SEQUOYAH NUCLEAR PLANT – UNIT 2 FUKUSHIMA NEAR-TERM TASK FORCE RECOMMENDATION 2.3: SEISMIC RESPONSE REPORT

26-September-2013

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REV	DESCRIPTION	ORIG	REVIEW	WORLEY-PARSONS APPROVAL	DATE	CLIENT APPROVAL	DATE
1	SQN Unit 2 Seismic Walkdown Report	I. Antanaitis	S. Summers	J. Edgar	26-Sep-13	KDC	9/26/2013

Title: Sequoyah Nuclear Plant – Unit 2 Fukushima Near-Term Task Force Recommendation 2.3: Seismic Response Report	REVISION LOG

Revision No.	DESCRIPTION OF REVISION	Date Approved
0	Initial Issue	12-Nov-2012
1	Revised to add additional references and incorporate lessons learned from self-assessment internal audit and U.S. Nuclear Regulatory Commission audit Added Sections: • Revision Log (pages 2A-2C) • 4.3 SWEL Finalization (page 19): added section to explain finalization of Seismic Walkdown Equipment Lists (SWELs). Revised Sections: • Title Page: Revised issue date • Signature Page: Updated name of originator and revised issue date • Table of Contents (page 3): Updated page numbering for entire report body to accommodate the revisions outlined below – report body length increased from 23 pages to 34 pages; updated page references for the appendices to reflect revised page numbering scheme • 1. Executive Summary (page 4): made minor wording changes in the first and second paragraphs • 2.3 Structures (pages 7-8): added references from Sequoyah Nuclear Plant Living Final Safety Analysis Report (FSAR) • 3.1 Equipment Selection Personnel (page 9): expanded descriptions of the applicable experience of equipment selection personnel • 3.2 Seismic Walkdown Engineers (pages 9-10): expanded descriptions of the applicable experience of seismic walkdown engineers (SWEs); added explanatory notes about training of SWEs • 3.3 Licensing Basis Reviewers (page 10): expanded descriptions of the applicable experience of the Licensing Basis Reviewers • 3.4 IPEEE Vulnerability Incorporation Personnel (pages 10-11): revised section title, made minor wording change, and added explanatory notes about the IPEEE vulnerability incorporation process • 3.5 Peer Review Team (page 11): expanded descriptions of experience of members of the Peer Review Team and added notes about calculation of HCLPF capacities • 4. Selection of Structures, Systems and Components (page 12): made minor wording changes and condensed the two existing paragraphs to one • 4.1 SWEL 1 Selection (pages 12-17): added descriptive notes about SWEL 1 selection process, as well as Figure 2 (SWEL 1 Selection Process)Table 2 (IPEEE Enhancements), Table 3 (CDF Risk Rankings), and Table 4 (LERF Risk Rankings) • 4.2 SWEL 2 Selection (pages 17-18): added descriptive notes about SWEL 2 selection process, as well as Figure 3 (SWEL 2 Selection Process) • 5. Seismic Walkdowns and Area Walk-Bys (page 20): revised wording in second paragraph and added explanatory notes about Service Requests (SRs) generated during the course of the walkdowns which were not related to potentially adverse seismic conditions	26-Sep-2013

Title: Sequoyah Nuclear Plant – Unit 2 Fukushima Near-Term Task Force Recommendation 2.3: Seismic Response Report	REVISION LOG	
Revision No.	**DESCRIPTION OF REVISION**	**Date Approved**
	• 5.1 Seismic Walkdown Procedure (page 21): revised explanation of anchorage configuration count and added explanatory notes about anchorage for cabinets and panels • 5.2 SWC & AWC Summary (pages 21): corrected UNID in the bulleted list for Potentially Adverse Seismic Condition 3 • 6.1 Licensing Basis Calculations (pages 23-25): deleted note (second to last sentence) in the first paragraph, added descriptive notes about the CAP program, and added Table 5 (Corrective Action Program Entries) • 7.1 IPEEE Description (page 28): made minor wording change (substitution of acronym) in first • 7.2 IPEEE Findings and Vulnerabilities (page 29): added resolution documentation references and associated dates to Table 6 (IPEEE Issues and Resolutions, previously indentified as Table 2 in Report Revision 0) • 7.4 Response to IPEEE Review (pages 29-30): added explanatory notes and added applicable dates and calculation references to Table 7 (Revised HCLPF Equipment) • 8. Peer Review (pages 31-32): added notes to the bulleted list of peer review interaction with SWEs, added Table 8 (Peer Review Team Activities), and added explanatory notes to the summary of the peer review process • 9. References (page 33): revised description of reference #4 and added references 7-11 • Appendix A: o revised pagination from pages 24-59 to pages A1-A45 o added explanatory note about the name shown on the EPRI Training Certificate for Karen Carboni) o minor revisions to the resume of Joshua Best, as noted on page A6 (formerly page 30) o 9 pages added to document training records • Appendix B: revised pagination from pages 60-82 to pages B1-B23; no pages added • Appendix C: revised pagination from pages 83-89 to pages C1-C7; no pages added • Appendix D: o revised pagination from pages 90-96 to pages D1-D7 o minor revision to listed UNID for item #12, as shown on page D2 (formerly page 91) o minor revision to listed UNID for item #13, as shown on page D2 (formerly page 91) o minor revision to listed UNID for item #45, as shown on page D3 (formerly page 92) o minor revision to listed UNID for item #51, as shown on page D3 (formerly page 92) o minor revision to listed Description for item #66, as shown on page D3 (formerly page 92)	

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Revision No.	DESCRIPTION OF REVISION	Date Approved
	○ minor revision to listed Description for item #67, as shown on page D3 (formerly page 92) ○ minor revision to listed UNID for item #74, as shown on page D3 (formerly page 92) ○ no pages added • Appendix E: ○ revised pagination from pages 97-335 to pages E1-E239; ○ Seismic Walkdown Checklist (SWC) for item #23: 'Room, Area' field revised from '**35** – SI Pump Room 2A' to '**26** – SI Pump Room 2A', as noted on page E46 (formerly page 142) ○ SWC for item #72: revised item description, as noted on pages E144-E145 (formerly pages 240-241) ○ no pages added • Appendix F: revised pagination from pages 336-436 to pages F1-F101; no pages added • Appendix G: revised pagination from pages 437-444 to pages G1-G8; no pages added	

Table of Contents

1. Executive Summary

As a result of the Fukushima Daiichi Nuclear Power Plant accident, the U.S. Nuclear Regulatory Commission (NRC) required all US nuclear power plants to perform seismic walkdowns to identify and address degraded, non-conforming or unanalyzed conditions and to verify the current plant configuration with the current seismic licensing basis. The NRC Near-Term Task Force (NTTF) issued a report (Reference 1) that made a series of recommendations. Subsequently, the NRC issued a 50.54(f) Letter (Reference 2) that requests information to assure that these recommendations are addressed by all U.S. nuclear power plants. This report provides guidance for conducting a seismic walkdown as required in the 50.54(f) Letter, Enclosure 3, Recommendation 2.3: Seismic.

In support of conducting the NTTF-2.3 Seismic Walkdowns, the Electrical Power Research Institute (EPRI) issued a report entitled *Seismic Walkdown Guidance for Resolution of Fukushima Near-Term Task Force Recommendation 2.3: Seismic* (Reference 3 – hereafter "EPRI Seismic Walkdown Guidance") to provide instruction for uniform seismic walkdowns of all U.S. nuclear power plants. This document also includes guidance for reporting the findings of the required walkdowns.

At Unit 2 of the Sequoyah Nuclear Power Plant, a total of 119 general Seismic Category I equipment items were selected from the original Individual Plant Examination for External Events (IPEEE) Safe Shutdown Equipment List (SSEL) to fulfill the requirements of the NTTF-2.3 Seismic Walkdowns. The selected items were located in various environments and included many different types of equipment from multiple safety systems. A total of 50 areas were included for area walk-bys. The equipment walkdowns and area walk-bys were performed by two teams, each consisting of two seismic engineers and operations personnel, between July 13, 2012 and November 9, 2012.

All 119 equipment items in the Seismic Walkdown Equipment List (SWEL) were completed during the walkdown phase. Ten potentially adverse seismic conditions were found and addressed through the TVA Corrective Action Program.

2. Seismic Licensing Basis

The seismic licensing basis for the Sequoyah Nuclear Power Plant is derived from Reference 4 - *Sequoyah Nuclear Plant Living Final Safety Analysis Report Amendment 24.*

2.1. General Plant Description

The Sequoyah Nuclear Power Plant site is located near the geographical center of Hamilton County, Tennessee, on a peninsula on the western shore of Chickamauga Lake at Tennessee River mile (TRM) 484.5. The Sequoyah site is approximately 7.5 miles northeast of the nearest city limit of Chattanooga, Tennessee, 14 miles west-northwest of Cleveland, Tennessee, and approximately 31 miles south-southwest of TVA's Watts Bar Nuclear Power Plant. The plant has been designed, built, and is operated by TVA and contains two identical units. Each of the two units employs a Pressurized Water Reactor Nuclear Steam Supply System with four coolant loops, furnished by Westinghouse Electric Corporation. Unit 2 began commercial operation on June 1, 1982.

2.2. Ground Response Spectra

The seismic design basis for Sequoyah Nuclear Power Plant is the 0.18g horizontal peak ground acceleration represented by the modified Housner-shape spectrum for Safe Shutdown Earthquake (SSE). Operating Basis Earthquake (OBE) is one-half of SSE ground acceleration. Vertical ground acceleration is two-thirds of the horizontal ground acceleration.

Figure 1 illustrates the relationship between the 5% damped minimum design response spectra and the actual site seismic design response spectra for the SSE used in the design of rock-supported structures.

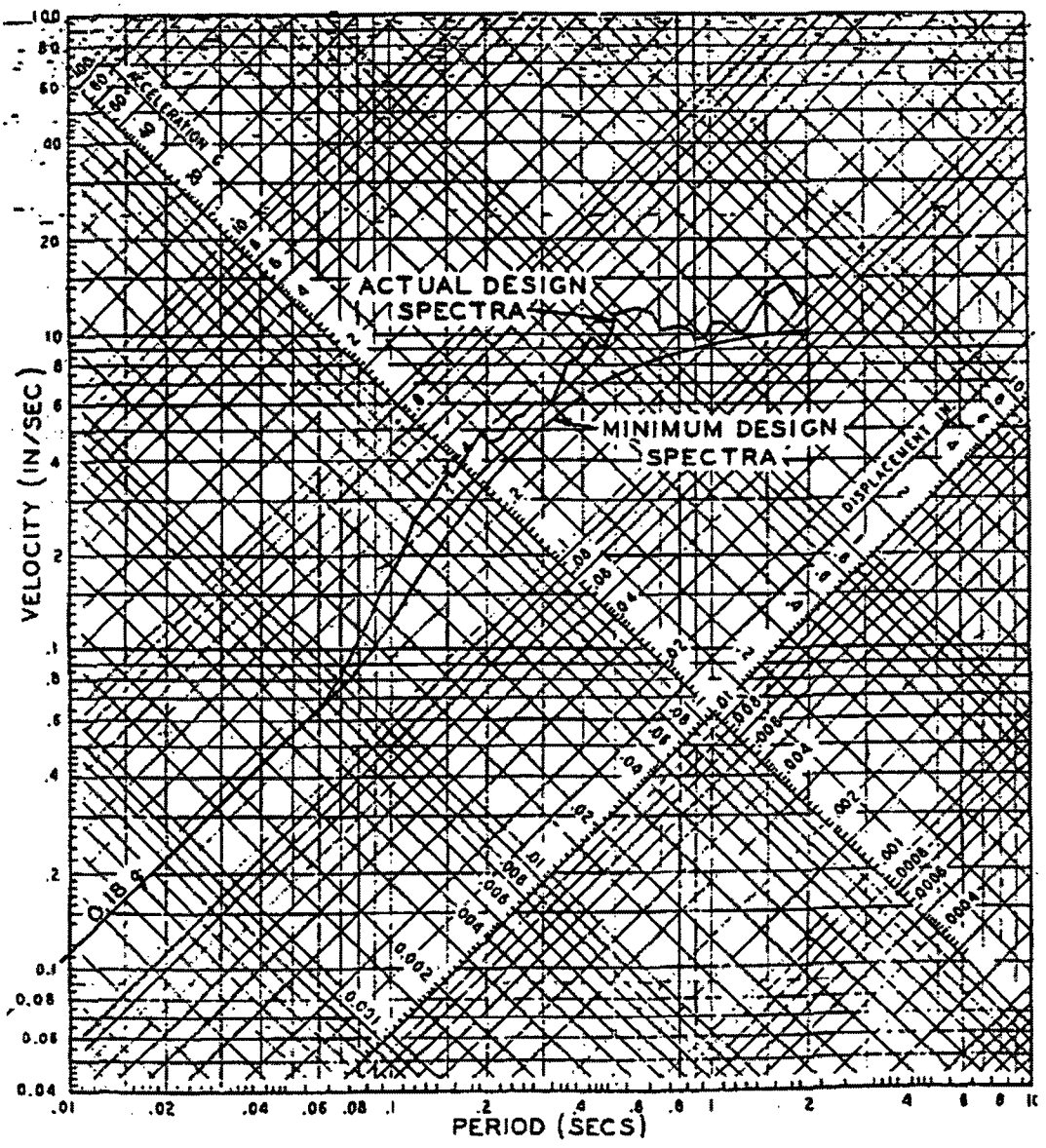

Figure 1 – Comparison of Response Spectra for Safe Shutdown Earthquake, 5% damping

2.3. Structures

The design of all Class I structures and facilities conformed to the applicable general codes or specifications including:

- American Concrete Institute (ACI)
  - ACI 214-77 Recommended Practice for Evaluation of Strength Results of Concrete
  - ACI 315-65 Manual of Standard Practice for Detailing Reinforced Concrete Structures
  - ACI 318-63 Building Code Requirements for Reinforced Concrete
  - ACI 318-71 Building Code Requirements for Reinforced Concrete
  - ACI 318-77 Building Code Requirements for Reinforced Concrete
  - ACI 347-68 Recommended Practice for Concrete Formwork
  - ACI 305-72 Recommended Practice for Hot Weather Concreting
  - ACI 211.1-70 Recommended Practice for Selecting Proportions for Normal Weight Concrete
  - ACI 304-73 Recommended Practice for Measuring, Mixing, Transporting, and Placing Concrete
- American Society for Testing and Materials (ASTM)
  - 1971 ASTM Standards
- American Society of Civil Engineers (ASCE)
  - Paper Number 3269, "Wind Forces on Structures," 1961
- American Institute of Steel Construction (AISC)
  - "Specification for the Design, Fabrication, and Erection of Structural Steel for Buildings," February 12, 1969
- American Welding Society (AWS):
  - "Code for Welding in Building Construction," AWS D1.0-69 as modified by TVA General Construction Specification G-29C.
  - "Structural Welding Code," AWS D1.1-72 as modified by TVA General Construction Specification G-29C.
  - "Recommended Practice for Welding Reinforcing Steel, Metal Inserts, and Connections in Reinforced Concrete Connections," AWS D12.1-61.
- Uniform Building Code, International Conference of Building Officials, Los Angeles, 1970 edition
- Southern Standard Building Code, 1969 edition, 1971 revision
- "Nuclear Reactors and Earthquakes," USAEC Report TID-7024, August 1963
- Code of Federal Regulations, Title 29, Chapter XVII, Part 1910, "Occupational Safety and Health Standards"
- TVA Construction Specifications:

  - G-2 - TVA General Construction Specification for Plain and Reinforced Concrete.
  - G-29 - TVA General Construction Specification - Process Specification for Welding and Heat Treatment.
  - G-30 - TVA General Construction Specification - Fly Ash for Use as an Admixture in Concrete.
  - G-32 - TVA General Construction Specification - Bolt Anchors Set in Hardened Concrete.
  - G-34 - TVA General Construction Specification - Repair of Concrete.
- TVA Reports
  - CEB 86-12 - Study of Long-Term Concrete Strength at Sequoyah and Watts Bar Nuclear Plant.
  - CEB 86-19-C - Concrete Quality Evaluation.
- NRC Regulatory Guides:
  - Number 1.12 Instrumentation for Earthquakes
  - Number 1.31 Control of Stainless Steel Welding

2.4. Equipment and Systems

Nuclear Steam Supply System (NSSS) components and equipment supplied by Westinghouse have been qualified in accordance with the applicable seismic qualification requirements. Seismic qualification requirements for Seismic Category I systems and components are consistent with Institute of Electrical and Electronics Engineers (IEEE) Standard 344-1971. Seismic Category I mechanical equipment has been qualified in accordance with the applicable seismic qualification requirements contained in Reference 4.

Class I equipment and safety related piping were designed such that stress and deformation behavior were maintained within the allowable limits when subjected to normal operating conditions combined with the seismic effects resulting from the response to the OBE. In addition, the stresses that resulted from normal loads combined with the response to the SSE were limited so that no loss of function occurred, and the capability of making a safe and orderly plant shutdown was maintained. The allowable limits are defined in appropriate design standards including:

- American Society of Mechanical Engineers (ASME) Boiler and Pressure Vessel Code, 1986
- American National Standards Institute (ANSI) Code for Pressure Piping ANSI B31.1.0, Power Piping, 1967
- AISC Specification for the Design, Fabrication and Erection of Structural Steel for Buildings, February 12, 1969

3. Personnel Qualifications

The personnel qualification for all individuals involved in the execution of the Fukushima Near-Term Task Force Recommendation 2.3: Seismic can be found in this section. Full resumes for the listed individuals can be found in Appendix A of this document.

3.1. Equipment Selection Personnel

The personnel who performed equipment selection and review are:

- David Moore, Sequoyah Outage Management, Operations Assessor, Human Performance Manager, Operations Work Control Planning and Scheduling Manager, and Shift Manager for 35 years.
- Larry Chandler, Sequoyah Reactor Operator and Senior Reactor Operator for 32 years.
- Phillip York, Associate Structural Engineer with 5 years of engineering experience, including seismic design for structural components and systems. Experience includes 2 years in the nuclear power industry.

3.2. Seismic Walkdown Engineers

The personnel who performed the seismic walkdowns are:

- Steven Summers, B.S. Civil Engineering Technology: Professional Engineer in the state of Pennsylvania with 8 years of engineering experience, including seismic design and general condition assessment for multiple structural component types and systems. Experience includes 3 years in the nuclear power industry.
- Robert Malone, B.S. Civil Engineering: Professional Engineer in the state of Pennsylvania with 7 years of engineering experience, including seismic design and general condition assessment for multiple structural component types and systems. Experience includes 2 years in the nuclear power industry.
- Isaac Antanaitis, B.S. Engineering: Civil: Structural Engineering associate with four years of experience in structural design for various power generating applications, including seismic design and general condition assessment for multiple structural component types and systems.
- Phillip York, (credentials outlined in Section 3.1 above)
- James Edgar, B.S. Civil Engineering: Professional Engineer in the state of Tennessee with 11 years of engineering experience, including seismic design and general condition assessment for multiple structural component types and systems. Experience includes 2 years in the nuclear power industry.

To prepare for the seismic walkdowns, Mr. Malone and Mr. Antanaitis completed the NTTF 2.3 Seismic Walkdown Training Course developed by EPRI. This course was

held at MPR Associates, Inc. in Alexandria, VA. It is noted in *Frequently Asked Questions on Seismic Walkdown Guidance*, Reference 8, that completion of this course qualifies those in attendance to facilitate presentation of course material in subsequent training sessions for others. Mr. Summers, Mr. York, and Mr. Edgar completed the course in a subsequent training session held at TVA's office complex in Chattanooga, TN. This subsequent training session was conducted by Steve Eder and John Dizon, subject-matter experts (personnel qualifications outlined in Section 3.5 below) who also completed the EPRI course in Virginia.

In addition to the walkdown training course developed by EPRI, all seismic walkdown engineers attended Sequoyah site-specific training before the walkdown process began. John Dizon facilitated the site-specific training by presenting explanations of licensing basis documents, IPEEE results and associated outliers, and seismically-related issues historically experienced at Sequoyah Nuclear Plant. The site-specific training also provided overviews of established seismic programs, which address the following:

- Equipment anchorage and reaction load validation
- Seismic category I(L) piping hazards (II/I failure, falling, and spray issues)
- Distribution and suspended systems
- Concrete / masonry wall and embedded plates
- Structural platforms

All training records can be found in Appendix A.

3.3. Licensing Basis Reviewers

The personnel who performed the licensing basis reviews:

- Karen Carboni, Site Civil Engineer at Sequoyah with over seven years of experience in seismic equipment qualification and piping seismic analysis.
- Glynna Wilson, Site Civil Engineer at Sequoyah with over four years of experience in structural analysis, including seismic equipment qualification.

3.4. IPEEE Vulnerability Incorporation Personnel

The personnel who incorporated IPEEE vulnerabilities are:

- Joshua Best, Project Mechanical Engineer with 5 years engineering experience, including 4 years in the nuclear power industry.
- Phillip York, (credentials outlined in Section 3.1 above)

To ensure that IPEEE vulnerabilities were given proper consideration in the development of the equipment sample, the individuals listed above reviewed the IPEEE

submittal report and the subsequent Request for Additional Information (RAI), identified appropriate outliers, and extracted the SSEL which became the basis for SWEL development. The results of this process were reviewed by the Peer Review Team members, whose applicable IPEEE-related experience is outlined in Section 3.5 below.

3.5. Peer Review Team

The personnel involved in the peer review process are:

- John Dizon, Professional Engineer with over 30 years of experience in the field of civil and structural engineering, earthquake engineering, risk assessment and project management.
- Steve Eder, Professional Engineer with over 30 years of experience in the field of civil and structural engineering, project management, seismic engineering, and risk management.

John Dizon is the Peer Review Team Leader. Through years of experience assisting TVA at SQN (since 1986), Mr. Dizon and Mr. Eder are familiar with the SQN plant design, plant operations, plant documentation, and associated SSCs. Past experience at SQN includes seismic design criteria development, verification of Seismic Category I(L) piping, and assistance on seismic qualification of cable trays, conduit, and other miscellaneous equipment and replacement parts. Mr. Dizon and Eder have supported TVA seismic qualification projects not only at SQN, but also at BFN, BLN, and WBN.

Mr. Dizon and Mr. Eder provided calculation CDQ-000-999-2012-000034 (Reference 9), which determines seismic HCLPF capacities for the governing SSC's from the seismic IPEEE, for control motion re-defined at rock outcrop.

4. Selection of Structures, Systems and Components

The selection of SSCs for the Recommendation 2.3 Seismic walkdowns followed the guidelines provided in the EPRI Seismic Walkdown Guidance. The combined SWEL for Sequoyah Unit 2, which consists of 119 items of equipment, adequately addresses all required selection criteria. These criteria include a distribution of environments, systems, safety functions, and classes of equipment. The SWEL 1 and 2 selection process is outlined in the following sections.

4.1. SWEL Selection

The SWEL 1 selection screening process was performed in accordance with the EPRI Seismic Walkdown Guidance. A schematic of the screening process taken directly from the EPRI Walkdown Guidance is shown below –

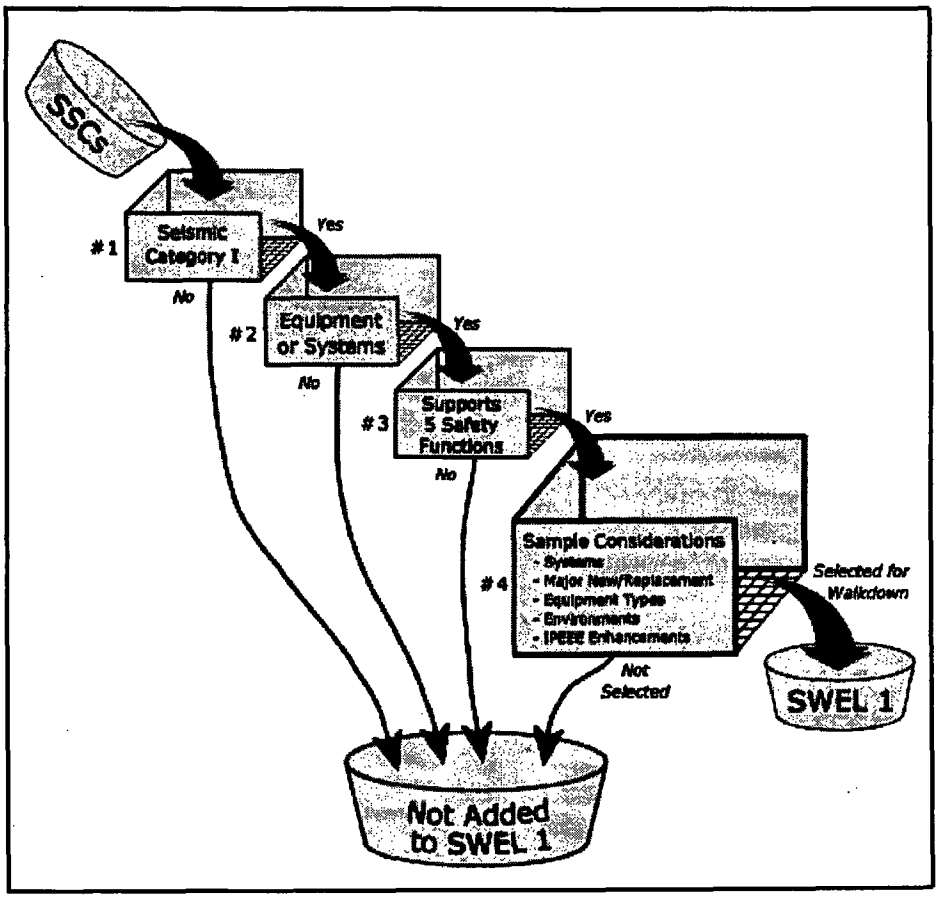

Figure 2: SWEL 1 Selection Process

Screens #1 through #3 -

The development of SWEL 1 began with the SSEL that was developed as part of the IPEEE implementation at Sequoyah, found in Reference 5 – Seismic Capability

Walkdown for IPEEE. This list fulfills the requirements of Screens #1 through #3 shown above.

It should be noted that an additional safety function "0 – Support Function" was added to the five safety functions listed in the EPRI guidance document to categorize equipment that does not perform one particular safety function but does support all five safety functions. The expanded safety function list is shown below:

0. Support function
1. Reactor reactivity control
2. Reactor coolant pressure control
3. Reactor coolant inventory control
4. Decay heat removal
5. Containment function

The SSEL with assigned safety functions are presented in Appendix B as Base List 1.

Screen #4 -

From Base List 1, equipment meeting three of the five screen requirements (system, equipment type, and environment) was identified. The systems and equipment types were chosen based on the criteria provided by EPRI Seismic Walkdown Guidance. The equipment environments selected for screen #4, which were not explicitly defined by EPRI, are listed below -

- Control Building
- Auxiliary Building
- Reactor Building
- Diesel Generator Building
- Emergency Raw Cooling Water Pump Station.

It should be noted that some of the equipment classes listed in the EPRI Seismic Walkdown Guidance were not represented in the original IPEEE SSEL, and therefore are not present in Base List 1. To ensure that all of the equipment classes identified in the EPRI Seismic Walkdown Guidance were represented in SWEL 1, the scope of selection was expanded to include SSCs which are not in the IPEEE SSEL but meet all screening criteria.

For the new or replacement equipment requirement, the walkdown team consulted with plant operations to identify system enhancements resulting in new or replaced equipment. Because the following equipment met all other requirements of the EPRI screening and was installed or modified as a result of recent projects, it was added to SWEL 1.

UNID	Description
SQN-2-INVB-250-QU-G	120V AC VITAL INVERTER 2-IV
SQN-0-AHU-311-0023	MAIN CONTROL ROOM AHU B-B

Table 1: New and Improved Equipment

For IPEEE Enhancements, the walkdown team referenced IPEEE resolution calculations SCG-5M-0012 (Reference 5) and CDQ-000-999-2012-000034 (Reference 9). The following equipment met all other requirements of the EPRI screening and were selected to represent IPEEE enhancements to SWEL 1.

UNID	Description
SQN-2-BDC-201-FL-A	480V ERCW MCC 2A-A
SQN-2-BDC-201-FN-B	480V ERCW MCC 2B-B
SQN-2-HEX-074-0015	RESIDUAL HEAT EXCHANGER 2A
SQN-2-HEX-074-0027	RESIDUAL HEAT EXCHANGER 2B
SQN-0-CHGB-250-QJ-G	125V DC VITAL BATTERY CHARGER IV
SQN-0-CHGB-250-QK-S	125V DC VITAL BATTERY CHARGER 2-SPARE
SQN-2-OXF-202-2A-A	480V SHUTDOWN TRANSFORMER 2A1-A
SQN-2-OXF-202-2B-B	SD XFMR 2B-B
SQN-2-OXF-202-DN-A	480V SHUTDOWN TRANSFORMER 2A-A
SQN-2-OXF-202-DQ-B	SD XFMR 2B2-B
SQN-2-BDB-201-DO-A	480V SHUTDOWN BD 2A2-A
SQN-2-BDB-201-DP-B	480V SHUTDOWN BD 2B1-B
SQN-2-BDB-201-DQ-B	480V SHUTDOWN BD 2B2-B
SQN-2-BDA-202-CO	6900V SHUTDOWN BOARD 2A-A
SQN-2-BDB-202-CP	6900V SHUTDOWN BOARD 2B-B
SQN-2-BDC-201-FQ-A	480V DIESEL AUXILIARY BOARD 2A1-A
SQN-2-BDC-201-FU-B	480V DIESEL AUXILIARY BOARD 2B1-B
SQN-2-BDC-201-GM-A	480V REACTOR MOV BD 2A2-A
SQN-2-BDC-201-GN-B	480V REACTOR MOV BD 2B1-B
SQN-2-BDC-201-JK-A	480V CONT & AUX BLDG VENT BD 2A2-A
SQN-2-INVB-250-QU-G	120V AC VITAL INVERTER 2-IV

Table 2: IPEEE Enhancements

Risk Contribution

In accordance with the EPRI guidance, SWEL 1 includes consideration of the importance of the contribution of risk for the SSCs. SWEL1 was compared to the Core Damage Frequency (CDF) and Large Early Release Frequency (LERF) Rankings, and any shared equipment was noted.

The seventeen SWEL items in the following two tables address the high risk criteria, using CDF and LERF Rankings for Sequoyah Unit 2. Risk rankings and scores are taken from SQN-SQS2-0162 (Reference 10).

Item	UNID	RAW Rank	RAW Score	RRW Rank	RRW Score
1	SQN-0-CMP-032-0086-B	NA	NA	1.007815	13
2	SQN-2-PMP-070-0059-A	NA	NA	1.006481	19
3	SQN-2-HEX-074-0027	4.912712	144	NA	NA
4	SQN-2-HEX-074-0015	2.215445	210	NA	NA
5	SQN-2-INVB-250-QU-G	4.9017	147	NA	NA
6	SQN-2-TNK-070-0063	1070.13	1	1.006407	20
7	SQN-2-BDC-201-GM-A	3.116802	188	NA	NA
8	SQN-2-BDC-201-GN-B	5.601521	120	NA	NA
9	SQN-2-BDB-201-DO-A	3.132869	186	NA	NA
10	SQN-2-BDB-201-DP-B	62.03357	9	NA	NA
11	SQN-2-BDB-201-DQ-B	41.25348	14	NA	NA
12	SQN-2-OXF-202-DN-A	22.51848	39	NA	NA
13	SQN-2-OXF-202-DQ-B	41.25348	15	NA	NA
14	SQN-2-BDE-250-NF-E	9.258878	74	NA	NA
15	SQN-2-BDE-250-NK-G	4.266348	158	NA	NA
16	SQN-0-CHGB-250-QJ-G	37.73672	16	NA	NA
17	SQN-2-PMP-003-0128	3.531878	181	1.005187	22

Table 3: CDF Risk Rankings

Item	UNID	RAW Rank	RAW Score	RRW Rank	RRW Score
1	SQN-2-FAN-030-0462-B	2.819112	150	NA	NA
2	SQN-0-CMP-032-0086-B	2.063044	222	1.007815	13
3	SQN-2-PMP-070-0059-A	NA	NA	1.006481	19
4	SQN-2-HEX-074-0027	3.20909	138	NA	NA
5	SQN-2-INVB-250-QU-G	5.013082	98	NA	NA
6	SQN-2-TNK-070-0063	587.0313	1	1.006407	20
7	SQN-2-BDC-201-GM-A	2.178098	189	NA	NA
8	SQN-2-BDC-201-GN-B	4.619392	100	NA	NA
9	SQN-2-BDB-201-DO-A	2.178531	187	NA	NA
10	SQN-2-BDB-201-DP-B	43.48617	6	NA	NA
11	SQN-2-BDB-201-DQ-B	23.3485	12	NA	NA
12	SQN-2-OXF-202-DN-A	22.77888	16	NA	NA
13	SQN-2-OXF-202-DQ-B	23.3485	13	NA	NA
14	SQN-2-BDE-250-NF-E	5.511841	93	NA	NA
15	SQN-2-BDE-250-NK-G	3.717315	126	NA	NA
16	SQN-0-CHGB-250-QJ-G	17.12208	19	NA	NA
17	SQN-2-PMP-003-0128	2.239433	183	1.005187	22

Table 4: LERF Risk Rankings

4.2. SWEL 2 Selection

The SWEL 2 selection screening process was performed in accordance with the EPRI guidance document, Seismic Walkdown Guidance. A schematic of the screening process taken directly from the EPRI Seismic Walkdown Guidance is shown below:

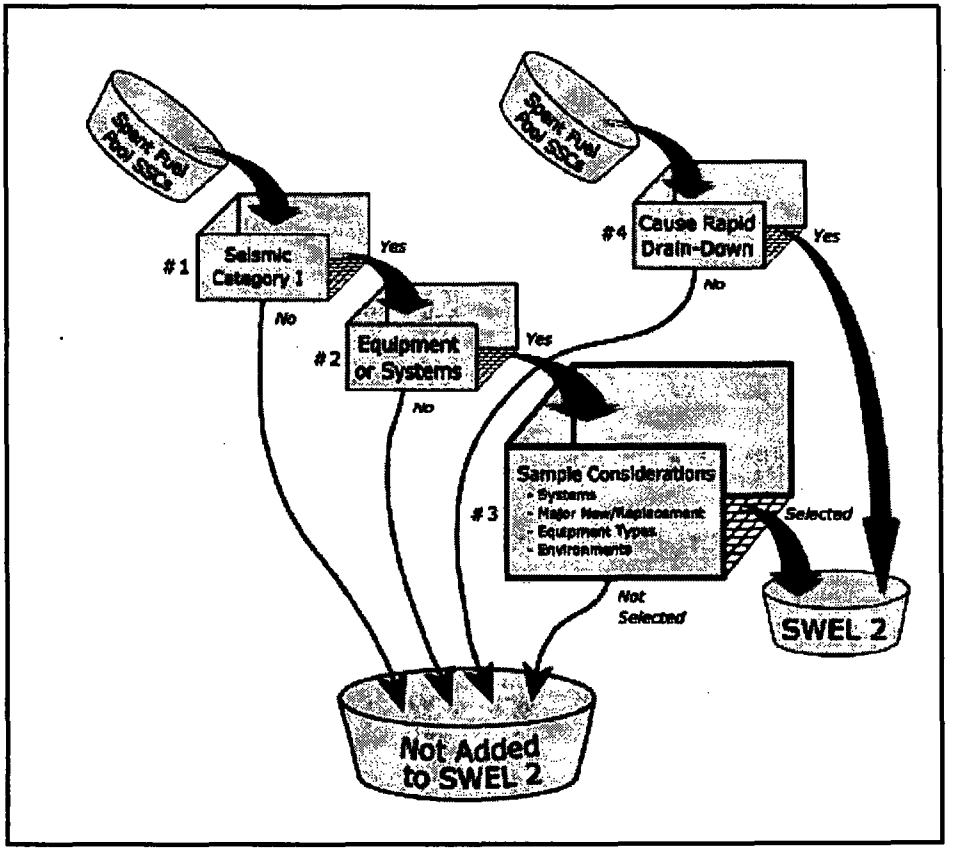

Figure 3: SWEL 2 Selection Process

Screens #1 through #2

The Master Equipment List for Sequoyah Nuclear Plant was utilized to retrieve a complete list of all Seismic Category 1 spent fuel pool systems and equipment. This list is presented in Appendix C as Base List 2.

Screen #3

The Spent Fuel Pool System at Sequoyah was limited to a single environment and a single system with no new or replacement equipment since the IPEEE analysis. Therefore the only screen #3 requirement that could be met was that of varying equipment type. Two items of differing equipment types were selected from Base List 2.

Screen #4

After reviewing spent fuel pool layout drawings and consulting with plant personnel, it was determined that there are no spent fuel pool penetrations below (approximately) ten feet above the top of the fuel assemblies. Therefore, no rapid drain-down items were added to SWEL 2.

4.3. SWEL Finalization

Once equipment was selected from Base Lists 1 and 2 that qualifies for seismic walkdowns, the equipment was reviewed by the site operations representative and the Peer Review Team. This review resulted in the addition of equipment (Medium Voltage Switchgear) that had not previously been considered to fulfill the Screen #4 for SWEL 1 required equipment types.

SWEL's 1 and 2 can be found in Appendix D.

5. Seismic Walkdowns and Area Walk-Bys

Guidance for performing the walkdowns and walk-bys required for Fukushima NTTF Recommendation 2.3 can be found in the Seismic Walkdown Guidance.

The walkdowns and walk-bys were conducted in accordance with this guideline and each was given a final status. If no potential seismically adverse conditions were noted during a walkdown or walk-by, a YES status was given to the selected piece of equipment or area. If a potentially adverse seismic condition was noted, a NO status was given and a Corrective Action Program (CAP) entry was written. If any equipment was inaccessible, or if a portion of an item of equipment was unobservable, an UNKNOWN status was given. It is noted that there were no inaccessible SWEL items at Sequoyah Unit 2.

It should also be noted that, during the course of performing the walkdowns and walk-bys, five (5) Service Requests (SRs) were generated to address general housekeeping issues which did not present potentially adverse seismic conditions (per the criteria established in the Seismic Walkdown Guidance). Notes were taken regarding these minor housekeeping issues based on general observations made during the course of performing walkdowns and walk-bys.

5.1. Seismic Walkdown Procedure

One hundred and nineteen (119) Seismic Walkdowns Checklists (SWCs) were completed at Sequoyah Unit 2. These checklists can be found in Appendix E of this document. The primary types of potentially adverse seismic conditions that were addressed during these walkdowns include:

- Bent, broken missing, or loose hardware
- Corrosion that is more than moderate
- Visible cracks in surrounding concrete
- Impact of soft targets
- Collapsing equipment
- Inadequate line flexibility

Fifty (50) Area Walk-by Checklists (AWCs) were completed at Sequoyah Unit 2. These checklists can be found in Appendix F of this document. The primary areas of observation for potentially adverse seismic conditions that were considered during these walk-bys include:

- Anchorage of equipment
- Cable/conduit raceways and HVAC ducts
- Spatial interactions between equipment
- Flooding/Spray hazards

- Fire hazards
- Housekeeping and temporary equipment

Of the one hundred nineteen (119) SWEL items, there were seven (7) pneumatic valves (equipment class 7) and nine (9) motor-operated valves (equipment class 8) for which anchorage configuration verification is not applicable. Anchorage configuration verification for fifty-five (55) out of the one hundred three (103) applicable SWEL items was verified by drawings and/or calculations.

For cabinets and panels that were selected for walkdown, NRC guidance was followed to determine which could and could not be opened for internal inspection. An excerpt from the guidance document, Reference 7- FAQ Clarification on Cabinets Walkdown 9-18-12 is shown below –

> *"Cabinets on the SWEL with undue safety or operational hazards can be considered inaccessible and opening of the cabinet can be deferred in accordance with the 50.54(f) letter. For those cabinets that are not to be opened, and will not be placed on the inaccessible list for later inspection (e.g., extensive disassembly is required), licensees should document the justification for not opening the cabinet on the walkdown check sheet."*

All cabinets meeting the above were documented in the individual walkdowns.

5.2. SWC & AWC Summary

The results documented by the SWCs and AWCs for Sequoyah Unit 2 is summarized below:

- 111 SWCs and 39 AWCs resulted in a YES status
- 8 SWCs and 11 AWCs resulted in a NO status
  - Potentially Adverse Seismic Condition 1
    - Area 32 – Surge Tank B Area
  - Potentially Adverse Seismic Condition 2
    - SQN-2-BDC-201-GM-A - 480V Reactor MOV Board 2A2-A
  - Potentially Adverse Seismic Condition 3
    - SQN-0-BATB-250-QY-G (1-20) - 125V Vital Batt. Rm IV Batteries
    - SQN-0-BATB-250-QY-G (21-40) - 125V Vital Batt. Rm IV Batteries
    - SQN-2-INVB-250-QU-G - 120V AC Vital Inverter 2-IV
    - SQN-0-CHGB-250-QJ-G - 125V DC Vital Battery Charger IV
    - Area 21 - 125V Battery Room IV
    - Area 22 - 480V Board Room 2B
  - Potentially Adverse Seismic Condition 4
    - SQN-2-LOCL-500-0222B - Floor Panel Auxiliary Building
    - Area 25 - RHR Pump Area

- Area 38 - Auxiliary Feedwater Pump B Area
- Area 43 - SI Pump Area

- Potentially Adverse Seismic Condition 5
  - Area 20 - 125V Vital Battery Room III
- Potentially Adverse Seismic Condition 6
  - SQN-2-GEND-085-DH/3B - Control Rod Drive Generator 2B
  - Area 30 - CRDM Room
- Potentially Adverse Seismic Condition 7
  - Area 36 - 6.9kV Shutdown Board Room B
- Potentially Adverse Seismic Condition 8
  - Area 7 – 2A Pump Room
- Potentially Adverse Seismic Condition 9
  - Area 37 – Control Bldg. 669 Mechanical Room
- Potentially Adverse Seismic Condition 10
  - SQN-2-AHU-030-0088 - Control Rod Drive Cooling Unit C-A

6. Licensing Basis Evaluations

6.1. Licensing Basis Calculations

When a potentially adverse seismic condition was identified at SQN, the condition was entered into the corrective action program. No licensing basis evaluations were performed by the walkdown team per TVA expectations to communicate any potential operability concerns as soon as they were identified. All licensing basis determinations were performed by SQN engineering on each CAP entry.

The CAP Process at TVA is defined in TVA NPG Standard Program and Processes 22.300 – Corrective Action Program (Reference 11). The CAP program at all TVA Nuclear Facilities consists of five key phases:

- Initiation
- Screening
- Analysis
- Implementation
- Monitoring

Multiple CAP entries were generated during the seismic walkdown process at Sequoyah Unit 2. There were a total of ten CAP entries that were considered potentially adverse seismic conditions and elevated to a Problem Evaluation Report (PER) status. These CAP entries are summarized in Table 5 on the following pages. All PERs related to this effort are now closed. No conditions outside the licensing basis were found during the course of this walkdown process.

No.	Location	Potentially Adverse Seismic Condition(s)	PER	Potential Consequence	Action Taken	Status Date	Status
1	Surge Tank B Area	A telecommunications cabinet used by the Rad Con Control point on the Refueling Floor is secured (by chain) at only one point.	593116	Single attachment does not provide sufficient stabilization to eliminate the possibility of the cabinet making contact with the Aux Air Compressor during a seismic event.	The cabinet was secured by providing an attachment at a second point to meet procedure compliance.	8/10/12	CLOSED
2	SQN-2-BDC-201-GM-A	Temporary mobile cooling fans adjacent to the 480V Boards were secured with chains that had sufficient slack to allow the fans to contact one of the 480V Boards in a seismic event.	590084	The slack in the chains must be eliminated if the fans remain in this location to mitigate the risk of the fans impacting the 480V Boards during a seismic event and to meet the requirements of 0-TI-DXX-000-013.0 (Temporary Equipment Control).	The fans were re-located and properly secured to meet procedure compliance.	8/3/12	CLOSED
3	125V Battery Room IV & 480V Board Room 2B	Near the connection to the ceiling, there is a crack in the south masonry wall shared by 125V Vital Battery Room IV and 480V Board Room 2B.	585201	The condition of the block wall needs to be structurally evaluated to determine if it would pose a threat to adjacent equipment during a seismic event.	Existing condition was evaluated per review of structural drawing, accepted as-is, and added to maintenance rule structures monitoring (TI-7 Attachment 44 and Calculation SCG1S596).	9/18/13	CLOSED
4	SI Pump Room Area & RHR Pump Room Area	1. Aux Bldg EL 690 (near Aux Feedwater Pump Area): Three (3) unrestrained 55-gal drums behind 2-LOCL-500-0222B 2. Aux Bldg EL 653 (outside RHR Pump Rooms): One (1) unrestrained 55-gal drum next to safety-related instrument rack	606982	Per 0-TI-DXX-000-013.0 (Section 3) and NPG-SPP-09.17, the drums are unstable and should be restrained to mitigate the risk of impact to the referenced equipment.	The unrestrained drums were relocated to eliminate the seismically adverse condition and to meet procedure compliance.	9/10/12	CLOSED
5	125V Battery Room III	The utility sink and cabinet in this room is not attached to the wall in a manner that is consistent with a seismically qualified restraint.	598032	If the sink / counter were to break loose from the wall during a seismic event, the water line could cause a spray hazard	The existing arrangement was previously identified in CAQR SQP900319, evaluated in Calculation SCG1S0366, and accepted as-is.	8/20/12	CLOSED

6	SQN-2-GEND-085-DH/3B	There is one anchor bolt missing (of four) from an ABGTS duct hanger support baseplate above 2-GEND-085-DH, Control Rod Drive Generator 2B.	742486	Visual inspection of the arrangement shows that there should be four anchor bolts for the baseplate in question. Adequacy of the support with the missing anchor bolt needs verification.	Immediate feedback (before completion of PER initiation) clarified that the existing condition was addressed by Calculation SCG2S89141 (in response to CAQR SQT870843). This condition is an anomaly which falls within the bounds evaluated and accepted as-is by the HVAC duct and duct support sampling program documented in the referenced calculation.	8/3/12	CLOSED
7	6.9kV Shtdwn Bd Rm B	Scaffolding in front of 6.9kV Shutdown Board compartments 10 & 11 is only secured in one location.	596884	Scaffolding requires another tie-off point opposite the existing tie-off point to prevent tipping and potentially making contact with the 6.9kV Shutdown Board during a seismic event.	Another tie-off point was added opposite the existing tie-off point to mitigate the potential for tipping and meet procedure compliance.	8/17/12	CLOSED
8	ERCW 2A Pump Room	A flammable material cabinet in the area (but not close enough for seismic spatial interaction) was not anchored and the latch on the door was broken.	610433	During a seismic event the door could open and flammable material could fall out and present a fire hazard to equipment and personnel in the area.	A hasp and lock were installed to prevent the flammable materials cabinet from opening to meet procedure compliance.	10/12/12	CLOSED
9	EL 669 Mechanical Equip Room	A bolt and nut are not fully engaged on a System 26 (Fire Protection) pipe hanger.	591635	Nut for this hanger support must be tightened to ensure proper engagement of the bolt.	The bolt was appropriately tightened to restore to full qualification.	8/14/12	CLOSED
10	SQN-2-AHU-030-0088	One bolt (of six) which anchors the equipment to the steel support frame is missing.	642337	This is conservatively noted as a potentially adverse seismic condition since it is an apparent deviation from the design basis.	New anchor bolt was installed to restore to full qualification.	3/8/13	CLOSED

Table 5: Corrective Action Program Entries

6.2. Potential Seismically Adverse Conditions

The potentially seismically adverse seismic conditions summarized above are described in more detail below.

6.2.1. Potentially Adverse Seismic Condition 1

During the walk-by for the Surge Tank B Area, a Radiation Control Cabinet was found chained at a single point to a steel column. To prevent sliding or tipping into the air compressor, it was recommended that the cabinet be anchored in a second location.

6.2.2. Potentially Adverse Seismic Condition 2

A temporary cooling fan was noted to be improperly restrained in the 480V Board Room 2A. This fan was secured with a chain to an appropriate structure, but the restraint was in a location that would allow the fan to move and tip in a manner that could cause it to strike a nearby electrical cabinet, 2-BDC-201-GM-A. Since many of the relays contained in this cabinet are sensitive, this condition was considered to be potentially seismically adverse.

6.2.3. Potentially Adverse Seismic Condition 3

During the walkdown for equipment in the 125V Vital Battery Room IV and the 480V Board Room 2B, a crack was noted in a common masonry block wall. The crack was observed at the top of the wall, directly beneath the steel angle used to connect the wall to the ceiling. The crack is approximately 6' long and was visible on both sides of the masonry wall. This crack was judged to pose a potentially adverse seismic condition to three different items of equipment including the 120V AC Vital Inverter 2-IV and 125V DC Vital Battery Charger IV in the 480V Board Room and battery racks 1-20 and 21-40 in the 125V Vital Battery Room IV.

6.2.4. Potentially Adverse Seismic Condition 4

During the equipment walkdown for SQN-2-LOCL-500-0222B and the area walk-bys for Area 25 - RHR Pump Area, Area 38 - Auxiliary Feed water Pump B Area, and Area 43 - SI Pump Area, it was noted that 55-gallon drums in the vicinity of the equipment were not properly restrained. Per TVA Procedure, the geometry of these drums require seismic restraint.

6.2.5. Potentially Adverse Seismic Condition 5

During the area walk-by associated with 125V Battery Room III, it was observed that the sink cabinet in this room was not restrained. During a seismic event, the cabinet could move away from the wall, causing the water supply line to rupture and cause a spray hazard onto the battery racks.

6.2.6. Potentially Adverse Seismic Condition 6

An anchor bolt was noted to be missing from a duct support above the Control Rod Drive Generator 2B (2-GEND-085-DH/3B) in the Control Rod Drive Mechanism Room.

The duct support with the missing bolt is a frame support, cantilevered from the wall, with two baseplates connecting it to the concrete. These baseplates have four bolt holes each, one of which is missing a bolt in the top plate.

6.2.7. Potentially Adverse Seismic Condition 7

A scaffold with potentially inadequate restraint was noted in the 6.9kV Shutdown Board Room B. This scaffolding was found in front of compartments 10 and 11 of the Unit 2 6900V Shutdown Board (2-BDB-202-CP) and was observed to be anchored at only one point by a loosely hung chain and could tip into overhead lighting and the shutdown board.

6.2.8. Potentially Adverse Seismic Condition 8

During the area walk-by of the ECRW Pump Room 2A-A, a flammable materials cabinet was noted to have a broken latch on its door. It was also not anchored to the floor or wall. During a seismic event, the door could open or the cabinet could tip, causing the enclosed flammable material to spill from the cabinet. This would present a potential fire hazard in the area.

6.2.9. Potentially Adverse Seismic Condition 9

While performing the walk-by for the Control Building El. 669 Mechanical Room, a bolt and nut were observed to be not fully engaged on a System 26 Fire Protection pipe hanger. The hanger is located 12 feet above the floor, on the east side, between the A and B EBR AHU's, just above the cross connection between the AHU's, closer to the A AHU.

6.2.10. Potentially Adverse Seismic Condition 10

While performing the walkdown for the Rod Drive Cooling Unit C-A, SQN-2-AHU-030-0088, a missing bolt was observed that connects the cooling unit to the steel support frame.

7. IPEEE Vulnerabilities Resolution Report

Information for the IPEEE Vulnerabilities Resolution Report is derived from Reference 5 – *Seismic Capability Walkdown for IPEEE* and Reference 6 – *Sequoyah Nuclear Plant (SQN) – Units 1 and 2 – Response to Request for Additional Information on the Individual Plant Examination of External Events.*

7.1. IPEEE Description

In Generic Letter 88-20, Supplement 4, the US NRC requested that the utilities for all active nuclear power plants in the United States perform an evaluation of their nuclear power generating facilities to identify any vulnerabilities associated with the occurrence of several plant-specific external events, and to access the impact of these vulnerabilities on the potential for plant core damage or radioactive material release. This program, designated the Individual Plant Examination of External Events (IPEEE), is a corollary program to the Individual Plant Examination (IPE) which focused on the vulnerabilities associated with the occurrence of external events.

After NRC review of the Sequoyah IPEEE Report, it was found that the review level earthquake (RLE) was characterized in a manner that was inconsistent with NUREG-1407, the governing document for IPEEE seismic events. The intent of NUREG-1407 is that the RLE control motion for SQN (which is predominantly a rock site) should be specified at rock outcrop as the NUREG/CR-0098 median 5% damped spectral shape for rock, anchored to a PGA of 0.30g at rock outcrop. The SQN IPEEE appropriately specified the RLE spectral shape as the NUREG/CR-0098 median rock spectrum at rock outcrop, but inappropriately specified the RLE PGA of 0.30g as occurring at the free-field soil surface.

7.2. IPEEE Findings and Vulnerabilities

The IPEEE Report for the Sequoyah Nuclear Plant addressed multiple vulnerabilities that were identified during the original IPEEE walkdown process. A full list of these vulnerabilities can be found in Reference 5 – *Seismic Capability Walkdown for IPEEE.* A sample of this list was selected for Recommendation 2.3 walkdowns, and this equipment was added to the SWEL for Sequoyah Unit 2. These selected items of equipment, the issues noted, and the resolutions can be found in Table 6.

UNID	Description	Resolution	Date
SQN-2-BDC-201-FL-A	Inadequate Anchorage / Interaction	DCN M9858A	7/20/1993
SQN-2-BDC-201-FN-B	Inadequate Anchorage	DCN M9858A	7/20/1993
SQN-2-BDC-201-FU-B	1 of 4 bolts missing: 2 of 7 bays	Calc SCG-4M-0169	6/16/1997
SQN-2-CLR-030-0178	2 of 6 anchor bolts missing	DCN S11135A	1/5/1995
SQN-2-INVB-250-QU-G	Weak way bending channels for inverters	Calc SCG-5M-0035	10/18/2012
SQN-2-HEX-074-0015	Support frame tabs to anchor plates for HX	DCN M11308A	10/4/1994
SQN-2-HEX-074-0027	Support frame tabs to anchor plates for HX	DCN M11308A	10/4/1994

Table 6: IPEEE Issues and Resolutions

7.3. NRC IPEEE Review

Subsequent to these original SQN high confidence low probability of failure (HCLPF) capacity bounding evaluations and during the NRC Request for Additional Information (RAI) process related to the definition of RLE control motion, the SQN IPEEE RLE was redefined from the free-field soil surface to rock outcrop. As a result, all of the HCLPF capacities as determined by the conservative bounding evaluations were scaled down by a factor of 0.75. Due to this scaling, the HCLPF capacity for many items dropped to below 0.30g (for RLE defined at rock outcrop). However, at that time no additional effort was expended to review in more detail and improve (increase) these HCLPF capacities, especially by eliminating some of the simplifying conservative approximations as used in the original bounding evaluations.

A full list of these items can be found in Reference 6 – *Sequoyah Nuclear Plant (SQN) – Units 1 and 2 – Response to Request for Additional Information on the Individual Plant Examination of External Events.* A sample of this list was selected for Recommendation 2.3 walkdowns, and this equipment was added to the SWEL 1 for Sequoyah Unit 2.

7.4. Response to IPEEE Review

The table on the following page shows the items that were identified as IPEEE outliers after the NRC RAI. Subsequent to the NRC Safety Evaluation Report (SER), action was taken to address identified outliers. For outliers which could not be reconciled through more in-depth seismic analysis, physical modifications and / or replacements were performed, as outlined in the table.

Item	Equipment Description*	Re-calculated HCLPF
1	RHR Heat Exchangers (modified 9/28/1995)	Resolved by TVA Calculation CDQ-000-999-2012-000034 Dated 10/18/12
2	Main Control Room AHUs	
3	Ice Condenser	
4	125V Vital Battery Chargers	
5	480 V Shutdown Transformers (minor modification – anchorage replaced 12/25/2012)	
6	480 V Shutdown Boards	
7	6.9 kV Shutdown Boards	
8	Regenerative Heat Exchangers	
9	480 V Diesel Aux Boards	
	480 V Reactor MOV Boards	
	480V Control & Aux Bldg. Vent Boards	
	480V Reactor Vent Boards	
10	RHR Pumps	
11	120 VAC Vital Inverters (modified 7/12/1999)	
	120 VAC Vital Inverters (replaced 7/12/1999)	
12	Pipe Chase Coolers (repaired)	

***TVA Calculation CDQ-000-999-2012-000034 utilizes descriptions and does not include UNIDs**

Table 7: Revised HCLPF Equipment

The statuses of all IPEEE outliers which were not corrected through physical modification were resolved through refined calculation of the appropriate HCLPF capacities in TVA calculation CDQ-000-999-2012-000034. All IPEEE outliers are now resolved and have minimum HCLPF Capacities above 0.3g.

8. Peer Review

A peer review was performed in accordance with References 2 and 3. The peer review process involved considerable interaction with the review teams, and was performed throughout all phases of the effort including the following:

- SWE Training (as outlined in Section 3.2)
- Consultation for selection of the SSCs included on the SWEL
- In-plant walkdown observations and completed checklists for the Seismic Walkdowns and Area Walk-Bys
- Review of potentially adverse seismic conditions, utilization of the CAP process, and associated licensing basis review considerations
- Review of submittal report

A summary of the activities performed by the Peer Review Team is shown in Table 8 below. The listed functions are taken from Section 6 of the Seismic Walkdown Guidance.

Activity Description	Activity Performed by Peer Review Team? (YES/NO)	Notes / Comments
Review the Selection of the SSCs included on the SWEL	YES	As noted in the Peer Review Report, the peer review team evaluated the SWEL to ensure a diverse sample of the equipment required to perform the five safety functions outlined in Section 4.1, including items previously identified as IPEEE outliers. The peer review team also provided needed clarification regarding equipment class designation for SWEL items (regarding instrument racks, temperature sensors, distribution panels, and medium voltage switchgear).
Review a sample of the checklists (10% to 25% required) prepared for the Seismic Walkdowns and Area Walk-Bys	YES	As noted in the Peer Review Report, in total, the peer review team performed documentation review for over 50% of the checklists completed by the SWEs. Review of the SWCs and AWCs included substantial interface with the SWEs, observation of the SWEs during performance of walkdowns / walk-bys,

		and independent field investigation of individual equipment components. Peer review team efforts related to this activity are summarized in the Peer Review Report.
Review the licensing basis evaluations	YES	As noted in the Peer Review Report, all potentially adverse seismic conditions were reviewed in detail to address seismic licensing basis and operability issues.
Review the decisions for entering the potentially adverse conditions into the CAP process	YES	As noted in the Peer Review Report, all potentially adverse seismic conditions were reviewed in detail to address seismic licensing basis and operability issues. The peer review team is in full concurrence with the entry of confirmed potentially adverse seismic conditions into the CAP.
Review the submittal report	YES	As noted in the Peer Review Report, the peer review team reviewed the submittal report and is in full concurrence with the documented observations and findings.
Summarize the results of the peer review process in the submittal report	YES	Results of the peer review process are summarized in the Peer Review Report

Table 8: Peer Review Team Activities

In summary, the peer review results are confirmatory and fully supportive of the evaluations and findings as described in this report. The peer review met the intent of the Seismic Walkdown Guidance and was effective in providing technical oversight and review of all required aspects of the process herein described. The completed peer review report is included as Appendix G to this report.

9. References

Reference No.	Document Title	Document Number	Preparer
1	Recommendations for Enhancing Reactor Safety in the 21st Century	N/A	United States Nuclear Regulatory Commission
2	Letter: Request for Information Pursuant to Title 10 of the Code of Federal Regulations 50.54 (f) Regarding Recommendations 2.1, 2.3, and 9.3, of the Near-Term Task Force Review of Insights from the Fukushima Daiichi Accident	N/A	United States Nuclear Regulatory Commission
3	Seismic Walkdown Guidance for Resolution of Fukushima Near-Term Task Force Recommendation 2.3: Seismic	EPRI Report 1025286	Electric Power Research Institute
4	Sequoyah Nuclear Plant Living Final Safety Analysis Report Amendment 24 (Control Copy 001437-001)	SQN-19	Tennessee Valley Authority
5	Seismic Capability Walkdown for IPEEE	SCG-5M-0012	Tennessee Valley Authority
6	Sequoyah Nuclear Plant (SQN) – Units 1 and 2 – Response to Request for Additional Information on the Individual Plant Examination of External Events (IPEEE) (TAC NOS. M83674 and M83675)	N/A	Tennessee Valley Authority
7	FAQ Clarification on Cabinets Walkdown 9-18-12	N/A	United States Nuclear Regulatory Commission
8	Frequently Asked Questions on Seismic Walkdown Guidance	NA	Nuclear Energy Institute
9	Resolution of SQN Seismic IPEEE Outliers	CDQ-000-999-2012-000034	Tennessee Valley Authority
10	Determination of Risk Rankings for Systems and Components for 10CFR50.65	SQN-SQS2-0162	Tennessee Valley Authority
11	Correction Action Program	NPG-SPP-22.300	Tennessee Valley Authority

10. Appendices

Appendix A: Resumes and Training Records

Resumes included in this Appendix are alphabetized by last name.

- Isaac Antanaitis – Walkdown Engineer
- Joshua Best – Fukushima Project Engineer
- Karen Carboni – Site Engineer
- Larry Chandler – Retired SRO
- John Dizon – Facility Risk Consultants
- Steve Eder – Facility Risk Consultants
- James Edgar – Lead Technical Engineer
- Robert Malone – Unit 2 Team Leader
- David Moore – Retired SRO
- Steven Summers – Lead Engineer & Unit 1 Team Leader
- Glynna Wilson – Site Engineer
- Phillip York – Walkdown Engineer

Training Record included in this Appendix:

- Virginia EPRI Training Certificates (Course Completion Certificate lists Karen Carboni as Karen Tracy – name change is noted on page A45)
- TVA/EPRI Training
- SQN site-specific training

WorleyParsons
resources & energy

Isaac Antanaitis, E.I.T.
Structural Engineer-in-Training

Resume

SUMMARY

Structural Engineer-in-Training with four years of experience with WorleyParsons in analysis and design of structural steel, ductwork, buckstays, selective catalytic reduction (SCR) reactors, and structural concrete. Experience includes using STAAD models, as well as using other software including Microsoft Excel and MathCAD to assist in the design process. Familiar with 9th,13th, and 14th Ed. AISC Steel Manuals, ACI 318, ACI 301, ACI 350, ASME BTH-1-2005, Design of Welded Structures (Blodgett), ASCE 7, U.S. Core of Engineer Design Guides for water-containing structures, and various AISC Design Guides. Experience also includes responsible engineering roles, project integration engineering (work-share facilitation), and assisting in business development related to subcontracting efforts with qualified small, minority, and woman-owned businesses.

EXPERIENCE

2008 - Present **Structural Engineer-in-Training, WorleyParsons, Chattanooga, Tennessee**

Arizona Public Service (APS) – Four Corners 2013 Capital Budget Items (CBI) Development. Primary responsibilities include coordination with APS plant personnel and prospective vendors to develop complete CBI packages (including scope, schedule, and budget for start to finish execution of capital projects) for submission to APS approval board.

APS – Cholla 2013 Capital Budget Items (CBI) Development. Primary responsibilities include coordination with APS plant personnel and prospective vendors to develop complete CBI packages (including scope, schedule, and budget for start to finish execution of capital projects) for submission to APS approval board.

Tennessee Valley Authority (TVA) – Kingston Fossil Plant (KIF) Unit Isolation Dampers Project. Primary responsibilities include performing the responsible engineering role for the plant-funded tasks associated with this project. This includes the development of the DCN (Design Change Notification) package, maintaining the project schedule, leading project status and design review meetings, and coordinating with plant personnel, vendors, and TVA Fossil Engineering Design (FED).

2011 **TVA – KIF Coal Unloader Project.** Primary responsibilities include the development of a STAAD model of the concrete coal building for use in the overall structural analyses performed for the project. Responsibilities also include developing the final deliverable DCN (Design Change Notification) package.

APS – Redhawk Cooling Tower Inspection. Primary responsibilities include assisting in the inspection and condition assessment of the structural components of the cooling tower for Units 1 and 2.

TVA – KIF Unit 6 Condenser Cooling Water (CCW) Tunnel Inspections. Primary responsibilities include preparation for and execution of cooling water intake and discharge tunnel inspections, preparation of job safety analysis, and origination of tunnel inspection reports

American Electric Power (AEP) Rockport Duct Inspection. Primary responsibilities include assisting in the inspection of various runs of back-end flue-gas ductwork in support of the Phase 1 engineering study for the Unit 1 SCR and FGD Retrofit Project.

TVA – Paradise Fossil Plant (PAF) Limestone Scales Project. Primary responsibilities include the design of reinforcement for existing limestone conveyor support steel to meet vendor requirements for new limestone scales. Responsibilities also include coordination with construction personnel. Design work includes delivering calculations and detailed engineering sketches.

TVA – Colbert Fossil Plant (COF) ADEM Consent Order Project. Primary responsibilities include the design of a concrete sump structure and associated support steel for the required chopper pump and access platforms. Responsibilities also include the design of a concrete foundation for electrical equipment, and coordination with construction personnel. Design work includes delivering calculations and detailed engineering sketches.

U.S. Steel – Pro-Tec Annealing Line. Primary responsibilities include preliminary design of the concrete post-finishing pit for the development of construction bid drawings.

2010 - 2011 **TVA – Cumberland Fossil Plant (CUF) Unit 1 Bottom Ash Hopper Replacement Project.** Primary responsibilities include the development of engineering estimates, project planning documents, and construction bid work scoping documents, as well as the design of: 1) post-installed epoxy anchors for hopper columns, 2) support steel for hopper platforms and piping, and 3) evaluation of sump pit support steel for demolition and construction loads. Design work includes delivering calculations and detailed engineering sketches.

U.S. Steel – Fairfield Works Fall Protection. Primary responsibilities included providing engineering recommendations in the development of design drawings documenting required installation of fall protection system components. Responsibilities included performing field walk-downs of 44 overhead cranes in the hot strip mill, sheet mill, dual line mill, and cold mill at Fairfield Works.

2010 **TVA – Bull Run Fossil Plant (BRF) CCW Inspection.** Primary responsibilities included preparation for and execution of cooling water discharge tunnel inspection, including preparation of job safety analysis and origination of tunnel inspection report.

TVA – Gallatin Fossil Plant (GAF) and KIF CCW Inspections. Primary responsibilities included preparation for and execution of cooling water intake and discharge tunnel inspections. For KIF tunnel inspections, primary responsibilities also included preparation of job safety analysis and origination of tunnel inspection reports.

2009 - 2010 **Dominion – Mount Storm Project Engineering.** Primary responsibilities included design of stop logs and cooling water intake structure. Design work included delivering calculations and detailed engineering sketches. The design of each stop log included considerations to accommodate dry maintenance of spillway gates, including: structural steel design (with corrosion allowance) for applicable load from pressure head, rubber seal selection and arrangement, and construction splicing scheme for shipping and field erection purposes. Primary intake structure responsibilities included developing design loads, performing stability analysis, creating and analyzing STAAD models, and designing the geometry and reinforcement for the walls and foundation of the concrete structure. Project responsibilities also include work related to the preparation and development of specifications and engineering requisition documents.

Southern Company – Plant Scherer Units 1-4 Pressure Upgrade. Primary responsibilities included updating existing drawings with new load data, and providing connection modifications for existing precipitator steel vertical bracing (Units 3 and 4).

TVA – CUF Unit 2 Bottom Ash Hopper Replacement Project. Primary responsibilities included design of post-installed epoxy anchors for hopper columns, and steel to support hopper platforms and piping. Responsibilities also included providing engineering support for hopper installation and removal plans, as well as for construction phase field adjustments.

2009 **TVA – John Sevier Fossil Plant (JSF) and GAF Stack Platform Extension As-built Field Verification.** Primary responsibilities included providing verification of as-built information for chimney platform modification work by aiding in platform safety inspection, measuring and

documenting dimensions of platforms and instruments, and creating sketch amendments for structural designers.

TVA – BRF Lifting Device Qualification. Primary responsibilities included rating the capacities of various lifting devices (including monorails, below the hook lifting beams, and a forklift lifting attachment), providing a maximum load rating for mezzanine storage floors, and performing a crane uprate qualification. The crane uprate qualification included calculation of the maximum capacities of the pulverizer lifting crane and corresponding support steel.

TVA – CUF Unit 2 SCR Field Weld Inspection and Qualification. Primary responsibilities included visually inspecting beam connection welds inside SCR box, determining structural condition of these welds, and documenting and reporting assessments to responsible plant personnel.

CPS Energy – Deely Unit 2 SCR Proposal. Primary responsibilities included providing ductwork and steel material estimates. Responsibilities also included creating and analyzing STAAD models to verify foundation modification design loads.

TVA – JSF and PAF Stack Platform Extensions. Primary responsibilities included providing baseline information for chimney platform modification work by aiding in platform safety inspection, measuring and documenting dimensions of platforms and instruments, and creating sketch amendments for structural designers.

2008 - 2009 **R.C. Cape May Holdings – B.L. England Unit 2 SCR Project Engineering.** SCR reactor primary responsibilities included creating and analyzing STAAD models for SCR reactor box. Structural steel primary responsibilities included submitting calculations and engineering sketches for base plates, anchor bolts, and column splices. Responsibilities also included submitting support steel calculations and sketches for platforms and stair towers.

2008 **Alstom – Keyspan Northport Project Engineering.** Ductwork primary responsibilities included creating and analyzing STAAD models which integrate new ductwork and existing support steel, delivering detailed design sketches, and submitting hand calculation packages. Structural steel primary responsibilities included analyzing existing support steel and recommending specific modifications to accommodate the new ductwork, delivering detailed design sketches, and submitting hand calculation packages. Buckstays primary responsibilities included analyzing existing buckstays and designing new buckstays for the addition of new separated over-fire air ducts.

Alstom – Pacificorp Project Engineering. Ductwork primary responsibilities included creating and analyzing STAAD models for ductwork (both existing ducts and modifications of existing ducts), delivering detailed design sketches, submitting hand calculation packages, and writing sections of the design modification report pertaining to the aforementioned ductwork.

PPL Global – Sunbury Project, Phase II Engineering. Ductwork primary responsibilities include creating and analyzing STAAD models for new ductwork, delivering detailed design sketches, and submitting hand calculation packages. Structural steel primary responsibilities included creating, integrating, and analyzing STAAD models for new support steel, delivering detailed design sketches, and submitting hand calculation packages.

2007 - 2008 **Civil Engineering Intern, J. Farrow, P. E. & Associates, Collegedale, Tennessee**

Labrador Heights (Development). Provided site design layouts, roadway designs, grading plans, and construction plan setup for the project. Developed the storm water pollution prevention plan and the aquatic resource alteration permit submittals.

London Lane (Development). Provided site design layouts, roadway designs, grading plans, and construction plan setup for the project. Created bid estimation computational tool for the project.

Stonegate (Development). Performed site plan revisions and general drafting tasks as directed by supervising engineers.

2006 **Engineering Intern, Tennessee Valley Authority, Chattanooga, Tennessee**

River System Operations – Water Resource Cataloguing System. Provided support for engineers in the analysis of water resource records from regions throughout the Tennessee Valley Watershed. Aided in the further development of the organizational system by which water resource records are tracked and cataloged.

2004 - 2005 **Field Service Technician, Vibration Control Engineering, Nashville, Tennessee**

Nashville Courthouse – Underground Parking Lot. Installed, serviced, and retrieved data from digital and analog seismographs through computer interface and manual documentation. Reported seismic data to responsible engineers and blasting contractors.

Wolf Chase (Development). Provided documentation of structural damage to engineers through the use of field sketches, notes, and digital photography. Initiated direct interaction with property owners potentially affected by the construction project.

Hicks Road – Sewer Line Installation. Set up meeting times and coordinated pre-blast precautionary measures with construction industry representatives. Provided documentation of structural damage to engineers through the use of field sketches, notes, and digital photography.

EDUCATION

B.S., Engineering: Civil, University of Tennessee, Chattanooga, Tennessee, 2008

B.S., Mathematics: Technology, Bryan College, 2004

REGISTRATIONS/AFFILIATIONS

Engineering Intern (E.I.T.), Tennessee No. 26439, 2007

Vice-President - Chattanooga Chapter of Engineers Without Borders

SPECIFIC TECHNICAL EXPERTISE/SPECIALIST COURSES

Computer Skills:

STAAD.Pro 2006, 2007, and V8i	AutoCAD® 2004, 2006, and 2008
SmartPlant	MathCAD
Microsoft Office	RISA Baseplate

Joshua H. Best

TVA Fukushima Response Team Project Engineer – Civil Design

Experience

S&L, LLC TVA Fukushima Response Team Project Engineer – Civil Design Dec. 2011 – Present

- Primary technical lead for NRC's request for information under 10 CFR 50.54(f) Recommendations 2.1 – Seismic and Flooding Re-evaluations and 2.3 – Seismic and Flooding walk downs including developing project strategy, project scoping, developing and maintaining project schedules and budgets, participating in industry meetings and teleconferences, and contractor oversight.
- Responsible for supporting all civil design functions associated with response to NRC "Order Modifying Licenses with Regard to Requirements for Mitigation Strategies for Beyond Design Basis External Events" as required under EA-12-049.

S&L, LLC. Mechanical Senior Associate - Pipe Stress Analyst June 2008 to Nov. 2011

- ASME Class 2 and 3 and B31.1 piping and component qualification using TVA TPIPE piping analysis software and hand calculations
- Knowledge of AMSE B31.1 and ASME Section III and VIII code requirements
- Responsible for Minimum Wall Calculations (FAC Evaluations), Component Qualifications (valves and nozzles), Commodity Clearance Evaluations, Temporary Shielding Requests (pipe stress qualification), and Functional Evaluations for Plant Operability
- Task Manager for numerous design change packages at Browns Ferry, Watts Bar and Sequoyah nuclear plants including responsibility for scoping and maintaining project schedule, budget, and interdisciplinary work flow

Tennessee Valley Authority, Fossil Power Group, Intern June 2007 – May 2008
Technical Support Services (Metallurgy and Welding)

Memberships

•Licensed Engineering Intern in Tennessee (Passed Fundamentals of Engineering Exam (October 2007))
•Member of American Society of Heating, Refrigerating, and Air-Conditioning Engineers (ASHRAE)
•Member of American Society of Mechanical Engineers (ASME)

Education

BSME, Mechanical Engineering: May 2008
University of Tennessee at Chattanooga, Chattanooga, TN
Focus: Energy Systems
Related Course Work: Thermodynamics, Thermal Component Design, Advanced Fluids, Energy Conversion

Bachelor of Arts, Natural Science: May 2008
Covenant College, Lookout Mountain, GA
Related course work: Physics, Chemistry, and Mathematics

Karen Carboni

SUMMARY

Civil Engineer with 7 years of experience in design engineering with the Tennessee Valley Authority. Job Experience includes designing piping modifications with plant system, equipment seismic qualification, piping seismic analysis, development of design change packages, performing functional evaluations and other various roles of a Civil Engineer. Familiar with ASME Section III and B31.1 for piping. Proficient with design software including and TVA-PIPE and MathCAD.

EXPERIENCE

Tennessee Valley Authority- Served as a Civil Engineer within the Civil Engineering Design Group at Chattanooga Office Complex from September 2005 to October 2006 and at Sequoyah Nuclear Plant since October 2006. Is qualified in Equipment Seismic Qualification and performed numerous evaluations of equipment during the procurement process. Qualified in piping analysis and evaluate modifications to piping systems to address plant needs. Responsible for piping analysis and development of design change documentation. Familiar with the TVA CAP process and how it is used for problem identification and resolution. Other responsibilities include field support, design change packages, verification of others work, functional evaluations, and interface with other departments within and outside of the Engineering Organization.

EDUCATION

B.S., Mechanical Engineering, University of Tennessee, Chattanooga, Tennessee, 2005

William L. Chandler

Professional Experience

I was employed by TVA from 1980 until 2012. I was a Reactor Operator from 1989 to 1998. From 1998 thru 2012 I held the position of Senior Reactor Operator/ Unit Supervisor. I was responsible for the safe operation of a nuclear unit reactor, oversight of the Unit operators, review of weekly work schedules, approval of all unit work and coordination between crafts for inspections and ongoing work.

JOHN O. DIZON, P.E.

PROFESSIONAL HISTORY

Facility Risk Consultants, Inc., Huntsville, Alabama, President, 2002-present
ABS Consulting (formerly EQE International), Oakland, California, Director and Vice President of Facility Risk Division, 2000-2002
EQE International, Oakland, California, Vice President, 1998-2000; Associate, 1991-1998; Senior Engineer, 1986-1991
Engineering Decision Analysis Company, Cupertino, California, Senior 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 30 years of experience in the field of civil and structural engineering, earthquake engineering, risk assessment and project management. He has extensive knowledge in the areas of seismic analyses and design assessments of primary structures and piping systems, seismic upgrade and retrofit design, seismic qualification of mechanical and electrical systems and components, and technical development of seismic evaluation criteria and programs for various industries, including power, oil and gas, petrochemical, and high tech process and manufacturing facilities. Mr. Dizon has undertaken and managed a wide variety of seismic projects, ranging from traditional structural engineering design and seismic retrofits to complex nuclear power plant and DOE facilities' seismic verification projects. He is also a guest instructor for the ASME Continuing Education Institute on seismic design and retrofit of piping systems and mechanical equipment.

At present, Mr. Dizon is primarily involved with Tennessee Valley Authority (TVA), under a subcontract with Bechtel Power Corporation, in providing engineering consulting services for various structural and seismic-related civil issues in support of Watts Bar Nuclear Power Plant Unit 2 Completion Project. He also provides seismic consulting services to other industries, including defense contractors and commercial equipment manufacturers, among others.

As President of Facility Risk Consultants, Mr. Dizon is responsible for business development and project management activities, including managing all associated tasks under a subcontract with Bechtel Power Corporation for seismic-related civil issues associated with the recently completed Browns Ferry Unit 1 Restart Project for Tennessee Valley Authority. The seismic works included USI A-46/IPEEE implementation programs, seismic II/I spray hazard evaluations, new cable routing utilizing the SQUG/GIP methodology, MSIV seismic ruggedness verification, among others. Furthermore, he was also actively involved in the development of seismic II/I design criteria for distribution systems and equipment for

DOE's PDCF project, under a subcontract with the Washington Group, Inc.; and in the seismic qualification of various essential equipment for DoD's GMD project, under a subcontract with Bechtel National, Inc. and its vendors. In addition, Mr. Dizon has participated as a subject matter expert witness in a litigation project for a large foreign company in the area of seismic performance of structures, piping systems and associated equipment associated with earthquake damges in a coal-fired power plant located in South America.

As EQE Project Manager for various seismic programs associated with the restart of Browns Ferry Units 2 and 3, Mr. Dizon was responsible for all engineering activities associated with USI A-46 resolution and seismic IPEEE implementation; seismic proximity and II/I spray interaction evaluations; MSIV seismic ruggedness verification; cable tray and conduit raceway and supports; and HVAC support evaluation programs. These activities consisted of seismic criteria development, seismic walkdown assessments and mitigation of findings, including retrofit designs and plant upgrades. He was also responsible for the A-46 seismic evaluation program for major equipment items at Davis-Besse, Duane Arnold and H.B. Robinson power plants. Mr. Dizon also served as Project Manager for the HVAC seismic verification program at Salem Nuclear Plant, MSIV seismic projects at Hope Creek and Brunswick plants, and participated in a number of related seismic evaluation projects at Sequoyah, Watts Bar, Bellefonte, Pickering A, Bruce A, Forsmark, Liebstadt, among others.

As Managing Director of EQE's Hsinchu, Taiwan project office following the 1999 Chi-Chi earthquake, he was in charge of the region's business development and project management. Mr. Dizon managed a number of seismic risk assessment and structural upgrade projects for the high tech industry, including seismic consultation on a number of projects for Taiwan Semiconductor Manufacturing Co., seismic strengthening projects for United Microelectronics, Applied Materials, Winbond Electronics and Macronix International in Taiwan. In addition, he also managed the seismic upgrades for the Cypress Semiconductor and Amkor facilities and seismic design review project for IBM in the Philippines, seismic risk assessment for AMP facilities in Japan, and seismic assessment of structural and non-structural components of clean room facilities at several Intel fab plants in the Northwest region in U.S., among others.

As Group Manager for EQE at the US Department of Energy Savannah River Site, Mr. Dizon was responsible for the seismic verification program of safety-related mechanical and electrical systems and components. His tasks included developing seismic evaluation criteria and procedures for restart and long-term seismic programs; managing the seismic walkdown and evaluation efforts; providing technical support in resolving seismic issues; and serving as an interface with the client. Mr. Dizon was also responsible for the seismic walkdown and evaluation of various distribution systems and critical equipment at the Pantex Facilities, including developing the walkdown screening criteria and evaluation acceptance criteria. 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. Other DOE facilities he has involvement with included Los Alamos, Livermore and Hanford sites. Mr. Dizon has also been involved in a number of risk assessment programs for petrochemical plants and refineries, including seismic walkdowns at the

Imperial West Chemical plants in Pittsburg and Antioch, CA; Tosco Refinery in Avon, CA; and Dupont Chemical plant in Antioch, CA, among others.

At EDAC, Mr. Dizon was responsible for the development and verification of a pipe support optimization program (OPTPIPE) and was involved in a number of snubber reduction pilot projects. Other areas of his involvement consisted of finite element analyses of the 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.

With General Electric Company, Mr. Dizon was responsible for stress analysis and code conformation of main steam and recirculation piping systems for generic BWR plants. He was also involved in the developmental phase of an in-house pipe support optimization program.

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 linear and nonlinear dynamic analyses, finite element modeling, and generation of floor response spectra for several nuclear power plants. 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.

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 several BWR plants for the various types of hydrodynamic loads. He was involved in a BWR in-plant test procedures, data reduction and correlation study to determine the dynamic response, including soil-structure interaction of the reactor/control buildings during GE Mark II reactor hydrodynamic load actuation in the primary containment.

At Stanford University, Mr. Dizon performed statistical analyses of earthquake accelerograms and various response parameters, as part of his research work under Professor Haresh Shah. He also 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

AFFILIATIONS AND AWARDS

Multidisciplinary Center for Earthquake Engineering Research (MCEER), Strategic Partner
Philippine Board Examination for Civil Engineers, Fifth Place, 1973
Philippine Association of Civil Engineers, Certificate of Merit, 1974

REGISTRATION

California: Civil Engineer
Philippines: Civil Engineer

SELECTED PUBLICATIONS

With S. J. Eder, 2007. "Seismic Qualification Case Study for a New Inverter." SMiRT-19 Conference, Toronto, Canada, August 12-17, 2007.

With S. J. Eder, 2006. "Use of Earthquake Experience Data for Seismic Qualification of Equipment." Prepared for Multidisciplinary Center for Earthquake Engineering Research (MCEER). June 22, 2006.

With S. J. Eder, 2005. "Seismic Qualification Case Study." Prepared for Electric Power Research Institute and Seismic Qualification Utility Group. December 2005.

With S. J. Eder, and R. D. Cutsinger. 2003. "Browns Ferry Cable Tray Evaluations." Presented to the SQUG/SEQUAL Annual Meeting, San Antonio, TX, December 10-12, 2003.

With S. J. Eder. 2003. "Technical Position Paper for Seismic II/I Design of Cable Tray Raceway Systems at PDCF." Presented to Washington Group, Inc., December 2003.

With S. J. Eder, W. H. Tong, and E. H. Wong, 1999. "Chichi, Taiwan Earthquake of September 21, 1999 (M7.6). An EQE Briefing. Oakland, CA. October, 1999.

With S. J. Eder. 1998. "Risk Management for Power and Industrial Facilities -- Focus on Business Interruption". Second Biennial Federation of Asian Pacific & African Risk Management Organization. Manila, Philippines. October, 1998.

With F. R. Beigi. 1995. "Application of Seismic Experience Based Criteria for Safety Related HVAC Duct System Evaluation." Fifth DOE Natural Phenomena Hazards Mitigation Symposium, Denver, Colorado, November 13-14, 1995.

With S. J. Eder, J. F. Glova, and R. L. Koch. 1994. "Seismic Adequacy Verification of HVAC Duct Systems and Supports for an USI A-46 Nuclear Power Plant." Fifth Symposium on Current Issues Related to Nuclear Power Plant Structures, Equipment and Piping, Orlando, Florida, December 14-16, 1994.

With E. J. Frevold and P. D. Osborne. 1993. "Seismic Qualification of Safety-related HVAC Duct Systems and Supports." ASME Pressure Vessel and Piping Division Conference, Denver, Colorado, July 1993.

With S. J. Eder. 1991. "Advancement in Design Standards for Raceway Supports and Its Applicability to Piping Systems." ASME Pressure Vessel and Piping Division Conference, San Diego, California, June 1991.

With R. D. Campbell and L. W. Tiong. 1990. "Response Predictions for Piping Systems Which Have Experienced Strong Motion Earthquakes." ASME Pressure Vessel and Piping Conference, Nashville, Tennessee, June 17-21, 1990.

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

Facility Risk Consultants, Huntsville, Alabama, Chief Executive Officer, 2003-present

ABS Consulting, Houston, Texas, Vice President, North Asia Pacific Region, 2001-2003

EQE International, San Francisco, California, Senior Vice President, 1985-2001 (ABS Purchased EQE in 2000).

URS/John A. Blume & Associates, Engineers, San Francisco, California, 1982-1985

J. G. Bouwkamp, Inc., Structural Engineers, Berkeley, California, 1981-1982

PROFESSIONAL EXPERIENCE

Mr. Stephen J. Eder provides senior engineering and management consultant services, licensing support, and expert testimony in the fields of natural hazards risk assessment, seismic analysis, structural performance evaluation, and retrofit design. His background includes project management, engineering, risk management, and planning for domestic and multinational corporations, insurance and financial institutions, construction companies, utilities, and the government. Mr. Eder is based in Madison, Alabama.

Prior to Facility Risk Consultants, Mr. Eder was stationed in Tokyo, Japan for 8 years and led all operations for ABS Consulting Inc. (formerly EQE International, Inc.) in Japan, China, Korea and Taiwan -- including risk consulting, structural engineering and design, probabilistic financial loss estimation, and the development and maintenance of management systems.

Mr. Eder has performed many post-earthquake reconnaissance studies -- most notably he led investigations of the M8.4 earthquake in Arequipa, Peru of June 2001; the M7.6 earthquake in Chichi, Taiwan of September 1999; and he was lead investigator of the M8.1 earthquake in Mexico of September 1985, for the US Electrical Power Research Institute (EPRI).

Prior to his assignment in Japan, Mr. Eder focused primarily in the seismic risk evaluation and seismic retrofit design of critical equipment and systems. Mr. Eder pioneered the development of many seismic risk evaluation procedures and criteria for the US and European nuclear power industry, the Seismic Qualification Utilities Group (SQUG), and the US Department of Energy (DOE). This included conducting a series of week-long seismic evaluation training courses for a total of about 500 engineers, and serving as subject matter expert and technical liason for industry groups.

Mr. Eder served as project manager or project consultant for the seismic risk surveys of critical equipment and systems at about 60 nuclear power plants in the US and Europe, and many DOE facilities. He performed research for and supported many U.S. industry and professional groups, to advance the state-of-the-art of seismic risk assessment techniques and seismic design guidelines.

EDUCATION

UNIVERSITY OF CALIFORNIA, Berkeley: M.Eng., Structural Engineering and Structural Mechanics, 1982

CLARKSON COLLEGE OF TECHNOLOGY, Potsdam, New York: B.S., Magna Cum Laude, Civil and Environmental Engineering, 1980

REGISTRATION

California: Civil Engineer, 1985

Alabama: Civil Engineer, 2003

PROFESSIONAL AND BUSINESS AFFILIATIONS

American Society of Civil Engineers

Earthquake Engineering Research Institute

Structural Engineers Association of Northern California

Applied Technology Council

Tau Beta Pi National Engineering Honor Society .

Phi Kappa Phi National Honor Society

American and British Chambers of Commerce in Japan

COMMITTEES -- PAST EXPERIENCE

- *Electric Power Research Institute* - Post Earthquake Investigation Team - Leader
- *U.S. Department of Energy* – Tiger Team Member – Natural Hazards Risk Analysis
- *U.S. Department of Energy* - Steering Committee on Natural Hazards – Technical Liason – Mechanical and Eletrical Equipment Evaluation and Design
- *Seismic Qualification Utility Group* – Equipment Seismic Evaluation Training – Lead Instructor and Subject Matter Expert
- Joint *American Society of Mechanical Engineers* and *Institute of Electrical and Electronics Engineers* - Special Seismic Qualification Working Group - CoChairman
- *National Center for Earthquake Engineering Research* – Critical Equipment Seismic Risk Analysis – Chief Researcher
- *National Fire Protection Association* (NFPA) – Seismic Technical Committee Member, NFPA-13.
- *Building Seismic Safety Council* - Seismic Rehabilitation Advisory Panel Member – Mechanical Equipment. NEHRP, FEMA 273.
- *American Society of Civil Engineers* – Electrical Raceway and HVAC Duct Seismic Design - Working Groups
- *Structural Engineers Association of California* - Seismology Subcommittee - Non-Building Structures and Equipment

SELECTED PUBLICATIONS & PRESENTATIONS

With J. O. Dizon, 2007. "Seismic Qualification Case Study for a New Inverter." SMiRT-19 Conference, Toronto, Canada, August 12-17, 2007.

With J. O. Dizon, 2006. "Use of Earthquake Experience Data for Seismic Qualification of Equipment." Prepared for Multidisciplinary Center for Earthquake Engineering Research (MCEER). June 22, 2006.

With J. O. Dizon, 2005. "Seismic Qualification Case Study." Prepared for Electric Power Research Institute and Seismic Qualification Utility Group. December 2005.

With J. O. Dizon, and R. D. Cutsinger. 2003. " Browns Ferry Cable Tray Evaluations." Presented to the SQUG/SEQUAL Annual Meeting, San Antonio, TX, December 10-12, 2003.

With J. O. Dizon. 2003. " Technical Position Paper for Seismic II/I Design of Cable Tray Raceway Systems at PDCF." Presented to Washington Group, Inc., December 2003.

"Analysis of Ilo2 Plant Components Affected by the June 23, 2001 Mw 8.4 Arequipa, Peru Earthquake". Prepared for Hitachi Corporation. December 2002. Presented in London, U.K.

"The Use of Modeling and Natural Risk Analysis for Power Plants". Presented at Second International Conference on Mitigating Your Risks in Energy. February 2002. Singapore.

"Using Risk Based Inspection Techniques to Assess Maintenance of Power Plants". 2002. Presented at Second International Conference on Mitigating Your Risks in Energy. February 2002. Singapore.

"Preparing Your Properties for Major Earthquakes". 2001. Prepared for Architecture, Construction, and Engineering Subcomittee, American Chamber of Commerce in Japan. December 2001. Tokyo.

"Earthquake Hazards and Earthquake Risks in Tokyo". 2001. TELS-Setagaya, Earthquake Disaster Information and Preparedness Seminar. October 2001. Tokyo.

"Geographic Information Systems". 2000. Prepared for Non-Life Insurance Institute, ISJ Advanced Course 2000 Program, Natural Hazards and Underwriting Capacity. November 2000. Tokyo.

With J. O. Dizon, W. H. Tong, and E. R. Wong, 1999. "Chichi, Taiwan Earthquake of September 21, 1999 (M7.6). An EQE Briefing. Oakland, CA. October, 1999.

With G.S. Johnson, R.E. Sheppard, M.D. Quilici, and C.R. Scawthorn, 1999. "Seismic Reliability Assessment of Critical Facilities: A Handbook, Supporting Documentation, and Model Code Provisions." Technical Report MCEER-99-0008. Multidisciplinary Center for Earthquake Engineering Research, Buffalo, NY.

"Earthquake Risk of Independent Power Producer Stations", 1999. Prepared for Lloyd's Japan Power Seminar. June 1999. Tokyo.

With J. O. Dizon. "Risk Management for Power and Industrial Facilities -- Focus on Business Interruption". Second Biennial Federation of Asian Pacific & African Risk Management Organization. Manilla, Philippines. October, 1998.

"3 Years After the Hanshin-Kobe Earthquake, Earthquake Risk Management, Damage Assessment and Mitigation". 1998. High Pressure Gase Safety Association of Japan. Vol. 35, No. 2 (1998). Tokyo.

With G. S. Johnson, R.E. Sheppard, and S.P. Harris. 1998. "A Method to Assess and Improve the Operational Reliability of Critical Systems Following Earthquakes." Presented at the 6th U.S. National Conference on Earthquake Engineering, Seattle, WA, June 1998.

With G. S. Johnson, R.E. Sheppard, and S.P. Harris. 1998. "The Development of Model Code Provisions to Address System Reliability Following Earthquakes." Presented at the ATC-29-1 Seminar on Seismic Design, Retrofit, and Performance of Nonstructural Components, San Francisco, CA, January 1998.

With D. W. Jones, M. K. Ravindra, C. R. Scawthorn, and K. Iida. 1996. "Earthquake Risk Management for Process Industries". High Pressure Gas Safety Institute of Japan. Vol. 35, No. 5 (1996). Tokyo.

With G. A. Antaki. 1994. "Recommended Provisions for Equipment Seismic Qualification Consistent with IEEE and ASME Criteria for Use of Experience." ASME 1994, PVP-Vol. 275-2, Seismic Engineering, Volume 2.

With P. J. Butler and R. P. Kassawara. 1994. "Application of the Generic Implementation Procedure Methodology to Demonstrate Seismic Adequacy of New and Replacement Equipment and Parts in USI A-46 Plants." ASME 1994, PVP-Vol. 275-2, Seismic Engineering - Volume 2. Proceedings American Power Conference, Illinois Institute of Technology, April 1994, Chicago, Illinois.

With N. P. Smith and R. P. Kassawara. 1994. "Future Direction for the Use of Earthquake Experience Data." Proceedings American Power Conference, Illinois Institute of Technology, April 1994, Chicago, Illinois.

With M. W. Eli and M. W. Salmon. November 1993. "Walkthrough Screening Evaluation Field Guide, Natural Phenomena Hazards at Department of Energy Facilities." UCRL-ID-115714, Revision 2. Lawrence Livermore National Laboratory.

"Seismic Design of Important Systems and Components--Functionality Considerations." 1993. Structural Engineers Association of Northern California, 1993 Fall Seminar, Nonstructural Components: Design and Detailing. San Francisco, California.

With C. Scawthorn, M. Zadeh, and G. Johnson. 1993. "Economic Impacts of Earthquake Damage to Nonstructural Components." 40th North American Meetings of the Regional Sciences Association International, Houston, Texas.

With M. W. Barlow, R. J. Budnitz, and M. W. Eli. 1993. "Use of Experience Data for DOE Seismic Evaluations." 4th DOE Natural Phenomena Hazards Mitigation Conference, Atlanta, Georgia.

With K. Porter, G. S. Johnson, M. M. Zadeh, and C. Scawthorn. 1993. "Seismic Vulnerability of Equipment in Critical Facilities: Life-safety and Operational Consequences." Technical; Report NCEER-93-0022. National Center for Earthquake Engineering Research.

With J. K. Arros. 1993. "Applications of Experience-based Methods for Seismic Qualification of Distribution Systems." Prepared for Advanced Reactor Corporation FOAKE ALWR Seismic Qualification Project.

With MPR Associates and Winston and Strawn. 1993. "Verifying the Seismic Adequacy of New and Replacement Equipment and Parts." Prepared for the SQUG Management Guidelines Document.

With Lawrence Livermore National Laboratory. 1992. "Program Plan for the Evaluation of Systems and Components in Existing DOE Facilities Subject to Nataral Phenonema Hazards." Prepared for the U.S. Department of Energy.

With J. O. Dizon, P. D. Baughman, and G. S. Johnson. 1992. "Peer Review of the Watts Bar Nuclear Plant Integrated Interaction Program Suspended Systems Proximity Task." Prepared for Tennessee Valley Authority.

With G. S. Hardy, G. S. Johnson, and R. W. Cushing of EQE; MPR; S&A; and URS. 1992. "Walkdown Screening and Seismic Evaluation Training Course." Prepared for Seismic Qualification Utility Group.

With M. W. Salmon. 1992. "Technical Safety Appraisal of the Idaho Chemical Processing Plant, NPH Discipline." Prepared for the U.S. Department of Energy.

With M. W. Eli. 1992. "NPH Walkdown Evaluation Summary Report - Paducah Gaseous Diffusion Plant." Prepared for the U.S. Department of Energy.

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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 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 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.

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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," University of California, Berkeley (June 1982), also American Petroleum Institute, October 1982, San Francisco, California.

James P. Edgar, P.E
Chief Civil/Structural Engineer

Resume

SUMMARY

Project Manager with over 10 years of project retrofit, design, and management experience with WorleyParsons. Primary responsibilities included the project management, project engineering, and the overall structural engineering and design, coordination, and estimating for all types of retrofit and design projects. Tasks included structural steel design and inspection, engineering man-hour and material cost estimating, scheduling, and fabrication/erection technical support and construction field support. Responsibilities include performing as the engineering task lead for structural steel for multi-million dollar/large scale structural retrofit projects. In addition, tasks include managing the structural condition assessment services performed by the WorleyParsons' Chattanooga office.

EXPERIENCE

2009 - Present **Project Manager, WorleyParsons, Chattanooga, Tennessee**

Tennessee Valley Authority (TVA). Oversee multi-discipline projects. Responsibilities include development, management, and execution of the project scope, schedule and budget. Typical project responsibilities include management of several concurrent projects from proposal development, to the conceptual study phase, through design implementation, and construction support.

2006 – 2009 **Principal Structural Engineer, WorleyParsons, Chattanooga, Tennessee**

Alstom ECS/ Kansas City Power & Light (KCPL) – Iatan Generating Station Selective Catalytic Reduction (SCR) Project, Alstom Project Partnership. Task lead overseeing engineering and design of ductwork, new support structures and the reinforcement of the existing support structure to accommodate the SCR retrofit project. Responsibilities include originating and reviewing calculations for structural steel, ductwork, foundations and other miscellaneous structural projects associated with the SCR project. Responsible for overseeing other structural engineers and structural designers in order to facilitate the design drawings with respect to the budgeted man hours and schedule. Review and approval shop fabrication and detailed drawings for structural steel and ductwork. Facilitate all communications between the Chattanooga and Knoxville offices as well as provide estimating and scheduling for all current and future projects, optional design arrangements, and engineering studies. Conduct several site visits to determine the construction feasibility of present and future projects as well as to investigate and propose alternative arrangement options for the support of the SCR system.

Alstom Performance Projects – Miscellaneous Projects. Task lead overseeing engineering and design of several miscellaneous structural steel, ductwork, and fossil projects. Responsibilities include originating and reviewing calculations for structural steel, ductwork, and other structural projects associated with fossil sites. Responsible for overseeing other structural engineers and structural designers in order to facilitate the design drawings with respect to the budgeted manhours and schedule. Projects include:

Lamma Low NOx Ductwork Installation and Structural Steel Modifications
Desota Low NOx Ductwork Installation
Dominion Generation Chesterfield Station Furnace Buckstay Upgrade Study

2007 - Present **Condition Assessment Services Team Leader, WorleyParsons, Chattanooga, Tennessee**

In addition to senior structural engineering activities, additional responsibilities include coordinating and leading condition assessment inspections at fossil power plants. The Chattanooga inspection

group consists of 16 civil/structural engineers who performed condition assessment inspections throughout the U.S. for several different utility companies.

Coordinating responsibilities include estimating and scheduling manpower, developing a detailed inspection criteria, also evaluating and documenting the existing conditions of the respective component during the inspection. Post-inspection responsibilities include formalizing inspection findings, formulating necessary modifications and reinforcements, outlining future recommendations and inspection plans, reviewing the findings of team members, and executing any subsequent structural engineering tasks or engineering studies.

Typical inspections include:

Air and flue gas ductwork (internal and external)
Circulating cooling water tunnels
Coal handling bins,
Chimneys and stacks, complete interior and exterior inspection
Boiler internals and pressure vessels
Furnace stiffening systems
Miscellaneous structural systems at a typical fossil site

Responsible Engineer, TVA Project Partnership

Tennessee Valley Authority (TVA) – Project Partnership. Project lead overseeing multi-discipline projects. Responsibilities include role as the technical lead for the multi-discipline effort as well as the point of contact between all engineers, designers, vendors, suppliers, and TVA management. Tasks include technical review of engineering and design, perform documentation of modifications, monitor allocation and utilization of estimated budget, and presentation of design proposals, progress, and construction planning to plant and construction management. Projects include:

Cumberland Fossil SCR Hopper and LPA Screen Installation and Existing Steel Modifications
Multi-site TVA Chimney Structural Review and Reinforcement Project
TVA Fossil Power Plants Condition Assessment Inspections

CPS Energy – Braunig Peaker Project (Combustion Turbine). Responsibilities include the design of several new and retrofitted structures and new equipment foundations. Duties focus on designing the structural integrity, support measures, and serviceability of the new structures and foundations associated with the new combustion turbine project.

2005 - 2006 **Structural Engineer, WorleyParsons, Chattanooga, Tennessee**

Progress Energy Carolinas (PGNC) – Roxboro Flue Gas Desulfurization (FGD). Responsibilities include the design of large ductwork and their support structures. Duties focus on designing the structural integrity, support measures, and thermal expansion characteristics for large ductwork associated with the new FGD system. In addition, responsibilities include designing the support steel and foundations for the FGD ductwork support structures.

Progress Energy Carolinas (PGNC) – Mayo Flue Gas Desulfurization (FGD). In anticipation of future FGD project, conducted internal duct inspection for the Unit 1 ductwork at PGNC's Mayo plant site and provided report evaluating the condition of the ductwork and its structural components and recommending repairs.

Alstom (Chattanooga) – TXU Oak Grove Hot Air Duct to Mills (New Boiler). Structural engineer for the design of the Hot Air Duct to the Mills for a new boiler construction project. Performed structural analysis of ductwork and support measures in addition to specifying metal expansion

joints. Provided subcontracted consulting engineering firm with ductwork-applied loading drawings to facilitate the structural steel and foundation design effort.

TVA. Responsible for several miscellaneous structural engineering projects involving structural steel design, duct design and analysis and design of retaining wall structures for both fossil and hydro power plants. Other responsibilities included providing technical support and temporary structure design to help facilitate construction efforts during plant modification projects. In addition, responsibilities include internal structural inspections for circulating cooling water tunnel systems.

2001 - 2005 **Structural Engineer, Alstom Power, Chattanooga, Tennessee**

East Kentucky Power – Spurlock No. 1, SCR Project. Responsibilities included the structural design of SCR ductwork, specification of fabric expansion joints, and slide gate and louver dampers. Provided subcontracted consulting engineering firm with ductwork-applied loading drawings to facilitate the structural steel and foundation design effort.

Tucson Electric – Springerville Units 1 and 2 LowNOx Retrofit Project. Responsible for overall layout and design of ductwork, structural steel, SOFA, air registers, access platforms, and modifications to the existing ductwork. In addition, preformed structural analysis of existing support steel and provided details to reinforce the structure. Performed same responsiblities for projects with customers including Platte River, Lower River Colorado Authorities, TXU, PacificCorp, and Kentucky Utilities.

Mobile Energy Service Corporation – Power Boiler No. 9, Furnace Explosion Rehabilitation Project. Structural engineer for the inspection of damaged boiler structural steel, access platforms, and furnace stiffeners. Produced inspection reports, design sketches, condition assessments, and material estimates to customer for required modifications/reinforcement and/or replacement of damaged steel.

Dominion Generation – Chesterfield Unit 5, Secondary Air Duct Modifications. Structural engineer for the design of modifications to the secondary air duct stiffener framing, supports, and guides to accommodate the installation of new duct openings and new expansion joint placement. Specified new fabric expansion joints and provided detailed sketches for construction. Provided OEM with ductwork applied loading drawings to facilitate the structural steel and foundation design effort.

Dominion Generation – Chesterfield No. 6, Ductwork and Furnace Upgrade Study. Conducted structural analysis of existing boiler framing and flue gas ductwork systems for FD/ID fan pressure upgrades. Additional responsibilities included secondary site inspections to determine the construction sequencing and identify potential design changes of new ductwork/boiler framing modifications. Performed same responsiblities for projects with customers including TXU, Exelon, and Indianapolis Power and Light.

Dominion Generation – Chesterfield No. 6, Ash Handling Tank Support Steel. Designed new support structure for an ash handling tank and equipment for the Economizer hopper. Evaluated the existing structural steel and provided detailed modifications to reinforce the existing structure effected by the new steel and equipment.

EDUCATION

B.S., Civil Engineering, University of Tennessee, Knoxville, Tennessee, 2001

Pursuing a Masters in Civil Engineering, University of Tennessee, Knoxville, Tennessee, 2003 - Present

REGISTRATIONS/AFFILIATIONS

Registered Professional Engineer – Tennessee, No.112009, 2008

One Way Element Leader, Element 9 Management of Change

Member, AISC, ASCE

Confined Space and Fall Protection Trained

Member, STAAD User Group

Wood Design CED Certified

PUBLICATIONS/PRESENTATIONS

ASCE Duct Design 2008 Structural Department Presentation

Duct Inspection Procedures 2008 Structural Department Presentation

Beam and Column Reinforcing Procedures 2008 Group Presentation

ASCE Wind Design Structures and Ducts 2007 Group Presentation

SCR Systems 2005 Structural Department Presentation

SPECIFIC TECHNICAL EXPERTISE/SPECIALIST COURSES

Doer-Seller Account Planning, 2010

Frontline Leadership Program, 2009

Prestressing Concrete (UTK) – Properties of prestressing materials; methods of pre-tensioning and post-tensioning; and analysis and design of simple and continuous beams and slabs

Behavior of Steel Structures (UTK) – Focused on the design of beams, columns, beam-columns, connections, bracing, tension members, and the interpretation of the ASD and LRFD specifications.

Statically Indeterminate Structures (UTC) – Analysis of frames, trusses, columns, and continuous beams by force methods and slope deflection.

Analysis of Plates and Shells (UTC) – Bending and buckling of plates and shells and non-linear analysis of cables and cable roof structures.

Computer Skills:

STAADPro 2004	AutoCAD® 2000, 2004
MicroStation	Frameworks
MathCAD	Microsoft Office

AWARDS

Nominee for Eastern Operations People Development Award 2010

Eastern Operations Civil/Structural Engineer of the Year, 2008

WorleyParsons
resources & energy

Robert D. Malone, P.E.
Structural Engineer

Resume

SUMMARY

Structural Engineer with over seven years of experience with WorleyParsons in structural engineering. Tasks include analysis and design of flue gas desulfurization (FGD) and selective catalytic reduction (SCR) ductwork, support steel, foundations, minor/major modifications to existing structural steel/ductwork, and evaluations of existing steel. Design of miscellaneous steel/duct components including platforms, stair towers, turning vanes, and large particle ash (LPA) screens. Field experience includes ductwork inspections (miscellaneous ductwork, precipitators, economizers, SCRs) for damage/wear assessment and general inspection for pre-bid evaluation, condenser inspections, elevator shaft inspection, and site visits for steel/ductwork layout evaluations. Responsibilities include performing as lead for various projects, providing man-hour estimates, general project management, and task supervision of junior engineers. Additional experience includes approximately one year of nuclear experience in modular design of equipment support steel.

EXPERIENCE

2005 - Present **Structural Engineer, WorleyParsons, Chattanooga, Tennessee**

2011 - Present **Arizona Public Service (APS) – Cooling Tower Assessment**. Provided structural assisgment of the existing cooling towers for the Redhawk, Cholla, Ocotillo, and West Phoenix power plants. General duties consisted of the following:

- Performed structural inspections of both wooden and FRP cooling towers.
- Performed "Repair vs. Replace" economic assessments.
- Provided inspection reports.

2011 - 2012 **American Electric Power (AEP) – Clifty Creek Power Plant, Unit Six SCR Addition**. Provided structural assistance in the analysis of the existing unit six turbine and boiler build steel for increased loading caused by the addition of a new SCR mounted on top of the existing turbine building. General duties consisted of the following:

- Modeled the existing turbine and boiler building.
- Designed the new SCR support steel located on top of the existing turbine building.

Tennessee Valley Authority (TVA) – Kingston Steam Plant, Isolation Damper Project. Performed the structural analysis of the existing steel and ductwork for the additional equipment loadings related to the new isolation dampers and seal air fan additions to units one through nine. General duties consisted of the following:

- Provided onsite support for construction.
- Performed structural calculations for existing steel modifications.
- Provided support to the structural design team.

TVA – Kingston Steam Plant, Steel Remediation. Performed the structural analysis of existing steel damaged due to faulty orginal design. General duties consisted of the following:

- Provided root cause analysis of the damaged duct support steel.
- Provided structural calculations for the repair of the damaged duct support steel.
- Provided support to the structural design team.

TVA – Kingston Steam Plant, Condenser Cooling Water (CCW), Tunnel Inspections. Performed as task lead for the CCW tunnel inspections for units one though nine. General duties consisted of the follwing:

- Performed CCW tunnel inspections.
- Provided CCW tunnel assessment reports.
- Scheduled and staffed the inspections.

2010 – 2011 **Westinghouse – Staff Augmentation at the Chattanooga, Tennessee Westinghouse Office.** Provided structural engineering support for the design of nuclear equipment module support steel. General duties consisted of the following:

- Performed structural analysis on modular units supporting equipment related to various AP1000 nuclear systems for loads induced by three boundary conditions: transportation, lifting, and operation.
- Performed reviews/audits of calculations performed by Westinghouse employees as well as external contractors.
- Provided assistance to design team to resolve/identify any constructability issues.
- Performed calculation revisions resulting from design modifications.
- Provided technical guidance of junior engineers.

2010 **Tennessee Valley Authority (TVA) – Allen Fossil Plant, EDTA Boiler Cleaning Project**. Provided structural engineering required for the switchover from the present HCl acid cleaning system to a new forced circulation EDTA boiler cleaning system. General duties consisted of the following:

- Provided pump foundation modification
- Prepared pipe support design
- Prepared platform modification
- Provided man-hour estimates
- Prepared assistance for the Task Work Scope document
- Provided the structural portion of the project planning document
- Attended site walkdowns for pipe routing and for meetings at the site

2007 - 2010 **Southern Company – Scherer Plant, Mercury Baghouse Project**. General responsibilities consist of ductwork/steel layout and design, material takeoff, duct work and steel inspection, and general duties as a task lead. Tasks Include:

- Requests for Information responses
- Unit 2 existing steel modification for new ductwork
- Unit 4 duct support steel layout/configuration
- Unit 4 duct support steel design and management of design
- Unit 4 ductwork layout
- Unit 4 ductwork design and management of design
- On-going construction support

2010 **TVA – Colbert Fossil Plant, Reheat/Super Heat Attemperator Replacement.** Provided structural analysis of existing steel for the removal of the Unit 2 reheat attemperator and instalation of replacment reheat attemperator. Provided review of current monorail scheme already in place for Unit 3 super heat attemperator removal/replacement to assure it is suitable for all Units 1 through 4. General duties consist of the following:

- Rigging design
- Support steel reinforcement
- Design drawing review
- Plant personnel coordination

- Site trip to identify field interferences

TVA – Widows Creek Steam Plant, Ammonia Vaporizer Replacment. Provided rigging plan and supplementary steel for the ammonia vaporizer removal and installation.

TVA – Shawnee Fossil Plant, Unit 8 Turbine Fire Inspection. Performed inspection of the turbine room roof, floor, and concrete turbine support frames. In addition to the above, also inspected the crane runway, girders, and rails in the immediate area of the fire. Provided structural repair recommendations.

TVA – Kingston Steam Plant, Condensor Inspection. Performed inspection of the Unit 6 condensor. TVA requested the inspection after the plate wall failed during a leak test. To perform the leak test, the condenser was filled with water. It is believed that after years of fatigue stress building up in the wall as well as poor craftsmanship, the additional hydrostatic pressure caused a horizontal fracture in the plate wall.

TVA – Kingston Steam Plant, Condensor Inspection. Performed inspection of the Unit 5 condensor. A re-occurring crack in the side wall of the condensor caused pressure loss. Previous attempts by field personal to weld up the crack failed. Per TVA's request, a 3' x 5' section was cut out of the sidewall and replaced with a new plate.

TVA – Cumberland Fossil Plant, Bolier Tie Modification. Provided calculation review as well as engineering for the boiler tie modifications for the Unit 2 boiler. Also performed walkdown to insure that no interferences would be encountered.

TVA – Cumberland Fossil Plant, Soot Blower Replacement Procedure Review. Per TVA's request, performed a safety evaluation of the current soot blower replacement procedure. This evaluation was spurred on by an accident in which a 60' blower lance fell from the 10th floor to the 8th floor. Recommended modifcations to the platform layouts on floors 9, 10, and 11. These modifications mostly consisted of platform widening to allow larger turning radiuses for the 60' soot blowers.

TVA – Cumberland Fossil Plant, Convection Pass Waterwall Replacement. Provided calculation review for the waterwall replacement, as well as a walkdown to insure that there would be no interferences for the construction procedures.

2009 – 2010 **TVA – Lagoon Creek Combined Cycle Plant**. Providing services as the owner's engineer of the structural engineering portion for a steam turbine generator addition. Tasks Include:

- Reviewing various calculations (turbine building steel and foundations, pipe racks, electrical buildings, steam turbine generator foundations, etc.).
- Reviewing various documents (drawings, bid analysis, vendor surveillance report, and technical specifications).

2009 **Florida Power and Light – Putnam Plant**. Provide structural input for a circulating water pipe upgrade proposal. Responsible for pipe support steel layout as well as steel estimate and pile estimate.

TVA – SCR inspections projects include:

- **Cumberland Steam Plant** – Provided condition assessment of the catalyst support beam connections. Provided immediate field repair recommendations. Responsible for guiding laborers in a manner that insured their safety as they performed their jobs. Responsible for daily updates on inspection progress to the customer.
- **Bull Run Steam Plant** – Provided condition assessment of the catalyst support beam connections.

TVA – Widows Creek Steam Plant. Inspection of the Unit 7 scrubber elevator shaft for condition assessment. Provided detailed report of the inspection.

TVA – Cumberland Steam Plant, Limestone Scale Project. Provide structural engineering required for the conveyor modification for the installation of limestone scales. Provide strctural input at weekly meetings as well as provide input for design change notification preperation.

2008 - 2009 **Consumers Energy – D.E. Karn Fossil Plant, Pulse Jet Fabric Filter Project**. General Responsibilities consisted of the following.

- Analysis and design of the duct support structure for the return ducts 8, 9, 10A, 10B, and the supply ducts 4 and 5 for Unit 2
- Pipe support steel for Unit 2
- Cable tray support steel for Unit 2
- Platform design for Unit 2

2008 **Sunbury Generation LP – Sunbury Station Wet FGD Retrofit Project**. Responsibilities consisted of the analysis and design of the limestone building as well as duct support structures.

2007 - 2008 **TVA – Cumberland Steam Plant LPA Screen Project**. Performed the Phase 1 study, and performed duties as the task lead for the Phase 2 study. The study consisted of an LPA screen and hopper row addition in the SCR inlet ducts of Units 1 and 2. The addition of these components affected the existing ductwork as well as the support steel to the extent that rework of the structural bracing was required. Performed plant walkdowns for interface with screen vendor. Provided support for numerous update meetings as well as design review meetings at the plant with the TVA resident engineer. Responsible for man-hour estimates of the Phase 2 study.

2007 **TVA – Kingston Fossil Plant Condenser Cooling Water Tunnel Inspection.** Performed inspection of the inlet and discharge condenser cooling water tunnels.

TVA – Cumberland Internal Duct Inspection Study. Conducted internal duct inspection for the Unit 1 ductwork, and provided report evaluating the condition of the ductwork and its structural components, and recommended repairs. The Cumberland inspection consists of the evaluation of the boiler outlet duct, SCR ductwork, and the precipitator box including its inlet and outlet duct trains.

Nebraska Public Power District. Performed solo pre-bid general duct inspection and provided a report on the overall structural integrity of the existing ductwork.

2006 - 2007 **Alstom Power – Kansas City Power & Light, Iatan Generation Station**. Performed design of SCR ductwork, existing steel modifications, existing steel/foundation evaluations for increased loads, pressure upgrade study for existing ductwork, and miscellaneous steel design (platforms, LPA screen). Other responsibilities included working with designers to convey engineering design and review of shop drawings. Attended walkdowns for interface with constructors.

2005 - 2006 **Progress Energy Carolinas (PGNC) – Roxboro FGD**. Responsibilities included design of ductwork and related support structures, as well as furnishing calculation packages detailing the designs. Checked other engineers' calculations to ensure correctness. Other responsibilities included providing detailed sketches for designers, as well as checking finished drawings to insure correct structural configurations. Also provided support for plant walkdowns. Work included:

Miscellaneous tasks included the design of various platforms, connections, base plates, anchor bolts, and stair towers.

EDUCATION

B.S., Civil Engineering, Emphasis in Structural, Tennessee Technological University, 2005

REGISTRATIONS/AFFILIATIONS

Registered Professional Engineer – Pennsylvania, 2009

Engineer-in-Training – Tennessee, 2005

Member, Chi Epsilon Honor Society

Member, Toastmasters, Club Number 1381870

Member, Kappa Alpha Order

Member, American Institute of Steel Construction

STAAD.Pro Committee Representative Chattanooga, Tennessee Office

SPECIFIC TECHNICAL EXPERTISE/SPECIALIST COURSES

Tennessee Valley Authority Responsible Engineer (R.E.) Training Program

Computer Training:

AutoCAD®	FORTRAN
SmartPlant Review	STAAD.Pro
MathCAD	MS Excel
NavisWorks	GTStrudl

David W. Moore

PROFESSIONAL SUMMARY

Thirty-five years of nuclear power plant experience most at Sequoyah Nuclear Plant. During this tenure, have held positions as, Outage Management, Operations Assessor, Human Performance Manager, Operations Work Control Planning and Scheduling Manager, Shift Manager and various operator positions.

PROFESSIONAL EXPERIENCE:

10/11 to Present - worked at Sequoyah Nuclear plant on TVA's Fukushima Japan response team focusing on Sequoyah site specific strategies and responses.

7/11 to 10/11- worked at Watts Bar Nuclear plant for the NEI 07-07- Groundwater Contamination (Tritium) environmental audit.

4/11 to 6/11- worked at Sequoyah Nuclear plant for the NEI 07-07- Groundwater Contamination (Tritium) environmental audit.

10/10 to 4/11- worked at Watts Bar Nuclear plant as a Developer for the Unit 1/Unit 2 startup and unit differences training for operators.

11/09 to 7/10- worked at Sequoyah Nuclear plant as a Developer for the Learning Material Upgrade Project for Operator Training.

6/09 to 11/09- worked at Sequoyah Nuclear Plant Training Center as an instructor for Operator Training.

12/08 to 5/09- worked at Prairie Island Nuclear plant as a developer for the Maintenance Rule Training Material.

9/07 to 11/08- worked at Watts Bar Nuclear plant as a Developer for the Learning Material Upgrade Project for Operator Training.

10/06 to 7/07- worked as mentor and operations manager at the Molten Salt Reactor in Oak Ridge Tennessee.

9/05- Retired in from Sequoyah Nuclear Plant

4/00 to 9/05 Sequoyah Nuclear Plant, Soddy-Daisy, TN
Shift Manager

Perform the duties of the Shift Manager. Ensure the safe operation of SQN under all conditions. During an emergency, duties include directing and controlling the actions of the operating crew and support personnel, as well as placing and maintaining the plant in a safe condition. During accident conditions serve as the Site Emergency Director until properly relieved. Serves as the Plant Manager whenever he is offsite to ensure the necessary management functions, protective actions and notifications are carried out.
Completed the INPO Shift Managers training program at the INPO training facility.
Served a lead assessor for Sequoyah Nuclear Plant switchyard and plant electrical system reliability.
Served as a team member for the INPO mid-cycle operational readiness assessment at the Columbia Generating Station.
Also served a team member for the operational readiness review for the Farley Generating Station.

Developed and implemented a Human Performance Coaching and training program for the operations department.
Served as the Work Control Supervisor managing the work schedule, work priorities and plant critical evolutions.

1986 – 2000 Sequoyah Nuclear Plant, Soddy-Daisy, TN
Unit Supervisor

Obtained and maintained a Senior Reactor Operators license since 1986. · . Served as a Unit Supervisor for the Plant restart effort from 1984-1986. Responsible for the safe and reliable operation of the assigned unit and for compliance with Technical Specifications, operating license requirements, plant procedures, regulations and orders of the NRC Served as the refueling supervisor responsible for the refueling crew, maintenance group, engineering group and associated contractors. In direct charge of the operation of the assigned unit. Direct and supervise licensed and non licensed operators to ensure proper performance of their duties.· Exercise control over any action which could affect reactivity of the reactor.· Have the authority to shutdown the unit or any equipment if conditions warrant.· Authorize the removal and return to service of plant equipment.· Enforce control room conduct and activities.· Coordinate operation and surveillance testing of plant equipment and systems.· Coordinate tagging operations to include removal from service of all mechanical and electrical equipment.· Assumed the control room command function in the absence of the Shift Manager. · Had the responsibility for approval and review of all radwaste releases.

1980 – 1986 Sequoyah Nuclear Plant, Soddy-Daisy, TN
Reactor Operator, As a reactor operator participated in unit start up to 100% power and criticality of the reactor.· Hot functional testing for the Unit 2 reactor and initial power ascension.· Obtained a Reactor operator license in 1981.

1979–1980 Sequoyah Nuclear Plant, Soddy-Daisy, TN
Assistant Unit Operator

Participated in initial fuel loading.· Involved in low power physics testing for the initial start up.· Performed operations and alignments of plant systems during plant operation and startup testing.

1977–1979 Sequoyah Nuclear Plant, Soddy-Daisy, TN
Nuclear Student Generating Plant Operator, Completed a two year training program learning systems, procedures and theory of the nuclear industry.

1974–1977 Gilman Paint and Varnish Chattanooga, TN.
Chemical Technician, Responsible for sales, purchasing of inventory, store accounting and banking.

1973–1974 Industrial Water Chemicals Chattanooga, TN.
Chemical Technician
Assisted in the development and the manufacture of chemicals.· Analyzed Boiler and heat exchanger water systems· Prescribed chemical treatment programs for industrial applications
Assistant Store Manager

EDUCATION

1968–1973 Tennessee Technological University Cookeville, TN
BS Degree in Biology

Interests
Antique automobile restoration

S. Lance Summers, P.E.
Structural Engineer

Resume

SUMMARY

Structural Engineer with over seven years of engineering experience, including four years with WorleyParsons. Primary responsibilities included the overall structural design and coordination for all types of power plant design and retrofit projects. Tasks included structural steel design, ductwork design, qualifying existing steel for upgraded loads/new code, foundation design, and providing erection/fabrication technical support for power generating stations. Skilled in creating and analyzing STAAD models for ductwork, structural steel, mat foundations, as well as creatively utilizing other software such as Excel, MathCAD, Smart Plant, and similar programs to expedite design. Also active in client interface with participation in project meetings and budget proposals. In addition, responsibilities include the inspection of ductwork, structural steel, and chimneys as part of the Chattanooga Condition Assesment Team. Familiar with AISC Steel Manual (ASD and LRFD), ACI 318-05, IBC 2000, and ASCE 7-05.

EXPERIENCE

2009 - Present **Structural Engineer , WorleyParsons, Chattanooga, Tennessee**

Tennessee Valley Authority (TVA) – Sequoyah Nuclear Power Plant, Soddy-Daisy, Tennessee. Qualification of new and existing nuclear fire protection pipe supports for new loading conditions, following appropriate design criteria, code provisions, and NRC requirements. Qualification and specification of both existing and new pipe support components, such as struts, clamps, and anchors. Qualification and design of non-standard welded connections. Pipe supports qualified using computer modeling, utilizing TVA supplied software. Software includes FAPPS (ME150), BASEPLATE II (ME035), MAPPS (ME153), CONAN, and IAP. Creation of supporting calculation packages utilizing MathCAD, Microsoft Excel and Word. Responsible for design input and verification of DCA (Drawing Change Authorization), which serves as the working document for required pipe support configurations and final support drawings to be issued into the TVA database.

Tennessee Valley Authority (TVA) – Browns Ferry Nuclear Power Plant, Athens, Alabama. Qualification of existing nuclear pipe supports for new loading conditions associated with the replacement of motors on two minimum flow valves, following appropriate design criteria, code provisions, and NRC requirements. Qualification and specification of existing pipe support components, such as struts, clamps, and anchors. Qualification and design of non-standard welded connections. Pipe supports qualified using computer modeling, utilizing TVA supplied software. Software includes FAPPS (ME150), BASEPLATE II (ME035), MAPPS (ME153), CONAN, and IAP. Creation of supporting calculation packages utilizing MathCAD, Microsoft Excel and Word. Responsible for design input and verification of DCA (Drawing Change Authorization), which serves as the working document for required pipe support configurations and final support drawings to be issued into the TVA database.

Tennessee Valley Authority (TVA) – Watts Bar Nuclear (WBN) Power Plant Unit 2, 1200 MW Unit, Spring City, Tennessee. Served as a team lead for a group of five engineers supporting the WBN Unit 2 pipe support project. Responsibilities include, but not limited to, the qualification of existing nuclear pipe supports for new loading conditions following the appropriate design criteria, code provisions, and NRC requirements. Qualification of existing and new pipe support components, such as snubbers, struts, clamps, and springs. Qualification and design of non-standard welded connections. The task utilized computer modeling via TVA-supplied software. The software includes FAPPS (ME150), BASEPLATE II (ME035), MAPPS (ME153), CONAN, and IAP. MathCAD, Excel, and Word. Software used in the creation of support calculation packages. Responsible for the review of Drawing Revision Authorization (DRA) to ensure accurate support drawings for issuance into the TVA database. Additional responsibilities included the review and verification of pipe support calculations prior to issuance and coordination between multiple offices to ensure quality, completeness, and consistency.

TVA – Widows Creek Fossil Unit 8 Opacity Reduction Study. Served as the structural task lead for a cost study of the addition of various air quality control measures (baghouse/precipitator) to Widows Creek Unit 8. The task included preliminary structural engineering of new ductwork, structural support steel, foundations, as well as the retrofit of the existing ductwork and structures. The work involved site visits to walkdown existing structures to find ways to interface with existing equipment and route ductwork through the existing structure. Interface with mechanical leads to provide the necessary ductwork cross-section and to ensure an efficient flow path to achieve a minimal pressure drop. Worked closely with the estimating department in order to produce an accurate cost estimate for four different retrofitting options.

Southern Company – Scherer Unit 1-4, Flue Gas Desulphurization (FGD)/Selective Catalytic Reduction (SCR) Project, Juliet, Georgia. Responsible for the design of an electrical utility bridge for Units 1 and 2. The process included the layout of the utility bridge using SmartPlant Review and the design of the structure utilizing STAAD Pro. The task included the design of anchor bolts and the design of spread footings to support the structure.

RC Cape May Holdings, LLC. – BL England Unit 2 Emissions Control Project, Beesley's Point, New Jersey. Primary responsibilities included the analysis and design of pile foundations to support the new SCR structure. The task included using SmartPlant Review to coordinate the layout of augercast piles in order to avoid existing interferences and obstructions. STAAD Pro 2007 finite element analysis used to analyze the pipe cap foundation. ACI 318-05 was utilized to provide the proper reinforcement for the pile cap as well as ensure that the anchor bolts met the requirements of Appendix D.

2007 - 2009 **Structural Engineer Associate, WorleyParsons, Chattanooga, Tennessee**

CPS Peaking – Turbine Project, Braunig Plant, Texas. Primary responsibilities included the computer modeling, anlaysis, and design of soil supported mat foundations. Analysis and design of small equipment foundations including oil containment areas. Interfaced with the mechanical department in order to provide pipe supports and the associated foundations to support the chilled water and natural gas piping systems throughout the plant.

Southern Company – Scherer Unit 1-4, FGD/SCR Project, Juliet, Georgia – Primary responsibilities included the retrofit of existing ductwork and support structures due to increased loading caused by an upgraded pressure load associated with the addition of a mercury baghouse, FGD, and SCR. STAAD used to analyze the ductwork and support structures while PCA Column and LPile were used to evaluate the existing caissons and piers. Retrofit modifications were made to qualify the structures for the increased shear, uplift, and compressive forces that were caused by the upgraded pressure.

Mitsubishi Power Systems Americas – Termocandelaria, Simple Cycle Plant Dual Fuel Conversion, Cartegena, Colombia. Primary responsibilities included the computer modeling, analysis, and design of soil supported mat foundations. Analysis and design of small equipment foundations including oil containment areas. Provided pipe supports and foundations to assist mechanical/electrical engineers in the balance-of-plant design. Produced calculations for cast-in-place and post-installed equipment anchorage to concrete. Other duties included the design of concrete and masonry structures that were needed due to fire rating requirements. Work also included coordinating work with other disciplines to produce deliverables, providing project manager with regular updates, and producing estimates and NWIs for additional work added to the Structural Engineering Scope.

Southern Company – Plant Scherer Unit 3 Mercury Baghouse, Juliet, Georgia. Primary responsibilities included performing the design and analysis of large ductwork and their support structures, as well as providing fabrication/erection support to the client. Other duties included creating and analyzing models for existing steel, ductwork, and working with designers to facilitate the generation of drawing deliverables, and meeting schedule requirements.

Condition Assessment Services Team Member, WorleyParsons, Chattanooga, Tennessee

In addition to structural engineering responsibilities, additional responsibilities include condition assessment inspections at fossil power plants. The tasks include traveling to the site and performing inspections, documenting the existing conditions of the respective component during the inspection, and providing a formalized post-inspection report which documents the findings and makes recommendations on any needed modifications to the structure. Typical inspections include air and flue gas ductwork, circulating cooling water tunnels, chimneys and stacks, and other miscellaneous structural systems.

2004 - 2007 **Project Engineer – C.W. Matthews Contracting Co., Marietta, Georgia**

GDOT – McFarland Rd/SR 400 Interchange Project. Primary responsibilities included the design and implementation of erosion control plans, traffic control plans, and staging plans. In addition, responsibilities included working with Department of Transportation (DOT) representatives to alter/change plan design in order to account for situations in the field or in order to have a minimal impact of the traveling public. Responsibilities also included the coordination and scheduling of work and subcontractors.

GDOT – SR20/SR400 Interchange Improvement Project. Primary responsibilities included the coordination and scheduling of work done by subcontractors and inspection of the work upon completion. In addition, responsibilities included working with DOT representatives to redesign plan in order to accommodate existing field conditions and to produce a more buildable design which was safer for the constructors as well as the traveling public. This included stormwater drainage plans, traffic control plans, and staging plans.

EDUCATION

B.S., Civil Engineering Technology, Southern Polytechnic State University, Marietta, Georgia, 2003.

REGISTRATIONS/AFFILIATIONS

Registered Professional Engineer, Civil, Pennsylvania, No. PE077046, 2009

Member, American Institute of Steel Construction (AISC)

Confined Space and Fall Protection Trained

SPECIFIC TECHNICAL EXPERTISE/SPECIALIST COURSES

Computer Skills

STAADPro V8i	AutoCAD®
MathCAD	SmartPlant Review
LPile Plus 5.0	SmartPlant Foundation
Microsoft Office Applications	PCA Column

Glynna J Wilson
Civil Design Engineer
Sequoyah Nuclear Plant
Tennessee Valley Authority

SUMMARY
Civil Engineer with 4.5 years of experience with the Tennessee Valley Authority at Sequoyah Nuclear Plant. Experience includes designing structural modifications with plant system, equipment seismic qualification, design change field implementation, and other various roles of a Civil Engineer. Lead Civil Engineer on Maintenance Rule, Structural Monitoring, and Dam Governance. Also, the Site Snubber Program Engineer. Familiar with AISC Steel Construction Manual, ACI 318 Building Code, and ASCE 7 Minimum Design Loads for buildings and other structures. Proficient with current design software including AutoCAD and MathCAD.

EXPERIENCE
Tennessee Valley Authority- Served as a Civil Engineer within the Civil Engineering Design Group at Sequoyah Nuclear Plant since April 2008. Is qualified in Equipment Seismic Qualification and performed numerous evaluations of equipment during the procurement process. Responsible for field support for design change implementation. Familiar with the TVA CAP process and how it is used for problem identification and resolution. Qualified Civil Engineer in the Maintenance Rule Program responsible for maintaining structural condition of plant buildings and entering them into the CAP program and Maintenance Rule Tracking Calculation in order to monitor and drive resolution. Other responsibilities include field support, design change packages, verification of others work, and interface with other departments within and outside of the Engineering Organization.

EDUCATION
B.S., Civil Engineering, University of Tennessee at Chattanooga, Chattanooga, Tennessee, 2008

WorleyParsons
resources & energy

Phillip W. York, E.I.T.
Structural Engineering Associate

Resume

SUMMARY

Structural Engineering Associate with over three years of experience in the structural and civil engineering fields including pipe support systems analysis and structural design.

EXPERIENCE

2010 - Present **Structural Engineering Associate, WorleyParsons, Chattanooga, Tennessee**

Tennessee Valley Authority (TVA) – Brown's Ferry Nuclear Power Plant, Athens, Alabama. Assisted in identifying and locating electrical panels and components for cable identification in all fire safety related systems.

TVA – Watts Bar Nuclear Power Plant, Spring City, Tennessee. Conducted field walkdowns of piping layout and supports.

TVA – Bellefonte Nuclear Power Plant, Hollywood, Alabama. Originated engineering analysis of pipe support systems including baseplates, structural steel, anchor bolts, welds, vendor components, and integral attachments.

2011 **Civil Engineer, Atwell Group, Charleston, Tennessee**

Verified field accuracy and installation of storm sewers and sewer structures compared with designed drawings.

2008 - 2009 **Structural Engineer, March Adams & Associates, Chattanooga, Tennessee**

Assisted on structural design and site planning of engineering projects including a precast concrete bridge, apartment complexes, and various industrial sites.

2007 - 2008 **Dam Safety/River Operations Intern, TVA, Chattanooga, Tennessee**

Programmed proprietary database to accept decades of instrumentation data from hydroelectric plants and to calculate along predetermined parameters.

EDUCATION

B.S., Engineering (Civil Concentration), University of Tennessee, Chattanooga, Tennessee, 2008

REGISTRATIONS/AFFILIATIONS

Engineer-in-Training, State of Tennessee, License #26776

SPECIFIC TECHNICAL EXPERTISE

AutoCAD®, 2D and 3D Drafting

SolidWorks, 2D and 3D Drafting

STAAD.Pro, Structural Analysis and Design

RISA, 2D and 3D Structural Analysis

EPRI | ELECTRIC POWER RESEARCH INSTITUTE

Certificate of Completion

Isaac Antanaitis

Training on Near Term Task Force Recommendation 2.3 - Plant Seismic Walkdowns

June 21, 2012

Date

R.P. Kassawara

Robert K. Kassawara
EPRI Manager,
Structural Reliability & Integrity

EPRI | ELECTRIC POWER RESEARCH INSTITUTE

Certificate of Completion

Joshua Best

Training on Near Term Task Force Recommendation 2.3 - Plant Seismic Walkdowns

June 21, 2012
Date

R.P. Kassawara

Robert K. Kassawara
EPRI Manager,
Structural Reliability & Integrity

EPRI | ELECTRIC POWER RESEARCH INSTITUTE

Certificate of Completion

John Dizon

Training on Near Term Task Force Recommendation 2.3 - Plant Seismic Walkdowns

June 21, 2012
Date

R.P. Kassawara
Robert K. Kassawara
EPRI Manager,
Structural Reliability & Integrity

EPRI | ELECTRIC POWER RESEARCH INSTITUTE

Certificate of Completion

Stephen Eder

Training on Near Term Task Force Recommendation 2.3 - Plant Seismic Walkdowns

June 21, 2012
Date

R.P. Kassawara
Robert K. Kassawara
EPRI Manager,
Structural Reliability & Integrity

EPRI | ELECTRIC POWER RESEARCH INSTITUTE

Certificate of Completion

Robert Malone

Training on Near Term Task Force Recommendation 2.3 - Plant Seismic Walkdowns

June 21, 2012
Date

R.P. Kassawara
Robert K. Kassawara
EPRI Manager,
Structural Reliability & Integrity

EPRI | ELECTRIC POWER RESEARCH INSTITUTE

Certificate of Completion

Karen Tracy

Training on Near Term Task Force Recommendation 2.3 - Plant Seismic Walkdowns

June 21, 2012
Date

R.P. Kassawara
Robert K. Kassawara
EPRI Manager,
Structural Reliability & Integrity

TRAINING AND DEVELOPMENT ATTENDANCE RECORD

Title of Course/Activity			Location
EGT024.14 - Seismic Course			LP E3 S800
Hours Scheduled	**From (Date and Time)**	**To (Date and Time)**	**Sponsoring Organization**
8	6/28/2012 0800	6/28/2012 1600	NPG

LEARNING ACTIVITY ID 00081987

SESSION NUMBER

For Administrative Use Only	
Date Entered in ATIS:	Entered By:

Please Print

	Course Grade	*PT Code	EIN/SSN	Name (as on payroll) - First, Middle, Last)	TVA Telephone	Check if NON-TVA Employee	No. Hrs.	Short Code	Signature
1	90	P		Glynna J Wilson	843-8544	☐			Glynna J Wilson
2	N/A	P		Vincent A Bianco	843-6783	☐			Vincent A Bianco
3	97.5	P		Steven L Summers		☑			Steven L Summers
4	95	P		James P. Edgar		☑			James P. Edgar
5	85	P		Avinash C Chundury		☑			Avinash C Chundury
6	95	P		Michael W Gordon		☑			Michael W Gordon
7	N/A	P		Kenneth R. Gates	751-8412	☑	part time		K. R. Gates
8						☐			
9						☐			
10						☐			
11						☐			
12						☐			
13						☐			
14						☐			
15						☐			
16						☐			

*Participant Codes: C - Certified, F - Failed, I - Incomplete, N - No Show, P - Pass, W - Waiver

6/28/12 Stephen

Trainer(s) Full Name: Steven Eder / John Dizon

Trainer(s) Telephone: 423-365-1569 / 423-365-1583

Trainer's Signature

6/28/12
Date

TRAINING AND DEVELOPMENT ATTENDANCE RECORD

Title of Course/Activity			Location
EGT024.14 - Seismic Course			LP E3 S800
Hours Scheduled	**From (Date and Time)**	**To (Date and Time)**	**Sponsoring Organization**
8	6/28/2012 0800	6/28/2012 1600	NPG

LEARNING ACTIVITY ID 00081987

SESSION NUMBER

For Administrative Use Only	
Date Entered in ATIS:	Entered By:

Please Print

	Course Grade	*PT Code	EIN/SSN	Name (as on payroll - First, Middle, Last)	TVA Telephone	Check if NON-TVA Employee	No. Hrs.	Short Code	Signature
1	100	P		PATRICK ARMET MCCARTHER		☒			Patrick McCarthy
2	90	P		George Bongart IV		☒			George Bongart
3	97.5	P		Phillip York		☒			Phillip York
4	100	P		Heather Powell		☒			H. M. Powell
5	95	P		Jason B. Black		☒			Jason Black
6						☐			
7						☐			
8						☐			
9						☐			
10						☐			
11						☐			
12						☐			
13						☐			
14						☐			
15						☐			
16						☐			

*Participant Codes: C - Cancelled; F - Failed; I - Incomplete; N - No Show; P - Pass; W - Waiver

Trainer(s) Full Name: Stephen Steven Eder / John Dizon

Trainer(s) Telephone: 423-365-1569 / 423-365-1583

Trainer's Signature

6/28/12
Date

SQN Seismic Training

Name	Company	Phone	Email
Joshua Best	TVA/S&L	423-751-6675	jhbest@tva.gov
Lance Summers	Worley Parsons	779-4245 ~~423-785-5474~~	SSUMMERS@TVA.gov
Isaac Antanaitis	WorleyParsons	615-218-2545	ijantanatis@tva.gov
Phillip York	WorleyParsons	423-314-2636	pwyork@tva.gov
Glynna Wilson	TVA	423-843-8544	gjwilson@tva.gov
Karen Carboni (Tracy)	TVA	423-843-8703	kcarboni@tvagov
Robert Mawue	WP	931-510-2034	ROBERT.MAWUE @ WORLEYPARSONS.COM
James Edgar	WP	423-785-5421	JAMES EDGAR @ WORLEYPARSON.COM
William L. Chandler	RRC	423-843-0136	WLchandl2 @ TVA.GOV.
David Moore	RRC	423-315-3643	dwmoore@TVA.GOV
Ross A. Malone	RRC	423-751-3811	Ramalone1@TVA.GOV

Appendix B: Base List 1

This Appendix includes the Sequoyah Unit 2 Base List 1..

UNID	Description	Safety Function
0-ACCM-032-0060	AUX CONTROL AIR ACC A	0
0-ACCM-032-0086	AUX CONTROL AIR ACC B	0
0-AHU-311-0020	MAIN CONTROL ROOM AHU A-A	0
0-AHU-311-0023	MAIN CONTROL ROOM AHU B-B	0
0-AHU-311-0027	ELEC BOARD ROOM AHU A-A	0
0-AHU-311-0028	ELEC BOARD ROOM AHU B-B	0
0-BATB-250-QV	125V DC VITAL BATTERY I	0
0-BATB-250-QW	125V DC VITAL BATTERY II	0
0-BATB-250-QX	125V DC VITAL BATTERY III	0
0-BATB-250-QY	125V DC VITAL BATTERY IV	0
0-BDG-250-KE	125V DC VITAL BATTERY BOARD I	0
0-BDG-250-KF	125V DC VITAL BATTERY BOARD II	0
0-BDG-250-KG	125V DC VITAL BATTERY BOARD III	0
0-BDG-250-KH	125V DC VITAL BATTERY BOARD IV	0
0-CHGB-250-QE	125V DC VITAL BATTERY CHARGER I	0
0-CHGB-250-QF	125V DC VITAL BATTERY CHARGER 1-SPARE	0
0-CHGB-250-QG	125V DC VITAL BATTERY CHARGER II	0
0-CHGB-250-QH	125V DC VITAL BATTERY CHARGER III	0
0-CHGB-250-QJ	125V DC VITAL BATTERY CHARGER IV	0
0-CHGB-250-QK	125V DC VITAL BATTERY CHARGER 2-SPARE	0
0-CHR-311-0126	MAIN CONTROL ROOM CHILLER PKG A-A	0
0-CHR-311-0141	MAIN CONTROL ROOM CHILLER PKG B-B	0
0-CHR-311-0156	ELEC BOARD ROOM CHILLER PKG A-A	0
0-CHR-311-0171	ELEC BOARD ROOM CHILLER PKG B-B	0
0-CHR-313-0303	SHUTDOWN BD ROOMS A&B CHILLER PKG A-A	0
0-CHR-313-0338	SHUTDOWN BD ROOMS A8B CHILLER PKG 8-8	0
0-CLR-030-0192	SPENT FUEL PIT PMP & TB BOOSTER PMP RM COOLER A-A	5
0-CLR-030-0193	SPENT FUEL PIT PMP 8 TB BOOSTER PMP ROOM COOLER B-B	5
0-CLR-032-0065	AUX CONTROL AIR AFTERCOOLER A	0
0-CLR-032-0092	AUX CONTROL AIR AFTERCOOLER B	0
0-CMP-032-0060	AUX CONTROL AIR COMPRESSOR A-A	0
0-CMP-032-0086	AUX CONTROL AIR COMPRESSOR B-B	0

UNID	Description	Safety Function
0-CRN-303-SJ	125 TON AUX BLDG CRANE	0
0-DRYA-032-0074	AUX BLDG AIR DRYER (NO 1) A-A	0
0-DRYA-032-0075	AUX BLDG AIR DRYER (NO 2) A-A	0
0-DRYA-032-0099	AUX BLDG AIR DRYER (NO 2) B-B	0
0-DRYA-032-0100	AUX BLDG AIR DRYER (NO 1) B-B	0
0-FCV-070-0001	SFPCS HTX B OUTLET VLV	5
0-FCV-070-0011	SFPCS HTX A OUTLET VLV	5
0-FCV-070-0040	SFPCS HTX B INLET VLV	5
0-FCV-070-0041	SFPCS HTX A INLET VLV	5
0-FCV-070-0193	SFPCS HTX SUPPLY HEADER VLV	5
0-FCV-070-0194	SFPCS HTX SUPPLY HEADER VLV	5
0-FCV-070-0197	SFPCS HTX SUPPLY HEADER VLV	5
0-FCV-070-0198	SFPCS HTX SUPPLY HEADER VLV	5
0-FCV-070-0206	COND DEMIN WASTE EVAL BLDF RETURN ISOL VLV	5
0-FCV-070-0208	COND DEMIN WASTE EVAL BLDF SUPPLY ISOL VLV	5
0-FLT-032-0074	AUX CONRTOL AIR COMPRESSOR A-A PREFILTER	0
0-FLT-032-0075	AUX CONRTOL AIR COMPRESSOR B-B PREFILTER	0
0-FLT-032-0082	CONTROL AIR AFTERFILTER TO DRYERS A-A	0
0-FLT-032-0085	CONTROL AIR AFTERFILTER TO DRYERS B-B	0
0-FSV-311-0022A	MAIN CONT RM AHU A-A TEMP	0
0-FSV-311-0022B	MAIN CONT RM AHU A-A TEMP	0
0-FSV-311-0039A	MAIN CONT RM AHU B-B TEMP	0
0-FSV-311-0039B	MAIN CONT RM AHU B-B TEMP	0
0-FSV-311-0041A	ELECTRICAL BD RM AHU B-B TEMP	0
0-FSV-311-0041B	ELECTRICAL BD RM AHU B-B TEMP	0
0-FSV-311-0043A	ELECTRICAL BD RM AHU B-B TEMP	0
0-FSV-311-0043B	ELECTRICAL BD RM AHU B-B TEMP	0
0-HEX-070-0012A	COMPONENT COOLING HX 0B1	0
0-HEX-070-0012B	COMPONENT COOLING HX 0B2	0
0-HEX-077-0096	WASTE GAS COMPRESSOR A HEAT EXCHANGER	0
0-HEX-077-0111	WASTE GAS COMPRESSOR B HEAT EXCHANGER	0
0-HEX-078-0017	SPENT FUEL PIT HEAT EXCHANGER B	0

UNID	Description	Safety Function
0-HEX-078-0018	SPENT FUEL PIT HEAT EXCHANGER A	0
0-LS-018-0062A/1	DSL GENERATOR DAY TANK 1 LEVEL-LOW	4
0-LS-018-0062A/2	DSL GENERATOR DAY TANK 1 LEVEL-LOW	4
0-LS-018-0062A/3	DSL GENERATOR DAY TANK 1 LEVEL-LOW	4
0-LS-018-0062A/4	DSL GENERATOR DAY TANK 1 LEVEL-LOW	4
0-LS-018-0062B/1	DSL GENERATOR DAY TANK 1 LEVEL-HI	4
0-LS-018-0062B/2	DSL GENERATOR DAY TANK 1 LEVEL-HI	4
0-LS-018-0062B/3	DSL GENERATOR DAY TANK 1 LEVEL-HI	4
0-LS-018-0062B/4	DSL GENERATOR DAY TANK 1 LEVEL-HI	4
0-LS-018-0078A/1	DSL GENERATOR DAY TANK 2 LEVEL-LOW	4
0-LS-018-0078A/2	DSL GENERATOR DAY TANK 2 LEVEL-LOW	4
0-LS-018-0078A/3	DSL GENERATOR DAY TANK 2 LEVEL-LOW	4
0-LS-018-0078A/4	DSL GENERATOR DAY TANK 2 LEVEL-LOW	4
0-LS-018-0078B/1	DSL GENERATOR DAY TANK 2 LEVEL-HI	4
0-LS-018-0078B/2	DSL GENERATOR DAY TANK 2 LEVEL-HI	4
0-LS-018-0078B/3	DSL GENERATOR DAY TANK 2 LEVEL-HI	4
0-LS-018-0078B/4	DSL GENERATOR DAY TANK 2 LEVEL-HI	4
0-PMP-067-0432	ERCW PUMP J-A	0
0-PMP-067-0436	ERCW PUMP K-A	0
0-PMP-067-0440	ERCW PUMP L-B	0
0-PMP-067-0444	ERCW PUMP M-B	0
0-PMP-067-0452	ERCW PUMP N-B	0
0-PMP-067-0456	ERCW PUMP P-B	0
0-PMP-067-0460	ERCW PUMP Q-A	0
0-PMP-067-0464	ERCW PUMP R-A	0
0-PMP-067-0470	ERCW SCREEN WASH PUMP A-A	0
0-PMP-067-0477	ERCW SCREEN WASH PUMP B-B	0
0-PMP-067-0482	ERCW SCREEN WASH PUMP C-B	0
0-PMP-067-0487	ERCW SCREEN WASH PUMP D-A	0
0-PMP-070-0051	CCS PUMP C-S	0
0-PMP-313-0303	SHTDN BD RM A&B CW SYS CIRC PMP	0
0-PMP-313-0338	SHTDN BD RM A&B CW SYS CIRC PMP	0

UNID	Description	Safety Function
0-SGEN-311-0053	MAIN CONT RM AHU A-A STEAM GEN	0
0-SGEN-311-0062	ELECT BD RM AHU A-A STEAM GEN	0
0-TCV-067-0195	ELECT RM A/C COND A SUPPLY CNTL VLV	0
0-TCV-067-0197	CONT BLDG A/C COND A SUPPLY CNTL VLV	0
0-TCV-067-0199	ELECT RM A/C COND B SUPPLY CNTL VLV	0
0-TCV-067-0201	CONT BLDG A/C COND B SUPPLY CNTL VLV	0
0-TNK-018-5032-1A1	HORIZONTAL DSL FUEL OIL STG TNK	0
0-TNK-018-5032-1A2	HORIZONTAL DSL FUEL OIL STG TNK	0
0-TNK-018-5032-1A3	HORIZONTAL DSL FUEL OIL STG TNK	0
0-TNK-018-5032-1A4	HORIZONTAL DSL FUEL OIL STG TNK	0
0-TNK-018-5032-1B1	HORIZONTAL DSL FUEL OIL STG TNK	0
0-TNK-018-5032-1B2	HORIZONTAL DSL FUEL OIL STG TNK	0
0-TNK-018-5032-1B3	HORIZONTAL DSL FUEL OIL STG TNK	0
0-TNK-018-5032-1B4	HORIZONTAL DSL FUEL OIL STG TNK	0
0-TNK-018-5032-2A1	HORIZONTAL DSL FUEL OIL STG TNK	0
0-TNK-018-5032-2A2	HORIZONTAL DSL FUEL OIL STG TNK	0
0-TNK-018-5032-2A3	HORIZONTAL DSL FUEL OIL STG TNK	0
0-TNK-018-5032-2A4	HORIZONTAL DSL FUEL OIL STG TNK	0
0-TNK-018-5032-2B1	HORIZONTAL DSL FUEL OIL STG TNK	0
0-TNK-018-5032-2B2	HORIZONTAL DSL FUEL OIL STG TNK	0
0-TNK-018-5032-2B3	HORIZONTAL DSL FUEL OIL STG TNK	0
0-TNK-018-5032-2B4	HORIZONTAL DSL FUEL OIL STG TNK	0
0-TNK-032-0062	AUX CONTROL AIR RECVR A-A	0
0-TNK-032-0088	AUX CONTROL AIR RECVR B-B	0
2-AHU-030-0080	CONTROL ROD DRIVE COOLING UNIT D-B	5
2-AHU-030-0083	CONTROL ROD DRIVE COOLING UNIT A-A	5
2-AHU-030-0088	CONTROL ROD DRIVE COOLING UNIT C-A	5
2-AHU-030-0092	CONTROL ROD DRIVE COOLING UNIT B-B	5
2-AHU-313-0262	INCORE INST RM AHU A	0
2-AHU-313-0267	INCORE INST RM AHU B	0
2-AHU-313-0332	SHTDN BD RM B SUPPLY AHU 2A-A	0
2-AHU-313-0367	SHTDN BD RM B SUPPLY AHU 2B-B	0

UNID	Description	Safety Function
2-AHU-313-0488	480V BD RM 2A SUPPLY AHU 2A-A	0
2-AHU-313-0514	480V BD RM 2B SUPPLY AHU 2B-B	0
2-BATB-082-UD	DG 2A-A BATTERY	0
2-BATB-082-UE	DB 2B-B BATTERY	0
2-BDA-202-CO	6900V SHUTDOWN BOARD 2A-A	0
2-BDB-201-DN	480V SHUTDOWN BD 2A1-A	0
2-BDB-201-DO	480V SHUTDOWN BD 2A2-A	0
2-BDB-201-DP	480V SHUTDOWN BD 2B1-B	0
2-BDB-201-DQ	480V SHUTDOWN BD 2B2-B	0
2-BDB-202-CP	6900V SHUTDOWN BOARD 2B-B	0
2-BDC-201-FL	480V ERCW MCC 2A-A	0
2-BDC-201-FN	480V ERCW MCC 2B-B	0
2-BDC-201-FQ	480V DIESEL AUXILIARY BOARD 2A1-A	0
2-BDC-201-FR	480V DIESEL AUXILIARY BOARD 2A2-A	0
2-BDC-201-FU	480V DIESEL AUXILIARY BOARD 2B1-B	0
2-BDC-201-FV	480V DIESEL AUXILIARY BOARD 2B2-B	0
2-BDC-201-GL	480V REACTOR MOV BOARD 2A1-A	0
2-BDC-201-GM	480V REACTOR MOV BOARD 2A2-A	0
2-BDC-201-GN	480V REACTOR MOV BOARD 2B1-B	0
2-BDC-201-GO	480V REACTOR MOV BOARD 2B2-B	0
2-BDC-201-JJ	480V CONTROL & AUX BLDG VENT BOARD 2A1-A	0
2-BDC-201-JK	480V CONTROL & AUX BLDG VENT BOARD 2A2-A	0
2-BDC-201-JL	480V CONTROL & AUX BLDG VENT BOARD 2B1-B	0
2-BDC-201-JM	480V CONTROL & AUX BLDG VENT BOARD 2B2-B	0
2-BDC-201-JP	480V REACTOR VENT BOARD 2A-A	0
2-BDC-201-JQ	480V REACTOR VENT BOARD 2B-B	0
2-BDE-250-ND	120V AC VITAL INST POWER BOARD 2-I	0
2-BDE-250-NF	120V AC VITAL INST POWER BOARD 2-II	0
2-BDE-250-NH	120V AC VITAL INST POWER BOARD 2-III	0
2-BDE-250-NK	120V AC VITAL INST POWER BOARD 2-IV	0
2-CHGB-062-TZ	DG 2A-A BATTERY CHARGER	0
2-CHGB-062-UA	DG 2B-B BATTERY CHARGER	0

UNID	Description	Safety Function
2-CHR-043-0156	HOT SAMPLE ROOM CHILLER	5
2-CHR-313-0221A	INCORE INST RMWTR CHILLER PKG A	0
2-CHR-313-0228A	INCORE INST RMWTR CHILLER PKG B	0
2-CLR-030-0074	LOWER COMPT COOLING UNIT A-A	5
2-CLR-030-0075	LOWER COMPT COOLING UNIT C-A	5
2-CLR-030-0077	LOWER COMPT COOLING UNIT B-B	5
2-CLR-030-0078	LOWER COMPT COOLING UNIT D-B	5
2-CLR-030-0095	UPPER COMPT COOLING UNIT A	5
2-CLR-030-0097	UPPER COMPT COOLING UNIT B	5
2-CLR-030-0099	UPPER COMPT COOLING UNIT C	5
2-CLR-030-0100	UPPER COMPT COOLING UNIT D	5
2-CLR-030-0175	RHR PUMP RM COOLER 2A-A	5
2-CLR-030-0176	RHR PUMP RM COOLER 2B-B	5
2-CLR-030-0177	CONTAINMENT SPRAY PUMP RM COOLER 2A-A	5
2-CLR-030-0178	CONTAINMENT SPRAY PUMP RM COOLER 2B-B	5
2-CLR-030-0179	SIS PUMP RM COOLER 2B-B	5
2-CLR-030-0180	SIS PUMP RM COOLER 2A-A	5
2-CLR-030-0181	RECIP CHG PMP RM COOLER 2C-B	0
2-CLR-030-0182	CENTRIF CHARGING PUMP RM COOLER 2B-B	5
2-CLR-030-0183	CENTRIF CHARGING PUMP RM COOLER 2A-A	5
2-CLR-030-0184	BA XFER PMP & AUX FW PMP SP CLR A-A	5
2-CLR-030-0185	BA XFER PMP & AUX FW PMP SP CLR B-B	5
2-CLR-030-0186	PENETRATION ROOM COOLER 2A-A	5
2-CLR-030-0187	PENETRATION ROOM COOLER 2B-B	5
2-CLR-030-0194	PENETRATION ROOM COOLER 2A-A	5
2-CLR-030-0195	PENETRATION ROOM COOLER 2B-B	5
2-CLR-030-0196	PENETRATION ROOM COOLER 2A-A	5
2-CLR-030-0197	PENETRATION ROOM COOLER 2B-B	5
2-CLR-030-0201	PIPE CHASE COOLER 2A-A	5
2-CLR-030-0202	PIPE CHASE COOLER 2B-B	5
2-CLR-043-0331A	POST ACCIDENT SAMPLING COOLERS 1	5
2-CLR-043-0331B	POST ACCIDENT SAMPLING COOLERS 2	5

UNID	Description	Safety Function
2-CLR-062-0191	BORIC ACID EVAP PKG B DISTILLATE COOLER	3,5
2-CMP-082-0240	DSL 2A1 STARTING AIR COMPRESSER 25.5 CFM	0
2-CMP-082-0241	DSL 2A2 STARTING AIR COMPRESSER 25.5 CFM	0
2-CMP-082-0270	DSL 2B1 STARTING AIR COMPRESSER 25.5 CFM	0
2-CMP-082-0271	DSL 2B2 STARTING AIR COMPRESSER 25.5 CFM	0
2-CMP-313-0483	480V ELECT BD RM 2A AIR RECIP COMP 2A-A	0
2-CMP-313-0508	480V ELECT BD RM 2B AIR RECIP COMP 2B-B	0
2-CND-062-0192	BORIC ACID EVAP PKG B CONDENSER	3,5
2-CND-062-0196	BORIC ACID EVAP PKG B VENT CONDENSER	3,5
2-CND-313-2074	480V ELECT BD RM 2A AIR COOLED COND 2A-A	0
2-CND-313-2075	480V ELECT BD RM 2B AIR COOLED COND 2B-B	0
2-CRN-303-DQ	175 TON POLAR CRANE	0
2-ENG-082-0002A1	DIESEL ENGINE 2A1	0
2-ENG-082-0002A2	DIESEL ENGINE 2A2	0
2-ENG-082-0002B1	DIESEL ENGINE 2B1	0
2-ENG-082-0002B2	DIESEL ENGINE 2B2	0
2-FAN-030-0038	CNTMT AIR RETURN FAN A	5
2-FAN-030-0039	CNTMT AIR RETURN FAN B	5
2-FAN-030-0246A	480V TRANSFORMER ROOM 2B EXH FAN 2B1-A	5
2-FAN-030-0246B	480V TRANSFORMER ROOM 2B EXH FAN 2B2-A	5
2-FAN-030-0246D	480V TRANSFORMER ROOM 2B EXH FAN 2B3-A	5
2-FAN-030-0246E	480V TRANSFORMER ROOM 2B EXH FAN 2B4-A	5
2-FAN-030-0250A	480V TRANSFORMER ROOM 2A EXH FAN 2A1-B	5
2-FAN-030-0250B	480V TRANSFORMER ROOM 2A EXH FAN 2A2-B	5
2-FAN-030-0316	DIESEL PANEL 2A-A VENT FAN	5
2-FAN-030-0317	DIESEL PANEL 2B-B VENT FAN	5
2-FAN-030-0448	D-G RM 2A-A EXHAUST FAN 1	5
2-FAN-030-0450	D-G RM 2B-B EXHAUST FAN 1	5
2-FAN-030-0452	D-G RM 2A-A EXHAUST FAN 2	5
2-FAN-030-0454	D-G RM 2B-B EXHAUST FAN 2	5
2-FAN-030-0456	DIESEL GEN ROOM 2A-A BATTERY HOOD EXHAUST	5
2-FAN-030-0458	DIESEL GEN ROOM 2B-B BATTERY HOOD EXHAUST	5

UNID	Description	Safety Function
2-FAN-030-0460	DIESEL GEN 2A-A ELECT BD ROOM EXHAUST	5
2-FAN-030-0462	DIESEL GEN 2B-B ELECT BD ROOM EXHAUST	5
2-FAN-030-250D	480V TRANSFORMER ROOM 2A EXH FAN 2A3-B	5
2-FAN-313-0496	BATTERY ROOM IV EXHAUST FAN 2B1-A	0
2-FAN-313-0497	BATTERY ROOM IV EXHAUST FAN 2B2-B	0
2-FAN-313-0522	BATTERY ROOM III EXHAUST FAN 2A1-A	0
2-FAN-313-0523	BATTERY ROOM III EXHAUST FAN 2A2-B	0
2-FCO-030-0250B	TRANSFORMER ROOM 2A DAMPER	5
2-FCO-030-246A	TRANSFORMER ROOM 2B DAMPER	5
2-FCO-030-246B	TRANSFORMER ROOM 2B DAMPER	5
2-FCO-030-250A	TRANSFORMER ROOM 2A DAMPER	5
2-FCO-313-0478A	BOARD RM CONDENSER 2A-A DAMPER	0
2-FCO-313-0478B	BOARD RM CONDENSER 2A-A DAMPER	0
2-FCO-313-0496	BATTERY ROOM IV DAMPER FOR FAN A1-A	0
2-FCO-313-0497	BATTERY ROOM IV DAMPER FOR FAN A2-B	0
2-FCO-313-0498	BATTERY ROOM IV DAMPER FOR FAN A2-B	0
2-FCO-313-0499	BATTERY ROOM IV DAMPER FOR FAN A1-A	0
2-FCO-313-0503	BOARD RM CONDENSER 2B-B DAMPER	0
2-FCO-313-0510	BATTERY ROOM III DAMPER FOR FAN B2-B	0
2-FCO-313-0522	BATTERY ROOM III DAMPER FOR FAN B1-A	0
2-FCO-313-0523	BATTERY ROOM III DAMPER FOR FAN B2-B	0
2-FCO-313-0524	BATTERY ROOM III DAMPER FOR FAN B1-A	0
2-FCV-001-0004	SG 1 MAIN STM HDR ISOLATION VALVE	5
2-FCV-001-0007	BLOWDOWN FLOW CONTROL VLV, SG-1	5
2-FCV-001-0011	SG 2 MAIN STM HDR ISOLATION VALVE	5
2-FCV-001-0014	BLOWDOWN HDR FLOW CONTROL VLV, SG-2	5
2-FCV-001-0015	AUX FW PMP TURB STM SUPPLY FROM SG NO 1	4,5
2-FCV-001-0016	AUX FW PMP TURB STM SUPPLY FROM SG NO 4	4,5
2-FCV-001-0022	SG 3 MAIN STM HDR ISOLATION VALVE	5
2-FCV-001-0025	BLOWDOWN HDR FLOW CONTROL VLV, SG-3	5
2-FCV-001-0029	SG 4 MAIN STM HDR ISOLATION VALVE	5
2-FCV-001-0032	BLOWDOWN HDR FLOW CONTROL VLV. SG-4	5

UNID	Description	Safety Function
2-FCV-001-01B1	BLOWDOWN ISOL VLV INSIDE CNTMT, SG-1	4
2-FCV-001-01B2	BLOWDOWN ISOL VLV INSIDE CNTMT, SG-2	4
2-FCV-001-01B3	BLOWDOWN ISOL VLV INSIDE CNTMT, SG-3	4
2-FCV-001-01B4	BLOWDOWN ISOL VLV INSIDE CNTMT, SG-4	4
2-FCV-003-0033	SG#1 FW ISOLATION VALVE	5
2-FCV-003-0047	STM GEN #2 ISOLATION VALVE	5
2-FCV-003-0087	STM GEN #3 ISOLATION VALVE	5
2-FCV-003-0100	STM GEN #4 FW ISOLATION VALVE	5
2-FCV-003-0126A	ERCW HDR B ISOL VLV	4
2-FCV-003-0136A	ERCW HDR A ISOL VLV	4
2-FCV-003-0166A	ERCW HDR A ISOL VLV	4
2-FCV-003-0166B	ERCW HDR A ISOL VLV	4
2-FCV-003-0179A	ERCW HDR B ISOL VLV	4
2-FCV-003-0179A	ERCW HDR B ISOL VLV	4
2-FCV-026-0240	CONTAINMENT STAND PIPE	5
2-FCV-026-0243	REACTOR COOLANT PMP SPRAY ISOL VLV	5
2-FCV-030-0007	UPPER COMPT PURGE ISOLATION VALVE	5
2-FCV-030-0008	UPPER COMPT PURGE ISOLATION VALVE	5
2-FCV-030-0009	UPPER COMPT PURGE ISOLATION VALVE	5
2-FCV-030-0010	UPPER COMPT PURGE ISOLATION VALVE	5
2-FCV-030-0014	LOWER COMPT PURGE ISOLATION VALVE	5
2-FCV-030-0015	LOWER COMPT PURGE ISOLATION VALVE	5
2-FCV-030-0016	LOWER COMPT PURGE ISOLATION VALVE	5
2-FCV-030-0017	LOWER COMPT PURGE ISOLATION VALVE	5
2-FCV-030-0019	INCORE INSTR ROOM PURGE ISOLATION VALVE	5
2-FCV-030-0020	INCORE INSTR ROOM PURGE ISOLATION VALVE	5
2-FCV-030-0037	LOWER COMPT PURGE CTRL VALVE	5
2-FCV-030-0040	LOWER COMPT PURGE CTRL VALVE	5
2-FCV-030-0047	CONTAINMENT VACUUM RELIEF	5
2-FCV-030-0048	CONTAINMENT VACUUM RELIEF	5
2-FCV-030-0050	UPPER CNTMT EXH ISOLATION VALVE	5
2-FCV-030-0051	UPPER CNTMT EXH ISOLATION VALVE	5

UNID	Description	Safety Function
2-FCV-030-0052	UPPER CNTMT EXH ISOLATION VALVE	5
2-FCV-030-0053	UPPER CNTMT EXH ISOLATION VALVE	5
2-FCV-030-0056	LOWER CNTMT EXH ISOLATION VALVE	5
2-FCV-030-0057	LOWER CNTMT EXH ISOLATION VALVE	5
2-FCV-030-0058	INCORE INSTR ROOM EXH ISOLATION VALVE	5
2-FCV-030-0059	INCORE INSTR ROOM EXH ISOLATION VALVE	5
2-FCV-032-0081	REACTOR BLDG UNIT 2 TRAIN A ISOL VLV	5
2-FCV-032-0103	REACTOR BLDG UNIT 2 TRAIN B ISOL VLV	5
2-FCV-032-0111	REACTOR BLDG UNIT 2 NONESNTL CNTL AIR ISOL VLV	5
2-FCV-061-0096	CLYCOL FLOOR SUPPLY ISOLATION VALVE	5
2-FCV-061-0097	INLET ISOLATION VALVE REACTOR BLDG	5
2-FCV-061-0110	GLYCOL FLOOR RETURN ISOLATION VALVE	5
2-FCV-061-0122	OUTLET ISOLATION VALVE REACTOR BLDG	5
2-FCV-061-0191	GLYCOL FLOOR RETURN ISOLATION VALV	5
2-FCV-061-0192	GLYCOL SUPPLY ISOLATION VALVE	5
2-FCV-061-0193	GLYCOL AIR HANDLER RETURN ISOL VALV	5
2-FCV-061-0194	GLYCOL RETURN ISOLATION VALVE	5
2-FCV-062-0009	RCP 1 SEAL INJECTION ISOLATION VALVE	3
2-FCV-062-0022	RCP 2 SEAL INJECTION ISOLATION VALVE	3
2-FCV-062-0035	RCP 3 SEAL INJECTION ISOLATION VALVE	3
2-FCV-062-0048	RCP 4 SEAL INJECTION ISOLATION VALVE	3
2-FCV-062-0061	SEAL FLOW ISOLATION VALVE	3,5
2-FCV-062-0063	RCP SEAL INJECTION ISOL VALVE	3,5
2-FCV-062-0069	RC LOOP 3 LETDOWN FLOW	3,5
2-FCV-062-0070	RC LOOP 3 LETDOWN FLOW	3,5
2-FCV-062-0072	REGEN HT EXCH LETDOWN ISOL VLV A	3,5
2-FCV-062-0073	REGEN HT EXCH LETDOWN ISOL VLV B	3,5
2-FCV-062-0074	REGEN HT EXCH LETDOWN ISOL VLV C	3,5
2-FCV-062-0077	LETDOWN LINE ISOL VLV FLOW CONTROL	3,5
2-FCV-062-0085	NORMAL CHARGING ISOL VALVE	3
2-FCV-063-0001	RWST TO RHR PMP FLOW CNTL VLV	1,3,4
2-FCV-063-0003	SIS PUMP DISCHARGE TO RWST SHUTOFF VALVE	3,4

UNID	Description	Safety Function
2-FCV-063-0004	SIS PUMP A-A DISCH TO RWST SHUTOFF VALVE	3,4
2-FCV-063-0005	RWST TO SIS PUMP FLOW CONTROL VALVE	1,3,4
2-FCV-063-0006	SIS PUMP INLET TO CVCS CHARGING PUMP	3,4
2-FCV-063-0007	SIS PUMP INLET TO CVCS CHARGING PUMP	3,4
2-FCV-063-0008	RHR HTX A T CVCS CHARGING PUMPS	3,4
2-FCV-063-0011	RHR HTX B TO SIS PUMPS	3,4
2-FCV-063-0021	SIS PUMP OUTLET TO SIS TEST LINE	5
2-FCV-063-0022	SIS PUMPS COLD LEG INJECTION CONTROL VLV	3,4
2-FCV-063-0023	SIS ACCUM FILL LINE ISOLATION VLV	5
2-FCV-063-0025	SIS CCP INJ TANK SHUTOFF VALVE	1,3,4
2-FCV-063-0026	SIS BORON INJ TANK SHUTOFF VALVE	1,3,4
2-FCV-063-0039	SIS BORON INJ TANK INLET SHUTOFF VALVE	1,3,4
2-FCV-063-0040	SIS BORON INJ TANK INLET SHUTOFF VALVE	1,3,4
2-FCV-063-0047	SIS PUMP A-A INLET VLV	1,3,4
2-FCV-063-0048	SIS PUMP B-B INLET VLV	1,3,4
2-FCV-063-0064	SIS ACCUM TANK N2 HDR INLET VLV	5
2-FCV-063-0067	SIS ACCUMULATOR TNK 4 FLOW ISOL VALVE	3
2-FCV-063-0070	SIS ACCUM TK4 FILL VLV	5
2-FCV-063-0071	SIS CHECK VLV FLOW ISOLATION VLV	5
2-FCV-063-0072	RHR CONTAINMENT SUMP FLOW ISOL VLV	3,4,5
2-FCV-063-0073	RHR CONTAINMENT SUMP FLOW ISOL VLV	3,4,5
2-FCV-063-0077	SIS ACCUM TK3 FILL VLV	5
2-FCV-063-0080	SIS ACCUMULATOR TNK 3 FLOW ISOL VALVE	3
2-FCV-063-0084	SIS CHK VLV ISOL HDR FLOW ISOLATION VLV	5
2-FCV-063-0090	CHARGING FLOW ISOL VLV	5
2-FCV-063-0091	CHARGING FLOW ISOL VLV	5
2-FCV-063-0093	RHR PUMP A-A DISCHARGE TO CL 2&3	1,3,4
2-FCV-063-0094	RHR PUMP B-B DISCHARGE TO CL 1&4	1,3,4
2-FCV-063-0095	SIS ACCUM TK 2 FILL VLV	5
2-FCV-063-0098	SIS ACCUMULATOR TNK 2 FLOW ISOL VALVE	3
2-FCV-063-0111	SIS CHK VLV LEAK TEST ISOLATION VLV	5
2-FCV-063-0112	SIS CHK VLV LEAK TEST ISOLATION VLV	5

UNID	Description	Safety Function
2-FCV-063-0115	SIS ACCUM TK 1 FILL VLV	5
2-FCV-063-0118	SIS ACCUMULATOR TNK 1 FLOW ISOL VALVE	3
2-FCV-063-0121	SIS FLOW TO CL CHECK VLV TEST	5
2-FCV-063-0138	EMERGENCY BORATION FLOW CONT VLV	3
2-FCV-063-0152	SIS PUMP A-A OUTLET FLOW CONTROL VALVE	1,3,4
2-FCV-063-0153	SIS PUMP B-B OUTLET FLOW CONTROL VALVE	1,3,4
2-FCV-063-0156	SIS PUMP OUTLET TO RCS LP 1&3 HL	1,3,4
2-FCV-063-0157	SIS PUMP OUTLET TO RCS LP 2&4 HL	1,3,4
2-FCV-063-0164	SIS PUMP OUT TEST LINE	5
2-FCV-063-0172	RHR INJECTION OR RECIRC AFTER LOCA	3,4
2-FCV-063-0174	SIS TEST LINE CHECK VLV TEST	5
2-FCV-063-0175	SIS PUMP B-B DISCH TO RWST SHUTOFF VLV	3,4
2-FCV-064-0490D	ERCW HEADER B STRAINER FLUSHOUT VALVE	0
2-FCV-067-0065	EMERG DSL HTXS B1&B2 SUP VLV FROM HDR A	0
2-FCV-067-0066	EMERG DSL HTXS A1&A2 SUP VLV FROM HDR A	0
2-FCV-067-0067	EMERG DSL HTXS B1&B2 SUP VLV FROM HDR B	0
2-FCV-067-0068	EMERG DSL HTXS A1&A2 SUP VLV FROM HDR B	0
2-FCV-067-0083	LOWER CNTMT D COOLERS SUPPLY ISOL VALVE	5
2-FCV-067-0087	LOWER CNTMT D COOLERS SUPPLY ISOL VALVE	5
2-FCV-067-0088	LOWER CNTMT D COOLERS SUPPLY ISOL VALVE	5
2-FCV-067-0089	LOWER CNTMT D COOLERS SUPPLY ISOL VALVE	5
2-FCV-067-0090	LOWER CNTMT D COOLERS SUPPLY ISOL VALVE	5
2-FCV-067-0091	LOWER CNTMT D COOLERS SUPPLY ISOL VALVE	5
2-FCV-067-0095	LOWER CNTMT D COOLERS SUPPLY ISOL VALVE	5
2-FCV-067-0096	LOWER CNTMT D COOLERS SUPPLY ISOL VALVE	5
2-FCV-067-0099	LOWER CNTMT D COOLERS SUPPLY ISOL VALVE	5
2-FCV-067-0103	LOWER CNTMT D COOLERS SUPPLY ISOL VALVE	5
2-FCV-067-0104	LOWER CNTMT D COOLERS SUPPLY ISOL VALVE	5
2-FCV-067-0105	LOWER CNTMT D COOLERS SUPPLY ISOL VALVE	5
2-FCV-067-0106	LOWER CNTMT D COOLERS SUPPLY ISOL VALVE	5
2-FCV-067-0107	LOWER CNTMT D COOLERS SUPPLY ISOL VALVE	5
2-FCV-067-0111	LOWER CNTMT D COOLERS SUPPLY ISOL VALVE	5

UNID	Description	Safety Function
2-FCV-067-0112	LOWER CNTMT D COOLERS SUPPLY ISOL VALVE	5
2-FCV-067-0123	CNTMT SPRAY HTX B SUPPLY CONTROL VALVE	0
2-FCV-067-0124	CONTAINMENT SPRAY HTX B SUPPLY CONTROL VALVE	0
2-FCV-067-0125	CNTMT SPRAY HTX A SUPPLY CONTROL VALVE	0
2-FCV-067-0126	CONTAINMENT SPRAY HTX A DISCHARGE VALVE	0
2-FCV-067-0130	UPPER CNTMT VENT CLR A SUPPLY ISOL VLV	5
2-FCV-067-0131	UPPER CNTMT VENT CLR A DISCH LSOL VLV	5
2-FCV-067-0133	UPPER CNTMT VENT CLR C SUPPLY ISOL VLV	5
2-FCV-067-0134	UPPER CNTMT VENT CLR C DISCH ISOL VLV	5
2-FCV-067-0138	UPPER CNTMT VENT CLR B SUPPLY ISOL VLV	5
2-FCV-067-0139	UPPER CNTMT VENT CLR B DISCH ISOL VLV	5
2-FCV-067-0141	UPPER CNTMT VENT CLR D SUPPLY ISOL VLV	5
2-FCV-067-0142	UPPER CNTMT VENT CLR D SDISCH ISOL VLV	5
2-FCV-067-0146	CCS HTX 1A1/A12 DISCH CONTROL VLV	0
2-FCV-067-0176	SIS PUMP RM CLR-30-180 SUPPLY CNTL VLV	0
2-FCV-067-0182	SIS PUMP RM CLR-30-179 SUPPLY CNTL VLV	0
2-FCV-067-0184	CS PUMP RM CLR-30-177 SUPPLY CNTL VLV	0
2-FCV-067-0186	CS PUMP RM CLR-30-178 SUPPLY CNTL VLV	0
2-FCV-067-0295	UPPER CNTMT VENT CLR A DISCH ISOL VLV	5
2-FCV-067-0296	UPPER CNTMT VENT CLR C DISCH ISOL VLV	5
2-FCV-067-0297	UPPER CNTMT VENT CLR B DISCH ISOL VLV	5
2-FCV-067-0298	UPPER CNTMT VENT CLR D DISCH ISOL VLV	5
2-FCV-067-0490A	ERCW HEADER B STRAINER BACKWASH VALVE	0
2-FCV-067-0491A	ERCW HEADER A STRAINER BACKWASH VALVE	0
2-FCV-067-0491D	ERCW HEADER A STRAINER FLUSHOUT VALVE	0
2-FCV-068-0305	RCS FLOW CNTL VLV WDS N2 MAAN TO PRT	5
2-FCV-068-0307	RCS FLOW CNTL VLV WDS GA TO PRT	5
2-FCV-068-0308	RCS FLOW CNTL VLV WDS GA TO PRT	5
2-FCV-068-0332	RCS PRESSURIZER FELIEF FLOW CTRL VALVE	2
2-FCV-068-0333	RCS PRESSURIZER FELIEF FLOW CTRL VALVE	2
2-FCV-070-0066	CCS SURGE TNK VENT VLV	0
2-FCV-070-0085	EXCESS LETON HTX OUTLET VLV	5

UNID	Description	Safety Function
2-FCV-070-0087	RC PMP THERM BARRIER RET CNTNMT ISOL VLV	5
2-FCV-070-0089	RC PMP OIL CLR RET CNTNMT ISOL VLV	5
2-FCV-070-0090	RC PMP THERM BARRIER RET CNTNMT ISOL VLV	5
2-FCV-070-0092	RC PMP OIL CLR RET CNTNMT ISOL VLV	5
2-FCV-070-0133	RC PMP THERM BARRIER CONT ISOL VLV	5
2-FCV-070-0134	RC PMP THERM BARRIER CONT ISOL VLV	5
2-FCV-070-0139	RC PMP OIL CLR HDR CONT ISOL VLV	5
2-FCV-070-0140	RC PMP OIL CLR HDR CONT ISOL VLV	5
2-FCV-070-0141	RC PMP OIL CLR HDR CONT ISOL VLV	5
2-FCV-070-0143	EXCESS LETDOWN HTX CONT INLET ISOL VLV	5
2-FCV-070-0153	RHR HTX B CUTLET VALVE	4
2-FCV-070-0156	RHR HTX A CUTLER VALVE	4
2-FCV-070-0168	BA GAS STPR EVAP PKG B FLOW CONT VLV	5
2-FCV-070-0183	SAMPLE HTX HDR OUTLET VLV	0
2-FCV-070-0207	COND DEMIN WASTE EVAP BLDG SUPPLY	5
2-FCV-072-0002	CONTAINMENT SPRAY HDR B ISOLATION VALVE	5
2-FCV-072-0020	CNTMT SUMP SPRAY HDR B FLOW CONTROL VLV	5
2-FCV-072-0021	RWST TO SPRAY HDR B FLOW CONTROL VALVE	5
2-FCV-072-0022	RWST TO SPRAY HDR A FLOW CONTROL VALVE	5
2-FCV-072-0023	CNTMT SUMP SPRAY HDR A FLOW CONTROL VLV	5
2-FCV-072-0039	CONTAINMENT SPRAY HDR A ISOLATION VALVE	5
2-FCV-072-0040	RHR SPRAY HEADER A ISOLATION VALVE	5
2-FCV-072-0041	RHR SPRAY HEADER B ISOLATION VALVE	5
2-FCV-074-0001	RHR SYSTEM ISOLATION VALVE	4
2-FCV-074-0002	RHR SYSTEM ISOLATION VALVE	4
2-FCV-074-0003	RHR PUMP 2A-A INLET FLOW CONTROL VALVE	1,3,4
2-FCV-074-0012	RHR PUMP 2A-A MINIMUM FLOW VALVE	1,3,4
2-FCV-074-0016	RHR HT EX A OUTLET FLOW CONTROL VLV	1,3,4
2-FCV-074-0021	RHR PUMP 2B-B INLET FLOW CONTROL VALVE	1,3,4
2-FCV-074-0024	RHR PUMP 2B-B MINIMUM FLOW VALVE	1,3,4
2-FCV-074-0028	RHR HT EX B OUT FLOW CONTROL VLV	1,3,4
2-FCV-074-0033	RHR HT EX A BYPASS	3,4

UNID	Description	Safety Function
2-FCV-074-0035	RHR HT EX B BYPASS	3,4
2-FCV-077-0009	REACT COOLANT DRAIN TNK FLOW CNTL VLV	5
2-FCV-077-0010	REACT COOLANT DRAIN TNK FLOW CNTL VLV	5
2-FCV-077-0018	REACT COOLANT DRN TNK TO VENT HDR ISOL VLV	5
2-FCV-077-0019	REACT COOLANT DRN TNK TO VENT HDR ISOL VLV	5
2-FCV-077-0020	REACT COOLANT DRN TNK N2 SUPPLY FLOW CNTL VLV	5
2-FCV-077-0127	RAECT BLDG SUMP DISCH FLOW CNTL VLV	5
2-FCV-077-0128	REACT BLDG SUMP DISCH FLOW CNTL VLV	5
2-FCV-084-0012	PW RCS PRESS RELF TNK & RCP STANDPIPES	5
2-FCV-090-0107	CNTNMT BLDG LWR COMPT MON ISOL VLV	5
2-FCV-090-0108	CNTNMT BLDG LWR COMPT MON ISOL VLV	5
2-FCV-090-0109	CNTNMT BLDG LWR COMPT MON ISOL VLV	5
2-FCV-090-0110	CNTNMT BLDG LWR COMPT MON ISOL VLV	5
2-FCV-090-0111	CNTNMT BLDG LWR COMPT MON ISOL VLV	5
2-FCV-090-0113	CNTNMT BLDG UPR COMPT MON ISOL VLV	5
2-FCV-090-0114	CNTNMT BLDG UPR COMPT MON ISOL VLV	5
2-FCV-090-0115	CNTNMT BLDG UPR COMPT MON ISOL VLV	5
2-FCV-090-0116	CNTNMT BLDG UPR COMPT MON ISOL VLV	5
2-FCV-090-0117	CNTNMT BLDG UPR COMPT MON ISOL VLV	5
2-FCV-313-0222	ANNULUS ISOL VLV	5
2-FCV-313-0223	INSTRUMENT RM ISOL VLV	0
2-FCV-313-0224	ANNULUS ISOL VLV	5
2-FCV-313-0225	INSTRUMENT RM ISOL VLV	0
2-FCV-313-0229	ANNULUS ISOL VLV	5
2-FCV-313-0230	INSTRUMENT RM ISOL VLV	0
2-FCV-313-0231	ANNULUS ISOL VLV	5
2-FCV-313-0232	INSTRUMENT RM ISOL VLV	0
2-FI-074-0012	RHR FLOW INDICATOR, TRAIN A	3,4
2-FI-074-0024	RHR FLOW INDICATOR, TRAIN B	3,4
2-FLT-062-0065	SEAL WATER FILTER	3
2-FLT-062-0096	SEAL WATER INJECTION FILTERS	3
2-FLT-062-0100	REACTOR COOLANT FILTER	3

UNID	Description	Safety Function
2-FSV-032-0087	AUX AIR COMPR B-B COOLING WTR INLET	5
2-FSV-068-0394	REACTOR HEAD VENT ISOLATION VALVE	4
2-FSV-068-0395	REACTOR HEAD VENT ISOLATION VALVE	4
2-FSV-068-0396	REACTOR HEAD VENT ISOLATION VALVE	4
2-FSV-068-0397	REACTOR HEAD VENT ISOLATION VALVE	4
2-FT-062-0001	RCP NO. 1 SEAL WATER FLOW	3
2-FT-062-0014	RCP NO. 2 SEAL WATER FLOW	3
2-FT-062-0027	RCP NO. 3 SEAL WATER FLOW	3
2-FT-062-0040	RCP NO. 4 SEAL WATER FLOW	3
2-FV-030-0046	CONTAINMENT VACUUM RELIEF	5
2-GENB-082-0002A	DIESEL GEN. 2A-A	0
2-GENB-082-0002B	DIESEL GEN. 2B-B	0
2-HEX-062-0055	EXCESS LETDOWN HEAT EXCHANGER	0
2-HEX-062-0066	SEAL WATER HEAT EXCHANGER	3
2-HEX-062-0077	LETDOWN HEAT EXCHANGER	3
2-HEX-062-0090	REGENERATIVE HEAT EXCHANGER	3
2-HEX-070-0015A	COMPONENT COOLING HX 2A1	0
2-HEX-070-0015B	COMPONENT COOLING HX 2A2	0
2-HEX-072-0007	CONTAINMENT SPRAY HEAT EXCHANGER 2B	5
2-HEX-072-0030	CONTAINMENT SPRAY HEAT EXCHANGER 2A	5
2-HEX-074-0010	RHR PUMP 2A-A SEAL HEAT EXCHANGER	1,3,4
2-HEX-074-0015	RHR HEAT EXCHANGER 2A	1,3,4
2-HEX-074-0020	RHR PUMP 2B-B SEAL HEAT EXCHANGER	1,3,4
2-HEX-074-0027	RHR HEAT EXCHANGER 2B	1,3,4
2-INVB-250-QM	120V AC VITAL INVERTER 2-I	0
2-INVB-250-QP	120V AC VITAL INVERTER 2-II	0
2-INVB-250-QS	120V AC VITAL INVERTER 2-III	0
2-INVB-250-QU	120V AC VITAL INVERTER 2-VI	0
2-LCV-003-0148	STM GEN #3 LEVEL CONTROL VALVE	4,5
2-LCV-003-0156	STM GEN #2 LEVEL CONTROL VALVE	4,5
2-LCV-003-0164	STM GEN #1 LEVEL CONTROL VALVE	4,5
2-LCV-003-0171	STM GEN #4 LEVEL CONTROL VALVE	4,5

UNID	Description	Safety Function
2-LCV-003-0172	STM GEN #3 LEVEL CONTROL VALVE	4,5
2-LCV-003-0173	STM GEN #2 LEVEL CONTROL VALVE	4,5
2-LCV-003-0174	STM GEN #1 LEVEL CONTROL VALVE	4,5
2-LCV-003-0175	STM GEN #4 LEVEL CONTROL VALVE	4,5
2-LCV-062-0132	VCT OUTLET ISOLATION VALVE LEVEL CONTROL	3
2-LCV-062-0133	VCT OUTLET ISOLATION VALVE LEVEL CONTROL	3
2-LCV-062-0135	CHARGING PUMP FLOW - RWST	3,5
2-LCV-062-0136	CHARGING PUMP FLOW - RWST	3,5
2-LCV-070-0063	CCS SURGE TNK DEMIN WATER INLET VLV	0
2-LOCL-099-R001	REACTOR PROTECTION SET 1	0
2-LOCL-099-R002	REACTOR PROTECTION SET 1	0
2-LOCL-099-R003	REACTOR PROTECTION SET 1	0
2-LOCL-099-R004	REACTOR PROTECTION SET 1	0
2-LOCL-099-R005	REACTOR PROTECTION SET 2	0
2-LOCL-099-R006	REACTOR PROTECTION SET 2	0
2-LOCL-099-R007	REACTOR PROTECTION SET 2	0
2-LOCL-099-R008	REACTOR PROTECTION SET 2	0
2-LOCL-099-R009	REACTOR PROTECTION SET 3	0
2-LOCL-099-R010	REACTOR PROTECTION SET 3	0
2-LOCL-099-R011	REACTOR PROTECTION SET 3	0
2-LOCL-099-R012	REACTOR PROTECTION SET 4	0
2-LOCL-099-R013	REACTOR PROTECTION SET 4	0
2-LOCL-099-R046	SOLID STATE PROTECTION TRAIN A	0
2-LOCL-099-R047	SOLID STATE PROTECTION TRAIN A	0
2-LOCL-099-R048	SOLID STATE PROTECTION TRAIN A	0
2-LOCL-099-R049	SOLID STATE PROTECTION TRAIN B	0
2-LOCL-099-R050	SOLID STATE PROTECTION TRAIN B	0
2-LOCL-099-R051	SOLID STATE PROTECTION TRAIN B	0
2-LOCL-099-R052	TEST PANEL A	0
2-LOCL-099-R053	TEST PANEL B	0
2-LOCL-099-R054	NSSS AUXILIARY RELAY PANEL A	0
2-LOCL-099-R055	NSSS AUXILIARY RELAY PANEL B	0

UNID	Description	Safety Function
2-LOCL-099-R058	NSSS AUXILIARY RELAY PANEL COMMON	0
2-LT-003-0038	STM GEN 1 LEVEL XMTR (NR)	4
2-LT-003-0039	STM GEN 1 LEVEL XMTR (NR)	4
2-LT-003-0042	STM GEN 1 LEVEL XMTR (NR)	4
2-LT-003-0043	STM GEN 1 LEVEL XMTR (NR)	4
2-LT-003-0051	STM GEN 1 LEVEL XMTR (NR)	4
2-LT-003-0052	STM GEN 1 LEVEL XMTR (NR)	4
2-LT-003-0055	STM GEN 1 LEVEL XMTR (NR)	4
2-LT-003-0056	STM GEN 1 LEVEL XMTR (NR)	4
2-LT-003-0093	STM GEN 1 LEVEL XMTR (NR)	4
2-LT-003-0094	STM GEN 1 LEVEL XMTR (NR)	4
2-LT-003-0097	STM GEN 1 LEVEL XMTR (NR)	4
2-LT-003-0098	STM GEN 1 LEVEL XMTR (NR)	4
2-LT-003-0106	STM GEN 1 LEVEL XMTR (NR)	4
2-LT-003-0107	STM GEN 1 LEVEL XMTR (NR)	4
2-LT-003-0110	STM GEN 1 LEVEL XMTR (NR)	4
2-LT-003-0111	STM GEN 1 LEVEL XMTR (NR)	4
2-LT-062-0129A	VOLUME CONTROL TANK LEVEL XMITTER	3
2-LT-062-0129C	VOLUME CONTROL TANK LEVEL XMITTER	3
2-LT-062-0130A	VOLUME CONTROL TANK LEVEL XMITTER	3
2-LT-062-0130C	VOLUME CONTROL TANK LEVEL XMITTER	3
2-LT-068-0320	RCS PRESSURIZER LEVEL TRANSMITTER	3
2-LT-068-0335	RCS PRESSURIZER LEVEL TRANSMITTER	3
2-LT-068-0339	RCS PRESSURIZER LEVEL TRANSMITTER	3
2-PCV-001-0005	SG1 MAIN STM HDR PWR RELIEF CONTROL VLV	4,5
2-PCV-001-0012	SG2 MAIN STM HDR PWR RELIEF CONTROL VLV	4,5
2-PCV-001-0023	SG3 MAIN STM HDR PWR RELIEF CONTROL VLV	4,5
2-PCV-001-0030	SG4 MAIN STM HDR PWR RELIEF CONTROL VLV	4,5
2-PCV-062-0081	LETDOWN HEAT EXCH PRESS CONT	3
2-PCV-068-0334	RCS PRESSURIZER POWER RELIEF VALVE	2,4
2-PCV-068-0340A	RCS PRESSURIZER POWER RELIEF VALVE	2,4
2-PDT-030-0044	CONTAINMENT PRESSURE TRANSMITTER	5

UNID	Description	Safety Function
2-PDT-062-0008	RCP NO 1 DP ACROSS NO 1 SEAL	3,5
2-PDT-062-0021	RCP NO 2 DP ACROSS NO 1 SEAL	3,5
2-PDT-062-0034	RCP NO 3 DP ACROSS NO 1 SEAL	3,5
2-PDT-062-0047	RCP NO 4 DP ACROSS NO 1 SEAL	3,5
2-PMP-003-0118	MOTOR DRIVEN AUX FEEDWATER PUMP 2A-A	4
2-PMP-003-0128	MOTOR DRIVEN AUX FEEDWATER PUMP 2B-B	4
2-PMP-018-054/4	DSL 2B2 DAY TNK FUEL XFER PUMP	4
2-PMP-018-064/3	DSL 2A2 DAY TNK FUEL XFER PUMP	4
2-PMP-018-065/3	DSL 2A1 DAY TNK FUEL XFER PUMP	4
2-PMP-018-065/4	DSL 2B1 DAY TNK FUEL XFER PUMP	4
2-PMP-062-0104	CENTRIFUGAL CHARGING PUMP 2B-B	3
2-PMP-062-0108	CENTRIFUGAL CHARGING PUMP 2A-A	3
2-PMP-063-0010	SIS PUMP 2A-A	1,3,4
2-PMP-063-0015	SIS PUMP 2B-B	1,3,4
2-PMP-068-0008	REACTOR COOLANT PUMP 1	2
2-PMP-068-0031	REACTOR COOLANT PUMP 2	2
2-PMP-068-0050	REACTOR COOLANT PUMP 3	2
2-PMP-068-0073	REACTOR COOLANT PUMP 4	2
2-PMP-070-0033	CCS PUMP 2B-B	0
2-PMP-070-0059	CCS PUMP 2A-A	0
2-PMP-070-0130	CCS THERMAL BARRIER BOOSTER PUMP 2B-B	0
2-PMP-070-0131	CCS THERMAL BARRIER BOOSTER PUMP 2A-A	0
2-PMP-072-0010	CONTAINMENT SPRAY PUMP 2B-B	5
2-PMP-072-0027	CONTAINMENT SPRAY PUMP 2A-A	5
2-PMP-074-0010	RHR PUMP 2A-A	1,3,4
2-PMP-074-0020	RHR PUMP 2B-B	1,3,4
2-PNLA-082-TV	DG 2A-A DISTRIBUTION AND CONTROL BOARD	0
2-PNLA-082-TW	DG 2B-B DISTRIBUTION AND CONTROL BOARD	0
2-PNLB-202-SC	6900V LOGIC RELAY PANEL 2A	0
2-PNLB-202-SD	6900V LOGIC RELAY PANEL 2B	0
2-PRS-068-0320	PRESSURIZER	2,3
2-PT-030-0310	CONTAINMENT PRESSURE TRANSMITTER	5

UNID	Description	Safety Function
2-PT-030-0311	CONTAINMENT PRESSURE TRANSMITTER	5
2-PT-068-0062	RCS WIDE RANGE PRESSURE LOOP 4 HOT LEG	2,4
2-PT-068-0069	RCS WIDE RANGE PRESSURE LOOP 1 HOT LEG	2,4
2-PT-068-0323	RCS PRESSURIZER PRESSURE TRANSMITTER	2
2-PT-068-0334	RCS PRESSURIZER PRESSURE TRANSMITTER	2
2-PT-068-0340	RCS PRESSURIZER PRESSURE TRANSMITTER	2
2-RCK-250-RCRD	120V AC INST PWR TRANSFER RACK (2-M-7)	0
2-RPV-068-0100	REACTOR VESSEL	2
2-SGEN-068-0101	STEAM GENERATOR 1	2
2-SGEN-068-0102	STEAM GENERATOR 2	2
2-SGEN-068-0103	STEAM GENERATOR 3	2
2-SGEN-068-0104	STEAM GENERATOR 4	2
2-STN-067-0490	ERCW STRAINER B2B-B	0
2-STN-067-0491	ERCW STRAINER A2A-A	0
2-TCV-062-0079	LETDOWN FLOW TEMP DIVERSION CONT VLV	3
2-TE-068-0001	RCS LOOP 1 HOT LEG TEMP	2,4
2-TE-068-0024	RCS LOOP 2 HOT LEG TEMP	2,4
2-TE-068-0043	RCS LOOP 3 HOT LEG TEMP	2,4
2-TE-068-0065	RCS LOOP 4 HOT LEG TEMP	2,4
2-TNK-018-061/3	ENGINE 2A1 DAY TANK 550 GAL	4
2-TNK-018-061/4	ENGINE 2B1 DAY TANK 550 GAL	4
2-TNK-018-076/3	ENGINE 2A2 DAY TANK 550 GAL	4
2-TNK-018-076/4	ENGINE 2B2 DAY TANK 550 GAL	4
2-TNK-062-0129	VOLUME CONTROL TANK LEVEL XMITTER	3
2-TNK-0623-0044	REFUELING WATER STORAGE TANK	1,3,4
2-TNK-063-0037	BORON INJECTION TANK 1A (CCP INJ TNK)	1,3,4
2-TNK-063-0060	SIS ACCUMULATOR TANK NO 4	1,3
2-TNK-063-0081	SIS ACCUMULATOR TANK NO 3	1,3
2-TNK-063-0099	SIS ACCUMULATOR TANK NO 2	1,3
2-TNK-063-0119	SIS ACCUMULATOR TANK NO 1	1,3
2-TNK-068-0300	PRESSURIZER RELIEF TANK	2,4
2-TNK-070-0063	COMPONENT COOLING WATER SURGE TANK	0

UNID	Description	Safety Function
2-TNK-082-0224	DSL 2A1 STARTING AIR TANK A 35 CF	0
2-TNK-082-0225	DSL 2A2 STARTING AIT TANK A 35 CF	0
2-TNK-082-0234	DSL 2A1 STARTING AIT TANK B 35 CF	0
2-TNK-082-0235	DSL 2A2 STARTING AIR TANK B 35 CF	0
2-TNK-082-0254	DSL 2B1 STARTING AIR TANK A 35 CF	0
2-TNK-082-0255	DSL 2B2 STARTING AIR TANK A 35 CF	0
2-TNK-082-0264	DSL 2B1 STARTING AIR TANK B 35 CF	0
2-TNK-082-0265	DSL 2B2 STARTING AIR TANK B 35 CF	0
2-VLV-001-0512/0531	MAIN STEAM SAFETY VALVES, SG-3	4
2-VLV-001-0513	MAIN STEAM SAFETY VALVES, SG-3	4
2-VLV-001-0514	MAIN STEAM SAFETY VALVES, SG-3	4
2-VLV-001-0515	MAIN STEAM SAFETY VALVES, SG-3	4
2-VLV-001-0516	MAIN STEAM SAFETY VALVES, SG-3	4
2-VLV-001-0517	MAIN STEAM SAFETY VALVES, SG-2	4
2-VLV-001-0518	MAIN STEAM SAFETY VALVES, SG-2	4
2-VLV-001-0519	MAIN STEAM SAFETY VALVES, SG-2	4
2-VLV-001-0520	MAIN STEAM SAFETY VALVES, SG-2	4
2-VLV-001-0521	MAIN STEAM SAFETY VALVES, SG-2	4
2-VLV-001-0522	MAIN STEAM SAFETY VALVES, SG-1	4
2-VLV-001-0523	MAIN STEAM SAFETY VALVES, SG-1	4
2-VLV-001-0524	MAIN STEAM SAFETY VALVES, SG-1	4
2-VLV-001-0525	MAIN STEAM SAFETY VALVES, SG-1	4
2-VLV-001-0526	MAIN STEAM SAFETY VALVES, SG-1	4
2-VLV-001-0527	MAIN STEAM SAFETY VALVES, SG-4	4
2-VLV-001-0528	MAIN STEAM SAFETY VALVES, SG-4	4
2-VLV-001-0529	MAIN STEAM SAFETY VALVES, SG-4	4
2-VLV-001-0530	MAIN STEAM SAFETY VALVES, SG-4	4
2-VLV-001-0539	CCS SURGE TNK VACUUM RELIEF	0
2-XCT-250-QC2A	480/240 - 120V AC INST PNL TRANFRMR 2A	0
2-XCT-250-QC2B	480/240 - 120V AC INST PWR TRANSFRMR 2B	0
2-XFA-202-0312	ERCW TRANSFORMER 2A-A	0
2-XFA-202-0313	480V SHUTDOWN TRANSFORMER 2A2-A	0

UNID	Description	Safety Function
2-XFA-202-0314	480V SHUTDOWN TRANSFORMER 2A-A	0
2-XFA-202-0315	480V SHUTDOWN TRANSFORMER 2A1-A	0
2-XFA-202-0316	ERCW TRANSFORMER 2B-B	0
2-XFA-202-0317	480V SHUTDOWN TRANSFORMER 2B2-B	0
2-XFA-202-0318	480V SHUTDOWN TRANSFORMER 2B-B	0
2-XFA-202-0319	480V SHUTDOWN TRANSFORMER 2B1-B	0

Appendix C: Base List 2

This Appendix includes the Sequoyah Unit 2 Base List 2.

UNID	Description
SQN-0-BCTB-078-0009-B	SPENT FUEL PIT PUMP B-B 45N779-4
SQN-0-BCTB-078-0012-A	SPENT FUEL PIT PUMP A-A 45N779-4
SQN-0-BCTB-078-0035-A	SPENT FUEL PIT BACK-UP PUMP C-S (NORMAL SUP)
SQN-0-BCTB-078-0035-B	SPENT FUEL PIT BACK-UP PUMP C-S (ALT SUP)
SQN-0-BCTC-078-0001	SPENT FUEL PIT SKIMMER PUMP
SQN-0-BCTD-078-0019-A	REFUELING WATER PURIFICATION PUMP A
SQN-0-BCTD-078-0020-B	REFUELING WATER PURIFICATION PUMP B
SQN-0-HEX-078-0017	SPENT FUEL PIT HEAT EXCHANGER B
SQN-0-HEX-078-0018	SPENT FUEL PIT HEAT EXCHANGER A
SQN-0-ISIV-078-0204C	PNL ISOL VLV TO PI-78-10
SQN-0-ISIV-078-0206C	PNL ISOL VLV TO PI-78-13
SQN-0-ISIV-078-0209B	HIGH SIDE PANEL ISOLATION VALVE FOR FI-78-16
SQN-0-ISIV-078-0210B	LOW SIDE PANEL ISOLATION VALVE FOR FI-78-16
SQN-0-ISIV-078-0211C	PNL ISOL VLV FOR 0-PI-78-21
SQN-0-ISIV-078-0212C	PNL ISOL VLV FOR 0-PI-78-22
SQN-0-ISIV-078-0213C	PNL ISOL VLV FOR 0-PI-78-23
SQN-0-ISIV-078-0214C	PNL ISOL VLV FOR 0-PI-78-24
SQN-0-ISIV-078-0230B	HIGH SIDE ISOLATION VALVE FOR 0-FI-078-0039
SQN-0-ISIV-078-0231B	LOWSIDE ISOLATION VALVE FOR 0-FI-078-0039
SQN-0-ISIV-078-0232B	HIGH SIDE ISOLATION VALVE FOR 0-FI-078-0040
SQN-0-ISIV-078-0233B	LOW SIDE ISOLATION VALVE FOR 0-FI-078-0040
SQN-0-MTRB-078-0001	SPENT FUEL PIT SKIMMER PUMP
SQN-0-MTRB-078-0009-B	SPENT FUEL PIT PUMP B-B 45N779-4
SQN-0-MTRB-078-0012-A	SPENT FUEL PIT PUMP A-A 45N779-4
SQN-0-MTRB-078-0019-A	REFUELING WATER PURIFICATION PUMP A MOTOR
SQN-0-MTRB-078-0020-B	REFUELING WATER PURIFICATION PUMP MOTOR B
SQN-0-MTRB-078-0035-S	SPENT FUEL PIT C-S (NOR & ALT PWR SUPPLY)
SQN-0-PMP-078-0001	SPENT FUEL PIT SKIMMER PUMP
SQN-0-PMP-078-0009-B	SPENT FUEL PIT PUMP B
SQN-0-PMP-078-0012-A	SPENT FUEL PIT PUMP A
SQN-0-PMP-078-0019	REF WTR PUR PUMP A-A
SQN-0-PMP-078-0020	REF WTR PUR PUMP B-B
SQN-0-PMP-078-0035-S	SFP COOLING BACK-UP PUMP C-S
SQN-0-PMP-078-0042	SGLWHT TRANSFER PUMP TO TRANSFER CANAL OR SFP
SQN-0-TA-078-0004A	SPENT FUEL PIT WATER TEMP HI
SQN-0-TE-078-0004	SPENT FUEL PIT WATER TEMP
SQN-0-TI-078-0005	SFPCS HT EX A INLET TEMP
SQN-0-TI-078-0006	SFPCS HT EX B INLET TEMP
SQN-0-TI-078-0017	SFPCS HT EX B OUTLET TEMP
SQN-0-TI-078-0018	SFPCS HT EX A OUTLET TEMP
SQN-0-TIS-078-0004	SPENT FUEL PIT WATER TEMP HI
SQN-0-TW-078-0005	SFPCS HT EX A INLET TEMP
SQN-0-TW-078-0006	SFPCS HT EX B INLET TEMP

UNID	Description
SQN-0-TW-078-0017	SFPCS HT EX B OUTLET TEMP
SQN-0-TW-078-0018	SFPCS HT EX A OUTLET TEMP
SQN-0-VLV-078-0201A	RT VLV TO PI-78-2
SQN-0-VLV-078-0202A	RT VLV TO PI-78-7
SQN-0-VLV-078-0203A	RT VLV TO PI-78-8
SQN-0-VLV-078-0204A	RT VLV TO PI-78-10
SQN-0-VLV-078-0205A	RT VLV TO PI-78-11
SQN-0-VLV-078-0206A	RT VLV TO PI-78-13
SQN-0-VLV-078-0207A	RT VLV TO PI-78-14
SQN-0-VLV-078-0208A	RT VLV TO PI-78-15
SQN-0-VLV-078-0209A	RT VLV TO FI-78-16
SQN-0-VLV-078-0210A	RT VLV TO FI-78-16
SQN-0-VLV-078-0211A	RT VLV TO PI-78-21
SQN-0-VLV-078-0211B	VENT VALVE FOR 0-PI-78-21
SQN-0-VLV-078-0212A	RT VLV TO PI-78-22
SQN-0-VLV-078-0212B	VENT VALVE FOR 0-PI-78-22
SQN-0-VLV-078-0213A	RT VLV TO PI-78-23
SQN-0-VLV-078-0213B	VENT VALVE FOR 0-PI-78-23
SQN-0-VLV-078-0214A	RT VLV TO PI-78-24
SQN-0-VLV-078-0214B	VENT VALVE FOR 0-PI-78-24
SQN-0-VLV-078-0215A	RT VLV TO PI-78-25
SQN-0-VLV-078-0216A	RT VLV TO PI-78-26
SQN-0-VLV-078-0217A	RT VLV TO PI-78-27
SQN-0-VLV-078-0218A	RT VLV TO PI-78-29
SQN-0-VLV-078-0219A	RT VLV TO PDI-78-30
SQN-0-VLV-078-0220A	RT VLV TO PDI-78-30
SQN-0-VLV-078-0221A	SF PMP A-A PRESS TEST
SQN-0-VLV-078-0222A	SF PMP B-B PRESS TEST
SQN-0-VLV-078-0223A	RT VLV TO PI-78-37
SQN-0-VLV-078-0224A	RT VLV TO PI-78-38
SQN-0-VLV-078-0230A	RT VLV TO FI-78-39
SQN-0-VLV-078-0231A	RT VLV TO FI-78-39
SQN-0-VLV-078-0232A	RT VLV TO FI-78-40
SQN-0-VLV-078-0233A	RT VLV TO FI-78-40
SQN-0-VLV-078-0501	SFP PUMP A-A SUCTION
SQN-0-VLV-078-0502	SFP PUMP B-B SUCTION
SQN-0-VLV-078-0503	SFP PUMP A-A SYS DR
SQN-0-VLV-078-0504	SFP PUMP B-B SYS DR
SQN-0-VLV-078-0505	SFP PUMP A-A CAS DR
SQN-0-VLV-078-0506	SFP PUMP B-B CAS DR
SQN-0-VLV-078-0507	SFP PUMP A-A CAS VT
SQN-0-VLV-078-0508	SFP PUMP B-B CAS VT
SQN-0-VLV-078-0509	SFP PUMP A-A CHECK

UNID	Description
SQN-0-VLV-078-0510	SFP PUMP B-B CHECK
SQN-0-VLV-078-0511	HX A DISCH
SQN-0-VLV-078-0512	HX B DISCH
SQN-0-VLV-078-0513	COOL LOOP SOV
SQN-0-VLV-078-0514	DEM WATER MAKE-UP SOV
SQN-0-VLV-078-0515	FROM SFP FILTER SOV
SQN-0-VLV-078-0516	COOL LP CASK LOAD SOV
SQN-0-VLV-078-0517	SOV TO SFP FILTER
SQN-0-VLV-078-0518	SOV TO SFP FILTER
SQN-0-VLV-078-0519	SFP PUMP DISCH TO HUT
SQN-0-VLV-078-0521	SFP SOV TO SFP FILTER
SQN-0-VLV-078-0522	PRIMARY WATER-SFP SOV
SQN-0-VLV-078-0523	DEM SOV TO SFP FILTER
SQN-0-VLV-078-0524	SFP FILTER ISOL-INLET
SQN-0-VLV-078-0525	SFP FILTER ISOL-DISCH
SQN-0-VLV-078-0526	SFP SOV TO DEM
SQN-0-VLV-078-0527	SFP DEM INLET CHECK VLV
SQN-0-VLV-078-0528	FROM RESIN TK SOV
SQN-0-VLV-078-0529	SFP DEM VENT
SQN-0-VLV-078-0530	TO WDS SRST SOV
SQN-0-VLV-078-0531	SFP DEM DR
SQN-0-VLV-078-0532	DEM SOV FROM RWPP
SQN-0-VLV-078-0533	DEM SOV TO RWPF
SQN-0-VLV-078-0534	DEM CHECK TO RWPF
SQN-0-VLV-078-0535	RWPP TO RWPF SOV
SQN-0-VLV-078-0536	RWPF B ISOL-INLET
SQN-0-VLV-078-0537	RWPF A ISOL-INLET
SQN-0-VLV-078-0538	RWPF B VENT
SQN-0-VLV-078-0539	RWPF A VENT
SQN-0-VLV-078-0540	RWPF B DR
SQN-0-VLV-078-0541	RWPF A DR
SQN-0-VLV-078-0542	RWPF B ISOL-DISCH
SQN-0-VLV-078-0543	RWPF A ISOL-DISCH
SQN-0-VLV-078-0544	RWPF TO CVCS HLDUP TK
SQN-0-VLV-078-0545	SAMPLING CONN VALVE
SQN-0-VLV-078-0546	TO REF CAVITY CHECK
SQN-0-VLV-078-0547	TO TRAN CANAL SOV
SQN-0-VLV-078-0548	SAMPLING CONN VALVE
SQN-0-VLV-078-0549	RWPP B ISOL-DISCH
SQN-0-VLV-078-0550	RWPP A ISOL-DISCH
SQN-0-VLV-078-0551	RWPP B CHECK
SQN-0-VLV-078-0552	RWPP A CHECK
SQN-0-VLV-078-0553	RWPP B CASING DR

UNID	Description
SQN-0-VLV-078-0554	RWPP A CASING DR
SQN-0-VLV-078-0555	RWPP B SUCTION SOV
SQN-0-VLV-078-0556	RWPP A SUCTION SOV
SQN-0-VLV-078-0563	FROM TRAN CANAL CHECK
SQN-0-VLV-078-0564	FROM TRAN CANAN SOV
SQN-0-VLV-078-0565	FROM TRAN CANAL VENT
SQN-0-VLV-078-0568	FROM CVCS REC PUM SOV
SQN-0-VLV-078-0569	SFP SKIM SOV
SQN-0-VLV-078-0570	SUCT CLEAN SOV
SQN-0-VLV-078-0571	SFP SKIM STR VENT
SQN-0-VLV-078-0572	SFP SKIM STR DR
SQN-0-VLV-078-0573	SFP SKIM PUMP DR
SQN-0-VLV-078-0574	SFP SKIM FILTER ISOL
SQN-0-VLV-078-0575	SFP SKIM FILTER VENT
SQN-0-VLV-078-0576	SFP SKIM FILTER DR
SQN-0-VLV-078-0577	SFP SKIM FILTER ISOL
SQN-0-VLV-078-0578	SFP FILTER VENT
SQN-0-VLV-078-0579	SFP FILTER DR
SQN-0-VLV-078-0581	SFP PUMP C-S SUCT A
SQN-0-VLV-078-0582	SFP PUMP C-S SUCT B
SQN-0-VLV-078-0583	SFP PUMP C-S CAS VT
SQN-0-VLV-078-0584	SFP PUMP C-S SYS DR
SQN-0-VLV-078-0585	SFP PUMP C-S CAS DR
SQN-0-VLV-078-0586	SFP PUMP C-S CK
SQN-0-VLV-078-0587	SFP PUMP C-S TO TR B
SQN-0-VLV-078-0588	SFP PUMP C-S TO TR A
SQN-0-VLV-078-0589	COOLING LOOP A LP DR
SQN-0-VLV-078-0590	COOLING LOOP B LP DR
SQN-0-VLV-078-0591	FLOOD MODE LOOP VENT
SQN-0-VLV-078-0592	RWP FILTER PIPING DR
SQN-0-VLV-078-0593	RWP FILTER PIPING DR
SQN-0-VLV-078-0594	SFP FILTER PIPING DR
SQN-0-VLV-078-0595	HX A OUTLET DR
SQN-0-VLV-078-0596	HX B OUTLET DR
SQN-0-VLV-078-0597	HX OUTLET PIPING DR
SQN-0-VLV-078-0598	RWP PUMPS DISCH ISO
SQN-0-VLV-078-0599	RWP PUMP DISCH ISOL VLV
SQN-0-VLV-078-0606	HUT TO REFUEL CANAL ISOL
SQN-0-VLV-078-0607	HUT TO REFUEL CANAL TELL-TALE DRAIN
SQN-0-VLV-078-0608	HUT TO REFUEL CANAL TELL-TALE VENT
SQN-0-VLV-078-0611	SG LAYUP WATER HOLDUP TK RECIRC ISO VLV
SQN-0-VLV-078-0612	SGLWHT TRANSFER PIPING DR VLV
SQN-0-VLV-078-0613	SGLWHT RECIR DR & SAMPLE VLV

UNID	Description
SQN-0-VLV-078-0614	SLGWHT TRANSFER PIPING DR VLV
SQN-0-VLV-078-0615	SGLWHT TRANSFER PIPING ISO VLV
SQN-0-VLV-078-0616	SGLWHT TRANSFER PIPING CHK VLV
SQN-0-VLV-078-0617	SGLWHT TRANSFER PIPING ISO VLV
SQN-0-VLV-078-0618	SGLWHT TRANSFER PIPING ISO VLV
SQN-0-VLV-078-606	BLOCK VALVE HUT TO SFP TRANSFER CANAL
SQN-0-XFA-078-0019-A	TRANSFORMER
SQN-0-XFA-078-0020-B	TRANSFORMER
SQN-0-XS-078-0036A-S	SFPCS BACK-UP PUMP C-S POWER TRANSFER SW
SQN-0-XS-078-0036B-S	SFPCS BACK-UP PUMP C-S POWER TRANSFER SW
SQN-0-XSW-078-0035-S	SFP COOLING BACK-UP PUMP C-S XFR SW
SQN-1-VLV-078-0225A	REF CAV ISO TEST CONN
SQN-1-VLV-078-0226A	REF CAV ISO TEST CONN
SQN-1-VLV-078-0227A	WDS ISO TEST CONN
SQN-1-VLV-078-0228A	WDS ISO TEST CONN
SQN-1-VLV-078-0229A	WDS ISO TEST CONN
SQN-1-VLV-078-0557	REF CAVITY ISOL
SQN-1-VLV-078-0558	REF CAVITY ISOL
SQN-1-VLV-078-0559	REF CAVITY ISOL
SQN-1-VLV-078-0560	REF CAVITY ISOL
SQN-1-VLV-078-0561	REF CAVITY ISOL
SQN-1-VLV-078-0562	FROM REF CAVITY CHECK
SQN-1-VLV-078-0566	FROM SIS RWST CHECK
SQN-1-VLV-078-0567	TO CSS RWST SOV
SQN-1-VLV-078-0600	REFUEL CAV SUPPLY BLOCK
SQN-1-VLV-078-0601	CONT ISO VENT
SQN-1-VLV-078-0602	CONT ISOL TEST CONN
SQN-1-VLV-078-0610	FUEL TRANSFER TUBE WAFER VALVE
SQN-2-VLV-078-0225A	REF CAV ISO TEST CONN
SQN-2-VLV-078-0226A	REF CAV ISO TEST CONN
SQN-2-VLV-078-0227A	WDS ISO TEST CONN
SQN-2-VLV-078-0228A	WDS ISO TEST CONN
SQN-2-VLV-078-0229A	WDS ISO TEST CONN
SQN-2-VLV-078-0557	REF CAVITY ISOL
SQN-2-VLV-078-0558	REF CAVITY ISOL
SQN-2-VLV-078-0559	REF CAVITY ISOL
SQN-2-VLV-078-0560	REF CAVITY ISOL
SQN-2-VLV-078-0561	REF CAVITY ISOL
SQN-2-VLV-078-0562	FROM REF CAVITY CHECK
SQN-2-VLV-078-0566	FROM SIS RWST CHECK
SQN-2-VLV-078-0567	TO CSS RWST SOV
SQN-2-VLV-078-0600	REFUEL CAV SUPPLY BLOCK
SQN-2-VLV-078-0601	CONT ISO VENT

UNID	Description
SQN-2-VLV-078-0602	CONT ISO TEST CONN
SQN-2-VLV-078-0610	FUEL TRANSFER TUBE WAFER VALVE
SQN-2-ZS-078-0041A	REF CNL VORTEX SUPP ZONE SW
SQN-2-ZS-078-0041B	REF CNL VORTEX SUPP ZONE SW

Appendix D: SWELs and Area List

This Appendix includes the Sequoyah Unit 2 SWELs and Area List.

Sequoyah Unit 2 Seismic Walkdown Equipment List 1 Created By: Approved By:

Item #	Class	UNID	Description	System	Building	Elevation	Risk Significant	New or Replaced	5 Safety Functions	Enhanced for IPEEE	Area Walkby	Anchorage Verification
1	0	0-DRYA-032-0002-B	Aux Control Air Dryer B-B	032	AUXILIARY	734 (RCA)			0		32	
2	1	2-BDC-201-FL-A	480V ERCW MCC 2A-A	201	ERCW	704			0		8	
3	1	2-BDC-201-FN-B	480V ERCW MCC 2B-B	201	ERCW	704			0		11	
4	1	2-BDC-201-FQ-A	480V DIESEL AUXILIARY BOARD 2A1-A	201	DIESEL GEN.	740			0	Y	2	Y
5	1	2-BDC-201-FU-B	480V DIESEL AUXILIARY BOARD 2B1-B	201	DIESEL GEN.	740			0	Y	5	
6	1	2-BDC-201-GM-A	480V REACTOR MOV BD 2A2-A	201	AUXILIARY	749	Y		0	Y	23	
7	1	2-BDC-201-GN-B	480V REACTOR MOV BD 2B1-B	201	AUXILIARY	749	Y		0	Y	22	
8	1	2-BDC-201-JK-A	480V CONT & AUX BLDG VENT BD 2A2-A	201	AUXILIARY	734			0	Y	15	
9	2	2-BDB-201-DO-A	480V SHUTDOWN BD 2A2-A	201	AUXILIARY	734	Y		0	Y	15	
10	2	2-BDB-201-DP-B	480V SHUTDOWN BD 2B1-B	201	AUXILIARY	734	Y		0	Y	16	
11	2	2-BDB-201-DQ-B	480V SHUTDOWN BD 2B2-B	201	AUXILIARY	734	Y		0	Y	17	
12	3	2-BDA-202-CO-A	6900V SHUTDOWN BOARD 2A-A	202	AUXILIARY	734			0	Y	31	
13	3	2-BDB-202-CP-B	6900V SHUTDOWN BOARD 2B-B	202	AUXILIARY	734			0	Y	36	
14	4	2-OXF-202-2A-A	480V SHUTDOWN TRANSFORMER 2A1-A	202	AUXILIARY	749			3	Y	19	Y
15	4	2-OXF-202-2B-B	SD XFMR 2B-B	202	AUXILIARY	749			3	Y	18	Y
16	4	2-OXF-202-DN-A	480V SHUTDOWN TRANSFORMER 2A-A	202	AUXILIARY	749	Y		3	Y	19	Y
17	4	2-OXF-202-DQ-B	SD XFMR 2B2-B	202	AUXILIARY	749	Y		3	Y	18	Y
18	4	2-XFA-202-0312	ERCW TRANSFORMER 2A-A	202	ERCW	704			0		8	Y
19	4	2-XFA-202-0316	ERCW TRANSFORMER 2B-B	202	ERCW	704			0		11	Y
20	*See SWEL 2 for Item 20.*											
21	5	2-PMP-003-0128	MOTOR DRIVEN AUX FEEDWATER PUMP 2B-B	003	AUXILIARY	690	Y		2,4		38	Y
22	5	2-PMP-062-0104	CENT. CHARGING PUMP 2B-B	062	AUXILIARY	669			3		35	Y
23	5	2-PMP-063-0010	SAFETY INJECTION PUMP 2A-A	063	AUXILIARY	669			1,3,4		26	Y
24	5	2-PMP-070-0059-A	CCS PUMP 2A-A	070	AUXILIARY	690	Y		0		27	Y
25	6	0-PMP-067-0452	ERCW PUMP N-B	067	ERCW	720			0		10	Y
26	6	0-PMP-067-0464	ERCW PUMP R-A	067	ERCW	720			0		7	Y
27	6	0-PMP-067-0482-B	ERCW SCREEN WASH PUMP C-B	067	ERCW	720			0		10	Y
28	6	0-PMP-067-0487-A	ERCW SCREEN WASH PUMP D-A	067	ERCW	720			0		7	Y
29	7	0-FCV-032-0085-B	AUX COMPR B-B AUX BLDG ISOL	032	AUXILIARY	734 (RCA)			0		32	
30	7	2-FCV-067-0176-A	S.I. PUMP AND RM CLR-30-180 SUPPLY	067	AUXILIARY	669			0		43	
31	7	2-FCV-067-0182-B	S.I. PUMP AND RM CLR-30-179 SUPPLY	067	AUXILIARY	669			0		43	
32	7	2-FCV-067-0190-B	RHR PUMP RM CLR-30-176 SUPPLY CONTROL VLV	067	AUXILIARY	653			0		25	
33	7	2-FCV-067-188	RHR PUMP RM CLR-30-175 SUPPLY CONTROL VLV	067	AUXILIARY	653			0		25	
34	7	2-LCV-070-0063	SURGE TANK DEMIN W INLET VLV	070	AUXILIARY	734 (RCA)			0		32	
35	8	0-FCV-070-0040-B	SFPCS HTX A INLET FCV 0-FCV-70-40	070	AUXILIARY	714			4		29	
36	8	2-FCV-003-0126A-B	ERCW HDR B ISOL VLV	003	AUXILIARY	690			4		38	
37	8	2-FCV-067-0066	EMERG DSL HTXS A1&A2 SUP VLV FROM HDR A	067	DIESEL GEN.	722			0		1	
38	8	2-FCV-067-0067	EMERG DSL HTXS B1&B2 SUP VLV FROM HDR A	067	DIESEL GEN.	722			0		4	
39	8	2-FCV-067-0068	EMERG DSL HTXS A1&A2 SUP VLV FROM HDR B	067	DIESEL GEN.	722			0		1	
40	8	2-FCV-067-0492	ISOL VALVE	067	ERCW	688			0		9	
41	9	2-FAN-030-0450-B	D-G RM 2B-B EXHAUST FAN 1	030	DIESEL GEN.	740			5		6	Y

Safety Function(s):
0 - Support Function
1 - Reactivity Control
2 - RCS Pressure Control
3 - RCS Inventory Control
4 - Decay Heat Removal
5 - Containment Isolation

Item #	Class	UNID	Description	System	Building	Elevation	Risk Significant	New or Replaced	5 Safety Functions	Enhanced for IPEEE	Area Walkby	Anchorage Verification
42	9	2-FAN-030-0452	D-G RM 2A-A EXHAUST FAN 2	030	DIESEL GEN.	740			5		3	Y
43	9	2-FAN-030-0460	DIESEL GEN 2A-A ELECT BD ROOM EXHAUST	030	DIESEL GEN.	740			5		3	Y
44	9	2-FAN-030-0462-B	DIESEL GEN 2B-B ELECT BD ROOM EXHAUST	030	DIESEL GEN.	740	Y		5		6	Y
45	10	0-AHU-311-0023-B	MAIN CONTROL ROOM AHU B-B	311	CONTROL	732		Y	0	Y	12	
46	10	2-AHU-313-0488	480V BD RM 2A SUPPLY AHU 2A-A	313	AUXILIARY	749			0		24	
47	10	2-CLR-030-0178	CONTAINMENT SPRAY PUMP COOLER 2B-B	030	AUXILIARY	653			5		44	
48	10	2-CLR-030-180-A	SIS PUMP COOLER 2A-A	030	AUXILIARY	669			5		26	
49	11	0-CHR-311-0126	MAIN CONTROL ROOM CHILLER PKG A-A	311	CONTROL	732			0		12	Y
50	11	0-CHR-311-0171	ELEC. BD. ROOM CHILLER PKG. B-B	311	CONTROL	669			0		37	Y
51	11	0-CHR-313-0338A	SHUTDOWN BD RMS A & B WATER CHILLER PKG B-B	313	AUXILIARY	714			0		40	
52	11	2-CHR-313-0483	480V ELECT BOARD RM 2A-A	313	AUXILIARY	749			0		24	
53	12	0-CMP-032-0086-B	AUX CONTROL AIR COMPRESSOR B-B	032	AUXILIARY	734 (RCA)	Y		0		32	
54	12	2-CMP-082-0240	DSL 2A1 STARTING AIR COMPRESSER 25.5 CFM	082	DIESEL GEN.	722			0		1	Y
55	12	2-CMP-082-0241	DSL 2A2 STARTING AIR COMPRESSOR 25.5 CFM	082	DIESEL GEN.	722			0		1	Y
56	12	2-CMP-082-0271	DSL 2B2 STARTING AIR COMPRESSER 25.5 CFM	082	DIESEL GEN.	722			0		4	Y
57	13	2-GEND-085-DG	4D,CONTROL ROD DRIVE GENERATOR 2A	085	AUXILIARY	759			0		30	Y
58	13	2-GEND-085-DH	3B,CONTROL ROD DRIVE GENERATOR 2B	085	AUXILIARY	759			0		30	Y
59	14	0-XSW-250-KL-S	SPARE 480 V AC VITAL TRANSFER SW 2-S	250	AUXILIARY	749			0		22	Y
60	14	0-XSW-250-KX-S	125VDC CHGR 2-S DC XFER SW TO VBB III	250	AUXILIARY	749			0		22	Y
61	14	2-BDE-250-NF-E	120V AC VITAL INSTR POWER BD 2-II	250	AUXILIARY	734	Y		0		14	
62	14	2-BDE-250-NK-G	120V AC VITAL INSTR POWER BD 2-IV	250	AUXILIARY	734	Y		0		45	
63	14	2-PNLA-082-TV-A	DG 2A-A 125 VOLT DC DISTRIBUTION PNL	082	DIESEL GEN.	722			0		1	
64	14	2-XSW-082-UH-A	DG 2A-A 480V TRANSFER SWITCH	082	DIESEL GEN.	722			0		1	
65	15	0-BATB-250-QX-F	125V Vital Battery Room III Batteries 1-20 Rack	250	AUXILIARY	749			0		20	Y
66	15	0-BATB-250-QX-F	125V Vital Battery Room III Batteries 21-40 Rack	250	AUXILIARY	749			0		20	Y
67	15	0-BATB-250-QX-F	125V Vital Battery Room III Batteries 41-60 Rack	250	AUXILIARY	749			0		20	Y
68	15	0-BATB-250-QY-G	125V Vital Battery Room IV Batteries 1-20 Rack	250	AUXILIARY	749			0		21	Y
69	15	0-BATB-250-QY-G	125V Vital Battery Room IV Batteries 21-40 Rack	250	AUXILIARY	749			0		21	Y
70	15	0-BATB-250-QY-G	125V Vital Battery Room IV Batteries 41-60 Rack	250	AUXILIARY	749			0		21	Y
71	15	2-BATB-082-UD-A	Diesel Gen. 2A-A Battery Rack	082	DIESEL GEN.	722			0		1	Y
72	16	0-CHGB-250-QJ-G	125V DC VITAL BATTERY CHARGER IV	250	AUXILIARY	749	Y		0	Y	22	
73	16	0-CHGB-250-QK-S	125V DC VITAL BATTERY CHARGER 2-SPARE	250	AUXILIARY	749			0	Y	22	Y
74	16	2-CHGB-082-TZ-A	DG 2A-A BATTERY CHARGER	082	DIESEL GEN.	722			0		1	
75	16	2-CHGB-082-UA-B	D/G 2B-B BATTERY CHGR	082	DIESEL GEN.	722			0		4	
76	16	2-INVB-250-QU-G	120V AC VITAL INVERTER 2-IV	250	AUXILIARY	749	Y	Y	0	Y	22	Y
77	17	2-ENG-082-0002A1	ENG 2A1	082	DIESEL GEN.	722			0		1	Y
78	17	2-ENG-082-0002A2	ENG 2A2	082	DIESEL GEN.	722			0		1	Y
79	17	2-ENG-082-0002B1	DIESEL ENGINE 2B1	082	DIESEL GEN.	722			0		4	Y
80	17	2-ENG-082-0002B2	DIESEL ENGINE 2B2	082	DIESEL GEN.	722			0		4	Y
81	17	2-GENB-082-0002A	DIESEL GEN. 2A-A	082	DIESEL GEN.	722			0		1	Y
82	17	2-GENB-082-0002B	DIESEL GEN. 2B-B	082	DIESEL GEN.	722			0		4	Y
83	18	0-LOCL-500-0428	FLOOR PANEL AUXILIARY BUILDING	500	AUXILIARY	734 (RCA)			0		32	
84	18	2-LOCL-500-0005	FLOOR PANEL AUXILIARY BUILDING	500	AUXILIARY	653			0		25	

Safety Function(s):

0 - Support Function
1 - Reactivity Control
2 - RCS Pressure Control
3 - RCS Inventory Control
4 - Decay Heat Removal
5 - Containment Isolation

Item #	Class	UNID	Description	System	Building	Elevation	Risk Significant	New or Replaced	5 Safety Functions	Enhanced for IPEEE	Area Walkby	Anchorage Verification
85	18	2-LOCL-500-0019	FLOOR PANEL AUXILIARY BUILDING	500	AUXILIARY	734 (RCA)			0		32	
86	18	2-LOCL-500-0048	FLOOR PANEL AUXILIARY BUILDING	500	AUXILIARY	690			0		27	
87	18	2-LOCL-500-0163	FLOOR PANEL DGB	500	DIESEL GEN.	722			0		4	
88	18	2-LOCL-500-0222B	FLOOR PANEL AUXILIARY BUILDING	500	AUXILIARY	690			0		38	
89	19	2-TE-300-0450A-B	DIESEL GEN 2B-B EXHAUST-HIGH TEMP	300	DIESEL GEN.	740			2,4		6	
90	19	2-TE-300-0450B-B	DIESEL GEN 2B-B EXHAUST-LOW TEMP	300	DIESEL GEN.	740			2,4		6	
91	19	2-TE-300-0452A-A	DIESEL GEN 2A-A EXHAUST-HIGH TEMP	300	DIESEL GEN.	740			2,4		3	
92	19	2-TE-300-0452B-A	DIESEL GEN 2A-A EXHAUST-LOW TEMP	300	DIESEL GEN.	740			2,4		3	
93	19	2-TS-001-0018A-B	STM FLOW TO AFPT ISOL - HIGH TEMP	001	AUXILIARY	669			0		34	
94	19	2-TS-001-0018B-B	STM FLOW TO AFPT ISOL - HIGH TEMP	001	AUXILIARY	669			0		34	
95	20	0-LOCL-500-M026D	DIESEL GEN CONT	500	CONTROL	732			0		13	Y
96	20	2-LOCL-500-M002	TURB CONTROL	500	CONTROL	732			0		13	Y
97	20	2-LOCL-500-M004	Reactor Control Panel 2-M-4	500	CONTROL	732			0		13	Y
98	20	2-LOCL-500-M008	TURB SUP CONT	500	CONTROL	732			0		13	
99	20	2-LOCL-500-M009	VENT-ICE CONT-REACT BD	500	CONTROL	732			0		13	Y
100	20	2-PNLA-082-TV /3-A	DG 2A-A CONTROL PNL	082	DIESEL GEN.	722			0		1	
101	*See SWEL 2 for Item 101.*											
102	21	2-HEX-072-0007	CNTMT SPRAY HT EXCH 2B	072	AUXILIARY	690			5		39	Y
103	21	2-HEX-072-0030	CONTAINMENT SPRAY HEAT EXCHANGER 2A	072	AUXILIARY	690			5		42	Y
104	21	2-HEX-074-0015	RESIDUAL HEAT EXCHANGER 2A	074	AUXILIARY	690	Y		1,3,4	Y	42	Y
105	21	2-HEX-074-0027	RESIDUAL HEAT EXCHANGER 2B	074	AUXILIARY	690	Y		1,3,4	Y	39	Y
106	21	2-TNK-070-0063	CCS SURGE TANK B	070	AUXILIARY	734 (RCA)	Y		0		32	Y
107	21	2-TNK-082-0224	DSL 2A1 STARTING AIR TANK A 35 CF	082	DIESEL GEN.	722			0		1	Y
108	21	2-TNK-082-0255	DSL 2B2 STARTING AIR TANK A 35 CF	082	DIESEL GEN.	722			0		4	Y
109	7	2-FCV-063-0090	SIS ACCUM TK 3 FLOW ISOLATION VLV	063	REACTOR	693			5		46	
110	8	2-PSV-001-0013B-B	SG 2 MAIN STM HDR PRESS	001	REACTOR	747			2,3		50	
111	8	2-PSV-001-0024A-A	SG 3 MAIN STM HDR PRESS	001	REACTOR	747			2,3		50	
112	8	2-FCV-063-0118	SIS ACCUM TK 1 FLOW ISOLATION VLV	063	REACTOR	693			3		48	
113	10	2-AHU-030-0080	CONTROL ROD DRIVE COOLING UNIT D-B	030	REACTOR	680			5		51	
114	10	2-AHU-030-0088	CONTROL ROD DRIVE COOLING UNIT C-A	030	REACTOR	680			5		51	
115	10	2-AHU-313-0262	INCORE INSTR RM AHU A	313	REACTOR	708			0		52	
116	10	2-CLR-030-0074	REACTOR LOWER COMPT COOLING UNIT A-A	030	REACTOR	693			5		47	
117	18	2-LOCL-500-0183C	FLOOR PANEL REACTOR BUILDING	500	REACTOR	693			0		47	
118	21	2-TNK-063-0060	SIS ACCUMULATOR NO 4	063	REACTOR	693			1,3		49	
119	21	2-TNK-063-0119	SIS ACCUMULATOR NO 1	063	REACTOR	693			1,3		48	

Safety Function(s):
0 - Support Function
1 - Reactivity Control
2 - RCS Pressure Control
3 - RCS Inventory Control
4 - Decay Heat Removal
5 - Containment Isolation

Sequoyah Unit 2 Seismic Walkdown Equipment List 2 Created By: Approved By:

Item #	Class	UNID	Description	System	Building	Elevation	Risk Significant	New or Replaced	5 Safety Functions	Enhanced for IPEEE	Area Walkby	Anchorage Verification
20	5	0-PMP-078-0012-A	SPENT FUEL PIT PUMP A	078	AUXILIARY	714			0		28	
101	21	0-HEX-078-0018	SPENT FUEL PIT HEAT EXCHANGER A	078	AUXILIARY	714			4		29	Y

Safety Function(s):
0 - Support Function
1 - Reactivity Control
2 - RCS Pressure Control
3 - RCS Inventory Control
4 - Decay Heat Removal
5 - Containment Isolation

Sequoyah Unit 2 Area Walk-Bys

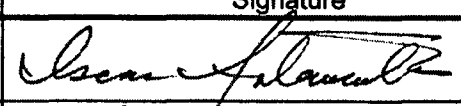
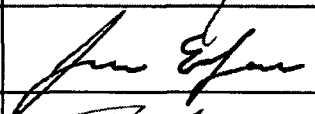
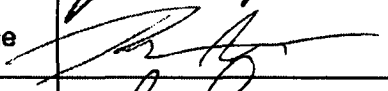
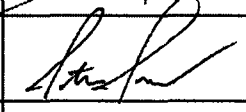
Area	Building	Elevation	Description
1	Diesel Gen	722	Bay 2A
2	Diesel Gen	740	2A Bd Rm
3	Diesel Gen	740	2A Fan Rm
4	Diesel Gen	722	Bay 2B
5	Diesel Gen	740	2B Bd Rm
6	Diesel Gen	740	2B Fan Rm
7	ERCW Pump	720	2A Pump Rm
8	ERCW Pump	704	2A Bd Rm
9	ERCW Pump	688	2A Strainer Rm
10	ERCW Pump	720	2B Pump Rm
11	ERCW Pump	704	2B Bd Rm
12	Control	732	Cont. Mech. Eqpt. Room
13	Control	732	Control Room Unit 2
14	Auxiliary	734	125V Batt Bd Room II
15	Auxiliary	734	480V Shtdwn Bd Rm 2A2
16	Auxiliary	734	480V Shtdwn Bd Rm 2B1
17	Auxiliary	734	480V Shtdwn Bd Rm 2B2
18	Auxiliary	749	480V XFMR Rm 2B
19	Auxiliary	749	480V XFMR Rm 2A
20	Auxiliary	749	125V Batt Rm III
21	Auxiliary	749	125V Batt Rm IV
22	Auxiliary	749	480V Bd Rm 2B
23	Auxiliary	749	480V Bd Rm 2A
24	Auxiliary	749	480V 2A Mech Eq Room
25	Auxiliary	653	RHR Pump Area
26	Auxiliary	669	SI Pump Rm 2A
27	Auxiliary	690	CCS Pump Area
28	Auxiliary	714	SFP Pit
29	Auxiliary	714	SFP HEX Area
30	Auxiliary	759	CRDM Room
31	Auxiliary	734	6.9kV Shtdwn Bd Rm A
32	Auxiliary	734	Surge Tnk B Area
Area 33 Omitted			
34	Auxiliary	669	Aux Feedwtr Pmp 2A-S
35	Auxiliary	669	Chg. Pump Rm 2B
36	Auxiliary	734	6.9kV Shtdwn Bd Rm B
37	Control	669	669 Mech Room
38	Auxiliary	690	Aux Feedwtr Pmp B Area
39	Auxiliary	690	2B RHR CCS HEX Room
40	Auxiliary	714	Shtdwn Bd B Area
Area 41 Omitted			
42	Auxiliary	690	2A RHR CCS HEX Room
43	Auxiliary	669	SI Pump Area
44	Auxiliary	653	CS Pump Room 2B
45	Auxiliary	734	125V Batt Bd Room IV

Sequoyah Unit 2 Area Walk-Bys

Area	Building	Elevation	Description
46	Reactor	693	Accum. Rm 3
47	Reactor	693	Fan Room 1
48	Reactor	693	Accum. Rm 1
49	Reactor	693	Accum. Rm 4
50	Reactor	747	Annulus AZ 277
51	Reactor	680	Inside Polar Crane Wall
52	Reactor	708	Incore Inst Room Platform

Appendix E: SWCs

The following signatures are provided for the engineers responsible for the Seismic Walkdown Checklists in Sequoyah Unit 2.

Name	Signature	Date
Isaac Antanaitis		11/12/12
James Edgar		11/12/12
Robert Malone		11/12/12
Steven Summers		11/12/12
Phillip York		11-12-2012

Status: Y☒ N☐ U☐

Seismic Walkdown Checklist (SWC)

Equipment ID No. *SQN-0-DRYA-032-0002-B* Equip. Class[3] *0 - Other (Dryer)*

Equipment Description *AUX CONTROL AIR DRYER B-B*

Location: Bldg. *Aux* Floor El. *734* Room, Area *32 - Surge Tank B Area*

Manufacturer, Model, Etc. (optional but recommended) _____

Instructions for Completing Checklist

This checklist may be used to document the results of the Seismic Walkdown of an item of equipment on the SWEL. The space below each of the following questions may be used to record the results of judgments and findings. Additional space is provided at the end of this checklist for documenting other comments.

Note: Y = Yes, N = No, U = Unknown, N/A = Not Applicable

Anchorage

1. Is the anchorage configuration verification required (i.e., is the item one of the 50% of SWEL items requiring such verification)? Y☐ N☒

2. Is the anchorage free of bent, broken, missing or loose hardware? Y☒ N☐ U☐ N/A☐

3. Is the anchorage free of corrosion that is more than mild surface oxidation? Y☒ N☐ U☐ N/A☐

4. Is the anchorage free of visible cracks in the concrete near the anchors? Y☒ N☐ U☐ N/A☐

5. Is the anchorage configuration consistent with plant documentation? (Note: This question only applies if the item is one of the 50% for which an anchorage configuration verification is required.) Y☐ N☐ U☐ N/A☒

6. Based on the above anchorage evaluations, is the anchorage free of potentially adverse seismic conditions? Y☒ N☐ U☐

[3] Enter the equipment class name from Appendix B: Classes of Equipment

Equipment ID No. *SQN-0-DRYA-032-0002-B* Equip. Class[3] *0 - Other (Dryer)*

Equipment Description *AUX CONTROL AIR DRYER B-B*

Interaction Effects

7. Are soft targets free from impact by nearby equipment or structures? Y☒ N☐ U☐ N/A☐

8. Are overhead equipment, distribution systems, ceiling tiles and lighting, and masonry block walls not likely to collapse onto the equipment? Y☒ N☐ U☐ N/A☐

9. Do attached lines have adequate flexibility to avoid damage? Y☒ N☐ U☐ N/A☐

10. Based on the above seismic interaction evaluations, is equipment free of potentially adverse seismic interaction effects? Y☒ N☐ U☐

Other Adverse Conditions

11. Have you looked for and found no other seismic conditions that could adversely affect the safety functions of the equipment? Y☒ N☐ U☐

Comments (Additional pages may be added as necessary)

Evaluated by: *Robert Malone* Date: *8/8/12*

Phillip York *8/8/12*

Status: Y☒ N☐ U☐

Seismic Walkdown Checklist (SWC)

Equipment ID No. *SQN-2-BDC-201-FL-A* Equip. Class[3] *1 - MCC*

Equipment Description *480V ERCW MCC 2A-A*

Location: Bldg. *ERCW* Floor El. *704* Room, Area *8 - 2A Board Room*

Manufacturer, Model, Etc. (optional but recommended) _____

Instructions for Completing Checklist

This checklist may be used to document the results of the Seismic Walkdown of an item of equipment on the SWEL. The space below each of the following questions may be used to record the results of judgments and findings. Additional space is provided at the end of this checklist for documenting other comments.

Note: Y = Yes, N = No, U = Unknown, N/A = Not Applicable

Anchorage

1. Is the anchorage configuration verification required (i.e., is the item one of the 50% of SWEL items requiring such verification)? Y☐ N☒

2. Is the anchorage free of bent, broken, missing or loose hardware? Y☒ N☐ U☐ N/A☐
   Front panels could not be opened due to sensitive equipment that is utilized in all modes of operation. Front kick-plates and back panels required extensive disassembly to open. Weld between channel and cabinet was checked for condition only.

3. Is the anchorage free of corrosion that is more than mild surface oxidation? Y☒ N☐ U☐ N/A☐

4. Is the anchorage free of visible cracks in the concrete near the anchors? Y☒ N☐ U☐ N/A☐

5. Is the anchorage configuration consistent with plant documentation? (Note: This question only applies if the item is one of the 50% for which an anchorage configuration verification is required.) Y☐ N☐ U☐ N/A☒

6. Based on the above anchorage evaluations, is the anchorage free of potentially adverse seismic conditions? Y☒ N☐ U☐

[3] Enter the equipment class name from Appendix B: Classes of Equipment

Equipment ID No. *SQN-2-BDC-201-FL-A* Equip. Class[3] *1 - MCC*

Equipment Description *480V ERCW MCC 2A-A*

Interaction Effects

7. Are soft targets free from impact by nearby equipment or structures? Y☒ N☐ U☐ N/A☐

8. Are overhead equipment, distribution systems, ceiling tiles and lighting, and masonry block walls not likely to collapse onto the equipment? Y☒ N☐ U☐ N/A☐

9. Do attached lines have adequate flexibility to avoid damage? Y☒ N☐ U☐ N/A☐

10. Based on the above seismic interaction evaluations, is equipment free of potentially adverse seismic interaction effects? Y☒ N☐ U☐

Other Adverse Conditions

11. Have you looked for and found no other seismic conditions that could adversely affect the safety functions of the equipment? Y☒ N☐ U☐

Comments (Additional pages may be added as necessary)

Evaluated by: *Robert Malone* Date: *7/19/12*

Phillip York *7/19/12*

Status: Y☒ N☐ U☐

Seismic Walkdown Checklist (SWC)

Equipment ID No. *SQN-2-BDC-201-FN-B* Equip. Class[3] *1 - MCC*

Equipment Description *480V ERCW MCC 2B-B*

Location: Bldg. *ERCW* Floor El. *704* Room, Area *11 - 2B Board Room*

Manufacturer, Model, Etc. (optional but recommended) _____

Instructions for Completing Checklist

This checklist may be used to document the results of the Seismic Walkdown of an item of equipment on the SWEL. The space below each of the following questions may be used to record the results of judgments and findings. Additional space is provided at the end of this checklist for documenting other comments.

Note: Y = Yes, N = No, U = Unknown, N/A = Not Applicable

Anchorage

1. Is the anchorage configuration verification required (i.e., is the item one of the 50% of SWEL items requiring such verification)? Y☐ N☒

2. Is the anchorage free of bent, broken, missing or loose hardware? Y☒ N☐ U☐ N/A☐
   Front panels could not be opened due to sensitive equipment that is utilized in all modes of operation. Front kick-plates and back panels required extensive disassembly to open. Weld between channel and cabinet was checked for condition only.

3. Is the anchorage free of corrosion that is more than mild surface oxidation? Y☒ N☐ U☐ N/A☐

4. Is the anchorage free of visible cracks in the concrete near the anchors? Y☒ N☐ U☐ N/A☐

5. Is the anchorage configuration consistent with plant documentation? (Note: This question only applies if the item is one of the 50% for which an anchorage configuration verification is required.) Y☐ N☐ U☐ N/A☒

6. Based on the above anchorage evaluations, is the anchorage free of potentially adverse seismic conditions? Y☒ N☐ U☐

[3] Enter the equipment class name from Appendix B: Classes of Equipment

Equipment ID No. *SQN-2-BDC-201-FN-B* Equip. Class[3] *1 - MCC*

Equipment Description *480V ERCW MCC 2B-B*

Interaction Effects

7. Are soft targets free from impact by nearby equipment or structures? Y☒ N☐ U☐ N/A☐

8. Are overhead equipment, distribution systems, ceiling tiles and lighting, and masonry block walls not likely to collapse onto the equipment? Y☒ N☐ U☐ N/A☐

9. Do attached lines have adequate flexibility to avoid damage? Y☒ N☐ U☐ N/A☐

10. Based on the above seismic interaction evaluations, is equipment free of potentially adverse seismic interaction effects? Y☒ N☐ U☐

Other Adverse Conditions

11. Have you looked for and found no other seismic conditions that could adversely affect the safety functions of the equipment? Y☒ N☐ U☐

Comments (Additional pages may be added as necessary)

Evaluated by: *Robert Malone* Date: *7/24/12*

Phillip York *7/24/12*

Status: Y☒ N☐ U☐

Seismic Walkdown Checklist (SWC)

Equipment ID No. *SQN-2-BDC-201-FQ-A* Equip. Class[3] *1 - MCC*

Equipment Description *480V DIESEL AUXILIARY BOARD 2A1-A*

Location: Bldg. *DG* Floor El. *740* Room, Area *2 - 2A Board Room*

Manufacturer, Model, Etc. (optional but recommended) _____

Instructions for Completing Checklist

This checklist may be used to document the results of the Seismic Walkdown of an item of equipment on the SWEL. The space below each of the following questions may be used to record the results of judgments and findings. Additional space is provided at the end of this checklist for documenting other comments.

Note: Y = Yes, N = No, U = Unknown, N/A = Not Applicable

Anchorage

1. Is the anchorage configuration verification required (i.e., is the item one of the 50% of SWEL items requiring such verification)? Y☒ N☐
   For anchorage configuration verification see calculation SCG-4M-00169, pages 17, 18A, 18B, and 18C.

2. Is the anchorage free of bent, broken, missing or loose hardware? Y☒ N☐ U☐ N/A☐
   Front kick-plates were removed and anchorage to structure was verified. Front panels could not be opened due to sensitive equipment that is utilized in all modes of operation. Back panels required extensive disassembly to open. Weld between channel and cabinet was checked for condition only.

3. Is the anchorage free of corrosion that is more than mild surface oxidation? Y☒ N☐ U☐ N/A☐

4. Is the anchorage free of visible cracks in the concrete near the anchors? Y☒ N☐ U☐ N/A☐

5. Is the anchorage configuration consistent with plant documentation? (Note: This question only applies if the item is one of the 50% for which an anchorage configuration verification is required.) Y☒ N☐ U☐ N/A☐

6. Based on the above anchorage evaluations, is the anchorage free of potentially adverse seismic conditions? Y☒ N☐ U☐

[3] Enter the equipment class name from Appendix B: Classes of Equipment

Equipment ID No. *SQN-2-BDC-201-FQ-A* Equip. Class[3] *1 - MCC*

Equipment Description *480V DIESEL AUXILIARY BOARD 2A1-A*

Interaction Effects

7. Are soft targets free from impact by nearby equipment or structures? Y☒ N☐ U☐ N/A☐
   Conduit from top of cabinet has minimum clear distance to cable trays. Licensing evaluation shows that seismic event would cause a movement of one-half inches. Not credible.

8. Are overhead equipment, distribution systems, ceiling tiles and lighting, and masonry block walls not likely to collapse onto the equipment? Y☒ N☐ U☐ N/A☐
   Masonry block wall behind cabinet seismically qualified in calculation SCG-1-86.

9. Do attached lines have adequate flexibility to avoid damage? Y☒ N☐ U☐ N/A☐

10. Based on the above seismic interaction evaluations, is equipment free of potentially adverse seismic interaction effects? Y☒ N☐ U☐

Other Adverse Conditions

11. Have you looked for and found no other seismic conditions that could adversely affect the safety functions of the equipment? Y☒ N☐ U☐

Comments (Additional pages may be added as necessary)

Evaluated by: *Robert Malone* Date: *7/18/12*

Phillip York *7/18/12*

Status: Y☒ N☐ U☐

Seismic Walkdown Checklist (SWC)

Equipment ID No. *SQN-2-BDC-201-FU-B* Equip. Class[3] *1 - MCC*

Equipment Description *480V DIESEL AUXILIARY BOARD 2B1-B*

Location: Bldg. *DG* Floor El. *740* Room, Area *5 - 2B Board Room*

Manufacturer, Model, Etc. (optional but recommended) _____

Instructions for Completing Checklist

This checklist may be used to document the results of the Seismic Walkdown of an item of equipment on the SWEL. The space below each of the following questions may be used to record the results of judgments and findings. Additional space is provided at the end of this checklist for documenting other comments.

Note: Y = Yes, N = No, U = Unknown, N/A = Not Applicable

Anchorage

1. Is the anchorage configuration verification required (i.e., is the item one of the 50% of SWEL items requiring such verification)? Y☐ N☒

2. Is the anchorage free of bent, broken, missing or loose hardware? Y☒ N☐ U☐ N/A☐
   Front kick-plates were removed and anchorage to structure was verified. Front panels could not be opened due to sensitive equipment that is utilized in all modes of operation. Back panels required extensive disassembly to open. Weld between channel and cabinet was checked for condition only.

3. Is the anchorage free of corrosion that is more than mild surface oxidation? Y☒ N☐ U☐ N/A☐

4. Is the anchorage free of visible cracks in the concrete near the anchors? Y☒ N☐ U☐ N/A☐

5. Is the anchorage configuration consistent with plant documentation? (Note: This question only applies if the item is one of the 50% for which an anchorage configuration verification is required.) Y☐ N☐ U☐ N/A☒

6. Based on the above anchorage evaluations, is the anchorage free of potentially adverse seismic conditions? Y☒ N☐ U☐

[3] Enter the equipment class name from Appendix B: Classes of Equipment

Equipment ID No. *SQN-2-BDC-201-FU-B* Equip. Class[3] *1 - MCC*

Equipment Description *480V DIESEL AUXILIARY BOARD 2B1-B*

Interaction Effects

7. Are soft targets free from impact by nearby equipment or structures? Y☒ N☐ U☐ N/A☐

8. Are overhead equipment, distribution systems, ceiling tiles and lighting, and masonry block walls not likely to collapse onto the equipment? Y☒ N☐ U☐ N/A☐
   Masonry block wall behind cabinet seismically qualified in calculation SCG-1-86.

9. Do attached lines have adequate flexibility to avoid damage? Y☒ N☐ U☐ N/A☐

10. Based on the above seismic interaction evaluations, is equipment free of potentially adverse seismic interaction effects? Y☒ N☐ U☐

Other Adverse Conditions

11. Have you looked for and found no other seismic conditions that could adversely affect the safety functions of the equipment? Y☒ N☐ U☐

Comments (Additional pages may be added as necessary)

Evaluated by: *Robert Malone* Date: *7/24/12*

Phillip York *7/24/12*

Status: Y☐ N☒ U☐

Seismic Walkdown Checklist (SWC)

Equipment ID No. *SQN-2-BDC-201-GM-A* Equip. Class[3] *1 - MCC*

Equipment Description *480V REACTOR MOV BD 2A2-A*

Location: Bldg. *Aux* Floor El. *749* Room, Area *23 - 480V Board Room 2A*

Manufacturer, Model, Etc. (optional but recommended) _____

Instructions for Completing Checklist

This checklist may be used to document the results of the Seismic Walkdown of an item of equipment on the SWEL. The space below each of the following questions may be used to record the results of judgments and findings. Additional space is provided at the end of this checklist for documenting other comments.

Note: Y = Yes, N = No, U = Unknown, N/A = Not Applicable

Anchorage

1. Is the anchorage configuration verification required (i.e., is the item one of the 50% of SWEL items requiring such verification)? Y☐ N☒

2. Is the anchorage free of bent, broken, missing or loose hardware? Y☒ N☐ U☐ N/A☐
   Front kick-plates were removed and anchorage to structure was verified. Front panels could not be opened due to sensitive equipment that is utilized in all modes of operation. Back panels required extensive disassembly to open. Weld between channel and cabinet was checked for condition only.

3. Is the anchorage free of corrosion that is more than mild surface oxidation? Y☒ N☐ U☐ N/A☐

4. Is the anchorage free of visible cracks in the concrete near the anchors? Y☒ N☐ U☐ N/A☐

5. Is the anchorage configuration consistent with plant documentation? (Note: This question only applies if the item is one of the 50% for which an anchorage configuration verification is required.) Y☐ N☐ U☐ N/A☒

6. Based on the above anchorage evaluations, is the anchorage free of potentially adverse seismic conditions? Y☒ N☐ U☐

[3] Enter the equipment class name from Appendix B: Classes of Equipment

Equipment ID No. *SQN-2-BDC-201-GM-A* Equip. Class[3] *1 - MCC*

Equipment Description *480V REACTOR MOV BD 2A2-A*

Interaction Effects

7. Are soft targets free from impact by nearby equipment or structures? Y☐ N☒ U☐ N/A☐
   Floor fan is chained improperly to conduit support near cabinet. During a seismic event fan could hit cabinet.

8. Are overhead equipment, distribution systems, ceiling tiles and lighting, and masonry block walls not likely to collapse onto the equipment? Y☒ N☐ U☐ N/A☐

9. Do attached lines have adequate flexibility to avoid damage? Y☒ N☐ U☐ N/A☐

10. Based on the above seismic interaction evaluations, is equipment free of potentially adverse seismic interaction effects? Y☒ N☐ U☐

Other Adverse Conditions

11. Have you looked for and found no other seismic conditions that could adversely affect the safety functions of the equipment? Y☒ N☐ U☐

Comments (Additional pages may be added as necessary)

Evaluated by: *Robert Malone* Date: *7/30/12*

Phillip York *7/30/12*

Status: Y☒ N☐ U☐

Seismic Walkdown Checklist (SWC)

Equipment ID No. *SQN-2-BDC-201-GN-B* Equip. Class[3] *1 - MCC*

Equipment Description *480V REACTOR MOV BD 2B1-B*

Location: Bldg. *Aux* Floor El. *749* Room, Area *22 - 480V Board Room 2B*

Manufacturer, Model, Etc. (optional but recommended) _____

Instructions for Completing Checklist

This checklist may be used to document the results of the Seismic Walkdown of an item of equipment on the SWEL. The space below each of the following questions may be used to record the results of judgments and findings. Additional space is provided at the end of this checklist for documenting other comments.

Note: Y = Yes, N = No, U = Unknown, N/A = Not Applicable

Anchorage

1. Is the anchorage configuration verification required (i.e., is the item one of the 50% of SWEL items requiring such verification)? Y☐ N☒

2. Is the anchorage free of bent, broken, missing or loose hardware? Y☒ N☐ U☐ N/A☐
   Front kick-plates were removed and anchorage to structure was verified. Front panels could not be opened due to sensitive equipment that is utilized in all modes of operation. Back panels required extensive disassembly to open. Weld between channel and cabinet was checked for condition only.

3. Is the anchorage free of corrosion that is more than mild surface oxidation? Y☒ N☐ U☐ N/A☐

4. Is the anchorage free of visible cracks in the concrete near the anchors? Y☒ N☐ U☐ N/A☐

5. Is the anchorage configuration consistent with plant documentation? (Note: This question only applies if the item is one of the 50% for which an anchorage configuration verification is required.) Y☐ N☐ U☐ N/A☒

6. Based on the above anchorage evaluations, is the anchorage free of potentially adverse seismic conditions? Y☒ N☐ U☐

[3] Enter the equipment class name from Appendix B: Classes of Equipment

Equipment ID No. *SQN-2-BDC-201-GN-B* Equip. Class[3] *1 - MCC*

Equipment Description *480V REACTOR MOV BD 2B1-B*

Interaction Effects

7. Are soft targets free from impact by nearby equipment or structures? Y☒ N☐ U☐ N/A☐

8. Are overhead equipment, distribution systems, ceiling tiles and lighting, and masonry block walls not likely to collapse onto the equipment? Y☒ N☐ U☐ N/A☐
   Masonry block wall seismically qualified in calculation SCG130X11.

9. Do attached lines have adequate flexibility to avoid damage? Y☒ N☐ U☐ N/A☐

10. Based on the above seismic interaction evaluations, is equipment free of potentially adverse seismic interaction effects? Y☒ N☐ U☐

Other Adverse Conditions

11. Have you looked for and found no other seismic conditions that could adversely affect the safety functions of the equipment? Y☒ N☐ U☐

Comments (Additional pages may be added as necessary)

Evaluated by: *Robert Malone* Date: *7/26/12*

James Edgar *7/26/12*

Status: Y☒ N☐ U☐

Seismic Walkdown Checklist (SWC)

Equipment ID No. *SQN-2-BDC-201-JK-A* Equip. Class[3] *1 - MCC*

Equipment Description *480V CONT & AUX BLDG VENT BD 2A2-A*

Location: Bldg. *Aux* Floor El. *734* Room, Area *15 - 480V Shutdown Board Room 2A2*

Manufacturer, Model, Etc. (optional but recommended) _____

Instructions for Completing Checklist

This checklist may be used to document the results of the Seismic Walkdown of an item of equipment on the SWEL. The space below each of the following questions may be used to record the results of judgments and findings. Additional space is provided at the end of this checklist for documenting other comments.

Note: Y = Yes, N = No, U = Unknown, N/A = Not Applicable

Anchorage

1. Is the anchorage configuration verification required (i.e., is the item one of the 50% of SWEL items requiring such verification)? Y☐ N☒

2. Is the anchorage free of bent, broken, missing or loose hardware? Y☒ N☐ U☐ N/A☐
   Front kick-plates were removed and anchorage to structure was verified. Front panels could not be opened due to sensitive equipment that is utilized in all modes of operation. Back panels required extensive disassembly to open. Weld between channel and cabinet was checked for condition only.

3. Is the anchorage free of corrosion that is more than mild surface oxidation? Y☒ N☐ U☐ N/A☐

4. Is the anchorage free of visible cracks in the concrete near the anchors? Y☒ N☐ U☐ N/A☐

5. Is the anchorage configuration consistent with plant documentation? (Note: This question only applies if the item is one of the 50% for which an anchorage configuration verification is required.) Y☐ N☐ U☐ N/A☒

6. Based on the above anchorage evaluations, is the anchorage free of potentially adverse seismic conditions? Y☒ N☐ U☐

[3] Enter the equipment class name from Appendix B: Classes of Equipment

Equipment ID No. *SQN-2-BDC-201-JK-A* Equip. Class[3] *1 - MCC*

Equipment Description *480V CONT & AUX BLDG VENT BD 2A2-A*

Interaction Effects

7. Are soft targets free from impact by nearby equipment or structures? Y☒ N☐ U☐ N/A☐

8. Are overhead equipment, distribution systems, ceiling tiles and lighting, and masonry block walls not likely to collapse onto the equipment? Y☒ N☐ U☐ N/A☐

9. Do attached lines have adequate flexibility to avoid damage? Y☒ N☐ U☐ N/A☐

10. Based on the above seismic interaction evaluations, is equipment free of potentially adverse seismic interaction effects? Y☒ N☐ U☐

Other Adverse Conditions

11. Have you looked for and found no other seismic conditions that could adversely affect the safety functions of the equipment? Y☒ N☐ U☐

Comments (Additional pages may be added as necessary)

Evaluated by: *Robert Malone* Date: *7/30/12*

Phillip York *7/30/12*

Status: Y☒ N☐ U☐

Seismic Walkdown Checklist (SWC)

Equipment ID No. *SQN-2-BDC-201-DO-A* Equip. Class[3] *2 - Low Voltage*

Equipment Description *480V SHUTDOWN BD 2A2-A*

Location: Bldg. *Aux* Floor El. *734* Room, Area *15 - 480V Shutdown Board Room 2A2*

Manufacturer, Model, Etc. (optional but recommended) _____

Instructions for Completing Checklist

This checklist may be used to document the results of the Seismic Walkdown of an item of equipment on the SWEL. The space below each of the following questions may be used to record the results of judgments and findings. Additional space is provided at the end of this checklist for documenting other comments.

Note: Y = Yes, N = No, U = Unknown, N/A = Not Applicable

Anchorage

1. Is the anchorage configuration verification required (i.e., is the item one of the 50% of SWEL items requiring such verification)? Y☐ N☒

2. Is the anchorage free of bent, broken, missing or loose hardware? Y☒ N☐ U☐ N/A☐
   Front panels could not be opened due to the excessive safety hazard of opening this shutdown board during any mode of operation. Back panels required extensive disassembly to open. Weld between channel and cabinet was checked for condition only.

3. Is the anchorage free of corrosion that is more than mild surface oxidation? Y☒ N☐ U☐ N/A☐

4. Is the anchorage free of visible cracks in the concrete near the anchors? Y☒ N☐ U☐ N/A☐

5. Is the anchorage configuration consistent with plant documentation? (Note: This question only applies if the item is one of the 50% for which an anchorage configuration verification is required.) Y☐ N☐ U☐ N/A☒

6. Based on the above anchorage evaluations, is the anchorage free of potentially adverse seismic conditions? Y☒ N☐ U☐

[3] Enter the equipment class name from Appendix B: Classes of Equipment

Equipment ID No. *SQN-2-BDC-201-DO-A* Equip. Class[3] *2 - Low Voltage*

Equipment Description *480V SHUTDOWN BD 2A2-A*

Interaction Effects

7. Are soft targets free from impact by nearby equipment or structures? Y☒ N☐ U☐ N/A☐

8. Are overhead equipment, distribution systems, ceiling tiles and lighting, and masonry block walls not likely to collapse onto the equipment? Y☒ N☐ U☐ N/A☐

9. Do attached lines have adequate flexibility to avoid damage? Y☒ N☐ U☐ N/A☐

10. Based on the above seismic interaction evaluations, is equipment free of potentially adverse seismic interaction effects? Y☒ N☐ U☐

Other Adverse Conditions

11. Have you looked for and found no other seismic conditions that could adversely affect the safety functions of the equipment? Y☒ N☐ U☐

Comments (Additional pages may be added as necessary)

Evaluated by: *Robert Malone* Date: *7/30/12*

Phillip York *7/30/12*

Status: Y☒ N☐ U☐

Seismic Walkdown Checklist (SWC)

Equipment ID No. *SQN-2-BDB-201-DP-B* Equip. Class[3] *2 - Low Voltage Switchgear*

Equipment Description *480V SHUTDOWN BD 2B1-B*

Location: Bldg. *Aux* Floor El. *734* Room, Area *16 - 480V Shutdown Board Room 2B1*

Manufacturer, Model, Etc. (optional but recommended) _____

Instructions for Completing Checklist

This checklist may be used to document the results of the Seismic Walkdown of an item of equipment on the SWEL. The space below each of the following questions may be used to record the results of judgments and findings. Additional space is provided at the end of this checklist for documenting other comments.

Note: Y = Yes, N = No, U = Unknown, N/A = Not Applicable

Anchorage

1. Is the anchorage configuration verification required (i.e., is the item one of the 50% of SWEL items requiring such verification)? Y☐ N☒

2. Is the anchorage free of bent, broken, missing or loose hardware? Y☒ N☐ U☐ N/A☐
   Front panels could not be opened due to the excessive safety hazard of opening this shutdown board during any mode of operation. Back panels required extensive disassembly to open. Weld between channel and cabinet was checked for condition only.

3. Is the anchorage free of corrosion that is more than mild surface oxidation? Y☒ N☐ U☐ N/A☐

4. Is the anchorage free of visible cracks in the concrete near the anchors? Y☒ N☐ U☐ N/A☐

5. Is the anchorage configuration consistent with plant documentation? (Note: This question only applies if the item is one of the 50% for which an anchorage configuration verification is required.) Y☐ N☐ U☐ N/A☒

6. Based on the above anchorage evaluations, is the anchorage free of potentially adverse seismic conditions? Y☒ N☐ U☐

[3] Enter the equipment class name from Appendix B: Classes of Equipment

Equipment ID No. *SQN-2-BDB-201-DP-B* Equip. Class[3] *2 - Low Voltage Switchgear*

Equipment Description *480V SHUTDOWN BD 2B1-B*

Interaction Effects

7. Are soft targets free from impact by nearby equipment or structures? Y☒ N☐ U☐ N/A☐

8. Are overhead equipment, distribution systems, ceiling tiles and lighting, and masonry block walls not likely to collapse onto the equipment? Y☒ N☐ U☐ N/A☐
   Masonry block wall seismically qualified in calculation SCG130X11.

9. Do attached lines have adequate flexibility to avoid damage? Y☒ N☐ U☐ N/A☐

10. Based on the above seismic interaction evaluations, is equipment free of potentially adverse seismic interaction effects? Y☒ N☐ U☐

Other Adverse Conditions

11. Have you looked for and found no other seismic conditions that could adversely affect the safety functions of the equipment? Y☒ N☐ U☐

Comments (Additional pages may be added as necessary)

Evaluated by: *Robert Malone* Date: *7/26/12*

James Edgar *7/26/12*

Status: Y☒ N☐ U☐

Seismic Walkdown Checklist (SWC)

Equipment ID No. *SQN-2-BDB-201-DQ-B* Equip. Class[3] *2 - Low Voltage Switchgear*

Equipment Description *480V SHUTDOWN BD 2B2-B*

Location: Bldg. *Aux* Floor El. *734* Room, Area *17 - 480V Shutdown Board Room 2B2*

Manufacturer, Model, Etc. (optional but recommended) _____

Instructions for Completing Checklist

This checklist may be used to document the results of the Seismic Walkdown of an item of equipment on the SWEL. The space below each of the following questions may be used to record the results of judgments and findings. Additional space is provided at the end of this checklist for documenting other comments.

Note: Y = Yes, N = No, U = Unknown, N/A = Not Applicable

Anchorage

1. Is the anchorage configuration verification required (i.e., is the item one of the 50% of SWEL items requiring such verification)? Y☐ N☒

2. Is the anchorage free of bent, broken, missing or loose hardware? Y☒ N☐ U☐ N/A☐
   Front panels could not be opened due to the excessive safety hazard of opening this shutdown board during any mode of operation. Back panels required extensive disassembly to open. Weld between channel and cabinet was checked for condition only.

3. Is the anchorage free of corrosion that is more than mild surface oxidation? Y☒ N☐ U☐ N/A☐

4. Is the anchorage free of visible cracks in the concrete near the anchors? Y☒ N☐ U☐ N/A☐

5. Is the anchorage configuration consistent with plant documentation? (Note: This question only applies if the item is one of the 50% for which an anchorage configuration verification is required.) Y☐ N☐ U☐ N/A☒

6. Based on the above anchorage evaluations, is the anchorage free of potentially adverse seismic conditions? Y☒ N☐ U☐

[3] Enter the equipment class name from Appendix B: Classes of Equipment

Equipment ID No. *SQN-2-BDB-201-DQ-B* Equip. Class[3] *2 - Low Voltage Switchgear*

Equipment Description *480V SHUTDOWN BD 2B2-B*

Interaction Effects

7. Are soft targets free from impact by nearby equipment or structures? Y☒ N☐ U☐ N/A☐

8. Are overhead equipment, distribution systems, ceiling tiles and lighting, and masonry block walls not likely to collapse onto the equipment? Y☒ N☐ U☐ N/A☐
   Masonry block wall seismically qualified in calculation SCG130X11.

9. Do attached lines have adequate flexibility to avoid damage? Y☒ N☐ U☐ N/A☐

10. Based on the above seismic interaction evaluations, is equipment free of potentially adverse seismic interaction effects? Y☒ N☐ U☐

Other Adverse Conditions

11. Have you looked for and found no other seismic conditions that could adversely affect the safety functions of the equipment? Y☒ N☐ U☐

Comments (Additional pages may be added as necessary)

Evaluated by: *Robert Malone* Date: *7/26/12*

James Edgar *7/26/12*

Status: Y☒ N☐ U☐

Seismic Walkdown Checklist (SWC)

Equipment ID No. *SQN-2-BDA-202-CO-A* Equip. Class[3] *3 - Medium Voltage Switchgear*

Equipment Description *6900V SHUTDOWN BOARD 2A-A*

Location: Bldg. *Aux* Floor El. *734* Room, Area *31 - 6.9kV Shutdown Board Room A*

Manufacturer, Model, Etc. (optional but recommended) _____

Instructions for Completing Checklist

This checklist may be used to document the results of the Seismic Walkdown of an item of equipment on the SWEL. The space below each of the following questions may be used to record the results of judgments and findings. Additional space is provided at the end of this checklist for documenting other comments.

Note: Y = Yes, N = No, U = Unknown, N/A = Not Applicable

Anchorage

1. Is the anchorage configuration verification required (i.e., is the item one of the 50% of SWEL items requiring such verification)? Y☐ N☒

2. Is the anchorage free of bent, broken, missing or loose hardware? Y☒ N☐ U☐ N/A☐
   Front panels could not be opened due to the excessive safety hazard of opening this shutdown board during any mode of operation. Back panels required extensive disassembly to open.

3. Is the anchorage free of corrosion that is more than mild surface oxidation? Y☒ N☐ U☐ N/A☐

4. Is the anchorage free of visible cracks in the concrete near the anchors? Y☒ N☐ U☐ N/A☐

5. Is the anchorage configuration consistent with plant documentation? (Note: This question only applies if the item is one of the 50% for which an anchorage configuration verification is required.) Y☐ N☐ U☐ N/A☒

6. Based on the above anchorage evaluations, is the anchorage free of potentially adverse seismic conditions? Y☒ N☐ U☐

[3] Enter the equipment class name from Appendix B: Classes of Equipment

Equipment ID No. *SQN-2-BDA-202-CO-A* Equip. Class[3] *3 - Medium Voltage Switchgear*

Equipment Description *6900V SHUTDOWN BOARD 2A-A*

Interaction Effects

7. Are soft targets free from impact by nearby equipment or structures? Y☒ N☐ U☐ N/A☐

8. Are overhead equipment, distribution systems, ceiling tiles and lighting, and masonry block walls not likely to collapse onto the equipment? Y☒ N☐ U☐ N/A☐

9. Do attached lines have adequate flexibility to avoid damage? Y☒ N☐ U☐ N/A☐

10. Based on the above seismic interaction evaluations, is equipment free of potentially adverse seismic interaction effects? Y☒ N☐ U☐

Other Adverse Conditions

11. Have you looked for and found no other seismic conditions that could adversely affect the safety functions of the equipment? Y☒ N☐ U☐

Comments (Additional pages may be added as necessary)

Evaluated by: *Robert Malone* Date: *8/3/12*

Phillip York *8/3/12*

Status: Y☒ N☐ U☐

Seismic Walkdown Checklist (SWC)

Equipment ID No. *SQN-2-BDB-202-CP-B* Equip. Class[3] *3 - Medium Voltage Switchgear*

Equipment Description *6900V SHUTDOWN BOARD 2B-B*

Location: Bldg. *Aux* Floor El. *734* Room, Area *36 - 6.9kV Shutdown Board Room B*

Manufacturer, Model, Etc. (optional but recommended) _____

Instructions for Completing Checklist

This checklist may be used to document the results of the Seismic Walkdown of an item of equipment on the SWEL. The space below each of the following questions may be used to record the results of judgments and findings. Additional space is provided at the end of this checklist for documenting other comments.

Note: Y = Yes, N = No, U = Unknown, N/A = Not Applicable

Anchorage

1. Is the anchorage configuration verification required (i.e., is the item one of the 50% of SWEL items requiring such verification)? Y☐ N☒

2. Is the anchorage free of bent, broken, missing or loose hardware? Y☒ N☐ U☐ N/A☐
   Front panels could not be opened due to the excessive safety hazard of opening this shutdown board during any mode of operation. Back panels required extensive disassembly to open.

3. Is the anchorage free of corrosion that is more than mild surface oxidation? Y☒ N☐ U☐ N/A☐

4. Is the anchorage free of visible cracks in the concrete near the anchors? Y☒ N☐ U☐ N/A☐

5. Is the anchorage configuration consistent with plant documentation? (Note: This question only applies if the item is one of the 50% for which an anchorage configuration verification is required.) Y☐ N☐ U☐ N/A☒

6. Based on the above anchorage evaluations, is the anchorage free of potentially adverse seismic conditions? Y☒ N☐ U☐

[3] Enter the equipment class name from Appendix B: Classes of Equipment

Equipment ID No. *SQN-2-BDB-202-CP-B* Equip. Class[3] *3 - Medium Voltage Switchgear*

Equipment Description *6900V SHUTDOWN BOARD 2B-B*

Interaction Effects

7. Are soft targets free from impact by nearby equipment or structures? Y☒ N☐ U☐ N/A☐
   Scaffolding in front of equipment needs additional restraint to prevent tipping into soft targets. Only one restraint point was used near the bottom on the assembly. During a seismic event, the scaffolding could overturn and strike the equipment. On a later inspection, it was found that the scaffolding had been anchored properly from the top of the assembly.
8. Are overhead equipment, distribution systems, ceiling tiles and lighting, and masonry block walls not likely to collapse onto the equipment? Y☒ N☐ U☐ N/A☐
   Masonry block wall near equipment seismically qualified in calculation 46W405-5.
9. Do attached lines have adequate flexibility to avoid damage? Y☒ N☐ U☐ N/A☐
10. Based on the above seismic interaction evaluations, is equipment free of potentially adverse seismic interaction effects? Y☒ N☐ U☐

Other Adverse Conditions

11. Have you looked for and found no other seismic conditions that could adversely affect the safety functions of the equipment? Y☒ N☐ U☐

Comments (Additional pages may be added as necessary)

Appendix R work was being performed in the area at the same time the walkdown occurred.

Temporary equipment was prevalent in the area. Proper storage for the equipment was verified.

Evaluated by: *Robert Malone* Date: *8/7/12*

Phillip York *8/7/12 & 8/23/12*

Isaac Antanaitis *8/23/12*

Status: Y☒ N☐ U☐

Seismic Walkdown Checklist (SWC)

Equipment ID No. *SQN-2-OXF-202-2A-A* Equip. Class[3] *4 - Transformer*

Equipment Description *480V SHUTDOWN TRANSFORMER 2A1-A*

Location: Bldg. *Aux* Floor El. *749* Room, Area *19 - 480V Transformer Room 2A*

Manufacturer, Model, Etc. (optional but recommended) _____

Instructions for Completing Checklist

This checklist may be used to document the results of the Seismic Walkdown of an item of equipment on the SWEL. The space below each of the following questions may be used to record the results of judgments and findings. Additional space is provided at the end of this checklist for documenting other comments.

Note: Y = Yes, N = No, U = Unknown, N/A = Not Applicable

Anchorage

1. Is the anchorage configuration verification required (i.e., is the item one of the 50% of SWEL items requiring such verification)? Y☒ N☐
   For anchorage configuration verification see drawings 7057025 and 48N1274 Mk 2.

2. Is the anchorage free of bent, broken, missing or loose hardware? Y☒ N☐ U☐ N/A☐

3. Is the anchorage free of corrosion that is more than mild surface oxidation? Y☒ N☐ U☐ N/A☐

4. Is the anchorage free of visible cracks in the concrete near the anchors? Y☒ N☐ U☐ N/A☐

5. Is the anchorage configuration consistent with plant documentation? (Note: This question only applies if the item is one of the 50% for which an anchorage configuration verification is required.) Y☒ N☐ U☐ N/A☐

6. Based on the above anchorage evaluations, is the anchorage free of potentially adverse seismic conditions? Y☒ N☐ U☐

[3] Enter the equipment class name from Appendix B: Classes of Equipment

Equipment ID No. *SQN-2-OXF-202-2A-A* Equip. Class[3] *4 - Transformer*

Equipment Description *480V SHUTDOWN TRANSFORMER 2A1-A*

Interaction Effects

7. Are soft targets free from impact by nearby equipment or structures? Y☒ N☐ U☐ N/A☐

8. Are overhead equipment, distribution systems, ceiling tiles and lighting, and masonry block walls not likely to collapse onto the equipment? Y☒ N☐ U☐ N/A☐
   Masonry block wall seismically qualified in drawing 46W405-7,9.

9. Do attached lines have adequate flexibility to avoid damage? Y☒ N☐ U☐ N/A☐

10. Based on the above seismic interaction evaluations, is equipment free of potentially adverse seismic interaction effects? Y☒ N☐ U☐

Other Adverse Conditions

11. Have you looked for and found no other seismic conditions that could adversely affect the safety functions of the equipment? Y☒ N☐ U☐

Comments (Additional pages may be added as necessary)

Evaluated by: *Robert Malone* Date: *7/30/12*

Phillip York *7/30/12*

Status: Y☒ N☐ U☐

Seismic Walkdown Checklist (SWC)

Equipment ID No. *SQN-2-OXF-202-2B-B* Equip. Class[3] *4 - Transformer*

Equipment Description *SD XFMR 2B-B*

Location: Bldg. *Aux* Floor El. *749* Room, Area *18 - 480V Transformer Room 2B*

Manufacturer, Model, Etc. (optional but recommended) _____

Instructions for Completing Checklist

This checklist may be used to document the results of the Seismic Walkdown of an item of equipment on the SWEL. The space below each of the following questions may be used to record the results of judgments and findings. Additional space is provided at the end of this checklist for documenting other comments.

Note: Y = Yes, N = No, U = Unknown, N/A = Not Applicable

Anchorage

1. Is the anchorage configuration verification required (i.e., is the item one of the 50% of SWEL items requiring such verification)? Y☒ N☐
   For anchorage configuration verification see drawings 7057025 and 48N1274 Mk 2.

2. Is the anchorage free of bent, broken, missing or loose hardware? Y☒ N☐ U☐ N/A☐

3. Is the anchorage free of corrosion that is more than mild surface oxidation? Y☒ N☐ U☐ N/A☐

4. Is the anchorage free of visible cracks in the concrete near the anchors? Y☒ N☐ U☐ N/A☐

5. Is the anchorage configuration consistent with plant documentation? (Note: This question only applies if the item is one of the 50% for which an anchorage configuration verification is required.) Y☒ N☐ U☐ N/A☐

6. Based on the above anchorage evaluations, is the anchorage free of potentially adverse seismic conditions? Y☒ N☐ U☐

[3] Enter the equipment class name from Appendix B: Classes of Equipment

Equipment ID No. *SQN-2-OXF-202-2B-B* Equip. Class[3] *4 - Transformer*

Equipment Description *SD XFMR 2B-B*

Interaction Effects

7. Are soft targets free from impact by nearby equipment or structures? Y☒ N☐ U☐ N/A☐

8. Are overhead equipment, distribution systems, ceiling tiles and lighting, and masonry block walls not likely to collapse onto the equipment? Y☒ N☐ U☐ N/A☐
   Hairline cracks were observed and should be monitored. Masonry block wall seismically qualified in drawing 46W405-7,9.

9. Do attached lines have adequate flexibility to avoid damage? Y☒ N☐ U☐ N/A☐

10. Based on the above seismic interaction evaluations, is equipment free of potentially adverse seismic interaction effects? Y☒ N☐ U☐

Other Adverse Conditions

11. Have you looked for and found no other seismic conditions that could adversely affect the safety functions of the equipment? Y☒ N☐ U☐

Comments (Additional pages may be added as necessary)

Evaluated by: *Robert Malone* Date: *7/26/12*

James Edgar *7/26/12*

Status: Y☒ N☐ U☐

Seismic Walkdown Checklist (SWC)

Equipment ID No. *SQN-2-OXF-202-DN-A* Equip. Class[3] *4 - Transformer*

Equipment Description *480V SHUTDOWN TRANSFORMER 2A-A*

Location: Bldg. *Aux* Floor El. *749* Room, Area *19 - 480V Transformer Room 2A*

Manufacturer, Model, Etc. (optional but recommended) _____

Instructions for Completing Checklist

This checklist may be used to document the results of the Seismic Walkdown of an item of equipment on the SWEL. The space below each of the following questions may be used to record the results of judgments and findings. Additional space is provided at the end of this checklist for documenting other comments.

Note: Y = Yes, N = No, U = Unknown, N/A = Not Applicable

Anchorage

1. Is the anchorage configuration verification required (i.e., is the item one of the 50% of SWEL items requiring such verification)? Y☒ N☐
   For anchorage configuration verification see drawings 7057025 and 48N1274 Mk 2.

2. Is the anchorage free of bent, broken, missing or loose hardware? Y☒ N☐ U☐ N/A☐

3. Is the anchorage free of corrosion that is more than mild surface oxidation? Y☒ N☐ U☐ N/A☐

4. Is the anchorage free of visible cracks in the concrete near the anchors? Y☒ N☐ U☐ N/A☐

5. Is the anchorage configuration consistent with plant documentation? (Note: This question only applies if the item is one of the 50% for which an anchorage configuration verification is required.) Y☒ N☐ U☐ N/A☐

6. Based on the above anchorage evaluations, is the anchorage free of potentially adverse seismic conditions? Y☒ N☐ U☐

[3] Enter the equipment class name from Appendix B: Classes of Equipment

Equipment ID No. *SQN-2-OXF-202-DN-A* Equip. Class[3] *4 - Transformer*

Equipment Description *480V SHUTDOWN TRANSFORMER 2A-A*

Interaction Effects

7. Are soft targets free from impact by nearby equipment or structures? Y☒ N☐ U☐ N/A☐

8. Are overhead equipment, distribution systems, ceiling tiles and lighting, and masonry block walls not likely to collapse onto the equipment? Y☒ N☐ U☐ N/A☐
   Hairline cracks were observed and should be monitored. Dwg 46W405-8 confirms use of same size rebar throughout the length of wall. Masonry block wall seismically qualified in drawing 46W405-7,9.

9. Do attached lines have adequate flexibility to avoid damage? Y☒ N☐ U☐ N/A☐

10. Based on the above seismic interaction evaluations, is equipment free of potentially adverse seismic interaction effects? Y☒ N☐ U☐

Other Adverse Conditions

11. Have you looked for and found no other seismic conditions that could adversely affect the safety functions of the equipment? Y☒ N☐ U☐

Comments (Additional pages may be added as necessary)

Evaluated by: *Robert Malone* Date: *7/30/12*

Phillip York *7/30/12*

Status: Y☒ N☐ U☐

Seismic Walkdown Checklist (SWC)

Equipment ID No. *SQN-2-OXF-202-DQ-B* Equip. Class[3] *4 - Transformer*

Equipment Description *SD XFMR 2B2-B*

Location: Bldg. *Aux* Floor El. *749* Room, Area *18 - 480V Transformer Room 2B*

Manufacturer, Model, Etc. (optional but recommended) _____

Instructions for Completing Checklist

This checklist may be used to document the results of the Seismic Walkdown of an item of equipment on the SWEL. The space below each of the following questions may be used to record the results of judgments and findings. Additional space is provided at the end of this checklist for documenting other comments.

Note: Y = Yes, N = No, U = Unknown, N/A = Not Applicable

Anchorage

1. Is the anchorage configuration verification required (i.e., is the item one of the 50% of SWEL items requiring such verification)? Y☒ N☐
   For anchorage configuration verification see drawings 7057025 and 48N1274 Mk 2.

2. Is the anchorage free of bent, broken, missing or loose hardware? Y☒ N☐ U☐ N/A☐

3. Is the anchorage free of corrosion that is more than mild surface oxidation? Y☒ N☐ U☐ N/A☐

4. Is the anchorage free of visible cracks in the concrete near the anchors? Y☒ N☐ U☐ N/A☐

5. Is the anchorage configuration consistent with plant documentation? (Note: This question only applies if the item is one of the 50% for which an anchorage configuration verification is required.) Y☒ N☐ U☐ N/A☐

6. Based on the above anchorage evaluations, is the anchorage free of potentially adverse seismic conditions? Y☒ N☐ U☐

[3] Enter the equipment class name from Appendix B: Classes of Equipment

Equipment ID No. *SQN-2-OXF-202-DQ-B* Equip. Class[3] *4 - Transformer*

Equipment Description *SD XFMR 2B2-B*

Interaction Effects

7. Are soft targets free from impact by nearby equipment or structures? Y☒ N☐ U☐ N/A☐

8. Are overhead equipment, distribution systems, ceiling tiles and lighting, and masonry block walls not likely to collapse onto the equipment? Y☒ N☐ U☐ N/A☐
   Hairline cracks were observed and should be monitored. Masonry block wall seismically qualified in drawing 46W405-7,9.

9. Do attached lines have adequate flexibility to avoid damage? Y☒ N☐ U☐ N/A☐

10. Based on the above seismic interaction evaluations, is equipment free of potentially adverse seismic interaction effects? Y☒ N☐ U☐

Other Adverse Conditions

11. Have you looked for and found no other seismic conditions that could adversely affect the safety functions of the equipment? Y☒ N☐ U☐

Comments (Additional pages may be added as necessary)

Evaluated by: *Robert Malone* Date: *7/26/12*

James Edgar *7/26/12*

Status: Y☒ N☐ U☐

Seismic Walkdown Checklist (SWC)

Equipment ID No. *SQN-2-XFA-202-0312* Equip. Class[3] *4 - Transformer*

Equipment Description *ERCW TRANSFORMER 2A-A*

Location: Bldg. *ERCW* Floor El. *704* Room, Area *8 - 2A Board Room*

Manufacturer, Model, Etc. (optional but recommended) _____

Instructions for Completing Checklist

This checklist may be used to document the results of the Seismic Walkdown of an item of equipment on the SWEL. The space below each of the following questions may be used to record the results of judgments and findings. Additional space is provided at the end of this checklist for documenting other comments.

Note: Y = Yes, N = No, U = Unknown, N/A = Not Applicable

Anchorage

1. Is the anchorage configuration verification required (i.e., is the item one of the 50% of SWEL items requiring such verification)? Y☒ N☐
   For anchorage configuration verification see drawings 35W312 Section A-A and 33N334 Section G-G.

2. Is the anchorage free of bent, broken, missing or loose hardware? Y☒ N☐ U☐ N/A☐

3. Is the anchorage free of corrosion that is more than mild surface oxidation? Y☒ N☐ U☐ N/A☐

4. Is the anchorage free of visible cracks in the concrete near the anchors? Y☒ N☐ U☐ N/A☐

5. Is the anchorage configuration consistent with plant documentation? (Note: This question only applies if the item is one of the 50% for which an anchorage configuration verification is required.) Y☒ N☐ U☐ N/A☐

6. Based on the above anchorage evaluations, is the anchorage free of potentially adverse seismic conditions? Y☒ N☐ U☐

[3] Enter the equipment class name from Appendix B: Classes of Equipment

Equipment ID No. *SQN-2-XFA-202-0312* Equip. Class[3] *4 - Transformer*

Equipment Description *ERCW TRANSFORMER 2A-A*

Interaction Effects

7. Are soft targets free from impact by nearby equipment or structures? Y☒ N☐ U☐ N/A☐

8. Are overhead equipment, distribution systems, ceiling tiles and lighting, and masonry block walls not likely to collapse onto the equipment? Y☒ N☐ U☐ N/A☐

9. Do attached lines have adequate flexibility to avoid damage? Y☒ N☐ U☐ N/A☐

10. Based on the above seismic interaction evaluations, is equipment free of potentially adverse seismic interaction effects? Y☒ N☐ U☐

Other Adverse Conditions

11. Have you looked for and found no other seismic conditions that could adversely affect the safety functions of the equipment? Y☒ N☐ U☐

Comments (Additional pages may be added as necessary)

Evaluated by: *Robert Malone* Date: *7/19/12*

Phillip York *7/19/12*

Status: Y☒ N☐ U☐

Seismic Walkdown Checklist (SWC)

Equipment ID No. *SQN-2-XFA-202-0316* Equip. Class[3] *4 - Transformer*

Equipment Description *ERCW TRANSFORMER 2B-B*

Location: Bldg. *ERCW* Floor El. *704* Room, Area *11 - 2B Board Room*

Manufacturer, Model, Etc. (optional but recommended) _____

Instructions for Completing Checklist

This checklist may be used to document the results of the Seismic Walkdown of an item of equipment on the SWEL. The space below each of the following questions may be used to record the results of judgments and findings. Additional space is provided at the end of this checklist for documenting other comments.

Note: Y = Yes, N = No, U = Unknown, N/A = Not Applicable

Anchorage

1. Is the anchorage configuration verification required (i.e., is the item one of the 50% of SWEL items requiring such verification)? Y☒ N☐
   For anchorage configuration verification see drawings 35W312 Section A-A and 33N334 Section G-G.

2. Is the anchorage free of bent, broken, missing or loose hardware? Y☒ N☐ U☐ N/A☐

3. Is the anchorage free of corrosion that is more than mild surface oxidation? Y☒ N☐ U☐ N/A☐

4. Is the anchorage free of visible cracks in the concrete near the anchors? Y☒ N☐ U☐ N/A☐

5. Is the anchorage configuration consistent with plant documentation? (Note: This question only applies if the item is one of the 50% for which an anchorage configuration verification is required.) Y☒ N☐ U☐ N/A☐

6. Based on the above anchorage evaluations, is the anchorage free of potentially adverse seismic conditions? Y☒ N☐ U☐

[3] Enter the equipment class name from Appendix B: Classes of Equipment

Equipment ID No. *SQN-2-XFA-202-0316* Equip. Class[3] *4 - Transformer*

Equipment Description *ERCW TRANSFORMER 2B-B*

Interaction Effects

7. Are soft targets free from impact by nearby equipment or structures? Y☒ N☐ U☐ N/A☐

8. Are overhead equipment, distribution systems, ceiling tiles and lighting, and masonry block walls not likely to collapse onto the equipment? Y☒ N☐ U☐ N/A☐

9. Do attached lines have adequate flexibility to avoid damage? Y☒ N☐ U☐ N/A☐

10. Based on the above seismic interaction evaluations, is equipment free of potentially adverse seismic interaction effects? Y☒ N☐ U☐

Other Adverse Conditions

11. Have you looked for and found no other seismic conditions that could adversely affect the safety functions of the equipment? Y☒ N☐ U☐

Comments (Additional pages may be added as necessary)

Evaluated by: *Robert Malone* Date: *7/24/12*

Phillip York *7/24/12*

Status: Y☒ N☐ U☐

Seismic Walkdown Checklist (SWC)

Equipment ID No. *SQN-0-PMP-078-0012-A* Equip. Class[3] *5 - Horizontal Pump*

Equipment Description *SPENT FUEL PIT PUMP A*

Location: Bldg. *Aux* Floor El. *714* Room, Area *28 - Spent Fuel Pool Pit*

Manufacturer, Model, Etc. (optional but recommended) _____

Instructions for Completing Checklist

This checklist may be used to document the results of the Seismic Walkdown of an item of equipment on the SWEL. The space below each of the following questions may be used to record the results of judgments and findings. Additional space is provided at the end of this checklist for documenting other comments.

Note: Y = Yes, N = No, U = Unknown, N/A = Not Applicable

Anchorage

1. Is the anchorage configuration verification required (i.e., is the item one of the 50% of SWEL items requiring such verification)? Y☐ N☒

2. Is the anchorage free of bent, broken, missing or loose hardware? Y☒ N☐ U☐ N/A☐

3. Is the anchorage free of corrosion that is more than mild surface oxidation? Y☒ N☐ U☐ N/A☐

4. Is the anchorage free of visible cracks in the concrete near the anchors? Y☒ N☐ U☐ N/A☐

5. Is the anchorage configuration consistent with plant documentation? (Note: This question only applies if the item is one of the 50% for which an anchorage configuration verification is required.) Y☐ N☐ U☐ N/A☒

6. Based on the above anchorage evaluations, is the anchorage free of potentially adverse seismic conditions? Y☒ N☐ U☐

[3] Enter the equipment class name from Appendix B: Classes of Equipment

Equipment ID No. *SQN-0-PMP-078-0012-A* Equip. Class[3] *5 - Horizontal Pump*

Equipment Description *SPENT FUEL PIT PUMP A*

Interaction Effects

7. Are soft targets free from impact by nearby equipment or structures? Y☒ N☐ U☐ N/A☐

8. Are overhead equipment, distribution systems, ceiling tiles and lighting, and masonry block walls not likely to collapse onto the equipment? Y☒ N☐ U☐ N/A☐

9. Do attached lines have adequate flexibility to avoid damage? Y☒ N☐ U☐ N/A☐

10. Based on the above seismic interaction evaluations, is equipment free of potentially adverse seismic interaction effects? Y☒ N☐ U☐

Other Adverse Conditions

11. Have you looked for and found no other seismic conditions that could adversely affect the safety functions of the equipment? Y☒ N☐ U☐

Comments (Additional pages may be added as necessary)

Evaluated by: *Robert Malone* Date: *8/2/12*

Phillip York *8/2/12*

Status: Y☒ N☐ U☐

Seismic Walkdown Checklist (SWC)

Equipment ID No. *SQN-2-PMP-003-0128* Equip. Class[3] *5 - Horizontal Pump*

Equipment Description *MOTOR DRIVEN AUX FEEDWATER PUMP 2B-B*

Location: Bldg. *Aux* Floor El. *690* Room, Area *38 - Aux Feedwater Pump B Area*

Manufacturer, Model, Etc. (optional but recommended) _____

Instructions for Completing Checklist

This checklist may be used to document the results of the Seismic Walkdown of an item of equipment on the SWEL. The space below each of the following questions may be used to record the results of judgments and findings. Additional space is provided at the end of this checklist for documenting other comments.

Note: Y = Yes, N = No, U = Unknown, N/A = Not Applicable

Anchorage

1. Is the anchorage configuration verification required (i.e., is the item one of the 50% of SWEL items requiring such verification)? Y☒ N☐
   For anchorage configuration verification see drawing C-55HMTA86X22-B

2. Is the anchorage free of bent, broken, missing or loose hardware? Y☒ N☐ U☐ N/A☐

3. Is the anchorage free of corrosion that is more than mild surface oxidation? Y☒ N☐ U☐ N/A☐

4. Is the anchorage free of visible cracks in the concrete near the anchors? Y☒ N☐ U☐ N/A☐

5. Is the anchorage configuration consistent with plant documentation? (Note: This question only applies if the item is one of the 50% for which an anchorage configuration verification is required.) Y☒ N☐ U☐ N/A☐

6. Based on the above anchorage evaluations, is the anchorage free of potentially adverse seismic conditions? Y☒ N☐ U☐

[3] Enter the equipment class name from Appendix B: Classes of Equipment

Equipment ID No. *SQN-2-PMP-003-0128* Equip. Class[3] *5 - Horizontal Pump*

Equipment Description *MOTOR DRIVEN AUX FEEDWATER PUMP 2B-B*

Interaction Effects

7. Are soft targets free from impact by nearby equipment or structures? Y☒ N☐ U☐ N/A☐

8. Are overhead equipment, distribution systems, ceiling tiles and lighting, and masonry block walls not likely to collapse onto the equipment? Y☒ N☐ U☐ N/A☐

9. Do attached lines have adequate flexibility to avoid damage? Y☒ N☐ U☐ N/A☐

10. Based on the above seismic interaction evaluations, is equipment free of potentially adverse seismic interaction effects? Y☒ N☐ U☐

Other Adverse Conditions

11. Have you looked for and found no other seismic conditions that could adversely affect the safety functions of the equipment? Y☒ N☐ U☐

Comments (Additional pages may be added as necessary)

Evaluated by: *Robert Malone* Date: *8/7/12*

Phillip York *8/7/12*

Status: Y☒ N☐ U☐

Seismic Walkdown Checklist (SWC)

Equipment ID No. *SQN-2-PMP-062-0104* Equip. Class[3] *5 - Horizontal Pump*

Equipment Description *CENT. CHARGING PUMP 2B-B*

Location: Bldg. *Aux* Floor El. *669* Room, Area *35 - Charging Pump Room 2B-B*

Manufacturer, Model, Etc. (optional but recommended) _____

Instructions for Completing Checklist

This checklist may be used to document the results of the Seismic Walkdown of an item of equipment on the SWEL. The space below each of the following questions may be used to record the results of judgments and findings. Additional space is provided at the end of this checklist for documenting other comments.

Note: Y = Yes, N = No, U = Unknown, N/A = Not Applicable

Anchorage

1. Is the anchorage configuration verification required (i.e., is the item one of the 50% of SWEL items requiring such verification)? Y☒ N☐
   For anchorage configuration verification see drawing ISI-0476-C-01.

2. Is the anchorage free of bent, broken, missing or loose hardware? Y☒ N☐ U☐ N/A☐

3. Is the anchorage free of corrosion that is more than mild surface oxidation? Y☒ N☐ U☐ N/A☐

4. Is the anchorage free of visible cracks in the concrete near the anchors? Y☒ N☐ U☐ N/A☐

5. Is the anchorage configuration consistent with plant documentation? (Note: This question only applies if the item is one of the 50% for which an anchorage configuration verification is required.) Y☒ N☐ U☐ N/A☐

6. Based on the above anchorage evaluations, is the anchorage free of potentially adverse seismic conditions? Y☒ N☐ U☐

[3] Enter the equipment class name from Appendix B: Classes of Equipment

Equipment ID No. *SQN-2-PMP-062-0104* Equip. Class[3] *5 - Horizontal Pump*

Equipment Description *CENT. CHARGING PUMP 2B-B*

Interaction Effects

7. Are soft targets free from impact by nearby equipment or structures? Y☒ N☐ U☐ N/A☐

8. Are overhead equipment, distribution systems, ceiling tiles and lighting, and masonry block walls not likely to collapse onto the equipment? Y☒ N☐ U☐ N/A☐
   A block wall used for equipment removal was near the equipment. It is restrained/reinforced with cross bars bolted to the concrete wall.

9. Do attached lines have adequate flexibility to avoid damage? Y☒ N☐ U☐ N/A☐

10. Based on the above seismic interaction evaluations, is equipment free of potentially adverse seismic interaction effects? Y☒ N☐ U☐

Other Adverse Conditions

11. Have you looked for and found no other seismic conditions that could adversely affect the safety functions of the equipment? Y☒ N☐ U☐

Comments (Additional pages may be added as necessary)

Flex conduit into junction box has slipped back and exposed the wires going into the box.

Evaluated by: *Robert Malone* Date: *8/6/12*

Phillip York *8/6/12*

Status: Y☒ N☐ U☐

Seismic Walkdown Checklist (SWC)

Equipment ID No. *SQN-2-PMP-063-0010* Equip. Class[3] *5 - Horizontal Pump*

Equipment Description *SAFETY INJECTION PUMP 2A-A*

Location: Bldg. *Aux* Floor El. *669* Room, Area *26 - SI Pump Room 2A*

Manufacturer, Model, Etc. (optional but recommended) _____

Instructions for Completing Checklist

This checklist may be used to document the results of the Seismic Walkdown of an item of equipment on the SWEL. The space below each of the following questions may be used to record the results of judgments and findings. Additional space is provided at the end of this checklist for documenting other comments.

Note: Y = Yes, N = No, U = Unknown, N/A = Not Applicable

Anchorage

1. Is the anchorage configuration verification required (i.e., is the item one of the 50% of SWEL items requiring such verification)? Y☒ N☐
   For anchorage configuration verification see drawing ISI-0476-C-01.

2. Is the anchorage free of bent, broken, missing or loose hardware? Y☒ N☐ U☐ N/A☐

3. Is the anchorage free of corrosion that is more than mild surface oxidation? Y☒ N☐ U☐ N/A☐

4. Is the anchorage free of visible cracks in the concrete near the anchors? Y☒ N☐ U☐ N/A☐

5. Is the anchorage configuration consistent with plant documentation? (Note: This question only applies if the item is one of the 50% for which an anchorage configuration verification is required.) Y☒ N☐ U☐ N/A☐

6. Based on the above anchorage evaluations, is the anchorage free of potentially adverse seismic conditions? Y☒ N☐ U☐

[3] Enter the equipment class name from Appendix B: Classes of Equipment

Equipment ID No. *SQN-2-PMP-063-0010* Equip. Class[3] *5 - Horizontal Pump*

Equipment Description *SAFETY INJECTION PUMP 2A-A*

Interaction Effects

7. Are soft targets free from impact by nearby equipment or structures? Y☒ N☐ U☐ N/A☐

8. Are overhead equipment, distribution systems, ceiling tiles and lighting, and masonry block walls not likely to collapse onto the equipment? Y☒ N☐ U☐ N/A☐
   A block wall used for equipment removal was near the equipment. It is restrained/reinforced with cross bars bolted to the concrete wall.

9. Do attached lines have adequate flexibility to avoid damage? Y☒ N☐ U☐ N/A☐

10. Based on the above seismic interaction evaluations, is equipment free of potentially adverse seismic interaction effects? Y☒ N☐ U☐

Other Adverse Conditions

11. Have you looked for and found no other seismic conditions that could adversely affect the safety functions of the equipment? Y☒ N☐ U☐

Comments (Additional pages may be added as necessary)

Flex conduit into junction box has slipped back and exposed the wires going into the box.

Evaluated by: *Robert Malone* Date: *8/6/12*

Phillip York *8/6/12*

Status: Y☒ N☐ U☐

Seismic Walkdown Checklist (SWC)

Equipment ID No. *SQN-2-PMP-070-0059-A* Equip. Class[3] *5 - Horizontal Pump*

Equipment Description *CCS PUMP 2A-A*

Location: Bldg. *Aux* Floor El. *690* Room, Area *27 - CCS Pump Area*

Manufacturer, Model, Etc. (optional but recommended) _____

Instructions for Completing Checklist

This checklist may be used to document the results of the Seismic Walkdown of an item of equipment on the SWEL. The space below each of the following questions may be used to record the results of judgments and findings. Additional space is provided at the end of this checklist for documenting other comments.

Note: Y = Yes, N = No, U = Unknown, N/A = Not Applicable

Anchorage

1. Is the anchorage configuration verification required (i.e., is the item one of the 50% of SWEL items requiring such verification)? Y☒ N☐
   For anchorage configuration verification see drawing ISI-0260-C-01.

2. Is the anchorage free of bent, broken, missing or loose hardware? Y☒ N☐ U☐ N/A☐

3. Is the anchorage free of corrosion that is more than mild surface oxidation? Y☒ N☐ U☐ N/A☐

4. Is the anchorage free of visible cracks in the concrete near the anchors? Y☒ N☐ U☐ N/A☐

5. Is the anchorage configuration consistent with plant documentation? (Note: This question only applies if the item is one of the 50% for which an anchorage configuration verification is required.) Y☒ N☐ U☐ N/A☐

6. Based on the above anchorage evaluations, is the anchorage free of potentially adverse seismic conditions? Y☒ N☐ U☐

[3] Enter the equipment class name from Appendix B: Classes of Equipment

Equipment ID No. *SQN-2-PMP-070-0059-A* Equip. Class[3] *5 - Horizontal Pump*

Equipment Description *CCS PUMP 2A-A*

Interaction Effects

7. Are soft targets free from impact by nearby equipment or structures? Y☒ N☐ U☐ N/A☐

8. Are overhead equipment, distribution systems, ceiling tiles and lighting, and masonry block walls not likely to collapse onto the equipment? Y☒ N☐ U☐ N/A☐
   There is a 10'-12' "special fire barrier" wall next to the equipment. It appears to be constructed of dry wall and cantilevered form the floor. During a seismic event, it was determined that the wall would not damage the equipment if it collapsed and is therefore not considered seismically significant.

9. Do attached lines have adequate flexibility to avoid damage? Y☒ N☐ U☐ N/A☐

10. Based on the above seismic interaction evaluations, is equipment free of potentially adverse seismic interaction effects? Y☒ N☐ U☐

Other Adverse Conditions

11. Have you looked for and found no other seismic conditions that could adversely affect the safety functions of the equipment? Y☒ N☐ U☐

Comments (Additional pages may be added as necessary)

Evaluated by: *Robert Malone* Date: *8/2/12*

Phillip York *8/2/12*

Status: Y☒ N☐ U☐

Seismic Walkdown Checklist (SWC)

Equipment ID No. *SQN-0-PMP-067-0452* Equip. Class[3] *6 - Vertical Pump*

Equipment Description *ERCW PUMP N-B*

Location: Bldg. *ERCW* Floor El. *720* Room, Area *10 - 2B Pump Room*

Manufacturer, Model, Etc. (optional but recommended) _____

Instructions for Completing Checklist

This checklist may be used to document the results of the Seismic Walkdown of an item of equipment on the SWEL. The space below each of the following questions may be used to record the results of judgments and findings. Additional space is provided at the end of this checklist for documenting other comments.

Note: Y = Yes, N = No, U = Unknown, N/A = Not Applicable

Anchorage

1. Is the anchorage configuration verification required (i.e., is the item one of the 50% of SWEL items requiring such verification)? Y☒ N☐
   For anchorage configuration verification see TVA calculation CEB-CQS-373.

2. Is the anchorage free of bent, broken, missing or loose hardware? Y☒ N☐ U☐ N/A☐

3. Is the anchorage free of corrosion that is more than mild surface oxidation? Y☒ N☐ U☐ N/A☐

4. Is the anchorage free of visible cracks in the concrete near the anchors? Y☒ N☐ U☐ N/A☐

5. Is the anchorage configuration consistent with plant documentation? (Note: This question only applies if the item is one of the 50% for which an anchorage configuration verification is required.) Y☒ N☐ U☐ N/A☐

6. Based on the above anchorage evaluations, is the anchorage free of potentially adverse seismic conditions? Y☒ N☐ U☐

[3] Enter the equipment class name from Appendix B: Classes of Equipment

Equipment ID No. *SQN-0-PMP-067-0452* Equip. Class[3] *6 - Vertical Pump*

Equipment Description *ERCW PUMP N-B*

Interaction Effects

7. Are soft targets free from impact by nearby equipment or structures? Y☒ N☐ U☐ N/A☐

8. Are overhead equipment, distribution systems, ceiling tiles and lighting, and masonry block walls not likely to collapse onto the equipment? Y☒ N☐ U☐ N/A☐

9. Do attached lines have adequate flexibility to avoid damage? Y☒ N☐ U☐ N/A☐

10. Based on the above seismic interaction evaluations, is equipment free of potentially adverse seismic interaction effects? Y☒ N☐ U☐

Other Adverse Conditions

11. Have you looked for and found no other seismic conditions that could adversely affect the safety functions of the equipment? Y☒ N☐ U☐

Comments (Additional pages may be added as necessary)

Evaluated by: *Robert Malone* Date: *7/24/12*

Phillip York *7/24/12*

Status: Y☒ N☐ U☐

Seismic Walkdown Checklist (SWC)

Equipment ID No. *SQN-0-PMP-067-0464* Equip. Class[3] *6 - Vertical Pump*

Equipment Description *ERCW PUMP R-A*

Location: Bldg. *ERCW* Floor El. *720* Room, Area *7 - 2A Pump Room*

Manufacturer, Model, Etc. (optional but recommended) _____

Instructions for Completing Checklist

This checklist may be used to document the results of the Seismic Walkdown of an item of equipment on the SWEL. The space below each of the following questions may be used to record the results of judgments and findings. Additional space is provided at the end of this checklist for documenting other comments.

Note: Y = Yes, N = No, U = Unknown, N/A = Not Applicable

Anchorage

1. Is the anchorage configuration verification required (i.e., is the item one of the 50% of SWEL items requiring such verification)? Y☒ N☐
   For anchorage configuration verification see TVA calculation CEB-CQS-373.

2. Is the anchorage free of bent, broken, missing or loose hardware? Y☒ N☐ U☐ N/A☐

3. Is the anchorage free of corrosion that is more than mild surface oxidation? Y☒ N☐ U☐ N/A☐

4. Is the anchorage free of visible cracks in the concrete near the anchors? Y☒ N☐ U☐ N/A☐

5. Is the anchorage configuration consistent with plant documentation? (Note: This question only applies if the item is one of the 50% for which an anchorage configuration verification is required.) Y☒ N☐ U☐ N/A☐

6. Based on the above anchorage evaluations, is the anchorage free of potentially adverse seismic conditions? Y☒ N☐ U☐

[3] Enter the equipment class name from Appendix B: Classes of Equipment

Equipment ID No. *SQN-0-PMP-067-0464* Equip. Class[3] *6 - Vertical Pump*

Equipment Description *ERCW PUMP R-A*

Interaction Effects

7. Are soft targets free from impact by nearby equipment or structures? Y☒ N☐ U☐ N/A☐

8. Are overhead equipment, distribution systems, ceiling tiles and lighting, and masonry block walls not likely to collapse onto the equipment? Y☒ N☐ U☐ N/A☐

9. Do attached lines have adequate flexibility to avoid damage? Y☒ N☐ U☐ N/A☐

10. Based on the above seismic interaction evaluations, is equipment free of potentially adverse seismic interaction effects? Y☒ N☐ U☐

Other Adverse Conditions

11. Have you looked for and found no other seismic conditions that could adversely affect the safety functions of the equipment? Y☒ N☐ U☐

Comments (Additional pages may be added as necessary)

Evaluated by: *Robert Malone* Date: *7/19/12*

Phillip York *7/19/12*

Status: Y☒ N☐ U☐

Seismic Walkdown Checklist (SWC)

Equipment ID No. *SQN-0-PMP-067-0482-B* Equip. Class[3] *6 - Vertical Pump*

Equipment Description *ERCW SCREEN WASH PUMP C-B*

Location: Bldg. *ERCW* Floor El. *720* Room, Area *10 - 2B Pump Room*

Manufacturer, Model, Etc. (optional but recommended) _____

Instructions for Completing Checklist

This checklist may be used to document the results of the Seismic Walkdown of an item of equipment on the SWEL. The space below each of the following questions may be used to record the results of judgments and findings. Additional space is provided at the end of this checklist for documenting other comments.

Note: Y = Yes, N = No, U = Unknown, N/A = Not Applicable

Anchorage

1. Is the anchorage configuration verification required (i.e., is the item one of the 50% of SWEL items requiring such verification)? Y☒ N☐
   For anchorage configuration verification see drawing 31W211-6, Section B6-B6.

2. Is the anchorage free of bent, broken, missing or loose hardware? Y☒ N☐ U☐ N/A☐

3. Is the anchorage free of corrosion that is more than mild surface oxidation? Y☒ N☐ U☐ N/A☐

4. Is the anchorage free of visible cracks in the concrete near the anchors? Y☒ N☐ U☐ N/A☐

5. Is the anchorage configuration consistent with plant documentation? (Note: This question only applies if the item is one of the 50% for which an anchorage configuration verification is required.) Y☒ N☐ U☐ N/A☐

6. Based on the above anchorage evaluations, is the anchorage free of potentially adverse seismic conditions? Y☒ N☐ U☐

[3] Enter the equipment class name from Appendix B: Classes of Equipment

Equipment ID No. *SQN-0-PMP-067-0482-B* Equip. Class[3] *6 - Vertical Pump*

Equipment Description *ERCW SCREEN WASH PUMP C-B*

Interaction Effects

7. Are soft targets free from impact by nearby equipment or structures? Y☒ N☐ U☐ N/A☐

8. Are overhead equipment, distribution systems, ceiling tiles and lighting, and masonry block walls not likely to collapse onto the equipment? Y☒ N☐ U☐ N/A☐

9. Do attached lines have adequate flexibility to avoid damage? Y☒ N☐ U☐ N/A☐

10. Based on the above seismic interaction evaluations, is equipment free of potentially adverse seismic interaction effects? Y☒ N☐ U☐

Other Adverse Conditions

11. Have you looked for and found no other seismic conditions that could adversely affect the safety functions of the equipment? Y☒ N☐ U☐
Cover to electrical box attached to equipment was not closed and caulk has pulled away from the electrical wire. Assembly is no longer watertight.

Comments (Additional pages may be added as necessary)

Evaluated by: *Robert Malone* Date: *7/24/12*

Phillip York *7/24/12*

Status: Y☒ N☐ U☐

Seismic Walkdown Checklist (SWC)

Equipment ID No. *SQN-0-PMP-067-0487-A* Equip. Class[3] *6 - Vertical Pump*

Equipment Description *ERCW SCREEN WASH PUMP D-A*

Location: Bldg. *ERCW* Floor El. *720* Room, Area *7 - 2A Pump Room*

Manufacturer, Model, Etc. (optional but recommended) _____

Instructions for Completing Checklist

This checklist may be used to document the results of the Seismic Walkdown of an item of equipment on the SWEL. The space below each of the following questions may be used to record the results of judgments and findings. Additional space is provided at the end of this checklist for documenting other comments.

Note: Y = Yes, N = No, U = Unknown, N/A = Not Applicable

Anchorage

1. Is the anchorage configuration verification required (i.e., is the item one of the 50% of SWEL items requiring such verification)? Y☒ N☐
   For anchorage configuration verification see drawing 31W211-6, Section B6-B6.

2. Is the anchorage free of bent, broken, missing or loose hardware? Y☒ N☐ U☐ N/A☐

3. Is the anchorage free of corrosion that is more than mild surface oxidation? Y☒ N☐ U☐ N/A☐

4. Is the anchorage free of visible cracks in the concrete near the anchors? Y☒ N☐ U☐ N/A☐

5. Is the anchorage configuration consistent with plant documentation? (Note: This question only applies if the item is one of the 50% for which an anchorage configuration verification is required.) Y☒ N☐ U☐ N/A☐

6. Based on the above anchorage evaluations, is the anchorage free of potentially adverse seismic conditions? Y☒ N☐ U☐
   Concrete edge distance for rear bolts is reduced as compared to other edges. Embedment of bolts into concrete is an additional 12" below the pad, per drawing 31W211-6, Section B6-B6, so reduced edge distance does not affect overall strength.

[3] Enter the equipment class name from Appendix B: Classes of Equipment

Equipment ID No. *SQN-0-PMP-067-0487-A* Equip. Class[3] *6 - Vertical Pump*

Equipment Description *ERCW SCREEN WASH PUMP D-A*

Interaction Effects

7. Are soft targets free from impact by nearby equipment or structures? Y☒ N☐ U☐ N/A☐

8. Are overhead equipment, distribution systems, ceiling tiles and lighting, and masonry block walls not likely to collapse onto the equipment? Y☒ N☐ U☐ N/A☐

9. Do attached lines have adequate flexibility to avoid damage? Y☒ N☐ U☐ N/A☐

10. Based on the above seismic interaction evaluations, is equipment free of potentially adverse seismic interaction effects? Y☒ N☐ U☐

Other Adverse Conditions

11. Have you looked for and found no other seismic conditions that could adversely affect the safety functions of the equipment? Y☒ N☐ U☐

Comments (Additional pages may be added as necessary)

Evaluated by: *Robert Malone* Date: *7/19/12*

Phillip York *7/19/12*

Status: Y☒ N☐ U☐

Seismic Walkdown Checklist (SWC)

Equipment ID No. *SQN-0-FCV-032-0085-B* Equip. Class[3] *7 - Pneumatic Valve*

Equipment Description *AUX COMPR B-B AUX BLDG ISOL*

Location: Bldg. *Aux* Floor El. *734* Room, Area *32 - Surge Tank B Area*

Manufacturer, Model, Etc. (optional but recommended) _____

Instructions for Completing Checklist

This checklist may be used to document the results of the Seismic Walkdown of an item of equipment on the SWEL. The space below each of the following questions may be used to record the results of judgments and findings. Additional space is provided at the end of this checklist for documenting other comments.

Note: Y = Yes, N = No, U = Unknown, N/A = Not Applicable

Anchorage

1. Is the anchorage configuration verification required (i.e., is the item one of the 50% of SWEL items requiring such verification)? Y☐ N☒

2. Is the anchorage free of bent, broken, missing or loose hardware? Y☐ N☐ U☐ N/A☒

3. Is the anchorage free of corrosion that is more than mild surface oxidation? Y☐ N☐ U☐ N/A☒

4. Is the anchorage free of visible cracks in the concrete near the anchors? Y☐ N☐ U☐ N/A☒

5. Is the anchorage configuration consistent with plant documentation? (Note: This question only applies if the item is one of the 50% for which an anchorage configuration verification is required.) Y☐ N☐ U☐ N/A☒

6. Based on the above anchorage evaluations, is the anchorage free of potentially adverse seismic conditions? Y☒ N☐ U☐

[3] Enter the equipment class name from Appendix B: Classes of Equipment

Equipment ID No. *SQN-0-FCV-032-0085-B* Equip. Class[3] *7 - Pneumatic Valve*

Equipment Description *AUX COMPR B-B AUX BLDG ISOL*

Interaction Effects

7. Are soft targets free from impact by nearby equipment or structures? Y☒ N☐ U☐ N/A☐

8. Are overhead equipment, distribution systems, ceiling tiles and lighting, and masonry block walls not likely to collapse onto the equipment? Y☒ N☐ U☐ N/A☐

9. Do attached lines have adequate flexibility to avoid damage? Y☒ N☐ U☐ N/A☐

10. Based on the above seismic interaction evaluations, is equipment free of potentially adverse seismic interaction effects? Y☒ N☐ U☐

Other Adverse Conditions

11. Have you looked for and found no other seismic conditions that could adversely affect the safety functions of the equipment? Y☒ N☐ U☐

Comments (Additional pages may be added as necessary)

Evaluated by: *Robert Malone* Date: *8/6/12*

Phillip York *8/6/12*

Status: Y☒ N☐ U☐

Seismic Walkdown Checklist (SWC)

Equipment ID No. *SQN-2-FCV-067-0176-A* Equip. Class[3] *7 - Pneumatic Valve*

Equipment Description *S.I. PUMP AND RM CLR-30-180 SUPPLY*

Location: Bldg. *Aux* Floor El. *669* Room, Area *43 - SI Pump Area*

Manufacturer, Model, Etc. (optional but recommended) _____

Instructions for Completing Checklist

This checklist may be used to document the results of the Seismic Walkdown of an item of equipment on the SWEL. The space below each of the following questions may be used to record the results of judgments and findings. Additional space is provided at the end of this checklist for documenting other comments.

Note: Y = Yes, N = No, U = Unknown, N/A = Not Applicable

Anchorage

1. Is the anchorage configuration verification required (i.e., is the item one of the 50% of SWEL items requiring such verification)? Y☐ N☒

2. Is the anchorage free of bent, broken, missing or loose hardware? Y☐ N☐ U☐ N/A☒

3. Is the anchorage free of corrosion that is more than mild surface oxidation? Y☐ N☐ U☐ N/A☒

4. Is the anchorage free of visible cracks in the concrete near the anchors? Y☐ N☐ U☐ N/A☒

5. Is the anchorage configuration consistent with plant documentation? (Note: This question only applies if the item is one of the 50% for which an anchorage configuration verification is required.) Y☐ N☐ U☐ N/A☒

6. Based on the above anchorage evaluations, is the anchorage free of potentially adverse seismic conditions? Y☒ N☐ U☐

[3] Enter the equipment class name from Appendix B: Classes of Equipment

Equipment ID No. *SQN-2-FCV-067-0176-A* Equip. Class[3] *7 - Pneumatic Valve*

Equipment Description *S.I. PUMP AND RM CLR-30-180 SUPPLY*

Interaction Effects

7. Are soft targets free from impact by nearby equipment or structures? Y☒ N☐ U☐ N/A☐

8. Are overhead equipment, distribution systems, ceiling tiles and lighting, and masonry block walls not likely to collapse onto the equipment? Y☒ N☐ U☐ N/A☐

9. Do attached lines have adequate flexibility to avoid damage? Y☒ N☐ U☐ N/A☐

10. Based on the above seismic interaction evaluations, is equipment free of potentially adverse seismic interaction effects? Y☒ N☐ U☐

Other Adverse Conditions

11. Have you looked for and found no other seismic conditions that could adversely affect the safety functions of the equipment? Y☒ N☐ U☐

Comments (Additional pages may be added as necessary)

Evaluated by: *Robert Malone* Date: *8/1/12*

Phillip York *8/1/12*

Status: Y☒ N☐ U☐

Seismic Walkdown Checklist (SWC)

Equipment ID No. *SQN-2-FCV-067-0182-B* Equip. Class[3] *7 - Pneumatic Valve*

Equipment Description *S.I. PUMP AND RM CLR-30-179 SUPPLY*

Location: Bldg. *Aux* Floor El. *669* Room, Area *43 - SI Pump Area*

Manufacturer, Model, Etc. (optional but recommended) _____

Instructions for Completing Checklist

This checklist may be used to document the results of the Seismic Walkdown of an item of equipment on the SWEL. The space below each of the following questions may be used to record the results of judgments and findings. Additional space is provided at the end of this checklist for documenting other comments.

Note: Y = Yes, N = No, U = Unknown, N/A = Not Applicable

Anchorage

1. Is the anchorage configuration verification required (i.e., is the item one of the 50% of SWEL items requiring such verification)? Y☐ N☒

2. Is the anchorage free of bent, broken, missing or loose hardware? Y☐ N☐ U☐ N/A☒

3. Is the anchorage free of corrosion that is more than mild surface oxidation? Y☐ N☐ U☐ N/A☒

4. Is the anchorage free of visible cracks in the concrete near the anchors? Y☐ N☐ U☐ N/A☒

5. Is the anchorage configuration consistent with plant documentation? (Note: This question only applies if the item is one of the 50% for which an anchorage configuration verification is required.) Y☐ N☐ U☐ N/A☒

6. Based on the above anchorage evaluations, is the anchorage free of potentially adverse seismic conditions? Y☒ N☐ U☐

[3] Enter the equipment class name from Appendix B: Classes of Equipment

Equipment ID No. *SQN-2-FCV-067-0182-B* Equip. Class[3] *7 - Pneumatic Valve*

Equipment Description *S.I. PUMP AND RM CLR-30-179 SUPPLY*

Interaction Effects

7. Are soft targets free from impact by nearby equipment or structures? Y☒ N☐ U☐ N/A☐

8. Are overhead equipment, distribution systems, ceiling tiles and lighting, and masonry block walls not likely to collapse onto the equipment? Y☒ N☐ U☐ N/A☐

9. Do attached lines have adequate flexibility to avoid damage? Y☒ N☐ U☐ N/A☐

10. Based on the above seismic interaction evaluations, is equipment free of potentially adverse seismic interaction effects? Y☒ N☐ U☐

Other Adverse Conditions

11. Have you looked for and found no other seismic conditions that could adversely affect the safety functions of the equipment? Y☒ N☐ U☐

Comments (Additional pages may be added as necessary)

Evaluated by: *Robert Malone* Date: *8/8/12*

Phillip York *8/8/12*

Status: Y☒ N☐ U☐

Seismic Walkdown Checklist (SWC)

Equipment ID No. *SQN-2-FCV-067-0190-B* Equip. Class[3] *7 - Pneumatic Valve*

Equipment Description *RHR PUMP RM CLR-30-176 SUPPLY CONTROL VLV*

Location: Bldg. *Aux* Floor El. *653* Room, Area *25 - RHR Pump Area*

Manufacturer, Model, Etc. (optional but recommended) _____

Instructions for Completing Checklist

This checklist may be used to document the results of the Seismic Walkdown of an item of equipment on the SWEL. The space below each of the following questions may be used to record the results of judgments and findings. Additional space is provided at the end of this checklist for documenting other comments.

Note: Y = Yes, N = No, U = Unknown, N/A = Not Applicable

Anchorage

1. Is the anchorage configuration verification required (i.e., is the item one of the 50% of SWEL items requiring such verification)? Y☐ N☒

2. Is the anchorage free of bent, broken, missing or loose hardware? Y☐ N☐ U☐ N/A☒

3. Is the anchorage free of corrosion that is more than mild surface oxidation? Y☐ N☐ U☐ N/A☒

4. Is the anchorage free of visible cracks in the concrete near the anchors? Y☐ N☐ U☐ N/A☒

5. Is the anchorage configuration consistent with plant documentation? (Note: This question only applies if the item is one of the 50% for which an anchorage configuration verification is required.) Y☐ N☐ U☐ N/A☒

6. Based on the above anchorage evaluations, is the anchorage free of potentially adverse seismic conditions? Y☒ N☐ U☐

[3] Enter the equipment class name from Appendix B: Classes of Equipment

Equipment ID No. *SQN-2-FCV-067-0190-B* Equip. Class[3] *7 - Pneumatic Valve*

Equipment Description *RHR PUMP RM CLR-30-176 SUPPLY CONTROL VLV*

Interaction Effects

7. Are soft targets free from impact by nearby equipment or structures? Y☒ N☐ U☐ N/A☐

8. Are overhead equipment, distribution systems, ceiling tiles and lighting, and masonry block walls not likely to collapse onto the equipment? Y☒ N☐ U☐ N/A☐

9. Do attached lines have adequate flexibility to avoid damage? Y☒ N☐ U☐ N/A☐

10. Based on the above seismic interaction evaluations, is equipment free of potentially adverse seismic interaction effects? Y☒ N☐ U☐

Other Adverse Conditions

11. Have you looked for and found no other seismic conditions that could adversely affect the safety functions of the equipment? Y☒ N☐ U☐

Comments (Additional pages may be added as necessary)

Evaluated by: *Robert Malone* Date: *8/6/12*

Phillip York *8/6/12*

Status: Y☒ N☐ U☐

Seismic Walkdown Checklist (SWC)

Equipment ID No. *SQN-2-FCV-067-188* Equip. Class[3] *7 - Pneumatic Valve*

Equipment Description *RHR PUMP RM CLR-30-175 SUPPLY CONTROL VLV*

Location: Bldg. *Aux* Floor El. *653* Room, Area *25 - RHR Pump Area*

Manufacturer, Model, Etc. (optional but recommended) _____

Instructions for Completing Checklist

This checklist may be used to document the results of the Seismic Walkdown of an item of equipment on the SWEL. The space below each of the following questions may be used to record the results of judgments and findings. Additional space is provided at the end of this checklist for documenting other comments.

Note: Y = Yes, N = No, U = Unknown, N/A = Not Applicable

Anchorage

1. Is the anchorage configuration verification required (i.e., is the item one of the 50% of SWEL items requiring such verification)? Y☐ N☒

2. Is the anchorage free of bent, broken, missing or loose hardware? Y☐ N☐ U☐ N/A☒

3. Is the anchorage free of corrosion that is more than mild surface oxidation? Y☐ N☐ U☐ N/A☒

4. Is the anchorage free of visible cracks in the concrete near the anchors? Y☐ N☐ U☐ N/A☒

5. Is the anchorage configuration consistent with plant documentation? (Note: This question only applies if the item is one of the 50% for which an anchorage configuration verification is required.) Y☐ N☐ U☐ N/A☒

6. Based on the above anchorage evaluations, is the anchorage free of potentially adverse seismic conditions? Y☒ N☐ U☐

[3] Enter the equipment class name from Appendix B: Classes of Equipment

Equipment ID No. *SQN-2-FCV-067-188* Equip. Class[3] *7 - Pneumatic Valve*

Equipment Description *RHR PUMP RM CLR-30-175 SUPPLY CONTROL VLV*

Interaction Effects

7. Are soft targets free from impact by nearby equipment or structures? Y☒ N☐ U☐ N/A☐

8. Are overhead equipment, distribution systems, ceiling tiles and lighting, and masonry block walls not likely to collapse onto the equipment? Y☒ N☐ U☐ N/A☐

9. Do attached lines have adequate flexibility to avoid damage? Y☒ N☐ U☐ N/A☐

10. Based on the above seismic interaction evaluations, is equipment free of potentially adverse seismic interaction effects? Y☒ N☐ U☐

Other Adverse Conditions

11. Have you looked for and found no other seismic conditions that could adversely affect the safety functions of the equipment? Y☒ N☐ U☐

Comments (Additional pages may be added as necessary)

Evaluated by: *Robert Malone* Date: *8/1/12*

Phillip York *8/1/12*

Status: Y☒ N☐ U☐

Seismic Walkdown Checklist (SWC)

Equipment ID No. *SQN-2-LCV-070-0063* Equip. Class[3] *7 - Pneumatic Valve*

Equipment Description *SURGE TANK DEMIN W INLET VLV*

Location: Bldg. *Aux* Floor El. *734* Room, Area *32 - Surge Tank B Area*

Manufacturer, Model, Etc. (optional but recommended) _____

Instructions for Completing Checklist

This checklist may be used to document the results of the Seismic Walkdown of an item of equipment on the SWEL. The space below each of the following questions may be used to record the results of judgments and findings. Additional space is provided at the end of this checklist for documenting other comments.

Note: Y = Yes, N = No, U = Unknown, N/A = Not Applicable

Anchorage

1. Is the anchorage configuration verification required (i.e., is the item one of the 50% of SWEL items requiring such verification)? Y☐ N☒

2. Is the anchorage free of bent, broken, missing or loose hardware? Y☐ N☐ U☐ N/A☒

3. Is the anchorage free of corrosion that is more than mild surface oxidation? Y☐ N☐ U☐ N/A☒

4. Is the anchorage free of visible cracks in the concrete near the anchors? Y☐ N☐ U☐ N/A☒

5. Is the anchorage configuration consistent with plant documentation? (Note: This question only applies if the item is one of the 50% for which an anchorage configuration verification is required.) Y☐ N☐ U☐ N/A☒

6. Based on the above anchorage evaluations, is the anchorage free of potentially adverse seismic conditions? Y☒ N☐ U☐

[3] Enter the equipment class name from Appendix B: Classes of Equipment

Equipment ID No. *SQN-2-LCV-070-0063* Equip. Class[3] *7 - Pneumatic Valve*

Equipment Description *SURGE TANK DEMIN W INLET VLV*

Interaction Effects

7. Are soft targets free from impact by nearby equipment or structures? Y☒ N☐ U☐ N/A☐
   Storage cabinet chained and wheels locked.

8. Are overhead equipment, distribution systems, ceiling tiles and lighting, and masonry block walls not likely to collapse onto the equipment? Y☒ N☐ U☐ N/A☐

9. Do attached lines have adequate flexibility to avoid damage? Y☒ N☐ U☐ N/A☐

10. Based on the above seismic interaction evaluations, is equipment free of potentially adverse seismic interaction effects? Y☒ N☐ U☐

Other Adverse Conditions

11. Have you looked for and found no other seismic conditions that could adversely affect the safety functions of the equipment? Y☒ N☐ U☐

Comments (Additional pages may be added as necessary)

Evaluated by: *Robert Malone* Date: *8/3/12*

Phillip York *8/3/12*

Status: Y☒ N☐ U☐

Seismic Walkdown Checklist (SWC)

Equipment ID No. *SQN-0-FCV-070-0040-B* Equip. Class[3] *8 - Motor Valve*

Equipment Description *SFPCS HTX A INLET FCV 0-FCV-70-40*

Location: Bldg. *Aux* Floor El. *714* Room, Area *29 - Spent Fuel Pool Heat Exchanger Area*

Manufacturer, Model, Etc. (optional but recommended) _____

Instructions for Completing Checklist

This checklist may be used to document the results of the Seismic Walkdown of an item of equipment on the SWEL. The space below each of the following questions may be used to record the results of judgments and findings. Additional space is provided at the end of this checklist for documenting other comments.

Note: Y = Yes, N = No, U = Unknown, N/A = Not Applicable

Anchorage

1. Is the anchorage configuration verification required (i.e., is the item one of the 50% of SWEL items requiring such verification)? Y☐ N☒

2. Is the anchorage free of bent, broken, missing or loose hardware? Y☐ N☐ U☐ N/A☒

3. Is the anchorage free of corrosion that is more than mild surface oxidation? Y☐ N☐ U☐ N/A☒

4. Is the anchorage free of visible cracks in the concrete near the anchors? Y☐ N☐ U☐ N/A☒

5. Is the anchorage configuration consistent with plant documentation? (Note: This question only applies if the item is one of the 50% for which an anchorage configuration verification is required.) Y☐ N☐ U☐ N/A☒

6. Based on the above anchorage evaluations, is the anchorage free of potentially adverse seismic conditions? Y☒ N☐ U☐

[3] Enter the equipment class name from Appendix B: Classes of Equipment

Equipment ID No. *SQN-0-FCV-070-0040-B* Equip. Class[3] *8 - Motor Valve*

Equipment Description *SFPCS HTX A INLET FCV 0-FCV-70-40*

Interaction Effects

7. Are soft targets free from impact by nearby equipment or structures? Y☒ N☐ U☐ N/A☐

8. Are overhead equipment, distribution systems, ceiling tiles and lighting, and masonry block walls not likely to collapse onto the equipment? Y☒ N☐ U☐ N/A☐

9. Do attached lines have adequate flexibility to avoid damage? Y☒ N☐ U☐ N/A☐

10. Based on the above seismic interaction evaluations, is equipment free of potentially adverse seismic interaction effects? Y☒ N☐ U☐

Other Adverse Conditions

11. Have you looked for and found no other seismic conditions that could adversely affect the safety functions of the equipment? Y☒ N☐ U☐

Comments (Additional pages may be added as necessary)

Evaluated by: *Robert Malone* Date: *8/2/12*

Phillip York *8/2/12*

Status: Y☒ N☐ U☐

Seismic Walkdown Checklist (SWC)

Equipment ID No. *SQN-2-FCV-003-0126A-B* Equip. Class[3] *8 - Motor Valve*

Equipment Description *ERCW HDR B ISOL VLV*

Location: Bldg. *Aux* Floor El. *690* Room, Area *38 - Aux Feedwater Pump B Area*

Manufacturer, Model, Etc. (optional but recommended) _____

Instructions for Completing Checklist

This checklist may be used to document the results of the Seismic Walkdown of an item of equipment on the SWEL. The space below each of the following questions may be used to record the results of judgments and findings. Additional space is provided at the end of this checklist for documenting other comments.

Note: Y = Yes, N = No, U = Unknown, N/A = Not Applicable

Anchorage

1. Is the anchorage configuration verification required (i.e., is the item one of the 50% of SWEL items requiring such verification)? Y☐ N☒

2. Is the anchorage free of bent, broken, missing or loose hardware? Y☐ N☐ U☐ N/A☒

3. Is the anchorage free of corrosion that is more than mild surface oxidation? Y☐ N☐ U☐ N/A☒

4. Is the anchorage free of visible cracks in the concrete near the anchors? Y☐ N☐ U☐ N/A☒

5. Is the anchorage configuration consistent with plant documentation? (Note: This question only applies if the item is one of the 50% for which an anchorage configuration verification is required.) Y☐ N☐ U☐ N/A☒

6. Based on the above anchorage evaluations, is the anchorage free of potentially adverse seismic conditions? Y☒ N☐ U☐

[3] Enter the equipment class name from Appendix B: Classes of Equipment

Equipment ID No. *SQN-2-FCV-003-0126A-B* Equip. Class[3] *8 - Motor Valve*

Equipment Description *ERCW HDR B ISOL VLV*

Interaction Effects

7. Are soft targets free from impact by nearby equipment or structures? Y☒ N☐ U☐ N/A☐

8. Are overhead equipment, distribution systems, ceiling tiles and lighting, and masonry block walls not likely to collapse onto the equipment? Y☒ N☐ U☐ N/A☐

9. Do attached lines have adequate flexibility to avoid damage? Y☒ N☐ U☐ N/A☐

10. Based on the above seismic interaction evaluations, is equipment free of potentially adverse seismic interaction effects? Y☒ N☐ U☐

Other Adverse Conditions

11. Have you looked for and found no other seismic conditions that could adversely affect the safety functions of the equipment? Y☒ N☐ U☐

Comments (Additional pages may be added as necessary)

Evaluated by: *Robert Malone* Date: *8/7/12*

Phillip York *8/7/12*

Status: Y☒ N☐ U☐

Seismic Walkdown Checklist (SWC)

Equipment ID No. *SQN-2-FCV-067-0066* Equip. Class[3] *8 - Motor Valve*

Equipment Description *EMERG DSL HTXS A1&A2 SUP VLV FROM HDR A*

Location: Bldg. *DG* Floor El. *722* Room, Area *1 - Bay 2A*

Manufacturer, Model, Etc. (optional but recommended) *Rotork*

Instructions for Completing Checklist

This checklist may be used to document the results of the Seismic Walkdown of an item of equipment on the SWEL. The space below each of the following questions may be used to record the results of judgments and findings. Additional space is provided at the end of this checklist for documenting other comments.

Note: Y = Yes, N = No, U = Unknown, N/A = Not Applicable

Anchorage

1. Is the anchorage configuration verification required (i.e., is the item one of the 50% of SWEL items requiring such verification)? Y☐ N☒

2. Is the anchorage free of bent, broken, missing or loose hardware? Y☐ N☐ U☐ N/A☒

3. Is the anchorage free of corrosion that is more than mild surface oxidation? Y☐ N☐ U☐ N/A☒

4. Is the anchorage free of visible cracks in the concrete near the anchors? Y☐ N☐ U☐ N/A☒

5. Is the anchorage configuration consistent with plant documentation? (Note: This question only applies if the item is one of the 50% for which an anchorage configuration verification is required.) Y☐ N☐ U☐ N/A☒

6. Based on the above anchorage evaluations, is the anchorage free of potentially adverse seismic conditions? Y☒ N☐ U☐

[3] Enter the equipment class name from Appendix B: Classes of Equipment

Equipment ID No. *SQN-2-FCV-067-0066* Equip. Class[3] *8 - Motor Valve*

Equipment Description *EMERG DSL HTXS A1&A2 SUP VLV FROM HDR A*

Interaction Effects

7. Are soft targets free from impact by nearby equipment or structures? Y☒ N☐ U☐ N/A☐

8. Are overhead equipment, distribution systems, ceiling tiles and lighting, and masonry block walls not likely to collapse onto the equipment? Y☒ N☐ U☐ N/A☐

9. Do attached lines have adequate flexibility to avoid damage? Y☒ N☐ U☐ N/A☐

10. Based on the above seismic interaction evaluations, is equipment free of potentially adverse seismic interaction effects? Y☒ N☐ U☐

Other Adverse Conditions

11. Have you looked for and found no other seismic conditions that could adversely affect the safety functions of the equipment? Y☒ N☐ U☐

Comments (Additional pages may be added as necessary)

Evaluated by: *Robert Malone* Date: *7/16/12*

Phillip York *7/16/12*

Status: Y☒ N☐ U☐

Seismic Walkdown Checklist (SWC)

Equipment ID No. *SQN-2-FCV-067-0067* Equip. Class[3] *8 - Motor Valve*

Equipment Description *EMERG DSL HTXS B1&B2 SUP VLV FROM HDR B*

Location: Bldg. *DG* Floor El. *722* Room, Area *4 - Bay 2B*

Manufacturer, Model, Etc. (optional but recommended) *Rotork*

Instructions for Completing Checklist

This checklist may be used to document the results of the Seismic Walkdown of an item of equipment on the SWEL. The space below each of the following questions may be used to record the results of judgments and findings. Additional space is provided at the end of this checklist for documenting other comments.

Note: Y = Yes, N = No, U = Unknown, N/A = Not Applicable

Anchorage

1. Is the anchorage configuration verification required (i.e., is the item one of the 50% of SWEL items requiring such verification)? Y☐ N☒

2. Is the anchorage free of bent, broken, missing or loose hardware? Y☐ N☐ U☐ N/A☒

3. Is the anchorage free of corrosion that is more than mild surface oxidation? Y☐ N☐ U☐ N/A☒

4. Is the anchorage free of visible cracks in the concrete near the anchors? Y☐ N☐ U☐ N/A☒

5. Is the anchorage configuration consistent with plant documentation? (Note: This question only applies if the item is one of the 50% for which an anchorage configuration verification is required.) Y☐ N☐ U☐ N/A☒

6. Based on the above anchorage evaluations, is the anchorage free of potentially adverse seismic conditions? Y☒ N☐ U☐

[3] Enter the equipment class name from Appendix B: Classes of Equipment

Equipment ID No. *SQN-2-FCV-067-0067* Equip. Class[3] *8 - Motor Valve*

Equipment Description *EMERG DSL HTXS B1&B2 SUP VLV FROM HDR B*

Interaction Effects

7. Are soft targets free from impact by nearby equipment or structures? Y☒ N☐ U☐ N/A☐

8. Are overhead equipment, distribution systems, ceiling tiles and lighting, and masonry block walls not likely to collapse onto the equipment? Y☒ N☐ U☐ N/A☐

9. Do attached lines have adequate flexibility to avoid damage? Y☒ N☐ U☐ N/A☐

10. Based on the above seismic interaction evaluations, is equipment free of potentially adverse seismic interaction effects? Y☒ N☐ U☐

Other Adverse Conditions

11. Have you looked for and found no other seismic conditions that could adversely affect the safety functions of the equipment? Y☒ N☐ U☐

Comments (Additional pages may be added as necessary)

Evaluated by: *Robert Malone* Date: *7/23/12*

Phillip York *7/23/12*

Status: Y☒ N☐ U☐

Seismic Walkdown Checklist (SWC)

Equipment ID No. *SQN-2-FCV-067-0068* Equip. Class[3] *8 - Motor Valve*

Equipment Description *EMERG DSL HTXS A1&A2 SUP VLV FROM HDR B*

Location: Bldg. *DG* Floor El. *722* Room, Area *1 - Bay 2A*

Manufacturer, Model, Etc. (optional but recommended) _____

Instructions for Completing Checklist

This checklist may be used to document the results of the Seismic Walkdown of an item of equipment on the SWEL. The space below each of the following questions may be used to record the results of judgments and findings. Additional space is provided at the end of this checklist for documenting other comments.

Note: Y = Yes, N = No, U = Unknown, N/A = Not Applicable

Anchorage

1. Is the anchorage configuration verification required (i.e., is the item one of the 50% of SWEL items requiring such verification)? Y☐ N☒

2. Is the anchorage free of bent, broken, missing or loose hardware? Y☐ N☐ U☐ N/A☒

3. Is the anchorage free of corrosion that is more than mild surface oxidation? Y☐ N☐ U☐ N/A☒

4. Is the anchorage free of visible cracks in the concrete near the anchors? Y☐ N☐ U☐ N/A☒

5. Is the anchorage configuration consistent with plant documentation? (Note: This question only applies if the item is one of the 50% for which an anchorage configuration verification is required.) Y☐ N☐ U☐ N/A☒

6. Based on the above anchorage evaluations, is the anchorage free of potentially adverse seismic conditions? Y☒ N☐ U☐

[3] Enter the equipment class name from Appendix B: Classes of Equipment

Equipment ID No. *SQN-2-FCV-067-0068* Equip. Class[3] *8 - Motor Valve*

Equipment Description *EMERG DSL HTXS A1&A2 SUP VLV FROM HDR B*

Interaction Effects

7. Are soft targets free from impact by nearby equipment or structures? Y☒ N☐ U☐ N/A☐

8. Are overhead equipment, distribution systems, ceiling tiles and lighting, and masonry block walls not likely to collapse onto the equipment? Y☒ N☐ U☐ N/A☐

9. Do attached lines have adequate flexibility to avoid damage? Y☒ N☐ U☐ N/A☐

10. Based on the above seismic interaction evaluations, is equipment free of potentially adverse seismic interaction effects? Y☒ N☐ U☐

Other Adverse Conditions

11. Have you looked for and found no other seismic conditions that could adversely affect the safety functions of the equipment? Y☒ N☐ U☐

Comments (Additional pages may be added as necessary)

Evaluated by: *Robert Malone* Date: *7/17/12*

Phillip York *7/17/12*

Status: Y☒ N☐ U☐

Seismic Walkdown Checklist (SWC)

Equipment ID No. *SQN-2-FCV-067-0492* Equip. Class[3] *8 - Motor Valve*

Equipment Description *ISOL VALVE*

Location: Bldg. *ERCW* Floor El. *688* Room, Area *9 - 2A Strainer Room*

Manufacturer, Model, Etc. (optional but recommended) _____

Instructions for Completing Checklist

This checklist may be used to document the results of the Seismic Walkdown of an item of equipment on the SWEL. The space below each of the following questions may be used to record the results of judgments and findings. Additional space is provided at the end of this checklist for documenting other comments.

Note: Y = Yes, N = No, U = Unknown, N/A = Not Applicable

Anchorage

1. Is the anchorage configuration verification required (i.e., is the item one of the 50% of SWEL items requiring such verification)? Y☐ N☒

2. Is the anchorage free of bent, broken, missing or loose hardware? Y☐ N☐ U☐ N/A☒

3. Is the anchorage free of corrosion that is more than mild surface oxidation? Y☐ N☐ U☐ N/A☒

4. Is the anchorage free of visible cracks in the concrete near the anchors? Y☐ N☐ U☐ N/A☒

5. Is the anchorage configuration consistent with plant documentation? (Note: This question only applies if the item is one of the 50% for which an anchorage configuration verification is required.) Y☐ N☐ U☐ N/A☒

6. Based on the above anchorage evaluations, is the anchorage free of potentially adverse seismic conditions? Y☒ N☐ U☐

[3] Enter the equipment class name from Appendix B: Classes of Equipment

Equipment ID No. *SQN-2-FCV-067-0492* Equip. Class[3] *8 - Motor Valve*

Equipment Description *ISOL VALVE*

Interaction Effects

7. Are soft targets free from impact by nearby equipment or structures? Y☒ N☐ U☐ N/A☐

8. Are overhead equipment, distribution systems, ceiling tiles and lighting, and masonry block walls not likely to collapse onto the equipment? Y☒ N☐ U☐ N/A☐

9. Do attached lines have adequate flexibility to avoid damage? Y☒ N☐ U☐ N/A☐

10. Based on the above seismic interaction evaluations, is equipment free of potentially adverse seismic interaction effects? Y☒ N☐ U☐

Other Adverse Conditions

11. Have you looked for and found no other seismic conditions that could adversely affect the safety functions of the equipment? Y☒ N☐ U☐

Comments (Additional pages may be added as necessary)

Evaluated by: *Robert Malone* Date: *7/19/12*

Phillip York *7/19/12*

Status: Y☒ N☐ U☐

Seismic Walkdown Checklist (SWC)

Equipment ID No. *SQN-2-FAN-030-0450-B* Equip. Class[3] *9 - Fan*

Equipment Description *D-G RM 2B-B EXHAUST FAN 1*

Location: Bldg. *DG* Floor El. *740* Room, Area *6 - 2B Fan Room*

Manufacturer, Model, Etc. (optional but recommended) _____

Instructions for Completing Checklist

This checklist may be used to document the results of the Seismic Walkdown of an item of equipment on the SWEL. The space below each of the following questions may be used to record the results of judgments and findings. Additional space is provided at the end of this checklist for documenting other comments.

Note: Y = Yes, N = No, U = Unknown, N/A = Not Applicable

Anchorage

1. Is the anchorage configuration verification required (i.e., is the item one of the 50% of SWEL items requiring such verification)? Y☒ N☐
   For anchorage configuration verification see drawing1,2-10N320-3, Detail F3.

2. Is the anchorage free of bent, broken, missing or loose hardware? Y☒ N☐ U☐ N/A☐

3. Is the anchorage free of corrosion that is more than mild surface oxidation? Y☒ N☐ U☐ N/A☐

4. Is the anchorage free of visible cracks in the concrete near the anchors? Y☒ N☐ U☐ N/A☐

5. Is the anchorage configuration consistent with plant documentation? (Note: This question only applies if the item is one of the 50% for which an anchorage configuration verification is required.) Y☒ N☐ U☐ N/A☐

6. Based on the above anchorage evaluations, is the anchorage free of potentially adverse seismic conditions? Y☒ N☐ U☐

[3] Enter the equipment class name from Appendix B: Classes of Equipment

Equipment ID No. *SQN-2-FAN-030-0450-B* Equip. Class[3] *9 - Fan*

Equipment Description *D-G RM 2B-B EXHAUST FAN 1*

Interaction Effects

7. Are soft targets free from impact by nearby equipment or structures? Y☒ N☐ U☐ N/A☐

8. Are overhead equipment, distribution systems, ceiling tiles and lighting, and masonry block walls not likely to collapse onto the equipment? Y☒ N☐ U☐ N/A☐
   Masonry block wall near equipment approved in calculation SCG-1-86.

9. Do attached lines have adequate flexibility to avoid damage? Y☒ N☐ U☐ N/A☐

10. Based on the above seismic interaction evaluations, is equipment free of potentially adverse seismic interaction effects? Y☒ N☐ U☐

Other Adverse Conditions

11. Have you looked for and found no other seismic conditions that could adversely affect the safety functions of the equipment? Y☒ N☐ U☐

Comments (Additional pages may be added as necessary)

Evaluated by: *Robert Malone* Date: *7/24/12*

Phillip York *7/24/12*

Status: Y☒ N☐ U☐

Seismic Walkdown Checklist (SWC)

Equipment ID No. *SQN-2-FAN-030-0452* Equip. Class[3] *9 - Fan*

Equipment Description *D-G RM 2A-A EXHAUST FAN 2*

Location: Bldg. *DG* Floor El. *740* Room, Area *3 - 2A Fan Rm*

Manufacturer, Model, Etc. (optional but recommended) _____

Instructions for Completing Checklist

This checklist may be used to document the results of the Seismic Walkdown of an item of equipment on the SWEL. The space below each of the following questions may be used to record the results of judgments and findings. Additional space is provided at the end of this checklist for documenting other comments.

Note: Y = Yes, N = No, U = Unknown, N/A = Not Applicable

Anchorage

1. Is the anchorage configuration verification required (i.e., is the item one of the 50% of SWEL items requiring such verification)? Y☒ N☐
   For anchorage configuration verification see drawing1,2-10N320-3, Detail F3.

2. Is the anchorage free of bent, broken, missing or loose hardware? Y☒ N☐ U☐ N/A☐
   There is slight bending in 3 of 4 anchor bolts. This is not considered seismically significant.

3. Is the anchorage free of corrosion that is more than mild surface oxidation? Y☒ N☐ U☐ N/A☐

4. Is the anchorage free of visible cracks in the concrete near the anchors? Y☒ N☐ U☐ N/A☐

5. Is the anchorage configuration consistent with plant documentation? (Note: This question only applies if the item is one of the 50% for which an anchorage configuration verification is required.) Y☒ N☐ U☐ N/A☐

6. Based on the above anchorage evaluations, is the anchorage free of potentially adverse seismic conditions? Y☒ N☐ U☐

[3] Enter the equipment class name from Appendix B: Classes of Equipment

Equipment ID No. *SQN-2-FAN-030-0452* Equip. Class[3] *9 - Fan*

Equipment Description *D-G RM 2A-A EXHAUST FAN 2*

Interaction Effects

7. Are soft targets free from impact by nearby equipment or structures? Y☒ N☐ U☐ N/A☐

8. Are overhead equipment, distribution systems, ceiling tiles and lighting, and masonry block walls not likely to collapse onto the equipment? Y☒ N☐ U☐ N/A☐
   Masonry block wall near equipment approved in calculation SCG-1-86.

9. Do attached lines have adequate flexibility to avoid damage? Y☒ N☐ U☐ N/A☐

10. Based on the above seismic interaction evaluations, is equipment free of potentially adverse seismic interaction effects? Y☒ N☐ U☐

Other Adverse Conditions

11. Have you looked for and found no other seismic conditions that could adversely affect the safety functions of the equipment? Y☒ N☐ U☐

Comments (Additional pages may be added as necessary)

Evaluated by: *Robert Malone* Date: *7/18/12*

Phillip York *7/18/12*

Status: Y☒ N☐ U☐

Seismic Walkdown Checklist (SWC)

Equipment ID No. *SQN-2-FAN-030-0460* Equip. Class[3] *9 - Fan*

Equipment Description *DIESEL GEN 2A-A ELECT BD ROOM EXHAUST*

Location: Bldg. *DG* Floor El. *740* Room, Area *3 - 2A Fan Rm*

Manufacturer, Model, Etc. (optional but recommended) _____

Instructions for Completing Checklist

This checklist may be used to document the results of the Seismic Walkdown of an item of equipment on the SWEL. The space below each of the following questions may be used to record the results of judgments and findings. Additional space is provided at the end of this checklist for documenting other comments.

Note: Y = Yes, N = No, U = Unknown, N/A = Not Applicable

Anchorage

1. Is the anchorage configuration verification required (i.e., is the item one of the 50% of SWEL items requiring such verification)? Y☒ N☐
   For anchorage configuration verification see drawing1,2-10N320-3, Detail E3.

2. Is the anchorage free of bent, broken, missing or loose hardware? Y☒ N☐ U☐ N/A☐

3. Is the anchorage free of corrosion that is more than mild surface oxidation? Y☒ N☐ U☐ N/A☐

4. Is the anchorage free of visible cracks in the concrete near the anchors? Y☒ N☐ U☐ N/A☐

5. Is the anchorage configuration consistent with plant documentation? (Note: This question only applies if the item is one of the 50% for which an anchorage configuration verification is required.) Y☒ N☐ U☐ N/A☐

6. Based on the above anchorage evaluations, is the anchorage free of potentially adverse seismic conditions? Y☒ N☐ U☐

[3] Enter the equipment class name from Appendix B: Classes of Equipment

Equipment ID No. *SQN-2-FAN-030-0460* Equip. Class[3] *9 - Fan*

Equipment Description *DIESEL GEN 2A-A ELECT BD ROOM EXHAUST*

Interaction Effects

7. Are soft targets free from impact by nearby equipment or structures? Y☒ N☐ U☐ N/A☐

8. Are overhead equipment, distribution systems, ceiling tiles and lighting, and masonry block walls not likely to collapse onto the equipment? Y☒ N☐ U☐ N/A☐
   Masonry block wall near equipment approved in calculation SCG-1-86.

9. Do attached lines have adequate flexibility to avoid damage? Y☒ N☐ U☐ N/A☐

10. Based on the above seismic interaction evaluations, is equipment free of potentially adverse seismic interaction effects? Y☒ N☐ U☐

Other Adverse Conditions

11. Have you looked for and found no other seismic conditions that could adversely affect the safety functions of the equipment? Y☒ N☐ U☐

Comments (Additional pages may be added as necessary)

Evaluated by: *Robert Malone* Date: *7/18/12*

Phillip York *7/18/12*

Status: Y☒ N☐ U☐

Seismic Walkdown Checklist (SWC)

Equipment ID No. *SQN-2-FAN-030-0462-B* Equip. Class[3] *9 - Fan*

Equipment Description *DIESEL GEN 2B-B ELECT BD ROOM EXHAUST*

Location: Bldg. *DG* Floor El. *740* Room, Area *6 - 2B Fan Rm*

Manufacturer, Model, Etc. (optional but recommended) _____

Instructions for Completing Checklist

This checklist may be used to document the results of the Seismic Walkdown of an item of equipment on the SWEL. The space below each of the following questions may be used to record the results of judgments and findings. Additional space is provided at the end of this checklist for documenting other comments.

Note: Y = Yes, N = No, U = Unknown, N/A = Not Applicable

Anchorage

1. Is the anchorage configuration verification required (i.e., is the item one of the 50% of SWEL items requiring such verification)? Y☒ N☐
   For anchorage configuration verification see drawing1,2-10N320-3, Detail E3.

2. Is the anchorage free of bent, broken, missing or loose hardware? Y☒ N☐ U☐ N/A☐

3. Is the anchorage free of corrosion that is more than mild surface oxidation? Y☒ N☐ U☐ N/A☐

4. Is the anchorage free of visible cracks in the concrete near the anchors? Y☒ N☐ U☐ N/A☐

5. Is the anchorage configuration consistent with plant documentation? (Note: This question only applies if the item is one of the 50% for which an anchorage configuration verification is required.) Y☒ N☐ U☐ N/A☐

6. Based on the above anchorage evaluations, is the anchorage free of potentially adverse seismic conditions? Y☒ N☐ U☐

[3] Enter the equipment class name from Appendix B: Classes of Equipment

Equipment ID No. *SQN-2-FAN-030-0462-B* Equip. Class[3] *9 - Fan*

Equipment Description *DIESEL GEN 2B-B ELECT BD ROOM EXHAUST*

Interaction Effects

7. Are soft targets free from impact by nearby equipment or structures? Y☒ N☐ U☐ N/A☐

8. Are overhead equipment, distribution systems, ceiling tiles and lighting, and masonry block walls not likely to collapse onto the equipment? Y☒ N☐ U☐ N/A☐
   Masonry block wall near equipment approved in calculation SCG-1-86.

9. Do attached lines have adequate flexibility to avoid damage? Y☒ N☐ U☐ N/A☐

10. Based on the above seismic interaction evaluations, is equipment free of potentially adverse seismic interaction effects? Y☒ N☐ U☐

Other Adverse Conditions

11. Have you looked for and found no other seismic conditions that could adversely affect the safety functions of the equipment? Y☒ N☐ U☐

Comments (Additional pages may be added as necessary)

Evaluated by: *Robert Malone* Date: *7/24/12*

Phillip York *7/24/12*

Status: Y☒ N☐ U☐

Seismic Walkdown Checklist (SWC)

Equipment ID No. *SQN-0-AHU-311-0023-B* Equip. Class[3] *10 - Air Handler*

Equipment Description *MAIN CONTROL ROOM AHU B-B*

Location: Bldg. *Control* Floor El. *732* Room, Area *12 - Control Mechanical Equipment Room*

Manufacturer, Model, Etc. (optional but recommended) _____

Instructions for Completing Checklist

This checklist may be used to document the results of the Seismic Walkdown of an item of equipment on the SWEL. The space below each of the following questions may be used to record the results of judgments and findings. Additional space is provided at the end of this checklist for documenting other comments.

Note: Y = Yes, N = No, U = Unknown, N/A = Not Applicable

Anchorage

1. Is the anchorage configuration verification required (i.e., is the item one of the 50% of SWEL items requiring such verification)? Y☐ N☒

2. Is the anchorage free of bent, broken, missing or loose hardware? Y☒ N☐ U☐ N/A☐

3. Is the anchorage free of corrosion that is more than mild surface oxidation? Y☒ N☐ U☐ N/A☐

4. Is the anchorage free of visible cracks in the concrete near the anchors? Y☒ N☐ U☐ N/A☐

5. Is the anchorage configuration consistent with plant documentation? (Note: This question only applies if the item is one of the 50% for which an anchorage configuration verification is required.) Y☐ N☐ U☐ N/A☒

6. Based on the above anchorage evaluations, is the anchorage free of potentially adverse seismic conditions? Y☒ N☐ U☐

[3] Enter the equipment class name from Appendix B: Classes of Equipment

Equipment ID No. *SQN-0-AHU-311-0023-B* Equip. Class[3] *10 - Air Handler*

Equipment Description *MAIN CONTROL ROOM AHU B-B*

Interaction Effects

7. Are soft targets free from impact by nearby equipment or structures? Y☒ N☐ U☐ N/A☐

8. Are overhead equipment, distribution systems, ceiling tiles and lighting, and masonry block walls not likely to collapse onto the equipment? Y☒ N☐ U☐ N/A☐

9. Do attached lines have adequate flexibility to avoid damage? Y☒ N☐ U☐ N/A☐

10. Based on the above seismic interaction evaluations, is equipment free of potentially adverse seismic interaction effects? Y☒ N☐ U☐

Other Adverse Conditions

11. Have you looked for and found no other seismic conditions that could adversely affect the safety functions of the equipment? Y☒ N☐ U☐

Comments (Additional pages may be added as necessary)

Evaluated by: *Robert Malone* Date: *7/27/12*

Phillip York *7/27/12*

Status: Y☒ N☐ U☐

Seismic Walkdown Checklist (SWC)

Equipment ID No. *SQN-2-AHU-313-0488* Equip. Class[3] *10 - Air Handler*

Equipment Description *480V BD RM 2A SUPPLY AHU 2A-A*

Location: Bldg. *Aux* Floor El. *749* Room, Area *24 - 480V 2A Mechanical Equipment Room*

Manufacturer, Model, Etc. (optional but recommended) _____

Instructions for Completing Checklist

This checklist may be used to document the results of the Seismic Walkdown of an item of equipment on the SWEL. The space below each of the following questions may be used to record the results of judgments and findings. Additional space is provided at the end of this checklist for documenting other comments.

Note: Y = Yes, N = No, U = Unknown, N/A = Not Applicable

Anchorage

1. Is the anchorage configuration verification required (i.e., is the item one of the 50% of SWEL items requiring such verification)? Y☐ N☒

2. Is the anchorage free of bent, broken, missing or loose hardware? Y☒ N☐ U☐ N/A☐

3. Is the anchorage free of corrosion that is more than mild surface oxidation? Y☒ N☐ U☐ N/A☐

4. Is the anchorage free of visible cracks in the concrete near the anchors? Y☒ N☐ U☐ N/A☐

5. Is the anchorage configuration consistent with plant documentation? (Note: This question only applies if the item is one of the 50% for which an anchorage configuration verification is required.) Y☐ N☐ U☐ N/A☒

6. Based on the above anchorage evaluations, is the anchorage free of potentially adverse seismic conditions? Y☒ N☐ U☐

[3] Enter the equipment class name from Appendix B: Classes of Equipment

Equipment ID No. *SQN-2-AHU-313-0488* Equip. Class[3] *10 - Air Handler*

Equipment Description *480V BD RM 2A SUPPLY AHU 2A-A*

Interaction Effects

7. Are soft targets free from impact by nearby equipment or structures? Y☒ N☐ U☐ N/A☐

8. Are overhead equipment, distribution systems, ceiling tiles and lighting, and masonry block walls not likely to collapse onto the equipment? Y☒ N☐ U☐ N/A☐

9. Do attached lines have adequate flexibility to avoid damage? Y☒ N☐ U☐ N/A☐

10. Based on the above seismic interaction evaluations, is equipment free of potentially adverse seismic interaction effects? Y☒ N☐ U☐

Other Adverse Conditions

11. Have you looked for and found no other seismic conditions that could adversely affect the safety functions of the equipment? Y☒ N☐ U☐

Comments (Additional pages may be added as necessary)

Evaluated by: *Robert Malone* Date: *7/31/12*

Phillip York *7/31/12*

Status: Y☒ N☐ U☐

Seismic Walkdown Checklist (SWC)

Equipment ID No. *SQN-2-CLR-030-0178* Equip. Class[3] *10 - Cooler*

Equipment Description *CS PUMP COOLER 2B-B*

Location: Bldg. *Aux* Floor El. *653* Room, Area *44 - CS Pump Room 2B*

Manufacturer, Model, Etc. (optional but recommended) _____

Instructions for Completing Checklist

This checklist may be used to document the results of the Seismic Walkdown of an item of equipment on the SWEL. The space below each of the following questions may be used to record the results of judgments and findings. Additional space is provided at the end of this checklist for documenting other comments.

Note: Y = Yes, N = No, U = Unknown, N/A = Not Applicable

Anchorage

1. Is the anchorage configuration verification required (i.e., is the item one of the 50% of SWEL items requiring such verification)? Y☐ N☒

2. Is the anchorage free of bent, broken, missing or loose hardware? Y☒ N☐ U☐ N/A☐
   Nuts are missing from rear center and rear corner anchor bolts. Upon further investigation, calculation DCG-4M-00173 shows that the equipment was seismically qualified for this arrangement.

3. Is the anchorage free of corrosion that is more than mild surface oxidation? Y☒ N☐ U☐ N/A☐

4. Is the anchorage free of visible cracks in the concrete near the anchors? Y☒ N☐ U☐ N/A☐

5. Is the anchorage configuration consistent with plant documentation? (Note: This question only applies if the item is one of the 50% for which an anchorage configuration verification is required.) Y☐ N☐ U☐ N/A☒

6. Based on the above anchorage evaluations, is the anchorage free of potentially adverse seismic conditions? Y☒ N☐ U☐

[3] Enter the equipment class name from Appendix B: Classes of Equipment

Equipment ID No. *SQN-2-CLR-030-0178* Equip. Class[3] *10 - Cooler*

Equipment Description *CS PUMP COOLER 2B-B*

Interaction Effects

7. Are soft targets free from impact by nearby equipment or structures? Y☒ N☐ U☐ N/A☐

8. Are overhead equipment, distribution systems, ceiling tiles and lighting, and masonry block walls not likely to collapse onto the equipment? Y☒ N☐ U☐ N/A☐

9. Do attached lines have adequate flexibility to avoid damage? Y☒ N☐ U☐ N/A☐

10. Based on the above seismic interaction evaluations, is equipment free of potentially adverse seismic interaction effects? Y☒ N☐ U☐

Other Adverse Conditions

11. Have you looked for and found no other seismic conditions that could adversely affect the safety functions of the equipment? Y☒ N☐ U☐

Comments (Additional pages may be added as necessary)

Evaluated by: *Isaac Antanaitis* Date: *8/22/12*

Phillip York *8/22/12*

Status: Y☒ N☐ U☐

Seismic Walkdown Checklist (SWC)

Equipment ID No. *SQN-2-CLR-030-180-A* Equip. Class[3] *10 - Air Handler*

Equipment Description *SIS PUMP COOLER 2A-A*

Location: Bldg. *Aux* Floor El. *669* Room, Area *26 - SI Pump Room 2A*

Manufacturer, Model, Etc. (optional but recommended) _____

Instructions for Completing Checklist

This checklist may be used to document the results of the Seismic Walkdown of an item of equipment on the SWEL. The space below each of the following questions may be used to record the results of judgments and findings. Additional space is provided at the end of this checklist for documenting other comments.

Note: Y = Yes, N = No, U = Unknown, N/A = Not Applicable

Anchorage

1. Is the anchorage configuration verification required (i.e., is the item one of the 50% of SWEL items requiring such verification)? Y☐ N☒

2. Is the anchorage free of bent, broken, missing or loose hardware? Y☒ N☐ U☐ N/A☐

3. Is the anchorage free of corrosion that is more than mild surface oxidation? Y☒ N☐ U☐ N/A☐

4. Is the anchorage free of visible cracks in the concrete near the anchors? Y☒ N☐ U☐ N/A☐

5. Is the anchorage configuration consistent with plant documentation? (Note: This question only applies if the item is one of the 50% for which an anchorage configuration verification is required.) Y☐ N☐ U☐ N/A☒

6. Based on the above anchorage evaluations, is the anchorage free of potentially adverse seismic conditions? Y☒ N☐ U☐

[3] Enter the equipment class name from Appendix B: Classes of Equipment

Equipment ID No. *SQN-2-CLR-030-180-A* Equip. Class[3] *10 - Air Handler*

Equipment Description *SIS PUMP COOLER 2A-A*

Interaction Effects

7. Are soft targets free from impact by nearby equipment or structures? Y☒ N☐ U☐ N/A☐

8. Are overhead equipment, distribution systems, ceiling tiles and lighting, and masonry block walls not likely to collapse onto the equipment? Y☒ N☐ U☐ N/A☐

9. Do attached lines have adequate flexibility to avoid damage? Y☒ N☐ U☐ N/A☐

10. Based on the above seismic interaction evaluations, is equipment free of potentially adverse seismic interaction effects? Y☒ N☐ U☐

Other Adverse Conditions

11. Have you looked for and found no other seismic conditions that could adversely affect the safety functions of the equipment? Y☒ N☐ U☐

Comments (Additional pages may be added as necessary)

Evaluated by: *Robert Malone* Date: *8/1/12*

Phillip York *8/1/12*

Status: Y☒ N☐ U☐

Seismic Walkdown Checklist (SWC)

Equipment ID No. *0-CHR-311-0126* Equip. Class[3] *11 - Chiller*

Equipment Description *MAIN CONTROL ROOM CHILLER PKG A-A*

Location: Bldg. *Control* Floor El. *732* Room, Area *12 - Control Mechanical Equipment Room*

Manufacturer, Model, Etc. (optional but recommended) _____

Instructions for Completing Checklist

This checklist may be used to document the results of the Seismic Walkdown of an item of equipment on the SWEL. The space below each of the following questions may be used to record the results of judgments and findings. Additional space is provided at the end of this checklist for documenting other comments.

Note: Y = Yes, N = No, U = Unknown, N/A = Not Applicable

Anchorage

1. Is the anchorage configuration verification required (i.e., is the item one of the 50% of SWEL items requiring such verification)? Y☒ N☐
   For anchorage configuration verification see drawing CS-LIT(X585)-1X585.

2. Is the anchorage free of bent, broken, missing or loose hardware? Y☒ N☐ U☐ N/A☐

3. Is the anchorage free of corrosion that is more than mild surface oxidation? Y☒ N☐ U☐ N/A☐

4. Is the anchorage free of visible cracks in the concrete near the anchors? Y☒ N☐ U☐ N/A☐

5. Is the anchorage configuration consistent with plant documentation? (Note: This question only applies if the item is one of the 50% for which an anchorage configuration verification is required.) Y☒ N☐ U☐ N/A☐

6. Based on the above anchorage evaluations, is the anchorage free of potentially adverse seismic conditions? Y☒ N☐ U☐

[3] Enter the equipment class name from Appendix B: Classes of Equipment

Equipment ID No. *0-CHR-311-0126* Equip. Class[3] *11 - Chiller*

Equipment Description *MAIN CONTROL ROOM CHILLER PKG A-A*

Interaction Effects

7. Are soft targets free from impact by nearby equipment or structures? Y☒ N☐ U☐ N/A☐

8. Are overhead equipment, distribution systems, ceiling tiles and lighting, and masonry block walls not likely to collapse onto the equipment? Y☒ N☐ U☐ N/A☐

9. Do attached lines have adequate flexibility to avoid damage? Y☒ N☐ U☐ N/A☐

10. Based on the above seismic interaction evaluations, is equipment free of potentially adverse seismic interaction effects? Y☒ N☐ U☐

Other Adverse Conditions

11. Have you looked for and found no other seismic conditions that could adversely affect the safety functions of the equipment? Y☒ N☐ U☐

Comments (Additional pages may be added as necessary)

Evaluated by: *Robert Malone* Date: *7/30/12*

Phillip York *7/30/12*

Status: Y☒ N☐ U☐

Seismic Walkdown Checklist (SWC)

Equipment ID No. *SQN-0-CHR-311-0171* Equip. Class[3] *11 - Chiller*

Equipment Description *ELEC. BD. ROOM CHILLER PKG. B-B*

Location: Bldg. *control* Floor El. *669* Room, Area *37 - 669 Mech Room*

Manufacturer, Model, Etc. (optional but recommended) _____

Instructions for Completing Checklist

This checklist may be used to document the results of the Seismic Walkdown of an item of equipment on the SWEL. The space below each of the following questions may be used to record the results of judgments and findings. Additional space is provided at the end of this checklist for documenting other comments.

Note: Y = Yes, N = No, U = Unknown, N/A = Not Applicable

Anchorage

1. Is the anchorage configuration verification required (i.e., is the item one of the 50% of SWEL items requiring such verification)? Y☒ N☐
   For anchorage configuration verification see drawing 48N1288, Mk 4 & 5.

2. Is the anchorage free of bent, broken, missing or loose hardware? Y☒ N☐ U☐ N/A☐

3. Is the anchorage free of corrosion that is more than mild surface oxidation? Y☒ N☐ U☐ N/A☐

4. Is the anchorage free of visible cracks in the concrete near the anchors? Y☒ N☐ U☐ N/A☐
   There are cracks in the housekeeping pad. These cracks do not extend into the concrete slab.

5. Is the anchorage configuration consistent with plant documentation? (Note: This question only applies if the item is one of the 50% for which an anchorage configuration verification is required.) Y☒ N☐ U☐ N/A☐
   Grout was found to cover the bottom steel plate and the corresponding welds. All bolts were visible above the grout and are in good condition.

6. Based on the above anchorage evaluations, is the anchorage free of potentially adverse seismic conditions? Y☒ N☐ U☐

[3] Enter the equipment class name from Appendix B: Classes of Equipment

Equipment ID No. *SQN-0-CHR-311-0171* Equip. Class[3] *11 - Chiller*

Equipment Description *ELEC. BD. ROOM CHILLER PKG. B-B*

Interaction Effects

7. Are soft targets free from impact by nearby equipment or structures? Y☒ N☐ U☐ N/A☐

8. Are overhead equipment, distribution systems, ceiling tiles and lighting, and masonry block walls not likely to collapse onto the equipment? Y☒ N☐ U☐ N/A☐

9. Do attached lines have adequate flexibility to avoid damage? Y☒ N☐ U☐ N/A☐

10. Based on the above seismic interaction evaluations, is equipment free of potentially adverse seismic interaction effects? Y☒ N☐ U☐

Other Adverse Conditions

11. Have you looked for and found no other seismic conditions that could adversely affect the safety functions of the equipment? Y☒ N☐ U☐

Comments (Additional pages may be added as necessary)

Evaluated by: *Robert Malone* Date: *8/7/12*

Phillip York *8/7/12*

Status: Y☒ N☐ U☐

Seismic Walkdown Checklist (SWC)

Equipment ID No. *SQN-0-CHR-313-0338A* Equip. Class[3] *11 - Chiller*

Equipment Description *SHUTDOWN BD RMS A & B WATER CHILLER PKG B-B*

Location: Bldg. *Aux* Floor El. *714* Room, Area *40 - Shutdown Board B Area*

Manufacturer, Model, Etc. (optional but recommended) _____

Instructions for Completing Checklist

This checklist may be used to document the results of the Seismic Walkdown of an item of equipment on the SWEL. The space below each of the following questions may be used to record the results of judgments and findings. Additional space is provided at the end of this checklist for documenting other comments.

Note: Y = Yes, N = No, U = Unknown, N/A = Not Applicable

Anchorage

1. Is the anchorage configuration verification required (i.e., is the item one of the 50% of SWEL items requiring such verification)? Y☐ N☒

2. Is the anchorage free of bent, broken, missing or loose hardware? Y☒ N☐ U☐ N/A☐

3. Is the anchorage free of corrosion that is more than mild surface oxidation? Y☒ N☐ U☐ N/A☐

4. Is the anchorage free of visible cracks in the concrete near the anchors? Y☒ N☐ U☐ N/A☐

5. Is the anchorage configuration consistent with plant documentation? (Note: This question only applies if the item is one of the 50% for which an anchorage configuration verification is required.) Y☐ N☐ U☐ N/A☒

6. Based on the above anchorage evaluations, is the anchorage free of potentially adverse seismic conditions? Y☒ N☐ U☐

[3] Enter the equipment class name from Appendix B: Classes of Equipment

Equipment ID No. *SQN-0-CHR-313-0338A* Equip. Class[3] *11 - Chiller*

Equipment Description *SHUTDOWN BD RMS A & B WATER CHILLER PKG B-B*

Interaction Effects

7. Are soft targets free from impact by nearby equipment or structures? Y☒ N☐ U☐ N/A☐
   Fire protection line is in contact with foam insulation on top of chiller piping. This is not a soft target and not considered seismically adverse.

8. Are overhead equipment, distribution systems, ceiling tiles and lighting, and masonry block walls not likely to collapse onto the equipment? Y☒ N☐ U☐ N/A☐
   Overhead light wire restraint is no longer connected to the ceiling. This is not considered seismically adverse.

9. Do attached lines have adequate flexibility to avoid damage? Y☒ N☐ U☐ N/A☐

10. Based on the above seismic interaction evaluations, is equipment free of potentially adverse seismic interaction effects? Y☒ N☐ U☐

Other Adverse Conditions

11. Have you looked for and found no other seismic conditions that could adversely affect the safety functions of the equipment? Y☒ N☐ U☐
    One position set screw for chiller motor is missing and another is not in contact with the motor. Per ex-SRO, contact is not required and set screws are used for installation purposes only.

Comments (Additional pages may be added as necessary)

Evaluated by: *Robert Malone* Date: *8/8/12*

Phillip York *8/8/12*

Status: Y☒ N☐ U☐

Seismic Walkdown Checklist (SWC)

Equipment ID No. *SQN-2-CHR-313-0483* Equip. Class[3] *11 - Chiller*

Equipment Description *480V ELECT BOARD RM 2A-A*

Location: Bldg. *Aux* Floor El. *749* Room, Area *24 - 480V 2A Mechanical Equipment Room*

Manufacturer, Model, Etc. (optional but recommended) _____

Instructions for Completing Checklist

This checklist may be used to document the results of the Seismic Walkdown of an item of equipment on the SWEL. The space below each of the following questions may be used to record the results of judgments and findings. Additional space is provided at the end of this checklist for documenting other comments.

Note: Y = Yes, N = No, U = Unknown, N/A = Not Applicable

Anchorage

1. Is the anchorage configuration verification required (i.e., is the item one of the 50% of SWEL items requiring such verification)? Y☐ N☒

2. Is the anchorage free of bent, broken, missing or loose hardware? Y☒ N☐ U☐ N/A☐

3. Is the anchorage free of corrosion that is more than mild surface oxidation? Y☒ N☐ U☐ N/A☐

4. Is the anchorage free of visible cracks in the concrete near the anchors? Y☒ N☐ U☐ N/A☐

5. Is the anchorage configuration consistent with plant documentation? (Note: This question only applies if the item is one of the 50% for which an anchorage configuration verification is required.) Y☐ N☐ U☐ N/A☒

6. Based on the above anchorage evaluations, is the anchorage free of potentially adverse seismic conditions? Y☒ N☐ U☐

[3] Enter the equipment class name from Appendix B: Classes of Equipment

Equipment ID No. *SQN-2-CHR-313-0483* Equip. Class[3] *11 - Chiller*

Equipment Description *480V ELECT BOARD RM 2A-A*

Interaction Effects

7. Are soft targets free from impact by nearby equipment or structures? Y☒ N☐ U☐ N/A☐

8. Are overhead equipment, distribution systems, ceiling tiles and lighting, and masonry block walls not likely to collapse onto the equipment? Y☒ N☐ U☐ N/A☐
   High distribution of hairline cracks in the block wall near equipment. Cracks are exaggerated due to suction through cracks. Plant has been advised to monitor. Not considered seismically adverse.

9. Do attached lines have adequate flexibility to avoid damage? Y☒ N☐ U☐ N/A☐

10. Based on the above seismic interaction evaluations, is equipment free of potentially adverse seismic interaction effects? Y☒ N☐ U☐

Other Adverse Conditions

11. Have you looked for and found no other seismic conditions that could adversely affect the safety functions of the equipment? Y☒ N☐ U☐

Comments (Additional pages may be added as necessary)

Evaluated by: *Robert Malone* Date: *7/31/12*

Phillip York *7/31/12*

Status: Y☒ N☐ U☐

Seismic Walkdown Checklist (SWC)

Equipment ID No. *SQN-0-CMP-032-0086-B* Equip. Class[3] *12 - Air Compressor*

Equipment Description *AUX CONTROL AIR COMPRESSOR B-B*

Location: Bldg. *Aux* Floor El. *734* Room, Area *32 - Surge Tank B Area*

Manufacturer, Model, Etc. (optional but recommended) _____

Instructions for Completing Checklist

This checklist may be used to document the results of the Seismic Walkdown of an item of equipment on the SWEL. The space below each of the following questions may be used to record the results of judgments and findings. Additional space is provided at the end of this checklist for documenting other comments.

Note: Y = Yes, N = No, U = Unknown, N/A = Not Applicable

Anchorage

1. Is the anchorage configuration verification required (i.e., is the item one of the 50% of SWEL items requiring such verification)? Y☐ N☒

2. Is the anchorage free of bent, broken, missing or loose hardware? Y☒ N☐ U☐ N/A☐

3. Is the anchorage free of corrosion that is more than mild surface oxidation? Y☒ N☐ U☐ N/A☐

4. Is the anchorage free of visible cracks in the concrete near the anchors? Y☒ N☐ U☐ N/A☐

5. Is the anchorage configuration consistent with plant documentation? (Note: This question only applies if the item is one of the 50% for which an anchorage configuration verification is required.) Y☐ N☐ U☐ N/A☒

6. Based on the above anchorage evaluations, is the anchorage free of potentially adverse seismic conditions? Y☒ N☐ U☐

[3] Enter the equipment class name from Appendix B: Classes of Equipment

Equipment ID No. *SQN-0-CMP-032-0086-B* Equip. Class[3] *12 - Air Compressor*

Equipment Description *AUX CONTROL AIR COMPRESSOR B-B*

Interaction Effects

7. Are soft targets free from impact by nearby equipment or structures? Y☒ N☐ U☐ N/A☐

8. Are overhead equipment, distribution systems, ceiling tiles and lighting, and masonry block walls not likely to collapse onto the equipment? Y☒ N☐ U☐ N/A☐

9. Do attached lines have adequate flexibility to avoid damage? Y☒ N☐ U☐ N/A☐

10. Based on the above seismic interaction evaluations, is equipment free of potentially adverse seismic interaction effects? Y☒ N☐ U☐

Other Adverse Conditions

11. Have you looked for and found no other seismic conditions that could adversely affect the safety functions of the equipment? Y☒ N☐ U☐

Comments (Additional pages may be added as necessary)

Evaluated by: *Robert Malone* Date: *8/6/12*

Phillip York *8/6/12*

Status: Y☒ N☐ U☐

Seismic Walkdown Checklist (SWC)

Equipment ID No. *SQN-2-CMP-082-0240* Equip. Class[3] *12 - Air Compressor*

Equipment Description *DSL 2A1 STARTING AIR COMPRESSER 25.5 CFM*

Location: Bldg. *DG* Floor El. *722* Room, Area *1 - Bay 2A*

Manufacturer, Model, Etc. (optional but recommended) _____

Instructions for Completing Checklist

This checklist may be used to document the results of the Seismic Walkdown of an item of equipment on the SWEL. The space below each of the following questions may be used to record the results of judgments and findings. Additional space is provided at the end of this checklist for documenting other comments.

Note: Y = Yes, N = No, U = Unknown, N/A = Not Applicable

Anchorage

1. Is the anchorage configuration verification required (i.e., is the item one of the 50% of SWEL items requiring such verification)? Y☒ N☐
   For anchorage configuration verification see drawing 10N320-2, Detail F2.

2. Is the anchorage free of bent, broken, missing or loose hardware? Y☒ N☐ U☐ N/A☐

3. Is the anchorage free of corrosion that is more than mild surface oxidation? Y☒ N☐ U☐ N/A☐

4. Is the anchorage free of visible cracks in the concrete near the anchors? Y☒ N☐ U☐ N/A☐

5. Is the anchorage configuration consistent with plant documentation? (Note: This question only applies if the item is one of the 50% for which an anchorage configuration verification is required.) Y☒ N☐ U☐ N/A☐

6. Based on the above anchorage evaluations, is the anchorage free of potentially adverse seismic conditions? Y☒ N☐ U☐

[3] Enter the equipment class name from Appendix B: Classes of Equipment

Equipment ID No. *SQN-2-CMP-082-0240* Equip. Class[3] *12 - Air Compressor*

Equipment Description *DSL 2A1 STARTING AIR COMPRESSER 25.5 CFM*

Interaction Effects

7. Are soft targets free from impact by nearby equipment or structures? Y☒ N☐ U☐ N/A☐

8. Are overhead equipment, distribution systems, ceiling tiles and lighting, and masonry block walls not likely to collapse onto the equipment? Y☒ N☐ U☐ N/A☐

9. Do attached lines have adequate flexibility to avoid damage? Y☒ N☐ U☐ N/A☐

10. Based on the above seismic interaction evaluations, is equipment free of potentially adverse seismic interaction effects? Y☒ N☐ U☐

Other Adverse Conditions

11. Have you looked for and found no other seismic conditions that could adversely affect the safety functions of the equipment? Y☒ N☐ U☐

Comments (Additional pages may be added as necessary)

Evaluated by: *Robert Malone* Date: *7/16/12*

Phillip York *7/16/12*

Status: Y☒ N☐ U☐

Seismic Walkdown Checklist (SWC)

Equipment ID No. *SQN-2-CMP-082-0241* Equip. Class[3] *12 - Air Compressor*

Equipment Description *DSL 2A2 STARTING AIR COMPRESSOR 25.5 CFM*

Location: Bldg. *DG* Floor El. *722* Room, Area *1 - Bay 2A*

Manufacturer, Model, Etc. (optional but recommended) _____

Instructions for Completing Checklist

This checklist may be used to document the results of the Seismic Walkdown of an item of equipment on the SWEL. The space below each of the following questions may be used to record the results of judgments and findings. Additional space is provided at the end of this checklist for documenting other comments.

Note: Y = Yes, N = No, U = Unknown, N/A = Not Applicable

Anchorage

1. Is the anchorage configuration verification required (i.e., is the item one of the 50% of SWEL items requiring such verification)? Y☒ N☐
   For anchorage configuration verification see drawing 10N320-2, Detail F2.

2. Is the anchorage free of bent, broken, missing or loose hardware? Y☒ N☐ U☐ N/A☐

3. Is the anchorage free of corrosion that is more than mild surface oxidation? Y☒ N☐ U☐ N/A☐

4. Is the anchorage free of visible cracks in the concrete near the anchors? Y☒ N☐ U☐ N/A☐

5. Is the anchorage configuration consistent with plant documentation? (Note: This question only applies if the item is one of the 50% for which an anchorage configuration verification is required.) Y☒ N☐ U☐ N/A☐

6. Based on the above anchorage evaluations, is the anchorage free of potentially adverse seismic conditions? Y☒ N☐ U☐

[3] Enter the equipment class name from Appendix B: Classes of Equipment

Equipment ID No. *SQN-2-CMP-082-0241* Equip. Class[3] *12 - Air Compressor*

Equipment Description *DSL 2A2 STARTING AIR COMPRESSOR 25.5 CFM*

Interaction Effects

7. Are soft targets free from impact by nearby equipment or structures? Y☒ N☐ U☐ N/A☐

8. Are overhead equipment, distribution systems, ceiling tiles and lighting, and masonry block walls not likely to collapse onto the equipment? Y☒ N☐ U☐ N/A☐

9. Do attached lines have adequate flexibility to avoid damage? Y☒ N☐ U☐ N/A☐

10. Based on the above seismic interaction evaluations, is equipment free of potentially adverse seismic interaction effects? Y☒ N☐ U☐

Other Adverse Conditions

11. Have you looked for and found no other seismic conditions that could adversely affect the safety functions of the equipment? Y☒ N☐ U☐

Comments (Additional pages may be added as necessary)

Evaluated by: *Robert Malone* Date: *7/17/12*

Phillip York *7/17/12*

Status: Y☒ N☐ U☐

Seismic Walkdown Checklist (SWC)

Equipment ID No. *SQN-2-CMP-082-0271* Equip. Class[3] *12 - Air Compressor*

Equipment Description *DSL 2B2 STARTING AIR COMPRESSER 25.5 CFM*

Location: Bldg. *DG* Floor El. *722* Room, Area *4 - Bay 2B*

Manufacturer, Model, Etc. (optional but recommended) _____

Instructions for Completing Checklist

This checklist may be used to document the results of the Seismic Walkdown of an item of equipment on the SWEL. The space below each of the following questions may be used to record the results of judgments and findings. Additional space is provided at the end of this checklist for documenting other comments.

Note: Y = Yes, N = No, U = Unknown, N/A = Not Applicable

Anchorage

1. Is the anchorage configuration verification required (i.e., is the item one of the 50% of SWEL items requiring such verification)? Y☒ N☐
   For anchorage configuration verification see drawing 10N320-2, Detail F2.

2. Is the anchorage free of bent, broken, missing or loose hardware? Y☒ N☐ U☐ N/A☐

3. Is the anchorage free of corrosion that is more than mild surface oxidation? Y☒ N☐ U☐ N/A☐

4. Is the anchorage free of visible cracks in the concrete near the anchors? Y☒ N☐ U☐ N/A☐

5. Is the anchorage configuration consistent with plant documentation? (Note: This question only applies if the item is one of the 50% for which an anchorage configuration verification is required.) Y☒ N☐ U☐ N/A☐

6. Based on the above anchorage evaluations, is the anchorage free of potentially adverse seismic conditions? Y☒ N☐ U☐

[3] Enter the equipment class name from Appendix B: Classes of Equipment

Equipment ID No. *SQN-2-CMP-082-0271* Equip. Class[3] *12 - Air Compressor*

Equipment Description *DSL 2B2 STARTING AIR COMPRESSER 25.5 CFM*

Interaction Effects

7. Are soft targets free from impact by nearby equipment or structures? Y☒ N☐ U☐ N/A☐

8. Are overhead equipment, distribution systems, ceiling tiles and lighting, and masonry block walls not likely to collapse onto the equipment? Y☒ N☐ U☐ N/A☐

9. Do attached lines have adequate flexibility to avoid damage? Y☒ N☐ U☐ N/A☐

10. Based on the above seismic interaction evaluations, is equipment free of potentially adverse seismic interaction effects? Y☒ N☐ U☐

Other Adverse Conditions

11. Have you looked for and found no other seismic conditions that could adversely affect the safety functions of the equipment? Y☒ N☐ U☐

Comments (Additional pages may be added as necessary)

Evaluated by: *Robert Malone* Date: *7/23/12*

Phillip York *7/23/12*

Status: Y☒ N☐ U☐

Seismic Walkdown Checklist (SWC)

Equipment ID No. *SQN-2-GEND-085-DG/4D* Equip. Class[3] *13 - Motor Generator*

Equipment Description *4D,CONTROL ROD DRIVE GENERATOR 2A*

Location: Bldg. *Aux* Floor El. *759* Room, Area *30 - CRDM Room*

Manufacturer, Model, Etc. (optional but recommended) *E-M*

Instructions for Completing Checklist

This checklist may be used to document the results of the Seismic Walkdown of an item of equipment on the SWEL. The space below each of the following questions may be used to record the results of judgments and findings. Additional space is provided at the end of this checklist for documenting other comments.

Note: Y = Yes, N = No, U = Unknown, N/A = Not Applicable

Anchorage

1. Is the anchorage configuration verification required (i.e., is the item one of the 50% of SWEL items requiring such verification)? Y☒ N☐
   For anchorage configuration verification see drawings 45N232 & 48N1275.

2. Is the anchorage free of bent, broken, missing or loose hardware? Y☒ N☐ U☐ N/A☐

3. Is the anchorage free of corrosion that is more than mild surface oxidation? Y☒ N☐ U☐ N/A☐

4. Is the anchorage free of visible cracks in the concrete near the anchors? Y☒ N☐ U☐ N/A☐

5. Is the anchorage configuration consistent with plant documentation? (Note: This question only applies if the item is one of the 50% for which an anchorage configuration verification is required.) Y☒ N☐ U☐ N/A☐

6. Based on the above anchorage evaluations, is the anchorage free of potentially adverse seismic conditions? Y☒ N☐ U☐

[3] Enter the equipment class name from Appendix B: Classes of Equipment

Equipment ID No. *SQN-2-GEND-085-DG/4D* Equip. Class[3] *13 - Motor Generator*

Equipment Description *4D,CONTROL ROD DRIVE GENERATOR 2A*

Interaction Effects

7. Are soft targets free from impact by nearby equipment or structures? Y☒ N☐ U☐ N/A☐
   Hoist is anchored to pipe support near equipment and can roll into equipment. There are no soft targets on the equipment, therefore this is considered insignificant.

8. Are overhead equipment, distribution systems, ceiling tiles and lighting, and masonry block walls not likely to collapse onto the equipment? Y☒ N☐ U☐ N/A☐

9. Do attached lines have adequate flexibility to avoid damage? Y☒ N☐ U☐ N/A☐

10. Based on the above seismic interaction evaluations, is equipment free of potentially adverse seismic interaction effects? Y☒ N☐ U☐

Other Adverse Conditions

11. Have you looked for and found no other seismic conditions that could adversely affect the safety functions of the equipment? Y☒ N☐ U☐

Comments (Additional pages may be added as necessary)

Evaluated by: *Robert Malone* Date: *8/3/12*

Phillip York *8/3/12*

Status: Y☐ N☒ U☐

Seismic Walkdown Checklist (SWC)

Equipment ID No. *SQN-2-GEND-085-DH/3B* Equip. Class[3] *13 - Motor Generator*

Equipment Description *3B,CONTROL ROD DRIVE GENERATOR 2B*

Location: Bldg. *Aux* Floor El. *759* Room, Area *30 - CRDM Room*

Manufacturer, Model, Etc. (optional but recommended) _____

Instructions for Completing Checklist

This checklist may be used to document the results of the Seismic Walkdown of an item of equipment on the SWEL. The space below each of the following questions may be used to record the results of judgments and findings. Additional space is provided at the end of this checklist for documenting other comments.

Note: Y = Yes, N = No, U = Unknown, N/A = Not Applicable

Anchorage

1. Is the anchorage configuration verification required (i.e., is the item one of the 50% of SWEL items requiring such verification)? Y☒ N☐
   For anchorage configuration verification see drawings 45N232 & 48N1275.

2. Is the anchorage free of bent, broken, missing or loose hardware? Y☒ N☐ U☐ N/A☐

3. Is the anchorage free of corrosion that is more than mild surface oxidation? Y☒ N☐ U☐ N/A☐

4. Is the anchorage free of visible cracks in the concrete near the anchors? Y☒ N☐ U☐ N/A☐

5. Is the anchorage configuration consistent with plant documentation? (Note: This question only applies if the item is one of the 50% for which an anchorage configuration verification is required.) Y☒ N☐ U☐ N/A☐

6. Based on the above anchorage evaluations, is the anchorage free of potentially adverse seismic conditions? Y☒ N☐ U☐

[3] Enter the equipment class name from Appendix B: Classes of Equipment

Equipment ID No. *SQN-2-GEND-085-DH/3B* Equip. Class[3] *13 - Motor Generator*

Equipment Description *3B,CONTROL ROD DRIVE GENERATOR 2B*

Interaction Effects

7. Are soft targets free from impact by nearby equipment or structures? Y☒ N☐ U☐ N/A☐

8. Are overhead equipment, distribution systems, ceiling tiles and lighting, and masonry block walls not likely to collapse onto the equipment? Y☐ N☒ U☐ N/A☐
   Duct support missing bolt from baseplate above equipment at size reduction.

9. Do attached lines have adequate flexibility to avoid damage? Y☒ N☐ U☐ N/A☐

10. Based on the above seismic interaction evaluations, is equipment free of potentially adverse seismic interaction effects? Y☒ N☐ U☐

Other Adverse Conditions

11. Have you looked for and found no other seismic conditions that could adversely affect the safety functions of the equipment? Y☒ N☐ U☐

Comments (Additional pages may be added as necessary)

Housing between motor and generator missing one bolt. Bolt can be seen under engine. Not considered significant.

Evaluated by: *Robert Malone* Date: *8/3/12*

Phillip York *8/3/12*

Status: Y☒ N☐ U☐

Seismic Walkdown Checklist (SWC)

Equipment ID No. *SQN-0-XSW-250-KL-S* Equip. Class[3] *14 - Transfer Switch*

Equipment Description *SPARE 480 V AC VITAL TRANSFER SW 2-S*

Location: Bldg. *Aux* Floor El. *749* Room, Area *22 - 480V Board Room 2B*

Manufacturer, Model, Etc. (optional but recommended) _____

Instructions for Completing Checklist

This checklist may be used to document the results of the Seismic Walkdown of an item of equipment on the SWEL. The space below each of the following questions may be used to record the results of judgments and findings. Additional space is provided at the end of this checklist for documenting other comments.

Note: Y = Yes, N = No, U = Unknown, N/A = Not Applicable

Anchorage

1. Is the anchorage configuration verification required (i.e., is the item one of the 50% of SWEL items requiring such verification)? Y☒ N☐
   For anchorage configuration verification see drawings 48N1272, Detail Mks 36, 37, 38, & 39.

2. Is the anchorage free of bent, broken, missing or loose hardware? Y☒ N☐ U☐ N/A☐

3. Is the anchorage free of corrosion that is more than mild surface oxidation? Y☒ N☐ U☐ N/A☐

4. Is the anchorage free of visible cracks in the concrete near the anchors? Y☒ N☐ U☐ N/A☐

5. Is the anchorage configuration consistent with plant documentation? (Note: This question only applies if the item is one of the 50% for which an anchorage configuration verification is required.) Y☒ N☐ U☐ N/A☐
   Only 4 bolt locations between the panel and the angle frame were noted in the walkdown. The corresponding drawing shows multiple possible locations for bolts, but it appears that every location is not required for installation. 4 bolts is sufficient attachment for the panel.

6. Based on the above anchorage evaluations, is the anchorage free of potentially adverse seismic conditions? Y☒ N☐ U☐

[3] Enter the equipment class name from Appendix B: Classes of Equipment

Equipment ID No. *SQN-0-XSW-250-KL-S* Equip. Class[3] *14 - Transfer Switch*

Equipment Description *SPARE 480 V AC VITAL TRANSFER SW 2-S*

Interaction Effects

7. Are soft targets free from impact by nearby equipment or structures? Y☒ N☐ U☐ N/A☐

8. Are overhead equipment, distribution systems, ceiling tiles and lighting, and masonry block walls not likely to collapse onto the equipment? Y☒ N☐ U☐ N/A☐
   Masonry block wall behind equipment approved in calculation46W405-8 & -9.

9. Do attached lines have adequate flexibility to avoid damage? Y☒ N☐ U☐ N/A☐

10. Based on the above seismic interaction evaluations, is equipment free of potentially adverse seismic interaction effects? Y☒ N☐ U☐

Other Adverse Conditions

11. Have you looked for and found no other seismic conditions that could adversely affect the safety functions of the equipment? Y☒ N☐ U☐

Comments (Additional pages may be added as necessary)

Evaluated by: *Robert Malone* Date: *7/20/12*

Phillip York *7/20/12*

Status: Y☒ N☐ U☐

Seismic Walkdown Checklist (SWC)

Equipment ID No. *SQN-0-XSW-250-KX-S* Equip. Class[3] *14 - Transfer Switch*

Equipment Description *125VDC CHGR 2-S DC XFER SW TO VBB III*

Location: Bldg. *Aux* Floor El. *749* Room, Area *22 - 480V Board Room 2B*

Manufacturer, Model, Etc. (optional but recommended) _____

Instructions for Completing Checklist

This checklist may be used to document the results of the Seismic Walkdown of an item of equipment on the SWEL. The space below each of the following questions may be used to record the results of judgments and findings. Additional space is provided at the end of this checklist for documenting other comments.

Note: Y = Yes, N = No, U = Unknown, N/A = Not Applicable

Anchorage

1. Is the anchorage configuration verification required (i.e., is the item one of the 50% of SWEL items requiring such verification)? Y☒ N☐
   For anchorage configuration verification see drawings 48N1272, Detail Mks 36, 37, 38, & 39.

2. Is the anchorage free of bent, broken, missing or loose hardware? Y☒ N☐ U☐ N/A☐

3. Is the anchorage free of corrosion that is more than mild surface oxidation? Y☒ N☐ U☐ N/A☐

4. Is the anchorage free of visible cracks in the concrete near the anchors? Y☒ N☐ U☐ N/A☐

5. Is the anchorage configuration consistent with plant documentation? (Note: This question only applies if the item is one of the 50% for which an anchorage configuration verification is required.) Y☒ N☐ U☐ N/A☐
   Only 4 bolt locations between the panel and the angle frame were noted in the walkdown. The corresponding drawing shows multiple possible locations for bolts, but it appears that every location is not required for installation. 4 bolts is sufficient attachment for the panel.

6. Based on the above anchorage evaluations, is the anchorage free of potentially adverse seismic conditions? Y☒ N☐ U☐

[3] Enter the equipment class name from Appendix B: Classes of Equipment

Equipment ID No. *SQN-0-XSW-250-KX-S* Equip. Class[3] *14 - Transfer Switch*

Equipment Description *125VDC CHGR 2-S DC XFER SW TO VBB III*

Interaction Effects

7. Are soft targets free from impact by nearby equipment or structures? Y☒ N☐ U☐ N/A☐

8. Are overhead equipment, distribution systems, ceiling tiles and lighting, and masonry block walls not likely to collapse onto the equipment? Y☒ N☐ U☐ N/A☐
   Masonry block wall behind equipment approved in calculation46W405-8 & -9.

9. Do attached lines have adequate flexibility to avoid damage? Y☒ N☐ U☐ N/A☐

10. Based on the above seismic interaction evaluations, is equipment free of potentially adverse seismic interaction effects? Y☒ N☐ U☐

Other Adverse Conditions

11. Have you looked for and found no other seismic conditions that could adversely affect the safety functions of the equipment? Y☒ N☐ U☐

Comments (Additional pages may be added as necessary)

Evaluated by: *Robert Malone* Date: *7/20/12*

Phillip York *7/20/12*

Status: Y☒ N☐ U☐

Seismic Walkdown Checklist (SWC)

Equipment ID No. *SQN-2-BDE-250-NF-E* Equip. Class[3] *14 - Distribution Panel*

Equipment Description *120V AC VITAL INSTR POWER BD 2-II*

Location: Bldg. *Aux* Floor El. *734* Room, Area *14 - 125V Vital Board Room II*

Manufacturer, Model, Etc. (optional but recommended) _____

Instructions for Completing Checklist

This checklist may be used to document the results of the Seismic Walkdown of an item of equipment on the SWEL. The space below each of the following questions may be used to record the results of judgments and findings. Additional space is provided at the end of this checklist for documenting other comments.

Note: Y = Yes, N = No, U = Unknown, N/A = Not Applicable

Anchorage

1. Is the anchorage configuration verification required (i.e., is the item one of the 50% of SWEL items requiring such verification)? Y☐ N☒

2. Is the anchorage free of bent, broken, missing or loose hardware? Y☒ N☐ U☐ N/A☐
   Back panels were opened and anchorage to structure was verified. The power boards exist in one continuous cabinet and no panel-to-panel anchorage was observed. Front panels required extensive disassembly to open. Weld between channel and cabinet was checked for condition only.

3. Is the anchorage free of corrosion that is more than mild surface oxidation? Y☒ N☐ U☐ N/A☐

4. Is the anchorage free of visible cracks in the concrete near the anchors? Y☒ N☐ U☐ N/A☐

5. Is the anchorage configuration consistent with plant documentation? (Note: This question only applies if the item is one of the 50% for which an anchorage configuration verification is required.) Y☐ N☐ U☐ N/A☒

6. Based on the above anchorage evaluations, is the anchorage free of potentially adverse seismic conditions? Y☒ N☐ U☐

[3] Enter the equipment class name from Appendix B: Classes of Equipment

Equipment ID No. *SQN-2-BDE-250-NF-E* Equip. Class[3] *14 - Distribution Panel*

Equipment Description *120V AC VITAL INSTR POWER BD 2-II*

Interaction Effects

7. Are soft targets free from impact by nearby equipment or structures? Y☒ N☐ U☐ N/A☐

8. Are overhead equipment, distribution systems, ceiling tiles and lighting, and masonry block walls not likely to collapse onto the equipment? Y☒ N☐ U☐ N/A☐
   Masonry block wall behind equipment approved in calculation SCG1S30X11 and drawing 46W405-9.

9. Do attached lines have adequate flexibility to avoid damage? Y☒ N☐ U☐ N/A☐

10. Based on the above seismic interaction evaluations, is equipment free of potentially adverse seismic interaction effects? Y☒ N☐ U☐

Other Adverse Conditions

11. Have you looked for and found no other seismic conditions that could adversely affect the safety functions of the equipment? Y☒ N☐ U☐

Comments (Additional pages may be added as necessary)

Evaluated by: *Robert Malone* Date: *7/26/12*

James Edgar *7/26/12*

Status: Y☒ N☐ U☐

Seismic Walkdown Checklist (SWC)

Equipment ID No. *SQN-2-BDE-250-NK-G* Equip. Class[3] *14 - Distribution Panel*

Equipment Description *120V AC VITAL INSTR POWER BD 2-IV*

Location: Bldg. *Aux* Floor El. *734* Room, Area *14 - 125V Vital Board Room II*

Manufacturer, Model, Etc. (optional but recommended) _____

Instructions for Completing Checklist

This checklist may be used to document the results of the Seismic Walkdown of an item of equipment on the SWEL. The space below each of the following questions may be used to record the results of judgments and findings. Additional space is provided at the end of this checklist for documenting other comments.

Note: Y = Yes, N = No, U = Unknown, N/A = Not Applicable

Anchorage

1. Is the anchorage configuration verification required (i.e., is the item one of the 50% of SWEL items requiring such verification)? Y☐ N☒

2. Is the anchorage free of bent, broken, missing or loose hardware? Y☒ N☐ U☐ N/A☐
   Back panels were opened and anchorage to structure was verified. The power boards exist in one continuous cabinet and no panel-to-panel anchorage was observed. Front panels required extensive disassembly to open. Weld between channel and cabinet was checked for condition only.

3. Is the anchorage free of corrosion that is more than mild surface oxidation? Y☒ N☐ U☐ N/A☐

4. Is the anchorage free of visible cracks in the concrete near the anchors? Y☒ N☐ U☐ N/A☐

5. Is the anchorage configuration consistent with plant documentation? (Note: This question only applies if the item is one of the 50% for which an anchorage configuration verification is required.) Y☐ N☐ U☐ N/A☒

6. Based on the above anchorage evaluations, is the anchorage free of potentially adverse seismic conditions? Y☒ N☐ U☐

[3] Enter the equipment class name from Appendix B: Classes of Equipment

Equipment ID No. *SQN-2-BDE-250-NK-G* Equip. Class[3] *14 - Distribution Panel*

Equipment Description *120V AC VITAL INSTR POWER BD 2-IV*

Interaction Effects

7. Are soft targets free from impact by nearby equipment or structures? Y☒ N☐ U☐ N/A☐

8. Are overhead equipment, distribution systems, ceiling tiles and lighting, and masonry block walls not likely to collapse onto the equipment? Y☒ N☐ U☐ N/A☐
   Overhead fluorescent bulbs have spring lock attachment. Follow-up to review calc for block walls.
   Masonry block wall behind equipment approved in calculation 46W405-9.

9. Do attached lines have adequate flexibility to avoid damage? Y☒ N☐ U☐ N/A☐
   Flex hose used.

10. Based on the above seismic interaction evaluations, is equipment free of potentially adverse seismic interaction effects? Y☒ N☐ U☐

Other Adverse Conditions

11. Have you looked for and found no other seismic conditions that could adversely affect the safety functions of the equipment? Y☒ N☐ U☐

Comments (Additional pages may be added as necessary)

Evaluated by: *Lance Summers* Date: *7/26/12*

Isaac Antanaitis *7/26/12*

Status: Y☒ N☐ U☐

Seismic Walkdown Checklist (SWC)

Equipment ID No. *SQN-2-PNLA-082-TV-A* Equip. Class[3] *14 - Distribution Panel*

Equipment Description *DG 2A-A 125 VOLT DC DISTRIBUTION PNL*

Location: Bldg. *DG* Floor El. *722* Room, Area *1 - Bay 2A*

Manufacturer, Model, Etc. (optional but recommended) _____

Instructions for Completing Checklist

This checklist may be used to document the results of the Seismic Walkdown of an item of equipment on the SWEL. The space below each of the following questions may be used to record the results of judgments and findings. Additional space is provided at the end of this checklist for documenting other comments.

Note: Y = Yes, N = No, U = Unknown, N/A = Not Applicable

Anchorage

1. Is the anchorage configuration verification required (i.e., is the item one of the 50% of SWEL items requiring such verification)? Y☐ N☒

2. Is the anchorage free of bent, broken, missing or loose hardware? Y☒ N☐ U☐ N/A☐
   Front panel was opened and anchorage to structure was verified.

3. Is the anchorage free of corrosion that is more than mild surface oxidation? Y☒ N☐ U☐ N/A☐

4. Is the anchorage free of visible cracks in the concrete near the anchors? Y☒ N☐ U☐ N/A☐
   Visible concrete around cabinet shows no cracking.

5. Is the anchorage configuration consistent with plant documentation? (Note: This question only applies if the item is one of the 50% for which an anchorage configuration verification is required.) Y☐ N☐ U☐ N/A☒

6. Based on the above anchorage evaluations, is the anchorage free of potentially adverse seismic conditions? Y☐ N☐ U☒

[3] Enter the equipment class name from Appendix B: Classes of Equipment

Equipment ID No. *SQN-2-PNLA-082-TV-A* Equip. Class[3] *14 - Distribution Panel*

Equipment Description *DG 2A-A 125 VOLT DC DISTRIBUTION PNL*

Interaction Effects

7. Are soft targets free from impact by nearby equipment or structures? Y☒ N☐ U☐ N/A☐

8. Are overhead equipment, distribution systems, ceiling tiles and lighting, and masonry block walls not likely to collapse onto the equipment? Y☒ N☐ U☐ N/A☐

9. Do attached lines have adequate flexibility to avoid damage? Y☒ N☐ U☐ N/A☐

10. Based on the above seismic interaction evaluations, is equipment free of potentially adverse seismic interaction effects? Y☒ N☐ U☐

Other Adverse Conditions

11. Have you looked for and found no other seismic conditions that could adversely affect the safety functions of the equipment? Y☒ N☐ U☐

Comments (Additional pages may be added as necessary)

Evaluated by: *Robert Malone* Date: *7/17/12*

Phillip York *7/17/12*

Status: Y☒ N☐ U☐

Seismic Walkdown Checklist (SWC)

Equipment ID No. *SQN-2-XSW-082-UH-A* Equip. Class[3] *18 - Transfer Switch*

Equipment Description *DG 2A-A 480V TRANSFER SWITCH*

Location: Bldg. *DG* Floor El. *722* Room, Area *1 - Bay 2A*

Manufacturer, Model, Etc. (optional but recommended) _____

Instructions for Completing Checklist

This checklist may be used to document the results of the Seismic Walkdown of an item of equipment on the SWEL. The space below each of the following questions may be used to record the results of judgments and findings. Additional space is provided at the end of this checklist for documenting other comments.

Note: Y = Yes, N = No, U = Unknown, N/A = Not Applicable

Anchorage

1. Is the anchorage configuration verification required (i.e., is the item one of the 50% of SWEL items requiring such verification)? Y☐ N☒

2. Is the anchorage free of bent, broken, missing or loose hardware? Y☒ N☐ U☐ N/A☐

3. Is the anchorage free of corrosion that is more than mild surface oxidation? Y☒ N☐ U☐ N/A☐

4. Is the anchorage free of visible cracks in the concrete near the anchors? Y☒ N☐ U☐ N/A☐

5. Is the anchorage configuration consistent with plant documentation? (Note: This question only applies if the item is one of the 50% for which an anchorage configuration verification is required.) Y☐ N☐ U☐ N/A☒

6. Based on the above anchorage evaluations, is the anchorage free of potentially adverse seismic conditions? Y☒ N☐ U☐

[3] Enter the equipment class name from Appendix B: Classes of Equipment

Equipment ID No. *SQN-2-XSW-082-UH-A* Equip. Class[3] *18 - Transfer Switch*

Equipment Description *DG 2A-A 480V TRANSFER SWITCH*

Interaction Effects

7. Are soft targets free from impact by nearby equipment or structures? Y☒ N☐ U☐ N/A☐

8. Are overhead equipment, distribution systems, ceiling tiles and lighting, and masonry block walls not likely to collapse onto the equipment? Y☒ N☐ U☐ N/A☐

9. Do attached lines have adequate flexibility to avoid damage? Y☒ N☐ U☐ N/A☐

10. Based on the above seismic interaction evaluations, is equipment free of potentially adverse seismic interaction effects? Y☒ N☐ U☐

Other Adverse Conditions

11. Have you looked for and found no other seismic conditions that could adversely affect the safety functions of the equipment? Y☒ N☐ U☐

Comments (Additional pages may be added as necessary)

Evaluated by: *Robert Malone* Date: *7/18/12*

Phillip York *7/18/12*

Status: Y☒ N☐ U☐

Seismic Walkdown Checklist (SWC)

Equipment ID No. *SQN-0-BATB-250-QX-F* Equip. Class[3] *15 - Battery Rack*

Equipment Description *125V Vital Battery Room III Batteries 1-20 Rack*

Location: Bldg. *Aux* Floor El. *749* Room, Area *20 - 125V Battery Room III*

Manufacturer, Model, Etc. (optional but recommended) _____

Instructions for Completing Checklist

This checklist may be used to document the results of the Seismic Walkdown of an item of equipment on the SWEL. The space below each of the following questions may be used to record the results of judgments and findings. Additional space is provided at the end of this checklist for documenting other comments.

Note: Y = Yes, N = No, U = Unknown, N/A = Not Applicable

Anchorage

1. Is the anchorage configuration verification required (i.e., is the item one of the 50% of SWEL items requiring such verification)? Y☒ N☐
   For anchorage configuration verification see drawings 1,2-45N230, Section B-B.

2. Is the anchorage free of bent, broken, missing or loose hardware? Y☒ N☐ U☐ N/A☐

3. Is the anchorage free of corrosion that is more than mild surface oxidation? Y☒ N☐ U☐ N/A☐

4. Is the anchorage free of visible cracks in the concrete near the anchors? Y☒ N☐ U☐ N/A☐

5. Is the anchorage configuration consistent with plant documentation? (Note: This question only applies if the item is one of the 50% for which an anchorage configuration verification is required.) Y☒ N☐ U☐ N/A☐

6. Based on the above anchorage evaluations, is the anchorage free of potentially adverse seismic conditions? Y☒ N☐ U☐

[3] Enter the equipment class name from Appendix B: Classes of Equipment

Equipment ID No. *SQN-0-BATB-250-QX-F* Equip. Class[3] *15 - Battery Rack*

Equipment Description *125V Vital Battery Room III Batteries 1-20 Rack*

Interaction Effects

7. Are soft targets free from impact by nearby equipment or structures? Y☒ N☐ U☐ N/A☐

8. Are overhead equipment, distribution systems, ceiling tiles and lighting, and masonry block walls not likely to collapse onto the equipment? Y☒ N☐ U☐ N/A☐
   Masonry block wall behind equipment approved in calculation46W405-8 & -9.

9. Do attached lines have adequate flexibility to avoid damage? Y☒ N☐ U☐ N/A☐

10. Based on the above seismic interaction evaluations, is equipment free of potentially adverse seismic interaction effects? Y☒ N☐ U☐

Other Adverse Conditions

11. Have you looked for and found no other seismic conditions that could adversely affect the safety functions of the equipment? Y☒ N☐ U☐

Comments (Additional pages may be added as necessary)

Evaluated by: *Robert Malone* Date: *7/20/12*

Phillip York *7/20/12*

Status: Y☒ N☐ U☐

Seismic Walkdown Checklist (SWC)

Equipment ID No. *SQN-0-BATB-250-QX-F* Equip. Class[3] *15 - Battery Rack*

Equipment Description *125V Vital Battery Room III Batteries 21-40 Rack*

Location: Bldg. *Aux* Floor El. *749* Room, Area *20 - 125V Battery Room III*

Manufacturer, Model, Etc. (optional but recommended) _____

Instructions for Completing Checklist

This checklist may be used to document the results of the Seismic Walkdown of an item of equipment on the SWEL. The space below each of the following questions may be used to record the results of judgments and findings. Additional space is provided at the end of this checklist for documenting other comments.

Note: Y = Yes, N = No, U = Unknown, N/A = Not Applicable

Anchorage

1. Is the anchorage configuration verification required (i.e., is the item one of the 50% of SWEL items requiring such verification)? Y☒ N☐
   For anchorage configuration verification see drawings 1,2-45N230, Section B-B.

2. Is the anchorage free of bent, broken, missing or loose hardware? Y☒ N☐ U☐ N/A☐

3. Is the anchorage free of corrosion that is more than mild surface oxidation? Y☒ N☐ U☐ N/A☐

4. Is the anchorage free of visible cracks in the concrete near the anchors? Y☒ N☐ U☐ N/A☐

5. Is the anchorage configuration consistent with plant documentation? (Note: This question only applies if the item is one of the 50% for which an anchorage configuration verification is required.) Y☒ N☐ U☐ N/A☐

6. Based on the above anchorage evaluations, is the anchorage free of potentially adverse seismic conditions? Y☒ N☐ U☐

[3] Enter the equipment class name from Appendix B: Classes of Equipment

Equipment ID No. *SQN-0-BATB-250-QX-F* Equip. Class[3] *15 - Battery Rack*

Equipment Description *125V Vital Battery Room III Batteries 21-40 Rack*

Interaction Effects

7. Are soft targets free from impact by nearby equipment or structures? Y☒ N☐ U☐ N/A☐

8. Are overhead equipment, distribution systems, ceiling tiles and lighting, and masonry block walls not likely to collapse onto the equipment? Y☒ N☐ U☐ N/A☐
   Masonry block wall behind equipment approved in calculation46W405-8 & -9.

9. Do attached lines have adequate flexibility to avoid damage? Y☒ N☐ U☐ N/A☐

10. Based on the above seismic interaction evaluations, is equipment free of potentially adverse seismic interaction effects? Y☒ N☐ U☐

Other Adverse Conditions

11. Have you looked for and found no other seismic conditions that could adversely affect the safety functions of the equipment? Y☒ N☐ U☐

Comments (Additional pages may be added as necessary)

Evaluated by: *Robert Malone* Date: *7/30/12*

Phillip York *7/30/12*

Status: Y☒ N☐ U☐

Seismic Walkdown Checklist (SWC)

Equipment ID No. *SQN-0-BATB-250-QX-F* Equip. Class[3] *15 - Battery Rack*

Equipment Description *125V Vital Battery Room III Batteries 41-60 Rack*

Location: Bldg. *Aux* Floor El. *749* Room, Area *20 - 125V Battery Room III*

Manufacturer, Model, Etc. (optional but recommended) _____

Instructions for Completing Checklist

This checklist may be used to document the results of the Seismic Walkdown of an item of equipment on the SWEL. The space below each of the following questions may be used to record the results of judgments and findings. Additional space is provided at the end of this checklist for documenting other comments.

Note: Y = Yes, N = No, U = Unknown, N/A = Not Applicable

Anchorage

1. Is the anchorage configuration verification required (i.e., is the item one of the 50% of SWEL items requiring such verification)? Y☒ N☐
   For anchorage configuration verification see drawings 1,2-45N230, Section B-B.

2. Is the anchorage free of bent, broken, missing or loose hardware? Y☒ N☐ U☐ N/A☐

3. Is the anchorage free of corrosion that is more than mild surface oxidation? Y☒ N☐ U☐ N/A☐

4. Is the anchorage free of visible cracks in the concrete near the anchors? Y☒ N☐ U☐ N/A☐

5. Is the anchorage configuration consistent with plant documentation? (Note: This question only applies if the item is one of the 50% for which an anchorage configuration verification is required.) Y☒ N☐ U☐ N/A☐

6. Based on the above anchorage evaluations, is the anchorage free of potentially adverse seismic conditions? Y☒ N☐ U☐

[3] Enter the equipment class name from Appendix B: Classes of Equipment

Equipment ID No. *SQN-0-BATB-250-QX-F* Equip. Class[3] *15 - Battery Rack*

Equipment Description *125V Vital Battery Room III Batteries 41-60 Rack*

Interaction Effects

7. Are soft targets free from impact by nearby equipment or structures? Y☒ N☐ U☐ N/A☐

8. Are overhead equipment, distribution systems, ceiling tiles and lighting, and masonry block walls not likely to collapse onto the equipment? Y☒ N☐ U☐ N/A☐
   Masonry block wall behind equipment approved in calculation46W405-8 & -9.

9. Do attached lines have adequate flexibility to avoid damage? Y☒ N☐ U☐ N/A☐

10. Based on the above seismic interaction evaluations, is equipment free of potentially adverse seismic interaction effects? Y☒ N☐ U☐

Other Adverse Conditions

11. Have you looked for and found no other seismic conditions that could adversely affect the safety functions of the equipment? Y☒ N☐ U☐

Comments (Additional pages may be added as necessary)

Evaluated by: *Robert Malone* Date: *7/20/12*

Phillip York *7/20/12*

Status: Y☐ N☒ U☐

Seismic Walkdown Checklist (SWC)

Equipment ID No. *SQN-0-BATB-250-QY-G* Equip. Class[3] *15 - Battery Rack*

Equipment Description *125V Vital Battery Room IV Batteries 1-20 Rack*

Location: Bldg. *Aux* Floor El. *749* Room, Area *21 - 125V Battery Room IV*

Manufacturer, Model, Etc. (optional but recommended) _____

Instructions for Completing Checklist

This checklist may be used to document the results of the Seismic Walkdown of an item of equipment on the SWEL. The space below each of the following questions may be used to record the results of judgments and findings. Additional space is provided at the end of this checklist for documenting other comments.

Note: Y = Yes, N = No, U = Unknown, N/A = Not Applicable

Anchorage

1. Is the anchorage configuration verification required (i.e., is the item one of the 50% of SWEL items requiring such verification)? Y☒ N☐
   For anchorage configuration verification see drawings 1,2-45N230, Section B-B.

2. Is the anchorage free of bent, broken, missing or loose hardware? Y☒ N☐ U☐ N/A☐

3. Is the anchorage free of corrosion that is more than mild surface oxidation? Y☒ N☐ U☐ N/A☐

4. Is the anchorage free of visible cracks in the concrete near the anchors? Y☒ N☐ U☐ N/A☐

5. Is the anchorage configuration consistent with plant documentation? (Note: This question only applies if the item is one of the 50% for which an anchorage configuration verification is required.) Y☒ N☐ U☐ N/A☐

6. Based on the above anchorage evaluations, is the anchorage free of potentially adverse seismic conditions? Y☒ N☐ U☐

[3] Enter the equipment class name from Appendix B: Classes of Equipment

Equipment ID No. *SQN-0-BATB-250-QY-G* Equip. Class[3] *15 - Battery Rack*

Equipment Description *125V Vital Battery Room IV Batteries 1-20 Rack*

Interaction Effects

7. Are soft targets free from impact by nearby equipment or structures? Y☒ N☐ U☐ N/A☐

8. Are overhead equipment, distribution systems, ceiling tiles and lighting, and masonry block walls not likely to collapse onto the equipment? Y☐ N☒ U☐ N/A☐
   Masonry block wall above and to the right of sink has a horizontal crack at the top of the wall near the supporting angle. This crack is approximately 6' long and can be seen on both sides of the masonry block wall.
   Masonry block wall behind equipment approved in drawing 46W405-8 & -9.
9. Do attached lines have adequate flexibility to avoid damage? Y☒ N☐ U☐ N/A☐

10. Based on the above seismic interaction evaluations, is equipment free of potentially adverse seismic interaction effects? Y☐ N☒ U☐

Other Adverse Conditions

11. Have you looked for and found no other seismic conditions that could adversely affect the safety functions of the equipment? Y☒ N☐ U☐

Comments (Additional pages may be added as necessary)

Evaluated by: *Robert Malone* Date: *7/25/12*

Phillip York *7/25/12*

Status: Y☐ N☒ U☐

Seismic Walkdown Checklist (SWC)

Equipment ID No. *SQN-0-BATB-250-QY-G* Equip. Class[3] *15 - Battery Rack*

Equipment Description *125V Vital Battery Room IV Batteries 21-40 Rack*

Location: Bldg. *Aux* Floor El. *749* Room, Area *21 - 125V Battery Room IV*

Manufacturer, Model, Etc. (optional but recommended) _____

Instructions for Completing Checklist

This checklist may be used to document the results of the Seismic Walkdown of an item of equipment on the SWEL. The space below each of the following questions may be used to record the results of judgments and findings. Additional space is provided at the end of this checklist for documenting other comments.

Note: Y = Yes, N = No, U = Unknown, N/A = Not Applicable

Anchorage

1. Is the anchorage configuration verification required (i.e., is the item one of the 50% of SWEL items requiring such verification)? Y☒ N☐
   For anchorage configuration verification see drawings 1,2-45N230, Section B-B.

2. Is the anchorage free of bent, broken, missing or loose hardware? Y☒ N☐ U☐ N/A☐

3. Is the anchorage free of corrosion that is more than mild surface oxidation? Y☒ N☐ U☐ N/A☐

4. Is the anchorage free of visible cracks in the concrete near the anchors? Y☒ N☐ U☐ N/A☐

5. Is the anchorage configuration consistent with plant documentation? (Note: This question only applies if the item is one of the 50% for which an anchorage configuration verification is required.) Y☒ N☐ U☐ N/A☐

6. Based on the above anchorage evaluations, is the anchorage free of potentially adverse seismic conditions? Y☒ N☐ U☐

[3] Enter the equipment class name from Appendix B: Classes of Equipment

Equipment ID No. *SQN-0-BATB-250-QY-G* Equip. Class[3] *15 - Battery Rack*

Equipment Description *125V Vital Battery Room IV Batteries 21-40 Rack*

Interaction Effects

7. Are soft targets free from impact by nearby equipment or structures? Y☒ N☐ U☐ N/A☐

8. Are overhead equipment, distribution systems, ceiling tiles and lighting, and masonry block walls not likely to collapse onto the equipment? Y☐ N☒ U☐ N/A☐
   Masonry block wall above and to the right of sink has a horizontal crack at the top of the wall near the supporting angle. This crack is approximately 6' long and can be seen on both sides of the masonry block wall.
   Masonry block wall behind equipment approved in drawing 46W405-8 & -9.
9. Do attached lines have adequate flexibility to avoid damage? Y☒ N☐ U☐ N/A☐

10. Based on the above seismic interaction evaluations, is equipment free of potentially adverse seismic interaction effects? Y☐ N☒ U☐

Other Adverse Conditions

11. Have you looked for and found no other seismic conditions that could adversely affect the safety functions of the equipment? Y☒ N☐ U☐

Comments (Additional pages may be added as necessary)

Evaluated by: *Robert Malone* Date: *7/25/12*

Phillip York *7/25/12*

Status: Y☒ N☐ U☐

Seismic Walkdown Checklist (SWC)

Equipment ID No. *SQN-0-BATB-250-QY-G* Equip. Class[3] *15 - Battery Rack*

Equipment Description *125V Vital Battery Room IV Batteries 41-60 Rack*

Location: Bldg. *Aux* Floor El. *749* Room, Area *21 - 125V Battery Room IV*

Manufacturer, Model, Etc. (optional but recommended) _____

Instructions for Completing Checklist

This checklist may be used to document the results of the Seismic Walkdown of an item of equipment on the SWEL. The space below each of the following questions may be used to record the results of judgments and findings. Additional space is provided at the end of this checklist for documenting other comments.

Note: Y = Yes, N = No, U = Unknown, N/A = Not Applicable

Anchorage

1. Is the anchorage configuration verification required (i.e., is the item one of the 50% of SWEL items requiring such verification)? Y☒ N☐
   For anchorage configuration verification see drawings 1,2-45N230, Section B-B.

2. Is the anchorage free of bent, broken, missing or loose hardware? Y☒ N☐ U☐ N/A☐

3. Is the anchorage free of corrosion that is more than mild surface oxidation? Y☒ N☐ U☐ N/A☐

4. Is the anchorage free of visible cracks in the concrete near the anchors? Y☒ N☐ U☐ N/A☐

5. Is the anchorage configuration consistent with plant documentation? (Note: This question only applies if the item is one of the 50% for which an anchorage configuration verification is required.) Y☒ N☐ U☐ N/A☐

6. Based on the above anchorage evaluations, is the anchorage free of potentially adverse seismic conditions? Y☒ N☐ U☐

[3] Enter the equipment class name from Appendix B: Classes of Equipment

Equipment ID No. *SQN-0-BATB-250-QY-G* Equip. Class[3] *15 - Battery Rack*

Equipment Description *125V Vital Battery Room IV Batteries 41-60 Rack*

Interaction Effects

7. Are soft targets free from impact by nearby equipment or structures? Y☒ N☐ U☐ N/A☐

8. Are overhead equipment, distribution systems, ceiling tiles and lighting, and masonry block walls not likely to collapse onto the equipment? Y☒ N☐ U☐ N/A☐
   Masonry block wall behind equipment approved in drawing 46W405-8 & -9.

9. Do attached lines have adequate flexibility to avoid damage? Y☒ N☐ U☐ N/A☐

10. Based on the above seismic interaction evaluations, is equipment free of potentially adverse seismic interaction effects? Y☒ N☐ U☐

Other Adverse Conditions

11. Have you looked for and found no other seismic conditions that could adversely affect the safety functions of the equipment? Y☒ N☐ U☐

Comments (Additional pages may be added as necessary)

Evaluated by: *Robert Malone* Date: *7/24/12*

Phillip York *7/24/12*

Status: Y☒ N☐ U☐

Seismic Walkdown Checklist (SWC)

Equipment ID No. *SQN-2-BATB-082-UD-A* Equip. Class[3] *15 - Battery Rack*

Equipment Description *Diesel Gen. 2A-A Battery Rack*

Location: Bldg. *DG* Floor El. *722* Room, Area *1 - Bay 2A*

Manufacturer, Model, Etc. (optional but recommended) _____

Instructions for Completing Checklist

This checklist may be used to document the results of the Seismic Walkdown of an item of equipment on the SWEL. The space below each of the following questions may be used to record the results of judgments and findings. Additional space is provided at the end of this checklist for documenting other comments.

Note: Y = Yes, N = No, U = Unknown, N/A = Not Applicable

Anchorage

1. Is the anchorage configuration verification required (i.e., is the item one of the 50% of SWEL items requiring such verification)? Y☒ N☐
   For anchorage configuration verification see drawing 10N320-2.

2. Is the anchorage free of bent, broken, missing or loose hardware? Y☒ N☐ U☐ N/A☐

3. Is the anchorage free of corrosion that is more than mild surface oxidation? Y☒ N☐ U☐ N/A☐

4. Is the anchorage free of visible cracks in the concrete near the anchors? Y☒ N☐ U☐ N/A☐

5. Is the anchorage configuration consistent with plant documentation? (Note: This question only applies if the item is one of the 50% for which an anchorage configuration verification is required.) Y☒ N☐ U☐ N/A☐

6. Based on the above anchorage evaluations, is the anchorage free of potentially adverse seismic conditions? Y☒ N☐ U☐

[3] Enter the equipment class name from Appendix B: Classes of Equipment

Equipment ID No. *SQN-2-BATB-082-UD-A* Equip. Class[3] *15 - Battery Rack*

Equipment Description *Diesel Gen. 2A-A Battery Rack*

Interaction Effects

7. Are soft targets free from impact by nearby equipment or structures? Y☒ N☐ U☐ N/A☐

8. Are overhead equipment, distribution systems, ceiling tiles and lighting, and masonry block walls not likely to collapse onto the equipment? Y☒ N☐ U☐ N/A☐
   Emergency eyewash station near equipment was not anchored properly and could cause a hazard during a seismic event. On a later visit, the eyewash station was anchored to a nearby sink. Barrier posts near equipment were not anchored. This is not considered seismically significant.

9. Do attached lines have adequate flexibility to avoid damage? Y☒ N☐ U☐ N/A☐

10. Based on the above seismic interaction evaluations, is equipment free of potentially adverse seismic interaction effects? Y☒ N☐ U☐

Other Adverse Conditions

11. Have you looked for and found no other seismic conditions that could adversely affect the safety functions of the equipment? Y☒ N☐ U☐

Comments (Additional pages may be added as necessary)

Evaluated by: *Robert Malone* Date: *7/16/12*

Phillip York *7/16/12*

Status: Y☐ N☒ U☐

Seismic Walkdown Checklist (SWC)

Equipment ID No. *SQN-0-CHGB-250-QJ-G* Equip. Class[3] *16 - Charger*

Equipment Description *125V DC Vital Battery Charger IV*

Location: Bldg. *Aux* Floor El. *749* Room, Area *22 - 480V Board Room 2B*

Manufacturer, Model, Etc. (optional but recommended) _____

Instructions for Completing Checklist

This checklist may be used to document the results of the Seismic Walkdown of an item of equipment on the SWEL. The space below each of the following questions may be used to record the results of judgments and findings. Additional space is provided at the end of this checklist for documenting other comments.

Note: Y = Yes, N = No, U = Unknown, N/A = Not Applicable

Anchorage

1. Is the anchorage configuration verification required (i.e., is the item one of the 50% of SWEL items requiring such verification)? Y☐ N☒

2. Is the anchorage free of bent, broken, missing or loose hardware? Y☒ N☐ U☐ N/A☐

3. Is the anchorage free of corrosion that is more than mild surface oxidation? Y☒ N☐ U☐ N/A☐

4. Is the anchorage free of visible cracks in the concrete near the anchors? Y☒ N☐ U☐ N/A☐

5. Is the anchorage configuration consistent with plant documentation? (Note: This question only applies if the item is one of the 50% for which an anchorage configuration verification is required.) Y☐ N☐ U☐ N/A☒

6. Based on the above anchorage evaluations, is the anchorage free of potentially adverse seismic conditions? Y☒ N☐ U☐

[3] Enter the equipment class name from Appendix B: Classes of Equipment

Equipment ID No. *SQN-0-CHGB-250-QJ-G* Equip. Class[3] *16 - Charger*

Equipment Description *125V DC Vital Battery Charger IV*

Interaction Effects

7. Are soft targets free from impact by nearby equipment or structures? Y☒ N☐ U☐ N/A☐

8. Are overhead equipment, distribution systems, ceiling tiles and lighting, and masonry block walls not likely to collapse onto the equipment? Y☐ N☒ U☐ N/A☐
   Masonry block wall above equipment has a horizontal crack at the top of the wall near the supporting angle. This crack is approximately 6' long and can be seen on both sides of the masonry block wall.

9. Do attached lines have adequate flexibility to avoid damage? Y☒ N☐ U☐ N/A☐

10. Based on the above seismic interaction evaluations, is equipment free of potentially adverse seismic interaction effects? Y☐ N☒ U☐

Other Adverse Conditions

11. Have you looked for and found no other seismic conditions that could adversely affect the safety functions of the equipment? Y☒ N☐ U☐

Comments (Additional pages may be added as necessary)

Evaluated by: *Robert Malone* Date: *7/25/12*

Phillip York *7/25/12*

Status: Y☒ N☐ U☐

Seismic Walkdown Checklist (SWC)

Equipment ID No. *SQN-0-CHGB-250-QK-S* Equip. Class[3] *16 - Charger*

Equipment Description *125V DC VITAL BATTERY CHARGER 2-SPARE*

Location: Bldg. *Aux* Floor El. *749* Room, Area *22 - 480V Board Room 2B*

Manufacturer, Model, Etc. (optional but recommended) _____

Instructions for Completing Checklist

This checklist may be used to document the results of the Seismic Walkdown of an item of equipment on the SWEL. The space below each of the following questions may be used to record the results of judgments and findings. Additional space is provided at the end of this checklist for documenting other comments.

Note: Y = Yes, N = No, U = Unknown, N/A = Not Applicable

Anchorage

1. Is the anchorage configuration verification required (i.e., is the item one of the 50% of SWEL items requiring such verification)? Y☒ N☐
   For anchorage configuration verification see drawing 48N1274.

2. Is the anchorage free of bent, broken, missing or loose hardware? Y☒ N☐ U☐ N/A☐

3. Is the anchorage free of corrosion that is more than mild surface oxidation? Y☒ N☐ U☐ N/A☐

4. Is the anchorage free of visible cracks in the concrete near the anchors? Y☒ N☐ U☐ N/A☐

5. Is the anchorage configuration consistent with plant documentation? (Note: This question only applies if the item is one of the 50% for which an anchorage configuration verification is required.) Y☒ N☐ U☐ N/A☐

6. Based on the above anchorage evaluations, is the anchorage free of potentially adverse seismic conditions? Y☒ N☐ U☐

[3] Enter the equipment class name from Appendix B: Classes of Equipment

Equipment ID No. *SQN-0-CHGB-250-QK-S* Equip. Class[3] *16 - Charger*

Equipment Description *125V DC VITAL BATTERY CHARGER 2-SPARE*

Interaction Effects

7. Are soft targets free from impact by nearby equipment or structures? Y☒ N☐ U☐ N/A☐

8. Are overhead equipment, distribution systems, ceiling tiles and lighting, and masonry block walls not likely to collapse onto the equipment? Y☒ N☐ U☐ N/A☐
   Masonry block wall behind equipment approved in calculation46W405-8 & -9.

9. Do attached lines have adequate flexibility to avoid damage? Y☒ N☐ U☐ N/A☐

10. Based on the above seismic interaction evaluations, is equipment free of potentially adverse seismic interaction effects? Y☒ N☐ U☐

Other Adverse Conditions

11. Have you looked for and found no other seismic conditions that could adversely affect the safety functions of the equipment? Y☒ N☐ U☐

Comments (Additional pages may be added as necessary)

Evaluated by: *Robert Malone* Date: *7/20/12*

Phillip York *7/20/12*

Status: Y☒ N☐ U☐

Seismic Walkdown Checklist (SWC)

Equipment ID No. *SQN-2-CHGB-082-TZ-A* Equip. Class[3] *16 - Charger*

Equipment Description *DG 2A-A BATTERY CHARGER*

Location: Bldg. *DG* Floor El. *722* Room, Area *1 - Bay 2A*

Manufacturer, Model, Etc. (optional but recommended) *LaMarche*

Instructions for Completing Checklist

This checklist may be used to document the results of the Seismic Walkdown of an item of equipment on the SWEL. The space below each of the following questions may be used to record the results of judgments and findings. Additional space is provided at the end of this checklist for documenting other comments.

Note: Y = Yes, N = No, U = Unknown, N/A = Not Applicable

Anchorage

1. Is the anchorage configuration verification required (i.e., is the item one of the 50% of SWEL items requiring such verification)? Y☐ N☒

2. Is the anchorage free of bent, broken, missing or loose hardware? Y☒ N☐ U☐ N/A☐

3. Is the anchorage free of corrosion that is more than mild surface oxidation? Y☒ N☐ U☐ N/A☐

4. Is the anchorage free of visible cracks in the concrete near the anchors? Y☒ N☐ U☐ N/A☐

5. Is the anchorage configuration consistent with plant documentation? (Note: This question only applies if the item is one of the 50% for which an anchorage configuration verification is required.) Y☐ N☐ U☐ N/A☒

6. Based on the above anchorage evaluations, is the anchorage free of potentially adverse seismic conditions? Y☒ N☐ U☐

[3] Enter the equipment class name from Appendix B: Classes of Equipment

Equipment ID No. *SQN-2-CHGB-082-TZ-A* Equip. Class[3] *16 - Charger*

Equipment Description *DG 2A-A BATTERY CHARGER*

Interaction Effects

7. Are soft targets free from impact by nearby equipment or structures? Y☒ N☐ U☐ N/A☐

8. Are overhead equipment, distribution systems, ceiling tiles and lighting, and masonry block walls not likely to collapse onto the equipment? Y☒ N☐ U☐ N/A☐

9. Do attached lines have adequate flexibility to avoid damage? Y☒ N☐ U☐ N/A☐

10. Based on the above seismic interaction evaluations, is equipment free of potentially adverse seismic interaction effects? Y☒ N☐ U☐

Other Adverse Conditions

11. Have you looked for and found no other seismic conditions that could adversely affect the safety functions of the equipment? Y☒ N☐ U☐

Comments (Additional pages may be added as necessary)

Evaluated by: *Robert Malone* Date: *7/16/12*

Phillip York *7/16/12*

Status: Y☒ N☐ U☐

Seismic Walkdown Checklist (SWC)

Equipment ID No. *SQN-2-CHGB-082-UA-B* Equip. Class[3] *16 - Charger*

Equipment Description *D/G 2B-B BATTERY CHGR*

Location: Bldg. *DG* Floor El. *722* Room, Area *4 - Bay 2B*

Manufacturer, Model, Etc. (optional but recommended)

Instructions for Completing Checklist

This checklist may be used to document the results of the Seismic Walkdown of an item of equipment on the SWEL. The space below each of the following questions may be used to record the results of judgments and findings. Additional space is provided at the end of this checklist for documenting other comments.

Note: Y = Yes, N = No, U = Unknown, N/A = Not Applicable

Anchorage

1. Is the anchorage configuration verification required (i.e., is the item one of the 50% of SWEL items requiring such verification)? Y☐ N☒

2. Is the anchorage free of bent, broken, missing or loose hardware? Y☒ N☐ U☐ N/A☐

3. Is the anchorage free of corrosion that is more than mild surface oxidation? Y☒ N☐ U☐ N/A☐

4. Is the anchorage free of visible cracks in the concrete near the anchors? Y☒ N☐ U☐ N/A☐

5. Is the anchorage configuration consistent with plant documentation? (Note: This question only applies if the item is one of the 50% for which an anchorage configuration verification is required.) Y☐ N☐ U☐ N/A☒

6. Based on the above anchorage evaluations, is the anchorage free of potentially adverse seismic conditions? Y☒ N☐ U☐

[3] Enter the equipment class name from Appendix B: Classes of Equipment

Equipment ID No. *SQN-2-CHGB-082-UA-B* Equip. Class[3] *16 - Charger*

Equipment Description *D/G 2B-B BATTERY CHGR*

Interaction Effects

7. Are soft targets free from impact by nearby equipment or structures? Y☒ N☐ U☐ N/A☐

8. Are overhead equipment, distribution systems, ceiling tiles and lighting, and masonry block walls not likely to collapse onto the equipment? Y☒ N☐ U☐ N/A☐

9. Do attached lines have adequate flexibility to avoid damage? Y☒ N☐ U☐ N/A☐

10. Based on the above seismic interaction evaluations, is equipment free of potentially adverse seismic interaction effects? Y☒ N☐ U☐

Other Adverse Conditions

11. Have you looked for and found no other seismic conditions that could adversely affect the safety functions of the equipment? Y☒ N☐ U☐

Comments (Additional pages may be added as necessary)

Evaluated by: *Robert Malone* Date: *7/23/12*

Phillip York *7/23/12*

Status: Y☐ N☒ U☐

Seismic Walkdown Checklist (SWC)

Equipment ID No. *SQN-2-INVB-250-QU-G* Equip. Class[3] *16 - Inverter*

Equipment Description *120V AC VITAL INVERTER 2-IV*

Location: Bldg. *Aux* Floor El. *749* Room, Area *22 - 480V Board Room 2B*

Manufacturer, Model, Etc. (optional but recommended)

Instructions for Completing Checklist

This checklist may be used to document the results of the Seismic Walkdown of an item of equipment on the SWEL. The space below each of the following questions may be used to record the results of judgments and findings. Additional space is provided at the end of this checklist for documenting other comments.

Note: Y = Yes, N = No, U = Unknown, N/A = Not Applicable

Anchorage

1. Is the anchorage configuration verification required (i.e., is the item one of the 50% of SWEL items requiring such verification)? Y☒ N☐
   For anchorage configuration verification see DCA D20071-392 and 382.

2. Is the anchorage free of bent, broken, missing or loose hardware? Y☒ N☐ U☐ N/A☐
   Front nut was loose on second set of anchorage. A 1/8" gap was noted between the washer and nut. This is not considered seismically significant.

3. Is the anchorage free of corrosion that is more than mild surface oxidation? Y☒ N☐ U☐ N/A☐

4. Is the anchorage free of visible cracks in the concrete near the anchors? Y☒ N☐ U☐ N/A☐

5. Is the anchorage configuration consistent with plant documentation? (Note: This question only applies if the item is one of the 50% for which an anchorage configuration verification is required.) Y☒ N☐ U☐ N/A☐

[3] Enter the equipment class name from Appendix B: Classes of Equipment

Equipment ID No. *SQN-2-INVB-250-QU-G* Equip. Class[3] *16 - Inverter*

Equipment Description *120V AC VITAL INVERTER 2-IV*

6. Based on the above anchorage evaluations, is the anchorage free of potentially adverse seismic conditions? Y☒ N☐ U☐

Interaction Effects

7. Are soft targets free from impact by nearby equipment or structures? Y☒ N☐ U☐ N/A☐

8. Are overhead equipment, distribution systems, ceiling tiles and lighting, and masonry block walls not likely to collapse onto the equipment? Y☐ N☒ U☐ N/A☐
   Masonry block wall above equipment has a horizontal crack at the top of the wall near the supporting angle. This crack is approximately 6' long and can be seen on both sides of the masonry block wall.

9. Do attached lines have adequate flexibility to avoid damage? Y☒ N☐ U☐ N/A☐

10. Based on the above seismic interaction evaluations, is equipment free of potentially adverse seismic interaction effects? Y☐ N☒ U☐

Other Adverse Conditions

11. Have you looked for and found no other seismic conditions that could adversely affect the safety functions of the equipment? Y☒ N☐ U☐

Comments (Additional pages may be added as necessary)

Evaluated by: *Robert Malone* Date: *7/25/12*

Phillip York *7/25/12*

Status: Y☒ N☐ U☐

Seismic Walkdown Checklist (SWC)

Equipment ID No. *SQN-2-ENG-082-0002A1* Equip. Class[3] *17 - Engine Generators*

Equipment Description *ENG 2A1*

Location: Bldg. *DG* Floor El. *722* Room, Area *1 - Bay 2A*

Manufacturer, Model, Etc. (optional but recommended) _____

Instructions for Completing Checklist

This checklist may be used to document the results of the Seismic Walkdown of an item of equipment on the SWEL. The space below each of the following questions may be used to record the results of judgments and findings. Additional space is provided at the end of this checklist for documenting other comments.

Note: Y = Yes, N = No, U = Unknown, N/A = Not Applicable

Anchorage

1. Is the anchorage configuration verification required (i.e., is the item one of the 50% of SWEL items requiring such verification)? Y☒ N☐
   For anchorage configuration verification see drawing 1,2-A950F12002.

2. Is the anchorage free of bent, broken, missing or loose hardware? Y☒ N☐ U☐ N/A☐

3. Is the anchorage free of corrosion that is more than mild surface oxidation? Y☒ N☐ U☐ N/A☐

4. Is the anchorage free of visible cracks in the concrete near the anchors? Y☒ N☐ U☐ N/A☐

5. Is the anchorage configuration consistent with plant documentation? (Note: This question only applies if the item is one of the 50% for which an anchorage configuration verification is required.) Y☒ N☐ U☐ N/A☐

6. Based on the above anchorage evaluations, is the anchorage free of potentially adverse seismic conditions? Y☒ N☐ U☐

[3] Enter the equipment class name from Appendix B: Classes of Equipment

Equipment ID No. *SQN-2-ENG-082-0002A1* Equip. Class[3] *17 - Engine Generators*

Equipment Description *ENG 2A1*

Interaction Effects

7. Are soft targets free from impact by nearby equipment or structures? Y☒ N☐ U☐ N/A☐

8. Are overhead equipment, distribution systems, ceiling tiles and lighting, and masonry block walls not likely to collapse onto the equipment? Y☒ N☐ U☐ N/A☐

9. Do attached lines have adequate flexibility to avoid damage? Y☒ N☐ U☐ N/A☐

10. Based on the above seismic interaction evaluations, is equipment free of potentially adverse seismic interaction effects? Y☒ N☐ U☐

Other Adverse Conditions

11. Have you looked for and found no other seismic conditions that could adversely affect the safety functions of the equipment? Y☒ N☐ U☐
The connection between the generator skid and the engine skid was field modified by removing the shear tab and flange plate bolts. Misalignment was noted in the bolt holes. Not considered seismically significant.

Comments (Additional pages may be added as necessary)

Many locations show oil leakage.

Evaluated by: *Robert Malone* Date: *7/17/12*

Phillip York *7/17/12*

Status: Y☒ N☐ U☐

Seismic Walkdown Checklist (SWC)

Equipment ID No. *SQN-2-ENG-082-0002A2* Equip. Class[3] *17 - Engine Generators*

Equipment Description *ENG 2A2*

Location: Bldg. *DG* Floor El. *722* Room, Area *1 - Bay 2A*

Manufacturer, Model, Etc. (optional but recommended) _____

Instructions for Completing Checklist

This checklist may be used to document the results of the Seismic Walkdown of an item of equipment on the SWEL. The space below each of the following questions may be used to record the results of judgments and findings. Additional space is provided at the end of this checklist for documenting other comments.

Note: Y = Yes, N = No, U = Unknown, N/A = Not Applicable

Anchorage

1. Is the anchorage configuration verification required (i.e., is the item one of the 50% of SWEL items requiring such verification)? Y☒ N☐
   For anchorage configuration verification see drawing 1,2-A950F12002.

2. Is the anchorage free of bent, broken, missing or loose hardware? Y☒ N☐ U☐ N/A☐
   Washer was missing on one of fourteen anchor bolts. Not considered seismically significant.

3. Is the anchorage free of corrosion that is more than mild surface oxidation? Y☒ N☐ U☐ N/A☐

4. Is the anchorage free of visible cracks in the concrete near the anchors? Y☒ N☐ U☐ N/A☐

5. Is the anchorage configuration consistent with plant documentation? (Note: This question only applies if the item is one of the 50% for which an anchorage configuration verification is required.) Y☒ N☐ U☐ N/A☐

6. Based on the above anchorage evaluations, is the anchorage free of potentially adverse seismic conditions? Y☒ N☐ U☐

[3] Enter the equipment class name from Appendix B: Classes of Equipment

Equipment ID No. *SQN-2-ENG-082-0002A2* Equip. Class[3] *17 - Engine Generators*

Equipment Description *ENG 2A2*

Interaction Effects

7. Are soft targets free from impact by nearby equipment or structures? Y☒ N☐ U☐ N/A☐

8. Are overhead equipment, distribution systems, ceiling tiles and lighting, and masonry block walls not likely to collapse onto the equipment? Y☒ N☐ U☐ N/A☐

9. Do attached lines have adequate flexibility to avoid damage? Y☒ N☐ U☐ N/A☐

10. Based on the above seismic interaction evaluations, is equipment free of potentially adverse seismic interaction effects? Y☒ N☐ U☐

Other Adverse Conditions

11. Have you looked for and found no other seismic conditions that could adversely affect the safety functions of the equipment? Y☒ N☐ U☐
The connection between the generator skid and the engine skid was field modified by removing the shear tab and flange plate bolts. Misalignment was noted in the bolt holes. Not considered seismically significant.

Comments (Additional pages may be added as necessary)

Evaluated by: *Robert Malone* Date: *7/17/12*

Phillip York *7/17/12*

Status: Y☒ N☐ U☐

Seismic Walkdown Checklist (SWC)

Equipment ID No. *SQN-2-ENG-082-0002B1* Equip. Class[3] *17 - Engine Generators*

Equipment Description *DIESEL ENGINE 2B1*

Location: Bldg. *DG* Floor El. *722* Room, Area *4 - Bay 2B*

Manufacturer, Model, Etc. (optional but recommended) _____

Instructions for Completing Checklist

This checklist may be used to document the results of the Seismic Walkdown of an item of equipment on the SWEL. The space below each of the following questions may be used to record the results of judgments and findings. Additional space is provided at the end of this checklist for documenting other comments.

Note: Y = Yes, N = No, U = Unknown, N/A = Not Applicable

Anchorage

1. Is the anchorage configuration verification required (i.e., is the item one of the 50% of SWEL items requiring such verification)? Y☒ N☐
   For anchorage configuration verification see drawing 1,2-A950F12002.

2. Is the anchorage free of bent, broken, missing or loose hardware? Y☒ N☐ U☐ N/A☐

3. Is the anchorage free of corrosion that is more than mild surface oxidation? Y☒ N☐ U☐ N/A☐

4. Is the anchorage free of visible cracks in the concrete near the anchors? Y☒ N☐ U☐ N/A☐
   Cracks observed in grout pad at corners of concrete pad. These cracks are not near anchorage. Not considered seismically significant.

5. Is the anchorage configuration consistent with plant documentation? (Note: This question only applies if the item is one of the 50% for which an anchorage configuration verification is required.) Y☒ N☐ U☐ N/A☐

6. Based on the above anchorage evaluations, is the anchorage free of potentially adverse seismic conditions? Y☒ N☐ U☐

[3] Enter the equipment class name from Appendix B: Classes of Equipment

Equipment ID No. *SQN-2-ENG-082-0002B1* Equip. Class[3] *17 - Engine Generators*

Equipment Description *DIESEL ENGINE 2B1*

Interaction Effects

7. Are soft targets free from impact by nearby equipment or structures? Y☒ N☐ U☐ N/A☐

8. Are overhead equipment, distribution systems, ceiling tiles and lighting, and masonry block walls not likely to collapse onto the equipment? Y☒ N☐ U☐ N/A☐

9. Do attached lines have adequate flexibility to avoid damage? Y☒ N☐ U☐ N/A☐

10. Based on the above seismic interaction evaluations, is equipment free of potentially adverse seismic interaction effects? Y☒ N☐ U☐

Other Adverse Conditions

11. Have you looked for and found no other seismic conditions that could adversely affect the safety functions of the equipment? Y☒ N☐ U☐
The connection between the generator skid and the engine skid was field modified by removing the shear tab and flange plate bolts. Misalignment was noted in the bolt holes. Not considered seismically significant.

Comments (Additional pages may be added as necessary)

Evaluated by: *Robert Malone* Date: *7/23/12*

Phillip York *7/23V12*

Status: Y☒ N☐ U☐

Seismic Walkdown Checklist (SWC)

Equipment ID No. *SQN-2-ENG-082-0002B2* Equip. Class[3] *17 - Engine Generators*

Equipment Description *DIESEL ENGINE 2B2*

Location: Bldg. *DG* Floor El. *722* Room, Area *4 - Bay 2B*

Manufacturer, Model, Etc. (optional but recommended) _____

Instructions for Completing Checklist

This checklist may be used to document the results of the Seismic Walkdown of an item of equipment on the SWEL. The space below each of the following questions may be used to record the results of judgments and findings. Additional space is provided at the end of this checklist for documenting other comments.

Note: Y = Yes, N = No, U = Unknown, N/A = Not Applicable

Anchorage

1. Is the anchorage configuration verification required (i.e., is the item one of the 50% of SWEL items requiring such verification)? Y☒ N☐
   For anchorage configuration verification see drawing 1,2-A950F12002.

2. Is the anchorage free of bent, broken, missing or loose hardware? Y☒ N☐ U☐ N/A☐

3. Is the anchorage free of corrosion that is more than mild surface oxidation? Y☒ N☐ U☐ N/A☐

4. Is the anchorage free of visible cracks in the concrete near the anchors? Y☒ N☐ U☐ N/A☐

5. Is the anchorage configuration consistent with plant documentation? (Note: This question only applies if the item is one of the 50% for which an anchorage configuration verification is required.) Y☒ N☐ U☐ N/A☐

6. Based on the above anchorage evaluations, is the anchorage free of potentially adverse seismic conditions? Y☒ N☐ U☐

[3] Enter the equipment class name from Appendix B: Classes of Equipment

Equipment ID No. *SQN-2-ENG-082-0002B2* Equip. Class[3] *17 - Engine Generators*

Equipment Description *DIESEL ENGINE 2B2*

Interaction Effects

7. Are soft targets free from impact by nearby equipment or structures? Y☒ N☐ U☐ N/A☐

8. Are overhead equipment, distribution systems, ceiling tiles and lighting, and masonry block walls not likely to collapse onto the equipment? Y☒ N☐ U☐ N/A☐

9. Do attached lines have adequate flexibility to avoid damage? Y☒ N☐ U☐ N/A☐

10. Based on the above seismic interaction evaluations, is equipment free of potentially adverse seismic interaction effects? Y☒ N☐ U☐

Other Adverse Conditions

11. Have you looked for and found no other seismic conditions that could adversely affect the safety functions of the equipment? Y☒ N☐ U☐
The connection between the generator skid and the engine skid was field modified by removing the shear tab and flange plate bolts. Misalignment was noted in the bolt holes. Not considered seismically significant.

Comments (Additional pages may be added as necessary)

Evaluated by: *Robert Malone* Date: *7/23/12*

Phillip York *7/23/12*

Status: Y☒ N☐ U☐

Seismic Walkdown Checklist (SWC)

Equipment ID No. *SQN-2-GENB-082-0002A* Equip. Class[3] *17 - Engine Generators*

Equipment Description *DIESEL GEN. 2A-A*

Location: Bldg. *DG* Floor El. *722* Room, Area *1 - Bay 2A*

Manufacturer, Model, Etc. (optional but recommended) _____

Instructions for Completing Checklist

This checklist may be used to document the results of the Seismic Walkdown of an item of equipment on the SWEL. The space below each of the following questions may be used to record the results of judgments and findings. Additional space is provided at the end of this checklist for documenting other comments.

Note: Y = Yes, N = No, U = Unknown, N/A = Not Applicable

Anchorage

1. Is the anchorage configuration verification required (i.e., is the item one of the 50% of SWEL items requiring such verification)? Y☒ N☐
   For anchorage configuration verification see drawing 1,2-A950F12002.

2. Is the anchorage free of bent, broken, missing or loose hardware? Y☒ N☐ U☐ N/A☐

3. Is the anchorage free of corrosion that is more than mild surface oxidation? Y☒ N☐ U☐ N/A☐

4. Is the anchorage free of visible cracks in the concrete near the anchors? Y☒ N☐ U☐ N/A☐

5. Is the anchorage configuration consistent with plant documentation? (Note: This question only applies if the item is one of the 50% for which an anchorage configuration verification is required.) Y☒ N☐ U☐ N/A☐

6. Based on the above anchorage evaluations, is the anchorage free of potentially adverse seismic conditions? Y☒ N☐ U☐

[3] Enter the equipment class name from Appendix B: Classes of Equipment

Equipment ID No. *SQN-2-GENB-082-0002A* Equip. Class[3] *17 - Engine Generators*

Equipment Description *DIESEL GEN. 2A-A*

Interaction Effects

7. Are soft targets free from impact by nearby equipment or structures? Y☒ N☐ U☐ N/A☐

8. Are overhead equipment, distribution systems, ceiling tiles and lighting, and masonry block walls not likely to collapse onto the equipment? Y☒ N☐ U☐ N/A☐

9. Do attached lines have adequate flexibility to avoid damage? Y☒ N☐ U☐ N/A☐

10. Based on the above seismic interaction evaluations, is equipment free of potentially adverse seismic interaction effects? Y☒ N☐ U☐

Other Adverse Conditions

11. Have you looked for and found no other seismic conditions that could adversely affect the safety functions of the equipment? Y☒ N☐ U☐
The connection between the generator skid and the engine skid was field modified by removing the shear tab and flange plate bolts. Misalignment was noted in the bolt holes. Not considered seismically significant.

Comments (Additional pages may be added as necessary)

Evaluated by: *Robert Malone* Date: *7/17/12*

Phillip York *7/17/12*

Status: Y☒ N☐ U☐

Seismic Walkdown Checklist (SWC)

Equipment ID No. *SQN-2-GENB-082-0002B* Equip. Class[3] *17 - Engine Generators*

Equipment Description *DIESEL GEN. 2B-B*

Location: Bldg. *DG* Floor El. *722* Room, Area *4 - Bay 2B*

Manufacturer, Model, Etc. (optional but recommended) _____

Instructions for Completing Checklist

This checklist may be used to document the results of the Seismic Walkdown of an item of equipment on the SWEL. The space below each of the following questions may be used to record the results of judgments and findings. Additional space is provided at the end of this checklist for documenting other comments.

Note: Y = Yes, N = No, U = Unknown, N/A = Not Applicable

Anchorage

1. Is the anchorage configuration verification required (i.e., is the item one of the 50% of SWEL items requiring such verification)? Y☒ N☐
   For anchorage configuration verification see drawing 1,2-A950F12002.

2. Is the anchorage free of bent, broken, missing or loose hardware? Y☒ N☐ U☐ N/A☐

3. Is the anchorage free of corrosion that is more than mild surface oxidation? Y☒ N☐ U☐ N/A☐

4. Is the anchorage free of visible cracks in the concrete near the anchors? Y☒ N☐ U☐ N/A☐

5. Is the anchorage configuration consistent with plant documentation? (Note: This question only applies if the item is one of the 50% for which an anchorage configuration verification is required.) Y☒ N☐ U☐ N/A☐

6. Based on the above anchorage evaluations, is the anchorage free of potentially adverse seismic conditions? Y☒ N☐ U☐

[3] Enter the equipment class name from Appendix B: Classes of Equipment

Equipment ID No. *SQN-2-GENB-082-0002B* Equip. Class[3] *17 - Engine Generators*

Equipment Description *DIESEL GEN. 2B-B*

Interaction Effects

7. Are soft targets free from impact by nearby equipment or structures? Y☒ N☐ U☐ N/A☐

8. Are overhead equipment, distribution systems, ceiling tiles and lighting, and masonry block walls not likely to collapse onto the equipment? Y☒ N☐ U☐ N/A☐

9. Do attached lines have adequate flexibility to avoid damage? Y☒ N☐ U☐ N/A☐

10. Based on the above seismic interaction evaluations, is equipment free of potentially adverse seismic interaction effects? Y☒ N☐ U☐

Other Adverse Conditions

11. Have you looked for and found no other seismic conditions that could adversely affect the safety functions of the equipment? Y☒ N☐ U☐
The connection between the generator skid and the engine skid was field modified by removing the shear tab and flange plate bolts. Misalignment was noted in the bolt holes. Not considered seismically significant.

Comments (Additional pages may be added as necessary)

Evaluated by: *Robert Malone* Date: *7/23/12*

Phillip York *7/23/12*

Status: Y☒ N☐ U☐

Seismic Walkdown Checklist (SWC)

Equipment ID No. *SQN-0-LOCL-500-0428* Equip. Class[3] *18 - Instrument Rack*

Equipment Description *FLOOR PANEL AUXILIARY BUILDING*

Location: Bldg. *Aux* Floor El. *734* Room, Area *32 - Surge Tank B Area*

Manufacturer, Model, Etc. (optional but recommended) _____

Instructions for Completing Checklist

This checklist may be used to document the results of the Seismic Walkdown of an item of equipment on the SWEL. The space below each of the following questions may be used to record the results of judgments and findings. Additional space is provided at the end of this checklist for documenting other comments.

Note: Y = Yes, N = No, U = Unknown, N/A = Not Applicable

Anchorage

1. Is the anchorage configuration verification required (i.e., is the item one of the 50% of SWEL items requiring such verification)? Y☐ N☒

2. Is the anchorage free of bent, broken, missing or loose hardware? Y☒ N☐ U☐ N/A☐

3. Is the anchorage free of corrosion that is more than mild surface oxidation? Y☒ N☐ U☐ N/A☐

4. Is the anchorage free of visible cracks in the concrete near the anchors? Y☒ N☐ U☐ N/A☐

5. Is the anchorage configuration consistent with plant documentation? (Note: This question only applies if the item is one of the 50% for which an anchorage configuration verification is required.) Y☐ N☐ U☐ N/A☒

6. Based on the above anchorage evaluations, is the anchorage free of potentially adverse seismic conditions? Y☒ N☐ U☐

[3] Enter the equipment class name from Appendix B: Classes of Equipment

Equipment ID No. *SQN-0-LOCL-500-0428* Equip. Class[3] *18 - Instrument Rack*

Equipment Description *FLOOR PANEL AUXILIARY BUILDING*

Interaction Effects

7. Are soft targets free from impact by nearby equipment or structures? Y☒ N☐ U☐ N/A☐
   Nearby cabinet is anchored properly. Table with frisker is not anchored. Not considered seismically adverse.

8. Are overhead equipment, distribution systems, ceiling tiles and lighting, and masonry block walls not likely to collapse onto the equipment? Y☒ N☐ U☐ N/A☐

9. Do attached lines have adequate flexibility to avoid damage? Y☒ N☐ U☐ N/A☐

10. Based on the above seismic interaction evaluations, is equipment free of potentially adverse seismic interaction effects? Y☒ N☐ U☐

Other Adverse Conditions

11. Have you looked for and found no other seismic conditions that could adversely affect the safety functions of the equipment? Y☒ N☐ U☐

Comments (Additional pages may be added as necessary)

Evaluated by: *Robert Malone* Date: *8/3/12*

Phillip York *8/3/12*

Status: Y☒ N☐ U☐

Seismic Walkdown Checklist (SWC)

Equipment ID No. *SQN-2-LOCL-500-0005* Equip. Class[3] *18 - Instrument Rack*

Equipment Description *FLOOR PANEL AUXILIARY BUILDING*

Location: Bldg. *Aux* Floor El. *653* Room, Area *25 - RHR Pump Area*

Manufacturer, Model, Etc. (optional but recommended) _____

Instructions for Completing Checklist

This checklist may be used to document the results of the Seismic Walkdown of an item of equipment on the SWEL. The space below each of the following questions may be used to record the results of judgments and findings. Additional space is provided at the end of this checklist for documenting other comments.

Note: Y = Yes, N = No, U = Unknown, N/A = Not Applicable

Anchorage

1. Is the anchorage configuration verification required (i.e., is the item one of the 50% of SWEL items requiring such verification)? Y☐ N☒

2. Is the anchorage free of bent, broken, missing or loose hardware? Y☒ N☐ U☐ N/A☐

3. Is the anchorage free of corrosion that is more than mild surface oxidation? Y☒ N☐ U☐ N/A☐

4. Is the anchorage free of visible cracks in the concrete near the anchors? Y☒ N☐ U☐ N/A☐

5. Is the anchorage configuration consistent with plant documentation? (Note: This question only applies if the item is one of the 50% for which an anchorage configuration verification is required.) Y☐ N☐ U☐ N/A☒

6. Based on the above anchorage evaluations, is the anchorage free of potentially adverse seismic conditions? Y☒ N☐ U☐

[3] Enter the equipment class name from Appendix B: Classes of Equipment

Equipment ID No. *SQN-2-LOCL-500-0005* Equip. Class[3] *18 - Instrument Rack*

Equipment Description *FLOOR PANEL AUXILIARY BUILDING*

Interaction Effects

7. Are soft targets free from impact by nearby equipment or structures? Y☒ N☐ U☐ N/A☐

8. Are overhead equipment, distribution systems, ceiling tiles and lighting, and masonry block walls not likely to collapse onto the equipment? Y☒ N☐ U☐ N/A☐

9. Do attached lines have adequate flexibility to avoid damage? Y☒ N☐ U☐ N/A☐

10. Based on the above seismic interaction evaluations, is equipment free of potentially adverse seismic interaction effects? Y☒ N☐ U☐

Other Adverse Conditions

11. Have you looked for and found no other seismic conditions that could adversely affect the safety functions of the equipment? Y☒ N☐ U☐

Comments (Additional pages may be added as necessary)

Evaluated by: *Robert Malone* Date: *8/1/12*

Phillip York *8/1/12*

Status: Y☒ N☐ U☐

Seismic Walkdown Checklist (SWC)

Equipment ID No. *SQN-2-LOCL-500-0019* Equip. Class[3] *18 - Instrument Rack*

Equipment Description *FLOOR PANEL AUXILIARY BUILDING*

Location: Bldg. *Aux* Floor El. *734* Room, Area *32 - Surge Tank B Area*

Manufacturer, Model, Etc. (optional but recommended) _____

Instructions for Completing Checklist

This checklist may be used to document the results of the Seismic Walkdown of an item of equipment on the SWEL. The space below each of the following questions may be used to record the results of judgments and findings. Additional space is provided at the end of this checklist for documenting other comments.

Note: Y = Yes, N = No, U = Unknown, N/A = Not Applicable

Anchorage

1. Is the anchorage configuration verification required (i.e., is the item one of the 50% of SWEL items requiring such verification)? Y☐ N☒

2. Is the anchorage free of bent, broken, missing or loose hardware? Y☒ N☐ U☐ N/A☐

3. Is the anchorage free of corrosion that is more than mild surface oxidation? Y☒ N☐ U☐ N/A☐

4. Is the anchorage free of visible cracks in the concrete near the anchors? Y☒ N☐ U☐ N/A☐

5. Is the anchorage configuration consistent with plant documentation? (Note: This question only applies if the item is one of the 50% for which an anchorage configuration verification is required.) Y☐ N☐ U☐ N/A☒

6. Based on the above anchorage evaluations, is the anchorage free of potentially adverse seismic conditions? Y☒ N☐ U☐

[3] Enter the equipment class name from Appendix B: Classes of Equipment

Equipment ID No. *SQN-2-LOCL-500-0019* Equip. Class[3] *18 - Instrument Rack*

Equipment Description *FLOOR PANEL AUXILIARY BUILDING*

Interaction Effects

7. Are soft targets free from impact by nearby equipment or structures? Y☒ N☐ U☐ N/A☐

8. Are overhead equipment, distribution systems, ceiling tiles and lighting, and masonry block walls not likely to collapse onto the equipment? Y☒ N☐ U☐ N/A☐

9. Do attached lines have adequate flexibility to avoid damage? Y☒ N☐ U☐ N/A☐

10. Based on the above seismic interaction evaluations, is equipment free of potentially adverse seismic interaction effects? Y☒ N☐ U☐

Other Adverse Conditions

11. Have you looked for and found no other seismic conditions that could adversely affect the safety functions of the equipment? Y☒ N☐ U☐

Comments (Additional pages may be added as necessary)

Evaluated by: *Robert Malone* Date: *8/6/12*

Phillip York *8/6/12*

Status: Y☒ N☐ U☐

Seismic Walkdown Checklist (SWC)

Equipment ID No. *SQN-2-LOCL-500-0048* Equip. Class[3] *18 - Instrument Rack*

Equipment Description *FLOOR PANEL AUXILIARY BUILDING*

Location: Bldg. *Aux* Floor El. *690* Room, Area *27 - CCS Pump Area*

Manufacturer, Model, Etc. (optional but recommended) _____

Instructions for Completing Checklist

This checklist may be used to document the results of the Seismic Walkdown of an item of equipment on the SWEL. The space below each of the following questions may be used to record the results of judgments and findings. Additional space is provided at the end of this checklist for documenting other comments.

Note: Y = Yes, N = No, U = Unknown, N/A = Not Applicable

Anchorage

1. Is the anchorage configuration verification required (i.e., is the item one of the 50% of SWEL items requiring such verification)? Y☐ N☒

2. Is the anchorage free of bent, broken, missing or loose hardware? Y☒ N☐ U☐ N/A☐

3. Is the anchorage free of corrosion that is more than mild surface oxidation? Y☒ N☐ U☐ N/A☐

4. Is the anchorage free of visible cracks in the concrete near the anchors? Y☒ N☐ U☐ N/A☐

5. Is the anchorage configuration consistent with plant documentation? (Note: This question only applies if the item is one of the 50% for which an anchorage configuration verification is required.) Y☐ N☐ U☐ N/A☒

6. Based on the above anchorage evaluations, is the anchorage free of potentially adverse seismic conditions? Y☒ N☐ U☐

[3] Enter the equipment class name from Appendix B: Classes of Equipment

Equipment ID No. *SQN-2-LOCL-500-0048* Equip. Class[3] *18 - Instrument Rack*

Equipment Description *FLOOR PANEL AUXILIARY BUILDING*

Interaction Effects

7. Are soft targets free from impact by nearby equipment or structures? Y☒ N☐ U☐ N/A☐
   "Special Fire Barrier" wall is cantilevered to the floor and is seismically qualified by TVA calculation SCG-1-48.

8. Are overhead equipment, distribution systems, ceiling tiles and lighting, and masonry block walls not likely to collapse onto the equipment? Y☒ N☐ U☐ N/A☐
   See note #7.

9. Do attached lines have adequate flexibility to avoid damage? Y☒ N☐ U☐ N/A☐

10. Based on the above seismic interaction evaluations, is equipment free of potentially adverse seismic interaction effects? Y☒ N☐ U☐

Other Adverse Conditions

11. Have you looked for and found no other seismic conditions that could adversely affect the safety functions of the equipment? Y☒ N☐ U☐

Comments (Additional pages may be added as necessary)

Evaluated by: *Robert Malone* Date: *8/2/12*

Phillip York *8/2/12*

Status: Y☒ N☐ U☐

Seismic Walkdown Checklist (SWC)

Equipment ID No. *SQN-2-LOCL-500-0163* Equip. Class[3] *18 - Instrument Rack*

Equipment Description *FLOOR PANEL DGB*

Location: Bldg. *DG* Floor El. *722* Room, Area *4 - Bay 2B*

Manufacturer, Model, Etc. (optional but recommended) _____

Instructions for Completing Checklist

This checklist may be used to document the results of the Seismic Walkdown of an item of equipment on the SWEL. The space below each of the following questions may be used to record the results of judgments and findings. Additional space is provided at the end of this checklist for documenting other comments.

Note: Y = Yes, N = No, U = Unknown, N/A = Not Applicable

Anchorage

1. Is the anchorage configuration verification required (i.e., is the item one of the 50% of SWEL items requiring such verification)? Y☐ N☒

2. Is the anchorage free of bent, broken, missing or loose hardware? Y☒ N☐ U☐ N/A☐

3. Is the anchorage free of corrosion that is more than mild surface oxidation? Y☒ N☐ U☐ N/A☐

4. Is the anchorage free of visible cracks in the concrete near the anchors? Y☒ N☐ U☐ N/A☐

5. Is the anchorage configuration consistent with plant documentation? (Note: This question only applies if the item is one of the 50% for which an anchorage configuration verification is required.) Y☐ N☐ U☐ N/A☒

6. Based on the above anchorage evaluations, is the anchorage free of potentially adverse seismic conditions? Y☒ N☐ U☐

[3] Enter the equipment class name from Appendix B: Classes of Equipment

Equipment ID No. *SQN-2-LOCL-500-0163* Equip. Class[3] *18 - Instrument Rack*

Equipment Description *FLOOR PANEL DGB*

Interaction Effects

7. Are soft targets free from impact by nearby equipment or structures? Y☒ N☐ U☐ N/A☐

8. Are overhead equipment, distribution systems, ceiling tiles and lighting, and masonry block walls not likely to collapse onto the equipment? Y☒ N☐ U☐ N/A☐

9. Do attached lines have adequate flexibility to avoid damage? Y☒ N☐ U☐ N/A☐

10. Based on the above seismic interaction evaluations, is equipment free of potentially adverse seismic interaction effects? Y☒ N☐ U☐

Other Adverse Conditions

11. Have you looked for and found no other seismic conditions that could adversely affect the safety functions of the equipment? Y☒ N☐ U☐

Comments (Additional pages may be added as necessary)

Evaluated by: *Robert Malone* Date: *7/23/12*

Phillip York *7/23/12*

Status: Y☐ N☒ U☐

Seismic Walkdown Checklist (SWC)

Equipment ID No. *SQN-2-LOCL-500-0222B* Equip. Class[3] *18 - Instrument Rack*

Equipment Description *FLOOR PANEL AUXILIARY BUILDING*

Location: Bldg. *Aux* Floor El. *690* Room, Area *38 - Aux Feedwater Pump B Area*

Manufacturer, Model, Etc. (optional but recommended)

Instructions for Completing Checklist

This checklist may be used to document the results of the Seismic Walkdown of an item of equipment on the SWEL. The space below each of the following questions may be used to record the results of judgments and findings. Additional space is provided at the end of this checklist for documenting other comments.

Note: Y = Yes, N = No, U = Unknown, N/A = Not Applicable

Anchorage

1. Is the anchorage configuration verification required (i.e., is the item one of the 50% of SWEL items requiring such verification)? Y☐ N☒

2. Is the anchorage free of bent, broken, missing or loose hardware? Y☒ N☐ U☐ N/A☐

3. Is the anchorage free of corrosion that is more than mild surface oxidation? Y☒ N☐ U☐ N/A☐

4. Is the anchorage free of visible cracks in the concrete near the anchors? Y☒ N☐ U☐ N/A☐

5. Is the anchorage configuration consistent with plant documentation? (Note: This question only applies if the item is one of the 50% for which an anchorage configuration verification is required.) Y☐ N☐ U☐ N/A☒

6. Based on the above anchorage evaluations, is the anchorage free of potentially adverse seismic conditions? Y☒ N☐ U☐

[3] Enter the equipment class name from Appendix B: Classes of Equipment

Equipment ID No. *SQN-2-LOCL-500-0222B* Equip. Class[3] *18 - Instrument Rack*

Equipment Description *FLOOR PANEL AUXILIARY BUILDING*

Interaction Effects

7. Are soft targets free from impact by nearby equipment or structures? Y☐ N☒ U☐ N/A☐
   50 gallon barrels in the area are not properly restrained.

8. Are overhead equipment, distribution systems, ceiling tiles and lighting, and masonry block walls not likely to collapse onto the equipment? Y☒ N☐ U☐ N/A☐

9. Do attached lines have adequate flexibility to avoid damage? Y☒ N☐ U☐ N/A☐

10. Based on the above seismic interaction evaluations, is equipment free of potentially adverse seismic interaction effects? Y☐ N☒ U☐

Other Adverse Conditions

11. Have you looked for and found no other seismic conditions that could adversely affect the safety functions of the equipment? Y☒ N☐ U☐

Comments (Additional pages may be added as necessary)

Evaluated by: *Robert Malone* Date: *8/7/12*

Phillip York *8/7/12*

Status: Y☒ N☐ U☐

Seismic Walkdown Checklist (SWC)

Equipment ID No. *SQN-2-TE-300-0450A-B* Equip. Class[3] *19 - Temperature Sensor*

Equipment Description *DIESEL GEN 2B-B EXHAUST HIGH TEMP*

Location: Bldg. *DG* Floor El. *740* Room, Area *6 - 2B Fan Room*

Manufacturer, Model, Etc. (optional but recommended) _____

Instructions for Completing Checklist

This checklist may be used to document the results of the Seismic Walkdown of an item of equipment on the SWEL. The space below each of the following questions may be used to record the results of judgments and findings. Additional space is provided at the end of this checklist for documenting other comments.

Note: Y = Yes, N = No, U = Unknown, N/A = Not Applicable

Anchorage

1. Is the anchorage configuration verification required (i.e., is the item one of the 50% of SWEL items requiring such verification)? Y☐ N☒

2. Is the anchorage free of bent, broken, missing or loose hardware? Y☒ N☐ U☐ N/A☐

3. Is the anchorage free of corrosion that is more than mild surface oxidation? Y☒ N☐ U☐ N/A☐

4. Is the anchorage free of visible cracks in the concrete near the anchors? Y☒ N☐ U☐ N/A☐

5. Is the anchorage configuration consistent with plant documentation? (Note: This question only applies if the item is one of the 50% for which an anchorage configuration verification is required.) Y☐ N☐ U☐ N/A☒

6. Based on the above anchorage evaluations, is the anchorage free of potentially adverse seismic conditions? Y☒ N☐ U☐

[3] Enter the equipment class name from Appendix B: Classes of Equipment

Equipment ID No. *SQN-2-TE-300-0450A-B* Equip. Class[3] *19 - Temperature Sensor*

Equipment Description *DIESEL GEN 2B-B EXHAUST HIGH TEMP*

Interaction Effects

7. Are soft targets free from impact by nearby equipment or structures? Y☒ N☐ U☐ N/A☐

8. Are overhead equipment, distribution systems, ceiling tiles and lighting, and masonry block walls not likely to collapse onto the equipment? Y☒ N☐ U☐ N/A☐

9. Do attached lines have adequate flexibility to avoid damage? Y☒ N☐ U☐ N/A☐

10. Based on the above seismic interaction evaluations, is equipment free of potentially adverse seismic interaction effects? Y☒ N☐ U☐

Other Adverse Conditions

11. Have you looked for and found no other seismic conditions that could adversely affect the safety functions of the equipment? Y☒ N☐ U☐

Comments (Additional pages may be added as necessary)

Evaluated by: *Robert Malone* Date: *7/24/12*

Phillip York *7/24/12*

Status: Y☒ N☐ U☐

Seismic Walkdown Checklist (SWC)

Equipment ID No. *SQN-2-TE-300-0450B-B* Equip. Class[3] *19 - Temperature Sensor*

Equipment Description *DIESEL GEN 2B-B EXHAUST LOW TEMP*

Location: Bldg. *DG* Floor El. *740* Room, Area *6 - 2B Fan Room*

Manufacturer, Model, Etc. (optional but recommended) _____

Instructions for Completing Checklist

This checklist may be used to document the results of the Seismic Walkdown of an item of equipment on the SWEL. The space below each of the following questions may be used to record the results of judgments and findings. Additional space is provided at the end of this checklist for documenting other comments.

Note: Y = Yes, N = No, U = Unknown, N/A = Not Applicable

Anchorage

1. Is the anchorage configuration verification required (i.e., is the item one of the 50% of SWEL items requiring such verification)? Y☐ N☒

2. Is the anchorage free of bent, broken, missing or loose hardware? Y☒ N☐ U☐ N/A☐

3. Is the anchorage free of corrosion that is more than mild surface oxidation? Y☒ N☐ U☐ N/A☐

4. Is the anchorage free of visible cracks in the concrete near the anchors? Y☒ N☐ U☐ N/A☐

5. Is the anchorage configuration consistent with plant documentation? (Note: This question only applies if the item is one of the 50% for which an anchorage configuration verification is required.) Y☐ N☐ U☐ N/A☒

6. Based on the above anchorage evaluations, is the anchorage free of potentially adverse seismic conditions? Y☒ N☐ U☐

[3] Enter the equipment class name from Appendix B: Classes of Equipment

Equipment ID No. *SQN-2-TE-300-0450B-B* Equip. Class[3] *19 - Temperature Sensor*

Equipment Description *DIESEL GEN 2B-B EXHAUST LOW TEMP*

Interaction Effects

7. Are soft targets free from impact by nearby equipment or structures? Y☒ N☐ U☐ N/A☐

8. Are overhead equipment, distribution systems, ceiling tiles and lighting, and masonry block walls not likely to collapse onto the equipment? Y☒ N☐ U☐ N/A☐

9. Do attached lines have adequate flexibility to avoid damage? Y☒ N☐ U☐ N/A☐

10. Based on the above seismic interaction evaluations, is equipment free of potentially adverse seismic interaction effects? Y☒ N☐ U☐

Other Adverse Conditions

11. Have you looked for and found no other seismic conditions that could adversely affect the safety functions of the equipment? Y☒ N☐ U☐

Comments (Additional pages may be added as necessary)

Evaluated by: *Robert Malone* Date: *7/24/12*

Phillip York *7/24/12*

Status: Y☒ N☐ U☐

Seismic Walkdown Checklist (SWC)

Equipment ID No. *SQN-2-TE-300-0452A-A* Equip. Class[3] *19 - Temperature Sensor*

Equipment Description *DIESEL GEN 2A-A EXHAUST-HIGH TEMP*

Location: Bldg. *DG* Floor El. *740* Room, Area *2A Fan Room*

Manufacturer, Model, Etc. (optional but recommended) _____

Instructions for Completing Checklist

This checklist may be used to document the results of the Seismic Walkdown of an item of equipment on the SWEL. The space below each of the following questions may be used to record the results of judgments and findings. Additional space is provided at the end of this checklist for documenting other comments.

Note: Y = Yes, N = No, U = Unknown, N/A = Not Applicable

Anchorage

1. Is the anchorage configuration verification required (i.e., is the item one of the 50% of SWEL items requiring such verification)? Y☐ N☒

2. Is the anchorage free of bent, broken, missing or loose hardware? Y☒ N☐ U☐ N/A☐
   Lower nut not fully engaged to plate. Given the small size of the equipment, this is not considered seismically adverse.

3. Is the anchorage free of corrosion that is more than mild surface oxidation? Y☒ N☐ U☐ N/A☐

4. Is the anchorage free of visible cracks in the concrete near the anchors? Y☒ N☐ U☐ N/A☐

5. Is the anchorage configuration consistent with plant documentation? (Note: This question only applies if the item is one of the 50% for which an anchorage configuration verification is required.) Y☐ N☐ U☐ N/A☒

6. Based on the above anchorage evaluations, is the anchorage free of potentially adverse seismic conditions? Y☒ N☐ U☐

[3] Enter the equipment class name from Appendix B: Classes of Equipment

Equipment ID No. *SQN-2-TE-300-0452A-A* Equip. Class[3] *19 - Temperature Sensor*

Equipment Description *DIESEL GEN 2A-A EXHAUST-HIGH TEMP*

Interaction Effects

7. Are soft targets free from impact by nearby equipment or structures? Y☒ N☐ U☐ N/A☐

8. Are overhead equipment, distribution systems, ceiling tiles and lighting, and masonry block walls not likely to collapse onto the equipment? Y☒ N☐ U☐ N/A☐
   The masonry block wall on which the sensor is attached is verified per Calculation #SCG-1-86.

9. Do attached lines have adequate flexibility to avoid damage? Y☒ N☐ U☐ N/A☐

10. Based on the above seismic interaction evaluations, is equipment free of potentially adverse seismic interaction effects? Y☒ N☐ U☐

Other Adverse Conditions

11. Have you looked for and found no other seismic conditions that could adversely affect the safety functions of the equipment? Y☒ N☐ U☐

Comments (Additional pages may be added as necessary)

Evaluated by: *Robert Malone* Date: *7/18/12*

Phillip York *7/18/12*

Status: Y☒ N☐ U☐

Seismic Walkdown Checklist (SWC)

Equipment ID No. *SQN-2-TE-300-0452B-A* Equip. Class[3] *19 - Temperature Sensor*

Equipment Description *DIESEL GEN 2A-A EXHAUST-LOW TEMP*

Location: Bldg. *DG* Floor El. *740* Room, Area *2A Fan Room*

Manufacturer, Model, Etc. (optional but recommended) _____

Instructions for Completing Checklist

This checklist may be used to document the results of the Seismic Walkdown of an item of equipment on the SWEL. The space below each of the following questions may be used to record the results of judgments and findings. Additional space is provided at the end of this checklist for documenting other comments.

Note: Y = Yes, N = No, U = Unknown, N/A = Not Applicable

Anchorage

1. Is the anchorage configuration verification required (i.e., is the item one of the 50% of SWEL items requiring such verification)? Y☐ N☒

2. Is the anchorage free of bent, broken, missing or loose hardware? Y☒ N☐ U☐ N/A☐

3. Is the anchorage free of corrosion that is more than mild surface oxidation? Y☒ N☐ U☐ N/A☐

4. Is the anchorage free of visible cracks in the concrete near the anchors? Y☒ N☐ U☐ N/A☐

5. Is the anchorage configuration consistent with plant documentation? (Note: This question only applies if the item is one of the 50% for which an anchorage configuration verification is required.) Y☐ N☐ U☐ N/A☒

6. Based on the above anchorage evaluations, is the anchorage free of potentially adverse seismic conditions? Y☒ N☐ U☐

[3] Enter the equipment class name from Appendix B: Classes of Equipment

Equipment ID No. *SQN-2-TE-300-0452B-A* Equip. Class[3] *19 - Temperature Sensor*

Equipment Description *DIESEL GEN 2A-A EXHAUST-LOW TEMP*

Interaction Effects

7. Are soft targets free from impact by nearby equipment or structures? Y☒ N☐ U☐ N/A☐

8. Are overhead equipment, distribution systems, ceiling tiles and lighting, and masonry block walls not likely to collapse onto the equipment? Y☒ N☐ U☐ N/A☐
   The masonry block wall on which the sensor is attached is verified per Calculation #SCG-1-86.

9. Do attached lines have adequate flexibility to avoid damage? Y☒ N☐ U☐ N/A☐

10. Based on the above seismic interaction evaluations, is equipment free of potentially adverse seismic interaction effects? Y☒ N☐ U☐

Other Adverse Conditions

11. Have you looked for and found no other seismic conditions that could adversely affect the safety functions of the equipment? Y☒ N☐ U☐

Comments (Additional pages may be added as necessary)

Evaluated by: *Robert Malone* Date: *7/18/12*

Phillip York *7/18/12*

Status: Y☒ N☐ U☐

Seismic Walkdown Checklist (SWC)

Equipment ID No. *SQN-2-TS-001-0018A-B* Equip. Class[3] *19 - Temperature Sensor*

Equipment Description *STM FLOW TO AFPT ISOL - HIGH TEMP*

Location: Bldg. *Aux* Floor El. *669* Room, Area *34 - Aux Feedwater Pump Room 2A-S*

Manufacturer, Model, Etc. (optional but recommended) _____

Instructions for Completing Checklist

This checklist may be used to document the results of the Seismic Walkdown of an item of equipment on the SWEL. The space below each of the following questions may be used to record the results of judgments and findings. Additional space is provided at the end of this checklist for documenting other comments.

Note: Y = Yes, N = No, U = Unknown, N/A = Not Applicable

Anchorage

1. Is the anchorage configuration verification required (i.e., is the item one of the 50% of SWEL items requiring such verification)? Y☐ N☒

2. Is the anchorage free of bent, broken, missing or loose hardware? Y☒ N☐ U☐ N/A☐

3. Is the anchorage free of corrosion that is more than mild surface oxidation? Y☒ N☐ U☐ N/A☐

4. Is the anchorage free of visible cracks in the concrete near the anchors? Y☒ N☐ U☐ N/A☐

5. Is the anchorage configuration consistent with plant documentation? (Note: This question only applies if the item is one of the 50% for which an anchorage configuration verification is required.) Y☐ N☐ U☐ N/A☒

6. Based on the above anchorage evaluations, is the anchorage free of potentially adverse seismic conditions? Y☒ N☐ U☐

[3] Enter the equipment class name from Appendix B: Classes of Equipment

Equipment ID No. *SQN-2-TS-001-0018A-B* Equip. Class[3] *19 - Temperature Sensor*

Equipment Description *STM FLOW TO AFPT ISOL - HIGH TEMP*

Interaction Effects

7. Are soft targets free from impact by nearby equipment or structures? Y☒ N☐ U☐ N/A☐

8. Are overhead equipment, distribution systems, ceiling tiles and lighting, and masonry block walls not likely to collapse onto the equipment? Y☒ N☐ U☐ N/A☐

9. Do attached lines have adequate flexibility to avoid damage? Y☒ N☐ U☐ N/A☐

10. Based on the above seismic interaction evaluations, is equipment free of potentially adverse seismic interaction effects? Y☒ N☐ U☐

Other Adverse Conditions

11. Have you looked for and found no other seismic conditions that could adversely affect the safety functions of the equipment? Y☒ N☐ U☐

Comments (Additional pages may be added as necessary)

Evaluated by: *Robert Malone* Date: *8/6/12*

Phillip York *8/6/12*

Status: Y☒ N☐ U☐

Seismic Walkdown Checklist (SWC)

Equipment ID No. *SQN-2-TS-001-0018B-B* Equip. Class[3] *19 - Temperature Sensor*

Equipment Description *STM FLOW TO AFPT ISOL - HIGH TEMP*

Location: Bldg. *Aux* Floor El. *669* Room, Area *34 - Aux Feedwater Pump Room 2A-S*

Manufacturer, Model, Etc. (optional but recommended) _____

Instructions for Completing Checklist

This checklist may be used to document the results of the Seismic Walkdown of an item of equipment on the SWEL. The space below each of the following questions may be used to record the results of judgments and findings. Additional space is provided at the end of this checklist for documenting other comments.

Note: Y = Yes, N = No, U = Unknown, N/A = Not Applicable

Anchorage

1. Is the anchorage configuration verification required (i.e., is the item one of the 50% of SWEL items requiring such verification)? Y☐ N☒

2. Is the anchorage free of bent, broken, missing or loose hardware? Y☒ N☐ U☐ N/A☐

3. Is the anchorage free of corrosion that is more than mild surface oxidation? Y☒ N☐ U☐ N/A☐

4. Is the anchorage free of visible cracks in the concrete near the anchors? Y☒ N☐ U☐ N/A☐

5. Is the anchorage configuration consistent with plant documentation? (Note: This question only applies if the item is one of the 50% for which an anchorage configuration verification is required.) Y☐ N☐ U☐ N/A☒

6. Based on the above anchorage evaluations, is the anchorage free of potentially adverse seismic conditions? Y☒ N☐ U☐

[3] Enter the equipment class name from Appendix B: Classes of Equipment

Equipment ID No. *SQN-2-TS-001-0018B-B* Equip. Class[3] *19 - Temperature Sensor*

Equipment Description *STM FLOW TO AFPT ISOL - HIGH TEMP*

Interaction Effects

7. Are soft targets free from impact by nearby equipment or structures? Y☒ N☐ U☐ N/A☐

8. Are overhead equipment, distribution systems, ceiling tiles and lighting, and masonry block walls not likely to collapse onto the equipment? Y☒ N☐ U☐ N/A☐

9. Do attached lines have adequate flexibility to avoid damage? Y☒ N☐ U☐ N/A☐

10. Based on the above seismic interaction evaluations, is equipment free of potentially adverse seismic interaction effects? Y☒ N☐ U☐

Other Adverse Conditions

11. Have you looked for and found no other seismic conditions that could adversely affect the safety functions of the equipment? Y☒ N☐ U☐

Comments (Additional pages may be added as necessary)

Evaluated by: *Robert Malone* Date: *8/6/12*

Phillip York *8/6/12*

Status: Y☒ N☐ U☐

Seismic Walkdown Checklist (SWC)

Equipment ID No. *SQN-0-LOCL-500-M026D* Equip. Class[3] *20 - Control Panel*

Equipment Description *DIESEL GEN CONT*

Location: Bldg. *Control* Floor El. *732* Room, Area *13 - Control Room*

Manufacturer, Model, Etc. (optional but recommended) _____

Instructions for Completing Checklist

This checklist may be used to document the results of the Seismic Walkdown of an item of equipment on the SWEL. The space below each of the following questions may be used to record the results of judgments and findings. Additional space is provided at the end of this checklist for documenting other comments.

Note: Y = Yes, N = No, U = Unknown, N/A = Not Applicable

Anchorage

1. Is the anchorage configuration verification required (i.e., is the item one of the 50% of SWEL items requiring such verification)? Y☒ N☐
   For anchorage configuration verification see drawing 1,2-47W605-3, Detail B3.

2. Is the anchorage free of bent, broken, missing or loose hardware? Y☒ N☐ U☐ N/A☐
   Back panels were opened and anchorage to structure was verified. Each control room panel consists of one continuous cabinet with multiple Risers. No Riser-to-Riser connections were observed. It was noted that adjacent panels were bolted together on the front side of each cabinet-to-cabinet interface.

3. Is the anchorage free of corrosion that is more than mild surface oxidation? Y☒ N☐ U☐ N/A☐

4. Is the anchorage free of visible cracks in the concrete near the anchors? Y☒ N☐ U☐ N/A☐

5. Is the anchorage configuration consistent with plant documentation? (Note: This question only applies if the item is one of the 50% for which an anchorage configuration verification is required.) Y☒ N☐ U☐ N/A☐

6. Based on the above anchorage evaluations, is the anchorage free of potentially adverse seismic conditions? Y☒ N☐ U☐

[3] Enter the equipment class name from Appendix B: Classes of Equipment

Equipment ID No. *SQN-0-LOCL-500-M026D* Equip. Class[3] *20 - Control Panel*

Equipment Description *DIESEL GEN CONT*

Interaction Effects

7. Are soft targets free from impact by nearby equipment or structures? Y☒ N☐ U☐ N/A☐

8. Are overhead equipment, distribution systems, ceiling tiles and lighting, and masonry block walls not likely to collapse onto the equipment? Y☒ N☐ U☐ N/A☐

9. Do attached lines have adequate flexibility to avoid damage? Y☒ N☐ U☐ N/A☐

10. Based on the above seismic interaction evaluations, is equipment free of potentially adverse seismic interaction effects? Y☒ N☐ U☐

Other Adverse Conditions

11. Have you looked for and found no other seismic conditions that could adversely affect the safety functions of the equipment? Y☒ N☐ U☐

Comments (Additional pages may be added as necessary)

Evaluated by: *Robert Malone* Date: *7/27/12*

Phillip York *7/27/12*

Status: Y☒ N☐ U☐

Seismic Walkdown Checklist (SWC)

Equipment ID No. *SQN-2-LOCL-500-M002* Equip. Class[3] *20 - Control Panel*

Equipment Description *TURB CONTROL*

Location: Bldg. *Control* Floor El. *732* Room, Area *13 - Control Room*

Manufacturer, Model, Etc. (optional but recommended) _____

Instructions for Completing Checklist

This checklist may be used to document the results of the Seismic Walkdown of an item of equipment on the SWEL. The space below each of the following questions may be used to record the results of judgments and findings. Additional space is provided at the end of this checklist for documenting other comments.

Note: Y = Yes, N = No, U = Unknown, N/A = Not Applicable

Anchorage

1. Is the anchorage configuration verification required (i.e., is the item one of the 50% of SWEL items requiring such verification)? Y☒ N☐
   For anchorage configuration verification see drawing 1,2-47W605-3, Detail A3.

2. Is the anchorage free of bent, broken, missing or loose hardware? Y☒ N☐ U☐ N/A☐
   Back panels were opened and anchorage to structure was verified. Each control room panel consists of one continuous cabinet with multiple Risers. No Riser-to-Riser connections were observed. It was noted that adjacent panels were bolted together on the front side of each cabinet-to-cabinet interface.

3. Is the anchorage free of corrosion that is more than mild surface oxidation? Y☒ N☐ U☐ N/A☐

4. Is the anchorage free of visible cracks in the concrete near the anchors? Y☒ N☐ U☐ N/A☐

5. Is the anchorage configuration consistent with plant documentation? (Note: This question only applies if the item is one of the 50% for which an anchorage configuration verification is required.) Y☒ N☐ U☐ N/A☐

6. Based on the above anchorage evaluations, is the anchorage free of potentially adverse seismic conditions? Y☒ N☐ U☐

[3] Enter the equipment class name from Appendix B: Classes of Equipment

Equipment ID No. *SQN-2-LOCL-500-M002* Equip. Class[3] *20 - Control Panel*

Equipment Description *TURB CONTROL*

Interaction Effects

7. Are soft targets free from impact by nearby equipment or structures? Y☒ N☐ U☐ N/A☐

8. Are overhead equipment, distribution systems, ceiling tiles and lighting, and masonry block walls not likely to collapse onto the equipment? Y☒ N☐ U☐ N/A☐

9. Do attached lines have adequate flexibility to avoid damage? Y☒ N☐ U☐ N/A☐

10. Based on the above seismic interaction evaluations, is equipment free of potentially adverse seismic interaction effects? Y☒ N☐ U☐

Other Adverse Conditions

11. Have you looked for and found no other seismic conditions that could adversely affect the safety functions of the equipment? Y☒ N☐ U☐

Comments (Additional pages may be added as necessary)

Evaluated by: *Robert Malone* Date: *7/31/12*

Phillip York *7/31/12*

Status: Y☒ N☐ U☐.

Seismic Walkdown Checklist (SWC)

Equipment ID No. *SQN-2-LOCL-500-M004* Equip. Class[3] *20 - Control Panel*

Equipment Description *Reactor Control Panel 2-M-4*

Location: Bldg. *Control* Floor El. *732* Room, Area *13 - Control Room*

Manufacturer, Model, Etc. (optional but recommended) _____

Instructions for Completing Checklist

This checklist may be used to document the results of the Seismic Walkdown of an item of equipment on the SWEL. The space below each of the following questions may be used to record the results of judgments and findings. Additional space is provided at the end of this checklist for documenting other comments.

Note: Y = Yes, N = No, U = Unknown, N/A = Not Applicable

Anchorage

1. Is the anchorage configuration verification required (i.e., is the item one of the 50% of SWEL items requiring such verification)? Y☒ N☐
   For anchorage configuration verification see drawing 1,2-47W605-3, Detail A3.

2. Is the anchorage free of bent, broken, missing or loose hardware? Y☒ N☐ U☐ N/A☐
   Back panels were opened and anchorage to structure was verified. Each control room panel consists of one continuous cabinet with multiple Risers. No Riser-to-Riser connections were observed. It was noted that adjacent panels were bolted together on the front side of each cabinet-to-cabinet interface.

3. Is the anchorage free of corrosion that is more than mild surface oxidation? Y☒ N☐ U☐ N/A☐

4. Is the anchorage free of visible cracks in the concrete near the anchors? Y☒ N☐ U☐ N/A☐

5. Is the anchorage configuration consistent with plant documentation? (Note: This question only applies if the item is one of the 50% for which an anchorage configuration verification is required.) Y☒ N☐ U☐ N/A☐

6. Based on the above anchorage evaluations, is the anchorage free of potentially adverse seismic conditions? Y☒ N☐ U☐

[3] Enter the equipment class name from Appendix B: Classes of Equipment

Equipment ID No. *SQN-2-LOCL-500-M004* Equip. Class[3] *20 - Control Panel*

Equipment Description *Reactor Control Panel 2-M-4*

Interaction Effects

7. Are soft targets free from impact by nearby equipment or structures? Y☒ N☐ U☐ N/A☐

8. Are overhead equipment, distribution systems, ceiling tiles and lighting, and masonry block walls not likely to collapse onto the equipment? Y☒ N☐ U☐ N/A☐

9. Do attached lines have adequate flexibility to avoid damage? Y☒ N☐ U☐ N/A☐

10. Based on the above seismic interaction evaluations, is equipment free of potentially adverse seismic interaction effects? Y☒ N☐ U☐

Other Adverse Conditions

11. Have you looked for and found no other seismic conditions that could adversely affect the safety functions of the equipment? Y☒ N☐ U☐

Comments (Additional pages may be added as necessary)

Evaluated by: *Robert Malone* Date: *7/31/12*

Phillip York *7/31/12*

Status: Y☒ N☐ U☐

Seismic Walkdown Checklist (SWC)

Equipment ID No. *SQN-2-LOCL-500-M008* Equip. Class[3] *20 - Control Panel*

Equipment Description *TURB SUP CONT*

Location: Bldg. *Control* Floor El. *732* Room, Area *13 - Control Room*

Manufacturer, Model, Etc. (optional but recommended) _____

Instructions for Completing Checklist

This checklist may be used to document the results of the Seismic Walkdown of an item of equipment on the SWEL. The space below each of the following questions may be used to record the results of judgments and findings. Additional space is provided at the end of this checklist for documenting other comments.

Note: Y = Yes, N = No, U = Unknown, N/A = Not Applicable

Anchorage

1. Is the anchorage configuration verification required (i.e., is the item one of the 50% of SWEL items requiring such verification)? Y☐ N☒

2. Is the anchorage free of bent, broken, missing or loose hardware? Y☒ N☐ U☐ N/A☐
   Back panels were opened and anchorage to structure was verified. Each control room panel consists of one continuous cabinet with multiple Risers. No Riser-to-Riser connections were observed. It was noted that adjacent panels were bolted together on the front side of each cabinet-to-cabinet interface.

3. Is the anchorage free of corrosion that is more than mild surface oxidation? Y☒ N☐ U☐ N/A☐

4. Is the anchorage free of visible cracks in the concrete near the anchors? Y☒ N☐ U☐ N/A☐

5. Is the anchorage configuration consistent with plant documentation? (Note: This question only applies if the item is one of the 50% for which an anchorage configuration verification is required.) Y☐ N☐ U☐ N/A☒

6. Based on the above anchorage evaluations, is the anchorage free of potentially adverse seismic conditions? Y☒ N☐ U☐

[3] Enter the equipment class name from Appendix B: Classes of Equipment

Equipment ID No. *SQN-2-LOCL-500-M008* Equip. Class[3] *20 - Control Panel*

Equipment Description *TURB SUP CONT*

Interaction Effects

7. Are soft targets free from impact by nearby equipment or structures? Y☒ N☐ U☐ N/A☐

8. Are overhead equipment, distribution systems, ceiling tiles and lighting, and masonry block walls not likely to collapse onto the equipment? Y☒ N☐ U☐ N/A☐

9. Do attached lines have adequate flexibility to avoid damage? Y☒ N☐ U☐ N/A☐

10. Based on the above seismic interaction evaluations, is equipment free of potentially adverse seismic interaction effects? Y☒ N☐ U☐

Other Adverse Conditions

11. Have you looked for and found no other seismic conditions that could adversely affect the safety functions of the equipment? Y☒ N☐ U☐

Comments (Additional pages may be added as necessary)

Evaluated by: *Robert Malone* Date: *7/31/12*

Phillip York *7/31/12*

Status: Y☒ N☐ U☐

Seismic Walkdown Checklist (SWC)

Equipment ID No. *SQN-2-LOCL-500-M009* Equip. Class[3] *20 - Control Panel*

Equipment Description *VENT-ICE CONT-REACT BD*

Location: Bldg. *Control* Floor El. *732* Room, Area *13 - Control Room*

Manufacturer, Model, Etc. (optional but recommended) _____

Instructions for Completing Checklist

This checklist may be used to document the results of the Seismic Walkdown of an item of equipment on the SWEL. The space below each of the following questions may be used to record the results of judgments and findings. Additional space is provided at the end of this checklist for documenting other comments.

Note: Y = Yes, N = No, U = Unknown, N/A = Not Applicable

Anchorage

1. Is the anchorage configuration verification required (i.e., is the item one of the 50% of SWEL items requiring such verification)? Y☒ N☐
   For anchorage configuration verification see drawing 1,2-47W605-3, Detail B3.

2. Is the anchorage free of bent, broken, missing or loose hardware? Y☒ N☐ U☐ N/A☐
   Back panels were opened and anchorage to structure was verified. Each control room panel consists of one continuous cabinet with multiple Risers. No Riser-to-Riser connections were observed. It was noted that adjacent panels were bolted together on the front side of each cabinet-to-cabinet interface.

3. Is the anchorage free of corrosion that is more than mild surface oxidation? Y☒ N☐ U☐ N/A☐

4. Is the anchorage free of visible cracks in the concrete near the anchors? Y☒ N☐ U☐ N/A☐

5. Is the anchorage configuration consistent with plant documentation? (Note: This question only applies if the item is one of the 50% for which an anchorage configuration verification is required.) Y☒ N☐ U☐ N/A☐

6. Based on the above anchorage evaluations, is the anchorage free of potentially adverse seismic conditions? Y☒ N☐ U☐

[3] Enter the equipment class name from Appendix B: Classes of Equipment

Equipment ID No. *SQN-2-LOCL-500-M009* Equip. Class[3] *20 - Control Panel*

Equipment Description *VENT-ICE CONT-REACT BD*

Interaction Effects

7. Are soft targets free from impact by nearby equipment or structures? Y☒ N☐ U☐ N/A☐

8. Are overhead equipment, distribution systems, ceiling tiles and lighting, and masonry block walls not likely to collapse onto the equipment? Y☒ N☐ U☐ N/A☐

9. Do attached lines have adequate flexibility to avoid damage? Y☒ N☐ U☐ N/A☐

10. Based on the above seismic interaction evaluations, is equipment free of potentially adverse seismic interaction effects? Y☒ N☐ U☐

Other Adverse Conditions

11. Have you looked for and found no other seismic conditions that could adversely affect the safety functions of the equipment? Y☒ N☐ U☐

Comments (Additional pages may be added as necessary)

Evaluated by: *Robert Malone* Date: *7/31/12*

Phillip York *7/31/12*

Status: Y☒ N☐ U☐

Seismic Walkdown Checklist (SWC)

Equipment ID No. *SQN-2-PNLA-082-TV/3-A* Equip. Class[3] *20 - Control Panel*

Equipment Description *DG 2A-A CONTROL PNL*

Location: Bldg. *DG* Floor El. *722* Room, Area *1 - Bay 2A*

Manufacturer, Model, Etc. (optional but recommended) _____

Instructions for Completing Checklist

This checklist may be used to document the results of the Seismic Walkdown of an item of equipment on the SWEL. The space below each of the following questions may be used to record the results of judgments and findings. Additional space is provided at the end of this checklist for documenting other comments.

Note: Y = Yes, N = No, U = Unknown, N/A = Not Applicable

Anchorage

1. Is the anchorage configuration verification required (i.e., is the item one of the 50% of SWEL items requiring such verification)? Y☐ N☒

2. Is the anchorage free of bent, broken, missing or loose hardware? Y☒ N☐ U☐ N/A☐
   Back and front panels were opened and anchorage to structure and surrounding panel was verified. One of eight anchor bolts was missing in the cabinet-to-cabinet connection. This is not deemed seismically adverse.

3. Is the anchorage free of corrosion that is more than mild surface oxidation? Y☒ N☐ U☐ N/A☐

4. Is the anchorage free of visible cracks in the concrete near the anchors? Y☒ N☐ U☐ N/A☐

5. Is the anchorage configuration consistent with plant documentation? (Note: This question only applies if the item is one of the 50% for which an anchorage configuration verification is required.) Y☐ N☐ U☐ N/A☒

6. Based on the above anchorage evaluations, is the anchorage free of potentially adverse seismic conditions? Y☒ N☐ U☐

[3] Enter the equipment class name from Appendix B: Classes of Equipment

Equipment ID No. *SQN-2-PNLA-082-TV/3-A* Equip. Class[3] *20 - Control Panel*

Equipment Description *DG 2A-A CONTROL PNL*

Interaction Effects

7. Are soft targets free from impact by nearby equipment or structures? Y☒ N☐ U☐ N/A☐

8. Are overhead equipment, distribution systems, ceiling tiles and lighting, and masonry block walls not likely to collapse onto the equipment? Y☒ N☐ U☐ N/A☐

9. Do attached lines have adequate flexibility to avoid damage? Y☒ N☐ U☐ N/A☐

10. Based on the above seismic interaction evaluations, is equipment free of potentially adverse seismic interaction effects? Y☒ N☐ U☐

Other Adverse Conditions

11. Have you looked for and found no other seismic conditions that could adversely affect the safety functions of the equipment? Y☒ N☐ U☐

Comments (Additional pages may be added as necessary)

Evaluated by: *Robert Malone* Date: *7/18/12*

Phillip York *7/18/12*

Status: Y☒ N☐ U☐

Seismic Walkdown Checklist (SWC)

Equipment ID No. *SQN-0-HEX-078-0018* Equip. Class[3] *21 - Heat Exchanger*

Equipment Description *SPENT FUEL PIT HEAT EXCHANGER A*

Location: Bldg. *Aux* Floor El. *714* Room, Area *29 - SFP HEX Area*

Manufacturer, Model, Etc. (optional but recommended)

Instructions for Completing Checklist

This checklist may be used to document the results of the Seismic Walkdown of an item of equipment on the SWEL. The space below each of the following questions may be used to record the results of judgments and findings. Additional space is provided at the end of this checklist for documenting other comments.

Note: Y = Yes, N = No, U = Unknown, N/A = Not Applicable

Anchorage

1. Is the anchorage configuration verification required (i.e., is the item one of the 50% of SWEL items requiring such verification)? Y☒ N☐
   For anchorage configuration verification see drawing 151-0287-6-01.

2. Is the anchorage free of bent, broken, missing or loose hardware? Y☒ N☐ U☐ N/A☐

3. Is the anchorage free of corrosion that is more than mild surface oxidation? Y☒ N☐ U☐ N/A☐

4. Is the anchorage free of visible cracks in the concrete near the anchors? Y☒ N☐ U☐ N/A☐

5. Is the anchorage configuration consistent with plant documentation? (Note: This question only applies if the item is one of the 50% for which an anchorage configuration verification is required.) Y☒ N☐ U☐ N/A☐
   Per drawing, the anchor bolts of one support saddle are supposed to be "backed up slightly". This does not seem to have occurred. However, per calc CEB-CQ5-406 R4, the required displacement is only 0.04". Given such a small displacement, the saddle should be able to flex adequately to meet the requirements.

6. Based on the above anchorage evaluations, is the anchorage free of potentially adverse seismic conditions? Y☒ N☐ U☐

[3] Enter the equipment class name from Appendix B: Classes of Equipment

Equipment ID No. *SQN-0-HEX-078-0018* Equip. Class[3] *21 - Heat Exchanger*

Equipment Description *SPENT FUEL PIT HEAT EXCHANGER A*

Interaction Effects

7. Are soft targets free from impact by nearby equipment or structures? Y☒ N☐ U☐ N/A☐

8. Are overhead equipment, distribution systems, ceiling tiles and lighting, and masonry block walls not likely to collapse onto the equipment? Y☒ N☐ U☐ N/A☐

9. Do attached lines have adequate flexibility to avoid damage? Y☒ N☐ U☐ N/A☐

10. Based on the above seismic interaction evaluations, is equipment free of potentially adverse seismic interaction effects? Y☒ N☐ U☐

Other Adverse Conditions

11. Have you looked for and found no other seismic conditions that could adversely affect the safety functions of the equipment? Y☒ N☐ U☐

Comments (Additional pages may be added as necessary)

Evaluated by: *Robert Malone* Date: *8/2/12*

Phillip York *8/2/12*

Status: Y☒ N☐ U☐

Seismic Walkdown Checklist (SWC)

Equipment ID No. *SQN-2-HEX-072-0007* Equip. Class[3] *21 - Heat Exchanger*

Equipment Description *CNTMT SPRAY HT EXCH 2B*

Location: Bldg. *Aux* Floor El. *690* Room, Area *39 - 2B RHR CCS HEX Room*

Manufacturer, Model, Etc. (optional but recommended) _____

Instructions for Completing Checklist

This checklist may be used to document the results of the Seismic Walkdown of an item of equipment on the SWEL. The space below each of the following questions may be used to record the results of judgments and findings. Additional space is provided at the end of this checklist for documenting other comments.

Note: Y = Yes, N = No, U = Unknown, N/A = Not Applicable

Anchorage

1. Is the anchorage configuration verification required (i.e., is the item one of the 50% of SWEL items requiring such verification)? Y☒ N☐
   For anchorage configuration verification see drawings 2-48N1231 and F-6662-2.

2. Is the anchorage free of bent, broken, missing or loose hardware? Y☒ N☐ U☐ N/A☐

3. Is the anchorage free of corrosion that is more than mild surface oxidation? Y☒ N☐ U☐ N/A☐

4. Is the anchorage free of visible cracks in the concrete near the anchors? Y☒ N☐ U☐ N/A☐

5. Is the anchorage configuration consistent with plant documentation? (Note: This question only applies if the item is one of the 50% for which an anchorage configuration verification is required.) Y☒ N☐ U☐ N/A☐

6. Based on the above anchorage evaluations, is the anchorage free of potentially adverse seismic conditions? Y☒ N☐ U☐

[3] Enter the equipment class name from Appendix B: Classes of Equipment

Equipment ID No. *SQN-2-HEX-072-0007* Equip. Class[3] *21 - Heat Exchanger*

Equipment Description *CNTMT SPRAY HT EXCH 2B*

Interaction Effects

7. Are soft targets free from impact by nearby equipment or structures? Y☒ N☐ U☐ N/A☐

8. Are overhead equipment, distribution systems, ceiling tiles and lighting, and masonry block walls not likely to collapse onto the equipment? Y☒ N☐ U☐ N/A☐

9. Do attached lines have adequate flexibility to avoid damage? Y☒ N☐ U☐ N/A☐

10. Based on the above seismic interaction evaluations, is equipment free of potentially adverse seismic interaction effects? Y☒ N☐ U☐

Other Adverse Conditions

11. Have you looked for and found no other seismic conditions that could adversely affect the safety functions of the equipment? Y☒ N☐ U☐

Comments (Additional pages may be added as necessary)

Evaluated by: *Robert Malone* Date: *8/7/12*

Phillip York *8/7/12*

Status: Y☒ N☐ U☐

Seismic Walkdown Checklist (SWC)

Equipment ID No. *SQN-2-HEX-072-0030* Equip. Class[3] *21 - Heat Exchanger*

Equipment Description *CONTAINMENT SPRAY HEAT EXCHANGER 2A*

Location: Bldg. *Aux* Floor El. *690* Room, Area *42 - 2A RHR CCS HEX Room*

Manufacturer, Model, Etc. (optional but recommended) _____

Instructions for Completing Checklist

This checklist may be used to document the results of the Seismic Walkdown of an item of equipment on the SWEL. The space below each of the following questions may be used to record the results of judgments and findings. Additional space is provided at the end of this checklist for documenting other comments.

Note: Y = Yes, N = No, U = Unknown, N/A = Not Applicable

Anchorage

1. Is the anchorage configuration verification required (i.e., is the item one of the 50% of SWEL items requiring such verification)? Y☒ N☐
   For anchorage configuration verification see drawings 2-48N1231 and F-6662-2.

2. Is the anchorage free of bent, broken, missing or loose hardware? Y☒ N☐ U☐ N/A☐

3. Is the anchorage free of corrosion that is more than mild surface oxidation? Y☒ N☐ U☐ N/A☐

4. Is the anchorage free of visible cracks in the concrete near the anchors? Y☒ N☐ U☐ N/A☐

5. Is the anchorage configuration consistent with plant documentation? (Note: This question only applies if the item is one of the 50% for which an anchorage configuration verification is required.) Y☒ N☐ U☐ N/A☐

6. Based on the above anchorage evaluations, is the anchorage free of potentially adverse seismic conditions? Y☒ N☐ U☐

[3] Enter the equipment class name from Appendix B: Classes of Equipment

Equipment ID No. *SQN-2-HEX-072-0030* Equip. Class[3] *21 - Heat Exchanger*

Equipment Description *CONTAINMENT SPRAY HEAT EXCHANGER 2A*

Interaction Effects

7. Are soft targets free from impact by nearby equipment or structures? Y☒ N☐ U☐ N/A☐

8. Are overhead equipment, distribution systems, ceiling tiles and lighting, and masonry block walls not likely to collapse onto the equipment? Y☒ N☐ U☐ N/A☐

9. Do attached lines have adequate flexibility to avoid damage? Y☒ N☐ U☐ N/A☐

10. Based on the above seismic interaction evaluations, is equipment free of potentially adverse seismic interaction effects? Y☒ N☐ U☐

Other Adverse Conditions

11. Have you looked for and found no other seismic conditions that could adversely affect the safety functions of the equipment? Y☒ N☐ U☐

Comments (Additional pages may be added as necessary)

Evaluated by: *Robert Malone* Date: *8/2/12*

Phillip York *8/2/12*

Status: Y☒ N☐ U☐

Seismic Walkdown Checklist (SWC)

Equipment ID No. *SQN-2-HEX-074-0015* Equip. Class[3] *21 - Heat Exchanger*

Equipment Description *RESIDUAL HEAT EXCHANGER 2A*

Location: Bldg. *Aux* Floor El. *690* Room, Area *42 - 2A RHR CCS HEX Room*

Manufacturer, Model, Etc. (optional but recommended) _____

Instructions for Completing Checklist

This checklist may be used to document the results of the Seismic Walkdown of an item of equipment on the SWEL. The space below each of the following questions may be used to record the results of judgments and findings. Additional space is provided at the end of this checklist for documenting other comments.

Note: Y = Yes, N = No, U = Unknown, N/A = Not Applicable

Anchorage

1. Is the anchorage configuration verification required (i.e., is the item one of the 50% of SWEL items requiring such verification)? Y☒ N☐
   For anchorage configuration verification see drawing 2-48N1231.

2. Is the anchorage free of bent, broken, missing or loose hardware? Y☒ N☐ U☐ N/A☐

3. Is the anchorage free of corrosion that is more than mild surface oxidation? Y☒ N☐ U☐ N/A☐

4. Is the anchorage free of visible cracks in the concrete near the anchors? Y☒ N☐ U☐ N/A☐

5. Is the anchorage configuration consistent with plant documentation? (Note: This question only applies if the item is one of the 50% for which an anchorage configuration verification is required.) Y☒ N☐ U☐ N/A☐

6. Based on the above anchorage evaluations, is the anchorage free of potentially adverse seismic conditions? Y☒ N☐ U☐

[3] Enter the equipment class name from Appendix B: Classes of Equipment

Equipment ID No. *SQN-2-HEX-074-0015* Equip. Class[3] *21 - Heat Exchanger*

Equipment Description *RESIDUAL HEAT EXCHANGER 2A*

Interaction Effects

7. Are soft targets free from impact by nearby equipment or structures? Y☒ N☐ U☐ N/A☐

8. Are overhead equipment, distribution systems, ceiling tiles and lighting, and masonry block walls not likely to collapse onto the equipment? Y☒ N☐ U☐ N/A☐

9. Do attached lines have adequate flexibility to avoid damage? Y☒ N☐ U☐ N/A☐

10. Based on the above seismic interaction evaluations, is equipment free of potentially adverse seismic interaction effects? Y☒ N☐ U☐

Other Adverse Conditions

11. Have you looked for and found no other seismic conditions that could adversely affect the safety functions of the equipment? Y☒ N☐ U☐

Comments (Additional pages may be added as necessary)

Evaluated by: *Isaac Antanaitis* Date: *8/15/12*

Phillip York *8/15/12*

Status: Y☒ N☐ U☐

Seismic Walkdown Checklist (SWC)

Equipment ID No. *SQN-2-HEX-074-0027* Equip. Class[3] *21 - Heat Exchanger*

Equipment Description *RESIDUAL HEAT EXCHANGER 2B*

Location: Bldg. *Aux* Floor El. *690* Room, Area *39 - 2B RHR CCS HEX Room*

Manufacturer, Model, Etc. (optional but recommended) _____

Instructions for Completing Checklist

This checklist may be used to document the results of the Seismic Walkdown of an item of equipment on the SWEL. The space below each of the following questions may be used to record the results of judgments and findings. Additional space is provided at the end of this checklist for documenting other comments.

Note: Y = Yes, N = No, U = Unknown, N/A = Not Applicable

Anchorage

1. Is the anchorage configuration verification required (i.e., is the item one of the 50% of SWEL items requiring such verification)? Y☒ N☐
   For anchorage configuration verification see drawing 2-48N1231.

2. Is the anchorage free of bent, broken, missing or loose hardware? Y☒ N☐ U☐ N/A☐

3. Is the anchorage free of corrosion that is more than mild surface oxidation? Y☒ N☐ U☐ N/A☐

4. Is the anchorage free of visible cracks in the concrete near the anchors? Y☒ N☐ U☐ N/A☐

5. Is the anchorage configuration consistent with plant documentation? (Note: This question only applies if the item is one of the 50% for which an anchorage configuration verification is required.) Y☒ N☐ U☐ N/A☐

6. Based on the above anchorage evaluations, is the anchorage free of potentially adverse seismic conditions? Y☒ N☐ U☐

[3] Enter the equipment class name from Appendix B: Classes of Equipment

Equipment ID No. *SQN-2-HEX-074-0027* Equip. Class[3] *21 - Heat Exchanger*

Equipment Description *RESIDUAL HEAT EXCHANGER 2B*

Interaction Effects

7. Are soft targets free from impact by nearby equipment or structures? Y☒ N☐ U☐ N/A☐

8. Are overhead equipment, distribution systems, ceiling tiles and lighting, and masonry block walls not likely to collapse onto the equipment? Y☒ N☐ U☐ N/A☐

9. Do attached lines have adequate flexibility to avoid damage? Y☒ N☐ U☐ N/A☐

10. Based on the above seismic interaction evaluations, is equipment free of potentially adverse seismic interaction effects? Y☒ N☐ U☐

Other Adverse Conditions

11. Have you looked for and found no other seismic conditions that could adversely affect the safety functions of the equipment? Y☒ N☐ U☐

Comments (Additional pages may be added as necessary)

Evaluated by: *Robert Malone* Date: *8/7/12*

Phillip York *8/7/12*

Status: Y☒ N☐ U☐

Seismic Walkdown Checklist (SWC)

Equipment ID No. *SQN-2-TNK-070-0063* Equip. Class[3] *21 - Tank*

Equipment Description *CCS SURGE TANK B*

Location: Bldg. *Aux* Floor El. *734* Room, Area *32 - Surge Tank B Area*

Manufacturer, Model, Etc. (optional but recommended) _____

Instructions for Completing Checklist

This checklist may be used to document the results of the Seismic Walkdown of an item of equipment on the SWEL. The space below each of the following questions may be used to record the results of judgments and findings. Additional space is provided at the end of this checklist for documenting other comments.

Note: Y = Yes, N = No, U = Unknown, N/A = Not Applicable

Anchorage

1. Is the anchorage configuration verification required (i.e., is the item one of the 50% of SWEL items requiring such verification)? Y☒ N☐
   For anchorage configuration verification see drawing ISI-0227-B-01.

2. Is the anchorage free of bent, broken, missing or loose hardware? Y☒ N☐ U☐ N/A☐

3. Is the anchorage free of corrosion that is more than mild surface oxidation? Y☒ N☐ U☐ N/A☐

4. Is the anchorage free of visible cracks in the concrete near the anchors? Y☒ N☐ U☐ N/A☐

5. Is the anchorage configuration consistent with plant documentation? (Note: This question only applies if the item is one of the 50% for which an anchorage configuration verification is required.) Y☒ N☐ U☐ N/A☐

6. Based on the above anchorage evaluations, is the anchorage free of potentially adverse seismic conditions? Y☒ N☐ U☐

[3] Enter the equipment class name from Appendix B: Classes of Equipment

Equipment ID No. *SQN-2-TNK-070-0063* Equip. Class[3] *21 - Tank*

Equipment Description *CCS SURGE TANK B*

Interaction Effects

7. Are soft targets free from impact by nearby equipment or structures? Y☒ N☐ U☐ N/A☐
   "Tank level Transmitter" piping is approximately 1.5" from ductwork near equipment. For the duct to deflect this distance, it would need to "crumple" at the nearest restraint location. Given that the HVAC system is designed for seismic loads, this was not considered seismically adverse.

8. Are overhead equipment, distribution systems, ceiling tiles and lighting, and masonry block walls not likely to collapse onto the equipment? Y☒ N☐ U☐ N/A☐

9. Do attached lines have adequate flexibility to avoid damage? Y☒ N☐ U☐ N/A☐

10. Based on the above seismic interaction evaluations, is equipment free of potentially adverse seismic interaction effects? Y☒ N☐ U☐

Other Adverse Conditions

11. Have you looked for and found no other seismic conditions that could adversely affect the safety functions of the equipment? Y☒ N☐ U☐

Comments (Additional pages may be added as necessary)

Evaluated by: *Robert Malone* Date: *8/6/12*

Phillip York *8/6/12*

Status: Y☒ N☐ U☐

Seismic Walkdown Checklist (SWC)

Equipment ID No. *SQN-2-TNK-082-0224* Equip. Class[3] *21 - Tank*

Equipment Description *DSL 2A1 STARTING AIR TANK A 35 CF*

Location: Bldg. *DG* Floor El. *722* Room, Area *1 - Bay 2A*

Manufacturer, Model, Etc. (optional but recommended) _____

Instructions for Completing Checklist

This checklist may be used to document the results of the Seismic Walkdown of an item of equipment on the SWEL. The space below each of the following questions may be used to record the results of judgments and findings. Additional space is provided at the end of this checklist for documenting other comments.

Note: Y = Yes, N = No, U = Unknown, N/A = Not Applicable

Anchorage

1. Is the anchorage configuration verification required (i.e., is the item one of the 50% of SWEL items requiring such verification)? Y☒ N☐
   For anchorage configuration verification see drawing10N320-2, Detail E2.

2. Is the anchorage free of bent, broken, missing or loose hardware? Y☒ N☐ U☐ N/A☐

3. Is the anchorage free of corrosion that is more than mild surface oxidation? Y☒ N☐ U☐ N/A☐

4. Is the anchorage free of visible cracks in the concrete near the anchors? Y☒ N☐ U☐ N/A☐

5. Is the anchorage configuration consistent with plant documentation? (Note: This question only applies if the item is one of the 50% for which an anchorage configuration verification is required.) Y☒ N☐ U☐ N/A☐

6. Based on the above anchorage evaluations, is the anchorage free of potentially adverse seismic conditions? Y☒ N☐ U☐

[3] Enter the equipment class name from Appendix B: Classes of Equipment

Equipment ID No. *SQN-2-TNK-082-0224* Equip. Class[3] *21 - Tank*

Equipment Description *DSL 2A1 STARTING AIR TANK A 35 CF*

Interaction Effects

7. Are soft targets free from impact by nearby equipment or structures? Y☒ N☐ U☐ N/A☐

8. Are overhead equipment, distribution systems, ceiling tiles and lighting, and masonry block walls not likely to collapse onto the equipment? Y☒ N☐ U☐ N/A☐
   Trapeze support above equipment could have interaction with the piping and tank during a seismic event. This interaction should not be adverse and is not considered seismically significant.

9. Do attached lines have adequate flexibility to avoid damage? Y☒ N☐ U☐ N/A☐

10. Based on the above seismic interaction evaluations, is equipment free of potentially adverse seismic interaction effects? Y☒ N☐ U☐

Other Adverse Conditions

11. Have you looked for and found no other seismic conditions that could adversely affect the safety functions of the equipment? Y☒ N☐ U☐

Comments (Additional pages may be added as necessary)

Evaluated by: *Robert Malone* Date: *7/16/12*

Phillip York *7/16/12*

Status: Y☒ N☐ U☐

Seismic Walkdown Checklist (SWC)

Equipment ID No. *SQN-2-TNK-082-0255* Equip. Class[3] *21 - Tank*

Equipment Description *DSL 2B2 STARTING AIR TANK A 35 CF*

Location: Bldg. *DG* Floor El. *722* Room, Area *4 - Bay 2B*

Manufacturer, Model, Etc. (optional but recommended) _____

Instructions for Completing Checklist

This checklist may be used to document the results of the Seismic Walkdown of an item of equipment on the SWEL. The space below each of the following questions may be used to record the results of judgments and findings. Additional space is provided at the end of this checklist for documenting other comments.

Note: Y = Yes, N = No, U = Unknown, N/A = Not Applicable

Anchorage

1. Is the anchorage configuration verification required (i.e., is the item one of the 50% of SWEL items requiring such verification)? Y☒ N☐
   For anchorage configuration verification see drawing10N320-2, Detail E2.

2. Is the anchorage free of bent, broken, missing or loose hardware? Y☒ N☐ U☐ N/A☐

3. Is the anchorage free of corrosion that is more than mild surface oxidation? Y☒ N☐ U☐ N/A☐

4. Is the anchorage free of visible cracks in the concrete near the anchors? Y☒ N☐ U☐ N/A☐

5. Is the anchorage configuration consistent with plant documentation? (Note: This question only applies if the item is one of the 50% for which an anchorage configuration verification is required.) Y☒ N☐ U☐ N/A☐

6. Based on the above anchorage evaluations, is the anchorage free of potentially adverse seismic conditions? Y☒ N☐ U☐

[3] Enter the equipment class name from Appendix B: Classes of Equipment

Equipment ID No. *SQN-2-TNK-082-0255* Equip. Class[3] *21 - Tank*

Equipment Description *DSL 2B2 STARTING AIR TANK A 35 CF*

Interaction Effects

7. Are soft targets free from impact by nearby equipment or structures? Y☒ N☐ U☐ N/A☐

8. Are overhead equipment, distribution systems, ceiling tiles and lighting, and masonry block walls not likely to collapse onto the equipment? Y☒ N☐ U☐ N/A☐

9. Do attached lines have adequate flexibility to avoid damage? Y☒ N☐ U☐ N/A☐

10. Based on the above seismic interaction evaluations, is equipment free of potentially adverse seismic interaction effects? Y☒ N☐ U☐

Other Adverse Conditions

11. Have you looked for and found no other seismic conditions that could adversely affect the safety functions of the equipment? Y☒ N☐ U☐

Comments (Additional pages may be added as necessary)

Evaluated by: *Robert Malone* Date: *7/23/12*

Phillip York *7/23/12*

Status: Y☒ N☐ U☐

Seismic Walkdown Checklist (SWC)

Equipment ID No. *SQN-2-FCV-063-0090* Equip. Class[1] *7 - Air Operated Valve*

Equipment Description *SIS ACCUM TK 3 FLOW ISOLATION VLV*

Location: Bldg. *Reactor* Floor El. *693* Room, Area *46 - Accum. Rm 3*

Manufacturer, Model, Etc. (optional but recommended) _____

Instructions for Completing Checklist

This checklist may be used to document the results of the Seismic Walkdown of an item of equipment on the SWEL. The space below each of the following questions may be used to record the results of judgments and findings. Additional space is provided at the end of this checklist for documenting other comments.

Note: Y = Yes, N = No, U = Unknown, N/A = Not Applicable

Anchorage

1. Is the anchorage configuration verification required (i.e., is the item one of the 50% of SWEL items requiring such verification)? Y☐ N☒

2. Is the anchorage free of bent, broken, missing or loose hardware? Y☐ N☐ U☐ N/A☒

3. Is the anchorage free of corrosion that is more than mild surface oxidation? Y☐ N☐ U☐ N/A☒

4. Is the anchorage free of visible cracks in the concrete near the anchors? Y☐ N☐ U☐ N/A☒

5. Is the anchorage configuration consistent with plant documentation? (Note: This question only applies if the item is one of the 50% for which an anchorage configuration verification is required.) Y☐ N☐ U☐ N/A☒

6. Based on the above anchorage evaluations, is the anchorage free of potentially adverse seismic conditions? Y☒ N☐ U☐

[1] Enter the equipment class name from Appendix B: Classes of Equipment

Equipment ID No. *SQN-2-FCV-063-0090* Equip. Class[1] *7 - Air Operated Valve*

Equipment Description *SIS ACCUM TK 3 FLOW ISOLATION VLV*

Interaction Effects

7. Are soft targets free from impact by nearby equipment or structures? Y☒ N☐ U☐ N/A☐

8. Are overhead equipment, distribution systems, ceiling tiles and lighting, and masonry block walls not likely to collapse onto the equipment? Y☒ N☐ U☐ N/A☐

9. Do attached lines have adequate flexibility to avoid damage? Y☒ N☐ U☐ N/A☐

10. Based on the above seismic interaction evaluations, is equipment free of potentially adverse seismic interaction effects? Y☒ N☐ U☐

Other Adverse Conditions

11. Have you looked for and found no other seismic conditions that could adversely affect the safety functions of the equipment? Y☒ N☐ U☐

Comments (Additional pages may be added as necessary)

Evaluated by: *Robert Malone* Date: *11/9/12*

Phillip York *11/9/12*

Status: Y☒ N☐ U☐

Seismic Walkdown Checklist (SWC)

Equipment ID No. *SQN-2-PSV-001-0013B-B* Equip. Class[1] *8 - Solenoid Operated Valve*

Equipment Description *SG 2 MAIN STM HDR PRESS*

Location: Bldg. *Reactor* Floor El. *747* Room, Area *50 - Annulus AZ 277*

Manufacturer, Model, Etc. (optional but recommended) _____

Instructions for Completing Checklist

This checklist may be used to document the results of the Seismic Walkdown of an item of equipment on the SWEL. The space below each of the following questions may be used to record the results of judgments and findings. Additional space is provided at the end of this checklist for documenting other comments.

Note: Y = Yes, N = No, U = Unknown, N/A = Not Applicable

Anchorage

1. Is the anchorage configuration verification required (i.e., is the item one of the 50% of SWEL items requiring such verification)? Y☐ N☒

2. Is the anchorage free of bent, broken, missing or loose hardware? Y☐ N☐ U☐ N/A☒

3. Is the anchorage free of corrosion that is more than mild surface oxidation? Y☐ N☐ U☐ N/A☒

4. Is the anchorage free of visible cracks in the concrete near the anchors? Y☐ N☐ U☐ N/A☒

5. Is the anchorage configuration consistent with plant documentation? (Note: This question only applies if the item is one of the 50% for which an anchorage configuration verification is required.) Y☐ N☐ U☐ N/A☒

6. Based on the above anchorage evaluations, is the anchorage free of potentially adverse seismic conditions? Y☒ N☐ U☐

[1] Enter the equipment class name from Appendix B: Classes of Equipment

Equipment ID No. *SQN-2-PSV-001-0013B-B* Equip. Class[1] *8 - Solenoid Operated Valve*

Equipment Description *SG 2 MAIN STM HDR PRESS*

Interaction Effects

7. Are soft targets free from impact by nearby equipment or structures? Y☒ N☐ U☐ N/A☐

8. Are overhead equipment, distribution systems, ceiling tiles and lighting, and masonry block walls not likely to collapse onto the equipment? Y☒ N☐ U☐ N/A☐

9. Do attached lines have adequate flexibility to avoid damage? Y☒ N☐ U☐ N/A☐

10. Based on the above seismic interaction evaluations, is equipment free of potentially adverse seismic interaction effects? Y☒ N☐ U☐

Other Adverse Conditions

11. Have you looked for and found no other seismic conditions that could adversely affect the safety functions of the equipment? Y☒ N☐ U☐

Comments (Additional pages may be added as necessary)

Evaluated by: *Robert Malone* Date: *11/9/12*

Phillip York *11/9/12*

Status: Y☒ N☐ U☐

Seismic Walkdown Checklist (SWC)

Equipment ID No. *SQN-2-PSV-001-0024A-A* Equip. Class[1] *8 - Solenoid Operated Valve*

Equipment Description *SG 3 MAIN STM HDR PRESS*

Location: Bldg. *Reactor* Floor El. *747* Room, Area *50 - Annulus AZ 277*

Manufacturer, Model, Etc. (optional but recommended) _____

Instructions for Completing Checklist

This checklist may be used to document the results of the Seismic Walkdown of an item of equipment on the SWEL. The space below each of the following questions may be used to record the results of judgments and findings. Additional space is provided at the end of this checklist for documenting other comments.

Note: Y = Yes, N = No, U = Unknown, N/A = Not Applicable

Anchorage

1. Is the anchorage configuration verification required (i.e., is the item one of the 50% of SWEL items requiring such verification)? Y☐ N☒

2. Is the anchorage free of bent, broken, missing or loose hardware? Y☐ N☐ U☐ N/A☒

3. Is the anchorage free of corrosion that is more than mild surface oxidation? Y☐ N☐ U☐ N/A☒

4. Is the anchorage free of visible cracks in the concrete near the anchors? Y☐ N☐ U☐ N/A☒

5. Is the anchorage configuration consistent with plant documentation? (Note: This question only applies if the item is one of the 50% for which an anchorage configuration verification is required.) Y☐ N☐ U☐ N/A☒

6. Based on the above anchorage evaluations, is the anchorage free of potentially adverse seismic conditions? Y☒ N☐ U☐

[1] Enter the equipment class name from Appendix B: Classes of Equipment

Equipment ID No. *SQN-2-PSV-001-0024A-A* Equip. Class[1] *8 - Solenoid Operated Valve*

Equipment Description *SG 3 MAIN STM HDR PRESS*

Interaction Effects

7. Are soft targets free from impact by nearby equipment or structures? Y☒ N☐ U☐ N/A☐

8. Are overhead equipment, distribution systems, ceiling tiles and lighting, and masonry block walls not likely to collapse onto the equipment? Y☒ N☐ U☐ N/A☐

9. Do attached lines have adequate flexibility to avoid damage? Y☒ N☐ U☐ N/A☐

10. Based on the above seismic interaction evaluations, is equipment free of potentially adverse seismic interaction effects? Y☒ N☐ U☐

Other Adverse Conditions

11. Have you looked for and found no other seismic conditions that could adversely affect the safety functions of the equipment? Y☒ N☐ U☐

Comments (Additional pages may be added as necessary)

Evaluated by: *Robert Malone* Date: *11/9/12*

Phillip York *11/9/12*

Status: Y☒ N☐ U☐

Seismic Walkdown Checklist (SWC)

Equipment ID No. *SQN-2-FCV-063-0118* Equip. Class[1] *8 - Motor Operated Valve*

Equipment Description *SIS ACCUM TK 1 FLOW ISOLATION VLV*

Location: Bldg. *Reactor* Floor El. *693* Room, Area *48 - Accum. Rm 1*

Manufacturer, Model, Etc. (optional but recommended) _____

Instructions for Completing Checklist

This checklist may be used to document the results of the Seismic Walkdown of an item of equipment on the SWEL. The space below each of the following questions may be used to record the results of judgments and findings. Additional space is provided at the end of this checklist for documenting other comments.

Note: Y = Yes, N = No, U = Unknown, N/A = Not Applicable

Anchorage

1. Is the anchorage configuration verification required (i.e., is the item one of the 50% of SWEL items requiring such verification)? Y☐ N☒

2. Is the anchorage free of bent, broken, missing or loose hardware? Y☐ N☐ U☐ N/A☒

3. Is the anchorage free of corrosion that is more than mild surface oxidation? Y☐ N☐ U☐ N/A☒

4. Is the anchorage free of visible cracks in the concrete near the anchors? Y☐ N☐ U☐ N/A☒

5. Is the anchorage configuration consistent with plant documentation? (Note: This question only applies if the item is one of the 50% for which an anchorage configuration verification is required.) Y☐ N☐ U☐ N/A☒

6. Based on the above anchorage evaluations, is the anchorage free of potentially adverse seismic conditions? Y☒ N☐ U☐

[1] Enter the equipment class name from Appendix B: Classes of Equipment

Equipment ID No. *SQN-2-FCV-063-0118* Equip. Class[1] *8 - Motor Operated Valve*

Equipment Description *SIS ACCUM TK 1 FLOW ISOLATION VLV*

Interaction Effects

7. Are soft targets free from impact by nearby equipment or structures? Y☒ N☐ U☐ N/A☐

8. Are overhead equipment, distribution systems, ceiling tiles and lighting, and masonry block walls not likely to collapse onto the equipment? Y☒ N☐ U☐ N/A☐

9. Do attached lines have adequate flexibility to avoid damage? Y☒ N☐ U☐ N/A☐
   Threaded attachment on flex hose was found to be unattached. Minor maintenance request.

10. Based on the above seismic interaction evaluations, is equipment free of potentially adverse seismic interaction effects? Y☒ N☐ U☐

Other Adverse Conditions

11. Have you looked for and found no other seismic conditions that could adversely affect the safety functions of the equipment? Y☒ N☐ U☐

Comments (Additional pages may be added as necessary)

Evaluated by: *Robert Malone* Date: *11/9/12*

Phillip York *11/9/12*

Status: Y☒ N☐ U☐

Seismic Walkdown Checklist (SWC)

Equipment ID No. *SQN-2-AHU-030-0080* Equip. Class[1] *10 - Air Handling Unit*

Equipment Description *CONTROL ROD DRIVE COOLING UNIT D-B*

Location: Bldg. *Reactor* Floor El. *680* Room, Area *51 - Inside Polar Crane Wall*

Manufacturer, Model, Etc. (optional but recommended) _____

Instructions for Completing Checklist

This checklist may be used to document the results of the Seismic Walkdown of an item of equipment on the SWEL. The space below each of the following questions may be used to record the results of judgments and findings. Additional space is provided at the end of this checklist for documenting other comments.

Note: Y = Yes, N = No, U = Unknown, N/A = Not Applicable

Anchorage

1. Is the anchorage configuration verification required (i.e., is the item one of the 50% of SWEL items requiring such verification)? Y☐ N☒

2. Is the anchorage free of bent, broken, missing or loose hardware? Y☒ N☐ U☐ N/A☐

3. Is the anchorage free of corrosion that is more than mild surface oxidation? Y☒ N☐ U☐ N/A☐

4. Is the anchorage free of visible cracks in the concrete near the anchors? Y☒ N☐ U☐ N/A☐

5. Is the anchorage configuration consistent with plant documentation? (Note: This question only applies if the item is one of the 50% for which an anchorage configuration verification is required.) Y☐ N☐ U☐ N/A☒

6. Based on the above anchorage evaluations, is the anchorage free of potentially adverse seismic conditions? Y☒ N☐ U☐

[1] Enter the equipment class name from Appendix B: Classes of Equipment

Equipment ID No. *SQN-2-AHU-030-0080* Equip. Class[1] *10 - Air Handling Unit*

Equipment Description *CONTROL ROD DRIVE COOLING UNIT D-B*

Interaction Effects

7. Are soft targets free from impact by nearby equipment or structures? Y☒ N☐ U☐ N/A☐

8. Are overhead equipment, distribution systems, ceiling tiles and lighting, and masonry block walls not likely to collapse onto the equipment? Y☒ N☐ U☐ N/A☐

9. Do attached lines have adequate flexibility to avoid damage? Y☒ N☐ U☐ N/A☐

10. Based on the above seismic interaction evaluations, is equipment free of potentially adverse seismic interaction effects? Y☒ N☐ U☐

Other Adverse Conditions

11. Have you looked for and found no other seismic conditions that could adversely affect the safety functions of the equipment? Y☒ N☐ U☐

Comments (Additional pages may be added as necessary)

Evaluated by: *Robert Malone* Date: *11/9/12*

Phillip York *11/9/12*

Status: Y☐ N☒ U☐

Seismic Walkdown Checklist (SWC)

Equipment ID No. *SQN-2-AHU-030-0088* Equip. Class[1] *10 - Air Handling Unit*

Equipment Description *CONTROL ROD DRIVE COOLING UNIT C-A*

Location: Bldg. *Reactor* Floor El. *680* Room, Area *51 - Inside Polar Crane Wall*

Manufacturer, Model, Etc. (optional but recommended) _____

Instructions for Completing Checklist

This checklist may be used to document the results of the Seismic Walkdown of an item of equipment on the SWEL. The space below each of the following questions may be used to record the results of judgments and findings. Additional space is provided at the end of this checklist for documenting other comments.

Note: Y = Yes, N = No, U = Unknown, N/A = Not Applicable

Anchorage

1. Is the anchorage configuration verification required (i.e., is the item one of the 50% of SWEL items requiring such verification)? Y☐ N☒

2. Is the anchorage free of bent, broken, missing or loose hardware? Y☐ N☒ U☐ N/A☐
   One (of six) bolt was missing from equipment to steel supporting frame.

3. Is the anchorage free of corrosion that is more than mild surface oxidation? Y☒ N☐ U☐ N/A☐

4. Is the anchorage free of visible cracks in the concrete near the anchors? Y☒ N☐ U☐ N/A☐

5. Is the anchorage configuration consistent with plant documentation? (Note: This question only applies if the item is one of the 50% for which an anchorage configuration verification is required.) Y☐ N☐ U☐ N/A☒

6. Based on the above anchorage evaluations, is the anchorage free of potentially adverse seismic conditions? Y☒ N☐ U☐

[1] Enter the equipment class name from Appendix B: Classes of Equipment

Equipment ID No. *SQN-2-AHU-030-0088* Equip. Class[1] *10 - Air Handling Unit*

Equipment Description *CONTROL ROD DRIVE COOLING UNIT C-A*

Interaction Effects

7. Are soft targets free from impact by nearby equipment or structures? Y☒ N☐ U☐ N/A☐

8. Are overhead equipment, distribution systems, ceiling tiles and lighting, and masonry block walls not likely to collapse onto the equipment? Y☒ N☐ U☐ N/A☐

9. Do attached lines have adequate flexibility to avoid damage? Y☒ N☐ U☐ N/A☐

10. Based on the above seismic interaction evaluations, is equipment free of potentially adverse seismic interaction effects? Y☒ N☐ U☐

Other Adverse Conditions

11. Have you looked for and found no other seismic conditions that could adversely affect the safety functions of the equipment? Y☒ N☐ U☐

Comments (Additional pages may be added as necessary)

Evaluated by: *Robert Malone* Date: *11/9/12*

Phillip York *11/9/12*

Status: Y☒ N☐ U☐

Seismic Walkdown Checklist (SWC)

Equipment ID No. *SQN-2-AHU-313-0262* Equip. Class[1] *10 - Air Handling Unit*

Equipment Description *INCORE INSTR RM AHU A*

Location: Bldg. *Reactor* Floor El. *708* Room, Area *52 - Incore Inst Room Platform*

Manufacturer, Model, Etc. (optional but recommended) _____

Instructions for Completing Checklist

This checklist may be used to document the results of the Seismic Walkdown of an item of equipment on the SWEL. The space below each of the following questions may be used to record the results of judgments and findings. Additional space is provided at the end of this checklist for documenting other comments.

Note: Y = Yes, N = No, U = Unknown, N/A = Not Applicable

Anchorage

1. Is the anchorage configuration verification required (i.e., is the item one of the 50% of SWEL items requiring such verification)? Y☐ N☒

2. Is the anchorage free of bent, broken, missing or loose hardware? Y☒ N☐ U☐ N/A☐

3. Is the anchorage free of corrosion that is more than mild surface oxidation? Y☒ N☐ U☐ N/A☐

4. Is the anchorage free of visible cracks in the concrete near the anchors? Y☐ N☐ U☐ N/A☒
   This AHU sits on steel grating on an elevated platform.

5. Is the anchorage configuration consistent with plant documentation? (Note: This question only applies if the item is one of the 50% for which an anchorage configuration verification is required.) Y☐ N☐ U☐ N/A☒

6. Based on the above anchorage evaluations, is the anchorage free of potentially adverse seismic conditions? Y☒ N☐ U☐

[1] Enter the equipment class name from Appendix B: Classes of Equipment

Equipment ID No. *SQN-2-AHU-313-0262* Equip. Class[1] *10 - Air Handling Unit*

Equipment Description *INCORE INSTR RM AHU A*

Interaction Effects

7. Are soft targets free from impact by nearby equipment or structures? Y☒ N☐ U☐ N/A☐

8. Are overhead equipment, distribution systems, ceiling tiles and lighting, and masonry block walls not likely to collapse onto the equipment? Y☒ N☐ U☐ N/A☐

9. Do attached lines have adequate flexibility to avoid damage? Y☒ N☐ U☐ N/A☐

10. Based on the above seismic interaction evaluations, is equipment free of potentially adverse seismic interaction effects? Y☒ N☐ U☐

Other Adverse Conditions

11. Have you looked for and found no other seismic conditions that could adversely affect the safety functions of the equipment? Y☒ N☐ U☐

Comments (Additional pages may be added as necessary)

Evaluated by: *Robert Malone* Date: *11/9/12*

Phillip York *11/9/12*

Status: Y☒ N☐ U☐

Seismic Walkdown Checklist (SWC)

Equipment ID No. *SQN-2-CLR-030-0074* Equip. Class[1] *10 - Cooler*

Equipment Description *REACTOR LOWER COMPT COOLING UNIT A-A*

Location: Bldg. *Reactor* Floor El. *693* Room, Area *47 - Fan Room 1*

Manufacturer, Model, Etc. (optional but recommended) _____

Instructions for Completing Checklist

This checklist may be used to document the results of the Seismic Walkdown of an item of equipment on the SWEL. The space below each of the following questions may be used to record the results of judgments and findings. Additional space is provided at the end of this checklist for documenting other comments.

Note: Y = Yes, N = No, U = Unknown, N/A = Not Applicable

Anchorage

1. Is the anchorage configuration verification required (i.e., is the item one of the 50% of SWEL items requiring such verification)? Y☐ N☒

2. Is the anchorage free of bent, broken, missing or loose hardware? Y☒ N☐ U☐ N/A☐

3. Is the anchorage free of corrosion that is more than mild surface oxidation? Y☒ N☐ U☐ N/A☐
   Minor corrosion found on anchorage. Not considered significant.

4. Is the anchorage free of visible cracks in the concrete near the anchors? Y☒ N☐ U☐ N/A☐

5. Is the anchorage configuration consistent with plant documentation? (Note: This question only applies if the item is one of the 50% for which an anchorage configuration verification is required.) Y☐ N☐ U☐ N/A☒

6. Based on the above anchorage evaluations, is the anchorage free of potentially adverse seismic conditions? Y☒ N☐ U☐

[1] Enter the equipment class name from Appendix B: Classes of Equipment

Equipment ID No. *SQN-2-CLR-030-0074* Equip. Class[1] *10 - Cooler*

Equipment Description *REACTOR LOWER COMPT COOLING UNIT A-A*

Interaction Effects

7. Are soft targets free from impact by nearby equipment or structures? Y☒ N☐ U☐ N/A☐

8. Are overhead equipment, distribution systems, ceiling tiles and lighting, and masonry block walls not likely to collapse onto the equipment? Y☒ N☐ U☐ N/A☐

9. Do attached lines have adequate flexibility to avoid damage? Y☒ N☐ U☐ N/A☐

10. Based on the above seismic interaction evaluations, is equipment free of potentially adverse seismic interaction effects? Y☒ N☐ U☐

Other Adverse Conditions

11. Have you looked for and found no other seismic conditions that could adversely affect the safety functions of the equipment? Y☒ N☐ U☐

Comments (Additional pages may be added as necessary)

Evaluated by: *Robert Malone* Date: *11/9/12*

Phillip York *11/9/12*

Status: Y☒ N☐ U☐

Seismic Walkdown Checklist (SWC)

Equipment ID No. *SQN-2-LOCL-500-0183C* Equip. Class[1] *18 - Instrument Rack*

Equipment Description *FLOOR PANEL REACTOR BUILDING*

Location: Bldg. *Reactor* Floor El. *693* Room, Area *47 - Fan Room 1*

Manufacturer, Model, Etc. (optional but recommended) _____

Instructions for Completing Checklist

This checklist may be used to document the results of the Seismic Walkdown of an item of equipment on the SWEL. The space below each of the following questions may be used to record the results of judgments and findings. Additional space is provided at the end of this checklist for documenting other comments.

Note: Y = Yes, N = No, U = Unknown, N/A = Not Applicable

Anchorage

1. Is the anchorage configuration verification required (i.e., is the item one of the 50% of SWEL items requiring such verification)? Y☐ N☒

2. Is the anchorage free of bent, broken, missing or loose hardware? Y☒ N☐ U☐ N/A☐

3. Is the anchorage free of corrosion that is more than mild surface oxidation? Y☒ N☐ U☐ N/A☐

4. Is the anchorage free of visible cracks in the concrete near the anchors? Y☒ N☐ U☐ N/A☐

5. Is the anchorage configuration consistent with plant documentation? (Note: This question only applies if the item is one of the 50% for which an anchorage configuration verification is required.) Y☐ N☐ U☐ N/A☒

6. Based on the above anchorage evaluations, is the anchorage free of potentially adverse seismic conditions? Y☒ N☐ U☐

[1] Enter the equipment class name from Appendix B: Classes of Equipment

Equipment ID No. *SQN-2-LOCL-500-0183C* Equip. Class[1] *18 - Instrument Rack*

Equipment Description *FLOOR PANEL REACTOR BUILDING*

Interaction Effects

7. Are soft targets free from impact by nearby equipment or structures? Y☒ N☐ U☐ N/A☐

8. Are overhead equipment, distribution systems, ceiling tiles and lighting, and masonry block walls not likely to collapse onto the equipment? Y☒ N☐ U☐ N/A☐

9. Do attached lines have adequate flexibility to avoid damage? Y☒ N☐ U☐ N/A☐

10. Based on the above seismic interaction evaluations, is equipment free of potentially adverse seismic interaction effects? Y☒ N☐ U☐

Other Adverse Conditions

11. Have you looked for and found no other seismic conditions that could adversely affect the safety functions of the equipment? Y☒ N☐ U☐

Comments (Additional pages may be added as necessary)

Evaluated by: *Robert Malone* Date: *11/9/12*

Phillip York *11/9/12*

Status: Y☒ N☐ U☐

Seismic Walkdown Checklist (SWC)

Equipment ID No. *SQN-2-TNK-063-0060* Equip. Class[1] *21 - Tank*

Equipment Description *SIS ACCUMULATOR NO 4*

Location: Bldg. *Reactor* Floor El. *693* Room, Area *49 - Accum. Rm 4*

Manufacturer, Model, Etc. (optional but recommended) _____

Instructions for Completing Checklist

This checklist may be used to document the results of the Seismic Walkdown of an item of equipment on the SWEL. The space below each of the following questions may be used to record the results of judgments and findings. Additional space is provided at the end of this checklist for documenting other comments.

Note: Y = Yes, N = No, U = Unknown, N/A = Not Applicable

Anchorage

1. Is the anchorage configuration verification required (i.e., is the item one of the 50% of SWEL items requiring such verification)? Y☐ N☒

2. Is the anchorage free of bent, broken, missing or loose hardware? Y☒ N☐ U☐ N/A☐

3. Is the anchorage free of corrosion that is more than mild surface oxidation? Y☒ N☐ U☐ N/A☐

4. Is the anchorage free of visible cracks in the concrete near the anchors? Y☒ N☐ U☐ N/A☐

5. Is the anchorage configuration consistent with plant documentation? (Note: This question only applies if the item is one of the 50% for which an anchorage configuration verification is required.) Y☐ N☐ U☐ N/A☒

6. Based on the above anchorage evaluations, is the anchorage free of potentially adverse seismic conditions? Y☒ N☐ U☐

[1] Enter the equipment class name from Appendix B: Classes of Equipment

Equipment ID No. *SQN-2-TNK-063-0060* Equip. Class[1] *21 - Tank*

Equipment Description *SIS ACCUMULATOR NO 4*

Interaction Effects

7. Are soft targets free from impact by nearby equipment or structures? Y☒ N☐ U☐ N/A☐

8. Are overhead equipment, distribution systems, ceiling tiles and lighting, and masonry block walls not likely to collapse onto the equipment? Y☒ N☐ U☐ N/A☐

9. Do attached lines have adequate flexibility to avoid damage? Y☒ N☐ U☐ N/A☐

10. Based on the above seismic interaction evaluations, is equipment free of potentially adverse seismic interaction effects? Y☒ N☐ U☐

Other Adverse Conditions

11. Have you looked for and found no other seismic conditions that could adversely affect the safety functions of the equipment? Y☒ N☐ U☐

Comments (Additional pages may be added as necessary)

Evaluated by: *Robert Malone* Date: *11/9/12*

Phillip York *11/9/12*

Status: Y☒ N☐ U☐

Seismic Walkdown Checklist (SWC)

Equipment ID No. *SQN-2-TNK-063-0119* Equip. Class[1] *21 - Tank*

Equipment Description *SIS ACCUMULATOR NO 1*

Location: Bldg. *Reactor* Floor El. *693* Room, Area *48 - Accum. Rm 1*

Manufacturer, Model, Etc. (optional but recommended) _____

Instructions for Completing Checklist

This checklist may be used to document the results of the Seismic Walkdown of an item of equipment on the SWEL. The space below each of the following questions may be used to record the results of judgments and findings. Additional space is provided at the end of this checklist for documenting other comments.

Note: Y = Yes, N = No, U = Unknown, N/A = Not Applicable

Anchorage

1. Is the anchorage configuration verification required (i.e., is the item one of the 50% of SWEL items requiring such verification)? Y☐ N☒

2. Is the anchorage free of bent, broken, missing or loose hardware? Y☒ N☐ U☐ N/A☐

3. Is the anchorage free of corrosion that is more than mild surface oxidation? Y☒ N☐ U☐ N/A☐

4. Is the anchorage free of visible cracks in the concrete near the anchors? Y☒ N☐ U☐ N/A☐

5. Is the anchorage configuration consistent with plant documentation? (Note: This question only applies if the item is one of the 50% for which an anchorage configuration verification is required.) Y☐ N☐ U☐ N/A☒

6. Based on the above anchorage evaluations, is the anchorage free of potentially adverse seismic conditions? Y☒ N☐ U☐

[1] Enter the equipment class name from Appendix B: Classes of Equipment

Equipment ID No. *SQN-2-TNK-063-0119* Equip. Class[1] *21 - Tank*

Equipment Description *SIS ACCUMULATOR NO 1*

Interaction Effects

7. Are soft targets free from impact by nearby equipment or structures? Y☒ N☐ U☐ N/A☐

8. Are overhead equipment, distribution systems, ceiling tiles and lighting, and masonry block walls not likely to collapse onto the equipment? Y☒ N☐ U☐ N/A☐

9. Do attached lines have adequate flexibility to avoid damage? Y☒ N☐ U☐ N/A☐

10. Based on the above seismic interaction evaluations, is equipment free of potentially adverse seismic interaction effects? Y☒ N☐ U☐

Other Adverse Conditions

11. Have you looked for and found no other seismic conditions that could adversely affect the safety functions of the equipment? Y☒ N☐ U☐

Comments (Additional pages may be added as necessary)

Evaluated by: *Robert Malone* Date: *11/9/12*

Phillip York *11/9/12*

Appendix F: AWCs

The following signatures are provided for the engineers responsible for the Area Walk-By Checklists in Sequoyah Unit 2.

Name	Signature	Date
Isaac Antanaitis		11/12/12
James Edgar		11/12/12
Robert Malone		11/12/12
Steven Summers		11/12/12
Phillip York		11-12-2012

Status: Y☒ N☐ U☐

Area Walk-By Checklist (AWC)

Location: Bldg. *DG* Floor El. *722* Room, Area[4] *1 - Bay 2A*

Instructions for Completing Checklist

This checklist may be used to document the results of the Area Walk-By near one or more SWEL items. The space below each of the following questions may be used to record the results of judgments and findings. Additional space is provided at the end of this checklist for documenting other comments.

Note: Y = Yes, N = No, U = Unknown, N/A = Not Applicable

1. Does anchorage of equipment in the area appear to be free of potentially adverse seismic conditions (if visible without necessarily opening cabinets)? Y☒ N☐ U☐ N/A☐

2. Does anchorage of equipment in the area appear to be free of significant degraded conditions? Y☒ N☐ U☐ N/A☐

3. Based on a visual inspection from the floor, do the cable/conduit raceways and HVAC ducting appear to be free of potentially adverse seismic conditions (e.g., condition of supports is adequate and fill conditions of cable trays appear to be inside acceptable limits)? Y☒ N☐ U☐ N/A☐

4. Does it appear that the area is free of potentially adverse seismic spatial interactions with other equipment in the area (e.g., ceiling tiles and lighting)? Y☒ N☐ U☐ N/A☐

[4] If the room in which the SWEL item is located is very large (e.g., Turbine Hall), the area selected should be described. This selected area should be based on judgment, e.g., on the order of about 35 feet from the SWEL item.

Location: Bldg. *DG* Floor El. *722* Room, Area[4] *1 - Bay 2A*

5. Does it appear that the area is free of potentially adverse seismic interactions that could cause flooding or spray in the area? Y☒ N☐ U☐ N/A☐
   Eye wash tank needs to be restrained. During a seismic event it could tip and could cause spray. The eye wash tank was observed to be restrained during a later inspecton.

6. Does it appear that the area is free of potentially adverse seismic interactions that could cause a fire in the area? Y☒ N☐ U☐ N/A☐

7. Does it appear that the area is free of potentially adverse seismic interactions associated with housekeeping practices, storage of portable equipment, and temporary installations (e.g., scaffolding, lead shielding)? Y☒ N☐ U☐ N/A☐
   Scaffolding was found in the area. The inspection tags are current and are dated to be removed 7-19-12.

8. Have you looked for and found no other seismic conditions that could adversely affect the safety functions of the equipment in the area? Y☒ N☐ U☐
   A washer was missing from one of the anchor bolts on the DG engine. This is not considered to be seismically adverse.

Comments (Additional pages may be added as necessary)

The SWEL items are included in the area encompassed by this Area Walk-By:

2-FCV-067-0066	2-XSW-082-UH-A	2-GENB-082-0002A
2-FCV-067-0068	2-BATB-082-UD-A	2-PNLA-082-TV /3-A
2-CMP-082-0240	2-CHGB-082-TZ	2-TNK-082-0224
2-CMP-082-0241	2-ENG-082-0002A1	
2-PNLA-082-TV-A	2-ENG-082-0002A2	

Evaluated by: *Robert Malone* Date: *7/18/12*

Phillip York *7/18/12*

Status: Y☒ N☐ U☐

Area Walk-By Checklist (AWC)

Location: Bldg. *DG* Floor El. *740* Room, Area[4] *2 - 2A Board Room*

Instructions for Completing Checklist

This checklist may be used to document the results of the Area Walk-By near one or more SWEL items. The space below each of the following questions may be used to record the results of judgments and findings. Additional space is provided at the end of this checklist for documenting other comments.

Note: Y = Yes, N = No, U = Unknown, N/A = Not Applicable

1. Does anchorage of equipment in the area appear to be free of potentially adverse seismic conditions (if visible without necessarily opening cabinets)? Y☒ N☐ U☐ N/A☐

2. Does anchorage of equipment in the area appear to be free of significant degraded conditions? Y☒ N☐ U☐ N/A☐

3. Based on a visual inspection from the floor, do the cable/conduit raceways and HVAC ducting appear to be free of potentially adverse seismic conditions (e.g., condition of supports is adequate and fill conditions of cable trays appear to be inside acceptable limits)? Y☒ N☐ U☐ N/A☐

4. Does it appear that the area is free of potentially adverse seismic spatial interactions with other equipment in the area (e.g., ceiling tiles and lighting)? Y☒ N☐ U☐ N/A☐

[4] If the room in which the SWEL item is located is very large (e.g., Turbine Hall), the area selected should be described. This selected area should be based on judgment, e.g., on the order of about 35 feet from the SWEL item.

Location: Bldg. *DG* Floor El. *740* Room, Area[4] *2 - 2A Board Room*

5. Does it appear that the area is free of potentially adverse seismic interactions that could cause flooding or spray in the area? Y☒ N☐ U☐ N/A☐

6. Does it appear that the area is free of potentially adverse seismic interactions that could cause a fire in the area? Y☒ N☐ U☐ N/A☐

7. Does it appear that the area is free of potentially adverse seismic interactions associated with housekeeping practices, storage of portable equipment, and temporary installations (e.g., scaffolding, lead shielding)? Y☒ N☐ U☐ N/A☐

8. Have you looked for and found no other seismic conditions that could adversely affect the safety functions of the equipment in the area? Y☒ N☐ U☐

Comments (Additional pages may be added as necessary)

The SWEL items are included in the area encompassed by this Area Walk-By:
2-BDC-201-FQ-A

Evaluated by: *Robert Malone* Date: *7-18-12*

Phillip York *7-18-12*

Status: Y☒ N☐ U☐

Area Walk-By Checklist (AWC)

Location: Bldg. *DG* Floor El. *740* Room, Area[4] *3 - 2A Fan Room*

Instructions for Completing Checklist

This checklist may be used to document the results of the Area Walk-By near one or more SWEL items. The space below each of the following questions may be used to record the results of judgments and findings. Additional space is provided at the end of this checklist for documenting other comments.

Note: Y = Yes, N = No, U = Unknown, N/A = Not Applicable

1. Does anchorage of equipment in the area appear to be free of potentially adverse seismic conditions (if visible without necessarily opening cabinets)? Y☒ N☐ U☐ N/A☐

   It was noted that a few of the HVAC supports attached to the ceiling had at first appeared to have missing bolts. The HVAC base plates consisted of a 4 bolt pattern plate bolted to the ceiling. Not all of the bolts had been installed. In the location without the bolts the corner of the base plate was welded to an embed plate. In most cases only one bolt was missing. Given that there was a corner weld to account for the missing bolt as well as the robustness of the connection (even when neglecting the weld) compared to the size of the ductwork this is deemed to be acceptable.

2. Does anchorage of equipment in the area appear to be free of significant degraded conditions? Y☒ N☐ U☐ N/A☐

3. Based on a visual inspection from the floor, do the cable/conduit raceways and HVAC ducting appear to be free of potentially adverse seismic conditions (e.g., condition of supports is adequate and fill conditions of cable trays appear to be inside acceptable limits)? Y☒ N☐ U☐ N/A☐

   Same note as shown in question one above.

4. Does it appear that the area is free of potentially adverse seismic spatial interactions with other equipment in the area (e.g., ceiling tiles and lighting)? Y☒ N☐ U☐ N/A☐

[4] If the room in which the SWEL item is located is very large (e.g., Turbine Hall), the area selected should be described. This selected area should be based on judgment, e.g., on the order of about 35 feet from the SWEL item.

Location: Bldg. *DG* Floor El. *740* Room, Area[4] *3 - 2A Fan Room*

5. Does it appear that the area is free of potentially adverse seismic interactions that could cause flooding or spray in the area? Y☒ N☐ U☐ N/A☐

6. Does it appear that the area is free of potentially adverse seismic interactions that could cause a fire in the area? Y☒ N☐ U☐ N/A☐

7. Does it appear that the area is free of potentially adverse seismic interactions associated with housekeeping practices, storage of portable equipment, and temporary installations (e.g., scaffolding, lead shielding)? Y☒ N☐ U☐ N/A☐

8. Have you looked for and found no other seismic conditions that could adversely affect the safety functions of the equipment in the area? Y☒ N☐ U☐

Comments (Additional pages may be added as necessary)

The following equipment is included in the area encompassed by this Area Walk-By:

2-FAN-030-0452
2-FAN-030-0460
2-TE-300-0452A-A
2-TE-300-0452B-A

Evaluated by: *Robert Malone* Date: *7-18-12*

Phillip York *7-18-12*

Status: Y☒ N☐ U☐

Area Walk-By Checklist (AWC)

Location: Bldg. DG Floor El. 722 Room, Area[4] 4 - Bay 2B

Instructions for Completing Checklist

This checklist may be used to document the results of the Area Walk-By near one or more SWEL items. The space below each of the following questions may be used to record the results of judgments and findings. Additional space is provided at the end of this checklist for documenting other comments.

Note: Y = Yes, N = No, U = Unknown, N/A = Not Applicable

1. Does anchorage of equipment in the area appear to be free of potentially adverse seismic conditions (if visible without necessarily opening cabinets)? Y☒ N☐ U☐ N/A☐

2. Does anchorage of equipment in the area appear to be free of significant degraded conditions? Y☒ N☐ U☐ N/A☐

3. Based on a visual inspection from the floor, do the cable/conduit raceways and HVAC ducting appear to be free of potentially adverse seismic conditions (e.g., condition of supports is adequate and fill conditions of cable trays appear to be inside acceptable limits)? Y☒ N☐ U☐ N/A☐

4. Does it appear that the area is free of potentially adverse seismic spatial interactions with other equipment in the area (e.g., ceiling tiles and lighting)? Y☒ N☐ U☐ N/A☐

[4] If the room in which the SWEL item is located is very large (e.g., Turbine Hall), the area selected should be described. This selected area should be based on judgment, e.g., on the order of about 35 feet from the SWEL item.

Location: Bldg. *DG* Floor El. *722* Room, Area[4] *4 - Bay 2B*

5. Does it appear that the area is free of potentially adverse seismic interactions that could cause flooding or spray in the area? Y☒ N☐ U☐ N/A☐

6. Does it appear that the area is free of potentially adverse seismic interactions that could cause a fire in the area? Y☒ N☐ U☐ N/A☐

7. Does it appear that the area is free of potentially adverse seismic interactions associated with housekeeping practices, storage of portable equipment, and temporary installations (e.g., scaffolding, lead shielding)? Y☒ N☐ U☐ N/A☐
   Trash can does not have a restraint but does not pose any seismic adverse risk.

8. Have you looked for and found no other seismic conditions that could adversely affect the safety functions of the equipment in the area? Y☒ N☐ U☐

Comments (Additional pages may be added as necessary)

The following equipment is included in the area encompassed by this Area Walk-By:

2-FCV-067-0067
2-CMP-082-0271
2-CHGB-082-UA-B
2-ENG-082-0002B1
2-ENG-082-0002B2
2-GENB-082-0002B
2-LOCL-500-0163
2-TNK-082-0255

Evaluated by: *Robert Malone* Date: *7/23/12*

Phillip York *7/23/12*

Status: Y☒ N☐ U☐

Area Walk-By Checklist (AWC)

Location: Bldg. *DG* Floor El. *740* Room, Area[4] *5 - 2B Board Room*

Instructions for Completing Checklist

This checklist may be used to document the results of the Area Walk-By near one or more SWEL items. The space below each of the following questions may be used to record the results of judgments and findings. Additional space is provided at the end of this checklist for documenting other comments.

Note: Y = Yes, N = No, U = Unknown, N/A = Not Applicable

1. Does anchorage of equipment in the area appear to be free of potentially adverse seismic conditions (if visible without necessarily opening cabinets)? Y☒ N☐ U☐ N/A☐

2. Does anchorage of equipment in the area appear to be free of significant degraded conditions? Y☒ N☐ U☐ N/A☐

3. Based on a visual inspection from the floor, do the cable/conduit raceways and HVAC ducting appear to be free of potentially adverse seismic conditions (e.g., condition of supports is adequate and fill conditions of cable trays appear to be inside acceptable limits)? Y☒ N☐ U☐ N/A☐

4. Does it appear that the area is free of potentially adverse seismic spatial interactions with other equipment in the area (e.g., ceiling tiles and lighting)? Y☒ N☐ U☐ N/A☐

[4] If the room in which the SWEL item is located is very large (e.g., Turbine Hall), the area selected should be described. This selected area should be based on judgment, e.g., on the order of about 35 feet from the SWEL item.

Location: Bldg. *DG* Floor El. *740* Room, Area[4] *5 - 2B Board Room*

5. Does it appear that the area is free of potentially adverse seismic interactions that could cause flooding or spray in the area? Y☒ N☐ U☐ N/A☐

6. Does it appear that the area is free of potentially adverse seismic interactions that could cause a fire in the area? Y☒ N☐ U☐ N/A☐

7. Does it appear that the area is free of potentially adverse seismic interactions associated with housekeeping practices, storage of portable equipment, and temporary installations (e.g., scaffolding, lead shielding)? Y☒ N☐ U☐ N/A☐
   Scaffolding noted in area but has current inspection dates.

8. Have you looked for and found no other seismic conditions that could adversely affect the safety functions of the equipment in the area? Y☒ N☐ U☐

Comments (Additional pages may be added as necessary)

The following equipment is included in the area encompassed by this Area Walk-By:
2-BDC-201-FU-B

Evaluated by: *Phillip York* Date: *7-24-12*

Robert Malone *7-24-12*

Status: Y☒ N☐ U☐

Area Walk-By Checklist (AWC)

Location: Bldg. *DG* Floor El. *740* Room, Area[4] *6 - 2B Fan Room*

Instructions for Completing Checklist

This checklist may be used to document the results of the Area Walk-By near one or more SWEL items. The space below each of the following questions may be used to record the results of judgments and findings. Additional space is provided at the end of this checklist for documenting other comments.

Note: Y = Yes, N = No, U = Unknown, N/A = Not Applicable

1. Does anchorage of equipment in the area appear to be free of potentially adverse seismic conditions (if visible without necessarily opening cabinets)? Y☒ N☐ U☐ N/A☐

2. Does anchorage of equipment in the area appear to be free of significant degraded conditions? Y☒ N☐ U☐ N/A☐

3. Based on a visual inspection from the floor, do the cable/conduit raceways and HVAC ducting appear to be free of potentially adverse seismic conditions (e.g., condition of supports is adequate and fill conditions of cable trays appear to be inside acceptable limits)? Y☒ N☐ U☐ N/A☐

4. Does it appear that the area is free of potentially adverse seismic spatial interactions with other equipment in the area (e.g., ceiling tiles and lighting)? Y☒ N☐ U☐ N/A☐

[4] If the room in which the SWEL item is located is very large (e.g., Turbine Hall), the area selected should be described. This selected area should be based on judgment, e.g., on the order of about 35 feet from the SWEL item.

Location: Bldg. *DG* Floor El. *740* Room, Area[4] *6 - 2B Fan Room*

5. Does it appear that the area is free of potentially adverse seismic interactions that could cause flooding or spray in the area? Y☒ N☐ U☐ N/A☐

6. Does it appear that the area is free of potentially adverse seismic interactions that could cause a fire in the area? Y☒ N☐ U☐ N/A☐

7. Does it appear that the area is free of potentially adverse seismic interactions associated with housekeeping practices, storage of portable equipment, and temporary installations (e.g., scaffolding, lead shielding)? Y☒ N☐ U☐ N/A☐

8. Have you looked for and found no other seismic conditions that could adversely affect the safety functions of the equipment in the area? Y☒ N☐ U☐

Comments (Additional pages may be added as necessary)

The following equipment is included in the area encompassed by this Area Walk-By:

2-FAN-030-0450-B
2-FAN-030-0462-B
2-TE-300-0450A-B
2-TE-300-0450B-B

Evaluated by: *Robert Malone* Date: *7-24-12*

Phillip York *7-24-12*

Status: Y☐ N☒ U☐

Area Walk-By Checklist (AWC)

Location: Bldg. *ERCW* Floor El. *720* Room, Area[4] *7 – 2A Pump Room*

Instructions for Completing Checklist

This checklist may be used to document the results of the Area Walk-By near one or more SWEL items. The space below each of the following questions may be used to record the results of judgments and findings. Additional space is provided at the end of this checklist for documenting other comments.

Note: Y = Yes, N = No, U = Unknown, N/A = Not Applicable

1. Does anchorage of equipment in the area appear to be free of potentially adverse seismic conditions (if visible without necessarily opening cabinets)? Y☒ N☐ U☐ N/A☐

2. Does anchorage of equipment in the area appear to be free of significant degraded conditions? Y☒ N☐ U☐ N/A☐

3. Based on a visual inspection from the floor, do the cable/conduit raceways and HVAC ducting appear to be free of potentially adverse seismic conditions (e.g., condition of supports is adequate and fill conditions of cable trays appear to be inside acceptable limits)? Y☒ N☐ U☐ N/A☐

4. Does it appear that the area is free of potentially adverse seismic spatial interactions with other equipment in the area (e.g., ceiling tiles and lighting)? Y☒ N☐ U☐ N/A☐

[4] If the room in which the SWEL item is located is very large (e.g., Turbine Hall), the area selected should be described. This selected area should be based on judgment, e.g., on the order of about 35 feet from the SWEL item.

Location: Bldg. *ERCW* Floor El. *720* Room, Area[4] *7 – 2A Pump Room*

5. Does it appear that the area is free of potentially adverse seismic interactions that could cause flooding or spray in the area? Y☒ N☐ U☐ N/A☐

6. Does it appear that the area is free of potentially adverse seismic interactions that could cause a fire in the area? Y☐ N☒ U☐ N/A☐
   Flammable material cabinet had a broken latch so the door would not stay closed. The cabinet was also not anchored.

7. Does it appear that the area is free of potentially adverse seismic interactions associated with housekeeping practices, storage of portable equipment, and temporary installations (e.g., scaffolding, lead shielding)? Y☒ N☐ U☐ N/A☐
   A welding machine was located within approximately 12" of the flexible electrical conduit coming out of the floor up to the pump. The wheels of the welding machine were restrained using a C-Clamp on both rear wheels. This was not considered seismically adverse.

8. Have you looked for and found no other seismic conditions that could adversely affect the safety functions of the equipment in the area? Y☒ N☐ U☐

Comments (Additional pages may be added as necessary)

The following SWEL items are included in the area encompassed by this Area Walk-By:

0-PMP-067-0464

0-PMP-067-0487-A

Evaluated by: *Robert Malone* Date: *7-19-12*

Phillip York *7-19-12*

Status: Y☒ N☐ U☐

Area Walk-By Checklist (AWC)

Location: Bldg. *ERCW* Floor El. *704* Room, Area[4] *8 - 2A Board Room*

Instructions for Completing Checklist

This checklist may be used to document the results of the Area Walk-By near one or more SWEL items. The space below each of the following questions may be used to record the results of judgments and findings. Additional space is provided at the end of this checklist for documenting other comments.

Note: Y = Yes, N = No, U = Unknown, N/A = Not Applicable

1. Does anchorage of equipment in the area appear to be free of potentially adverse seismic conditions (if visible without necessarily opening cabinets)? Y☒ N☐ U☐ N/A☐

2. Does anchorage of equipment in the area appear to be free of significant degraded conditions? Y☒ N☐ U☐ N/A☐

3. Based on a visual inspection from the floor, do the cable/conduit raceways and HVAC ducting appear to be free of potentially adverse seismic conditions (e.g., condition of supports is adequate and fill conditions of cable trays appear to be inside acceptable limits)? Y☒ N☐ U☐ N/A☐

4. Does it appear that the area is free of potentially adverse seismic spatial interactions with other equipment in the area (e.g., ceiling tiles and lighting)? Y☒ N☐ U☐ N/A☐
   Florescent lights do not have cages.

[4] If the room in which the SWEL item is located is very large (e.g., Turbine Hall), the area selected should be described. This selected area should be based on judgment, e.g., on the order of about 35 feet from the SWEL item.

Location: Bldg. *ERCW* Floor El. *704* Room, Area[4] *8 - 2A Board Room*

5. Does it appear that the area is free of potentially adverse seismic interactions that could cause flooding or spray in the area? Y☒ N☐ U☐ N/A☐

6. Does it appear that the area is free of potentially adverse seismic interactions that could cause a fire in the area? Y☒ N☐ U☐ N/A☐

7. Does it appear that the area is free of potentially adverse seismic interactions associated with housekeeping practices, storage of portable equipment, and temporary installations (e.g., scaffolding, lead shielding)? Y☒ N☐ U☐ N/A☐
   Unrestrained ladder in area but not near any equipment.

8. Have you looked for and found no other seismic conditions that could adversely affect the safety functions of the equipment in the area? Y☒ N☐ U☐

Comments (Additional pages may be added as necessary)

The following equipment is included in the area encompassed by this Area Walk-By:

2-BDC-201-FL-A
2-XFA-202-0312

Evaluated by: *Robert Malone* Date: *7-19-12*

Phillip York *7-19-12*

Status: Y☒ N☐ U☐

Area Walk-By Checklist (AWC)

Location: Bldg. *ERCW* Floor El. *688* Room, Area[4] *9 - 2A Strainer Room*

Instructions for Completing Checklist

This checklist may be used to document the results of the Area Walk-By near one or more SWEL items. The space below each of the following questions may be used to record the results of judgments and findings. Additional space is provided at the end of this checklist for documenting other comments.

Note: Y = Yes, N = No, U = Unknown, N/A = Not Applicable

1. Does anchorage of equipment in the area appear to be free of potentially adverse seismic conditions (if visible without necessarily opening cabinets)? Y☒ N☐ U☐ N/A☐

2. Does anchorage of equipment in the area appear to be free of significant degraded conditions? Y☒ N☐ U☐ N/A☐

3. Based on a visual inspection from the floor, do the cable/conduit raceways and HVAC ducting appear to be free of potentially adverse seismic conditions (e.g., condition of supports is adequate and fill conditions of cable trays appear to be inside acceptable limits)? Y☒ N☐ U☐ N/A☐

4. Does it appear that the area is free of potentially adverse seismic spatial interactions with other equipment in the area (e.g., ceiling tiles and lighting)? Y☒ N☐ U☐ N/A☐

[4] If the room in which the SWEL item is located is very large (e.g., Turbine Hall), the area selected should be described. This selected area should be based on judgment, e.g., on the order of about 35 feet from the SWEL item.

Location: Bldg. *ERCW* Floor El. *688* Room, Area[4] *9 - 2A Strainer Room*

5. Does it appear that the area is free of potentially adverse seismic interactions that could cause flooding or spray in the area? Y☒ N☐ U☐ N/A☐

6. Does it appear that the area is free of potentially adverse seismic interactions that could cause a fire in the area? Y☒ N☐ U☐ N/A☐

7. Does it appear that the area is free of potentially adverse seismic interactions associated with housekeeping practices, storage of portable equipment, and temporary installations (e.g., scaffolding, lead shielding)? Y☒ N☐ U☐ N/A☐

8. Have you looked for and found no other seismic conditions that could adversely affect the safety functions of the equipment in the area? Y☒ N☐ U☐

Comments (Additional pages may be added as necessary)

The following equipment is included in the area encompassed by this Area Walk-By:
2-FCV-067-0492

Evaluated by: *Robert Malone* Date: *7-19-12*

Phillip York *7-19-12*

Status: Y☒ N☐ U☐

Area Walk-By Checklist (AWC)

Location: Bldg. *ERCW* Floor El. *720* Room, Area[4] *10 - 2B Pump Room*

Instructions for Completing Checklist

This checklist may be used to document the results of the Area Walk-By near one or more SWEL items. The space below each of the following questions may be used to record the results of judgments and findings. Additional space is provided at the end of this checklist for documenting other comments.

Note: Y = Yes, N = No, U = Unknown, N/A = Not Applicable

1. Does anchorage of equipment in the area appear to be free of potentially adverse seismic conditions (if visible without necessarily opening cabinets)? Y☒ N☐ U☐ N/A☐

2. Does anchorage of equipment in the area appear to be free of significant degraded conditions? Y☒ N☐ U☐ N/A☐

3. Based on a visual inspection from the floor, do the cable/conduit raceways and HVAC ducting appear to be free of potentially adverse seismic conditions (e.g., condition of supports is adequate and fill conditions of cable trays appear to be inside acceptable limits)? Y☒ N☐ U☐ N/A☐

4. Does it appear that the area is free of potentially adverse seismic spatial interactions with other equipment in the area (e.g., ceiling tiles and lighting)? Y☒ N☐ U☐ N/A☐

[4] If the room in which the SWEL item is located is very large (e.g., Turbine Hall), the area selected should be described. This selected area should be based on judgment, e.g., on the order of about 35 feet from the SWEL item.

Location: Bldg. *ERCW* Floor El. *720* Room, Area[4] *10 - 2B Pump Room*

5. Does it appear that the area is free of potentially adverse seismic interactions that could cause flooding or spray in the area? Y☒ N☐ U☐ N/A☐
   The ERCW pump 0-MTRA-67-456-B is leaking at the shaft/pipe interface. The pump had been roped off and appears to be in the process of being fixed.

6. Does it appear that the area is free of potentially adverse seismic interactions that could cause a fire in the area? Y☒ N☐ U☐ N/A☐
   It was noted that a fire extinguisher was not restrained and could easily fall out of its box during a seismic event. It is not near any equipment so it does not pose any significant risk.

7. Does it appear that the area is free of potentially adverse seismic interactions associated with housekeeping practices, storage of portable equipment, and temporary installations (e.g., scaffolding, lead shielding)? Y☒ N☐ U☐ N/A☐

8. Have you looked for and found no other seismic conditions that could adversely affect the safety functions of the equipment in the area? Y☒ N☐ U☐

Comments (Additional pages may be added as necessary)

The following equipment is included in the area encompassed by this Area Walk-By:

0-PMP-067-0452

0-PMP-067-0482-B

Evaluated by: *Robert Malone* Date: *7/24/12*

Phillip York *7/24/12*

Status: Y☒ N☐ U☐

Area Walk-By Checklist (AWC)

Location: Bldg. *ERCW* Floor El. *704* Room, Area[4] *11 - 2B Board Room*

Instructions for Completing Checklist

This checklist may be used to document the results of the Area Walk-By near one or more SWEL items. The space below each of the following questions may be used to record the results of judgments and findings. Additional space is provided at the end of this checklist for documenting other comments.

Note: Y = Yes, N = No, U = Unknown, N/A = Not Applicable

1. Does anchorage of equipment in the area appear to be free of potentially adverse seismic conditions (if visible without necessarily opening cabinets)? Y☒ N☐ U☐ N/A☐

2. Does anchorage of equipment in the area appear to be free of significant degraded conditions? Y☒ N☐ U☐ N/A☐

3. Based on a visual inspection from the floor, do the cable/conduit raceways and HVAC ducting appear to be free of potentially adverse seismic conditions (e.g., condition of supports is adequate and fill conditions of cable trays appear to be inside acceptable limits)? Y☒ N☐ U☐ N/A☐

4. Does it appear that the area is free of potentially adverse seismic spatial interactions with other equipment in the area (e.g., ceiling tiles and lighting)? Y☒ N☐ U☐ N/A☐

[4] If the room in which the SWEL item is located is very large (e.g., Turbine Hall), the area selected should be described. This selected area should be based on judgment, e.g., on the order of about 35 feet from the SWEL item.

Location: Bldg. *ERCW* Floor El. *704* Room, Area[4] *11 - 2B Board Room*

5. Does it appear that the area is free of potentially adverse seismic interactions that could cause flooding or spray in the area? Y☒ N☐ U☐ N/A☐
   Concrete seepage noted in some locations. Not a significant enough source of water to cause flooding.

6. Does it appear that the area is free of potentially adverse seismic interactions that could cause a fire in the area? Y☒ N☐ U☐ N/A☐

7. Does it appear that the area is free of potentially adverse seismic interactions associated with housekeeping practices, storage of portable equipment, and temporary installations (e.g., scaffolding, lead shielding)? Y☒ N☐ U☐ N/A☐
   Computer cabinet restrained to transformer frame with rope. SRO advised that this was an approved method of restraint.

8. Have you looked for and found no other seismic conditions that could adversely affect the safety functions of the equipment in the area? Y☒ N☐ U☐

Comments (Additional pages may be added as necessary)

Minor mineral staining in various locations. No areas of leakage directly over equipment. Not a significant source of flooding.

The following equipment is included in the area encompassed by this Area Walk-By:

2-BDC-201-FN-B
2-XFA-202-0316

Evaluated by: *Robert Malone* Date: *7-24-12*

Phillip York *7-24-12*

Status: Y☒ N☐ U☐

Area Walk-By Checklist (AWC)

Location: Bldg. *Control* Floor El. *732* Room, Area[4] *12 - Control Mechanical Equip Room*

Instructions for Completing Checklist

This checklist may be used to document the results of the Area Walk-By near one or more SWEL items. The space below each of the following questions may be used to record the results of judgments and findings. Additional space is provided at the end of this checklist for documenting other comments.

Note: Y = Yes, N = No, U = Unknown, N/A = Not Applicable

1. Does anchorage of equipment in the area appear to be free of potentially adverse seismic conditions (if visible without necessarily opening cabinets)? Y☒ N☐ U☐ N/A☐

2. Does anchorage of equipment in the area appear to be free of significant degraded conditions? Y☒ N☐ U☐ N/A☐

3. Based on a visual inspection from the floor, do the cable/conduit raceways and HVAC ducting appear to be free of potentially adverse seismic conditions (e.g., condition of supports is adequate and fill conditions of cable trays appear to be inside acceptable limits)? Y☒ N☐ U☐ N/A☐

4. Does it appear that the area is free of potentially adverse seismic spatial interactions with other equipment in the area (e.g., ceiling tiles and lighting)? Y☒ N☐ U☐ N/A☐

[4] If the room in which the SWEL item is located is very large (e.g., Turbine Hall), the area selected should be described. This selected area should be based on judgment, e.g., on the order of about 35 feet from the SWEL item.

Location: Bldg. *Control* Floor El. *732* Room, Area[4] *12 - Control Mechanical Equip Room*

5. Does it appear that the area is free of potentially adverse seismic interactions that could cause flooding or spray in the area? Y☒ N☐ U☐ N/A☐

6. Does it appear that the area is free of potentially adverse seismic interactions that could cause a fire in the area? Y☒ N☐ U☐ N/A☐
   There is a oil bottle without a cap. However the bottle is tied up in a manner that should prevent any spills.

7. Does it appear that the area is free of potentially adverse seismic interactions associated with housekeeping practices, storage of portable equipment, and temporary installations (e.g., scaffolding, lead shielding)? Y☒ N☐ U☐ N/A☐

8. Have you looked for and found no other seismic conditions that could adversely affect the safety functions of the equipment in the area? Y☒ N☐ U☐

Comments (Additional pages may be added as necessary)

The following equipment is included in the area encompassed by this Area Walk-By:

0-AHU-311-0023

0-CHR-311-0126

Evaluated by: *Lance Summers* Date: *7-30-12*

Phillip York *7-30-12*

Status: Y☒ N☐ U☐

Area Walk-By Checklist (AWC)

Location: Bldg. *Control* Floor El. *732* Room, Area[4] *13 - Control Room Unit 2*

Instructions for Completing Checklist

This checklist may be used to document the results of the Area Walk-By near one or more SWEL items. The space below each of the following questions may be used to record the results of judgments and findings. Additional space is provided at the end of this checklist for documenting other comments.

Note: Y = Yes, N = No, U = Unknown, N/A = Not Applicable

1. Does anchorage of equipment in the area appear to be free of potentially adverse seismic conditions (if visible without necessarily opening cabinets)? Y☒ N☐ U☐ N/A☐

2. Does anchorage of equipment in the area appear to be free of significant degraded conditions? Y☒ N☐ U☐ N/A☐

3. Based on a visual inspection from the floor, do the cable/conduit raceways and HVAC ducting appear to be free of potentially adverse seismic conditions (e.g., condition of supports is adequate and fill conditions of cable trays appear to be inside acceptable limits)? Y☐ N☐ U☐ N/A☒

4. Does it appear that the area is free of potentially adverse seismic spatial interactions with other equipment in the area (e.g., ceiling tiles and lighting)? Y☒ N☐ U☐ N/A☐

   Two fuse cabinets are not restrained and are in close proximity to the control panels. The panels are approximately 2.5'x3'x5' tall. If the panels tipped they would impact the control panel. Credible but not significant, since the potential spatial interaction is with non-safety related equipment.

[4] If the room in which the SWEL item is located is very large (e.g., Turbine Hall), the area selected should be described. This selected area should be based on judgment, e.g., on the order of about 35 feet from the SWEL item.

Location: Bldg. *Control* Floor El. *732* Room, Area[4] *13 - Control Room Unit 2*

5. Does it appear that the area is free of potentially adverse seismic interactions that could cause flooding or spray in the area? Y☒ N☐ U☐ N/A☐

6. Does it appear that the area is free of potentially adverse seismic interactions that could cause a fire in the area? Y☒ N☐ U☐ N/A☐

7. Does it appear that the area is free of potentially adverse seismic interactions associated with housekeeping practices, storage of portable equipment, and temporary installations (e.g., scaffolding, lead shielding)? Y☒ N☐ U☐ N/A☐
   Step stool unrestrained. Not near panels. Ok.

8. Have you looked for and found no other seismic conditions that could adversely affect the safety functions of the equipment in the area? Y☒ N☐ U☐

Comments (Additional pages may be added as necessary)

The following equipment is included in the area encompassed by this Area Walk-By:

0-LOCL-500-M026D
2-LOCL-500-M002
2-LOCL-500-M004
2-LOCL-500-M008
2-LOCL-500-M009

Evaluated by: *Robert Malone* Date: *7-31-12*

Phillip York *7-31-12*

Status: Y☒ N☐ U☐

Area Walk-By Checklist (AWC)

Location: Bldg. *Auxiliary* Floor El. *734* Room, Area[4] *14 - 125V Batt Board Room II*

Instructions for Completing Checklist

This checklist may be used to document the results of the Area Walk-By near one or more SWEL items. The space below each of the following questions may be used to record the results of judgments and findings. Additional space is provided at the end of this checklist for documenting other comments.

Note: Y = Yes, N = No, U = Unknown, N/A = Not Applicable

1. Does anchorage of equipment in the area appear to be free of potentially adverse seismic conditions (if visible without necessarily opening cabinets)? Y☒ N☐ U☐ N/A☐

2. Does anchorage of equipment in the area appear to be free of significant degraded conditions? Y☒ N☐ U☐ N/A☐

3. Based on a visual inspection from the floor, do the cable/conduit raceways and HVAC ducting appear to be free of potentially adverse seismic conditions (e.g., condition of supports is adequate and fill conditions of cable trays appear to be inside acceptable limits)? Y☒ N☐ U☐ N/A☐

4. Does it appear that the area is free of potentially adverse seismic spatial interactions with other equipment in the area (e.g., ceiling tiles and lighting)? Y☒ N☐ U☐ N/A☐

[4] If the room in which the SWEL item is located is very large (e.g., Turbine Hall), the area selected should be described. This selected area should be based on judgment, e.g., on the order of about 35 feet from the SWEL item.

Location: Bldg. *Auxiliary* Floor El. *734* Room, Area[4] *14 - 125V Batt Board Room II*

5. Does it appear that the area is free of potentially adverse seismic interactions that could cause flooding or spray in the area? Y☒ N☐ U☐ N/A☐

6. Does it appear that the area is free of potentially adverse seismic interactions that could cause a fire in the area? Y☒ N☐ U☐ N/A☐

7. Does it appear that the area is free of potentially adverse seismic interactions associated with housekeeping practices, storage of portable equipment, and temporary installations (e.g., scaffolding, lead shielding)? Y☒ N☐ U☐ N/A☐
   Scaffolding was found in the area and has current inspection date.

8. Have you looked for and found no other seismic conditions that could adversely affect the safety functions of the equipment in the area? Y☒ N☐ U☐

Comments (Additional pages may be added as necessary)

The following equipment is included in the area encompassed by this Area Walk-By:

2-BDE-250-NF-E

Evaluated by: *Robert Malone* Date: *7/26/12*

Jim Edgar *7/26/12*

Status: Y☒ N☐ U☐

Area Walk-By Checklist (AWC)

Location: Bldg. *Auxiliary* Floor El. *734* Room, Area[4] *15 - 480V Shutdown Board Room 2A2*

Instructions for Completing Checklist

This checklist may be used to document the results of the Area Walk-By near one or more SWEL items. The space below each of the following questions may be used to record the results of judgments and findings. Additional space is provided at the end of this checklist for documenting other comments.

Note: Y = Yes, N = No, U = Unknown, N/A = Not Applicable

1. Does anchorage of equipment in the area appear to be free of potentially adverse seismic conditions (if visible without necessarily opening cabinets)? Y☒ N☐ U☐ N/A☐
   Unistrut pipe strap has a gap on one side but does appear to have been tightened as much as possible. This is ok per TVA documentation.

2. Does anchorage of equipment in the area appear to be free of significant degraded conditions? Y☒ N☐ U☐ N/A☐

3. Based on a visual inspection from the floor, do the cable/conduit raceways and HVAC ducting appear to be free of potentially adverse seismic conditions (e.g., condition of supports is adequate and fill conditions of cable trays appear to be inside acceptable limits)? Y☒ N☐ U☐ N/A☐

4. Does it appear that the area is free of potentially adverse seismic spatial interactions with other equipment in the area (e.g., ceiling tiles and lighting)? Y☒ N☐ U☐ N/A☐

[4] If the room in which the SWEL item is located is very large (e.g., Turbine Hall), the area selected should be described. This selected area should be based on judgment, e.g., on the order of about 35 feet from the SWEL item.

Location: Bldg. *Auxiliary* Floor El. *734* Room, Area[4] *15 - 480V Shutdown Board Room 2A2*

5. Does it appear that the area is free of potentially adverse seismic interactions that could cause flooding or spray in the area? Y☒ N☐ U☐ N/A☐

6. Does it appear that the area is free of potentially adverse seismic interactions that could cause a fire in the area? Y☒ N☐ U☐ N/A☐

7. Does it appear that the area is free of potentially adverse seismic interactions associated with housekeeping practices, storage of portable equipment, and temporary installations (e.g., scaffolding, lead shielding)? Y☒ N☐ U☐ N/A☐

8. Have you looked for and found no other seismic conditions that could adversely affect the safety functions of the equipment in the area? Y☒ N☐ U☐
Concrete wall has cracks from floor to ceiling that has been filled in with white caulking.

Comments (Additional pages may be added as necessary)

The following equipment is included in the area encompassed by this Area Walk-By:

2-BDC-201-JK-A

2-BDB-201-DO-A

Evaluated by: *Robert Malone* Date: *7-30-12*

Phillip York *7-30-12*

Status: Y☒ N☐ U☐

Area Walk-By Checklist (AWC)

Location: Bldg. *Auxiliary* Floor El. *734* Room, Area[4] *16 - 480V Shutdown Board Room 2B1*

Instructions for Completing Checklist

This checklist may be used to document the results of the Area Walk-By near one or more SWEL items. The space below each of the following questions may be used to record the results of judgments and findings. Additional space is provided at the end of this checklist for documenting other comments.

Note: Y = Yes, N = No, U = Unknown, N/A = Not Applicable

1. Does anchorage of equipment in the area appear to be free of potentially adverse seismic conditions (if visible without necessarily opening cabinets)? Y☒ N☐ U☐ N/A☐

2. Does anchorage of equipment in the area appear to be free of significant degraded conditions? Y☒ N☐ U☐ N/A☐

3. Based on a visual inspection from the floor, do the cable/conduit raceways and HVAC ducting appear to be free of potentially adverse seismic conditions (e.g., condition of supports is adequate and fill conditions of cable trays appear to be inside acceptable limits)? Y☒ N☐ U☐ N/A☐

4. Does it appear that the area is free of potentially adverse seismic spatial interactions with other equipment in the area (e.g., ceiling tiles and lighting)? Y☒ N☐ U☐ N/A☐

[4] If the room in which the SWEL item is located is very large (e.g., Turbine Hall), the area selected should be described. This selected area should be based on judgment, e.g., on the order of about 35 feet from the SWEL item.

Location: Bldg. *Auxiliary* Floor El. *734* Room, Area[4] *16 - 480V Shutdown Board Room 2B1*

5. Does it appear that the area is free of potentially adverse seismic interactions that could cause flooding or spray in the area? Y☒ N☐ U☐ N/A☐

6. Does it appear that the area is free of potentially adverse seismic interactions that could cause a fire in the area? Y☒ N☐ U☐ N/A☐

7. Does it appear that the area is free of potentially adverse seismic interactions associated with housekeeping practices, storage of portable equipment, and temporary installations (e.g., scaffolding, lead shielding)? Y☒ N☐ U☐ N/A☐
   Scaffolding was found in the area and has current inspection date.

8. Have you looked for and found no other seismic conditions that could adversely affect the safety functions of the equipment in the area? Y☒ N☐ U☐

Comments (Additional pages may be added as necessary)

The following equipment is included in the area encompassed by this Area Walk-By:
2-BDB-201-DP-B

Evaluated by: *Robert Malone* Date: *7/26/12*

Jim Edgar *7/26/12*

Status: Y☒ N☐ U☐

Area Walk-By Checklist (AWC)

Location: Bldg. *Auxiliary* Floor El. *734* Room, Area[4] *17 - 480V Shutdown Board Room 2B2*

Instructions for Completing Checklist

This checklist may be used to document the results of the Area Walk-By near one or more SWEL items. The space below each of the following questions may be used to record the results of judgments and findings. Additional space is provided at the end of this checklist for documenting other comments.

Note: Y = Yes, N = No, U = Unknown, N/A = Not Applicable

1. Does anchorage of equipment in the area appear to be free of potentially adverse seismic conditions (if visible without necessarily opening cabinets)? Y☒ N☐ U☐ N/A☐

2. Does anchorage of equipment in the area appear to be free of significant degraded conditions? Y☒ N☐ U☐ N/A☐

3. Based on a visual inspection from the floor, do the cable/conduit raceways and HVAC ducting appear to be free of potentially adverse seismic conditions (e.g., condition of supports is adequate and fill conditions of cable trays appear to be inside acceptable limits)? Y☒ N☐ U☐ N/A☐

4. Does it appear that the area is free of potentially adverse seismic spatial interactions with other equipment in the area (e.g., ceiling tiles and lighting)? Y☒ N☐ U☐ N/A☐

[4] If the room in which the SWEL item is located is very large (e.g., Turbine Hall), the area selected should be described. This selected area should be based on judgment, e.g., on the order of about 35 feet from the SWEL item.

Location: Bldg. *Auxiliary* Floor El. *734* Room, Area[4] *17 - 480V Shutdown Board Room 2B2*

5. Does it appear that the area is free of potentially adverse seismic interactions that could cause flooding or spray in the area? Y☒ N☐ U☐ N/A☐

6. Does it appear that the area is free of potentially adverse seismic interactions that could cause a fire in the area? Y☒ N☐ U☐ N/A☐

7. Does it appear that the area is free of potentially adverse seismic interactions associated with housekeeping practices, storage of portable equipment, and temporary installations (e.g., scaffolding, lead shielding)? Y☒ N☐ U☐ N/A☐
   Two ladders in room tied off to cable tray. Knee boards on cable tray. No adverse seismic condition found.

8. Have you looked for and found no other seismic conditions that could adversely affect the safety functions of the equipment in the area? Y☒ N☐ U☐

Comments (Additional pages may be added as necessary)

The following equipment is included in the area encompassed by this Area Walk-By:
2-BDB-201-DQ-B

Evaluated by: *Robert Malone* Date: *7/26/12*

Jim Edgar *7/26/12*

Status: Y☒ N☐ U☐

Area Walk-By Checklist (AWC)

Location: Bldg. *Auxiliary* Floor El. *749* Room, Area[4] *18 - 480V Transformer Room 2B*

Instructions for Completing Checklist

This checklist may be used to document the results of the Area Walk-By near one or more SWEL items. The space below each of the following questions may be used to record the results of judgments and findings. Additional space is provided at the end of this checklist for documenting other comments.

Note: Y = Yes, N = No, U = Unknown, N/A = Not Applicable

1. Does anchorage of equipment in the area appear to be free of potentially adverse seismic conditions (if visible without necessarily opening cabinets)? Y☒ N☐ U☐ N/A☐

2. Does anchorage of equipment in the area appear to be free of significant degraded conditions? Y☒ N☐ U☐ N/A☐

3. Based on a visual inspection from the floor, do the cable/conduit raceways and HVAC ducting appear to be free of potentially adverse seismic conditions (e.g., condition of supports is adequate and fill conditions of cable trays appear to be inside acceptable limits)? Y☒ N☐ U☐ N/A☐

4. Does it appear that the area is free of potentially adverse seismic spatial interactions with other equipment in the area (e.g., ceiling tiles and lighting)? Y☒ N☐ U☐ N/A☐

[4] If the room in which the SWEL item is located is very large (e.g., Turbine Hall), the area selected should be described. This selected area should be based on judgment, e.g., on the order of about 35 feet from the SWEL item.

Location: Bldg. *Auxiliary* Floor El. *749* Room, Area[4] *18 - 480V Transformer Room 2B*

5. Does it appear that the area is free of potentially adverse seismic interactions that could cause flooding or spray in the area? Y☒ N☐ U☐ N/A☐

6. Does it appear that the area is free of potentially adverse seismic interactions that could cause a fire in the area? Y☒ N☐ U☐ N/A☐

7. Does it appear that the area is free of potentially adverse seismic interactions associated with housekeeping practices, storage of portable equipment, and temporary installations (e.g., scaffolding, lead shielding)? Y☒ N☐ U☐ N/A☐
Scaffolding in area. Inspection tag is current. Wheels locked.

8. Have you looked for and found no other seismic conditions that could adversely affect the safety functions of the equipment in the area? Y☒ N☐ U☐

Comments (Additional pages may be added as necessary)

The following equipment is included in the area encompassed by this Area Walk-By:

2-OXF-202-2B-B

2-OXF-202-DQ-B

Evaluated by: *Robert Malone* Date: *7/26/12*

Jim Edgar *7/26/12*

Status: Y☒ N☐ U☐

Area Walk-By Checklist (AWC)

Location: Bldg. *Auxiliary* Floor El. *749* Room, Area[4] *19 - 480V Transformer Room 2A*

Instructions for Completing Checklist

This checklist may be used to document the results of the Area Walk-By near one or more SWEL items. The space below each of the following questions may be used to record the results of judgments and findings. Additional space is provided at the end of this checklist for documenting other comments.

Note: Y = Yes, N = No, U = Unknown, N/A = Not Applicable

1. Does anchorage of equipment in the area appear to be free of potentially adverse seismic conditions (if visible without necessarily opening cabinets)? Y☒ N☐ U☐ N/A☐

2. Does anchorage of equipment in the area appear to be free of significant degraded conditions? Y☒ N☐ U☐ N/A☐

3. Based on a visual inspection from the floor, do the cable/conduit raceways and HVAC ducting appear to be free of potentially adverse seismic conditions (e.g., condition of supports is adequate and fill conditions of cable trays appear to be inside acceptable limits)? Y☒ N☐ U☐ N/A☐

4. Does it appear that the area is free of potentially adverse seismic spatial interactions with other equipment in the area (e.g., ceiling tiles and lighting)? Y☒ N☐ U☐ N/A☐

[4] If the room in which the SWEL item is located is very large (e.g., Turbine Hall), the area selected should be described. This selected area should be based on judgment, e.g., on the order of about 35 feet from the SWEL item.

Location: Bldg. *Auxiliary* Floor El. *749* Room, Area[4] *19 - 480V Transformer Room 2A*

5. Does it appear that the area is free of potentially adverse seismic interactions that could cause flooding or spray in the area? Y☒ N☐ U☐ N/A☐

6. Does it appear that the area is free of potentially adverse seismic interactions that could cause a fire in the area? Y☒ N☐ U☐ N/A☐

7. Does it appear that the area is free of potentially adverse seismic interactions associated with housekeeping practices, storage of portable equipment, and temporary installations (e.g., scaffolding, lead shielding)? Y☒ N☐ U☐ N/A☐

8. Have you looked for and found no other seismic conditions that could adversely affect the safety functions of the equipment in the area? Y☒ N☐ U☐

Comments (Additional pages may be added as necessary)

The following equipment is included in the area encompassed by this Area Walk-By:

2-OXF-202-2A-A

2-OXF-202-DN-A

Evaluated by: *Robert Malone* Date: *7-30-12*

Phillip York *7-30-12*

Status: Y☐ N☒ U☐

Area Walk-By Checklist (AWC)

Location: Bldg. *Auxiliary* Floor El. *749* Room, Area[4] *20 - 125V Battery Room III*

Instructions for Completing Checklist

This checklist may be used to document the results of the Area Walk-By near one or more SWEL items. The space below each of the following questions may be used to record the results of judgments and findings. Additional space is provided at the end of this checklist for documenting other comments.

Note: Y = Yes, N = No, U = Unknown, N/A = Not Applicable

1. Does anchorage of equipment in the area appear to be free of potentially adverse seismic conditions (if visible without necessarily opening cabinets)? Y☒ N☐ U☐ N/A☐

2. Does anchorage of equipment in the area appear to be free of significant degraded conditions? Y☒ N☐ U☐ N/A☐

3. Based on a visual inspection from the floor, do the cable/conduit raceways and HVAC ducting appear to be free of potentially adverse seismic conditions (e.g., condition of supports is adequate and fill conditions of cable trays appear to be inside acceptable limits)? Y☒ N☐ U☐ N/A☐

4. Does it appear that the area is free of potentially adverse seismic spatial interactions with other equipment in the area (e.g., ceiling tiles and lighting)? Y☒ N☐ U☐ N/A☐

[4] If the room in which the SWEL item is located is very large (e.g., Turbine Hall), the area selected should be described. This selected area should be based on judgment, e.g., on the order of about 35 feet from the SWEL item.

Location: Bldg. *Auxiliary* Floor El. *749* Room, Area[4] *20 - 125V Battery Room III*

5. Does it appear that the area is free of potentially adverse seismic interactions that could cause flooding or spray in the area? Y☐ N☒ U☐ N/A☐
   The sink and vanity is not attached to the wall in a manner that is consistent with a seismically qualified restraint. If the sink/vanity broke loose from the wall during a seismic event the water line could cause spray.

6. Does it appear that the area is free of potentially adverse seismic interactions that could cause a fire in the area? Y☒ N☐ U☐ N/A☐

7. Does it appear that the area is free of potentially adverse seismic interactions associated with housekeeping practices, storage of portable equipment, and temporary installations (e.g., scaffolding, lead shielding)? Y☒ N☐ U☐ N/A☐

8. Have you looked for and found no other seismic conditions that could adversely affect the safety functions of the equipment in the area? Y☒ N☐ U☐

Comments (Additional pages may be added as necessary)

Improper housekeeping practices were noted but would not cause any adverse seismic issues. It should be note that following was observed:

- *The sink vanity was used to store random garbage.*
- *A space heater with a temporary equipment tag dated 2006 was shoved inside the vanity.*
- *Unlabeled chemicals as well as other chemicals were stored in cabinet.*

All of the above housekeeping issues listed above were immediately resolved upon discovery.

The following equipment is included in the area encompassed by this Area Walk-By:
0-BATB-250-QX-F

Evaluated by: *Robert Malone* Date: *7-20-12*

Phillip York *7-20-12*

Status: Y☐ N☒ U☐

Area Walk-By Checklist (AWC)

Location: Bldg. *Auxiliary* Floor El. *749* Room, Area[4] *21 - 125V Battery Room IV*

Instructions for Completing Checklist

This checklist may be used to document the results of the Area Walk-By near one or more SWEL items. The space below each of the following questions may be used to record the results of judgments and findings. Additional space is provided at the end of this checklist for documenting other comments.

Note: Y = Yes, N = No, U = Unknown, N/A = Not Applicable

1. Does anchorage of equipment in the area appear to be free of potentially adverse seismic conditions (if visible without necessarily opening cabinets)? Y☒ N☐ U☐ N/A☐

2. Does anchorage of equipment in the area appear to be free of significant degraded conditions? Y☒ N☐ U☐ N/A☐

3. Based on a visual inspection from the floor, do the cable/conduit raceways and HVAC ducting appear to be free of potentially adverse seismic conditions (e.g., condition of supports is adequate and fill conditions of cable trays appear to be inside acceptable limits)? Y☒ N☐ U☐ N/A☐

4. Does it appear that the area is free of potentially adverse seismic spatial interactions with other equipment in the area (e.g., ceiling tiles and lighting)? Y☒ N☐ U☐ N/A☐

[4] If the room in which the SWEL item is located is very large (e.g., Turbine Hall), the area selected should be described. This selected area should be based on judgment, e.g., on the order of about 35 feet from the SWEL item.

Location: Bldg. *Auxiliary* Floor El. *749* Room, Area[4] *21 - 125V Battery Room IV*

5. Does it appear that the area is free of potentially adverse seismic interactions that could cause flooding or spray in the area? Y☒ N☐ U☐ N/A☐

6. Does it appear that the area is free of potentially adverse seismic interactions that could cause a fire in the area? Y☒ N☐ U☐ N/A☐

7. Does it appear that the area is free of potentially adverse seismic interactions associated with housekeeping practices, storage of portable equipment, and temporary installations (e.g., scaffolding, lead shielding)? Y☒ N☐ U☐ N/A☐

8. Have you looked for and found no other seismic conditions that could adversely affect the safety functions of the equipment in the area? Y☐ N☒ U☐
   Masonry block wall in area has a horizontal crack at the top of the wall near the supporting angle. This crack is approximately 6' long and can be seen on both sides of the masonry block wall

Comments (Additional pages may be added as necessary)

The following equipment is included in the area encompassed by this Area Walk-By:

0-BATB-250-QY-G

Evaluated by: *Robert Malone* Date: *7-25-12*

Phillip York *7-25-12*

Status: Y☐ N☒ U☐

Area Walk-By Checklist (AWC)

Location: Bldg. *Auxiliary* Floor El. *749* Room, Area[4] *22 - 480V Board Room 2B*

Instructions for Completing Checklist

This checklist may be used to document the results of the Area Walk-By near one or more SWEL items. The space below each of the following questions may be used to record the results of judgments and findings. Additional space is provided at the end of this checklist for documenting other comments.

Note: Y = Yes, N = No, U = Unknown, N/A = Not Applicable

1. Does anchorage of equipment in the area appear to be free of potentially adverse seismic conditions (if visible without necessarily opening cabinets)? Y☒ N☐ U☐ N/A☐

2. Does anchorage of equipment in the area appear to be free of significant degraded conditions? Y☒ N☐ U☐ N/A☐

3. Based on a visual inspection from the floor, do the cable/conduit raceways and HVAC ducting appear to be free of potentially adverse seismic conditions (e.g., condition of supports is adequate and fill conditions of cable trays appear to be inside acceptable limits)? Y☒ N☐ U☐ N/A☐

4. Does it appear that the area is free of potentially adverse seismic spatial interactions with other equipment in the area (e.g., ceiling tiles and lighting)? Y☒ N☐ U☐ N/A☐

[4] If the room in which the SWEL item is located is very large (e.g., Turbine Hall), the area selected should be described. This selected area should be based on judgment, e.g., on the order of about 35 feet from the SWEL item.

Location: Bldg. *Auxiliary* Floor El. *749* Room, Area[4] *22 - 480V Board Room 2B*

5. Does it appear that the area is free of potentially adverse seismic interactions that could cause flooding or spray in the area? Y☒ N☐ U☐ N/A☐

6. Does it appear that the area is free of potentially adverse seismic interactions that could cause a fire in the area? Y☒ N☐ U☐ N/A☐

7. Does it appear that the area is free of potentially adverse seismic interactions associated with housekeeping practices, storage of portable equipment, and temporary installations (e.g., scaffolding, lead shielding)? Y☒ N☐ U☐ N/A☐

8. Have you looked for and found no other seismic conditions that could adversely affect the safety functions of the equipment in the area? Y☐ N☒ U☐
Masonry block wall in area has a horizontal crack at the top of the wall near the supporting angle. This crack is approximately 6' long and can be seen on both sides of the masonry block wall

Comments (Additional pages may be added as necessary)

The following equipment is included in the area encompassed by this Area Walk-By:

2-BDC-201-GN-B
0-XSW-250-KL-S
0-XSW-250-KX-S
0-CHGB-250-QJ-G
0-CHGB-250-QK-S
2-INVB-250-QU-G

Evaluated by: *Robert Malone* Date: *7/26/12*

Phillip York *7/26/12*

Status: Y☒ N☐ U☐

Area Walk-By Checklist (AWC)

Location: Bldg. *Auxiliary* Floor El. *749* Room, Area[4] *23 - 480V Board Room 2A*

Instructions for Completing Checklist

This checklist may be used to document the results of the Area Walk-By near one or more SWEL items. The space below each of the following questions may be used to record the results of judgments and findings. Additional space is provided at the end of this checklist for documenting other comments.

Note: Y = Yes, N = No, U = Unknown, N/A = Not Applicable

1. Does anchorage of equipment in the area appear to be free of potentially adverse seismic conditions (if visible without necessarily opening cabinets)? Y☒ N☐ U☐ N/A☐

2. Does anchorage of equipment in the area appear to be free of significant degraded conditions? Y☒ N☐ U☐ N/A☐

3. Based on a visual inspection from the floor, do the cable/conduit raceways and HVAC ducting appear to be free of potentially adverse seismic conditions (e.g., condition of supports is adequate and fill conditions of cable trays appear to be inside acceptable limits)? Y☒ N☐ U☐ N/A☐

4. Does it appear that the area is free of potentially adverse seismic spatial interactions with other equipment in the area (e.g., ceiling tiles and lighting)? Y☒ N☐ U☐ N/A☐

[4] If the room in which the SWEL item is located is very large (e.g., Turbine Hall), the area selected should be described. This selected area should be based on judgment, e.g., on the order of about 35 feet from the SWEL item.

Location: Bldg. *Auxiliary* Floor El. *749* Room, Area[4] *23 - 480V Board Room 2A*

5. Does it appear that the area is free of potentially adverse seismic interactions that could cause flooding or spray in the area? Y☒ N☐ U☐ N/A☐

6. Does it appear that the area is free of potentially adverse seismic interactions that could cause a fire in the area? Y☒ N☐ U☐ N/A☐

7. Does it appear that the area is free of potentially adverse seismic interactions associated with housekeeping practices, storage of portable equipment, and temporary installations (e.g., scaffolding, lead shielding)? Y☒ N☐ U☐ N/A☐
   Temporary equipment found in area. Equipment was chained and anchored together and not near any equipment. O.K.

8. Have you looked for and found no other seismic conditions that could adversely affect the safety functions of the equipment in the area? Y☒ N☐ U☐

Comments (Additional pages may be added as necessary)

The following equipment is included in the area encompassed by this Area Walk-By:
2-BDC-201-GM-A

Evaluated by: *Robert Malone* Date: *7-30-12*

Phillip York *7-30-12*

Status: Y☒ N☐ U☐

Area Walk-By Checklist (AWC)

Location: Bldg. *Auxiliary* Floor El. *749* Room, Area[4] *24 - 480V 2A Mechanical Equipment Room*

Instructions for Completing Checklist

This checklist may be used to document the results of the Area Walk-By near one or more SWEL items. The space below each of the following questions may be used to record the results of judgments and findings. Additional space is provided at the end of this checklist for documenting other comments.

Note: Y = Yes, N = No, U = Unknown, N/A = Not Applicable

1. Does anchorage of equipment in the area appear to be free of potentially adverse seismic conditions (if visible without necessarily opening cabinets)? Y☒ N☐ U☐ N/A☐

2. Does anchorage of equipment in the area appear to be free of significant degraded conditions? Y☒ N☐ U☐ N/A☐

3. Based on a visual inspection from the floor, do the cable/conduit raceways and HVAC ducting appear to be free of potentially adverse seismic conditions (e.g., condition of supports is adequate and fill conditions of cable trays appear to be inside acceptable limits)? Y☒ N☐ U☐ N/A☐

4. Does it appear that the area is free of potentially adverse seismic spatial interactions with other equipment in the area (e.g., ceiling tiles and lighting)? Y☒ N☐ U☐ N/A☐

[4] If the room in which the SWEL item is located is very large (e.g., Turbine Hall), the area selected should be described. This selected area should be based on judgment, e.g., on the order of about 35 feet from the SWEL item.

Location: Bldg. *Auxiliary* Floor El. *749* Room, Area[4] *24 - 480V 2A Mechanical Equipment Room*

5. Does it appear that the area is free of potentially adverse seismic interactions that could cause flooding or spray in the area? Y☒ N☐ U☐ N/A☐

6. Does it appear that the area is free of potentially adverse seismic interactions that could cause a fire in the area? Y☒ N☐ U☐ N/A☐

7. Does it appear that the area is free of potentially adverse seismic interactions associated with housekeeping practices, storage of portable equipment, and temporary installations (e.g., scaffolding, lead shielding)? Y☒ N☐ U☐ N/A☐
   Ladder and scaffolding in area and has current inspection date.

8. Have you looked for and found no other seismic conditions that could adversely affect the safety functions of the equipment in the area? Y☒ N☐ U☐

Comments (Additional pages may be added as necessary)

The following equipment is included in the area encompassed by this Area Walk-By:

2-AHU-313-0488

2-CHR-313-0483

Evaluated by: *Robert Malone* Date: *7-31-12*

Phillip York *7-31-12*

Status: Y☐ N☒ U☐

Area Walk-By Checklist (AWC)

Location: Bldg. *Auxiliary* ' Floor El. *653* Room, Area[4] *25 - RHR Pump Room Area*

Instructions for Completing Checklist

This checklist may be used to document the results of the Area Walk-By near one or more SWEL items. The space below each of the following questions may be used to record the results of judgments and findings. Additional space is provided at the end of this checklist for documenting other comments.

Note: Y = Yes, N = No, U = Unknown, N/A = Not Applicable

1. Does anchorage of equipment in the area appear to be free of potentially adverse seismic conditions (if visible without necessarily opening cabinets)? Y☒ N☐ U☐ N/A☐

2. Does anchorage of equipment in the area appear to be free of significant degraded conditions? Y☒ N☐ U☐ N/A☐

3. Based on a visual inspection from the floor, do the cable/conduit raceways and HVAC ducting appear to be free of potentially adverse seismic conditions (e.g., condition of supports is adequate and fill conditions of cable trays appear to be inside acceptable limits)? Y☒ N☐ U☐ N/A☐

4. Does it appear that the area is free of potentially adverse seismic spatial interactions with other equipment in the area (e.g., ceiling tiles and lighting)? Y☒ N☐ U☐ N/A☐

[4] If the room in which the SWEL item is located is very large (e.g., Turbine Hall), the area selected should be described. This selected area should be based on judgment, e.g., on the order of about 35 feet from the SWEL item.

Location: Bldg. *Auxiliary* Floor El. *653* Room, Area[4] *25 - RHR Pump Room Area*

5. Does it appear that the area is free of potentially adverse seismic interactions that could cause flooding or spray in the area? Y☒ N☐ U☐ N/A☐

6. Does it appear that the area is free of potentially adverse seismic interactions that could cause a fire in the area? Y☒ N☐ U☐ N/A☐

7. Does it appear that the area is free of potentially adverse seismic interactions associated with housekeeping practices, storage of portable equipment, and temporary installations (e.g., scaffolding, lead shielding)? Y☐ N☒ U☐ N/A☐

   Barrels holding radioactive material are unstable and not secured. Could tip over and roll into instrumentation panel which supports safety related instruments. This is deemed a potentially adverse condition.

   Scaffolding has been inspected and is horizontally tied off to supports at 3 locations.

   Other minor housekeeping issues were noted but none were considered seismically adverse.

8. Have you looked for and found no other seismic conditions that could adversely affect the safety functions of the equipment in the area? Y☒ N☐ U☐

Comments (Additional pages may be added as necessary)

The following SWEL items are included in the area encompassed by this Area Walk-By:

1, 2-FCV-067-0190-B

1, 2-FCV-067-188

1, 2-LOCL-500-0005

Evaluated by: *Lance Summers* Date: *8/1/12*

Isaac Antanaitis *8/1/12*

Status: Y☒ N☐ U☐

Area Walk-By Checklist (AWC)

Location: Bldg. *Auxiliary* Floor El. *669* Room, Area[4] *26 - SI Pump Room 2A*

Instructions for Completing Checklist

This checklist may be used to document the results of the Area Walk-By near one or more SWEL items. The space below each of the following questions may be used to record the results of judgments and findings. Additional space is provided at the end of this checklist for documenting other comments.

Note: Y = Yes, N = No, U = Unknown, N/A = Not Applicable

1. Does anchorage of equipment in the area appear to be free of potentially adverse seismic conditions (if visible without necessarily opening cabinets)? Y☒ N☐ U☐ N/A☐

2. Does anchorage of equipment in the area appear to be free of significant degraded conditions? Y☒ N☐ U☐ N/A☐

3. Based on a visual inspection from the floor, do the cable/conduit raceways and HVAC ducting appear to be free of potentially adverse seismic conditions (e.g., condition of supports is adequate and fill conditions of cable trays appear to be inside acceptable limits)? Y☒ N☐ U☐ N/A☐

4. Does it appear that the area is free of potentially adverse seismic spatial interactions with other equipment in the area (e.g., ceiling tiles and lighting)? Y☒ N☐ U☐ N/A☐

[4] If the room in which the SWEL item is located is very large (e.g., Turbine Hall), the area selected should be described. This selected area should be based on judgment, e.g., on the order of about 35 feet from the SWEL item.

Location: Bldg. *Auxiliary* Floor El. *669* Room, Area[4] *26 - SI Pump Room 2A*

5. Does it appear that the area is free of potentially adverse seismic interactions that could cause flooding or spray in the area? Y☒ N☐ U☐ N/A☐

6. Does it appear that the area is free of potentially adverse seismic interactions that could cause a fire in the area? Y☒ N☐ U☐ N/A☐

7. Does it appear that the area is free of potentially adverse seismic interactions associated with housekeeping practices, storage of portable equipment, and temporary installations (e.g., scaffolding, lead shielding)? Y☒ N☐ U☐ N/A☐

8. Have you looked for and found no other seismic conditions that could adversely affect the safety functions of the equipment in the area? Y☒ N☐ U☐

Comments (Additional pages may be added as necessary)

The following equipment is included in the area encompassed by this Area Walk-By:

2-PMP-063-0010

2-CLR-030-180-A

Evaluated by: *Robert Malone* Date: *8/1/12*

Phillip York *8/1/12*

Status: Y☒ N☐ U☐

Area Walk-By Checklist (AWC)

Location: Bldg. *Auxiliary* Floor El. *690* Room, Area[4] *27 - Unit 2 CCS Pump Area*

Instructions for Completing Checklist

This checklist may be used to document the results of the Area Walk-By near one or more SWEL items. The space below each of the following questions may be used to record the results of judgments and findings. Additional space is provided at the end of this checklist for documenting other comments.

Note: Y = Yes, N = No, U = Unknown, N/A = Not Applicable

1. Does anchorage of equipment in the area appear to be free of potentially adverse seismic conditions (if visible without necessarily opening cabinets)? Y☒ N☐ U☐ N/A☐

2. Does anchorage of equipment in the area appear to be free of significant degraded conditions? Y☒ N☐ U☐ N/A☐

3. Based on a visual inspection from the floor, do the cable/conduit raceways and HVAC ducting appear to be free of potentially adverse seismic conditions (e.g., condition of supports is adequate and fill conditions of cable trays appear to be inside acceptable limits)? Y☒ N☐ U☐ N/A☐
   A few elbow conduit covers were missing. Appendix R work was ongoing in the area. Not considered seismically adverse.

4. Does it appear that the area is free of potentially adverse seismic spatial interactions with other equipment in the area (e.g., ceiling tiles and lighting)? Y☒ N☐ U☐ N/A☐
   A "special fire barrier" wall was in the area. Wall appeared to be made of drywall, 10" thick, 15' tall, and 40' long, cantilevered from the floor. No soft targets in the area that were not already covered by equipment walkdowns. Further investigation provided evidence that wall was seismically qualified.

[4] If the room in which the SWEL item is located is very large (e.g., Turbine Hall), the area selected should be described. This selected area should be based on judgment, e.g., on the order of about 35 feet from the SWEL item.

Location: Bldg. *Auxiliary* Floor El. *690* Room, Area[4] *27 - Unit 2 CCS Pump Area*

5. Does it appear that the area is free of potentially adverse seismic interactions that could cause flooding or spray in the area? Y☒ N☐ U☐ N/A☐

6. Does it appear that the area is free of potentially adverse seismic interactions that could cause a fire in the area? Y☒ N☐ U☐ N/A☐

7. Does it appear that the area is free of potentially adverse seismic interactions associated with housekeeping practices, storage of portable equipment, and temporary installations (e.g., scaffolding, lead shielding)? Y☒ N☐ U☐ N/A☐

8. Have you looked for and found no other seismic conditions that could adversely affect the safety functions of the equipment in the area? Y☒ N☐ U☐

Comments (Additional pages may be added as necessary)

The following equipment is included in the area encompassed by this Area Walk-By:

2-PMP-070-0059-A

2-LOCL-500-0048

Evaluated by: *Robert Malone* Date: *8/8/12*

Phillip York *8/8/12*

Status: Y☒ N☐ U☐

Area Walk-By Checklist (AWC)

Location: Bldg. *Auxiliary* Floor El. *714* Room, Area[4] *28 - Spent Fuel Pool Pump Pit*

Instructions for Completing Checklist

This checklist may be used to document the results of the Area Walk-By near one or more SWEL items. The space below each of the following questions may be used to record the results of judgments and findings. Additional space is provided at the end of this checklist for documenting other comments.

Note: Y = Yes, N = No, U = Unknown, N/A = Not Applicable

1. Does anchorage of equipment in the area appear to be free of potentially adverse seismic conditions (if visible without necessarily opening cabinets)? Y☒ N☐ U☐ N/A☐

2. Does anchorage of equipment in the area appear to be free of significant degraded conditions? Y☒ N☐ U☐ N/A☐

3. Based on a visual inspection from the floor, do the cable/conduit raceways and HVAC ducting appear to be free of potentially adverse seismic conditions (e.g., condition of supports is adequate and fill conditions of cable trays appear to be inside acceptable limits)? Y☒ N☐ U☐ N/A☐

4. Does it appear that the area is free of potentially adverse seismic spatial interactions with other equipment in the area (e.g., ceiling tiles and lighting)? Y☒ N☐ U☐ N/A☐

[4] If the room in which the SWEL item is located is very large (e.g., Turbine Hall), the area selected should be described. This selected area should be based on judgment, e.g., on the order of about 35 feet from the SWEL item.

Location: Bldg. *Auxiliary* Floor El. *714* Room, Area[4] *28 - Spent Fuel Pool Pump Pit*

5. Does it appear that the area is free of potentially adverse seismic interactions that could cause flooding or spray in the area? Y☒ N☐ U☐ N/A☐

6. Does it appear that the area is free of potentially adverse seismic interactions that could cause a fire in the area? Y☒ N☐ U☐ N/A☐

7. Does it appear that the area is free of potentially adverse seismic interactions associated with housekeeping practices, storage of portable equipment, and temporary installations (e.g., scaffolding, lead shielding)? Y☒ N☐ U☐ N/A☐

8. Have you looked for and found no other seismic conditions that could adversely affect the safety functions of the equipment in the area? Y☒ N☐ U☐

Comments (Additional pages may be added as necessary)

The following equipment is included in the area encompassed by this Area Walk-By:
0-PMP-078-0012-A

Evaluated by: *Robert Malone* Date: *8/2/12*

Phillip York *8/2/12*

Status: Y☒ N☐ U☐

Area Walk-By Checklist (AWC)

Location: Bldg. *Auxiliary* Floor El. *714* Room, Area[4] *29 - Spent Fuel Pool HEX Area*

Instructions for Completing Checklist

This checklist may be used to document the results of the Area Walk-By near one or more SWEL items. The space below each of the following questions may be used to record the results of judgments and findings. Additional space is provided at the end of this checklist for documenting other comments.

Note: Y = Yes, N = No, U = Unknown, N/A = Not Applicable

1. Does anchorage of equipment in the area appear to be free of potentially adverse seismic conditions (if visible without necessarily opening cabinets)? Y☒ N☐ U☐ N/A☐

   Bolt appears to be missing from conduit support. It has likely been moved to miss interaction with rebar. Anchor still has four bolts. This is not considered adverse.

   Anchor for conduit support in ceiling above instrument rack 1-LOCL-500-0024 appears to have a misaligned spring for a spring nut connection. Spring nut and other hardware appear to be secured to the unistrut so this instance is not deemed adverse.

2. Does anchorage of equipment in the area appear to be free of significant degraded conditions? Y☒ N☐ U☐ N/A☐

3. Based on a visual inspection from the floor, do the cable/conduit raceways and HVAC ducting appear to be free of potentially adverse seismic conditions (e.g., condition of supports is adequate and fill conditions of cable trays appear to be inside acceptable limits)? Y☒ N☐ U☐ N/A☐

4. Does it appear that the area is free of potentially adverse seismic spatial interactions with other equipment in the area (e.g., ceiling tiles and lighting)? Y☒ N☐ U☐ N/A☐

5. Does it appear that the area is free of potentially adverse seismic interactions that could cause flooding or spray in the area? Y☒ N☐ U☐ N/A☐

[4] If the room in which the SWEL item is located is very large (e.g., Turbine Hall), the area selected should be described. This selected area should be based on judgment, e.g., on the order of about 35 feet from the SWEL item.

Location: Bldg. *Auxiliary* Floor El. *714* Room, Area[4] *29 - Spent Fuel Pool HEX Area*

6. Does it appear that the area is free of potentially adverse seismic interactions that could cause a fire in the area? Y☒ N☐ U☐ N/A☐

7. Does it appear that the area is free of potentially adverse seismic interactions associated with housekeeping practices, storage of portable equipment, and temporary installations (e.g., scaffolding, lead shielding)? Y☒ N☐ U☐ N/A☐

   Scaffolding under elevated platform (for CCS Thermal Barrier Booster Pumps) is well secured to platform support steel.

   Mobile toolbox is chained to scaffolding. Cart is free to roll. This condition is deemed to be credible but insignificant.
   Spoolpiece toolbox is chained to stair stringer.

   Checkplate sheet metal is resting against scaffolding. If it were to move in a seismic event, it would slide down the back side of the stair stringer before coming into contact with the spoolpiece toolbox and the adjacent instrument rack with pressure gauges for the Thermal Barrier Booster Pumps.

   There is a short (approximately 3') folding ladder on the CCS Thermal Booster Pump platform which is wire-tied to conduit. This is not deemed credible or significant.

   Scaffolding around / near column A-7 and A-9 appears to be well-braced and is tied off (by wire ties) to stair stringers and support steel braces.

8. Have you looked for and found no other seismic conditions that could adversely affect the safety functions of the equipment in the area? Y☒ N☐ U☐

Comments (Additional pages may be added as necessary)

The following equipment is included in the area encompassed by this Area Walk-By:
0-PMP-078-0012-A

Evaluated by: *Lance Summers* Date: *8/2/12*

Isaac Antanaitis *8/2/12*

Status: Y☐ N☒ U☐

Area Walk-By Checklist (AWC)

Location: Bldg. *Auxiliary* Floor El. *759* Room, Area[4] *30 - CRDM Room*

Instructions for Completing Checklist

This checklist may be used to document the results of the Area Walk-By near one or more SWEL items. The space below each of the following questions may be used to record the results of judgments and findings. Additional space is provided at the end of this checklist for documenting other comments.

Note: Y = Yes, N = No, U = Unknown, N/A = Not Applicable

1. Does anchorage of equipment in the area appear to be free of potentially adverse seismic conditions (if visible without necessarily opening cabinets)? Y☐ N☒ U☐ N/A☐
   Bolt is missing from duct support baseplate above 2-GEND-085-DH, Control Rod Drive Generator 2B.

2. Does anchorage of equipment in the area appear to be free of significant degraded conditions? Y☒ N☐ U☐ N/A☐

3. Based on a visual inspection from the floor, do the cable/conduit raceways and HVAC ducting appear to be free of potentially adverse seismic conditions (e.g., condition of supports is adequate and fill conditions of cable trays appear to be inside acceptable limits)? Y☒ N☐ U☐ N/A☐
   Flex conduit is disconnected from conduit above Hydrogen Recombiner SQN-2-PWC-83-002. Thermostat had broken loose from baseplate and was repaired by AUO during inspection.

4. Does it appear that the area is free of potentially adverse seismic spatial interactions with other equipment in the area (e.g., ceiling tiles and lighting)? Y☒ N☐ U☐ N/A☐
   An Aux air gage, 0-PI-032-0171, on a run of 3" piping was observed that could sway into the HVAC duct in the area. This gage is not Safety Related and would not prevent safe shutdown. Not considered seismically adverse.

[4] If the room in which the SWEL item is located is very large (e.g., Turbine Hall), the area selected should be described. This selected area should be based on judgment, e.g., on the order of about 35 feet from the SWEL item.

Location: Bldg. *Auxiliary* Floor El. *759* Room, Area[4] *30 - CRDM Room*

5. Does it appear that the area is free of potentially adverse seismic interactions that could cause flooding or spray in the area? Y☒ N☐ U☐ N/A☐

6. Does it appear that the area is free of potentially adverse seismic interactions that could cause a fire in the area? Y☒ N☐ U☐ N/A☐

7. Does it appear that the area is free of potentially adverse seismic interactions associated with housekeeping practices, storage of portable equipment, and temporary installations (e.g., scaffolding, lead shielding)? Y☒ N☐ U☐ N/A☐

8. Have you looked for and found no other seismic conditions that could adversely affect the safety functions of the equipment in the area? Y☒ N☐ U☐

Comments (Additional pages may be added as necessary)

The following equipment is included in the area encompassed by this Area Walk-By:

2-GEND-085-DG

2-GEND-085-DH

Evaluated by: *Robert Malone* Date: *8/3/12*

Phillip York *8/3/12*

Status: Y☒ N☐ U☐

Area Walk-By Checklist (AWC)

Location: Bldg. *Auxiliary* Floor El. *734* Room, Area[4] *31 - 6.9kV Shtdwn Board Rm A (U2 Side)*

Instructions for Completing Checklist

This checklist may be used to document the results of the Area Walk-By near one or more SWEL items. The space below each of the following questions may be used to record the results of judgments and findings. Additional space is provided at the end of this checklist for documenting other comments.

Note: Y = Yes, N = No, U = Unknown, N/A = Not Applicable

1. Does anchorage of equipment in the area appear to be free of potentially adverse seismic conditions (if visible without necessarily opening cabinets)? Y☒ N☐ U☐ N/A☐
   Cabinets in the area had unobservable anchorage.

2. Does anchorage of equipment in the area appear to be free of significant degraded conditions? Y☒ N☐ U☐ N/A☐

3. Based on a visual inspection from the floor, do the cable/conduit raceways and HVAC ducting appear to be free of potentially adverse seismic conditions (e.g., condition of supports is adequate and fill conditions of cable trays appear to be inside acceptable limits)? Y☒ N☐ U☐ N/A☐

4. Does it appear that the area is free of potentially adverse seismic spatial interactions with other equipment in the area (e.g., ceiling tiles and lighting)? Y☒ N☐ U☐ N/A☐

[4] If the room in which the SWEL item is located is very large (e.g., Turbine Hall), the area selected should be described. This selected area should be based on judgment, e.g., on the order of about 35 feet from the SWEL item.

Location: Bldg. *Auxiliary* Floor El. *734* Room, Area[4] *31 - 6.9kV Shtdwn Board Rm A (U2 Side)*

5. Does it appear that the area is free of potentially adverse seismic interactions that could cause flooding or spray in the area? Y☒ N☐ U☐ N/A☐

6. Does it appear that the area is free of potentially adverse seismic interactions that could cause a fire in the area? Y☒ N☐ U☐ N/A☐

7. Does it appear that the area is free of potentially adverse seismic interactions associated with housekeeping practices, storage of portable equipment, and temporary installations (e.g., scaffolding, lead shielding)? Y☒ N☐ U☐ N/A☐
   Temporary equipment was properly anchored to permanent conduit support.

8. Have you looked for and found no other seismic conditions that could adversely affect the safety functions of the equipment in the area? Y☒ N☐ U☐

Comments (Additional pages may be added as necessary)

The following equipment is included in the area encompassed by this Area Walk-By:
2-BDA-202-CO

Evaluated by: *Robert Malone* Date: *8/3/12*

Phillip York *8/3/12*

Status: Y☐ N☒ U☐

Area Walk-By Checklist (AWC)

Location: Bldg. *Auxiliary* Floor El. *734* Room, Area[4] *32 - Surge Tank B Area*

Instructions for Completing Checklist

This checklist may be used to document the results of the Area Walk-By near one or more SWEL items. The space below each of the following questions may be used to record the results of judgments and findings. Additional space is provided at the end of this checklist for documenting other comments.

Note: Y = Yes, N = No, U = Unknown, N/A = Not Applicable

1. Does anchorage of equipment in the area appear to be free of potentially adverse seismic conditions (if visible without necessarily opening cabinets)? Y☒ N☐ U☐ N/A☐

2. Does anchorage of equipment in the area appear to be free of significant degraded conditions? Y☒ N☐ U☐ N/A☐

3. Based on a visual inspection from the floor, do the cable/conduit raceways and HVAC ducting appear to be free of potentially adverse seismic conditions (e.g., condition of supports is adequate and fill conditions of cable trays appear to be inside acceptable limits)? Y☒ N☐ U☐ N/A☐

4. Does it appear that the area is free of potentially adverse seismic spatial interactions with other equipment in the area (e.g., ceiling tiles and lighting)? Y☒ N☐ U☐ N/A☐

[4] If the room in which the SWEL item is located is very large (e.g., Turbine Hall), the area selected should be described. This selected area should be based on judgment, e.g., on the order of about 35 feet from the SWEL item.

Location: Bldg. *Auxiliary* Floor El. *734* Room, Area[4] *32 - Surge Tank B Area*

5. Does it appear that the area is free of potentially adverse seismic interactions that could cause flooding or spray in the area? Y☒ N☐ U☐ N/A☐

6. Does it appear that the area is free of potentially adverse seismic interactions that could cause a fire in the area? Y☒ N☐ U☐ N/A☐

7. Does it appear that the area is free of potentially adverse seismic interactions associated with housekeeping practices, storage of portable equipment, and temporary installations (e.g., scaffolding, lead shielding)? Y☐ N☒ U☐ N/A☐
   Rad Protection AV Cabinet lacks proper seismic restraint. Cabinet has two eye hook restraints but only one is in use.

8. Have you looked for and found no other seismic conditions that could adversely affect the safety functions of the equipment in the area? Y☒ N☐ U☐
   The posts supporting the two sets of stairs to the elevated office are poorly anchored. The posts are not anchored to the floor and bolts are missing between the posts and upper platforms. A temporary gantry crane, with locked wheels, is anchored to one of these posts. Since there is no equipment related to safe shutdown or operations in the area, this issue is not considered seismically adverse.

Comments (Additional pages may be added as necessary)

The following equipment is included in the area encompassed by this Area Walk-By:

0-DRYA-032-0002-B
0-FCV-032-0085-B
2-LCV-070-0063
0-CMP-032-0086-B
0-LOCL-500-0428
2-LOCL-500-0019
2-TNK-070-0063

Evaluated by: *Robert Malone* Date: *8/3/12*

Phillip York *8/3/12*

Status: Y☒ N☐ U☐

Area Walk-By Checklist (AWC)

Location: Bldg. *Auxiliary* Floor El. *669* Room, Area[4] *34 - Feedwater Pump 2A-S Room*

Instructions for Completing Checklist

This checklist may be used to document the results of the Area Walk-By near one or more SWEL items. The space below each of the following questions may be used to record the results of judgments and findings. Additional space is provided at the end of this checklist for documenting other comments.

Note: Y = Yes, N = No, U = Unknown, N/A = Not Applicable

1. Does anchorage of equipment in the area appear to be free of potentially adverse seismic conditions (if visible without necessarily opening cabinets)? Y☒ N☐ U☐ N/A☐

2. Does anchorage of equipment in the area appear to be free of significant degraded conditions? Y☒ N☐ U☐ N/A☐

3. Based on a visual inspection from the floor, do the cable/conduit raceways and HVAC ducting appear to be free of potentially adverse seismic conditions (e.g., condition of supports is adequate and fill conditions of cable trays appear to be inside acceptable limits)? Y☒ N☐ U☐ N/A☐

4. Does it appear that the area is free of potentially adverse seismic spatial interactions with other equipment in the area (e.g., ceiling tiles and lighting)? Y☒ N☐ U☐ N/A☐

[4] If the room in which the SWEL item is located is very large (e.g., Turbine Hall), the area selected should be described. This selected area should be based on judgment, e.g., on the order of about 35 feet from the SWEL item.

Location: Bldg. *Auxiliary* Floor El. *669* Room, Area[4] *34 - Feedwater Pump 2A-S Room*

5. Does it appear that the area is free of potentially adverse seismic interactions that could cause flooding or spray in the area? Y☒ N☐ U☐ N/A☐

6. Does it appear that the area is free of potentially adverse seismic interactions that could cause a fire in the area? Y☒ N☐ U☐ N/A☐

7. Does it appear that the area is free of potentially adverse seismic interactions associated with housekeeping practices, storage of portable equipment, and temporary installations (e.g., scaffolding, lead shielding)? Y☒ N☐ U☐ N/A☐

8. Have you looked for and found no other seismic conditions that could adversely affect the safety functions of the equipment in the area? Y☒ N☐ U☐

Comments (Additional pages may be added as necessary)

The following equipment is included in the area encompassed by this Area Walk-By:

2-TS-001-0018A-B

2-TS-001-0018B-B

Evaluated by: *Robert Malone* Date: *8/6/12*

Phillip York *8/6/12*

Status: Y☒ N☐ U☐

Area Walk-By Checklist (AWC)

Location: Bldg. *Auxiliary* Floor El. *669'* Room, Area[4] *35 - Charging Pump Room 2B*

Instructions for Completing Checklist

This checklist may be used to document the results of the Area Walk-By near one or more SWEL items. The space below each of the following questions may be used to record the results of judgments and findings. Additional space is provided at the end of this checklist for documenting other comments.

Note: Y = Yes, N = No, U = Unknown, N/A = Not Applicable

1. Does anchorage of equipment in the area appear to be free of potentially adverse seismic conditions (if visible without necessarily opening cabinets)? Y☒ N☐ U☐ N/A☐

2. Does anchorage of equipment in the area appear to be free of significant degraded conditions? Y☒ N☐ U☐ N/A☐

3. Based on a visual inspection from the floor, do the cable/conduit raceways and HVAC ducting appear to be free of potentially adverse seismic conditions (e.g., condition of supports is adequate and fill conditions of cable trays appear to be inside acceptable limits)? Y☒ N☐ U☐ N/A☐
   Two elbow conduit covers were missing. Not considered seismically adverse.

4. Does it appear that the area is free of potentially adverse seismic spatial interactions with other equipment in the area (e.g., ceiling tiles and lighting)? Y☒ N☐ U☐ N/A☐

[4] If the room in which the SWEL item is located is very large (e.g., Turbine Hall), the area selected should be described. This selected area should be based on judgment, e.g., on the order of about 35 feet from the SWEL item.

Location: Bldg. *Auxiliary* Floor El. *669* Room, Area[4] *35 - Charging Pump Room 2B*

5. Does it appear that the area is free of potentially adverse seismic interactions that could cause flooding or spray in the area?	Y☒ N☐ U☐ N/A☐
6. Does it appear that the area is free of potentially adverse seismic interactions that could cause a fire in the area?	Y☒ N☐ U☐ N/A☐
7. Does it appear that the area is free of potentially adverse seismic interactions associated with housekeeping practices, storage of portable equipment, and temporary installations (e.g., scaffolding, lead shielding)?	Y☒ N☐ U☐ N/A☐
8. Have you looked for and found no other seismic conditions that could adversely affect the safety functions of the equipment in the area?	Y☒ N☐ U☐

Comments (Additional pages may be added as necessary)

The following equipment is included in the area encompassed by this Area Walk-By:
2-PMP-062-0104

Evaluated by: *Robert Malone* Date: *8/6/12*

Phillip York *8/6/12*

Status: Y☐ N☒ U☐

Area Walk-By Checklist (AWC)

Location: Bldg. *Auxiliary* Floor El. *734* Room, Area[4] *36 - 6.9kV Shtdwn Board Rm B (U2 Side)*

Instructions for Completing Checklist

This checklist may be used to document the results of the Area Walk-By near one or more SWEL items. The space below each of the following questions may be used to record the results of judgments and findings. Additional space is provided at the end of this checklist for documenting other comments.

Note: Y = Yes, N = No, U = Unknown, N/A = Not Applicable

1. Does anchorage of equipment in the area appear to be free of potentially adverse seismic conditions (if visible without necessarily opening cabinets)? Y☒ N☐ U☐ N/A☐

2. Does anchorage of equipment in the area appear to be free of significant degraded conditions? Y☒ N☐ U☐ N/A☐

3. Based on a visual inspection from the floor, do the cable/conduit raceways and HVAC ducting appear to be free of potentially adverse seismic conditions (e.g., condition of supports is adequate and fill conditions of cable trays appear to be inside acceptable limits)? Y☒ N☐ U☐ N/A☐

4. Does it appear that the area is free of potentially adverse seismic spatial interactions with other equipment in the area (e.g., ceiling tiles and lighting)? Y☒ N☐ U☐ N/A☐

[4] If the room in which the SWEL item is located is very large (e.g., Turbine Hall), the area selected should be described. This selected area should be based on judgment, e.g., on the order of about 35 feet from the SWEL item.

Location: Bldg. *Auxiliary* Floor El. *734* Room, Area[4] *36 - 6.9kV Shtdwn Board Rm B (U2 Side)*

5. Does it appear that the area is free of potentially adverse seismic interactions that could cause flooding or spray in the area?	Y☒ N☐ U☐ N/A☐
6. Does it appear that the area is free of potentially adverse seismic interactions that could cause a fire in the area?	Y☒ N☐ U☐ N/A☐
7. Does it appear that the area is free of potentially adverse seismic interactions associated with housekeeping practices, storage of portable equipment, and temporary installations (e.g., scaffolding, lead shielding)? *Scaffolding in area, in front of compartments 10 & 11, requires another tie-off point opposite of existing tie-off point to prevent tipping. Wheels were restrained properly to prevent rolling. During next visit to area, scaffolding was properly anchored to pipe support extending from ceiling.*	Y☐ N☒ U☐ N/A☐
8. Have you looked for and found no other seismic conditions that could adversely affect the safety functions of the equipment in the area?	Y☒ N☐ U☐

Comments (Additional pages may be added as necessary)

The following equipment is included in the area encompassed by this Area Walk-By:
2-BDB-202-CP

Evaluated by: *Robert Malone* Date: *8/7/12*

Phillip York *8/7/12*

Status: Y☐ N☒ U☐

Area Walk-By Checklist (AWC)

Location: Bldg. *Control* Floor El. *669* Room, Area[4] *37 - Control 669 Mech Room*

Instructions for Completing Checklist

This checklist may be used to document the results of the Area Walk-By near one or more SWEL items. The space below each of the following questions may be used to record the results of judgments and findings. Additional space is provided at the end of this checklist for documenting other comments.

Note: Y = Yes, N = No, U = Unknown, N/A = Not Applicable

1. Does anchorage of equipment in the area appear to be free of potentially adverse seismic conditions (if visible without necessarily opening cabinets)? Y☒ N☐ U☐ N/A☐

2. Does anchorage of equipment in the area appear to be free of significant degraded conditions? Y☒ N☐ U☐ N/A☐

3. Based on a visual inspection from the floor, do the cable/conduit raceways and HVAC ducting appear to be free of potentially adverse seismic conditions (e.g., condition of supports is adequate and fill conditions of cable trays appear to be inside acceptable limits)? Y☒ N☐ U☐ N/A☐
   In one location a copper line rubs on insulation for ductwork. Since this is a flexible copper line, this condition is deemed to be insignificant.

4. Does it appear that the area is free of potentially adverse seismic spatial interactions with other equipment in the area (e.g., ceiling tiles and lighting)? Y☒ N☐ U☐ N/A☐

5. Does it appear that the area is free of potentially adverse seismic interactions that could cause flooding or spray in the area? Y☐ N☒ U☐ N/A☐
   In one location a nozzle on the fire protection line is very close to a conduit on the ceiling (from visual inspection from the floor, it appears to be within 1" of the conduit). This nozzle is in the middle of a pipe span of about 4' ~5' (between hangers). Vertical movement will likely be limited, since adjacent FP line spanning bays are ~10' (between supports) and vertical acceleration is not likely to cause a vertical movement of 1".

   Fire protection hanger in the center of the room (between AHU A-A and AHU B-B has a pin with a nut that is loose. This nut needs to be tightened to the vertical support tabs. Possible spray hazard as if nut comes loose the fire protection line could be overstressed.

[4] If the room in which the SWEL item is located is very large (e.g., Turbine Hall), the area selected should be described. This selected area should be based on judgment, e.g., on the order of about 35 feet from the SWEL item.

Location: Bldg. *Control* Floor El. *669* Room, Area[4] *37 - Control 669 Mech Room*

6. Does it appear that the area is free of potentially adverse seismic interactions that could cause a fire in the area? Y☒ N☐ U☐ N/A☐

7. Does it appear that the area is free of potentially adverse seismic interactions associated with housekeeping practices, storage of portable equipment, and temporary installations (e.g., scaffolding, lead shielding)? Y☒ N☐ U☐ N/A☐

8. Have you looked for and found no other seismic conditions that could adversely affect the safety functions of the equipment in the area? Y☒ N☐ U☐

There is moderate mineral buildup / corrosion on conduit (and associated anchorage), conduit support steel baseplate, and electrical cabinet behind pipe on wall near 0-CHR-311-171. There appears to be some type of leak near the ceiling. This condition is not considered to be seismically adverse, but it should be monitored for future degradation.

Control Bldg Elec Bd Rm Alt Fan A-A Mtr (0-MTRB-311-0027) has one mounting nut that is not fully engaged (appears to be about 50% engaged). The loose nut is on one (of two) of the all thread rods at the base of the motor mounting frame (on the mounting rod that does not have a sleeve). This is not considered to be seismically adverse because it appears that this condition has not developed from the nut "backing off" (or any other kind of damage). It appears that this condition is the result of the base rod being too short.

Comments (Additional pages may be added as necessary)

Evaluated by: *Lance Summers* Date: *8/7/12*

Isaac Antanaitis *8/7/12*

Status: Y☐ N☒ U☐

Area Walk-By Checklist (AWC)

Location: Bldg. *Auxiliary* Floor El. *690* Room, Area[4] *38 - Aux Feedwater Pump B Area*

Instructions for Completing Checklist

This checklist may be used to document the results of the Area Walk-By near one or more SWEL items. The space below each of the following questions may be used to record the results of judgments and findings. Additional space is provided at the end of this checklist for documenting other comments.

Note: Y = Yes, N = No, U = Unknown, N/A = Not Applicable

1. Does anchorage of equipment in the area appear to be free of potentially adverse seismic conditions (if visible without necessarily opening cabinets)? Y☒ N☐ U☐ N/A☐

2. Does anchorage of equipment in the area appear to be free of significant degraded conditions? Y☒ N☐ U☐ N/A☐

3. Based on a visual inspection from the floor, do the cable/conduit raceways and HVAC ducting appear to be free of potentially adverse seismic conditions (e.g., condition of supports is adequate and fill conditions of cable trays appear to be inside acceptable limits)? Y☒ N☐ U☐ N/A☐

4. Does it appear that the area is free of potentially adverse seismic spatial interactions with other equipment in the area (e.g., ceiling tiles and lighting)? Y☒ N☐ U☐ N/A☐

[4] If the room in which the SWEL item is located is very large (e.g., Turbine Hall), the area selected should be described. This selected area should be based on judgment, e.g., on the order of about 35 feet from the SWEL item.

Location: Bldg. *Auxiliary* Floor El. *690* Room, Area[4] *38 - Aux Feedwater Pump B Area*

5. Does it appear that the area is free of potentially adverse seismic interactions that could cause flooding or spray in the area? Y☒ N☐ U☐ N/A☐

6. Does it appear that the area is free of potentially adverse seismic interactions that could cause a fire in the area? Y☒ N☐ U☐ N/A☐

7. Does it appear that the area is free of potentially adverse seismic interactions associated with housekeeping practices, storage of portable equipment, and temporary installations (e.g., scaffolding, lead shielding)? Y☐ N☒ U☐ N/A☐
   55 gallon barrels in the area are not properly restrained. Much of the equipment in the area has soft targets, including valves, gauges, and small tubing.

8. Have you looked for and found no other seismic conditions that could adversely affect the safety functions of the equipment in the area? Y☒ N☐ U☐

Comments (Additional pages may be added as necessary)

Fire Protection cabinet is not restrained but the height/width ratio is less than 2 and the cabinet is not prone to tipping. Inspection tag was located on cabinet and appeared to be installed per plant procedure.

The following equipment is included in the area encompassed by this Area Walk-By:

2-PMP-003-0128

2-FCV-003-0126A-B

2-LOCL-500-0222B

Evaluated by: *Robert Malone* Date: *8/7/12*

Phillip York *8/7/12*

Status: Y☒ N☐ U☐

Area Walk-By Checklist (AWC)

Location: Bldg. *Auxiliary* Floor El. *690* Room, Area[4] *39 - 2B RHR CCS HEX Room*

Instructions for Completing Checklist

This checklist may be used to document the results of the Area Walk-By near one or more SWEL items. The space below each of the following questions may be used to record the results of judgments and findings. Additional space is provided at the end of this checklist for documenting other comments.

Note: Y = Yes, N = No, U = Unknown, N/A = Not Applicable

1. Does anchorage of equipment in the area appear to be free of potentially adverse seismic conditions (if visible without necessarily opening cabinets)? Y☒ N☐ U☐ N/A☐

2. Does anchorage of equipment in the area appear to be free of significant degraded conditions? Y☒ N☐ U☐ N/A☐

3. Based on a visual inspection from the floor, do the cable/conduit raceways and HVAC ducting appear to be free of potentially adverse seismic conditions (e.g., condition of supports is adequate and fill conditions of cable trays appear to be inside acceptable limits)? Y☒ N☐ U☐ N/A☐

4. Does it appear that the area is free of potentially adverse seismic spatial interactions with other equipment in the area (e.g., ceiling tiles and lighting)? Y☒ N☐ U☐ N/A☐

[4] If the room in which the SWEL item is located is very large (e.g., Turbine Hall), the area selected should be described. This selected area should be based on judgment, e.g., on the order of about 35 feet from the SWEL item.

Location: Bldg. *Auxiliary* Floor El. *690* Room, Area[4] *39 - 2B RHR CCS HEX Room*

5. Does it appear that the area is free of potentially adverse seismic interactions that could cause flooding or spray in the area? Y☒ N☐ U☐ N/A☐

6. Does it appear that the area is free of potentially adverse seismic interactions that could cause a fire in the area? Y☒ N☐ U☐ N/A☐

7. Does it appear that the area is free of potentially adverse seismic interactions associated with housekeeping practices, storage of portable equipment, and temporary installations (e.g., scaffolding, lead shielding)? Y☒ N☐ U☐ N/A☐

8. Have you looked for and found no other seismic conditions that could adversely affect the safety functions of the equipment in the area? Y☒ N☐ U☐

Comments (Additional pages may be added as necessary)

An unrestrained ladder was found on the very top platform in the room. There was no equipment in the area and this was not considered seismically adverse.

The following equipment is included in the area encompassed by this Area Walk-By:

2-HEX-072-0007

2-HEX-074-0027

Evaluated by: *Robert Malone* Date: *8/7/12*

Phillip York *8/7/12*

Status: Y☒ N☐ U☐

Area Walk-By Checklist (AWC)

Location: Bldg. *Auxiliary* Floor El. *714* Room, Area[4] *40 - Shutdown Board B Area*

Instructions for Completing Checklist

This checklist may be used to document the results of the Area Walk-By near one or more SWEL items. The space below each of the following questions may be used to record the results of judgments and findings. Additional space is provided at the end of this checklist for documenting other comments.

Note: Y = Yes, N = No, U = Unknown, N/A = Not Applicable

1. Does anchorage of equipment in the area appear to be free of potentially adverse seismic conditions (if visible without necessarily opening cabinets)? Y☒ N☐ U☐ N/A☐

2. Does anchorage of equipment in the area appear to be free of significant degraded conditions? Y☒ N☐ U☐ N/A☐

3. Based on a visual inspection from the floor, do the cable/conduit raceways and HVAC ducting appear to be free of potentially adverse seismic conditions (e.g., condition of supports is adequate and fill conditions of cable trays appear to be inside acceptable limits)? Y☒ N☐ U☐ N/A☐

4. Does it appear that the area is free of potentially adverse seismic spatial interactions with other equipment in the area (e.g., ceiling tiles and lighting)? Y☒ N☐ U☐ N/A☐

[4] If the room in which the SWEL item is located is very large (e.g., Turbine Hall), the area selected should be described. This selected area should be based on judgment, e.g., on the order of about 35 feet from the SWEL item.

Location: Bldg. *Auxiliary* Floor El. *714* Room, Area[4] *40 - Shutdown Board B Area*

5. Does it appear that the area is free of potentially adverse seismic interactions that could cause flooding or spray in the area? Y☒ N☐ U☐ N/A☐

6. Does it appear that the area is free of potentially adverse seismic interactions that could cause a fire in the area? Y☒ N☐ U☐ N/A☐

7. Does it appear that the area is free of potentially adverse seismic interactions associated with housekeeping practices, storage of portable equipment, and temporary installations (e.g., scaffolding, lead shielding)? Y☒ N☐ U☐ N/A☐

8. Have you looked for and found no other seismic conditions that could adversely affect the safety functions of the equipment in the area? Y☒ N☐ U☐

Comments (Additional pages may be added as necessary)

The following equipment is included in the area encompassed by this Area Walk-By:
0-CHR-313-0338

Evaluated by: *Robert Malone* Date: *8/8/12*

Phillip York *8/8/12*

Status: Y☒ N☐ U☐

Area Walk-By Checklist (AWC)

Location: Bldg. *Auxiliary* Floor El. *690* Room, Area[4] *42 - 2A RHR CCS HEX Room*

Instructions for Completing Checklist

This checklist may be used to document the results of the Area Walk-By near one or more SWEL items. The space below each of the following questions may be used to record the results of judgments and findings. Additional space is provided at the end of this checklist for documenting other comments.

Note: Y = Yes, N = No, U = Unknown, N/A = Not Applicable

1. Does anchorage of equipment in the area appear to be free of potentially adverse seismic conditions (if visible without necessarily opening cabinets)? Y☒ N☐ U☐ N/A☐

2. Does anchorage of equipment in the area appear to be free of significant degraded conditions? Y☒ N☐ U☐ N/A☐

3. Based on a visual inspection from the floor, do the cable/conduit raceways and HVAC ducting appear to be free of potentially adverse seismic conditions (e.g., condition of supports is adequate and fill conditions of cable trays appear to be inside acceptable limits)? Y☒ N☐ U☐ N/A☐

4. Does it appear that the area is free of potentially adverse seismic spatial interactions with other equipment in the area (e.g., ceiling tiles and lighting)? Y☒ N☐ U☐ N/A☐

[4] If the room in which the SWEL item is located is very large (e.g., Turbine Hall), the area selected should be described. This selected area should be based on judgment, e.g., on the order of about 35 feet from the SWEL item.

Location: Bldg. *Auxiliary* Floor El. *690* Room, Area[4] *42 - 2A RHR CCS HEX Room*

5. Does it appear that the area is free of potentially adverse seismic interactions that could cause flooding or spray in the area? Y☒ N☐ U☐ N/A☐

6. Does it appear that the area is free of potentially adverse seismic interactions that could cause a fire in the area? Y☒ N☐ U☐ N/A☐

7. Does it appear that the area is free of potentially adverse seismic interactions associated with housekeeping practices, storage of portable equipment, and temporary installations (e.g., scaffolding, lead shielding)? Y☒ N☐ U☐ N/A☐

   A roll of tape was found on top of the RHR heat exchanger. There were no soft targets in the area and this was not considered seismically adverse.

8. Have you looked for and found no other seismic conditions that could adversely affect the safety functions of the equipment in the area? Y☒ N☐ U☐

Comments (Additional pages may be added as necessary)

The following equipment is included in the area encompassed by this Area Walk-By:

2-HEX-072-0030

2-HEX-074-0015

Evaluated by: *Robert Malone* Date: *8/2/12*

Phillip York *8/2/12*

Status: Y☐ N☒ U☐

Area Walk-By Checklist (AWC)

Location: Bldg. *Auxiliary* Floor El. *669* Room, Area[4] *43 - SI Pump Area*

Instructions for Completing Checklist

This checklist may be used to document the results of the Area Walk-By near one or more SWEL items. The space below each of the following questions may be used to record the results of judgments and findings. Additional space is provided at the end of this checklist for documenting other comments.

Note: Y = Yes, N = No, U = Unknown, N/A = Not Applicable

1. Does anchorage of equipment in the area appear to be free of potentially adverse seismic conditions (if visible without necessarily opening cabinets)? Y☒ N☐ U☐ N/A☐

2. Does anchorage of equipment in the area appear to be free of significant degraded conditions? Y☒ N☐ U☐ N/A☐

3. Based on a visual inspection from the floor, do the cable/conduit raceways and HVAC ducting appear to be free of potentially adverse seismic conditions (e.g., condition of supports is adequate and fill conditions of cable trays appear to be inside acceptable limits)? Y☒ N☐ U☐ N/A☐

4. Does it appear that the area is free of potentially adverse seismic spatial interactions with other equipment in the area (e.g., ceiling tiles and lighting)? Y☒ N☐ U☐ N/A☐

[4] If the room in which the SWEL item is located is very large (e.g., Turbine Hall), the area selected should be described. This selected area should be based on judgment, e.g., on the order of about 35 feet from the SWEL item.

Location: Bldg. *Auxiliary* Floor El. *669* Room, Area[4] *43 - SI Pump Area*

5. Does it appear that the area is free of potentially adverse seismic interactions that could cause flooding or spray in the area? Y☐ N☒ U☐ N/A☐
   55 gallon barrels in the area are not properly restrained. Much of the equipment in the area has soft targets, including valves, gauges, and small tubing.

6. Does it appear that the area is free of potentially adverse seismic interactions that could cause a fire in the area? Y☒ N☐ U☐ N/A☐

7. Does it appear that the area is free of potentially adverse seismic interactions associated with housekeeping practices, storage of portable equipment, and temporary installations (e.g., scaffolding, lead shielding)? Y☒ N☐ U☐ N/A☐

8. Have you looked for and found no other seismic conditions that could adversely affect the safety functions of the equipment in the area? Y☒ N☐ U☐

Comments (Additional pages may be added as necessary)

The following equipment is included in the area encompassed by this Area Walk-By:

2-FCV-067-0176-A

2-FCV-067-0182-B

Evaluated by: *Robert Malone* Date: *8/1/12*

Phillip York *8/1/12*

Status: Y☒ N☐ U☐

Area Walk-By Checklist (AWC)

Location: Bldg. *Auxiliary* Floor El. *653* Room, Area[4] *44 - CS Pump Room 2B*

Instructions for Completing Checklist

This checklist may be used to document the results of the Area Walk-By near one or more SWEL items. The space below each of the following questions may be used to record the results of judgments and findings. Additional space is provided at the end of this checklist for documenting other comments.

Note: Y = Yes, N = No, U = Unknown, N/A = Not Applicable

1. Does anchorage of equipment in the area appear to be free of potentially adverse seismic conditions (if visible without necessarily opening cabinets)? Y☒ N☐ U☐ N/A☐

2. Does anchorage of equipment in the area appear to be free of significant degraded conditions? Y☒ N☐ U☐ N/A☐
   Light rust on pipe hanger. Not credible.

3. Based on a visual inspection from the floor, do the cable/conduit raceways and HVAC ducting appear to be free of potentially adverse seismic conditions (e.g., condition of supports is adequate and fill conditions of cable trays appear to be inside acceptable limits)? Y☒ N☐ U☐ N/A☐

4. Does it appear that the area is free of potentially adverse seismic spatial interactions with other equipment in the area (e.g., ceiling tiles and lighting)? Y☒ N☐ U☐ N/A☐

[4] If the room in which the SWEL item is located is very large (e.g., Turbine Hall), the area selected should be described. This selected area should be based on judgment, e.g., on the order of about 35 feet from the SWEL item.

Location: Bldg. *Auxiliary* Floor El. *653* Room, Area[4] *44 - CS Pump Room 2B*

5. Does it appear that the area is free of potentially adverse seismic interactions that could cause flooding or spray in the area? Y☒ N☐ U☐ N/A☐

6. Does it appear that the area is free of potentially adverse seismic interactions that could cause a fire in the area? Y☒ N☐ U☐ N/A☐

7. Does it appear that the area is free of potentially adverse seismic interactions associated with housekeeping practices, storage of portable equipment, and temporary installations (e.g., scaffolding, lead shielding)? Y☒ N☐ U☐ N/A☐

8. Have you looked for and found no other seismic conditions that could adversely affect the safety functions of the equipment in the area? Y☒ N☐ U☐
Partial block wall for equipment removal in one concrete wall of room. Block wall is anchored by steel bars with bolts into concrete.

Comments (Additional pages may be added as necessary)

The following equipment is included in the area encompassed by this Area Walk-By:
2-CLR-030-0178

Evaluated by: *Isaac Antanaitis* Date: *8/22/12*

Phillip York *8/22/12*

Status: Y☒ N☐ U☐

Area Walk-By Checklist (AWC)

Location: Bldg. *Auxiliary* Floor El. *734* Room, Area[4] *45 - 125V Vital Battery Board Room IV*

Instructions for Completing Checklist

This checklist may be used to document the results of the Area Walk-By near one or more SWEL items. The space below each of the following questions may be used to record the results of judgments and findings. Additional space is provided at the end of this checklist for documenting other comments.

Note: Y = Yes, N = No, U = Unknown, N/A = Not Applicable

1. Does anchorage of equipment in the area appear to be free of potentially adverse seismic conditions (if visible without necessarily opening cabinets)? Y☒ N☐ U☐ N/A☐

2. Does anchorage of equipment in the area appear to be free of significant degraded conditions? Y☒ N☐ U☐ N/A☐

3. Based on a visual inspection from the floor, do the cable/conduit raceways and HVAC ducting appear to be free of potentially adverse seismic conditions (e.g., condition of supports is adequate and fill conditions of cable trays appear to be inside acceptable limits)? Y☒ N☐ U☐ N/A☐

4. Does it appear that the area is free of potentially adverse seismic spatial interactions with other equipment in the area (e.g., ceiling tiles and lighting)? Y☒ N☐ U☐ N/A☐

[4] If the room in which the SWEL item is located is very large (e.g., Turbine Hall), the area selected should be described. This selected area should be based on judgment, e.g., on the order of about 35 feet from the SWEL item.

Location: Bldg. *Auxiliary* Floor El. *734* Room, Area[4] *45 - 125V Vital Battery Board Room IV*

5. Does it appear that the area is free of potentially adverse seismic interactions that could cause flooding or spray in the area? Y☒ N☐ U☐ N/A☐

6. Does it appear that the area is free of potentially adverse seismic interactions that could cause a fire in the area? Y☒ N☐ U☐ N/A☐

7. Does it appear that the area is free of potentially adverse seismic interactions associated with housekeeping practices, storage of portable equipment, and temporary installations (e.g., scaffolding, lead shielding)? Y☒ N☐ U☐ N/A☐
   A temporary cover is being used for an overhead cable near the back corner of 125V DC Vital Battery Board IV (0-BDG-250-KH-G) – panel 4.

8. Have you looked for and found no other seismic conditions that could adversely affect the safety functions of the equipment in the area? Y☒ N☐ U☐

Comments (Additional pages may be added as necessary)

The following equipment is included in the area encompassed by this Area Walk-By:

2-BDE-250-NK-G

- *There is visual evidence of a concrete patch for fire protection penetration in the ceiling.*
- *Block walls on North, South, and East side of the room are reinforced seismic category 1 walls per TVA drawings 46W405-5, 46W405-9, and 46W405-15. Most of the front wall has a concrete header instead of the typical angle connection to ceiling slab, which is consistent with drawing 46W405-15.*

Evaluated by: *Lance Summers* Date: *7/26/12*

Isaac Antanaitis *7/26/12*

Status: Y☒ N☐ U☐

Area Walk-By Checklist (AWC)

Location: Bldg. *Reactor* Floor El. *693* Room, Area[1] *46 - Accumulator Room 3*

Instructions for Completing Checklist

This checklist may be used to document the results of the Area Walk-By near one or more SWEL items. The space below each of the following questions may be used to record the results of judgments and findings. Additional space is provided at the end of this checklist for documenting other comments.

Note: Y = Yes, N = No, U = Unknown, N/A = Not Applicable

1. Does anchorage of equipment in the area appear to be free of potentially adverse seismic conditions (if visible without necessarily opening cabinets)? Y☒ N☐ U☐ N/A☐

2. Does anchorage of equipment in the area appear to be free of significant degraded conditions? Y☒ N☐ U☐ N/A☐

3. Based on a visual inspection from the floor, do the cable/conduit raceways and HVAC ducting appear to be free of potentially adverse seismic conditions (e.g., condition of supports is adequate and fill conditions of cable trays appear to be inside acceptable limits)? Y☒ N☐ U☐ N/A☐

4. Does it appear that the area is free of potentially adverse seismic spatial interactions with other equipment in the area (e.g., ceiling tiles and lighting)? Y☒ N☐ U☐ N/A☐

[1] If the room in which the SWEL item is located is very large (e.g., Turbine Hall), the area selected should be described. This selected area should be based on judgment, e.g., on the order of about 35 feet from the SWEL item.

Location: Bldg. *Reactor* Floor El. *693* Room, Area[1] *46 - Accumulator Room 3*

5. Does it appear that the area is free of potentially adverse seismic interactions that could cause flooding or spray in the area? Y☒ N☐ U☐ N/A☐

6. Does it appear that the area is free of potentially adverse seismic interactions that could cause a fire in the area? Y☒ N☐ U☐ N/A☐

7. Does it appear that the area is free of potentially adverse seismic interactions associated with housekeeping practices, storage of portable equipment, and temporary installations (e.g., scaffolding, lead shielding)? Y☒ N☐ U☐ N/A☐

   The condition in Unit 2 during this walk-by was Refueling outage with Steam Generator replacement. The fuel is off-load in the Spent Fuel Pit. The unit is currently in a No Mode, as per Tech Specs. Minor temporary equipment and housekeeping issues were disregarded because of this condition.

8. Have you looked for and found no other seismic conditions that could adversely affect the safety functions of the equipment in the area? Y☒ N☐ U☐

Comments (Additional pages may be added as necessary)

The following equipment is included in the area encompassed by this Area Walk-By:
2-FCV-063-0090

Evaluated by: *Robert Malone* Date: *11/9/12*

Phillip York *11/9/12*

Status: Y☒ N☐ U☐

Area Walk-By Checklist (AWC)

Location: Bldg. *Reactor* Floor El. *693* Room, Area[1] *47 - Fan Room 1*

Instructions for Completing Checklist

This checklist may be used to document the results of the Area Walk-By near one or more SWEL items. The space below each of the following questions may be used to record the results of judgments and findings. Additional space is provided at the end of this checklist for documenting other comments.

Note: Y = Yes, N = No, U = Unknown, N/A = Not Applicable

1. Does anchorage of equipment in the area appear to be free of potentially adverse seismic conditions (if visible without necessarily opening cabinets)? Y☒ N☐ U☐ N/A☐

2. Does anchorage of equipment in the area appear to be free of significant degraded conditions? Y☒ N☐ U☐ N/A☐

3. Based on a visual inspection from the floor, do the cable/conduit raceways and HVAC ducting appear to be free of potentially adverse seismic conditions (e.g., condition of supports is adequate and fill conditions of cable trays appear to be inside acceptable limits)? Y☒ N☐ U☐ N/A☐

4. Does it appear that the area is free of potentially adverse seismic spatial interactions with other equipment in the area (e.g., ceiling tiles and lighting)? Y☒ N☐ U☐ N/A☐
   Scaffold support was found to be in contact with small bore piping behind instrument. Not considered significant.

[1] If the room in which the SWEL item is located is very large (e.g., Turbine Hall), the area selected should be described. This selected area should be based on judgment, e.g., on the order of about 35 feet from the SWEL item.

Location: Bldg. *Reactor* Floor El. *693* Room, Area[1] *47 - Fan Room 1*

5. Does it appear that the area is free of potentially adverse seismic interactions that could cause flooding or spray in the area? Y☒ N☐ U☐ N/A☐

6. Does it appear that the area is free of potentially adverse seismic interactions that could cause a fire in the area? Y☒ N☐ U☐ N/A☐

7. Does it appear that the area is free of potentially adverse seismic interactions associated with housekeeping practices, storage of portable equipment, and temporary installations (e.g., scaffolding, lead shielding)? Y☒ N☐ U☐ N/A☐

   The condition in Unit 2 during this walk-by was Refueling outage with Steam Generator replacement. The fuel is off-load in the Spent Fuel Pit. The unit is currently in a No Mode, as per Tech Specs. Minor temporary equipment and housekeeping issues were disregarded because of this condition.

8. Have you looked for and found no other seismic conditions that could adversely affect the safety functions of the equipment in the area? Y☒ N☐ U☐

Comments (Additional pages may be added as necessary)

The following equipment is included in the area encompassed by this Area Walk-By:

2-CLR-030-0074

2-LOCL-500-0183C

Evaluated by: *Robert Malone* Date: *11/9/12*

Phillip York *11/9/12*

Status: Y☒ N☐ U☐

Area Walk-By Checklist (AWC)

Location: Bldg. *Reactor* Floor El. *693* Room, Area[1] *48 - Accumulator Room 1*

Instructions for Completing Checklist

This checklist may be used to document the results of the Area Walk-By near one or more SWEL items. The space below each of the following questions may be used to record the results of judgments and findings. Additional space is provided at the end of this checklist for documenting other comments.

Note: Y = Yes, N = No, U = Unknown, N/A = Not Applicable

1. Does anchorage of equipment in the area appear to be free of potentially adverse seismic conditions (if visible without necessarily opening cabinets)? Y☒ N☐ U☐ N/A☐

2. Does anchorage of equipment in the area appear to be free of significant degraded conditions? Y☒ N☐ U☐ N/A☐

3. Based on a visual inspection from the floor, do the cable/conduit raceways and HVAC ducting appear to be free of potentially adverse seismic conditions (e.g., condition of supports is adequate and fill conditions of cable trays appear to be inside acceptable limits)? Y☒ N☐ U☐ N/A☐

4. Does it appear that the area is free of potentially adverse seismic spatial interactions with other equipment in the area (e.g., ceiling tiles and lighting)? Y☒ N☐ U☐ N/A☐

[1] If the room in which the SWEL item is located is very large (e.g., Turbine Hall), the area selected should be described. This selected area should be based on judgment, e.g., on the order of about 35 feet from the SWEL item.

Location: Bldg. *Reactor* Floor El. *693* Room, Area[1] *48 - Acculumator Room 1*

5. Does it appear that the area is free of potentially adverse seismic interactions that could cause flooding or spray in the area? Y☒ N☐ U☐ N/A☐

6. Does it appear that the area is free of potentially adverse seismic interactions that could cause a fire in the area? Y☒ N☐ U☐ N/A☐

7. Does it appear that the area is free of potentially adverse seismic interactions associated with housekeeping practices, storage of portable equipment, and temporary installations (e.g., scaffolding, lead shielding)? Y☒ N☐ U☐ N/A☐

   The condition in Unit 2 during this walk-by was Refueling outage with Steam Generator replacement. The fuel is off-load in the Spent Fuel Pit. The unit is currently in a No Mode, as per Tech Specs. Minor temporary equipment and housekeeping issues were disregarded because of this condition.

8. Have you looked for and found no other seismic conditions that could adversely affect the safety functions of the equipment in the area? Y☒ N☐ U☐

Comments (Additional pages may be added as necessary)

The following equipment is included in the area encompassed by this Area Walk-By:

2-TNK-063-0119

2-FCV-063-0118

Evaluated by: *Robert Malone* Date: *11/9/12*

Phillip York *11/9/12*

Status: Y☒ N☐ U☐

Area Walk-By Checklist (AWC)

Location: Bldg. *Reactor* Floor El. *693* Room, Area[1] *49 - Accumulator Room 4*

Instructions for Completing Checklist

This checklist may be used to document the results of the Area Walk-By near one or more SWEL items. The space below each of the following questions may be used to record the results of judgments and findings. Additional space is provided at the end of this checklist for documenting other comments.

Note: Y = Yes, N = No, U = Unknown, N/A = Not Applicable

1. Does anchorage of equipment in the area appear to be free of potentially adverse seismic conditions (if visible without necessarily opening cabinets)? Y☒ N☐ U☐ N/A☐

2. Does anchorage of equipment in the area appear to be free of significant degraded conditions? Y☒ N☐ U☐ N/A☐

3. Based on a visual inspection from the floor, do the cable/conduit raceways and HVAC ducting appear to be free of potentially adverse seismic conditions (e.g., condition of supports is adequate and fill conditions of cable trays appear to be inside acceptable limits)? Y☒ N☐ U☐ N/A☐

4. Does it appear that the area is free of potentially adverse seismic spatial interactions with other equipment in the area (e.g., ceiling tiles and lighting)? Y☒ N☐ U☐ N/A☐

[1] If the room in which the SWEL item is located is very large (e.g., Turbine Hall), the area selected should be described. This selected area should be based on judgment, e.g., on the order of about 35 feet from the SWEL item.

Location: Bldg. *Reactor* Floor El. *693* Room, Area[1] *49 - Accumulator Room 4*

5. Does it appear that the area is free of potentially adverse seismic interactions that could cause flooding or spray in the area? Y☒ N☐ U☐ N/A☐

6. Does it appear that the area is free of potentially adverse seismic interactions that could cause a fire in the area? Y☒ N☐ U☐ N/A☐

7. Does it appear that the area is free of potentially adverse seismic interactions associated with housekeeping practices, storage of portable equipment, and temporary installations (e.g., scaffolding, lead shielding)? Y☒ N☐ U☐ N/A☐

   The condition in Unit 2 during this walk-by was Refueling outage with Steam Generator replacement. The fuel is off-load in the Spent Fuel Pit. The unit is currently in a No Mode, as per Tech Specs. Minor temporary equipment and housekeeping issues were disregarded because of this condition.

8. Have you looked for and found no other seismic conditions that could adversely affect the safety functions of the equipment in the area? Y☒ N☐ U☐

Comments (Additional pages may be added as necessary)

The following equipment is included in the area encompassed by this Area Walk-By:
2-TNK-063-0060

Evaluated by: *Robert Malone* Date: *11/9/12*

Phillip York *11/9/12*

Status: Y☒ N☐ U☐

Area Walk-By Checklist (AWC)

Location: Bldg. *Reactor* Floor El. *747* Room, Area[1] *50 - Annulus AZ 277*

Instructions for Completing Checklist

This checklist may be used to document the results of the Area Walk-By near one or more SWEL items. The space below each of the following questions may be used to record the results of judgments and findings. Additional space is provided at the end of this checklist for documenting other comments.

Note: Y = Yes, N = No, U = Unknown, N/A = Not Applicable

1. Does anchorage of equipment in the area appear to be free of potentially adverse seismic conditions (if visible without necessarily opening cabinets)? Y☒ N☐ U☐ N/A☐

2. Does anchorage of equipment in the area appear to be free of significant degraded conditions? Y☒ N☐ U☐ N/A☐

3. Based on a visual inspection from the floor, do the cable/conduit raceways and HVAC ducting appear to be free of potentially adverse seismic conditions (e.g., condition of supports is adequate and fill conditions of cable trays appear to be inside acceptable limits)? Y☒ N☐ U☐ N/A☐

4. Does it appear that the area is free of potentially adverse seismic spatial interactions with other equipment in the area (e.g., ceiling tiles and lighting)? Y☒ N☐ U☐ N/A☐

[1] If the room in which the SWEL item is located is very large (e.g., Turbine Hall), the area selected should be described. This selected area should be based on judgment, e.g., on the order of about 35 feet from the SWEL item.

Location: Bldg. *Reactor* Floor El. *747* Room, Area[1] *50 - Annulus AZ 277*

5. Does it appear that the area is free of potentially adverse seismic interactions that could cause flooding or spray in the area? Y☒ N☐ U☐ N/A☐

6. Does it appear that the area is free of potentially adverse seismic interactions that could cause a fire in the area? Y☒ N☐ U☐ N/A☐

7. Does it appear that the area is free of potentially adverse seismic interactions associated with housekeeping practices, storage of portable equipment, and temporary installations (e.g., scaffolding, lead shielding)? Y☒ N☐ U☐ N/A☐

8. Have you looked for and found no other seismic conditions that could adversely affect the safety functions of the equipment in the area? Y☒ N☐ U☐

Comments (Additional pages may be added as necessary)

The following equipment is included in the area encompassed by this Area Walk-By:

2-PSV-001-0024A-A

2-PSV-001-0013B-B

Evaluated by: *Robert Malone* Date: *11/9/12*

Phillip York *11/9/12*

Status: Y☒ N☐ U☐

Area Walk-By Checklist (AWC)

Location: Bldg. *Reactor* Floor El. *680* Room, Area[1] *51 - Inside Polar Crane Wall*

Instructions for Completing Checklist

This checklist may be used to document the results of the Area Walk-By near one or more SWEL items. The space below each of the following questions may be used to record the results of judgments and findings. Additional space is provided at the end of this checklist for documenting other comments.

Note: Y = Yes, N = No, U = Unknown, N/A = Not Applicable

1. Does anchorage of equipment in the area appear to be free of potentially adverse seismic conditions (if visible without necessarily opening cabinets)? Y☒ N☐ U☐ N/A☐

2. Does anchorage of equipment in the area appear to be free of significant degraded conditions? Y☒ N☐ U☐ N/A☐

3. Based on a visual inspection from the floor, do the cable/conduit raceways and HVAC ducting appear to be free of potentially adverse seismic conditions (e.g., condition of supports is adequate and fill conditions of cable trays appear to be inside acceptable limits)? Y☒ N☐ U☐ N/A☐

4. Does it appear that the area is free of potentially adverse seismic spatial interactions with other equipment in the area (e.g., ceiling tiles and lighting)? Y☒ N☐ U☐ N/A☐

[1] If the room in which the SWEL item is located is very large (e.g., Turbine Hall), the area selected should be described. This selected area should be based on judgment, e.g., on the order of about 35 feet from the SWEL item.

Location: Bldg. *Reactor* Floor El. *680* Room, Area[1] *51 - Inside Polar Crane Wall*

5. Does it appear that the area is free of potentially adverse seismic interactions that could cause flooding or spray in the area? Y☒ N☐ U☐ N/A☐

6. Does it appear that the area is free of potentially adverse seismic interactions that could cause a fire in the area? Y☒ N☐ U☐ N/A☐

7. Does it appear that the area is free of potentially adverse seismic interactions associated with housekeeping practices, storage of portable equipment, and temporary installations (e.g., scaffolding, lead shielding)? Y☒ N☐ U☐ N/A☐

   The condition in Unit 2 during this walk-by was Refueling outage with Steam Generator replacement. The fuel is off-load in the Spent Fuel Pit. The unit is currently in a No Mode, as per Tech Specs. Minor temporary equipment and housekeeping issues were disregarded because of this condition.

8. Have you looked for and found no other seismic conditions that could adversely affect the safety functions of the equipment in the area? Y☒ N☐ U☐

Comments (Additional pages may be added as necessary)

The following equipment is included in the area encompassed by this Area Walk-By:

2-AHU-030-0088

2-AHU-030-0080

Evaluated by: *Robert Malone* Date: *11/9/12*

Phillip York *11/9/12*

Status: Y☒ N☐ U☐

Area Walk-By Checklist (AWC)

Location: Bldg. *Reactor* Floor El. *708* Room, Area[1] *52 - Incore Inst Room Platform*

Instructions for Completing Checklist

This checklist may be used to document the results of the Area Walk-By near one or more SWEL items. The space below each of the following questions may be used to record the results of judgments and findings. Additional space is provided at the end of this checklist for documenting other comments.

Note: Y = Yes, N = No, U = Unknown, N/A = Not Applicable

1. Does anchorage of equipment in the area appear to be free of potentially adverse seismic conditions (if visible without necessarily opening cabinets)? Y☒ N☐ U☐ N/A☐

2. Does anchorage of equipment in the area appear to be free of significant degraded conditions? Y☒ N☐ U☐ N/A☐

3. Based on a visual inspection from the floor, do the cable/conduit raceways and HVAC ducting appear to be free of potentially adverse seismic conditions (e.g., condition of supports is adequate and fill conditions of cable trays appear to be inside acceptable limits)? Y☒ N☐ U☐ N/A☐

4. Does it appear that the area is free of potentially adverse seismic spatial interactions with other equipment in the area (e.g., ceiling tiles and lighting)? Y☒ N☐ U☐ N/A☐
   Unrestrained ladders were found in the area but did not appear to be near any sensitive equipment. Not significant.

[1] If the room in which the SWEL item is located is very large (e.g., Turbine Hall), the area selected should be described. This selected area should be based on judgment, e.g., on the order of about 35 feet from the SWEL item.

Location: Bldg. *Reactor* Floor El. *708* Room, Area[1] *52 - Incore Inst Room Platform*

5. Does it appear that the area is free of potentially adverse seismic interactions that could cause flooding or spray in the area? Y☒ N☐ U☐ N/A☐

6. Does it appear that the area is free of potentially adverse seismic interactions that could cause a fire in the area? Y☒ N☐ U☐ N/A☐

7. Does it appear that the area is free of potentially adverse seismic interactions associated with housekeeping practices, storage of portable equipment, and temporary installations (e.g., scaffolding, lead shielding)? Y☒ N☐ U☐ N/A☐

   The condition in Unit 2 during this walk-by was Refueling outage with Steam Generator replacement. The fuel is off-load in the Spent Fuel Pit. The unit is currently in a No Mode, as per Tech Specs. Minor temporary equipment and housekeeping issues were disregarded because of this condition.

8. Have you looked for and found no other seismic conditions that could adversely affect the safety functions of the equipment in the area? Y☒ N☐ U☐

Comments (Additional pages may be added as necessary)

The following equipment is included in the area encompassed by this Area Walk-By:
2-AHU-313-0262

Evaluated by: *Robert Malone* Date: *11/9/12*

Phillip York *11/9/12*

Appendix G: Peer Review Report

NTTF 2.3/SQN-02
November 12, 2012

PEER REVIEW REPORT
Sequoyah Nuclear Plant Unit 2
Near-Term Task Force 2.3 Seismic Walkdowns

A peer review of the Tennessee Valley Authority (TVA) Sequoyah Nuclear Plant - Unit 2 (SQN2) seismic walkdowns for Near-Term Task Force (NTTF) Recommendation 2.3: Seismic was performed in accordance with the U.S. Nuclear Regulatory Commission (NRC) 50.54 (f) letter (listed as Reference 2 in the SQN2 Seismic Response Report) and the guidance provided in Electric Power Research Institute (EPRI) Report 1025286 (listed as Reference 3 in the Seismic Response Report).

A highly interactive process was utilized by the peer review team. This involved ongoing open dialog consultation with project participants throughout training, equipment selection, equipment walkdowns, area walkbys, review of potentially adverse seismic conditions and corrective action program documentation, and final report preparation.

In summary, the peer review team is in full concurrence with the final results as documented in the SQN2 Seismic Response Report, and we conclude that all of the project requirements have been met and adequately documented. The following sections summarize the details of the peer review process for the major elements of the project.

TRAINING

The walkdown teams are described in Section 3 of the SQN2 Seismic Response Report. All of the walkdown team members successfully completed the EPRI developed training on NTTF Recommendation 2.3 - Seismic Walkdown Guidance. All of the individual team members meet the qualification requirements as defined in EPRI Report 1025286. In addition to this EPRI training, per our recommendations, all walkdown team members received additional training. The purpose of the additional training was two-fold. First, additional technical training was provided on equipment anchorage and seismic interaction evaluations, as an enhancement to the anchorage and interaction issues overview provided in the EPRI training course. Second, background information was provided on the site-specific seismic programs implemented by TVA at SQN. This provided team members with historical background on the scope and findings of prior seismic reviews, as well as to deepen their understanding of the seismic licensing basis for SQN.

Examples of the additional plant-specific training material provided for the team members include the following:

- Description of SQN seismic design basis 0.18g Housner-shaped ground motion response spectrum
- Scope of the Nuclear Performance Plan (NPP, NUREG 1232, Volume 2) commitments at SQN. This included the following major civil/seismic programs:
  - Programmatic control of safety-related design modifications

  - Cable tray support analytical basis
  - Application of alternate analysis methods to non-rigorously analyzed piping and supports
  - Appendix R fire protection
  - Welding issues
  - Instrument tubing & sense lines
  - Quality issues with replacement components and parts
  - Misc. employee concerns

- Major Civil/Seismic programs implemented as a result of the SQN NPP
  - Equipment Anchorage/Reaction Load Validation
    - Safety-related equipment
    - Tanks and other major items
  - Seismic Category I(L) Piping Hazards
    - Position retention – II/I failure & falling issues
    - Pressure retention – II/I spray issues
  - Distribution/Suspended Systems Programs and Design Criteria
    - Conduit, cable trays, and supports
  - Concrete/Masonry Wall & Embedded Plates Issues
  - Structural Platform attachment loads and thermal growth effects

- Seismic Individual Plant Examination for External Events (IPEEE)
  - Review Level Earthquake (RLE) for seismic IPEEE implementation at SQN
  - Scope of review and Safe Shutdown Equipment List (SSEL)
  - Summary of SQN seismic IPEEE walkdown results
  - Presentation of results and governing High Confidence Low Probability of Failure (HCLPF) capacities, including original free field definition of RLE as implemented by TVA and subsequent rock outcrop definition resulted from NRC review
  - Discussion of enhanced seismic IPEEE efforts to increase plant HCLPF capacity to more than 0.30g as defined at rock outcrop

- Plant procedures that overlap with the NTTF 2.3 seismic walkdowns:
  - Temporary Equipment -- NPG-SPP-09.17
  - Scaffolding -- MMTP-102
  - Seismic Interaction Commodity Clearance Requirements -- M&AI-28 and N2C-948

SELECTION OF ITEMS ON THE SEISMIC WALKDOWN EQUIPMENT LIST (SWEL)

The completed SWEL as described in Section 4 of the SQN2 Seismic Response Report is in full compliance with the guidelines in EPRI Report 1025286.

The SWEL 1 represents a diverse sample of selected equipment and support systems required to perform the five safety functions of reactor reactivity control, reactor coolant pressure control, reactor coolant inventory control, decay heat removal, and containment function. The SWEL 1 includes, as appropriate, various types of systems, classes of equipment, and equipment environments. The SWEL 1 includes new and replacement equipment.

The SQN IPEEE review was performed using the EPRI margins methodology and that success path based SSEL associated with SQN2 was used as a starting point for SWEL 1. No seismic PRA has been performed for SQN2 so no information regarding dominant contributors to

seismic risk was available. SWEL 1 was compared to the Core Damage Frequency (CDF) and Large Early Release Frequency (LERF) Rankings, and any shared equipment was noted.

The SWEL 2 represents selected equipment related to the spent fuel pool system, including those that could cause rapid drain-down of the pool and accidental exposures of the fuel assemblies.

There was considerable interaction between the peer review team, the walkdown team, and the equipment selection team during the course of the evaluation. The final SWEL, as documented in Section 4 and in Appendix D of the SQN2 Seismic Response Report, is a culmination of this interaction. Examples of peer review comments that were adequately addressed and resolved during the SWEL development process include the following:

- During the development of the preliminary SWEL, there was confusion regarding the equipment class definition, in particular, instrument racks (18), temperature sensors (19), distribution panels (14) and medium voltage switchgears (03). These were clarified and corrected in the final SWEL. As such, the 120VAC vital instrument power boards are in the distribution panel equipment class, and the 6.9kV shutdown boards are added to the medium voltage switchgear equipment class.
- In order to include representative equipment items for all of the 21 classes of equipment listed in Table B-1 of the EPRI Report 1025286, items of equipment were added to the SWEL that were not part of the IPEEE review. It was noted that this was unnecessary yet conservative, so the items remained on the SWEL.
- During the initial phase of the SWEL development, it was noted that no equipment were selected inside the Reactor Building. Subsequently, selected equipment items in the Reactor Building were added to the final list.
- Selected SQN2 equipment items identified as outliers in SQN seismic IPEEE review were added to the SWEL for confirmation of seismic IPEEE upgrades. This is to address reporting of the evaluations related to seismic vulnerabilities identified during that program.
- It is noted that the final SWEL adequately includes equipment in each major building structure and encompasses mild to more severe environments.

SEISMIC EQUIPMENT WALKDOWNS AND AREA WALKBYS

The peer review team spent considerable time interfacing with the walkdown team members during the SQN2 seismic equipment walkdowns and area walkbys. This included responding to questions regarding the scope and content of the reviews. This also included in-plant observations of the teams during the reviews as well as independent in-plant reviews of individual equipment components. Walkdown observations and results were reviewed and discussed on a weekly basis with the walkdown team members. Particular emphasis was given to any items preliminarily identified as potential adverse seismic conditions (see discussion in the next section). In the end, the peer review addressed over 50% of the completed walkdown documentation forms.

It is noted that the in-plant activity and over 50% documentation review is above and beyond the peer review requirements as defined in EPRI Report 1025286. As a result of this effort, we are

highly confident that the teams conducted the reviews in a thorough and competent manner, and that the reviews are fully in compliance with the intent of the NRC 50.54 (f) letter.

Examples of walkdown team observations and seismic issues discussed and resolved during the course of the peer review process for the SQN2 equipment seismic walkdowns and area walkbys include the following:

- The walkdown teams diligently verified presence of safety cables or wires on miscellaneous overhead features (such as lights and speakers) and spring locks on florescent light tubes for all electrical equipment panels. Any exceptions were carefully reviewed and discussed.
- The walkdown teams diligently noted all cracks including minor hairline cracks in floors in the vicinity of equipment and even in structural walls. Each instance was discussed at length and resolved, and no items were found to be significant. For the masonry walls, all of cases were verified to be Seismic Category I reinforced block wall structures, and that hairline cracks were insignificant.
- The walkdown teams diligently verified seismic adequacy issues associated with equipment anchor condition and anchorage load path, such as bent, missing or loose hardware, anchor edge distance and rust conditions. Each instance was reviewed and discussed thoroughly. Conditions were generally determined to be insignificant, thus did not affect seismic capacity and were accepted as-is. Others were qualified as-is based on existing documentation.
- The walkdown teams diligently noted instances of unusual supports on overhead systems, such as bent rod hangers and missing anchor bolts. Based on further discussion, in all cases it was determined that the vertical load carrying capability of the overhead supports was not compromised, thus did not pose as a seismic falling interaction hazard.
- The walkdown teams diligently noted instances of potential seismic interaction sources to assess their effects on the nearby safety related equipment items. Examples include fire extinguishers, frisker on unanchored table, unanchored barrier posts and cantilevered fire barrier wall. Based on further discussion and review, in all cases it was determined that the potential source was either evaluated and qualified previously as documented in calculation, or deemed to be insignificant.
- At the DG 2A-A Battery Rack, the walkdown teams noted an emergency eye wash station was not adequately restrained and could potentially roll and topple over during a seismic event and spill or spray water in the room. This was determined not to represent a significant hazard to the batteries, but the eye wash was subsequently restrained.
- The skids for each of the diesel generators were inspected in detail by the walkdown teams, and they had preliminary concerns that the base frames for the engine and the generator were not linked together by steel members as shown on the original design drawings. After considerable discussion and reviewing the load paths, it was concluded that the base frames are very rigid, and that these are each anchored to the same rigid massive concrete base, so that it was not possible for the engine and the generator to experience any differential seismic movement.

- On electrical panel line-up inspections, the walkdown teams checked for bolting between adjacent panels. In one case, for the DG 2A-A Control Panel, they observed that 1 of 8 bolts was missing in the cabinet-to-cabinet connection. It was agreed that the one missing bolt was insignificant.
- During the area walkbys, the teams noted cases where conduit exiting top of MCCs were in proximity to overhead rigidly supported cable trays. Examples areas include the DG 2A and 2B Board Rooms. Simple conservative equations were used to estimate deflection, and in all cases it was confirmed that the clearance was adequate for the component design basis earthquake deflections.
- During the area walkbys, the teams noted isolated instances of not full thread engagement at bolted connection and misaligned unistrut channel nut connection. Each instance was reviewed and discussed thoroughly, and considered acceptable based on its as-installed configuration.
- During the area walkbys, the teams noted a variety of temporary equipment and installations such as scaffoldings, ladders, tools and tool boxes. In all cases, conditions were assessed and determined to be acceptable as-is.

In the end, the peer review team is in concurrence with the Seismic Walkdown Checklists (SWCs) and Area Walkby Checklists (AWCs) as presented in Appendices E and F, respectively, of the SQN2 Seismic Response Report.

POTENTIAL ADVERSE SEISMIC CONDITIONS

The peer review team spent considerable time with the walkdown teams addressing preliminary potential adverse seismic conditions identified during walkdowns. It is noted that there were very many questions early in the walkdown review process on the conservative side of issues, and these kinds of questions diminished towards the end of the project as the judgment of the teams significantly improved. Most of these early concerns were in regards to potential seismic interaction effects. In most cases, these issues were resolved by review of prior evaluations or the TVA procedures and guidance already in place at the plant.

All potential adverse seismic conditions were reviewed in detail, including working with the teams to address seismic licensing basis and operability issues for the confirmed potential adverse seismic conditions that resulted in the initiation of Problem Evaluation Reports (PERs) as part of the Corrective Action Program (CAP). In the end, the peer review team is in full concurrence with all of the potential adverse seismic conditions summarized in Sections 6.2 and 6.3 of the SQN2 Seismic Response Report.

Comments regarding the individual potential adverse seismic conditions for SQN2 include the following:

- Potentially Adverse Seismic Condition 1 addresses a radiation protection cabinet that was marginally restrained in the Auxiliary Building Surge Tank B area at El. 734'. The cabinet was restrained on one of the two eye hook locations and in the current configuration it did not present a credible seismic interaction hazard to nearby safety related equipment. The walkdown team conservatively noted this as a potential adverse seismic condition and entered it into the CAP, and subsequently the cabinet was adequately restrained.

- Potentially Adverse Seismic Condition 2 addresses a temporary ventilation fan in the 480V Board Room 2A, in the vicinity of motor control center 2-BDC-201-GM-A. The floor fan was secured with chain and did not appear to be a credible interaction hazard given the position of the fan and the distance to the MCC cabinet. The walkdown team conservatively noted this as a potential adverse seismic condition and entered it into the CAP, and subsequently the fan was removed.
- Potentially Adverse Seismic Condition 3 addresses a crack noted at the top of a block wall next to the angle restraint that is common to the 125V Vital Battery Room IV and the 480V Board Room 2B. Bounding analyses, in consideration of the steel reinforcing in the wall, were performed to demonstrate that the as-found condition had sufficient margin to withstand design basis seismic loading. The walkdown team conservatively noted this as a potential adverse seismic condition and entered it into the CAP. Further engineering evaluation determined that the condition is acceptable.
- Potentially Adverse Seismic Condition 4 addresses unrestrained 55-gallon drums in the vicinity of safety-related instrument racks in the walkbys in the RHR, AFW and SI pump areas. In all cases, toppling or sliding of the drums would not compromise the safety function of instrument racks. The unrestrained drums however do not comply with applicable TVA procedures for restraint of temporary items. The walkdown team noted these cases as a potential adverse seismic condition. A CAP entry was submitted to address this issue, and the temporary equipment (drums) were removed from the areas.
- Potentially Adverse Seismic Condition 5 addresses a sink cabinet in the 125V Battery Room III that was not anchored in the same manner as the other battery rooms. Given its location with respect to the safety related equipment in the room, it was judged that the sink does not pose a seismic interaction and spray concern. The walkdown team noted this as a potential adverse seismic condition and entered it into the CAP. Subsequently, the design calculation for the current configuration was retrieved, which indicates that the unrestrained cabinet is not a seismic concern nor spray hazard and is acceptable as-is.
- Potentially Adverse Seismic Condition 6 addresses a missing bolt on a duct support above the Control Rod Drive Generator 2B (2-GEND-085-DH/3B) in the CRDM Room. The duct and support configuration is judged to be robust and rugged and in the current configuration it did not present a credible seismic falling interaction hazard to nearby safety related equipment. The walkdown team noted this as a potential adverse seismic condition and entered it into the CAP. Further engineering evaluation determined that the condition is acceptable.
- Potentially Adverse Seismic Condition 7 addresses a temporary scaffold near Unit 2 6.9kV Shutdown Board 2B-2 (2-BDB-202-CP). The walkdown team observed the scaffolding to be anchored only at one location at the top, noted the non-conforming scaffold as a potential adverse seismic condition, and entered it into the CAP. Subsequently, the scaffolding was observed to be adequately restrained on its upper corner to a permanent plant feature. The temporary scaffold is found to be in compliance with TVA procedures.

- Potentially Adverse Seismic Condition 8 addresses an unanchored cabinet with broken latch on the cabinet door for flammable materials during the area walkby of the ERCW Pump Room 2A-A. Given the location of the cabinet, it does not represent a direct seismic interaction source for any safety related equipment. The walkdown team conservatively noted this as a potential adverse seismic condition and entered it into the CAP, and subsequently the door lock was repaired to provide positive enclosure of the flammable materials within the cabinet.
- Potentially Adverse Seismic Condition 9 addresses a nut and bolt not fully engaged on a fire protection pipe hanger in the vicinity of the Electrical Board Room Chillers. The walkdown team was concerned that the nut could loosen and become free during a seismic event. This is not considered to be a credible failure mode, and further evaluations indicated that the pipe hanger was able to perform its intended function. The walkdown team conservatively noted this as a potential adverse seismic condition and entered it into the CAP.
- Potentially Adverse Seismic Condition 10 addresses a missing bolt attaching the axial fan of the Control Rod Drive Cooling Unit 2-AHU-030-0088 to its skid framework. The as-found configuration is stable and has sufficient margin to withstand design basis seismic loading -- 5 out of 6 bolts are sufficient to resist seismic demand shear loads; the flanged attachment of the fan to the AHU resists overturning moment. The walkdown team conservatively noted this as a potential adverse seismic condition and entered it into the CAP.

SUBMITTAL REPORT

The peer review team has reviewed the SQN2 submittal report in detail and we are in full concurrence with the documented observations and findings. The report is in compliance with the guidance in EPRI Report 1025286, and meets the requirements and objectives of the NRC 50.54 (f) letter.

In our opinion, the potential adverse seismic conditions identified by the program are in general only minor issues, and this is a reflection of the adequate seismic design criteria as well as sufficiently rigorous seismic-related construction and maintenance procedures that TVA has in place at SQN2. The walkdown demonstrates that the current plant configuration is in compliance with the current seismic licensing basis. Furthermore, the walkdown demonstrates that that TVA has maintained or improved the seismic IPEEE HCLPF capacity of the plant.

Sincerely,

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Lead Peer Reviewer

Stephen J. Eder, P.E.
Peer Reviewer