 2	AUX	623	505	SR		ON	ON	Y	52	ELECTRICAL	0	0	0	0	1
1057	B	20	EI-6271	BUS D1P VOLTMETER	OS-060 SH 2	AUX	623	505	SR		ON	ON	Y	52	ELECTRICAL	0	0	0	0	1
1058	P	20	EI-6272	BUS D2N VOLTMETER	OS-060 SH 2	AUX	623	505	SR		ON	ON	Y	52	ELECTRICAL	0	0	0	0	1
751	B	20	EI-6273	BUS 1P-BUS INCOMING VOLTMETER	OS-060 SH 1	AUX	623	502	SR		ON	ON	Y	52	ELECTRICAL	0	0	0	0	1
752	P	20	EI-6274	BUS 2P-BUS 2N VOLTMETER	OS-060 SH 1	AUX	623	502	SR		ON	ON	Y	52	ELECTRICAL	0	0	0	0	1
1059	B	20	EI-6275	BUS D1N VOLTMETER	OS-060 SH 2	AUX	623	505	SR		ON	ON	Y	52	ELECTRICAL	0	0	0	0	1
753	P	20	EI-6276	BUS D2P VOLTMETER	OS-060 SH 2	AUX	623	502	SR		ON	ON	Y	52	ELECTRICAL	0	0	0	0	1
754	B	20	EI-6277	BUS Y1 VOLTMETER	OS-060 SH 2	AUX	623	505	SR		ON	ON	Y	52	ELECTRICAL	0	0	0	0	1
755	P	20	EI-6278	BUS Y4 VOLTMETER	OS-060 SH 2	AUX	623	505	SR		ON	ON	Y	52	ELECTRICAL	0	0	0	0	1
756	B	20	EI-6281	BUS Y3 VOLTMETER	OS-060 SH 2	AUX	623	505	SR		ON	ON	Y	52	ELECTRICAL	0	0	0	0	1
757	P	20	EI-6282	BUS Y2 VOLTMETER	OS-060 SH 2	AUX	623	505	SR		ON	ON	Y	52	ELECTRICAL	0	0	0	0	1
758	B	20	EI-6297	BUS YAU VOLTMETER	OS-060 SH 1	AUX	623	505	SR		ON	ON	Y	52	ELECTRICAL	0	0	0	0	1
759	P	20	EI-6298	BUS YBU VOLTMETER	OS-060 SH 1	AUX	623	505	SR		ON	ON	Y	52	ELECTRICAL	0	0	0	0	1
760	P	2	F1	480V ESSENTIAL UNIT SUBSTATION	OS-059 SH 1	AUX	603	428	SR		ON	ON	Y	60	ELECTRICAL	0	0	0	0	1
873	P	1	F11A	480V ESSENTIAL MCC	OS-059 SH 1	AUX	603	427	SR		ON	ON	Y	68	ELECTRICAL	0	0	0	0	1
874	P	1	F11B	480V ESSENTIAL MCC	OS-059 SH 1	AUX	603	405	SR		ON	ON	Y	19	ELECTRICAL	0	0	0	0	1
1223	P	1	F11B	480V ESSENTIAL MCC	OS-059 SH 1	AUX	603	405	SR		ON	ON	Y	20	ELECTRICAL	0	0	0	0	1
1049	P	1	F11C	480V ESSENTIAL MCC	OS-059 SH 1	AUX	565	136	SR		ON	ON	Y	281	ELECTRICAL	0	0	0	0	1
1045	P	1	F11D	480V ESSENTIAL MCC	OS-059 SH 1	AUX	565	227	SR		ON	ON	Y	17	ELECTRICAL	0	0	0	0	1
1224	P	1	F11D	480V ESSENTIAL MCC	OS-059 SH 1	AUX	565	227	SR		ON	ON	Y	21	ELECTRICAL	0	0	0	0	1
1084	P	1	F11E	480V ESSENTIAL MCC	OS-059 SH 1	AUX	545	101	SR		ON	ON	Y	16	ELECTRICAL	0	0	0	0	1
1225	P	1	F11E	480V ESSENTIAL MCC	OS-059 SH 1	AUX	545	101	SR		ON	ON	Y	22	ELECTRICAL	0	0	0	0	1
875	P	1	F12A	480V ESSENTIAL MCC	OS-059 SH 1	AUX	603	428	SR		ON	ON	Y	67	ELECTRICAL	0	0	0	0	1
876	P	1	F12B	480V ESSENTIAL MCC	OS-059 SH 1	AUX	585	319	SR		ON	ON	Y	280	ELECTRICAL	0	0	0	0	1
877	P	1	F12C	480V ESSENTIAL MCC	OS-059 SH 1	ITK	576	052	SR		ON	ON	Y	26	ELECTRICAL	0	0	0	0	1
878	P	1	F12D	480V ESSENTIAL MCC	OS-059 SH 1	ITK	576	052	SR		ON	ON	Y	27	ELECTRICAL	0	0	0	0	1
879	P	1	F14	480V ESSENTIAL MCC	OS-059 SH 1	AUX	603	428	SR		ON	ON	Y	65	ELECTRICAL	0	0	0	0	1
761	B	0	F15-1	SERVICE WATER STRAINER 1-1	OS-020 SH 1	ITK	576	052	SR		STB	O/O	Y	134	ELECTRICAL	0	0	0	0	1
762	P	0	F15-2	SERVICE WATER STRAINER 1-2	OS-020 SH 1	ITK	576	052	SR		STB	O/O	Y	135	ELECTRICAL	0	0	0	0	1
1047	P	1	F16A	480V ESSENTIAL MCC	OS-059 SH 1	AUX	603	428	SR		ON	ON	Y	69	ELECTRICAL	0	0	0	0	1

COMPOSITE SQUG SAFE SHUTDOWN EQUIPMENT LIST (SSEL)

Line No.	Train	Equip Class	Equipment ID Number	System/Equipment Description	Drawing Number	Bldg	Elev	Room No.	Eval Cat.	Note	Normal State	Desired State	Pwr Reqd	G.4 Form Number	Support System	RC	IC	PC	DH	SU
763	B	18	FIS 1422C	CC PMP 1-1 DISCH FLOW INDIC SW	OS-021 SH 1	AUX	585	328	SR	1	ON	ON	Y	289	ELECTRICAL	0	0	0	0	1
1181	P	18	FIS 1422D	CC PMP 1-1 DISCH FLOW INDIC SW		AUX	585	328	S	4	ON	ON	Y		ELECTRICAL	0	0	0	0	1
1178	B	18	FIS 1427C	CC PMP 1-3 DISCH FLOW INDIC SW		AUX	585	328	S	4	ON	ON	Y		ELECTRICAL	0	0	0	0	1
1182	P	18	FIS 1427D	CC PMP 1-3 DISCH FLOW INDIC SW		AUX	585	328	S	4	ON	ON	Y		ELECTRICAL	0	0	0	0	1
1177	B	18	FIS 1432C	CC PMP 1-2 DISCH FLOW INDIC SW		AUX	585	328	S	4	ON	ON	Y		ELECTRICAL	0	0	0	0	1
764	P	18	FIS 1432D	CC PMP 1-2 DISCH FLOW INDIC SW	OS-021 SH 1	AUX	585	328	SR	1	ON	ON	Y	298	ELECTRICAL	0	0	0	0	1
359	P	18	FT DH2A	LO PRESSURE INJ LINE 2 FLOW TRANSMITTER	OS-004 SH 1	AUX	565	236	SR		ON	ON	Y	310	ELECTRICAL	0	0	0	1	0
360	B	18	FT DH2B	LP INJ LINE 1 FLOW TRANSMITTER	OS-004 SH 1	AUX	545	105	SR		ON	ON	Y	310	ELECTRICAL	0	0	0	1	0
361	P	20	FYI-DH2A	LP INJECTION LINE 2 FLOW RELAY INDICATOR	OS-004 SH 1	AUX	623	505	SR	1	ON	ON	Y	310	ELECTRICAL	0	0	0	1	0
362	B	20	FYI-DH2B	LP INJECTION LINE 1 FLOW RELAY INDICATOR	OS-004 SH 1	AUX	623	505	SR	1	ON	ON	Y	310	ELECTRICAL	0	0	0	1	0
45	B	20	GRP IN LMT	ROD GROUP IN LIMIT LIGHTS	N/A - CBNT C5706	AUX	623	505	SR		ON	ON	Y	313	ELECTRICAL	1	0	0	0	0
1115	P	R	HA-11	AIR COOLED COND UNIT 2 OUTLET ISOL VLV	OS-32B	AUX	638	603			CLS	OPN	Y		MANUAL	0	0	0	0	1
1116	B	R	HA-15	AIR COOLED COND UNIT 1 OUTLET ISOL VLV	OS-32B	AUX	638	603			CLS	OPN	Y		MANUAL	0	0	0	0	1
1117	P	R	HA-16	AIR COOLED COND UNIT 2 INLET ISOL VLV	OS-32B	AUX	638	603			CLS	OPN	Y		MANUAL	0	0	0	0	1
1118	B	R	HA-17	AIR COOLED COND UNIT 1 INLET ISOL VLV	OS-32B	AUX	638	603			CLS	OPN	Y		MANUAL	0	0	0	0	1
542	P	20	HIS 100	HS FOR MSIV 100	OS-008 SH 1	AUX	623	505	SR		ON	ON	Y	303	ELECTRICAL	0	0	0	1	0
548	C	20	HIS 100B	SFRCS CH 2 BLOCK SW	N/A	AUX	623	505	SR		ON	ON	Y	312	ELECTRICAL	0	0	0	1	0
549	C	20	HIS 100C	SFRCS CH 4 BLOCK SW	N/A	AUX	623	505	SR		ON	ON	Y	312	ELECTRICAL	0	0	0	1	0
543	B	20	HIS 101	HS FOR MSIV 101	OS-008 SH 1	AUX	623	505	SR		ON	ON	Y	303	ELECTRICAL	0	0	0	1	0
550	C	20	HIS 101B	SFRCS CH 1 BLOCK SW	N/A	AUX	623	505	SR		ON	ON	Y	312	ELECTRICAL	0	0	0	1	0
551	C	20	HIS 101C	SFRCS CH 3 BLOCK SW	N/A	AUX	623	505	SR		ON	ON	Y	312	ELECTRICAL	0	0	0	1	0
363	B	20	HIS 106A	AFP TURB 1-1 MS ISO VALVE SG 1-1 HIS	OS-017B SH 1	AUX	623	505	SR		ON	ON	Y	250	ELECTRICAL	0	0	0	1	0
364	P	20	HIS 107A	AFP TURB 1-2 MS ISO VALVE SG 1-2 HIS	OS-017B SH 1	AUX	623	505	SR		ON	ON	Y	153	ELECTRICAL	0	0	0	1	0
1019	B	20	HIS 1356	CTMT CLR 1 SW OUTLET VALVE HIS IN C5716	OS-020 SH 1	AUX	623	505	SR		ON	ON	Y	265	ELECTRICAL	0	0	0	0	1
1020	P	20	HIS 1357	CTMT CLR 2 SW OUTLET VALVE HIS IN C5716	OS-020 SH 1	AUX	623	505	SR		ON	ON	Y	266	ELECTRICAL	0	0	0	0	1
1021	B	20	HIS 1366	CTMT CLR 1 SW INLT ISO VALVE HIS, C5716	OS-020 SH 1	AUX	623	505	SR		ON	ON	Y	86	ELECTRICAL	0	0	0	0	1
1022	P	20	HIS 1367	CTMT CLR 2 SW INLT ISO VALVE HIS, C5716	OS-020 SH 1	AUX	623	505	SR		ON	ON	Y	87	ELECTRICAL	0	0	0	0	1
765	B	20	HIS 1370	SW PMP 1 HAND INDIC SWITCH	OS-020 SH 1	AUX	623	505	SR		ON	ON	Y	287	ELECTRICAL	0	0	0	0	1
766	P	20	HIS 1371	SW PUMP 2 HIS	OS-020 SH 1	AUX	623	505	SR		ON	ON	Y	295	ELECTRICAL	0	0	0	0	1
365	B	20	HIS 1382	HIS FOR ISO VALVE SW1382	OS-017A SH 1	AUX	623	505	SR		ON	ON	Y	120	ELECTRICAL	0	0	0	1	0
366	B	20	HIS 1382B	HIS FOR ISO VALVE SW1382 LOC IN C3630	OS-017A SH 1	AUX	585	324	SR		ON	ON	Y	120	ELECTRICAL	0	0	0	1	0
367	P	20	HIS 1383	HIS FOR ISO VALVE SW1383	OS-017A SH 1	AUX	623	505	SR		ON	ON	Y	121	ELECTRICAL	0	0	0	1	0
368	P	20	HIS 1383B	HIS FOR ISO VALVE SW1383 LOC IN C3630	OS-017A SH 1	AUX	585	324	SR		ON	ON	Y	121	ELECTRICAL	0	0	0	1	0
767	P	20	HIS 1395	SW TO CLNG HDR HIS IN C5717	OS-020 SH 1	AUX	623	505	SR		ON	ON	Y	160	ELECTRICAL	0	0	0	0	1
768	B	20	HIS 1399	SW TO CLNG WTR HDR HIS	OS-020 SH 1	AUX	623	505	SR		ON	ON	Y	267	ELECTRICAL	0	0	0	0	1
769	B	20	HIS 1414	CCW PMP 1 HAND INDIC SWITCH	OS-021 SH 1	AUX	623	505	SR		ON	ON	Y	289	ELECTRICAL	0	0	0	0	1
770	P	20	HIS 1418	CC PMP 2 HIS	OS-021 SH 1	AUX	623	505	SR		ON	ON	Y	298	ELECTRICAL	0	0	0	0	1
771	B	20	HIS 1424	CC HX 1 SW OUT ISO VLV HIS	OS-020 SH 1	AUX	623	505	SR		ON	ON	Y	268	ELECTRICAL	0	0	0	0	1
772	P	20	HIS 1434	CC HX2 SW SW OUT VLV HIS	OS-020 SH 1	AUX	623	505	SR		ON	ON	Y	269	ELECTRICAL	0	0	0	0	1
1030	B	20	HIS 1467	DH RMVL CLR 1 CCW OUT HIS	OS-021 SH 1	AUX	623	505	SR		ON	ON	Y	175	ELECTRICAL	0	0	0	0	1
773	P	20	HIS 1469	DH RMVL CLR 2 CCW OUT HIS	OS-021 SH 1	AUX	623	505	SR		ON	ON	Y	176	ELECTRICAL	0	0	0	0	1
1031	B	20	HIS 1471	EDG 1 CCW OUT HIS	OS-021 SH 1	AUX	623	505	SR		ON	ON	Y	177	ELECTRICAL	0	0	0	0	1
1032	P	20	HIS 1474	EDG 2 CCW OUT HIS	OS-021 SH 1	AUX	623	505	SR		ON	ON	Y	178	ELECTRICAL	0	0	0	0	1
369	B	20	HIS 1517	DH PMP 1-1 NORM SUC ISO VLV HIS IN C5704	OS-004 SH 1	AUX	623	505	SR	88	ON	ON	Y	83	ELECTRICAL	0	0	0	1	0
370	P	20	HIS 1518	DH PMP 1-2 NORM SUC ISO VLV HIS IN C5704	OS-004 SH 1	AUX	623	505	SR	84	ON	ON	Y	84	ELECTRICAL	0	0	0	1	0
237	P	20	HIS 200A	PRZR VNT VLV TO CTMT VNT VLV HIS	OS-001A SH 2	AUX	623	505	SR		ON	ON	Y	163	ELECTRICAL	0	0	1	0	0
238	P	20	HIS 239A	PRZR VAPOR SAMPLE ISO VALVE HIS	OS-001A SH 2	AUX	623	505	SR		ON	ON	Y	154	ELECTRICAL	0	0	1	0	0

COMPOSITE SQUG SAFE SHUTDOWN EQUIPMENT LIST (SSEL)

Line No.	Train	Equip Class	Equipment ID Number	System/Equipment Description	Drawing Number	Bldg	Elev	Room No.	Eval Cat.	Note	Normal State	Desired State	Pwr Reqd	G.4 Form Number	Support System	RC	IC	PC	DH	SU
371	B	20	HIS 2733	DH PMP 1-1 SUCT FRM LP INJ LINE HIS	OS-004 SH 1	AUX	623	505	SR		ON	ON	Y	81	ELECTRICAL	0	0	0	1	0
372	P	20	HIS 2734	DH PMP 1-2 SUCT FRM LP INJ LINE HIS	OS-004 SH 1	AUX	623	505	SR		ON	ON	Y	82	ELECTRICAL	0	0	0	1	0
774	B	20	HIS 2927	CTRM EMERG COND 1 SW OUTLT VLV	OS-020 SH 1	AUX	623	505	SR		ON	ON	Y	128	ELECTRICAL	0	0	0	0	1
775	P	20	HIS 2928	CTRM EMER CND 2 SW OUT VNT VLV	OS-020 SH 1	AUX	623	505	SR		ON	ON	Y	129	ELECTRICAL	0	0	0	0	1
776	B	20	HIS 2929	SW TO INTAKE STRUCTURE VLV HIS	OS-020 SH 1	AUX	623	505	SR		ON	ON	Y	138	ELECTRICAL	0	0	0	0	1
777	P	20	HIS 2930	SW TO INTK FOREBAY VALVE HIS	OS-020 SH 1	AUX	623	505	SR		ON	ON	Y	161	ELECTRICAL	0	0	0	0	1
778	B	20	HIS 2931	SW TO CLNG TWR MU VLV HIS	OS-020 SH 1	AUX	623	505	SR		ON	ON	Y	139	ELECTRICAL	0	0	0	0	1
779	P	20	HIS 2932	SW - COLLECTION BASIN VLV HIS	OS-020 SH 1	AUX	623	505	SR		ON	ON	Y	162	ELECTRICAL	0	0	0	0	1
28	P	20	HIS 3971	RC MUP SCTN HIS IN C5703	OS-002 SH 3	AUX	623	505	SR		ON	ON	Y	164	ELECTRICAL	1	0	0	0	0
182	P	20	HIS 3971	RC MUP SCTN HIS IN C5703	OS-002 SH 3	AUX	623	505	SR		ON	ON	Y	164	ELECTRICAL	0	1	0	0	0
1119	B	20	HIS 4823	CTRL RM EMER SYS COND 1 IN HIS (C6708)	OS-032B	AUX	643	603	SR		ON	ON	Y	90	ELECTRICAL	0	0	0	0	1
1120	B	20	HIS 4823A	CTRL RM EMER SYS COND 1 IN HIS	OS-032B	AUX	643	603	SR		ON	ON	Y	90	ELECTRICAL	0	0	0	0	1
1121	B	20	HIS 4824	CTRL RM EMER SYS COND 1 OUT HIS (C6708)	OS-032B	AUX	643	603	SR		ON	ON	Y	90	ELECTRICAL	0	0	0	0	1
1122	P	20	HIS 4827	CTRL RM EMER SYS COND 2 IN HIS (C6709)	OS-032B	AUX	643	603	SR		ON	ON	Y	91	ELECTRICAL	0	0	0	0	1
1123	P	20	HIS 4827A	CTRL RM EMER SYS COND 2 IN HIS	OS-032B	AUX	643	603	SR		ON	ON	Y	91	ELECTRICAL	0	0	0	0	1
1124	P	20	HIS 4828	CTRL RM EMER SYS COND 2 OUT HIS (C6709)	OS-032B	AUX	643	603	SR		ON	ON	Y	91	ELECTRICAL	0	0	0	0	1
239	B	20	HIS 5031	CTMT COOLER FAN 1 HIS	OS-033A	AUX	623	505	SR		ON	ON	Y	167	ELECTRICAL	0	0	1	0	0
240	P	20	HIS 5032	CTMT COOLER FAN 2 HIS	OS-033A	AUX	623	505	SR		ON	ON	Y	168	ELECTRICAL	0	0	1	0	0
780	B	20	HIS 5095	CCW LN 1 TO NON-ESSEN HDR HIS	OS-021 SH 1	AUX	623	505	SR		ON	ON	Y	126	ELECTRICAL	0	0	0	0	1
781	P	20	HIS 5096	CCW LN 2 HAND INDIC SWITCH	OS-021 SH 1	AUX	623	505	SR		ON	ON	Y	127	ELECTRICAL	0	0	0	0	1
373	B	20	HIS 520A	AFP 1-1 GOV CTRL HIS, LOC IN C5709	OS-017B SH 1	AUX	623	505	SR		ON	ON	Y	72	ELECTRICAL	0	0	0	1	0
374	P	20	HIS 521A	AFP GOV CTRL HIS, LOCATED IN C5709	OS-017B SH 1	AUX	623	505	SR		ON	ON	Y	73	ELECTRICAL	0	0	0	1	0
782	B	20	HIS 5261	EMERG VENT FAN 1-1 HIS	OS-032B	AUX	623	505	SR		ON	ON	Y	94	ELECTRICAL	0	0	0	0	1
783	B	20	HIS 5261A	HIS FR EMERG VENT FAN INLT VLV	OS-032B	AUX	623	505	SR		ON	ON	Y	88	ELECTRICAL	0	0	0	0	1
784	C	20	HIS 5262	HIS FOR EMERG VENT FAN 2 1-2	OS-032B	AUX	623	505	SR		ON	ON	Y	95	ELECTRICAL	0	0	0	0	1
785	P	20	HIS 5262A	HIS FR EMER VENT FAN2 IN C5720	OS-032B	AUX	623	505	SR		ON	ON	Y	89	ELECTRICAL	0	0	0	0	1
786	B	20	HIS 5301	HIS FOR AUX BLDG CTRM DMPR AIR	OS-032A	AUX	623	505	SR		ON	ON	Y	270	ELECTRICAL	0	0	0	0	1
787	P	20	HIS 5311	HIS FOR AUX BLDG CTRM DAMP AIR	OS-032A	AUX	623	505	SR		ON	ON	Y	271	ELECTRICAL	0	0	0	0	1
375	B	20	HIS 5889A	AFP TURB 1-1 STEAM INLET VALVE	OS-017B SH 1	AUX	623	505	SR		ON	ON	Y	225	ELECTRICAL	0	0	0	1	0
376	P	20	HIS 5889B	AFP 1-2 HAND INDICATING SWITCH, IN C5709	OS-017B SH 1	AUX	623	505	SR		ON	ON	Y	226	ELECTRICAL	0	0	0	1	0
377	P	20	HIS 598	STEAM GEN ISO VALVE HIS, IN C5717	OS-051 SH 2	AUX	623	505	SR		ON	ON	Y	272	ELECTRICAL	0	0	0	1	0
378	B	20	HIS 607	SG 1-1 SAMPLE ISO VALVE HIS, IN C5717	OS-051 SH 2	AUX	623	505	SR		ON	ON	Y	273	ELECTRICAL	0	0	0	1	0
379	B	20	HIS 6403	SFRCS/AFW MANUAL INITIATION SWITCH TRN 1	N/A	AUX	623	505	SR		ON	ON	Y	208	ELECTRICAL	0	0	0	1	0
380	P	20	HIS 6404	SFRCS/AFW MANUAL INITIATION SWITCH TRN 2	N/A	AUX	623	505	SR		ON	ON	Y	209	ELECTRICAL	0	0	0	1	0
29	B	20	HIS 6405	RC MUP SUCTION VALVE 1	OS-002 SH 3	AUX	623	505	SR		ON	ON	Y	85	ELECTRICAL	1	0	0	0	0
181	B	20	HIS 6405	RC MUP SUCTION VALVE 1	OS-002 SH 3	AUX	623	505	SR		ON	ON	Y	85	ELECTRICAL	0	1	0	0	0
30	B	20	HIS 6419	RC MU DISCH VALVE 1	OS-002 SH 3	AUX	623	505	SR		ON	ON	Y	150	ELECTRICAL	1	0	0	0	0
206	B	20	HIS 6419	RC MU DISCH VALVE 1	OS-002 SH 3	AUX	623	505	SR		ON	ON	Y	150	ELECTRICAL	0	1	0	0	0
31	B	20	HIS 6421	RC MU DISCH VALVE	OS-002 SH 3	AUX	623	505	SR		ON	ON	Y	111	ELECTRICAL	1	0	0	0	0
209	B	20	HIS 6421	RC MU DISCH VALVE	OS-002 SH 3	AUX	623	505	SR		ON	ON	Y	111	ELECTRICAL	0	1	0	0	0
304	C	20	HIS 7528	SFAS CHANNEL 1 BLOCK SW	OS-001A SH 1	AUX	623	505	SR		ON	ON	Y	311	ELECTRICAL	0	0	1	0	0
305	C	20	HIS 7529	SFAS CHANNEL 2 BLOCK SW	OS-001A SH 1	AUX	623	505	SR		ON	ON	Y	311	ELECTRICAL	0	0	1	0	0
306	C	20	HIS 7530	SFAS CHANNEL 3 BLOCK SW	OS-001A SH 1	AUX	623	505	SR		ON	ON	Y	311	ELECTRICAL	0	0	1	0	0
307	C	20	HIS 7531	SFAS CHANNEL 4 BLOCK SW	OS-001A SH 1	AUX	623	505	SR		ON	ON	Y	311	ELECTRICAL	0	0	1	0	0
1152	P	20	HIS CF1A	HS FOR CF1A	OS-006	AUX	623	505	S	18	ON	ON	Y		ELECTRICAL	0	1	0	0	0
1151	B	20	HIS CF1B	HS FOR CF1B	OS-006	AUX	623	505	S	18	ON	ON	Y		ELECTRICAL	0	1	0	0	0
241	P	20	HIS DH11	NORM DH SUCTN ISO VLV DH 11 HIS IN C5704	OS-004 SH 1	AUX	623	505	SR		ON	ON	Y	100	ELECTRICAL	0	0	1	0	0
381	P	20	HIS DH11	NORM DH SUCTN ISO VLV DH 11 HIS IN C5704	OS-004 SH 1	AUX	623	505	SR		ON	ON	Y	100	ELECTRICAL	0	0	0	1	0

COMPOSITE SQUG SAFE SHUTDOWN EQUIPMENT LIST (SSEL)

Line No.	Train	Equip Class	Equipment ID Number	System/Equipment Description	Drawing Number	Bldg	Elev	Room No.	Eval Cat.	Note	Normal State	Desired State	Pwr Reqd	G.4 Form Number	Support System	RC	IC	PC	DH	SU
242	P	20	HIS DH11A	NORM DH SUCTN ISO VLV HIS IN 5704	OS-004 SH 1	AUX	623	505	SR		OFF	ON	Y	100	ELECTRICAL	0	0	1	0	0
382	P	20	HIS DH11A	NORM DH SUCTN ISO VLV HIS IN 5704	OS-004 SH 1	AUX	623	505	SR		ON	ON	Y	100	ELECTRICAL	0	0	0	1	0
243	P	20	HIS DH12	NORM DH SUCTN ISO VLV DH12 HIS IN C5704	OS-004 SH 1	AUX	623	505	SR		ON	ON	Y	99	ELECTRICAL	0	0	1	0	0
383	P	20	HIS DH12	NORM DH SUCTN ISO VLV DH12 HIS IN C5704	OS-004 SH 1	AUX	623	505	SR		ON	ON	Y	99	ELECTRICAL	0	0	0	1	0
244	P	20	HIS DH12A	NORM DH SUCTN ISO VLV HIS IN C5704	OS-004 SH 1	AUX	623	505	SR		OFF	ON	Y	99	ELECTRICAL	0	0	1	0	0
384	P	20	HIS DH12A	NORM DH SUCTN ISO VLV HIS IN C5704	OS-004 SH 1	AUX	623	505	SR		ON	ON	Y	99	ELECTRICAL	0	0	0	1	0
385	P	20	HIS DH1A	HIS FOR DH1A	OS-004 SH 1	AUX	623	505	SR		ON	ON	Y	79	ELECTRICAL	0	0	0	1	0
386	P	20	HIS DH1A-2	ISO VLV HVDH1A HIS LOCATED IN C5716	OS-004 SH 1	AUX	623	505	SR		ON	ON	Y	79	ELECTRICAL	0	0	0	1	0
387	B	20	HIS DH1B	HIS FOR DH1B	OS-004 SH 1	AUX	623	505	SR		ON	ON	Y	78	ELECTRICAL	0	0	0	1	0
388	B	20	HIS DH1B-2	ISO VLV HVDH1B DISCONN HIS IN C5716	OS-004 SH 1	AUX	623	505	SR		ON	ON	Y	78	ELECTRICAL	0	0	0	1	0
389	P	20	HIS DH6A	DH PUMP 1-2 HAND INDICATING SWITCH	OS-004 SH 1	AUX	623	505	SR		ON	ON	Y	296	ELECTRICAL	0	0	0	1	0
390	B	20	HIS DH6B	DH PUMP 1-1 HAND INDICATING SWITCH	OS-004 SH 1	AUX	623	505	SR		ON	ON	Y	288	ELECTRICAL	0	0	0	1	0
540	P	20	HIS ICS11A	HS FOR ICS11A	OS-008 SH 1	AUX	623	505	SR		ON	ON	Y	202	ELECTRICAL	0	0	0	1	0
541	B	20	HIS ICS11B	HS FOR ICS11B	OS-008 SH 1	AUX	623	505	SR		ON	ON	Y	203	ELECTRICAL	0	0	0	1	0
115	P	20	HIS MU1A	RC LETDOWN COOLER 1 INLET VALVE HIS	OS-002 SH 1	AUX	623	505	SR		ON	ON	Y	155	ELECTRICAL	0	1	0	0	0
116	P	20	HIS MU1B	RC LETDOWN COOLER 2 INLET VALVE HIS	OS-002 SH 1	AUX	623	505	SR		ON	ON	Y	156	ELECTRICAL	0	1	0	0	0
32	B	20	HIS MU24A	RC MUP1 HAND INDICATING SWITCH	OS-002 SH 3	AUX	623	505	SR		ON	ON	Y	106	ELECTRICAL	1	0	0	0	0
186	B	20	HIS MU24A	RC MUP1 HAND INDICATING SWITCH	OS-002 SH 3	AUX	623	505	SR		ON	ON	Y	106	ELECTRICAL	0	1	0	0	0
33	B	20	HIS MU24A1	MUP1 AC OIL PMP E11D HIS	OS-002 SH 4	AUX	623	505	SR		ON	ON	Y	103	ELECTRICAL	1	0	0	0	0
188	B	20	HIS MU24A1	MUP1 AC OIL PMP E11D HIS	OS-002 SH 4	AUX	623	505	SR		ON	ON	Y	103	ELECTRICAL	0	1	0	0	0
105	B	20	HIS MU24A2	HS FOR MUP1 DC OIL PMP	OS-002 SH 4	AUX	623	505	SR		ON	ON	Y	104	ELECTRICAL	1	0	0	0	0
189	B	20	HIS MU24A2	HS FOR MUP1 DC OIL PMP	OS-002 SH 4	AUX	623	505	SR		ON	ON	Y	104	ELECTRICAL	0	1	0	0	0
106	B	20	HIS MU24A3	HS FOR MUP1 GEAR OIL PMP	OS-002 SH 4	AUX	623	505	SR		ON	ON	Y	105	ELECTRICAL	1	0	0	0	0
190	B	20	HIS MU24A3	HS FOR MUP1 GEAR OIL PMP	OS-002 SH 4	AUX	623	505	SR		ON	ON	Y	105	ELECTRICAL	0	1	0	0	0
34	P	20	HIS MU24B	RC MUP2 HAND INDICATING SWITCH	OS-002 SH 3	AUX	623	505	SR		ON	ON	Y	110	ELECTRICAL	1	0	0	0	0
187	P	20	HIS MU24B	RC MUP2 HAND INDICATING SWITCH	OS-002 SH 3	AUX	623	505	SR		ON	ON	Y	110	ELECTRICAL	0	1	0	0	0
35	P	20	HIS MU24B1	MUP2 AC OIL PMP F11C HIS	OS-002 SH 4	AUX	623	505	SR		ON	ON	Y	107	ELECTRICAL	1	0	0	0	0
191	P	20	HIS MU24B1	MUP2 AC OIL PMP F11C HIS	OS-002 SH 4	AUX	623	505	SR		ON	ON	Y	107	ELECTRICAL	0	1	0	0	0
107	P	20	HIS MU24B2	HS FOR MUP2 DC OIL PMP	OS-002 SH 4	AUX	623	505	SR		ON	ON	Y	108	ELECTRICAL	1	0	0	0	0
192	P	20	HIS MU24B2	HS FOR MUP2 DC OIL PMP	OS-002 SH 4	AUX	623	505	SR		ON	ON	Y	108	ELECTRICAL	0	1	0	0	0
108	P	20	HIS MU24B3	HS FOR MUP2 GEAR OIL PMP	OS-002 SH 4	AUX	623	505	SR		ON	ON	Y	109	ELECTRICAL	1	0	0	0	0
193	P	20	HIS MU24B3	HS FOR MUP2 GEAR OIL PMP	OS-002 SH 4	AUX	623	505	SR		ON	ON	Y	109	ELECTRICAL	0	1	0	0	0
117	B	20	HIS MU2B	RC LETDOWN COOLERS INLET VALVE HIS	OS-002 SH 1	AUX	623	505	SR		ON	ON	Y	98	ELECTRICAL	0	1	0	0	0
118	P	20	HIS MU3B	RCP SEAL RETURN ISO VALVE HIS IN C5717	OS-002 SH 2	AUX	623	505	SR		ON	ON	Y	231	ELECTRICAL	0	1	0	0	0
36	B	20	HIS MU40	BA BATCH STOP VLV HIS	OS-002 SH 1	AUX	623	505	SR		ON	ON	Y	80	ELECTRICAL	1	0	0	0	0
37	B	20	HIS MU50A	BA PMP 1-1 HIS	OS-046	AUX	623	505	SR		ON	ON	Y	101	ELECTRICAL	1	0	0	0	0
38	P	20	HIS MU50B	BA PMP 1-2 HIS	OS-046	AUX	623	505	SR		ON	ON	Y	102	ELECTRICAL	1	0	0	0	0
156	P	20	HIS MU66A	HS FOR MU-66A	OS-002 SH 2	AUX	623	505	SR		ON	ON	Y	227	ELECTRICAL	0	1	0	0	0
157	P	20	HIS MU66B	HS FOR MU-66B	OS-002 SH 2	AUX	623	505	SR		ON	ON	Y	228	ELECTRICAL	0	1	0	0	0
158	P	20	HIS MU66C	HS FOR MU-66C	OS-002 SH 2	AUX	623	505	SR		ON	ON	Y	229	ELECTRICAL	0	1	0	0	0
159	P	20	HIS MU66D	HS FOR MU-66D	OS-002 SH 2	AUX	623	505	SR		ON	ON	Y	230	ELECTRICAL	0	1	0	0	0
788	P	20	HIS NC133	LOW VOLT. SWGR RM VEN FAN 1-2 LCL	OS-035	AUX	603	428	SR		ON	ON	Y	117	ELECTRICAL	0	0	0	0	1
789	B	20	HIS NC251	EDG RM VENTILATION FAN 1 LCL	OS-035	AUX	585	318	SR		ON	ON	Y	130	ELECTRICAL	0	0	0	0	1
790	B	20	HIS NC252	EDG RM VENTILATION FAN 2 LCL	OS-035	AUX	585	318	SR		ON	ON	Y	131	ELECTRICAL	0	0	0	0	1
791	P	20	HIS NC253	EDG RM 2 VNTL FAN 3 LCL HIS	OS-035	AUX	585	319	SR		ON	ON	Y	158	ELECTRICAL	0	0	0	0	1
792	P	20	HIS NC254	EDG RM 2 VNTL FAN 4 LCL HIS	OS-035	AUX	585	319	SR		ON	ON	Y	159	ELECTRICAL	0	0	0	0	1
1072	P	20	HIS NC311	ECCS RM CLR FAN 1-1 SW	OS-034 SH 2	AUX	545	115	SR		ON	ON	Y	148	ELECTRICAL	0	0	0	1	0
1073	P	20	HIS NC312	ECCS RM CLR FAN 1-2 SW	OS-034 SH 2	AUX	545	115	SR		ON	ON	Y	149	ELECTRICAL	0	0	0	1	0

COMPOSITE SQUG SAFE SHUTDOWN EQUIPMENT LIST (SSEL)

Line No.	Train	Equip Class	Equipment ID Number	System/Equipment Description	Drawing Number	Bldg	Elev	Room No.	Eval Cat.	Note	Normal State	Desired State	Pwr Reqd	G.4 Form Number	Support System	RC	IC	PC	DH	SU
1074	B	20	HIS NC314	ECCS RM CLR FAN 1-4 SW	OS-034 SH 2	AUX	545	105	SR		ON	ON	Y	146	ELECTRICAL	0	0	0	1	0
1075	B	20	HIS NC315	ECCS RM CLR FAN 1-5 SW	OS-034 SH 2	AUX	545	105	SR		ON	ON	Y	147	ELECTRICAL	0	0	0	1	0
793	B	20	HIS NC711	LOW VOLT. SWGR RM VENT FAN 101 LCL	OS-035	AUX	603	429	SR		ON	ON	Y	116	ELECTRICAL	0	0	0	0	1
794	B	20	HIS NC751	CCW PMP RM VNT FAN 1-1 LOC....	OS-036 SH 1	AUX	585	328	SR		AUT	AUT	Y	96	ELECTRICAL	0	0	0	0	1
795	P	20	HIS NC752	CCW PMP RM FAN 1-2 LOCAL....	OS-036 SH 1	AUX	585	328	SR		AUT	AUT	Y	97	ELECTRICAL	0	0	0	0	1
796	B	20	HIS NC781	BATTERY RM VENT FAN 1-1 LCL	OS-035	AUX	603	429	SR		ON	ON	Y	142	ELECTRICAL	0	0	0	0	1
797	P	20	HIS NC782	BATTERY RM VENT FAN 1-2 LCL	OS-035	AUX	603	428	SR		ON	ON	Y	143	ELECTRICAL	0	0	0	0	1
1105	B	20	HIS NP1951	EDG FUEL OIL ST TK 1-1 HAND IND SW	OS-041C	AUX	585	321A	SR		ON	ON	Y	151	ELECTRICAL	0	0	0	0	1
1106	B	20	HIS NP1951A	EDG FUEL OIL ST TK 1-1 HAND IND SW	OS-041C	AUX	585	321A	SR		ON	ON	Y	151	ELECTRICAL	0	0	0	0	1
1107	P	20	HIS NP1952	EDG FUEL OIL STOR TK 1-2 PUMP IND SW	OS-041C	AUX	585	320A	SR		ON	ON	Y	152	ELECTRICAL	0	0	0	0	1
1108	P	20	HIS NP1952A	EDG FUEL OIL STOR TK 1-2 PUMP IND SW	OS-041C	AUX	585	320A	SR		ON	ON	Y	152	ELECTRICAL	0	0	0	0	1
245	B	20	HIS RC2-6	RC PRZR AUTO VENT TO QUENCH TANK HIS	OS-001A SH 2	AUX	623	505	SR		ON	ON	Y	255	ELECTRICAL	0	0	1	0	0
246	B	20	HIS RC2-7	PRESSURIZER HEATER CTRL SELECT HIS	OS-001A SH 2	AUX	585	324	SR		ON	ON	Y	124	ELECTRICAL	0	0	1	0	0
247	P	20	HIS RC2-8	PRESSURIZER HEATER CONTROL SELECT HIS	OS-001A SH 2	AUX	585	324	SR		ON	ON	Y	125	ELECTRICAL	0	0	1	0	0
248	B	20	HIS RC2-A	RC PRESSURIZER ESSEN BNK 1 HTR CTRL HIS	OS-001A SH 2	AUX	623	505	SR		ON	ON	Y	124	ELECTRICAL	0	0	1	0	0
249	P	20	HIS RC2-B	RC PRESSURIZER ESSEN BNK 2 HTR CTRL HIS	OS-001A SH 2	AUX	623	505	SR		ON	ON	Y	125	ELECTRICAL	0	0	1	0	0
39	C	8A	HP-2A	HPI LN2-1 ISO VALVE	OS-003	AUX	565	236	R		CLS	CLS	N	204		1	0	0	0	0
40	C	8A	HP-2B	HPI LN2-2 ISO VALVE	OS-003	AUX	565	236	R		CLS	CLS	N	205		1	0	0	0	0
119	C	8A	HP-2B	HPI LN2-2 ISO VALVE	OS-003	AUX	565	236	R		CLS	CLS	N	205		0	1	0	0	0
41	C	8A	HP-2C	HPI LINE 1-1 VALVE	OS-003	AUX	565	208	R		CLS	CLS	N	206		1	0	0	0	0
120	C	8A	HP-2C	HPI LINE 1-1 VALVE	OS-003	AUX	565	208	R		CLS	CLS	N	206		0	1	0	0	0
42	C	8A	HP-2D	HPI LINE 1-1 VALVE	OS-003	AUX	565	208	R		CLS	CLS	N	207		1	0	0	0	0
391	B	20	HS-4627	INCORE TEMP HAND SWITCH	OS-001A SH 1	AUX	623	505	SR		ON	ON	Y	305	ELECTRICAL	0	0	0	1	0
392	P	20	HS-4628	INCORE TEMP HAND SWITCH	OS-001A SH 1	AUX	623	505	SR		ON	ON	Y	305	ELECTRICAL	0	0	0	1	0
798	B	20	HS-4688	H. S. FR XHAUST FAN 1-1 NC 9901	OS-038B	ITK	576	052	SR		AUT	AUT	Y	114	ELECTRICAL	0	0	0	0	1
799	P	20	HS-4689	H. S. FR XHAUST FAN 99-3 NC 9903	OS-038B	ITK	576	052	SR		AUT	AUT	Y	115	ELECTRICAL	0	0	0	0	1
800	B	20	HS-4698	H. S. FR XHAUST FN C99-2 NC 9901	OS-038B	ITK	576	052	SR		AUT	AUT	Y	118	ELECTRICAL	0	0	0	0	1
801	P	20	HS-4699	H. S. FR VENT FAN C99-4 NC 9903	OS-038B	ITK	576	052	SR		AUT	AUT	Y	119	ELECTRICAL	0	0	0	0	1
393	B	20	HS-5902	H. S. FOR AFP ROOM 1 VENT FAN NC 0731	OS-036 SH 1	AUX	565	237	SR		ON	ON	Y	122	ELECTRICAL	0	0	0	1	0
394	P	20	HS-5903	H. S. FOR AFP RM 2 VENT FAN NC 0732	OS-036 SH 1	AUX	565	238	SR		ON	ON	Y	123	ELECTRICAL	0	0	0	1	0
395	B	20	HS-6453A	SG LVL/TEST SLCT HS FOR AFP 1-1 DISCH	OS-017A SH 1	AUX	585	324	SR		ON	ON	Y	309	ELECTRICAL	0	0	0	1	0
396	P	20	HS-6454A	SG LVL/TEST SLCT HS FOR AFP 1-2 DISCH	OS-017A SH 1	AUX	585	324	SR		ON	ON	Y	308	ELECTRICAL	0	0	0	1	0
397	P	20	HS-ICS38A	AFP TURB 1-2 GOV CTRL SELECT HIS, C3630	OS-017B SH 1	AUX	585	324	SR		ON	ON	Y	73	ELECTRICAL	0	0	0	1	0
398	B	20	HS-ICS38B	AFP TURB 1-1 CTRL SELECT HIS, IN C3630	OS-017B SH 1	AUX	585	324	SR		ON	ON	Y	72	ELECTRICAL	0	0	0	1	0
43	B	20	HS-NI45	MANUAL TRIP SWITCH	E-65B SH 15A/16A	AUX	623	505	SR		ON	ON	Y	183	ELECTRICAL	1	0	0	0	0
44	P	20	HS-NI46	MANUAL TRIP SWITCH	E-65B SH 13A/14A	AUX	623	505	SR		ON	ON	Y	183	ELECTRICAL	1	0	0	0	0
1125	B	0	HV-4906	CTRM EVS STBY COND 1 MOTOR OPER	OS-032B	AUX	656	N/A	SR		CLS	OP/CL	Y	90	ELECTRICAL	0	0	0	0	1
1126	P	0	HV-4907	CTRM EVS STBY COND 2 MOTOR OPER	OS-032B	AUX	656	N/A	SR		CLS	OP/CL	Y	91	ELECTRICAL	0	0	0	0	1
802	B	8A	HV-5261	CTRM EMERG VENT FAN 1 INLT MDO	OS-032B	AUX	638	603	SR		CLS	OPN	Y	88	ELECTRICAL	0	0	0	0	1
803	P	8A	HV-5262	CTRM EMERG VENT FAN 2 INLT MDO	OS-032B	AUX	638	603	SR		CLS	OPN	Y	89	ELECTRICAL	0	0	0	0	1
804	B	7	HV-5301A	CTRM COMPUT CONFER&COMPT SUP..	OS-032A	AUX	638	603	SR	33	OPN	CLS	Y	270	ELECTRICAL	0	0	0	0	1
805	B	7	HV-5301B	CTRM CTRL CABNET RM Q PNEU OP	OS-032A	AUX	638	603	SR	33	OPN	CLS	Y	270	ELECTRICAL	0	0	0	0	1
806	B	7	HV-5301C	CTRM CABLE SPRDNG RM Q PNEU OP	OS-032A	AUX	638	603	SR	33	OPN	CLS	Y	270	ELECTRICAL	0	0	0	0	1
807	B	7	HV-5301D	CTRM I&C SHOP&KTCHN Q PNEU OP	OS-032A	AUX	638	603	SR	33	OPN	CLS	Y	270	ELECTRICAL	0	0	0	0	1

COMPOSITE SQUG SAFE SHUTDOWN EQUIPMENT LIST (SSEL)

Line No.	Train	Equip Class	Equipment ID Number	System/Equipment Description	Drawing Number	Bldg	Elev	Room No.	Eval Cat.	Note	Normal State	Desired State	Pwr Reqd	G.4 Form Number	Support System	RC	IC	PC	DH	SU
808	B	7	HV-5301E	CTRM RTRN AIR FANS IN PNEU..OP	OS-032A	AUX	638	603	SR	33	OPN	CLS	Y	270	ELECTRICAL	0	0	0	0	1
809	B	7	HV-5301F	CTRM TOILET 2 EXH FAN PNEU OP	OS-032A	AUX	638	603	SR	33	OPN	CLS	Y	270	ELECTRICAL	0	0	0	0	1
810	B	7	HV-5301G	CTRM TOILET EXH FAN PNEU OP	OS-032A	AUX	638	603	SR	33	OPN	CLS	Y	270	ELECTRICAL	0	0	0	0	1
811	B	7	HV-5301H	CTRM KITCHEN EXH FAN PNEU OP	OS-032A	AUX	638	603	SR	33	OPN	CLS	Y	270	ELECTRICAL	0	0	0	0	1
812	B	0	HV-5305	L.V.S.G. RM 429 VENT DAMP OPER	OS-035	AUX	603	429	SR		OP/CL	OP/CL	Y	210	ELECTRICAL	0	0	0	0	1
813	B	0	HV-5305A	L.V.S.G. RM 429 INTK A DAMP OP	OS-035	AUX	603	429	SR	36	OP/CL	OP/CL	Y	140	ELECTRICAL	0	0	0	0	1
814	B	0	HV-5305B	L.V.S.G. RM INTK B DAMP OPER	OS-035	AUX	603	429	SR	36	OP/CL	OP/CL	Y	141	ELECTRICAL	0	0	0	0	1
815	P	7	HV-5311A	CTRM AREA HVAC DMPR PNEU VLV..	OS-032A	AUX	638	603	SR	33	OPN	CLS	Y	271	ELECTRICAL	0	0	0	0	1
816	P	7	HV-5311B	CTRM CTRL CABNET RM Q PNEU VO	OS-032A	AUX	638	603	SR	33	OPN	CLS	Y	271	ELECTRICAL	0	0	0	0	1
817	P	7	HV-5311C	CTRM SPRDNG CABLE RM Q PNEU VO	OS-032A	AUX	638	603	SR	33	OPN	CLS	Y	271	ELECTRICAL	0	0	0	0	1
818	P	7	HV-5311D	CTRM I&C LB&KTCHN Q PNE VLV OP	OS-032A	AUX	638	603	SR	33	OPN	CLS	Y	271	ELECTRICAL	0	0	0	0	1
819	P	7	HV-5311E	CTRM RTRN AIR FANS IN PNUE OP	OS-032A	AUX	638	603	SR	33	OPN	CLS	Y	271	ELECTRICAL	0	0	0	0	1
820	P	7	HV-5311F	CTRM TOILET 2 EXH FAN PNEU VO	OS-032A	AUX	638	603	SR	33	OPN	CLS	Y	271	ELECTRICAL	0	0	0	0	1
821	P	7	HV-5311G	CTRM TOILET EXH FAN PVO	OS-032A	AUX	638	603A	SR	33	OPN	CLS	Y	271	ELECTRICAL	0	0	0	0	1
822	P	7	HV-5311H	CTRM KITCHEN EXH FAN PVO	OS-032A	AUX	638	603	SR	33	OPN	CLS	Y	271	ELECTRICAL	0	0	0	0	1
823	P	0	HV-5314	L.V.S.G. RM 428 VENT DAMPER OP	OS-035	AUX	623	515	SR		OP/CL	OP/CL	Y	211	ELECTRICAL	0	0	0	0	1
824	P	0	HV-5314A	L.V.S.G RM 428 INTKE DMPR OPER	OS-035	AUX	603	428	SR	36	OP/CL	OP/CL	Y	157	ELECTRICAL	0	0	0	0	1
825	B	0	HV-5329A	EDG RM 318 AIR DAMP OPERATOR	OS-035	AUX	585	318	SR		OP/CL	OP/CL	Y	212	ELECTRICAL	0	0	0	0	1
826	B	0	HV-5329B	EDG RM 318 AIR DAMP OPERATOR	OS-035	AUX	585	318	SR		OP/CL	OP/CL	Y	213	ELECTRICAL	0	0	0	0	1
827	B	0	HV-5329C	EDG RM 318 AIR DAMP OPERATOR	OS-035	AUX	585	318	SR	36	OP/CL	OP/CL	Y	214	ELECTRICAL	0	0	0	0	1
828	P	0	HV-5336A	EDG RM 2 OTSD AIR CTRL DAMP OP	OS-035	AUX	585	319	SR		OP/CL	OP/CL	Y	215	ELECTRICAL	0	0	0	0	1
829	P	0	HV-5336B	EDG RM 2 RECIRC CTRL DAMP OPER	OS-035	AUX	585	319	SR		OP/CL	OP/CL	Y	216	ELECTRICAL	0	0	0	0	1
830	P	0	HV-5336C	EDG RM 2 XHST AIR CTRL DAMP OP	OS-035	AUX	585	319	SR	36	OP/CL	OP/CL	Y	217	ELECTRICAL	0	0	0	0	1
831	B	7	HV-5361A	CABLE SPRDNG RM DMPR INLT OPER	OS-032A	AUX	623	506	SR	33	OPN	CLS	Y	270	ELECTRICAL	0	0	0	0	1
832	B	7	HV-5361B	CABLE SPRDNG RM INLT DMPR OPER	OS-032A	AUX	623	501	SR	33	OPN	CLS	Y	270	ELECTRICAL	0	0	0	0	1
833	P	7	HV-5362A	CABLE SPRDNG RM DMPR OUTLT OPR	OS-032A	AUX	623	506	SR	33	OPN	CLS	Y	271	ELECTRICAL	0	0	0	0	1
834	P	7	HV-5362B	CABLE SPRDNG RM OUTLT DMPR OPR	OS-032A	AUX	623	501	SR	33	OPN	CLS	Y	271	ELECTRICAL	0	0	0	0	1
835	B	0	HV-5443A	CCP RM VNT FN 1 RM OUT DAMP OP	OS-036 SH 1	AUX	585	328	SR		OP/CL	OP/CL	Y	218	ELECTRICAL	0	0	0	0	1
836	B	0	HV-5443B	CCP RM VNT FN 1 RM IN DAMP OP	OS-036 SH 1	AUX	585	328	SR		OP/CL	OP/CL	Y	219	ELECTRICAL	0	0	0	0	1
837	B	0	HV-5443C	CCP RM VNT FN1-1 RM IN DAMP OP	OS-036 SH 1	AUX	585	328	SR	36	OP/CL	OP/CL	Y	222	ELECTRICAL	0	0	0	0	1
838	P	0	HV-5444A	CCP RM VNT FN 2 RM OUT DAMP OP	OS-036 SH 1	AUX	585	328	SR		OP/CL	OP/CL	Y	220	ELECTRICAL	0	0	0	0	1
839	P	0	HV-5444B	CCP RM VNT FN RM INLT DAMP OPR	OS-036 SH 1	AUX	585	328	SR		OP/CL	OP/CL	Y	221	ELECTRICAL	0	0	0	0	1
840	P	0	HV-5444C	CCP RM VNT FN2 RM INLT DAMP OP	OS-036 SH 1	AUX	585	328	SR	36	OP/CL	OP/CL	Y	223	ELECTRICAL	0	0	0	0	1
841	B	0	HV-5597	BAT RM A VENT TO ATM DAMP OPER	OS-035	AUX	603	429B	SR		OP/CL.	OP/CL	Y	112	ELECTRICAL	0	0	0	0	1
842	P	0	HV-5598	OPER,DMPR FRM BAT RM VENT -ATM	OS-035	AUX	603	428A	SR		OP/CL	OP/CL	Y	113	ELECTRICAL	0	0	0	0	1
160	P	7	IA-630	IA PCV FOR MU66D	OS-002 SH 2	AUX	565	208	S		THR	THR	N			0	1	0	0	0
161	P	7	IA-636	IA PCV FOR MU66A	OS-002 SH 2	AUX	565	208	S		THR	THR	N			0	1	0	0	0
151	P	7	IA-648	IA PCV FOR MU38	OS-002 SH 2	AUX	565	208	S		THR	THR	N			0	1	0	0	0
162	P	7	IA-654	IA PCV FOR MU66B	OS-002 SH 2	AUX	565	208	S		THR	THR	N			0	1	0	0	0
163	P	7	IA-660	IA PCV FOR MU66C	OS-002 SH 2	AUX	565	208	S		THR	THR	N			0	1	0	0	C
399	P	7	ICS-11A	MS LINE 2 ATMOSPHERIC VENT VALVE	OS-008 SH 1	AUX	643	602	SR	93	CLS	OP/CL	Y	202	ELECTRICAL/MANUAL	0	0	0	1	0
1158	P	R	ICS-11AB	CLOSING AIR BLEEDOFF (MANUAL VALVE)	OS-008 SH 1	AUX	623	501			CLS	OPN	Y		MANUAL	0	0	0	1	0
544	P	7	ICS-11AD	AIR CONT VLV FOR ICS 11A	OS-008 SH 1	AUX	643	602	S		CLS	OPN	N			0	0	0	1	0
400	B	7	ICS-11B	MS LINE 1 ATMOSPHERIC VENT VALVE	OS-008 SH 1	AUX	643	601	SR	93	CLS	OP/CL	Y	203	ELECTRICAL/MANUAL	0	0	0	1	0
1157	B	R	ICS-11BB	CLOSING AIR BLEEDOFF (MANUAL VALVE)	OS-008 SH 1	AUX	623	500			CLS	OPN	Y		MANUAL	0	0	0	1	0
545	B	7	ICS-11BD	AIR CONT VLV FOR ICS 11B	OS-008 SH 1	AUX	643	601	S		CLS	OPN	N			0	0	0	1	0

COMPOSITE SQUG SAFE SHUTDOWN EQUIPMENT LIST (SSEL)

Line No.	Train	Equip Class	Equipment ID Number	System/Equipment Description	Drawing Number	Bldg	Elev	Room No.	Eval Cat.	Note	Normal State	Desired State	Pwr Reqd	G.4 Form Number	Support System	RC	IC	PC	DH	SU
1053	B	20	II-6283	DBC1P AMMETER	OS-060 SH 1	AUX	623	505	SR		ON	ON	Y	52	ELECTRICAL	0	0	0	0	1
1054	P	20	II-6284	DBC2N AMMETER	OS-060 SH 1	AUX	623	505	SR		ON	ON	Y	52	ELECTRICAL	0	0	0	0	1
1055	B	20	II-6285	DBC1N AMMETER	OS-060 SH 1	AUX	623	505	SR		ON	ON	Y	52	ELECTRICAL	0	0	0	0	1
1056	P	20	II-6286	DBC2P AMMETER	OS-060 SH 1	AUX	623	505	SR		ON	ON	Y	52	ELECTRICAL	0	0	0	0	1
843	B	20	II-6289	BATT 1P TO BUS 1P AMMMETER	OS-060 SH 1	AUX	623	502	SR		ON	ON	Y	52	ELECTRICAL	0	0	0	0	1
844	P	20	II-6290	BATT 2N TO BUS 2N AMMETER	OS-060 SH 1	AUX	623	502	SR		ON	ON	Y	52	ELECTRICAL	0	0	0	0	1
845	B	20	II-6291	BATT 1N TO BUS 1N AMMETER	OS-060 SH 1	AUX	623	502	SR		ON	ON	Y	52	ELECTRICAL	0	0	0	0	1
846	P	20	II-6292	BATT 2P TO BUS 2P AMMETER	OS-060 SH 1	AUX	623	502	SR		ON	ON	Y	52	ELECTRICAL	0	0	0	0	1
1160	B	20	JT-2703	TERMINAL BLOCK BOX FOR AFPT 1 AUX RELAY		AUX	565	237	S	4	ON	ON	Y		ELECTRICAL	0	0	0	0	1
1161	P	20	JT-2704	TERMINAL BLOCK BOX FOR AFPT 2 AUX RELAY		AUX	565	238	S	4	ON	ON	Y		ELECTRICAL	0	0	0	0	1
401	B	5	K3-1	AUXILIARY FEED PMP TURBINE 1-1	OS-017B SH 1	AUX	565	237	SR	91	STB	ON	Y	72	ELECTRICAL	0	0	0	1	0
402	P	5	K3-2	AUXILIARY FEED PMP TURBINE 1-2	OS-017B SH 1	AUX	565	237	SR	91	STB	ON	Y	73	ELECTRICAL	0	0	0	1	0
851	B	17	K5-1	EDG 1-1 (all skidmounted)	OS-041A SH 1	AUX	585	318	SR	102	STB	ON	Y	351	ELECTRICAL	0	0	0	0	1
852	P	17	K5-2	EDG 1-2 (all skidmounted)	OS-041A SH 2	AUX	585	319	SR	102	STB	ON	Y	353	ELECTRICAL	0	0	0	0	1
403	P	18	LC-6451	STEAM GEN 1/2 LVL CTRL FR AFP 2 CTRL VLV	OS-017A SH 1	AUX	603	428	SR		ON	ON	Y	308	ELECTRICAL	0	0	0	1	0
404	B	18	LC-6452	STEAM GEN 1/2 LVL CTRL FR AFP 1 CTRL VLV	OS-017A SH 1	AUX	585	325	SR		ON	ON	Y	309	ELECTRICAL	0	0	0	1	0
853	B	20	LI-1402	CC SRG TNK SIDE 1 LV INDIC	OS-021 SH 3	AUX	623	505	SR	1	ON	ON	Y	315	ELECTRICAL	0	0	0	0	1
854	P	20	LI-1403	CC SRG TNK SIDE 2 LV INDIC	OS-021 SH 3	AUX	623	505	SR	1	ON	ON	Y	315	ELECTRICAL	0	0	0	0	1
46	B	20	LI-1525A	BWST LEVEL INDICATOR SFAS CH1	OS-004 SH 1	AUX	623	502	SR	1	ON	ON	Y	300	ELECTRICAL	1	0	0	0	0
47	P	20	LI-1525B	BWST LEVEL INDICATOR SFAS CH2	OS-004 SH 1	AUX	623	502	SR	1	ON	ON	Y	300	ELECTRICAL	1	0	0	0	0
855	B	20	LI-2787B	EDG DAY TANK 1-1 LV INDICATOR	OS-041C	AUX	623	505	SR	1	ON	ON	Y	316	ELECTRICAL	0	0	0	0	1
856	P	20	LI-2788B	EDG DAY TANK 1-2 LVL INDICATOR	OS-041C	AUX	623	505	SR	1	ON	ON	Y	316	ELECTRICAL	0	0	0	0	1
109	B	20	LI-MU16-2	MUT LVL INDICATOR	OS-002 SH 3	AUX	623	505	SR	1	ON	ON	Y	314	ELECTRICAL	1	0	0	0	0
175	B	20	LI-MU16-2	MUT LVL INDICATOR	OS-002 SH 3	AUX	623	505	SR	1	ON	ON	Y	314	ELECTRICAL	0	1	0	0	0
48	B	20	LI-RC14-3	RC COOLANT PRESSURIZER CH 1	OS-001A SH 2	AUX	623	505	SR	1	ON	ON	Y	317	ELECTRICAL	1	0	0	0	0
121	B	20	LI-RC14-3	RC COOLANT PRESSURIZER CH 1	OS-001A SH 2	AUX	623	505	SR	1	ON	ON	Y	317	ELECTRICAL	0	1	0	0	0
250	B	20	LI-RC14-3	RC COOLANT PRESSURIZER CH 1	OS-001A SH 2	AUX	623	505	SR	1	ON	ON	Y	317	ELECTRICAL	0	0	1	0	0
405	B	20	LI-RC14-3	RC COOLANT PRESSURIZER CH 1	OS-001A SH 2	AUX	623	505	SR	1	ON	ON	Y	317	ELECTRICAL	0	0	0	1	0
49	P	20	LI-RC14-4	RC PRESSURIZER CHANNEL 2	OS-001A SH 2	AUX	623	505	SR	1	ON	ON	Y	317	ELECTRICAL	1	0	0	0	0
122	P	20	LI-RC14-4	RC PRESSURIZER CHANNEL 2	OS-001A SH 2	AUX	623	505	SR	1	ON	ON	Y	317	ELECTRICAL	0	1	0	0	0
251	P	20	LI-RC14-4	RC PRESSURIZER CHANNEL 2	OS-001A SH 2	AUX	623	505	SR	1	ON	ON	Y	317	ELECTRICAL	0	0	1	0	0
406	P	20	LI-RC14-4	RC PRESSURIZER CHANNEL 2	OS-001A SH 2	AUX	623	505	SR	1	ON	ON	Y	317	ELECTRICAL	0	0	0	1	0
407	P	20	LI-SP9A1	STEAM GEN 1-2 STARTUP LEVEL INDICATOR	OS-008 SH 1	AUX	623	505	SR	1	ON	ON	Y	308	ELECTRICAL	0	0	0	1	0
408	B	20	LI-SP9B1	STEAM GEN 1 STARTUP LEVEL INDICATOR	OS-008 SH 1	AUX	623	505	SR	1	ON	ON	Y	309	ELECTRICAL	0	0	0	1	0
409	P	20	LIC 6451	STEAM GEN 1/2 SU LEVEL	OS-017A SH 1	AUX	623	505	SR	1	ON	ON	Y	308	ELECTRICAL	0	0	0	1	0
410	B	20	LIC 6452	STEAM GEN 1/2 SU LEVEL	OS-017A SH 1	AUX	623	505	SR	1	ON	ON	Y	309	ELECTRICAL	0	0	0	1	0
50	C	20	LR-MU16	MUT LVL RECORDER	OS-002 SH 3	AUX	623	505	SR	1,7	ON	ON	Y	314	ELECTRICAL	1	0	0	0	0
173	P	20	LR-MU16	MUT LVL RECORDER	OS-002 SH 3	AUX	623	505	SR	1,7	ON	ON	Y	314	ELECTRICAL	0	1	0	0	0
857	P	18	LSH 1122	EDG DAY TANK 1-1 LVL SWITCH HI	OS-041C	AUX	595	320A	SR	1			Y	152	ELECTRICAL	0	0	0	0	1
858	B	18	LSH 1128	EDG DAY TANK 1-1 LVL SWITCH HI	OS-041C	AUX	595	321A	SR	1			Y	151	ELECTRICAL	0	0	0	0	1
859	P	18	LSL 1122	EDG DAY TANK 1-2 LVL SWITCH LO	OS-041C	AUX	595	320A	SR	1			Y	152	ELECTRICAL	0	0	0	0	1
860	B	18	LSL 1128	EDG DAY TANK 1-1 LVL SWITCH LO	OS-041C	AUX	595	321A	SR	1			Y	151	ELECTRICAL	0	0	0	0	1
861	B	18	LT-1402	CC SRG TNK 1-1 SIDE 1 LV TRANS	OS-021 SH 3	AUX	623	501	SR		ON	ON	Y	315	ELECTRICAL	0	0	0	0	1
862	P	18	LT-1403	CC SRG TNK 1-1 SIDE 2 LV TRANS	OS-021 SH 3	AUX	623	501	SR		ON	ON	Y	315	ELECTRICAL	0	0	0	0	1
863	B	18	LT-2787	EDG DAY TANK 1-1 LVL TRANSMITT	OS-041C	AUX	585	318	SR		ON	ON	Y	316	ELECTRICAL	0	0	0	0	1
864	P	18	LT-2788	EDG DAY TANK 1-2 LVL TRANSMITT	OS-041C	AUX	585	319	SR		ON	ON	Y	316	ELECTRICAL	0	0	0	0	1
51	C	18	LT-MU16-1	MUT LVL TRANSMITTER	OS-002 SH 3	AUX	565	AB3	SR		ON	ON	Y	314	ELECTRICAL	1	0	0	0	0
172	P	18	LT-MU16-1	MUT LVL TRANSMITTER	OS-002 SH 3	AUX	565	AB3	SR		ON	ON	Y	314	ELECTRICAL	0	1	0	0	0

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110	B	18	LT-MU16-2	MUT LVL TRANSMITTER	OS-002 SH 3	AUX	565	AB3	SR		ON	ON	Y	314	ELECTRICAL	1	0	0	0	0
174	B	18	LT-MU16-2	MUT LVL TRANSMITTER	OS-002 SH 3	AUX	565	AB3	SR		ON	ON	Y	314	ELECTRICAL	0	1	0	0	0
52	P	18	LT-RC14-1	RC PRESSURIZER CH 2 LEVEL TRANSMITTER	OS-001A SH 2	CTM	585	317	SR		ON	ON	Y	317	ELECTRICAL	1	0	0	0	0
123	P	18	LT-RC14-1	RC PRESSURIZER CH 2 LEVEL TRANSMITTER	OS-001A SH 2	CTM	585	317	SR		ON	ON	Y	317	ELECTRICAL	0	1	0	0	0
252	P	18	LT-RC14-1	RC PRESSURIZER CH 2 LEVEL TRANSMITTER	OS-001A SH 2	CTM	585	317	SR		ON	ON	Y	317	ELECTRICAL	0	0	1	0	0
411	P	18	LT-RC14-1	RC PRESSURIZER CH 2 LEVEL TTANSMITTER	OS-001A SH 2	CTM	585	317	SR		ON	ON	Y	317	ELECTRICAL	0	0	0	1	0
53	B	18	LT-RC14-3	RC PRESSURIZER CH 1 LEVEL TRANSMITTER	OS-001A SH 2	CTM	585	317	SR		ON	ON	Y	317	ELECTRICAL	1	0	0	0	0
124	B	18	LT-RC14-3	RC PRESSURIZER CH 1 LEVEL TRANSMITTER	OS-001A SH 2	CTM	585	317	SR		ON	ON	Y	317	ELECTRICAL	0	1	0	0	0
253	B	18	LT-RC14-3	RC PRESSURIZER CH 1 LEVEL TRANSMITTER	OS-001A SH 2	CTM	585	317	SR		ON	ON	Y	317	ELECTRICAL	0	0	1	0	0
412	B	18	LT-RC14-3	RC PRESSURIZER CH 1 LEVEL TRANSMITTER	OS-001A SH 2	CTM	585	317	SR		ON	ON	Y	317	ELECTRICAL	0	0	0	1	0
413	P	18	LT-SP9A3	STEAM GEN 1-2 STARTUP LEVEL TRANSMIT 3	OS-008 SH 1	CTM	565	286	SR	89	ON	ON	Y	308	ELECTRICAL	0	0	0	1	0
414	B	18	LT-SP9B3	STEAM GEN 1 STARTUP LEVEL TRANSMITTER	OS-008 SH 1	CTM	565	285	SR	90	ON	ON	Y	309	ELECTRICAL	0	0	0	1	0
415	P	7	MS-100	MAIN STEAM LINE 2 ISO VALVE	OS-008 SH 1	AUX	643	602	SR		OPN	CLS	Y	303	ELECTRICAL	0	0	0	1	0
416	P	7	MS-100-1	MAIN STEAM LINE 2 MSIV BYPASS VALVE	OS-008 SH 1	AUX	643	602	R		CLS	CLS	N	232		0	0	0	1	0
417	B	7	MS-101	MS LINE 1 ISO VALVE	OS-008 SH 1	AUX	643	601	SR		OPN	CLS	Y	303	ELECTRICAL	0	0	0	1	0
418	B	7	MS-101-1	MS LINE 1 MSIV BYPASS VALVE	OS-008 SH 1	AUX	643	601	R		CLS	CLS	N	233		0	0	0	1	0
419	B	8B	MS-106	MS LINE 1 TO AFP TURB 1-1 ISO VALVE	OS-017B SH 1	AUX	623	500	SR		CLS	OPN	Y	250	ELECTRICAL	0	0	0	1	0
1087	P	8A	MS-106A	MS LINE 2 TO AFP TURB 1-1 ISO VALVE	OS-017B SH 1	AUX	623	501	R		OPN	OPN	N	358		0	0	0	1	0
420	P	8A	MS-107	MS LN 2 TO AFP TURB 1-2 MTR CTRL ISO VLV	OS-017B SH 1	AUX	623	501	SR		CLS	OPN	Y	153	ELECTRICAL	0	0	0	1	0
1088	B	8A	MS-107A	MS LINE 1 TO AFP TURB 1-2 ISO VALVE	OS-017B SH 1	AUX	623	500	R		OPN	OPN	N	359		0	0	0	1	0
421	P	7	MS-375	MAIN STEAM LINE 2 WARMUP DRAIN VALVE	OS-008 SH 1	AUX	643	602	R		CLS	CLS	N	224		0	0	0	1	0
422	B	7	MS-394	MS LINE 1 WARMUP DRAIN VALVE	OS-008 SH 1	AUX	643	601	R		CLS	CLS	N	234		0	0	0	1	0
423	C	7	MS-5889A	AFP TURB 1-1 STEAM ADMISSION VALVE	OS-017B SH 1	AUX	565	237	SR		CLS	OPN	Y	225	ELECTRICAL	0	0	0	1	0
424	C	7	MS-5889B	AFP TURB 1-2 STEAM ADMISSION VALVE	OS-017B SH 1	AUX	565	238	SR		CLS	OPN	Y	226	ELECTRICAL	0	0	0	1	0
425	P	8A	MS-603	SG 1-2 DRAIN LINE ISO VALVE	OS-008 SH 3	AUX	565	236	R		CLS	CLS	N	235		0	0	0	1	0
426	B	8A	MS-611	SG 1-1 DRAIN LINE ISO VALVE	OS-008 SH 3	AUX	565	236	R		CLS	CLS	N	236		0	0	0	1	0
54	C	8A	MU-11	MX BED1 OUT TO ION BED LN VLV	OS-002 SH 1	AUX	565	211	R		MUT	MUT	N	237		1	0	0	0	0
55	C	8A	MU-12A	MU FILTER 1 INLET ISO VALVE	OS-002 SH 1	AUX	565	211	R		OPN	OPN	N	238		1	0	0	0	0
56	C	8A	MU-12B	MIXED BED 1-2 INLET ISO VALVE	OS-002 SH 1	AUX	565	211	R		CLS	CLS	N	239		1	0	0	0	0
57	C	7	MU-19	RCP SEAL INJ FLOW CTRL VLV	OS-002 SH 3	AUX	585	303	S	3	THR	N/A	N	319		1	0	0	0	0
215	C	7	MU-19	RCP SEAL INJ FLOW CTRL VLV	OS-002 SH 3	AUX	585	303	SR	10	THR	OPN	N	319		0	1	0	0	0
125	P	8A	MU-1A	RC LETDOWN COOLER 1-1 INLET ISO VALVE	OS-002 SH 1	CTM	565	215	SR		OPN	CLS	Y	155	ELECTRICAL	0	1	0	0	0
126	P	8A	MU-1B	RC LETDOWN COOLER 1-2 INLET ISO VALVE	OS-002 SH 1	CTM	565	215	SR		OPN	CLS	Y	156	ELECTRICAL	0	1	0	0	0
58	C	R	MU-209	NORM MU FLOW CTRL IN ISO VLV	OS-002 SH 3	AUX	565	225		11	OPN	OP/CL	Y		MANUAL	1	0	0	0	0
211	C	R	MU-209	NORM MU FLOW CTRL IN ISO VLV	OS-002 SH 3	AUX	565	225		11	OPN	OP/CL	Y		MANUAL	0	1	0	0	0
216	C	R	MU-216	BYPASS VLV FOR MU-19	OS-002 SH 3	AUX	585	303		20	CLS	THR	Y		MANUAL	0	1	0	0	0
59	C	7	MU-23	BA PMP PNEUMATC DISCH CTRL VLV	OS-046	AUX	565	240	SR		CLS	OPN	Y	318	ELECTRICAL	1	0	0	0	0
127	C	8A	MU-2B	RC LETDOWN ISO VALVE	OS-002 SH 1	CTM	565	216	SR		OPN	CLS	Y	98	ELECTRICAL	0	1	0	0	0
60	P	7	MU-32	MU FLOW CTRL VALVE	OS-002 SH 3	AUX	565	225	SR		THR	OPN	Y	319	ELECTRICAL	1	0	0	0	0
213	P	7	MU-32	MU FLOW CTRL VALVE	OS-002 SH 3	AUX	565	225	SR		THR	OPN	Y	319	ELECTRICAL	0	1	0	0	0
61	C	R	MU-338	BAAT 1 & 2 DISCH XCONN VALVE	OS-046	AUX	565	240		37	CLS	OPN	Y		MANUAL	1	0	0	0	0
62	C	R	MU-348	BORIC ACID PMP 1-1 DISCH VALVE	OS-046	AUX	565	240		38	OPN	THR	Y		MANUAL	1	0	0	0	0
63	C	R	MU-349	BA PMP 1-2 DISCH VALVE	OS-046	AUX	565	240		38	OPN	THR	Y		MANUAL	1	0	0	0	0
64	C	R	MU-366	BA PMP 1-2 TO MU FLTRS ISO VLV	OS-046	AUX	565	240		2	CLS	OPN	Y		MANUAL	1	0	0	0	0
128	C	7	MU-38	RCP SEAL RETURN ISO VALVE	OS-002 SH 2	AUX	565	208	SR	51	OPN	OPN	Y	231	ELECTRICAL/MANUAL	0	1	0	0	0
65	C	8A	MU-3971	MU PUMP2 SUCTION 3 WAY MOV	OS-002 SH 3	AUX	565	225	SR	9	OPN	OPN	Y	164	ELECTRICAL	1	0	0	0	0
177	C	8A	MU-3971	MU PUMP2 SUCTION 3 WAY MOV	OS-002 SH 3	AUX	565	225	SR	9	OPN	OPN	Y	164	ELECTRICAL	0	1	0	0	0

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66	C	8A	MU-40	BATCH FEED LINE STOP ISO VLV	OS-002 SH 1	AUX	565	211	SR		CLS	OP/CL	Y	80	ELECTRICAL	1	0	0	0	0
67	C	R	MU-58A	NRML MKUP FLOW INDCTR FIMU58 SOURCE VLV	OS-002 SH 3	AUX	565	225		11	OPN	OP/CL	Y		MANUAL	1	0	0	0	0
210	C	R	MU-58A	NRML MKUP FLOW INDCTR FIMU58 SOURCE VLV	OS-002 SH 3	AUX	565	225		11	OPN	OP/CL	Y		MANUAL	0	1	0	0	0
129	C	8A	MU-59A	RCP SEAL RETURN 2-1	OS-002 SH 2	CTM	565	214	R		OPN	OPN	N	240		0	1	0	0	0
130	C	8A	MU-59B	RCP SEAL RETURN 2-2	OS-002 SH 2	CTM	565	214	R		OPN	OPN	N	241		0	1	0	0	0
131	C	8A	MU-59C	RCP SEAL RETURN 1-1	OS-002 SH 2	CTM	565	214	R		OPN	OPN	N	242		0	1	0	0	0
132	C	8A	MU-59D	RCP SEAL RETURN 1-2	OS-002 SH 2	CTM	565	214	R		OPN	OPN	N	243		0	1	0	0	0
68	C	8A	MU-6405	RC MU PMP1-1 3-WAY SUCTION VALVE	OS-002 SH 3	AUX	565	225	SR	9	OPN	OPN	Y	85	ELECTRICAL	1	0	0	0	0
178	C	8A	MU-6405	RC MU PMP1-1 3-WAY SUCTION VALVE	OS-002 SH 3	AUX	565	225	SR	9	OPN	OPN	Y	85	ELECTRICAL	0	1	0	0	0
69	C	8B	MU-6406	MAKE-UP 2 RECIRC	OS-002 SH 3	AUX	565	225	R		OPN	OPN	N	244		1	0	0	0	0
200	C	8B	MU-6406	MAKE-UP 2 RECIRC	OS-002 SH 3	AUX	565	225	R		OPN	OPN	N	244		0	1	0	0	0
70	C	8B	MU-6407	MAKE-UP 1 RECIRC	OS-002 SH 3	AUX	565	225	R		OPN	OPN	N	245		1	0	0	0	0
201	C	8B	MU-6407	MAKE-UP 1 RECIRC	OS-002 SH 3	AUX	565	225	R		OPN	OPN	N	245		0	1	0	0	0
71	C	8A	MU-6408	NORM MU TO SL INJ LN...ISO VLV	OS-002 SH 3	AUX	565	225	R		OPN	OPN	N	246		1	0	0	0	0
202	C	8A	MU-6408	NORM MU TO SL INJ LN...ISO VLV	OS-002 SH 3	AUX	565	225	R		OPN	OPN	N	246		0	1	0	0	0
72	C	8A	MU-6409	MAKE-UP 1 DISCH XCONN	OS-002 SH 3	AUX	565	225	R		OPN	OPN	N	247		1	0	0	0	0
203	C	8A	MU-6409	MAKE-UP 1 DISCH XCONN	OS-002 SH 3	AUX	565	225	R		OPN	OPN	N	247		0	1	0	0	0
73	C	8A	MU-6419	NORMAL MU TO RCS LOOP-1 ISOVLV	OS-002 SH 3	AUX	565	208	SR		CLS	OPN	Y	150	ELECTRICAL	1	0	0	0	0
204	C	8A	MU-6419	NORMAL MU TO RCS LOOP-1 ISOVLV	OS-002 SH 3	AUX	565	208	SR		CLS	OP/CL	Y	150	ELECTRICAL	0	1	0	0	0
74	C	8A	MU-6420	BYPASS VLV IN MU32 MINIFLOW LN	OS-002 SH 3	AUX	565	225	R		CLS	CLS	N	248		1	0	0	0	0
212	C	8A	MU-6420	BYPASS VLV IN MU32 MINIFLOW LN	OS-002 SH 3	AUX	565	225	R		CLS	CLS	N	248		0	1	0	0	0
75	B	8A	MU-6421	MU TO RCS TRAIN2 ISO VALVE	OS-002 SH 3	AUX	565	208	SR		CLS	OPN	Y	111	ELECTRICAL	1	0	0	0	0
207	B	8A	MU-6421	MU TO RCS TRAIN2 ISO VALVE	OS-002 SH 3	AUX	565	208	SR		CLS	OPN	Y	111	ELECTRICAL	0	1	0	0	0
76	P	8A	MU-6422	NORM MU TO RCP SEALS ISO VLV	OS-002 SH 3	AUX	565	236	R		OPN	OPN	N	249		1	0	0	0	0
214	P	8A	MU-6422	NORM MU TO RCP SEALS ISO VLV	OS-002 SH 3	AUX	565	236	SR	12	OPN	THR	Y	249	ELECTRICAL	0	1	0	0	0
77	C	7	MU-66A	RCP1-2-1 SEAL INJ FLOW ISO VLV	OS-002 SH 2	AUX	565	208		3	OPN	N/A	N			1	0	0	0	0
168	C	7	MU-66A	RCP1-2-1 SEAL INJ FLOW ISO VLV	OS-002 SH 2	AUX	565	208	SR	51	OPN	OPN	Y	227	ELECTRICAL/MANUAL	0	1	0	0	0
78	C	7	MU-66B	P1-2-2 SEAL INJ FLOW CNTRL VLV	OS-002 SH 2	AUX	565	208		3	OPN	N/A	N			1	0	0	0	0
169	C	7	MU-66B	P1-2-2 SEAL INJ FLOW CNTRL VLV	OS-002 SH 2	AUX	565	208	SR	51	OPN	OPN	Y	228	ELECTRICAL/MANUAL	0	1	0	0	0
79	C	7	MU-66C	RCP1-1-1 SEAL INJ FLOW ISO VLV	OS-002 SH 2	AUX	565	208		3	OPN	N/A	N			1	0	0	0	0
170	C	7	MU-66C	RCP1-1-1 SEAL INJ FLOW ISO VLV	OS-002 SH 2	AUX	565	208	SR	51	OPN	OPN	Y	229	ELECTRICAL/MANUAL	0	1	0	0	0
80	C	7	MU-66D	RCP1-1-2 SEAL INJ FLOW ISO VLV	OS-002 SH 2	AUX	565	208		3	OPN	N/A	N			1	0	0	0	0
171	C	7	MU-66D	RCP1-1-2 SEAL INJ FLOW ISO VLV	OS-002 SH 2	AUX	565	208	SR	51	OPN	OPN	Y	230	ELECTRICAL/MANUAL	0	1	0	0	0
1091	B	0	NI-5874A	NEUTRON FLUX IND CH 1 (SOURCE RANGE)	OS-001A	AUX	623	505	SR		ON	ON	Y	320	ELECTRICAL	1	0	0	0	0
1092	P	0	NI-5875A	NEUTRON FLUX IND CH 2 (SOURCE RANGE)	OS-001A	AUX	623	505	SR		ON	ON	Y	320	ELECTRICAL	1	0	0	0	0
1109	B	20	NP 1473	EDG 1-1 OIL PUMP CONT BOX CH A		AUX	585	318	SR		ON	ON	Y	144	ELECTRICAL	0	0	0	0	1
1110	P	20	NP 1474	EDG 1-2 OIL PUMP CONT BOX CH B		AUX	585	319	SR		ON	ON	Y	145	ELECTRICAL	0	0	0	0	1
884	B	20	NV-5305A	L.V.S.G. RM DAMP CTRL STATION	OS-035	AUX	603	420	SR		AUT	AUT	Y	140	ELECTRICAL	0	0	0	0	1
885	B	20	NV-5305B	L.V.S.G. RM DAMP CTRL STATION	OS-035	AUX	603	429	SR		AUT	AUT	Y	141	ELECTRICAL	0	0	0	0	1
886	P	20	NV-5314A	L.V.S.G. RM 428 VENT	OS-035	AUX	603	428	SR		AUT	AUT	Y	157	ELECTRICAL	0	0	0	0	1
887	B	20	NV-55970	BATT RM 429B DISCH DMPR LOC SW	OS-035	AUX	603	429	SR		AUT	AUT	Y	112	ELECTRICAL	0	0	0	0	1
888	P	20	NV-55980	BATT RM 428A DISCH DMPR LOC SW	OS-035	AUX	603	428	SR		AUT	AUT	Y	113	ELECTRICAL	0	0	0	0	1
1089	B	0	NY-5874B	NEUTRON FLUX MONITORING AMPLIGIER CH1		AUX	603	402	SR		ON	ON	Y	320	ELECTRICAL	1	0	0	0	0
1090	B	0	NY-5874C	NEUTRON FLUX SIGNAL PROCESSOR CH 1		AUX	603	402	SR		ON	ON	Y	320	ELECTRICAL	1	0	0	0	0

COMPOSITE SQUG SAFE SHUTDOWN EQUIPMENT LIST (SSEL)

Line No.	Train	Equip Class	Equipment ID Number	System/Equipment Description	Drawing Number	Bldg	Elev	Room No.	Eval Cat.	Note	Normal State	Desired State	Pwr Reqd	G.4 Form Number	Support System	RC	IC	PC	DH	SU
1093	P	0	NY-5875B	NEUTRON FLUX SIGNAL AMPLIFIER		AUX	603	427	SR		ON	ON	Y	320	ELECTRICAL	1	0	0	0	0
1094	P	0	NY-5875C	NEUTRON FLUX SIGNAL PROCESSOR CH 2		AUX	603	427	SR		ON	ON	Y	320	ELECTRICAL	1	0	0	0	0
427	B	5	P14-1	AUXILIARY FEEDWATER PUMP 1-1	OS-017A SH 1	AUX	565	237	S		STB	ON	Y		STEAM	0	0	0	1	0
428	P	5	P14-2	AUXILIARY FEEDWATER PUMP 1-2	OS-017A SH 1	AUX	565	238	S		STB	ON	Y		STEAM	0	0	0	1	0
889	B	6	P195-1	EDG FUEL OIL TRANSFER PUMP 1-1	OS-041C	YRD	585	N/A	SR		O/O	O/O	Y	151	ELECTRICAL	0	0	0	0	1
890	P	6	P195-2	EDG FUEL OIL TRANSFER PUMP 1-2	OS-041C	YRD	585	N/A	SR		O/O	O/O	Y	152	ELECTRICAL	0	0	0	0	1
891	B	6	P3-1	SERVICE WATER PUMP 1-1	OS-020 SH 1	ITK	576	052	SR		ON	ON	Y	287	ELECTRICAL	0	0	0	0	1
892	P	6	P3-2	SERVICE WATER PUMP 1-2	OS-020 SH 1	ITK	576	052	SR		ON	ON	Y	295	ELECTRICAL	0	0	0	0	1
81	C	5	P37-1	MAKEUP PUMP 1-1	OS-002 SH 3	AUX	565	225	SR	8	OFF	ON	Y	106	ELECTRICAL	1	0	0	0	0
176	C	5	P37-1	MAKEUP PUMP 1-1	OS-002 SH 3	AUX	565	225	SR	8	OFF	ON	Y	106	ELECTRICAL	0	1	0	0	0
82	C	5	P37-2	MAKEUP PUMP 1-2	OS-002 SH 3	AUX	565	225	SR	8	ON	ON	Y	110	ELECTRICAL	1	0	0	0	0
183	C	5	P37-2	MAKEUP PUMP 1-2	OS-002 SH 3	AUX	565	225	SR	8	ON	ON	Y	110	ELECTRICAL	0	1	0	0	0
83	C	5	P38-1	BORIC ACID PUMP 1-1	OS-046	AUX	565	240	SR		OFF	ON	Y	101	ELECTRICAL	1	0	0	0	0
84	C	5	P38-2	BORIC ACID PUMP 1-2	OS-046	AUX	565	240	SR		OFF	ON	Y	102	ELECTRICAL	1	0	0	0	0
85	C	5	P42-1	DECAY HEAT PUMP 1-1	OS-004 SH 1	AUX	545	105	SR	15	OFF	OFF	N	288		1	0	0	0	0
143	C	5	P42-1	DECAY HEAT PUMP 1-1	OS-004 SH 1	AUX	545	105	SR	15	OFF	OFF	N	288		0	1	0	0	0
429	B	5	P42-1	DECAY HEAT PUMP 1-1	OS-004 SH 1	AUX	545	105	SR	79	OFF	ON	Y	288	ELECTRICAL	0	0	0	1	0
86	C	5	P42-2	DECAY HEAT PUMP 1-2	OS-004 SH 1	AUX	545	115	SR	15	OFF	OFF	N	296		1	0	0	0	0
144	C	5	P42-2	DECAY HEAT PUMP 1-2	OS-004 SH 1	AUX	545	115	SR	15	OFF	OFF	N	296		0	1	0	0	0
430	P	5	P42-2	DECAY HEAT PUMP 1-2	OS-004 SH 1	AUX	545	115	SR	79	OFF	ON	Y	296	ELECTRICAL	0	0	0	1	0
893	B	5	P43-1	COMP COOLING PUMP 1-1	OS-021 SH 1	AUX	585	328	SR		ON	ON	Y	289	ELECTRICAL	0	0	0	0	1
894	P	5	P43-2	COMPONENT COOLING PUMP 1-2	OS-021 SH 1	AUX	585	328	SR		OFF	ON	Y	298	ELECTRICAL	0	0	0	0	1
895	B	5	P43-3	CC PUMP 1-3	OS-021 SH 1	AUX	585	328	S		OFF	N/A	N			0	0	0	0	1
87	C	5	P56-1	CONTAINMENT SPRAY PUMP 1-1	OS-005	AUX	545	105	SR	17	OFF	OFF	N	274		1	0	0	0	0
145	C	5	P56-1	CONTAINMENT SPRAY PUMP 1-1	OS-005	AUX	545	105	SR	17	OFF	OFF	N	274		0	1	0	0	0
88	C	5	P56-2	CONTAINMENT SPRAY PUMP 1-2	OS-005	AUX	545	115	SR	17	OFF	OFF	N	275		1	0	0	0	0
146	C	5	P56-2	CONTAINMENT SPRAY PUMP 1-2	OS-005	AUX	545	115	SR	17	OFF	OFF	N	275		0	1	0	0	0
89	C	5	P57	BORATED WATER RECIRC PUMP 1-1	OS-007	AUX	565	209	S	99	ON	N/A	N			1	0	0	0	0
147	C	5	P57	BORATED WATER RECIRC PUMP 1-1	OS-007	AUX	565	209	S	99	ON	N/A	N			0	1	0	0	0
90	C	5	P58-1	HI PRESSURE INJECTION PUMP 1-1	OS-003	AUX	545	105	SR	13	OFF	OFF	N	290		1	0	0	0	0
91	C	5	P58-2	HI PRESSURE INJECTION PUMP 1-2	OS-003	AUX	545	115	SR	13	OFF	OFF	N	297		1	0	0	0	0
1127	B	20	PC-5898	CREVS STBY COND 1 DAMPER CONTROL (C6714)	OS-032B	AUX	643	603	SR		CLS	OPN	Y	90	ELECTRICAL	0	0	0	0	1
1128	P	20	PC-5899	CREVS STBY COND 2 DAMPER CONTROL (C6715)	OS-032B	AUX	643	603	SR		CLS	OPN	Y	91	ELECTRICAL	0	0	0	0	1
896	B	18	PDIS 1379A	SW STRNR 1-1 PRESS DIFF IND SW	OS-020 SH 1	ITK	576	052	SR	1	ON	ON	Y	134	ELECTRICAL	0	0	0	0	1
897	P	18	PDIS 1380A	SW STRNR 1-2 PRESS DIFF IND SW	OS-020 SH 1	ITK	576	052	SR	1	ON	ON	Y	135	ELECTRICAL	0	0	0	0	1
1033	B	18	PDSH 3981	DG1 JKT CC OUT ISO VLV PDSH	OS-021 SH 1	AUX	585	318	SR	32	ON	ON	Y	177	ELECTRICAL	0	0	0	0	1
1034	P	18	PDSH 3982	DG2 JKT CC OUT ISO VLV PDSH	OS-021 SH 1	AUX	585	319	SR	32	ON	ON	Y	178	ELECTRICAL	0	0	0	0	1
254	B	20	PI-2000	CTMT SFAS CH 1 PRESSURE INDICATOR	OS-033F	AUX	623	505	SR	1	ON	ON	Y	300	ELECTRICAL	0	0	1	0	0
255	P	20	PI-2001	CTMT SFAS CH 2 PRESSURE INDICATOR	OS-033F	AUX	623	505	SR	1	ON	ON	Y	300	ELECTRICAL	0	0	1	0	0
92	B	20	PI-MU52A	BA PMP 1-1 DISCH PRESS INDIC	OS-046	AUX	565	241	SR	1	ON	ON	Y	301	ELECTRICAL	1	0	0	0	0
93	P	20	PI-MU52B	BA PMP 1-2 DISCH PRESS INDIC	OS-046	AUX	565	241	SR	1	ON	ON	Y	301	ELECTRICAL	1	0	0	0	0
256	P	20	PI-RC2A4	RC LOOP 2 HLG WR SFAS CH 2	OS-001A SH 1	AUX	623	505	SR	1	ON	ON	Y	300	ELECTRICAL	0	0	1	0	0
431	P	20	PI-RC2A4	RC LOOP 2 HLG WR SFAS CH 2	OS-001A SH 1	AUX	623	505	SR	1	ON	ON	Y	300	ELECTRICAL	0	0	0	1	0
257	B	20	PI-RC2B4	RC LOOP 1 HLG WR SFAS CH 1	OS-001A SH 1	AUX	623	505	SR	1	ON	ON	Y	300	ELECTRICAL	0	0	1	0	0
432	B	20	PI-RC2B4	RC LOOP 1 HLG WR SFAS CH 1	OS-001A SH 1	AUX	623	505	SR	1	ON	ON	Y	300	ELECTRICAL	0	0	0	1	0
433	P	20	PI-SP12A	STEAM GEN 2 DISCHARGE PRESSURE INDICATOR	OS-008 SH 1	AUX	623	505	SR	1	ON	ON	Y	302	ELECTRICAL	0	0	0	1	0
434	B	20	PI-SP12B	STEAM GEN 1 DISCH PRESSURE INDICATOR	OS-008 SH 1	AUX	623	505	SR	1	ON	ON	Y	302	ELECTRICAL	0	0	0	1	0
1131	B	18	PS 28020	CREVS COND 1 MTR UNLOADER PRESS SWITCH	OS-032B	AUX	643	603	SR		ON	ON	Y	74	ELECTRICAL	0	0	0	0	1

COMPOSITE SQUG SAFE SHUTDOWN EQUIPMENT LIST (SSEL)

Line No.	Train	Equip Class	Equipment ID Number	System/Equipment Description	Drawing Number	Bldg	Elev	Room No.	Eval Cat.	Note	Normal State	Desired State	Pwr Reqd	G.4 Form Number	Support System	RC	IC	PC	DH	SU
1132	B	18	PS 28021	CREVS COND 1 MTR UNLOADER PRESS SWITCH	OS-032B	AUX	643	603	SR		ON	ON	Y	74	ELECTRICAL	0	0	0	0	1
1133	P	18	PS 28022	CREVS COND 2 MTR UNLOADER PRESS SWITCH	OS-032B	AUX	643	603	SR		ON	ON	Y	75	ELECTRICAL	0	0	0	0	1
1134	P	18	PS 28023	CREVS COND 2 MTR UNLOADER PRESS SWITCH	OS-032B	AUX	643	603	SR		ON	ON	Y	75	ELECTRICAL	0	0	0	0	1
1210	P	18	PS 3687A	M S LINE 2 PRESS LO TO SFRCS CH 2 PRESS		AUX	623	501	S	4	ON	ON	Y		ELECTRICAL	0	0	0	0	1
1211	B	18	PS 3687C	M S LINE 1 PRESS LO TO SFRCS PRESS SW		AUX	623	500	S	4	ON	ON	Y		ELECTRICAL	0	0	0	0	1
1214	P	18	PS 3687E	SFRCS STM LN PRESSURE SWITCH (SG 1-2)		AUX	623	501	S	4	ON	ON	Y		ELECTRICAL	0	0	0	0	1
1215	B	18	PS 3687G	SFRCS STM LN PRESSURE SWITCH (SG 1-1)		AUX	623	500	S	4	ON	ON	Y		ELECTRICAL	0	0	0	0	1
1213	B	18	PS 3689B	M S LINE 1 PRESS LO TO SFRCS PRESS SW		AUX	623	500	S	4	ON	ON	Y		ELECTRICAL	0	0	0	0	1
1212	P	18	PS 3689D	M S LINE 2 PRESS LO TO SFRCS CH 1 PRESS		AUX	623	501	S	4	ON	ON	Y		ELECTRICAL	0	0	0	0	1
1216	B	18	PS 3689F	MS LINE 1 PRESS LO TO SFRCS PRESS SW		AUX	623	500	S	4	ON	ON	Y		ELECTRICAL	0	0	0	0	1
1217	P	18	PS 3689H	M S LINE 2 PRESS LO TO SFRCS CH3 PRESS S		AUX	623	501	S	4	ON	ON	Y		ELECTRICAL	0	0	0	0	1
1129	B	18	PS 5900	CREVS CH 1 SWITCHOVER PRESSURE	OS-032B	AUX	638	603	SR		ON	ON	Y	90	ELECTRICAL	0	0	0	0	1
1130	P	18	PS 5901	CREVS CH 2 SWITCHOVER PRESSURE	OS-032B	AUX	638	603	SR		ON	ON	Y	91	ELECTRICAL	0	0	0	0	1
1164	P	18	PS MU102A	MK-UP PMP2 OIL PRESS SWTCH		AUX	565	225	S	4	ON	ON	Y		ELECTRICAL	0	0	0	0	1
1165	P	18	PS MU102A1	MK-UP PMP2 OIL PRESS SWTCH		AUX	565	225	S	4	ON	ON	Y		ELECTRICAL	0	0	0	0	1
1206	P	18	PS2MU105A	RCT MK-UP PMP 1-2 LUBE OIL PRESS SWITCH		AUX	565	225	S	4	ON	ON	Y		ELECTRICAL	0	0	0	0	1
1207	P	18	PS3MU105A	RCT MK-UP PMP 1-2 LUBE OIL PRESS SWITCH		AUX	565	225	S	4	ON	ON	Y		ELECTRICAL	0	0	0	0	1
258	B	0	PSE 226	PRESSURIZER QUENCH TANK RUPTURE DISK	OS-001A SH 3	CTM	565	218	S		CLS	OPN	N			0	0	1	0	0
259	P	0	PSE 5461	PRESSURIZER SAFETY VALVE RUPTURE DISK	OS-001A SH 2	CTM	565	218	S		CLS	OPN	N			0	0	1	0	0
260	P	0	PSE 5462	PRESSURIZER SAFETY VALVE RUPTURE DISK	OS-001A SH 2	CTM	565	218	S		CLS	OPN	N			0	0	1	0	0
261	B	0	PSE 5463	PRESSURIZER SAFETY VALVE RUPTURE DISK	OS-001A SH 2	CTM	565	218	S		CLS	OPN	N			0	0	1	0	0
262	B	0	PSE 5464	PRESSURIZER SAFETY VALVE RUPTURE DISK	OS-001A SH 2	CTM	565	218	S		CLS	OPN	N			0	0	1	0	0
1208	P	18	PSH 3711	LETDOWN CLR 1-1 CCW SIDE PRESS SWITCH HI		CTM	565	215	S	4	ON	ON	Y		ELECTRICAL	0	0	0	0	1
1205	P	18	PSH 3712	SW SYS HEADER PRES SW		CTM	565	215	S	4	ON	ON	Y		ELECTRICAL	0	0	0	0	1
1135	B	18	PSH 5898	CREVS STBY COND 1 FAN START	OS-032B	AUX	643	603	SR		ON	ON	Y	90	ELECTRICAL	0	0	0	0	1
1136	P	18	PSH 5899	CREVS STBY COND 2 FAN START	OS-032B	AUX	643	603	SR		ON	ON	Y	91	ELECTRICAL	0	0	0	0	1
263	B	20	PSH 7528A	RC LOOP 1 HOT LEG SFAS CH 1	OS-001A SH 1	AUX	623	502	SR	1	ON	ON	Y	311	ELECTRICAL	0	0	1	0	0
264	P	20	PSH 7531A	RC LOOP 2 HOT LEG SFAS CHANNEL 4	OS-001A SH 1	AUX	623	502	SR	1	ON	ON	Y	311	ELECTRICAL	0	0	1	0	0
265	P	18	PSH PC2B4	RC HOT LEG PRESSURE SWITCH	OS-001A SH 1	CTM	603	410A	SR	1	ON	ON	Y	99	ELECTRICAL	0	0	1	0	0
1137	P	18	PSHL 28018	CREVS UNIT 2 HIGH/LOW PRESS SWITCH	OS-032B	AUX	643	603	SR		ON	ON	Y	75	ELECTRICAL	0	0	0	0	1
1138	B	18	PSHL 28019	CREVS UNIT 1 HIGH/LOW PRESS SWITCH	OS-032B	AUX	643	603	SR		ON	ON	Y	74	ELECTRICAL	0	0	0	0	1
435	B	18	PSL 106A	PRESS SWTCH LO FR AFP TURB 1-1 STM INLET	OS-017B SH 1	AUX	565	237	SR	1	ON	ON	Y	250	ELECTRICAL	0	0	0	1	0
436	B	18	PSL 106B	PRESS SWITCH LOW AT AFP TURB 1-1 SUCTION	OS-017B SH 1	AUX	565	237	SR	1	ON	ON	Y	250	ELECTRICAL	0	0	0	1	0
437	B	18	PSL 106C	PRESS SWITCH LOW FOR AFP TURB 1-1 INLET	OS-017B SH 1	AUX	565	237	SR	1	ON	ON	Y	250	ELECTRICAL	0	0	0	1	0
438	B	18	PSL 106D	PRESS SWITCH LOW FOR AFP TURB 1-1 INLET	OS-017B SH 1	AUX	565	237	SR	1	ON	ON	Y	250	ELECTRICAL	0	0	0	1	0
439	P	18	PSL 107A	AFP TURB 1-2 INLET PRESS SWITCH LOW	OS-017B SH 1	AUX	565	238	SR	1	ON	ON	Y	153	ELECTRICAL	0	0	0	1	0
440	P	18	PSL 107B	AFP TURB 1-2 INLET PRESS SWITCH LOW	OS-017B SH 1	AUX	565	238	SR	1	ON	ON	Y	153	ELECTRICAL	0	0	0	1	0
441	P	18	PSL 107C	AFP TURB 1-2 INLET PRESS SWITCH LOW	OS-017B SH 1	AUX	565	238	SR	1	ON	ON	Y	153	ELECTRICAL	0	0	0	1	0
442	P	18	PSL 107D	AFP TURB 1-2 INLET PRESS SWITCH LOW	OS-017B SH 1	AUX	565	238	SR	1	ON	ON	Y	153	ELECTRICAL	0	0	0	1	0
898	P	18	PSL 1377A	SW PMP 1-2 DCHG SRC TAP PRESS SWITCH LOW	OS-020 SH 1	ITK	576	052	SR	101	ON	ON	Y	160	ELECTRICAL	0	0	0	0	1
1141	P	18	PSL 28016	CREVS UNIT 2 LOW OIL PRESS PROT SWITCH	OS-032B	AUX	643	603	SR		ON	ON	Y	75	ELECTRICAL	0	0	0	0	1
1142	B	18	PSL 28017	CREVS UNIT 1 LOW OIL PRESS PROT SWITCH	OS-032B	AUX	643	603	SR		ON	ON	Y	74	ELECTRICAL	0	0	0	0	1
899	B	18	PSL 3783	EDG STRTNG AIR RCVR 1-1-1 TO..	OS-041B	AUX	585	318	SR	1	ON	ON	Y	186	ELECTRICAL	0	0	0	0	1
900	B	18	PSL 3784	EDG STRTNG AIR RCVR 1-1-2 TO..	OS-041B	AUX	585	318	SR	1	ON	ON	Y	187	ELECTRICAL	0	0	0	0	1
901	P	18	PSL 3785	EDG STRTNG AIR RCVR 1-2-1 TO..	OS-041B	AUX	585	319	SR	1	ON	ON	Y	188	ELECTRICAL	0	0	0	0	1
902	P	18	PSL 3786	EDG STRTNG AIR RCVR 1-2-2 TO..	OS-041B	AUX	585	319	SR	1	ON	ON	Y	189	ELECTRICAL	0	0	0	0	1
1167	B	18	PSL 4928A	AFP 1-1 SUCTION BEFORE STRNR PRESS SWT L		AUX	565	237	S	4	ON	ON	Y		ELECTRICAL	0	0	0	0	1
1168	B	18	PSL 4928B	AFP 1-1 SUCTION BEFORE STRNR PRESS SWT L		AUX	565	237	S	4	ON	ON	Y		ELECTRICAL	0	0	0	0	1

COMPOSITE SQUG SAFE SHUTDOWN EQUIPMENT LIST (SSEL)

Line No.	Train	Equip Class	Equipment ID Number	System/Equipment Description	Drawing Number	Bldg	Elev	Room No.	Eval Cat.	Note	Normal State	Desired State	Pwr Reqd	G.4 Form Number	Support System	RC	IC	PC	DH	SU
1171	P	18	PSL 4929A	AFP 1-2 SUCTION BEFORE STRNR PRESS SWT L		AUX	565	238	S	4	ON	ON	Y		ELECTRICAL	0	0	0	0	1
1172	P	18	PSL 4929B	AFP 1-2 SUCTION BEFORE STRNR PRESS SWT L		AUX	565	238	S	4	ON	ON	Y		ELECTRICAL	0	0	0	0	1
443	B	18	PSL 4930A	AFP 1-1 SUCTION AFTER STRNR PRESS SWT LO	OS-017A SH 1	AUX	565	237	SR	1	ON	ON	Y	250	ELECTRICAL	0	0	0	1	0
444	B	35	PSL 4930B	AFP 1-1 SUCTION AFTER STRNR PRESS SWT LO	OS-017A SH 1	AUX	565	237	SR	1	ON	ON	Y	358	ELECTRICAL	0	0	0	1	0
445	P	18	PSL 4931A	AFP 1-2 SUCTION AFTER STRNR PRESS SWT LO	OS-017A SH 1	AUX	565	238	SR	1	ON	ON	Y	153	ELECTRICAL	0	0	0	1	0
446	P	18	PSL 4931B	AFP 1-2 SUCTION AFTER STRNR PRESS SWT LO	OS-017A SH 1	AUX	565	238	SR	1	ON	ON	Y	359	ELECTRICAL	0	0	0	1	0
1139	B	18	PSL 5898	CREVS STANDBY COND 1 FAN STOP	OS-032B	AUX	643	603	SR		ON	ON	Y	90	ELECTRICAL	0	0	0	0	1
1140	P	18	PSL 5899	CREVS STANDBY COND 2 FAN STOP	OS-032B	AUX	643	603	SR		ON	ON	Y	91	ELECTRICAL	0	0	0	0	1
164	P	18	PSLL MU66A	PS FOR MU66A	OS-002 SH 2	AUX	565	208	SR	1	ON	ON	Y	227	ELECTRICAL	0	1	0	0	0
165	P	18	PSLL MU66B	PS FOR MU66B	OS-002 SH 2	AUX	565	208	SR	1	ON	ON	Y	228	ELECTRICAL	0	1	0	0	0
166	P	18	PSLL MU66C	PS FOR MU66C	OS-002 SH 2	AUX	565	208	SR	1	ON	ON	Y	229	ELECTRICAL	0	1	0	0	0
167	P	18	PSLL MU66D	PS FOR MU66D	OS-002 SH 2	AUX	565	208	SR	1	ON	ON	Y	230	ELECTRICAL	0	1	0	0	0
266	B	18	PT-2000	CTMT PRESSURE SFAS CH1 PRESSURE TRANSMIT	OS-033F	AUX	603	400	SR		ON	ON	Y	300	ELECTRICAL	0	0	1	0	0
267	P	18	PT-2001	CTMT PRESSURE SFAS CH2 PRESSURE TRANSMIT	OS-033F	AUX	623	501	SR		ON	ON	Y	300	ELECTRICAL	0	0	1	0	0
302	C	18	PT-2002	CTMT PRESSURE SFAS CH3 PRESSURE TRANS	OS-033F	AUX	623	500	SR	62	ON	ON	Y	311	ELECTRICAL	0	0	1	0	0
303	C	18	PT-2003	CTMT PRESSURE SFAS CH4 PRESSURE TRANS	OS-033F	AUX	603	421	SR	62	ON	ON	Y	311	ELECTRICAL	0	0	1	0	0
1143	B	18	PT-5898	CREVS CH 1 REFRIG HEAD PRESS	OS-032B	AUX	638	603	SR		ON	ON	Y	90	ELECTRICAL	0	0	0	0	1
1144	P	18	PT-5899	CREVS CH 2 REFRIG HEAD PRESS	OS-032B	AUX	638	603	SR		ON	ON	Y	91	ELECTRICAL	0	0	0	0	1
268	P	18	PT-RC2A4	RCP LOOP 2 HLG WR PRESS TRANS SFAS CH 2	OS-001A SH 1	CTM	603	482	SR		ON	ON	Y	305	ELECTRICAL	0	0	1	0	0
447	P	18	PT-RC2A4	RCP LOOP 2 HLG WR PRESS TRANS SFAS CH 2	OS-001A SH 1	CTM	603	482	SR		ON	ON	Y	300	ELECTRICAL	0	0	0	1	0
269	B	18	PT-RC2B4	RCP LOOP 1 HLG WR PRESS TRANS SFAS CH 1	OS-001A SH 1	CTM	603	483	SR		ON	ON	Y	305	ELECTRICAL	0	0	1	0	0
448	B	18	PT-RC2B4	RCP LOOP 1 HLG WR PRESS TRANS SFAS CH 1	OS-001A SH 1	CTM	603	483	SR		ON	ON	Y	300	ELECTRICAL	0	0	0	1	0
449	P	18	PT-SP12A2	STEAM GEN 1-2 OUTLT STEAM PRESS TRANSMIT	OS-008 SH 1	CTM	585	384	SR		ON	ON	Y	302	ELECTRICAL	0	0	0	1	0
450	B	18	PT-SP12B1	STEAM GEN 1-1 OUTLT STEAM PRESS TRANSMIT	OS-008 SH 1	CTM	585	317	SR		ON	ON	Y	302	ELECTRICAL	0	0	0	1	0
451	P	7	PY-100A	MSIV--PNEUMATIC RELAY	OS-008 SH 1	AUX	643	602	SR		CLS	OPN	Y	303	ELECTRICAL	0	0	0	1	0
452	P	7	PY-100B	MSIV-- PNEUMATIC RELAY	OS-008 SH 1	AUX	643	602	SR		CLS	OPN	Y	303	ELECTRICAL	0	0	0	1	0
453	P	7	PY-100G	MSIV--PNEUMATIC RELAY	OS-008 SH 1	AUX	643	602	SR		CLS	OPN	Y	303	ELECTRICAL	0	0	0	1	0
454	P	7	PY-100H	MSIV--PNEUMATIC RELAY	OS-008 SH 1	AUX	643	602	SR		CLS	OPN	Y	303	ELECTRICAL	0	0	0	1	0
455	P	7	PY-100J	MSIV--PNEUMATIC RELAY	OS-008 SH 1	AUX	643	602	SR		CLS	OPN	Y	303	ELECTRICAL	0	0	0	1	0
456	B	7	PY-101A	MSIV--PNEUMATIC RELAY	OS-008 SH 1	AUX	643	601	SR		CLS	OPN	Y	303	ELECTRICAL	0	0	0	1	0
457	B	7	PY-101B	MSIV--PNEUMATIC RELAYS	OS-008 SH 1	AUX	643	601	SR		CLS	OPN	Y	303	ELECTRICAL	0	0	0	1	0
458	B	7	PY-101G	MSIV--PNEUMATIC RELAY	OS-008 SH 1	AUX	643	601	SR		CLS	OPN	Y	303	ELECTRICAL	0	0	0	1	0
459	B	7	PY-101H	MSIV--PNEUMATIC RELAY	OS-008 SH 1	AUX	643	601	SR		CLS	OPN	Y	303	ELECTRICAL	0	0	0	1	0
460	B	7	PY-101J	MSIV-- PNEUMATIC RELAY	OS-008 SH 1	AUX	643	601	SR		CLS	OPN	Y	303	ELECTRICAL	0	0	0	1	0
1163	P	20	RC 2826	AUX RELAY CABINET CH B		AUX	565	209	S	4	ON	ON	Y		ELECTRICAL	0	0	0	0	1
1200	C	20	RC 3004	RELAY CABINET FOR CH B		ITK	565	053	S	4	ON	ON	Y		ELECTRICAL	0	0	0	0	1
1186	P	20	RC 3014	RELAY CABINET CH2		ITK	576	052	S	4	ON	ON	Y		ELECTRICAL	0	0	0	0	1
1176	B	20	RC 3607	RELAY CABINET CH1		AUX	585	325	S	4	ON	ON	Y		ELECTRICAL	0	0	0	0	1
1180	P	20	RC 3608	RELAY CABINET CH2		AUX	585	323	S	4	ON	ON	Y		ELECTRICAL	0	0	0	0	1
1196	B	20	RC 3701	AUX RELAY CABINET CH1		AUX	585	314	S	4	ON	ON	Y		ELECTRICAL	0	0	0	0	1
1201	P	20	RC 3702	AUX RELAY CABINET CH2		AUX	585	314	S	4	ON	ON	Y		ELECTRICAL	0	0	0	0	1
1175	B	20	RC 3704	RELAY CABINET CH1		AUX	585	314	S	4	ON	ON	Y		ELECTRICAL	0	0	0	0	1
1179	P	20	RC 3705	RELAY CABINET CH2		AUX	585	314	S	4	ON	ON	Y		ELECTRICAL	0	0	0	0	1
1191	P	20	RC 3715	RELAY CABINET		AUX	585	313	S	4	ON	ON	Y		ELECTRICAL	0	0	0	0	1
1173	B	20	RC 4604	AUX RELAY CABINET CH 1		AUX	603	429	S	4	ON	ON	Y		ELECTRICAL	0	0	0	0	1
1174	P	20	RC 4605	RELAY CABINET CH2		AUX	603	428	S	4	ON	ON	Y		ELECTRICAL	0	0	0	0	1
1194	P	20	RC 4606	RELAY CABINET CH2		AUX	603	428	S	4	ON	ON	Y		ELECTRICAL	0	0	0	0	1
1199	P	20	RC 4607	RELAY CABINET CH2 FOR SV4632		AUX	603	427	S	4	ON	ON	Y		ELECTRICAL	0	0	0	0	1

COMPOSITE SQUG SAFE SHUTDOWN EQUIPMENT LIST (SSEL)

Line No.	Train	Equip Class	Equipment ID Number	System/Equipment Description	Drawing Number	Bldg	Elev	Room No.	Eval Cat.	Note	Normal State	Desired State	Pwr Reqd	G.4 Form Number	Support System	RC	IC	PC	DH	SU
1195	B	20	RC 4801	RELAY CABINET CH1		AUX	603	402	S	4	ON	ON	Y		ELECTRICAL	0	0	0	0	1
133	C	8A	RC-11	PRZR PWR RELIEF ISO VALVE BE1602 E16B	OS-001A SH 2	CTM	623	580		50	OPN	N/A	N			0	1	0	0	0
270	B	8A	RC-11	PRZR PWR RELIEF ISO VALVE BE1602 E16B	OS-001A SH 2	CTM	623	580	R		OPN	OPN	N	252		0	0	1	0	0
271	P	7	RC-13A	PRESSURIZER CODE SAFETY RELIEF VALVE	OS-001A SH 2	CTM	565	218	S		CLS	OP/CL	Y		ELECTRICAL	0	0	1	0	0
272	B	7	RC-13B	PRESSURIZER CODE SAFETY RELIEF VALVE	OS-001A SH 2	CTM	565	218	S		CLS	OP/CL	Y		ELECTRICAL	0	0	1	0	0
134	C	8A	RC-2	PRESSURIZER SPRAY VALVE	OS-001A SH 2	CTM	623	580		50	CLS	CLS	N	251		0	1	0	0	0
273	P	8A	RC-200	PRESS VENT LINE STOP VALVE	OS-001A SH 2	CTM	585	385	SR		CLS	OP/CL	Y	163	ELECTRICAL	0	0	1	0	0
274	P	7	RC-207	PRZR QUENCH TANK RELIEF VLV TO CTMT SUMP	OS-001A SH 3	CTM	585	218	S		CLS	OP/CL	N			0	0	1	0	0
135	C	8A	RC-239A	PRESS VAPOR PHASE SAMPLE ISO VALVE	OS-001A SH 2	CTM	585	385	R		CLS	CLS	N	154		0	1	0	0	0
275	P	8A	RC-239A	PRESS VAPOR PHASE SAMPLE ISO VALVE	OS-001A SH 2	CTM	585	385	SR		CLS	OP/CL	Y	154	ELECTRICAL	0	0	1	0	0
136	C	8A	RC-239B	PRESSURIZER LIQUID PHASE SAMPLE VALVE	OS-001A SH 2	CTM	585	385	R		CLS	CLS	N	253		0	1	0	0	0
276	P	8A	RC-239B	PRESSURIZER LIQUID PHASE SAMPLE VALVE	OS-001A SH 2	CTM	585	385	R		CLS	CLS	N	253		0	0	1	0	0
277	P	8A	RC-240A	PRESSURIZER SAMPLE LINE ISO VALVE	OS-001A SH 2	CTM	585	385	R		CLS	CLS	N	254		0	0	1	0	0
137	C	0	RC-2A	PRZR PWR RELIEF VALVE (SOL PILOT OP)	OS-001A SH 2	CTM	623	580	R		CLS	CLS	N	255		0	1	0	0	0
278	B	0	RC-2A	PRZR PWR RELIEF VALVE (SOL PILOT OP)	OS-001A SH 2	CTM	623	580	SR		CLS	OP/CL	Y	255	ELECTRICAL	0	0	1	0	0
138	C	8B	RC-4608A	LOOP 1 HI POINT VENT VALVE	OS-001A SH 1	CTM	565	216	R		CLS	CLS	N	256		0	1	0	0	0
139	C	8B	RC-4610A	RC LOOP 2 HI POINT VENT VALVE	OS-001A SH 1	CTM	565	216	R		CLS	CLS	N	257		0	1	0	0	0
140	C	8B	RC-4632	RC LOOP 2 COLD LEG SAMPLE VALVE	OS-001A SH 1	CTM	585	315	R		CLS	CLS	N	258		0	1	0	0	0
279	P	8B	RC-4632	RC LOOP 2 COLD LEG SAMPLE VALVE	OS-001A SH 1	CTM	585	315	R		CLS	CLS	N	258		0	0	1	0	0
903	B	10	S33-1	CREVS WATER COOLED COND 1	OS-020 SH 1	AUX	638	603	SR	34	ON	ON	N	74		0	0	0	0	1
1038	B	10	S33-1	CREVS WATER COOLED COND 1	OS-032B	AUX	638	603	SR	34	ON	ON	N	74		0	0	0	0	1
904	P	10	S33-2	CREVS WATER COOLED COND 2	OS-020 SH 1	AUX	638	603	SR	34	ON	ON	N	75		0	0	0	0	1
1039	P	10	S33-2	CREVS WATER COOLED COND 2	OS-032B	AUX	638	603	SR	34	ON	ON	N	75		0	0	0	0	1
905	B	10	S61-1	CREVS AIR COOLED CONDENSER 1	OS-032B	AUX	660	N/A	SR	34	OFF	O/O	Y	92	ELECTRICAL	0	0	0	0	1
906	P	10	S61-2	CREVS AIR COOLED CONDENSER 2	OS-032B	AUX	660	N/A	SR	34	OFF	O/O	Y	93	ELECTRICAL	0	0	0	0	1
465	P	7	SP-17A1	MS LINE 2 CODE SAFETY VALVE (PSVSP17A1)	OS-008 SH 1	AUX	643	602	S		CLS	OP/CL	N			0	0	0	1	0
466	P	7	SP-17A2	MS LINE 2 CODE SAFETY VALVE (PSVSP17A2)	OS-008 SH 1	AUX	643	602	S		CLS	OP/CL	N			0	0	0	1	0
467	P	7	SP-17A3	MS LINE 2 CODE SAFETY VALVE (PSVSP17A3)	OS-008 SH 1	AUX	643	602	S		CLS	OP/CL	N			0	0	0	1	0
468	P	7	SP-17A4	MS LINE 2 CODE SAFETY VALVE (PSVSP17A4)	OS-008 SH 1	AUX	643	602	S		CLS	OP/CL	N			0	0	0	1	0
469	P	7	SP-17A5	MS LINE 2 CODE SAFETY VALVE (PSVSP17A5)	OS-008 SH 1	AUX	643	602	S		CLS	OP/CL	N			0	0	0	1	0
470	P	7	SP-17A6	MS LINE 2 CODE SAFETY VALVE (PSVSP17A6)	OS-008 SH 1	AUX	643	602	S		CLS	OP/CL	N			0	0	0	1	0
471	P	7	SP-17A7	MS LINE 2 CODE SAFETY VALVE (PSVSP17A7)	OS-008 SH 1	AUX	643	602	S		CLS	OP/CL	N			0	0	0	1	0
472	P	7	SP-17A8	MS LINE 2 CODE SAFETY VALVE (PSVSP17A8)	OS-008 SH 1	AUX	643	602	S		CLS	OP/CL	N			0	0	0	1	0
473	P	7	SP-17A9	MS LINE 2 CODE SAFETY VALVE (PSVSP17A9)	OS-008 SH 1	AUX	643	602	S		CLS	OP/CL	N			0	0	0	1	0
474	B	7	SP-17B1	MS LINE 1 CODE SAFETY VALVE (PSVSP17B1)	OS-008 SH 1	AUX	643	601	S		CLS	OP/CL	N			0	0	0	1	0
475	B	7	SP-17B2	MS LINE 1 CODE SAFETY VALVE (PSVSP17B2)	OS-008 SH 1	AUX	643	601	S		CLS	OP/CL	N			0	0	0	1	0
476	B	7	SP-17B3	MS LINE 1 CODE SAFETY VALVE (PSVSP17B3)	OS-008 SH 1	AUX	643	601	S		CLS	OP/CL	N			0	0	0	1	0
477	B	7	SP-17B4	MS LINE 1 CODE SAFETY VALVE (PSVSP17B4)	OS-008 SH 1	AUX	643	601	S		CLS	OP/CL	N			0	0	0	1	0
478	B	7	SP-17B5	MS LINE 1 CODE SAFETY VALVE (PSVSP17B5)	OS-008 SH 1	AUX	643	601	S		CLS	OP/CL	N			0	0	0	1	0
479	B	7	SP-17B6	MS LINE 1 CODE SAFETY VALVE (PSVSP17B6)	OS-008 SH 1	AUX	643	601	S		CLS	OP/CL	N			0	0	0	1	0
480	B	7	SP-17B7	MS LINE 1 CODE SAFETY VALVE (PSVSP17B7)	OS-008 SH 1	AUX	643	601	S		CLS	OP/CL	N			0	0	0	1	0
481	B	7	SP-17B8	MS LINE 1 CODE SAFETY VALVE (PSVSP17B8)	OS-008 SH 1	AUX	643	601	S		CLS	OP/CL	N			0	0	0	1	0
482	B	7	SP-17B9	MS LINE 1 CODE SAFETY VALVE (PSVSP17B9)	OS-008 SH 1	AUX	643	601	S		CLS	OP/CL	N			0	0	0	1	0
483	P	7	SS-598	STEAM GEN 1-2 SAMPLE LINE CTMT ISO VALVE	OS-051 SH 2	AUX	585	314	SR		OPN	CLS	Y	272	ELECTRICAL	0	0	0	1	0
484	B	7	SS-607	STEAM GEN 1-1 SAMPLE LINE CTMT ISO VALVE	OS-051 SH 2	AUX	585	314	SR		OPN	CLS	Y	273	ELECTRICAL	0	0	0	1	0
485	P	R	ST121	MAIN STEAM LINE 2 TO AFPT 1-1 STEAM TRAP	OS-017B SH 1	AUX	623	501		100	N/A	N/A	N			0	0	0	1	0
486	P	R	ST125	MAIN STEAM LINE 2 TO AFPT 1-2 STEAM TRAP	OS-017B SH 1	AUX	623	501		100	N/A	N/A	N			0	0	0	1	0
487	C	R	ST131	MAIN STEAM LINE 1 TO AFPT 1-2 STEAM TRAP	OS-017B SH 1	AUX	623	501		100	N/A	N/A	N			0	0	0	1	0

COMPOSITE SQUG SAFE SHUTDOWN EQUIPMENT LIST (SSEL)

Line No.	Train	Equip Class	Equipment ID Number	System/Equipment Description	Drawing Number	Bldg	Elev	Room No.	Eval Cat.	Note	Normal State	Desired State	Pwr Reqd	G.4 Form Number	Support System	RC	IC	PC	DH	SU
488	B	R	ST132	MAIN STEAM LINE 1 TO AFPT 1-2 STEAM TRAP	OS-017B SH 1	AUX	623	500		100	N/A	N/A	N			0	0	0	1	0
489	C	R	ST133	MAIN STEAM LINE 2 TO AFPT 1-1 STEAM TRAP	OS-017B SH 1	AUX	565	237		100	N/A	N/A	N			0	0	0	1	0
490	C	R	ST134	AFPT INLET HDR INLET XCONNECT STM TRAP	OS-017B SH 1	AUX	565	238		100	N/A	N/A	N			0	0	0	1	0
491	C	R	ST137	MAIN STEAM INLT HDR TO AFPT 1-2 STM TRAP	OS-017B SH 1	AUX	585	314		100	N/A	N/A	N			0	0	0	1	0
492	C	R	ST138	MAIN STEAM INLT HDR TO AFPT 1-1 STM TRAP	OS-017B SH 1	AUX	585	314		100	N/A	N/A	N			0	0	0	1	0
493	C	R	ST139	MAIN STEAM LINE TO AFPT 1-1 STEAM TRAP	OS-017B SH 1	AUX	623	501		100	N/A	N/A	N			0	0	0	1	0
494	B	R	ST148	STEAM TRAP	OS-017B SH 1	AUX	565	237		100	N/A	N/A	N			0	0	0	1	0
495	B	R	ST149	STEAM TRAP	OS-017B SH 1	AUX	545	125		100	N/A	N/A	N			0	0	0	1	0
496	P	R	ST150	AFPT 1-2 CASING DRAIN STEAM TRAP	OS-017B SH 1	AUX	565	238		100	N/A	N/A	N			0	0	0	1	0
497	P	R	ST151	STEAM TRAP	OS-017B SH 1	AUX	545	125		100	N/A	N/A	N			0	0	0	1	0
498	B	R	ST39	MAIN STEAM LINE TO AFPT 1-1 STEAM TRAP	OS-017B SH 1	AUX	630	500		100	N/A	N/A	N			0	0	0	1	0
499	C	R	ST90	MAIN STEAM LINE 2 TO AFPT 1-1 STEAM TRAP	OS-017B SH 1	AUX	623	500		100	N/A	N/A	N			0	0	0	1	0
500	P	8B	SV-100A	MS LINE 2 ISO VALVE	OS-008 SH 1	AUX	643	602	SR		ON	OFF	Y	303	ELECTRICAL	0	0	0	1	0
501	P	8B	SV-100B	MS LINE 2 ISO VALVE	OS-008 SH 1	AUX	643	602	SR		ON	OFF	Y	303	ELECTRICAL	0	0	0	1	0
502	P	8B	SV-100F	MS LINE 2 ISO VALVE	OS-008 SH 1	AUX	643	602	SR		ON	OFF	Y	303	ELECTRICAL	0	0	0	1	0
503	B	8B	SV-101A	MS LINE 1 ISO VALVE SOL VALVE	OS-008 SH 1	AUX	643	601	SR		ON	OFF	Y	303	ELECTRICAL	0	0	0	1	0
504	B	8B	SV-101B	MS LINE 1 ISO VALVE SOL VALVE	OS-008 SH 1	AUX	643	601	SR		ON	OFF	Y	303	ELECTRICAL	0	0	0	1	0
505	B	8B	SV-101F	MS LINE 1 ISO VALVE SOL VALVE	OS-008 SH 1	AUX	643	601	SR		ON	OFF	Y	303	ELECTRICAL	0	0	0	1	0
1023	B	8B	SV-1356A	CAC 1-1 SW OUTLET ISO VALVE	OS-020 SH 1	AUX	585	314	SR	65	ON	OFF	Y	265	ELECTRICAL	0	0	0	0	1
1024	B	8B	SV-1356B	CAC 1-1 SW OUTLET ISO VALVE	OS-020 SH 1	AUX	585	314	SR	65	ON	OFF	Y	265	ELECTRICAL	0	0	0	0	1
1025	P	8B	SV-1357A	CAC 2 SW OUTLET ISO SOLENOID VALVE	OS-020 SH 1	AUX	585	314	SR	65	ON	OFF	Y	266	ELECTRICAL	0	0	0	0	1
1026	P	8B	SV-1357B	CAC 2 SW OUTLET ISO VALVE	OS-020 SH 1	AUX	585	314	SR	65	ON	OFF	Y	266	ELECTRICAL	0	0	0	0	1
907	B	8B	SV-1424	SOL VLV FR CC HX 1 SW OUT ISO VLV	OS-020 SH 1	AUX	585	328	SR	30	ON	OFF	Y	268	ELECTRICAL	0	0	0	0	1
908	P	8B	SV-1434	SOL VLV FR CC HX 2 SW OUT ISO VLV	OS-020 SH 1	AUX	585	328	SR	30	ON	OFF	Y	269	ELECTRICAL	0	0	0	0	1
1035	B	8B	SV-1467	SOL VLV FOR HV-1467	OS-021 SH 1	AUX	545	113	SR	33	ON	O/O	Y	175	ELECTRICAL	0	0	0	0	1
909	P	8B	SV-1469	SOL VALVE FOR HV1469	OS-021 SH 1	AUX	545	113	SR	33	ON	O/O	Y	176	ELECTRICAL	0	0	0	0	1
1036	B	8B	SV-1471	SOL VLV FOR HV-1471	OS-021 SH 1	AUX	585	318	SR	33	ON	O/O	Y	177	ELECTRICAL	0	0	0	0	1
1037	P	8B	SV-1474	SOL VLV FOR HV-1474	OS-021 SH 1	AUX	585	319	SR	33	ON	O/O	Y	178	ELECTRICAL	0	0	0	0	1
910	B	8B	SV-5301	AUX BLDG CTRM DMPR AIR SOL VLV	OS-032A	AUX	638	603	SR		ON	OFF	Y	270	ELECTRICAL	0	0	0	0	1
911	B	8B	SV-5301A	CTRM COMP CONF RM&COMP..SOLVLV	OS-032A	AUX	638	603	SR		ON	OFF	Y	270	ELECTRICAL	0	0	0	0	1
912	P	8B	SV-5311	CTRM ISO DAMPERS SOL VALVE	OS-032A	AUX	638	603	SR		ON	OFF	Y	271	ELECTRICAL	0	0	0	0	1
913	P	8B	SV-5311A	AUX BLDG CTRM DMPR AIR SOL VLV	OS-032A	AUX	638	603	SR		ON	OFF	Y	271	ELECTRICAL	0	0	0	0	1
506	B	8B	SV-5889A	AFP TURB 1-1 STM ADM BLD OFF SOL VALVE	OS-017B SH 1	AUX	565	237	SR		ON	OFF	Y	225	ELECTRICAL	0	0	0	1	0
507	P	8B	SV-5889B	AFP TURB 1-2 STM ADM BLD OFF SOL VALVE	OS-017B SH 1	AUX	565	238	SR		ON	OFF	Y	226	ELECTRICAL	0	0	0	1	0
508	P	8B	SV-598	SOLENOID VALVE FOR VALVE SS598	OS-051 SH 2	AUX	585	314	SR		ON	OFF	Y	272	ELECTRICAL	0	0	0	1	0
509	B	8B	SV-607	STEAM GEN 1-1 SAMPLE LINE CTMT ISO VALVE	OS-051 SH 2	AUX	585	314	SR		ON	OFF	Y	273	ELECTRICAL	0	0	0	1	0
546	P	8B	SV-ICS11A2	SV FOR ICS-11A	OS-008 SH 1	AUX	643	602	SR		ON	OFF	Y	202	ELECTRICAL	0	0	0	1	0
547	B	8B	SV-ICS11B2	SV FOR ICS-11B	OS-008 SH 1	AUX	643	601	SR		ON	OFF	Y	203	ELECTRICAL	0	0	0	1	0
150	P	8B	SV-MU38	SOL VLV FOR MU-38	OS-002 SH 2	AUX	565	208	SR		ON	ON	Y	231	ELECTRICAL	0	1	0	0	0
152	P	8B	SV-MU66A	SOL VLV FOR MU-66A	OS-002 SH 2	AUX	565	208	SR		ON	ON	Y	227	ELECTRICAL	0	1	0	0	0
153	P	8B	SV-MU66B	SOL VLV FOR MU-66B	OS-002 SH 2	AUX	565	208	SR		ON	ON	Y	228	ELECTRICAL	0	1	0	0	0
154	P	8B	SV-MU66C	SOL VLV FOR MU-66C	OS-002 SH 2	AUX	565	208	SR		ON	ON	Y	229	ELECTRICAL	0	1	0	0	0
155	P	8B	SV-MU66D	SOL VLV FOR MU-66D	OS-002 SH 2	AUX	565	208	SR		ON	ON	Y	230	ELECTRICAL	0	1	0	0	0
914	C	R	SW-105	ECCS RM COOLER 1-2 BYPASS VLV	OS-020 SH 1	AUX	545	115		28	OPN	OP/CL	Y		MANUAL	0	0	0	0	1
915	C	R	SW-113	ECCS ROOM CLR 1-4 BYPASS VALVE	OS-020 SH 1	AUX	545	105		27	OPN	OP/CL	Y		MANUAL	0	0	0	0	1
916	C	R	SW-121	ECCS RM CLR 1-5 BYPASS VALVE	OS-020 SH 1	AUX	545	105		27	OPN	OP/CL	Y		MANUAL	0	0	0	0	1
917	B	7	SW-1356	CAC 1-1 OUTLET TEMP CTRL VALVE	OS-020 SH 1	AUX	585	314	R		THR	OPN	Y	265	ELECTRICAL	0	0	0	0	1
918	P	7	SW-1357	CAC 1-2 OUTLET TEMP CTRL VALVE	OS-020 SH 1	AUX	585	314	R		THR	OPN	Y	266	ELECTRICAL	0	0	0	0	1

COMPOSITE SQUG SAFE SHUTDOWN EQUIPMENT LIST (SSEL)

Line No.	Train	Equip Class	Equipment ID Number	System/Equipment Description	Drawing Number	Bldg	Elev	Room No.	Eval Cat.	Note	Normal State	Desired State	Pwr Reqd	G.4 Form Number	Support System	RC	IC	PC	DH	SU
919	B	8A	SW-1366	CAC 1-1 INLET ISO VALVE	OS-020 SH 1	AUX	585	314	R		OPN	OPN	N	86		0	0	0	0	1
920	P	8A	SW-1367	CAC 1-2 INLET ISO VALVE	OS-020 SH 1	AUX	585	314	R		OPN	OPN	N	87		0	0	0	0	1
921	C	8A	SW-1379	SW STRNR 1-1 DRAIN VALVE	OS-020 SH 1	ITK	576	052	SR		OP/CL	OP/CL	Y	136	ELECTRICAL	0	0	0	0	1
922	C	8A	SW-1380	SW STRNR 1-2 DRAIN VALVE	OS-020 SH 1	ITK	576	052	SR		OP/CL	OP/CL	Y	137	ELECTRICAL	0	0	0	0	1
510	B	8A	SW-1382	SW SUPPLY TO AFP 1-1 ISO VALVE	OS-017A SH 1	AUX	565	237	SR		CLS	OPN	Y	120	ELECTRICAL	0	0	0	1	0
923	B	8A	SW-1382	SW SUPPLY TO AFP 1-1 ISO VALVE	OS-017A SH 1	AUX	565	237	R		CLS	CLS	N	120		0	0	0	0	1
511	P	8A	SW-1383	SW SUPPLY TO AFP 1-2 ISO VALVE	OS-017A SH 1	AUX	565	236	SR		CLS	OPN	Y	121	ELECTRICAL	0	0	0	1	0
924	P	8A	SW-1383	SW SUPPLY TO AFP 1-2 ISO VALVE	OS-017A SH 1	AUX	565	236	R		CLS	CLS	N	121		0	0	0	0	1
925	P	8A	SW-1395	TPCW HTXCHANG INLT HDR ISO VLV	OS-020 SH 1	ITK	566	053	SR		OPN	CLS	Y	160	ELECTRICAL	0	0	0	0	1
926	B	8A	SW-1399	SW LOOP 1 TO TPCW HX	OS-020 SH 1	ITK	585	053	R		CLS	CLS	N	267		0	0	0	0	1
927	B	7	SW-1424	CCW HT XCHANG 1-1 OUT CTRL VLV	OS-020 SH 1	AUX	585	328	SR	30	MOD	OPN	Y	268	ELECTRICAL	0	0	0	0	1
928	P	7	SW-1434	CCW HT XCHANG1-2 OTLT CTRL VLV	OS-020 SH 1	AUX	585	328	SR	30	CLS	OPN	Y	269	ELECTRICAL	0	0	0	0	1
929	B	8A	SW-2927	CTRM EMERG COND 1-1 OUTLET TV	OS-020 SH 1	AUX	638	603	SR		CLS	OPN	Y	128	ELECTRICAL	0	0	0	0	1
930	P	8A	SW-2928	CTRM EMERG COND 1-2 OUTLET TV	OS-020 SH 1	AUX	638	603	SR		CLS	OPN	Y	129	ELECTRICAL	0	0	0	0	1
931	C	8A	SW-2929	SW DISCH TO IN STRUCTURE VALVE	OS-020 SH 1	ITK	566	053	SR	25	OP/CL	CLS	Y	138	ELECTRICAL/MANUAL	0	0	0	0	1
932	C	8A	SW-2930	SW DISCH TO IN FOREBAY VALVE	OS-020 SH 1	ITK	566	053	SR	26	OP/CL	OPN	Y	161	ELECTRICAL/MANUAL	0	0	0	0	1
933	C	8A	SW-2931	SW DISCH TO COOLING TWR MU VLV	OS-020 SH 1	ITK	566	053	SR	25	OP/CL	CLS	Y	139	ELECTRICAL/MANUAL	0	0	0	0	1
934	C	8A	SW-2932	SW DISCH TO COLLECT BASIN VLV	OS-020 SH 1	ITK	566	053	SR	26	OP/CL	CLS	Y	162	ELECTRICAL/MANUAL	0	0	0	0	1
935	C	7	SW-2944	STRNR BLWDN - COLLEC BASIN VLV	OS-020 SH 1	ITK	585	052	R		CLS	CLS	N	260		0	0	0	0	1
936	C	7	SW-2945	STRNR BLWDN - INTAKE..4BAY VLV	OS-020 SH 1	ITK	585	052	R		OPN	OPN	N	261		0	0	0	0	1
937	C	R	SW-326	CAC 1-3 SERV WTR OUTLT ISO VLV	OS-020 SH 1	AUX	585	314		27	OPN	OP/CL	Y		MANUAL	0	0	0	0	1
938	C	R	SW-335	CTMT AIR COOLER SW RETURN VLV	OS-020 SH 1	TUR	565	251		28	OPN	OP/CL	Y		MANUAL	0	0	0	0	1
939	C	R	SW-43	CCW HT XCHANGER DISCH VALVE	OS-020 SH 1	TUR	565	251		27	OPN	OP/CL	Y		MANUAL	0	0	0	0	1
940	C	R	SW-44	CCW HT XCHANG DISCH HEADER	OS-020 SH 1	TUR	565	251		28	OPN	OP/CL	Y		MANUAL	0	0	0	0	1
941	B	8A	SW-5067	H2 DILU SYS BLWR1-1 MOV IN VLV	OS-020 SH 1	AUX	585	314	R		CLS	CLS	N	262		0	0	0	0	1
942	P	8A	SW-5068	H2 DILU BLWR1-2 MO INLT GA VLV	OS-020 SH 1	AUX	565	208	R		CLS	CLS	N	263		0	0	0	0	1
943	B	7	SW-5896	CTRM EMERG COND 1-1 SW VLV	OS-020 SH 1	AUX	638	603	S		OPN	THR	Y		ELECTRICAL	0	0	0	0	1
944	P	7	SW-5897	CTRM EMERG COND 1-2...CONT VLV	OS-020 SH 1	AUX	638	603	S		OPN	THR	Y		ELECTRICAL	0	0	0	0	1
946	P	R	SW-77	CAC 1-1 SERV WTR OUTLT ISO VLV	OS-020 SH 1	AUX	585	314		27	OPN	OP/CL	Y		MANUAL	0	0	0	0	1
945	C	R	SW-8432	SW RTRN IN ISO VLV TO RAD MONT	OS-020 SH 1	ITK	585	053		24	OPN	CLS	Y		MANUAL	0	0	0	0	1
947	C	R	SW-89	ECCS RM COOLER 1-1 BYPASS VLV	OS-020 SH 1	AUX	545	115		28	OPN	OP/CL	Y		MANUAL	0	0	0	0	1
948	C	R	SW-95	ECCS RM CLR 1-3 OUTLET VALVE	OS-020 SH 1	AUX	545	113		28	OPN	OP/CL	Y		MANUAL	0	0	0	0	1
94	C	21	T10	BORATED WATER STORAGE TANK 1-1	OS-004 SH 1	YRD	585	N/A	S		ON	ON	N			1	0	0	0	0
949	B	21	T12-I	COMPONENT COOLING SURGE TNK I	OS-021 SH 3	AUX	623	501	S		ON	ON	N			0	0	0	0	1
950	P	21	T12-II	COMPONENT COOLING SURGE TNK II	OS-021 SH 3	AUX	623	501	S		ON	ON	N			0	0	0	0	1
951	B	21	T153-1	EDG FUEL OIL STORAGE 1-1	OS-041C	YRD	585	N/A	S		ON	ON	N			0	0	0	0	1
952	P	21	T153-2	EDG FUEL OIL STORAGE 1-2	OS-041C	YRD	585	N/A	S		ON	ON	N			0	0	0	0	1
95	C	21	T18	SFP DEMINERALIZER TANK 1-1	OS-007	AUX	565	233	S		ON	N/A	N			1	0	0	0	0
149	C	21	T18	SFP DEMINERALIZER TANK 1-1	OS-007	AUX	565	233	S		ON	N/A	N			0	1	0	0	0
96	C	21	T4	MAKEUP TANK 1-1	OS-002 SH 3	AUX	565	205	S		ON	ON	N			1	0	0	0	0
217	C	21	T4	MAKEUP TANK 1-1	OS-002 SH 3	AUX	565	205	S		ON	ON	N			0	1	0	0	0
953	B	21	T46-1	EDG DAY TANK 1-1	OS-041C	AUX	595	321A	S		ON	ON	N			0	0	0	0	1
954	P	21	T46-2	EDG DAY TANK 1-2	OS-041C	AUX	595	320A	S		ON	ON	N			0	0	0	0	1
97	C	21	T7-1	BORIC ACID ADDITION TANK 1-1	OS-046	AUX	565	240	S	39	ON	ON	N			1	0	0	0	0

COMPOSITE SQUG SAFE SHUTDOWN EQUIPMENT LIST (SSEL)

Line No.	Train	Equip Class	Equipment ID Number	System/Equipment Description	Drawing Number	Bldg	Elev	Room No.	Eval Cat.	Note	Normal State	Desired State	Pwr Reqd	G.4 Form Number	Support System	RC	IC	PC	DH	SU
98	C	21	T7-2	BORIC ACID ADDITION TANK 1-2	OS-046	AUX	565	240	S	39	ON	ON	N			1	0	0	0	0
955	B	21	T86-1	EDG 1-1 AIR RECEIVER 1-1-1	OS-041B	AUX	585	318	S		ON	ON	N			0	0	0	0	1
956	B	21	T86-2	EDG 1-1 AIR RECEIVER 1-1-2	OS-041B	AUX	585	318	S		ON	ON	N			0	0	0	0	1
957	P	21	T86-3	EDG 1-2 AIR RECEIVER 1-2-1	OS-041B	AUX	585	319	S		ON	ON	N			0	0	0	0	1
958	P	21	T86-4	EDG 1-2 AIR RECEIVER 1-2-2	OS-041B	AUX	585	319	S		ON	ON	N			0	0	0	0	1
959	B	18	TC-5329	EDG RM 1 TEMP CONTROLLER	OS-035	AUX	585	318	SR	1	ON	ON	Y	212	ELECTRI[illegible]	0	0	0	0	1
960	P	18	TC-5336	EDG RM2 TEMP CTRL LOC IN C3616	OS-035	AUX	585	319	SR	1	ON	ON	Y	215	ELECTRICAL	0	0	0	0	1
284	P	20	TDI 4950	RCS MARGIN TO SAT INDICATOR (TSAT)	OS-001A SH 1	AUX	623	505	SR	1	ON	ON	Y	305	ELECTRICAL	0	0	1	0	0
285	B	20	TDI 4951	RCS MARGIN TO SAT INDICATOR (TSAT)	OS-001A SH 1	AUX	623	505	SR	1	ON	ON	Y	305	ELECTRICAL	0	0	1	0	0
512	P	20	TDI-4950	RCS MARGIN TO SAT INDICATOR (TSAT)	OS-001A SH 1	AUX	623	505	SR	1	ON	ON	Y	305	ELECTRICAL	0	0	0	1	0
513	B	20	TDI-4951	RCS MARGIN TO SAT INDICATOR (TSAT)	OS-001A SH 1	AUX	623	505	SR	1	ON	ON	Y	305	ELECTRICAL	0	0	0	1	0
286	B	19	TE-1356	CTMT COOLER FAN 1 SUCTION TEMP ELEMENT	OS-033A	CTM	585	317	SR		ON	ON	Y	304	ELECTRICAL	0	0	1	0	0
287	P	19	TE-1357	CTMT COOLER FAN 2 SUCTION TEMP ELEMENT	OS-033A	CTM	585	317	SR		ON	ON	Y	304	ELECTRICAL	0	0	1	0	0
961	B	19	TE-5329	EDG RM 318 TEMP ELEMENT	OS-035	AUX	585	318	SR		ON	ON	Y	212	ELECTRICAL	0	0	0	0	1
962	P	19	TE-5336	EDG RM 2 TEMP ELEMENT	OS-035	AUX	585	319	SR		ON	ON	Y	215	ELECTRICAL	0	0	0	0	1
963	B	19	TE-5443	CC PMP 1 RM TEMP ELEMENT	OS-036 SH 1	AUX	585	328	SR		ON	ON	Y	219	ELECTRICAL	0	0	0	0	1
964	P	19	TE-5444	CC PMP 1 RM TEMP ELEMENT	OS-036 SH 1	AUX	585	328	SR		ON	ON	Y	220	ELECTRICAL	0	0	0	0	1
514	P	0	TE-IM07E	INCORE OUTLET E7 TEMP ELEMENT	OS-001A SH 1	CTM	578	315	SR		ON	ON	Y	305	ELECTRICAL	0	0	0	1	0
515	B	0	TE-IM07M	INCORE OUTLET M7 TEMP ELEMENT	OS-001A SH 1	CTM	578	315	SR		ON	ON	Y	305	ELECTRICAL	0	0	0	1	0
288	P	19	TE-RC3A6	RC LOOP 2 HLG WR TEMP ELEMENT	OS-001A SH 1	CTM	630	218	SR		ON	ON	Y	305	ELECTRICAL	0	0	1	0	0
516	P	19	TE-RC3A6	RC LOOP 2 HLG WR TEMP ELEMENT	OS-001A SH 1	CTM	630	218	SR		ON	ON	Y	305	ELECTRICAL	0	0	0	1	0
289	B	19	TE-RC3B5	RC LOOP 1 HLG WR TEMP ELEMENT	OS-001A SH 1	CTM	565	216	SR		ON	ON	Y	305	ELECTRICAL	0	0	1	0	0
517	B	19	TE-RC3B5	RC LOOP 1 HLG WR TEMP ELEMENT	OS-001A SH 1	CTM	565	216	SR		ON	ON	Y	305	ELECTRICAL	0	0	0	1	0
99	P	19	TE-RC4A2	RCP 2-1 DISCH CLG WR TEMP ELEMENT	OS-001A SH 1	CTM	565	218	SR		ON	ON	Y	307	ELECTRICAL	1	0	0	0	0
290	P	19	TE-RC4A2	RCP 2-1 DISCH CLG WR TEMP ELEMENT	OS-001A SH 1	CTM	565	218	SR		ON	ON	Y	307	ELECTRICAL	0	0	1	0	0
518	P	19	TE-RC4A2	RCP 2-1 DISCH CLG WR TEMP ELEMENT	OS-001A SH 1	CTM	565	218	SR		ON	ON	Y	307	ELECTRICAL	0	0	0	1	0
100	B	19	TE-RC4B2	RCP 1-1 DISCH CLG WR TEMP ELEMENT	OS-001A SH 1	CTM	565	216	SR		ON	ON	Y	307	ELECTRICAL	1	0	0	0	0
291	B	19	TE-RC4B2	RCP 1-1 DISCH CLG WR TEMP ELEMENT	OS-001A SH 1	CTM	565	216	SR		ON	ON	Y	307	ELECTRICAL	0	0	1	0	0
519	B	19	TE-RC4B2	RCP 1-1 DISCH CLG WR TEMP ELEMENT	OS-001A SH 1	CTM	565	216	SR		ON	ON	Y	307	ELECTRICAL	0	0	0	1	0
520	B	19	TE-SP11A1	STEAM GEN 1-2 SHELL TEMP ELEMENT 1	OS-008 SH 1	CTM	565	218	SR		ON	ON	Y	306	ELECTRICAL	0	0	0	1	0
521	B	19	TE-SP11A2	STEAM GEN 1-2 SHELL TEMP ELEMENT 2	OS-008 SH 1	CTM	585	218	SR		ON	ON	Y	306	ELECTRICAL	0	0	0	1	0
522	B	19	TE-SP11A3	STEAM GEN 1-2 SHELL TEMP ELEMENT 3	OS-008 SH 1	CTM	585	218	SR		ON	ON	Y	306	ELECTRICAL	0	0	0	1	0
523	B	19	TE-SP11A4	STEAM GEN 1-2 SHELL TEMP ELEMENT 4	OS-008 SH 1	CTM	603	218	SR		ON	ON	Y	306	ELECTRICAL	0	0	0	1	0
524	B	19	TE-SP11A5	STEAM GEN 1-2 SHELL TEMP ELEMENT 5	OS-008 SH 1	CTM	603	218	SR		ON	ON	Y	306	ELECTRICAL	0	0	0	1	0
525	P	19	TE-SP11B1	STEAM GEN 1-1 SHELL TEMP ELEMENT 1	OS-008 SH 1	CTM	565	216	SR		ON	ON	Y	306	ELECTRICAL	0	0	0	1	0
526	P	19	TE-SP11B2	STEAM GEN 1-1 SHELL TEMP ELEMENT 2	OS-008 SH 1	CTM	565	216	SR		ON	ON	Y	306	ELECTRICAL	0	0	0	1	0
527	P	19	TE-SP11B3	STEAM GEN 1-1 SHELL TEMP ELEMENT 3	OS-008 SH 1	CTM	565	216	SR		ON	ON	Y	306	ELECTRICAL	0	0	0	1	0
528	P	19	TE-SP11B4	STEAM GEN 1-1 SHELL TEMP ELEMENT 4	OS-008 SH 1	CTM	565	216	SR		ON	ON	Y	306	ELECTRICAL	0	0	0	1	0
529	P	19	TE-SP11B5	STEAM GEN 1-1 SHELL TEMP ELEMENT 5	OS-008 SH 1	CTM	565	216	SR		ON	ON	Y	306	ELECTRICAL	0	0	0	1	0
292	B	20	TI-1356	CTMT COOLER FAN 1 SUCTION TEMP INDICATOR	OS-033A	AUX	623	505	SR	1	ON	ON	Y	304	ELECTRICAL	0	0	1	0	0
293	P	20	TI-1357	CTMT COOLER FAN 2 SUCTION TEMP INDICATOR	OS-033A	AUX	623	505	SR	1	ON	ON	Y	304	ELECTRICAL	0	0	1	0	0
530	B	20	TI-4627	INCORE TEMP INDICATOR	OS-001A SH 1	AUX	623	505	SR	1	ON	ON	Y	305	ELECTRICAL	0	0	0	1	0
531	P	20	TI-4628	INCORE TEMPERATURE INDICATOR	OS-001A SH 1	AUX	623	505	SR	1	ON	ON	Y	305	ELECTRICAL	0	0	0	1	0
1154	P	0	TI-5503	PORTABLE RC TEMPERATURE INDICATOR		AUX	585	304	SR		OFF	ON	Y	321	ELECTRICAL	1	0	1	1	0
1155	B	0	TI-5504	PORTABLE RC TEMPERATURE INDICATOR		AUX	585	304	SR		OFF	ON	Y	321	ELECTRICAL	1	0	1	1	0
965	B	18	TIC 5443	CC PMP 1 RM TEMP INDEX CONTROL	OS-036 SH 1	AUX	585	328	SR	1	AUT	AUT	Y	219	ELECTRICAL	0	0	0	0	1
966	P	18	TIC 5444	CC PMP 2 RM TEMP INDEX CONTROL	OS-036 SH 1	AUX	585	328	SR	1	AUT	AUT	Y	220	ELECTRICAL	0	0	0	0	1
967	B	18	TS-4688	TEMP SWT FR XHAUST FAN C99-1&2	OS-038B	ITK	576	052	SR	1			Y	114	ELECTRICAL	0	0	0	0	1

COMPOSITE SQUG SAFE SHUTDOWN EQUIPMENT LIST (SSEL)

Line No.	Train	Equip Class	Equipment ID Number	System/Equipment Description	Drawing Number	Bldg	Elev	Room No.	Eval Cat.	Note	Normal State	Desired State	Pwr Reqd	G.4 Form Number	Support System	RC	IC	PC	DH	SU
968	P	18	TS-4689	TEMP SWT FR XHAUST FAN C99-3&4	OS-038B	ITK	576	052	SR	1			Y	115	ELECTRICAL	0	0	0	0	1
532	B	18	TS-5135	TEMP SWITCH FOR AFP ROOM VENT FAN 1-1	OS-036 SH 1	AUX	565	237	SR	1	ON	ON	Y	122	ELECTRICAL	0	0	0	1	0
533	P	18	TS-5136	AFP ROOM VENT FAN 2 TEMPERATURE SWITCH	OS-036 SH 1	AUX	565	238	SR	1	ON	ON	Y	123	ELECTRICAL	0	0	0	1	0
969	B	18	TS-5261	CTRM EMERG VENT FAN 1 TEMP SWT	OS-032B	AUX	638	603	SR	1			Y	74	ELECTRICAL	0	0	0	0	1
970	P	18	TS-5262	CTRM EMERG VENT FAN 2 TEMP SWT	OS-032B	AUX	638	603	SR	1			Y	75	ELECTRICAL	0	0	0	0	1
971	P	18	TS-5315	TEMP SWT FR L.V.S.G.RM 428 VNT	OS-035	AUX	603	428	SR	1			Y	117	ELECTRICAL	0	0	0	0	1
972	B	18	TS-5318	L.V.S.G. RM DAMP TEMP SWITCH	OS-035	AUX	603	429	SR	1			Y	116	ELECTRICAL	0	0	0	0	1
973	B	18	TS-5443	CC PMP RM VNT FN 1 TEMP SWITCH	OS-036 SH 1	AUX	585	328	SR	1			Y	96	ELECTRICAL	0	0	0	0	1
974	P	18	TS-5444	CC PMP VNT FN RM 2 TEMP SWITCH	OS-036 SH 1	AUX	585	328	SR	1			Y	97	ELECTRICAL	0	0	0	0	1
1040	B	18	TS-5597	TEMP SW FR BATT RM A THERMO	OS-035	AUX	603	429	SR	1			Y	112	ELECTRICAL	0	0	0	0	1
975	P	18	TS-5598	TEMP SW FR BATT RM B THERMO	OS-035	AUX	603	428	SR	1			Y	113	ELECTRICAL	0	0	0	0	1
976	P	18	TSH 1435	CC HX 2 CCW OUT TEMP SWTCH HI	OS-021 SH 1	AUX	585	328	SR	1			Y	298	ELECTRICAL	0	0	0	0	1
977	B	18	TSH 1483	CC HX CCW OUT TEMP SWICH HIGH	OS-021 SH 1	AUX	585	328	SR	1			Y	289	ELECTRICAL	0	0	0	0	1
1078	B	18	TSH 5421	ECCS RM CLR FAN 1-5 TEMP SW	OS-034 SH 2	AUX	545	105	SR	1	ON	ON	Y	147	ELECTRICAL	0	0	0	1	0
1079	B	18	TSH 5422	ECCS RM CLR FAN 1-4 TEMP SW	OS-034 SH 2	AUX	545	105	SR	1	ON	ON	Y	146	ELECTRICAL	0	0	0	1	0
1077	P	18	TSH 5424	ECCS RM CLR FAN 1-2 TEMP SW	OS-034 SH 2	AUX	545	115	SR	1	ON	ON	Y	149	ELECTRICAL	0	0	0	1	0
1076	P	18	TSH 5425	ECCS RM CLR FAN 1-1 TEMP SW	OS-034 SH 2	AUX	545	115	SR	1	ON	ON	Y	148	ELECTRICAL	0	0	0	1	0
1083	B	18	TSL 5421	ECCS RM CLR FAN 1-5 TEMP SW	OS-034 SH 2	AUX	545	105	SR	1	ON	ON	Y	147	ELECTRICAL	0	0	0	1	0
1082	B	18	TSL 5422	ECCS RM CLR FAN 1-4 TEMP SW	OS-034 SH 2	AUX	545	105	SR	1	ON	ON	Y	146	ELECTRICAL	0	0	0	1	0
1081	P	18	TSL 5424	ECCS RM CLR FAN 1-2 TEMP SW	OS-034 SH 2	AUX	545	115	SR	1	ON	ON	Y	149	ELECTRICAL	0	0	0	1	0
1080	P	18	TSL 5425	ECCS RM CLR FAN 1-1 TEMP SW	OS-034 SH 2	AUX	545	115	SR	1	ON	ON	Y	148	ELECTRICAL	0	0	0	1	0
294	B	18	TT-1356	CTMT COOLER FAN 1 SUCTION TEMP TRANSMIT	OS-033A	AUX	585	303	SR		ON	ON	Y	304	ELECTRICAL	0	0	1	0	0
295	P	18	TT-1357	CTMT COOLER FAN 2 SUCTION TEMP TRANSMIT	OS-033A	AUX	585	314	SR		ON	ON	Y	304	ELECTRICAL	0	0	1	0	0
978	B	18	TT-5329	EDG RM 1 TEMP TRANSMITTER	OS-035	AUX	585	318	SR		ON	ON	Y	212	ELECTRICAL	0	0	0	0	1
979	P	18	TT-5336	EMG RM 2 TEMP TRANSMITTER	OS-035	AUX	585	319	SR		ON	ON	Y	215	ELECTRICAL	0	0	0	0	1
980	B	18	TT-5443	CC PMP 1 RM TEMP TRANSMITTER	OS-036 SH 1	AUX	585	328	SR		ON	ON	Y	219	ELECTRICAL	0	0	0	0	1
981	P	18	TT-5444	CC PMP 2 RM TEMP TRANSMITTER	OS-036 SH 1	AUX	585	328	SR		ON	ON	Y	220	ELECTRICAL	0	0	0	0	1
534	P	18	TT-IM07E	INCORE OUTLET E7 TEMP TRANSMIT	OS-001A SH 1	AUX	623	502	SR		ON	ON	Y	305	ELECTRICAL	0	0	0	1	0
535	B	18	TT-IM07M	INCORE OUTLET M7 TEMP TRANSMIT	OS-001A SH 1	AUX	623	502	SR		ON	ON	Y	305	ELECTRICAL	0	0	0	1	0
296	P	18	TT-RC3A6	RC TEMP HLG WR CH 2 TSAT TEMP	OS-001A SH 1	AUX	623	502	SR		ON	ON	Y	305	ELECTRICAL	0	0	1	0	0
536	P	18	TT-RC3A6	RC TEMP HLG WR CH 2 TSAT TEMP	OS-001A SH 1	AUX	623	502	SR		ON	ON	Y	305	ELECTRICAL	0	0	0	1	0
297	B	18	TT-RC3B5	RC TEMP HLG WR CH 1 TSAT TEMP TRANS	OS-001A SH 1	AUX	623	502	SR		ON	ON	Y	305	ELECTRICAL	0	0	1	0	0
537	B	18	TT-RC3B5	RC TEMP HLG WR CH 1 TSAT TEMP TRANS	OS-001A SH 1	AUX	623	502	SR		ON	ON	Y	305	ELECTRICAL	0	0	0	1	0
1145	B	20	Y-104	CREVS DISC SWITCH FOR C6708 & C6714		AUX	603	429	SR		CLS	CLS	N	50		0	0	0	0	1
1111	B	20	Y-105	EDG 1-1 DISCONNECT SWITCH FOR C3615		AUX	603	429	SR		CLS	CLS	N	50		0	0	0	0	1
1146	P	20	Y-204	CREVS DISC SWITCH FOR C6709 & C6715		AUX	603	428	SR		CLS	CLS	N	50		0	0	0	0	1
1113	P	20	Y-205	EDG 1-2 DISCONNECT SWITCH FOR C3616		AUX	603	428	SR		CLS	CLS	N	50		0	0	0	0	1
1112	B	20	Y-305	EDG 1-1 DISCONNECT SWITCH FOR C3615		AUX	603	429A	SR		CLS	CLS	N	50		0	0	0	0	1
1114	P	20	Y-405	EDG 1-2 DISCONNECT SWITCH FOR C3616		AUX	603	428	SR		CLS	CLS	N	50		0	0	0	0	1
982	C	14	Y1	ESSEN INSTR DIST PNL "Y1"	OS-060 SH 2	AUX	603	429	SR	41	ON	ON	Y	50	ELECTRICAL	0	0	0	0	1
983	C	2	Y101	XFER SWITCH FOR INV YV1 &....	OS-060 SH 2	AUX	603	429	SR		CLS	CLS	N	50		0	0	0	0	1
984	C	2	Y101A	XFER SWITCH FOR Y1A	OS-060 SH 2	AUX	603	429	SR		CLS	CLS	N	51		0	0	0	0	1
985	C	14	Y1A	120VAC ESSEN INST DIST PANEL	OS-060 SH 2	AUX	603	429	SR	41	ON	ON	Y	51	ELECTRICAL	0	0	0	0	1
986	C	14	Y2	ESSEN INSTR DIST PNL "Y2" 120V	OS-060 SH 2	AUX	603	428	SR	42	ON	ON	Y	50	ELECTRICAL	0	0	0	0	1
987	C	2	Y201	XFER SWT FOR YV2 ABD YBR BUS	OS-060 SH 2	AUX	603	428	SR		CLS	CLS	N	50		0	0	0	0	1
988	C	2	Y201A	XFER SWT FOR INV YV2 AND YBR	OS-060 SH 2	AUX	603	428	SR		CLS	CLS	N	51		0	0	0	0	1
989	C	14	Y2A	120VAC ESSEN INST DIST PANEL	OS-060 SH 2	AUX	603	428	SR	42	ON	ON	Y	51	ELECTRICAL	0	0	0	0	1
990	C	14	Y3	ESSEN INSTR DIST PNL "Y3" 120V	OS-060 SH 2	AUX	603	429A	SR	41	ON	ON	Y	50	ELECTRICAL	0	0	0	0	1

COMPOSITE SQUG SAFE SHUTDOWN EQUIPMENT LIST (SSEL)

Line No.	Train	Equip Class	Equipment ID Number	System/Equipment Description	Drawing Number	Bldg	Elev	Room No.	Eval Cat.	Note	Normal State	Desired State	Pwr Reqd	G.4 Form Number	Support System	RC	IC	PC	DH	SU
991	C	2	Y301	XFER SWITCH FOR Y3	OS-060 SH 2	AUX	603	429A	SR		CLS	CLS	N	50		0	0	0	0	1
992	C	14	Y4	ESSEN INSTR DIST PNL "Y4" 120V	OS-060 SH 2	AUX	603	428	SR	42	ON	ON	Y	50	ELECTRICAL	0	0	0	0	1
993	C	2	Y401	XFER SWT FR DIST PNL Y4 FRM...	OS-060 SH 2	AUX	603	428	SR		CLS	CLS	N	50		0	0	0	0	1
994	B	14	YAU	UPS INSTR DIST PNL "YAU"	OS-060 SH 1	AUX	603	429	SR		ON	ON	Y	77	ELECTRICAL	0	0	0	0	1
995	B	2	YAU 01	MAIN DISC SWITCH	OS-060 SH 1	AUX	603	429	SR		CLS	CLS	N	77		0	0	0	0	1
996	P	14	YBU	UPS INSTR DIST PNL 120V ac	OS-060 SH 1	AUX	603	428	SR		ON	ON	Y	77	ELECTRICAL	0	0	0	0	1
997	P	2	YBU 01	MAIN DISC SWITCH	OS-060 SH 1	AUX	603	428	SR		CLS	CLS	N	77		0	0	0	0	1
998	B	2	YE-101	BRKR, LVSG RM VNT FN1-1 DAMPER	OS-035	AUX	585	318	SR		CLS	CLS	N	212		0	0	0	0	1
999	B	2	YE-102	BRKR, EDG RM 1 SPLY FAN RECIRC	OS-035	AUX	585	318	SR		CLS	CLS	N	213		0	0	0	0	1
1000	B	2	YE-103	BRKR, EDG RM 1 SPLY FAN OUTLT	OS-035	AUX	585	318	SR		CLS	CLS	N	214		0	0	0	0	1
1001	B	2	YE-104	BRKR, L.V.S.G. RM VENT FAN 1-1	OS-035	AUX	585	318	SR		CLS	CLS	N	210		0	0	0	0	1
1002	B	2	YE-208	BREAKER FOR TRANS 240-120 AC..	OS-059 SH 1	AUX	585	304	SR		CLS	CLS	N	70		0	0	0	0	1
1003	B	2	YE-209	BRKR, CCP RM VNT FN 1 RM BYPSS	OS-036 SH 1	AUX	585	304	SR		CLS	CLS	N	218		0	0	0	0	1
1004	B	2	YE-210	BRKR, CC PMP RM VNT FN 1 RM IN	OS-036 SH 1	AUX	585	304	SR		CLS	CLS	N	219		0	0	0	0	1
1005	B	2	YE-212	BRKR, CC PMP RM O.A. LOUVER 1	OS-036 SH 1	AUX	585	304	SR		CLS	CLS	N	222		0	0	0	0	1
880	B	1	YE1	480/120 VAC MCC/TRANSFORMER	OS-059 SH 1	AUX	585	318	SR		ON	ON	Y	12	ELECTRICAL	0	0	0	0	1
1050	B	4	YE1	480/120 VAC MCC/TRANSFORMER	OS-059 SH 1	AUX	585	318	SR		ON	ON	Y	71	ELECTRICAL	0	0	0	0	1
881	B	1	YE2	240 VAC MCC/TRANSFORMER	OS-059 SH 1	AUX	585	304	SR		ON	ON	Y	2	ELECTRICAL	0	0	0	0	1
1006	B	4	YE2A	480-240V TRANSFORMER	OS-059 SH 1	AUX	603	405	SR		ON	ON	Y	71	ELECTRICAL	0	0	0	0	1
1051	B	4	YE2B	240-120V TRANSFORMER	OS-059 SH 1	AUX	585	304	SR		ON	ON	Y	70	ELECTRICAL	0	0	0	0	1
1007	P	2	YF-101	BRKR, EMDG RM 2 SPLY FAN INLT	OS-035	AUX	585	319	SR		CLS	CLS	N	215		0	0	0	0	1
1008	P	2	YF-102	BRKR, EDG RM 2 SPLY FAN RECIRC	OS-035	AUX	585	319	SR		CLS	CLS	N	216		0	0	0	0	1
1009	P	2	YF-103	BKR, EDG RM 2 SPLY FAN OUTLT	OS-035	AUX	585	319	SR		CLS	CLS	N	217		0	0	0	0	1
1010	P	2	YF-104	BRKR, L.V.S.G. RM OUTLT DAMPER	OS-035	AUX	585	319	SR		CLS	CLS	N	211		0	0	0	0	1
1011	P	2	YF-208	BREAKER FOR 2 KVA TRANSFORMER	OS-059 SH 1	AUX	603	427	SR		CLS	CLS	N	70		0	0	0	0	1
1012	P	2	YF-209	BRKR, CC PMP RM VENT FAN2 BYPS	OS-036 SH 1	AUX	603	427	SR		CLS	CLS	N	220		0	0	0	0	1
1013	P	2	YF-210	BRKR, CC PMP RM VENT FAN 2..IN	OS-036 SH 1	AUX	603	427	SR		CLS	CLS	N	221		0	0	0	0	1
1014	P	2	YF-212	BRKR, CC PMP RM O.A. LOUVER 1	OS-036 SH 1	AUX	603	427	SR		CLS	CLS	N	223		0	0	0	0	1
882	P	1	YF1	480-120V MCC/TRANSFORMER	OS-059 SH 1	AUX	585	319	SR		ON	ON	Y	25	ELECTRICAL	0	0	0	0	1
1015	P	4	YF1	480-120V MCC/TRANSFORMER	OS-059 SH 1	AUX	585	319	SR		ON	ON	Y	71	ELECTRICAL	0	0	0	0	1
883	P	1	YF2	240 VAC MCC/TRANSFORMER	OS-059 SH 1	AUX	603	427	SR		ON	ON	Y	18	ELECTRICAL	0	0	0	0	1
1016	P	4	YF2A	480-240V TRANSFORMER	OS-059 SH 1	AUX	603	427	SR		ON	ON	Y	71	ELECTRICAL	0	0	0	0	1
1052	P	4	YF2B	240-120V TRANSFORMER	OS-059 SH 1	AUX	603	427	SR		ON	ON	Y	70	ELECTRICAL	0	0	0	0	1
847	C	16	YV1	125VDC/120VAC INVERTER CH 1	OS-060 SH 2	AUX	603	429	SR		ON	ON	Y	357	ELECTRICAL	0	0	0	0	1
848	C	16	YV2	125VDC/120VAC INVERTER CH 2	OS-060 SH 2	AUX	603	428	SR		ON	ON	Y	58	ELECTRICAL	0	0	0	0	1
849	C	16	YV3	125VDC 120VAC INVERTER CH 3	OS-060 SH 2	AUX	603	429A	SR		ON	ON	Y	58	ELECTRICAL	0	0	0	0	1
850	C	16	YV4	125VDC/120VAC INVERTER CH 4	OS-060 SH 2	AUX	603	428	SR		ON	ON	Y	357	ELECTRICAL	0	0	0	0	1
1017	B	16	YVA	UPS "YVA" INVERTER	OS-060 SH 1	AUX	603	429	SR		ON	ON	Y	76	ELECTRICAL	0	0	0	0	1
1018	P	16	YVB	UPS "YVB" INVERTER	OS-060 SH 1	AUX	603	428	SR		ON	ON	Y	76	ELECTRICAL	0	0	0	0	1
538	P	18	ZC-6451	AFP 1-2 DISCH CTRL VLV POSITION CTRLR	OS-017A SH 1	AUX	565	238	SR		ON	ON	Y	308	ELECTRICAL	0	0	0	1	0
539	B	18	ZC-6452	AFP 1-1 DISCH CTRL VLV POS CONTROLER	OS-017A SH 1	AUX	565	237	SR		OP/CL	ON	Y	309	ELECTRICAL	0	0	0	1	0

Seismic Qualification Utility Group (SQUG) Equipment List Notes

NOTE #

1. Instrument device requires and includes all components (e.g. power supply, electronic devices, signal processors, instrument sensing tubing, interconnecting wiring, etc.) traced from the instrument to the process or controlled device which are required to support its operability. Due to the variance in the available level of details, it is not possible to show this by use of highlighting on an operational schematic.

2. MU-366 will have to be manually opened for the SSEL primary train flow path.

3. For the reactivity control function, position of this valve is not important.

4. These components have been added to the SSEL due to the relay evaluation determining they contain essential relays.

5. This note intentionally left blank.

6. This note intentionally left blank.

7. a. Makeup (MU) tank level is required.
   b. Control room indication has been chosen instead of local indication.
   c. The Operations Department prefers use of the recorder instead of meter indication.

8. a. Assume makeup pump 1-1 is off and makeup pump 1-2 is the running pump as the normal plant Seismic Qualification Utility Group (SQUG) lineup.
   b. Includes component cooling water (CCW) cooling assembly and skid mounted lube oil systems.

9. "Desired State Open" is for both the normal supply from the MU tank and supply from the borated water storage tank (BWST).

10. The position of MU-19 may be as-is (throttled) or failed open for the SSEL primary train.

11. These valves are to be maintained open for the SSEL primary train and manually closed for the SSEL backup train.

12. This valve, due to a "latch in" control circuit, is to be manually throttled for the SSEL primary train.

13. High pressure injection (HPI) is not necessary for the reactivity control function. HPI pumps are included as a pressure boundary. Abrasive (cyclone) separators are considered as an integral part of the pumps.

14. No seismic evaluation is required for this function, as relief valve only serves as a boundary isolation.

15. Decay heat pump is not in operation for this function, but relay review is included to prevent inadvertent actuation.

16. No relay review required for this function. If valve spuriously closes or remains closed, it will then serve as the boundary isolation valve. If valve spuriously opens or remains open, an isolation boundary is still maintained.

17. Relay evaluation is required to prevent possible pump dead-head operation.

18. Since the breaker for the power supply is normally open, no relay review is required.

19. Valve is to be manually closed to preserve a flow boundary.

20. Manually open for the SSEL backup train flow path.

21. Manually open for the SSEL primary train flow path.

22. Manually open for the common flow path.

23. This note intentionally left blank.

24. Manually close for the common flow path.

25. For the primary train, SW-2929 & SW-2931 may have to be manually closed to ensure the service water (SW) return flow path is directed to the other end of the intake forebay for cooling.

26. For the backup train, SW-2932 may have to be manually closed and SW-2930 manually opened to ensure a SW return flow path to the forebay.

27. Manually close for the SSEL primary train.

28. Manually close for the SSEL backup train.

29. Valve position is of no consequence for SQUG purposes.

30. Air line between solenoid valve and service water (SW) valve is not included as a part of SQUG.

31. This note intentionally left blank.

32. Includes interlock to emergency diesel generator (EDG) CCW outlet valve as described in note "CL-6" on OS-21 SH1.

33. Air line is not included as a part of SQUG.

34. The necessary control room emergency ventilation system (CREVS) equipment is skid mounted, which includes the condensing unit (S33-1,2), the air cooled condenser (S61-1,2), and the cooling coil (E106-1,2).

35. This note intentionally left blank.

36. Associated piping/ductwork for air path is also included.

37. Manually open to cross-connect both boric acid addition tanks (BAATs).

38. Manually throttle MU-349 for the SSEL primary train, and MU-348 for the SSEL backup train.

39. Both boric acid addition tanks (BAATs) are required because there is no assurance that one alone will contain the necessary amount of boric acid.

40. This note intentionally left blank.

41. This panel needs to feed at least channel 1 steam and feedwater rupture control system (SFRCS) and safety features actuation system (SFAS) cabinets to prevent trips to support channel 2 (SSEL primary train).

42. This panel needs to feed at least channel 2 SFRCS & SFAS cabinets to prevent trips to support channel 1 (SSEL backup train).

43. This note intentionally left blank.

44. This note intentionally left blank.

45. This note intentionally left blank.

46. The 125 VDC shown at fuses FU-3P and FU-3N at C3621 (SSEL primary train) and C3622 (SSEL backup train) includes power traced back to the source.

47. This note intentionally left blank.

48. This note intentionally left blank.

49. This note intentionally left blank.

50. For the inventory control function, position of this valve is not important. However, if offsite power is still available, the desired position for RC-2 is closed to prevent the inadvertent lowering of reactor coolant system (RCS) pressure.

51. Manually open with local handwheel for backup path.

52. This note intentionally left blank.

53. This note intentionally left blank.

54. This note intentionally left blank.

55. This note intentionally left blank.

56. This note intentionally left blank.

57. This note intentionally left blank.

58. This note intentionally left blank.

59. This note intentionally left blank.

60. T is note intentionally left blank.

61. This note intentionally left blank.

62. Instrument string is required to prevent spurious trips. In addition, SSEL note 1 also applies.

63. Includes panel breakers 13, 14, and 15.

64. The system boundary located downstream of this point is shown in the decay heat removal drawings. For the RCS pressure control function, there are no active components past this point in the system and no relay evaluations required since this flow path is not established until several hours following the seismic event.

65. Solenoid valves are assumed to be deenergized for the associated service water valve to be fully open.

66. This note intentionally left blank.

67. Includes associated air handling ductwork in containment.

68. HPI pump breakers must be racked out for DH-4849 to be able to provide low temperature overpressure protection (LTOP).

69. This note intentionally left blank.

70. This note intentionally left blank.

71. This note intentionally left blank.

72. This note intentionally left blank.

73. This note intentionally left blank.

74. This note intentionally left blank.

75. This note intentionally left blank.

76. This note intentionally left blank.

77. This note intentionally left blank.

78. This note intentionally left blank.

79. Additional equipment is shown on support systems drawings.

80. DH-21 and DH-23 are manually opened for the backup train.

81. Manually close for the SSEL primary train.

82. Operators to control decay heat removal (DHR) flow by throttling valve DH-1A via HIS DH1A.

83. Manually close for the SSEL backup train.

84. Operators to open DH-1518 for the SSEL primary train via HIS 1518. DH-1518 is to remain closed for the SSEL backup train.

85. This note intentionally left blank.

86. For SSEL primary train operation, MCC E11B may have to be powered via the cross tie from MCC F11A using breakers described in note 15 of OS-059. This is for the decay heat removal and pressure control functions only.

87. Operators to control DHR flow by throttling valve DH-1B via HIS DH1B.

88. Operators to open DH-1517 for the SSEL backup train via HIS 1517. DH-1517 is to remain closed for the SSEL primary train.

89. Includes control signal to LIC 6451 (OS-17A SH1).

90. Includes control signal to LIC 6452 (OS-17A SH1).

91. a. Includes trip throttle valve & governor valve.
    b. Includes equipment for steam exhaust path to atmosphere.

92. Includes associated fan intake & discharge path.

93. Includes associated reach rod and air tubing to bleed off the closing air supply. For decay heat removal, both ICS11A and ICS11B will be controlled by use of a manual handwheel.

94. The SQUG boundary for the piping extends to the S/I boundary outside the auxiliary building. Pipe integrity is not required past this point for the purposes of SQUG.

95. This note intentionally left blank.

96. This note intentionally left blank.

97. This note intentionally left blank.

98. This note intentionally left blank.

99. The BWST recirculation pump and heater are included only as a pressure boundary.

100. Steam traps are included for the decay heat removal function only as a pressure boundary. It is assumed that at the time of a seismic event, the steam traps have been functioning and any water drained from the steam lines. Therefore, the steam traps are not required to function following a seismic event because the auxiliary feed pump turbines (AFPTs) are expected to start soon after occurrence of the event.

101. Includes interlock to service water valve described in Note "CL-6" on OS-020 SH2.

102. Only consider those control circuits on panel C3615 (EDG 1-1) & C3616 (EDG 1-2) which will allow the EDG to auto start, auto load on the essential bus, and continue to run and provide power--e.g., control power, protective relays, etc. It will also be necessary to include the entire skid mounted portions of the EDG coolant, lube oil, air start, and fuel oil systems, including the combustion air supply flow path from the intake to the exhaust.

RJW:rjw
June 7, 1995

DAVIS-BESSE NUCLEAR POWER STATION

Unresolved Safety Issue (USI) A-46

Seismic Evaluation Report

APPENDIX C

SEISMIC REVIEW
SAFE SHUTDOWN EQUIPMENT LIST (SSEL)

Seismic Review Safe Shutdown Equipment List (SSEL)

Line No.	Train	Equip Class	Equipment ID Number	System/Equipment Description	Drawing Number	Bldg	Elev	Room No.	Eval Cat.	Note	Normal State	Desired State	Pwr Reqd	G.4 Form Number	Support System	RC	IC	PC	DH	SU
1	P	20	0%ZRL	0% ZONE REF LIGHTS - PANEL ZI3000	N/A	AUX	623	505	SR		ON	ON	Y	313	ELECTRICAL	1	0	0	0	0
554	B	15	1N	STATION BATTERY -125V dc	OS-060 SH 1	AUX	603	429B	S		ON	ON	N			0	0	0	0	1
555	B	15	1P	STATION BATTERY +125V dc	OS-060 SH 1	AUX	603	429B	S		ON	ON	N			0	0	0	0	1
556	P	15	2N	STATION BATTERY -125V dc	OS-060 SH 1	AUX	603	428A	S		ON	ON	N			0	0	0	0	1
557	P	15	2P	STATION BATTERY +125V dc	OS-060 SH 1	AUX	603	428A	S		ON	ON	N			0	0	0	0	1
558	P	3	AACD1	BUS D1, CUB 2 BRKR FRM BUS....	OS-058 SH 2	AUX	585	323	SR		OPN	OPN	N	292		0	0	0	0	1
559	B	3	ABDC1	BUS C1, CUB 2 BRKR FRM BUS...	OS-058 SH 1	AUX	585	325	SR		OPN	OPN	N	284		0	0	0	0	1
298	P	3	AC 111	HPI 1-1 BKR	OS-058 SH 1	AUX	585	325	S	68	OPN	R/O	Y	290	ELECTRICAL	0	0	1	0	0
560	B	3	AC-101	BREAKER FROM EDG 1	OS-041A SH 1	AUX	585	325	SR		OPN	CLS	Y	283	ELECTRICAL	0	0	0	0	1
2	B	3	AC-105	BRKR, MUP MTR 1-1 MP37-1	OS-002 SH 3	AUX	585	325	SR		OPN	CLS	Y	106	ELECTRICAL	1	0	0	0	0
184	B	3	AC-105	BRKR, MUP MTR 1-1 MP37-1	OS-002 SH 3	AUX	585	325	SR		OPN	CLS	Y	106	ELECTRICAL	0	1	0	0	0
561	B	3	AC-107	BUS C1 CUB 7 FDR BRKR FR SWP1-1	OS-020 SH 1	AUX	585	325	SR		CLS	CLS	N	287		0	0	0	0	1
562	B	3	AC-110	BUS C1, CUB 10 BRKR TO 4.16...	OS-058 SH 1	AUX	585	325	SR		CLS	OPN	Y	285	ELECTRICAL	0	0	0	0	1
563	P	3	AC-111	BRKR, HP INJ PMP MOTOR 1-1	OS-058 SH 1	AUX	585	325	SR	68	OPN	R/O	Y	290	ELECTRICAL	0	0	0	0	1
308	B	3	AC-112	BUS C1 CBCL 12 FDR BRKR FOR DH PMP 1-1	OS-004 SH 1	AUX	585	325	SR		OFF	ON	Y	288	ELECTRICAL	0	0	0	1	0
564	B	3	AC-113	BREAKER, CC PMP MTR 1-1 MP431	OS-021 SH 1	AUX	585	325	SR		CLS	CLS	N	289		0	0	0	0	1
565	B	3	AC-1CE11	BUS C1, CUB 4-FEED BRKR FRM...	OS-058 SH 1	AUX	585	325	SR		CLS	CLS	N	286		0	0	0	0	1
299	P	3	AD 111	HPI 1-2 BKR	OS-058 SH 2	AUX	585	323	S	68	OPN	R/O	Y	297	ELECTRICAL	0	0	1	0	0
566	P	3	AD-101	BUS D1, CUB 1-FD BRKR FRM EDG2	OS-041A SH 2	AUX	585	323	SR		OPN	CLS	Y	291	ELECTRICAL	0	0	0	0	1
3	P	3	AD-105	BRKR,MUP1-2 MP 37-2	OS-002 SH 3	AUX	585	323	SR		CLS	CLS	N	110		1	0	0	0	0
185	P	3	AD-105	BRKR,MUP1-2 MP 37-2	OS-002 SH 3	AUX	585	323	SR		CLS	CLS	N	110		0	1	0	0	0
567	P	3	AD-107	BUS D1 CBCLE 7-BRKR FR SWP1-2	OS-020 SH 1	AUX	585	323	SR		CLS	CLS	N	295		0	0	0	0	1
568	P	3	AD-110	BUS D1, CUB 10 BRKR FOR SWGR..	OS-058 SH 2	AUX	585	323	SR		CLS	OPN	Y	293	ELECTRICAL	0	0	0	0	1
569	P	3	AD-111	BUS D1 CUB 11-FD BRKR HPIP 1-2	OS-058 SH 2	AUX	585	323	SR	68	OPN	R/O	Y	297	ELECTRICAL	0	0	0	0	1
309	P	3	AD-112	BUS D1 CUB 12-FDR BRKR FR DH PMP 1-2	OS-004 SH 1	AUX	585	323	SR		OFF	ON	Y	296	ELECTRICAL	0	0	0	1	0
570	P	3	AD-113	BUS D1 CUB 13 BRKR FR CCPMP1-2	OS-021 SH 1	AUX	585	323	SR		OPN	CLS	Y	298	ELECTRICAL	0	0	0	0	1
571	P	3	AD-1DF12	BUS D1, CUB 4 BRKR FOR SUB....	OS-058 SH 2	AUX	585	323	SR		CLS	CLS	N	294		0	0	0	0	1
316	P	8B	AF-6451	AFP 1-2 SOL CONTROL VALVE	OS-017A SH 1	AUX	565	238	SR		OPN	THR	Y	308	ELECTRICAL	0	0	0	1	0
317	B	8B	AF-6452	AFP 1-1 SOL CONTROL VALVE	OS-017A SH 1	AUX	565	237	SR		OPN	THR	Y	309	ELECTRICAL	0	0	0	1	0
572	B	2	BCE 11	BUS E1 NORM FEED BRKR FROM....	OS-059 SH 1	AUX	603	429	SR		CLS	CLS	N	59		0	0	0	0	1
573	P	2	BDF 12	BUS F1 NORM FEED BRKR FROM...	OS-059 SH 1	AUX	603	428	SR		CLS	CLS	N	60		0	0	0	0	1
574	B	2	BE-106	FEEDER BREAKER FOR MCC E12A	OS-059 SH 1	AUX	603	429	SR		CLS	CLS	N	61		0	0	0	0	1
575	B	2	BE-107	FEEDER BREAKER FOR MCC E11A	OS-059 SH 1	AUX	603	429	SR		CLS	CLS	N	62		0	0	0	0	1
576	B	2	BE-110	FEEDER BREAKER FOR MCC E14	OS-059 SH 1	AUX	603	429	SR		CLS	CLS	N	63		0	0	0	0	1
318	B	2	BE-1106	BREAKER FOR LP INJ 1 VALVE, MVDH1B	OS-004 SH 1	AUX	565	209	SR		ON	ON	Y	78	ELECTRICAL	0	0	0	1	0
4	B	2	BE-1109	BREAKER FOR MVMU400	OS-002 SH 1	AUX	565	209	SR		CLS	CLS	N	80		1	0	0	0	0
577	B	2	BE-1120	FEEDER BREAKER FOR MCC E11B	OS-059 SH 1	AUX	565	209	SR		CLS	CLS	N	1		0	0	0	0	1
319	B	2	BE-1121	BREAKER FOR DH PUMP 1 SUC VALVE FRM BWST	OS-004 SH 1	AUX	565	209	SR		ON	ON	Y	81	ELECTRICAL	0	0	0	1	0
320	B	2	BE-1126	BREAKER FOR DH NORM SUC LINE 1 ISO VLV	OS-004 SH 1	AUX	565	227	SR		ON	ON	Y	83	ELECTRICAL	0	0	0	1	0
5	B	2	BE-1127	BRKR, RC MUP SUCTION VLV MOTOR	OS-002 SH 3	AUX	565	227	SR		CLS	CLS	N	85		1	0	0	0	0
179	B	2	BE-1127	BRKR, RC MUP SUCTION VLV MOTOR	OS-002 SH 3	AUX	565	227	SR		CLS	CLS	N	85		0	1	0	0	0
578	B	2	BE-1144	BRKR, CTRM EMERG VNT FAN1..VLV	OS-032B	AUX	585	304	SR		CLS	CLS	N	88		0	0	0	0	1
579	B	2	BE-1148	BRKR, CTRM EMERG STND BYPAS...	OS-032B	AUX	603	402	SR		CLS	CLS	N	90		0	0	0	0	1
580	B	2	BE-1150	FEEDER BREAKER TO MCC E11E	OS-059 SH 1	AUX	585	304	SR		CLS	CLS	N	4		0	0	0	0	1
581	B	2	BE-1151	BREAKER FOR FEED FROM MCC E11C	OS-059 SH 1	AUX	603	402	SR		CLS	CLS	N	6		0	0	0	0	1
582	B	2	BE-1154	BRKR, CC PMP RM VNT FAN 1...	OS-036 SH 1	AUX	585	304	SR		CLS	CLS	N	96		0	0	0	0	1
1149	B	2	BE-1162	BRKR FOR CFT 1 ISOLATION VALVE	OS-006	AUX	585	304	S	18	OPN	CLS	Y		MANUAL	0	1	0	0	0
583	B	2	BE-1166	BRKR FOR FEED TO MCC E11B	OS-059 SH 1	AUX	585	304	SR		CLS	CLS	N	3		0	0	0	0	1
111	B	2	BE-1172	RC LETDOWN ISO VALVE	OS-002 SH 1	AUX	585	304	SR		CLS	CLS	N	98		0	1	0	0	0

Seismic Review Safe Shutdown Equipment List (SSEL)

Line No.	Train	Equip Class	Equipment ID Number	System/Equipment Description	Drawing Number	Bldg	Elev	Room No.	Eval Cat.	Note	Normal State	Desired State	Pwr Reqd	G.4 Form Number	Support System	RC	IC	PC	DH	SU
584	B	2	BE-1180	BREAKER FOR XYE2 FDR TO MCCYE2	OS-059 SH 1	AUX	585	304	SR		CLS	CLS	N	2		0	0	0	0	1
218	P	2	BE-1183	BREAKER FOR DH REMOVAL SUCT LN VLV MOTOR	OS-004 SH 1	AUX	585	304	SR		CLS	CLS	N	99		0	0	1	0	0
321	P	2	BE-1183	BREAKER FOR DH REMOVAL SUCT LN VLV MOTOR	OS-004 SH 1	AUX	585	304	SR		OFF	ON	Y	99	ELECTRICAL	0	0	0	1	0
6	B	2	BE-1185	BREAKER FOR BA PUMP 1 MP381	OS-046	AUX	565	227	SR		CLS	CLS	N	101		1	0	0	0	0
7	B	2	BE-1191	BRKR RC MUP1 MN OIL PMP MP371B	OS-002 SH 4	AUX	565	227	SR		CLS	CLS	N	103		1	0	0	0	0
194	B	2	BE-1191	BRKR RC MUP1 MN OIL PMP MP371B	OS-002 SH 4	AUX	565	227	SR		CLS	CLS	N	103		0	1	0	0	0
101	B	2	BE-1192	BKR FOR MUP1 AUX GEAR PMP MP371D	OS-002 SH 4	AUX	565	227	SR		CLS	CLS	N	105		1	0	0	0	0
196	B	2	BE-1192	BKR FOR MUP1 AUX GEAR PMP MP371D	OS-002 SH 4	AUX	565	227	SR		CLS	CLS	N	105		0	1	0	0	0
8	B	2	BE-1194	BRKR FOR CTMT IV MOTOR MU6421	OS-002 SH 3	AUX	565	227	SR		CLS	CLS	N	111		1	0	0	0	0
208	B	2	BE-1194	BRKR FOR CTMT IV MOTOR MU6421	OS-002 SH 3	AUX	565	227	SR		CLS	CLS	N	111		0	1	0	0	0
585	B	2	BE-1196	BREAKER FR FEEDER FRM MCC E11A	OS-059 SH 1	AUX	565	227	SR		CLS	CLS	N	5		0	0	0	0	1
586	B	2	BE-1201	BRKR, CR EMERG SYS STANDBY...	OS-032B	AUX	603	429	SR		CLS	CLS	N	92		0	0	0	0	1
587	B	2	BE-1202	FEEDER BREAKER TO MCC E12C	OS-059 SH 1	AUX	603	429	SR		CLS	CLS	N	7		0	0	0	0	1
588	B	2	BE-1205	BRKR, SW PMP VENT FAN 2 MC99-2	OS-038B	ITK	575	051	SR		CLS	CLS	N	118		0	0	0	0	1
589	B	2	BE-1208	BRKR, BAT RM 429B- ATM DAMP MO	OS-035	AUX	603	429	SR		CLS	CLS	N	112		0	0	0	0	1
590	B	2	BE-1209	BRKR, CTRL RM EMERG VENTILATN	OS-032B	AUX	603	429	SR		CLS	CLS	N	94		0	0	0	0	1
591	B	2	BE-1212	BRKR, SW PMP VENT FAN 1 MC99-1	OS-038B	ITK	575	051	SR		CLS	CLS	N	114		0	0	0	0	1
592	B	2	BE-1216	BRKR, CTRM EMERG COND UNT1 MTR	OS-032B	AUX	603	429	SR		CLS	CLS	N	74		0	0	0	0	1
593	B	2	BE-1217	BRKR, VNT FN 1 MTR L.V.S.G. RM	OS-035	AUX	603	429	SR		CLS	CLS	N	116		0	0	0	0	1
322	B	2	BE-1218	BREAKER FOR AFP 1 SUCTION VALVE MV1382	OS-017A SH 1	AUX	603	429	SR		CLS	CLS	N	120		0	0	0	1	0
323	B	2	BE-1222	BREAKR FOR AFP ROOM VENT FAN 1 MOTOR	OS-036 SH 1	AUX	603	429	SR		CLS	CLS	N	122		0	0	0	1	0
219	B	2	BE-1223	FEEDER BRKR FOR PRZR HTRS CH 1	OS-001A SH 2	AUX	603	429	SR		CLS	CLS	N	124		0	0	1	0	0
594	B	2	BE-1226	BREAKER, CCW DISCH LN ISO VLV	OS-021 SH 1	AUX	603	429	SR		CLS	CLS	N	126		0	0	0	0	1
595	B	2	BE-1232	BRKR, CTRM EMERG CNDS 1 VLV MO	OS-020 SH 1	AUX	603	429	SR		CLS	CLS	N	128		0	0	0	0	1
596	B	2	BE-1233	BREAKER FOR BATT CHARGER DBC1P	OS-060 SH 1	AUX	603	429	SR		CLS	CLS	N	10		0	0	0	0	1
597	B	2	BE-1234	FEEDER BREAKER FOR MCC E12E	OS-059 SH 1	AUX	603	429	SR		CLS	CLS	N	8		0	0	0	0	1
598	B	2	BE-1235	BREAKER FOR BATT CHARGER DBC1N	OS-060 SH 1	AUX	603	429	SR		CLS	CLS	N	9		0	0	0	0	1
599	B	2	BE-1240	BRKR, L.V.S.G. RM 429 VNT VLV	OS-035	AUX	603	429	SR		CLS	CLS	N	140		0	0	0	0	1
600	B	2	BE-1241	BRKR, L.V.S.G. RM VNT VLV MTR	OS-035	AUX	603	429	SR		CLS	CLS	N	141		0	0	0	0	1
601	B	2	BE-1255	BRKR, EDG RM 1 VENT FAN 1	OS-035	AUX	585	318	SR		CLS	CLS	N	130		0	0	0	0	1
602	B	2	BE-1256	BRKR, EDG RM 1 VENT FAN 2	OS-035	AUX	585	318	SR		CLS	CLS	N	131		0	0	0	0	1
1095	B	2	BE-1258	EDG 1 IMMERSION HEATER BREAKER	OS-041A	AUX	585	318	SR		CLS	CLS	N	276		0	0	0	0	1
603	B	2	BE-1259	BRKR, FDR TO 120VAC MCC YE1	OS-059 SH 1	AUX	585	318	SR		CLS	CLS	N	12		0	0	0	0	1
604	B	2	BE-1261	BRKR, EDG SOAK PMP MP1471	OS-041A SH 1	AUX	585	318	SR		CLS	CLS	N	132		0	0	0	0	1
1061	B	2	BE-1273	FEEDER BREAKER FOR MCC E12F	OS-059 SH 1	AUX	585	318	SR		CLS	CLS	N	11		0	0	0	0	1
605	B	2	BE-1274	BREAKER, SW PUMPSTRNR MF12-1	OS-020 SH 1	ITK	585	051	SR		CLS	CLS	N	134		0	0	0	0	1
606	B	2	BE-1275	BRKR, SW PMP STRNR DRAIN VALVE	OS-020 SH 1	ITK	585	051	SR		CLS	CLS	N	136		0	0	0	0	1
607	B	2	BE-1281	BREAKER, SW - INTAKE STRCT VLV	OS-020 SH 1	ITK	585	051	SR		CLS	CLS	N	138		0	0	0	0	1
608	B	2	BE-1282	BREAKER, SW TO CLNG TWR MU VLV	OS-020 SH 1	ITK	585	051	SR		CLS	CLS	N	139		0	0	0	0	1
609	B	2	BE-1284	BREAKER FR FEEDER FRM MCC E12A	OS-059 SH 1	ITK	585	051	SR		CLS	CLS	N	13		0	0	0	0	1
610	B	2	BE-1285	BRKR, BAT RM VENT FAN 1-1	OS-035	AUX	585	318	SR		CLS	CLS	N	142		0	0	0	0	1
611	B	2	BE-1289	BRKR, EDG1 AC TURBO OIL PMP MO	OS-041A SH 1	AUX	585	318	SR		CLS	CLS	N	144		0	0	0	0	1
612	B	2	BE-1291	BREAKER FOR FEEDER TO MCC E12A	OS-059 SH 1	AUX	545	101	SR		CLS	CLS	N	14		0	0	0	0	1
1070	B	2	BE-1292	BRKR FOR C31-4	OS-034 SH 2	AUX	545	101	SR		CLS	CLS	N	146		0	0	0	1	0
1071	B	2	BE-1293	BRKR FOR C31-5	OS-034 SH 2	AUX	545	101	SR		CLS	CLS	N	147		0	0	0	1	0
9	B	2	BE-1295	BRKR FOR MU-6419	OS-002 SH 3	AUX	545	101	SR		CLS	CLS	N	150		1	0	0	0	0
205	B	2	BE-1295	BRKR FOR MU-6419	OS-002 SH 3	AUX	545	101	SR		CLS	CLS	N	150		0	1	0	0	0
1062	B	2	BE-1297	FEEDER BREAKER TO MCC E12F	OS-059 SH 1	AUX	585	318	SR		CLS	CLS	N	15		0	0	0	0	1
613	B	2	BE-1298	BRKR, EDG FUEL OIL STRG & XFER	OS-041C	AUX	585	318	SR		CLS	CLS	N	151		0	0	0	0	1

Seismic Review Safe Shutdown Equipment List (SSEL)

Line No.	Train	Equip Class	Equipment ID Number	System/Equipment Description	Drawing Number	Bldg	Elev	Room No.	Eval Cat.	Note	Normal State	Desired State	Pwr Reqd	G.4 Form Number	Support System	RC	IC	PC	DH	SU
220	B	2	BE-1401	HI & LO SPD STARTER FR CTMT AIR CLR FAN1	OS-033A	AUX	603	429	SR		CLS	CLS	N	167		0	0	1	0	0
221	B	14	BE12	ESNTL PZR HTR BNK 1 SPLY PNL	OS-001A SH 2	AUX	603	429	SR	63	ON	ON	Y	124	ELECTRICAL	0	0	1	0	0
614	P	2	BF-110	BRKR, MCC F14 (CTMT AIR CLR 2)	OS-059 SH 1	AUX	603	428	SR		CLS	CLS	N	65		0	0	0	0	1
1063	P	2	BF-1101	BRKR FOR FEEDER TO MCC YF2	OS-059 SH 1	AUX	603	427	SR		CLS	CLS	N	18		0	0	0	0	1
615	P	2	BF-1103	BRKR, CTRM EMERG SYS STNDBY...	OS-032B	AUX	603	427	SR		CLS	CLS	N	91		0	0	0	0	1
616	P	2	BF-1106	BRKR, CC WTR DISCH LN 2 ISOVLV	OS-021 SH 1	AUX	603	427	SR		CLS	CLS	N	127		0	0	0	0	1
617	P	2	BF-1112	BRKR, CC PMP RM VENT FAN 2	OS-036 SH 1	AUX	603	427	SR		CLS	CLS	N	97		0	0	0	0	1
1150	P	2	BF-1120	BRKR FOR CFT 2 ISOLATION VALVE	OS-006	AUX	603	427	S	18	OPN	CLS	Y		MANUAL	0	1	0	0	0
324	P	2	BF-1124	BREAKER FOR AFP TURB 1-2 MS INLET ISOVLV	OS-017B SH 1	AUX	603	427	SR		CLS	CLS	N	153		0	0	0	1	0
222	P	2	BF-1126	BREAKER FOR PRZR VAPOR SAMPLE LINE VALVE	OS-001A SH 2	AUX	603	427	SR		CLS	CLS	N	154		0	0	1	0	0
325	P	2	BF-1129	BREAKER FOR DH NORM SUCT LINE 2 ISO VLV	OS-004 SH 1	AUX	565	236	SR		ON	ON	Y	84	ELECTRICAL	0	0	0	1	0
223	P	2	BF-1130	BREAKER FOR DH REMOVAL SUCTION LN VALVE	OS-004 SH 1	AUX	603	427	SR		CLS	CLS	N	100		0	0	1	0	0
326	P	2	BF-1130	BREAKER FOR DH REMOVAL SUCTION LN VALVE	OS-004 SH 1	AUX	603	427	SR		OFF	ON	Y	100	ELECTRICAL	0	0	0	1	0
618	P	2	BF-1131	BRKR, CTRM EMERG COND UNT 2	OS-032B	AUX	603	427	SR		CLS	CLS	N	75		0	0	0	0	1
619	P	2	BF-1132	BREAKER, CTRM EMERG COND 2 VLV	OS-020 SH 1	AUX	603	427	SR		CLS	CLS	N	129		0	0	0	0	1
327	P	2	BF-1134	BREAKER FOR DH PMP 2 SUC VLV FRM BWST	OS-004 SH 1	AUX	565	236	SR		ON	ON	Y	82	ELECTRICAL	0	0	0	1	0
328	P	2	BF-1136	BREAKER FOR LP INJ 2 VALVE MVDH1A	OS-004 SH 1	AUX	565	236	SR		ON	ON	Y	79	ELECTRICAL	0	0	0	1	0
620	P	2	BF-1137	BREAKER FOR FEEDER TO MCC F11B	OS-059 SH 1	AUX	603	427	SR		CLS	CLS	N	19		0	0	0	0	1
621	P	2	BF-114	BREAKER FOR MCC F12A	OS-059 SH 1	AUX	603	428	SR		CLS	CLS	N	67		0	0	0	0	1
622	P	2	BF-1146	BREAKER FOR FEEDER TO MCC F11D	OS-059 SH 1	AUX	603	427	SR		CLS	CLS	N	17		0	0	0	0	1
623	P	2	BF-1149	BRKR, CTRM EMERG VENT SYS FAN2	OS-032B	AUX	603	427	SR		CLS	CLS	N	95		0	0	0	0	1
624	P	2	BF-115	BREAKER FOR MCC F11A	OS-059 SH 1	AUX	603	428	SR		CLS	CLS	N	68		0	0	0	0	1
625	P	2	BF-1162	BREAKER FOR FEEDER FRM MCCF11A	OS-059 SH 1	AUX	603	405	SR		CLS	CLS	N	20		0	0	0	0	1
10	P	2	BF-1167	BRKR FR RC MUP2 MN OIL PMP MOT	OS-002 SH 4	AUX	565	236	SR		CLS	CLS	N	107		1	0	0	0	0
197	P	2	BF-1167	BRKR FR RC MUP2 MN OIL PMP MOT	OS-002 SH 4	AUX	565	236	SR		CLS	CLS	N	107		0	1	0	0	0
102	P	2	BF-1168	BKR FOR MUP2 AUX GEAR PMP MP372D	OS-002 SH 4	AUX	565	236	SR		CLS	CLS	N	109		1	0	0	0	0
199	P	2	BF-1168	BKR FOR MUP2 AUX GEAR PMP MP372D	OS-002 SH 4	AUX	565	236	SR		CLS	CLS	N	109		0	1	0	0	0
11	P	2	BF-1169	BRKR FOR BA PMP 1-2 MP382	OS-046	AUX	565	227	SR		CLS	CLS	N	102		1	0	0	0	0
626	P	2	BF-1175	BREAKER FR FEEDER FRM MCC F11A	OS-059 SH 1	AUX	565	227	SR		CLS	CLS	N	21		0	0	0	0	1
329	P	2	BF-1177	BREAKER FOR AFP 2 SUC VLV MOTOR MV1383	OS-017A SH 1	AUX	565	236	SR		CLS	CLS	N	121		0	0	0	1	0
627	P	2	BF-118	BREAKER FOR MCC F16A	OS-059 SH 1	AUX	603	428	SR		CLS	CLS	N	69		0	0	0	0	1
628	P	2	BF-1186	BRKR, CTRM EMERG VENT FAN..VLV	OS-032B	AUX	603	405	SR		CLS	CLS	N	89		0	0	0	0	1
1085	P	2	BF-1189	BRKR FOR FEEDER TO MCC F11E	OS-059 SH 1	AUX	603	427	SR		CLS	CLS	N	16		0	0	0	0	1
1086	P	2	BF-1191	FEEDER BRKR FOR MCC F11E	OS-059 SH 1	AUX	545	101	SR		CLS	CLS	N	22		0	0	0	0	1
1068	P	2	BF-1192	BRKR FOR C31-1	OS-034 SH 2	AUX	545	101	SR		CLS	CLS	N	148		0	0	0	1	0
1069	P	2	BF-1193	BRKR FOR C31-2	OS-034 SH 2	AUX	545	101	SR		CLS	CLS	N	149		0	0	0	1	0
629	P	2	BF-1204	BRKR, VENT FAN 2 L.V.S.G. RM	OS-035	AUX	603	428	SR		CLS	CLS	N	117		0	0	0	0	1
330	P	2	BF-1205	BREAKER FOR AFP ROOM VENT FAN 2	OS-036 SH 1	AUX	603	428	SR		CLS	CLS	N	123		0	0	0	1	0
630	P	2	BF-1209	BREAKER FOR BATT CHRGER DBC2P	OS-060 SH 1	AUX	603	428	SR		CLS	CLS	N	23		0	0	0	0	1
631	P	2	BF-1210	BRKR, BATT RM 428A TO ATM DPR	OS-035	AUX	603	428	SR		CLS	CLS	N	113		0	0	0	0	1
632	P	2	BF-1211	BRKR, SW PMP VENT FAN 3 MC99-3	OS-038B	ITK	575	051	SR		CLS	CLS	N	115		0	0	0	0	1
633	P	2	BF-1212	BREAKER FOR BATT CHARGER DBC2N	OS-060 SH 1	AUX	603	428	SR		CLS	CLS	N	24		0	0	0	0	1
224	P	2	BF-1217	BREAKER FOR PRZR HTRS CH 2	OS-001A SH 2	AUX	428	603	SR		CLS	CLS	N	125		0	0	1	0	0
634	P	2	BF-1229	BRKR, CTRM EMERG SYS STNBY...	OS-032B	AUX	603	428	SR		CLS	CLS	N	93		0	0	0	0	1
635	P	2	BF-1230	BRKR, EDG FUEL OIL STOR & XFER	OS-041C	AUX	603	428	SR		CLS	CLS	N	152		0	0	0	0	1
636	P	2	BF-1236	BRKR, SW PMP VENT FAN 4 MC99-4	OS-038B	ITK	575	051	SR		CLS	CLS	N	119		0	0	0	0	1
112	P	2	BF-1237	RC LETDOWN COOLER 1-1 INLET ISO VALVE	OS-002 SH 1	AUX	603	428	SR		CLS	CLS	N	155		0	1	0	0	0
113	P	2	BF-1238	BREAKER FR LETDOWN COOLER 2 INLT VLV MTR	OS-002 SH 1	AUX	603	428	SR		CLS	CLS	N	156		0	1	0	0	0
637	P	2	BF-1239	BRKR, LOW VOLT SWGR RM VENT...	OS-035	AUX	603	428	SR		CLS	CLS	N	157		0	0	0	0	1

Seismic Review Safe Shutdown Equipment List (SSEL)

Line No.	Train	Equip Class	Equipment ID Number	System/Equipment Description	Drawing Number	Bldg	Elev	Room No.	Eval Cat.	Note	Normal State	Desired State	Pwr Reqd	G.4 Form Number	Support System	RC	IC	PC	DH	SU
638	P	2	BF-1255	BRKR, EDG RM 2 VNTL FAN 3	OS-035	AUX	585	319	SR		CLS	CLS	N	158		0	0	0	0	1
639	P	2	BF-1256	BRKR, EDG RM 2 VNTL FAN 4	OS-035	AUX	585	319	SR		CLS	CLS	N	159		0	0	0	0	1
1096	P	2	BF-1258	EDG 2 IMMERSION HEATER BREAKER	OS-041A	AUX	585	319	SR		CLS	CLS	N	277		0	0	0	0	1
640	P	2	BF-1259	BRKR, BATT RM VENT FAN 1-2	OS-035	AUX	585	319	SR		CLS	CLS	N	143		0	0	0	0	1
641	P	2	BF-1261	BRKR, EDG 2 SOAK PUMP MP1472	OS-041A SH 2	AUX	585	319	SR		CLS	CLS	N	133		0	0	0	0	1
642	P	2	BF-1270	BREAKER FOR FEEDER TO MCC YF1	OS-059 SH 1	AUX	585	319	SR		CLS	CLS	N	25		0	0	0	0	1
643	P	2	BF-1274	BRKR, SW PUMP STRAINER MF15-2	OS-020 SH 1	ITK	585	052	SR		CLS	CLS	N	135		0	0	0	0	1
644	P	2	BF-1275	BRKR, SW PMP STRNR DRAIN VALVE	OS-020 SH 1	ITK	585	052	SR		CLS	CLS	N	137		0	0	0	0	1
645	P	2	BF-1277	BRKR, SW ISO VLV - COOLING WTR	OS-020 SH 1	ITK	585	052	SR		CLS	CLS	N	160		0	0	0	0	1
646	P	2	BF-1278	BREAKER FR FEEDER TO MCC F12D	OS-059 SH 1	ITK	585	052	SR		CLS	CLS	N	27		0	0	0	0	1
647	P	2	BF-1281	BREAKER, SW - INTK FOREBAY VLV	OS-020 SH 1	ITK	585	052	SR		CLS	CLS	N	161		0	0	0	0	1
648	P	2	BF-1282	BRKER, SW - COLLECT BASIN VLV	OS-020 SH 1	ITK	585	052	SR		CLS	CLS	N	162		0	0	0	0	1
649	P	2	BF-1284	BREAKER FR FEEDER FRM MCC F12A	OS-059 SH 1	ITK	585	052	SR		CLS	CLS	N	26		0	0	0	0	1
225	P	2	BF-1285	BREAKER FOR PRZR SMPL LINE TO...HDR VLV	OS-001A SH 2	AUX	603	428	SR		CLS	CLS	N	163		0	0	1	0	0
650	P	2	BF-1289	BRKR, EDG 2 AC TURBO OIL PUMP	OS-041A SH 2	AUX	585	319	SR		CLS	CLS	N	145		0	0	0	0	1
226	P	2	BF-1401	HI/LO SPD STARTER FOR CAC FAN 2	OS-033A	AUX	603	428	SR		CLS	CLS	N	168		0	0	1	0	0
12	P	2	BF-1617	BRKR FOR MUP SUCT VLV MV3971	OS-002 SH 3	AUX	603	428	SR		CLS	CLS	N	164		1	0	0	0	0
180	P	2	BF-1617	BRKR FOR MUP SUCT VLV MV3971	OS-002 SH 3	AUX	603	428	SR		CLS	CLS	N	164		0	1	0	0	0
227	P	14	BF12	ESNTL PZR HTR BNK 2 SPLY PNL	OS-001A SH 2	AUX	603	428	SR	63	ON	ON	Y	125	ELECTRICAL	0	0	1	0	0
13	P	2	BRKR-A	CRDM TRIP BRKR-A C4606	E-65B SH 14	AUX	603	428	SR		CLS	OPN	Y	183	ELECTRICAL	1	0	0	0	0
14	P	2	BRKR-B	CRDM TRIP BRKR-B C4603	E-65B SH 13	AUX	603	429	SR		CLS	OPN	Y	183	ELECTRICAL	1	0	0	0	0
15	B	2	BRKR-C	CRDM TRIP BRKR-C C4612	E-65B SH 16	AUX	603	428	SR		CLS	OPN	Y	183	ELECTRICAL	1	0	0	0	0
16	B	2	BRKR-D	CRDM TRIP BRKR-D C4806	E-65B SH 15	AUX	603	402	SR		CLS	OPN	Y	183	ELECTRICAL	1	0	0	0	0
462	P	20	C 5755C	SFAS CHANNEL 2	OS-001A SH 1	AUX	623	502	SR		ON	ON	Y	311	ELECTRICAL	0	0	0	1	0
463	B	20	C 5761A	SFRCS ACTUATION CHANNEL 1	N/A	AUX	623	502	SR		ON	ON	Y	312	ELECTRICAL	0	0	0	1	0
552	B	20	C 5762A	SFRCS ACTUATION CHANNEL 1	N/A	AUX	623	502	SR		ON	ON	Y	312	ELECTRICAL	0	0	0	1	0
461	B	20	C 5762C	SFAS CHANNEL 1	OS-001A SH 1	AUX	623	502	SR		ON	ON	Y	311	ELECTRICAL	0	0	0	1	0
464	P	20	C 5792	SFRCS ACTUATION CHANNEL 2	N/A	AUX	623	502	SR		ON	ON	Y	312	ELECTRICAL	0	0	0	1	0
553	P	20	C 5792A	SFRCS ACTUATION CHANNEL 2	N/A	AUX	623	502	SR		ON	ON	Y	312	ELECTRICAL	0	0	0	1	0
1043	B	3	C1	4.16 KV SWITCH GEAR	OS-058 SH 1	AUX	585	325	SR		ON	ON	Y	299	ELECTRICAL	0	0	0	0	1
228	B	10	C1-1	CAC 1-1 (AIR SIDE FUNCTION)	OS-033A	CTM	585	217	SR	66	FAST	FAST	Y	167	ELECTRICAL	0	0	1	0	0
229	P	10	C1-2	CAC 1-2 (AIR SIDE FUNCTION)	OS-033A	CTM	585	217	SR	66	FAST	FAST	Y	168	ELECTRICAL	0	0	1	0	0
651	P	9	C133	VENT FAN FOR L.V.S.G. ROOM	OS-035	AUX	603	428	SR	36	STB	O/O	Y	117	ELECTRICAL	0	0	0	0	1
1202	B	3	C2	4.16 KV SWITCH GEAR		AUX	585	325	S	4	ON	ON	Y		ELECTRICAL	0	0	0	0	1
652	B	10	C21-1	CNTRL RM EMERG VENT SYS FAN1-1	OS-032B	AUX	638	603	SR	36	OFF	ON	Y	94	ELECTRICAL	0	0	0	0	1
653	P	10	C21-2	CNTRL RM EMERG VENT SYS FAN1-2	OS-032B	AUX	638	603	SR	36	OFF	ON	Y	95	ELECTRICAL	0	0	0	0	1
654	B	9	C25-1	SUPPLY FAN 1-1	OS-035	AUX	585	318	SR	36	OFF	ON	Y	130	ELECTRICAL	0	0	0	0	1
655	B	9	C25-2	SUPPLY FAN 1-2	OS-035	AUX	585	318	SR	36	OFF	ON	Y	131	ELECTRICAL	0	0	0	0	1
656	P	9	C25-3	EDG RM SUPPLY FAN	OS-035	AUX	585	319	SR	36	OFF	ON	Y	158	ELECTRICAL	0	0	0	0	1
657	P	9	C25-4	EDG SUPPLY FAN 1-4	OS-035	AUX	585	319	SR	36	OFF	ON	Y	159	ELECTRICAL	0	0	0	0	1
658	B	20	C3017	SW STRNR 1-1 DRAIN/BCKWASH VLV CABINET	OS-020 SH 1	ITK	576	052	SR		AUT	AUT	Y	134	ELECTRICAL	0	0	0	0	1
659	P	20	C3018	SW STRNR 1-2 DRAIN/BCKWASH VLV CABINET	OS-020 SH 1	ITK	576	052	SR		AUT	AUT	Y	135	ELECTRICAL	0	0	0	0	1
1064	P	10	C31-1	ECCS RM CLR 1-1 FAN	OS-034 SH 2	AUX	545	115	SR	36	STB	O/O	Y	148	ELECTRICAL	0	0	0	1	0
1065	P	10	C31-2	ECCS RM CLR 1-2 FAN	OS-034 SH 2	AUX	545	115	SR	36	STB	O/O	Y	149	ELECTRICAL	0	0	0	1	0
1066	B	10	C31-4	ECCS RM CLR 1-4 FAN	OS-034 SH 2	AUX	545	105	SR	36	STB	O/O	Y	146	ELECTRICAL	0	0	0	1	0
1067	B	10	C31-5	ECCS RM CLR 1-5 FAN	OS-034 SH 2	AUX	545	105	SR	36	STB	O/O	Y	147	ELECTRICAL	0	0	0	1	0
1041	B	20	C3615	EDG 1 CONTROL PANEL	OS-041A SH 1	AUX	585	318	SR	102	ON	ON	Y	356	ELECTRICAL	0	0	0	0	1
1042	P	20	C3616	EDG 2 CONTROL PANEL	OS-041A SH 2	AUX	585	319	SR	102	ON	ON	Y	355	ELECTRICAL	0	0	0	0	1
1097	B	20	C3617	EDG 1-1 STATIC EXCITER VOLTAGE REG PNL	OS-041A	AUX	585	318	SR		ON	ON	Y	352	ELECTRICAL	0	0	0	0	1

Seismic Review Safe Shutdown Equipment List (SSEL)

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1098	P	20	C3618	EDG 1-1 STATIC EXCITER VOLTAGE REG PNL	OS-041A	AUX	585	319	SR		ON	ON	Y	354	ELECTRICAL	0	0	0	0	1
660	B	20	C3621	EDG 1-1 ENGINE MNTD CTRL PNL	OS-041C	AUX	585	318	SR	46	ON	ON	Y	351	ELECTRICAL	0	0	0	0	1
1099	B	20	C3621A	EDG 1-1 IDLE START/STOP CONTROL PNL	OS-041B	AUX	585	318	SR		ON	ON	Y	351	ELECTRICAL	0	0	0	0	1
661	P	20	C3622	EDG 1-2 ENGINE MNTD CTRL PNL	OS-041C	AUX	585	319	SR	46	ON	ON	Y	353	ELECTRICAL	0	0	0	0	1
1100	P	20	C3622A	EDG 1-2 IDLE START/STOP CONTROL PNL	OS-041B	AUX	585	319	SR		ON	ON	Y	353	ELECTRICAL	0	0	0	0	1
1156	P	20	C3712	CABINET FOR PORTABLE RC TEMP IND TI5503		AUX	585	314	S		CLS	OPN	Y		MANUAL	1	0	1	1	0
1153	B	20	C3812	CABINET FOR PORTABLE RC TEMP IND TI5504		AUX	585	303	S		CLS	OPN	Y		MANUAL	1	0	1	1	0
281	C	20	C5755C	SFAS CHANNEL 2	OS-001A SH 1	AUX	623	502	SR		ON	ON	Y	311	ELECTRICAL	0	0	1	0	0
1187	P	20	C5755D	SFAS CHANNEL 2		AUX	623	502	S	4	ON	ON	Y		ELECTRICAL	0	0	0	0	1
1188	P	20	C5756C	SFAS CHANNEL 4		AUX	623	502	S	4	ON	ON	Y		ELECTRICAL	0	0	0	0	1
283	C	20	C5756D	SFAS CHANNEL 4	OS-001A SH 1	AUX	623	502	SR		ON	ON	Y	311	ELECTRICAL	0	0	1	0	0
1209	C	20	C5759D	CONTROL ROOM NON-NUCLEAR INST-X		AUX	623	502	S	4	ON	ON	Y		ELECTRICAL	0	0	0	0	1
1189	B	20	C5762A	SFRCS ACTUATION CHANNEL 1		AUX	623	502	S	4	ON	ON	Y		ELECTRICAL	0	0	0	0	1
280	C	20	C5762C	SFAS CHANNEL 1	OS-001A SH 1	AUX	623	502	SR		ON	ON	Y	311	ELECTRICAL	0	0	1	0	0
1192	B	20	C5762D	SFAS CHANNEL 1		AUX	623	502	S	4	ON	ON	Y		ELECTRICAL	0	0	0	0	1
1193	B	20	C5763C	SFAS CHANNEL 3		AUX	623	502	S	4	ON	ON	Y		ELECTRICAL	0	0	0	0	1
282	C	20	C5763D	SFAS CHANNEL 3	OS-001A SH1	AUX	623	502	SR		ON	ON	Y	311	ELECTRICAL	0	0	1	0	0
1185	P	20	C5792	SFRCS ACTUATION CHANNEL 2		AUX	623	502	S	4	ON	ON	Y		ELECTRICAL	0	0	0	0	1
662	B	9	C71-1	L.V.S.G. RM VENT FAN 1-1	OS-035	AUX	603	429	SR	36	STB	O/O	Y	116	ELECTRICAL	0	0	0	0	1
331	B	9	C73-1	AFP ROOM EXHAUST FAN	OS-036 SH 1	AUX	565	237	SR	92	STB	ON	Y	122	ELECTRICAL	0	0	0	1	0
332	P	9	C73-2	AFP ROOM EXHAUST FAN	OS-036 SH 1	AUX	565	238	SR	92	STB	ON	Y	123	ELECTRICAL	0	0	0	1	0
663	B	9	C75-1	CC PMP RM VENT FAN 1-1	OS-036 SH 1	AUX	585	328	SR	36	O/O	O/O	Y	96	ELECTRICAL	0	0	0	0	1
664	P	9	C75-2	CC PMP RM VENT FAN 1-2	OS-036 SH 1	AUX	585	328	SR	36	O/O	O/O	Y	97	ELECTRICAL	0	0	0	0	1
665	B	9	C78-1	BATTERY ROOM VENT FAN 1-1	OS-035	AUX	603	429B	SR	36	STB	O/O	Y	142	ELECTRICAL	0	0	0	0	1
666	P	9	C78-2	BATTERY ROOM VENT FAN 1-2	OS-035	AUX	603	428A	SR	36	STB	O/O	Y	143	ELECTRICAL	0	0	0	0	1
667	B	9	C99-1	EXHAUST FAN 1-1	OS-038B	ITK	585	52A	SR	36	O/O	O/O	Y	114	ELECTRICAL	0	0	0	0	1
668	B	9	C99-2	EXHAUST FAN 1-2	OS-038B	ITK	585	52A	SR	36	O/O	O/O	Y	118	ELECTRICAL	0	0	0	0	1
669	P	9	C99-3	EXHAUST FAN 1-3	OS-038B	ITK	585	52A	SR	36	O/O	O/O	Y	115	ELECTRICAL	0	0	0	0	1
670	P	9	C99-4	EXHAUST FAN 1-4	OS-038B	ITK	585	52A	SR	36	O/O	O/O	Y	119	ELECTRICAL	0	0	0	0	1
671	B	7	CC-1467	CCW FRM DH RMVL CLR 1-1...VLV	OS-021 SH 1	AUX	545	113	SR	33	CLS	OP/CL	Y	175	ELECTRICAL	0	0	0	0	1
672	P	7	CC-1469	CCW FRM DH RMVL CLR 1-2....VLV	OS-021 SH 1	AUX	545	113	SR	33	CLS	OP/CL	Y	176	ELECTRICAL	0	0	0	0	1
673	B	7	CC-1471	CC FRM EDG 1-1 SOL OUTLET VLV	OS-021 SH 1	AUX	585	318	SR	33	CLS	OP/CL	Y	177	ELECTRICAL	0	0	0	0	1
674	P	7	CC-1474	CC FRM EDG 1-2 SOL OUTLET VLV	OS-021 SH 1	AUX	585	319	SR	33	CLS	OP/CL	Y	178	ELECTRICAL	0	0	0	0	1
675	B	8A	CC-5095	CC LN 1 DISCH ISO VALVE	OS-021 SH 1	AUX	585	328	SR		OPN	OP/CL	Y	126	ELECTRICAL	0	0	0	0	1
676	P	8A	CC-5096	CC LN 2 DISCH ISO VALVE	OS-021 SH 1	AUX	585	328	SR		CLS	OP/CL	Y	127	ELECTRICAL	0	0	C	0	1
1197	B	20	CDE11C	DISCONNECT SWITCH CABINET		AUX	585	304	S	4	ON	ON	Y		ELECTRICAL	0	0	0	0	1
1166	B	20	CDE11D	DISCONNECT SWITCH CABINET		AUX	565	227	S	4	ON	ON	Y		ELECTRICAL	0	0	0	0	1
1159	B	20	CDE12A1	DISCONNECT SWITCH CABINET		AUX	603	429	S	4	ON	ON	Y		ELECTRICAL	0	0	0	0	1
1183	B	20	CDE12C	DISCONNECT SWITCH CABINET		ITK	576	051	S	4	ON	ON	Y		ELECTRICAL	0	0	0	0	1
1204	P	20	CDF11A2	DISCONNECT SWITCH CABINET		AUX	603	427	S	4	ON	ON	Y		ELECTRICAL	0	0	0	0	1
1169	P	20	CDF11C	DISCONNECT SWITCH CABINET		AUX	565	236	S	4	ON	ON	Y		ELECTRICAL	0	0	0	0	1
1184	P	20	CDF11D	DISCONNECT SWITCH CABINET		AUX	565	227	S	4	ON	ON	Y		ELECTRICAL	0	0	0	0	1
1162	P	20	CDF12A1	DISCONNECT SWITCH CABINET		AUX	603	428	S	4	ON	ON	Y		ELECTRICAL	0	0	0	0	1
1170	P	20	CDF12A2	DISCONNECT SWITCH CABINET		AUX	603	428	S	4	ON	ON	Y		ELECTRICAL	0	0	0	0	1
677	B	4	CE1-1	4.16 KV-480V TRANSFORMER	OS-059 SH 1	AUX	603	429	SR		ON	ON	Y	278	ELECTRICAL	0	0	0	0	1
1147	C	8A	CF-1A	CORE FLOOD TANK 2 ISO VLV	OS-006	CTM	565	217	S	18	OPN	CLS	Y		ELECTRICAL	0	1	0	0	0
1148	C	8A	CF-1B	CORE FLOOD TANK 1 ISO VLV	OS-006	CTM	565	214	S	18	OPN	CLS	Y		ELECTRICAL	0	1	0	0	0
1060	P	3	D1	4.16 KV SWITCH GEAR	OS-058 SH 2	AUX	585	323	SR		ON	ON	Y	350	ELECTRICAL	0	0	0	0	1
678	B	2	D101	BRKR FOR +125VDC DIST PNL D1P	OS-060 SH 1	AUX	603	429	SR		CLS	CLS	N	30		0	0	0	0	1

Seismic Review Safe Shutdown Equipment List (SSEL)

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679	B	2	D102	BRKR FOR +125VDC DIST PNL D2P	OS-060 SH 1	AUX	603	429	SR	42	OPN	CLS	Y	31	ELECTRICAL	0	0	0	0	1
680	B	2	D103	BREAKER FOR + SUPPLY FRM DBC1P	OS-060 SH 1	AUX	603	429	SR		CLS	CLS	N	29		0	0	0	0	1
681	B	2	D104	BREAKER FOR STATION BATT 1P	OS-060 SH 1	AUX	603	429	SR		CLS	CLS	N	28		0	0	0	0	1
682	B	2	D111	BRKR FR EMERG LIGHT XFER SWT 1	OS-060 SH 1	AUX	603	429	SR		CLS	CLS	N	32		0	0	0	0	1
684	B	2	D112	BRKR FR EMERG LIGHT XFER SWT 3	OS-060 SH 1	AUX	603	429	SR		CLS	CLS	N	33		0	0	0	0	1
683	B	2	D116	BREAKER FOR INVERTER YVA	OS-060 SH 1	AUX	603	429	SR		CLS	CLS	N	34		0	0	0	0	1
103	B	2	D117	BKR FOR MUP1 DC OIL PMP	OS-002 SH 4	AUX	603	429	SR		CLS	CLS	N	104		1	0	0	0	0
195	B	2	D117	BKR FOR MUP1 DC OIL PMP	OS-002 SH 4	AUX	603	429	SR		CLS	CLS	N	104		0	1	0	0	0
685	B	2	D131	BREAKER FOR STATION BATT 1N	OS-060 SH 1	AUX	603	429	SR		CLS	CLS	N	35		0	0	0	0	1
686	B	2	D132	BRKR FOR -125VDC DIST PNL	OS-060 SH 1	AUX	603	429	SR		CLS	CLS	N	36		0	0	0	0	1
687	B	2	D133	BRKR FOR -125VDC DIST PNL D2N	OS-060 SH 1	AUX	603	429	SR	42	OPN	CLS	Y	37	ELECTRICAL	0	0	0	0	1
688	B	2	D134	BRKR FOR - SUPPLY FROM DBC1N	OS-060 SH 1	AUX	603	429	SR		CLS	CLS	N	43		0	0	0	0	1
333	B	2	D135	BREAKER FOR AFP TURB 1 MS INLT ISO VALVE	OS-017B SH 1	AUX	603	429	SR		CLS	CLS	N	250		0	0	0	1	0
703	B	2	D145	BRKR FOR D1NA	OS-060 SH 1	AUX	603	429	SR		CLS	CLS	N	38		0	0	0	0	1
689	C	14	D1N	ESSEN DIST PNL "D1N"	OS-060 SH 2	AUX	603	429A	SR		ON	ON	Y	53	ELECTRICAL	0	0	0	0	1
690	B	2	D1N 01	BREAKER FOR INCOMING DC MCC 1	OS-060 SH 2	AUX	603	429A	SR		CLS	CLS	N	53		0	0	0	0	1
691	P	2	D1N 02	BRKR FOR INCOMNG FRM DC MCC 2	OS-060 SH 2	AUX	603	429A	SR	41	OPN	CLS	Y	53	ELECTRICAL	0	0	0	0	1
692	C	2	D1N 03	BREAKER FOR INVERTER YV3	OS-060 SH 2	AUX	603	429A	SR		CLS	CLS	N	53		0	0	0	0	1
1103	P	20	D1N09	DISC SW FOR EDG 1-1 FUNCTION C3615 (ALT)		AUX	603	429A	SR		CLS	CLS	N	53		0	0	0	0	1
706	B	2	D1NA	ESSENTIAL -125VDC DIST PNL CH1	OS-060 SH 1	AUX	603	429	SR		ON	ON	Y	38	ELECTRICAL	0	0	0	0	1
694	C	14	D1P	ESSEN DIST PNL "D1P"	OS-060 SH 2	AUX	603	429	SR		ON	ON	Y	55	ELECTRICAL	0	0	0	0	1
695	B	2	D1P 01	BREAKER FOR DC MCC 1	OS-060 SH 2	AUX	603	429	SR		CLS	CLS	N	55		0	0	0	0	1
696	P	2	D1P 02	BREAKER FOR DC MCC 2	OS-060 SH 2	AUX	603	429	SR	41	OPN	CLS	Y	55	ELECTRICAL	0	0	0	0	1
697	C	2	D1P 03	BREAKER FOR INVERTER YV1	OS-060 SH 2	AUX	603	429	SR		CLS	CLS	N	55		0	0	0	0	1
1102	B	20	D1P09	DISC SW FOR EDG 1-1 FUNCTION C3615		AUX	603	429	SR		CLS	CLS	N	55		0	0	0	0	1
334	B	2	D1P20	CIRCUIT D1P20	OS-017B SH 1	AUX	603	429	SR		CLS	CLS	N	72		0	0	0	1	0
1190	B	14	D1PA	125/250 VDC MCC		AUX	603	429	S	4	ON	ON	Y		ELECTRICAL	0	0	0	0	1
1203	P	3	D2	4.16 KV SWITCH GEAR		AUX	585	323	S	4	ON	ON	Y		ELECTRICAL	0	0	0	0	1
699	P	2	D201	BRKR FOR +125VDC DISTR PNL D1P	OS-060 SH 1	AUX	603	428	SR	41	OPN	CLS	Y	41	ELECTRICAL	0	0	0	0	1
700	P	2	D202	BRKR FR +125VDC DIST PNL D2P	OS-060 SH 1	AUX	603	428	SR		CLS	CLS	N	42		0	0	0	0	1
701	P	2	D203	BREAKER FOR + SUPPLY FRM DBC2P	OS-060 SH 1	AUX	603	428	SR		CLS	CLS	N	40		0	0	0	0	1
702	P	2	D204	BRKR FOR INCOM PW FRM BATT 2P	OS-060 SH 1	AUX	603	428	SR		CLS	CLS	N	39		0	0	0	0	1
704	P	2	D212	BRKR FR EMERG LIGHT XFER SWT 4	OS-060 SH 1	AUX	603	428	SR		CLS	CLS	N	44		0	0	0	0	1
705	P	2	D216	BREAKER FOR INVERTER YVB	OS-060 SH 1	AUX	603	428	SR		CLS	CLS	N	45		0	0	0	0	1
104	P	2	D217	BKR FOR MUP2 DC OIL PMP	OS-002 SH 4	AUX	603	428	SR		CLS	CLS	N	108		1	0	0	0	0
198	P	2	D217	BKR FOR MUP2 DC OIL PMP	OS-002 SH 4	AUX	603	428	SR		CLS	CLS	N	108		0	1	0	0	0
707	P	2	D231	BREAKER FOR BATT STATION 2N	OS-060 SH 1	AUX	603	428	SR		CLS	CLS	N	49		0	0	0	0	1
708	P	2	D232	BRKR FR -125V DC DIST PNL D1N	OS-060 SH 1	AUX	603	428	SR	41	OPN	CLS	Y	46	ELECTRICAL	0	0	0	0	1
709	P	2	D233	BRKR FR -125V DC DIST PNL D2N	OS-060 SH 1	AUX	603	428	SR		CLS	CLS	N	47		0	0	0	0	1
710	P	2	D234	BRKR FOR - SUPPLY FRM DBC2N	OS-060 SH 1	AUX	603	428	SR		CLS	CLS	N	48		0	0	0	0	1
711	C	14	D2N	ESSEN DIST PNL "D2N"	OS-060 SH 2	AUX	603	428B	SR		ON	ON	Y	56	ELECTRICAL	0	0	0	0	1
712	P	2	D2N 01	BREAKER FOR DC MCC D1	OS-060 SH 2	AUX	603	428	SR		CLS	CLS	N	56		0	0	0	0	1
713	B	2	D2N 02	BREAKER FOR DC MCC D2	OS-060 SH 2	AUX	603	428	SR	42	OPN	CLS	Y	56	ELECTRICAL	0	0	0	0	1
714	C	2	D2N 03	BREAKER FOR INVERTER YV4	OS-060 SH 2	AUX	603	428	SR		CLS	CLS	N	56		0	0	0	0	1
1104	P	20	D2N09	DISC SW FOR EDG 1-2 FUNCTION C3616 (ALT)		AUX	603	428	SR		ON	ON	Y	56	ELECTRICAL	0	0	0	0	1
715	C	14	D2P	ESSNTL +125VDC DISTBTN PNL CH2	OS-060 SH 2	AUX	603	428	SR		ON	ON	Y	54	ELECTRICAL	0	0	0	0	1
716	P	2	D2P 01	BREAKER FOR DC MCC 2	OS-060 SH 2	AUX	603	428	SR		CLS	CLS	N	54		0	0	0	0	1
717	B	2	D2P 02	BREAKER FOR DC MCC 1	OS-060 SH 2	AUX	603	428	SR	42	OPN	CLS	Y	54	ELECTRICAL	0	0	0	0	1
718	C	2	D2P 03	BREAKER FOR INVERTER YV2	OS-060 SH 2	AUX	603	428	SR		CLS	CLS	N	54		0	0	0	0	1

Seismic Review Safe Shutdown Equipment List (SSEL)

Line No.	Train	Equip Class	Equipment ID Number	System/Equipment Description	Drawing Number	Bldg	Elev	Room No.	Eval Cat.	Note	Normal State	Desired State	Pwr Reqd	G.4 Form Number	Support System	RC	IC	PC	DH	SU
1101	P	20	D2P09	DISC SW FOR EDG 1-2 FUNCTION C3616		AUX	603	428	SR		ON	ON	Y	54	ELECTRICAL	0	0	0	0	1
335	P	2	D2P20	CIRCUIT D2P20	OS-017B SH 1	AUX	603	428	SR		CLS	CLS	N	73		0	0	0	1	0
719	B	8B	DA-3783	EDG AIR RCVR 1-1-1 TO AIR..VLV	OS-041B	AUX	585	318	SR		OPN	CLS	Y	186	ELECTRICAL	0	0	0	0	1
720	B	8B	DA-3784	EDG AIR RCVR 1-1-2 TO AIR..VLV	OS-041B	AUX	585	318	SR		OPN	CLS	Y	187	ELECTRICAL	0	0	0	0	1
721	P	8B	DA-3785	EDG AIR RCVR 1-2-1 TO AIR..VLV	OS-041B	AUX	585	319	SR		OPN	CLS	Y	188	ELECTRICAL	0	0	0	0	1
722	P	8B	DA-3786	EDG AIR RCVR 1-2-2 TO AIR..VLV	OS-041B	AUX	585	319	SR		OPN	CLS	Y	189	ELECTRICAL	0	0	0	0	1
723	B	16	DBC1N	BATTERY CHARGER -125V dc	OS-060 SH 1	AUX	603	429	SR		ON	ON	Y	57	ELECTRICAL	0	0	0	0	1
724	B	16	DBC1P	BATT CHARGER FOR BATT 1P +125V	OS-060 SH 1	AUX	603	429	SR		ON	ON	Y	57	ELECTRICAL	0	0	0	0	1
725	P	16	DBC2N	BATTERY CHARGER 125V dc	OS-060 SH 1	AUX	603	428	SR		ON	ON	Y	57	ELECTRICAL	0	0	0	0	1
726	P	16	DBC2P	BATTERY CHARGER +125V	OS-060 SH 1	AUX	603	428	SR		ON	ON	Y	57	ELECTRICAL	0	0	0	0	1
693	B	14	DC MCC-1	DC BUS TRAIN 1	OS-060 SH 1	AUX	603	429	SR		ON	ON	Y	28	ELECTRICAL	0	0	0	0	1
698	P	14	DC MCC-2	DC BUS TRAIN 2	OS-060 SH 1	AUX	603	428	SR		ON	ON	Y	39	ELECTRICAL	0	0	0	0	1
727	P	4	DF1-2	4.16kV-480V TRANSFORMER	OS-059 SH 1	AUX	603	428	SR		ON	ON	Y	279	ELECTRICAL	0	0	0	0	1
232	P	8A	DH-11	RCS TO DH SYSTEM ISO VALVE	OS-004 SH 1	CTM	565	290	SR	64	CLS	OPN	Y	100	ELECTRICAL	0	0	1	0	0
337	C	8A	DH-11	RCS TO DH SYSTEM ISO VALVE	OS-004 SH 1	CTM	565	290	SR		CLS	OPN	Y	100	ELECTRICAL	0	0	0	1	0
233	P	8A	DH-12	RCS TO DH SYSTEM ISO VALVE	OS-004 SH 1	CTM	565	290	SR		CLS	OPN	Y	99	ELECTRICAL	0	0	1	0	0
338	C	8A	DH-12	RCS TO DH SYSTEM ISO VALVE	OS-004 SH 1	CTM	565	290	SR		CLS	OPN	Y	99	ELECTRICAL	0	0	0	1	0
343	C	8A	DH-1517	DH PUMP 1-1 SUCTION FROM RCS VALVE	OS-004 SH 1	AUX	565	236	SR	88	CLS	OP/CL	Y	83	ELECTRICAL	0	0	0	1	0
344	C	8A	DH-1518	DH PUMP 1-2 SUCTION FROM RCS	OS-004 SH 1	AUX	565	236	SR	84	CLS	OP/CL	Y	84	ELECTRICAL	0	0	0	1	0
345	P	8A	DH-1A	DH COOLER 1-2 DISCH TO RCS ISO VALVE	OS-004 SH 1	AUX	565	236	SR	82	OPN	THR	Y	79	ELECTRICAL	0	0	0	1	0
346	B	8A	DH-1B	DH COOLER 1-1 DISCH TO RCS ISO VALVE	OS-004 SH 1	AUX	565	208	SR	87	OPN	THR	Y	78	ELECTRICAL	0	0	0	1	0
350	B	8A	DH-2733	DH PMP 1-1 SUC (BWST OR EMERG SUMP) VLV	OS-004 SH 1	AUX	545	105	SR		OPN	CLS	Y	81	ELECTRICAL	0	0	0	1	0
351	P	8A	DH-2734	DH PMP 1-2 SUC (BWST OR EMERG SUMP) VLV	OS-004 SH 1	AUX	545	113	SR		OPN	CLS	Y	82	ELECTRICAL	0	0	0	1	0
234	P	7	DH-4849	DH COOLDOWN LN RELIEF TO EMERG SUMP VLV	OS-004 SH 1	CTM	565	220	S	68	CLS	OP/CL	N			0	0	1	0	0
729	B	2	E1	480V ESSENTIAL UNIT SUBSTATION	OS-059 SH 1	AUX	603	429	SR		ON	ON	Y	59	ELECTRICAL	0	0	0	0	1
730	B	21	E10-1	EMERG DIESEL GEN JCKT HT XCHNG	OS-021 SH 1	AUX	585	318	S		ON	ON	N			0	0	0	0	1
731	P	21	E10-2	EDG JACKET CW HT XCHANGER 1-2	OS-021 SH 1	AUX	585	319	S		ON	ON	N			0	0	0	0	1
732	B	10	E106-1	COOLING COIL 1-1	OS-032B	AUX	638	603	S	34	ON	ON	N			0	0	0	0	1
733	P	10	E106-2	COOLING COIL 1-2	OS-032B	AUX	638	603	S	34	ON	ON	N			0	0	0	0	1
1044	B	1	E11A	480V ESSENTIAL MCC	OS-059 SH 1	AUX	565	209	SR		ON	ON	Y	62	ELECTRICAL	0	0	0	0	1
865	B	1	E11B	480V ESSENTIAL MCC	OS-059 SH 1	AUX	585	304	SR	86	ON	ON	Y	1	ELECTRICAL	0	0	0	0	1
1218	B	1	E11B	480V ESSENTIAL MCC	OS-059 SH 1	AUX	585	304	SR	86	ON	ON	Y	3	ELECTRICAL	0	0	0	0	1
866	B	1	E11C	480V ESSENTIAL MCC	OS-059 SH 1	AUX	585	304	SR		ON	ON	Y	62	ELECTRICAL	0	0	0	0	1
1046	B	1	E11D	480V ESSENTIAL MCC	OS-059 SH 1	AUX	565	227	SR		ON	ON	Y	5	ELECTRICAL	0	0	0	0	1
867	B	1	E11E	480V ESSENTIAL MCC	OS-059 SH 1	AUX	603	402	SR		ON	ON	Y	4	ELECTRICAL	0	0	0	0	1
1219	B	1	E11E	480V ESSENTIAL MCC	OS-059 SH 1	AUX	603	402	SR		ON	ON	Y	6	ELECTRICAL	0	0	0	0	1
868	B	1	E12A	480V ESSENTIAL MCC	OS-059 SH 1	AUX	603	429	SR		ON	ON	Y	61	ELECTRICAL	0	0	0	0	1
869	B	1	E12B	480V ESSENTIAL MCC	OS-059 SH 1	AUX	585	318	SR		ON	ON	Y	282	ELECTRICAL	0	0	0	0	1
870	B	1	E12C	480V ESSENTIAL MCC	OS-059 SH 1	ITK	576	051	SR		ON	ON	Y	7	ELECTRICAL	0	0	0	0	1
1220	B	1	E12C	480V ESSENTIAL MCC	OS-059 SH 1	ITK	576	051	SR		ON	ON	Y	13	ELECTRICAL	0	0	0	0	1
1048	B	1	E12E	480V ESSENTIAL MCC	OS-059 SH 1	AUX	545	101	SR		ON	ON	Y	8	ELECTRICAL	0	0	0	0	1
1221	B	1	E12E	480V ESSENTIAL MCC	OS-059 SH 1	AUX	545	101	SR		ON	ON	Y	14	ELECTRICAL	0	0	0	0	1
871	B	1	E12F	480V ESSENTIAL MCC	OS-059 SH 1	AUX	585	318	SR		ON	ON	Y	11	ELECTRICAL	0	0	0	0	1
1222	B	1	E12F	480V ESSENTIAL MCC	OS-059 SH 1	AUX	585	318	SR		ON	ON	Y	15	ELECTRICAL	0	0	0	0	1
872	B	1	E14	480V ESSENTIAL MCC	OS-059 SH 1	AUX	603	429	SR		ON	ON	Y	63	ELECTRICAL	0	0	0	0	1
1198	B	1	E16B	480V ESSENTIAL MCC		AUX	603	402	S	4	ON	ON	Y		ELECTRICAL	0	0	0	0	1
736	B	21	E19B-1	HP INJ PUMP BRG OIL COOLER 1-1	OS-021 SH 1	AUX	545	105	S		ON	ON	N			0	0	0	0	1
737	P	21	E19B-2	HP INJ PUMP BRG OIL COOLER 1-2	OS-021 SH 1	AUX	545	115	S		ON	ON	N			0	0	0	0	1
738	B	21	E22-1	COMP. COOLING HEAT XCHANGR 1-1	OS-020 SH 1	AUX	585	328	S		ON	ON	N			0	0	0	0	1

Seismic Review Safe Shutdown Equipment List (SSEL)

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1027	B	21	E22-1	COMP. COOLING HEAT XCHANGR 1-1	OS-021 SH 1	AUX	585	328	S		ON	ON	N			0	0	0	0	1
739	P	21	E22-2	COMP. COOLING HEAT XCHANGR 1-2	OS-020 SH 1	AUX	585	328	S		ON	ON	N			0	0	0	0	1
1029	P	21	E22-2	COMP. COOLING HEAT XCHANGR 1-2	OS-021 SH 1	AUX	585	328	S		ON	ON	N			0	0	0	0	1
740	B	21	E22-3	COMP. COOLING HEAT XCHANGR 1-3	OS-020 SH 1	AUX	585	328	S		ON	N/A	N			0	0	0	0	1
1028	B	21	E22-3	COMP. COOLING HEAT XCHANGR 1-3	OS-021 SH 1	AUX	585	328	S		ON	N/A	N			0	0	0	0	1
23	C	21	E26-1	SEAL RETURN COOLER 1-1	OS-002 SH 2	AUX	565	208	S		OFF	OFF	N			1	0	0	0	0
141	C	21	E26-1	SEAL RETURN COOLER 1-1	OS-002 SH 2	AUX	565	208	S		OFF	OFF	N			0	1	0	0	0
24	C	21	E26-2	SEAL RETURN COOLER 1-2	OS-002 SH 2	AUX	565	208	S		ON	N/A	N			1	0	0	0	0
142	C	21	E26-2	SEAL RETURN COOLER 1-2	OS-002 SH 2	AUX	565	208	S		ON	ON	N			0	1	0	0	0
25	C	21	E27-1	DECAY HEAT REMOVAL COOLER 1-1	OS-004 SH 1	AUX	545	113	S		ON	N/A	N			1	0	0	0	0
357	B	21	E27-1	DECAY HEAT REMOVAL COOLER 1-1	OS-004 SH 1	AUX	545	113	S	79	ON	ON	N			0	0	0	1	0
26	C	21	E27-2	DECAY HEAT REMOVAL COOLER 1-2	OS-004 SH 1	AUX	545	113	S		ON	N/A	N			1	0	0	0	0
358	P	21	E27-2	DECAY HEAT REMOVAL COOLER 1-2	OS-004 SH 1	AUX	545	113	S	79	ON	ON	N			0	0	0	1	0
27	C	21	E34	BWST HEATER	OS-007	AUX	565	209	S	99	ON	N/A	N			1	0	0	0	0
148	C	21	E34	BWST HEATER	OS-007	AUX	565	209	S	99	ON	N/A	N			0	1	0	0	0
235	B	10	E37-1	CAC COIL 1-1 (SW SIDE)	OS-033A	CTM	585	317	S	79	ON	ON	N			0	0	1	0	0
741	B	10	E37-1	CAC COIL 1-1 (SW SIDE)	OS-020 SH 1	CTM	585	317	S		ON	ON	N			0	0	0	0	1
236	P	10	E37-2	CAC COIL 1-2 (SW SIDE)	OS-033A	CTM	585	317	S	79	ON	ON	N			0	0	1	0	0
742	B	10	E37-2	CAC COIL 1-2 (SW SIDE)	OS-020 SH 1	CTM	585	317	S		ON	ON	N			0	0	0	0	1
743	B	10	E37-3	CTMT AIR COOLER 1-3	OS-020 SH 1	CTM	585	317	S		OFF	OFF	N			0	0	0	0	1
744	P	10	E42-1	ECCS ROOM COOLER COIL 1-1	OS-020 SH 1	AUX	545	115	S		ON	N/A	N			0	0	0	0	1
745	P	10	E42-2	ECCS ROOM COOLER COIL 1-2	OS-020 SH 1	AUX	545	115	S		ON	N/A	N			0	0	0	0	1
746	P	10	E42-3	ECCS ROOM COOLER COIL 1-3	OS-020 SH 1	AUX	545	113	S		ON	N/A	N			0	0	0	0	1
747	B	10	E42-4	ECCS ROOM COOLER COIL 1-4	OS-020 SH 1	AUX	545	105	S		ON	N/A	N			0	0	0	0	1
748	B	10	E42-5	ECCS ROOM COOLER COIL 1-5	OS-020 SH 1	AUX	545	105	S		ON	N/A	N			0	0	0	0	1
749	B	20	EI-4553	BUS Y1A VOLTMETER	OS-060 SH 2	AUX	623	505	SR		ON	ON	Y	52	ELECTRICAL	0	0	0	0	1
750	P	20	EI-4554	BUS Y2A VOLTMETER	OS-060 SH 2	AUX	623	505	SR		ON	ON	Y	52	ELECTRICAL	0	0	0	0	1
1057	B	20	EI-6271	BUS D1P VOLTMETER	OS-060 SH 2	AUX	623	505	SR		ON	ON	Y	52	ELECTRICAL	0	0	0	0	1
1058	P	20	EI-6272	BUS D2N VOLTMETER	OS-060 SH 2	AUX	623	505	SR		ON	ON	Y	52	ELECTRICAL	0	0	0	0	1
751	B	20	EI-6273	BUS 1P-BUS INCOMING VOLTMETER	OS-060 SH 1	AUX	623	502	SR		ON	ON	Y	52	ELECTRICAL	0	0	0	0	1
752	P	20	EI-6274	BUS 2P-BUS 2N VOLTMETER	OS-060 SH 1	AUX	623	502	SR		ON	ON	Y	52	ELECTRICAL	0	0	0	0	1
1059	B	20	EI-6275	BUS D1N VOLTMETER	OS-060 SH 2	AUX	623	505	SR		ON	ON	Y	52	ELECTRICAL	0	0	0	0	1
753	P	20	EI-6276	BUS D2P VOLTMETER	OS-060 SH 2	AUX	623	502	SR		ON	ON	Y	52	ELECTRICAL	0	0	0	0	1
754	B	20	EI-6277	BUS Y1 VOLTMETER	OS-060 SH 2	AUX	623	505	SR		ON	ON	Y	52	ELECTRICAL	0	0	0	0	1
755	P	20	EI-6278	BUS Y4 VOLTMETER	OS-060 SH 2	AUX	623	505	SR		ON	ON	Y	52	ELECTRICAL	0	0	0	0	1
756	B	20	EI-6281	BUS Y3 VOLTMETER	OS-060 SH 2	AUX	623	505	SR		ON	ON	Y	52	ELECTRICAL	0	0	0	0	1
757	P	20	EI-6282	BUS Y2 VOLTMETER	OS-060 SH 2	AUX	623	505	SR		ON	ON	Y	52	ELECTRICAL	0	0	0	0	1
758	B	20	EI-6297	BUS YAU VOLTMETER	OS-060 SH 1	AUX	623	505	SR		ON	ON	Y	52	ELECTRICAL	0	0	0	0	1
759	P	20	EI-6298	BUS YBU VOLTMETER	OS-060 SH 1	AUX	623	505	SR		ON	ON	Y	52	ELECTRICAL	0	0	0	0	1
760	P	2	F1	480V ESSENTIAL UNIT SUBSTATION	OS-059 SH 1	AUX	603	428	SR		ON	ON	Y	60	ELECTRICAL	0	0	0	0	1
873	P	1	F11A	480V ESSENTIAL MCC	OS-059 SH 1	AUX	603	427	SR		ON	ON	Y	68	ELECTRICAL	0	0	0	0	1
874	P	1	F11B	480V ESSENTIAL MCC	OS-059 SH 1	AUX	603	405	SR		ON	ON	Y	19	ELECTRICAL	0	0	0	0	1
1223	P	1	F11B	480V ESSENTIAL MCC	OS-059 SH 1	AUX	603	405	SR		ON	ON	Y	20	ELECTRICAL	0	0	0	0	1
1049	P	1	F11C	480V ESSENTIAL MCC	OS-059 SH 1	AUX	565	236	SR		ON	ON	Y	281	ELECTRICAL	0	0	0	0	1
1045	P	1	F11D	480V ESSENTIAL MCC	OS-059 SH 1	AUX	565	227	SR		ON	ON	Y	17	ELECTRICAL	0	0	0	0	1
1224	P	1	F11D	480V ESSENTIAL MCC	OS-059 SH 1	AUX	565	227	SR		ON	ON	Y	21	ELECTRICAL	0	0	0	0	1
1084	P	1	F11E	480V ESSENTIAL MCC	OS-059 SH 1	AUX	545	101	SR		ON	ON	Y	16	ELECTRICAL	0	0	0	0	1
1225	P	1	F11E	480V ESSENTIAL MCC	OS-059 SH 1	AUX	545	101	SR		ON	ON	Y	22	ELECTRICAL	0	0	0	0	1
875	P	1	F12A	480V ESSENTIAL MCC	OS-059 SH 1	AUX	603	428	SR		ON	ON	Y	67	ELECTRICAL	0	0	0	0	1

Seismic Review Safe Shutdown Equipment List (SSEL)

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876	P	1	F12B	480V ESSENTIAL MCC	OS-059 SH 1	AUX	585	319	SR		ON	ON	Y	280	ELECTRICAL	0	0	0	0	1
877	P	1	F12C	480V ESSENTIAL MCC	OS-059 SH 1	ITK	576	052	SR		ON	ON	Y	26	ELECTRICAL	0	0	0	0	1
878	P	1	F12D	480V ESSENTIAL MCC	OS-059 SH 1	ITK	576	052	SR		ON	ON	Y	27	ELECTRICAL	0	0	0	0	1
879	P	1	F14	480V ESSENTIAL MCC	OS-059 SH 1	AUX	603	428	SR		ON	ON	Y	65	ELECTRICAL	0	0	0	0	1
761	B	0	F15-1	SERVICE WATER STRAINER 1-1	OS-020 SH 1	ITK	576	052	SR		STB	O/O	Y	134	ELECTRICAL	0	0	0	0	1
762	P	0	F15-2	SERVICE WATER STRAINER 1-2	OS-020 SH 1	ITK	576	052	SR		STB	O/O	Y	135	ELECTRICAL	0	0	0	0	1
1047	P	1	F16A	480V ESSENTIAL MCC	OS-059 SH 1	AUX	603	428	SR		ON	ON	Y	69	ELECTRICAL	0	0	0	0	1
763	B	18	FIS 1422C	CC PMP 1-1 DISCH FLOW INDIC SW	OS-021 SH 1	AUX	585	328	SR	1	ON	ON	Y	289	ELECTRICAL	0	0	0	0	1
1181	P	18	FIS 1422D	CC PMP 1-1 DISCH FLOW INDIC SW		AUX	585	328	S	4	ON	ON	Y		ELECTRICAL	0	0	0	0	1
1178	B	18	FIS 1427C	CC PMP 1-3 DISCH FLOW INDIC SW		AUX	585	328	S	4	ON	ON	Y		ELECTRICAL	0	0	0	0	1
1182	P	18	FIS 1427D	CC PMP 1-3 DISCH FLOW INDIC SW		AUX	585	328	S	4	ON	ON	Y		ELECTRICAL	0	0	0	0	1
1177	B	18	FIS 1432C	CC PMP 1-2 DISCH FLOW INDIC SW		AUX	585	328	S	4	ON	ON	Y		ELECTRICAL	0	0	0	0	1
764	P	18	FIS 1432D	CC PMP 1-2 DISCH FLOW INDIC SW	OS-021 SH 1	AUX	585	328	SR	1	ON	ON	Y	298	ELECTRICAL	0	0	0	0	1
359	P	18	FT DH2A	LO PRESSURE INJ LINE 2 FLOW TRANSMITTER	OS-004 SH 1	AUX	565	236	SR		ON	ON	Y	310	ELECTRICAL	0	0	0	1	0
360	B	18	FT DH2B	LP INJ LINE 1 FLOW TRANSMITTER	OS-004 SH 1	AUX	545	105	SR		ON	ON	Y	310	ELECTRICAL	0	0	0	1	0
361	P	20	FYI-DH2A	LP INJECTION LINE 2 FLOW RELAY INDICATOR	OS-004 SH 1	AUX	623	505	SR	1	ON	ON	Y	310	ELECTRICAL	0	0	0	1	0
362	B	20	FYI-DH2B	LP INJECTION LINE 1 FLOW RELAY INDICATOR	OS-004 SH 1	AUX	623	505	SR	1	ON	ON	Y	310	ELECTRICAL	0	0	0	1	0
45	B	20	GRP IN LMT	ROD GROUP IN LIMIT LIGHTS	N/A - CBNT C5706	AUX	623	505	SR		ON	ON	Y	313	ELECTRICAL	1	0	0	0	0
542	P	20	HIS 100	HS FOR MSIV 100	OS-008 SH 1	AUX	623	505	SR		ON	ON	Y	303	ELECTRICAL	0	0	0	1	0
548	C	20	HIS 100B	SFRCS CH 2 BLOCK SW	N/A	AUX	623	505	SR		ON	ON	Y	312	ELECTRICAL	0	0	0	1	0
549	C	20	HIS 100C	SFRCS CH 4 BLOCK SW	N/A	AUX	623	505	SR		ON	ON	Y	312	ELECTRICAL	0	0	0	1	0
543	B	20	HIS 101	HS FOR MSIV 101	OS-008 SH 1	AUX	623	505	SR		ON	ON	Y	303	ELECTRICAL	0	0	0	1	0
550	C	20	HIS 101B	SFRCS CH 1 BLOCK SW	N/A	AUX	623	505	SR		ON	ON	Y	312	ELECTRICAL	0	0	0	1	0
551	C	20	HIS 101C	SFRCS CH 3 BLOCK SW	N/A	AUX	623	505	SR		ON	ON	Y	312	ELECTRICAL	0	0	0	1	0
363	B	20	HIS 106A	AFP TURB 1-1 MS ISO VALVE SG 1-1 HIS	OS-017B SH 1	AUX	623	505	SR		ON	ON	Y	250	ELECTRICAL	0	0	0	1	0
364	P	20	HIS 107A	AFP TURB 1-2 MS ISO VALVE SG 1-2 HIS	OS-017B SH 1	AUX	623	505	SR		ON	ON	Y	153	ELECTRICAL	0	0	0	1	0
1019	B	20	HIS 1356	CTMT CLR 1 SW OUTLET VALVE HIS IN C5716	OS-020 SH 1	AUX	623	505	SR		ON	ON	Y	265	ELECTRICAL	0	0	0	0	1
1020	P	20	HIS 1357	CTMT CLR 2 SW OUTLET VALVE HIS IN C5716	OS-020 SH 1	AUX	623	505	SR		ON	ON	Y	266	ELECTRICAL	0	0	0	0	1
1021	B	20	HIS 1366	CTMT CLR 1 SW INLT ISO VALVE HIS, C5716	OS-020 SH 1	AUX	623	505	SR		ON	ON	Y	86	ELECTRICAL	0	0	0	0	1
1022	P	20	HIS 1367	CTMT CLR 2 SW INLT ISO VALVE HIS, C5716	OS-020 SH 1	AUX	623	505	SR		ON	ON	Y	87	ELECTRICAL	0	0	0	0	1
765	B	20	HIS 1370	SW PMP 1 HAND INDIC SWITCH	OS-020 SH 1	AUX	623	505	SR		ON	ON	Y	287	ELECTRICAL	0	0	0	0	1
766	P	20	HIS 1371	SW PUMP 2 HIS	OS-020 SH 1	AUX	623	505	SR		ON	ON	Y	295	ELECTRICAL	0	0	0	0	1
365	B	20	HIS 1382	HIS FOR ISO VALVE SW1382	OS-017A SH 1	AUX	623	505	SR		ON	ON	Y	120	ELECTRICAL	0	0	0	1	0
366	B	20	HIS 1382B	HIS FOR ISO VALVE SW1382 LOC IN C3630	OS-017A SH 1	AUX	585	324	SR		ON	ON	Y	120	ELECTRICAL	0	0	0	1	0
367	P	20	HIS 1383	HIS FOR ISO VALVE SW1383	OS-017A SH 1	AUX	623	505	SR		ON	ON	Y	121	ELECTRICAL	0	0	0	1	0
368	P	20	HIS 1383B	HIS FOR ISO VALVE SW1383 LOC IN C3630	OS-017A SH 1	AUX	585	324	SR		ON	ON	Y	121	ELECTRICAL	0	0	0	1	0
767	P	20	HIS 1395	SW TO CLNG HDR HIS IN C5717	OS-020 SH 1	AUX	623	505	SR		ON	ON	Y	160	ELECTRICAL	0	0	0	0	1
768	B	20	HIS 1399	SW TO CLNG WTR HDR HIS	OS-020 SH 1	AUX	623	505	SR		ON	ON	Y	267	ELECTRICAL	0	0	0	0	1
769	B	20	HIS 1414	CCW PMP 1 HAND INDIC SWITCH	OS-021 SH 1	AUX	623	505	SR		ON	ON	Y	289	ELECTRICAL	0	0	0	0	1
770	P	20	HIS 1418	CC PMP 2 HIS	OS-021 SH 1	AUX	623	505	SR		ON	ON	Y	298	ELECTRICAL	0	0	0	0	1
771	B	20	HIS 1424	CC HX 1 SW OUT ISO VLV HIS	OS-020 SH 1	AUX	623	505	SR		ON	ON	Y	268	ELECTRICAL	0	0	0	0	1
772	P	20	HIS 1434	CC HX2 SW SW OUT VLV HIS	OS-020 SH 1	AUX	623	505	SR		ON	ON	Y	269	ELECTRICAL	0	0	0	0	1
1030	B	20	HIS 1467	DH RMVL CLR 1 CCW OUT HIS	OS-021 SH 1	AUX	623	505	SR		ON	ON	Y	175	ELECTRICAL	0	0	0	0	1
773	P	20	HIS 1469	DH RMVL CLR 2 CCW OUT HIS	OS-021 SH 1	AUX	623	505	SR		ON	ON	Y	176	ELECTRICAL	0	0	0	0	1
1031	B	20	HIS 1471	EDG 1 CCW OUT HIS	OS-021 SH 1	AUX	623	505	SR		ON	ON	Y	177	ELECTRICAL	0	0	0	0	1
1032	P	20	HIS 1474	EDG 2 CCW OUT HIS	OS-021 SH 1	AUX	623	505	SR		ON	ON	Y	178	ELECTRICAL	0	0	0	0	1
369	B	20	HIS 1517	DH PMP 1-1 NORM SUC ISO VLV HIS IN C5704	OS-004 SH 1	AUX	623	505	SR	88	ON	ON	Y	83	ELECTRICAL	0	0	0	1	0
370	P	20	HIS 1518	DH PMP 1-2 NORM SUC ISO VLV HIS IN C5704	OS-004 SH 1	AUX	623	505	SR	84	ON	ON	Y	84	ELECTRICAL	0	0	0	1	0

Seismic Review Safe Shutdown Equipment List (SSEL)

Line No.	Train	Equip Class	Equipment ID Number	System/Equipment Description	Drawing Number	Bldg	Elev	Room No.	Eval Cat.	Note	Normal State	Desired State	Pwr Reqd	G.4 Form Number	Support System	RC	IC	PC	DH	SU
237	P	20	HIS 200A	PRZR VNT VLV TO CTMT VNT VLV HIS	OS-001A SH 2	AUX	623	505	SR		ON	ON	Y	163	ELECTRICAL	0	0	1	0	0
238	P	20	HIS 239A	PRZR VAPOR SAMPLE ISO VALVE HIS	OS-001A SH 2	AUX	623	505	SR		ON	ON	Y	154	ELECTRICAL	0	0	1	0	0
371	B	20	HIS 2733	DH PMP 1-1 SUCT FRM LP INJ LINE HIS	OS-004 SH 1	AUX	623	505	SR		ON	ON	Y	81	ELECTRICAL	0	0	0	1	0
372	P	20	HIS 2734	DH PMP 1-2 SUCT FRM LP INJ LINE HIS	OS-004 SH 1	AUX	623	505	SR		ON	ON	Y	82	ELECTRICAL	0	0	0	1	0
774	B	20	HIS 2927	CTRM EMERG COND 1 SW OUTLT VLV	OS-020 SH 1	AUX	623	505	SR		ON	ON	Y	128	ELECTRICAL	0	0	0	0	1
775	P	20	HIS 2928	CTRM EMER CND 2 SW OUT VNT VLV	OS-020 SH 1	AUX	623	505	SR		ON	ON	Y	129	ELECTRICAL	0	0	0	0	1
776	B	20	HIS 2929	SW TO INTAKE STRUCTURE VLV HIS	OS-020 SH 1	AUX	623	505	SR		ON	ON	Y	138	ELECTRICAL	0	0	0	0	1
777	P	20	HIS 2930	SW TO INTK FOREBAY VALVE HIS	OS-020 SH 1	AUX	623	505	SR		ON	ON	Y	161	ELECTRICAL	0	0	0	0	1
778	B	20	HIS 2931	SW TO CLNG TWR MU VLV HIS	OS-020 SH 1	AUX	623	505	SR		ON	ON	Y	139	ELECTRICAL	0	0	0	0	1
779	P	20	HIS 2932	SW - COLLECTION BASIN VLV HIS	OS-020 SH 1	AUX	623	505	SR		ON	ON	Y	162	ELECTRICAL	0	0	0	0	1
28	P	20	HIS 3971	RC MUP SCTN HIS IN C5703	OS-002 SH 3	AUX	623	505	SR		ON	ON	Y	164	ELECTRICAL	1	0	0	0	0
182	P	20	HIS 3971	RC MUP SCTN HIS IN C5703	OS-002 SH 3	AUX	623	505	SR		ON	ON	Y	164	ELECTRICAL	0	1	0	0	0
1119	B	20	HIS 4823	CTRL RM EMER SYS COND 1 IN HIS (C6708)	OS-032B	AUX	643	603	SR		ON	ON	Y	90	ELECTRICAL	0	0	0	0	1
1120	B	20	HIS 4823A	CTRL RM EMER SYS COND 1 IN HIS	OS-032B	AUX	643	603	SR		ON	ON	Y	90	ELECTRICAL	0	0	0	0	1
1121	B	20	HIS 4824	CTRL RM EMER SYS COND 1 OUT HIS (C6708)	OS-032B	AUX	643	603	SR		ON	ON	Y	90	ELECTRICAL	0	0	0	0	1
1122	P	20	HIS 4827	CTRL RM EMER SYS COND 2 IN HIS (C6709)	OS-032B	AUX	643	603	SR		ON	ON	Y	91	ELECTRICAL	0	0	0	0	1
1123	P	20	HIS 4827A	CTRL RM EMER SYS COND 2 IN HIS	OS-032B	AUX	643	603	SR		ON	ON	Y	91	ELECTRICAL	0	0	0	0	1
1124	P	20	HIS 4828	CTRL RM EMER SYS COND 2 OUT HIS (C6709)	OS-032B	AUX	643	603	SR		ON	ON	Y	91	ELECTRICAL	0	0	0	0	1
239	B	20	HIS 5031	CTMT COOLER FAN 1 HIS	OS-033A	AUX	623	505	SR		ON	ON	Y	167	ELECTRICAL	0	0	1	0	0
240	P	20	HIS 5032	CTMT COOLER FAN 2 HIS	OS-033A	AUX	623	505	SR		ON	ON	Y	168	ELECTRICAL	0	0	1	0	0
780	B	20	HIS 5095	CCW LN 1 TO NON-ESSEN HDR HIS	OS-021 SH 1	AUX	623	505	SR		ON	ON	Y	126	ELECTRICAL	0	0	0	0	1
781	P	20	HIS 5096	CCW LN 2 HAND INDIC SWITCH	OS-021 SH 1	AUX	623	505	SR		ON	ON	Y	127	ELECTRICAL	0	0	0	0	1
373	B	20	HIS 520A	AFP 1-1 GOV CTRL HIS, LOC IN C5709	OS-017B SH 1	AUX	623	505	SR		ON	ON	Y	72	ELECTRICAL	0	0	0	1	0
374	P	20	HIS 521A	AFP GOV CTRL HIS, LOCATED IN C5709	OS-017B SH 1	AUX	623	505	SR		ON	ON	Y	73	ELECTRICAL	0	0	0	1	0
782	P	20	HIS 5261	EMERG VENT FAN 1-1 HIS	OS-032B	AUX	623	505	SR		ON	ON	Y	94	ELECTRICAL	0	0	0	0	1
783	B	20	HIS 5261A	HIS FR EMERG VENT FAN INLT VLV	OS-032B	AUX	623	505	SR		ON	ON	Y	88	ELECTRICAL	0	0	0	0	1
784	C	20	HIS 5262	HIS FOR EMERG VENT FAN 2 1-2	OS-032B	AUX	623	505	SR		ON	ON	Y	95	ELECTRICAL	0	0	0	0	1
785	P	20	HIS 5262A	HIS FR EMER VENT FAN2 IN C5720	OS-032B	AUX	623	505	SR		ON	ON	Y	89	ELECTRICAL	0	0	0	0	1
786	B	20	HIS 5301	HIS FOR AUX BLDG CTRM DMPR AIR	OS-032A	AUX	623	505	SR		ON	ON	Y	270	ELECTRICAL	0	0	0	0	1
787	P	20	HIS 5311	HIS FOR AUX BLDG CTRM DAMP AIR	OS-032A	AUX	623	505	SR		ON	ON	Y	271	ELECTRICAL	0	0	0	0	1
375	B	20	HIS 5889A	AFP TURB 1-1 STEAM INLET VALVE	OS-017B SH 1	AUX	623	505	SR		ON	ON	Y	225	ELECTRICAL	0	0	0	1	0
376	P	20	HIS 5889B	AFP 1-2 HAND INDICATING SWITCH, IN C5709	OS-017B SH 1	AUX	623	505	SR		ON	ON	Y	226	ELECTRICAL	0	0	0	1	0
377	P	20	HIS 598	STEAM GEN ISO VALVE HIS, IN C5717	OS-051 SH 2	AUX	623	505	SR		ON	ON	Y	272	ELECTRICAL	0	0	0	1	0
378	B	20	HIS 607	SG 1-1 SAMPLE ISO VALVE HIS, IN C5717	OS-051 SH 2	AUX	623	505	SR		ON	ON	Y	273	ELECTRICAL	0	0	0	1	0
379	B	20	HIS 6403	SFRCS/AFW MANUAL INITIATION SWITCH TRN 1	N/A	AUX	623	505	SR		ON	ON	Y	208	ELECTRICAL	0	0	0	1	0
380	P	20	HIS 6404	SFRCS/AFW MANUAL INITIATION SWITCH TRN 2	N/A	AUX	623	505	SR		ON	ON	Y	209	ELECTRICAL	0	0	0	1	0
29	B	20	HIS 6405	RC MUP SUCTION VALVE 1	OS-002 SH 3	AUX	623	505	SR		ON	ON	Y	85	ELECTRICAL	1	0	0	0	0
181	B	20	HIS 6405	RC MUP SUCTION VALVE 1	OS-002 SH 3	AUX	623	505	SR		ON	ON	Y	85	ELECTRICAL	0	1	0	0	0
30	B	20	HIS 6419	RC MU DISCH VALVE 1	OS-002 SH 3	AUX	623	505	SR		ON	ON	Y	150	ELECTRICAL	1	0	0	0	0
206	B	20	HIS 6419	RC MU DISCH VALVE 1	OS-002 SH 3	AUX	623	505	SR		ON	ON	Y	150	ELECTRICAL	0	1	0	0	0
31	B	20	HIS 6421	RC MU DISCH VALVE	OS-002 SH 3	AUX	623	505	SR		ON	ON	Y	111	ELECTRICAL	1	0	0	0	0
209	B	20	HIS 6421	RC MU DISCH VALVE	OS-002 SH 3	AUX	623	505	SR		ON	ON	Y	111	ELECTRICAL	0	1	0	0	0
304	C	20	HIS 7528	SFAS CHANNEL 1 BLOCK SW	OS-001A SH 1	AUX	623	505	SR		ON	ON	Y	311	ELECTRICAL	0	0	1	0	0
305	C	20	HIS 7529	SFAS CHANNEL 2 BLOCK SW	OS-001A SH 1	AUX	623	505	SR		ON	ON	Y	311	ELECTRICAL	0	0	1	0	0
306	C	20	HIS 7530	SFAS CHANNEL 3 BLOCK SW	OS-001A SH 1	AUX	623	505	SR		ON	ON	Y	311	ELECTRICAL	0	0	1	0	0
307	C	20	HIS 7531	SFAS CHANNEL 4 BLOCK SW	OS-001A SH 1	AUX	623	505	SR		ON	ON	Y	311	ELECTRICAL	0	0	1	0	0
1152	P	20	HIS CF1A	HS FOR CF1A	OS-006	AUX	623	505	S	18	ON	ON	Y		ELECTRICAL	0	1	0	0	0
1151	B	20	HIS CF1B	HS FOR CF1B	OS-006	AUX	623	505	S	18	ON	ON	Y		ELECTRICAL	0	1	0	0	0
241	P	20	HIS DH11	NORM DH SUCTN ISO VLV DH 11 HIS IN C5704	OS-004 SH 1	AUX	623	505	SR		ON	ON	Y	100	ELECTRICAL	0	0	1	0	0

Seismic Review Safe Shutdown Equipment List (SSEL)

Line No.	Train	Equip Class	Equipment ID Number	System/Equipment Description	Drawing Number	Bldg	Elev	Room No.	Eval Cat.	Note	Normal State	Desired State	Pwr Reqd	G.4 Form Number	Support System	RC	IC	PC	DH	SU
381	P	20	HIS DH11	NORM DH SUCTN ISO VLV DH 11 HIS IN C5704	OS-004 SH 1	AUX	623	505	SR		ON	ON	Y	100	ELECTRICAL	0	0	0	1	0
242	P	20	HIS DH11A	NORM DH SUCTN ISO VLV HIS IN 5704	OS-004 SH 1	AUX	623	505	SR		OFF	ON	Y	100	ELECTRICAL	0	0	1	0	0
382	P	20	HIS DH11A	NORM DH SUCTN ISO VLV HIS IN 5704	OS-004 SH 1	AUX	623	505	SR		ON	ON	Y	100	ELECTRICAL	0	0	0	1	0
243	P	20	HIS DH12	NORM DH SUCTN ISO VLV DH12 HIS IN C5704	OS-004 SH 1	AUX	623	505	SR		ON	ON	Y	99	ELECTRICAL	0	0	1	0	0
383	P	20	HIS DH12	NORM DH SUCTN ISO VLV DH12 HIS IN C5704	OS-004 SH 1	AUX	623	505	SR		ON	ON	Y	99	ELECTRICAL	0	0	0	1	0
244	P	20	HIS DH12A	NORM DH SUCTN ISO VLV HIS IN C5704	OS-004 SH 1	AUX	623	505	SR		OFF	ON	Y	99	ELECTRICAL	0	0	1	0	0
384	P	20	HIS DH12A	NORM DH SUCTN ISO VLV HIS IN C5704	OS-004 SH 1	AUX	623	505	SR		ON	ON	Y	99	ELECTRICAL	0	0	0	1	0
385	P	20	HIS DH1A	HIS FOR DH1A	OS-004 SH 1	AUX	623	505	SR		ON	ON	Y	79	ELECTRICAL	0	0	0	1	0
386	P	20	HIS DH1A-2	ISO VLV HVDH1A HIS LOCATED IN C5716	OS-004 SH 1	AUX	623	505	SR		ON	ON	Y	79	ELECTRICAL	0	0	0	1	0
387	B	20	HIS DH1B	HIS FOR DH1B	OS-004 SH 1	AUX	623	505	SR		ON	ON	Y	78	ELECTRICAL	0	0	0	1	0
388	B	20	HIS DH1B-2	ISO VLV HVDH1B DISCONN HIS IN C5716	OS-004 SH 1	AUX	623	505	SR		ON	ON	Y	78	ELECTRICAL	0	0	0	1	0
389	P	20	HIS DH6A	DH PUMP 1-2 HAND INDICATING SWITCH	OS-004 SH 1	AUX	623	505	SR		ON	ON	Y	296	ELECTRICAL	0	0	0	1	0
390	B	20	HIS DH6B	DH PUMP 1-1 HAND INDICATING SWITCH	OS-004 SH 1	AUX	623	505	SR		ON	ON	Y	288	ELECTRICAL	0	0	0	1	0
540	P	20	HIS ICS11A	HS FOR ICS11A	OS-008 SH 1	AUX	623	505	SR		ON	ON	Y	202	ELECTRICAL	0	0	0	1	0
541	B	20	HIS ICS11B	HS FOR ICS11B	OS-008 SH 1	AUX	623	505	SR		ON	ON	Y	203	ELECTRICAL	0	0	0	1	0
115	P	20	HIS MU1A	RC LETDOWN COOLER 1 INLET VALVE HIS	OS-002 SH 1	AUX	623	505	SR		ON	ON	Y	155	ELECTRICAL	0	1	0	0	0
116	P	20	HIS MU1B	RC LETDOWN COOLER 2 INLET VALVE HIS	OS-002 SH 1	AUX	623	505	SR		ON	ON	Y	156	ELECTRICAL	0	1	0	0	0
32	B	20	HIS MU24A	RC MUP1 HAND INDICATING SWITCH	OS-002 SH 3	AUX	623	505	SR		ON	ON	Y	106	ELECTRICAL	1	0	0	0	0
186	B	20	HIS MU24A	RC MUP1 HAND INDICATING SWITCH	OS-002 SH 3	AUX	623	505	SR		ON	ON	Y	106	ELECTRICAL	0	1	0	0	0
33	B	20	HIS MU24A1	MUP1 AC OIL PMP E11D HIS	OS-002 SH 4	AUX	623	505	SR		ON	ON	Y	103	ELECTRICAL	1	0	0	0	0
188	B	20	HIS MU24A1	MUP1 AC OIL PMP E11D HIS	OS-002 SH 4	AUX	623	505	SR		ON	ON	Y	103	ELECTRICAL	0	1	0	0	0
105	B	20	HIS MU24A2	HS FOR MUP1 DC OIL PMP	OS-002 SH 4	AUX	623	505	SR		ON	ON	Y	104	ELECTRICAL	1	0	0	0	0
189	B	20	HIS MU24A2	HS FOR MUP1 DC OIL PMP	OS-002 SH 4	AUX	623	505	SR		ON	ON	Y	104	ELECTRICAL	0	1	0	0	0
106	B	20	HIS MU24A3	HS FOR MUP1 GEAR OIL PMP	OS-002 SH 4	AUX	623	505	SR		ON	ON	Y	105	ELECTRICAL	1	0	0	0	0
190	B	20	HIS MU24A3	HS FOR MUP1 GEAR OIL PMP	OS-002 SH 4	AUX	623	505	SR		ON	ON	Y	105	ELECTRICAL	0	1	0	0	0
34	P	20	HIS MU24B	RC MUP2 HAND INDICATING SWITCH	OS-002 SH 3	AUX	623	505	SR		ON	ON	Y	110	ELECTRICAL	1	0	0	0	0
187	P	20	HIS MU24B	RC MUP2 HAND INDICATING SWITCH	OS-002 SH 3	AUX	623	505	SR		ON	ON	Y	110	ELECTRICAL	0	1	0	0	0
35	P	20	HIS MU24B1	MUP2 AC OIL PMP F11C HIS	OS-002 SH 4	AUX	623	505	SR		ON	ON	Y	107	ELECTRICAL	1	0	0	0	0
191	P	20	HIS MU24B1	MUP2 AC OIL PMP F11C HIS	OS-002 SH 4	AUX	623	505	SR		ON	ON	Y	107	ELECTRICAL	0	1	0	0	0
107	P	20	HIS MU24B2	HS FOR MUP2 DC OIL PMP	OS-002 SH 4	AUX	623	505	SR		ON	ON	Y	108	ELECTRICAL	1	0	0	0	0
192	P	20	HIS MU24B2	HS FOR MUP2 DC OIL PMP	OS-002 SH 4	AUX	623	505	SR		ON	ON	Y	108	ELECTRICAL	0	1	0	0	0
108	P	20	HIS MU24B3	HS FOR MUP2 GEAR OIL PMP	OS-002 SH 4	AUX	623	505	SR		ON	ON	Y	109	ELECTRICAL	1	0	0	0	0
193	P	20	HIS MU24B3	HS FOR MUP2 GEAR OIL PMP	OS-002 SH 4	AUX	623	505	SR		ON	ON	Y	109	ELECTRICAL	0	1	0	0	0
117	B	20	HIS MU2B	RC LETDOWN COOLERS INLET VALVE HIS	OS-002 SH 1	AUX	623	505	SR		ON	ON	Y	98	ELECTRICAL	0	1	0	0	0
118	P	20	HIS MU38	RCP SEAL RETURN ISO VALVE HIS IN C5717	OS-002 SH 2	AUX	623	505	SR		ON	ON	Y	231	ELECTRICAL	0	1	0	0	0
36	B	20	HIS MU40	BA BATCH STOP VLV HIS	OS-002 SH 1	AUX	623	505	SR		ON	ON	Y	80	ELECTRICAL	1	0	0	0	0
37	B	20	HIS MU50A	BA PMP 1-1 HIS	OS-046	AUX	623	505	SR		ON	ON	Y	101	ELECTRICAL	1	0	0	0	0
38	P	20	HIS MU50B	BA PMP 1-2 HIS	OS-046	AUX	623	505	SR		ON	ON	Y	102	ELECTRICAL	1	0	0	0	0
156	P	20	HIS MU66A	HS FOR MU-66A	OS-002 SH 2	AUX	623	505	SR		ON	ON	Y	227	ELECTRICAL	0	1	0	0	0
157	P	20	HIS MU66B	HS FOR MU-66B	OS-002 SH 2	AUX	623	505	SR		ON	ON	Y	228	ELECTRICAL	0	1	0	0	0
158	P	20	HIS MU66C	HS FOR MU-66C	OS-002 SH 2	AUX	623	505	SR		ON	ON	Y	229	ELECTRICAL	0	1	0	0	0
159	P	20	HIS MU66D	HS FOR MU-66D	OS-002 SH 2	AUX	623	505	SR		ON	ON	Y	230	ELECTRICAL	0	1	0	0	0
788	P	20	HIS NC133	LOW VOLT. SWGR RM VEN FAN 1-2 LCL	OS-035	AUX	603	428	SR		ON	ON	Y	117	ELECTRICAL	0	0	0	0	1
789	B	20	HIS NC251	EDG RM VENTILATION FAN 1 LCL	OS-035	AUX	585	318	SR		ON	ON	Y	130	ELECTRICAL	0	0	0	0	1
790	B	20	HIS NC252	EDG RM VENTILATION FAN 2 LCL	OS-035	AUX	585	318	SR		ON	ON	Y	131	ELECTRICAL	0	0	0	0	1
791	P	20	HIS NC253	EDG RM 2 VNTL FAN 3 LCL HIS	OS-035	AUX	585	319	SR		ON	ON	Y	158	ELECTRICAL	0	0	0	0	1
792	P	20	HIS NC254	EDG RM 2 VNTL FAN 4 LCL HIS	OS-035	AUX	585	319	SR		ON	ON	Y	159	ELECTRICAL	0	0	0	0	1
1072	P	20	HIS NC311	ECCS RM CLR FAN 1-1 SW	OS-034 SH 2	AUX	545	115	SR		ON	ON	Y	148	ELECTRICAL	0	0	0	1	0
1073	P	20	HIS NC312	ECCS RM CLR FAN 1-2 SW	OS-034 SH 2	AUX	545	115	SR		ON	ON	Y	149	ELECTRICAL	0	0	0	1	0

Seismic Review Safe Shutdown Equipment List (SSEL)

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1074	B	20	HIS NC314	ECCS RM CLR FAN 1-4 SW	OS-034 SH 2	AUX	545	105	SR		ON	ON	Y	146	ELECTRICAL	0	0	0	1	0
1075	B	20	HIS NC315	ECCS RM CLR FAN 1-5 SW	OS-034 SH 2	AUX	545	105	SR		ON	ON	Y	147	ELECTRICAL	0	0	0	1	0
793	B	20	HIS NC711	LOW VOLT. SWGR RM VENT FAN 101 LCL	OS-035	AUX	603	429	SR		ON	ON	Y	116	ELECTRICAL	0	0	0	0	1
794	B	20	HIS NC751	CCW PMP RM VNT FAN 1-1 LOC....	OS-036 SH 1	AUX	585	328	SR		AUT	AUT	Y	96	ELECTRICAL	0	0	0	0	1
795	P	20	HIS NC752	CCW PMP RM FAN 1-2 LOCAL.....	OS-036 SH 1	AUX	585	328	SR		AUT	AUT	Y	97	ELECTRICAL	0	0	0	0	1
796	B	20	HIS NC781	BATTERY RM VENT FAN 1-1 LCL	OS-035	AUX	603	429	SR		ON	ON	Y	142	ELECTRICAL	0	0	0	0	1
797	P	20	HIS NC782	BATTERY RM VENT FAN 1-2 LCL	OS-035	AUX	603	428	SR		ON	ON	Y	143	ELECTRICAL	0	0	0	0	1
1105	B	20	HIS NP1951	EDG FUEL OIL ST TK 1-1 HAND IND SW	OS-041C	AUX	585	321A	SR		ON	ON	Y	151	ELECTRICAL	0	0	0	0	1
1106	B	20	HIS NP1951A	EDG FUEL OIL ST TK 1-1 HAND IND SW	OS-041C	AUX	585	321A	SR		ON	ON	Y	151	ELECTRICAL	0	0	0	0	1
1107	P	20	HIS NP1952	EDG FUEL OIL STOR TK 1-2 PUMP IND SW	OS-041C	AUX	585	320A	SR		ON	ON	Y	152	ELECTRICAL	0	0	0	0	1
1108	P	20	HIS NP1952A	EDG FUEL OIL STOR TK 1-2 PUMP IND SW	OS-041C	AUX	585	320A	SR		ON	ON	Y	152	ELECTRICAL	0	0	0	0	1
245	B	20	HIS RC2-6	RC PRZR AUTO VENT TO QUENCH TANK HIS	OS-001A SH 2	AUX	623	505	SR		ON	ON	Y	255	ELECTRICAL	0	0	1	0	0
246	B	20	HIS RC2-7	PRESSURIZER HEATER CTRL SELECT HIS	OS-001A SH 2	AUX	585	324	SR		ON	ON	Y	124	ELECTRICAL	0	0	1	0	0
247	P	20	HIS RC2-8	PRESSURIZER HEATER CONTROL SELECT HIS	OS-001A SH 2	AUX	585	324	SR		ON	ON	Y	125	ELECTRICAL	0	0	1	0	0
248	B	20	HIS RC2-A	RC PRESSURIZER ESSEN BNK 1 HTR CTRL HIS	OS-001A SH 2	AUX	623	505	SR		ON	ON	Y	124	ELECTRICAL	0	0	1	0	0
249	P	20	HIS RC2-B	RC PRESSURIZER ESSEN BNK 2 HTR CTRL HIS	OS-001A SH 2	AUX	623	505	SR		ON	ON	Y	125	ELECTRICAL	0	0	1	0	0
391	B	20	HS-4627	INCORE TEMP HAND SWITCH	OS-001A SH 1	AUX	623	505	SR		ON	ON	Y	305	ELECTRICAL	0	0	0	1	0
392	P	20	HS-4628	INCORE TEMP HAND SWITCH	OS-001A SH 1	AUX	623	505	SR		ON	ON	Y	305	ELECTRICAL	0	0	0	1	0
798	B	20	HS-4688	H. S. FR XHAUST FAN 1-1 NC 9901	OS-038B	ITK	576	052	SR		AUT	AUT	Y	114	ELECTRICAL	0	0	0	0	1
799	P	20	HS-4689	H. S. FR XHAUST FAN 99-3 NC 9903	OS-038B	ITK	576	052	SR		AUT	AUT	Y	115	ELECTRICAL	0	0	0	0	1
800	B	20	HS-4698	H. S. FR XHAUST FN C99-2 NC 9901	OS-038B	ITK	576	052	SR		AUT	AUT	Y	118	ELECTRICAL	0	0	0	0	1
801	P	20	HS-4699	H. S. FR VENT FAN C99-4 NC 9903	OS-038B	ITK	576	052	SR		AUT	AUT	Y	119	ELECTRICAL	0	0	0	0	1
393	B	20	HS-5902	H. S. FOR AFP ROOM 1 VENT FAN NC 0731	OS-036 SH 1	AUX	565	237	SR		ON	ON	Y	122	ELECTRICAL	0	0	0	1	0
394	P	20	HS-5903	H. S. FOR AFP RM 2 VENT FAN NC 0732	OS-036 SH 1	AUX	565	238	SR		ON	ON	Y	123	ELECTRICAL	0	0	0	1	0
395	B	20	HS-6453A	SG LVL/TEST SLCT HS FOR AFP 1-1 DISCH	OS-017A SH 1	AUX	585	324	SR		ON	ON	Y	309	ELECTRICAL	0	0	0	1	0
396	P	20	HS-6454A	SG LVL/TEST SLCT HS FOR AFP 1-2 DISCH	OS-017A SH 1	AUX	585	324	SR		ON	ON	Y	308	ELECTRICAL	0	0	0	1	0
397	P	20	HS-ICS38A	AFP TURB 1-2 GOV CTRL SELECT HIS, C3630	OS-017B SH 1	AUX	585	324	SR		ON	ON	Y	73	ELECTRICAL	0	0	0	1	0
398	B	20	HS-ICS38B	AFP TURB 1-1 CTRL SELECT HIS, IN C3630	OS-017B SH 1	AUX	585	324	SR		ON	ON	Y	72	ELECTRICAL	0	0	0	1	0
43	B	20	HS-NI45	MANUAL TRIP SWITCH	E-65B SH 15A/16A	AUX	623	505	SR		ON	ON	Y	183	ELECTRICAL	1	0	0	0	0
44	P	20	HS-NI46	MANUAL TRIP SWITCH	E-65B SH 13A/14A	AUX	623	505	SR		ON	ON	Y	183	ELECTRICAL	1	0	0	0	0
1125	B	0	HV-4906	CTRM EVS STBY COND 1 MOTOR OPER	OS-032B	AUX	656	N/A	SR		CLS	OP/CL	Y	90	ELECTRICAL	0	0	0	0	1
1126	P	0	HV-4907	CTRM EVS STBY COND 2 MOTOR OPER	OS-032B	AUX	656	N/A	SR		CLS	OP/CL	Y	91	ELECTRICAL	0	0	0	0	1
802	B	8A	HV-5261	CTRM EMERG VENT FAN 1 INLT MDO	OS-032B	AUX	638	603	SR		CLS	OPN	Y	88	ELECTRICAL	0	0	0	0	1
803	P	8A	HV-5262	CTRM EMERG VENT FAN 2 INLT MDO	OS-032B	AUX	638	603	SR		CLS	OPN	Y	89	ELECTRICAL	0	0	0	0	1
804	B	7	HV-5301A	CTRM COMPUT CONFER&COMPT SUP..	OS-032A	AUX	638	603	SR	33	OPN	CLS	Y	270	ELECTRICAL	0	0	0	0	1
805	B	7	HV-5301B	CTRM CTRL CABNET RM Q PNEU OP	OS-032A	AUX	638	603	SR	33	OPN	CLS	Y	270	ELECTRICAL	0	0	0	0	1
806	B	7	HV-5301C	CTRM CABLE SPRDNG RM Q PNEU OP	OS-032A	AUX	638	603	SR	33	OPN	CLS	Y	270	ELECTRICAL	0	0	0	0	1
807	B	7	HV-5301D	CTRM I&C SHOP&KTCHN Q PNEU OP	OS-032A	AUX	638	603	SR	33	OPN	CLS	Y	270	ELECTRICAL	0	0	0	0	1
808	B	7	HV-5301E	CTRM RTRN AIR FANS IN PNEU..OP	OS-032A	AUX	638	603	SR	33	OPN	CLS	Y	270	ELECTRICAL	0	0	0	0	1
809	B	7	HV-5301F	CTRM TOILET 2 EXH FAN PNEU OP	OS-032A	AUX	638	603	SR	33	OPN	CLS	Y	270	ELECTRICAL	0	0	0	0	1
810	B	7	HV-5301G	CTRM TOILET EXH FAN PNEU OP	OS-032A	AUX	638	603	SR	33	OPN	CLS	Y	270	ELECTRICAL	0	0	0	0	1
811	B	7	HV-5301H	CTRM KITCHEN EXH FAN PNEU OP	OS-032A	AUX	638	603	SR	33	OPN	CLS	Y	270	ELECTRICAL	0	0	0	0	1
812	B	0	HV-5305	L.V.S.G. RM 429 VENT DAMP OPER	OS-035	AUX	603	429	SR		OP/CL	OP/CL	Y	210	ELECTRICAL	0	0	0	0	1
813	B	0	HV-5305A	L.V.S.G. RM 429 INTK A DAMP OP	OS-035	AUX	603	429	SR	36	OP/CL	OP/CL	Y	140	ELECTRICAL	0	0	0	0	1
814	B	0	HV-5305B	L.V.S.G. RM INTK B DAMP OPER	OS-035	AUX	603	429	SR	36	OP/CL	OP/CL	Y	141	ELECTRICAL	0	0	0	0	1

Seismic Review Safe Shutdown Equipment List (SSEL)

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815	P	7	HV-5311A	CTRM AREA HVAC DMPR PNEU VLV..	OS-032A	AUX	638	603	SR	33	OPN	CLS	Y	271	ELECTRICAL	0	0	0	0	1
816	P	7	HV-5311B	CTRM CTRL CABNET RM Q PNEU VO	OS-032A	AUX	638	603	SR	33	OPN	CLS	Y	271	ELECTRICAL	0	0	0	0	1
817	P	7	HV-5311C	CTRM SPRDNG CABLE RM Q PNEU VO	OS-032A	AUX	638	603	SR	33	OPN	CLS	Y	271	ELECTRICAL	0	0	0	0	1
818	P	7	HV-5311D	CTRM I&C LB&KTCHN Q PNE VLV OP	OS-032A	AUX	638	603	SR	33	OPN	CLS	Y	271	ELECTRICAL	0	0	0	0	1
819	P	7	HV-5311E	CTRM RTRN AIR FANS IN PNUE OP	OS-032A	AUX	638	603	SR	33	OPN	CLS	Y	271	ELECTRICAL	0	0	0	0	1
820	P	7	HV-5311F	CTRM TOILET 2 EXH FAN PNEU VO	OS-032A	AUX	638	603	SR	33	OPN	CLS	Y	271	ELECTRICAL	0	0	0	0	1
821	P	7	HV-5311G	CTRM TOILET EXH FAN PVO	OS-032A	AUX	638	603A	SR	33	OPN	CLS	Y	271	ELECTRICAL	0	0	0	0	1
822	P	7	HV-5311H	CTRM KITCHEN EXH FAN PVO	OS-032A	AUX	638	603	SR	33	OPN	CLS	Y	271	ELECTRICAL	0	0	0	0	1
823	P	0	HV-5314	L.V.S.G. RM 428 VENT DAMPER OP	OS-035	AUX	623	515	SR		OP/CL	OP/CL	Y	211	ELECTRICAL	0	0	0	0	1
824	P	0	HV-5314A	L.V.S.G RM 428 INTKE DMPR OPER	OS-035	AUX	603	428	SR	36	OP/CL	OP/CL	Y	157	ELECTRICAL	0	0	0	0	1
825	B	0	HV-5329A	EDG RM 318 AIR DAMP OPERATOR	OS-035	AUX	585	318	SR		OP/CL	OP/CL	Y	212	ELECTRICAL	0	0	0	0	1
826	B	0	HV-5329B	EDG RM 318 AIR DAMP OPERATOR	OS-035	AUX	585	318	SR		OP/CL	OP/CL	Y	213	ELECTRICAL	0	0	0	0	1
827	B	0	HV-5329C	EDG RM 318 AIR DAMP OPERATOR	OS-035	AUX	585	318	SR	36	OP/CL	OP/CL	Y	214	ELECTRICAL	0	0	0	0	1
828	P	0	HV-5336A	EDG RM 2 OTSD AIR CTRL DAMP OP	OS-035	AUX	585	319	SR		OP/CL	OP/CL	Y	215	ELECTRICAL	0	0	0	0	1
829	P	0	HV-5336B	EDG RM 2 RECIRC CTRL DAMP OPER	OS-035	AUX	585	319	SR		OP/CL	OP/CL	Y	216	ELECTRICAL	0	0	0	0	1
830	P	0	HV-5336C	EDG RM 2 XHST AIR CTRL DAMP OP	OS-035	AUX	585	319	SR	36	OP/CL	OP/CL	Y	217	ELECTRICAL	0	0	0	0	1
831	B	7	HV-5361A	CABLE SPRDNG RM DMPR INLT OPER	OS-032A	AUX	623	506	SR	33	OPN	CLS	Y	270	ELECTRICAL	0	0	0	0	1
832	B	7	HV-5361B	CABLE SPRDNG RM INLT DMPR OPER	OS-032A	AUX	623	501	SR	33	OPN	CLS	Y	270	ELECTRICAL	0	0	0	0	1
833	P	7	HV-5362A	CABLE SPRDNG RM DMPR OUTLT OPR	OS-032A	AUX	623	506	SR	33	OPN	CLS	Y	271	ELECTRICAL	0	0	0	0	1
834	P	7	HV-5362B	CABLE SPRDNG RM OUTLT DMPR OPR	OS-032A	AUX	623	501	SR	33	OPN	CLS	Y	271	ELECTRICAL	0	0	0	0	1
835	B	0	HV-5443A	CCP RM VNT FN 1 RM OUT DAMP OP	OS-036 SH 1	AUX	585	328	SR		OP/CL	OP/CL	Y	218	ELECTRICAL	0	0	0	0	1
836	B	0	HV-5443B	CCP RM VNT FN 1 RM IN DAMP OP	OS-036 SH 1	AUX	585	328	SR		OP/CL	OP/CL	Y	219	ELECTRICAL	0	0	0	0	1
837	B	0	HV-5443C	CCP RM VNT FN1-1 RM IN DAMP OP	OS-036 SH 1	AUX	585	328	SR	36	OP/CL	OP/CL	Y	222	ELECTRICAL	0	0	0	0	1
838	P	0	HV-5444A	CCP RM VNT FN 2 RM OUT DAMP OP	OS-036 SH 1	AUX	585	328	SR		OP/CL	OP/CL	Y	220	ELECTRICAL	0	0	0	0	1
839	P	0	HV-5444B	CCP RM VNT FN RM INLT DAMP OPR	OS-036 SH 1	AUX	585	328	SR		OP/CL	OP/CL	Y	221	ELECTRICAL	0	0	0	0	1
840	P	0	HV-5444C	CCP RM VNT FN2 RM INLT DAMP OP	OS-036 SH 1	AUX	585	328	SR	36	OP/CL	OP/CL	Y	223	ELECTRICAL	0	0	0	0	1
841	B	0	HV-5597	BAT RM A VENT TO ATM DAMP OPER	OS-035	AUX	603	429B	SR		OP/CL	OP/CL	Y	112	ELECTRICAL	0	0	0	0	1
842	P	0	HV-5598	OPER,DMPR FRM BAT RM VENT -ATM	OS-035	AUX	603	428A	SR		OP/CL	OP/CL	Y	113	ELECTRICAL	0	0	0	0	1
160	P	7	IA-630	IA PCV FOR MU66D	OS-002 SH 2	AUX	565	208	S		THR	THR	N			0	1	0	0	0
161	P	7	IA-636	IA PCV FOR MU66A	OS-002 SH 2	AUX	565	208	S		THR	THR	N			0	1	0	0	0
151	P	7	IA-648	IA PCV FOR MU38	OS-002 SH 2	AUX	565	208	S		THR	THR	N			0	1	0	0	0
162	P	7	IA-654	IA PCV FOR MU66B	OS-002 SH 2	AUX	565	208	S		THR	THR	N			0	1	0	0	0
163	P	7	IA-660	IA PCV FOR MU66C	OS-002 SH 2	AUX	565	208	S		THR	THR	N			0	1	0	0	0
399	P	7	ICS-11A	MS LINE 2 ATMOSPHERIC VENT VALVE	OS-008 SH 1	AUX	643	602	SR	93	CLS	OP/CL	Y	202	ELECTRICAL/MANUAL	0	0	0	1	0
544	P	7	ICS-11AD	AIR CONT VLV FOR ICS 11A	OS-008 SH 1	AUX	643	602	S		CLS	OPN	N			0	0	0	1	0
400	B	7	ICS-11B	MS LINE 1 ATMOSPHERIC VENT VALVE	OS-008 SH 1	AUX	643	601	SR	93	CLS	OP/CL	Y	203	ELECTRICAL/MANUAL	0	0	0	1	0
545	B	7	ICS-11BD	AIR CONT VLV FOR ICS 11B	OS-008 SH 1	AUX	643	601	S		CLS	OPN	N			0	0	0	1	0
10[illegible]	B	20	II-6283	DBC1P AMMETER	OS-060 SH 1	AUX	623	505	SR		ON	ON	Y	52	ELECTRICAL	0	0	0	0	1
1054	P	20	II-6284	DBC2N AMMETER	OS-060 SH 1	AUX	623	505	SR		ON	ON	Y	52	ELECTRICAL	0	0	0	0	1
1055	B	20	II-6285	DBC1N AMMETER	OS-060 SH 1	AUX	623	505	SR		ON	ON	Y	52	ELECTRICAL	0	0	0	0	1
1056	P	20	II-6286	DBC2P AMMETER	OS-060 SH 1	AUX	623	505	SR		ON	ON	Y	52	ELECTRICAL	0	0	0	0	1
843	B	20	II-6289	BATT 1P TO BUS 1P AMMMETER	OS-060 SH 1	AUX	623	502	SR		ON	ON	Y	52	ELECTRICAL	0	0	0	0	1
844	P	20	II-6290	BATT 2N TO BUS 2N AMMETER	OS-060 SH 1	AUX	623	502	SR		ON	ON	Y	52	ELECTRICAL	0	0	0	0	1
845	B	20	II-6291	BATT 1N TO BUS 1N AMMETER	OS-060 SH 1	AUX	623	502	SR		ON	ON	Y	52	ELECTRICAL	0	0	0	0	1
846	P	20	II-6292	BATT 2P TO BUS 2P AMMETER	OS-060 SH 1	AUX	623	502	SR		ON	ON	Y	52	ELECTRICAL	0	0	0	0	1
1160	B	20	JT-2703	TERMINAL BLOCK BOX FOR AFPT 1 AUX RELAY		AUX	565	237	S	4	ON	ON	Y		ELECTRICAL	0	0	0	0	1
1161	P	20	JT-2704	TERMINAL BLOCK BOX FOR AFPT 2 AUX RELAY		AUX	565	238	S	4	ON	ON	Y		ELECTRICAL	0	0	0	0	1

Seismic Review Safe Shutdown Equipment List (SSEL)

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401	B	5	K3-1	AUXILIARY FEED PMP TURBINE 1-1	OS-017B SH 1	AUX	565	237	SR	91	STB	ON	Y	72	ELECTRICAL	0	0	0	1	0
402	P	5	K3-2	AUXILIARY FEED PMP TURBINE 1-2	OS-017B SH 1	AUX	565	237	SR	91	STB	ON	Y	73	ELECTRICAL	0	0	0	1	0
851	B	17	K5-1	EDG 1-1 (all skidmounted)	OS-041A SH 1	AUX	585	318	SR	102	STB	ON	Y	351	ELECTRICAL	0	0	0	0	1
852	P	17	K5-2	EDG 1-2 (all skidmounted)	OS-041A SH 2	AUX	585	319	SR	102	STB	ON	Y	353	ELECTRICAL	0	0	0	0	1
403	P	18	LC-6451	STEAM GEN 1/2 LVL CTRL FR AFP 2 CTRL VLV	OS-017A SH 1	AUX	603	428	SR		ON	ON	Y	308	ELECTRICAL	0	0	0	1	0
404	B	18	LC-6452	STEAM GEN 1/2 LVL CTRL FR AFP 1 CTRL VLV	OS-017A SH 1	AUX	585	325	SR		ON	ON	Y	309	ELECTRICAL	0	0	0	1	0
853	B	20	LI-1402	CC SRG TNK SIDE 1 LV INDIC	OS-021 SH 3	AUX	623	505	SR	1	ON	ON	Y	315	ELECTRICAL	0	0	0	0	1
854	P	20	LI-1403	CC SRG TNK SIDE 2 LV INDIC	OS-021 SH 3	AUX	623	505	SR	1	ON	ON	Y	315	ELECTRICAL	0	0	0	0	1
46	B	20	LI-1525A	BWST LEVEL INDICATOR SFAS CH1	OS-004 SH 1	AUX	623	502	SR	1	ON	ON	Y	300	ELECTRICAL	1	0	0	0	0
47	P	20	LI-1525B	BWST LEVEL INDICATOR SFAS CH2	OS-004 SH 1	AUX	623	502	SR	1	ON	ON	Y	300	ELECTRICAL	1	0	0	0	0
855	B	20	LI-2787B	EDG DAY TANK 1-1 LV INDICATOR	OS-041C	AUX	623	505	SR	1	ON	ON	Y	316	ELECTRICAL	0	0	0	0	1
856	P	20	LI-2788B	EDG DAY TANK 1-2 LVL INDICATOR	OS-041C	AUX	623	505	SR	1	ON	ON	Y	316	ELECTRICAL	0	0	0	0	1
109	B	20	LI-MU16-2	MUT LVL INDICATOR	OS-002 SH 3	AUX	623	505	SR	1	ON	ON	Y	314	ELECTRICAL	1	0	0	0	0
175	B	20	LI-MU16-2	MUT LVL INDICATOR	OS-002 SH 3	AUX	623	505	SR	1	ON	ON	Y	314	ELECTRICAL	0	1	0	0	0
48	B	20	LI-RC14-3	RC COOLANT PRESSURIZER CH 1	OS-001A SH 2	AUX	623	505	SR	1	ON	ON	Y	317	ELECTRICAL	1	0	0	0	0
121	B	20	LI-RC14-3	RC COOLANT PRESSURIZER CH 1	OS-001A SH 2	AUX	623	505	SR	1	ON	ON	Y	317	ELECTRICAL	0	1	0	0	0
250	B	20	LI-RC14-3	RC COOLANT PRESSURIZER CH 1	OS-001A SH 2	AUX	623	505	SR	1	ON	ON	Y	317	ELECTRICAL	0	0	1	0	0
405	B	20	LI-RC14-3	RC COOLANT PRESSURIZER CH 1	OS-001A SH 2	AUX	623	505	SR	1	ON	ON	Y	317	ELECTRICAL	0	0	0	1	0
49	P	20	LI-RC14-4	RC PRESSURIZER CHANNEL 2	OS-001A SH 2	AUX	623	505	SR	1	ON	ON	Y	317	ELECTRICAL	1	0	0	0	0
122	P	20	LI-RC14-4	RC PRESSURIZER CHANNEL 2	OS-001A SH 2	AUX	623	505	SR	1	ON	ON	Y	317	ELECTRICAL	0	1	0	0	0
251	P	20	LI-RC14-4	RC PRESSURIZER CHANNEL 2	OS-001A SH 2	AUX	623	505	SR	1	ON	ON	Y	317	ELECTRICAL	0	0	1	0	0
406	P	20	LI-RC14-4	RC PRESSURIZER CHANNEL 2	OS-001A SH 2	AUX	623	505	SR	1	ON	ON	Y	317	ELECTRICAL	0	0	0	1	0
407	P	20	LI-SP9A1	STEAM GEN 1-2 STARTUP LEVEL INDICATOR	OS-008 SH 1	AUX	623	505	SR	1	ON	ON	Y	308	ELECTRICAL	0	0	0	1	0
408	B	20	LI-SP981	STEAM GEN 1 STARTUP LEVEL INDICATOR	OS-008 SH 1	AUX	623	505	SR	1	ON	ON	Y	309	ELECTRICAL	0	0	0	1	0
409	P	20	LIC 6451	STEAM GEN 1/2 SU LEVEL	OS-017A SH 1	AUX	623	505	SR	1	ON	ON	Y	308	ELECTRICAL	0	0	0	1	0
410	B	20	LIC 6452	STEAM GEN 1/2 SU LEVEL	OS-017A SH 1	AUX	623	505	SR	1	ON	ON	Y	309	ELECTRICAL	0	0	0	1	0
50	C	20	LR-MU16	MUT LVL RECORDER	OS-002 SH 3	AUX	623	505	SR	1,7	ON	ON	Y	314	ELECTRICAL	1	0	0	0	0
173	P	20	LR-MU16	MUT LVL RECORDER	OS-002 SH 3	AUX	623	505	SR	1,7	ON	ON	Y	314	ELECTRICAL	0	1	0	0	0
857	P	18	LSH 1122	EDG DAY TANK 1-1 LVL SWITCH HI	OS-041C	AUX	595	320A	SR	1			Y	152	ELECTRICAL	0	0	0	0	1
858	B	18	LSH 1128	EDG DAY TANK 1-1 LVL SWITCH HI	OS-041C	AUX	595	321A	SR	1			Y	151	ELECTRICAL	0	0	0	0	1
859	P	18	LSL 1122	EDG DAY TANK 1-2 LVL SWITCH LO	OS-041C	AUX	595	320A	SR	1			Y	152	ELECTRICAL	0	0	0	0	1
860	B	18	LSL 1128	EDG DAY TANK 1-1 LVL SWITCH LO	OS-041C	AUX	595	321A	SR	1			Y	151	ELECTRICAL	0	0	0	0	1
861	B	18	LT-1402	CC SRG TNK 1-1 SIDE 1 LV TRANS	OS-021 SH 3	AUX	623	501	SR		ON	ON	Y	315	ELECTRICAL	0	0	0	0	1
862	P	18	LT-1403	CC SRG TNK 1-1 SIDE 2 LV TRANS	OS-021 SH 3	AUX	623	501	SR		ON	ON	Y	315	ELECTRICAL	0	0	0	0	1
863	B	18	LT-2787	EDG DAY TANK 1-1 LVL TRANSMITT	OS-041C	AUX	585	318	SR		ON	ON	Y	316	ELECTRICAL	0	0	0	0	1
864	P	18	LT-2788	EDG DAY TANK 1-2 LVL TRANSMITT	OS-041C	AUX	585	319	SR		ON	ON	Y	316	ELECTRICAL	0	0	0	0	1
51	C	18	LT-MU16-1	MUT LVL TRANSMITTER	OS-002 SH 3	AUX	565	AB3	SR		ON	ON	Y	314	ELECTRICAL	1	0	0	0	0
172	P	18	LT-MU16-1	MUT LVL TRANSMITTER	OS-002 SH 3	AUX	565	AB3	SR		ON	ON	Y	314	ELECTRICAL	0	1	0	0	0
110	B	18	LT-MU16-2	MUT LVL TRANSMITTER	OS-002 SH 3	AUX	565	AB3	SR		ON	ON	Y	314	ELECTRICAL	1	0	0	0	0
174	B	18	LT-MU16-2	MUT LVL TRANSMITTER	OS-002 SH 3	AUX	565	AB3	SR		ON	ON	Y	314	ELECTRICAL	0	1	0	0	0
52	P	18	LT-RC14-1	RC PRESSURIZER CH 2 LEVEL TRANSMITTER	OS-001A SH 2	CTM	585	317	SR		ON	ON	Y	317	ELECTRICAL	1	0	0	0	0
123	P	18	LT-RC14-1	RC PRESSURIZER CH 2 LEVEL TRANSMITTER	OS-001A SH 2	CTM	585	317	SR		ON	ON	Y	317	ELECTRICAL	0	1	0	0	0
252	P	18	LT-RC14-1	RC PRESSURIZER CH 2 LEVEL TRANSMITTER	OS-001A SH 2	CTM	585	317	SR		ON	ON	Y	317	ELECTRICAL	0	0	1	0	0
411	P	18	LT-RC14-1	RC PRESSURIZER CH 2 LEVEL TRANSMITTER	OS-001A SH 2	CTM	585	317	SR		ON	ON	Y	317	ELECTRICAL	0	0	0	1	0
53	B	18	LT-RC14-3	RC PRESSURIZER CH 1 LEVEL TRANSMITTER	OS-001A SH 2	CTM	585	317	SR		ON	ON	Y	317	ELECTRICAL	1	0	0	0	0
124	B	18	LT-RC14-3	RC PRESSURIZER CH 1 LEVEL TRANSMITTER	OS-001A SH 2	CTM	585	317	SR		ON	ON	Y	317	ELECTRICAL	0	1	0	0	0
253	B	18	LT-RC14-3	RC PRESSURIZER CH 1 LEVEL TRANSMITTER	OS-001A SH 2	CTM	585	317	SR		ON	ON	Y	317	ELECTRICAL	0	0	1	0	0
412	B	18	LT-RC14-3	RC PRESSURIZER CH 1 LEVEL TRANSMITTER	OS-001A SH 2	CTM	585	317	SR		ON	ON	Y	317	ELECTRICAL	0	0	0	1	0
413	P	18	LT-SP9A3	STEAM GEN 1-2 STARTUP LEVEL TRANSMIT 3	OS-008 SH 1	CTM	565	286	SR	89	ON	ON	Y	308	ELECTRICAL	0	0	0	1	0

Seismic Review Safe Shutdown Equipment List (SSEL)

Line No.	Train	Equip Class	Equipment ID Number	System/Equipment Description	Drawing Number	Bldg	Elev	Room No.	Eval Cat.	Note	Normal State	Desired State	Pwr Reqd	G.4 Form Number	Support System	RC	IC	PC	DH	SU
414	B	18	LT-SP983	STEAM GEN 1 STARTUP LEVEL TRANSMITTER	OS-008 SH 1	CTM	565	285	SR	90	ON	ON	Y	309	ELECTRICAL	0	0	0	1	0
415	P	7	MS-100	MAIN STEAM LINE 2 ISO VALVE	OS-008 SH 1	AUX	643	602	SR		OPN	CLS	Y	303	ELECTRICAL	0	0	0	1	0
417	B	7	MS-101	MS LINE 1 ISO VALVE	OS-008 SH 1	AUX	643	601	SR		OPN	CLS	Y	303	ELECTRICAL	0	0	0	1	0
419	B	8B	MS-106	MS LINE 1 TO AFP TURB 1-1 ISO VALVE	OS-017B SH 1	AUX	623	500	SR		CLS	OPN	Y	250	ELECTRICAL	0	0	0	1	0
420	P	8A	MS-107	MS LN 2 TO AFP TURB 1-2 MTR CTRL ISO VLV	OS-017B SH 1	AUX	623	501	SR		CLS	OPN	Y	153	ELECTRICAL	0	0	0	1	0
423	C	7	MS-5889A	AFP TURB 1-1 STEAM ADMISSION VALVE	OS-017B SH 1	AUX	565	237	SR		CLS	OPN	Y	225	ELECTRICAL	0	0	0	1	0
424	C	7	MS-5889B	AFP TURB 1-2 STEAM ADMISSION VALVE	OS-017B SH 1	AUX	565	238	SR		CLS	OPN	Y	226	ELECTRICAL	0	0	0	1	0
57	C	7	MU-19	RCP SEAL INJ FLOW CTRL VLV	OS-002 SH 3	AUX	585	303	S	3	THR	N/A	N	319		1	0	0	0	0
215	C	7	MU-19	RCP SEAL INJ FLOW CTRL VLV	OS-002 SH 3	AUX	585	303	SR	10	THR	OPN	N	319		0	1	0	0	0
125	P	8A	MU-1A	RC LETDOWN COOLER 1-1 INLET ISO VALVE	OS-002 SH 1	CTM	565	215	SR		OPN	CLS	Y	155	ELECTRICAL	0	1	0	0	0
126	P	8A	MU-1B	RC LETDOWN COOLER 1-2 INLET ISO VALVE	OS-002 SH 1	CTM	565	215	SR		OPN	CLS	Y	156	ELECTRICAL	0	1	0	0	0
59	C	7	MU-23	BA PMP PNEUMATC DISCH CTRL VLV	OS-046	AUX	565	240	SR		CLS	OPN	Y	318	ELECTRICAL	1	0	0	0	0
127	C	8A	MU-2B	RC LETDOWN ISO VALVE	OS-002 SH 1	CTM	565	216	SR		OPN	CLS	Y	98	ELECTRICAL	0	1	0	0	0
60	P	7	MU-32	MU FLOW CTRL VALVE	OS-002 SH 3	AUX	565	225	SR		THR	OPN	Y	319	ELECTRICAL	1	0	0	0	0
213	P	7	MU-32	MU FLOW CTRL VALVE	OS-002 SH 3	AUX	565	225	SR		THR	OPN	Y	319	ELECTRICAL	0	1	0	0	0
128	C	7	MU-38	RCP SEAL RETURN ISO VALVE	OS-002 SH 2	AUX	565	208	SR	51	OPN	OPN	Y	231	ELECTRICAL/M ANUAL	0	1	0	0	0
65	C	8A	MU-3971	MU PUMP2 SUCTION 3 WAY MOV	OS-002 SH 3	AUX	565	225	SR	9	OPN	OPN	Y	164	ELECTRICAL	1	0	0	0	0
177	C	8A	MU-3971	MU PUMP2 SUCTION 3 WAY MOV	OS-002 SH 3	AUX	565	225	SR	9	OPN	OPN	Y	164	ELECTRICAL	0	1	0	0	0
66	C	8A	MU-40	BATCH FEED LINE STOP ISO VLV	OS-002 SH 1	AUX	565	211	SR		CLS	OP/CL	Y	80	ELECTRICAL	1	0	0	0	0
68	C	8A	MU-6405	RC MU PMP1-1 3-WAY SUCTION VALVE	OS-002 SH 3	AUX	565	225	SR	9	OPN	OPN	Y	85	ELECTRICAL	1	0	0	0	0
178	C	8A	MU-6405	RC MU PMP1-1 3-WAY SUCTION VALVE	OS-002 SH 3	AUX	565	225	SR	9	OPN	OPN	Y	85	ELECTRICAL	0	1	0	0	0
73	C	8A	MU-6419	NORMAL MU TO RCS LOOP-1 ISOVLV	OS-002 SH 3	AUX	565	208	SR		CLS	OPN	Y	150	ELECTRICAL	1	0	0	0	0
204	C	8A	MU-6419	NORMAL MU TO RCS LOOP-1 ISOVLV	OS-002 SH 3	AUX	565	208	SR		CLS	OP/CL	Y	150	ELECTRICAL	0	1	0	0	0
75	B	8A	MU-6421	MU TO RCS TRAIN2 ISO VALVE	OS-002 SH 3	AUX	565	208	SR		CLS	OPN	Y	111	ELECTRICAL	1	0	0	0	0
207	B	8A	MU-6421	MU TO RCS TRAIN2 ISO VALVE	OS-002 SH 3	AUX	565	208	SR		CLS	OPN	Y	111	ELECTRICAL	0	1	0	0	0
214	P	8A	MU-6422	NORM MU TO RCP SEALS ISO VLV	OS-002 SH 3	AUX	565	236	SR	12	OPN	THR	Y	249	ELECTRICAL	0	1	0	0	0
168	C	7	MU-66A	RCP1-2-1 SEAL INJ FLOW ISO VLV	OS-002 SH 2	AUX	565	208	SR	51	OPN	OPN	Y	227	ELECTRICAL/M ANUAL	0	1	0	0	0
169	C	7	MU-66B	P1-2-2 SEAL INJ FLOW CNTRL VLV	OS-002 SH 2	AUX	565	208	SR	51	OPN	OPN	Y	228	ELECTRICAL/M ANUAL	0	1	0	0	0
170	C	7	MU-66C	RCP1-1-1 SEAL INJ FLOW ISO VLV	OS-002 SH 2	AUX	565	208	SR	51	OPN	OPN	Y	229	ELECTRICAL/M ANUAL	0	1	0	0	0
171	C	7	MU-66D	RCP1-1-2 SEAL INJ FLOW ISO VLV	OS-002 SH 2	AUX	565	208	SR	51	OPN	OPN	Y	230	ELECTRICAL/M ANUAL	0	1	0	0	0
1091	B	0	NI-5874A	NEUTRON FLUX IND CH 1 (SOURCE RANGE)	OS-001A	AUX	623	505	SR		ON	ON	Y	320	ELECTRICAL	1	0	0	0	0
1092	P	0	NI-5875A	NEUTRON FLUX IND CH 2 (SOURCE RANGE)	OS-001A	AUX	623	505	SR		ON	ON	Y	320	ELECTRICAL	1	0	0	0	0
1109	B	20	NP 1473	EDG 1-1 OIL PUMP CONT BOX CH A		AUX	585	318	SR		ON	ON	Y	144	ELECTRICAL	0	0	0	0	1
1110	P	20	NP 1474	EDG 1-2 OIL PUMP CONT BOX CH B		AUX	585	319	SR		ON	ON	Y	145	ELECTRICAL	0	0	0	0	1
884	B	20	NV-5305A	L.V.S.G. RM DAMP CTRL STATION	OS-035	AUX	603	429	SR		AUT	AUT	Y	140	ELECTRICAL	0	0	0	0	1
885	B	20	NV-5305B	L.V.S.G. RM DAMP CTRL STATION	OS-035	AUX	603	429	SR		AUT	AUT	Y	141	ELECTRICAL	0	0	0	0	1
886	P	20	NV-5314A	L.V.S.G. RM 428 VENT	OS-035	AUX	603	428	SR		AUT	AUT	Y	157	ELECTRICAL	0	0	0	0	1
887	B	20	NV-5597D	BATT RM 429B DISCH DMPR LOC SW	OS-035	AUX	603	429	SR		AUT	AUT	Y	112	ELECTRICAL	0	0	0	0	1
888	P	20	NV-5598D	BATT RM 428A DISCH DMPR LOC SW	OS-035	AUX	603	428	SR		AUT	AUT	Y	113	ELECTRICAL	0	0	0	0	1
1089	B	0	NY-5874B	NEUTRON FLUX MONITORING AMPLIGIER CH1		AUX	603	402	SR		ON	ON	Y	320	ELECTRICAL	1	0	0	0	0
1090	B	0	NY-5874C	NEUTRON FLUX SIGNAL PROCESSOR CH 1		AUX	603	402	SR		ON	ON	Y	320	ELECTRICAL	1	0	0	0	0
1093	P	0	NY-5875B	NEUTRON FLUX SIGNAL AMPLIFIER		AUX	603	427	SR		ON	ON	Y	320	ELECTRICAL	1	0	0	0	0
1094	P	0	NY-5875C	NEUTRON FLUX SIGNAL PROCESSOR CH 2		AUX	603	427	SR		ON	ON	Y	320	ELECTRICAL	1	0	0	0	0
427	B	5	P14-1	AUXILIARY FEEDWATER PUMP 1-1	OS-017A SH 1	AUX	565	237	S		STB	ON	Y		STEAM	0	0	0	1	0

Seismic Review Safe Shutdown Equipment List (SSEL)

Line No.	Train	Equip Class	Equipment ID Number	System/Equipment Description	Drawing Number	Bldg	Elev	Room No.	Eval Cat.	Note	Normal State	Desired State	Pwr Reqd	G.4 Form Number	Support System	RC	IC	PC	DH	SU
428	P	5	P14-2	AUXILIARY FEEDWATER PUMP 1-2	OS-017A SH 1	AUX	565	238	S		STB	ON	Y		STEAM	0	0	0	1	0
889	B	6	P195-1	EDG FUEL OIL TRANSFER PUMP 1-1	OS-041C	YRD	585	N/A	SR		O/O	O/O	Y	151	ELECTRICAL	0	0	0	0	1
890	P	6	P195-2	EDG FUEL OIL TRANSFER PUMP 1-2	OS-041C	YRD	585	N/A	SR		O/O	O/O	Y	152	ELECTRICAL	0	0	0	0	1
891	B	6	P3-1	SERVICE WATER PUMP 1-1	OS-020 SH 1	ITK	576	052	SR		ON	ON	Y	287	ELECTRICAL	0	0	0	0	1
892	P	6	P3-2	SERVICE WATER PUMP 1-2	OS-020 SH 1	ITK	576	052	SR		ON	ON	Y	295	ELECTRICAL	0	0	0	0	1
81	C	5	P37-1	MAKEUP PUMP 1-1	OS-002 SH 3	AUX	565	225	SR	8	OFF	ON	Y	106	ELECTRICAL	1	0	0	0	0
176	C	5	P37-1	MAKEUP PUMP 1-1	OS-002 SH 3	AUX	565	225	SR	8	OFF	ON	Y	106	ELECTRICAL	0	1	0	0	0
82	C	5	P37-2	MAKEUP PUMP 1-2	OS-002 SH 3	AUX	565	225	SR	8	ON	ON	Y	110	ELECTRICAL	1	0	0	0	0
183	C	5	P37-2	MAKEUP PUMP 1-2	OS-002 SH 3	AUX	565	225	SR	8	ON	ON	Y	110	ELECTRICAL	0	1	0	0	0
83	C	5	P38-1	BORIC ACID PUMP 1-1	OS-046	AUX	565	240	SR		OFF	ON	Y	101	ELECTRICAL	1	0	0	0	0
84	C	5	P38-2	BORIC ACID PUMP 1-2	OS-046	AUX	565	240	SR		OFF	ON	Y	102	ELECTRICAL	1	0	0	0	0
85	C	5	P42-1	DECAY HEAT PUMP 1-1	OS-004 SH 1	AUX	545	105	SR	15	OFF	OFF	N	288		1	0	0	0	0
143	C	5	P42-1	DECAY HEAT PUMP 1-1	OS-004 SH 1	AUX	545	105	SR	15	OFF	OFF	N	288		0	1	0	0	0
429	B	5	P42-1	DECAY HEAT PUMP 1-1	OS-004 SH 1	AUX	545	105	SR	79	OFF	ON	Y	288	ELECTRICAL	0	0	0	1	0
86	C	5	P42-2	DECAY HEAT PUMP 1-2	OS-004 SH 1	AUX	545	115	SR	15	OFF	OFF	N	296		1	0	0	0	0
144	C	5	P42-2	DECAY HEAT PUMP 1-2	OS-004 SH 1	AUX	545	115	SR	15	OFF	OFF	N	296		0	1	0	0	0
430	P	5	P42-2	DECAY HEAT PUMP 1-2	OS-004 SH 1	AUX	545	115	SR	79	OFF	ON	Y	296	ELECTRICAL	0	0	0	1	0
893	B	5	P43-1	COMP COOLING PUMP 1-1	OS-021 SH 1	AUX	585	328	SR		ON	ON	Y	289	ELECTRICAL	0	0	0	0	1
894	P	5	P43-2	COMPONENT COOLING PUMP 1-2	OS-021 SH 1	AUX	585	328	SR		OFF	ON	Y	298	ELECTRICAL	0	0	0	0	1
895	B	5	P43-3	CC PUMP 1-3	OS-021 SH 1	AUX	585	328	S		OFF	N/A	N			0	0	0	0	1
87	C	5	P56-1	CONTAINMENT SPRAY PUMP 1-1	OS-005	AUX	545	105	SR	17	OFF	OFF	N	274		1	0	0	0	0
145	C	5	P56-1	CONTAINMENT SPRAY PUMP 1-1	OS-005	AUX	545	105	SR	17	OFF	OFF	N	274		0	1	0	0	0
88	C	5	P56-2	CONTAINMENT SPRAY PUMP 1-2	OS-005	AUX	545	115	SR	17	OFF	OFF	N	275		1	0	0	0	0
146	C	5	P56-2	CONTAINMENT SPRAY PUMP 1-2	OS-005	AUX	545	115	SR	17	OFF	OFF	N	275		0	1	0	0	0
89	C	5	P57	BORATED WATER RECIRC PUMP 1-1	OS-007	AUX	565	209	S	99	ON	N/A	N			1	0	0	0	0
147	C	5	P57	BORATED WATER RECIRC PUMP 1-1	OS-007	AUX	565	209	S	99	ON	N/A	N			0	1	0	0	0
90	C	5	P58-1	HI PRESSURE INJECTION PUMP 1-1	OS-003	AUX	545	105	SR	13	OFF	OFF	N	290		1	0	0	0	0
91	C	5	P58-2	HI PRESSURE INJECTION PUMP 1-2	OS-003	AUX	545	115	SR	13	OFF	OFF	N	297		1	0	0	0	0
1127	B	20	PC-5898	CREVS STBY COND 1 DAMPER CONTROL (C6714)	OS-032B	AUX	643	603	SR		CLS	OPN	Y	90	ELECTRICAL	0	0	0	0	1
1128	P	20	PC-5899	CREVS STBY COND 2 DAMPER CONTROL (C6715)	OS-032B	AUX	643	603	SR		CLS	OPN	Y	91	ELECTRICAL	0	0	0	0	1
896	B	18	PDIS 1379A	SW STRNR 1-1 PRESS DIFF IND SW	OS-020 SH 1	ITK	576	052	SR	1	ON	ON	Y	134	ELECTRICAL	0	0	0	0	1
897	P	18	PDIS 1380A	SW STRNR 1-2 PRESS DIFF IND SW	OS-020 SH 1	ITK	576	052	SR	1	ON	ON	Y	135	ELECTRICAL	0	0	0	0	1
1033	B	18	PDSH 3981	DG1 JKT CC OUT ISO VLV PDSH	OS-021 SH 1	AUX	585	318	SR	32	ON	ON	Y	177	ELECTRICAL	0	0	0	0	1
1034	P	18	PDSH 3982	DG2 JKT CC OUT ISO VLV PDSH	OS-021 SH 1	AUX	585	319	SR	32	ON	ON	Y	178	ELECTRICAL	0	0	0	0	1
254	B	20	PI-2000	CTMT SFAS CH 1 PRESSURE INDICATOR	OS-033F	AUX	623	505	SR	1	ON	ON	Y	300	ELECTRICAL	0	0	1	0	0
255	P	20	PI-2001	CTMT SFAS CH 2 PRESSURE INDICATOR	OS-033F	AUX	623	505	SR	1	ON	ON	Y	300	ELECTRICAL	0	0	1	0	0
92	B	20	PI-MU52A	BA PMP 1-1 DISCH PRESS INDIC	OS-046	AUX	565	241	SR	1	ON	ON	Y	301	ELECTRICAL	1	0	0	0	0
93	P	20	PI-MU52B	BA PMP 1-2 DISCH PRESS INDIC	OS-046	AUX	565	241	SR	1	ON	ON	Y	301	ELECTRICAL	1	0	0	0	0
256	P	20	PI-RC2A4	RC LOOP 2 HLG WR SFAS CH 2	OS-001A SH 1	AUX	623	505	SR	1	ON	ON	Y	300	ELECTRICAL	0	0	1	0	0
431	P	20	PI-RC2A4	RC LOOP 2 HLG WR SFAS CH 2	OS-001A SH 1	AUX	623	505	SR	1	ON	ON	Y	300	ELECTRICAL	0	0	0	1	0
257	B	20	PI-RC2B4	RC LOOP 1 HLG WR SFAS CH 1	OS-001A SH 1	AUX	623	505	SR	1	ON	ON	Y	300	ELECTRICAL	0	0	1	0	0
432	B	20	PI-RC2B4	RC LOOP 1 HLG WR SFAS CH 1	OS-001A SH 1	AUX	623	505	SR	1	ON	ON	Y	300	ELECTRICAL	0	0	0	1	0
433	P	20	PI-SP12A	STEAM GEN 2 DISCHARGE PRESSURE INDICATOR	OS-008 SH 1	AUX	623	505	SR	1	ON	ON	Y	302	ELECTRICAL	0	0	0	1	0
434	B	20	PI-SP12B	STEAM GEN 1 DISCH PRESSURE INDICATOR	OS-008 SH 1	AUX	623	505	SR	1	ON	ON	Y	302	ELECTRICAL	0	0	0	1	0
1131	B	18	PS 28020	CREVS COND 1 MTR UNLOADER PRESS SWITCH	OS-032B	AUX	643	603	SR		ON	ON	Y	74	ELECTRICAL	0	0	0	0	1
1132	B	18	PS 28021	CREVS COND 1 MTR UNLOADER PRESS SWITCH	OS-032B	AUX	643	603	SR		ON	ON	Y	74	ELECTRICAL	0	0	0	0	1
1133	P	18	PS 28022	CREVS COND 2 MTR UNLOADER PRESS SWITCH	OS-032B	AUX	643	603	SR		ON	ON	Y	75	ELECTRICAL	0	0	0	0	1
1134	P	18	PS 28023	CREVS COND 2 MTR UNLOADER PRESS SWITCH	OS-032B	AUX	643	603	SR		ON	ON	Y	75	ELECTRICAL	0	0	0	0	1
1210	P	18	PS 3687A	M S LINE 2 PRESS LO TO SFRCS CH 2 PRESS		AUX	623	501	S	4	ON	ON	Y		ELECTRICAL	0	0	0	0	1

Seismic Review Safe Shutdown Equipment List (SSEL)

Line No.	Train	Equip Class	Equipment ID Number	System/Equipment Description	Drawing Number	Bldg	Elev	Room No.	Eval Cat.	Note	Normal State	Desired State	Pwr Reqd	G.4 Form Number	Support System	RC	IC	PC	DH	SU
1211	B	18	PS 3687C	M S LINE 1 PRESS LO TO SFRCS PRESS SW		AUX	623	500	S	4	ON	ON	Y		ELECTRICAL	0	0	0	0	1
1214	P	18	PS 3687E	SFRCS STM LN PRESSURE SWITCH (SG 1-2)		AUX	623	501	S	4	ON	ON	Y		ELECTRICAL	0	0	0	0	1
1215	B	18	PS 3687G	SFRCS STM LN PRESSURE SWITCH (SG 1-1)		AUX	623	500	S	4	ON	ON	Y		ELECTRICAL	0	0	0	0	1
1213	B	18	PS 3689B	M S LINE 1 PRESS LO TO SFRCS PRESS SW		AUX	623	500	S	4	ON	ON	Y		ELECTRICAL	0	0	0	0	1
1212	P	18	PS 3689D	M S LINE 2 PRESS LO TO SFRCS CH 1 PRESS		AUX	623	501	S	4	ON	ON	Y		ELECTRICAL	0	0	0	0	1
1216	B	18	PS 3689F	MS LINE 1 PRESS LO TO SFRCS PRESS SW		AUX	623	500	S	4	ON	ON	Y		ELECTRICAL	0	0	0	0	1
1217	P	18	PS 3689H	M S LINE 2 PRESS LO TO SFRCS CH3 PRESS S		AUX	623	501	S	4	ON	ON	Y		ELECTRICAL	0	0	0	0	1
1129	B	18	PS 5900	CREVS CH 1 SWITCHOVER PRESSURE	OS-032B	AUX	638	603	SR		ON	ON	Y	90	ELECTRICAL	0	0	0	0	1
1130	P	18	PS 5901	CREVS CH 2 SWITCHOVER PRESSURE	OS-032B	AUX	638	603	SR		ON	ON	Y	91	ELECTRICAL	0	0	0	0	1
1164	P	18	PS MU102A	MK-UP PMP2 OIL PRESS SWTCH		AUX	565	225	S	4	ON	ON	Y		ELECTRICAL	0	0	0	0	1
1165	P	18	PS MU102A1	MK-UP PMP2 OIL PRESS SWTCH		AUX	565	225	S	4	ON	ON	Y		ELECTRICAL	0	0	0	0	1
1206	P	18	PS2MU105A	RCT MK-UP PMP 1-2 LUBE OIL PRESS SWITCH		AUX	565	225	S	4	ON	ON	Y		ELECTRICAL	0	0	0	0	1
1207	P	18	PS3MU105A	RCT MK-UP PMP 1-2 LUBE OIL PRESS SWITCH		AUX	565	225	S	4	ON	ON	Y		ELECTRICAL	0	0	0	0	1
258	B	0	PSE 226	PRESSURIZER QUENCH TANK RUPTURE DISK	OS-001A SH 3	CTM	565	218	S		CLS	OPN	N			0	0	1	0	0
259	P	0	PSE 5461	PRESSURIZER SAFETY VALVE RUPTURE DISK	OS-001A SH 2	CTM	565	218	S		CLS	OPN	N			0	0	1	0	0
260	P	0	PSE 5462	PRESSURIZER SAFETY VALVE RUPTURE DISK	OS-001A SH 2	CTM	565	218	S		CLS	OPN	N			0	0	1	0	0
261	B	0	PSE 5463	PRESSURIZER SAFETY VALVE RUPTURE DISK	OS-001A SH 2	CTM	565	218	S		CLS	OPN	N			0	0	1	0	0
262	B	0	PSE 5464	PRESSURIZER SAFETY VALVE RUPTURE DISK	OS-001A SH 2	CTM	565	218	S		CLS	OPN	N			0	0	1	0	0
1208	P	18	PSH 3711	LETDOWN CLR 1-1 CCW SIDE PRESS SWITCH HI		CTM	565	215	S	4	ON	ON	Y		ELECTRICAL	0	0	0	0	1
1205	P	18	PSH 3712	SW SYS HEADER PRES SW		CTM	565	215	S	4	ON	ON	Y		ELECTRICAL	0	0	0	0	1
1135	B	18	PSH 5898	CREVS STBY COND 1 FAN START	OS-032B	AUX	643	603	SR		ON	ON	Y	90	ELECTRICAL	0	0	0	0	1
1136	P	18	PSH 5899	CREVS STBY COND 2 FAN START	OS-032B	AUX	643	603	SR		ON	ON	Y	91	ELECTRICAL	0	0	0	0	1
263	B	20	PSH 7528A	RC LOOP 1 HOT LEG SFAS CH 1	OS-001A SH 1	AUX	623	502	SR	1	ON	ON	Y	311	ELECTRICAL	0	0	1	0	0
264	P	20	PSH 7531A	RC LOOP 2 HOT LEG SFAS CHANNEL 4	OS-001A SH 1	AUX	623	502	SR	1	ON	ON	Y	311	ELECTRICAL	0	0	1	0	0
265	P	18	PSH RC2B4	RC HOT LEG PRESSURE SWITCH	OS-001A SH 1	CTM	603	410A	SR	1	ON	ON	Y	99	ELECTRICAL	0	0	1	0	0
1137	P	18	PSHL 28018	CREVS UNIT 2 HIGH/LOW PRESS SWITCH	OS-032B	AUX	643	603	SR		ON	ON	Y	75	ELECTRICAL	0	0	0	0	1
1138	B	18	PSHL 28019	CREVS UNIT 1 HIGH/LOW PRESS SWITCH	OS-032B	AUX	643	603	SR		ON	ON	Y	74	ELECTRICAL	0	0	0	0	1
435	B	18	PSL 106A	PRESS SWTCH LO FR AFP TURB 1-1 STM INLET	OS-017B SH 1	AUX	565	237	SR	1	ON	ON	Y	250	ELECTRICAL	0	0	0	1	0
436	B	18	PSL 106B	PRESS SWITCH LOW AT AFP TURB 1-1 SUCTION	OS-017B SH 1	AUX	565	237	SR	1	ON	ON	Y	250	ELECTRICAL	0	0	0	1	0
437	B	18	PSL 106C	PRESS SWITCH LOW FOR AFP TURB 1-1 INLET	OS-017B SH 1	AUX	565	237	SR	1	ON	ON	Y	250	ELECTRICAL	0	0	0	1	0
438	B	18	PSL 106D	PRESS SWITCH LOW FOR AFP TURB 1-1 INLET	OS-017B SH 1	AUX	565	237	SR	1	ON	ON	Y	250	ELECTRICAL	0	0	0	1	0
439	P	18	PSL 107A	AFP TURB 1-2 INLET PRESS SWITCH LOW	OS-017B SH 1	AUX	565	238	SR	1	ON	ON	Y	153	ELECTRICAL	0	0	0	1	0
440	P	18	PSL 107B	AFP TURB 1-2 INLET PRESS SWITCH LOW	OS-017B SH 1	AUX	565	238	SR	1	ON	ON	Y	153	ELECTRICAL	0	0	0	1	0
441	P	18	PSL 107C	AFP TURB 1-2 INLET PRESS SWITCH LOW	OS-017B SH 1	AUX	565	238	SR	1	ON	ON	Y	153	ELECTRICAL	0	0	0	1	0
442	P	18	PSL 107D	AFP TURB 1-2 INLET PRESS SWITCH LOW	OS-017B SH 1	AUX	565	238	SR	1	ON	ON	Y	153	ELECTRICAL	0	0	0	1	0
898	P	18	PSL 1377A	SW PMP 1-2 DCHG SRC TAP PRESS SWITCH LOW	OS-020 SH 1	ITK	576	052	SR	101	ON	ON	Y	160	ELECTRICAL	0	0	0	0	1
1141	P	18	PSL 28016	CREVS UNIT 2 LOW OIL PRESS PROT SWITCH	OS-032B	AUX	643	603	SR		ON	ON	Y	75	ELECTRICAL	0	0	0	0	1
1142	B	18	PSL 28017	CREVS UNIT 1 LOW OIL PRESS PROT SWITCH	OS-032B	AUX	643	603	SR		ON	ON	Y	74	ELECTRICAL	0	0	0	0	1
899	B	18	PSL 3783	EDG STRTNG AIR RCVR 1-1-1 TO..	OS-041B	AUX	585	318	SR	1	ON	ON	Y	186	ELECTRICAL	0	0	0	0	1
900	B	18	PSL 3784	EDG STRTNG AIR RCVR 1-1-2 TO..	OS-041B	AUX	585	318	SR	1	ON	ON	Y	187	ELECTRICAL	0	0	0	0	1
901	P	18	PSL 3785	EDG STRTNG AIR RCVR 1-2-1 TO..	OS-041B	AUX	585	319	SR	1	ON	ON	Y	188	ELECTRICAL	0	0	0	0	1
902	P	18	PSL 3786	EDG STRTNG AIR RCVR 1-2-2 TO..	OS-041B	AUX	585	319	SR	1	ON	ON	Y	189	ELECTRICAL	0	0	0	0	1
1167	B	18	PSL 4928A	AFP 1-1 SUCTION BEFORE STRNR PRESS SWT L		AUX	565	237	S	4	ON	ON	Y		ELECTRICAL	0	0	0	0	1
1168	B	18	PSL 4928B	AFP 1-1 SUCTION BEFORE STRNR PRESS SWT L		AUX	565	237	S	4	ON	ON	Y		ELECTRICAL	0	0	0	0	1
1171	P	18	PSL 4929A	AFP 1-2 SUCTION BEFORE STRNR PRESS SWT L		AUX	565	238	S	4	ON	ON	Y		ELECTRICAL	0	0	0	0	1
1172	P	18	PSL 4929B	AFP 1-2 SUCTION BEFORE STRNR PRESS SWT L		AUX	565	238	S	4	ON	ON	Y		ELECTRICAL	0	0	0	0	1
443	B	18	PSL 4930A	AFP 1-1 SUCTION AFTER STRNR PRESS SWT LO	OS-017A SH 1	AUX	565	237	SR	1	ON	ON	Y	250	ELECTRICAL	0	0	0	1	0
444	B	35	PSL 4930B	AFP 1-1 SUCTION AFTER STRNR PRESS SWT LO	OS-017A SH 1	AUX	565	237	SR	1	ON	ON	Y	358	ELECTRICAL	0	0	0	1	0
445	P	18	PSL 4931A	AFP 1-2 SUCTION AFTER STRNR PRESS SWT LO	OS-017A SH 1	AUX	565	238	SR	1	ON	ON	Y	153	ELECTRICAL	0	0	0	1	0

Seismic Review Safe Shutdown Equipment List (SSEL)

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446	P	18	PSL 4931B	AFP 1-2 SUCTION AFTER STRNR PRESS SWT LO	OS-017A SH 1	AUX	565	238	SR	1	ON	ON	Y	359	ELECTRICAL	0	0	0	1	0
1139	B	18	PSL 5898	CREVS STANDBY COND 1 FAN STOP	OS-032B	AUX	643	603	SR		ON	ON	Y	90	ELECTRICAL	0	0	0	0	1
1140	P	18	PSL 5899	CREVS STANDBY COND 2 FAN STOP	OS-032B	AUX	643	603	SR		ON	ON	Y	91	ELECTRICAL	0	0	0	0	1
164	P	18	PSLL MU66A	PS FOR MU66A	OS-002 SH 2	AUX	565	208	SR	1	ON	ON	Y	227	ELECTRICAL	0	1	0	0	0
165	P	18	PSLL MU66B	PS FOR MU66B	OS-002 SH 2	AUX	565	208	SR	1	ON	ON	Y	228	ELECTRICAL	0	1	0	0	0
166	P	18	PSLL MU66C	PS FOR MU66C	OS-002 SH 2	AUX	565	208	SR	1	ON	ON	Y	229	ELECTRICAL	0	1	0	0	0
167	P	18	PSLL MU66D	PS FOR MU66D	OS-002 SH 2	AUX	565	208	SR	1	ON	ON	Y	230	ELECTRICAL	0	1	0	0	0
266	B	18	PT-2000	CTMT PRESSURE SFAS CH1 PRESSURE TRANSMIT	OS-033F	AUX	603	400	SR		ON	ON	Y	300	ELECTRICAL	0	0	1	0	0
267	P	18	PT-2001	CTMT PRESSURE SFAS CH2 PRESSURE TRANSMIT	OS-033F	AUX	623	501	SR		ON	ON	Y	300	ELECTRICAL	0	0	1	0	0
302	C	18	PT-2002	CTMT PRESSURE SFAS CH3 PRESSURE TRANS	OS-033F	AUX	623	500	SR	62	ON	ON	Y	311	ELECTRICAL	0	0	1	0	0
303	C	18	PT-2003	CTMT PRESSURE SFAS CH4 PRESSURE TRANS	OS-033F	AUX	603	421	SR	62	ON	ON	Y	311	ELECTRICAL	0	0	1	0	0
1143	B	18	PT-5898	CREVS CH 1 REFRIG HEAD PRESS	OS-032B	AUX	638	603	SR		ON	ON	Y	90	ELECTRICAL	0	0	0	0	1
1144	P	18	PT-5899	CREVS CH 2 REFRIG HEAD PRESS	OS-032B	AUX	638	603	SR		ON	ON	Y	91	ELECTRICAL	0	0	0	0	1
268	P	18	PT-RC2A4	RCP LOOP 2 HLG WR PRESS TRANS SFAS CH 2	OS-001A SH 1	CTM	603	482	SR		ON	ON	Y	305	ELECTRICAL	0	0	1	0	0
447	P	18	PT-RC2A4	RCP LOOP 2 HLG WR PRESS TRANS SFAS CH 2	OS-001A SH 1	CTM	603	482	SR		ON	ON	Y	300	ELECTRICAL	0	0	0	1	0
269	B	18	PT-RC2B4	RCP LOOP 1 HLG WR PRESS TRANS SFAS CH 1	OS-001A SH 1	CTM	603	483	SR		ON	ON	Y	305	ELECTRICAL	0	0	1	0	0
448	B	18	PT-RC2B4	RCP LOOP 1 HLG WR PRESS TRANS SFAS CH 1	OS-001A SH 1	CTM	603	483	SR		ON	ON	Y	300	ELECTRICAL	0	0	0	1	0
449	P	18	PT-SP12A2	STEAM GEN 1-2 OUTLT STEAM PRESS TRANSMIT	OS-008 SH 1	CTM	585	384	SR		ON	ON	Y	302	ELECTRICAL	0	0	0	1	0
450	B	18	PT-SP12B1	STEAM GEN 1-1 OUTLT STEAM PRESS TRANSMIT	OS-008 SH 1	CTM	585	317	SR		ON	ON	Y	302	ELECTRICAL	0	0	0	1	0
451	P	7	PY-100A	MSIV--PNEUMATIC RELAY	OS-008 SH 1	AUX	643	602	SR		CLS	OPN	Y	303	ELECTRICAL	0	0	0	1	0
452	P	7	PY-100B	MSIV-- PNEUMATIC RELAY	OS-008 SH 1	AUX	643	602	SR		CLS	OPN	Y	303	ELECTRICAL	0	0	0	1	0
453	P	7	PY-100G	MSIV--PNEUMATIC RELAY	OS-008 SH 1	AUX	643	602	SR		CLS	OPN	Y	303	ELECTRICAL	0	0	0	1	0
454	P	7	PY-100H	MSIV--PNEUMATIC RELAY	OS-008 SH 1	AUX	643	602	SR		CLS	OPN	Y	303	ELECTRICAL	0	0	0	1	0
455	P	7	PY-100J	MSIV--PNEUMATIC RELAY	OS-008 SH 1	AUX	643	602	SR		CLS	OPN	Y	303	ELECTRICAL	0	0	0	1	0
456	B	7	PY-101A	MSIV--PNEUMATIC RELAY	OS-008 SH 1	AUX	643	601	SR		CLS	OPN	Y	303	ELECTRICAL	0	0	0	1	0
457	B	7	PY-101B	MSIV--PNEUMATIC RELAYS	OS-008 SH 1	AUX	643	601	SR		CLS	OPN	Y	303	ELECTRICAL	0	0	0	1	0
458	B	7	PY-101G	MSIV--PNEUMATIC RELAY	OS-008 SH 1	AUX	643	601	SR		CLS	OPN	Y	303	ELECTRICAL	0	0	0	1	0
459	B	7	PY-101H	MSIV--PNEUMATIC RELAY	OS-008 SH 1	AUX	643	601	SR		CLS	OPN	Y	303	ELECTRICAL	0	0	0	1	0
460	B	7	PY-101J	MSIV-- PNEUMATIC RELAY	OS-008 SH 1	AUX	643	601	SR		CLS	OPN	Y	303	ELECTRICAL	0	0	0	1	0
1163	P	20	RC 2826	AUX RELAY CABINET CH B		AUX	565	209	S	4	ON	ON	Y		ELECTRICAL	0	0	0	0	1
1200	C	20	RC 3004	RELAY CABINET FOR CH B		ITK	565	053	S	4	ON	ON	Y		ELECTRICAL	0	0	0	0	1
1186	P	20	RC 3014	RELAY CABINET CH2		ITK	576	052	S	4	ON	ON	Y		ELECTRICAL	0	0	0	0	1
1176	B	20	RC 3607	RELAY CABINET CH1		AUX	585	325	S	4	ON	ON	Y		ELECTRICAL	0	0	0	0	1
1180	P	20	RC 3608	RELAY CABINET CH2		AUX	585	323	S	4	ON	ON	Y		ELECTRICAL	0	0	0	0	1
1196	B	20	RC 3701	AUX RELAY CABINET CH1		AUX	585	314	S	4	ON	ON	Y		ELECTRICAL	0	0	0	0	1
1201	P	20	RC 3702	AUX RELAY CABINET CH2		AUX	585	314	S	4	ON	ON	Y		ELECTRICAL	0	0	0	0	1
1175	B	20	RC 3704	RELAY CABINET CH1		AUX	585	314	S	4	ON	ON	Y		ELECTRICAL	0	0	0	0	1
1179	P	20	RC 3705	RELAY CABINET CH2		AUX	585	314	S	4	ON	ON	Y		ELECTRICAL	0	0	0	0	1
1191	P	20	RC 3715	RELAY CABINET		AUX	585	313	S	4	ON	ON	Y		ELECTRICAL	0	0	0	0	1
1173	B	20	RC 4604	AUX RELAY CABINET CH 1		AUX	603	429	S	4	ON	ON	Y		ELECTRICAL	0	0	0	0	1
1174	P	20	RC 4605	RELAY CABINET CH2		AUX	603	428	S	4	ON	ON	Y		ELECTRICAL	0	0	0	0	1
1194	P	20	RC 4606	RELAY CABINET CH2		AUX	603	428	S	4	ON	ON	Y		ELECTRICAL	0	0	0	0	1
1199	P	20	RC 4607	RELAY CABINET CH2 FOR SV4632		AUX	603	427	S	4	ON	ON	Y		ELECTRICAL	0	0	0	0	1
1195	B	20	RC 4801	RELAY CABINET CH1		AUX	603	402	S	4	ON	ON	Y		ELECTRICAL	0	0	0	0	1
271	P	7	RC-13A	PRESSURIZER CODE SAFETY RELIEF VALVE	OS-001A SH 2	CTM	565	218	S		CLS	OP/CL	Y		ELECTRICAL	0	0	1	0	0
272	B	7	RC-13B	PRESSURIZER CODE SAFETY RELIEF VALVE	OS-001A SH 2	CTM	565	218	S		CLS	OP/CL	Y		ELECTRICAL	0	0	1	0	0
273	P	8A	RC-200	PRESS VENT LINE STOP VALVE	OS-001A SH 2	CTM	585	385	SR		CLS	OP/CL	Y	163	ELECTRICAL	0	0	1	0	0
274	P	7	RC-207	PRZR QUENCH TANK RELIEF VLV TO CTMT SUMP	OS-001A SH 3	CTM	585	218	S		CLS	OP/CL	N			0	0	1	0	0
275	P	8A	RC-239A	PRESS VAPOR PHASE SAMPLE ISO VALVE	OS-001A SH 2	CTM	585	385	SR		CLS	OP/CL	Y	154	ELECTRICAL	0	0	1	0	0

Seismic Review Safe Shutdown Equipment List (SSEL)

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278	B	0	RC-2A	PRZR PWR RELIEF VALVE (SOL PILOT OP)	OS-001A SH 2	CTM	623	580	SR		CLS	OP/CL	Y	255	ELECTRICAL	0	0	1	0	0
903	B	10	S33-1	CREVS WATER COOLED COND 1	OS-020 SH 1	AUX	638	603	SR	34	ON	ON	N	74		0	0	0	0	1
1038	B	10	S33-1	CREVS WATER COOLED COND 1	OS-032B	AUX	638	603	SR	34	ON	ON	N	74		0	0	0	0	1
904	P	10	S33-2	CREVS WATER COOLED COND 2	OS-020 SH 1	AUX	638	603	SR	34	ON	ON	N	75		0	0	0	0	1
1039	P	10	S33-2	CREVS WATER COOLED COND 2	OS-032B	AUX	638	603	SR	34	ON	ON	N	75		0	0	0	0	1
905	B	10	S61-1	CREVS AIR COOLED CONDENSER 1	OS-032B	AUX	660	N/A	SR	34	OFF	O/O	Y	92	ELECTRICAL	0	0	0	0	1
906	P	10	S61-2	CREVS AIR COOLED CONDENSER 2	OS-032B	AUX	660	N/A	SR	34	OFF	O/O	Y	93	ELECTRICAL	0	0	0	0	1
465	P	7	SP-17A1	MS LINE 2 CODE SAFETY VALVE (PSVSP17A1)	OS-008 SH 1	AUX	643	602	S		CLS	OP/CL	N			0	0	0	1	0
466	P	7	SP-17A2	MS LINE 2 CODE SAFETY VALVE (PSVSP17A2)	OS-008 SH 1	AUX	643	602	S		CLS	OP/CL	N			0	0	0	1	0
467	P	7	SP-17A3	MS LINE 2 CODE SAFETY VALVE (PSVSP17A3)	OS-008 SH 1	AUX	643	602	S		CLS	OP/CL	N			0	0	0	1	0
468	P	7	SP-17A4	MS LINE 2 CODE SAFETY VALVE (PSVSP17A4)	OS-008 SH 1	AUX	643	602	S		CLS	OP/CL	N			0	0	0	1	0
469	P	7	SP-17A5	MS LINE 2 CODE SAFETY VALVE (PSVSP17A5)	OS-008 SH 1	AUX	643	602	S		CLS	OP/CL	N			0	0	0	1	0
470	P	7	SP-17A6	MS LINE 2 CODE SAFETY VALVE (PSVSP17A6)	OS-008 SH 1	AUX	643	602	S		CLS	OP/CL	N			0	0	0	1	0
471	P	7	SP-17A7	MS LINE 2 CODE SAFETY VALVE (PSVSP17A7)	OS-008 SH 1	AUX	643	602	S		CLS	OP/CL	N			0	0	0	1	0
472	P	7	SP-17A8	MS LINE 2 CODE SAFETY VALVE (PSVSP17A8)	OS-008 SH 1	AUX	643	602	S		CLS	OP/CL	N			0	0	0	1	0
473	P	7	SP-17A9	MS LINE 2 CODE SAFETY VALVE (PSVSP17A9)	OS-008 SH 1	AUX	643	602	S		CLS	OP/CL	N			0	0	0	1	0
474	B	7	SP-17B1	MS LINE 1 CODE SAFETY VALVE (PSVSP17B1)	OS-008 SH 1	AUX	643	601	S		CLS	OP/CL	N			0	0	0	1	0
475	B	7	SP-17B2	MS LINE 1 CODE SAFETY VALVE (PSVSP17B2)	OS-008 SH 1	AUX	643	601	S		CLS	OP/CL	N			0	0	0	1	0
476	B	7	SP-17B3	MS LINE 1 CODE SAFETY VALVE (PSVSP17B3)	OS-008 SH 1	AUX	643	601	S		CLS	OP/CL	N			0	0	0	1	0
477	B	7	SP-17B4	MS LINE 1 CODE SAFETY VALVE (PSVSP17B4)	OS-008 SH 1	AUX	643	601	S		CLS	OP/CL	N			0	0	0	1	0
478	B	7	SP-17B5	MS LINE 1 CODE SAFETY VALVE (PSVSP17B5)	OS-008 SH 1	AUX	643	601	S		CLS	OP/CL	N			0	0	0	1	0
479	B	7	SP-17B6	MS LINE 1 CODE SAFETY VALVE (PSVSP17B6)	OS-008 SH 1	AUX	643	601	S		CLS	OP/CL	N			0	0	0	1	0
480	B	7	SP-17B7	MS LINE 1 CODE SAFETY VALVE (PSVSP17B7)	OS-008 SH 1	AUX	643	601	S		CLS	OP/CL	N			0	0	0	1	0
481	B	7	SP-17B8	MS LINE 1 CODE SAFETY VALVE (PSVSP17B8)	OS-008 SH 1	AUX	643	601	S		CLS	OP/CL	N			0	0	0	1	0
482	B	7	SP-17B9	MS LINE 1 CODE SAFETY VALVE (PSVSP17B9)	OS-008 SH 1	AUX	643	601	S		CLS	OP/CL	N			0	0	0	1	0
483	P	7	SS-598	STEAM GEN 1-2 SAMPLE LINE CTMT ISO VALVE	OS-051 SH 2	AUX	585	314	SR		OPN	CLS	Y	272	ELECTRICAL	0	0	0	1	0
484	B	7	SS-607	STEAM GEN 1-1 SAMPLE LINE CTMT ISO VALVE	OS-051 SH 2	AUX	585	314	SR		OPN	CLS	Y	273	ELECTRICAL	0	0	0	1	0
500	P	88	SV-100A	MS LINE 2 ISO VALVE	OS-008 SH 1	AUX	643	602	SR		ON	OFF	Y	303	ELECTRICAL	0	0	0	1	0
501	P	88	SV-100B	MS LINE 2 ISO VALVE	OS-008 SH 1	AUX	643	602	SR		ON	OFF	Y	303	ELECTRICAL	0	0	0	1	0
502	P	88	SV-100F	MS LINE 2 ISO VALVE	OS-008 SH 1	AUX	643	602	SR		ON	OFF	Y	303	ELECTRICAL	0	0	0	1	0
503	B	88	SV-101A	MS LINE 1 ISO VALVE SOL VALVE	OS-008 SH 1	AUX	643	601	SR		ON	OFF	Y	303	ELECTRICAL	0	0	0	1	0
504	B	88	SV-101B	MS LINE 1 ISO VALVE SOL VALVE	OS-008 SH 1	AUX	643	601	SR		ON	OFF	Y	303	ELECTRICAL	0	0	0	1	0
505	B	88	SV-101F	MS LINE 1 ISO VALVE SOL VALVE	OS-008 SH 1	AUX	643	601	SR		ON	OFF	Y	303	ELECTRICAL	0	0	0	1	0
1023	B	88	SV-1356A	CAC 1-1 SW OUTLET ISO VALVE	OS-020 SH 1	AUX	585	314	SR	65	ON	OFF	Y	265	ELECTRICAL	0	0	0	0	1
1024	B	88	SV-1356B	CAC 1-1 SW OUTLET ISO VALVE	OS-020 SH 1	AUX	585	314	SR	65	ON	OFF	Y	265	ELECTRICAL	0	0	0	0	1
1025	P	88	SV-1357A	CAC 2 SW OUTLET ISO SOLENOID VALVE	OS-020 SH 1	AUX	585	314	SR	65	ON	OFF	Y	266	ELECTRICAL	0	0	0	0	1
1026	P	88	SV-1357B	CAC 2 SW OUTLET ISO VALVE	OS-020 SH 1	AUX	585	314	SR	65	ON	OFF	Y	266	ELECTRICAL	0	0	0	0	1
907	B	88	SV-1424	SOL VLV FR CC HX 1 SW OUT ISO VLV	OS-020 SH 1	AUX	585	328	SR	30	ON	OFF	Y	268	ELECTRICAL	0	0	0	0	1
908	P	88	SV-1434	SOL VLV FR CC HX 2 SW OUT ISO VLV	OS-020 SH 1	AUX	585	328	SR	30	ON	OFF	Y	269	ELECTRICAL	0	0	0	0	1
1035	B	88	SV-1467	SOL VLV FOR HV-1467	OS-021 SH 1	AUX	545	113	SR	33	ON	O/O	Y	175	ELECTRICAL	0	0	0	0	1
909	P	88	SV-1469	SOL VALVE FOR HV1469	OS-021 SH 1	AUX	545	113	SR	33	ON	O/O	Y	176	ELECTRICAL	0	0	0	0	1
1036	B	88	SV-1471	SOL VLV FOR HV-1471	OS-021 SH 1	AUX	585	318	SR	33	ON	O/O	Y	177	ELECTRICAL	0	0	0	0	1
1037	P	88	SV-1474	SOL VLV FOR HV-1474	OS-021 SH 1	AUX	585	319	SR	33	ON	O/O	Y	178	ELECTRICAL	0	0	0	0	1
910	B	88	SV-5301	AUX BLDG CTRM DMPR AIR SOL VLV	OS-032A	AUX	638	603	SR		ON	OFF	Y	270	ELECTRICAL	0	0	0	0	1
911	B	88	SV-5301A	CTRM COMP CONF RM&COMP..SOLVLV	OS-032A	AUX	638	603	SR		ON	OFF	Y	270	ELECTRICAL	0	0	0	0	1
912	P	88	SV-5311	CTRM ISO DAMPERS SOL VALVE	OS-032A	AUX	638	603	SR		ON	OFF	Y	271	ELECTRICAL	0	0	0	0	1
913	P	88	SV-5311A	AUX BLDG CTRM DMPR AIR SOL VLV	OS-032A	AUX	638	603	SR		ON	OFF	Y	271	ELECTRICAL	0	0	0	0	1
506	B	88	SV-5889A	AFP TURB 1-1 STM ADM BLD OFF SOL VALVE	OS-017B SH 1	AUX	565	237	SR		ON	OFF	Y	225	ELECTRICAL	0	0	0	1	0
507	P	88	SV-5889B	AFP TURB 1-2 STM ADM BLD OFF SOL VALVE	OS-017B SH 1	AUX	565	238	SR		ON	OFF	Y	226	ELECTRICAL	0	0	0	1	0

Seismic Review Safe Shutdown Equipment List (SSEL)

Line No.	Train	Equip Class	Equipment ID Number	System/Equipment Description	Drawing Number	Bldg	Elev	Room No.	Eval Cat.	Note	Normal State	Desired State	Pwr Reqd	G.4 Form Number	Support System	RC	IC	PC	DN	SU
508	P	8B	SV-598	SOLENOID VALVE FOR VALVE SS598	OS-051 SH 2	AUX	585	314	SR		ON	OFF	Y	272	ELECTRICAL	0	0	0	1	0
509	B	8B	SV-607	STEAM GEN 1-1 SAMPLE LINE CTMT ISO VALVE	OS-051 SH 2	AUX	585	314	SR		ON	OFF	Y	273	ELECTRICAL	0	0	0	1	0
546	P	8B	SV-ICS11A2	SV FOR ICS-11A	OS-008 SH 1	AUX	643	602	SR		ON	OFF	Y	202	ELECTRICAL	0	0	0	1	0
547	B	8B	SV-ICS11B2	SV FOR ICS-11B	OS-008 SH 1	AUX	643	601	SR		ON	OFF	Y	203	ELECTRICAL	0	0	0	1	0
150	P	8B	SV-MU38	SOL VLV FOR MU-38	OS-002 SH 2	AUX	565	208	SR		ON	ON	Y	231	ELECTRICAL	0	1	0	0	0
152	P	8B	SV-MU66A	SOL VLV FOR MU-66A	OS-002 SH 2	AUX	565	208	SR		ON	ON	Y	227	ELECTRICAL	0	1	0	0	0
153	P	8B	SV-MU66B	SOL VLV FOR MU-66B	OS-002 SH 2	AUX	565	208	SR		ON	ON	Y	228	ELECTRICAL	0	1	0	0	0
154	P	8B	SV-MU66C	SOL VLV FOR MU-66C	OS-002 SH 2	AUX	565	208	SR		ON	ON	Y	229	ELECTRICAL	0	1	0	0	0
155	P	8B	SV-MU66D	SOL VLV FOR MU-66D	OS-002 SH 2	AUX	565	208	SR		ON	ON	Y	230	ELECTRICAL	0	1	0	0	0
921	C	8A	SW-1379	SW STRNR 1-1 DRAIN VALVE	OS-020 SH 1	ITK	576	052	SR		OP/CL	OP/CL	Y	136	ELECTRICAL	0	0	0	0	1
922	C	8A	SW-1380	SW STRNR 1-2 DRAIN VALVE	OS-020 SH 1	ITK	576	052	SR		OP/CL	OP/CL	Y	137	ELECTRICAL	0	0	0	0	1
510	B	8A	SW-1382	SW SUPPLY TO AFP 1-1 ISO VALVE	OS-017A SH 1	AUX	565	237	SR		CLS	OPN	Y	120	ELECTRICAL	0	0	0	1	0
511	P	8A	SW-1383	SW SUPPLY TO AFP 1-2 ISO VALVE	OS-017A SH 1	AUX	565	236	SR		CLS	OPN	Y	121	ELECTRICAL	0	0	0	1	0
925	P	8A	SW-1395	TPCW HTXCHANG INLT HDR ISO VLV	OS-020 SH 1	ITK	566	053	SR		OPN	CLS	Y	160	ELECTRICAL	0	0	0	0	1
927	B	7	SW-1424	CCW HT XCHANG 1-1 OUT CTRL VLV	OS-020 SH 1	AUX	585	328	SR	30	MOD	OPN	Y	268	ELECTRICAL	0	0	0	0	1
928	P	7	SW-1434	CCW HT XCHANG1-2 OTLT CTRL VLV	OS-020 SH 1	AUX	585	328	SR	30	CLS	OPN	Y	269	ELECTRICAL	0	0	0	0	1
929	B	8A	SW-2927	CTRM EMERG COND 1-1 OUTLET TV	OS-020 SH 1	AUX	638	603	SR		CLS	OPN	Y	128	ELECTRICAL	0	0	0	0	1
930	P	8A	SW-2928	CTRM EMERG COND 1-2 OUTLET TV	OS-020 SH 1	AUX	638	603	SR		CLS	OPN	Y	129	ELECTRICAL	0	0	0	0	1
931	C	8A	SW-2929	SW DISCH TO IN STRUCTURE VALVE	OS-020 SH 1	ITK	566	053	SR	25	OP/CL	CLS	Y	138	ELECTRICAL/M ANUAL	0	0	0	0	1
932	C	8A	SW-2930	SW DISCH TO IN FOREBAY VALVE	OS-020 SH 1	ITK	566	053	SR	26	OP/CL	OPN	Y	161	ELECTRICAL/M ANUAL	0	0	0	0	1
933	C	8A	SW-2931	SW DISCH TO COOLING TWR MU VLV	OS-020 SH 1	ITK	566	053	SR	25	OP/CL	CLS	Y	139	ELECTRICAL/M ANUAL	0	0	0	0	1
934	C	8A	SW-2932	SW DISCH TO COLLECT BASIN VLV	OS-020 SH 1	ITK	566	053	SR	26	OP/CL	CLS	Y	162	ELECTRICAL/M ANUAL	0	0	0	0	1
943	B	7	SW-5896	CTRM EMERG COND 1-1 SW VLV	OS-020 SH 1	AUX	638	603	S		OPN	THR	Y		ELECTRICAL	0	0	0	0	1
944	P	7	SW-5897	CTRM EMERG COND 1-2...CONT VLV	OS-020 SH 1	AUX	638	603	S		OPN	THR	Y		ELECTRICAL	0	0	0	0	1
94	C	21	T10	BORATED WATER STORAGE TANK 1-1	OS-004 SH 1	YRD	585	N/A	S		ON	ON	N			1	0	0	0	0
949	B	21	T12-I	COMPONENT COOLING SURGE TNK I	OS-021 SH 3	AUX	623	501	S		ON	ON	N			0	0	0	0	1
950	P	21	T12-II	COMPONENT COOLING SURGE TNK II	OS-021 SH 3	AUX	623	501	S		ON	ON	N			0	0	0	0	1
951	B	21	T153-1	EDG FUEL OIL STORAGE 1-1	OS-041C	YRD	585	N/A	S		ON	ON	N			0	0	0	0	1
952	P	21	T153-2	EDG FUEL OIL STORAGE 1-2	OS-041C	YRD	585	N/A	S		ON	ON	N			0	0	0	0	1
95	C	21	T18	SFP DEMINERALIZER TANK 1-1	OS-007	AUX	565	233	S		ON	N/A	N			1	0	0	0	0
149	C	21	T18	SFP DEMINERALIZER TANK 1-1	OS-007	AUX	565	233	S		ON	N/A	N			0	1	0	0	0
96	C	21	T4	MAKEUP TANK 1-1	OS-002 SH 3	AUX	565	205	S		ON	ON	N			1	0	0	0	0
217	C	21	T4	MAKEUP TANK 1-1	OS-002 SH 3	AUX	565	205	S		ON	ON	N			0	1	0	0	0
953	B	21	T46-1	EDG DAY TANK 1-1	OS-041C	AUX	595	321A	S		ON	ON	N			0	0	0	0	1
954	P	21	T46-2	EDG DAY TANK 1-2	OS-041C	AUX	595	320A	S		ON	ON	N			0	0	0	0	1
97	C	21	T7-1	BORIC ACID ADDITION TANK 1-1	OS-046	AUX	565	240	S	39	ON	ON	N			1	0	0	0	0
98	C	21	T7-2	BORIC ACID ADDITION TANK 1-2	OS-046	AUX	565	240	S	39	ON	ON	N			1	0	0	0	0
955	B	21	T86-1	EDG 1-1 AIR RECEIVER 1-1-1	OS-041B	AUX	585	318	S		ON	ON	N			0	0	0	0	1
956	B	21	T86-2	EDG 1-1 AIR RECEIVER 1-1-2	OS-041B	AUX	585	318	S		ON	ON	N			0	0	0	0	1
957	P	21	T86-3	EDG 1-2 AIR RECEIVER 1-2-1	OS-041B	AUX	585	319	S		ON	ON	N			0	0	0	0	1
958	P	21	T86-4	EDG 1-2 AIR RECEIVER 1-2-2	OS-041B	AUX	585	319	S		ON	ON	N			0	0	0	0	1
959	B	18	TC-5329	EDG RM 1 TEMP CONTROLLER	OS-035	AUX	585	318	SR	1	ON	ON	Y	212	ELECTRICAL	0	0	0	0	1
960	P	18	TC-5336	EDG RM2 TEMP CTRL LOC IN C3616	OS-035	AUX	585	319	SR	1	ON	ON	Y	215	ELECTRICAL	0	0	0	0	1
284	P	20	TDI 4950	RCS MARGIN TO SAT INDICATOR (TSAT)	OS-001A SH 1	AUX	623	505	SR	1	ON	ON	Y	305	ELECTRICAL	0	0	1	0	0
285	B	20	TDI 4951	RCS MARGIN TO SAT INDICATOR (TSAT)	OS-001A SH 1	AUX	623	505	SR	1	ON	ON	Y	305	ELECTRICAL	0	0	1	0	0

Seismic Review Safe Shutdown Equipment List (SSEL)

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512	P	20	TDI-4950	RCS MARGIN TO SAT INDICATOR (TSAT)	OS-001A SH 1	AUX	623	505	SR	1	ON	ON	Y	305	ELECTRICAL	0	0	0	1	0
513	B	20	TDI-4951	RCS MARGIN TO SAT INDICATOR (TSAT)	OS-001A SH 1	AUX	623	505	SR	1	ON	ON	Y	305	ELECTRICAL	0	0	0	1	0
286	B	19	TE-1356	CTMT COOLER FAN 1 SUCTION TEMP ELEMENT	OS-033A	CTM	585	317	SR		ON	ON	Y	304	ELECTRICAL	0	0	1	0	0
287	P	19	TE-1357	CTMT COOLER FAN 2 SUCTION TEMP ELEMENT	OS-033A	CTM	585	317	SR		ON	ON	Y	304	ELECTRICAL	0	0	1	0	0
961	B	19	TE-5329	EDG RM 318 TEMP ELEMENT	OS-035	AUX	585	318	SR		ON	ON	Y	212	ELECTRICAL	0	0	0	0	1
962	P	19	TE-5336	EDG RM 2 TEMP ELEMENT	OS-035	AUX	585	319	SR		ON	ON	Y	215	ELECTRICAL	0	0	0	0	1
963	B	19	TE-5443	CC PMP 1 RM TEMP ELEMENT	OS-036 SH 1	AUX	585	328	SR		ON	ON	Y	219	ELECTRICAL	0	0	0	0	1
964	P	19	TE-5444	CC PMP 1 RM TEMP ELEMENT	OS-036 SH 1	AUX	585	328	SR		ON	ON	Y	220	ELECTRICAL	0	0	0	0	1
514	P	0	TE-IM07E	INCORE OUTLET E7 TEMP ELEMENT	OS-001A SH 1	CTM	578	315	SR		ON	ON	Y	305	ELECTRICAL	0	0	0	1	0
515	B	0	TE-IM07M	INCORE OUTLET M7 TEMP ELEMENT	OS-001A SH 1	CTM	578	315	SR		ON	ON	Y	305	ELECTRICAL	0	0	0	1	0
288	P	19	TE-RC3A6	RC LOOP 2 HLG WR TEMP ELEMENT	OS-001A SH 1	CTM	630	218	SR		ON	ON	Y	305	ELECTRICAL	0	0	1	0	0
516	P	19	TE-RC3A6	RC LOOP 2 HLG WR TEMP ELEMENT	OS-001A SH 1	CTM	630	218	SR		ON	ON	Y	305	ELECTRICAL	0	0	0	1	0
289	B	19	TE-RC3B5	RC LOOP 1 HLG WR TEMP ELEMENT	OS-001A SH 1	CTM	565	216	SR		ON	ON	Y	305	ELECTRICAL	0	0	1	0	0
517	B	19	TE-RC3B5	RC LOOP 1 HLG WR TEMP ELEMENT	OS-001A SH 1	CTM	565	216	SR		ON	ON	Y	305	ELECTRICAL	0	0	0	1	0
99	P	19	TE-RC4A2	RCP 2-1 DISCH CLG WR TEMP ELEMENT	OS-001A SH 1	CTM	565	218	SR		ON	ON	Y	307	ELECTRICAL	1	0	0	0	0
290	P	19	TE-RC4A2	RCP 2-1 DISCH CLG WR TEMP ELEMENT	OS-001A SH 1	CTM	565	218	SR		ON	ON	Y	307	ELECTRICAL	0	0	1	0	0
518	P	19	TE-RC4A2	RCP 2-1 DISCH CLG WR TEMP ELEMENT	OS-001A SH 1	CTM	565	218	SR		ON	ON	Y	307	ELECTRICAL	0	0	0	1	0
100	B	19	TE-RC4B2	RCP 1-1 DISCH CLG WR TEMP ELEMENT	OS-001A SH 1	CTM	565	216	SR		ON	ON	Y	307	ELECTRICAL	1	0	0	0	0
291	B	19	TE-RC4B2	RCP 1-1 DISCH CLG WR TEMP ELEMENT	OS-001A SH 1	CTM	565	216	SR		ON	ON	Y	307	ELECTRICAL	0	0	1	0	0
519	B	19	TE-RC4B2	RCP 1-1 DISCH CLG WR TEMP ELEMENT	OS-001A SH 1	CTM	565	216	SR		ON	ON	Y	307	ELECTRICAL	0	0	0	1	0
520	B	19	TE-SP11A1	STEAM GEN 1-2 SHELL TEMP ELEMENT 1	OS-008 SH 1	CTM	565	218	SR		ON	ON	Y	306	ELECTRICAL	0	0	0	1	0
521	B	19	TE-SP11A2	STEAM GEN 1-2 SHELL TEMP ELEMENT 2	OS-008 SH 1	CTM	585	218	SR		ON	ON	Y	306	ELECTRICAL	0	0	0	1	0
522	B	19	TE-SP11A3	STEAM GEN 1-2 SHELL TEMP ELEMENT 3	OS-008 SH 1	CTM	585	218	SR		ON	ON	Y	306	ELECTRICAL	0	0	0	1	0
523	B	19	TE-SP11A4	STEAM GEN 1-2 SHELL TEMP ELEMENT 4	OS-008 SH 1	CTM	603	218	SR		ON	ON	Y	306	ELECTRICAL	0	0	0	1	0
524	B	19	TE-SP11A5	STEAM GEN 1-2 SHELL TEMP ELEMENT 5	OS-008 SH 1	CTM	603	218	SR		ON	ON	Y	306	ELECTRICAL	0	0	0	1	0
525	P	19	TE-SP11B1	STEAM GEN 1-1 SHELL TEMP ELEMENT 1	OS-008 SH 1	CTM	565	216	SR		ON	ON	Y	306	ELECTRICAL	0	0	0	1	0
526	P	19	TE-SP11B2	STEAM GEN 1-1 SHELL TEMP ELEMENT 2	OS-008 SH 1	CTM	565	216	SR		ON	ON	Y	306	ELECTRICAL	0	0	0	1	0
527	P	19	TE-SP11B3	STEAM GEN 1-1 SHELL TEMP ELEMENT 3	OS-008 SH 1	CTM	565	216	SR		ON	ON	Y	306	ELECTRICAL	0	0	0	1	0
528	P	19	TE-SP11B4	STEAM GEN 1-1 SHELL TEMP ELEMENT 4	OS-008 SH 1	CTM	565	216	SR		ON	ON	Y	306	ELECTRICAL	0	0	0	1	0
529	P	19	TE-SP11B5	STEAM GEN 1-1 SHELL TEMP ELEMENT 5	OS-008 SH 1	CTM	565	216	SR		ON	ON	Y	306	ELECTRICAL	0	0	0	1	0
292	B	20	TI-1356	CTMT COOLER FAN 1 SUCTION TEMP INDICATOR	OS-033A	AUX	623	505	SR	1	ON	ON	Y	304	ELECTRICAL	0	0	1	0	0
293	P	20	TI-1357	CTMT COOLER FAN 2 SUCTION TEMP INDICATOR	OS-033A	AUX	623	505	SR	1	ON	ON	Y	304	ELECTRICAL	0	0	1	0	0
530	B	20	TI-4627	INCORE TEMP INDICATOR	OS-001A SH 1	AUX	623	505	SR	1	ON	ON	Y	305	ELECTRICAL	0	0	0	1	0
531	P	20	TI-4628	INCORE TEMPERATURE INDICATOR	OS-001A SH 1	AUX	623	505	SR	1	ON	ON	Y	305	ELECTRICAL	0	0	0	1	0
1154	P	0	TI-5503	PORTABLE RC TEMPERATURE INDICATOR		AUX	585	304	SR		OFF	ON	Y	321	ELECTRICAL	1	0	1	1	0
1155	B	0	TI-5504	PORTABLE RC TEMPERATURE INDICATOR		AUX	585	304	SR		OFF	ON	Y	321	ELECTRICAL	1	0	1	1	0
965	B	18	TIC 5443	CC PMP 1 RM TEMP INDEX CONTROL	OS-036 SH 1	AUX	585	328	SR	1	AUT	AUT	Y	219	ELECTRICAL	0	0	0	0	1
966	P	18	TIC 5444	CC PMP 2 RM TEMP INDEX CONTROL	OS-036 SH 1	AUX	585	328	SR	1	AUT	AUT	Y	220	ELECTRICAL	0	0	0	0	1
967	B	18	TS-4688	TEMP SWT FR XHAUST FAN C99-1&2	OS-038B	ITK	576	052	SR	1			Y	114	ELECTRICAL	0	0	0	0	1
968	P	18	TS-4689	TEMP SWT FR XHAUST FAN C99-3&4	OS-038B	ITK	576	052	SR	1			Y	115	ELECTRICAL	0	0	0	0	1
532	B	18	TS-5135	TEMP SWITCH FOR AFP ROOM VENT FAN 1-1	OS-036 SH 1	AUX	565	237	SR	1	ON	ON	Y	122	ELECTRICAL	0	0	0	1	0
533	P	18	TS-5136	AFP ROOM VENT FAN 2 TEMPERATURE SWITCH	OS-036 SH 1	AUX	565	238	SR	1	ON	ON	Y	123	ELECTRICAL	0	0	0	1	0
969	B	18	TS-5261	CTRM EMERG VENT FAN 1 TEMP SWT	OS-032B	AUX	638	603	SR	1			Y	74	ELECTRICAL	0	0	0	0	1
970	P	18	TS-5262	CTRM EMERG VENT FAN 2 TEMP SWT	OS-032B	AUX	638	603	SR	1			Y	75	ELECTRICAL	0	0	0	0	1
971	P	18	TS-5315	TEMP SWT FR L.V.S.G.RM 428 VNT	OS-035	AUX	603	428	SR	1			Y	117	ELECTRICAL	0	0	0	0	1
972	B	18	TS-5318	L.V.S.G. RM DAMP TEMP SWITCH	OS-035	AUX	603	429	SR	1			Y	116	ELECTRICAL	0	0	0	0	1
973	B	18	TS-5443	CC PMP RM VNT FN 1 TEMP SWITCH	OS-036 SH 1	AUX	585	328	SR	1			Y	96	ELECTRICAL	0	0	0	0	1
974	P	18	TS-5444	CC PMP VNT FN RM 2 TEMP SWITCH	OS-036 SH 1	AUX	585	328	SR	1			Y	97	ELECTRICAL	0	0	0	0	1
1040	B	18	TS-5597	TEMP SW FR BATT RM A THERMO	OS-035	AUX	603	429	SR	1			Y	112	ELECTRICAL	0	0	0	0	1

Seismic Review Safe Shutdown Equipment List (SSEL)

Line No.	Train	Equip Class	Equipment ID Number	System/Equipment Description	Drawing Number	Bldg	Elev	Room No.	Eval Cat.	Note	Normal State	Desired State	Pwr Reqd	G.4 Form Number	Support System	RC	IC	PC	DH	SU
975	P	18	TS-5598	TEMP SW FR BATT RM B THERMO	OS-035	AUX	603	428	SR	1			Y	113	ELECTRICAL	0	0	0	0	1
976	P	18	TSH 1435	CC HX 2 CCW OUT TEMP SWTCH HI	OS-021 SH 1	AUX	585	328	SR	1			Y	298	ELECTRICAL	0	0	0	0	1
977	B	18	TSH 1483	CC HX CCW OUT TEMP SWICH HIGH	OS-021 SH 1	AUX	585	328	SR	1			Y	289	ELECTRICAL	0	0	0	0	1
1078	B	18	TSH 5421	ECCS RM CLR FAN 1-5 TEMP SW	OS-034 SH 2	AUX	545	105	SR	1	ON	ON	Y	147	ELECTRICAL	0	0	0	1	0
1079	B	18	TSH 5422	ECCS RM CLR FAN 1-4 TEMP SW	OS-034 SH 2	AUX	545	105	SR	1	ON	ON	Y	1	ELECTRICAL	0	0	0	1	0
1077	P	18	TSH 5424	ECCS RM CLR FAN 1-2 TEMP SW	OS-034 SH 2	AUX	545	115	SR	1	ON	ON	Y		ELECTRICAL	0	0	0	1	0
1076	P	18	TSH 5425	ECCS RM CLR FAN 1-1 TEMP SW	OS-034 SH 2	AUX	545	115	SR	1	ON	ON	Y	1	ELECTRICAL	0	0	0	1	0
1083	B	18	TSL 5421	ECCS RM CLR FAN 1-5 TEMP SW	OS-034 SH 2	AUX	545	105	SR	1	ON	ON	Y	14	ECTRICAL	0	0	0	1	0
1082	B	18	TSL 5422	ECCS RM CLR FAN 1-4 TEMP SW	OS-034 SH 2	AUX	545	105	SR	1	ON	ON	Y	146	ECTRICAL	0	0	0	1	0
1081	P	18	TSL 5424	ECCS RM CLR FAN 1-2 TEMP SW	OS-034 SH 2	AUX	545	115	SR	1	ON	ON	Y	149	LECTRICAL	0	0	0	1	0
1080	P	18	TSL 5425	ECCS RM CLR FAN 1-1 TEMP SW	OS-034 SH 2	AUX	545	115	SR	1	ON	ON	Y	148	ELECTRICAL	0	0	0	1	0
294	B	18	TT-1356	CTMT COOLER FAN 1 SUCTION TEMP TRANSMIT	OS-033A	AUX	585	303	SR		ON	ON	Y	304	ELECTRICAL	0	0	1	0	0
295	P	18	TT-1357	CTMT COOLER FAN 2 SUCTION TEMP TRANSMIT	OS-033A	AUX	585	314	SR		ON	ON	Y	304	ELECTRICAL	0	0	1	0	0
978	B	18	TT-5329	EDG RM 1 TEMP TRANSMITTER	OS-035	AUX	585	318	SR		ON	ON	Y	212	ELECTRICAL	0	0	0	0	1
979	P	18	TT-5336	EMG RM 2 TEMP TRANSMITTER	OS-035	AUX	585	319	SR		ON	ON	Y	215	ELECTRICAL	0	0	0	0	1
980	B	18	TT-5443	CC PMP 1 RM TEMP TRANSMITTER	OS-036 SH 1	AUX	585	328	SR		ON	ON	Y	219	ELECTRICAL	0	0	0	0	1
981	P	18	TT-5444	CC PMP 2 RM TEMP TRANSMITTER	OS-036 SH 1	AUX	585	328	SR		ON	ON	Y	220	ELECTRICAL	0	0	0	0	1
534	P	18	TT-IM07E	INCORE OUTLET E7 TEMP TRANSMIT	OS-001A SH 1	AUX	623	502	SR		ON	ON	Y	305	ELECTRICAL	0	0	0	1	0
535	B	18	TT-IM07M	INCORE OUTLET M7 TEMP TRANSMIT	OS-001A SH 1	AUX	623	502	SR		ON	ON	Y	305	ELECTRICAL	0	0	0	1	0
296	P	18	TT-RC3A6	RC TEMP HLG WR CH 2 TSAT TEMP	OS-001A SH 1	AUX	623	502	SR		ON	ON	Y	305	ELECTRICAL	0	0	1	0	0
536	P	18	TT-RC3A6	RC TEMP HLG WR CH 2 TSAT TEMP	OS-001A SH 1	AUX	623	502	SR		ON	ON	Y	305	ELECTRICAL	0	0	0	1	0
297	B	18	TT-RC3B5	RC TEMP HLG WR CH 1 TSAT TEMP TRANS	OS-001A SH 1	AUX	623	502	SR		ON	ON	Y	305	ELECTRICAL	0	0	1	0	0
537	B	18	TT-RC3B5	RC TEMP HLG WR CH 1 TSAT TEMP TRANS	OS-001A SH 1	AUX	623	502	SR		ON	ON	Y	305	ELECTRICAL	0	0	0	1	0
1145	B	20	Y-104	CREVS DISC SWITCH FOR C6708 & C6714		AUX	603	429	SR		CLS	CLS	N	50		0	0	0	0	1
1111	B	20	Y-105	EDG 1-1 DISCONNECT SWITCH FOR C3615		AUX	603	429	SR		CLS	CLS	N	50		0	0	0	0	1
1146	P	20	Y-204	CREVS DISC SWITCH FOR C6709 & C6715		AUX	603	428	SR		CLS	CLS	N	50		0	0	0	0	1
1113	P	20	Y-205	EDG 1-2 DISCONNECT SWITCH FOR C3616		AUX	603	428	SR		CLS	CLS	N	50		0	0	0	0	1
1112	B	20	Y-305	EDG 1-1 DISCONNECT SWITCH FOR C3615		AUX	603	429A	SR		CLS	CLS	N	50		0	0	0	0	1
1114	P	20	Y-405	EDG 1-2 DISCONNECT SWITCH FOR C3616		AUX	603	428	SR		CLS	CLS	N	50		0	0	0	0	1
982	C	14	Y1	ESSEN INSTR DIST PNL "Y1"	OS-060 SH 2	AUX	603	429	SR	41	ON	ON	Y	50	ELECTRICAL	0	0	0	0	1
983	C	2	Y101	XFER SWITCH FOR INV YV1 &....	OS-060 SH 2	AUX	603	429	SR		CLS	CLS	N	50		0	0	0	0	1
984	C	2	Y101A	XFER SWITCH FOR Y1A	OS-060 SH 2	AUX	603	429	SR		CLS	CLS	N	51		0	0	0	0	1
985	C	14	Y1A	120VAC ESSEN INST DIST PANEL	OS-060 SH 2	AUX	603	429	SR	41	ON	ON	Y	51	ELECTRICAL	0	0	0	0	1
986	C	14	Y2	ESSEN INSTR DIST PNL "Y2" 120V	OS-060 SH 2	AUX	603	428	SR	42	ON	ON	Y	50	ELECTRICAL	0	0	0	0	1
987	C	2	Y201	XFER SWT FOR YV2 ABD YBR BUS	OS-060 SH 2	AUX	603	428	SR		CLS	CLS	N	50		0	0	0	0	1
988	C	2	Y201A	XFER SWT FOR INV YV2 AND YBR	OS-060 SH 2	AUX	603	428	SR		CLS	CLS	N	51		0	0	0	0	1
989	C	14	Y2A	120VAC ESSEN INST DIST PANEL	OS-060 SH 2	AUX	603	428	SR	42	ON	ON	Y	51	ELECTRICAL	0	0	0	0	1
990	C	14	Y3	ESSEN INSTR DIST PNL "Y3" 120V	OS-060 SH 2	AUX	603	429A	SR	41	ON	ON	Y	50	ELECTRICAL	0	0	0	0	1
991	C	2	Y301	XFER SWITCH FOR Y3	OS-060 SH 2	AUX	603	429A	SR		CLS	CLS	N	50		0	0	0	0	1
992	C	14	Y4	ESSEN INSTR DIST PNL "Y4" 120V	OS-060 SH 2	AUX	603	428	SR	42	ON	ON	Y	50	ELECTRICAL	0	0	0	0	1
993	C	2	Y401	XFER SWT FR DIST PNL Y4 FRM...	OS-060 SH 2	AUX	603	428	SR		CLS	CLS	N	50		0	0	0	0	1
994	B	14	YAU	UPS INSTR DIST PNL "YAU"	OS-060 SH 1	AUX	603	429	SR		ON	ON	Y	77	ELECTRICAL	0	0	0	0	1
995	B	2	YAU 01	MAIN DISC SWITCH	OS-060 SH 1	AUX	603	429	SR		CLS	CLS	N	77		0	0	0	0	1
996	P	14	YBU	UPS INSTR DIST PNL 120V ac	OS-060 SH 1	AUX	603	428	SR		ON	ON	Y	77	ELECTRICAL	0	0	0	0	1
997	P	2	YBU 01	MAIN DISC SWITCH	OS-060 SH 1	AUX	603	428	SR		CLS	CLS	N	77		0	0	0	0	1
998	B	2	YE-101	BRKR, LVSG RM VNT FN1-1 DAMPER	OS-035	AUX	585	318	SR		CLS	CLS	N	212		0	0	0	0	1
999	B	2	YE-102	BRKR, EDG RM 1 SPLY FAN RECIRC	OS-035	AUX	585	318	SR		CLS	CLS	N	213		0	0	0	0	1
1000	B	2	YE-103	BRKR, EDG RM 1 SPLY FAN OUTLT	OS-035	AUX	585	318	SR		CLS	CLS	N	214		0	0	0	0	1
1001	B	2	YE-104	BRKR, L.V.S.G. RM VENT FAN 1-1	OS-035	AUX	585	318	SR		CLS	CLS	N	210		0	0	0	0	1

Seismic Review Safe Shutdown Equipment List (SSEL)

Line No.	Train	Equip Class	Equipment ID Number	System/Equipment Description	Drawing Number	Bldg	Elev	Room No.	Eval Cat.	Note	Normal State	Desired State	Pwr Reqd	G.4 Form Number	Support System	RC	IC	PC	DH	SU
1002	B	2	YE-208	BREAKER FOR TRANS 240-120 AC..	OS-059 SH 1	AUX	585	304	SR		CLS	CLS	N	70		0	0	0	0	1
1003	B	2	YE-209	BRKR, CCP RM VNT FN 1 RM BYPSS	OS-036 SH 1	AUX	585	304	SR		CLS	CLS	N	218		0	0	0	0	1
1004	B	2	YE-210	BRKR, CC PMP RM VNT FN 1 RM IN	OS-036 SH 1	AUX	585	304	SR		CLS	CLS	N	219		0	0	0	0	1
1005	B	2	YE-212	BRKR, CC PMP RM O.A. LOUVER 1	OS-036 SH 1	AUX	585	304	SR		CLS	CLS	N	222		0	0	0	0	1
880	B	1	YE1	480/120 VAC MCC/TRANSFORMER	OS-059 SH 1	AUX	585	318	SR		ON	ON	Y	12	ELECTRICAL	0	0	0	0	1
1050	B	4	YE1	480/120 VAC MCC/TRANSFORMER	OS-059 SH 1	AUX	585	318	SR		ON	ON	Y	71	ELECTRICAL	0	0	0	0	1
881	B	1	YE2	240 VAC MCC/TRANSFORMER	OS-059 SH 1	AUX	585	304	SR		ON	ON	Y	2	ELECTRICAL	0	0	0	0	1
1006	B	4	YE2A	480-240V TRANSFORMER	OS-059 SH 1	AUX	603	405	SR		ON	ON	Y	71	ELECTRICAL	0	0	0	0	1
1051	B	4	YE2B	240-120V TRANSFORMER	OS-059 SH 1	AUX	585	304	SR		ON	ON	Y	70	ELECTRICAL	0	0	0	0	1
1007	P	2	YF-101	BRKR, EMDG RM 2 SPLY FAN INLT	OS-035	AUX	585	319	SR		CLS	CLS	N	215		0	0	0	0	1
1008	P	2	YF-102	BRKR, EDG RM 2 SPLY FAN RECIRC	OS-035	AUX	585	319	SR		CLS	CLS	N	216		0	0	0	0	1
1009	P	2	YF-103	BKR, EDG RM 2 SPLY FAN OUTLT	OS-035	AUX	585	319	SR		CLS	CLS	N	217		0	0	0	0	1
1010	P	2	YF-104	BRKR, L.V.S.G. RM OUTLT DAMPER	OS-035	AUX	585	319	SR		CLS	CLS	N	211		0	0	0	0	1
1011	P	2	YF-208	BREAKER FOR 2 KVA TRANSFORMER	OS-059 SH 1	AUX	603	427	SR		CLS	CLS	N	70		0	0	0	0	1
1012	P	2	YF-209	BRKR, CC PMP RM VENT FAN2 BYPS	OS-036 SH 1	AUX	603	427	SR		CLS	CLS	N	220		0	0	0	0	1
1013	P	2	YF-210	BRKR, CC PMP RM VENT FAN 2..IN	OS-036 SH 1	AUX	603	427	SR		CLS	CLS	N	221		0	0	0	0	1
1014	P	2	YF-212	BRKR, CC PMP RM O.A. LOUVER 1	OS-036 SH 1	AUX	603	427	SR		CLS	CLS	N	223		0	0	0	0	1
882	P	1	YF1	480-120V MCC/TRANSFORMER	OS-059 SH 1	AUX	585	319	SR		ON	ON	Y	25	ELECTRICAL	0	0	0	0	1
1015	P	4	YF1	480-120V MCC/TRANSFORMER	OS-059 SH 1	AUX	585	319	SR		ON	ON	Y	71	ELECTRICAL	0	0	0	0	1
883	P	1	YF2	240 VAC MCC/TRANSFORMER	OS-059 SH 1	AUX	603	427	SR		ON	ON	Y	18	ELECTRICAL	0	0	0	0	1
1016	P	4	YF2A	480-240V TRANSFORMER	OS-059 SH 1	AUX	603	427	SR		ON	ON	Y	71	ELECTRICAL	0	0	0	0	1
1052	P	4	YF2B	240-120V TRANSFORMER	OS-059 SH 1	AUX	603	427	SR		ON	ON	Y	70	ELECTRICAL	0	0	0	0	1
847	C	16	YV1	125VDC/120VAC INVERTER CH 1	OS-060 SH 2	AUX	603	429	SR		ON	ON	Y	357	ELECTRICAL	0	0	0	0	1
848	C	16	YV2	125VDC/120VAC INVERTER CH 2	OS-060 SH 2	AUX	603	428	SR		ON	ON	Y	58	ELECTRICAL	0	0	0	0	1
849	C	16	YV3	125VDC 120VAC INVERTER CH 3	OS-060 SH 2	AUX	603	429A	SR		ON	ON	Y	58	ELECTRICAL	0	0	0	0	1
850	C	16	YV4	125VDC/120VAC INVERTER CH 4	OS-060 SH 2	AUX	603	428	SR		ON	ON	Y	357	ELECTRICAL	0	0	0	0	1
1017	B	16	YVA	UPS "YVA" INVERTER	OS-060 SH 1	AUX	603	429	SR		ON	ON	Y	76	ELECTRICAL	0	0	0	0	1
1018	P	16	YVB	UPS "YVB" INVERTER	OS-060 SH 1	AUX	603	428	SR		ON	ON	Y	76	ELECTRICAL	0	0	0	0	1
538	P	18	ZC-6451	AFP 1-2 DISCH CTRL VLV POSITION CTRLR	OS-017A SH 1	AUX	565	238	SR		ON	ON	Y	308	ELECTRICAL	0	0	0	1	0
539	B	18	ZC-6452	AFP 1-1 DISCH CTRL VLV POS CONTROLER	OS-017A SH 1	AUX	565	237	SR		OP/CL	ON	Y	309	ELECTRICAL	0	0	0	1	0

DAVIS-BESSE NUCLEAR POWER STATION

Unresolved Safety Issue (USI) A-46

Seismic Evaluation Report

APPENDIX D

SCREENING VERIFICATION DATA SHEETS (SVDS)

APPENDIX D

DAVIS-BESSE NUCLEAR POWER STATION

SCREENING VERIFICATION DATA SHEETS (SVDS)

SCREENING VERIFICATION DATA SHEET (SVDS)
NV-55980 CERTIFICATION

All the information contained on the following Screening Verification Data Sheets (SVDS) is, to the best of our knowledge and belief, correct and accurate. "All information" includes each entry and conclusion (whether verified to be seismically adequate or not).

The "SQUGGER" number adjacent to each seismic Capability Engineer (SCE) corresponds to the SQUGGER column on the SVDS. It represents the cognizant SCEs who were responsible for performing the walkdown and evaluation for the specified equipment.

APPROVED: Signatures of all Seismic Capability Engineers on the Seismic Reviews Team (SRT) are required. There should be at least two SCE on each SRT with at least one signatory a licensed professional engineer. All signatories should agree with all of the entries and conclusions.

SQUGGER NO.	NAME	SIGNATURE	DATE
8	~~Jack~~ JAGDISH C. Arora P.E. J.C.A. 8/14/95	Jagdish Arora	8/14/95
1	Richard N. Bair P.E.	Richard N. Bair	8/23/95
2	Thomas E, Dabrowiak P.E.	Thomas Dabrowiak	8/14/95
11	James R. Disser ~~P.E.~~ 8/9/95		8/9/95
3	John O. Dizon P.E.	John O. Dizon	8-3-95
12	Steven J. Eder P.E.	S J Eder	8/4/95
4	Jon G. Hook P. E.	Jon G. Hook	8/15/95
5	Gayle S. Johnson P.E.	G S Johnson	8/4/95
10	Omar Khemici P.E.	Omar Khemici	8/4/95
9	Steven J. Osting P.E.	Steven J Osting	8/15/95
6	Scott R. Saunders	Scott R. Saunders	8/15/95
7	Basilio Sumodobila P.E.	Bsumodobila J	8/4/95

SCREENING VERIFICATION DATA SHEET (SVDS)

LINE NO	EQ CLASS	EQ NO	EQUIPMENT DESCRIPTION	BLDG	ELEV	RM	SQUGGER	BASE ELEV	<40	SPECTRUM CAP	SPECTRUM DEMAND	CAP> DEMAND	CAVEATS WORD	CAVEATS INTENT	ANCH OK	INTER-ACT OK	OUTLIER Y/N	OUTLIER OK	EQUIP OK
1	15	1N	STATION BATTERY -125V dc	AUX	603	429B	3 4	603	Y	BS	GRS	Y	Y		Y	Y			Y
2	15	1P	STATION BATTERY +125V dc	AUX	603	429B	3 4	603	Y	BS	GRS	Y	Y		Y	Y			Y
3	15	2N	STATION BATTERY -125V dc	AUX	603	428A	3 4	603	Y	BS	GRS	Y	Y		Y	Y			Y
4	15	2P	STATION BATTERY +125V dc	AUX	603	428A	3 4	603	Y	BS	GRS	Y	Y		Y	Y			Y
5	8B	AF-6451	AFP 1-2 SOL CONTROL VALVE	AUX	565	238	1 7	565	Y	BS	GRS	Y	Y		N/A	Y			Y
6	8B	AF-6452	AFP 1-1 SOL CONTROL VALVE	AUX	565	237	1 7	565	Y	BS	GRS	Y	Y		N/A	Y			Y
7	3	C1	4.16 KV SWITCH GEAR	AUX	585	325	2 11	585	Y	ABS	RRS	Y	Y		Y	Y			Y
8	10	C1-1	CAC 1-1 (AIR SIDE FUNCTION)	CTM	585	217	1 4	585	Y	ABS	CRS	Y	Y		Y	Y			Y
9	10	C1-2	CAC 1-2 (AIR SIDE FUNCTION)	CTM	585	217	1 4	585	Y	ABS	CRS	Y	Y		Y	Y			Y
10	9	C133	VENT FAN FOR L.V.S.G. ROOM	AUX	603	428	1 4	618	NO	DOC	CRS	Y	Y		Y	Y			Y
11	3	C2	4.16 KV SWITCH GEAR	AUX	585	325	1 4	585	Y	ABS	RRS	Y	NO	NO	NO	Y	Y	NO	NO
12	9	C21-1	CNTRL RM EMERG VENT SYS FAN1-1	AUX	638	603	7 9	638	NO	DOC	RRS	Y	NO	NO	Y	Y	Y	NO	NO
13	9	C21-2	CNTRL RM EMERG VENT SYS FAN1-2	AUX	638	603	7 9	638	NO	DOC	RRS	Y	NO	NO	Y	Y	Y	NO	NO
14	9	C25-1	SUPPLY FAN 1-1	AUX	585	318	1 4	610	Y	BS	CRS	Y	Y		Y	Y			Y
15	9	C25-2	SUPPLY FAN 1-2	AUX	585	318	1 4	610	Y	BS	CRS	Y	NO	NO	NO	Y	Y	Y	Y
16	9	C25-3	EDG RM SUPPLY FAN	AUX	585	319	146	610	Y	BS	CRS	Y	NO	NO	NO	Y	Y	Y	Y
17	9	C25-4	EDG SUPPLY FAN 1-4	AUX	585	319	146	610	Y	BS	CRS	Y	NO	NO	NO	Y	Y	Y	Y
18	20	C3017	SW STRNR 1-1 DRAIN/BCKWASH VLV CABINET	ITK	576	052	6 7	580	Y	BS	GRS	Y	Y		Y	Y			Y
19	20	C3018	SW STRNR 1-2 DRAIN/BCKWASH VLV CABINET	ITK	576	052	6 7	580	Y	BS	GRS	Y	Y		Y	Y			Y
20	10	C31-1	ECCS RM CLR 1-1 FAN	AUX	545	115	8 9	545	Y	BS	GRS	Y	Y		Y	Y			Y
21	10	C31-2	ECCS RM CLR 1-2 FAN	AUX	545	115	8 9	545	Y	BS	GRS	Y	Y		Y	Y			Y
22	10	C31-4	ECCS RM CLR 1-4 FAN	AUX	545	105	4 8	545	Y	ABS	CRS	Y	Y		Y	Y			Y
23	10	C31-5	ECCS RM CLR 1-5 FAN	AUX	545	105	8 9	545	Y	BS	GRS	Y	Y		Y	Y			Y

SCREENING VERIFICATION DATA SHEET (SVDS)

LINE NO	EQ CLASS	EQ NO	EQUIPMENT DESCRIPTION	BLDG	ELEV	RM	SQUGGER	BASE ELEV	<40	SPECTRUM CAP	SPECTRUM DEMAND	CAP> DEMAND	CAVEATS WORD	CAVEATS INTENT	ANCH OK	INTER-ACT OK	OUTLIER Y/N	OUTLIER OK	EQUIP OK
24	20	C3615	EDG 1 CONTROL PANEL	AUX	585	318	12347	585	Y	BS	GRS	Y	Y		Y	Y			Y
25	20	C3616	EDG 2 CONTROL PANEL	AUX	585	319	12347	585	Y	BS	GRS	Y	Y		Y	Y			Y
26	20	C3617	EDG 1-1 STATIC EXITER VOLTAGE REG PNL	AUX	585	318	4 8	585	Y	ABS	RRS	Y	Y		Y	Y			Y
27	20	C3618	EDG 1-2 STATIC EXITER VOLTAGE REG PNL	AUX	585	319	7 8	585	Y	ABS	RRS	Y	Y		Y	Y			Y
28	20	C3621A	EDG 1-1 IDLE START/STOP CONTROL PNL	AUX	585	318	4 8 12	585	Y	BS	GRS	Y	Y		Y	Y			Y
29	20	C3622A	EDG 1-2 IDLE START/STOP CONTROL PNL	AUX	585	319	7 8	585	Y	BS	GRS	Y	Y		Y	Y			Y
30	20	C3630	AUXILIARY SHUTDOWN PANEL	AUX	585	324	6 7	585	Y	BS	GRS	Y	Y		Y	Y			Y
31	20	C3645	CONTROL PANEL (AUX FEEDWATER)	AUX	585	325	3 4	585	Y	BS	GRS	Y	NO	Y	Y	Y			Y
32	20	C3712	CABINET FOR PORTABLE RC TEMP IND TI5503	AUX	585	314	4 710	587	Y	BS	GRS	Y	Y		Y	Y			Y
33	20	C3812	CABINET FOR PORTABLE RC TEMP IND TI5504	AUX	585	303	4 710	587	Y	BS	GRS	Y	Y		Y	Y			Y
34	20	C4602	NEUTRON FLUX MONITOR CABINET	AUX	603	427	1 4	603	Y	BS	GRS	Y	Y		Y	Y			Y
35	20	C4603	CRD SYS PRIMARY TRIP BRKR B	AUX	603	429	123	603	Y	BS	GRS	Y	Y		Y	Y			Y
36	20	C4606	CRD SYS PRIMARY TRIP BRKR A	AUX	603	428	123	603	Y	BS	GRS	Y	Y		Y	Y			Y
37	20	C4612	CRD SYS PRIMARY TRIP BRKR C	AUX	603	428	123	603	Y	BS	GRS	Y	Y		Y	Y			Y
38	20	C4625	CONTROL PANEL (AUX FEEDWATER)	AUX	603	428	3 4	603	Y	BS	GRS	Y	NO	Y	Y	Y			Y
39	20	C4806	CRD SYS PRIMARY TRIP BRKR D	AUX	603	402	123	603	Y	BS	GRS	Y	Y		Y	Y			Y
40	20	C4808	NEUTRON FLUX MONITOR CAB CH1	AUX	603	402	1 4	603	Y	BS	GRS	Y	Y		Y	Y			Y
41	20	C5702	CONTROL ROOM LEFT CONSOLE	AUX	623	505	2 3	623	NO	ABS	RRS	Y	Y		Y	NO	Y	NO	NO
42	20	C5703	CONTROL ROOM LEFT CONSOLE	AUX	623	505	2 3	623	NO	ABS	RRS	Y	NO	NO	Y	NO	Y	NO	NO
43	20	C5704	CONTROL ROOM LEFT CONSOLE	AUX	623	505	2 3	623	NO	ABS	RRS	Y	Y		Y	NO	Y	NO	NO
44	20	C5705	CONTROL ROOM LEFT CONSOLE	AUX	623	505	2 3	623	NO	ABS	RRS	Y	Y		Y	NO	Y	NO	NO
45	20	C5706	CONTROL ROOM CENTER CONSOLE	AUX	623	505	2 3	623	NO	ABS	RRS	Y	Y		Y	NO	Y	NO	NO
46	20	C5707	CONTROL ROOM CENTER CONSOLE	AUX	623	505	2 3	623	NO	ABS	RRS	Y	Y		Y	NO	Y	NO	NO

SCREENING VERIFICATION DATA SHEET (SVDS)

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47	20	C5708	CONTROL ROOM CENTER CONSOLE	AUX	623	505	2 3	623	NO	ABS	RRS	Y	Y		Y	NO	Y	NO	NO
48	20	C5709	CONTROL ROOM CENTER CONSOLE	AUX	623	505	2 3	623	NO	ABS	RRS	Y	Y		Y	NO	Y	NO	NO
49	20	C5710	CONTROL ROOM CENTER CONSOLE	AUX	623	505	2 3	623	NO	ABS	RRS	Y	Y		Y	NO	Y	NO	NO
50	20	C5712	CONTROL ROOM RIGHT CONSOLE	AUX	623	505	2 3	623	NO	ABS	RRS	Y	Y		Y	NO	Y	NO	NO
51	20	C5715	CONTROL ROOM STATION ELEC. DIST. PANEL	AUX	623	505	2 3	623	NO	ABS	RRS	Y	Y		Y	Y			Y
52	20	C5716	CONTROL ROOM ENG. SAFETY FEAT. CON. PAN.	AUX	623	505	2 3	623	NO	ABS	RRS	Y	Y		Y	Y			Y
53	20	C5717	CONTROL ROOM ENG. SAFETY FEATR. CON. PAN	AUX	623	505	2 3	623	NO	ABS	RRS	Y	Y		Y	Y			Y
54	20	C5719	CON RM REACTOR & STATION AUX CONT PANEL	AUX	623	505	2 3	623	NO	ABS	RRS	Y	Y		Y	Y			Y
55	20	C5720	CONTROL ROOM REACTOR IN STAT AUX CON PAN	AUX	623	505	2 3	623	NO	ABS	RRS	Y	Y		Y	Y			Y
56	20	C5721	CONTROL ROOM FEEDWATER CONTROL PANEL	AUX	623	505	2 3	623	NO	ABS	RRS	Y	Y		Y	Y			Y
57	20	C5755C	SFAS CHANNEL 2	AUX	623	502	2 3	623	NO	DOC	RRS	Y	NO	NO	NO	NO	Y	NO	NO
58	20	C5755D	SFAS CHANNEL 2	AUX	623	502	2 3	623	NO	DOC	RRS	Y	NO	NO	NO	NO	Y	NO	NO
59	20	C5755G	POST ACCIDENT EQUIP RACK CH 4	AUX	623	502	2 4	623	NO	ABS	RRS	Y	NO	NO	NO	Y	Y	NO	NO
60	20	C5756C	SFAS CHANNEL 4	AUX	623	502	2 5	623	NO	DOC	RRS	Y	NO	NO	NO	NO	Y	NO	NO
61	20	C5756D	SFAS CHANNEL 4	AUX	623	502	2 5	623	NO	DOC	RRS	Y	NO	NO	NO	NO	Y	NO	NO
62	20	C5759D	CONTROL ROOM NON-NUCLEAR INST-X	AUX	623	502	2 7	623	NO	U	U	NO	NO	NO	U	NO	Y	NO	NO
63	20	C5761A	SFRCS ACTUATION CHANNEL 1	AUX	623	502	2 5	623	NO	ABS	RRS	Y	Y		Y	NO	Y	NO	NO
64	20	C5762A	SFRCS ACTUATION CHANNEL 1	AUX	623	502	2 5	623	NO	ABS	RRS	Y	NO	NO	NO	NO	Y	NO	NO
65	20	C5762C	SFAS CHANNEL 1	AUX	623	502	2 5	623	NO	DOC	RRS	Y	NO	NO	NO	NO	Y	NO	NO
66	20	C5762D	SFAS CHANNEL 1	AUX	623	502	2 5	623	NO	DOC	RRS	Y	NO	NO	NO	NO	Y	NO	NO
67	20	C5763A	POST ACCIDENT EQUIP RACK CH4	AUX	623	502	6 7	623	NO	ABS	RRS	Y	Y		Y	Y			Y
68	20	C5763C	SFAS CHANNEL 3	AUX	623	502	2 5	623	NO	DOC	RRS	Y	NO	NO	NO	NO	Y	NO	NO
69	20	C5763D	SFAS CHANNEL 3	AUX	623	502	2 5	623	NO	DOC	RRS	Y	NO	NO	NO	NO	Y	NO	NO

SCREENING VERIFICATION DATA SHEET (SVDS)

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70	20	C5792	SFRCS ACTUATION CHANNEL 2	AUX	623	502	2 5	623	NO	ABS	RRS	Y	NO	NO	NO	NO	Y	NO	NO
71	20	C5792A	SFRCS ACTUATION CHANNEL 2	AUX	623	502	2 5	623	NO	ABS	RRS	Y	NO	NO	NO	NO	Y	NO	NO
72	20	C5798	POST ACCIDENT INDICATING PANEL CH2	AUX	623	505	6 7	623	NO	ABS	CRS	Y	Y		Y	Y			Y
73	20	C5799	POST ACCIDENT INDICATING PAN CH1	AUX	623	505	6 7	623	NO	ABS	CRS	Y	Y		Y	Y			Y
74	20	C6708	CONTROL PANEL FOR CREVS STANDBY CON.	AUX	638	603	189	638	NO	ABS	CRS	Y	Y		Y	Y			Y
75	20	C6709	CTRM EMER SYS STBY CON UNIT CTRL CABT	AUX	638	603	7 9	638	NO	ABS	CRS	Y	Y		Y	Y			Y
76	20	C6714	CREVS CONTROL PANEL	AUX	638	603	7 9	638	NO	ABS	RRS	Y	Y		Y	Y			Y
77	20	C6715	CREVS CONTROL PANEL	AUX	638	603	7 9	638	NO	ABS	RRS	Y	Y		Y	Y			Y
78	9	C71-1	L.V.S.G. RM VENT FAN 1-1	AUX	603	429	1 4	613	Y	BS	GRS	Y	Y		Y	Y			Y
79	9	C73-1	AFP ROOM EXHAUST FAN	AUX	565	237	6 7	585	Y	ABS	CRS	Y	NO	NO	NO	Y	Y	Y	Y
80	9	C73-2	AFP ROOM EXHAUST FAN	AUX	565	238	6 7	585	Y	ABS	CRS	Y	NO	NO	NO	Y	Y	Y	Y
81	9	C75-1	CC PMP RM VENT FAN 1-1	AUX	585	328	2 6	603	Y	BS	GRS	Y	Y		Y	Y			Y
82	9	C75-2	CC PMP RM VENT FAN 1-2	AUX	585	328	2 6	603	Y	BS	GRS	Y	NO	NO	NO	Y	Y	Y	Y
83	9	C78-1	BATTERY ROOM VENT FAN 1-1	AUX	603	429B	2 4	613	Y	BS	GRS	Y	NO	NO	NO	Y	Y	Y	Y
84	9	C78-2	BATTERY ROOM VENT FAN 1-2	AUX	603	428A	2 6	623	NO	DOC	RRS	Y	NO	NO	NO	Y	Y	Y	Y
85	9	C99-1	EXHAUST FAN 1-1	ITK	585	52A	8 9	586	Y	BS	GRS	Y	Y		Y	Y			Y
86	9	C99-2	EXHAUST FAN 1-2	ITK	585	52A	8 9	586	Y	BS	GRS	Y	Y		Y	Y			Y
87	9	C99-3	EXHAUST FAN 1-3	ITK	585	52A	8 9	586	Y	BS	GRS	Y	Y		Y	Y			Y
88	9	C99-4	EXHAUST FAN 1-4	ITK	585	52A	8 9	586	Y	BS	GRS	Y	Y		Y	Y			Y
89	7	CC-1467	CCW FRM DH RMVL CLR 1-1...VLV	AUX	545	113	1367	565	Y	BS	GRS	Y	NO	Y	N/A	Y			Y
90	7	CC-1469	CCW FRM DH RMVL CLR 1-2....VLV	AUX	545	113	1367	565	Y	BS	GRS	Y	NO	Y	N/A	Y			Y
91	7	CC-1471	CC FRM EDG 1-1 SOL OUTLET VLV	AUX	585	318	1 4	585	Y	BS	GRS	Y	Y		N/A	Y			Y
92	7	CC-1474	CC FRM EDG 1-2 SOL OUTLET VLV	AUX	585	319	146	585	Y	BS	GRS	Y	Y		N/A	Y			Y

SCREENING VERIFICATION DATA SHEET (SVDS)

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93	8A	CC-5095	CC LN 1 DISCH ISO VALVE	AUX	585	328	6 7	585	Y	BS	GRS	Y	Y		N/A	Y			Y
94	8A	CC-5096	CC LN 2 DISCH ISO VALVE	AUX	585	328	6 7	585	Y	BS	GRS	Y	Y		N/A	Y			Y
95	20	CDE11C	DISCONNECT SWITCH CABINET	AUX	585	304	248	585	Y	BS	GRS	Y	Y		Y	Y			Y
96	20	CDE11D	DISCONNECT SWITCH CABINET	AUX	565	227	6 7	565	Y	BS	GRS	Y	NO	NO	Y	NO	Y	NO	NO
97	20	CDE12A1	DISCONNECT SWITCH CABINET	AUX	603	429	1 3(489)	603	Y	BS	GRS	Y	Y		Y	Y			Y
98	20	CDE12C	DISCONNECT SWITCH CABINET	ITK	576	051	6 7	576	Y	BS	GRS	Y	Y		Y	Y			Y
99	20	CDF11A-2	DISCONNECT SWITCH CABINET	AUX	603	427	6 7	603	Y	BS	GRS	Y	NO	NO	Y	NO	Y	NO	NO
100	20	CDF11C	DISCONNECT SWITCH CABINET	AUX	565	236	6 7	565	Y	BS	GRS	Y	Y		Y	Y			Y
101	20	CDF11D	DISCONNECT SWITCH CABINET	AUX	565	227	6 7	565	Y	BS	GRS	Y	Y		Y	Y			Y
102	20	CDF12A-2	DISCONNECT SWITCH CABINET	AUX	603	428	6 7	603	Y	BS	GRS	Y	Y		Y	Y			Y
103	20	CDF12A1	DISCONNECT SWITCH CABINET	AUX	603	428	489	603	Y	BS	GRS	Y	Y		Y	Y			Y
104	20	CDF12B	DISCONNECT SWITCH CABINET	AUX	585	319	6 7	585	Y	BS	GRS	Y	Y		Y	Y			Y
105	4	CE1-1	4.16 KV-480V TRANSFORMER	AUX	603	429	6 9	603	Y	BS	GRS	Y	Y		N/A	Y			Y
106	8A	CF-1A	CORE FLOOD TANK 2 ISO VLV	CTM	565	217	145	585	Y	BS	GRS	Y	Y		N/A	Y			Y
107	8A	CF-1B	CORE FLOOD TANK 1 ISO VLV	CTM	565	214	1 4	585	Y	BS	GRS	Y	Y		N/A	Y			Y
108	3	D1	4.16 KV SWITCH GEAR	AUX	585	323	2 11	585	Y	ABS	RRS	Y	Y		Y	Y			Y
109	14	D1N	ESSEN DIST PNL "D1N"	AUX	603	429A	2 3	603	Y	BS	GRS	Y	NO	NO	Y	NO	Y	NO	NO
110	1	D1NA	ESSENTIAL -125VDC DIST PNL CH1	AUX	603	429	2 3	603	Y	BS	GRS	Y	NO	NO	NO	Y	Y	NO	NO
111	14	D1P	ESSEN DIST PNL "D1P"	AUX	603	429	12347	603	Y	BS	GRS	Y	Y		Y	Y			Y
112	14	D1PA	125/250 VDC MCC	AUX	603	429	2 4	603	Y	BS	GRS	Y	NO	NO	NO	Y	Y	NO	NO
113	3	D2	4.16 KV SWITCH GEAR	AUX	585	323	2 11	585	Y	ABS	RRS	Y	U		U	NO	Y	NO	NO
114	14	D2N	ESSEN DIST PNL "D2N"	AUX	603	428B	4 7	603	Y	BS	GRS	Y	Y		Y	Y			Y
115	14	D2P	ESSNTL +125VDC DISTBTN PNL CH2	AUX	603	428	2 3	603	Y	BS	GRS	Y	NO	NO	Y	NO	Y	NO	NO

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116	8B	DA-3783	EDG AIR RCVR 1-1-1 TO AIR..VLV	AUX	585	318	12347	595	Y	BS	GRS	Y	Y		N/A	Y			Y
117	8B	DA-3784	EDG AIR RCVR 1-1-2 TO AIR..VLV	AUX	585	318	12347	595	Y	BS	GRS	Y	Y		N/A	Y			Y
118	8B	DA-3785	EDG AIR RCVR 1-2-1 TO AIR..VLV	AUX	585	319	12347	595	Y	BS	GRS	Y	Y		N/A	Y			Y
119	8B	DA-3786	EDG AIR RCVR 1-2-2 TO AIR..VLV	AUX	585	319	12347	595	Y	BS	GRS	Y	Y		N/A	Y			Y
120	16	DBC1N	BATTERY CHARGER -125V dc	AUX	603	429	2 3	603	Y	BS	GRS	Y	Y		Y	Y			Y
121	16	DBC1P	BATT CHARGER FOR BATT 1P +125V	AUX	603	429	2 3	603	Y	BS	GRS	Y	Y		Y	Y			Y
122	16	DBC2N	BATTERY CHARGER 125V dc	AUX	603	428	2 4	603	Y	BS	GRS	Y	Y		Y	Y			Y
123	16	DBC2P	BATTERY CHARGER +125V	AUX	603	428	2 9	603	Y	BS	GRS	Y	Y		Y	Y			Y
124	1	DC MCC-1		AUX	603	429	1 3	603	Y	BS	GRS	Y	Y		Y	Y			Y
125	1	DC MCC-2		AUX	603	428	489	603	Y	BS	GRS	Y	Y		Y	Y			Y
126	4	DF1-2	4.16kV-480V TRANSFORMER	AUX	603	428	7 8	603	Y	BS	GRS	Y	Y		N/A	Y			Y
127	8A	DH-11	RCS TO DH SYSTEM ISO VALVE	CTM	565	290	1 4	565	Y	BS	GRS	Y	Y		N/A	Y			Y
128	8A	DH-12	RCS TO DH SYSTEM ISO VALVE	CTM	565	290	1 4	565	Y	BS	GRS	Y	Y		N/A	Y			Y
129	8A	DH-1517	DH PUMP 1-1 SUCTION FROM RCS VALVE	AUX	565	236	1367	565	Y	BS	GRS	Y	Y		N/A	Y			Y
130	8A	DH-1518	DH PUMP 1-2 SUCTION FROM RCS	AUX	565	236	1367	565	Y	BS	GRS	Y	Y		N/A	Y			Y
131	8A	DH-1A	DH COOLER 1-2 DISCH TO RCS ISO VALVE	AUX	565	236	1367	565	Y	BS	GRS	Y	Y		N/A	Y			Y
132	8A	DH-1B	DH COOLER 1-1 DISCH TO RCS ISO VALVE	AUX	565	208	6 7	565	Y	BS	GRS	Y	Y		N/A	Y			Y
133	8A	DH-2733	DH PMP 1-1 SUC (BWST OR EMERG SUMP) VLV	AUX	545	105	1367	565	Y	BS	GRS	Y	Y		N/A	Y			Y
134	8A	DH-2734	DH PMP 1-2 SUC (BWST OR EMERG SUMP) VLV	AUX	545	113	1367	565	Y	BS	GRS	Y	Y		N/A	Y			Y
135	7	DH-4849	DH COOLDOWN LN RELIEF TO EMERG SUMP VLV	CTM	565	220	1 7	565	Y	BS	GRS	Y	Y		N/A	Y			Y
136	2	E1	480V ESSENTIAL UNIT SUBSTATION	AUX	603	429	6 9	603	Y	BS	GRS	Y	NO	NO	NO	Y	Y	NO	NO
137	1	E11A	480V ESSENTIAL MCC	AUX	565	209	1489	565	Y	BS	GRS	Y	Y		Y	Y			Y
138	1	E11B	480V ESSENTIAL MCC	AUX	585	304	1489	585	Y	BS	GRS	Y	Y		Y	NO	Y	NO	NO

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139	1	E11C	480V ESSENTIAL MCC	AUX	585	304	1489	585	Y	BS	GRS	Y	Y		Y	NO	Y	NO	NO
140	1	E11D	480V ESSENTIAL MCC	AUX	565	227	1489	565	Y	BS	GRS	Y	Y		Y	NO	Y	NO	NO
141	1	E11E	480V ESSENTIAL MCC	AUX	603	402	1489	603	Y	BS	GRS	Y	Y		Y	Y			Y
142	1	E12A	480V ESSENTIAL MCC	AUX	603	429	1389	603	Y	BS	GRS	Y	Y		Y	Y			Y
143	1	E12B	480V ESSENTIAL MCC	AUX	585	318	1489	585	Y	BS	GRS	Y	Y		Y	NO	Y	NO	NO
144	1	E12C	480V ESSENTIAL MCC	ITK	576	051	4 9	576	Y	BS	GRS	Y	NO	NO	NO	Y	Y	Y	Y
145	1	E12E	480V ESSENTIAL MCC	AUX	545	101	1489	545	Y	BS	GRS	Y	Y		Y	Y			Y
146	1	E12F	480V ESSENTIAL MCC	AUX	585	318	49	585	Y	BS	GRS	Y	Y		Y	Y			Y
147	1	E14	480V ESSENTIAL MCC	AUX	603	429	489	603	Y	BS	GRS	Y	Y		Y	Y			Y
148	1	E16B	480V ESSENTIAL MCC	AUX	603	402	7 8	603	Y	BS	GRS	Y	NO	NO	NO	Y	Y	Y	Y
149	10	E37-1	CAC COIL 1-1 (SW SIDE)	CTM	585	317	1 4	585	Y	DOC	CRS	Y	NO	NO	NO	Y	Y	Y	Y
150	10	E37-2	CAC COIL 1-2 (SW SIDE)	CTM	585	317	147	585	Y	DOC	CRS	Y	NO	NO	NO	Y	Y	Y	Y
151	10	E37-3	CTMT AIR COOLER 1-3	CTM	585	317	1 4	585	Y	DOC	CRS	Y	NO	NO	NO	Y	Y	Y	Y
152	10	E42-1	ECCS ROOM COOLER COIL 1-1	AUX	545	115	8 9	545	Y	BS	GRS	Y	Y		Y	Y			Y
153	10	E42-2	ECCS ROOM COOLER COIL 1-2	AUX	545	115	8 9	545	Y	BS	GRS	Y	Y		Y	Y			Y
154	10	E42-3	ECCS ROOM COOLER COIL 1-3	AUX	545	113	8 9	545	Y	BS	GRS	Y	Y		Y	Y			Y
155	10	E42-4	ECCS ROOM COOLER COIL 1-4	AUX	545	105	4 8	545	Y	ABS	CRS	Y	Y		Y	Y			Y
156	10	E42-5	ECCS ROOM COOLER COIL 1-5	AUX	545	105	8 9	545	Y	BS	GRS	Y	Y		Y	Y			Y
157	2	F1	480V ESSENTIAL UNIT SUBSTATION	AUX	603	428	6 9	603	Y	BS	GRS	Y	NO	NO	NO	Y	Y	NO	NO
158	O	F108-1	EDG 1-1 INTAKE FILTER	AUX	610	N/A	6 9	610	Y	DOC	CRS	Y	N/A		NO	Y	Y	NO	NO
159	O	F108-2	EDG 1-2 INTAKE FILTER	AUX	610	N/A	6 9	610	Y	DOC	CRS	Y	N/A		NO	Y	Y	NO	NO
160	1	F11A	480V ESSENTIAL MCC	AUX	603	427	149	603	Y	BS	GRS	Y	NO	NO	Y	NO	Y	NO	NO
161	1	F11B	480V ESSENTIAL MCC	AUX	603	405	1489	603	Y	BS	GRS	Y	Y		Y	Y			Y

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162	1	F11C	480V ESSENTIAL MCC	AUX	565	236	1489	565	Y	BS	GRS	Y	Y		Y	NO	Y	NO	NO
163	1	F11D	480V ESSENTIAL MCC	AUX	565	227	149	565	Y	BS	GRS	Y	Y		Y	Y			Y
164	1	F11E	480V ESSENTIAL MCC	AUX	545	101	1489	545	Y	BS	GRS	Y	Y		Y	Y			Y
165	1	F12A	480V ESSENTIAL MCC	AUX	603	428	489	603	Y	BS	GRS	Y	Y		Y	Y			Y
166	1	F12B	480V ESSENTIAL MCC	AUX	585	319	1489	585	Y	BS	GRS	Y	Y		Y	Y			Y
167	1	F12C	480V ESSENTIAL MCC	ITK	576	052	149	576	Y	BS	GRS	Y	Y		Y	Y			Y
168	1	F12D	480V ESSENTIAL MCC	ITK	576	052	149	575	Y	BS	GRS	Y	NO	NO	NO	Y	Y	Y	Y
169	1	F14	480V ESSENTIAL MCC	AUX	603	428	489	603	Y	BS	GRS	Y	Y		Y	Y			Y
170	0	F15-1	SERVICE WATER STRAINER 1-1	ITK	576	052	127	576	Y	DOC	CRS	Y	N/A		Y	Y			Y
171	0	F15-2	SERVICE WATER STRAINER 1-2	ITK	576	052	127	576	Y	DOC	CRS	Y	N/A		Y	Y			Y
172	1	F16A	480V ESSENTIAL MCC	AUX	603	428	6 7	603	Y	BS	GRS	Y	NO	NO	NO	Y	Y	Y	Y
173	18	FIS 1422C	CC PMP 1-1 DISCH FLOW INDIC SW	AUX	585	328	6 7	590	Y	BS	GRS	Y	Y		Y	Y			Y
174	18	FIS 1422D	CC PMP 1-1 DISCH FLOW INDIC SW	AUX	585	328	2 6	588	Y	BS	GRS	Y	Y		Y	Y			Y
175	18	FIS 1427C	CC PMP 1-3 DISCH FLOW INDIC SW	AUX	585	328	2 6	585	Y	BS	GRS	Y	Y		Y	Y			Y
176	18	FIS 1427D	CC PMP 1-3 DISCH FLOW INDIC SW	AUX	585	328	2 6	585	Y	BS	GRS	Y	Y		Y	Y			Y
177	18	FIS 1432C	CC PMP 1-2 DISCH FLOW INDIC SW	AUX	585	328	2 6	588	Y	BS	GRS	Y	Y		Y	Y			Y
178	18	FIS 1432D	CC PMP 1-2 DISCH FLOW INDIC SW	AUX	585	328	6 7	587	Y	BS	GRS	Y	Y		Y	Y			Y
179	18	FT DH2A	LO PRESSURE INJ LINE 2 FLOW TRANSMITTER	AUX	565	236	7 8	570	Y	BS	GRS	Y	Y		Y	Y			Y
180	18	FT DH2B	LP INJ LINE 1 FLOW TRANSMITTER	AUX	545	105	5 8	549	Y	BS	GRS	Y	Y		Y	Y			Y
181	20	HIS NC133	LOW VOLT. SWGR RM VEN FAN 1-2 LCL	AUX	603	428	6 7	607	Y	BS	GRS	Y	NO	Y	Y	Y			Y
182	20	HIS NC251	EDG RM VENTILATION FAN 1 LCL	AUX	585	318	1 4	589	Y	BS	GRS	Y	Y		Y	Y			Y
183	20	HIS NC252	EDG RM VENTILATION FAN 2 LCL	AUX	585	318	1 4	589	Y	BS	GRS	Y	NO	Y	Y	Y			Y
184	20	HIS NC253	EDG RM 2 VNTL FAN 3 LCL HIS	AUX	585	319	146	588	Y	BS	GRS	Y	NO	Y	Y	Y			Y

SCREENING VERIFICATION DATA SHEET (SVDS)

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185	20	HIS NC254	EDG RM 2 VNTL FAN 4 LCL HIS	AUX	585	319	146	588	Y	BS	GRS	Y	NO	Y	Y	Y			Y
186	20	HIS NC311	ECCS RM CLR FAN 1-1 SW	AUX	545	115	4 9	550	Y	BS	GRS	Y	Y		Y	Y			Y
187	20	HIS NC312	ECCS RM CLR FAN 1-2 SW	AUX	545	115	4 9	550	Y	BS	GRS	Y	Y		Y	Y			Y
188	20	HIS NC314	ECCS RM CLR FAN 1-4 SW	AUX	545	105	5 6	549	Y	BS	GRS	Y	Y		Y	Y			Y
189	20	HIS NC315	ECCS RM CLR FAN 1-5 SW	AUX	545	105	5 6	549	Y	BS	GRS	Y	NO	Y	Y	Y			Y
190	20	HIS NC711	LOW VOLT. SWGR RM VENT FAN 101 LCL	AUX	603	429	6 7	608	Y	BS	GRS	Y	Y		Y	Y			Y
191	20	HIS NC751	CCW PMP RM VNT FAN 1-1 LOC....	AUX	585	328	6 7	589	Y	BS	GRS	Y	NO	Y	Y	Y			Y
192	20	HIS NC752	CCW PMP RM FAN 1-2 LOCAL....	AUX	585	328	6 7	589	Y	BS	GRS	Y	NO	Y	Y	Y			Y
193	20	HIS NC781	BATTERY RM VENT FAN 1-1 LCL	AUX	603	429	6 7	607	Y	BS	GRS	Y	NO	Y	Y	Y			Y
194	20	HIS NC782	BATTERY RM VENT FAN 1-2 LCL	AUX	603	428	6 7	607	Y	BS	GRS	Y	NO	Y	Y	Y			Y
195	20	HIS NP1951	EDG FUEL OIL ST TK 1-1 HAND IND SW	YRD	585	N/A	1 6	578	Y	BS	GRS	Y	Y		Y	Y			Y
196	20	HIS NP1951A	EDG FUEL OIL ST TK 1-1 HAND IND SW	AUX	585	321A	1 6	595	Y	BS	GRS	Y	Y		Y	Y			Y
197	20	HIS NP1952	EDG FUEL OIL STOR TK 1-2 PUMP IND SW	YRD	585	N/A	1 6	575	Y	BS	GRS	Y	Y		Y	Y			Y
198	20	HIS NP1952A	EDG FUEL OIL STOR TK 1-2 PUMP IND SW	AUX	585	320A	1 6	595	Y	BS	GRS	Y	Y		Y	Y			Y
199	20	HS-4688	H. S. FR XHAUST FAN 1-1 NC 9901	ITK	576	052	5 6	581	Y	BS	GRS	Y	Y		Y	Y			Y
200	20	HS-4689	H. S. FR XHAUST FAN 99-3 NC 9903	ITK	576	052	5 6	581	Y	BS	GRS	Y	Y		Y	Y			Y
201	20	HS-4698	H. S. FR XHAUST FN C99-2 NC 9901	ITK	576	052	5 6	581	Y	BS	GRS	Y	Y		Y	Y			Y
202	20	HS-4699	H. S. FR VENT FAN C99-4 NC 9903	ITK	576	052	5 6	581	Y	BS	GRS	Y	Y		Y	Y			Y
203	20	HS-5902	H. S. FOR AFP ROOM 1 VENT FAN NC 0731	AUX	565	237	6 7	565	Y	BS	GRS	Y	Y		Y	Y			Y
204	20	HS-5903	H. S. FOR AFP RM 2 VENT FAN NC 0732	AUX	565	238	6 7	565	Y	BS	GRS	Y	Y		Y	Y			Y
205	O	HV-4906	CTRM EVS STBY COND 1 MOTOR OPER	AUX	656	N/A	2 10	656	NO	DOC	RRS	Y	N/A		Y	Y			Y
206	O	HV-4907	CTRM EVS STBY COND 2 MOTOR OPER	AUX	656	N/A	2 10	656	NO	DOC	RRS	Y	N/A		Y	Y			Y
207	O	HV-5261	CTRM EMERG VENT FAN 1 INLT MDO	AUX	639	603	2 10	656	NO	U	CRS	NO	N/A		NO	NO	Y	NO	NO

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208	O	HV-5262	CTRM EMERG VENT FAN 2 INLT MDO	AUX	638	603	2 10	656	NO	U	CRS	NO	N/A		NO	NO	Y	NO	NO
209	O	HV-5301A	CTRM COMPUT CONFER&COMPT SUP..	AUX	638	603	6 7	638	NO	DOC	CRS	Y	N/A		N/A	Y			Y
210	O	HV-5301B	CTRM CTRL CABNET RM Q PNEU OP	AUX	638	603	6 7	638	NO	DOC	CRS	Y	N/A		N/A	Y			Y
211	O	HV-5301C	CTRM CABLE SPRDNG RM Q PNEU OP	AUX	638	603	6 7	638	NO	DOC	CRS	Y	N/A		N/A	Y			Y
212	O	HV-5301D	CTRM I&C SHOP&KTCHN Q PNEU OP	AUX	638	603	6 7	638	NO	DOC	CRS	Y	N/A		N/A	Y			Y
213	O	HV-5301E	CTRM RTRN AIR FANS IN PNEU..OP	AUX	638	603	6 7	638	NO	DOC	CRS	Y	N/A		N/A	Y			Y
214	O	HV-5301F	CTRM TOILET 2 EXH FAN PNEU OP	AUX	638	603	6 7	643	NO	DOC	CRS	Y	N/A		N/A	Y			Y
215	O	HV-5301G	CTRM TOILET EXH FAN PNEU OP	AUX	638	603	6 7	643	NO	DOC	CRS	Y	N/A		N/A	Y			Y
216	O	HV-5301H	CTRM KITCHEN EXH FAN PNEU OP	AUX	638	603	6 7	646	NO	DOC	CRS	Y	N/A		N/A	Y			Y
217	O	HV-5305	L.V.S.G. RM 429 VENT DAMP OPER	AUX	603	429	1 4	620	NO	DOC	CRS	Y	N/A		Y	Y			Y
218	O	HV-5305A	L.V.S.G. RM 429 INTK A DAMP OP	AUX	603	429	1 4	620	NO	DOC	CRS	Y	N/A		Y	Y			Y
219	O	HV-5305B	L.V.S.G. RM INTK B DAMP OPER	AUX	603	429	2 8	613	Y	DOC	CRS	Y	N/A		Y				Y
220	O	HV-5311A	CTRM AREA HVAC DMPR PNEU VLV..	AUX	638	603	6 7	638	NO	DOC	CRS	Y	N/A		N/A	Y			Y
221	O	HV-5311B	CTRM CTRL CABNET RM Q PNEU VO	AUX	638	603	6 7	638	NO	DOC	CRS	Y	N/A		N/A	Y			Y
222	O	HV-5311C	CTRM SPRDNG CABLE RM Q PNEU VO	AUX	638	603	6 7	638	NO	DOC	CRS	Y	N/A		N/A	Y			Y
223	O	HV-5311D	CTRM I&C LB&KTCHN Q PNE VLV OP	AUX	638	603	6 7	638	NO	DOC	CRS	Y	N/A		N/A	Y			Y
224	O	HV-5311E	CTRM RTRN AIR FANS IN PNUE OP	AUX	638	603	6 7	638	NO	DOC	CRS	Y	N/A		N/A	Y			Y
225	O	HV-5311F	CTRM TOILET 2 EXH FAN PNEU VO	AUX	638	603	6 7	643	NO	DOC	CRS	Y	N/A		N/A	Y			Y
226	O	HV-5311G	CTRM TOILET EXH FAN PVO	AUX	638	603A	6 7	643	NO	DOC	CRS	Y	N/A		N/A	Y			Y
227	O	HV-5311H	CTRM KITCHEN EXH FAN PVO	AUX	638	603	6 7	653	NO	DOC	CRS	Y	N/A		N/A	Y			Y
228	O	HV-5314	L.V.S.G. RM 428 VENT DAMPER OP	AUX	623	515	7 8	623	NO	DOC	RRS	Y	N/A		Y	Y			Y
229	O	HV-5314A	L.V.S.G RM 428 INTKE DMPR OPER	AUX	603	428	7,8,12	603	Y	DOC	RRS	Y	N/A		Y	Y			Y
230	O	HV-5329A	EDG RM 318 AIR DAMP OPERATOR	AUX	585	318	1 4	610	Y	DOC	CRS	Y	N/A		Y	Y			Y

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231	O	HV-5329B	EDG RM 318 AIR DAMP OPERATOR	AUX	585	318	1 4	610	Y	DOC	CRS	Y	N/A		Y	Y			Y
232	O	HV-5329C	EDG RM 318 AIR DAMP OPERATOR	AUX	585	318	1 4	610	Y	DOC	CRS	Y	N/A		Y	Y			Y
233	O	HV-5336A	EDG RM 2 OTSD AIR CTRL DAMP OP	AUX	585	319	146	610	Y	DOC	CRS	Y	N/A		Y	Y			Y
234	O	HV-5336B	EDG RM 2 RECIRC CTRL DAMP OPER	AUX	585	319	146	610	Y	DOC	CRS	Y	N/A		Y	Y			Y
235	O	HV-5336C	EDG RM 2 XHST AIR CTRL DAMP OP	AUX	585	319	146	610	Y	DOC	CRS	Y	N/A		Y	Y			Y
236	O	HV-5361A	CABLE SPRDNG RM DMPR INLT OPER	AUX	623	506	6 7	642	NO	DOC	CRS	Y	N/A		Y	Y			Y
237	O	HV-5361B	CABLE SPRDNG RM INLT DMPR OPER	AUX	623	501	6 7	642	NO	DOC	CRS	Y	N/A		Y	Y			Y
238	O	HV-5362A	CABLE SPRDNG RM DMPR OUTLT OPR	AUX	623	506	6 7	642	NO	DOC	CRS	Y	N/A		Y	Y			Y
239	O	HV-5362B	CABLE SPRDNG RM OUTLT DMPR OPR	AUX	623	501	6 7	642	NO	DOC	CRS	Y	N/A		Y	Y			Y
240	O	HV-5443A	CCP RM VNT FN 1 RM OUT DAMP OP	AUX	585	328	678	595	Y	DOC	CRS	Y	N/A		Y	Y			Y
241	O	HV-5443B	CCP RM VNT FN 1 RM IN DAMP OP	AUX	585	328	678	595	Y	DOC	CRS	Y	N/A		Y	Y			Y
242	O	HV-5443C	CCP RM VNT FN1-1 RM IN DAMP OP	AUX	585	328	1 6	603	Y	DOC	CRS	Y	N/A		Y	Y			Y
243	O	HV-5444A	CCP RM VNT FN 2 RM OUT DAMP OP	AUX	585	328	678	595	Y	DOC	CRS	Y	N/A		Y	Y			Y
244	O	HV-5444B	CCP RM VNT FN RM INLT DAMP OPR	AUX	585	328	678	595	Y	DOC	CRS	Y	N/A		Y	Y			Y
245	O	HV-5444C	CCP RM VNT FN2 RM INLT DAMP OP	AUX	585	328	1 6	603	Y	DOC	CRS	Y	N/A		Y	Y			Y
246	O	HV-5597	BAT RM A VENT TO ATM DAMP OPER	AUX	603	429B	2 4	615	Y	DOC	CRS	Y	N/A		Y	Y			Y
247	O	HV-5598	OPER,DMPR FRM BAT RM VENT -ATM	AUX	603	428A	2 8	623	NO	DOC	RRS	Y	N/A		Y	Y			Y
248	18	IA-630	IA PCV FOR MU66D	AUX	565	208	567	565	Y	BS	GRS	Y	Y		Y	Y			Y
249	18	IA-636	IA PCV FOR MU66A	AUX	565	208	567	565	Y	BS	GRS	Y	Y		Y	Y			Y
250	18	IA-648	IA PCV FOR MU38	AUX	565	208	567	565	Y	BS	GRS	Y	Y		Y	Y			Y
251	18	IA-654	IA PCV FOR MU66B	AUX	565	208	567	565	Y	BS	GRS	Y	Y		Y	Y			Y
252	18	IA-660	IA PCV FOR MU66C	AUX	565	208	567	565	Y	BS	GRS	Y	Y		Y	Y			Y
253	7	ICS-11A	MS LINE 2 ATMOSPHERIC VENT VALVE	AUX	643	602	147	660	NO	DOC	CRS	Y	N/A		N/A	Y			Y

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254	7	ICS-11B	MS LINE 1 ATMOSPHERIC VENT VALVE	AUX	643	601	147	660	NO	DOC	CRS	Y	N/A		N/A	Y			Y
255	20	JT-2703	TERMINAL BLOCK BOX FOR AFPT 1 AUX RELAY	AUX	565	237	6 7	565	Y	ABS	CRS	Y	Y		Y	Y			Y
256	20	JT-2704	TERMINAL BLOCK BOX FOR AFPT 2 AUX RELAY	AUX	565	238	6 7	565	Y	BS	GRS	Y	Y		Y	Y			Y
257	5	K3-1	AUXILIARY FEED PMP TURBINE 1-1	AUX	565	237	1 7	565	Y	BS	GRS	Y	NO	Y	Y	Y			Y
258	5	K3-2	AUXILIARY FEED PMP TURBINE 1-2	AUX	565	237	1 7	565	Y	BS	GRS	Y	NO	Y	Y	Y			Y
259	17	K5-1	EDG 1-1	AUX	585	318	1 9	585	Y	BS	GRS	Y	Y		Y	Y			Y
260	17	K5-2	EDG 1-2	AUX	585	319	6 9	585	Y	BS	GRS	Y	Y		Y	Y			Y
261	18	LSH 1122	EDG DAY TANK 1-1 LVL SWITCH HI	AUX	595	320A	1237	600	Y	BS	GRS	Y	Y		N/A	Y			Y
262	18	LSH 1128	EDG DAY TANK 1-1 LVL SWITCH HI	AUX	595	321A	12347	600	Y	BS	GRS	Y	Y		N/A	Y			Y
263	18	LSL 1122	EDG DAY TANK 1-2 LVL SWITCH LO	AUX	595	320A	12347	600	Y	BS	GRS	Y	Y		N/A	Y			Y
264	18	LSL 1128	EDG DAY TANK 1-1 LVL SWITCH LO	AUX	595	321A	12347	600	Y	BS	GRS	Y	Y		N/A	Y			Y
265	18	LT-1402	CC SRG TNK 1-1 SIDE 1 LV TRANS	AUX	623	501	2 3	623	NO	ABS	CRS	Y	Y		Y	NO	Y	NO	NO
266	18	LT-1403	CC SRG TNK 1-1 SIDE 2 LV TRANS	AUX	623	501	2 3	623	NO	ABS	CRS	Y	Y		Y	NO	Y	NO	NO
267	18	LT-2787	EDG DAY TANK 1-1 LVL TRANSMITT	AUX	585	318	12347	590	Y	BS	GRS	Y	Y		Y	Y			Y
268	18	LT-2788	EDG DAY TANK 1-2 LVL TRANSMITT	AUX	585	319	12347	590	Y	BS	GRS	Y	Y		Y	Y			Y
269	18	LT-MU16-1	RC MU TANK LVL TRANSMITTER	AUX	565	AB3	2 4	567	Y	BS	GRS	Y	Y		Y	Y			Y
270	18	LT-MU16-2	RC MUT LVL TRANSMITTER	AUX	565	AB3	2 4	567	Y	BS	GRS	Y	Y		Y	Y			Y
271	18	LT-RC14-1	RC PRESSURIZER CH 2 LEVEL TRANSMITTER	CTM	585	317	145	593	Y	BS	GRS	Y	Y		Y	Y			Y
272	18	LT-RC14-3	RC PRESSURIZER CH 1 LEVEL TRANSMITTER	CTM	585	317	145	589	Y	BS	GRS	Y	Y		Y	Y			Y
273	18	LT-SP9A3	STEAM GEN 1-2 STARTUP LEVEL TRANSMIT 3	CTM	565	286	145	565	Y	BS	GRS	Y	Y		Y	Y			Y
274	18	LT-SP9B3	STEAM GEN 1 STARTUP LEVEL TRANSMITTER	CTM	565	285	145	565	Y	BS	GRS	Y	Y		Y	Y			Y
275	7	MS-100	MAIN STEAM LINE 2 ISO VALVE	AUX	643	602	147	647	NO	DOC	CRS	Y	N/A		N/A	Y			Y
276	7	MS-101	MS LINE 1 ISO VALVE	AUX	643	601	147	647	NO	DOC	CRS	Y	N/A		N/A	Y			Y

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277	8A	MS-106	MS LINE 1 TO AFP TURB 1-1 ISO VALVE	AUX	623	500	2 3	623	NO	DOC	CRS	Y	N/A		N/A	Y			Y
278	8A	MS-107	MS LN 2 TO AFP TURB 1-2 MTR CTRL ISO VLV	AUX	623	501	2 3	623	NO	DOC	CRS	Y	N/A		N/A	Y			Y
279	7	MS-5889A	AFP TURB 1-1 STEAM ADMISSION VALVE	AUX	565	237	3 6	585	Y	BS	GRS	Y	Y		N/A	Y			Y
280	7	MS-5889B	AFP TURB 1-2 STEAM ADMISSION VALVE	AUX	565	238	3 6	585	Y	BS	GRS	Y	Y		N/A	Y			Y
281	7	MU-19	RCP SEAL INJ FLOW CTRL VLV	AUX	585	303	1 7	585	Y	BS	GRS	Y	NO	Y	N/A	Y			Y
282	8A	MU-1A	RC LETDOWN COOLER 1-1 INLET ISO VALVE	CTM	565	215	1 4	568	Y	BS	GRS	Y	Y		N/A	Y			Y
283	8A	MU-1B	RC LETDOWN COOLER 1-2 INLET ISO VALVE	CTM	565	215	1 4	568	Y	BS	GRS	Y	Y		N/A	Y			Y
284	7	MU-23	BA PMP PNEUMATC DISCH CTRL VLV	AUX	565	240	2 10	571	Y	BS	GRS	Y	Y		N/A	Y			Y
285	8A	MU-2B	RC LETDOWN ISO VALVE	CTM	565	216	1 4	565	Y	BS	GRS	Y	Y		N/A	Y			Y
286	7	MU-32	MU FLOW CTRL VALVE	AUX	565	225	3 6	568	Y	BS	GRS	Y	Y		N/A	Y			Y
287	7	MU-38	RCP SEAL RETURN ISO VALVE	AUX	565	208	567	565	Y	BS	GRS	Y	NO	Y	N/A	Y			Y
288	8A	MU-3971	MU PUMP2 SUCTION 3 WAY MOV	AUX	565	225	3 6	585	Y	BS	GRS	Y	Y		N/A	Y			Y
289	8A	MU-40	BATCH FEED LINE STOP ISO VLV	AUX	565	211	1 8	568	Y	BS	GRS	Y	Y		N/A	Y			Y
290	8A	MU-6405	RC MU PMP1-1 3-WAY SUCTION VALVE	AUX	565	225	3 6	585	Y	BS	GRS	Y	Y		N/A	Y			Y
291	8A	MU-6419	NORMAL MU TO RCS LOOP-1 ISOVLV	AUX	565	208	6 7	565	Y	BS	GRS	Y	Y		N/A	Y			Y
292	8A	MU-6421	MU TO RCS TRAIN2 ISO VALVE	AUX	565	208	6 7	565	Y	BS	GRS	Y	Y		N/A	Y			Y
293	8A	MU-6422	NORM MU TO RCP SEALS ISO VLV	AUX	565	236	6 7	565	Y	BS	GRS	Y	Y		N/A	Y			Y
294	7	MU-66A	RCP1-2-1 SEAL INJ FLOW ISO VLV	AUX	565	208	6 7	565	Y	BS	GRS	Y	NO	Y	N/A	Y			Y
295	7	MU-66B	P1-2-2 SEAL INJ FLOW CNTRL VLV	AUX	565	208	6 7	565	Y	BS	GRS	Y	NO	Y	N/A	Y			Y
296	7	MU-66C	RCP1-1-1 SEAL INJ FLOW ISO VLV	AUX	565	208	6 7	565	Y	BS	GRS	Y	NO	Y	N/A	Y			Y
297	7	MU-66D	RCP1-1-2 SEAL INJ FLOW ISO VLV	AUX	565	208	6 7	565	Y	BS	GRS	Y	NO	Y	N/A	Y			Y
298	1	NP 1473	EDG 1-1 OIL PUMP CONT BOX CH A	AUX	585	318	7 8	591	Y	BS	GRS	Y	Y		Y	Y			Y
299	1	NP 1474	EDG 1-2 OIL PUMP CONT BOX CH B	AUX	585	319	7 8	591	Y	BS	GRS	Y	Y		Y	Y			Y

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300	20	NV-5305A	L.V.S.G. RM DAMP CTRL STATION	AUX	603	429	2 4	607	Y	BS	GRS	Y	Y		Y	Y			Y
301	20	NV-5305B	L.V.S.G. RM DAMP CTRL STATION	AUX	603	429	2 4	607	Y	BS	GRS	Y	Y		Y	Y			Y
302	18	NV-5314A	L.V.S.G. RM 428 VENT	AUX	603	428	1 10	608	Y	BS	GRS	Y	Y		Y	Y			Y
303	20	NV-55970	BATT RM 429B DISCH DMPR LOC SW	AUX	603	429	2 4	607	Y	BS	GRS	Y	Y		Y	Y			Y
304	18	NV-55980	BATT RM 428A DISCH DMPR LOC SW	AUX	603	428	1 10	608	Y	BS	GRS	Y	NO	Y	Y	Y			Y
305	20	NY-5874B	NEUTRON FLUX MONITORING AMPLIGIER CH1	AUX	603	402	1 4	608	Y	BS	GRS	Y	Y		Y	Y			Y
306	18	NY-5875B	NEUTRON FLUX SIGNAL AMPLIFIER	AUX	603	427	1 4	603	Y	BS	GRS	Y	Y		Y	Y			Y
307	5	P14-1	AUXILIARY FEEDWATER PUMP 1-1	AUX	565	237	1 7	565	Y	BS	GRS	Y	NO	Y	Y	Y			Y
308	5	P14-2	AUXILIARY FEEDWATER PUMP 1-2	AUX	565	238	1 7	565	Y	BS	GRS	Y	NO	Y	Y	Y			Y
309	6	P195-1	EDG FUEL OIL TRANSFER PUMP 1-1	YRD	585	N/A	4 6	578	Y	DOC	GRS	Y	N/A		Y	Y			Y
310	6	P195-2	EDG FUEL OIL TRANSFER PUMP 1-2	YRD	585	N/A	4 6	578	Y	DOC	GRS	Y	N/A		Y	Y			Y
311	6	P3-1	SERVICE WATER PUMP 1-1	ITK	576	052	124	576	Y	DOC	RRS	Y	NO	NO	Y	Y	Y	Y	Y
312	6	P3-2	SERVICE WATER PUMP 1-2	ITK	576	052	2 4	576	Y	DOC	RRS	Y	NO	NO	Y	Y	Y	Y	Y
313	5	P37-1	MAKEUP PUMP 1-1	AUX	565	225	1 4	565	Y	BS	GRS	Y	Y		Y	Y			Y
314	5	P37-2	MAKEUP PUMP 1-2	AUX	565	225	1 4	565	Y	BS	GRS	Y	Y		Y	Y			Y
315	5	P38-1	BORIC ACID PUMP 1-1	AUX	565	240	2 10	565	Y	BS	GRS	Y	Y		N/A	Y			Y
316	5	P38-2	BORIC ACID PUMP 1-2	AUX	565	240	2 10	565	Y	BS	GRS	Y	Y		N/A	Y			Y
317	5	P42-1	DECAY HEAT PUMP 1-1	AUX	545	105	5 6	545	Y	BS	GRS	Y	Y		Y	Y			Y
318	5	P42-2	DECAY HEAT PUMP 1-2	AUX	545	115	4 9	545	Y	BS	GRS	Y	Y		Y	Y			Y
319	5	P43-1	COMP COOLING PUMP 1-1	AUX	585	328	1367	585	Y	BS	GRS	Y	Y		Y	Y			Y
320	5	P43-2	COMPONENT COOLING PUMP 1-2	AUX	585	328	1367	585	Y	BS	GRS	Y	Y		Y	Y			Y
321	5	P43-3	CC PUMP 1-3	AUX	585	328	1367	585	Y	BS	GRS	Y	Y		Y	Y			Y
322	5	P56-1	CONTAINMENT SPRAY PUMP 1-1	AUX	545	105	5 6	545	Y	BS	GRS	Y	Y		Y	Y			Y

SCREENING VERIFICATION DATA SHEET (SVDS)

LINE NO	EQ CLASS	EQ NO	EQUIPMENT DESCRIPTION	BLDG	ELEV	RM	SQUGGER	BASE ELEV	<40	SPECTRUM CAP	SPECTRUM DEMAND	CAP> DEMAND	CAVEATS WORD	CAVEATS INTENT	ANCH OK	INTER-ACT OK	OUTLIER Y/N	OUTLIER OK	EQUIP OK
323	5	P56-2	CONTAINMENT SPRAY PUMP 1-2	AUX	545	115	4 9	545	Y	BS	GRS	Y	Y		Y	Y			Y
324	5	P57	BORATED WATER RECIRC PUMP 1-1	AUX	565	209	1 7	565	Y	BS	GRS	Y	Y		Y	Y			Y
325	5	P58-1	HI PRESSURE INJECTION PUMP 1-1	AUX	545	105	5 6	545	Y	BS	GRS	Y	Y		Y	Y			Y
326	5	P58-2	HI PRESSURE INJECTION PUMP 1-2	AUX	545	115	4 9	545	Y	BS	GRS	Y	Y		Y	Y			Y
327	18	PDIS 1379A	SW STRNR 1-1 PRESS DIFF IND SW	ITK	576	052	5 6	576	Y	BS	GRS	Y	Y		Y	Y			Y
328	18	PDIS 1380A	SW STRNR 1-2 PRESS DIFF IND SW	ITK	576	052	5 6	576	Y	BS	GRS	Y	Y		Y	Y			Y
329	18	PDSH 3981	DG1 JKT CC OUT ISO VLV PDSH	AUX	585	318	1 4	589	Y	BS	GRS	Y	Y		Y	Y			Y
330	18	PDSH 3982	DG2 JKT CC OUT ISO VLV PDSH	AUX	585	319	146	589	Y	BS	GRS	Y	Y		Y	Y			Y
331	18	PI-MU52A	BA PMP 1-1 DISCH LN PRESS INDI	AUX	565	241	4710	569	Y	ABS	CRS	Y	NO	Y	Y	Y			Y
332	18	PI-MU52B	BA PMP 1-2 DISCH PRESS INDIC	AUX	565	241	4710	569	Y	ABS	CRS	Y	NO	Y	Y	Y			Y
333	18	PS 3687A	MS LINE 2 PRESS LO TO SFRCS CH 2 PRESS SW	AUX	623	501	4 8	628	NO	DOC	CRS	Y	Y		Y	Y			Y
334	18	PS 3687C	MS LINE 1 PRESS LO TO SFRCS PRESS SW	AUX	623	500	4 8	627	NO	DOC	CRS	Y	Y		Y	Y			Y
335	18	PS 3687E	MS LINE 2 PRESS LO TO SFRCS CH 4 PESS SW	AUX	623	501	4 8	628	NO	DOC	CRS	Y	Y		Y	Y			Y
336	18	PS 3687G	MS LINE 1 PRESS LO TO SFRCS CH4 PRESS SW	AUX	623	500	4 8	627	NO	DOC	CRS	Y	Y		Y	Y			Y
337	18	PS 3689B	MS LINE 1 PRESS LO TO SFRCS PRESS SW	AUX	623	500	4 8	627	NO	DOC	CRS	Y	Y		Y	Y			Y
338	18	PS 3689D	MS LINE 2 PRESS LO TO SFRCS CH 1 PRESS SW	AUX	623	501	4 8	628	NO	DOC	CRS	Y	Y		Y	Y			Y
339	18	PS 3689F	MS LINE 1 PRESS LO TO SFRCS PRESS SW	AUX	623	500	4 8	627	NO	DOC	CRS	Y	Y		Y	Y			Y
340	18	PS 3689H	MS LINE 2 PRESS LO TO SFRCS CH3 PRESS SW	AUX	623	501	4 8	628	NO	DOC	CRS	Y	Y		Y	Y			Y
341	18	PS 5301	CTRM H&V SFAS ACT ISO PRES SWT	AUX	638	603	2 11	643	Y	ABS	RRS	Y	Y		Y	Y			Y
342	18	PS 5311	CTRM H&V SFAS ACT ISO PRES SWT	AUX	638	603	2 11	643	Y	ABS	RRS	Y	Y		Y	Y			Y
343	18	PS MU102A	MK-UP PMP2 OIL PRESS SWTCH	AUX	565	225	7 9	565	Y	BS	GRS	Y	Y		Y	Y			Y
344	18	PS MU102A1	MK-UP PMP2 OIL PRESS SWTCH	AUX	565	225	7 9	565	Y	BS	GRS	Y	Y		Y	Y			Y
345	0	PSE 226	PRESSURIZER QUENCH TANK RUPTURE DISK	CTM	565	218	1 7	565	Y	EJ	EJ	Y	N/A		N/A	Y			Y

SCREENING VERIFICATION DATA SHEET (SVDS)

LINE NO	EQ CLASS	EQ NO	EQUIPMENT DESCRIPTION	BLDG	ELEV	RM	SQUGGER	BASE ELEV	<40	SPECTRUM CAP	SPECTRUM DEMAND	CAP> DEMAND	CAVEATS WORD	CAVEATS INTENT	ANCH OK	INTER-ACT OK	OUTLIER Y/N	OUTLIER OK	EQUIP OK
346	0	PSE 5461	PRESSURIZER SAFETY VALVE RUPTURE DISK	CTM	565	218	1 7	609	Y	EJ	EJ	Y	N/A		N/A	Y			Y
347	0	PSE 5462	PRESSURIZER SAFETY VALVE RUPTURE DISK	CTM	565	218	1 7	609	Y	EJ	EJ	Y	N/A		N/A	Y			Y
348	0	PSE 5463	PRESSURIZER SAFETY VALVE RUPTURE DISK	CTM	565	218	1 7	609	Y	EJ	EJ	Y	N/A		N/A	Y			Y
349	0	PSE 5464	PRESSURIZER SAFETY VALVE RUPTURE DISK	CTM	565	218	1 7	609	Y	EJ	EJ	Y	N/A		N/A	Y			Y
350	18	PSH 3711	LETDOWN COOLER 1-1 CCW SIDE PRES SWITCH	CTM	565	215	1 4	565	Y	BS	GRS	Y	Y		Y	Y			Y
351	18	PSH 3712	SW SYS HEADER PRES SW	CTM	565	215	1 4	565	Y	BS	GRS	Y	Y		Y	Y			Y
352	18	PSH RC2B4	RC HOT LEG PRESSURE SWITCH	CTM	603	410A	1 4	607	Y	BS	GRS	Y	Y		Y	Y			Y
353	18	PSL 106A	PRESS SWTCH LO FR AFP TURB 1-1 STM INLET	AUX	565	237	2 7	569	Y	BS	GRS	Y	Y		Y	Y			Y
354	18	PSL 106B	PRESS CWITCH LOW AT AFP TURB 1-1 SUCTION	AUX	565	237	2 7	570	Y	BS	GRS	Y	Y		Y	Y			Y
355	18	PSL 106C	PRESS SWITCH LOW FOR AFP TURB 1-1 INLET	AUX	565	237	2 7	569	Y	BS	GRS	Y	Y		Y	Y			Y
356	18	PSL 106D	PRESS SWITCH LOW FOR AFP TURB 1-1 INLET	AUX	565	237	2 7	570	Y	BS	GRS	Y	Y		Y	Y			Y
357	18	PSL 107A	AFP TURB 1-2 INLET PRESS SWITCH LOW	AUX	565	238	2 7	569	Y	BS	GRS	Y	Y		Y	Y			Y
358	18	PSL 107B	AFP TURB 1-2 INLET PRESS SWITCH LOW	AUX	565	238	2 7	570	Y	BS	GRS	Y	Y		Y	Y			Y
359	18	PSL 107C	AFP TURB 1-2 INLET PRESS SWITCH LOW	AUX	565	238	2 7	569	Y	BS	GRS	Y	Y		Y	Y			Y
360	18	PSL 107D	AFP TURB 1-2 INLET PRESS SWITCH LOW	AUX	565	238	2 7	569	Y	BS	GRS	Y	Y		Y	Y			Y
361	18	PSL 1377A	SW PMP 1-2 DCHG SRC TAP PRESS SWITCH LOW	ITK	576	052	5 6	581	Y	BS	GRS	Y	Y		Y	Y			Y
362	18	PSL 3783	EDG STRTNG AIR RCVR 1-1-1 TO..	AUX	585	318	1 4	604	Y	BS	GRS	Y	Y		Y	Y			Y
363	18	PSL 3784	EDG STRTNG AIR RCVR 1-1-2 TO..	AUX	585	318	1 4	604	Y	BS	GRS	Y	Y		Y	Y			Y
364	18	PSL 3785	EDG STRTNG AIR RCVR 1-2-1 TO..	AUX	585	319	4 6	603	Y	BS	GRS	Y	Y		Y	Y			Y
365	18	PSL 3786	EDG STRTNG AIR RCVR 1-2-2 TO..	AUX	585	319	4 6	603	Y	BS	GRS	Y	Y		Y	Y			Y
366	18	PSL 4928A	AFP 1-1 SUCTION BEFORE STRNR PRESS SWT LO	AUX	565	237	1 8	565	Y	BS	GRS	Y	NO	NO	Y	NO	Y	NO	NO
367	18	PSL 4928B	AFP 1-1 SUCTION BEFORE STRNR PRESS SWT LO	AUX	565	237	1 8	565	Y	BS	GRS	Y	NO	NO	Y	NO	Y	NO	NO
368	18	PSL 4929A	AFP 1-2 SUCTION BEFORE STRNR PRESS SWT LO	AUX	565	238	1 8	565	Y	BS	GRS	Y	Y		Y	Y			Y

SCREENING VERIFICATION DATA SHEET (SVDS)

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369	18	PSL 4929B	AFP 1-2 SUCTION BEFORE STRNR PRESS SWT LO	AUX	565	238	1 8	565	Y	BS	GRS	Y	Y		Y	Y			Y
370	18	PSL 4930A	AFP 1-1 SUCTION AFTER STRNR PRESS SWT LO	AUX	565	237	3 6	565	Y	BS	GRS	Y	Y		Y	Y			Y
371	18	PSL 4930B	AFP 1-1 SUCTION AFTER STRNR PRESS SWT LO	AUX	565	237	3 6	565	Y	BS	GRS	Y	Y		Y	Y			Y
372	18	PSL 4931A	AFP 1-2 SUCTION AFTER STRNR PRESS SWT LO	AUX	565	238	3 6	568	Y	BS	GRS	Y	Y		Y	Y			Y
373	18	PSL 4931B	AFP 1-2 SUCTION AFTER STRNR PRESS SWT LO	AUX	565	238	3 6	568	Y	BS	GRS	Y	Y		Y	Y			Y
374	18	PSLL MU66A	PS FOR MU66A	AUX	565	208	567	570	Y	BS	GRS	Y	Y		Y	Y			Y
375	18	PSLL MU66B	PS FOR MU66B	AUX	565	208	567	569	Y	BS	GRS	Y	Y		Y	Y			Y
376	18	PSLL MU66C	PS FOR MU66C	AUX	565	208	567	569	Y	BS	GRS	Y	Y		Y	Y			Y
377	18	PSLL MU66D	PS FOR MU66D	AUX	565	208	567	570	Y	BS	GRS	Y	Y		Y	Y			Y
378	18	PT-2000	CTMT PRESSURE SFAS CH1 PRESSURE TRANSMIT	AUX	603	400	2 3	607	Y	BS	GRS	Y	Y		Y	Y			Y
379	18	PT-2001	CTMT PRESSURE SFAS CH2 PRESSURE TRANSMIT	AUX	623	501	2 3	628	NO	GERS	CRS	Y	Y		Y	Y			Y
380	18	PT-2002	CTMT PRESSURE SFAS CH3 PRESSURE TRANS	AUX	623	500	2 3	628	NO	GERS	CRS	Y	Y		Y	Y			Y
381	18	PT-2003	CTMT PRESSURE SFAS CH4 PRESSURE TRANS	AUX	603	421	2 3	607	Y	BS	GRS	Y	Y		Y	Y			Y
382	18	PT-5898	CREVS CH 1 REFRIG HEAD PRESS	AUX	638	603	2 11	644	Y	ABS	RRS	Y	Y		Y	Y			Y
383	18	PT-5899	CREVS CH 2 REFRIG HEAD PRESS	AUX	638	603	2 11	644	Y	ABS	RRS	Y	Y		Y	Y			Y
384	18	PT-RC2A4	RCP LOOP 2 HLG WR PRESS TRANS SFAS CH 2	CTM	603	482	145	608	Y	BS	GRS	Y	Y		Y	Y			Y
385	18	PT-RC2B4	RCP LOOP 1 HLG WR PRESS TRANS SFAS CH 1	CTM	603	483	145	608	Y	BS	GRS	Y	Y		Y	Y			Y
386	18	PT-SP12A2	STEAM GEN 1-2 OUTLT STEAM PRESS TRANSMIT	CTM	585	384	145	589	Y	BS	GRS	Y	Y		Y	Y			Y
387	18	PT-SP12B1	STEAM GEN 1-1 OUTLT STEAM PRESS TRANSMIT	CTM	585	317	145	589	Y	BS	GRS	Y	Y		Y	Y			Y
388	7	RC 13A	PRESSURIZER CODE SAFETY RELIEF VALVE	CTM	565	218	1 7	609	Y	BS	GRS	Y	Y		N/A	Y			Y
389	7	RC 13B	PRESSURIZER CODE SAFETY RELIEF VALVE	CTM	565	218	1 7	609	Y	BS	GRS	Y	Y		N/A	Y			Y
390	8A	RC 200	PRESS VENT LINE STOP VALVE	CTM	585	385	134	589	Y	BS	GRS	Y	NO	Y	N/A	Y			Y
391	7	RC 207	PRZR QUENCH TANK RELIEF VLV TO CTMT SUMP	CTM	585	218	145	585	Y	BS	GRS	Y	Y		N/A	Y			Y

SCREENING VERIFICATION DATA SHEET (SVDS)

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392	8A	RC 239A	PRESS VAPOR PHASE SAMPLE ISO VALVE	CTM	585	385	1 3 4	589	Y	BS	GRS	Y	NO	Y	N/A	Y			Y
393	20	RC 2826	AUX RELAY CABINET CH B	AUX	565	209	2 7	565	Y	ABS	CRS	Y	Y		Y	NO	Y	NO	NO
394	0	RC 2A	PRZR PWR RELIEF VALVE (SOL PILOT OP)	CTM	623	580	1 4	636	NO	DOC	RRS	Y	N/A		N/A	Y			Y
395	20	RC 3004	RELAY CABINET FOR CH B	ITK	565	053	2 11	566	Y	ABS	CRS	Y	Y		Y	NO	Y	NO	NO
396	20	RC 3014	RELAY CABINET CH2	ITK	576	052	2 11	580	Y	BS	GRS	Y	Y		Y	Y			Y
397	20	RC 3607	RELAY CABINET CH1	AUX	585	325	2 7(189)	588	Y	BS	GRS	Y	Y		Y	Y			Y
398	20	RC 3608	RELAY CABINET CH2	AUX	585	323	2 10	590	Y	BS	GRS	Y	Y		Y	Y			Y
399	20	RC 3701	AUX RELAY CABINET CH1	AUX	585	314	2 7	585	Y	BS	GRS	Y	Y		Y	NO	Y	NO	NO
400	20	RC 3702	AUX RELAY CABINET CH2	AUX	585	314	2 7	585	Y	BS	GRS	Y	Y		Y	Y			Y
401	20	RC 3704	RELAY CABINET CH1	AUX	585	314	2 10	590	Y	BS	GRS	Y	Y		Y	Y			Y
402	20	RC 3705	RELAY CABINET CH2	AUX	585	314	2 10	590	Y	BS	GRS	Y	Y		Y	Y			Y
403	20	RC 3715	RELAY CABINET	AUX	585	313	2 7	585	Y	ABS	CRS	Y	Y		Y	Y			Y
404	20	RC 4604	AUX RELAY CABINET CH 1	AUX	603	429	2 7	608	Y	BS	GRS	Y	Y		Y	Y			Y
405	20	RC 4605	RELAY CABINET CH2	AUX	603	428	2 7	608	Y	BS	GRS	Y	Y		Y	Y			Y
406	20	RC 4606	RELAY CABINET CH2	AUX	603	428	2 7	603	Y	BS	GRS	Y	Y		Y	Y			Y
407	20	RC 4607	RELAY CABINET CH2 FOR SV4632	AUX	603	427	2 7	603	Y	BS	GRS	Y	Y		Y	Y			Y
408	20	RC 4801	RELAY CABINET CH1	AUX	603	402	2 7	603	Y	BS	GRS	Y	Y		Y	Y			Y
409	10	S33-1	CREVS WATER COOLED COND 1	AUX	638	603	2 11	638	NO	ABS	RRS	Y	NO	NO	Y	Y	Y	NO	NO
410	10	S33-2	CREVS WATER COOLED COND 2	AUX	638	603	2 11	638	NO	ABS	RRS	Y	NO	NO	Y	Y	Y	NO	NO
411	10	S61-1	CREVS AIR COOLED CONDENSER 1	AUX	660	N/A	2 11	660	NO	DOC	RRS	Y	Y		Y	Y			Y
412	10	S61-2	CREVS AIR COOLED CONDENSER 2	AUX	660	N/A	2 11	660	NO	DOC	RRS	Y	Y		Y	Y			Y
413	7	SP-17A1	MS LINE 2 CODE SAFETY VALVE (PSVSP17A1)	AUX	643	602	6 9	660	NO	DOC	CRS	Y	N/A		N/A	Y			Y
414	7	SP-17A2	MS LINE 2 CODE SAFETY VALVE (PSVSP17A2)	AUX	643	602	6 9	660	NO	DOC	CRS	Y	N/A		N/A	Y			Y

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415	7	SP-17A3	MS LINE 2 CODE SAFETY VALVE (PSVSP17A3)	AUX	643	602	6 9	660	NO	DOC	CRS	Y	N/A		N/A	Y			Y
416	7	SP-17A4	MS LINE 2 CODE SAFETY VALVE (PSVSP17A4)	AUX	643	602	6 9	660	NO	DOC	CRS	Y	N/A		N/A	Y			Y
417	7	SP-17A5	MS LINE 2 CODE SAFETY VALVE (PSVSP17A5)	AUX	643	602	6 9	660	NO	DOC	CRS	Y	N/A		N/A	Y			Y
418	7	SP-17A6	MS LINE 2 CODE SAFETY VALVE (PSVSP17A6)	AUX	643	602	6 9	660	NO	DOC	CRS	Y	N/A		N/A	Y			Y
419	7	SP-17A7	MS LINE 2 CODE SAFETY VALVE (PSVSP17A7)	AUX	643	602	6 9	660	NO	DOC	CRS	Y	N/A		N/A	Y			Y
420	7	SP-17A8	MS LINE 2 CODE SAFETY VALVE (PSVSP17A8)	AUX	643	602	6 9	660	NO	DOC	CRS	Y	N/A		N/A	Y			Y
421	7	SP-17A9	MS LINE 2 CODE SAFETY VALVE (PSVSP17A9)	AUX	643	602	6 9	660	NO	DOC	CRS	Y	N/A		N/A	Y			Y
422	7	SP-17B1	MS LINE 1 CODE SAFETY VALVE (PSVSP17B1)	AUX	643	601	6 9	660	NO	DOC	CRS	Y	N/A		N/A	Y			Y
423	7	SP-17B2	MS LINE 1 CODE SAFETY VALVE (PSVSP17B2)	AUX	643	601	6 9	660	NO	DOC	CRS	Y	N/A		N/A	Y			Y
424	7	SP-17B3	MS LINE 1 CODE SAFETY VALVE (PSVSP17B3)	AUX	643	601	6 9	660	NO	DOC	CRS	Y	N/A		N/A	Y			Y
425	7	SP-17B4	MS LINE 1 CODE SAFETY VALVE (PSVSP17B4)	AUX	643	601	6 9	660	NO	DOC	CRS	Y	N/A		N/A	Y			Y
426	7	SP-17B5	MS LINE 1 CODE SAFETY VALVE (PSVSP17B5)	AUX	643	601	6 9	660	NO	DOC	CRS	Y	N/A		N/A	Y			Y
427	7	SP-17B6	MS LINE 1 CODE SAFETY VALVE (PSVSP17B6)	AUX	643	601	6 9	660	NO	DOC	CRS	Y	N/A		N/A	Y			Y
428	7	SP-17B7	MS LINE 1 CODE SAFETY VALVE (PSVSP17B7)	AUX	643	601	6 9	660	NO	DOC	CRS	Y	N/A		N/A	Y			Y
429	7	SP-17B8	MS LINE 1 CODE SAFETY VALVE (PSVSP17B8)	AUX	643	601	6 9	660	NO	DOC	CRS	Y	N/A		N/A	Y			Y
430	7	SP-17B9	MS LINE 1 CODE SAFETY VALVE (PSVSP17B9)	AUX	643	601	6 9	660	NO	DOC	CRS	Y	N/A		N/A	Y			Y
431	7	SS-598	STEAM GEN 1-2 SAMPLE LINE CTMT ISO VALVE	AUX	585	314	1 7	598	Y	BS	GRS	Y	NO	Y	N/A	Y			Y
432	7	SS-607	STEAM GEN 1-1 SAMPLE LINE CTMT ISO VALVE	AUX	585	314	1 7	598	Y	BS	GRS	Y	NO	Y	N/A	Y			Y
433	8B	SV-5301	AUX BLDG CTRM DMPR AIR SOL VLV	AUX	638	603	2 4	648	NO	GERS	CRS	Y	Y		Y	Y			Y
434	8B	SV-5301A	CTRM COMP CONF RM&COMP..SOLVLV	AUX	638	603	2 4	649	NO	GERS	CRS	Y	Y		Y	Y			Y
435	8B	SV-5311	CTRM ISO DAMPERS SOL VALVE	AUX	638	603	2 4	649	NO	GERS	CRS	Y	Y		Y	Y			Y
436	8B	SV-5311A	AUX BLDG CTRM DMPR AIR SOL VLV	AUX	638	603	2 4	649	NO	GERS	CRS	Y	Y		Y	Y			Y
437	7	SW-1356	CAC 1-1 OUTLET TEMP CTRL VALVE	AUX	585	314	6 7	585	Y	BS	GRS	Y	Y		N/A	Y			Y

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438	7	SW-1357	CAC 1-2 OUTLET TEMP CTRL VALVE	AUX	585	314	6 7	585	Y	BS	GRS	Y	Y		N/A	Y			Y
439	8A	SW-1379	SW STRNR 1-1 DRAIN VALVE	ITK	576	052	12347	576	Y	BS	GRS	Y	Y		N/A	Y			Y
440	8A	SW-1380	SW STRNR 1-2 DRAIN VALVE	ITK	576	052	12347	576	Y	BS	GRS	Y	Y		N/A	Y			Y
441	8A	SW-1382	SW SUPPLY TO AFP 1-1 ISO VALVE	AUX	565	237	4 6	565	Y	BS	GRS	Y	Y		N/A	Y			Y
442	8A	SW-1383	SW SUPPLY TO AFP 1-2 ISO VALVE	AUX	565	236	4 6	565	Y	BS	GRS	Y	Y		N/A	Y			Y
443	8A	SW-1395	TPCW HTXCHANG INLT HDR ISO VLV	ITK	566	053	5 6	566	Y	BS	GRS	Y	Y		N/A	Y			Y
444	7	SW-1424	CCW HT XCHANG 1-1 OUT CTRL VLV	AUX	585	328	6 7	585	Y	BS	GRS	Y	Y		N/A	Y			Y
445	7	SW-1434	CCW HT XCHANG1-2 OTLT CTRL VLV	AUX	585	328	6 7	585	Y	BS	GRS	Y	Y		N/A	Y			Y
446	8A	SW-2927	CTRM EMERG COND 1-1 TV...VALVE	AUX	638	603	1 7	638	NO	GERS	CRS	Y	Y		N/A	Y			Y
447	8A	SW-2928	CTRM EMERG COND 1-2 OUTLET TV	AUX	638	603	1 7	638	NO	GERS	CRS	Y	Y		N/A	Y			Y
[illegible]	8A	SW-2929	SW DISCH TO IN STRUCTURE VALVE	ITK	566	053	12347	566	Y	BS	GRS	Y	Y		N/A	Y			Y
449	8A	SW-2930	SW DISCH TO IN FOREBAY VALVE	ITK	566	053	12347	566	Y	BS	GRS	Y	Y		N/A	Y			Y
450	8A	SW-2931	SW DISCH TO COOLING TWR MU VLV	ITK	566	053	12347	566	Y	BS	GRS	Y	Y		N/A	Y			Y
451	8A	SW-2932	SW DISCH TO COLLECT BASIN VLV	ITK	566	053	12347	566	Y	BS	GRS	Y	Y		N/A	Y			Y
452	7	SW-5896	CTRM EMERG COND 1-1 SW VLV	AUX	638	603	1 7	638	NO	GERS	CRS	Y	NO	Y	N/A	Y			Y
453	7	SW-5897	CTRM EMERG COND 1-2...CONT VLV	AUX	638	603	1 7	638	NO	GERS	CRS	Y	NO	Y	N/A	Y			Y
454	12	T86-1	EDG 1-1 AIR RECEIVER 1-1-1	AUX	585	318	12467	595	Y	BS	GRS	Y	Y		Y	Y			Y
455	12	T86-2	EDG 1-1 AIR RECEIVER 1-1-2	AUX	585	318	12467	595	Y	BS	GRS	Y	Y		Y	Y			Y
456	12	T86-3	EDG 1-2 AIR RECEIVER 1-2-1	AUX	585	319	12467	595	Y	BS	GRS	Y	Y		Y	Y			Y
457	12	T86-4	EDG 1-2 AIR RECEIVER 1-2-2	AUX	585	319	12467	595	Y	BS	GRS	Y	Y		Y	Y			Y
458	18	TE-1356	CTMT COOLER FAN 1 SUCTION TEMP ELEMENT	CTM	585	317	1 4	585	Y	ABS	CRS	Y	Y		Y	Y			Y
459	18	TE-1357	CTMT COOLER FAN 2 SUCTION TEMP ELEMENT	CTM	585	317	1 4	585	Y	ABS	CRS	Y	Y		Y	Y			Y
460	18	TE-5329	EDG RM 318 TEMP ELEMENT	AUX	585	318	12347	590	Y	BS	GRS	Y	Y		Y	Y			Y

SCREENING VERIFICATION DATA SHEET (SVDS)

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461	18	TE-5336	EDG RM 2 TEMP ELEMENT	AUX	585	319	12347	590	Y	BS	GRS	Y	Y		Y	Y			Y
462	18	TE-5443	CC PMP 1 RM TEMP ELEMENT	AUX	585	328	6 7	595	Y	BS	GRS	Y	NO	Y	Y	Y			Y
463	18	TE-5444	CC PMP 1 RM TEMP ELEMENT	AUX	585	328	6 7	596	Y	BS	GRS	Y	Y		Y	Y			Y
464	19	TE-IM07E	INCORE OUTLET E7 TEMP ELEMENT	CTM	578	315	1 7	578	Y	BS	GRS	Y	Y		N/A	Y			Y
465	19	TE-IM07M	INCORE OUTLET M7 TEMP ELEMENT	CTM	578	315	1 7	578	Y	BS	GRS	Y	Y		N/A	Y			Y
466	19	TE-RC3A6	RC LOOP 2 HLG WR TEMP ELEMENT	CTM	630	218	147	641	NO	DOC	CRS	Y	Y		N/A	Y			Y
467	19	TE-RC3B5	RC LOOP 1 HLG WR TEMP ELEMENT	CTM	585	216	1 4	641	NO	DOC	CRS	Y	Y		N/A	Y			Y
468	19	TE-RC4A2	RCP 2-1 DISCH CLG WR TEMP ELEMENT	CTM	585	218	145	571	Y	BS	GRS	Y	Y		N/A	Y			Y
469	19	TE-RC4B2	RCP 1-1 DISCH CLG WR TEMP ELEMENT	CTM	565	216	145	571	Y	BS	GRS	Y	Y		N/A	Y			Y
470	19	TE-SP11A1	STEAM GEN 1-2 SHELL TEMP ELEMENT 1	CTM	565	218	1 4	630	NO	DOC	CRS	Y	Y		N/A	Y			Y
471	19	TE-SP11A2	STEAM GEN 1-2 SHELL TEMP ELEMENT 2	CTM	585	218	1 4	630	NO	DOC	CRS	Y	Y		N/A	Y			Y
472	19	TE-SP11A3	STEAM GEN 1-2 SHELL TEMP ELEMENT 3	CTM	585	218	1 4	630	NO	DOC	CRS	Y	Y		N/A	Y			Y
473	19	TE-SP11A4	STEAM GEN 1-2 SHELL TEMP ELEMENT 4	CTM	603	218	1 4	630	NO	DOC	CRS	Y	Y		N/A	Y			Y
474	19	TE-SP11A5	STEAM GEN 1-2 SHELL TEMP ELEMENT 5	CTM	603	218	1 4	630	NO	DOC	CRS	Y	Y		N/A	Y			Y
475	19	TE-SP11B1	STEAM GEN 1-1 SHELL TEMP ELEMENT 1	CTM	565	216	146	630	NO	DOC	CRS	Y	Y		N/A	Y			Y
476	19	TE-SP11B2	STEAM GEN 1-1 SHELL TEMP ELEMENT 2	CTM	565	216	146	630	NO	DOC	CRS	Y	Y		N/A	Y			Y
477	19	TE-SP11B3	STEAM GEN 1-1 SHELL TEMP ELEMENT 3	CTM	565	216	146	630	NO	DOC	CRS	Y	Y		N/A	Y			Y
478	19	TE-SP11B4	STEAM GEN 1-1 SHELL TEMP ELEMENT 4	CTM	565	216	146	630	NO	DOC	CRS	Y	Y		N/A	Y			Y
479	19	TE-SP11B5	STEAM GEN 1-1 SHELL TEMP ELEMENT 5	CTM	565	216	146	630	NO	DOC	CRS	Y	Y		N/A	Y			Y
480	O	TI 5503	PORTABLE RC TEMPERATURE INDICATOR	AUX	585	304	2 11	585	Y	DOC	CRS	Y	N/A		N/A	Y			Y
481	O	TI 5504	PORTABLE RC TEMPERATURE INDICATOR	AUX	585	304	2 11	585	Y	DOC	CRS	Y	N/A		N/A	Y			Y
482	18	TIC 5443	CC PMP 1 RM TEMP INDEX CONTROL	AUX	585	328	6 7	585	Y	BS	GRS	Y	NO	Y	Y	Y			Y
483	18	TIC 5444	CC PMP 2 RM TEMP INDEX CONTROL	AUX	585	328	6 7	585	Y	BS	GRS	Y	NO	Y	Y	Y			Y

SCREENING VERIFICATION DATA SHEET (SVDS)

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484	18	TS-4688	TEMP SWT FR XHAUST FAN C99-1&2	ITK	576	052	5 6	580	Y	BS	GRS	Y	NO	Y	Y	Y			Y
485	18	TS-4689	TEMP SWT FR XHAUST FAN C99-3&4	ITK	576	052	5 6	582	Y	BS	GRS	Y	Y		Y	Y			Y
486	18	TS-5135	TEMP SWITCH FOR AFP ROOM VENT FAN 1-1	AUX	565	237	2 7	570	Y	BS	GRS	Y	Y		Y	Y			Y
487	18	TS-5136	AFP ROOM VENT FAN 2 TEMPERATURE SWITCH	AUX	565	238	2 7	570	Y	BS	GRS	Y	Y		Y	Y			Y
488	18	TS-5261	CTRM EMERG VENT FAN 1 TEMP SWT	AUX	638	603	1 7	638	NO	ABS	RRS	Y	Y		Y	Y			Y
489	18	TS-5262	CTRM EMERG VENT FAN 2 TEMP SWT	AUX	638	603	1 7	638	NO	ABS	RRS	Y	Y		Y	NO	Y	NO	NO
490	18	TS-5315	TEMP SWT FR L.V.S.G.RM 428 VNT	AUX	603	428	1 10	608	Y	BS	GRS	Y	Y		Y	Y			Y
491	18	TS-5318	L.V.S.G. RM DAMP TEMP SWITCH	AUX	603	429	2 4	607	Y	BS	GRS	Y	Y		Y	Y			Y
492	18	TS-5443	CC PMP RM VNT FN 1 TEMP SWITCH	AUX	585	328	6 7	595	Y	BS	GRS	Y	Y		Y	Y			Y
493	18	TS-5444	CC PMP VNT FN RM 2 TEMP SWITCH	AUX	585	328	6 7	596	Y	BS	GRS	Y	Y		Y	Y			Y
494	18	TS-5597	TEMP SW FR BATT RM A THERMO	AUX	603	429	367	608	Y	BS	GRS	Y	Y		Y	Y			Y
495	18	TS-5598	TEMP SW FR BATT RM B THERMO	AUX	603	428	367	608	Y	BS	GRS	Y	Y		Y	Y			Y
496	18	TSH 1435	CC HX 2 CCW OUT TEMP SWTCH HI	AUX	585	328	6 7	590	Y	BS	GRS	Y	Y		Y	Y			Y
497	18	TSH 1483	CC HX CCW OUT TEMP SWICH HIGH	AUX	585	328	6 7	595	Y	BS	GRS	Y	Y		Y	Y			Y
498	18	TSH 5421	ECCS RM CLR FAN 1-5 TEMP SW	AUX	545	105	5 6	549	Y	BS	GRS	Y	Y		Y	Y			Y
499	18	TSH 5422	ECCS RM CLR FAN 1-4 TEMP SW	AUX	545	105	5 6	551	Y	BS	GRS	Y	Y		Y	Y			Y
500	18	TSH 5424	ECCS RM CLR FAN 1-2 TEMP SW	AUX	545	115	4 9	558	Y	BS	GRS	Y	Y		Y	Y			Y
501	18	TSH 5425	ECCS RM CLR FAN 1-1 TEMP SW	AUX	545	115	4 9	557	Y	BS	GRS	Y	Y		Y	Y			Y
502	18	TSL 5421	ECCS RM CLR FAN 1-5 TEMP SW	AUX	545	105	5 6	549	Y	BS	GRS	Y	Y		Y	Y			Y
503	18	TSL 5422	ECCS RM CLR FAN 1-4 TEMP SW	AUX	545	105	5 6	549	Y	BS	GRS	Y	Y		Y	Y			Y
504	18	TSL 5424	ECCS RM CLR FAN 1-2 TEMP SW	AUX	545	115	4 9	558	Y	BS	GRS	Y	Y		Y	Y			Y
505	18	TSL 5425	ECCS RM CLR FAN 1-1 TEMP SW	AUX	545	115	4 9	557	Y	BS	GRS	Y	Y		Y	Y			Y
506	18	TT-1356	CTMT COOLER FAN 1 SUCTION TEMP TRANSMIT	AUX	585	303	1 7	590	Y	BS	GRS	Y	NO	NO	NO	Y	Y	NO	NO

SCREENING VERIFICATION DATA SHEET (SVDS)

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507	18	TT-1357	CTMT COOLER FAN 2 SUCTION TEMP TRANSMIT	AUX	585	314	1 7	590	Y	BS	GRS	Y	Y		Y	Y			Y
508	18	TT-5443	CC PMP 1 RM TEMP TRANSMITTER	AUX	585	328	6 8	603	Y	BS	GRS	Y	NO	Y	Y	Y			Y
509	18	TT-5444	CC PMP 2 RM TEMP TRANSMITTER	AUX	585	328	6 8	603	Y	BS	GRS	Y	Y		Y	Y			Y
510	14	Y1	ESSEN INSTR DIST PNL "Y1"	AUX	603	429	2 3	603	Y	BS	GRS	Y	Y		Y	Y			Y
511	14	Y1A	120VAC ESSEN INST DIST PANEL	AUX	603	429	2 3	603	Y	BS	GRS	Y	Y		Y	Y			Y
512	14	Y2	ESSEN INSTR DIST PNL "Y2" 120V	AUX	603	428	8 9	603	Y	BS	GRS	Y	Y		Y	Y			Y
513	14	Y2A	120VAC ESSEN INST DIST PANEL	AUX	603	428	1 9	603	Y	BS	GRS	Y	Y		Y	Y			Y
514	14	Y3	ESSEN INSTR DIST PNL "Y3" 120V	AUX	603	429A	2 3	603	Y	BS	GRS	Y	Y		Y	Y			Y
515	14	Y4	ESSEN INSTR DIST PNL "Y4" 120V	AUX	603	428	489	603	Y	BS	GRS	Y	Y		Y	Y			Y
516	14	YAU	UPS INSTR DIST PNL "YAU"	AUX	603	429	489	603	Y	BS	GRS	Y	Y		Y	Y			Y
517	14	YBU	UPS INSTR DIST PNL 120V ac	AUX	603	428	8 9	603	Y	BS	GRS	Y	Y		Y	Y			Y
518	1	YE1	480/120 VAC MCC/TRANSFORMER	AUX	585	318	1489	585	Y	BS	GRS	Y	Y		Y	NO	Y	NO	NO
519	1	YE2	240 VAC MCC/TRANSFORMER	AUX	585	304	1489	585	Y	BS	GRS	Y	Y		Y	Y			Y
520	4	YE2A	480-240V TRANSFORMER	AUX	603	405	1367	603	Y	BS	GRS	Y	Y		Y	Y			Y
521	1	YF1	480-120V MCC/TRANSFORMER	AUX	585	319	1489	585	Y	BS	GRS	Y	Y		Y	Y			Y
522	1	YF2	240 VAC MCC/TRANSFORMER	AUX	603	427	489	585	Y	BS	GRS	Y	Y		Y	Y			Y
523	4	YF2A	480-240V TRANSFORMER	AUX	603	427	1367	603	Y	BS	GRS	Y	Y		Y	Y			Y
524	16	YV1	125VDC/120VAC INVERTER CH 1	AUX	603	429	237	603	Y	BS	GRS	Y	Y		Y	Y			Y
525	16	YV2	125VDC/120VAC INVERTER CH 2	AUX	603	428	2 3	603	Y	BS	GRS	Y	Y		Y	NO	Y	NO	NO
526	16	YV3	125VDC 120VAC INVERTER CH 3	AUX	603	429A	1 7	603	Y	BS	GRS	Y	Y		Y	NO	Y	NO	NO
527	16	YV4	125VDC/120VAC INVERTER CH 4	AUX	603	428	4 7	603	Y	BS	GRS	Y	Y		Y	NO	Y	NO	NO
528	16	YVA	UPS "YVA" INVERTER	AUX	603	429	4 6	603	Y	ABS	RRS	NO	NO	NO	NO	Y	Y	NO	NO
529	16	YVB	UPS "YVB" INVERTER	AUX	603	428	1 6	603	Y	ABS	RRS	NO	NO	NO	NO	Y	Y	NO	NO

8/21/95

SCREENING VERIFICATION DATA SHEET (SVDS)

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530	18	ZC-6451	AFP 1-2 DISCH CTRL VLV POSITION CTRLR	AUX	565	238	4 6	569	Y	BS	GRS	Y	Y		Y	Y			Y
531	18	ZC-6452	AFP 1-1 DISCH CTRL VLV POS CONTROLER	AUX	565	237	4 6	569	Y	BS	GRS	Y	Y		Y	Y			Y

DAVIS-BESSE NUCLEAR POWER STATION

Unresolved Safety Issue (USI) A-46

Seismic Evaluation Report

APPENDIX E

THIRD-PARTY AUDIT REPORT

Transmittal
JJJ-95-0506

August 11, 1995

Mr. Jon G. Hook
Toledo Edison Company
Davis-Besse Nuclear Station MS-3210
5501 North State Route 2
Oak Harbor, OH 43449

Subject: Davis-Besse A-46 Program Report of Peer Review

Dear Mr. Hook:

This letter documents the subject Peer Review conducted on June 8-9, 1995

GENERAL

On June 8-9, 1995, I reviewed the implementation of the SQUG Generic Implementation Procedure (GIP) to the resolution of USI A-46 for Davis-Besse Nuclear Power Station. The time frame was short, hence, the review focused on the overall program, basic assumptions applied program-wide, selected SEWS reviews, resolution of difficult issues, and in-plant evaluations.

SSEL

The safe shutdown equipment list for Davis-Besse contained 531 equipment components, including those containing essential relays for A-46 and an additional 67 components for IPEEE. Of the 531 components, 64 had been designated outliers at the time of the peer review. Many of the outliers were reviewed on the walk-down to better understand the issues. The adequacy of the SSEL was not reviewed.

Seismic Demand

A review of the Davis-Besse in-structure response spectra to be used in the evaluations was completed. Several options were available to the Seismic Review Teams as a function of building/area and location within (less than or greater than 40 ft. above effective grade). For those components reviewed, seismic demand was implemented appropriately.

In addition to in-structure response spectra, building displacements for all buildings/areas and elevations were reviewed. The review demonstrated that relative building/area displacements were based on design values consistent with the existing seismic

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design analyses denoted conservative design. The maximum relative displacement between buildings/areas was 0.28" horizontally between the Shield Bldg. and Area 6 at elevation 638' which bounds the cases of interest. At lower elevations and for other buildings/areas, the maximum relative horizontal displacements are less and usually substantially less. Vertical displacements are considerably less and warrant minimal consideration. The in-plant evaluation examined many building boundaries to validate judgments made in the field and documented in the SEWS. Those judgments were found to be appropriate. In some instances, analyses were performed to demonstrate the adequacy of the installation to relative building motions, e.g., MCC F11B, MCC F11D. The in-office and in-plant evaluation concurred with the analysis and judgments.

SEWS Reviews

Selected SEWS reviews were performed focused on components with significant judgment applied or difficult issues to be addressed. The major question examined was natural frequency estimation.

Natural Frequency Determination

Davis-Besse has plant specific in-situ frequency tests supplemented by generic data from EPRI and others to assist in estimating natural frequencies of electrical cabinets with and without top bracing. Top bracing is provided by substantial conduit for which inspections were made verifying the conduit attachment to the top of representative cabinets. Typically, front-to-back frequencies (those of most interest) increased by a factor of 2 or greater when top mounted substantial conduit is in place.

A recommendation to review those evaluations where in-situ test data and generic test data were used to estimate natural frequencies was made during the June 8-9 , 1995 evaluation. This recommendation was based on the complexity of the information provided by the testing firm and was intended to assure appropriate implementation. Follow-up to the on-site review, clarifications were sought and received from the testing firm and implemented in the evaluations as appropriate.

Documentation

It was recommended, although not required, that SEWS back-up documentation, such as calculations be maintained more formally with preparer/checker signatures and dates with revisions noted.

Seismic/Fire and Seismic/Flood Interaction for IPEEE

The subject evaluations for IPEEE should be performed on area- by- area basis in coordination with the fire and flood evaluation teams.

Transmittal No
JJJ- 95-0506

In-Plant Evaluations (Walkdown)

An area walkdown was performed on June 9, 1995 walking-by as much equipment as possible in the time available. Building/area separations were viewed at several elevations and several locations in the complex.

Electrical cabinets, including MCCs, were examined to evaluate judgments made concerning impact between adjacent cabinets and walls, the robust nature of top bracing due to channels bolted to cabinets and top mounted conduit, and attachment points to multiple buildings/areas.

The emergency diesel generator rooms were visited. Fire protection system was visually inspected and clarified with operations personnel to be water-type, rather than halon or carbon dioxide. This eliminates one potential systems interaction issue. The emergency diesel generator supply fans were reviewed. Capacity issues included anchorage capacity, vibration isolators, and the capacity of the attaching bellows to resist shear and moment and displaces as required vertically or laterally. This evaluation was being completed at the time of the Peer Review. The issues were well identified and resolutions appeared imminent.

The control room was visited. The control room ceiling was inspected with the understanding some re-work is in order. Control room cabinets were inspected. Selected cabinets are to be bolted together.

SUMMARY

Generally, the Davis-Besse GIP implementation is being performed in an appropriate and adequate fashion.

For the sample considered, I concur with the final conclusions as stated.

Sincerely,
EQE International, Inc.

James Johnson

Dr. James J. Johnson
Executive Vice President

JJJ:emb