

ENCLOSURE 3

**BROWNS FERRY NUCLEAR PLANT, UNIT 3
FUKUSHIMA NEAR-TERM TASK FORCE
RECOMMENDATION 2: SEISMIC RESPONSE REPORT**



**BROWNS FERRY NUCLEAR PLANT – UNIT 3
FUKUSHIMA NEAR-TERM TASK FORCE
RECOMMENDATION 2.3: SEISMIC
RESPONSE REPORT**

26-November-2012

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NTTF Recommendation 2.3: Seismic Response Report
Browns Ferry Unit 3

REV	DESCRIPTION	ORIG	REVIEW	WORLEY- PARSONS APPROVAL	DATE	CLIENT APPROVAL	DATE
0	BFN Unit 3 Seismic Walkdown Report	J. Black	J. Black FOR N. Pressler VTA TELECON	J. Edger	28-Nov-12	STEPHEN SAMANT	11/24/12



Table of Contents

1) Executive Summary	4
2) Seismic Licensing Basis	5
2.1 General Plant Description	5
2.2 Ground Response Spectra	5
2.3 Structures	8
2.4 Equipment	8
2.5 Seismic Spatial System Interactions	9
3) Personnel Qualifications	10
3.1 Equipment Selection Personnel	10
3.2 Seismic Walkdown Engineers	10
3.3 Licensing Basis Reviewers	10
3.4 IPEEE Reviewers	11
3.5 Peer Review Team	11
4) Selection of Structures, Systems, and Components (SSCs)	12
4.1 SWEL Selection	12
4.2 SWEL Analysis	13
5) Seismic Walkdowns and Area Walk-Bys	14
5.1 Seismic Walkdown Checklists	14
5.2 SWC & AWC Summary	15
6) Licensing Basis Evaluations	16
6.1 Licensing Basis Calculations	16
6.2 Potentially Seismically Adverse Conditions	16
7) IPEEE Vulnerabilities Resolution Report	17
7.1 IPEEE Description	17
7.2 IPEEE Findings and Vulnerabilities	17
8) Peer Review	18
9) References	19
10) Appendices	20
Appendix A: Resumes	21
Appendix B: Base List 1	56
Appendix C: Base List 2	78
Appendix D: SWELs and Areas	111
Appendix E: SWCs	116
Appendix F: AWCs	717
Appendix G: Peer Review Report	882



1) Executive Summary

As a result of the Fukushima Daiichi Nuclear Power Plant accident, the U.S. Nuclear Regulatory Commission established the Near Term Task Force (NTTF) to conduct a systematic and methodical review of NRC processes and regulations to determine whether the agency should make additional improvements to its regulatory system and to make recommendations to the Commission for its policy direction. The NTTF issued a report (Reference 1) that made a series of recommendations, some of which were to be acted upon "without unnecessary delay". 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. Every U.S. nuclear power plant is required to perform a seismic walkdown to identify and address degraded, non-conforming or unanalyzed conditions and to verify the current plant configuration with the current seismic licensing basis.

In support of conducting the NTTF-2.3 Seismic Walkdowns, the Electrical Power Research Institute (EPRI) issued a report entitled *Seismic Walkdown Guidance* (Reference 3) 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. TVA incorporated this documentation into a procedure and provided training to all team members.

At Unit 3 of the Browns Ferry Nuclear Plant, a total of 120 items, general Seismic Category 1, were selected from the original IPEEE Safe Shutdown Equipment List (SSEL) to fulfill the requirements of the NTTF-2.3 Seismic Walkdowns. The selected equipment was located in various environments and included many different types of equipment from multiple safety systems. A total of 41 areas were included for area walk-bys. The equipment walkdowns and area walk-bys were performed by three teams each consisting of two seismic walkdown engineers and operations personnel, between July 9, 2012 and October 18, 2012.

Of the 120 equipment items in the Seismic Walkdown Equipment List (SWEL), 116 were completed during the walkdown phase. No potential adverse seismic conditions were found. There are four remaining items of equipment that were inaccessible at 100% power due to physical limitations or excessive safety hazards. These future equipment walkdowns will be performed during the next Browns Ferry Unit 3 refueling outage scheduled for February-April 2014.



2) Seismic Licensing Basis

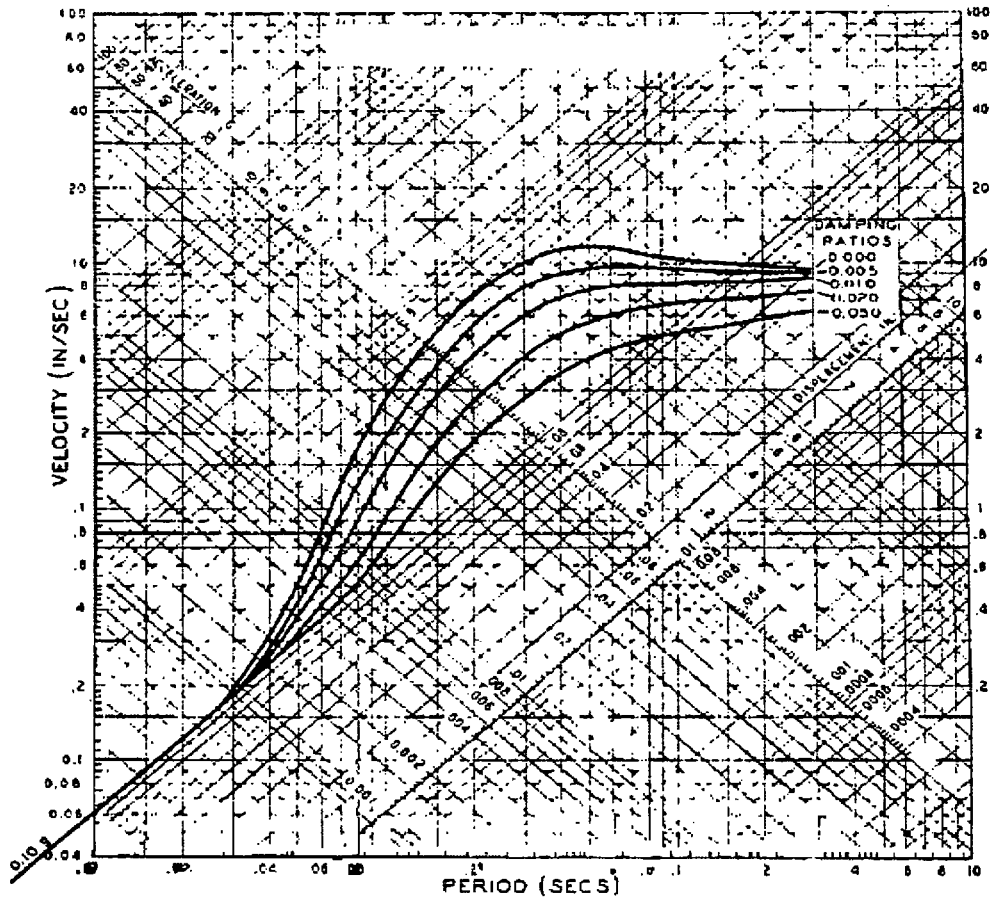
The seismic licensing basis for the Browns Ferry Nuclear Power Plant is derived from Reference 4 – *BFN FSAR*.

2.1 General Plant Description

The Browns Ferry site is located on the north shore of Wheeler Lake at river mile 294 in Limestone County in north Alabama. The site is approximately 10 miles southwest of Athens, Alabama, and 10 miles northwest of the center of Decatur, Alabama. The plant consists of three General Electric (GE) boiling water reactors with mark I containments, each with an electrical output of about 1,100 megawatts. Commercial operation of each unit began on the following dates: Unit 1 on August 1, 1974, Unit 2 on March 1, 1975, and Unit 3 on March 1, 1977.

2.2 Ground Response Spectra

The BFN licensing-basis Operating Basis Earthquake (OBE) and Design Basis Earthquake (DBE) ground motion acceleration response spectra defined in Sections 2.5.4 and 12.2 of the BFN Final Safety Analysis Report (FSAR). The site design ground spectrum is that of a Housner shaped spectrum with horizontal peak ground acceleration (PGA) corresponding to the OBE is 0.10g and the DBE is 0.20g, defined at the top of the sound rock. Vertical ground motion is two-thirds of the horizontal ground motion as specified in the FSAR. Figure 1 shows the Operating Basis Earthquake and Figure 2 shows the Design Basis Earthquake input spectra with various damping.



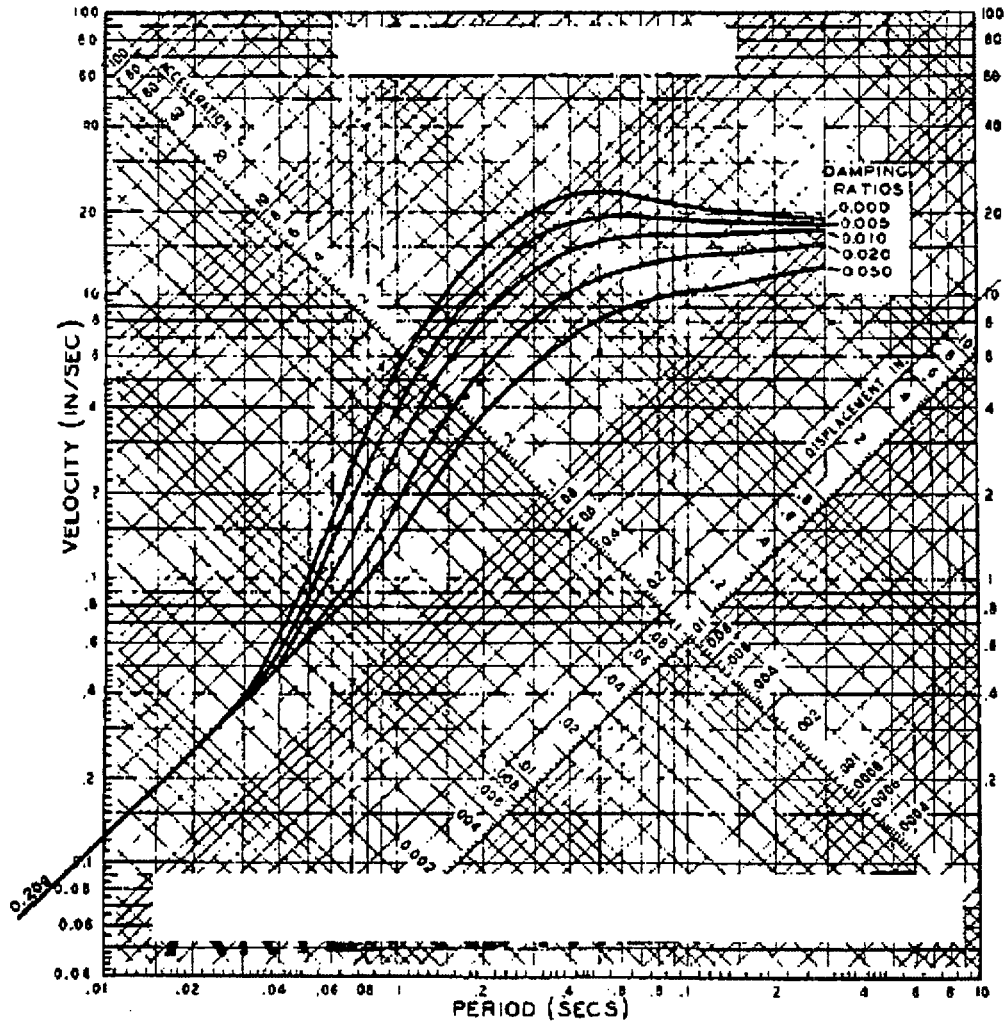
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SITE DESIGN SPECTRUM
OPERATIONAL BASIS EARTHQUAKE
HORIZONTAL

FIGURE 2.5-3

AMENDMENT 16

Figure 1 Site Design Spectrum Operating Earthquake



BROWNS FERRY NUCLEAR PLANT
FINAL SAFETY
ANALYSIS REPORT

SITE DESIGN SPECTRUM
DESIGN BASIS EARTHQUAKE
HORIZONTAL

FIGURE 2.5-9

AMENDMENT 16

Figure 2 Site Design Spectrum Design Basis Earthquake



2.3 Structures

The design of all structures and facilities (Class I & II) conformed to the applicable general codes or specifications such as Uniform Building Code (UBC); American Institute of Steel Construction (AISC); "Specification for the Design, Fabrication, and Erection of Structural Steel for Buildings"; American Concrete Institute (ACI) "Building Code Requirements for Reinforced Concrete" (ACI 318-71), "Requirements for Reinforced Concrete" (ACI 318-71), "Requirements for Reinforced Concrete Chimneys" (ACI 907); and American Welding Society (AWS) "Structural Welding Code – Steel" (AWS-D.1.1), among others.

Seismic requirements for Class I structures, features, and systems are contained in TVA General Design Criteria BFN-50-C-7102. The design of Class I structures was based on the following criteria:

- Operating basis earthquake (OBE) considered a horizontal ground acceleration of 0.10g.
- Design basis earthquake (DBE) considered a horizontal ground acceleration of 0.20g
- Vertical ground accelerations associated with the OBE and DBE were defined as 2/3 of the corresponding horizontal response spectra.

Class I structures, equipment and safety related piping were designed such that stress and deformation behavior of structures, piping, and equipment were maintained within the allowable limits when subjected to loads such as dead, live, pressure, and thermal, under normal operating conditions combined with the seismic effects resulting from the response to the OBE. These allowable limits are defined in appropriate design standards such as the ASME Boiler and Pressure Vessel Code; American National Standards Institute (ANSI) Code for Pressure Piping ANSI B31.1.0, Power Piping; ACI 318 Building Code Requirements for Reinforced Concrete; the AISC Specification for the Design, Fabrication and Erection of Structural Steel for Buildings. In addition, the stresses that resulted from normal loads and design basis loss-of-coolant accident loads combined with the response to the DBE were limited so that no loss of function occurred and the capability of making a safe and orderly plant shutdown was maintained.

2.4 Equipment

General Electric (GE) designed, fabricated, and supplied the nuclear steam supply system (NSSS), turbine-generators, as well as the nuclear fuel for the plant. GE also provided technical supervision for the installation and startup services of this equipment. In general, the modules were designed to withstand and perform their functions during an OBE and a DBE. This qualification was ascertained by either analytical techniques,



vibration testing techniques, or a combination of the two. A seismic specification covering the following procedure was made a part of the purchase order.

All the Class I instrumentation and electrical equipment were designed and tested or analyzed to ensure their capability to perform their required functions during and after the Design Basis Earthquake (DBE). This includes equipment made by General Electric (GE) as well as that purchased by GE. Suppliers of Class I equipment were required to verify the adequacy of their equipment by submitting test, analytical, or operating experience data. Typically, equipment supplied as part of the original design are in compliance with IEEE-344-71 requirements.

In addition, Browns Ferry Nuclear Plant was identified as one of the operating plants to be reviewed for the NRC Unresolved Safety Issue (USI) A-46 requirements. As such, plant-specific verification of the seismic adequacy of selected safe shutdown equipment items (SSEL – Safe Shutdown Equipment List) has been performed as part of the USI A-46 resolution (Ref. 5).

Furthermore, the use of A-46 criteria and methods in accordance with the implementation guidelines provided in References 7 and 8 has been included as an alternate approach for the seismic qualification of new equipment and replacements for existing equipment (Appendix C, Ref. 9).

2.5 Seismic Spatial System Interactions

Browns Ferry has a seismic categorization similar to Regulatory Guide 1.29, using the terminology of Class I and Class II. The term II/I is used to describe physical conditions where Class II components are located above or in proximity to Class I components. Seismic induced spray refers to the possible breach of a fluid pressure boundary due to its own seismic response or its seismic interaction with other plant features. Seismic induced spray is a hazard when there are target Class I components, vulnerable to fluid spray, in the vicinity of the source.

A comprehensive “II/I” seismic interaction verification program was implemented as part of the BFN-1 Restart Project. Seismic spatial interactions (failure, falling, and impact) were evaluated for all Safe Shutdown Equipment List (SSEL) items during the USI A-46 resolution program. Impact-related seismic interactions are further addressed by the TVA BFN Potential Clearance Discrepancy (PCD) evaluation program for piping clearance discrepancies of 3” and under. Seismic-induced spray evaluations were addressed by detailed walkdowns and bounding evaluations in accordance with TVA Design Criteria BFN-50-C-7306.



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 involved in equipment selection and review are:

- Steve Gray, Retired SRO from Browns Ferry with extensive experience providing engineering support through all phases of the operating site.
- Nicholas Pressler, Senior Structural Engineer with 7 years of experience, including 2 years of experience in the nuclear industry.
- Jason Black – Associate Structural engineer with 1.5 years of engineering experience, including 1.5 years in the nuclear power industry.

3.2 Seismic Walkdown Engineers

The personnel involved in performing the seismic walkdowns are:

- Nicholas Pressler
- Patrick McCarraher, Senior Supervising Structural Engineer with over 38 years of engineering experience, including 15 years in the nuclear power industry.
- Jeffry Lawrence, Mechanical Engineer II, E.I.T. with five years of engineering experience, including two in the nuclear power industry.
- Avinash Chunduri, Structural Engineer II with 6 years of engineering experience, including 1.5 years' experience in nuclear power industry.
- George Bongart, Associate Civil Engineer with 9 months engineering experience.
- Jason Black
- James Edgar, Professional engineer in the state of Tennessee with 11 years of engineering experience including 2 years in the nuclear power industry.

3.3 Licensing Basis Reviewers

The personnel involved in performing the licensing basis reviews:

- Steve Samaras, Site engineer at Browns Ferry with extensive experience providing engineering support of the operating site.



3.4 IPEEE Reviewers

The personnel involved in reviewing IPEEE vulnerabilities are:

- Josh Best - Project Mechanical Engineer with 5 years engineering experience, including 4 years in the nuclear power industry.
- Jason Black

3.5 Peer Review Team

The personnel involved in the peer review process are:

- John Dizon, Over 30 years of experience in the field of civil and structural engineering, earthquake engineering, risk assessment and project management.
- Steve Eder, 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.



4) Selection of Structures, Systems, and Components (SSCs)

The selection of SSCs for the Recommendation 2.3 Seismic walkdowns followed the guideline provided in Reference 3 – *The Electrical Power Research Institute's (EPRI) Seismic Walkdown Guidance*. The SWELs and list of corresponding Area Walk-Bys for Browns Ferry Unit 3 can be found in Appendix D of this document.

4.1 SWEL Selection

The development of SWEL 1 began with the integrated Safe Shutdown Equipment List (SSEL) that was developed for the resolution of USI A-46 program and the implementation of Individual Plant Examination for External Events (IPEEE) program for Browns Ferry Units 2 and 3 (Refs. 5 and 6, respectively). This list was divided by unit, location, system, and equipment class. After separating the data into these categories, equipment was selected to represent the multiple equipment classes. Many of the suggested equipment classes that were listed in the EPRI guidance were not included in the original SSEL. In order to include all of the recommended classes of equipment, the scope of the selection was expanded to cover all Seismic Category 1 Safety Related equipment.

After a wide variety of environments and equipment classes were satisfied, each entry in the list was assigned to one of the five safety functions that support safe shutdown of the plant. Safety Function "0 - Support Function" was added in addition to the EPRI guidance to include equipment that does not perform one particular safety function but does support all five primary safety functions. These six safety functions are:

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 developed during the USI A-46 program included one path to satisfy the five safety functions listed above. The seismic IPEEE required both a preferred path and an alternate path, so the USI A-46 SSEL was expanded accordingly. In some cases there are multiple systems involved in these safety functions. In these cases SSC's from the redundant systems that were not part of USI A-46 were added to the SWEL 1. For instance, the Standby Liquid Cooling (SLC) system was not inspected during the USI A-46 program, and was added to the SWEL for that reason.

This categorized list is presented in Appendix B as Base List 1. After separating the data into the previously mentioned categories, a sample was selected from Base List 1 to represent all Special Considerations that were required by the EPRI Walkdown



Guidance. Once safety functions were assigned, the equipment was reviewed and compared to plant documentation to locate any new or modified equipment. To account for high risk equipment in the walkdown process, the SWEL was compared to the Core Damage Frequency (CDF) and Large Early Release Frequency (LERF) Rankings and any shared equipment was noted.

Some of the equipment classes that were listed in the EPRI walkdown guidance were not covered in the original SSEL, and therefore are not present in Base List 1. However, in order to include all of the classes of equipment, the scope of the selection was expanded for these seismic walkdowns to include other Seismic Category 1 Safety Related equipment for the classes that were not previously covered.

SWEL 1 represents the full list of equipment that was selected from Base List 1 and from the Category 1 equipment list. SWEL 1 can be found in Appendix D.

Base List 2, presented in Appendix C, is a list of all spent fuel pool systems and equipment. SWEL 2 consists solely of equipment related to the Spent Fuel Pool at the site, including any equipment or system failure that could cause rapid drain-down of the pool and accidental exposures of fuel assemblies. The Spent Fuel Pool system was reviewed with the system engineers and it was determined that there is no path for rapid drain-down to occur. The full list of seismic category 1 SSC's was reviewed and it was determined that there were 5 pieces of equipment related to the spent fuel pool that were seismic category 1 and fit into one of the equipment categories. These pieces of equipment make up SWEL 2.

4.2 SWEL Analysis

The SWEL for Browns Ferry Unit 3 consists of 120 individual pieces of equipment. The SWEL for Browns Ferry Unit 3 adequately addresses all criteria that were required for the selections of SSCs in EPRI Seismic Walkdown Guidance. These criteria include a distribution of environments, systems, safety functions, and classes of equipment.

The following equipment addresses the new and improved equipment criteria for Browns Ferry Unit 3:

UNID	Description
BFN-3-XFA-082-0003AA	BFN-3-XFA-082-0003AA, DG-3B NEUTRAL GRN XFMR
BFN-3-FCV-023-0034	BFN-3-FCV-023-0034, RHR HTX 3A COOL WATER OUTLET
BFN-3-FCV-023-0046	RHR HTX 3B COOL WATER OUTLET

Table 1. New/Improved Equipment



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 Reference 3 - *The Electrical Power Research Institute's Seismic Walkdown Guidance*.

The walkdowns and walk-bys were conducted in accordance with these guidelines and each was given a final status. If no potentially adverse seismic conditions were noted or housekeeping and minor maintenance issues 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 the equipment was entered into the Corrective Action Program (CAP) to begin a functional evaluation. If equipment was inaccessible, or if a portion of an item of equipment was unobservable an UNKNOWN status was given.

5.1 Seismic Walkdown Checklists

One hundred sixteen (116) out of one hundred twenty (120) Seismic Walkdown Checklists (SWCs) were completed at Browns Ferry Unit 3. The SWCs completed at Browns Ferry Unit 3 can be found in Appendix E of this document. The 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
- Line flexibility

Forty-one (41) Area Walk-by Checklists (AWCs) were completed at Browns Ferry Unit 3. These checklists can be found in Appendix F of this document. The types of potentially adverse seismic conditions that were addressed during these walk-bys include:

- Anchorage of equipment
- Degraded conditions of anchorage
- Cable/conduit raceways and HVAC ducts
- Spatial interactions between equipment
- Flooding/spray hazards
- Fire hazards
- Housekeeping and temporary equipment



There are four SWCs that resulted in an unknown status due to plant conditions when operating at 100% power. These walkdowns will be performed during a later outage. Additional AWCs will be performed during the equipment walkdowns for the four pieces of equipment that currently have an unknown status.

Anchorage configuration for 47 items of equipment in Browns Ferry Unit 3 was verified by drawings, calculations, and/or the A-46 Screening Evaluation Worksheets (SEWs).

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. Undue safety hazards, operational hazards, or cabinets that required extensive disassembly were documented and only observable anchorage was included in those walkdowns.

5.2 SWC & AWC Summary

The results documented by the SWCs and AWCs for Browns Ferry Unit 3 are summarized below:

- 116 SWCs resulted in a YES status
- 4 SWCs resulted in and UNKNOWN status
 - Inaccessible Anchorage
 - Inaccessible Equipment
 - BFN-3-FCV-001-0014, MSIV "A" INBOARD ISOLATION VALVE
 - BFN-3-FCV-001-0015, MSIV "A" OUTBOARD ISOLATION VALVE
 - BFN-3-PCV-001-0005, MS/MAIN STEAM SAFETY RELIEF VALVE
 - BFN-3-PCV-001-0042, MS/MAIN STEAM SAFETY RELIEF VALVE
- 41 AWCs resulted in a YES status



6) Licensing Basis Evaluations

6.1 Licensing Basis Calculations

When a potentially adverse seismic condition was identified at BFN, 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. Due to the nature of this process, no calculations were performed by the walkdown team for licensing basis evaluations before the CAP entry was submitted. All licensing basis determinations were performed by BFN engineering on each CAP entry.

There were no CAP entries that were considered potential seismically adverse conditions. No degraded or non-conforming conditions were found during the walkdown process.

6.2 Potentially Seismically Adverse Conditions

There were no potentially adverse seismic conditions found during the walkdowns of Browns Ferry Unit 3.



7) IPEEE Vulnerabilities Resolution Report

7.1 IPEEE Description

In Generic Letter 88-20, Supplement 4, the US Nuclear Regulatory Commission 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 assess 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 focuses on the vulnerabilities associated with the occurrence of external events. Browns Ferry was designated as a 0.3g focused scope plant for the seismic IPEEE.

7.2 IPEEE Findings and Vulnerabilities

The IPEEE Report for the Browns Ferry Nuclear Plant addressed multiple vulnerabilities that were identified during the original IPEEE walkdown process for Units 2 and 3 systems including common systems for all three units. A full list of these vulnerabilities can be found in Reference 6 - *Seismic IPEEE Report for Browns Ferry Nuclear Plant*. A list of the equipment identified during IPEEE is listed below along with actions taken.

UNID	DESCRIPTION	RESOLUTION
BFN-0-OXF-219-TDA	HCLPF capacity below 0.3g	Transformer to be replaced as part of the long-term asbestos material removal program at BFN.
BFN-0-OXF-219-TDB	HCLPF capacity below 0.3g	Transformer to be replaced as part of the long-term asbestos material removal program at BFN.

Table 2. IPEEE Outliers



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:

- Selection of the SSCs included on the SWEL
- In-plant walkdown observations and completed checklists for the Seismic Walkdowns and Area Walk-Bys
- Identified potentially adverse seismic conditions, utilization of the CAP process, and associated licensing basis review considerations
- Submittal report

In summary, the peer review results are confirmatory and fully supportive of the evaluations and findings as described in this report. 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 21 st 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 1025286	Electric Power Research Institute
4	BFN FSAR, Revision 4		Tennessee Valley Authority
5	Browns Ferry Nuclear Plant USI A-46 Seismic Evaluation Report	50147-R-001	Tennessee Valley Authority
6	Seismic IPEEE Report Browns Ferry Nuclear Plant	50147-R-002	Tennessee Valley Authority
7	Generic Implementation Procedure (GIP) for Seismic Verification of Nuclear Plant Equipment - Revision 3A, December 2001	N/A	Seismic Qualification Utilities Group
8	Implementation Guidelines for Seismic Qualification of New and Replacement Equipment/Parts (NARE) Using the Generic Implementation Procedure (GIP) - Revision 5 October 2002	N/A	Seismic Qualification Utilities Group
9	BFN FSAR	BFN-24.4	Tennessee Valley Authority



10) Appendices

Appendix A: Resumes

Appendix B: Base List 1

Appendix C: Base List 2

Appendix D: SWELs and Areas

Appendix E: SWCs

Appendix F: AWCs

Appendix G: Peer Review Report



Appendix A: Resumes

Resumes included in this Appendix are alphabetized by last name.

- Joshua Best - TVA
- Jason Black – Walkdown Engineer
- George Bongart – Walkdown Engineer
- Avinash Chunduri – Walkdown Engineer
- John Dizon – Facility Risk Consultants
- Steve Eder – Facility Risk Consultants
- James Edgar – Lead Technical Engineer
- Steve Gray – Retired SRO
- Jeffrey Lawrence – Walkdown Engineer
- Patrick McCarraher – Walkdown Engineer
- Nicholas Pressler – Lead Engineer
- Steve Samaras – Site Engineering

Joshua H. Best

jhbest@tva.gov or Joshua.H.Best@sargentlundy.com

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



Resume

SUMMARY

Structural Engineering Associate experience includes cable routing and pipe support analysis. Experienced in RISA, AutoCAD, and SolidWorks programs.

EXPERIENCE

2011 - Present Structural Engineering Associate, WorleyParsons, Chattanooga, Tennessee

Tennessee Valley Authority (TVA) – Brown’s Ferry Nuclear Plant Units 1 and 2. Responsibilities include:

- ▶ Designate routes for cables
- ▶ Modify drawings using AutoCAD 2008
- ▶ Prepare and check spreadsheets to submit to TVA
- ▶ Prepare paperwork for EDC to close project.

2010 Structural Engineering Intern, WorleyParsons, Chattanooga, Tennessee

TVA – Watts Bar Nuclear Plant Pipe Support Project. Trained as an originator to analyze pipe supports and complete calculation packages using Matlab, Excel, AutoCAD, and other programs. Retrieved information from TVA's database business support library (BSL). Assembled and filed folders to assist drafters. Used Microsoft Access to organize and track work completed on project.

2005 - 2010 Mathematics Tutor, UTC Math Lab, Chattanooga, Tennessee

Tutored students in mathematics ranging from pre-Algebra to Calculus II. Responsible for:

- ▶ Cataloging math grades using Microsoft Access
- ▶ Inputting data entry for student testing
- ▶ Filing math tests
- ▶ Responding to phone inquiries.

EDUCATION

B.S., Civil Engineering, University of Tennessee at Chattanooga, 2010

SPECIFIC TECHNICAL EXPERTISE/SPECIALIST COURSES

Proficient in Microsoft Office, SolidWorks CAD Program, and Risa 2D Structural Software

Familiar with AutoCAD® 2009 and Matlab



SUMMARY

Civil Engineer-in-Training with experience with WorleyParsons on large and small projects, with a particular emphasis in material takeoffs and preparation of technical documents. Previous experience includes construction observation, drawing review, and specification preparation.

EXPERIENCE

2012 - Present Civil Engineer-in-Training, WorleyParsons, Reading, Pennsylvania

American Electric Power, Rockport, Indiana. Responsible for entering drainage data and modeling the existing stormwater system for the area around the plant in StormCAD. Support the preparation of the stormwater pollution and prevention plan for the trailer park relocation portion of the project, and update the associated attachments binder with the relevant information to this portion of the project.

American Electric Power, Louisa, Kentucky – Big Sandy Unit 2 Retrofit Project. Responsible for a portion of the material takeoffs in the flue gas desulfurization (FGD) byproduct handling and the barge unloading areas. Also responsible for the review of the estimate in regards to the quantities to ensure accuracy.

FirstEnergy, Cleveland, Ohio. Responsible for quantity takeoffs for the site development portion of the project; also responsible for checking and revising the estimate for accuracy in regards to the quantities entered. Supported the preparation of the design basis document, by researching local conditions and filling in the required information, where needed.

GenOn, Bangor, Pennsylvania. Supported the updating of the bonding worksheets for the Pennsylvania Department of Environmental Protection for the current year.

PPL Corporation, Lancaster, Pennsylvania. Responsible for the quantity takeoffs of the preliminary design work.

2009 Engineering Intern, SEPTA, Philadelphia, Pennsylvania

Construction Observation. Performed multiple site visits to ensure contractors abided by the specifications. Also observed several grade crossing renewal projects, also an active member in the field engineering team.

Drawing Review. Reviewed design drawings for external contacts including the water and gas departments for the City of Philadelphia to ensure that their proposed construction would not interfere with SEPTA facilities and systems.

Specification Writing. Wrote a specification for line striping on future SEPTA projects. Work included contacting the City of Philadelphia for their requirements and consulting PennDOT publications for state requirements

EDUCATION

B.S., Civil Engineering, University of Hartford, 2010

Currently attending Villanova University, Pennsylvania to obtain M.S., Civil Engineering - Expected graduation 2012.



REGISTRATIONS/AFFILIATIONS

Engineer-In-Training, Connecticut, 2010

SPECIFIC TECHNICAL EXPERTISE/SPECIALIST COURSES

Microsoft Office Suite

AutoCAD

AutoTurn

HEC-RAS

HCS 2000

Sidra Intersection

**SUMMARY**

Four years of professional work experience, including three years with WorleyParsons, in the civil engineering field including design of structural steel members, connections, and reinforced concrete foundations and pump stations for power and petrochemical facilities. WorleyParsons' experience includes design of new structures and rehabilitating existing structures for petrochemical and fossil power facilities. Technical experience also includes dynamic qualification of equipment foundations, structural analysis and design, structural field support activities, and expertise in computer programs used for analysis and design. Familiarity with AISC-ASD, AISC-LRFD, ACI, ASCE, and IBC code design requirements.

EXPERIENCE

2007 - Present Structural Engineering Specialist – WorleyParsons, Reading, Pennsylvania

Tennessee Valley Authority (TVA), Watts Bar Nuclear Plant, Unit 2 – Originate pipe support calculations including the design of rigid struts, mechanical snubbers, spring cans, gang supports, and several other rigid restraints. Design includes originating new supports and updating existing supports for new loading.

Southern Company Services, Georgia Power Plant Scherer, Juliette, Georgia, Air Quality Control Project – Project consists of four nominal 923 MW (gross), coal-fired units for retrofit of selective catalytic reactors (SCR) systems for each unit. Responsibilities include:

- ▶ Evaluate Units 1, 2, 3, and 4 boiler house and duct work for changes in pressures and existing steel structure system for SCR units.
- ▶ Create STAAD model of boiler house building for the analysis of structural elements, and determine the demo sequences.
- ▶ Design structural steel supports for segments of ductwork for Units 3 and 4 to facilitate future construction schedule, and support contract erection requirements.

2006 - 2007 Project Engineer – Formosa Plastics, Texas

Reviewed local building code requirements and made recommendations to the appropriate personnel. Maintained regular communication with all departments and vendors throughout each project. Ensured adherence to the timelines and budget. Coordinated all aspects of the pre-building phase of each project by identifying critical deadlines, scheduling appropriate meetings, and raising potential problems to be solved practically. Monitored and proactively addressed issues to ensure project progress to timeline and budget. Developed structural engineering analysis models and design calculations. Conducted post-budget analysis and proposed solutions to previous problems.

2005 - 2006 Graduate Research Assistant – TXDOT, Texas

Conducted/implemented experimental work on cost benefit analysis of landscaping projects for TXDOT. This project involved cultivating own methods for calculating and estimating the costs and benefits by creating cost benefit evaluation matrix which would work out for any desired specimen. Provided technical and market analysis to evaluate proposed products. Under the direct supervision of head of the department, carried out research on assigned research problems, contributing to the attainment of research objective. Coordinated development and review of TXDOT landscape projects, and prepared calculations, technical reports, studies, and specifications.



Resume

2003 Design Engineer – BHEL, Hyderabad, India

Worked with designers and project engineers to develop design packages for new capital projects. Developed timely, completed and detailed designs for capital projects. Designed analyzer room, overhead transmission and distribution line structures, foundations, and their related facilities. Provided design calculations and drawings for foundations to new equipment, pipe support and structures. Compared values from manual calculations with STAAD Pro results. Prepared requisitions of materials/equipments, design sewers, and construction services.

2002 Student Intern – IJMI, Hyderabad, India

Worked on project controls, prolog/project management and spreadsheet software. Monitored, controlled, and updated project schedules. Prepared change order request status, contract documents, plans, spreadsheets, owner contracts, and construction contracts. Built and maintained effective and professional working relationships with project managers, owners, architects, engineers, and subcontractors. Wrote an internship report detailing arguments and how learning objectives are achieved. Field and lab non-destructive testing and analysis; technical report writing.

EDUCATION

M.S., Civil Engineering, Texas A&M University, Texas, 2006

Graduate Research Assistantship, Texas A&M University, 2005 - 2006

B.E., Civil Engineering, JNT University, Hyderabad, India, 2005

Project Management Certification, Lehigh University, Pennsylvania, 2010.

REGISTRATIONS/AFFILIATIONS

Registered Engineer-in-Training – Pennsylvania, 2008

SPECIFIC TECHNICAL EXPERTISE/SPECIALIST COURSES

Microsoft Office

MathCAD

STAAD

AutoCAD

Risa 3D

HEC-RAS

FRAMEWORKS

MicroStation

Smart Plant 3D Structural Applications

Encompass®

Microsoft Project

HEC-HMS

JOHN O. DIZON, P.E.

PROFESSIONAL HISTORY

Facility Risk Consultants, Inc., Huntsville, Alabama, President, 2002-présent
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 damages 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 Accelerograms 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 liaison 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 Subcommittee, 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. Manila, Philippines. October, 1998.

"3 Years After the Hanshin-Kobe Earthquake, Earthquake Risk Management, Damage Assessment and Mitigation". 1998. High Pressure Gas 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.

STEPHEN J. EDER

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 Natural Phenomena 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.

With G. S. Johnson, R. H. Kincaid, and G. S. Hardy. 1992. "High-rise Building Critical Equipment Study." Prepared for National Center for Earthquake Engineering Research.

With K. E. Smith. 1992. "Seismic Performance of Standby and Emergency Power Engine Generator Systems." Prepared for National Center for Earthquake Engineering Research.

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

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

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

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

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

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

STEPHEN J. EDER

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

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

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

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

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

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

With 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.

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

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

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

STEPHEN J. EDER

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

With 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.



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



Resume

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.

**Resume**

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, performed structural analysis of existing support steel and provided details to reinforce the structure. Performed same responsibilities 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 responsibilities 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



Resume

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

Steve R. Gray

Objective

Obtain a position where I can maximize my working experience, program development skills, and my training abilities.

Experience

12/2010 – 02/2011 Sun Technical Services, Inc. Reno, NV

Ground Water Contamination Risk Assessment

- Risk assessment of the probability of tritium getting into the ground water.

01/2010 – 10/2010 Hyperspring Madison, AL

Operation Staff Augmentation

- Coordinate activities to safely remove from service 120 Volt molded case circuit breakers.
- Test 120 Volt molded case circuit breakers per NRC commitment.

1987 - 2009 TVA Browns Ferry Nuclear Power Plant

Unit Manager

- Supervise Unit Operations
- SRO license
- Licensed to operate a nuclear power plant in accordance with all regulations.
- Operating the mechanical, electrical and reactor systems from the plant control room in a safe and efficient manner to ensure maximum electrical generation in compliance with regulations.
- Knowledge of state and federal regulations, guidelines, controls and procedures to protect the public and plant workers.
- Implemented and maintained effective planning and operating practices to maximum efficient operation.
- Supervise plant operations and direct and implement emergency operation procedures and event reporting.
- Operations representative during outages.
- Planned and implemented outages.
- Responsible for daily operations, assisted with Unit 2 and Unit 1 plant recovery.
- Responsible for all personnel assigned to unit.
- Controlled the operations and maintenance activities in accordance with operating procedures and technical specification.
- Supervised operators and maintenance personnel in the plant and outage organization.
- Supervised placing in and out of service the control-rod drive system, recirculation pumps, and VFDs; tested the emergency cooling systems; HPCI, RCIC, RHR, core-spray, and diesel generator standby electrical supply systems; testing of logic associated with the auto-start of the systems.
- Placed in service condensate/feed water, turbine/generator EHC, heater drains and vents, CCW, all seal oil systems, hydrogen cooling systems, and stator cooling systems for the generator.
- Worked in FIN as group's SRO supervisor.
- Supervised plant activities inside and outside of control room.

1981-1987

TVA

Browns Ferry Nuclear
Power Plant

Unit Operator

- Nuclear Power Plant Operator
- RO License
- Responsible for Unit Operations
- Monitored generators and turbine equipment in power reactors to ensure to good working conditions at all times.
- Maintained standard voltage regulation of electricity that flows from the nuclear plant to the households.
- Coordinated with distribution departments if the electricity supplied is enough to generate power accordingly.
- Updated records and data at all times for future reference in case a shutdown occurs.
- Operated all controls in the control room and coordinated the activities with fellow operators in order to have a regulated flow of electricity.
- Regulated the controls of the machines and followed the procedures indicated for a smooth flow of the operations.
- Monitored the functions and stability of the machine equipment and ensured the standard flow of power.
- Instructed the workers to respond to malfunctions and inspected the gauges and perform corrective actions.
- Implemented high quality of standard procedures to maintain normal operating conditions.
- Maintained daily recorded data of the operations and functions of the power plant and noted all malfunctions and shutdown activities of machines and equipment.
- Implemented operational procedures such as those controlling start-up and shut-down activities of machines and equipment.
- Implemented operational procedures such a those controlling start-up and shut-down activities.
- Recorded operating data and results of surveillance tests.
- Direct supervisor of AUOs

1976-1981

TVA

Browns Ferry Nuclear
Plant

AUO Trainee/AUO

- Assistant Unit Operator
- Assist in plant activities including start-ups, shut-downs, and outage activities
- Assist in the clearing of plant equipment for maintenance and return to service.

Military Service

1974-1976

U.S. Army

Germany

References

References are available on request.



Resume

SUMMARY

Mechanical Engineering Associate with three years of experience with WorleyParsons. Experience includes the energy/power generation industry and the steel mill industry. Power experience includes creating detailed specifications for power plant equipment, creating piping line specifications, modeling hydraulic systems, and creating Piping and Instrumentation Diagrams (P&ID). Steel mill experience includes preparing Phase II project documents for the replacement of Non-destructive Testing (NDT) equipment.

EXPERIENCE

- 2007 - Present Mechanical Engineering Associate, WorleyParsons, Chattanooga, Tennessee**
- 2010 - Present U.S. Steel, Fairfield, Alabama – Fairfield Tubular, NDT Equipment Upgrade.** Evaluate equipment options and cost analysis for replacement/upgrade of the NDT equipment at Fairfield Pipe Mill.
- 2010 Tennessee Valley Authority (TVA) – Watts Bar Unit 2 Pipe Supports, Spring City, Tennessee.** Facilitated the work flow process for nuclear calculation documentation, review, and issuance. Reviewed final pipe support calculation packages prior to issuance. Ensured each package is consistent with TVA and WorleyParsons nuclear quality procedures. Originated nuclear Category 1 pipe support calculations.
- 2008 - 2009 TVA – Kingston Dry Fly Ash Conversion Project, Kingston, Tennessee.** Created and analyzed hydraulic models for the existing fly-ash sluice water system and the new dry fly ash handling system. Tasks included walking down existing piping, updating piping drawings, and designing the new water piping system to deliver demands to the new dry system and the tie-ins to the high pressure fire water and raw water systems.
- Braunig Peaking Turbines Project – Austin Industrial, San Antonio, Texas –** Created and analyzed hydraulic models for demineralized water system and service water system for all users of peaker plant. Sized piping system and forwarding pumps for plant water systems. Developed P&IDs for potable water, service water, and demineralized water systems. Assisted in the creation of piping line specifications for all piping services. General support of engineering staff.
- 2007 - 2008 TVA.** Developed a water study to evaluate condenser options based on water availability for future Western Tennessee sites. Evaluated the performance of wet and dry cooling systems, as well as various hybrid systems. Performed an economic analysis to evaluate various cooling options based on capital cost, power loss due to condenser performance, and water storage. Performed heat balances to determine the reduction in overall power plant output for condenser cooling options.

EDUCATION

B.S., Mechanical Engineering, University of Tennessee at Chattanooga, Chattanooga, Tennessee, 2007

REGISTRATIONS/AFFILIATIONS

Registered Engineering Intern

**Resume****SUMMARY**

Senior Supervising Engineer with over 37 years of civil/structural design and construction experience, with an emphasis on power generation and distribution at major electric generating stations, including thirty years with WorleyParsons. Development and design of new fossil, nuclear, and renewable sources of power generation, as well as modifications and retrofits to existing facilities.

EXPERIENCE

2007 - Present Senior Supervising Engineer, WorleyParsons, Denver, Colorado

2011 - Present Pacific Gas & Electric (PG&E) – Diablo Canyon Power Plant. Lead Discipline Engineer tasked with preparing modification packages at Diablo Canyon Power Plant.

2010 Tennessee Valley Authority (TVA) – Watts Bar Unit 2. Performed a piping reassessment program of safety related piping systems. Requalified existing pipe supports in conjunction with the completion effort at Watts Bar Unit 2.

2009 Arizona Public Service (APS) – Palo Verde Nuclear Generating Station. Performed field walkdowns, and prepared structural engineering input to the ADV Nitrogen Margin Recovery Conceptual Design Study Report. Designed structural modifications to Units 1, 2, and 3 hydrazine injection systems.

GE-Hitachi Nuclear Energy, Inc.. Prepared the civil/structural portion of a "balance of plant" cost estimate for a GE-ESBWR reactor. Areas considered were the Turbine Island (turbine building, electrical building and aux-boiler building), and the radwaste building.

BP Alternative Energy. Developed conceptual structural design and cost estimate for a 250 MW concentrated solar power project.

Iberdrola. Developed conceptual structural design and cost estimates for a 115 MW, a 250 MW, and a 300 MW concentrated solar power project.

Tri State Electric – Craig Station Unit 3. Provided structural support of high-pressure heater drain piping modifications.

Black Hills Energy Wygen 2 Power Plant, Located near Gillette, Wyoming. Designed selective catalytic reduction (SCR) inlet duct modifications to resolve ash plugging issues.

2008 Électricité de France (EDF). Prepared an investigative study entitled "U.S. Nuclear Plant Tornado Design Practices" for France's largest electric utility.

FPL Energy – Termosol Units 1 and 2, Two 50 MW. Prepared grading and site development plans for concentrated solar units located near Extremadura, Spain.

Colorado Springs Utility – Martin Drake Station. Designed flue gas ductwork support structures.

Enrgy, Mohave Generating Station Located near Laughlin, Nevada. Performed a general condition assessment associated with repowering a decommissioned coal fired plant with natural gas.

Dyno Nobel, Inc.. Ammonia unloading and storage project. Performed the structural and civil design for the addition of new railcar unloading platforms and storage tanks. Tasks included design of tank foundations and miscellaneous steel structures.

**Resume**

Skyfuel, Inc.. Developed conceptual structural design and cost estimate for a 5 MW concentrated solar power demonstration project located in Mexico.

GE Energy. Reviewed foundation design for 1.5 MW GE wind turbines located near Iowa Lakes, Iowa.

- 2007** **BHP Billiton – Navajo Mine Expansion Project Located near Farmington, New Mexico.**
Prepared bid evaluations.
- 2006 - 2007** **Principal Structural Engineer, WorleyParsons, Reading, Pennsylvania**
- Southern Company, Plant Scherer.** Task lead for selective catalytic reduction upgrades to Units 1 and 2. Prepared scope document and cost estimate for upgrades. Supervised design of SCR support platforms, inlet and outlet ductwork, foundations, and boiler building modifications.
- 2006** **Santee Cooper – Pee Dee Unit 1, One New 600 MW Fossil Power Plant Unit.** Responsible for assembling construction contract packages, engineering requisitions, and bid evaluations. Design steel structures and concrete foundations.
- 2002 - 2006** **Santee Cooper – Cross Units 3 & 4, Two New 640 MW Fossil Power Plant Units.** Responsible for assembling construction contract packages, engineering requisitions, and bid evaluations. Design steel structures and concrete foundations. Resolve field questions.
- 2000 - 2002** **Orion Power Midwest – Cheswick Station.** Lead structural design engineer for the Cheswick station selective catalytic reduction system upgrade. Babcock & Wilcox was prime contractor for the SCR reactor and associated ductwork with WorleyParsons responsible for structural steel support and balance of plant. Designed the structural components for the selective catalytic reduction system, including support platform, boiler house modifications, ID fan modifications and ammonia handling system.
- 1999 - 2000** **Allegheny Energy Supply – Harrison Station.** Designed the structural components for an SCR system, including support platform, reactor, catalyst handling buildings, boiler house modifications, and inlet/outlet ducts.
- 1995 - 1999** **Senior Structural Engineer, WorleyParsons, Reading, Pennsylvania**
- 1998 - 1999** **Nuklearna Elektrana Krško – Krško Nuclear Power Plant (Slovenia).** Participant in a Siemens–Framatone consortium responsible for steam generator replacement activities. Prepared modification packages and licensing documents for regulatory approval. Performed 50.59 safety evaluations and resolved engineering issues regarding the rigging, handling and onsite storage of both the new and the old steam generators.
- 1997** **Florida Power Corporation, Crystal River 3 – Part of the Restart Effort.** Prepared response to concerns associated with nuclear safety-related structures, systems, and components. Prepared structural modification packages, as required.
- 1995 - 1996** **Pennsylvania Power & Light Company – Allentown, Pennsylvania, Utility's Headquarters.**
Seconded employee – Performed structural engineering related activities at Susquehanna Steam Electric Station. Performed cooling tower inspections and wrote structural repair procedures. Developed an expansion anchor design criteria and installation specification. Issued an investigative report on problems associated with the plant's prestressed concrete river water intake pipeline. Participated in the replacement of the plant's RW intake pipeline. Prepared numerous modification packages at the Susquehanna nuclear power plant.

**Resume**

- 1980 - 1995** **Structural Engineer, WorleyParsons, Reading, Pennsylvania**
- 1994 - 1995** **Baltimore Gas & Electric Company – Calvert Cliffs Nuclear Power Plant.** Developed a life cycle management plan for Category I structures.
- 1992 - 1993** **New York State Electric & Gas – Milliken Station.** Designed FGD ductwork including precipitator outlet ducts, ID fan ducts, absorber inlet and outlet ducts, by-pass duct, and cross over section. Designed duct supports and support steel. Assisted mechanical engineering in expansion joint evaluations and FGD flow modeling studies.
- 1991 - 1992** **Martin Marietta Energy Systems – Advanced Neutron Source.** Conceptual design of a state-of-the-art research facility located at Oak Ridge National Laboratories. Developed safety analysis report and system design descriptions. Integrated NRC and DOE requirements into workable design criteria.
- 1990** **South Carolina Electric & Gas Company – V.C. Summer Nuclear Station.** Provided structural engineering support of chilled water modifications. Designed foundations for chemical injection tanks and a supplemental cooling tower.
- 1989** **Tennessee Valley Authority – Sequoyah Nuclear Power Plant.** Performed a time history analysis of the plant's primary steel containment vessel. Qualified safety-related conduit and cable tray systems. Served as task engineer for an embedded plate qualification program.
- 1987 - 1988** **Texas Utilities – Comanche Peak Nuclear Power Station.** Implemented a Design Adequacy Program. Provided technical oversight of ongoing design activities, specifically in the area of civil/structural design. Successfully resolved outstanding safety concerns.
- 1985 - 1986** **Eastman Kodak Corporation, Rochester, New York, Utility Division.** Seconded employee – Provided engineering calculations in support of building renovations. Designed switchyard structures. Designed foundations, containment structures, and fire barriers for oil-filled transformers. Prepared construction specifications and bid packages.
- 1984** **Pennsylvania Electric Company – Keystone Station.** Designed switchyard structures, transformer foundations, and miscellaneous yard structures. Also, prepared the design of a leachate collection system around the plant's coal piles.
- 1983 - 1984** **Cleveland Electric Illuminating Company – Perry Nuclear Power Plant.** Designed safety-related pipe supports and performed piping analysis of feedwater and mainstream systems. Qualified welded attachments to safety-related piping systems. Analyzed the effect of accident temperatures on the primary containment.
- 1982** **General Public Utilities – Three Mile Island, Unit 1.** Performed walkdowns of component supports. Qualified safety-related pipe supports based on as-built configuration. Qualified concrete anchorages based on NRC mandated criteria. Implemented GPU's 79-02 and 79-14 program at TMI.
- 1980 - 1981** **Rochester Gas & Electric Corporation – R.E. Ginna Nuclear Power Plant.** Assessed the ability of Category I structures to withstand the effects of extreme wind and tornado loads. Participated in a seismic upgrade program for Category I structures. Designed modifications, as required, to bring the plant into compliance with NRC regulations.
- 1979 - 1980** **Project Engineer, Morrison-Knudsen Company, Inc.**
- Public Service Company of Indiana – Merom Station Power Plant.** Responsible for permanent material purchase orders, subcontracts and scope changes. Resolved installation problems



Resume

encountered during construction. Assured that all work was performed in accordance with project specifications. Supervised field engineering staff and survey crews.

1977 - 1978 Cost and Scheduling Engineer, Morrison-Knudsen Company, Inc.

Potomac Electric Power Company – Chalk Point Power Plant. Prepared cost reports and construction schedules. Implemented a preventative maintenance program for permanent plant equipment. Supervised document control personnel.

1974 - 1976 Field Engineer, Morrison-Knudsen Company, Inc.

1976 Columbia Gas Company – Cove Point Liquefied Natural Gas (LNG) Facility at Cove Point, Maryland. Provided engineering support during construction of LNG facility located on the Chesapeake Bay.

1974 - 1975 Morrison-Knudsen Company, Inc. Eastern Regional Office. Assisted senior estimators with the preparation of proposals. Performed material take-off from bid drawings. Obtained price quotations from suppliers and subcontractors.

EDUCATION

B.S., Civil Engineering, Lehigh University, Bethlehem, Pennsylvania

REGISTRATIONS/AFFILIATIONS

Registered Professional Engineer – Pennsylvania, Indiana, South Carolina, Georgia, Colorado and Wyoming.

Member, American Society of Civil Engineers (ASCE)

Member, American Institute of Steel Construction (AISC)

**Resume****SUMMARY**

Senior Structural Engineer with seven years of experience within WorleyParsons; experience includes performing structural engineering and design of fossil power plants and air quality projects, leading and performing nuclear pipe support analysis, and lead structural engineer and project engineer in the minerals and metal sector, coordinating and performing engineering and design of steel manufacturing facilities. Other experience includes structural inspections and modifications of existing structures.

EXPERIENCE

2010 - Present Senior Structural Engineer, WorleyParsons, Chicago, Illinois

Pro-Tec Coating Company – Continuous Annealing Line (CAL). Project Engineer. Duties include coordinating and tracking all discipline scope, progress, and manhours; project reporting to management and client; assisting project manager with oversight of project schedule and budget; and tracking variances and invoices. Other duties include tracking and coordinating with vendors and vendor submittals; expediting vendors and coordinating between vendors and client.

Pro-Tec Coating Company – Continuous Annealing Line (CAL). Lead Structural Engineer. Duties include oversight of structural engineering work and coordination with client and other contracted engineering firms in a multi-faceted project. Work includes equipment foundations, steel utility racks, steel support structures for process control buildings, and other miscellaneous balance-of-plant equipment. Other duties include responding to field requests for information (RFI) and approval of fabrication drawings.

2007 - 2010 Structural Engineer I/II, WorleyParsons, Chattanooga, Tennessee

Tennessee Valley Authority – Watts Barr Nuclear Unit 2. Lead Structural Engineer. Coordinated the engineering of over 1,000 pipe supports between four offices and client technical representative, as well as provided technical leadership during design. Managed and trained more than 50 engineers in FAPPS software suite for qualification of existing pipe supports and design of new pipe supports.

Consumers Energy, Karn Pulse Jet Fabric Filter (PJFF). Task Lead responsible for the oversight and organization between multiple offices to perform the design of all ductwork and support structures. Other duties included responding to RFI from fabricator and adjustment of engineering to facilitate shipping and erection of ductwork.

Regional Inspection Team. Perform inspections to determine structural integrity and necessary modifications to existing structural systems, and preparation of inspection reports. Types of inspections performed include ductwork, condenser cooling water (CCW) tunnels, and exterior stack evaluation.

Progress Energy Carolinas (PGNC) – Roxboro Flue Gas Desulfurization (FGD). Two weeks as site engineer during Unit 3 tie-in outage. Primary responsibilities include resolving emergent questions from erector and coordination with home office. Other duties included routing and structural support of electrical raceways.

Southern Company – Scherer Mercury Baghouse. Primary responsibilities included overseeing and performing the design and analysis of very large ductwork and their support structures, as well as coordinating with the constructor and other disciplines. Other responsibilities included coordination with fabricator, answering requests for information, reviewing shop drawings, resolving field questions during construction and collaborating with erector in developing a lifting plan. Field support duties include design of quick turnaround solutions for interferences involving steel and ductwork as well as coordination with other disciplines to resolve issues.



Resume

2005 - 2007 Associate Structural Engineer-in-Training, WorleyParsons, Chattanooga, Tennessee

Alstom Power – Soto De Ribera, Low NOx Ductwork Addition. Primary responsibilities include designing small air ducts and analyzing and modifying the existing steel to accommodate the additional load of the new ductwork, and modifications to the existing boiler buck-stays. All modifications and design adhere to Spanish codes and require the use of Spanish steel and shapes.

Progress Energy Carolinas (PGNC) – Roxboro FGD. Primary responsibilities included creating and analyzing STAAD models for large duct work and their support structures, as well as providing engineering calculation packages. Responsibilities also included the design of reinforced concrete foundations including spread footings, piles, and pile caps. Work experience also included performing site walkdowns to determine the feasibility, constructability, layout, and arrangement of large flue gas duct work and their support structures in and around existing equipment, steel, and foundations. Duties also included assisting in resolution to RFIs and field support.

EDUCATION

B.S., Civil Engineering, Purdue University, West Lafayette Indiana, May 2005

Registrations/Affiliations

Registered Professional Engineer (2009) – Texas and Ohio

Member, American Institute of Steel Construction (AISC)

Specific Technical Expertise/Specialist Courses

Confined Space	Half Face Respirator	
Full Face PAPR	Fall Protection	
Computer		
STAADPro v8i	AutoCAD®	Microstation
Frameworks	MathCAD®	Microsoft Office
FAPPS	SmartPlant Review	

Stephen Samaras
112 Medicine Bend Drive
Madison, AL 35758
(256) 837-4060

EXPERIENCE

Tennessee Valley Authority, Browns Ferry Nuclear Plant, Decatur, Alabama Senior Civil Design Engineer, January 2006 – PRESENT

The responsible engineer for several group initiatives: development of various design packages and corrective action plans; issuance of radiological shielding packages; approval of rigging plans; outage and maintenance support; issuance of programmatic procedures. Completed Task Qualifications required for a senior civil structural design engineer. In addition, assumed the position of the BFN Snubber Program Engineer.

Acting Engineering Support Group Manager, November 2005 – December 2006

Managed the long-term and day-to-day activities of the Engineering Support Group, which consisted of three units: the Configuration Group, the Drafting Group, and the Procurement Engineering Group. Aligned the Engineering Support Group's objectives and resources to support key Site Engineering initiatives: outage support; Unit 1 Restart; INPO and other third-party assessment activities; departmental indicators; day-to-day engineering discipline support; and management of the department's corrective action program.

Site Engineering Task Manager PG-8/PG-7, November 1991 – November 2005

Site Engineering representative at Daily Work Week and Advance Work Week review meetings. Focus engineering support for work week, unit downpower, and plant priority items. Lead multi-discipline team to review and validate the Final Safety Analysis Report. Conduct Site Engineering Self Assessment Program. Track and trend observations, self assessments, and department indices. Prepare and issue monthly Site Engineering Self Assessment Report. Also prepare and present Engineering Support Windows to STAC. Developed Site Engineering Fiscal Year and Unit outage radiation dose exposure plan. ALARA Review Committee member and also serve on two Central Safety subcommittees. Root Cause Analysis Coach.

Provide overall direct management and coordination of assigned engineering projects, which include: SPAE and SPOC for Unit 2 Cycle 5 outage, Unit 2 Secondary Backlog and ISI Support Drawing Upgrade, Reactor Building Roof Replacement, Reactor Building Overhead Crane Upgrade, Raw Water Chemical Treatment, and Essential Design Calculations. Coordinate and obtain funding for subject projects. Work with Engineering Manager and Lead Engineers to develop fiscal year budget and resource plan.

Acted as Duty Engineering Manager during U2C7, U2C8, U3C7, and U2C11 refuel outages, and also during Unit 3 Restart. Attended U2C7, U2C8, and U2C11 pre-outage meetings to focus Site Engineering (SE) activities to support outage. Acted as Assistant Duty Site Engineering Manager during U2C6 refuel outage.

Initiate new and/or changes to existing contracts. Review and document contractor performance.

Civil Engineer SC-4 Technical Supervisor, August 1989 - November 1991

As Technical Supervisor in Civil Field Support group, resolved various field design problems to support design closure and system return to service. Also was Civil Engineering representative to the Conditions Adverse to Quality (CAQ) group. Resolved and closed CAQs to help Civil Engineering achieve a net 34% reduction of backlog CAQs. Resolved seismic coupling issue of suspended systems supported on flexible platforms. Acted as lead for Civil Engineering SPAE Phase I effort.

Closed NRC OIE Bulletin 80-11, "Masonry Wall Design" at Browns Ferry Nuclear Plant (BFNP) Units 1, 2, and 3.

Civil Engineer SC-3, September 1987 - July 1989

Directed TVA and Architect/Engineering activities to complete design work associated with masonry block walls at BFNP. Acted as Task Engineer for several other miscellaneous efforts. Also was Nuclear Engineering (NE) representative in the BFNP "War Room."

**Impell Corporation, Norcross Georgia
Principal Engineer, January 1987 - August 1987**

Civil engineer in TVA's civil structural section at BFNP. Wrote Site Directors Standard Practice (SDSP - 9.8) which set the requirements for DNE plant walkdown at BFNP. Developed TVA's program to close OIE Bulletin 80-11 "Masonry Wall Design." Wrote Project Instruction (BFEP PI 86-40) for the plant walkdown of the masonry block walls. Lead engineer for the walkdown team performing the inspection of the masonry walls.

**Teledyne Engineering Services, Waltham, Massachusetts
Project Engineer, June 1982 - December 1986**

Civil engineer in TVA's civil structural section at BFNP. Control Bay Main Floor Steel Evaluation Program; conducted walkdown of worst loaded floor beam, and then performed structural qualification of as-built condition without requiring field modifications. Structural analyst for seismic class I miscellaneous structures/frames. Reviewed several electrical and mechanical Appendix R design criteria, calculations, and drawings for civil/structural interfaces.

Pipe stress analyst for ASME Class II nuclear piping at Bellefonte Nuclear Power Plant. Worked to close several mechanical piping work packages.

At the Teledyne office, acted as structural analyst for building steel, pipe supports, and multifunctional support frames of various commercial nuclear power plants. Analyzed pipe stress for a variety of in-house nuclear piping stress jobs, as well as for several fossil plant life extension projects.

Field engineer for the Calvert Cliffs Nuclear Plant Unit 2 mainstream pipe support modification project in Lusby, Maryland. As the sole representative of TES, responsible for guiding and assisting craft personnel during this around-the-clock effort.

Field engineer at Turkey Point Nuclear Plant Units 3 and 4 in Homestead, Florida, for the implementation of NRC OIE Bulletin 79-14 and the snubber testing/replacement program.

Proficient with STAAD, GSTRUDL, GTSTRUDL, TMRPIPE, TPIPE, BASEPLATE II, and GENERIC II. Have also used STARDYNE and STARPIPE.

EDUCATION

University of Alabama, Tuscaloosa, Alabama, Master of Business Administration, 1991

University of Lowell, Lowell, Massachusetts, Bachelor of Science, Civil Engineering, 1982

LICENSE/CERTIFICATION

Registered Professional Engineer, Structural -- Commonwealth of Massachusetts

Management Senior Reactor Operator Certification -- Completed 12/96 at BFNP

CONTINUING EDUCATION

Completed two seminars offered by the American Society of Civil Engineers, *How to Design and Construct Reinforced Masonry Structures*, and *How to Apply the New 1988 Seismic Code Provisions*

Additional Continuing Education includes:

- Completed ATI Course "Materials Science"
- Completed TTU Course "Materials Behavior in Reactor"
- Completed TTU Course "Fundamentals of Nuclear Engineering"
- Completed TTU Course "Advanced Reactor Physics"
- Completed PII Common Cause Analysis training

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

SQUG Walkdown Screening and Seismic Evaluation Training Course

INPO / NANTEL Training on Near Term Task Force Recommendation 2.3 - Flooding Walkdowns



Appendix B: Base List 1

UNID	Description	SAFETY FUNCTION
3-ACC-32-6104	CA/ACCUMULATOR FOR PSV-1-18	1, 3
3-ACC-32-6105	CA/ACCUMULATOR FOR PSV-1-19	1, 3
3-ACC-32-6106	CA/ACCUMULATOR FOR PSV-1-5	1, 3
3-ACC-32-6107	CA/ACCUMULATOR FOR PSV-1-22	1, 3
3-ACC-32-6108	CA/ACCUMULATOR FOR PSV-1-31	1, 3
3-ACC-32-6109	CA/ACCUMULATOR FOR PSV-1-34	1, 3
3-ACC-32-6110	CA/ACCUMULATOR FOR PSV-1-41	1, 3
3-ACC-32-6111	CA/ACCUMULATOR FOR PSV-1-30	1, 3
3-AMP-092-0007/41A	IRM CH. "A" VOLTAGE PREAMPLIFIER 7-34A	0
3-AMP-092-0007/41B	IRM CH. "B" VOLTAGE PREAMPLIFIER 7-34B	0
3-AMP-092-0007/41C	IRM CH. "C" VOLTAGE PREAMPLIFIER 7-34C	0
3-AMP-092-0007/41D	IRM CH. "D" VOLTAGE PREAMPLIFIER 7-34D	0
3-BATA-248-0003EB	250V BATTERY SB-3EB	0
3-BATB-254-0000A	125V DC DSL BATT 3A	0
3-BATB-254-0000B	125V DC DSL BATT 3B	0
3-BATB-254-0000C	DIESEL 3C 125V BATTERY	0
3-BATB-254-0000D	DIESEL 3D 125V BATTERY	0
3-BATD-283-000A3	24V NEUTRON MONITORING BATTERY, U3 CHANNEL A	0
3-BATD-283-000B3	24V NEUTRON MONITORING BATTERY, U3 CHANNEL B	0
3-BDAA-211-0003EA	4KV SHDN BD 3EA	0
3-BDAA-211-0003EB	4KV SHDN BD 3EB	0
3-BDAA-211-0003EC	4KV SHUTDOWN BOARD 3EC	0
3-BDAA-211-0003ED	4KV SHUTDOWN BOARD 3ED	0
3-BDBB-219-0003EA	480V DSL AUX BD 3EA	0
3-BDBB-219-0003EB	480V DIESEL AUX BOARD 3EB	0
3-BDBB-231-0003B	480V SD BOARD 3B	0
3-BDBB-265-0003B	480V RB VENT BD 3B	0
3-BDBB-268-0003A	480V RMOV BOARD 3A	0
3-BDBB-268-0003B	480V RMOV BOARD 3B	0
3-BDBB-268-0003D	480V RMOV BOARD 3D	0
3-BDBB-268-0003E	480V RMOX BOARD 3E	0

3-BDBB-281-0003A	250V DC RMOV BOARD 3A	0
3-BDBB-281-0003B	250V DC RMOV BOARD 3B	0
3-BDBB-281-0003C	250V DC RMOV BOARD 3C	0
3-BDGG-254-0003A	125V DC DSL BATT BD 3A	0
3-BDGG-254-0003B	125V DC DSL BATT BD 3B	0
3-BDGG-254-0003C	DIESEL 3C 125V BATTERY BOARD	0
3-BDGG-254-0003D	DIESEL 3D 125V BATTERY BOARD	0
3-CHGA-248-0003EB	250V BATTERY CHARGER SB-3EB	0
3-CHGB-254-0000AA	125V DC DSL 3A BATT CHGR A	0
3-CHGB-254-0000BA	125V DC DSL 3B BATT CHGR A	0
3-CHGB-254-0000CB	DIESEL 3C BATTERY CHARGER B	0
3-CHGB-254-0000DB	DIESEL 3D BATTERY CHARGER B	0
3-CHGD-283-A1-3	24V NEUTRON BATTERY CHARGERS A1-3	0
3-CHGD-283-A2-3	24V NEUTRON BATTERY CHARGERS A2-3	0
3-CHGD-283-B1-3	24V NEUTRON BATTERY CHARGERS B1-3	0
3-CHGD-283-B2-3	24V NEUTRON BATTERY CHARGERS B2-3	0
3-CKV*67-649	EECW NORTH HEADER SUPPLY CHECK VALVE TO A CS	0
3-CKV-10-506	RVVD/MSRV 1-4 DISCHARGE LINE VACUUM BKR	4, 5
3-CKV-10-507	RVVD/MSRV 1-5 DISCHARGE LINE VACUUM BKR	4, 5
3-CKV-10-508	RVVD/MSRV 1-18 DISCHARGE LINE VACUUM BKR	4, 5
3-CKV-10-509	RVVD/MSRV 1-19 DISCHARGE LINE VACUUM BKR	4, 5
3-CKV-10-510	RVVD/MSRV 1-22 DISCHARGE LINE VACUUM BKR	4, 5
3-CKV-10-511	RVVD/MSRV 1-23 DISCHARGE LINE VACUUM BKR	4, 5
3-CKV-10-512	RVVD/MSRV 1-30 DISCHARGE LINE VACUUM BKR	4, 5
3-CKV-10-513	RVVD/MSRV 1-31 DISCHARGE LINE VACUUM BKR	4, 5
3-CKV-10-514	RVVD/MSRV 1-34 DISCHARGE LINE VACUUM BKR	4, 5
3-CKV-10-515	RVVD/MSRV 1-41 DISCHARGE LINE VACUUM BKR	4, 5
3-CKV-10-516	RVVD/MSRV 1-42 DISCHARGE LINE VACUUM BKR	4, 5
3-CKV-10-519	RVVD/MSRV 1-179 DISCHARGE LINE VACUUM BKR	4, 5
3-CKV-10-520	RVVD/MSRV 1-180 DISCHARGE LINE VACUUM BKR	4, 5
3-CKV-10-521	RVVD/MSRV 1-4 DISCHARGE LINE VACUUM BKR	4, 5
3-CKV-10-522	RVVD/MSRV 1-5 DISCHARGE LINE VACUUM BKR	4, 5
3-CKV-10-523	RVVD/MSRV 1-18 DISCHARGE LINE VACUUM BKR	4, 5

3-CKV-10-524	RVVD/MSRV 1-19 DISCHARGE LINE VACUUM BKR	4, 5
3-CKV-10-525	RVVD/MSRV 1-22 DISCHARGE LINE VACUUM BKR	4, 5
3-CKV-10-526	RVVD/MSRV 1-23 DISCHARGE LINE VACUUM BKR	4, 5
3-CKV-10-527	RVVD/MSRV 1-30 DISCHARGE LINE VACUUM BKR	4, 5
3-CKV-10-528	RVVD/MSRV 1-31 DISCHARGE LINE VACUUM BKR	4, 5
3-CKV-10-529	RVVD/MSRV 1-34 DISCHARGE LINE VACUUM BKR	4, 5
3-CKV-10-530	RVVD/MSRV 1-41 DISCHARGE LINE VACUUM BKR	4, 5
3-CKV-10-531	RVVD/MSRV 1-42 DISCHARGE LINE VACUUM BKR	4, 5
3-CKV-10-532	RVVD/MSRV 1-179 DISCHARGE LINE VACUUM BKR	4, 5
3-CKV-10-533	RVVD/MSRV 1-180 DISCHARGE LINE VACUUM BKR	4, 5
3-CKV-23-579	RHRW TO HX A INLET CHECK VALVE	4, 5
3-CKV-23-580	RHRW TO HX B INLET CHECK VALVE	4, 5
3-CKV-23-581	RHRW TO HX C INLET CHECK VALVE	4, 5
3-CKV-23-582	RHRW TO HX D INLET CHECK VALVE	4, 5
3-CKV-32-2163	CA/CHECK VALVE FROM DWCA CMPRSSR TO DRYWELL-PATH 2	4, 5
3-CKV-32-2367	CA/DRYWELL CONTROL AIR TO PSV-1-30	4, 5
3-CKV-32-2378	CA/DRYWELL CONTROL AIR TO PSV-1-31	4, 5
3-CKV-32-2516	CA/CHECK VALVE FROM DWCA CMPRSSR TO DRYWELL-PATH 1	4, 5
3-CKV-32-2521	CA/CHECK VALVE FROM DWCA CMPRSSR TO DRYWELL-PATH 1	4, 5
3-CKV-32-336	CA/CHECK VALVE FROM DWCA CMPRSSR TO DRYWELL-PATH 2	4, 5
3-CKV-32-3749+	CAD/CONTROL AIR/CAD CHECK VALVE	4, 5
3-CKV-32-816	CA/DRYWELL CONTROL AIR TO PSV-1-19	4, 5
3-CKV-32-859	CA/DRYWELL CONTROL AIR TO PSV-1-5	4, 5
3-CKV-32-872	CA/DRYWELL CONTROL AIR TO PSV-1-18	4, 5
3-CKV-32-892	CA/DRYWELL CONTROL AIR TO PSV-1-22	4, 5
3-CKV-32-915	CA/DRYWELL CONTROL AIR TO PSV-1-41	4, 5
3-CKV-32-919	CA/DRYWELL CONTROL AIR TO PSV-1-34	4, 5
3-CKV-3-554	FEEDWATER "A" OUTBOARD ISOLATION VALVE	2, 4, 5
3-CKV-3-558	FEEDWATER "A" INBOARD ISOLATION VALVE	2, 4, 5
3-CKV-3-568	FEEDWATER "B" OUTBOARD ISOLATION VALVE	2, 4, 5
3-CKV-3-572	FEEDWATER "B" INBOARD ISOLATION VALVE	2, 4, 5
3-CKV-67-541	EECW SOUTH HEADER SUPPLY CHECK VALVE TO A CS	4, 5
3-CKV-67-542	EECW SOUTH HEADER SUPPLY CHECK VALVE TO A CS	4, 5

3-CKV-67-558	EECW SOUTH HEADER SUPPLY CHECK VALVE TO A & C RHR	4, 5
3-CKV-67-559	EECW SOUTH HEADER SUPPLY CHECK VALVE TO A & C RHR	4, 5
3-CKV-67-584	EECW SOUTH HEADER SUPPLY CHECK VALVE TO B CS	4, 5
3-CKV-67-585	EECW SOUTH HEADER SUPPLY CHECK VALVE TO B CS	4, 5
3-CKV-67-598	EECW SEAL DISCHARGE CHECK VALVE	4, 5
3-CKV-67-600	EECW SOUTH HEADER SUPPLY CHECK VALVE TO B & D RHR	4, 5
3-CKV-67-601	EECW SOUTH HEADER SUPPLY CHECK VALVE TO B & D RHR	4, 5
3-CKV-67-638	EECW NORTH HEADER SUPPLY CHECK VALVE TO A & C RHR	4, 5
3-CKV-67-639	EECW NORTH HEADER SUPPLY CHECK VALVE TO A & C RHR	4, 5
3-CKV-67-648	EECW NORTH HEADER SUPPLY CHECK VALVE TO CS	4, 5
3-CKV-67-656	EECW NORTH HEADER SUPPLY CHECK VALVE TO B CS	4, 5
3-CKV-67-657	EECW NORTH HEADER SUPPLY CHECK VALVE TO B CS	4, 5
3-CKV-67-659	EECW NORTH HEADER SUPPLY CHECK VALVE TO B&D RHR	4, 5
3-CKV-67-660	EECW NORTH HEADER SUPPLY CHECK VALVE TO B&D RHR	4, 5
3-CKV-67-693	EECW NORTH HEADER SUPPLY CHECK VALVE TO THE 3EA DG	4, 5
3-CKV-67-694	EECW NORTH HEADER SUPPLY CHECK VALVE TO THE 3EA DG	4, 5
3-CKV-67-695	EECW SOUTH HEADER SUPPLY CHECK VALVE TO THE 3EA DG	4, 5
3-CKV-67-703	EECW NORTH HEADER SUPPLY CHECK VALVE TO THE 3EB DG	4, 5
3-CKV-67-704	EECW NORTH HEADER SUPPLY CHECK VALVE TO THE 3EB DG	4, 5
3-CKV-67-713	EECW NORTH HEADER SUPPLY CHECK VALVE TO 3EC DG	4, 5
3-CKV-67-714	EECW NORTH HEADER SUPPLY CHECK VALVE TO 3EC DG	4, 5
3-CKV-67-715	EECW SOUTH HEADER SUPPLY CHECK VALVE TO 3EC DG	4, 5
3-CKV-67-716	EECW SOUTH HEADER SUPPLY CHECK VALVE TO 3EC DG	4, 5
3-CKV-67-723	EECW NORTH HEADER SUPPLY CHECK VALVE TO 3ED DG	4, 5
3-CKV-67-724	EECW NORTH HEADER SUPPLY CHECK VALVE TO 3ED DG	4, 5
3-CKV-67-725	EECW SOUTH HEADER SUPPLY CHECK VALVE TO 3ED DG	4, 5
3-CKV-67-726	EECW SOUTH HEADER SUPPLY CHECK VALVE TO 3ED DG	4, 5
3-CKV-68-696	EECW SOUTH HEADER SUPPLY CHECK VALVE TO THE 3EA DG	4, 5
3-CKV-69-705	EECW SOUTH HEADER SUPPLY CHECK VALVE TO THE 3EB DG	4, 5
3-CKV-70-506	RBCCW DRYWELL SUPPLY CHECK VALVE	4, 5
3-CKV-70-706	EECW SOUTH HEADER SUPPLY CHECK VALVE TO THE 3EB DG	4, 5
3-CKV-71-547	RCIC/RCIC MINIMUM FLOW CHECK VALVE	4, 5
3-CKV-73-559	HPCI/HPCI PUMP MINIMUM FLOW CHECK VALVE	4, 5

3-CKV-73-559B	RHR/PUMP 3B DISCHARGE CHECK VALVE	4, 5
3-CKV-74-559A	RHR/PUMP 3A DISCHARGE CHECK VALVE	1, 3, 4, 5
3-CKV-74-559C	RHR/PUMP 3C DISCHARGE CHECK VALVE	1, 3, 4, 5
3-CKV-74-559D	RHR/PUMP 3D DISCHARGE CHECK VALVE	1, 3, 4, 5
3-CKV-74-560A	RHR/PUMP 3A MINIMUM FLOW CHECK VALVE	1, 3, 4, 5
3-CKV-74-560B	RHR/PUMP 3B MINIMUM FLOW CHECK VALVE	1, 3, 4, 5
3-CKV-74-560C	RHR/PUMP 3C MINIMUM FLOW CHECK VALVE	1, 3, 4, 5
3-CKV-74-560D	RHR/PUMP 3D MINIMUM FLOW CHECK VALVE	1, 3, 4, 5
3-CKV-75-537A	CS/PUMP 3A DISCHARGE CHECK VALVE	5
3-CKV-75-537B	CS/PUMP 3B DISCHARGE CHECK VALVE	5
3-CKV-75-537C	CS/PUMP 3C DISCHARGE CHECK VALVE	5
3-CKV-75-537D	CS/PUMP 3D DISCHARGE CHECK VALVE	5
3-CKV-75-570A	CS/PUMP 3A MINI-FLOW CHECK VALVE	5
3-CKV-75-570B	CS/PUMP 3B MINI-FLOW CHECK VALVE	5
3-CKV-75-570C	CS/PUMP 3C MINI-FLOW CHECK VALVE	5
3-CKV-75-570D	CS/PUMP 3D MINI-FLOW CHECK VALVE	5
3-CLR-67-917	EECW/RHR PUMP 3A ROOM COOLER	5
3-CLR-67-918	EECW/RHR PUMP 3B ROOM COOLER	5
3-CLR-67-919	EECW/CS PUMP 3A ROOM COOLER	5
3-CLR-67-920	EECW/CS PUMP 3B ROOM COOLER	5
3-CLR-67-921	EECW/RHR PUMP 3A ROOM COOLER	5
3-CLR-67-922	EECW/RHR PUMP 3D ROOM COOLER	5
3-ECAB-231-003A	250V DC CONT PWR TRANSFER SW - 480V SD BD 3A	0
3-ECAB-231-003B	250V DC CONT PWR TRANSFER SW - 480V SD BD 3B	0
3-FAN-30-230	DG ROOM 3A EXHAUST FAN "A"	5
3-FAN-30-231	DG ROOM 3A EXHAUST FAN "B"	5
3-FAN-30-232	DG ROOM 3B EXHAUST FAN "A"	5
3-FAN-30-233	DG ROOM 3B EXHAUST FAN "B"	5
3-FAN-30-234	DG ROOM 3C EXHAUST FAN "A"	5
3-FAN-30-235	DG ROOM 3C EXHAUST FAN "B"	5
3-FAN-30-236	DG ROOM 3D EXHAUST FAN "A"	5
3-FAN-30-237	DG ROOM 3D EXHAUST FAN "B"	5
3-FC0-30-233C	INLET DAMPER FOR FAN "B" IN DG ROOM "3B"	5

3-FCO-30-230B	INLET DAMPER FOR FAN "A" IN DG ROOM "3A"	5
3-FCO-30-230C	INLET DAMPER FOR FAN "A" IN DG ROOM "3A"	5
3-FCO-30-231A	OUTLET DAMPER FOR FAN "B" IN DG ROOM "3A"	5
3-FCO-30-231B	INLET DAMPER FOR FAN "B" IN DG ROOM "3A"	5
3-FCO-30-231C	INLET DAMPER FOR FAN "B" IN DG ROOM "3A"	5
3-FCO-30-232B	INLET DAMPER FOR FAN "A" IN DG ROOM "3B"	5
3-FCO-30-232C	INLET DAMPER FOR FAN "A" IN DG ROOM "3B"	5
3-FCO-30-233A	OUTLET DAMPER FOR FAN "B" IN DG ROOM "3B"	5
3-FCO-30-233B	INLET DAMPER FOR FAN "B" IN DG ROOM "3B"	5
3-FCO-30-234A	OUTLET DAMPER FOR FAN "A" IN DG ROOM "3C"	5
3-FCO-30-234B	INLET DAMPER FOR FAN "A" IN DG ROOM "3C"	5
3-FCO-30-234C	INLET DAMPER FOR FAN "A" IN DG ROOM "3C"	5
3-FCO-30-235A	OUTLET DAMPER FOR FAN "B" IN DG ROOM "3C"	5
3-FCO-30-235B	INLET DAMPER FOR FAN "B" IN DG ROOM "3C"	5
3-FCO-30-235C	INLET DAMPER FOR FAN "B" IN DG ROOM "3C"	5
3-FCO-30-236A	OUTLET DAMPER FOR FAN "A" IN DG ROOM "3D"	5
3-FCO-30-236B	INLET DAMPER FOR FAN "A" IN DG ROOM "3D"	5
3-FCO-30-236C	INLET DAMPER FOR FAN "A" IN DG ROOM "3D"	5
3-FCO-30-237A	OUTLET DAMPER FOR FAN "B" IN DG ROOM "3D"	5
3-FCO-30-237B	INLET DAMPER FOR FAN "B" IN DG ROOM "3D"	5
3-FCO-30-237C	INLET DAMPER FOR FAN "B" IN DG ROOM "3D"	5
3-FCO-30-23A	OUTLET DAMPER FOR FAN "A" IN DG ROOM "3A"	5
3-FCO-30-23A	OUTLET DAMPER FOR FAN "A" IN DG ROOM "3B"	5
3-FCV-1-14	MSIV "A" INBOARD ISOLATION VALVE	4, 5
3-FCV-1-15	MSIV "A" OUTBOARD ISOLATION VALVE	4, 5
3-FCV-1-26	MSIV "B" INBOARD ISOLATION VALVE	4, 5
3-FCV-1-27	MSIV "B" OUTBOARD ISOLATION VALVE	4, 5
3-FCV-1-37	MSIV "C" INBOARD ISOLATION VALVE	4, 5
3-FCV-1-38	MSIV "C" OUTBOARD ISOLATION VALVE	4, 5
3-FCV-1-51	MSIV "D" INBOARD ISOLATION VALVE	4, 5
3-FCV-1-52	MSIV "D" OUTBOARD ISOLATION VALVE	4, 5
3-FCV-1-55	MAIN STEAM LINE DRAIN ISOLATION VALVE	4, 5
3-FCV-23-034	RHR/RHRSW HX A OUTLET VALVE	4, 5

3-FCV-23-034	RHR/RHRWS HX A OUTLET VALVE	4, 5
3-FCV-23-040	RHR/RHRWS HX C OUTLET VALVE	4, 5
3-FCV-23-040	RHR/RHRWS HX C OUTLET VALVE	4, 5
3-FCV-23-046	RHR/RHRWS HX B OUTLET VALVE	4, 5
3-FCV-23-046	RHR/RHRWS HX B OUTLET VALVE	4, 5
3-FCV-23-052	RHR/RHRWS HX D OUTLET VALVE	4, 5
3-FCV-32-63	DRYWELL CONTROL AIR SUCTION VALVE	4, 5
3-FCV-64-139	CONTAINMENT DW DP ISOLATION VALVE	4, 5
3-FCV-64-140	CONTAINMENT DW DP ISOLATION VALVE	4, 5
3-FCV-64-17	CONTAINMENT VENTILATION ISOLATION VALVE	4, 5
3-FCV-64-222	HARDENED WETWELL VENT	4, 5
3-FCV-64-28A	SUPPRESSION CHAMBER/DRYWELL VACUUM BREAKERS	4, 5
3-FCV-64-28B	SUPPRESSION CHAMBER/DRYWELL VACUUM BREAKERS	4, 5
3-FCV-64-28C	SUPPRESSION CHAMBER/DRYWELL VACUUM BREAKERS	4, 5
3-FCV-64-28D	SUPPRESSION CHAMBER/DRYWELL VACUUM BREAKERS	4, 5
3-FCV-64-28E	SUPPRESSION CHAMBER/DRYWELL VACUUM BREAKERS	4, 5
3-FCV-64-28F	SUPPRESSION CHAMBER/DRYWELL VACUUM BREAKERS	4, 5
3-FCV-64-28G	SUPPRESSION CHAMBER/DRYWELL VACUUM BREAKERS	4, 5
3-FCV-64-28H	SUPPRESSION CHAMBER/DRYWELL VACUUM BREAKERS	4, 5
3-FCV-64-28J	SUPPRESSION CHAMBER/DRYWELL VACUUM BREAKERS	4, 5
3-FCV-64-28K	SUPPRESSION CHAMBER/DRYWELL VACUUM BREAKERS	4, 5
3-FCV-64-28L	SUPPRESSION CHAMBER/DRYWELL VACUUM BREAKERS	4, 5
3-FCV-64-28M	SUPPRESSION CHAMBER/DRYWELL VACUUM BREAKERS	4, 5
3-FCV-64-30	CONTAINMENT VENTILATION ISOLATION VALVE	4, 5
3-FCV-64-33	CONTAINMENT VENTILATION ISOLATION VALVE	4, 5
3-FCV-67-50	EECW SYSTEM NORTH HEADER BACKUP TO RBCCW	4, 5
3-FCV-67-51	EECW SYSTEM SOUTH HEADER BACKUP TO RBCCW	4, 5
3-FCV-69-1	RWCU INBOARD ISOLATION VALVE	4, 5
3-FCV-69-2	RWCU OUTBOARD ISOLATION VALVE	4, 5
3-FCV-69-629	RWCU SYSTEM RETURN CHECK VALVE	4, 5
3-FCV-70-47	RBCCW DRYWELL RETURN VALVE	4, 5
3-FCV-71-18	RCIC OUTBOARD SUCTION VALVE	4, 5
3-FCV-71-2	RCIC INBOARD ISOLATION VALVE	4, 5

3-FCV-71-3	RCIC OUTBOARD ISOLATION VALVE	4, 5
3-FCV-73-2	HPCI STEAM SUPPLY ISOLATION VALVE	4, 5
3-FCV-73-27	HPCI OUTBOARD SUCTION VALVE	4, 5
3-FCV-73-3	HPCI STEAM SUPPLY ISOLATION VALVE	4, 5
3-FCV-73-81	HPCI STEAM SUPPLY ISOLATION BYPASS VALVE	4, 5
3-FCV-74-1	RHR/PUMP 3A SUCTION VALVE FROM SUPPRESSION POOL	1, 3, 4, 5
3-FCV-74-100	RHR/U3 TO U2 RHR DISCHARGE X-TIE ISOLATION VALVE	1, 3, 4, 5
3-FCV-74-12	RHR/PUMP 3C SUCTION VALVE FROM SUPPRESSION POOL	1, 3, 4, 5
3-FCV-74-13	RHR/PUMP 3C SUCTION VALVE FROM SHUTDOWN COOLING	1, 3, 4, 5
3-FCV-74-2	RHR/PUMP 3A SUCTION VALVE FROM SHUTDOWN COOLING	1, 3, 4, 5
3-FCV-74-24	RHR/PUMP 3B SUCTION VALVE FROM SUPPRESSION POOL	1, 3, 4, 5
3-FCV-74-25	RHR/PUMP 3B SUCTION VALVE FROM SHUTDOWN COOLING	1, 3, 4, 5
3-FCV-74-28	RHR/PUMP 3B	1, 3, 4, 5
3-FCV-74-30	RHR/PUMP 3B&3D MINIMUM FLOW VALVE	1, 3, 4, 5
3-FCV-74-35	RHR/PUMP 3D SUCTION VALVE FROM SUPPRESSION POOL	1, 3, 4, 5
3-FCV-74-36	RHR/PUMP 3D SUCTION VALVE FROM SHUTDOWN COOLING	1, 3, 4, 5
3-FCV-74-39	RHR/PUMP 3D	1, 3, 4, 5
3-FCV-74-52	RHR/LOOP I OUTBOARD INJECTION VALVE	1, 3, 4, 5
3-FCV-74-53	RHR/LOOP I INBOARD INJECTION VALVE	1, 3, 4, 5
3-FCV-74-54	RHR/LOOP I TESTABLE CHECK VALVE	1, 3, 4, 5
3-FCV-74-57	RHR/LOOP I TORUS CONTAINMENT COOLING/SPRAY VALVE	1, 3, 4, 5
3-FCV-74-58	RHR/LOOP I SUPPRESSION POOL SPRAY VALVE	1, 3, 4, 5
3-FCV-74-59	RHR/LOOP I SUPPRESSION POOL COOLING VALVE	1, 3, 4, 5
3-FCV-74-60	RHR/LOOP 1 OUTBOARD DRYWELL SPRAY VALVE	1, 3, 4, 5
3-FCV-74-61	RHR/LOOP 1 INBOARD DRYWELL SPRAY VALVE	1, 3, 4, 5
3-FCV-74-66	RHR/LOOP II OUTBOARD INJECTION VALVE	1, 3, 4, 5
3-FCV-74-67	RHR/LOOP II INBOARD INJECTION VALVE	1, 3, 4, 5
3-FCV-74-68	RHR/LOOP II TESTABLE CHECK VALVE	1, 3, 4, 5
3-FCV-74-7	RHR/PUMP 3A&3C MINIMUM FLOW VALVE	1, 3, 4, 5
3-FCV-74-71	RHR/LOOP II TORUS CONTAINMENT COOLING/SPRAY VALVE	1, 3, 4, 5
3-FCV-74-72	RHR/LOOP II SUPPRESSION POOL SPRAY VALVE	1, 3, 4, 5
3-FCV-74-73	RHR/LOOP II SUPPRESSION POOL COOLING VALVE	1, 3, 4, 5
3-FCV-74-74	RHR/LOOP II OUTBOARD DRYWELL SPRAY VALVE	1, 3, 4, 5

3-FCV-74-75	RHR/LOOP II INBOARD DRYWELL SPRAY VALVE	1, 3, 4, 5
3-FCV-74-96	RHR/UNIT 3 TO UNIT 2 RHR X-TIE ISOLATION VALVE	1, 3, 4, 5
3-FCV-74-97	RHR/UNIT 3 TO UNIT 2 RHR X-TIE ISOLATION VALVE	1, 3, 4, 5
3-FCV-75-11	CS/PUMP 3C SUCTION ISOLATION VALVE	5
3-FCV-75-2	CS/PUMP 3A SUCTION ISOLATION VALVE	5
3-FCV-75-22	CS/PUMP 3A & 3C TEST ISOLATION VALVE	5
3-FCV-75-23	CS/DIV I OUTBOARD INJECTION VALVE	5
3-FCV-75-25	CS/DIV I INBOARD INJECTION VALVE	5
3-FCV-75-26	CS/DIV I TESTABLE CHECK VALVE	5
3-FCV-75-30	CS/PUMP 3B SUCTION ISOLATION VALVE	5
3-FCV-75-37	CS/PUMP 3B & 3D MINI-FLOW VALVE	5
3-FCV-75-39	CS/PUMP 3D SUCTION ISOLATION VALVE	5
3-FCV-75-50	CS/PUMP 3B & 3D TEST ISOLATION VALVE	5
3-FCV-75-51	CS/DIV II OUTBOARD INJECTION VALVE	5
3-FCV-75-53	CS/DIV II INBOARD INJECTION VALVE	5
3-FCV-75-54	CS/DIV II TESTABLE CHECK VALVE	5
3-FCV-75-57	PSC PUMP SUCTION ISOLATION VALVE	5
3-FCV-75-58	PSC PUMP SUCTION ISOLATION VALVE	5
3-FCV-75-9	CS/PUMP 3A & 3C MINI-FLOW VALVE	5
3-FCV-76-17	CONTAINMENT INERTING N2 MAKEUP	4, 5
3-FCV-76-24	PRIMARY CONTAINMENT ISOLATION VALVE	4, 5
3-FCV-77-15B	DRYWELL EQUIPMENT DRAIN SUMP DISCHARGE	5
3-FCV-77-2B	DRYWELL FLOOR DRAIN SUMP DISCHARGE	5
3-FCV-78-61	FPC/SPENT FUEL POOL COOLING X-TIE TO RHR	0
3-FCV-84-19	CAD ISOLATION VALVE	4, 5
3-FCV-84-20	CAD ISOLATION VALVE	4, 5
3-FCV-85-37C	CRD/WEST SDV DRAIN VALVE	4, 5
3-FCV-85-37D	CRD/WEST SDV DRAIN VALVE	4, 5
3-FCV-85-37E	CRD/EAST SDV DRAIN VALVE	4, 5
3-FCV-85-37F	CRD/EAST SDV DRAIN VALVE	4, 5
3-FCV-85-82	CRD/WEST SDV VENT VALVE	4, 5
3-FCV-85-82A	CRD/WEST SDV VENT VALVE	4, 5
3-FCV-85-83	CRD/EAST SDV VENT VALVE	4, 5

3-FCV-85-83A	CRD/EAST SDV VENT VALVE	4, 5
3-FI-23-36	RHR SW HX A FLOW INDICATOR	0
3-FI-23-42	RHR SW HX C FLOW INDICATOR	0
3-FI-23-48	RHR SW HX B FLOW INDICATOR	0
3-FI-23-54	RHR SW HX D FLOW INDICATOR	0
3-FI-74-50	RHR/LOOP I FLOW INDICATOR	1, 3, 4, 5
3-FI-74-56	RHR/LOOP I FLOW INDICATOR	1, 3, 4, 5
3-FI-74-64	RHR/LOOP II FLOW INDICATOR	1, 3, 4, 5
3-FI-74-70	RHR/LOOP II FLOW INDICATOR	1, 3, 4, 5
3-FI-75-21	CS/PUMP 3A & 3C FLOW INDICATOR	5
3-FI-75-49	CS/PUMP 3B & 3D FLOW INDICATOR	5
3-FSV-84-48	CAD/CAD SYSTEM "A" TO UNIT 3 DRYWELL CONTROL AIR	4, 5
3-FSV-84-49	CAD/CAD SYSTEM "B" TO UNIT 3 DRYWELL CONTROL AIR	4, 5
3-FSV-84-8A	CAD/CAD TO DW (3-FCV-64-18) SOLENOID VALVE	4, 5
3-FSV-84-8B	CAD/CAD TO DW (3-FCV-64-19) SOLENOID VALVE	4, 5
3-FSV-84-8C	CAD/CAD TO DW (3-FCV-64-19) SOLENOID VALVE	4, 5
3-FSV-84-8D	CAD/CAD TO DW (3-FCV-64-18) SOLENOID VALVE	4, 5
3-FSV-85-35A	CRD/BACKUP SCRAM VALVE	4, 5
3-FSV-85-35B	CRD/BACKUP SCRAM VALVE	4, 5
3-FSV-85-37A	CRD/SCRAM DUMP VALVE	4, 5
3-FSV-85-37B	CRD/SCRAM DUMP VALVE	4, 5
3-FVC-23-052	RHR/RHR SW HX D OUTLET VALVE	4, 5
3-GEN-82-3A	UNIT 3 DIESEL GENERATOR A	0
3-GEN-82-3B	UNIT 3 DIESEL GENERATOR B	0
3-GEN-82-3C	UNIT 3 DIESEL GENERATOR "C"	0
3-GEN-82-3D	UNIT 3 DIESEL GENERATOR "D"	0
3-HCU-85,1-185	CRD/HYDRAULIC CONTROL UNIT	0
3-HEX-67-915	EECW/RHR SEAL HX 3A	2, 3, 4
3-HEX-67-916	EECW/RHR SEAL HX 3C	2, 3, 4
3-HEX-67-923	EECW/RHR SEAL HX 3B	2, 3, 4
3-HEX-67-924	EECW/RHR SEAL HX 3D	2, 3, 4
3-HEX-74-900A	RHR/HEAT EXCHANGER 3A	1, 3, 4, 5
3-HEX-74-900B	RHR/HEAT EXCHANGER 3B	1, 3, 4, 5

3-HEX-74-900C	RHR/HEAT EXCHANGER 3C	1, 3, 4, 5
3-HEX-74-900D	RHR/HEAT EXCHANGER 3D	1, 3, 4, 5
3-HS-23-34B	LOCAL HS STATION (TERM BLOCK) - SEALED BOX	0
3-HS-23-40B	LOCAL HS STATION (TERM BLOCK) - SEALED BOX	0
3-HS-23-46B	LOCAL HS STATION	0
3-HS-23-52B	LOCAL HS STATION	0
3-HS-30-230	LOCAL HS STATION - DG 3A EXH FAN A	5
3-HS-30-231	LOCAL HS STATION - DG 3A EXH FAN B	5
3-HS-30-232	LOCAL HS STATION - DG 3B EXH FAN A	5
3-HS-30-233	LOCAL HS STATION - DG 3B EXH FAN B	5
3-HS-30-234	LOCAL HS STATION - DG 3C EXH FAN A	5
3-HS-30-235	LOCAL HS STATION - DG 3C EXH FAN B	5
3-HS-30-236	LOCAL HS STATION - DG 3D EXH FAN A	5
3-HS-30-237	LOCAL HS STATION - DG 3D EXH FAN B	5
3-HS-64-68	HANDSWITCH FOR 3-CLR-67-917 (34001)	0
3-HS-64-69	HANDSWITCH FOR 3-CLR-67-918 (34013)	0
3-HS-64-70	HANDSWITCH FOR 3-CLR-67-921 (34003)	0
3-HS-64-71	HANDSWITCH FOR 3-CLR-67-922 (34015)	0
3-HS-64-72	HANDSWITCH FOR 3-CLR-67-919 (34002)	0
3-HS-64-73	HANDSWITCH FOR 3-CLR-67-920 (34014)	0
3-HS-69-2B	HANDSWITCH FOR 3-FCV-69-2 (33033)	0
3-HS-70-47B	LOCAL HS STATION	4, 5
3-HS-71-18B	HANDSWITCH FOR 3-FCV-71-18 (33039)	0
3-HS-71-2B	HANDSWITCH FOR 3-FCV-71-2 (33037)	0
3-HS-73-27B	HANDSWITCH FOR 3-FCV-73-27 (33043)	0
3-HS-73-3B	HANDSWITCH FOR 3-FCV-73-3 (33041)	0
3-HS-73-81B	HANDSWITCH FOR 3-FCV-73-81 (33042)	0
3-HS-74-0005B	LOCAL HS STATION - RHR PUMP 3A	1, 3, 4, 5
3-HS-74-0016B	LOCAL HS STATION - RHR PUMP 3C	1, 3, 4, 5
3-HS-74-0028B	LOCAL HS STATION - RHR PUMP 3B	1, 3, 4, 5
3-HS-74-0039B	LOCAL HS STATION - RHR PUMP 3D	1, 3, 4, 5
3-HS-74-100B	HANDSWITCH FOR 3-FCV-74-100 (31010)	1, 3, 4, 5
3-HS-74-12B	HANDSWITCH FOR 3-FCV-74-12 (31011)	1, 3, 4, 5

3-HS-74-13B	HANDSWITCH FOR 3-FCV-74-13 (31012)	1, 3, 4, 5
3-HS-74-1B	HANDSWITCH FOR 3-FCV-74-1 (31001)	1, 3, 4, 5
3-HS-74-24B	HANDSWITCH FOR 3-FCV-74-24 (31029)	1, 3, 4, 5
3-HS-74-25B	HANDSWITCH FOR 3-FCV-74-25 (31030)	1, 3, 4, 5
3-HS-74-2B	HANDSWITCH FOR 3-FCV-74-2 (31002)	1, 3, 4, 5
3-HS-74-30B	LOCAL HS STATION	1, 3, 4, 5
3-HS-74-35B	HANDSWITCH FOR 3-FCV-74-35 (31037)	1, 3, 4, 5
3-HS-74-36B	HANDSWITCH FOR 3-FCV-74-36 (31038)	1, 3, 4, 5
3-HS-74-52B	LOCAL HS STATION	1, 3, 4, 5
3-HS-74-53B	LOCAL HS STATON	1, 3, 4, 5
3-HS-74-57B	LOCAL HS STATION	1, 3, 4, 5
3-HS-74-58B	LOCAL HS STATION	1, 3, 4, 5
3-HS-74-59B	LOCAL HS STATION	1, 3, 4, 5
3-HS-74-60B	LOCAL HS STATION	1, 3, 4, 5
3-HS-74-61B	LOCAL HS STATION	1, 3, 4, 5
3-HS-74-66B	LOCAL HS STATION	1, 3, 4, 5
3-HS-74-67B	LOCAL HS STATION	1, 3, 4, 5
3-HS-74-71B	LOCAL HS STATION	1, 3, 4, 5
3-HS-74-72B	LOCAL HS STATION	1, 3, 4, 5
3-HS-74-73B	HANDSWITCH FOR 3-FCV-74-73 (31046)	1, 3, 4, 5
3-HS-74-75B	LOCAL HS STATION	1, 3, 4, 5
3-HS-74-7B	LOCAL HS STATION	1, 3, 4, 5
3-HS-74-96B	HAND SWITCH FOR 3-FCV-74-96 (SSEL #31003)	1, 3, 4, 5
3-HS-74-97B	HANDSWITCH FOR 3-FCV-74-97 (31013)	1, 3, 4, 5
3-HS-75-0005B	LOCAL HS STATION - CS PUMP 3A	5
3-HS-75-0014B	LOCAL HS STATION - CS PUMP 3C	5
3-HS-75-0033B	LOCAL HS STATION - CS PUMP 3B	5
3-HS-75-0042B	LOCAL HS STATION - CS PUMP 3D	5
3-HS-75-11B	HANDSWITCH FOR 3-FCV-75-11 (35006)	5
3-HS-75-22B	HANDSWITCH FOR 3-FCV-75-22 (35010)	5
3-HS-75-23B	HANDSWITCH FOR 3-FCV-75-23 (35012)	5
3-HS-75-25B	LOCAL HS STATION	5
3-HS-75-2B	HANDSWITCH FOR 3-FCV-75-2 (35001)	5

3-HS-75-30B	HANDSWITCH FOR 3-FCV-75-30 (35015)	5
3-HS-75-37B	LOCAL HS STATION	5
3-HS-75-39B	HANDSWITCH FOR 3-FCV-75-39 (35020)	5
3-HS-75-50B	HANDSWITCH FOR 3-FCV-75-50 (35024)	5
3-HS-75-51B	HANDSWITCH FOR 3-FCV-75-51 (35026)	5
3-HS-75-53B	LOCAL HS STATION (TERM BLOCK) - SEALED BOX	5
3-HS-75-9B	LOCAL HS STATION	5
3-HS-78-61B	HANDSWITCH FOR 3-FCV-78-61 (31026)	0
3-HS-99-5A-S1	RPS/REACTOR MODE SWITCH	0
3-HS-99-5AV/S3A	RPS/REACTOR MANUAL SCRAM CHANNEL A3	0
3-HS-99-5AV/S3B	RPS/REACTOR MANUAL SCRAM CHANNEL B3	0
3-INVT-256-0001	DIV I ECCS ATU INVERTER	0
3-INVT-256-0002	DIV II ECCS ATU INVERTER	0
3-JBOX-23-4189	JUNCTION BOX (TERM BLOCK) - SEALED BOX	0
3-JBOX-23-4190	JUNCTION BOX (TERM BLOCK) - SEALED BOX	0
3-JBOX-253-7158	I&C BUS 3A DISC SWITCH	0
3-JBOX-253-7159	I&C BUS 3A BREAKER BOX	0
3-JBOX-253-7160	I&C BUS 3B DISC SWITCH	0
3-JBOX-253-7161	I&C BUS 3B DISC SWITCH	0
3-JBOX-253-7162	I&C BUS 3B BREAKER BOX	0
3-JBOX-253-7163	I&C BUS 3A DISC SWITCH	0
3-JBOX-253-8866	I&C BUS 3A DISC SWITCH	0
3-JBOX-253-8868	I&C BUS 3B DISC SWITCHES	0
3-JBOX-268-5955	MG SET 3DN CONTROL BOX (RELAYS) - SEALED BOX	0
3-JBOX-268-5956	MG SET 3DA CONTROL BOX (RELAYS)	0
3-JBOX-268-5957	MG SET 3EN CONTROL BOX (RELAYS) - SEALED BOX	0
3-JBOX-268-5958	MG SET 3EA CONTROL BOX (RELAYS)	0
3-JBOX-268-5994	MG SET 3CN CONTROL STATION (3-HS-268-0003DN)	0
3-JBOX-268-5995	MG SET 3DA CONTROL STATION (3-HS-268-0003DA)	0
3-JBOX-268-5996	MG SET 3CN CONTROL STATION (3-HS-268-0003EN)	0
3-JBOX-268-5997	MG SET 3EA CONTROL STATION (3-HS-268-0003EA)	0
3-JBOX-30-4239	JUNCTION BOX (TERM BLOCK)	5
3-JBOX-30-4241	JUNCTION BOX (TERM BLOCK)	5

3-JBOX-30-4242	JUNCTION BOX (TERM BLOCK) - SEALED BOX	5
3-JBOX-30-4243	JUNCTION BOX (TERM BLOCK) - SEALED BOX	5
3-JBOX-30-4244	JUNCTION BOX (TERM BLOCK) - SEALED BOX	5
3-JBOX-30-4245	JUNCTION BOX (TERM BLOCK) - SEALED BOX	5
3-JBOX-30-4246	JUNCTION BOX (TERM BLOCK) - SEALED BOX	5
3-JBOX-3-4240	JUNCTION BOX (TERM BLOCK) - SEALED BOX	2, 4, 5
3-JBOX-70-3398	JUNCTION BOX (TERM BLOCK) - SEALED BOX	4, 5
3-JBOX-74-2133	JUNCTION BOX (TERM BLOCK) - SEALED BOX	1, 3, 4, 5
3-JBOX-74-2135	JUNCTION BOX (TERM BLOCK) - SEALED BOX	1, 3, 4, 5
3-JBOX-74-2939	JUNCTION BOX (TERM BLOCK) - SEALED BOX	1, 3, 4, 5
3-JBOX-74-3391	JUNCTION BOX (TERM BLOCK) - SEALED BOX	1, 3, 4, 5
3-JBOX-74-3391	JUNCTION BOX (TERM BLOCK) - SEALED BOX	1, 3, 4, 5
3-JBOX-74-3503	JUNCTION BOX (TERM BLOCK) - SEALED BOX	1, 3, 4, 5
3-JBOX-74-3535	JUNCTION BOX (TERM BLOCK) - SEALED BOX	1, 3, 4, 5
3-JBOX-74-3543	JUNCTION BOX (TERM BLOCK) - SEALED BOX	1, 3, 4, 5
3-JBOX-74-3840	JUNCTION BOX (TERM BLOCK) - SEALED BOX	1, 3, 4, 5
3-JBOX-75-3333	JUNCTION BOX (TERM BLOCK) - SEALED BOX	5
3-JBOX-75-3345	LOCAL HS STATION (TERM BLOCK) - SEALED BOX	5
3-JBOX-75-3390	JUNCTION BOX (TERM BLOCK) - SEALED BOX	5
3-JBOX-75-3448	JUNCTION BOX (TERM BLOCK) - SEALED BOX	5
3-LI-3-58-A	RPV LEVEL INSTRUMENT	2, 4, 5
3-LI-3-58-B	RPV LEVEL INSTRUMENT	2, 4, 5
3-LI-3-74-A	RPV PRESSURE INSTRUMENT	2, 4, 5
3-LI-3-74-B	RPV PRESSURE INSTRUMENT	2, 4, 5
3-LI-64-159A	TORUS LEVEL INSTRUMENT	0
3-LPNL-925-0001	LOCAL PANEL 25-1	0
3-LPNL-925-0007A	LOCAL PANEL 3-25-7A	0
3-LPNL-925-0007B	LOCAL PANEL 3-25-7A	0
3-LPNL-925-0027	PANEL 3-25-27 IRM PREAMP. RPS I	0
3-LPNL-925-0047A	PANEL 3-25-47A	0
3-LPNL-925-0047B	PANEL 3-25-47B	0
3-LPNL-925-0047C	PANEL 3-25-47C	0
3-LPNL-925-0047D	PANEL 3-25-47D	0

3-LPNL-925-0059	LOCAL PANEL 25-59	0
3-LPNL-925-005A	LOCAL PANEL 25-5A	0
3-LPNL-925-005B	LOCAL PANEL 25-5B	0
3-LPNL-925-005D	LOCAL PANEL 25-5D	0
3-LPNL-925-0060	LOCAL PANEL 25-60	0
3-LPNL-925-0061	PANEL 3-25-61 IRM PREAMP. RPS II	0
3-LPNL-925-0062	LOCAL PANEL 25-62	0
3-LPNL-925-006A	LOCAL PANEL 25-6A	0
3-LPNL-925-006D	LOCAL PANEL 25-6D	0
3-LPNL-925-0223	LOCAL PANEL 3-25-223	0
3-LPNL-925-0247B	LOCAL PANEL 3-25-247B (CAD N2 SUPPLY PANEL B)	0
3-LPNL-925-0658	MSRV TRANSFER CONTROL PANEL (DCN W21814)	0
3-LPNL-925-247A	LOCAL PANEL 3-25-247A (CAD DRYWELL & SUPP. CHAMB. V.)	0
3-LPNL-925-654A	DIV I LOAD SHED LOGIC PANEL - DCN W21284	0
3-LPNL-925-654B	DIV II LOAD SHED LOGIC PANEL - DCN W21284	0
3-LPNL-925-655A	DIV I LOAD SHED LOGIC PANEL	0
3-LPNL-925-655B	DIV II LOAD SHED LOGIC PANEL	0
3-LPNL-925-656A	480V RMOV BD 3A LOAD SHED PANEL - DCN W21284	0
3-LPNL-925-656B	480V RMOV BD 3B LOAD SHED PANEL - DCN W21284	0
3-LPNL-925-657A	DIV I LOAD SHED LOGIC PANEL	0
3-LPNL-925-657B	DIV II LOAD SHED LOGIC PANEL	0
3-MGEN-268-0003DA	LPCI MG SET 3DA	0
3-MGEN-268-0003DN	LPCI MG SET 3DN	0
3-MGEN-268-0003EA	LPCI MG SET 3EA	0
3-MGEN-268-0003EN	LPCI MG SET 3EN	0
3-NM-92-7/41A	CHANNEL "A" IRM INDICATOR	0
3-NM-92-7/41A	CHANNEL "A" IRM INDICATOR	0
3-NM-92-7/41B	CHANNEL "B" IRM INDICATOR	0
3-NM-92-7/41B	CHANNEL "B" IRM INDICATOR	0
3-NM-92-7/41C	CHANNEL "C" IRM INDICATOR	0
3-NM-92-7/41D	CHANNEL "D" IRM INDICATOR	0
3-PCV-1-179	MS/MAIN STEAM SAFETY RELIEF VALVE	4, 5
3-PCV-1-18	MS/MAIN STEAM SAFETY RELIEF VALVE	4, 5

3-PCV-1-180	MS/MAIN STEAM SAFETY RELIEF VALVE	4, 5
3-PCV-1-19	MS/MAIN STEAM SAFETY RELIEF VALVE	4, 5
3-PCV-1-22	MS/MAIN STEAM SAFETY RELIEF VALVE	4, 5
3-PCV-1-23	MS/MAIN STEAM SAFETY RELIEF VALVE	4, 5
3-PCV-1-30	MS/MAIN STEAM SAFETY RELIEF VALVE	4, 5
3-PCV-1-31	MS/MAIN STEAM SAFETY RELIEF VALVE	4, 5
3-PCV-1-34	MS/MAIN STEAM SAFETY RELIEF VALVE	4, 5
3-PCV-1-4	MS/MAIN STEAM SAFETY RELIEF VALVE	4, 5
3-PCV-1-41	MS/MAIN STEAM SAFETY RELIEF VALVE	4, 5
3-PCV-1-42	MS/MAIN STEAM SAFETY RELIEF VALVE	4, 5
3-PCV-1-5	MS/MAIN STEAM SAFETY RELIEF VALVE	4, 5
3-PI-64-160A	DRYWELL PRESSURE INSTRUMENT	0
3-PI-64-67B	DRYWELL PRESSURE INSTRUMENT	0
3-PMP-74-16	RHR/PUMP 3C	1, 3, 4, 5
3-PMP-74-5	RHR/PUMP 3A	1, 3, 4, 5
3-PMP-75-14	CS/PUMP 3C	5
3-PMP-75-33	CS/PUMP 3B	5
3-PMP-75-42	CS/PUMP 3D	5
3-PMP-75-5	CS/PUMP 3A	5
3-PNLA-009-0003	REACTOR SD & CONT. COOLING PNL	2, 4, 5
3-PNLA-009-0004	CLEANUP & RECIRC PNL	0
3-PNLA-009-0005	REACTOR CONTROL PNL	0
3-PNLA-009-0006	FW & COND. PNL	0
3-PNLA-009-0009	I&C BUS 3A (CAB 2 OF PNL 3-9-9) ((SEE 39119))	0
3-PNLA-009-0009	I&C BUS 3B (CAB 3 OF PNL 3-9-9) ((SEE 39119))	0
3-PNLA-009-0009	PNL 9-9 (I&C CONT PWR, CAB 2&3)	0
3-PNLA-009-000B	PANEL 3-9-8	0
3-PNLA-009-0015	RPS CH A (DIV I)	0
3-PNLA-009-0016	RPS CH A, B, C, D	0
3-PNLA-009-0017	RPS CH B (DIV II)	0
3-PNLA-009-0018	FW & RECIRC PNL	0
3-PNLA-009-0019	PROCESS INSTR PNL	0
3-PNLA-009-0020	PANEL 3-9-20	0

3-PNLA-009-0021	TEMP RECORDING PNL	0
3-PNLA-009-0023A	PANEL 3-9-23A	0
3-PNLA-009-0023B	PANEL 3-9-23B	0
3-PNLA-009-0023C	PANEL 3-9-23C	0
3-PNLA-009-0023D	PANEL 3-9-23D	0
3-PNLA-009-0028	CRD SELECT RELAY AUX PNL	0
3-PNLA-009-0030	AUTO BLOWNDOWN AUX PNL	0
3-PNLA-009-0032	RHR,CS, & HPCI (CH A) PNL	0
3-PNLA-009-0033	RHR, CS, & HPCI (CH B) PNL	0
3-PNLA-009-0036A	PANEL 3-9-36A	0
3-PNLA-009-0039	HPCI RELAY AUX PNL	0
3-PNLA-009-0042	MSRV (OUTBOARD) DIV I PNL	0
3-PNLA-009-0043	MSIV (OUTBOARD) DIV II PNL	0
3-PNLA-009-0054	CONTAINMENT ATM. DILUTION PNL	0
3-PNLA-009-0055	CONTAINMENT ATM. DILUTION PNL	0
3-PNLA-009-0081	DIV I ECCS ATU CABINET	0
3-PNLA-009-0082	DIV II ECCS ATU CABINET	0
3-PNLA-009-0083	RPS ATU CAB	0
3-PNLA-009-0084	PRS ATU CAB	0
3-PNLA-009-0085	PRS ATU CAB	0
3-PNLA-009-0086	PRS ATU CAB	0
3-PNLA-009-0087	DIV I TORUS TEMP MONITORING	0
3-PNLA-009-0088	DIV II TORUS TEMP MONITORING	0
3-PNLA-009-0093	NEW PNL (INSTALLED BY DCN W19433	0
3-PNLA-009-012	PANEL 3-9-12	0
3-PNLA-082-00003A	DG 3A ELECTRICAL CONTROL CABINET	0
3-PNLA-082-00003B	DG 3B ELECTRICAL CONTROL CABINET	0
3-PNLA-082-00003C	DG 3C ELECTRICAL CONTROL CABINET	0
3-PNLA-082-00003D	DG 3D ELECTRICAL CONTROL CABINET	0
3-PNLA-248-0003EB	250V DISTRIBUTION PANEL SB-3EB	0
3-PNLA-925-0031	LOCAL PANEL 25-31	0
3-PNLA-925-0032	LOCAL PANEL 25-32	0
3-PREG-84-52	CAD/CAD SYSTEM "A" TO UNIT 3 DRYWELL CONTROL AIR	0

3-PREG-84-54	CAD/CAD SYSTEM "B" TO UNIT 3 DRYWELL CONTROL AIR	0
3-PROT-099-0003A1	RPS CIRCUIT PROTECTOR CABINET 3A1	0
3-PROT-099-0003A2	RPS CIRCUIT PROTECTR CABINET 3A2	0
3-PROT-099-0003B1	RPS CIRCUIT PROTECTOR CABINET 3B1	0
3-PROT-099-0003B2	RPS CIRCUIT PROTECTOR CABINET 3B2	0
3-PROT-099-0003C1	RPS CIRCUIT PROTECTOR CABINET 3C1	0
3-PROT-099-0003C2	RPS CIRCUIT PROTECTOR CABINET 3C2	0
3-PS-67-50	PRESSURE SWITCH FOR 3-FCV-67-50 (4018)	0
3-PS-67-51	PRESSURE SWITCH FOR 3-FCV-67-51 (4061)	0
3-PSV-1-179	MS/SOLENOID VALVE FOR PCV-1-179	4, 5
3-PSV-1-18	MS/SOLENOID VALVE FOR PCV-1-18	4, 5
3-PSV-1-180	MS/SOLENOID VALVE FOR PCV-1-180	4, 5
3-PSV-1-19	MS/SOLENOID VALVE FOR PCV-1-19	4, 5
3-PSV-1-22	MS/SOLENOID VALVE FOR PCV-1-22	4, 5
3-PSV-1-23	MS/SOLENOID VALVE FOR PCV-1-23	4, 5
3-PSV-1-30	MS/SOLENOID VALVE FOR PCV-1-30	4, 5
3-PSV-1-31	MS/SOLENOID VALVE FOR PCV-1-31	4, 5
3-PSV-1-34	MS/SOLENOID VALVE FOR PCV-1-34	4, 5
3-PSV-1-4	MS/SOLENOID VALVE FOR PCV-1-4	4, 5
3-PSV-1-41	MS/SOLENOID VALVE FOR PCV-1-41	4, 5
3-PSV-1-42	MS/SOLENOID VALVE FOR PCV-1-42	4, 5
3-PSV-1-5	MS/SOLENOID VALVE FOR PCV-1-5	4, 5
3-PX-64-159A	POWER SUPPLY (3-9-18)	0
3-PX-64-159B	POWER SUPPLY (PNL 3-9-19)	0
3-PX-64-160A	POWER SUPPLY (3-9-18)	0
3-PX-64-160B3	POWER SUPPLY (PNL 3-9-19: 3-LI-64-159B,160B)	0
3-PX-64-161	POWER SUPPLY (PNL 9-87)	0
3-PX-64-162	POWER SUPPLY (PNL 9-88)	0
3-PX-64-50	POWER SUPPLY (PNL 3-25-31: XR-64-50 (DEV BA TERM 11/12)	0
3-PX-64-67B	POWER SUPPLY (3-9-19)	0
3-PX-71-60-1	ECCS ATU CAB 3-9-81 POWER SUPPLY	0
3-PX-71-60-1A	ECCS ATU CAB 3-9-81 POWER SUPPLY	0
3-PX-71-60-2	ECCS ATU CAB 3-9-82 POWER SUPPLY	0

3-PX-71-60-2A	ECCS ATU CAB 3-9-82 POWER SUPPLY	0
3-PX-74-56	POWER SUPPLY (PNL 3-9-18: FI-74-56)	1, 3, 4, 5
3-PX-74-70	POWER SUPPLY (PNL 3-9-19: FI-74-70)	1, 3, 4, 5
3-PXMC-23-114	POWER SUPPLY (PNL 3-9-18: FI-23-36,42;FI-74-50)	0
3-PXMC-23-115 A&B	POWER SUPPLY (PNL 3-9-19:FI-23-48,54;FI-74-64)	0
3-TI-64-161	TORUS TEMPERATURE INSTRUMENT	0
3-TI-64-162	TORUS TEMPERATURE INSTRUMENT	0
3-TI-64-52AB	DRYWELL TEMPERATURE INSTRUMENT	0
3-TNK-18-61/1	DG "3A" 7 DAY FUEL OIL TANK	4
3-TNK-18-61/2	DG "3A" 7 DAY FUEL OIL TANK	4
3-TNK-18-61/3	DG "3A" 7 DAY FUEL OIL TANK	4
3-TNK-18-62/1	DG "3B" 7 DAY FUEL OIL TANK	4
3-TNK-18-62/2	DG "3B" 7 DAY FUEL OIL TANK	4
3-TNK-18-62/3	DG "3B" 7 DAY FUEL OIL TANK	4
3-TNK-18-63/1	DG "3C" 7 DAY FUEL OIL TANK	4
3-TNK-18-63/2	DG "3C" 7 DAY FUEL OIL TANK	4
3-TNK-18-63/3	DG "3C" 7 DAY FUEL OIL TANK	4
3-TNK-18-64/1	DG "3D" 7 DAY FUEL OIL TANK	4
3-TNK-18-64/2	DG "3D" 7 DAY FUEL OIL TANK	4
3-TNK-18-64/3	DG "3D" 7 DAY FUEL OIL TANK	4
3-TNK-85-901	CRD/WEST SCRAM INSTRUMENT VOLUME	4
3-TNK-85-902	CRD/WEST SCRAM INSTRUMENT VOLUME	4
3-TNK-86-650A	DG "3A" RIGHT BANK STARTING AIR RECEIVER	4
3-TNK-86-650B	DG "3B" RIGHT BANK STARTING AIR RECEIVERS	4
3-TNK-86-650C	DG "3C" RIGHT BANK STARTING AIR RECIEVERS	4
3-TNK-86-650D	DG "3D" RIGHT BANK STARTING AIR RECIEVERS	4
3-TNK-86-651A	DG "3A" RIGHT BANK STARTING AIR RECEIVER	4
3-TNK-86-651B	DG "3B" RIGHT BANK STARTING AIR RECEIVERS	4
3-TNK-86-651C	DG "3C" RIGHT BANK STARTING AIR RECIEVERS	4
3-TNK-86-651D	DG "3D" RIGHT BANK STARTING AIR RECIEVERS	4
3-TNK-86-652A	DG "3A" RIGHT BANK STARTING AIR RECEIVER	4
3-TNK-86-652B	DG "3B" RIGHT BANK STARTING AIR RECEIVERS	4
3-TNK-86-652C	DG "3C" RIGHT BANK STARTING AIR RECIEVERS	4

3-TNK-86-652D	DG "3D" RIGHT BANK STARTING AIR RECIEVERS	4
3-TNK-86-653A	DG "3A" RIGHT BANK STARTING AIR RECEIVER	4
3-TNK-86-653B	DG "3B" RIGHT BANK STARTING AIR RECEIVERS	4
3-TNK-86-653C	DG "3C" RIGHT BANK STARTING AIR RECIEVERS	4
3-TNK-86-653D	DG "3D" RIGHT BANK STARTING AIR RECIEVERS	4
3-TNK-86-654A	DG "3A" RIGHT BANK STARTING AIR RECEIVER	4
3-TNK-86-654B	DG "3B" RIGHT BANK STARTING AIR RECEIVERS	4
3-TNK-86-654C	DG "3C" RIGHT BANK STARTING AIR RECIEVERS	4
3-TNK-86-654D	DG "3D" RIGHT BANK STARTING AIR RECIEVERS	4
3-TNK-86-655A	DG "3A" LEFT BANK STARTING AIR RECEIVER	4
3-TNK-86-655B	DG "3B" LEFT BANK STARTING AIR RECEIVERS	4
3-TNK-86-655C	DG "3C" LEFT BANK STARTING AIR RECIEVERS	4
3-TNK-86-655D	DG "3D" LEFT BANK STARTING AIR RECIEVERS	4
3-TNK-86-656A	DG "3A" LEFT BANK STARTING AIR RECEIVER	4
3-TNK-86-656B	DG "3B" LEFT BANK STARTING AIR RECEIVERS	4
3-TNK-86-656C	DG "3C" LEFT BANK STARTING AIR RECIEVERS	4
3-TNK-86-656D	DG "3D" LEFT BANK STARTING AIR RECIEVERS	4
3-TNK-86-657A	DG "3A" LEFT BANK STARTING AIR RECEIVER	4
3-TNK-86-657B	DG "3B" LEFT BANK STARTING AIR RECEIVERS	4
3-TNK-86-657C	DG "3C" LEFT BANK STARTING AIR RECIEVERS	4
3-TNK-86-657D	DG "3D" LEFT BANK STARTING AIR RECIEVERS	4
3-TNK-86-658A	DG "3A" LEFT BANK STARTING AIR RECEIVER	4
3-TNK-86-658B	DG "3B" LEFT BANK STARTING AIR RECEIVERS	4
3-TNK-86-658C	DG "3C" LEFT BANK STARTING AIR RECIEVERS	4
3-TNK-86-658D	DG "3D" LEFT BANK STARTING AIR RECIEVERS	4
3-TNK-86-659A	DG "3A" LEFT BANK STARTING AIR RECEIVER	4
3-TNK-86-659B	DG "3B" LEFT BANK STARTING AIR RECEIVERS	4
3-TNK-86-659C	DG "3C" LEFT BANK STARTING AIR RECIEVERS	4
3-TNK-86-659D	DG "3D" LEFT BANK STARTING AIR RECIEVERS	4
3-TS-1-17A	MAIN STEAM VAULT TEMPERATURE SWITCH	4, 5
3-TS-1-17B	MAIN STEAM VAULT TEMPERATURE SWITCH	4, 5
3-TS-1-17C	MAIN STEAM VAULT TEMPERATURE SWITCH	4, 5
3-TS-1-17D	MAIN STEAM VAULT TEMPERATURE SWITCH	4, 5

3-TS-1-29A	MAIN STEAM TUNNEL TEMPERATURE SWITCH	4, 5
3-TS-1-29B	MAIN STEAM TUNNEL TEMPERATURE SWITCH	4, 5
3-TS-1-29C	MAIN STEAM TUNNEL TEMPERATURE SWITCH	4, 5
3-TS-1-29D	MAIN STEAM TUNNEL TEMPERATURE SWITCH	4, 5
3-TS-1-40A	MAIN STEAM TUNNEL TEMPERATURE SWITCH	4, 5
3-TS-1-40B	MAIN STEAM TUNNEL TEMPERATURE SWITCH	4, 5
3-TS-1-40C	MAIN STEAM TUNNEL TEMPERATURE SWITCH	4, 5
3-TS-1-40D	MAIN STEAM TUNNEL TEMPERATURE SWITCH	4, 5
3-TS-1-54A	MAIN STEAM TUNNEL TEMPERATURE SWITCH	4, 5
3-TS-1-54B	MAIN STEAM TUNNEL TEMPERATURE SWITCH	4, 5
3-TS-1-54C	MAIN STEAM TUNNEL TEMPERATURE SWITCH	4, 5
3-TS-1-54D	MAIN STEAM TUNNEL TEMPERATURE SWITCH	4, 5
3-TS-64-68	TEMPERATURE SWITCH FOR 3-CLR-67-917 (34001)	4
3-TS-64-69	TEMPERATURE SWITCH FOR 3-CLR-67-918 (34013)	4
3-TS-64-70	TEMPERATURE SWITCH FOR 3-CLR-67-921 (34003)	4
3-TS-64-71	TEMPERATURE SWITCH FOR 3-CLR-67-922 (34015)	4
3-TS-64-72	TEMPERATURE SWITCH FOR 3-CLR-67-919 (34002)	4
3-TS-64-73	TEMPERATURE SWITCH FOR 3-CLR-67-920 (34014)	4
3-XFA-082-0003AA	DG-3A NEUTRAL GRN XFMR	0
3-XFA-082-0003BA	DG-3B NEUTRAL GRN XFMR	0
3-XFA-082-0003CA	DG-3C NEUTRAL GRN XFMR	0
3-XFA-082-0003DA	DG-3D NEUTRAL GRN XFMR	0
3-XFA-231-TS2A	4KV/480V XFMR TS3A	0
3-XFA-231-TS3B	4KV/480V TRANSFORMER TS3B	0
3-XFA-253-0003A1	I&C BUS A 480/208-120V TRANSFORMER	0
3-XFA-253-0003A2	I&C BUS 3A REFULATING TRANSFORMER	0
3-XFA-253-0003B1	I&C BUS 3B 480/208-120V TRANSFORMER	0
3-XFA-253-0003B2	I&C BUS B REGULATING TRANSFORMER	0
3-XR-64-159	TORUS LEVEL AND DRYWELL PRESSURE INSTRUMENT	0
3-XR-64-50	DRYWELL TEMPERATURE AND PRESSURE INSTRUMENT	0



Appendix C: Base List 2

TVA UNID	Description
BFN-3-FU1-078-0001D	BFN-3-FU1-078-0001D, 19AF15A LS 78 ID & IF
BFN-3-PREG-078-0024A	BFN-3-PREG-078-0024A, PRESSURE REGULATOR TO 3-FM-78-24A
BFN-3-RI-090-0078	BFN-3-RI-090-0078, UNIT 3 EAST STAIRS EL 586.0 TURB BLDG
BFN-3-PMP-078-0015	BFN-3-PMP-078-0015, FUEL POOL COOLING & CLEAN-UP PUMP B
BFN-3-HS-078-0048	BFN-3-HS-078-0048, FUEL POOL F/D C BACKWASH AIR SUPPLY VLV
BFN-3-FLT-018-0788BL20	BFN-3-FLT-018-0788BL20, FILTER INJECTOR RETURN
BFN-3-ISIV-078-0030	BFN-3-ISIV-078-0030, INSTR ISOL VLV TO 3-PI-78-30
BFN-3-ISIV-078-0032	BFN-3-ISIV-078-0032, INSTR ISOL VLV TO 3-PI-78-32
BFN-3-PMP-078-0010	BFN-3-PMP-078-0010, FUEL POOL COOLING & CLEAN-UP PUMP A
BFN-3-HS-078-0045	BFN-3-HS-078-0045, FUEL POOL F/D D UNIT3 INLET VLV--OUTLET VLV
BFN-3-PREG-078-0024B	BFN-3-PREG-078-0024B, PRESSURE REGULATOR TO 3-FM-78-24B
BFN-3-@P-244-0078	BFN-3-@P-244-0078, DCN W20039A, DIP
BFN-3-HS-078-0066B	BFN-3-HS-078-0066B, F/D BYPASS ISOL VALVE A
BFN-3-BKR-078-0067	BFN-3-BKR-078-0067, FPC FLT DEMIN ISOL OUTBD VLV 480V RMOV 3A/5B
BFN-3-TW-078-0008	BFN-3-TW-078-0008, SKIMMER SURGE TANK DISCHARGE TEMP
BFN-3-SCV-033-0787	BFN-3-SCV-033-0787, 1" SA SERVICE CONN VLV
BFN-3-BKR-027-0078	BFN-3-BKR-027-0078, COND C CCW OUTLET SO VA LVE SS
BFN-3-BKR-066-0078	BFN-3-BKR-066-0078, RECOMBINER 3A DISCHARGE 480 TMOV BD 3C/11DR
BFN-3-BKR-078-0063	BFN-3-BKR-078-0063, F/D INFLUENT INBD ISOL VLV 480V RMOV 3B/9B2
BFN-3-ISV-026-0787	BFN-3-ISV-026-0787, FIRE PMP CONT SHUTOFF TO MAIN TURB OIL
BFN-3-SHV-026-0785	BFN-3-SHV-026-0785, SOL PILOT MAIN TURB OIL SHUTOFF VLV
BFN-3-RTV-078-0205A	BFN-3-RTV-078-0205A, RT VLV TO PI-78-21A AND PDT-78-21H
BFN-3-SCV-033-0789	BFN-3-SCV-033-0789, 1" SA SERVICE CONN VLV
BFN-3-BKR-078-0061	BFN-3-BKR-078-0061, POOL MAKEUP FROM RHR INBD VLV 480 RMOVBD3B/13D
BFN-3-BKR-078-0065	BFN-3-BKR-078-0065, F/D BYPASS ISOL VALVE BYPASS B 480V RMOV 3A 9B
BFN-3-SHV-090-0789	BFN-3-SHV-090-0789, REAC BLDG SPLY TO RAD MON 250 SHUTOFF VLV
BFN-3-SHV-090-0788	BFN-3-SHV-090-0788, TURB BLDG SPLY TO RAD MON 250 SHUTOFF VLV

BFN-3-BKR-078-0062	BFN-3-BKR-078-0062, PL MAKEUP FROM RHR OUTBD VLV 480RMOV BD 3A/4B
BFN-3-SHV-078-0539	BFN-3-SHV-078-0539, PUMP A SUCT VLV
BFN-3-HS-078-0066A	BFN-3-HS-078-0066A, FILTER DEMIN BYPASS VALVE A
BFN-3-ISV-026-0782	BFN-3-ISV-026-0782, TURBINE HEAD END SHUTOFF VLV
BFN-3-SCV-033-0786	BFN-3-SCV-033-0786, 1" SA SERVICE CONN VLV
BFN-3-BKR-078-0066	BFN-3-BKR-078-0066, F/D BYPASS ISOL VALVE A 480V RMOV BD 3B 9D
BFN-3-SHV-078-0589	BFN-3-SHV-078-0589, 3-FS-78-51 SHUTOFF VALVE
BFN-3-BKR-078-0064	BFN-3-BKR-078-0064, F/D INFLUENT OUTBD ISOL VLV 480V RMOV BD 3A/9C
BFN-3-IL-078-0001E/GB	BFN-3-IL-078-0001E/GB, SKIMMER SURGE TANK LEVEL LOW LOW ISOL(19A-DS46
BFN-3-ISV-043-0780	BFN-3-ISV-043-0780, AUX BOILER CNDS XFER PMP-GRAB
BFN-3-SHV-033-0784	BFN-3-SHV-033-0784, BRANCH SHUTOFF TO PRIMARY CONTAINMENT
BFN-3-FCV-078-0019	BFN-3-FCV-078-0019, FUEL POOL F/D C INFLUENT VLV
BFN-3-@RP-085-0784/G3	BFN-3-@RP-085-0784/G3, GROUP 3 PILOT SCRAM VLV SOLENOID
BFN-3-RLY-078-0R5C	BFN-3-RLY-078-0R5C, FPC DEMIN STEP SW 1C RELAY
BFN-3-TW-006-0078	BFN-3-TW-006-0078, MOISTURE SEP DRAINS TO HTR B2
BFN-3-TW-002-0078	BFN-3-TW-002-0078, CNDS FROM HEATER A4
BFN-3-SCV-033-0788	BFN-3-SCV-033-0788, 1" SA SERVICE CONN VLV
BFN-3-BKR-078-0068	BFN-3-BKR-078-0068, REACTOR WELL INFLUENT INBOARD VALVE
BFN-3-FU3-078-0010	BFN-3-FU3-078-0010, 7C FUEL POOL COOLING PUMP 3A
BFN-3-TW-024-0078	BFN-3-TW-024-0078, RAW COOLING WATER TO RBCCW HT EXCH A
BFN-3-SHV-078-0523	BFN-3-SHV-078-0523, STORAGE POOL SUPPLY SHUTOFF VLV
BFN-3-@V-078-2801	BFN-3-@V-078-2801, FUEL POOL FILTER DEMIN OUTBD ISOL V CONT
BFN-3-HS-078-0026A	BFN-3-HS-078-0026A, FUEL POOL F/D C EFFLUENT VLV
BFN-3-RTV-078-0229A	BFN-3-RTV-078-0229A, RT VLV TO PIS-78-16
BFN-3-FIS-078-0005	BFN-3-FIS-078-0005, FUEL POOL GATE LEAKAGE EXCESSIVE
BFN-3-SHV-078-0525	BFN-3-SHV-078-0525, POOL DIFFUSER B SHUTOFF VLV
BFN-3-@V-078-2803	BFN-3-@V-078-2803, FUEL POOL FILTER DEMIN OUTBD ISOL V CONT
BFN-3-TIS-078-0034	BFN-3-TIS-078-0034, FUEL POOL F/D C INFLUENT TEMP HIGH
BFN-3-@V-078-2802	BFN-3-@V-078-2802, FUEL POOL FILTER DEMIN OUTBD ISOL V CONT

BFN-3-DRV-078-0529	BFN-3-DRV-078-0529, RHR TEST, PURGE & DR VLV
BFN-3-FU1-078-25-035CA	BFN-3-FU1-078-25-035CA, UTILITY
BFN-3-HS-078-0026B	BFN-3-HS-078-0026B, FUEL POOL F/D C RET EFFLUENT VLV
BFN-3-@V-078-2804	BFN-3-@V-078-2804, FUEL POOL FILTER DEMIN OUTBD ISOL V CONT
BFN-3-SHV-078-0524	BFN-3-SHV-078-0524, POOL DIFFUSER A SHUTOFF VLV
BFN-3-RLY-078-TDR9C	BFN-3-RLY-078-TDR9C, FPC DEMIN C HOLDING PMP OFF DELAY RLY
BFN-3-SHV-078-0045	BFN-3-SHV-078-0045, SHUTOFF VLV TO 3-FSV-78-45
BFN-3-SHV-078-0042	BFN-3-SHV-078-0042, SHUTOFF VLV TO 3-FSV-78-42
BFN-3-@V-078-2800	BFN-3-@V-078-2800, FUEL POOL FILTER DEMIN OUTBD ISOL V SUP
BFN-3-ŞC-094-0078A	BFN-3-ŞC-094-0078A, SPLICE, CABLE 3C78
BFN-3-FU2-078-0066A	BFN-3-FU2-078-0066A, INDICATING LIGHT
BFN-3-IL-078-0001D/FB	BFN-3-IL-078-0001D/FB, SKIMMER SURGE TANK LEVEL LOW LOW ISOL 19A-SA45
BFN-3-@RP-085-0785/G3	BFN-3-@RP-085-0785/G3, GROUP 3 PILOT SCRAM VLV SOLENOID
BFN-3-XDV-027-0782	BFN-3-XDV-027-0782, S CNDR INLET 3B1 DISTRIBUTOR VLV
BFN-3-XDV-027-0786	BFN-3-XDV-027-0786, CNDR INLET 3B2 DISTRIBUTOR VLV
BFN-3-XDV-027-0784	BFN-3-XDV-027-0784, N CNDR INLET 3B1 DISTRIBUTOR VLV
BFN-3-FE-003-0078A	BFN-3-FE-003-0078A, RFW FLOW TO REACTOR LINE A
BFN-3-FLT-018-0787C	BFN-3-FLT-018-0787C, FILTER INJECTOR SUPPLY
BFN-3-CKV-078-0590	BFN-3-CKV-078-0590, FROM FUEL POOL DEMINS INBD CK VLV
BFN-3-XDV-027-0788	BFN-3-XDV-027-0788, S CNDR INLET 3C1 DISTRIBUTOR VLV
BFN-3-FLT-018-0787AL20	BFN-3-FLT-018-0787AL20, FILTER INJECTOR RETURN
BFN-3-PREG-078-0007	BFN-3-PREG-078-0007, PRESSURE REGULATOR TO 3-FSV-78-7
BFN-3-XDV-027-0780	BFN-3-XDV-027-0780, CNDR INLET 3A2 DISTRIBUTOR VLV
BFN-3-FE-003-0078B	BFN-3-FE-003-0078B, RFW FLOW TO REACTOR LINE B
BFN-3-TV-078-0566	BFN-3-TV-078-0566, FUEL STRG LINER DR TO DRW TEST CONN VLV
BFN-3-TRP-078-0754	BFN-3-TRP-078-0754, FUEL POOL RESIN TRAP
BFN-3-XDV-027-0781	BFN-3-XDV-027-0781, N CNDR INLET 3A2 DISTRIBUTOR VLV
BFN-3-XDV-027-0789	BFN-3-XDV-027-0789, CNDR INLET 3C1 DISTRIBUTOR VLV
BFN-3-FU2-078-0066B	BFN-3-FU2-078-0066B, CONTROL CIRCUIT
BFN-3-IL-078-0001AA	BFN-3-IL-078-0001AA, SKIMMER SURGE TANK LEVEL HIGH (19A-DS17)

BFN-3-XDV-027-0785	BFN-3-XDV-027-0785, S CNDR INLET 3B2 DISTRIBUTOR VLV
BFN-3-CKV-078-0591	BFN-3-CKV-078-0591, FROM FUEL POOL DEMINS OUTBD CK VLV
BFN-3-XDV-027-0783	BFN-3-XDV-027-0783, CNDR INLET 3B1 DISTRIBUTOR VLV
BFN-3-XDV-027-0787	BFN-3-XDV-027-0787, N CNDR INLET 3B2 DISTRIBUTOR VLV
BFN-3-FLT-018-0788BR01	BFN-3-FLT-018-0788BR01, FILTER INJECTOR SUPPLY
BFN-3-HS-078-0062B	BFN-3-HS-078-0062B, POOL MAKEUP FROM RHR OUTBOARD VALVE
BFN-3-FLT-018-0788BR09	BFN-3-FLT-018-0788BR09, FILTER INJECTOR SUPPLY
BFN-3-HS-027-0078A	BFN-3-HS-027-0078A, CNDR 3C SS CCW OUTL SHUTOFF VLV
BFN-3-RTV-075-0078DA	BFN-3-RTV-075-0078DA, PSC WTR HD TK LOW-LOW LS RT VLV
BFN-3-FLT-018-0788BR05	BFN-3-FLT-018-0788BR05, FILTER INJECTOR SUPPLY
BFN-3-SMV-078-0516	BFN-3-SMV-078-0516, HX OUTLET SMPL CONN VLV
BFN-3-HS-027-0078C	BFN-3-HS-027-0078C, CNDR 3C CCW OUTLET SOV SS
BFN-3-FLT-018-0788BR07	BFN-3-FLT-018-0788BR07, FILTER INJECTOR SUPPLY
BFN-3-ISIV-078-0024G	BFN-3-ISIV-078-0024G, INSTR ISOL VLV FOR 3-FQ-78-24
BFN-3-ISIV-078-0001G	BFN-3-ISIV-078-0001G, INSTR ISOL VLV FOR LS-78-1G
BFN-3-FSV-078-0027	BFN-3-FSV-078-0027, FUEL POOL F/D C RET BYPASS CNDS STG VLV
BFN-3-FLT-018-0788BR03	BFN-3-FLT-018-0788BR03, FILTER INJECTOR SUPPLY
BFN-3-BYV-078-0509	BFN-3-BYV-078-0509, HX A BYPASS VLV
BFN-3-FSV-078-0023	BFN-3-FSV-078-0023, FUEL POOL F/D C PRECOAT INLET VLV
BFN-3-RTV-075-0078DB	BFN-3-RTV-075-0078DB, PSC WTR HD TK LOW-LOW LS RT VLV
BFN-3-HS-027-0078D	BFN-3-HS-027-0078D, CNDR 3C CCW OUTLET SOV SS
BFN-3-LI-078-0004	BFN-3-LI-078-0004, REACTOR WELL LEVEL INDICATOR
BFN-3-VTV-078-0022H	BFN-3-VTV-078-0022H, VENT VALVE FOR 3-PDIS-78-22 HIGH SIDE
BFN-3-VTV-078-0021H	BFN-3-VTV-078-0021H, VENT FOR 3-PI-78-21A & 3-PDT-78-21 HIGH SIDE
BFN-3-FLT-018-0788BR04	BFN-3-FLT-018-0788BR04, FILTER INJECTOR RETURN
BFN-3-FSV-078-0028	BFN-3-FSV-078-0028, FUEL POOL F/D C PRECOAT/BACKWASH VLV
BFN-3-ACC-043-2078	BFN-3-ACC-043-2078, WTR SMPL HW, CD, RFW OIC CNTRL AIR SUPPLY ACCUM
BFN-3-FLT-018-0788BR08	BFN-3-FLT-018-0788BR08, FILTER INJECTOR RETURN

BFN-3-PREG-043-2078	BFN-3-PREG-043-2078, WTR SMPL HW,CD,RFW OIC CONT AIR SPLY PRESS REG
BFN-3-FLT-018-0788BR02	BFN-3-FLT-018-0788BR02, FILTER INJECTOR RETURN
BFN-3-XA-057-0078	BFN-3-XA-057-0078, 4KV SHUTDOWN BUS 2 AUTO XFR
BFN-3-BYV-078-0508	BFN-3-BYV-078-0508, HX B BYPASS VLV
BFN-3-FSV-078-0026	BFN-3-FSV-078-0026, FUEL POOL F/D C EFFLUENT VLV
BFN-3-TTIV-078-0024C	BFN-3-TTIV-078-0024C, INSTR TEST VALVE FOR 3-FM-78-24C
BFN-3-FLT-018-0788BR06	BFN-3-FLT-018-0788BR06, FILTER INJECTOR RETURN
BFN-3-HS-027-0078B	BFN-3-HS-027-0078B, CNDR 3C CCW OUTLET SOV SS
BFN-3-IL-078-0015C	BFN-3-IL-078-0015C, FUEL POOL COOLING PUMP 3B (19A-DS7B)
BFN-3-TTIV-078-0001C	BFN-3-TTIV-078-0001C, INSTR TEST VLV FOR LS-78-1C
BFN-3-IL-078-0010C	BFN-3-IL-078-0010C, FUEL POOL COOLING PUMP 3A (19A-DS7A)
BFN-3-ŞCR-003-0785A	BFN-3-ŞCR-003-0785A, SPLICE, IN JB 9165
BFN-3-TE-085-0007-078	BFN-3-TE-085-0007-078, CRD TEMP AT DRIVE LOCATION 26-31
BFN-3-VTV-075-0078C	BFN-3-VTV-075-0078C, PSC WTR HEAD TK LOW LS VENT VLV
BFN-3-SHV-043-2078B	BFN-3-SHV-043-2078B, WTR SMPL HW,CD,RFW OIC CONT AIR SUPPLY SHV
BFN-3-HS-066-0078B	BFN-3-HS-066-0078B, RECOMBINER 3A DISCHARGE
BFN-3-VTV-075-0078A	BFN-3-VTV-075-0078A, PSC WTR HEAD TK HIGH-HIGH LS VENT VLV
BFN-3-FT-003-0078B	BFN-3-FT-003-0078B, RFW LINE B FLOW
BFN-3-FU1-078-0001E	BFN-3-FU1-078-0001E, 19AF15B
BFN-3-FU2-078-0010A	BFN-3-FU2-078-0010A, 7C TRIP CKT
BFN-3-VTV-075-0078D	BFN-3-VTV-075-0078D, PSC WTR HEAD TK LOW-LOW LS VENT VLV
BFN-3-HS-066-0078A	BFN-3-HS-066-0078A, RECOMBINER 3A DISCHARGE VALVE
BFN-3-JBOX-078-10028	BFN-3-JBOX-078-10028, JBOX 10028, ABOVE PANEL 25-37, QR17/639 RB
BFN-3-FLT-043-2078	BFN-3-FLT-043-2078, WTR SMPL HW,CD,RFW OIC CONTROL AIR SPLY FILTER
BFN-3-FT-003-0078A	BFN-3-FT-003-0078A, RFW LINE A FLOW
BFN-3-SHV-043-2078A	BFN-3-SHV-043-2078A, WTR SMPL HW,CD,RFW OIC CONT AIR CMP SUCT SPLY
BFN-3-VTV-075-0078B	BFN-3-VTV-075-0078B, PSC WTR HEAD TK HIGH LS VENT VLV
BFN-3-63-078-0010	BFN-3-63-078-0010, FPC PUMP 3A CONT CKT PRESS RELAY 63
BFN-3-CKV-078-0552	BFN-3-CKV-078-0552, SEAL RUPTURE DR TO CNDRCK VLV
BFN-3-63-078-0015	BFN-3-63-078-0015, FPC PUMP 3B CONT CKT PRESS RELAY 63

BFN-3-CKV-078-0556	BFN-3-CKV-078-0556, REACTOR WELL DR CK VLV
BFN-3-FU2-078-0010B	BFN-3-FU2-078-0010B, 7C CL CKT
BFN-3-PREG-078-0045	BFN-3-PREG-078-0045, PRESSURE REGULATOR TO 3-FSV-78-45
BFN-3-@V-078-2850	BFN-3-@V-078-2850, F POOL FILTER DEMIN INBD ISOL V SUP
BFN-3-FU2-078-0062A	BFN-3-FU2-078-0062A, INDICATING LIGHT
BFN-3-HS-047-0078C	BFN-3-HS-047-0078C, RAISE (OCP #1) (SW25)
BFN-3-FU2-078-0031B	BFN-3-FU2-078-0031B, CONT CKT
BFN-3-PI-067-0078A	BFN-3-PI-067-0078A, COOLING WATER TO CONT ROOM CHILLER A
BFN-3-HS-047-0078A	BFN-3-HS-047-0078A, OFF (OCP #1) (SW29)
BFN-3-HS-078-0010B	BFN-3-HS-078-0010B, FUEL POOL COOLING PUMP A
BFN-3-FU2-066-0078A	BFN-3-FU2-066-0078A, RUN LIGHT
BFN-3-TE-078-0013	BFN-3-TE-078-0013, FUEL POOL COOL HTX A DISCHARGE TEMP
BFN-3-HS-078-0007	BFN-3-HS-078-0007, DRAIN VLV TO MAIN CONDENSER
BFN-3-HS-047-0078B	BFN-3-HS-047-0078B, LOWER (OCP #1) (SW26)
BFN-3-FU2-078-0062B	BFN-3-FU2-078-0062B, CONTROL CIRCUIT
BFN-3-PI-067-0078B	BFN-3-PI-067-0078B, COOLING WATER FROM CONT ROOM CHILLER A
BFN-3-PREG-078-0042	BFN-3-PREG-078-0042, PRESSURE REGULATOR TO 3-FSV-78-42
BFN-3-HS-047-0078D	BFN-3-HS-047-0078D, CHEST WARMING (OCP #1) (SW31)
BFN-3-BKR-035-0781A	BFN-3-BKR-035-0781A, CONT PWR TO THERMOSTAT T206 DEMIN CAB 8Q
BFN-3-DRIV-078-0030	BFN-3-DRIV-078-0030, 3-PI-78-30 DRAIN VALVE
BFN-3-DRIV-078-0032	BFN-3-DRIV-078-0032, 3-PI-78-32 DRAIN VALVE
BFN-3-HS-078-0010A	BFN-3-HS-078-0010A, FUEL POOL COOLING PUMP 3A
BFN-3-ISIV-078-0001D	BFN-3-ISIV-078-0001D, INSTR ISOL VLV FOR LS-78-1D
BFN-3-FU2-066-0078B	BFN-3-FU2-066-0078B, CONT CKT
BFN-3-TE-078-0018	BFN-3-TE-078-0018, FUEL POOL COOL HTX B DISCHARGE TEMP
BFN-3-DRIV-078-0024	BFN-3-DRIV-078-0024, INSTR DRAIN VLV TO 3-FQ-78-24
BFN-3-ISIV-078-0021D	BFN-3-ISIV-078-0021D, INSTR ISOL VLV FOR 3-PDI-78-21
BFN-3-ISIV-078-0024D	BFN-3-ISIV-078-0024D, INSTR ISOL VLV TO 3-FT-78-24
BFN-3-DRV-078-0569	BFN-3-DRV-078-0569, DR VLV TO PUMP SUCT
BFN-3-@V-078-2842	BFN-3-@V-078-2842, F POOL FILTER DEMIN BYPASS V CONT
BFN-3-SHV-078-0721	BFN-3-SHV-078-0721, BYPASS VLV TO CNDS STRG TK

BFN-3-SHV-078-0725	BFN-3-SHV-078-0725, C F/D EFFLUENT SAMPLE RT VLV
BFN-3-ISIV-078-0021B	BFN-3-ISIV-078-0021B, INSTR ISOL VLV FOR 3-PDM-78-21
BFN-3-ISIV-078-0024B	BFN-3-ISIV-078-0024B, INSTR ISOL VLV FOR 3-FM-78-24A
BFN-3-FU2-027-0078B	BFN-3-FU2-027-0078B, CONT XFMR
BFN-3-DRV-078-0565	BFN-3-DRV-078-0565, FUEL STRG LINER DR VLV TO DRW
BFN-3-@CR-003-0784	BFN-3-@CR-003-0784, CABLE, RFP B DISCHARGE PRESS (A3377)
BFN-3-ISIV-078-0001B	BFN-3-ISIV-078-0001B, INSTR ISOL VLV FOR LS-78-1B
BFN-3-RTV-078-0209A	BFN-3-RTV-078-0209A, RT VLV TO FT-78-24H
BFN-3-@CR-092-0078	BFN-3-@CR-092-0078, CABLE, SPARE COMPUTER INPUT POINT
BFN-3-FU1-078-25-015B	BFN-3-FU1-078-25-015B, 19AF8
BFN-3-@CR-003-0786	BFN-3-@CR-003-0786, CABLE, RFP DISCHARGE HEADER PRESS (A3379)
BFN-3-@V-078-2840	BFN-3-@V-078-2840, F POOL FILTER DEMIN BYPASS V CONT
BFN-3-SHV-078-0724	BFN-3-SHV-078-0724, C F/D INFLUENT SAMPLE RT VLV
BFN-3-@CR-003-0787	BFN-3-@CR-003-0787, CABLE, RFW PRESS TO REACTOR (A3380)
BFN-3-SHV-032-2078	BFN-3-SHV-032-2078, SHUTOFF VLV TO FSV-2-213AA
BFN-3-JBOX-078-4109	BFN-3-JBOX-078-4109, JBOX 4109, EL 621, COL SR18 (SEALED)
BFN-3-DRV-078-0560	BFN-3-DRV-078-0560, DRYER/SEP STORAGE POOL DR VLV TO DR CRW
BFN-3-SHV-078-0720	BFN-3-SHV-078-0720, C F/D EFFLUENT SHUTOFF VLV
BFN-3-@CR-003-0783	BFN-3-@CR-003-0783, CABLE, RFP A DISCH PRESS (A3376)
BFN-3-FU1-078-25-015A	BFN-3-FU1-078-25-015A, 19AF7
BFN-3-RTV-078-0225A	BFN-3-RTV-078-0225A, RT VLV TO LI-78-4
BFN-3-@V-078-2841	BFN-3-@V-078-2841, F POOL FILTER DEMIN BYPASS V CONT
BFN-3-FU2-027-0078A	BFN-3-FU2-027-0078A, RUN LIGHT
BFN-3-RLY-078-LR6C	BFN-3-RLY-078-LR6C, FPC VESSEL C CYCLE SELECTION RELAY
BFN-3-@CR-003-0785	BFN-3-@CR-003-0785, CABLE, RFP C DISCHARGE PRESS (A3378)
BFN-3-VTV-078-0580	BFN-3-VTV-078-0580, FUEL STRG POOL SPLY LINE VENT VLV
BFN-3-@RM-090-0782	BFN-3-@RM-090-0782, CONTROL CIRCUIT (3-FS-90-134B & 134C)
BFN-3-SHV-078-0507	BFN-3-SHV-078-0507, PUMP A&B CROSSTIE VLV
BFN-3-VTV-078-0582	BFN-3-VTV-078-0582, RX WELL DIFFUSER A SPLY VENT VLV
BFN-3-@RM-090-0784	BFN-3-@RM-090-0784, CONTROL CIRCUIT (3-FS-90-134C)

BFN-3-SHV-078-0505	BFN-3-SHV-078-0505, HX B-INLET VLV
BFN-3-@RM-090-0780	BFN-3-@RM-090-0780, CONTROL CIRCUIT (3-FS-90-133C)
BFN-3-@RM-090-0781	BFN-3-@RM-090-0781, CONTROL CIRCUIT (3-FS-90-134B & 134C)
BFN-3-SHV-078-0506	BFN-3-SHV-078-0506, HX A-INLET VLV
BFN-3-VTV-078-0583	BFN-3-VTV-078-0583, FPC TO RHR PUMP SUCT LINE VENT VLV
BFN-3-DRIV-074-9078	BFN-3-DRIV-074-9078, INSTR DRAIN VALVE FOR 3-PS-74-42B
BFN-3-VTV-078-0581	BFN-3-VTV-078-0581, RHR TO FUEL STRG POOL LINE VLV
BFN-3-@V-078-2860	BFN-3-@V-078-2860, FUEL POOL COOLING AND DEMIN SYS
BFN-3-PISV-078-0009	BFN-3-PISV-078-0009, PANEL ISOL VLV TO 3-PS-78-9
BFN-3-@RM-090-0783	BFN-3-@RM-090-0783, CONTROL CIRCUIT (3-FS-90-134B)
BFN-3-JBOX-078-4281	BFN-3-JBOX-078-4281, JB 4281 SR18/621 RB (SEALED)
BFN-3-FLT-018-0787AL02	BFN-3-FLT-018-0787AL02, FILTER INJECTOR RETURN
BFN-3-IL-078-0001B/CB	BFN-3-IL-078-0001B/CB, SKIMMER SURGE TANK LEVEL LOW (19A-DS23)
BFN-3-PI-078-0030	BFN-3-PI-078-0030, FUEL POOL F/D C HOLD PUMP SUCTION PRESS
BFN-3-FSV-078-0048	BFN-3-FSV-078-0048, FUEL POOL F/D C BACKWASH AIR SUPPLY SOL VLV
BFN-3-HS-078-0068A	BFN-3-HS-078-0068A, REACTOR WELL RETURN INBD VLV
BFN-3-FLT-018-0787AL06	BFN-3-FLT-018-0787AL06, FILTER INJECTOR RETURN
BFN-3-FLT-018-0787AL08	BFN-3-FLT-018-0787AL08, FILTER INJECTOR RETURN
BFN-3-PI-078-0032	BFN-3-PI-078-0032, FUEL POOL F/D C HOLD PUMP DISCHARGE PRESS
BFN-3-HS-078-0028	BFN-3-HS-078-0028, FUEL POOL F/D C PRECOAT/BACKWASH VLV
BFN-3-ZS-069-0078B	BFN-3-ZS-069-0078B, POSN SW FOR 3-FCV-69-78 (CLOSED)
BFN-3-FSV-078-0042	BFN-3-FSV-078-0042, FUEL POOL F/D D UNIT3 INLET VLV
BFN-3-ISIV-078-0024F	BFN-3-ISIV-078-0024F, INSTR ISOL VLV FOR 3-FI-78-24B
BFN-3-FLT-018-0787AL04	BFN-3-FLT-018-0787AL04, FILTER INJECTOR RETURN
BFN-3-ISIV-078-0001F	BFN-3-ISIV-078-0001F, INSTR ISOL VLV FOR LS-78-1F
BFN-3-ZI-078-0062A	BFN-3-ZI-078-0062A, POOL MAKEUP FROM RHR OUTBOARD VALVE
BFN-3-RTV-078-0226A	BFN-3-RTV-078-0226A, RT VLV TO PS-78-9
BFN-3-HS-078-0023	BFN-3-HS-078-0023, FUEL POOL F/D C PRECOAT INLET VLV
BFN-3-RFV-067-0783	BFN-3-RFV-067-0783, 3B-1 INL RV

BFN-3-JBOX-078-1153	BFN-3-JBOX-078-1153, JBOX 1153 COL J1-J1 EL 621-25
BFN-3-TW-078-0017	BFN-3-TW-078-0017, FUEL POOL COOL HTX B INLET TEMP
BFN-3-74-076-0078	BFN-3-74-076-0078, DW/SUPPR CHMBR O2/H2 ANALYZER A FAILURE RELAY
BFN-3-VTV-024-0780	BFN-3-VTV-024-0780, RCW VENT VLV
BFN-3-FLT-018-0787AL05	BFN-3-FLT-018-0787AL05, FILTER INJECTOR SUPPLY
BFN-3-FLT-018-0787AL09	BFN-3-FLT-018-0787AL09, FILTER INJECTOR SUPPLY
BFN-3-TW-078-0013	BFN-3-TW-078-0013, FUEL POOL COOL HTX A DISCHARGE TEMP
BFN-3-HS-078-0027	BFN-3-HS-078-0027, FUEL POOL F/D C RET BYPASS CNDS STG VLV
BFN-3-@R-078-1874	BFN-3-@R-078-1874, FPC FILTER DEMIN INLET
BFN-3-FLT-018-0787AL01	BFN-3-FLT-018-0787AL01, FILTER INJECTOR SUPPLY
BFN-3-@R-078-1872	BFN-3-@R-078-1872, FPC HX 3A OUTLET
BFN-3-@R-078-1871	BFN-3-@R-078-1871, FPC SKIMMER SURGE TK
BFN-3-@R-078-1873	BFN-3-@R-078-1873, FPC HX 3B OUTLET
BFN-3-RLY-078-19A-K4	BFN-3-RLY-078-19A-K4, GATE SEAL OR DW TO RX WELL SEAL LEAKAGE
BFN-3-IL-078-0001E/GA	BFN-3-IL-078-0001E/GA, SKIMMER SURGE TANK LEVEL LOW LOW ISOL 19A-DS44
BFN-3-HS-078-0068B	BFN-3-HS-078-0068B, REACTOR WELL INFLUENT INBOARD VALVE
BFN-3-ZS-069-0078A	BFN-3-ZS-069-0078A, POSN SW FOR 3-FCV-69-78 (OPEN)
BFN-3-FCV-078-0023	BFN-3-FCV-078-0023, FUEL POOL F/D C PRECOAT INLET VLV
BFN-3-FLT-018-0787AL03	BFN-3-FLT-018-0787AL03, FILTER INJECTOR SUPPLY
BFN-3-LA-078-0001A	BFN-3-LA-078-0001A, FUEL POOL SKIMMER SURGE TK LEVEL HIGH
BFN-3-VTV-075-0078	BFN-3-VTV-075-0078, PSC WATER HEAD TANK VENT VLV
BFN-3-FE-078-0024	BFN-3-FE-078-0024, FUEL POOL F/D C EFFLUENT FLOW
BFN-3-TI-067-0078B	BFN-3-TI-067-0078B, COOLING WATER FROM CONT ROOM CHILLER A
BFN-3-@ES-074-3078/II	BFN-3-@ES-074-3078/II, RHR PUMP B SHTDN COOLING SUCT VLV CONTROL
BFN-3-FU2-078-0031A	BFN-3-FU2-078-0031A, RUN LIGHT
BFN-3-FSV-078-0045	BFN-3-FSV-078-0045, FUEL POOL F/D D UNIT3 OUTLET VLV
BFN-3-@R-001-0784	BFN-3-@R-001-0784, MAIN STM LINE C REL VLV TEMP RECD, TR-1-1
BFN-3-TV-078-0548	BFN-3-TV-078-0548, DRYER/SEP STORAGE POOL LINER LEAKAGE TEST VLV
BFN-3-SHV-090-0787	BFN-3-SHV-090-0787, RAD MON 251 SUCTION SHUTOFF VLV

BFN-3-RTV-075-0078CB	BFN-3-RTV-075-0078CB, PSC WTR HD TK LOW LS RT VLV
BFN-3-TE-078-0034	BFN-3-TE-078-0034, FUEL POOL F/D C INFLUENT TEMP HIGH
BFN-3-FCV-078-0027	BFN-3-FCV-078-0027, FUEL POOL F/D C RET BYPASS CNDS STG VLV
BFN-3-FLT-018-0787AL07	BFN-3-FLT-018-0787AL07, FILTER INJECTOR SUPPLY
BFN-3-HS-078-0065A	BFN-3-HS-078-0065A, FILTER DEMIN BYPASS VALVE
BFN-3-DRV-075-0078B	BFN-3-DRV-075-0078B, PSC WTR HEAD TK HIGH LS DR VLV
BFN-3-SHV-078-0531	BFN-3-SHV-078-0531, FUEL POOL AND XFR CANAL EQV
BFN-3-SHV-067-0781	BFN-3-SHV-067-0781, CHILLER 3B-2 OUT
BFN-3-ZS-078-0035A	BFN-3-ZS-078-0035A, FUEL POOL F/D C BACKWASH DRAIN VLV OPEN
BFN-3-ZS-078-0033A	BFN-3-ZS-078-0033A, FUEL POOL F/D C HOLDING VLV OPEN
BFN-3-FCV-069-0078	BFN-3-FCV-069-0078, PRECOAT RECYCLE VLV
BFN-3-DRV-078-0530	BFN-3-DRV-078-0530, RHR TEST, PURGE & DR VLV
BFN-3-ZS-078-0026A	BFN-3-ZS-078-0026A, FUEL POOL F/D C EFFLUENT VLV OPEN
BFN-3-ZS-078-0023A	BFN-3-ZS-078-0023A, FUEL POOL F/D C PRECOAT INLET VLV OPEN
BFN-3-@PL-063-0780	BFN-3-@PL-063-0780, SLC TEST TANK VLV (SHV-63-43) POSITION
BFN-3-@PL-063-0785	BFN-3-@PL-063-0785, STANDBY LIQ CONT INBD V HCV-63-12
BFN-3-@PL-078-0691	BFN-3-@PL-078-0691, CABLE FOR FUEL POOL COOLING PMP 3A SUPPLY
BFN-3-@ES-073-4078/II	BFN-3-@ES-073-4078/II, HPCI STEAM FLOW (PDT-73-1B)
BFN-3-DRV-078-0536	BFN-3-DRV-078-0536, RHR TEST, PURGE & DR VLV
BFN-3-RE-090-0078	BFN-3-RE-090-0078, UNIT 3 EAST STAIRS EL 586.0 TURB BLDG
BFN-3-RTV-078-0207A	BFN-3-RTV-078-0207A, RT VLV TO PDIS-78-22H
BFN-3-RLY-078-LR1C	BFN-3-RLY-078-LR1C, FPC VESSEL C PRECOAT CONTROL RELAY
BFN-3-FLT-018-0787B	BFN-3-FLT-018-0787B, FILTER INJECTOR SUPPLY
BFN-3-SHV-078-0537	BFN-3-SHV-078-0537, FPC PUMP SPLY SHUTOFF VLV
BFN-3-HEX-078-0759	BFN-3-HEX-078-0759, FUEL POOL COOLING HEAT EXCHANGER B
BFN-3-DRV-075-0078D	BFN-3-DRV-075-0078D, PSC WTR HEAD TK LOW-LOW LS DR VLV
BFN-3-FU2-078-0068B	BFN-3-FU2-078-0068B, CONTROL CIRCUIT
BFN-3-ISIV-078-0001A	BFN-3-ISIV-078-0001A, INSTR ISOL VLV FOR LS-78-1A
BFN-3-MBIV-078-0021	BFN-3-MBIV-078-0021, MULTI BRANCH ISOL VLV 3-PDS-78-21, 3-PDI-78-21

BFN-3-FQ-078-0024	BFN-3-FQ-078-0024, FUEL POOL F/D C EFFLUENT FLOW
BFN-3-PI-035-0078	BFN-3-PI-035-0078, STATOR COOLING WATER DEIONIZER OUT PRESS IND.
BFN-3-PI-032-0078	BFN-3-PI-032-0078, CONTROL AIR PREFILTER INLET
BFN-3-FLT-018-0788BR20	BFN-3-FLT-018-0788BR20, FILTER INJECTOR RETURN
BFN-3-SHV-078-0534	BFN-3-SHV-078-0534, FPC TO RHR SUCT VLV
BFN-3-ISIV-078-0021A	BFN-3-ISIV-078-0021A, INSTR ISOL VLV TO 3-PDT-78-21
BFN-3-RLY-078-TDR8C	BFN-3-RLY-078-TDR8C, FPC VESSEL C OFF DELAY RELAY
BFN-3-ISIV-078-0024A	BFN-3-ISIV-078-0024A, INSTR ISOL VLV TO 3-FM-78-24A
BFN-3-PISV-078-0021B	BFN-3-PISV-078-0021B, PANEL ISOL VLV TO 3-PI-78-21B
BFN-3-FU2-078-0068A	BFN-3-FU2-078-0068A, INDICATING LIGHT
BFN-3-ZT-001-0078	BFN-3-ZT-001-0078, MAIN STEAM STOP VLV 2 POSITION TRANSMITTER
BFN-3-SHV-078-0538	BFN-3-SHV-078-0538, PUMP B SUCTION VLV
BFN-3-@V-078-2810	BFN-3-@V-078-2810, FUEL POOL COOLING AND DEMIN SYS
BFN-3-SHV-067-0780	BFN-3-SHV-067-0780, CHILLER 3A-1 OUT
BFN-3-DRV-075-0078C	BFN-3-DRV-075-0078C, PSC WTR HEAD TK LOW LS DR VLV
BFN-3-@RP-085-0783/G3	BFN-3-@RP-085-0783/G3, GROUP 3 PILOT SCRAM VLV SOLENOID
BFN-3-DRV-078-0535	BFN-3-DRV-078-0535, RHR TEST, PURGE & DR VLV
BFN-3-PCV-067-0078	BFN-3-PCV-067-0078, COOLING WTR FROM CONT RM CHILLER A
BFN-3-SHV-026-0786	BFN-3-SHV-026-0786, EMER CONT MAIN TURB OIL SHUTOFF VLV
BFN-3-HEX-078-0758	BFN-3-HEX-078-0758, FUEL POOL COOLING HEAT EXCHANGER A
BFN-3-SCR-003-0783A	BFN-3-SCR-003-0783A, SPLICE, IN JB 9165
BFN-3-RLY-078-OR7C	BFN-3-RLY-078-OR7C, FPC VESSEL C PRECOAT/CLEANING RELAY
BFN-3-SHV-067-0782	BFN-3-SHV-067-0782, 3B-1 CHILLER INL
BFN-3-SHV-078-0532	BFN-3-SHV-078-0532, SURGE TANK CNDS SPLY SHUTOFF VLV
BFN-3-DRV-075-0078A	BFN-3-DRV-075-0078A, PSC WTR HEAD TK HIGH-HIGH LG DR VLV
BFN-3-SES-073-4078A	BFN-3-SES-073-4078A, SPLICE TO CONAX 3-CSC-073-0001B
BFN-3-FLT-018-0787AR09	BFN-3-FLT-018-0787AR09, FILTER INJECTOR SUPPLY
BFN-3-FLT-018-0788BL05	BFN-3-FLT-018-0788BL05, FILTER INJECTOR SUPPLY
BFN-3-PDIS-078-0021	BFN-3-PDIS-078-0021, FUEL POOL F/D C VESSEL D/P
BFN-3-THV-078-0010B	BFN-3-THV-078-0010B, FPC PMP 3A STUFFING BOX INL THROT VLV

BFN-3-DEM-078-0752	BFN-3-DEM-078-0752, FUEL POOL FILTER DEMIN C
BFN-3-FLT-018-0787AR01	BFN-3-FLT-018-0787AR01, FILTER INJECTOR SUPPLY
BFN-3-LA-075-0078	BFN-3-LA-075-0078, PSC HEAD TANK LEVEL HIGH
BFN-3-LS-078-0001G	BFN-3-LS-078-0001G, SKIMMER SURGE TANK LEVEL LOW LOW ISOL
BFN-3-FLT-018-0788BL01	BFN-3-FLT-018-0788BL01, FILTER INJECTOR SUPPLY
BFN-3-LS-078-0001C	BFN-3-LS-078-0001C, SKIMMER SURGE TANK LEVEL LOW LOW
BFN-3-FLT-018-0787AR05	BFN-3-FLT-018-0787AR05, FILTER INJECTOR SUPPLY
BFN-3-@V-078-2777	BFN-3-@V-078-2777, FUEL POOL MAKEUP FROM RHR OUTBD V CONT
BFN-3-FLT-018-0788BL09	BFN-3-FLT-018-0788BL09, FILTER INJECTOR SUPPLY
BFN-3-§CR-003-0786A	BFN-3-§CR-003-0786A, SPLICE IN JB9165
BFN-3-@PL-078-0707	BFN-3-@PL-078-0707, FUEL POOL COOLING PUMP 3B CONTROL
BFN-3-RTV-078-0211A	BFN-3-RTV-078-0211A, RT VLV TO PI-78-30
BFN-3-@PL-078-0705	BFN-3-@PL-078-0705, FUEL POOL COOLING PMP 3B CONTROL
BFN-3-FSV-069-0078	BFN-3-FSV-069-0078, PRECOAT RECYCLE VLV
BFN-3-FLT-018-0788BL03	BFN-3-FLT-018-0788BL03, FILTER INJECTOR SUPPLY
BFN-3-IL-078-0001D/FA	BFN-3-IL-078-0001D/FA, SKIMMER SURGE TANK LEVEL LOW LOW ISOL 19A-DS43
BFN-3-LS-078-0001A	BFN-3-LS-078-0001A, SKIMMER SURGE TANK LEVEL HIGH
BFN-3-DRV-078-0588	BFN-3-DRV-078-0588, BULKHEAD DR VLV TO CRW
BFN-3-FLT-018-0787AR07	BFN-3-FLT-018-0787AR07, FILTER INJECTOR SUPPLY
BFN-3-FRC-078-0024	BFN-3-FRC-078-0024, FUEL POOL F/D C EFFLUENT FLOW
BFN-3-FLT-018-0788BL07	BFN-3-FLT-018-0788BL07, FILTER INJECTOR SUPPLY
BFN-3-FU2-078-0067A	BFN-3-FU2-078-0067A, INDICATING LIGHT
BFN-3-TE-070-0078A	BFN-3-TE-070-0078A, DW COOLING UNIT MOTOR TC - SPARE
BFN-3-PISV-078-0022H	BFN-3-PISV-078-0022H, HIGH SIDE PANEL ISOL VLV TO 3-PDIS-78-22
BFN-3-DRV-078-0584	BFN-3-DRV-078-0584, FPC PMP SUCT HDR DR VLV TO CRW
BFN-3-PISV-078-0024H	BFN-3-PISV-078-0024H, HIGH SIDE PANEL ISOL VLV TO 3-FT-78-24
BFN-3-PISV-078-0021H	BFN-3-PISV-078-0021H, HIGH SIDE PANEL ISOL VLV TO 3-PDT-78-21
BFN-3-FLT-018-0787AR03	BFN-3-FLT-018-0787AR03, FILTER INJECTOR SUPPLY
BFN-3-LS-078-0001E	BFN-3-LS-078-0001E, SKIMMER SURGE TANK LEVEL LOW LOW ISOL

BFN-3- S PL-063-0786A	BFN-3- S PL-063-0786A, SPLICE AT PENETRATION
BFN-3-LS-078-0001B	BFN-3-LS-078-0001B, SKIMMER SURGE TANK LEVEL LOW
BFN-3-DRV-078-0585	BFN-3-DRV-078-0585, FPC TO CNDR HDR DR VLV
BFN-3-FLT-018-0787AR04	BFN-3-FLT-018-0787AR04, FILTER INJECTOR RETURN
BFN-3-@V-078-2778	BFN-3-@V-078-2778, FUEL POOL MAKEUP FROM RHR OUTBD V CONT
BFN-3-FLT-018-0788BL08	BFN-3-FLT-018-0788BL08, FILTER INJECTOR RETURN
BFN-3-PDIS-078-0022	BFN-3-PDIS-078-0022, FUEL POOL F/D C RESIN TRAP D/P HIGH
BFN-3-@PL-078-0706	BFN-3-@PL-078-0706, FUEL POOL COOLING PMP 3B CONTROL
BFN-3-LS-078-0001F	BFN-3-LS-078-0001F, SKIMMER SURGE TANK LEVEL LOW LOW ISOL
BFN-3-ZS-001-0078F	BFN-3-ZS-001-0078F, MAIN STEAM STOP VALVE NO. 2 RPS SW
BFN-3-@V-078-2852	BFN-3-@V-078-2852, F POOL FILTER DEMIN INBD ISOL V CONT
BFN-3-FLT-018-0788BL04	BFN-3-FLT-018-0788BL04, FILTER INJECTOR RETURN
BFN-3-TE-070-0078B	BFN-3-TE-070-0078B, DW COOLING UNIT MOTOR TC - SPARE
BFN-3-@RP-085-0781/G3	BFN-3-@RP-085-0781/G3, GROUP 3 PILOT SCRAM VLV SOLENOID
BFN-3-FLT-018-0787AR08	BFN-3-FLT-018-0787AR08, FILTER INJECTOR RETURN
BFN-3-FLT-018-0788BL06	BFN-3-FLT-018-0788BL06, FILTER INJECTOR RETURN
BFN-3-FLT-018-0787D	BFN-3-FLT-018-0787D, FILTER INJECTOR SUPPLY
BFN-3-DRV-078-0587	BFN-3-DRV-078-0587, BULKHEAD DR VLV TO CRW
BFN-3-@ES-001-0078/IS1	BFN-3-@ES-001-0078/IS1, ENGINEERING SAFEGUARDS CABLE
BFN-3-FLT-018-0787AR02	BFN-3-FLT-018-0787AR02, FILTER INJECTOR RETURN
BFN-3-LS-078-0001D	BFN-3-LS-078-0001D, SKIMMER SURGE TANK LEVEL LOW LOW ISOL
BFN-3-THV-078-0010A	BFN-3-THV-078-0010A, FPC PMP 3A STUFFING BOX INL THROT VLV
BFN-3-FLT-018-0788BL02	BFN-3-FLT-018-0788BL02, FILTER INJECTOR RETURN
BFN-3-FLT-018-0787AR06	BFN-3-FLT-018-0787AR06, FILTER INJECTOR RETURN
BFN-3-@V-078-2776	BFN-3-@V-078-2776, FUEL POOL MAKEUP FROM RHR OUTBD V CONT
BFN-3-MISC-078	BFN-3-MISC-078, MISCELLANEOUS EQUIPMENT RECORD UNIT 3 SYSTEM 078
BFN-3-FU2-078-0067B	BFN-3-FU2-078-0067B, CONTROL CIRCUIT
BFN-3-@PL-078-0704	BFN-3-@PL-078-0704, FUEL POOL COOLING PMP 3B SUPPLY

BFN-3-MVOP-078-0062	BFN-3-MVOP-078-0062, POOL MAKEUP FROM RHR OUTBOARD VALVE
BFN-3-VTV-078-0575	BFN-3-VTV-078-0575, HX BYPASS VENT VLV
BFN-3-RTV-078-0206A	BFN-3-RTV-078-0206A, RT VLV TO PI-78-21B ANDPDT-78-21L
BFN-3-ZS-078-0028B	BFN-3-ZS-078-0028B, FUEL POOL F/D C PRECOAT/BACKWASH VLV CLOSED
BFN-3-FLT-018-0788BR17	BFN-3-FLT-018-0788BR17, FILTER INJECTOR SUPPLY
BFN-3-FCV-078-0062	BFN-3-FCV-078-0062, POOL MAKEUP FROM RHR OUTBOARD VALVE
BFN-3-FCV-078-0066	BFN-3-FCV-078-0066, F/D BYPASS ISOL VALVE A
BFN-3-FSV-078-0033	BFN-3-FSV-078-0033, FUEL POOL F/D C HOLDING VLV
BFN-3-MVOP-078-0066	BFN-3-MVOP-078-0066, F/D BYPASS ISOL VALVE A
BFN-3-IL-078-0068	BFN-3-IL-078-0068, REACTOR WELL INFLUENT INBOARD VLV
BFN-3-SHV-026-1078	BFN-3-SHV-026-1078, FIRE PROTECTION SHUTOFF TO U-3 DG BLDG
BFN-3-FLT-018-0788BR13	BFN-3-FLT-018-0788BR13, FILTER INJECTOR SUPPLY
BFN-3-JBOX-248-10078	BFN-3-JBOX-248-10078, EL 630 R/R13
BFN-3-MVOP-078-0068	BFN-3-MVOP-078-0068, REACTOR WELL INFLUENT INBOARD VALVE
BFN-3-FLT-018-0788BR15	BFN-3-FLT-018-0788BR15, FILTER INJECTOR SUPPLY
BFN-3-@PP-211-0781	BFN-3-@PP-211-0781, ACB 1726 AMMETER
BFN-3-FCV-078-0064	BFN-3-FCV-078-0064, F/D INFLUENT OUTBOARD ISOL VLV
BFN-3-@PP-211-0789	BFN-3-@PP-211-0789, ACB 1844 AMMETER
BFN-3-JBOX-078-0525	BFN-3-JBOX-078-0525, JB 525 PR15/617 CB
BFN-3-FLT-018-0788BR11	BFN-3-FLT-018-0788BR11, FILTER INJECTOR SUPPLY
BFN-3-FCV-078-0068	BFN-3-FCV-078-0068, REACTOR WELL INFLUENT INBOARD VALVE
BFN-3-MVOP-078-0064	BFN-3-MVOP-078-0064, F/D INFLUENT OUTBOARD ISOL VLV
BFN-3-@RP-085-0787/G3	BFN-3-@RP-085-0787/G3, GROUP 3 PILOT SCRAM VLV SOLENOID
BFN-3-FLT-018-0788BR19	BFN-3-FLT-018-0788BR19, FILTER INJECTOR SUPPLY
BFN-3-HS-078-0061B	BFN-3-HS-078-0061B, POOL MAKEUP FROM RHR INBOARD VALVE
BFN-3-@PP-211-0785	BFN-3-@PP-211-0785, ACB 1334 AMMETER
BFN-3-VTV-078-0573	BFN-3-VTV-078-0573, B HX INLET VENT VLV
BFN-3-MVOP-001-0078	BFN-3-MVOP-001-0078, MAIN STEAM STOP VALVE NO. 2 CONTROL CYL
BFN-3-\$PL-063-0785A	BFN-3-\$PL-063-0785A, SPLICE AT PENE EE
BFN-3-FCV-078-0061	BFN-3-FCV-078-0061, POOL MAKEUP FROM RHR INBOARD VALVE
BFN-3-MVOP-078-0067	BFN-3-MVOP-078-0067, REACTOR WELL INFLUENT OUTBOARD VALVE

BFN-3-MVOP-027-0078	BFN-3-MVOP-027-0078, COND 3C1 CCW OUTLET SOV SS 480 TMOV 3B 17D
BFN-3-FLT-018-0788BR12	BFN-3-FLT-018-0788BR12, FILTER INJECTOR RETURN
BFN-3-MVOP-066-0078	BFN-3-MVOP-066-0078, RECOMBINER A DISCHARGE VALVE MTR-OPR
BFN-3-FLT-018-0788BR16	BFN-3-FLT-018-0788BR16, FILTER INJECTOR RETURN
BFN-3-VTV-078-0574	BFN-3-VTV-078-0574, A HX INLET VENT VLV
BFN-3-FSV-078-0036	BFN-3-FSV-078-0036, FUEL POOL F/D C VESSEL VENT VLV
BFN-3-30X-078-0010	BFN-3-30X-078-0010, FPC PUMP 3A CONT CKT AUX ANN RELAY 30X
BFN-3-RLY-078-CR17C	BFN-3-RLY-078-CR17C, FPC DEMIN C HOLDING PMPCONTROL RLY
BFN-3-30X-078-0015	BFN-3-30X-078-0015, FPC PUMP 3B CONT CKT AUX ANN RELAY 30X
BFN-3-FCV-078-0065	BFN-3-FCV-078-0065, F/D BYPASS ISOL VALVE B
BFN-3-MVOP-078-0063	BFN-3-MVOP-078-0063, F/D INFLUENT INBOARD ISOL VLV
BFN-3-FU1-078-0007A	BFN-3-FU1-078-0007A, 19AF10
BFN-3-CKV-078-0533	BFN-3-CKV-078-0533, SURGE TANK CNDS SPLY CK VLV
BFN-3-FLT-018-0788BR10	BFN-3-FLT-018-0788BR10, FILTER INJECTOR RETURN
BFN-3-VTV-078-0032	BFN-3-VTV-078-0032, VENT VALVE FOR 3-PI-78-32
BFN-3-VTV-078-0030	BFN-3-VTV-078-0030, VENT VALVE FOR 3-PI-78-30
BFN-3-VTV-078-0014	BFN-3-VTV-078-0014, VENT VLV FOR 3-PS-78-14
BFN-3-VTV-078-0016	BFN-3-VTV-078-0016, VENT VLV FOR 3-PS-78-16
BFN-3-VTV-078-0011	BFN-3-VTV-078-0011, VENT VLV FOR 3-PS-78-11
BFN-3-MVOP-078-0065	BFN-3-MVOP-078-0065, F/D BYPASS ISOL VALVE B
BFN-3-FLT-018-0788BR18	BFN-3-FLT-018-0788BR18, FILTER INJECTOR RETURN
BFN-3-PS-078-0009	BFN-3-PS-078-0009, FUEL POOL COOL PUMP A NPSH LOW INTERLOCK
BFN-3-FCV-078-0063	BFN-3-FCV-078-0063, F/D INFLUENT INBOARD ISOL VLV
BFN-3-FCV-078-0067	BFN-3-FCV-078-0067, REACTOR WELL INFLUENT OUTBOARD VALVE
BFN-3-HS-078-0061A	BFN-3-HS-078-0061A, POOL MAKEUP FROM RHR INBOARD VLV
BFN-3-FCV-001-0078	BFN-3-FCV-001-0078, MAIN STEAM STOP VLV 2
BFN-3-MVOP-078-0061	BFN-3-MVOP-078-0061, POOL MAKEUP FROM RHR INBOARD VALVE
BFN-3-FCV-027-0078	BFN-3-FCV-027-0078, COND 3C CCW OUTLET SOV SS

BFN-3-TE-068-0078	BFN-3-TE-068-0078, RECIRC PUMP B DISCH TEMP
BFN-3-FLT-018-0788BR14	BFN-3-FLT-018-0788BR14, FILTER INJECTOR RETURN
BFN-3-FSV-078-0038	BFN-3-FSV-078-0038, FUEL POOL F/D C HEAD VENT VLV
BFN-3-FCV-066-0078	BFN-3-FCV-066-0078, RECOMBINER 3A DISCHARGE
BFN-3-CKV-078-0567	BFN-3-CKV-078-0567, STG POOL DR CK VLV
BFN-3-XA-078-0051	BFN-3-XA-078-0051, FUEL POOL SYSTEM ABNORMAL
BFN-3-JBOX-078-4287	BFN-3-JBOX-078-4287, JBOX, SR16/639 RB (SEALED)
BFN-3-TW-003-0078B	BFN-3-TW-003-0078B, RFW TEMP TO REACTOR LINE B
BFN-3-ZS-078-0042B	BFN-3-ZS-078-0042B, LIMIT SW, FUEL POOL F/D INLET VLV CLOSE
BFN-3-@V-078-2788	BFN-3-@V-078-2788, FUEL POOL FILTER DEMIN BYPASS V SUP
BFN-3-TW-078-0020	BFN-3-TW-078-0020, FUEL POOL F/D INFLUENT TEMP
BFN-3-FCV-078-0038	BFN-3-FCV-078-0038, FUEL POOL F/D C HEAD VENT VLV
BFN-3-ZI-001-0078	BFN-3-ZI-001-0078, MAIN STEAM STOP VLV 2 POSITION INDICATOR
BFN-3-ZI-047-0078	BFN-3-ZI-047-0078, MSV-2 PILOT POSITION (OCP #1) (IND6)
BFN-3-LS-078-0002A	BFN-3-LS-078-0002A, FUEL STORAGE POOL LEVEL HIGH
BFN-3-DRV-078-0549	BFN-3-DRV-078-0549, RX WELL LINER LEAKAGE DR VLV
BFN-3-HS-078-0064B	BFN-3-HS-078-0064B, F/D INFLUENT OUTBOARD ISOL VLV
BFN-3-RTV-078-0210A	BFN-3-RTV-078-0210A, RT VLV TO FT-78-24L
BFN-3-@V-078-2784	BFN-3-@V-078-2784, FUEL POOL FILTER DEMIN OUTBD ISOL V CONT
BFN-3-RTV-075-0078BA	BFN-3-RTV-075-0078BA, PSC WTR HD TK HIGH LS RT VLV
BFN-3-ISIV-078-0024L	BFN-3-ISIV-078-0024L, LOW SIDE MANIFOLD ISOL VLV TO 3-FT-78-24
BFN-3-ISIV-078-0022L	BFN-3-ISIV-078-0022L, LOW SIDE MANIFOLD ISOL VLV TO 3-PDIS-78-22
BFN-3-ISIV-078-0021L	BFN-3-ISIV-078-0021L, LOW SIDE MANIFOLD ISOL VLV TO 3-PDT-78-21
BFN-3-DRV-078-0547	BFN-3-DRV-078-0547, DRYER/SEP STORAGE LINER LKG DRV
BFN-3-FCV-078-0036	BFN-3-FCV-078-0036, FUEL POOL F/D VESSEL VENT VLV
BFN-3-PI-078-0021A	BFN-3-PI-078-0021A, FUEL POOL F/D C VESSEL INFLUENT PRESS
BFN-3-@V-078-2782	BFN-3-@V-078-2782, FUEL POOL FILTER DEMIN OUTBD ISOL V CONT
BFN-3-FI-078-0024B	BFN-3-FI-078-0024B, FUEL POOL F/D C EFFLUENT FLOW

BFN-3-PDT-078-0021	BFN-3-PDT-078-0021, FUEL POOL F/D C VESSEL D/P
BFN-3-ZS-078-0007A	BFN-3-ZS-078-0007A, LIMIT SW, DR VLV TO MAIN CNDR OPEN
BFN-3-MTR-078-0015	BFN-3-MTR-078-0015, FUEL POOL COOLING & CLEAN-UP PUMP B
BFN-3-IL-076-0078	BFN-3-IL-076-0078, H2 ANALYZER 3A LOSS OF FLOW
BFN-3-ZS-078-0042A	BFN-3-ZS-078-0042A, LIMIT SW, FUEL POOL F/D INLET VLV OPEN
BFN-3-TW-003-0078A	BFN-3-TW-003-0078A, RFW TEMP TO REACTOR LINE A
BFN-3-FS-078-0051	BFN-3-FS-078-0051, REFUELING BELLOWS LEAKAGE EXCESSIVE
BFN-3-FCV-078-0033	BFN-3-FCV-078-0033, FUEL POOL F/D C HOLDING VLV
BFN-3-PI-078-0021B	BFN-3-PI-078-0021B, FUEL POOL F/D C VESSEL EFFLUENT PRESS
BFN-3-PDA-078-0022	BFN-3-PDA-078-0022, FUEL POOL F/D C RESIN TRAP D/P HIGH
BFN-3-@V-078-2785	BFN-3-@V-078-2785, FUEL POOL FILTER DEMIN OUTBD ISOL V CONT
BFN-3-@R-001-0782	BFN-3-@R-001-0782, MAIN STM LINE D REL VLV TEMP RECD, TR-1-1
BFN-3-RTV-075-0078BB	BFN-3-RTV-075-0078BB, PSC WTR HD TK HIGH LS RT VLV
BFN-3-@R-001-0785	BFN-3-@R-001-0785, MAIN STM LINE C REL VLV TEMP RECD, TR-1-1
BFN-3-JBOX-078-1145	BFN-3-JBOX-078-1145, ON PNL 25-37 QR17/639 RB
BFN-3-HS-078-0064A	BFN-3-HS-078-0064A, FILTER DEMIN OUTBD ISOL VALVE
BFN-3-@V-078-2789	BFN-3-@V-078-2789, FUEL POOL FILTER DEMIN BYPASS V CONT
BFN-3-PDM-078-0021	BFN-3-PDM-078-0021, FUEL POOL F/D C VESSEL D/P P/E
BFN-3-@RP-085-1078/G2	BFN-3-@RP-085-1078/G2, GROUP 2 PILOT SCRAM VLV SOLENOID
BFN-3-PISV-078-0021A	BFN-3-PISV-078-0021A, PANEL ISOL VLV TO 3-PI-78-21A
BFN-3-@V-078-2781	BFN-3-@V-078-2781, FUEL POOL FILTER DEMIN OUTBD ISOL V SUP
BFN-3-DRIV-078-0021A	BFN-3-DRIV-078-0021A, INSTR DRAIN VLV FOR 3-PI-78-21A
BFN-3-ZS-078-0007B	BFN-3-ZS-078-0007B, LIMIT SW, DR VLV TO MAIN CNDR CLOSE
BFN-3-STN-075-0078	BFN-3-STN-075-0078, PSC HEAD TANK VENT STRAINER
BFN-3-FI-078-0024A	BFN-3-FI-078-0024A, FUEL POOL F/D C EFFLUENT FLOW
BFN-3-@RP-085-0789/G3	BFN-3-@RP-085-0789/G3, GROUP 3 PILOT SCRAM VLV SOLENOID
BFN-3-RLY-078-0R3C	BFN-3-RLY-078-0R3C, FPC VESSEL C FLOW LOW
BFN-3-LS-078-0002B	BFN-3-LS-078-0002B, FUEL STORAGE POOL LEVEL LOW

BFN-3-FCV-078-0035	BFN-3-FCV-078-0035, FUEL POOL F/D C BACKWASH DRAIN VLV
BFN-3-@V-078-2783	BFN-3-@V-078-2783, FUEL POOL FILTER DEMIN OUTBD ISOL V CONT
BFN-3-RTV-078-0227A	BFN-3-RTV-078-0227A, RT VLV TO PIS-78-11
BFN-3-MTR-078-0010	BFN-3-MTR-078-0010, FUEL POOL COOLING & CLEAN UP PUMP 3A
BFN-3-ISIV-078-0024C	BFN-3-ISIV-078-0024C, INSTR ISOL VLV FOR 3-FM-78-24C
BFN-3-ISIV-078-0021C	BFN-3-ISIV-078-0021C, INSTR ISOL VLV FOR 3-PDS-78-21
BFN-3-ISIV-078-0001C	BFN-3-ISIV-078-0001C, INSTR ISOL VLV FOR LS-78-1C
BFN-3-BKR-078-0031C	BFN-3-BKR-078-0031C, FUEL POOL DEMIN HOLD PMP C SUPPLY
BFN-3-LS-075-0078D	BFN-3-LS-075-0078D, PRESS SUPPR CHBR HEAD TANK LEVEL
BFN-3-@V-078-2825	BFN-3-@V-078-2825, F POOL MAKEUP RHR THROTTLING INBD V SUP
BFN-3-LS-075-0078B	BFN-3-LS-075-0078B, PRESS SUPPR CHBR HEAD TANK LEVEL
BFN-3-TW-067-0078A	BFN-3-TW-067-0078A, COOLING WATER TO CONT ROOM CHILLER A
BFN-3-FE-067-0078	BFN-3-FE-067-0078, COOLING WATER FROM CONT ROOM CHILLER A
BFN-3-@A-078-6678	BFN-3-@A-078-6678, SKIMMER SURGE TANK LEVEL ALARM
BFN-3-FG-078-0029	BFN-3-FG-078-0029, FUEL POOL F/D C CHEM DRAIN FLOW
BFN-3-@V-078-2827	BFN-3-@V-078-2827, F POOL MAKEUP RHR THROTTLING INBD V CONT
BFN-3-FU2-078-0063A	BFN-3-FU2-078-0063A, INDICATING LIGHT
BFN-3-TW-067-0078B	BFN-3-TW-067-0078B, COOLING WATER FROM CONT ROOM CHILLER A
BFN-3-TTIV-078-0011	BFN-3-TTIV-078-0011, INSTR TEST VLV FOR LI-78-11
BFN-3-TTIV-078-0014	BFN-3-TTIV-078-0014, INSTR TEST VLV TO 3-PS-78-14
BFN-3-TTIV-078-0016	BFN-3-TTIV-078-0016, INSTR TEST VLV TO 3-PS-78-16
BFN-3-@V-078-2826	BFN-3-@V-078-2826, F POOL MAKEUP RHR THROTTLING INBD V CONT
BFN-3-@A-078-6677	BFN-3-@A-078-6677, FUEL POOL COOLING ALARMS
BFN-3-LS-075-0078C	BFN-3-LS-075-0078C, PRESS SUPPR CHBR HEAD TANK LEVEL
BFN-3-DRIV-078-0021H	BFN-3-DRIV-078-0021H, HIGH SIDE INSTR DRAIN VLV FOR 3-PDT-78-21
BFN-3-TTIV-078-0021	BFN-3-TTIV-078-0021, INSTR TEST VLV FOR 3-PDM-78-21
BFN-3-DRIV-078-0022H	BFN-3-DRIV-078-0022H, HIGH SIDE INSTR DRAIN VLV FOR 3-PDIS-78- 22
BFN-3-DRIV-078-0024H	BFN-3-DRIV-078-0024H, HIGH SIDE INSTR DRAIN VLV 3-FT-78-24

BFN-3-ZS-078-0028A	BFN-3-ZS-078-0028A, FUEL POOL F/D C PRECOAT/BACKWASH VLV OPEN
BFN-3-TE-078-0020	BFN-3-TE-078-0020, FPC HX HDR OUTLET TEMP
BFN-3-TTIV-078-0004	BFN-3-TTIV-078-0004, INSTR TEST VLV FOR LI-78-4
BFN-3-@PLR-078-2442	BFN-3-@PLR-078-2442, SKIMMER SURGE TANK LEVEL ALARM
BFN-3-@ES-075-0786/I	BFN-3-@ES-075-0786/I, CS LOGIC CONTROL, DIV I
BFN-3-@FE-026-1078	BFN-3-@FE-026-1078, FIRE DET SIG CABLE TO 3-SDET-026-0082AL
BFN-3-LS-075-0078A	BFN-3-LS-075-0078A, PRESS SUPPR CHBR HEAD TANK LEVEL
BFN-3-@PLR-078-2426	BFN-3-@PLR-078-2426, CABLE TO 3-FS-078-0051
BFN-3-@NM-092-0078/IB	BFN-3-@NM-092-0078/IB, CABLE, NEUTRON MONITORING SYSTEM
BFN-3-FU2-078-0063B	BFN-3-FU2-078-0063B, CONTROL CIRCUIT
BFN-3-VTV-078-0021L	BFN-3-VTV-078-0021L, VENT FOR 3-PI-78-21B & 3-PDT-78-21 LOW SIDE
BFN-3-VTV-078-0022L	BFN-3-VTV-078-0022L, VENT VLV FOR 3-PDIS-78-22 LOW SIDE
BFN-3-@V-078-2854	BFN-3-@V-078-2854, F POOL FILTER DEMIN INBD ISOL V CONT
BFN-3-PREG-078-0021	BFN-3-PREG-078-0021, PRESSURE REGULATOR TO 3-PDT-78-21
BFN-3-@RP-085-0786/G3	BFN-3-@RP-085-0786/G3, GROUP 3 PILOT SCRAM VLV SOLENOID
BFN-3-FLV-090-0784	BFN-3-FLV-090-0784, PURGE WATER FLUSH VLV
BFN-3-FLT-018-0787AR17	BFN-3-FLT-018-0787AR17, FILTER INJECTOR SUPPLY
BFN-3-FA-078-0024A	BFN-3-FA-078-0024A, VESSEL C FLOW LOW
BFN-3-VTV-078-0542	BFN-3-VTV-078-0542, PUMP B VENT VLV
BFN-3-FLT-018-0787AR13	BFN-3-FLT-018-0787AR13, FILTER INJECTOR SUPPLY
BFN-3-DRV-078-0577	BFN-3-DRV-078-0577, A HX OUTL DR VLV TO CRW
BFN-3-FU2-078-0064A	BFN-3-FU2-078-0064A, INDICATING LIGHT
BFN-3-ISIV-078-0001E	BFN-3-ISIV-078-0001E, INSTR ISOL VLV FOR LS-78-1E
BFN-3-ŞCR-003-0787A	BFN-3-ŞCR-003-0787A, SPLICE, IN JB 9165
BFN-3-FLT-018-0787AR15	BFN-3-FLT-018-0787AR15, FILTER INJECTOR RETURN
BFN-3-DRIV-078-0021B	BFN-3-DRIV-078-0021B, INSTR DRAIN VLV FOR 3-PI-78-21B
BFN-3-ISIV-078-0024E	BFN-3-ISIV-078-0024E, INSTR ISOL VLV FOR 3-FS-78-24
BFN-3-DRV-078-0579	BFN-3-DRV-078-0579, DEMIN SPLY DR VLV TO CRW
BFN-3-FLT-018-0787AR19	BFN-3-FLT-018-0787AR19, FILTER INJECTOR SUPPLY
BFN-3-@PL-078-0693	BFN-3-@PL-078-0693, FUEL POOL COOLING PUMP 3A CONTROL

BFN-3-FLT-018-0787AR11	BFN-3-FLT-018-0787AR11, FILTER INJECTOR SUPPLY
BFN-3-JBOX-078-4137	BFN-3-JBOX-078-4137, EL 639' V1-V1 (SEALED)
BFN-3-FLT-018-0787A	BFN-3-FLT-018-0787A, FILTER INJECTOR SUPPLY
BFN-3-FLT-018-0787AR12	BFN-3-FLT-018-0787AR12, FILTER INJECTOR RETURN
BFN-3-DRV-078-0576	BFN-3-DRV-078-0576, B HX OUTLET DR VLV TO CRW
BFN-3-DRV-043-2078	BFN-3-DRV-043-2078, WTR SMPL HW,CD,RFW OIC CONT AIR SPLY ACCUM DRN
BFN-3-PISV-078-0004	BFN-3-PISV-078-0004, PANEL ISOL VLV FOR LI-78-4
BFN-3-PDS-078-0021	BFN-3-PDS-078-0021, FUEL POOL F/D C VESSEL D/P
BFN-3-PISV-078-0024	BFN-3-PISV-078-0024, PANEL ISOL VLV TO 3-FQ-78-24
BFN-3-FU2-078-0064B	BFN-3-FU2-078-0064B, CONTROL CIRCUIT
BFN-3-DRV-078-0572	BFN-3-DRV-078-0572, PUMP A DISCH DR TO CRW
BFN-3-FLT-018-0787AR16	BFN-3-FLT-018-0787AR16, FILTER INJECTOR RETURN
BFN-3-FSV-078-0007	BFN-3-FSV-078-0007, DRAIN VLV TO MAIN CONDENSER
BFN-3-@PL-078-0694	BFN-3-@PL-078-0694, FUEL POOL COOLING PUMP 3A CONTROL
BFN-3-PREG-078-0026	BFN-3-PREG-078-0026, PRESSURE REGULATOR TO 3-FSV-78-26
BFN-3-SCR-092-0078A	BFN-3-SCR-092-0078A, SPLICE, IN JB 9165
BFN-3-PISV-078-0011	BFN-3-PISV-078-0011, PANEL ISOL VLV FOR LI-78-11
BFN-3-PISV-078-0014	BFN-3-PISV-078-0014, PANEL ISOL VLV TO 3-PS-78-14
BFN-3-PISV-078-0016	BFN-3-PISV-078-0016, PANEL ISOL VLV TO 3-PS-78-16
BFN-3-TI-024-0078	BFN-3-TI-024-0078, RCW TO RBCCW HT EXCH A
BFN-3-DRV-078-0578	BFN-3-DRV-078-0578, DEMIN BYP DR VLV TO CRW
BFN-3-FLT-018-0787AR18	BFN-3-FLT-018-0787AR18, FILTER INJECTOR RETURN
BFN-3-@PL-078-0692	BFN-3-@PL-078-0692, FUEL POOL COOLING PUMP 3A CONTROL
BFN-3-FLV-026-0781	BFN-3-FLV-026-0781, FLUSH TO DISCH CULVERT TURB HD END
BFN-3-FU1-078-0042A	BFN-3-FU1-078-0042A, FUSE, INLET & OUTLET FSV
BFN-3-@V-078-2853	BFN-3-@V-078-2853, F POOL FILTER DEMIN INBD ISOL V CONT
BFN-3-DRV-078-0570	BFN-3-DRV-078-0570, DR VLV TO CONDENSER
BFN-3-FLT-018-0787AR10	BFN-3-FLT-018-0787AR10, FILTER INJECTOR RETURN
BFN-3-VTV-078-0543	BFN-3-VTV-078-0543, PUMP A VENT VLV

BFN-3-FLT-018-0787AR14	BFN-3-FLT-018-0787AR14, FILTER INJECTOR RETURN
BFN-3-FA-078-0024B	BFN-3-FA-078-0024B, VESSEL C FLOW LOW
BFN-3-PREG-078-0024	BFN-3-PREG-078-0024, PRESSURE REGULATOR TO 3-FT-78-24
BFN-3-FM-078-0024B	BFN-3-FM-078-0024B, FUEL POOL F/D C EFFLUENT FLOW E/P
BFN-3-FU2-078-0065B	BFN-3-FU2-078-0065B, CONTROL CIRCUIT
BFN-3-FCV-078-0042	BFN-3-FCV-078-0042, FUEL POOL F/D D UNIT3 INLET VLV
BFN-3-FLT-018-0787AR20	BFN-3-FLT-018-0787AR20, FILTER INJECTOR RETURN
BFN-3-HS-078-0063B	BFN-3-HS-078-0063B, F/D INFLUENT INBOARD ISOL VLV
BFN-3-FCV-078-0048	BFN-3-FCV-078-0048, FUEL POOL F/D C BACKWASH AIR SUPPLY VLV
BFN-3-PDI-078-0021	BFN-3-PDI-078-0021, FUEL POOL F/D C VESSEL D/P
BFN-3-@RP-085-0782/G3	BFN-3-@RP-085-0782/G3, GROUP 3 PILOT SCRAM VLV SOLENOID
BFN-3-FSV-078-0019	BFN-3-FSV-078-0019, FUEL POOL F/D C INFLUENT VLV
BFN-3-FCV-078-0045	BFN-3-FCV-078-0045, FUEL POOL F/D D UNIT3 OUTLET VLV
BFN-3-ISIV-078-0024H	BFN-3-ISIV-078-0024H, HIGH SIDE MANIFOLD ISOL VLV TO 3-FT-78-24
BFN-3-ISIV-078-0022H	BFN-3-ISIV-078-0022H, HIGH SIDE PANEL ISOL VLV TO 3-PDIS-78-22
BFN-3-ISIV-078-0021H	BFN-3-ISIV-078-0021H, HIGH SIDE MANIFOLD ISOL VLV TO 3-PDT-78-21
BFN-3-SCR-003-0784A	BFN-3-SCR-003-0784A, SPLICE, IN JB 9165
BFN-3-FM-078-0024A	BFN-3-FM-078-0024A, FUEL POOL F/D C EFFLUENT FLOW SQ RT
BFN-3-MTR-078-0066	BFN-3-MTR-078-0066, F/D BYPASS ISOL VALVE A MTR
BFN-3-MTR-078-0062	BFN-3-MTR-078-0062, POOL MAKEUP FROM RHR OUTBD VLV MTR
BFN-3-MTR-078-0064	BFN-3-MTR-078-0064, F/D INFLUENT OUTBOARD ISO VLV MTR
BFN-3-FU2-078-0065A	BFN-3-FU2-078-0065A, INDICATING LIGHT
BFN-3-MTR-078-0063	BFN-3-MTR-078-0063, F/D INFLUENT INBOARD ISOL VLV MTR
BFN-3-MTR-078-0067	BFN-3-MTR-078-0067, REACTOR WELL INFLUENT OUTBOARD VLV NTR
BFN-3-MTR-078-0061	BFN-3-MTR-078-0061, POOL MAKEUP FROM RHR INBD VLV MTR
BFN-3-MTR-078-0065	BFN-3-MTR-078-0065, F/D INFLUENT OUTBOARD ISO VLV MTR
BFN-3-HS-078-0063A	BFN-3-HS-078-0063A, FILTER DEMIN INBD ISOL VALVE
BFN-3-FM-078-0024C	BFN-3-FM-078-0024C, FUEL POOL F/D C EFFLUENT FLOW P/E
BFN-3-MTR-078-0031	BFN-3-MTR-078-0031, FUEL POOL HOLDING PUMP C MOTOR
BFN-3-RTV-078-0212A	BFN-3-RTV-078-0212A, RT VLV TO PI-78-32

BFN-3-DRV-070-0786	BFN-3-DRV-070-0786, DRAIN FOR 3-LG-70-2
BFN-3-FG-078-0039	BFN-3-FG-078-0039, FUEL POOL F/D C HEAD VENT FLOW
BFN-3-@V-078-2833	BFN-3-@V-078-2833, F POOL FILTER DEMIN INBD ISOL V CONT
BFN-3-HS-078-0019A	BFN-3-HS-078-0019A, FUEL POOL F/D C INFLUENT VLV
BFN-3-CMP-043-2078	BFN-3-CMP-043-2078, WTR SMPL HW,CD,RFW OIC CONT AIR SPLY COMPRESS
BFN-3-@V-078-2835	BFN-3-@V-078-2835, F POOL FILTER DEMIN INBD ISOL V CONT
BFN-3-TNK-078-0757	BFN-3-TNK-078-0757, SKIMMER SURGE TANK B
BFN-3-DRV-067-0784	BFN-3-DRV-067-0784, SD BD RM CHLR 3B-1 SPLY STNR DRAIN
BFN-3-CKV-078-0545	BFN-3-CKV-078-0545, RX WELL DIFFUSER A SPLYCK VLV
BFN-3-DRV-026-0780	BFN-3-DRV-026-0780, STNR DRAIN TO DISCH CULVERT TURB HD END
BFN-3-TTIV-078-0009	BFN-3-TTIV-078-0009, INSTR TEST VLV TO 3-PS-78-9
BFN-3-@V-078-2831	BFN-3-@V-078-2831, F POOL FILTER DEMIN INBD ISOL V SUP
BFN-3-FG-078-0037	BFN-3-FG-078-0037, FUEL POOL F/D C VESSEL VENT FLOW
BFN-3-@V-078-2839	BFN-3-@V-078-2839, F POOL FILTER DEMIN BYPASS V CONT
BFN-3-DRV-026-0788	BFN-3-DRV-026-0788, DRAIN TO TB FLOOR DRAIN SUMP MAIN TURB OIL
BFN-3-DRV-026-0789	BFN-3-DRV-026-0789, DRAIN TO TB FLOOR DRAIN SUMP MAIN TURB OIL
BFN-3-@V-078-2838	BFN-3-@V-078-2838, F POOL FILTER DEMIN BYPASS V SUP
BFN-3-CKV-078-0546	BFN-3-CKV-078-0546, RX WELL DIFFUSER B SPLYCK VLV
BFN-3-@V-078-2834	BFN-3-@V-078-2834, F POOL FILTER DEMIN INBD ISOL V CONT
BFN-3-TTIV-078-0001B	BFN-3-TTIV-078-0001B, INSTR TEST VLV FOR LS-78-1B
BFN-3-@V-078-2832	BFN-3-@V-078-2832, F POOL FILTER DEMIN INBD ISOL V CONT
BFN-3-HS-078-0019B	BFN-3-HS-078-0019B, FUEL POOL F/D C INFLUENT VLV
BFN-3-TNK-078-0756	BFN-3-TNK-078-0756, SKIMMER SURGE TANK A
BFN-3-TNK-075-0078	BFN-3-TNK-075-0078, PSC WATER HEAD TANK
BFN-3-TE-002-0078	BFN-3-TE-002-0078, CNDS FROM HEATER A4
BFN-3-TE-006-0078	BFN-3-TE-006-0078, MOISTURE SEP DRAINS TO HTR B2
BFN-3-PS-078-0014	BFN-3-PS-078-0014, FUEL POOL COOL PUMP B NPSH LOW INTERLOCK
BFN-3-VTV-078-0009	BFN-3-VTV-078-0009, VENT VLV FOR 3-PS-78-9
BFN-3-HS-069-0078	BFN-3-HS-069-0078, PRECOAT RECYCLE VLV

BFN-3-@V-078-2828	BFN-3-@V-078-2828, F POOL MAKEUP RHR THROTTLING INBD V CONT
BFN-3-PI-043-2078A	BFN-3-PI-043-2078A, WTR SMPL HW,CD,RFW OIC CONT AIR SPLY ACCUM PI
BFN-3-VTV-024-1078	BFN-3-VTV-024-1078, RB CCW CLR B RCW VENT VLV
BFN-3-TTIV-078-0001A	BFN-3-TTIV-078-0001A, INSTR TEST VLV FOR LS-78-1A
BFN-3-@A-078-2274	BFN-3-@A-078-2274, CABLE TO 3-FS-078-0051
BFN-3-THV-078-0015A	BFN-3-THV-078-0015A, FPC PMP 3B STUFFING BOX INL THROT VLV
BFN-3-TTIV-078-0024A	BFN-3-TTIV-078-0024A, INSTR TEST VLV FOR 3-FM-78-24A
BFN-3-PIS-078-0011	BFN-3-PIS-078-0011, FUEL POOL COOL PUMP A DISCHARGE PRESS. LOW
BFN-3-PDA-078-0021A	BFN-3-PDA-078-0021A, FUEL POOL F/D C VESSEL D/P HIGH
BFN-3-PIS-078-0016	BFN-3-PIS-078-0016, FUEL POOL COOL PUMP B DISCHARGE PRESS. LOW
BFN-3-PI-043-2078B	BFN-3-PI-043-2078B, WTR SMPL HW,CD,RFW OIC CONTROL AIR SPLY PI
BFN-3-PMP-078-0031	BFN-3-PMP-078-0031, FUEL POOL HOLDING PUMP C
BFN-3-TE-078-0008	BFN-3-TE-078-0008, SKIMMER SURGE TANK DISCHARGE TEMP
BFN-3-@C-094-0078	BFN-3-@C-094-0078, CABLE, TIP CH D, 28V DC, DIGITAL BUS
BFN-3-@V-078-2851	BFN-3-@V-078-2851, F POOL FILTER DEMIN INBD ISOL V CONT
BFN-3-PDA-078-0021B	BFN-3-PDA-078-0021B, FUEL POOL F/D C VESSEL D/P HIGH
BFN-3-THV-078-0015B	BFN-3-THV-078-0015B, FPC PMP 3B STUFFING BOX INL THROT VLV
BFN-3-@V-078-2792	BFN-3-@V-078-2792, FUEL POOL FILTER DEMIN BYPASS V CONT
BFN-3-BKR-078-0015	BFN-3-BKR-078-0015, FUEL POOL COOLING PMP 3B 480 SD BD 3B/7C
BFN-3-SHV-078-0717	BFN-3-SHV-078-0717, C F/D EFFLUENT SHUTOFF VLV
BFN-3-DRV-078-0557	BFN-3-DRV-078-0557, GATE SLOT DRAIN VLV TO DR HDR
BFN-3-JBOX-078-4112	BFN-3-JBOX-078-4112, EL 621.25 J1-J1 (SEALED)
BFN-3-RTV-078-0208A	BFN-3-RTV-078-0208A, RT VLV TO PDIS-78-22L
BFN-3-DRV-078-0553	BFN-3-DRV-078-0553, RX WELL DR VLV TO CRW
BFN-3-DRV-078-0714	BFN-3-DRV-078-0714, C F/D EFFLUENT CHEM DR VLV
BFN-3-DRV-078-0551	BFN-3-DRV-078-0551, SEAL RUPTURE DR VLV TO CNDR
BFN-3-DRV-078-0559	BFN-3-DRV-078-0559, DRYER/SEP STORAGE POOL DR TO DR HDR
BFN-3-TW-078-0034	BFN-3-TW-078-0034, FUEL POOL F/D C INFLUENT TEMP HIGH

BFN-3-@V-078-2790	BFN-3-@V-078-2790, FUEL POOL FILTER DEMIN BYPASS V CONT
BFN-3-SHV-078-0715	BFN-3-SHV-078-0715, C HOLDING PUMP SUCT SHUTOFF VLV
BFN-3-DRV-078-0555	BFN-3-DRV-078-0555, REACTOR WELL DR VLV
BFN-3-DRV-078-0719	BFN-3-DRV-078-0719, C RESIN TRAP DR SHUTOFF VLV
BFN-3-RLY-078-0R2C	BFN-3-RLY-078-0R2C, FPC VESSEL C DRAIN RELAY
BFN-3-BKR-078-0010	BFN-3-BKR-078-0010, FUEL POOL COOL PMP 3A 480 SD BD 3A/7C
BFN-3-@V-078-2791	BFN-3-@V-078-2791, FUEL POOL FILTER DEMIN BYPASS V CONT
BFN-3-DRIV-078-0024L	BFN-3-DRIV-078-0024L, LOW SIDE INSTR DRAIN VLV FOR 3-FT-78-24
BFN-3-DRIV-078-0022L	BFN-3-DRIV-078-0022L, LOW SIDE INSTR DRAIN VLV FOR 3-PDIS-78-22
BFN-3-DRIV-078-0021L	BFN-3-DRIV-078-0021L, LOW SIDE INSTR DRAIN VLV FOR 3-PDT-78-21
BFN-3-DRV-078-0713	BFN-3-DRV-078-0713, C F/D INFLUENT CHEM DR VLV
BFN-3-DRV-078-0554	BFN-3-DRV-078-0554, GATE SLOT DR VLV TO 3-FIS-78-5
BFN-3-FSV-078-0035A	BFN-3-FSV-078-0035A, FUEL POOL F/D C BACKWASH DRAIN VLV
BFN-3-DRV-078-0558	BFN-3-DRV-078-0558, RX WELL AND GATE SLOT DR VLV TO DR HDR
BFN-3-SHV-078-0718	BFN-3-SHV-078-0718, C RESIN TRAP BW CNDS SHUTOFF VLV
BFN-3-FU1-078-25-016A	BFN-3-FU1-078-25-016A, 19AF7
BFN-3-ZS-078-0045A	BFN-3-ZS-078-0045A, LIMIT SW, FUEL POOL F/D OUTLET VLV OPEN
BFN-3-SHV-078-0511	BFN-3-SHV-078-0511, HX A-OUTLET VLV
BFN-3-DRV-078-0514	BFN-3-DRV-078-0514, HX A-CRW DR VLV
BFN-3-PMP-018-0780C	BFN-3-PMP-018-0780C, ENGINE DRIVEN FUEL OIL PUMP
BFN-3-@ES-075-0787/I	BFN-3-@ES-075-0787/I, CS LOGIC CONTROL, DIV I
BFN-3-@CR-261-2078	BFN-3-@CR-261-2078, CABLE, ICS MULTIPLEXER PWR
BFN-3-IL-078-0001AB	BFN-3-IL-078-0001AB, SKIMMER SURGE TANK LEVEL HIGH (19A-DS22)
BFN-3-RTV-078-0228A	BFN-3-RTV-078-0228A, RT VLV TO PS-78-14
BFN-3-PMP-018-0780A	BFN-3-PMP-018-0780A, ENGINE DRIVEN FUEL OIL PUMP
BFN-3-DRV-074-0787A	BFN-3-DRV-074-0787A, RHR DRAIN PMP A DISCH DRAIN VLV
BFN-3-SHV-078-0510	BFN-3-SHV-078-0510, HX B-OUTLET VLV
BFN-3-PMP-018-0780D	BFN-3-PMP-018-0780D, ENGINE DRIVEN FUEL OIL PUMP
BFN-3-DRV-078-0513	BFN-3-DRV-078-0513, HX B-CRW DR VLV
BFN-3-PISV-078-0022L	BFN-3-PISV-078-0022L, LOW SIDE PANEL ISOL VLV TO 3-PDIS-78-22

BFN-3-PISV-078-0024L	BFN-3-PISV-078-0024L, LOW SIDE PANEL ISOL VLV TO 3-FT-78-24
BFN-3-PISV-078-0021L	BFN-3-PISV-078-0021L, LOW SIDE PANEL ISOL VLV TO 3-PDT-78-21
BFN-3-DRV-078-0519	BFN-3-DRV-078-0519, DEMIN EFFL TO DRW DR VLV
BFN-3-ZS-078-0045B	BFN-3-ZS-078-0045B, LIMIT SW, FUEL POOL F/D OUTLET VLV CLOSE
BFN-3-FS-078-0024	BFN-3-FS-078-0024, FPC F/D C FLOW LOW
BFN-3-DRV-074-0787B	BFN-3-DRV-074-0787B, RHR DRAIN PMP B DISCH DRAIN VLV
BFN-3-PMP-018-0780B	BFN-3-PMP-018-0780B, ENGINE DRIVEN FUEL OIL PUMP
BFN-3-FLT-018-0787AL10	BFN-3-FLT-018-0787AL10, FILTER INJECTOR RETURN
BFN-3-HS-078-0015B	BFN-3-HS-078-0015B, FUEL POOL COOLING PUMP B
BFN-3-HS-078-0038	BFN-3-HS-078-0038, FUEL POOL F/D C HEAD VENT VLV
BFN-3-FLT-018-0787AL18	BFN-3-FLT-018-0787AL18, FILTER INJECTOR RETURN
BFN-3-FLT-018-0787AL14	BFN-3-FLT-018-0787AL14, FILTER INJECTOR RETURN
BFN-3-RLY-078-19A-K6A	BFN-3-RLY-078-19A-K6A, LOW SURGE TNK LEVEL ISOLATION RELAY
BFN-3-FLT-018-0787AL16	BFN-3-FLT-018-0787AL16, FILTER INJECTOR RETURN
BFN-3-IL-078-0001B/CA	BFN-3-IL-078-0001B/CA, SKIMMER SURGE TANK LEVEL LOW (19A-DS18)
BFN-3-HS-078-0031A	BFN-3-HS-078-0031A, FUEL POOL F/D C HOLDING PUMP
BFN-3-FU2-078-0061A	BFN-3-FU2-078-0061A, INDICATING LIGHT
BFN-3-CKV-078-0586	BFN-3-CKV-078-0586, FPC TO COND HDR CK VLV
BFN-3-FLT-018-0787AL12	BFN-3-FLT-018-0787AL12, FILTER INJECTOR RETURN
BFN-3-HS-078-0036	BFN-3-HS-078-0036, FUEL POOL F/D C VESSEL VENT VLV
BFN-3-FLT-018-0787AL13	BFN-3-FLT-018-0787AL13, FILTER INJECTOR SUPPLY
BFN-3-HS-078-0035	BFN-3-HS-078-0035, FUEL POOL F/D C BACKWASH DRAIN VLV
BFN-3-HS-078-0031B	BFN-3-HS-078-0031B, FUEL POOL F/D C HOLDING PUMP
BFN-3-HS-078-0015A	BFN-3-HS-078-0015A, FUEL POOL COOLING PUMP 3B
BFN-3-JBOX-078-9558	BFN-3-JBOX-078-9558, JBOX AZ230/602 DW
BFN-3-FLT-018-0787AL17	BFN-3-FLT-018-0787AL17, FILTER INJECTOR SUPPLY
BFN-3-TV-078-0550	BFN-3-TV-078-0550, RX LINER LKG DR TEST CONN VLV
BFN-3-FLT-018-0787AL11	BFN-3-FLT-018-0787AL11, FILTER INJECTOR SUPPLY
BFN-3-FU2-078-0061B	BFN-3-FU2-078-0061B, CONTROL CIRCUIT

BFN-3-FLT-018-0787AL19	BFN-3-FLT-018-0787AL19, FILTER INJECTOR SUPPLY
BFN-3-HS-078-0033	BFN-3-HS-078-0033, FUEL POOL F/D C HOLDING VLV
BFN-3-@PL-063-0786	BFN-3-@PL-063-0786, STANDBY LIQ CONT INBD VLV HCV-63-12
BFN-3-FLT-018-0787AL15	BFN-3-FLT-018-0787AL15, FILTER INJECTOR SUPPLY
BFN-3-RLY-078-19A-K6B	BFN-3-RLY-078-19A-K6B, LOW SURGE TNK LEVEL ISOLATION RELAY
BFN-3-TV-075-0078A	BFN-3-TV-075-0078A, PSC WATER HEAD TANK TEST VLV
BFN-3-TV-070-0788	BFN-3-TV-070-0788, PRI CTMT OUTLET HDR TETS VLV
BFN-3-VTV-078-0515	BFN-3-VTV-078-0515, HX A-VENT A
BFN-3-HS-078-0067B	BFN-3-HS-078-0067B, REACTOR WELL INFLUENT OUTBOARD VALVE
BFN-3-RTV-075-0078AA	BFN-3-RTV-075-0078AA, PSC WTR HD TK HIGH-HIGH LS RT VLV
BFN-3-@RP-085-0788/G3	BFN-3-@RP-085-0788/G3, GROUP 3 PILOT SCRAM VLV SOLENOID
BFN-3-TW-068-0078	BFN-3-TW-068-0078, RECIRC PUMP B DISCH TEMP
BFN-3-\$PL-063-0785B	BFN-3-\$PL-063-0785B, SPLICE IN JBOX 9856
BFN-3-MTR-078-0068	BFN-3-MTR-078-0068, REACTOR WELL INFLUENT INBOARD VLV MTR (MVOP)
BFN-3-MVOP-078-0007	BFN-3-MVOP-078-0007, DRAIN VLV TO MAIN CONDENSER
BFN-3-RTV-075-0078AB	BFN-3-RTV-075-0078AB, PSC WTR HD TK HIGH-HIGH LS RT VLV
BFN-3-FCV-078-0007	BFN-3-FCV-078-0007, DRAIN VLV TO MAIN CONDENSER
BFN-3-HS-078-0067A	BFN-3-HS-078-0067A, REACTOR WELL RETURN OUTBD VLV
BFN-3-TV-070-0787	BFN-3-TV-070-0787, PRI CTMT OUTLET HDR TEST VLV
BFN-3-VTV-078-0512	BFN-3-VTV-078-0512, HX B-VENT
BFN-3-TV-075-0078B	BFN-3-TV-075-0078B, PSC WATER HEAD TANK TEST VLV
BFN-3-FLT-018-0788BL13	BFN-3-FLT-018-0788BL13, FILTER INJECTOR SUPPLY
BFN-3-MPEN-100-Z664/078	BFN-3-MPEN-100-Z664/078, Z36645078, SENSING LINE
BFN-3-DRV-078-0594	BFN-3-DRV-078-0594, SEAL RUPT DR VLV TO FIS-78-5
BFN-3-FLT-018-0788BL17	BFN-3-FLT-018-0788BL17, FILTER INJECTOR SUPPLY
BFN-3-SHV-074-0786B	BFN-3-SHV-074-0786B, RHR DRAIN PMP B DISCH SHUTOFF VLV
BFN-3-FLT-018-0788BL19	BFN-3-FLT-018-0788BL19, FILTER INJECTOR SUPPLY
BFN-3-FLT-018-0788BL11	BFN-3-FLT-018-0788BL11, FILTER INJECTOR SUPPLY
BFN-3-FLT-018-0788BL15	BFN-3-FLT-018-0788BL15, FILTER INJECTOR SUPPLY

BFN-3-CKV-078-0501	BFN-3-CKV-078-0501, PUMP B DISCH CK VLV
BFN-3-FLT-018-0788BL16	BFN-3-FLT-018-0788BL16, FILTER INJECTOR RETURN
BFN-3-LOV-078-0061	BFN-3-LOV-078-0061, FCV-78-61 PACKING LEAKOFF VLV
BFN-3-@LS-231-0078/I	BFN-3-@LS-231-0078/I, LOAD SHED PANEL INTERCONNECT
BFN-3-CKV-078-0502	BFN-3-CKV-078-0502, PUMP A DISCH CK VLV
BFN-3-FLT-018-0788BL12	BFN-3-FLT-018-0788BL12, FILTER INJECTOR RETURN
BFN-3-FLT-018-0788BL14	BFN-3-FLT-018-0788BL14, FILTER INJECTOR RETURN
BFN-3-TA-078-0034	BFN-3-TA-078-0034, FUEL POOL F/D C INFLUENT TEMP HIGH
BFN-3-SHV-074-0786A	BFN-3-SHV-074-0786A, RHR DRAIN PMP A DISCH SHUTOFF VLV
BFN-3-FT-078-0024	BFN-3-FT-078-0024, FUEL POOL F/D C EFFLUENT FLOW
BFN-3-FLT-018-0788BL10	BFN-3-FLT-018-0788BL10, FILTER INJECTOR RETURN
BFN-3-FLT-018-0788BL18	BFN-3-FLT-018-0788BL18, FILTER INJECTOR RETURN
BFN-3-ZS-078-0027A	BFN-3-ZS-078-0027A, LIMIT SW, FUEL POOL F/D VLV OPEN
BFN-3-FU1-001-0078A	BFN-3-FU1-001-0078A, 5AF10E
BFN-3-FI-003-0078A	BFN-3-FI-003-0078A, LINE ADIP BY DCN T40665AWade Redd, GE, x4614
BFN-3-CSC-078-0001F	BFN-3-CSC-078-0001F, CONDUIT SEAL CONNECTOR
BFN-3-ŞES-001-0078A	BFN-3-ŞES-001-0078A, ENGINEERING SAFEGUARDS CABLE SPLICE
BFN-3-CKV-078-0522	BFN-3-CKV-078-0522, FROM FUEL POOL DEMINS CK VLV
BFN-3-CSC-078-0001D	BFN-3-CSC-078-0001D, CONDUIT SEAL CONNECTOR
BFN-3-FU2-078-0015B	BFN-3-FU2-078-0015B, 7C CL CKT
BFN-3-CKV-078-0526	BFN-3-CKV-078-0526, TO POOL DIFFUSER A
BFN-3-FI-066-0078	BFN-3-FI-066-0078, RECOMBINER 3A DISCH VLV SEAL AIR
BFN-3-FU1-001-0078B	BFN-3-FU1-001-0078B, 5AF10D
BFN-3-EQIV-078-0022	BFN-3-EQIV-078-0022, INSTR EQUALIZING VLV FOR 3-PDIS-78-22
BFN-3-EQIV-078-0024	BFN-3-EQIV-078-0024, INSTR EQUALIZING VLV FOR 3-FT-78-24
BFN-3-EQIV-078-0021	BFN-3-EQIV-078-0021, INSTR EQUALIZING VLV TO 3-PDT-78-21
BFN-3-CSC-078-0001G	BFN-3-CSC-078-0001G, CONDUIT SEAL CONNECTOR
BFN-3-CKV-078-0527	BFN-3-CKV-078-0527, TO POOL DIFFUSER B
BFN-3-RFV-043-2078	BFN-3-RFV-043-2078, WTR SMPL HW,CD,RFW OIC CONT AIR SPLY ACCUM RFV
BFN-3-FU2-078-0015A	BFN-3-FU2-078-0015A, 7C TRIP CKT
BFN-3-CSC-078-0001E	BFN-3-CSC-078-0001E, CONDUIT SEAL CONNECTOR

BFN-3-IL-078-0002	BFN-3-IL-078-0002, FUEL POOL HIGH LEVEL (19A-DS15)
BFN-3-IL-078-0005	BFN-3-IL-078-0005, FUEL POOL GATE LEAKAGE EXCESSIVE (19A-DS16)
BFN-3-CKV-078-0521	BFN-3-CKV-078-0521, TO FUEL POOL DEMINS CK VLV
BFN-3-ZS-078-0033B	BFN-3-ZS-078-0033B, FUEL POOL F/D C HOLDING VLV CLOSED
BFN-3-ZS-078-0035B	BFN-3-ZS-078-0035B, FUEL POOL F/D C BACKWASH DRAIN VLV CLOSED
BFN-3-\$ES-001-0078B	BFN-3-\$ES-001-0078B, ENGINEERING SAFEGUARDS CABLE SPLICE
BFN-3-IL-078-0065	BFN-3-IL-078-0065, FILTER DEMIN BYPASS B VALVE
BFN-3-IL-078-0061	BFN-3-IL-078-0061, FUEL POOL MAKEUP FROM RHR INBOARD VLV
BFN-3-IL-078-0063	BFN-3-IL-078-0063, FILTER DEMIN INFLUENT INBOARD ISOL VLV
BFN-3-IL-078-0067	BFN-3-IL-078-0067, REACTOR WELL INFLUENT OUTBOARD VLV
BFN-3-IL-078-0066	BFN-3-IL-078-0066, FILTER DEMIN BYPASS A VALVE
BFN-3-FI-003-0078B	BFN-3-FI-003-0078B, LINE B
BFN-3-IL-078-0062	BFN-3-IL-078-0062, FUEL POOL MAKEUP FROM RHR OUTBOARD VLV
BFN-3-IL-078-0064	BFN-3-IL-078-0064, FILETER DEMIN INFLUENT OUTBOARD ISOL VLV
BFN-3-LOV-070-0789	BFN-3-LOV-070-0789, PACKING LEAK-OFF FOR FCV-70-47
BFN-3-ZS-078-0027B	BFN-3-ZS-078-0027B, LIMIT SW, FUEL POOL F/D VLV CLOSE
BFN-3-IL-078-0016	BFN-3-IL-078-0016, FPC PUMP 3B DISCHARGE PRESSURE LOW (19A- DS19B)
BFN-3-ZS-078-0026B	BFN-3-ZS-078-0026B, FUEL POOL F/D C EFFLUENT VLV CLOSED
BFN-3-ZS-078-0023B	BFN-3-ZS-078-0023B, FUEL POOL F/D C PRECOAT INLET VLV CLOSED
BFN-3-IL-078-0011	BFN-3-IL-078-0011, FPC PUMP 3A DISCHARGE PRESSURE LOW (19A- DS19A)
BFN-3-IL-078-0051	BFN-3-IL-078-0051, REFUELING BELLOWS LEAKAGE EXCESSIVE (19A- DS14)
BFN-3-SHV-002-1078	BFN-3-SHV-002-1078, DEMIN WTR SERVICE CONN VLV
BFN-3-@RP-085-0780/G3	BFN-3-@RP-085-0780/G3, GROUP 3 PILOT SCRAM VLV SOLENOID
BFN-3-TW-078-0012	BFN-3-TW-078-0012, FUEL POOL COOL HTX A INLET TEMP
BFN-3-@R-001-0781	BFN-3-@R-001-0781, MAIN STM LINE D REL VLV TEMP RECD, TR-1-1
BFN-3-TI-067-0078A	BFN-3-TI-067-0078A, COOLING WATER TO CONT ROOM CHILLER A
BFN-3-@R-001-0788	BFN-3-@R-001-0788, MAIN STM LINE C REL VLV TEMP RECD, TR-1-1
BFN-3-SHV-070-1078	BFN-3-SHV-070-1078, RBCCW RETURN FROM DRYWELL

BFN-3-FCV-078-0026	BFN-3-FCV-078-0026, FUEL POOL F/D C EFFLUENT VLV
BFN-3-@R-001-0787	BFN-3-@R-001-0787, MAIN STM LINE C REL VLV TEMP RECD, TR-1-1
BFN-3-LA-078-0001B	BFN-3-LA-078-0001B, FUEL POOL SKIMMER SURGE TK LEVEL LO/LO-LO
BFN-3-RTV-075-0078CA	BFN-3-RTV-075-0078CA, PSC WTR HD TK LOW LS RTVLV
BFN-3-HS-078-0065B	BFN-3-HS-078-0065B, F/D BYPASS ISOL VALVE B
BFN-3-TW-078-0018	BFN-3-TW-078-0018, FUEL POOL COOL HTX B DISCHARGE TEMP
BFN-3-FU1-078-0027A	BFN-3-FU1-078-0027A, 19AF11
BFN-3-FCV-078-0028	BFN-3-FCV-078-0028, FUEL POOL F/D C PRECOAT/BACKWASH VLV
BFN-3-CKV-078-0716	BFN-3-CKV-078-0716, C HOLDING PUMP DISCH CK VLV
BFN-3-SHV-078-0539	BFN-3-SHV-078-0539,PUMP A SUCT VLV
BFN-3-FE-078-0758	BFN-3-FE-078-0758, FUEL POOL COOL HEX A FLOW ELEMENT
BFN-3-TV-078-0758A	BFN-3-TV-078-0758A, 3-FE-78-758 HI SIDE TEST VENT VALVE
BFN-3-TV-078-0758B	BFN-3-TV-078-0758B, 3-FE-78-758 LO SIDE TEST VENT VALVE
BFN-3-FE-078-0759	BFN-3-FE-078-0759, FUEL POOL COOL HEX B FLOW ELEMENT
BFN-3-TV-078-0759A	BFN-3-TV-078-0759A, 3-FE-78-759 HI SIDE TEST VENT VALVE
BFN-3-TV-078-0759B	BFN-3-TV-078-0759B, 3-FE-78-759 LO SIDE TEST VENT VALVE
BFN-3-TV-078-0760A	BFN-3-TV-078-0760A, 3-FE-78-760 HI SIDE TEST VENT VALVE
BFN-3-TV-078-0760B	BFN-3-TV-078-0760B, 3-FE-78-760 LO SIDE TEST VENT VALVE
BFN-3-FE-078-0760	BFN-3-FE-078-0760, FUEL POOL COOL HEX BYPASS FLOW ELEMENT
BFN-3-OR-078-0761	BFN-3-OR-078-0761, FUEL POOL COOL DEMIN BYPASS FLOW REDUCING ORIFICE
BFN-3-DRV-002-0781	BFN-3-DRV-002-0781, CNDS BSTR PUMP A SUCT DRV
BFN-3-DRV-002-0782	BFN-3-DRV-002-0782, CNDS BSTR PUMP B SUCT DR
BFN-3-DRV-002-0783	BFN-3-DRV-002-0783, CNDS BSTR PUMP C SUCT DR
BFN-3-SHV-002-0784	BFN-3-SHV-002-0784, CNDS BSTR PUMP A H2 INJ.
BFN-3-SHV-002-0785	BFN-3-SHV-002-0785, CNDS BSTR PUMP B H2 INJ.
BFN-3-SHV-002-0786	BFN-3-SHV-002-0786, CNDS BSTR PUMP C H2 INJ.
BFN-3-RES-066-1078	BFN-3-RES-066-1078, OFFGAS PANEL ANNUNCIATOR RESITOR
BFN-3-ZI-078-0061A	BFN-3-ZI-078-0061A, FUEL POOL MAKEUP FROM RHR INBOARD VLV

BFN-3-ZI-078-0061B	BFN-3-ZI-078-0061B, FUEL POOL MAKEUP FROM RHR INBOARD VLV
BFN-3-ZI-078-0063A	BFN-3-ZI-078-0063A, FILTER DEMIN INFLUENT INBOARD ISOL VLV
BFN-3-ZI-078-0063B	BFN-3-ZI-078-0063B, FILTER DEMIN INFLUENT INBOARD ISOL VLV
BFN-3-ZI-078-0064A	BFN-3-ZI-078-0064A, FILTER DEMIN INFLUENT OUTBOARD ISOL VLV
BFN-3-ZI-078-0064B	BFN-3-ZI-078-0064B, FILTER DEMIN INFLUENT OUTBOARD ISOL VLV
BFN-3-ZI-078-0065A	BFN-3-ZI-078-0065A, FILTER DEMIN BYPASS B VALVE
BFN-3-ZI-078-0065B	BFN-3-ZI-078-0065B, FILTER DEMIN BYPASS B VALVE
BFN-3-ZI-078-0066A	BFN-3-ZI-078-0066A, FILTER DEMIN BYPASS A VALVE
BFN-3-ZI-078-0066B	BFN-3-ZI-078-0066B, FILTER DEMIN BYPASS A VALVE
BFN-3-ZI-078-0067A	BFN-3-ZI-078-0067A, REACTOR WELL INFLUENT OUTBOARD VLV
BFN-3-ZI-078-0067B	BFN-3-ZI-078-0067B, REACTOR WELL INFLUENT OUTBOARD VLV
BFN-3-ZI-078-0068A	BFN-3-ZI-078-0068A, REACTOR WELL INFLUENT INBOARD VLV
BFN-3-ZI-078-0068B	BFN-3-ZI-078-0068B, REACTOR WELL INFLUENT INBOARD VLV
BFN-3-ZM-001-0078	BFN-3-ZM-001-0078, LVDT CONDITIONER (1LVDT8)
BFN-3-HS-047-0078E	BFN-3-HS-047-0078E, SHELL WARMING (SW 30)(OCP #1)
BFN-3-IL-078-0010B	BFN-3-IL-078-0010B, FUEL POOL COOLING PUMP 3A RUNNING
BFN-3-IL-078-0015B	BFN-3-IL-078-0015B, FUEL POOL COOLING PUMP 3B RUNNING
BFN-3-ZI-078-0007	BFN-3-ZI-078-0007, DRAIN VALVE TO MAIN CONDENSER
BFN-3-ZI-078-0027	BFN-3-ZI-078-0027, FUEL POOL F/D B RET BYPASS VLV TO CNDS STG
BFN-3-FU1-067-0078	BFN-3-FU1-067-0078, DIP DCN 69467
BFN-3-RLY-046-0078	BFN-3-RLY-046-0078, RFPT 3C BACKUP OVERSPEED TRIP RELAY DURING TST
BFN-3-DRIV-003-0078AL	BFN-3-DRIV-003-0078AL, LOW SIDE INSTR DRAIN VLV FOR FT-3-78A
BFN-3-DRIV-003-0078AH	BFN-3-DRIV-003-0078AH, HIGH SIDE INSTR DRAIN VLV FOR FT-3-78A
BFN-3-DRIV-003-0078BH	BFN-3-DRIV-003-0078BH, HIGH SIDE INSTR DRAIN VLV FOR FT-3-78B
BFN-3-DRIV-003-0078BL	BFN-3-DRIV-003-0078BL, LOW SIDE INSTR DRAIN VLV FOR FT-3-78B
BFN-3-ISIV-003-0078AH	BFN-3-ISIV-003-0078AH, HIGH SIDE INSTR ISOL VLV TO FT-3-78A
BFN-3-ISIV-003-0078AL	BFN-3-ISIV-003-0078AL, LOW SIDE INSTR ISOL VLV TO FT-3-78A
BFN-3-ISIV-003-0078BL	BFN-3-ISIV-003-0078BL, LOW SIDE INSTR ISOL VLV TO FT-3-78B

BFN-3-ISIV-003-0078BH	BFN-3-ISIV-003-0078BH, HIGH SIDE INSTR ISOL VLV TO FT-3-78B
BFN-3-EQIV-003-0078A	BFN-3-EQIV-003-0078A, INSTR EQG VLV FOR FT-3-78A
BFN-3-EQIV-003-0078B	BFN-3-EQIV-003-0078B, INSTR EQG VLV FOR FT-3-78B
BFN-3-PISV-003-0078BH	BFN-3-PISV-003-0078BH, HIGH SIDE INSTR ISOL VLV TO FT-3-78B
BFN-3-PISV-003-0078BL	BFN-3-PISV-003-0078BL, LOW SIDE INSTR ISOL VLV TO FT-3-78B
BFN-3-PISV-003-0078AH	BFN-3-PISV-003-0078AH, HIGH SIDE INSTR ISOL VLV TO FT-3-78A
BFN-3-PISV-003-0078AL	BFN-3-PISV-003-0078AL, LOW SIDE INSTR ISOL VLV TO FT-3-78A
BFN-3-SNUB-001-5078	BFN-3-SNUB-001-5078, DRYWELL STEAM DECK ELEV. 586, AZ 76, PSA 10
BFN-3-SNUB-078-5001	BFN-3-SNUB-078-5001, SW QUAD, ELEV. 556, PSA 3
BFN-3-MBIV-078-0024	BFN-3-MBIV-078-0024, MULTI BRANCH ISOL VLV 3-FI-78-24B, 3-FS-78- 24
BFN-3-WBOX-027-0078	BFN-3-WBOX-027-0078, 3C1 CCW Waterbox Outlet
BFN-3-FUPG-043-2078	BFN-3-FUPG-043-2078, WTR SMPL RECIRC/RWCU CHLR FUSIBLE PLUG VENT FOR 3-RVR-43-2079
BFN-3-CMOD-026-0078	BFN-3-CMOD-026-0078, U3 TB AND CABLE TUNNEL HORNSTROBE CONTROL MODULE
BFN-3-CMOD-026-0078A	BFN-3-CMOD-026-0078A, U3 TB EL 586 ZONE A STROBE CONTROL MODULE
BFN-3-CMOD-026-0078B	BFN-3-CMOD-026-0078B, U3 TB EL 586 ZONE B STROBE CONTROL MODULE
BFN-3-CMOD-026-0078C	BFN-3-CMOD-026-0078C, U0 CABLE TUNNEL EL 565 STROBE CONTROL MODULE
BFN-3-CMOD-026-0078D	BFN-3-CMOD-026-0078D, U3 TB EL 586 ZONE A HORNSTROBE CONTROL MODULE
BFN-3-CMOD-026-0078E	BFN-3-CMOD-026-0078E, U3 TB EL 586 ZONE B HORNSTROBE CONTROL MODULE
BFN-3-CMOD-026-0078F	BFN-3-CMOD-026-0078F, U0 CABLE TUNNEL EL 565 HORNSTROBE CONTROL MODULE
BFN-3-HSTB-026-0078AA	BFN-3-HSTB-026-0078AA, U3 TB EL 586 ZONE A HORN STROBE-78AA
BFN-3-HSTB-026-0078AB	BFN-3-HSTB-026-0078AB, U3 TB EL 586 ZONE A HORN STROBE-78AB
BFN-3-HSTB-026-0078BA	BFN-3-HSTB-026-0078BA, U3 TB EL 586 ZONE B HORN STROBE-78BA
BFN-3-HSTB-026-0078BB	BFN-3-HSTB-026-0078BB, U3 TB EL 586 ZONE B HORN STROBE-78BB
BFN-3-SDET-026-0078AA	BFN-3-SDET-026-0078AA, U3 TB EL 586 ZONE A SMOKE DETECTOR- 78AA
BFN-3-SDET-026-0078AC	BFN-3-SDET-026-0078AC, U3 TB EL 586 ZONE A SMOKE DETECTOR- 78AC
BFN-3-SDET-026-0078AB	BFN-3-SDET-026-0078AB, U3 TB EL 586 ZONE A SMOKE DETECTOR- 78AB
BFN-3-SDET-026-0078BA	BFN-3-SDET-026-0078BA, U3 TB EL 586 ZONE B SMOKE DETECTOR- 78BA

BFN-3-SDET-026-0078BB

BFN-3-SDET-026-0078BB, U3 TB EL 586 ZONE B SMOKE DETECTOR-78BB

BFN-3-SDET-026-0078BC

BFN-3-SDET-026-0078BC, U3 TB EL 586 ZONE B SMOKE DETECTOR-78BC

BFN-3-SDET-026-0078BD

BFN-3-SDET-026-0078BD, U3 TB EL 586 ZONE B SMOKE DETECTOR-78BD



Appendix D: SWELs and Areas

Brown Ferry Unit 3 Seismic Walkdown Equipment List				Created By: <i>Phil Mc</i> <i>For Jason Black via Telecon</i>					Approved By: <i>Steve Gray</i> <i>per Telecom RAM 11-21-12</i>				
Item #	Equip. Class (0-21)	UNID	Description	Unit	Bldg.	Elev.	Sys.	Seismic Cat 1 Yes/No	Safety Function	Risk Rankings	New or Replaced	Anch. Verified	AWC
3072	15	BFN-0-BATA-248-0003	250V Unit Battery No. 3	0	CB	593	248	YES	1,2,3,4,5	YES		NO	031
3001	0	BFN-0-STN-067-0928	EECW SOUTH HDR STRAINER D	0	INTAKE	565	067	YES	3,4,5	YES		NO	033
3071	15	BFN-3-BATA-248-0003EB	SHUTDOWN BDS 250VDC BATTERY SB-3EB	3	DG	583	248	YES	1,2,3,4,5	YES		YES	055
3073	15	BFN-3-BATB-254-0000A	125 VDC DIESEL SYSTEM BATTERY 3A	3	DG	565	254	YES	1,2,3,4,5	NO		YES	058
3074	15	BFN-3-BATB-254-0000B	125 VDC DIESEL SYSTEM BATTERY 3B	3	DG	565	254	YES	1,2,3,4,5	NO		YES	053
3075	15	BFN-3-BATB-254-0000C	125 VDC DIESEL SYSTEM BATTERY 3C	3	DG	565	254	YES	1,2,3,4,5	NO		YES	093
3076	15	BFN-3-BATB-254-0000D	125 VDC DIESEL SYSTEM BATTERY 3D	3	DG	565	254	YES	1,2,3,4,5	NO		YES	094
3012	3	BFN-3-BDAA-211-0003EA	4KV SHUTDOWN BOARD 3EA	3	DG	583	211	YES	1,2,3,4,5	NO		NO	112
3013	3	BFN-3-BDAA-211-0003EB	4KV SHUTDOWN BD 3EB	3	DG	565	211	YES	1,2,3,4,5	NO		NO	117
3014	3	BFN-3-BDAA-211-0003EC	4KV SHUTDOWN BD 3EC	3	DG	583	211	YES	1,2,3,4,5	NO		NO	112
3015	3	BFN-3-BDAA-211-0003ED	4KV SHUTDOWN BD 3ED	3	DG	565	211	YES	1,2,3,4,5	NO		NO	117
3004	1	BFN-3-BDDB-219-0003EA	480V DIESEL AUX BD 3EA	3	DG	583	219	YES	1,2,3,4,5	YES		YES	116
3005	1	BFN-3-BDDB-219-0003EB	480V DIESEL AUX BD 3EB	3	DG	583	219	YES	1,2,3,4,5	YES		YES	116
3010	2	BFN-3-BDDB-231-0003A	480V SHUTDOWN BD 3A	3	RB	621	231	YES	1,2,3,4,5	YES		NO	123
3011	2	BFN-3-BDDB-231-0003B	480V SHUTDOWN BD 3B	3	RB	621	231	YES	1,2,3,4,5	YES		NO	124
3008	1	BFN-3-BDDB-268-0003A	480V RMOV BD 3A	3	RB	621	268	YES	1,2,3,4,5	YES		NO	026
3007	1	BFN-3-BDDB-268-0003D	480V RMOV BD 3D	3	RB	593	268	YES	1,2,3,4,5	YES		YES	113
3009	1	BFN-3-BDDB-268-0003E	480V RMOV BD 3E	3	RB	621	268	YES	1,2,3,4,5	YES		YES	114
3006	1	BFN-3-BDDD-281-0003B	250V RMOV BD 3B	3	RB	593	281	YES	1,2,3,4,5	YES		NO	027
3069	14	BFN-3-BDGG-254-0003A	125 VDC DSL SYS BAT BOARD A	3	DG	565	254	YES	1,2,3,4,5	NO		YES	058
3068	14	BFN-3-BDGG-254-0003B	125 VDC DSL SYS BAT BOARD B	3	DG	565	254	YES	1,2,3,4,5	NO		NO	053
3070	14	BFN-3-BDGG-254-0003D	125 VDC DSL SYS BAT BOARD D	3	DG	565	254	YES	1,2,3,4,5	NO		YES	094
3077	16	BFN-3-CHGA-248-0003EB	SHUTDOWN BDS 250VDC BATTERY CHARGER SB-3EB	3	DG	583	248	YES	1,2,3,4,5	NO		NO	056
3078	16	BFN-3-CHGB-254-0000AA	DG3A 125 VDC DSL SYS BTRY CHGR A	3	DG	565	254	YES	1,2,3,4,5	NO		YES	057
3079	16	BFN-3-CHGB-254-0000BA	DG3B 125 VDC DSL SYS BTRY CHGR A	3	DG	565	254	YES	1,2,3,4,5	NO		NO	053
3080	16	BFN-3-CHGB-254-0000CB	DG3C 125 VDC DSL SYS BTRY CHGR B	3	DG	565	254	YES	1,2,3,4,5	NO		YES	093
3081	16	BFN-3-CHGB-254-0000DB	DG3D 125 VDC DSL SYS BTRY CHGR B	3	DG	565	254	YES	1,2,3,4,5	NO		YES	094
3059	11	BFN-3-CHR-031-1943	WATER CHILLER 3A	3	CB	606	031	YES	2,3,4,5	NO		NO	122
3060	11	BFN-3-CHR-031-1951	WATER CHILLER 3B	3	CB	606	031	YES	2,3,4,5	NO		NO	122
3050	9	BFN-3-FAN-030-0230	DG ROOM 3A EXHAUST FAN "A"	3	DG	583	030	YES	3,4,5	NO		YES	054
3111	9	BFN-3-FAN-030-0231	DG ROOM 3A EXHAUST FAN "B"	3	DG	583	030	YES	3,4,5	NO		YES	054
3051	9	BFN-3-FAN-030-0232	DG ROOM 3B EXHAUST FAN "A"	3	DG	583	030	YES	3,4,5	NO		YES	051
3052	9	BFN-3-FAN-030-0233	DG ROOM 3B EXHAUST FAN "B"	3	DG	583	030	YES	3,4,5	NO		YES	051
3055	10	BFN-3-FCO-030-0230A	FAN A DISCHARGE DAMPER	3	DG	583	030	YES	3,4,5	NO		NO	054
3056	10	BFN-3-FCO-030-0230B	FAN RM 3A INLET DAMPER	3	DG	565	030	YES	3,4,5	NO		NO	058
3057	10	BFN-3-FCO-030-0233A	FAN B DISCHARGE DAMPER	3	DG	583	030	YES	3,4,5	NO		NO	051
3058	10	BFN-3-FCO-030-0233B	FAN RM 3B INLET DAMPER	3	DG	565	030	YES	3,4,5	NO		NO	053
3123	7	BFN-3-FCV-001-0014	MSIV "A" INBOARD ISOLATION VALVE	3	RB	565	001	YES	2	NO		NO	
3124	7	BFN-3-FCV-001-0015	MSIV "A" OUTBOARD ISOLATION VALVE	3	RB	565	001	YES	2	NO		NO	
3046	8	BFN-3-FCV-023-0034	RHR HTX 3A COOL WATER OUTLET	3	RB	565	023	YES	4,5	YES	YES	NO	045
3047	8	BFN-3-FCV-023-0046	RHR HTX 3B COOL WATER OUTLET	3	RB	565	023	YES	4,5	YES	YES	NO	045
3002	0	BFN-3-FCV-063-0008A	SLC INJECTION VALVE A	3	RB	639	063	YES	1	NO		NO	028
3003	0	BFN-3-FCV-063-0008B	SLC INJECTION VALVE B	3	RB	639	063	YES	1	NO		NO	028
3040	7	BFN-3-FCV-064-0032	SUPP CHAMBER EXHAUST INBD ISOL VLV	3	RB	565	064	YES	5	NO		NO	042
3039	7	BFN-3-FCV-064-0033	SUPP CHAMBER EXHAUST OUTBD ISOL VLV	3	RB	565	064	YES	5	NO		NO	042
3033	7	BFN-3-FCV-067-0050	EECW NORTH HDR SUP VLV TO RBCCW HTXS	3	RB	593	067	YES	3,4,5	NO		NO	049

Item #	Equip. Class (0-21)	UNID	Description	Unit	Bldg.	Elev.	Sys.	Seismic Cat 1 Yes/No	Safety Function	Risk Rankings	New or Replaced	Anch. Verified	AWC
3034	7	BFN-3-FCV-067-0051	EECW SOUTH HDR SUP VLV TO RBCCW HTX	3	RB	565	067	YES	3,4,5	NO		NO	045
3042	8	BFN-3-FCV-071-0017	RCIC SUPPR POOL INBD SUCTION VLV	3	RB	519	071	YES	3	YES		NO	092
3043	8	BFN-3-FCV-071-0018	RCIC SUPPR POOL OUTBD SUCTION VLV	3	RB	519	071	YES	3	YES		NO	092
3041	8	BFN-3-FCV-071-0019	RCIC CNDS TANK SUCTION VLV	3	RB	519	071	YES	3	YES		NO	092
3044	8	BFN-3-FCV-074-0007	RHR SYSTEM 1 MINIMUM FLOW VLV	3	RB	519	074	YES	3,4	YES		NO	103
3045	8	BFN-3-FCV-074-0030	RHR LOOP II MIN FLOW BYPASS VLV	3	RB	519	074	YES	3,4	YES		NO	097
3114	8	BFN-3-FCV-078-0062	POOL MAKEUP FROM RHR OUTBOARD VALVE	3	RB	621	078	YES	SWEL 2	NO		NO	106
3035	7	BFN-3-FCV-085-0037C	WEST SCRAM DISCH VOL DRAIN CONT VLV	3	RB	565	085	YES	1	NO		NO	042
3036	7	BFN-3-FCV-085-0037D	WEST SCRAM DISCH VOL DRAIN CONT VLV	3	RB	565	085	YES	1	NO		NO	042
3037	7	BFN-3-FCV-085-0037E	EAST SCRAM DISCH VOL DRAIN CONT VLV	3	RB	565	085	YES	1	NO		NO	046
3038	7	BFN-3-FCV-085-0037F	EAST SCRAM DISCH VOL DRAIN CONT VLV	3	RB	565	085	YES	1	NO		NO	046
3112	8	BFN-3-FSV-084-0008B	SUPPRESS CHAMBER N2 SUPPLY TRAIN A DIV I	3	RB	565	084	YES	5	NO		NO	045
3113	8	BFN-3-FSV-084-0048	CAD A CROSSTIE TO DW CA FLOW SOL VLV	3	RB	565	084	YES	5	NO		NO	045
3048	8	BFN-3-FSV-085-0037A	CRD SCRAM DISCH VOL DR & VENT PILOT VLV A	3	RB	565	085	YES	1	NO		NO	043
3049	8	BFN-3-FSV-085-0037B	CRD SCRAM DISCH VOL DR & VENT PILOT VLV B	3	RB	565	085	YES	1	NO		NO	043
3084	17	BFN-3-GEN-082-0003A	DIESEL GENERATOR 3A	3	DG	565	082	YES	3,4,5	YES		YES	058
3085	17	BFN-3-GEN-082-0003B	DIESEL GENERATOR 3B	3	DG	565	082	YES	3,4,5	YES		YES	053
3086	17	BFN-3-GEN-082-0003C	DIESEL GENERATOR 3C	3	DG	565	082	YES	3,4,5	YES		YES	093
3087	17	BFN-3-GEN-082-0003D	DIESEL GENERATOR 3D	3	DG	565	082	YES	3,4,5	YES		YES	094
3102	21	BFN-3-HEX-074-0028	RHR PUMP SEAL HEAT EXCHANGER B	3	RB	519	074	YES	3,4,5	NO		NO	102
3103	21	BFN-3-HEX-074-0039	RHR PUMP SEAL HEAT EXCHANGER D	3	RB	519	074	YES	3,4,5	NO		NO	102
3082	16	BFN-3-INVT-256-0001	DIV I ECCS ATU INVERTER UNIT	3	RB	593	256	YES	1,2,3,4,5	NO		NO	027
3083	16	BFN-3-INVT-256-0002	DIV II ECCS ATU INVERTER UNIT	3	RB	621	256	YES	1,2,3,4,5	NO		YES	026
3088	18	BFN-3-LPNL-925-0005A	REACTOR PROTECTION & NSS PNL	3	RB	593	925	YES	1,2	NO		YES	050
3089	18	BFN-3-LPNL-925-0005B	REACTOR PROTECTION & NSS PNL	3	RB	593	925	YES	1,2	NO		YES	050
3090	18	BFN-3-LPNL-925-0005D	REACTOR PROTECTION & NSS PNL	3	RB	593	925	YES	1,2	NO		YES	050
3091	18	BFN-3-LPNL-925-0006A	REACTOR PROTECTION & NSS PNL	3	RB	593	925	YES	1,2	NO		YES	049
3092	18	BFN-3-LPNL-925-0006D	REACTOR PROTECTION & NSS PNL	3	RB	593	925	YES	1,2	NO		YES	049
3093	18	BFN-3-LPNL-925-0247A	CAD DRYWELL & SUPPRESSION CHAMBER VENT	3	RB	621	925	YES	1	NO		NO	047
3117	20	BFN-3-LS-078-0001D	SKIMMER SURGE TANK LEVEL LOW LOW ISOL	3	RB	639	078	YES	SWEL 2	NO		NO	098
3116	20	BFN-3-LS-078-0001E	SKIMMER SURGE TANK LEVEL LOW LOW ISOL	3	RB	639	078	YES	SWEL 2	NO		NO	098
3115	20	BFN-3-LS-078-0001F	SKIMMER SURGE TANK LEVEL LOW LOW ISOL	3	RB	639	078	YES	SWEL 2	NO		NO	098
3118	20	BFN-3-LS-078-0001G	SKIMMER SURGE TANK LEVEL LOW LOW ISOL	3	RB	639	078	YES	SWEL 2	NO		NO	098
3063	13	BFN-3-MGEN-268-0003DA	480/480 MG SET 3DA	3	RB	621	268	YES	3	NO		YES	029
3061	13	BFN-3-MGEN-268-0003DN	480/480 MG SET 3DN	3	RB	621	268	YES	3	NO		YES	048
3064	13	BFN-3-MGEN-268-0003EA	LPCI MG SET 3EA	3	RB	621	268	YES	3	NO		YES	048
3062	13	BFN-3-MGEN-268-0003EN	LPCI MG SET 3EN	3	RB	621	268	YES	3	NO		YES	029
3125	7	BFN-3-PCV-001-0005	MAIN STEAM LINE A RELIEF VLV	3	RB	585	001	YES	2	NO		NO	
3126	7	BFN-3-PCV-001-0042	MAIN STEAM LINE D RELIEF VLV	3	RB	585	001	YES	2	NO		NO	
3028	5	BFN-3-PMP-063-0006A	STANDBY LIQ CONT PMP A	3	RB	639	063	YES	1	NO		YES	028
3027	5	BFN-3-PMP-063-0006B	STANDBY LIQ CONT PMP B	3	RB	639	063	YES	1	NO		YES	028
3025	5	BFN-3-PMP-073-0029	HPCI BOOSTER PUMP	3	RB	519	073	YES	3	NO		NO	101
3024	5	BFN-3-PMP-073-0054	HPCI TURBINE MAIN PUMP	3	RB	519	073	YES	3	YES		NO	101
3029	6	BFN-3-PMP-074-0028	RESIDUAL HEAT REMOVAL PUMP 3B	3	RB	519	074	YES	3,4	NO		YES	102
3030	6	BFN-3-PMP-074-0039	RESIDUAL HEAT REMOVAL PUMP 3D	3	RB	519	074	YES	3,4	NO		YES	102
3031	6	BFN-3-PMP-075-0005	CORE SPRAY PMP 3A	3	RB	519	075	YES	3	NO		YES	092
3032	6	BFN-3-PMP-075-0014	CORE SPRAY PMP 3C	3	RB	519	075	YES	3	NO		YES	092
3095	20	BFN-3-PNLA-009-0005	REACTOR CONTROL PANEL	3	CB	617	009	YES	1	NO		NO	121

Item #	Equip. Class (0-21)	UNID	Description	Unit	Bldg.	Elev.	Sys.	Seismic Cat 1 Yes/No	Safety Function	Risk Rankings	New or Replaced	Anch. Verified	AWC
3100	20	BFN-3-PNLA-009-0009	UNIT 3 CONTROL BD PN LA 9-9	3	CB	617	009	YES	1,2,3,4,5	YES		NO	121
3097	20	BFN-3-PNLA-009-0032	RHR,CS, & HPCI (CH A) PNL	3	CB	593	009	YES	3,4	NO		NO	052
3098	20	BFN-3-PNLA-009-0033	RHR, CS, & HPCI (CH B) PNL	3	CB	593	009	YES	3,4	NO		NO	052
3101	20	BFN-3-PNLA-009-0036A	UNIT 3 AUX INSTR RM TO 480V BD 3D	3	CB	593	009	YES	0	NO		NO	052
3099	20	BFN-3-PNLA-009-0055	CNMT ATMOS DILUTION PNL	3	CB	617	009	YES	1	NO		NO	121
3054	20	BFN-3-PNLA-009-0081	ECCS DIV 1 TRIP UNIT CABINET	3	CB	593	009	YES	2,3,4,5	NO		NO	052
3053	20	BFN-3-PNLA-009-0082	ECCS DIV 2 TRIP UNIT CABINET	3	CB	593	009	YES	2,3,4,5	NO		NO	052
3065	14	BFN-3-PNLA-082-0003A	DIESEL GENERATOR 3A ELECTRICAL CONTROL CABINET	3	DG	565	082	YES	3,4,5	NO		YES	058
3066	14	BFN-3-PNLA-082-0003B	DIESEL GENERATOR 3B ELECTRICAL CONTROL CABINET	3	DG	565	082	YES	3,4,5	NO		NO	053
3067	14	BFN-3-PNLA-248-0003EB	4KV S/D BD 250V DC DISTRIBUTION PNL SB-3EB	3	DG	583	248	YES	1,2,3,4,5	YES		YES	056
3119	19	BFN-3-TE-064-0161B	SUPPR POOL BULK TEMP DIV I	3	RB	519	064	YES	5	NO		NO	128
3120	19	BFN-3-TE-064-0161C	SUPPR POOL BULK TEMP DIV I	3	RB	519	064	YES	5	NO		NO	128
3121	19	BFN-3-TE-064-0162B	SUPPR POOL BULK TEMP DIV II	3	RB	519	064	YES	5	NO		NO	128
3122	19	BFN-3-TE-064-0162C	SUPPR POOL BULK TEMP DIV II	3	RB	519	064	YES	5	NO		NO	128
3106	21	BFN-3-TNK-063-0583	STANDBY LIQ CONT TANK	3	RB	639	063	YES	1	YES		YES	028
3104	21	BFN-3-TNK-085-0901	SCRAM DISCHARGE INSTRUMENT VOLUME (WEST)	3	RB	565	085	YES	1	NO		NO	042
3107	21	BFN-3-TNK-086-0650B	DSL GEN B RIGHT BANK STARTING AIR TANK	3	DG	565	086	YES	3,4,5	NO		NO	053
3109	21	BFN-3-TNK-086-0650C	DSL GEN C RIGHT BANK STARTING AIR TANK	3	DG	565	086	YES	3,4,5	NO		YES	093
3108	21	BFN-3-TNK-086-0655A	DSL GEN A LEFT BANK STARTING AIR TANK	3	DG	565	086	YES	3,4,5	NO		YES	058
3110	21	BFN-3-TNK-086-0655D	DSL GEN D LEFT BANK STARTING AIR TANK	3	DG	565	086	YES	3,4,5	NO		YES	094
3023	4	BFN-3-XFA-082-0003AA	DG-3A NEUTRAL GRN XFMR	3	DG	565	082	YES	3,4,5	NO	YES	YES	058
3016	4	BFN-3-XFA-231-TS3A	480V SHUTDOWN BOARD TRANSFORMER	3	RB	621	231	YES	1,2,3,4,5	YES		NO	029
3017	4	BFN-3-XFA-231-TS3B	480V SHUTDOWN BOARD TRANSFORMER	3	RB	621	231	YES	1,2,3,4,5	YES		NO	029
3018	4	BFN-3-XFA-253-0003A1	480-120/208 VAC XFMR FOR I&C BUS A	3	RB	621	253	YES	1,2,3,4,5	NO		NO	026
3019	4	BFN-3-XFA-253-0003A2	120/208-120/208 VAC REG XFMR FOR I&C BUS A	3	RB	621	253	YES	1,2,3,4,5	NO		NO	026
3020	4	BFN-3-XFA-253-0003B1	480-120/208 VAC XFMR FOR I&C BUS B	3	RB	593	253	YES	1,2,3,4,5	NO		YES	027

No.	AWC No.	Unit	Bldg.	El.	Location	Walkdown Date
033	0-YD-EL565-033	0	INTAKE	565	RHRSW Pump Room D	7/27/2012
031	3-CB-EL593-031	3	CB	593	Battery Room 3	7/27/2012
052	3-CB-EL593-052	3	CB	593	Aux Instrument Room	8/1/2012
122	3-CB-EL606-122	3	CB	606	Chiller Room (Spreading Room)	8/14/2012
121	3-CB-EL617-121	3	CB	617	Main Control Room	8/14/2012
053	3-DG-EL565-053	3	DG	565	3B Diesel Generator Room	8/1/2012
057	3-DG-EL565-057	3	DG	565	Electrical Tunnel	8/1/2012
058	3-DG-EL565-058	3	DG	565	Diesel Generator Room A	8/1/2012
093	3-DG-EL565-093	3	DG	565	Diesel Generator Room C	8/8/2012
094	3-DG-EL565-094	3	DG	565	Diesel Generator Room D	8/8/2012
117	3-DG-EL565-117	3	DG	565	Electric Board Room 3EB	8/13/2012
051	3-DG-EL583-051	3	DG	583	Fan Room B	8/1/2012
054	3-DG-EL583-054	3	DG	583	Fan Room A	8/1/2012
055	3-DG-EL583-055	3	DG	583	EB Battery Room	8/1/2012
056	3-DG-EL583-056	3	DG	583	EB Battery Room Area	8/1/2012
112	3-DG-EL583-112	3	DG	583	Electric Board Rm 3EA	8/13/2012
116	3-DG-EL583-116	3	DG	583	480V Diesel Shutdown Board Room	8/13/2012
092	3-RB-EL519-092	3	RB	519	NW Quad	8/8/2012
101	3-RB-EL519-101	3	RB	519	HPCI Room	8/9/2012
102	3-RB-EL519-102	3	RB	519	RHR Pump Room	8/9/2012
128	3-RB-EL519-128	3	RB	519	Under Torus	10/18/2012
097	3-RB-EL541-097	3	RB	541	SE Quad	8/9/2012
103	3-RB-EL541-103	3	RB	541	SW Quad	8/9/2012
042	3-RB-EL565-042	3	RB	565	West SDV Area	7/31/2012
043	3-RB-EL565-043	3	RB	565	Scram Dump Valves	7/31/2012
045	3-RB-EL565-045	3	RB	565	South Wall	7/31/2012
046	3-RB-EL565-046	3	RB	565	SDV Cage East	7/31/2012
027	3-RB-EL593-027	3	RB	593	Electrical Board Room 3B	7/26/2012
047	3-RB-EL593-047	3	RB	621	S-U, R16-R18 Area	7/31/2012
049	3-RB-EL593-049	3	RB	593	RBCCW Heat Exchanger Area	7/31/2012
113	3-RB-EL593-113	3	RB	593	T/R20 Area	8/10/2012
026	3-RB-EL621-026	3	RB	621	Electric Board Room 3A	7/26/2012
029	3-RB-EL621-029	3	RB	621	S-U, R20-R21 Area	7/26/2012
048	3-RB-EL621-048	3	RB	621	S-U, R16-R20 Area	7/31/2012
050	3-RB-EL621-050	3	RB	593	P-S, R17-R20 Area	7/31/2012
114	3-RB-EL621-114	3	RB	621	U/R17 Area	8/10/2012
123	3-RB-EL621-123	3	RB	621	480V Shutdown Board Room 3A	8/14/2012
124	3-RB-EL621-124	3	RB	621	480V Shutdown Board Room 3B	8/14/2012
028	3-RB-EL639-028	3	RB	639	SLC Area	7/26/2012
098	3-RB-EL639-098	3	RB	639	SLC Area By Stairs	8/9/2012
106	3-RB-EL639-106	3	RB	621	S-T, R15-R18	8/9/2012



Appendix E: SWCs

The following signatures are provided for the engineers responsible for the Seismic Walkdown Checklists in Browns Ferry Unit 3.

Name	Signature	Date
Jason Black	<i>Jason Black</i>	11-15-12
George Bongart	<i>George Bongart</i>	11-14-12
Avinash Chunduri	<i>Avinash Chunduri</i>	11-15-12
James Edgar	<i>James Edgar</i>	11-15-12
Jeffrey Lawrence	<i>Jeffrey Lawrence</i>	11-15-12
Patrick McCarraher	<i>Patrick McCarraher</i>	11-15-12
Nicholas Pressler	<i>Nicholas Pressler</i>	11-15-12

Seismic Walkdown Checklist (SWC)

Equipment ID No. **BFN-0-BATA-248-0003** Equipment Class³ 15

Equipment Description 250V Unit Battery No. 3

Location: Bldg. U3-CB Floor El. 593 Room, Area 031, Room 479, Battery Room 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

For additional information reference vendor drawings M5886, 3-M5886-1 through 4

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

Anchored by embedded steel plate. The supports have been welded to the steel base plate. Welds are in good condition.

³Enter the equipment class name from Appendix B, Classes of Equipment.

Seismic Walkdown Checklist (SWC)

Equipment ID No. **BFN-0-BATA-248-0003** Equipment Class³ 15

Equipment Description 250V Unit Battery No. 3

Anchorage (Continued)

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

For additional information reference vendor drawings M5886, 3-M5886-1 through 4

Seismic Walkdown Checklist (SWC)

Equipment ID No. **BFN-0-BATA-248-0003** Equipment Class³ 15

Equipment Description 250V Unit Battery No. 3

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

Seismic Walkdown Checklist (SWC)

Equipment ID No. **BFN-0-BATA-248-0003** Equipment Class³ 15

Equipment Description 250V Unit Battery No. 3

Interaction Effects (Continued)

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

Seismic Walkdown Checklist (SWC)

Equipment ID No. **BFN-0-BATA-248-0003** Equipment Class³ 15

Equipment Description 250V Unit Battery No. 3

Comments (Additional pages may be added as necessary)

Evaluated by: George Bongart

Date:7/27/2012

Patrick McCarraher

7/27/2012

Seismic Walkdown Checklist (SWC)

Equipment ID No. **BFN-0-STN-067-0928** Equipment Class³ 0

Equipment Description EECW SOUTH HDR STRAINER D

Location: Bldg. INTAKE Floor El. 565 Room, Area 033 - RHRSW Pump Room D

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

³Enter the equipment class name from Appendix B, Classes of Equipment.

Seismic Walkdown Checklist (SWC)

Equipment ID No. **BFN-0-STN-067-0928** Equipment Class³ 0

Equipment Description EECW SOUTH HDR STRAINER D

Anchorage (Continued)

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

Algae buildup on the foundation. No cracks found.

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

Seismic Walkdown Checklist (SWC)

Equipment ID No. **BFN-0-STN-067-0928** Equipment Class³ 0

Equipment Description EECW SOUTH HDR STRAINER D

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

Seismic Walkdown Checklist (SWC)

Equipment ID No. **BFN-0-STN-067-0928** Equipment Class³ 0

Equipment Description EECW SOUTH HDR STRAINER D

Interaction Effects (Continued)

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

Seismic Walkdown Checklist (SWC)

Equipment ID No. **BFN-0-STN-067-0928** Equipment Class³ 0

Equipment Description EECW SOUTH HDR STRAINER D

Comments (Additional pages may be added as necessary)

Evaluated by: George Bongart

Date: 7/27/2012

Patrick McCarraher

7/27/2012

Seismic Walkdown Checklist (SWC)

Equipment ID No. **BFN-3-BATA-248-0003EB** Equipment Class³ 14

Equipment Description SHUTDOWN BDS 250VDC BATTERY SB-EB

Location: Bldg. U3-DG Floor El. 583 Room, Area 055, EB BATTERY 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 additional information reference calculation CDQ3248910432

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

³Enter the equipment class name from Appendix B, Classes of Equipment.

Seismic Walkdown Checklist (SWC)

Equipment ID No. **BFN-3-BATA-248-0003EB** Equipment Class³ 14

Equipment Description SHUTDOWN BDS 250VDC BATTERY SB-EB

Anchorage (Continued)

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

Calculation CDQ3248910432 verifies the anchorage configuration.

Seismic Walkdown Checklist (SWC)

Equipment ID No. **BFN-3-BATA-248-0003EB** Equipment Class³ 14

Equipment Description SHUTDOWN BDS 250VDC BATTERY SB-EB

- 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

The masonry walls have been sesimically qualified per IEB 80-11, refer to drawing 41N1201-1.

Seismic Walkdown Checklist (SWC)

Equipment ID No. **BFN-3-BATA-248-0003EB** Equipment Class³ 14

Equipment Description SHUTDOWN BDS 250VDC BATTERY SB-EB

Interaction Effects (Continued)

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

Seismic Walkdown Checklist (SWC)

Equipment ID No. **BFN-3-BATA-248-0003EB** Equipment Class³ 14

Equipment Description SHUTDOWN BDS 250VDC BATTERY SB-EB

Comments (Additional pages may be added as necessary)

Evaluated by: Patrick McCarraher

Date:8/1/2012

George Bongart

8/1/2012

Seismic Walkdown Checklist (SWC)

Equipment ID No. **BFN-3-BATB-254-0000A** Equipment Class³ 15

Equipment Description 125 VDC DIESEL SYSTEM BATTERY 3A

Location: Bldg. U3-DG Floor El. 565 Room, Area 058. Diesel Generator Room 3A

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 additional information reference calculation CDQ0999900691 and drawings 3-45N337-5, 3-48N897-1 and 3-48N897-5

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

³Enter the equipment class name from Appendix B, Classes of Equipment.

Seismic Walkdown Checklist (SWC)

Equipment ID No. **BFN-3-BATB-254-0000A** Equipment Class³ 15

Equipment Description 125 VDC DIESEL SYSTEM BATTERY 3A

Anchorage (Continued)

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

Two anchors on the inside corner of floor mounts have bigger bolts than the other 3/8" anchor bolts. These bolts look to be about 1/2". Anchorage verified per A-46 SEWS 9142.

For additional information reference calculation CDQ0999900691 and drawings 3-45N337-5, 3-48N897-1 and 3-48N897-5

Seismic Walkdown Checklist (SWC)

Equipment ID No. **BFN-3-BATB-254-0000A** Equipment Class³ 15

Equipment Description 125 VDC DIESEL SYSTEM BATTERY 3A

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

Seismic Walkdown Checklist (SWC)

Equipment ID No. **BFN-3-BATB-254-0000A** Equipment Class³ 15

Equipment Description 125 VDC DIESEL SYSTEM BATTERY 3A

Interaction Effects (Continued)

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

Rope has been tied to a support rail. The rope appears to be going to a hoist mechanism located in the ceiling. The rope has been tied in a secure way. This has been determined as insignificant.

Seismic Walkdown Checklist (SWC)

Equipment ID No. **BFN-3-BATB-254-0000A** Equipment Class³ 15

Equipment Description 125 VDC DIESEL SYSTEM BATTERY 3A

Comments (Additional pages may be added as necessary)

Evaluated by: George Bongart

Date:8/1/2012

Patrick McCarraher

8/1/2012

Seismic Walkdown Checklist (SWC)

Equipment ID No. **BFN-3-BATB-254-0000B** Equipment Class³ 14

Equipment Description 125 VDC DIESEL SYSTEM BATTERY 3B

Location: Bldg. U3-DG Floor El. 565 Room, Area 053, Diesel Generator Room 3B

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 additional information reference calculation CDQ0999900691 and drawings 3-45N337-5, 3-48N897-1 and 3-48N897-5.

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

³Enter the equipment class name from Appendix B, Classes of Equipment.

Seismic Walkdown Checklist (SWC)

Equipment ID No. **BFN-3-BATB-254-0000B** Equipment Class³ 14

Equipment Description 125 VDC DIESEL SYSTEM BATTERY 3B

Anchorage (Continued)

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

Anchorage verified per A-46 SEWS 9142.

For additional information reference calculation CDQ0999900691 and drawings 3-45N337-5, 3-48N897-1 and 3-48N897-5.

Seismic Walkdown Checklist (SWC)

Equipment ID No. **BFN-3-BATB-254-0000B** Equipment Class³ 14

Equipment Description 125 VDC DIESEL SYSTEM BATTERY 3B

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

Seismic Walkdown Checklist (SWC)

Equipment ID No. **BFN-3-BATB-254-0000B** Equipment Class³ 14

Equipment Description 125 VDC DIESEL SYSTEM BATTERY 3B

Interaction Effects (Continued)

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

Seismic Walkdown Checklist (SWC)

Equipment ID No. **BFN-3-BATB-254-0000B** Equipment Class³ 14

Equipment Description 125 VDC DIESEL SYSTEM BATTERY 3B

Comments (Additional pages may be added as necessary)

Evaluated by: Jeff Lawrence

Date:08/01/2012

Jason Black

08/01/2012

Seismic Walkdown Checklist (SWC)

Equipment ID No. **BFN-3-BATB-254-0000C** Equipment Class³ 14

Equipment Description 125 VDC DIESEL SYSTEM BATTERY 3C

Location: Bldg. U3-DG Floor El. 565 Room, Area 093, DIESEL GENERATOR ROOM 3C

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

³Enter the equipment class name from Appendix B, Classes of Equipment.

Seismic Walkdown Checklist (SWC)

Equipment ID No. **BFN-3-BATB-254-0000C** Equipment Class³ 14

Equipment Description 125 VDC DIESEL SYSTEM BATTERY 3C

Anchorage (Continued)

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

The anchorage configuration was verified per calculation
CDQ0999900691

Seismic Walkdown Checklist (SWC)

Equipment ID No. **BFN-3-BATB-254-0000C** Equipment Class³ **14**

Equipment Description **125 VDC DIESEL SYSTEM BATTERY 3C**

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

Seismic Walkdown Checklist (SWC)

Equipment ID No. **BFN-3-BATB-254-0000C** Equipment Class³ 14

Equipment Description 125 VDC DIESEL SYSTEM BATTERY 3C

Interaction Effects (Continued)

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

Seismic Walkdown Checklist (SWC)

Equipment ID No. **BFN-3-BATB-254-0000C** Equipment Class³ 14

Equipment Description 125 VDC DIESEL SYSTEM BATTERY 3C

Comments (Additional pages may be added as necessary)

Evaluated by: Patrick McCarraher

Date:8/8/2012

George Bongart

8/8/2012

Seismic Walkdown Checklist (SWC)

Equipment ID No. **BFN-3-BATB-254-0000D** Equipment Class³ 15

Equipment Description 125 VDC DIESEL SYSTEM BATTERY 3D

Location: Bldg. U3-DG Floor El. 565 Room, Area 094, DIESEL GENERATOR ROOM 3D

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

³Enter the equipment class name from Appendix B, Classes of Equipment.

Seismic Walkdown Checklist (SWC)

Equipment ID No. **BFN-3-BATB-254-0000D** Equipment Class³ 15

Equipment Description 125 VDC DIESEL SYSTEM BATTERY 3D

Anchorage (Continued)

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

Anchorage configuration has been verified per calculation CDQ0999900691.

Seismic Walkdown Checklist (SWC)

Equipment ID No. **BFN-3-BATB-254-0000D** Equipment Class³ 15

Equipment Description 125 VDC DIESEL SYSTEM BATTERY 3D

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

Seismic Walkdown Checklist (SWC)

Equipment ID No. **BFN-3-BATB-254-0000D** Equipment Class³ 15

Equipment Description 125 VDC DIESEL SYSTEM BATTERY 3D

Interaction Effects (Continued)

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

Seismic Walkdown Checklist (SWC)

Equipment ID No. **BFN-3-BATB-254-0000D** Equipment Class³ 15

Equipment Description 125 VDC DIESEL SYSTEM BATTERY 3D

Comments (Additional pages may be added as necessary)

Evaluated by: George Bongart

Date:8/8/2012

Patrick McCarraher

8/8/2012

Seismic Walkdown Checklist (SWC)

Equipment ID No. **BFN-3-BDAA-211-0003EA** Equipment Class³ 3

Equipment Description 4KV SHUTDOWN BOARD 3EA

Location: Bldg. U3-DG Floor El. 583 Room, Area 112, 3EA ELECTRIC 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

Only a few of the anchors are visible without removing breakers. Of the few that were visible they appear to be in good condition. See comment section for the anchorage visible. internal anchorage inaccessible because extensive disassembly is required to enter the cabinet. The cabinet is checked externally for its condition.

³Enter the equipment class name from Appendix B, Classes of Equipment.

Seismic Walkdown Checklist (SWC)

Equipment ID No. **BFN-3-BDAA-211-0003EA** Equipment Class³ **3**

Equipment Description **4KV SHUTDOWN BOARD 3EA**

Anchorage (Continued)

3. Is the anchorage free of corrosion that is more than mild surface oxidation?

Y N U N/A

The visible anchors were free of corrosion.

4. Is the anchorage free of visible cracks in the concrete near the anchors?

Y N U N/A

The embedded plate was visible and there are no cracks around it.

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

Seismic Walkdown Checklist (SWC)

Equipment ID No. **BFN-3-BDAA-211-0003EA** Equipment Class³ 3

Equipment Description 4KV SHUTDOWN BOARD 3EA

6. Based on the above anchorage evaluations, is the anchorage free of potentially adverse seismic conditions?

Y N U

No potentially adverse seismic conditions were observed.

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

Seismic Walkdown Checklist (SWC)

Equipment ID No. **BFN-3-BDAA-211-0003EA** Equipment Class³ 3

Equipment Description 4KV SHUTDOWN BOARD 3EA

Interaction Effects (Continued)

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

Seismic Walkdown Checklist (SWC)

Equipment ID No. **BFN-3-BDAA-211-0003EA** Equipment Class³ 3

Equipment Description 4KV SHUTDOWN BOARD 3EA

Comments (Additional pages may be added as necessary)

Frame is welded to the embedded plate, and the welds are in good condition.

Visible bolts and locations:

Bay 7 - Front right - slot between breakers and frame make anchorage visible

Bay 9 - Front right - slot between breakers and frame make anchorage visible

Bay 10 - Front right - slot between breakers and frame make anchorage visible

Bay 11 - Front right - slot between breakers and frame make anchorage visible

Evaluated by: George Bongart

Date:8/13/2012

Patrick McCarraher

8/13/2012

Seismic Walkdown Checklist (SWC)

Equipment ID No. **BFN-3-BDAA-211-0003EB** Equipment Class³ 3

Equipment Description 4KV SHUTDOWN BOARD 3EB

Location: Bldg. U3-DG Floor El. 565 Room, Area 117, 3EB ELECTRIC 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

Cannot see anchorage to answer this question. Internal anchorage inaccessible because extensive disassembly is required to enter the cabinet. The cabinet is checked externally for its condition.

³Enter the equipment class name from Appendix B, Classes of Equipment.

Seismic Walkdown Checklist (SWC)

Equipment ID No. **BFN-3-BDAA-211-0003EB** Equipment Class³ 3

Equipment Description 4KV SHUTDOWN BOARD 3EB

Anchorage (Continued)

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

Seismic Walkdown Checklist (SWC)

Equipment ID No. **BFN-3-BDAA-211-0003EB** Equipment Class³ **3**

Equipment Description 4KV SHUTDOWN BOARD 3EB

6. Based on the above anchorage evaluations, is the anchorage free of potentially adverse seismic conditions?

Y N U

No potentially adverse seismic conditions were observed.

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

Seismic Walkdown Checklist (SWC)

Equipment ID No. **BFN-3-BDAA-211-0003EB** Equipment Class³ **3**

Equipment Description 4KV SHUTDOWN BOARD 3EB

Interaction Effects (Continued)

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

Attached lines have adequate flexibility to avoid damage.

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

Seismic Walkdown Checklist (SWC)

Equipment ID No. **BFN-3-BDAA-211-0003EB** Equipment Class³ 3

Equipment Description 4KV SHUTDOWN BOARD 3EB

Comments (Additional pages may be added as necessary)

Water is leaking down from the hatch above by 3EB shutdown board.

Evaluated by: George Bongart

Date:8/13/2012

Patrick McCarraher

8/13/2012

Seismic Walkdown Checklist (SWC)

Equipment ID No. **BFN-3-BDAA-211-0003EC** Equipment Class³ 3

Equipment Description 4KV SHUTDOWN BOARD 3EC

Location: Bldg. U3-DG Floor El. 583 Room, Area 112, 3EA ELECTRIC 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

Only a few anchors were visible, see comment section for anchorage that was visible. The visible anchors are in good condition. Internal anchorage inaccessible because extensive disassembly is require to enter the cabinet. The cabinet is checked externally for its condition.

³Enter the equipment class name from Appendix B, Classes of Equipment.

Seismic Walkdown Checklist (SWC)

Equipment ID No. **BFN-3-BDAA-211-0003EC** Equipment Class³ 3

Equipment Description 4KV SHUTDOWN BOARD 3EC

Anchorage (Continued)

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

The visible anchors are free of corrosion.

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

There are no cracks present around the embedded plate.

- 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

Seismic Walkdown Checklist (SWC)

Equipment ID No. **BFN-3-BDAA-211-0003EC** Equipment Class³ 3

Equipment Description 4KV SHUTDOWN BOARD 3EC

6. Based on the above anchorage evaluations, is the anchorage free of potentially adverse seismic conditions?

Y N U

No potentially adverse seismic conditions were observed.

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

Seismic Walkdown Checklist (SWC)

Equipment ID No. **BFN-3-BDAA-211-0003EC** Equipment Class³ 3

Equipment Description 4KV SHUTDOWN BOARD 3EC

Interaction Effects (Continued)

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

Seismic Walkdown Checklist (SWC)

Equipment ID No. **BFN-3-BDAA-211-0003EC** Equipment Class³ **3**

Equipment Description 4KV SHUTDOWN BOARD 3EC

Comments (Additional pages may be added as necessary)

Frame is welded to the embedded plate, the welds are in good condition.

Anchorage visible and their locations:

Bay 1 - Right front - breaker is pulled out enough to see this anchor

Bay 3 - Right front - slot between the breakers and the frame allows for visual observation

Bay 6 - Right front - slot between the breakers and the frame allows for visual observation

Bay 7 - Right front - slot between the breakers and the frame allows for visual observation

Bay 8 - Left front - slot between the breakers and the frame allows for visual observation

Bay 9 - Right front - slot between the breakers and the frame allows for visual observation

Bay 10 - Right front - slot between the breakers and the frame allows for visual observation

Bay 12 - Right front - slot between the breakers and the frame allows for visual observation

Evaluated by: Patrick McCarraher

Date:8/13/2012

George Bongart

8/13/2012

Seismic Walkdown Checklist (SWC)

Equipment ID No. **BFN-3-BDAA-211-0003ED** Equipment Class³ **3**

Equipment Description **4KV SHUTDOWN BOARD 3ED**

Location: Bldg. U3-DG Floor El. 565 Room, Area 117, 3EB ELECTRIC 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

Cannot see anchorage to verify. Internal anchorage inaccessible because extensive disassembly is required to enter the cabinet. The cabinet is checked externally for its condition.

³Enter the equipment class name from Appendix B, Classes of Equipment.

Seismic Walkdown Checklist (SWC)

Equipment ID No. **BFN-3-BDAA-211-0003ED** Equipment Class³ **3**

Equipment Description 4KV SHUTDOWN BOARD 3ED

Anchorage (Continued)

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

No cracks in the concrete near the embedded plate.

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

Seismic Walkdown Checklist (SWC)

Equipment ID No. **BFN-3-BDAA-211-0003ED** Equipment Class³ **3**

Equipment Description 4KV SHUTDOWN BOARD 3ED

6. Based on the above anchorage evaluations, is the anchorage free of potentially adverse seismic conditions?

Y N U

No potentially adverse seismic conditions were observed.

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

Seismic Walkdown Checklist (SWC)

Equipment ID No. **BFN-3-BDAA-211-0003ED** Equipment Class³ 3

Equipment Description 4KV SHUTDOWN BOARD 3ED

Interaction Effects (Continued)

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

Seismic Walkdown Checklist (SWC)

Equipment ID No. **BFN-3-BDAA-211-0003ED** Equipment Class³ 3

Equipment Description 4KV SHUTDOWN BOARD 3ED

Comments (Additional pages may be added as necessary)

Evaluated by: Patrick McCarraher

Date:8/13/2012

George Bongart

8/13/2012

Seismic Walkdown Checklist (SWC)

Equipment ID No. **BFN-3-BDBB-219-0003EA** Equipment Class³ 1

Equipment Description 480V DIESEL AUX BD 3EA

Location: Bldg. U3-DG Floor El. 583 Room, Area 116, 480V DIESEL SHUTDOWN BOARD ROOM

Manufacturer, Model, Etc. (optional but recommended) General Electric

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

This equipment has been selected for anchorage verification.

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

³Enter the equipment class name from Appendix B, Classes of Equipment.

Seismic Walkdown Checklist (SWC)

Equipment ID No. **BFN-3-BDBB-219-0003EA** Equipment Class³ 1

Equipment Description 480V DIESEL AUX BD 3EA

Anchorage (Continued)

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

Anchorage has been verified against A-46 SEWS 9033; the current anchorage configuration matches the reference documentation.

Seismic Walkdown Checklist (SWC)

Equipment ID No. **BFN-3-BDBB-219-0003EA** Equipment Class³ **1**

Equipment Description 480V DIESEL AUX BD 3EA

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

Seismic Walkdown Checklist (SWC)

Equipment ID No. **BFN-3-BDBB-219-0003EA** Equipment Class³ 1

Equipment Description 480V DIESEL AUX BD 3EA

Interaction Effects (Continued)

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

Seismic Walkdown Checklist (SWC)

Equipment ID No. **BFN-3-BDBB-219-0003EA** Equipment Class³ 1

Equipment Description 480V DIESEL AUX BD 3EA

Comments (Additional pages may be added as necessary)

Evaluated by: Patrick McCarraher

Date:8/13/2012

George Bongart

8/13/2012

Seismic Walkdown Checklist (SWC)

Equipment ID No. **BFN-3-BDBB-219-0003EB** Equipment Class³ 1

Equipment Description 480V DIESEL AUX BD 3EB

Location: Bldg. U3-DG Floor El. 583 Room, Area 116, 480V DIESEL SHUTDOWN BOARD ROOM

Manufacturer, Model, Etc. (optional but recommended) General Electric

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

This equipment has been selected for anchorage configuration.

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

Far left bay front left bolt has no head, this has already been addressed in A-46 SEWS 39005 and has been determined to not be a problem.

³Enter the equipment class name from Appendix B, Classes of Equipment.

Seismic Walkdown Checklist (SWC)

Equipment ID No. **BFN-3-BDBB-219-0003EB** Equipment Class³ **1**

Equipment Description 480V DIESEL AUX BD 3EB

Anchorage (Continued)

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 no cracks in the concrete near the anchors.

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

Anchorage has been verified against A-46 SEWS Number 39005; the current configuration matches the documentation.

Seismic Walkdown Checklist (SWC)

Equipment ID No. **BFN-3-BDBB-219-0003EB** Equipment Class³ 1

Equipment Description 480V DIESEL AUX BD 3EB

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

Seismic Walkdown Checklist (SWC)

Equipment ID No. **BFN-3-BDBB-219-0003EB** Equipment Class³ 1

Equipment Description 480V DIESEL AUX BD 3EB

Interaction Effects (Continued)

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

Seismic Walkdown Checklist (SWC)

Equipment ID No. **BFN-3-BDBB-219-0003EB** Equipment Class³ 1

Equipment Description 480V DIESEL AUX BD 3EB

Comments (Additional pages may be added as necessary)

Evaluated by: George Bongart

Date:8/13/2012

Patrick McCarraher

8/13/2012

Seismic Walkdown Checklist (SWC)

Equipment ID No. **BFN-3-BDBB-231-0003A** Equipment Class³ 2

Equipment Description 480V SHUTDOWN BD 3A

Location: Bldg. U3-RB Floor El. 621 Room, Area 123, Electrical Board Room 3A, 480V SDBD 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

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

Only able to verify anchorage on plates on sides of board. Unable to verify anchorage inside. Internal anchorage inaccessible because extensive disassembly is required to enter the cabinet. The cabinet is checked externally for its condition.

³Enter the equipment class name from Appendix B, Classes of Equipment.

Seismic Walkdown Checklist (SWC)

Equipment ID No. **BFN-3-BDBB-231-0003A** Equipment Class³ **2**

Equipment Description 480V SHUTDOWN BD 3A

Anchorage (Continued)

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

Seismic Walkdown Checklist (SWC)

Equipment ID No. **BFN-3-BDBB-231-0003A** Equipment Class³ 2

Equipment Description 480V SHUTDOWN BD 3A

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

Verified per dwg. 41N1203-1 R4

Seismic Walkdown Checklist (SWC)

Equipment ID No. **BFN-3-BDBB-231-0003A** Equipment Class³ 2

Equipment Description 480V SHUTDOWN BD 3A

Interaction Effects (Continued)

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

Seismic Walkdown Checklist (SWC)

Equipment ID No. **BFN-3-BDBB-231-0003A** Equipment Class³ **2**

Equipment Description 480V SHUTDOWN BD 3A

Comments (Additional pages may be added as necessary)

Ladder next to shutdown board will interact with board during seismic event. Operations has since removed ladder.

Evaluated by: Jeff Lawrence

Date:08/14/2012

Jason Black

08/14/2012

Seismic Walkdown Checklist (SWC)

Equipment ID No. **BFN-3-BDBB-231-0003B** Equipment Class³ 2

Equipment Description 480V SHUTDOWN BD 3B

Location: Bldg. U3-RB Floor El. 621 Room, Area 124, Electrical Board Room 3B, 480V SDBD 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

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

Only able to verify anchorage outside board on sides. Internal anchorage inaccessible because extensive disassembly is required to enter the cabinet. The cabinet is checked externally for its condition.

³Enter the equipment class name from Appendix B, Classes of Equipment.

Seismic Walkdown Checklist (SWC)

Equipment ID No. **BFN-3-BDBB-231-0003B** Equipment Class³ 2

Equipment Description 480V SHUTDOWN BD 3B

Anchorage (Continued)

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

Seismic Walkdown Checklist (SWC)

Equipment ID No. **BFN-3-BDBB-231-0003B** Equipment Class³ **2**

Equipment Description 480V SHUTDOWN BD 3B

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

Block walls verified per dwg 41N1203-1

Seismic Walkdown Checklist (SWC)

Equipment ID No. **BFN-3-BDBB-231-0003B** Equipment Class³ 2

Equipment Description 480V SHUTDOWN BD 3B

Interaction Effects (Continued)

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

Seismic Walkdown Checklist (SWC)

Equipment ID No. **BFN-3-BDBB-231-0003B** Equipment Class³ 2

Equipment Description 480V SHUTDOWN BD 3B

Comments (Additional pages may be added as necessary)

Evaluated by: Jeff Lawrence

Date:08/14/2012

Jason Black

08/14/2012

Seismic Walkdown Checklist (SWC)

Equipment ID No. **BFN-3-BDBB-268-0003A** Equipment Class³ 1

Equipment Description 480V RMOV BD 3A

Location: Bldg. U3-RB Floor El. 621 Room, Area 026, 3A ELECTRIC 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

³Enter the equipment class name from Appendix B, Classes of Equipment.

Seismic Walkdown Checklist (SWC)

Equipment ID No. **BFN-3-BDBB-268-0003A** Equipment Class³ 1

Equipment Description 480V RMOV BD 3A

Anchorage (Continued)

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

Seismic Walkdown Checklist (SWC)

Equipment ID No. **BFN-3-BDBB-268-0003A** Equipment Class³ **1**

Equipment Description 480V RMOV BD 3A

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

Block wall verified per dwg. 41N1203-1 R4.

Seismic Walkdown Checklist (SWC)

Equipment ID No. **BFN-3-BDBB-268-0003A** Equipment Class³ **1**

Equipment Description 480V RMOV BD 3A

Interaction Effects (Continued)

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

Seismic Walkdown Checklist (SWC)

Equipment ID No. **BFN-3-BDBB-268-0003A** Equipment Class³ 1

Equipment Description 480V RMOV BD 3A

Comments (Additional pages may be added as necessary)

Evaluated by: Jeff Lawrence

Date:08/14/2012

Jason Black

08/14/2012

Seismic Walkdown Checklist (SWC)

Equipment ID No. **BFN-3-BDBB-268-0003D** Equipment Class³ 1

Equipment Description 480V RMOV BOARD 3D

Location: Bldg. U3-RB Floor El. 593 Room, Area 113, T/R20 Area

Manufacturer, Model, Etc. (optional but recommended) Interational Switchboard Corporation

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

The MCC has been selected for anchorage verification.

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

³Enter the equipment class name from Appendix B, Classes of Equipment.

Seismic Walkdown Checklist (SWC)

Equipment ID No. **BFN-3-BDBB-268-0003D** Equipment Class³ **1**

Equipment Description **480V RMOV BOARD 3D**

Anchorage (Continued)

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

No corrosion was found on the anchorage

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

Evidence of previous cracking in the grout, these cracks have been repaired and there are no new cracks present.

- 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

Anchorage was verified using A-46 SEWS Number 39016; each bay is anchored by four bolts, two in the front and two in the back as described in reference documentation.

Seismic Walkdown Checklist (SWC)

Equipment ID No. **BFN-3-BDBB-268-0003D** Equipment Class³ **1**

Equipment Description 480V RMOV BOARD 3D

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

There are no overhead equipment or structures that are likely to collapse onto the MCC,

Seismic Walkdown Checklist (SWC)

Equipment ID No. **BFN-3-BDBB-268-0003D** Equipment Class³ 1

Equipment Description 480V RMOV BOARD 3D

Interaction Effects (Continued)

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

Seismic Walkdown Checklist (SWC)

Equipment ID No. **BFN-3-BDBB-268-0003D** Equipment Class³ 1

Equipment Description 480V RMOV BOARD 3D

Comments (Additional pages may be added as necessary)

Evaluated by: Patrick McCarraher

Date:8/10/2012

George Bongart

8/10/2012

Seismic Walkdown Checklist (SWC)

Equipment ID No. **BFN-3-BDBB-268-0003E** Equipment Class³ 1

Equipment Description 480V RMOV BOARD 3E

Location: Bldg. U3-RB Floor El. 621 Room, Area 114, U/R17

Manufacturer, Model, Etc. (optional but recommended) International Switchboard Corporation

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

³Enter the equipment class name from Appendix B, Classes of Equipment.

Seismic Walkdown Checklist (SWC)

Equipment ID No. **BFN-3-BDBB-268-0003E** Equipment Class³ 1

Equipment Description 480V RMOV BOARD 3E

Anchorage (Continued)

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

Anchorage has been verified against A-46 SEWS number 39018, the current configuration matches calculations and sketches as stated in reference material.

Seismic Walkdown Checklist (SWC)

Equipment ID No. **BFN-3-BDBB-268-0003E** Equipment Class³ **1**

Equipment Description 480V RMOV BOARD 3E

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

Seismic Walkdown Checklist (SWC)

Equipment ID No. **BFN-3-BDBB-268-0003E** Equipment Class³ 1

Equipment Description 480V RMOV BOARD 3E

Interaction Effects (Continued)

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

Attached lines have adequate flexibility.

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

Seismic Walkdown Checklist (SWC)

Equipment ID No. **BFN-3-BDBB-268-0003E** Equipment Class³ 1

Equipment Description 480V RMOV BOARD 3E

Comments (Additional pages may be added as necessary)

Evaluated by: George Bongart

Date:8/10/2012

Patrick McCarraher

8/10/2012

Seismic Walkdown Checklist (SWC)

Equipment ID No. **BFN-3-BDDD-281-0003B** Equipment Class³ **1**

Equipment Description 250V RMOV BD 3B

Location: Bldg. U3-RB Floor El. 593 Room, Area 027, Electrical Board Room 3B

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

³Enter the equipment class name from Appendix B, Classes of Equipment.

Seismic Walkdown Checklist (SWC)

Equipment ID No. **BFN-3-BDDD-281-0003B** Equipment Class³ 1

Equipment Description 250V RMOV BD 3B

Anchorage (Continued)

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

Seismic Walkdown Checklist (SWC)

Equipment ID No. **BFN-3-BDDD-281-0003B** Equipment Class³ **1**

Equipment Description 250V RMOV BD 3B

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

Seismic Walkdown Checklist (SWC)

Equipment ID No. **BFN-3-BDDD-281-0003B** Equipment Class³ 1

Equipment Description 250V RMOV BD 3B

Interaction Effects (Continued)

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

Seismic Walkdown Checklist (SWC)

Equipment ID No. **BFN-3-BDDD-281-0003B** Equipment Class³ 1

Equipment Description 250V RMOV BD 3B

Comments (Additional pages may be added as necessary)

Evaluated by: Jeff Lawrence

Date:08/14/2012

Jason Black

08/14/2012

Seismic Walkdown Checklist (SWC)

Equipment ID No. **BFN-3-BDGG-254-0003A** Equipment Class³ 14

Equipment Description 125 VDC DSL SYS BAT BOARD 3A

Location: Bldg. U3-DG Floor El. 565 Room, Area 058, DG ROOM 3A

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

³Enter the equipment class name from Appendix B, Classes of Equipment.

Seismic Walkdown Checklist (SWC)

Equipment ID No. **BFN-3-BDGG-254-0003A** Equipment Class³ 14

Equipment Description 125 VDC DSL SYS BAT BOARD 3A

Anchorage (Continued)

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

Anchorage has been verified against SEWS Number 9156. The current configuration matches the reference documentation.

Seismic Walkdown Checklist (SWC)

Equipment ID No. **BFN-3-BDGG-254-0003A** Equipment Class³ 14

Equipment Description 125 VDC DSL SYS BAT BOARD 3A

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

Seismic Walkdown Checklist (SWC)

Equipment ID No. **BFN-3-BDGG-254-0003A** Equipment Class³ 14

Equipment Description 125 VDC DSL SYS BAT BOARD 3A

Interaction Effects (Continued)

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

Seismic Walkdown Checklist (SWC)

Equipment ID No. **BFN-3-BDGG-254-0003A** Equipment Class³ 14

Equipment Description 125 VDC DSL SYS BAT BOARD 3A

Comments (Additional pages may be added as necessary)

Evaluated by: George Bongart

Date:8/1/2012

Patrick McCarraher

8/1/2012

Seismic Walkdown Checklist (SWC)

Equipment ID No. **BFN-3-BDGG-254-0003B** Equipment Class³ 14

Equipment Description 125 VDC DSL SYS BAT BOARD B

Location: Bldg. U3-DG Floor El. 565 Room, Area 053, Diesel Generator Room 3B

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

³Enter the equipment class name from Appendix B, Classes of Equipment.

Seismic Walkdown Checklist (SWC)

Equipment ID No. **BFN-3-BDGG-254-0003B** Equipment Class³ 14

Equipment Description 125 VDC DSL SYS BAT BOARD B

Anchorage (Continued)

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

Seismic Walkdown Checklist (SWC)

Equipment ID No. **BFN-3-BDGG-254-0003B** Equipment Class³ 14

Equipment Description 125 VDC DSL SYS BAT BOARD B

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

All soft targets housed in panel with properly latched door.

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

Seismic Walkdown Checklist (SWC)

Equipment ID No. **BFN-3-BDGG-254-0003B** Equipment Class³ 14

Equipment Description 125 VDC DSL SYS BAT BOARD B

Interaction Effects (Continued)

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

Conduits connecting at bottom of panel have enough flexibility.

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

Seismic Walkdown Checklist (SWC)

Equipment ID No. **BFN-3-BDGG-254-0003B** Equipment Class³ 14

Equipment Description 125 VDC DSL SYS BAT BOARD B

Comments (Additional pages may be added as necessary)

Evaluated by: Jeff Lawrence

Date:08/01/2012

Jason Black

08/01/2012

Seismic Walkdown Checklist (SWC)

Equipment ID No. **BFN-3-BDGG-254-0003D** Equipment Class³ 14

Equipment Description 125 VDC DSL SYS BAT BOARD D

Location: Bldg. U3-DG Floor El. 565 Room, Area 094, DIESEL GENERATOR ROOM 3D

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

³Enter the equipment class name from Appendix B, Classes of Equipment.

Seismic Walkdown Checklist (SWC)

Equipment ID No. **BFN-3-BDGG-254-0003D** Equipment Class³ 14

Equipment Description 125 VDC DSL SYS BAT BOARD D

Anchorage (Continued)

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

Anchorage has been verified using A-46 SEWS Number 9157. The current anchorage configuration matches reference documentation.

Seismic Walkdown Checklist (SWC)

Equipment ID No. **BFN-3-BDGG-254-0003D** Equipment Class³ 14

Equipment Description 125 VDC DSL SYS BAT BOARD D

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

Breakers on the front of the panel are protected by cages.

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

Seismic Walkdown Checklist (SWC)

Equipment ID No. **BFN-3-BDGG-254-0003D** Equipment Class³ 14

Equipment Description 125 VDC DSL SYS BAT BOARD D

Interaction Effects (Continued)

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

Seismic Walkdown Checklist (SWC)

Equipment ID No. **BFN-3-BDGG-254-0003D** Equipment Class³ 14

Equipment Description 125 VDC DSL SYS BAT BOARD D

Comments (Additional pages may be added as necessary)

Evaluated by: George Bongart

Date:8/8/2012

Patrick McCarraher

8/8/2012

Seismic Walkdown Checklist (SWC)

Equipment ID No. **BFN-3-CHGA-248-0003EB** Equipment Class³ 16

Equipment Description SHUTDOWN BDS 250VDC BATTERY CHARGER SB-3EB

Location: Bldg. U3-DG Floor El. 583 Room, Area 056, 3EB BATTERY ROOM 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 additional information reference calculation CDQ0248910433.

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

³Enter the equipment class name from Appendix B, Classes of Equipment.

Seismic Walkdown Checklist (SWC)

Equipment ID No. **BFN-3-CHGA-248-0003EB** Equipment Class³ 16

Equipment Description SHUTDOWN BDS 250VDC BATTERY CHARGER SB-3EB

Anchorage (Continued)

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

For additional information reference calculation CDQ0248910433.

Seismic Walkdown Checklist (SWC)

Equipment ID No. **BFN-3-CHGA-248-0003EB** Equipment Class³ 16

Equipment Description SHUTDOWN BDS 250VDC BATTERY CHARGER SB-3EB

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 wall is seismically qualified per IEB 80-11, refer to drawing 41N1201-1..

Seismic Walkdown Checklist (SWC)

Equipment ID No. **BFN-3-CHGA-248-0003EB** Equipment Class³ 16

Equipment Description SHUTDOWN BDS 250VDC BATTERY CHARGER SB-3EB

Interaction Effects (Continued)

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

Seismic Walkdown Checklist (SWC)

Equipment ID No. **BFN-3-CHGA-248-0003EB** Equipment Class³ 16

Equipment Description SHUTDOWN BDS 250VDC BATTERY CHARGER SB-3EB

Comments (Additional pages may be added as necessary)

Evaluated by: Patrick McCarraher

Date:8/1/2012

George Bongart

8/1/2012

Seismic Walkdown Checklist (SWC)

Equipment ID No. **BFN-3-CHGB-254-0000AA** Equipment Class³ 16

Equipment Description DG3A 125 VDC DSL SYS BTRY CHGR A

Location: Bldg. U3-DG Floor El. 565 Room, Area 057, ELECTRICAL TUNNEL

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 additional information reference drawings 3-45N337-5, 3-48N897-1 and 3-48N897-7

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

³Enter the equipment class name from Appendix B, Classes of Equipment.

Seismic Walkdown Checklist (SWC)

Equipment ID No. **BFN-3-CHGB-254-0000AA** Equipment Class³ 16

Equipment Description DG3A 125 VDC DSL SYS BTRY CHGR A

Anchorage (Continued)

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

Anchorage has been verified against calculation and drawings referenced in CDQ3254931005. The current configuration matches the reference material.

For additional information reference drawings 3-45N337-5, 3-48N897-1 and 3-48N897-7

Seismic Walkdown Checklist (SWC)

Equipment ID No. **BFN-3-CHGB-254-0000AA** Equipment Class³ 16

Equipment Description DG3A 125 VDC DSL SYS BTRY CHGR A

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

Seismic Walkdown Checklist (SWC)

Equipment ID No. **BFN-3-CHGB-254-0000AA** Equipment Class³ 16

Equipment Description DG3A 125 VDC DSL SYS BTRY CHGR A

Interaction Effects (Continued)

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

Seismic Walkdown Checklist (SWC)

Equipment ID No. **BFN-3-CHGB-254-0000AA** Equipment Class³ 16

Equipment Description DG3A 125 VDC DSL SYS BTRY CHGR A

Comments (Additional pages may be added as necessary)

Evaluated by: George Bongart

Date:8/1/2012

Patrick McCarraher

8/1/2012

Seismic Walkdown Checklist (SWC)

Equipment ID No. **BFN-3-CHGB-254-0000BA** Equipment Class³ 16

Equipment Description DG3B 125 VDC DSL SYS BTRY CHGR A

Location: Bldg. U3-DG Floor El. 565 Room, Area 053, Diesel Generator Room 3B

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 additional information reference drawings 3-45N337-5, 3-48N897-1 and 3-48N897-7

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

³Enter the equipment class name from Appendix B, Classes of Equipment.

Seismic Walkdown Checklist (SWC)

Equipment ID No. **BFN-3-CHGB-254-0000BA** Equipment Class³ 16

Equipment Description DG3B 125 VDC DSL SYS BTRY CHGR A

Anchorage (Continued)

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

For additional information reference drawings 3-45N337-5, 3-48N897-1 and 3-48N897-7

Seismic Walkdown Checklist (SWC)

Equipment ID No. **BFN-3-CHGB-254-0000BA** Equipment Class³ 16

Equipment Description DG3B 125 VDC DSL SYS BTRY CHGR A

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

Nothing overhead which presents concerns of impacted targets

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

Seismic Walkdown Checklist (SWC)

Equipment ID No. **BFN-3-CHGB-254-0000BA** Equipment Class³ 16

Equipment Description DG3B 125 VDC DSL SYS BTRY CHGR A

Interaction Effects (Continued)

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

Seismic Walkdown Checklist (SWC)

Equipment ID No. **BFN-3-CHGB-254-0000BA** Equipment Class³ 16

Equipment Description DG3B 125 VDC DSL SYS BTRY CHGR A

Comments (Additional pages may be added as necessary)

Evaluated by: Jeff Lawrence

Date:08/01/2012

Jason Black

08/01/2012

Seismic Walkdown Checklist (SWC)

Equipment ID No. **BFN-3-CHGB-254-0000CB** Equipment Class³ 16

Equipment Description DG3C 125 VDC DSL SYS BTRY CHGR B

Location: Bldg. U3-DG Floor El. 565 Room, Area 093, DIESEL GENERATOR ROOM 3C

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 additional information reference drawings 3-45N337-5, 3-48N897-1 and 3-48N897-7

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

³Enter the equipment class name from Appendix B, Classes of Equipment.

Seismic Walkdown Checklist (SWC)

Equipment ID No. **BFN-3-CHGB-254-0000CB** Equipment Class³ 16

Equipment Description DG3C 125 VDC DSL SYS BTRY CHGR B

Anchorage (Continued)

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

Anchorage was verified using drawing 3-48B900-237 the current configuration matches the documentation.

For additional information reference drawings 3-45N337-5, 3-48N897-1 and 3-48N897-7

Seismic Walkdown Checklist (SWC)

Equipment ID No. **BFN-3-CHGB-254-0000CB** Equipment Class³ 16

Equipment Description DG3C 125 VDC DSL SYS BTRY CHGR B

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

Seismic Walkdown Checklist (SWC)

Equipment ID No. **BFN-3-CHGB-254-0000CB** Equipment Class³ 16

Equipment Description DG3C 125 VDC DSL SYS BTRY CHGR B

Interaction Effects (Continued)

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

Seismic Walkdown Checklist (SWC)

Equipment ID No. **BFN-3-CHGB-254-0000CB** Equipment Class³ 16

Equipment Description DG3C 125 VDC DSL SYS BTRY CHGR B

Comments (Additional pages may be added as necessary)

Evaluated by: George Bongart

Date:8/8/2012

Patrick McCarraher

8/8/2012

Seismic Walkdown Checklist (SWC)

Equipment ID No. **BFN-3-CHGB-254-0000DB** Equipment Class³ 16

Equipment Description DG3D 125 VDC DSL SYS BTRY CHGR B

Location: Bldg. U3-DG Floor El. 565 Room, Area 094, DIESEL GENERATOR ROOM 3D

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 additional information reference drawings 3-45N337-5, 3-48N897-1 and 3-48N897-7

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

³Enter the equipment class name from Appendix B, Classes of Equipment.

Seismic Walkdown Checklist (SWC)

Equipment ID No. **BFN-3-CHGB-254-0000DB** Equipment Class³ 16

Equipment Description DG3D 125 VDC DSL SYS BTRY CHGR B

Anchorage (Continued)

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

Anchorage has been verified against drawing 3-48B900-239. The current anchorage matches the reference documentation.

For additional information reference drawings 3-45N337-5, 3-48N897-1 and 3-48N897-7

Seismic Walkdown Checklist (SWC)

Equipment ID No. **BFN-3-CHGB-254-0000DB** Equipment Class³ 16

Equipment Description DG3D 125 VDC DSL SYS BTRY CHGR B

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

Seismic Walkdown Checklist (SWC)

Equipment ID No. **BFN-3-CHGB-254-0000DB** Equipment Class³ 16

Equipment Description DG3D 125 VDC DSL SYS BTRY CHGR B

Interaction Effects (Continued)

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

Seismic Walkdown Checklist (SWC)

Equipment ID No. **BFN-3-CHGB-254-0000DB** Equipment Class³ 16

Equipment Description DG3D 125 VDC DSL SYS BTRY CHGR B

Comments (Additional pages may be added as necessary)

Evaluated by: Patrick McCarraher

Date:8/8/2012

George Bongart

8/8/2012

Seismic Walkdown Checklist (SWC)

Equipment ID No. **BFN-3-CHR-031-1943** Equipment Class³ 11

Equipment Description WATER CHILLER 3A

Location: Bldg. U3-CB Floor El. 606 Room, Area 122, Chiller 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

Chiller unit is anchored to pad by four (4) 1-1/2" bolts on each of the two legs of the equipment skid (8 bolts total). One (1) bolt is missing on one (1) of the legs of the equipment on the east side. Per TVA calculation CDQ3031895494 Rev 1 Appendix A, the anchorage is qualified with the missing anchor.

³Enter the equipment class name from Appendix B, Classes of Equipment.

Seismic Walkdown Checklist (SWC)

Equipment ID No. **BFN-3-CHR-031-1943** Equipment Class³ 11

Equipment Description WATER CHILLER 3A

Anchorage (Continued)

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

Seismic Walkdown Checklist (SWC)

Equipment ID No. **BFN-3-CHR-031-1943** Equipment Class³ 11

Equipment Description WATER CHILLER 3A

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

Seismic Walkdown Checklist (SWC)

Equipment ID No. **BFN-3-CHR-031-1943** Equipment Class³ 11

Equipment Description WATER CHILLER 3A

Interaction Effects (Continued)

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

Seismic Walkdown Checklist (SWC)

Equipment ID No. **BFN-3-CHR-031-1943** Equipment Class³ 11

Equipment Description WATER CHILLER 3A

Comments (Additional pages may be added as necessary)

Evaluated by: Jeff Lawrence

Date:08/14/2012

Jason Black

08/14/2012

Seismic Walkdown Checklist (SWC)

Equipment ID No. **BFN-3-CHR-031-1951** Equipment Class³ 11

Equipment Description WATER CHILLER 3B

Location: Bldg. U3-CB Floor El. 606 Room, Area 122, Chiller 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

³Enter the equipment class name from Appendix B, Classes of Equipment.

Seismic Walkdown Checklist (SWC)

Equipment ID No. **BFN-3-CHR-031-1951** Equipment Class³ 11

Equipment Description WATER CHILLER 3B

Anchorage (Continued)

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

Seismic Walkdown Checklist (SWC)

Equipment ID No. **BFN-3-CHR-031-1951** Equipment Class³ 11

Equipment Description WATER CHILLER 3B

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

Seismic Walkdown Checklist (SWC)

Equipment ID No. **BFN-3-CHR-031-1951** Equipment Class³ 11

Equipment Description WATER CHILLER 3B

Interaction Effects (Continued)

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

Seismic Walkdown Checklist (SWC)

Equipment ID No. **BFN-3-CHR-031-1951** Equipment Class³ 11

Equipment Description WATER CHILLER 3B

Comments (Additional pages may be added as necessary)

Evaluated by: Jeff Lawrence

Date:08/14/2012

Jason Black

08/14/2012

Seismic Walkdown Checklist (SWC)

Equipment ID No. **BFN-3-FAN-030-0230** Equipment Class³ 9

Equipment Description DG ROOM 3A EXHAUST FAN "A"

Location: Bldg. U3-DG Floor El. 583 Room, Area 054, Fan 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

³Enter the equipment class name from Appendix B, Classes of Equipment.

Seismic Walkdown Checklist (SWC)

Equipment ID No. **BFN-3-FAN-030-0230** Equipment Class³ 9

Equipment Description DG ROOM 3A EXHAUST FAN "A"

Anchorage (Continued)

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

Minor cracks in grout on right side. Not 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

Anchorage has been verified against A-46 SEWS Number 7015. the current configuration matches the reference documentation.

Seismic Walkdown Checklist (SWC)

Equipment ID No. **BFN-3-FAN-030-0230** Equipment Class³ 9

Equipment Description DG ROOM 3A EXHAUST FAN "A"

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

Seismic Walkdown Checklist (SWC)

Equipment ID No. **BFN-3-FAN-030-0230** Equipment Class³ 9

Equipment Description DG ROOM 3A EXHAUST FAN "A"

Interaction Effects (Continued)

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

Seismic Walkdown Checklist (SWC)

Equipment ID No. **BFN-3-FAN-030-0230** Equipment Class³9

Equipment Description DG ROOM 3A EXHAUST FAN "A"

Comments (Additional pages may be added as necessary)

Evaluated by: George Bongart

Date:8/1/2012

Patrick McCarraher

8/1/2012

Seismic Walkdown Checklist (SWC)

Equipment ID No. **BFN-3-FAN-030-0231** Equipment Class³ **9**

Equipment Description DG ROOM 3A EXHAUST FAN "B"

Location: Bldg. U3-DG Floor El. 583 Room, Area 054, Fan 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

³Enter the equipment class name from Appendix B, Classes of Equipment.

Seismic Walkdown Checklist (SWC)

Equipment ID No. **BFN-3-FAN-030-0231** Equipment Class³9

Equipment Description DG ROOM 3A EXHAUST FAN "B"

Anchorage (Continued)

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

Minor cracks in grout on left side. Not 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

Anchorage has been verified against A-46 SEWS Number 7015.
The current configuration matches reference material.

Seismic Walkdown Checklist (SWC)

Equipment ID No. **BFN-3-FAN-030-0231** Equipment Class³9

Equipment Description DG ROOM 3A EXHAUST FAN "B"

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

Seismic Walkdown Checklist (SWC)

Equipment ID No. **BFN-3-FAN-030-0231** Equipment Class³ 9

Equipment Description DG ROOM 3A EXHAUST FAN "B"

Interaction Effects (Continued)

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

Seismic Walkdown Checklist (SWC)

Equipment ID No. **BFN-3-FAN-030-0231** Equipment Class³9

Equipment Description DG ROOM 3A EXHAUST FAN "B"

Comments (Additional pages may be added as necessary)

Evaluated by: George Bongart

Date:8/1/2012

Patrick McCarraher

8/1/2012

Seismic Walkdown Checklist (SWC)

Equipment ID No. **BFN-3-FAN-030-0232** Equipment Class³ 9

Equipment Description DG ROOM 3B EXHAUST FAN "A"

Location: Bldg. U3-DG Floor El. 583 Room, Area 051, Fan 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

³Enter the equipment class name from Appendix B, Classes of Equipment.

Seismic Walkdown Checklist (SWC)

Equipment ID No. **BFN-3-FAN-030-0232** Equipment Class³ 9

Equipment Description DG ROOM 3B EXHAUST FAN "A"

Anchorage (Continued)

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

Grout chipped near one (1) of the bolts anchoring the equipment to the concrete. Crack does not pass through the bolt and concrete under grout is not damaged. The grout pad is in good condition in all other areas around the other three (3) bolts and will adequately resist shear without subjecting the anchors to unnecessary bending. No potentially adverse seismic conditions exist.

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

Anchorage configuration verified per A-46 SEWS (SSEL # 7015)

Seismic Walkdown Checklist (SWC)

Equipment ID No. **BFN-3-FAN-030-0232** Equipment Class³ 9

Equipment Description DG ROOM 3B EXHAUST FAN "A"

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

Seismic Walkdown Checklist (SWC)

Equipment ID No. **BFN-3-FAN-030-0232** Equipment Class³ 9

Equipment Description DG ROOM 3B EXHAUST FAN "A"

Interaction Effects (Continued)

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

Seismic Walkdown Checklist (SWC)

Equipment ID No. **BFN-3-FAN-030-0232** Equipment Class³9

Equipment Description DG ROOM 3B EXHAUST FAN "A"

Comments (Additional pages may be added as necessary)

Evaluated by: Jeff Lawrence

Date:08/01/2012

Jason Black

08/01/2012

Seismic Walkdown Checklist (SWC)

Equipment ID No. **BFN-3-FAN-030-0233** Equipment Class³ **9**

Equipment Description DG ROOM 3B EXHAUST FAN "B"

Location: Bldg. U3-DG Floor El. 583 Room, Area 051, Fan 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

³Enter the equipment class name from Appendix B, Classes of Equipment.

Seismic Walkdown Checklist (SWC)

Equipment ID No. **BFN-3-FAN-030-0233** Equipment Class³ 9

Equipment Description DG ROOM 3B EXHAUST FAN "B"

Anchorage (Continued)

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

Anchorage verified per A-46 SEWS 7015.

Seismic Walkdown Checklist (SWC)

Equipment ID No. **BFN-3-FAN-030-0233** Equipment Class³ 9

Equipment Description DG ROOM 3B EXHAUST FAN "B"

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

Seismic Walkdown Checklist (SWC)

Equipment ID No. **BFN-3-FAN-030-0233** Equipment Class³ 9

Equipment Description DG ROOM 3B EXHAUST FAN "B"

Interaction Effects (Continued)

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

Seismic Walkdown Checklist (SWC)

Equipment ID No. **BFN-3-FAN-030-0233** Equipment Class³9

Equipment Description DG ROOM 3B EXHAUST FAN "B"

Comments (Additional pages may be added as necessary)

Evaluated by: Jeff Lawrence

Date:8/1/2012

Jason Black

8/1/2012

Seismic Walkdown Checklist (SWC)

Equipment ID No. **BFN-3-FCO-030-0230A** Equipment Class³ 10

Equipment Description FAN A DISCHARGE DAMPER

Location: Bldg. U3-DG Floor El. 583 Room, Area 054, Fan 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

³Enter the equipment class name from Appendix B, Classes of Equipment.

Seismic Walkdown Checklist (SWC)

Equipment ID No. **BFN-3-FCO-030-0230A** Equipment Class³ 10

Equipment Description FAN A DISCHARGE DAMPER

Anchorage (Continued)

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

Not attached to concrete.

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

Seismic Walkdown Checklist (SWC)

Equipment ID No. **BFN-3-FCO-030-0230A** Equipment Class³ 10

Equipment Description FAN A DISCHARGE DAMPER

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

Seismic Walkdown Checklist (SWC)

Equipment ID No. **BFN-3-FCO-030-0230A** Equipment Class³ 10

Equipment Description FAN A DISCHARGE DAMPER

Interaction Effects (Continued)

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

Seismic Walkdown Checklist (SWC)

Equipment ID No. **BFN-3-FCO-030-0230A** Equipment Class³ 10

Equipment Description FAN A DISCHARGE DAMPER

Comments (Additional pages may be added as necessary)

Evaluated by: George Bongart

Date:8/1/2012

Patrick McCarraher

8/1/2012

Seismic Walkdown Checklist (SWC)

Equipment ID No. **BFN-3-FCO-030-0230B** Equipment Class³ 10

Equipment Description FAN RM 3A INLET DAMPER

Location: Bldg. U3-DG Floor El. 565 Room, Area 058, DG ROOM 3A

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

³Enter the equipment class name from Appendix B, Classes of Equipment.

Seismic Walkdown Checklist (SWC)

Equipment ID No. **BFN-3-FCO-030-0230B** Equipment Class³ 10

Equipment Description FAN RM 3A INLET DAMPER

Anchorage (Continued)

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

Seismic Walkdown Checklist (SWC)

Equipment ID No. **BFN-3-FCO-030-0230B** Equipment Class³ 10

Equipment Description FAN RM 3A INLET DAMPER

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

Seismic Walkdown Checklist (SWC)

Equipment ID No. **BFN-3-FCO-030-0230B** Equipment Class³ 10

Equipment Description FAN RM 3A INLET DAMPER

Interaction Effects (Continued)

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

Seismic Walkdown Checklist (SWC)

Equipment ID No. **BFN-3-FCO-030-0230B** Equipment Class³ 10

Equipment Description FAN RM 3A INLET DAMPER

Comments (Additional pages may be added as necessary)

Evaluated by: George Bongart

Date:8/1/2012

Patrick McCarraher

8/1/2012

Seismic Walkdown Checklist (SWC)

Equipment ID No. **BFN-3-FCO-030-0233A** Equipment Class³ 10

Equipment Description FAN B DISCHARGE DAMPER

Location: Bldg. U3-DG Floor El. 583 Room, Area 051, Diesel Generator Fan Room 3B

Manufacturer, Model, Etc. (optional but recommended) AIV American Warming and Ventilating INC.

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

³Enter the equipment class name from Appendix B, Classes of Equipment.

Seismic Walkdown Checklist (SWC)

Equipment ID No. **BFN-3-FCO-030-0233A** Equipment Class³ 10

Equipment Description FAN B DISCHARGE DAMPER

Anchorage (Continued)

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

No cracks in structure. Damper not mounted on concrete.

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

Seismic Walkdown Checklist (SWC)

Equipment ID No. **BFN-3-FCO-030-0233A** Equipment Class³ 10

Equipment Description FAN B DISCHARGE DAMPER

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

Seismic Walkdown Checklist (SWC)

Equipment ID No. **BFN-3-FCO-030-0233A** Equipment Class³ 10

Equipment Description FAN B DISCHARGE DAMPER

Interaction Effects (Continued)

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

Seismic Walkdown Checklist (SWC)

Equipment ID No. **BFN-3-FCO-030-0233A** Equipment Class³ 10

Equipment Description FAN B DISCHARGE DAMPER

Comments (Additional pages may be added as necessary)

Evaluated by: Jeff Lawrence

Date:08/01/2012

Jason Black

08/01/2012

Seismic Walkdown Checklist (SWC)

Equipment ID No. **BFN-3-FCO-030-0233B** Equipment Class³ 10

Equipment Description FAN RM 3B INLET DAMPER

Location: Bldg. U3-DG Floor El. 565 Room, Area 053, Diesel Generator Room 3B

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

Damper can be seen from the floor of the diesel generator room.

³Enter the equipment class name from Appendix B, Classes of Equipment.

Seismic Walkdown Checklist (SWC)

Equipment ID No. **BFN-3-FCO-030-0233B** Equipment Class³ 10

Equipment Description FAN RM 3B INLET DAMPER

Anchorage (Continued)

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

Seismic Walkdown Checklist (SWC)

Equipment ID No. **BFN-3-FCO-030-0233B** Equipment Class³ 10

Equipment Description FAN RM 3B INLET DAMPER

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

Seismic Walkdown Checklist (SWC)

Equipment ID No. **BFN-3-FCO-030-0233B** Equipment Class³ 10

Equipment Description FAN RM 3B INLET DAMPER

Interaction Effects (Continued)

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

Seismic Walkdown Checklist (SWC)

Equipment ID No. **BFN-3-FCO-030-0233B** Equipment Class³ 10

Equipment Description FAN RM 3B INLET DAMPER

Comments (Additional pages may be added as necessary)

Evaluated by: Jeff Lawrence

Date:08/01/2012

Jason Black

08/01/2012

Seismic Walkdown Checklist (SWC)

Equipment ID No. **BFN-3-FCV-001-0014** Equipment Class³ 7

Equipment Description MSIV "A" INBOARD ISOLATION VALVE

Location: Bldg. U3 RB Floor El. 565 Room, 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

³Enter the equipment class name from Appendix B, Classes of Equipment.

Seismic Walkdown Checklist (SWC)

Equipment ID No. **BFN-3-FCV-001-0014** Equipment Class³ 7

Equipment Description MSIV "A" INBOARD ISOLATION VALVE

Anchorage (Continued)

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

Seismic Walkdown Checklist (SWC)

Equipment ID No. **BFN-3-FCV-001-0014** Equipment Class³ 7

Equipment Description MSIV "A" INBOARD ISOLATION VALVE

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

Seismic Walkdown Checklist (SWC)

Equipment ID No. **BFN-3-FCV-001-0014** Equipment Class³ 7

Equipment Description MSIV "A" INBOARD ISOLATION VALVE

Interaction Effects (Continued)

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

Seismic Walkdown Checklist (SWC)

Equipment ID No. **BFN-3-FCV-001-0014** Equipment Class³ 7

Equipment Description MSIV "A" INBOARD ISOLATION VALVE

Comments (Additional pages may be added as necessary)

Evaluated by:

Date:

Seismic Walkdown Checklist (SWC)

Equipment ID No. **BFN-3-FCV-001-0015** Equipment Class³ 7

Equipment Description MSIV "A" OUTBOARD ISOLATION VALVE

Location: Bldg. U3 RB Floor El. 565 Room, 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

³Enter the equipment class name from Appendix B, Classes of Equipment.

Seismic Walkdown Checklist (SWC)

Equipment ID No. **BFN-3-FCV-001-0015** Equipment Class³ 7

Equipment Description MSIV "A" OUTBOARD ISOLATION VALVE

Anchorage (Continued)

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

Seismic Walkdown Checklist (SWC)

Equipment ID No. **BFN-3-FCV-001-0015** Equipment Class³ 7

Equipment Description MSIV "A" OUTBOARD ISOLATION VALVE

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

Seismic Walkdown Checklist (SWC)

Equipment ID No. **BFN-3-FCV-001-0015** Equipment Class³ 7

Equipment Description MSIV "A" OUTBOARD ISOLATION VALVE

Interaction Effects (Continued)

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

Seismic Walkdown Checklist (SWC)

Equipment ID No. **BFN-3-FCV-001-0015** Equipment Class³ 7

Equipment Description MSIV "A" OUTBOARD ISOLATION VALVE

Comments (Additional pages may be added as necessary)

Evaluated by:

Date:

Seismic Walkdown Checklist (SWC)

Equipment ID No. **BFN-3-FCV-023-0034** Equipment Class³ **8**

Equipment Description RHR HTX 3A COOL WATER OUTLET VALVE

Location: Bldg. U3-RB Floor El. 565 Room, Area 045, South 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

³Enter the equipment class name from Appendix B, Classes of Equipment.

Seismic Walkdown Checklist (SWC)

Equipment ID No. **BFN-3-FCV-023-0034** Equipment Class³ **8**

Equipment Description RHR HTX 3A COOL WATER OUTLET VALVE

Anchorage (Continued)

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

Seismic Walkdown Checklist (SWC)

Equipment ID No. **BFN-3-FCV-023-0034** Equipment Class³ **8**

Equipment Description **RHR HTX 3A COOL WATER OUTLET VALVE**

- 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

Seismic Walkdown Checklist (SWC)

Equipment ID No. **BFN-3-FCV-023-0034** Equipment Class³ 8

Equipment Description RHR HTX 3A COOL WATER OUTLET VALVE

Interaction Effects (Continued)

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

Seismic Walkdown Checklist (SWC)

Equipment ID No. **BFN-3-FCV-023-0034** Equipment Class³ 8

Equipment Description RHR HTX 3A COOL WATER OUTLET VALVE

Comments (Additional pages may be added as necessary)

Evaluated by: George Bongart

Date: 7/31/2012

Patrick McCarraher

7/31/2012

Seismic Walkdown Checklist (SWC)

Equipment ID No. **BFN-3-FCV-023-0046** Equipment Class³ 8

Equipment Description RHR HTX 3B COOL WATER OUTLET VALVE

Location: Bldg. U3-RB Floor El. 565 Room, Area 045, South 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

Pipe support anchors are in good condition.

³Enter the equipment class name from Appendix B, Classes of Equipment.

Seismic Walkdown Checklist (SWC)

Equipment ID No. **BFN-3-FCV-023-0046** Equipment Class³ **8**

Equipment Description RHR HTX 3B COOL WATER OUTLET VALVE

Anchorage (Continued)

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

Seismic Walkdown Checklist (SWC)

Equipment ID No. **BFN-3-FCV-023-0046** Equipment Class³ **8**

Equipment Description **RHR HTX 3B COOL WATER OUTLET VALVE**

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

Seismic Walkdown Checklist (SWC)

Equipment ID No. **BFN-3-FCV-023-0046** Equipment Class³ **8**

Equipment Description RHR HTX 3B COOL WATER OUTLET VALVE

Interaction Effects (Continued)

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

Seismic Walkdown Checklist (SWC)

Equipment ID No. **BFN-3-FCV-023-0046** Equipment Class³ **8**

Equipment Description RHR HTX 3B COOL WATER OUTLET VALVE

Comments (Additional pages may be added as necessary)

Operating handwheel is so close to adjacent piping that some pipe insulation had to be removed. Judged to be acceptable since both the large diameter pipe and the valve/operator are rigid, deflections should be small, and pipe/valve operator are rugged enough to sustain the potential impact

Evaluated by: George Bongart

Date:07/31/12

Patrick McCarraher

07/31/12

Seismic Walkdown Checklist (SWC)

Equipment ID No. **BFN-3-FCV-063-0008A** Equipment Class³ 0

Equipment Description SLC INJECTION VALVE A

Location: Bldg. U3-RB Floor El. 639 Room, Area 028, SLC 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

Inline valve, no anchorage.

³Enter the equipment class name from Appendix B, Classes of Equipment.

Seismic Walkdown Checklist (SWC)

Equipment ID No. **BFN-3-FCV-063-0008A** Equipment Class³ 0

Equipment Description SLC INJECTION VALVE A

Anchorage (Continued)

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

Seismic Walkdown Checklist (SWC)

Equipment ID No. **BFN-3-FCV-063-0008A** Equipment Class³ 0

Equipment Description SLC INJECTION VALVE A

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

Seismic Walkdown Checklist (SWC)

Equipment ID No. **BFN-3-FCV-063-0008A** Equipment Class³ 0

Equipment Description SLC INJECTION VALVE A

Interaction Effects (Continued)

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

Seismic Walkdown Checklist (SWC)

Equipment ID No. **BFN-3-FCV-063-0008A** Equipment Class³ 0

Equipment Description SLC INJECTION VALVE A

Comments (Additional pages may be added as necessary)

Evaluated by: Avinash Chunduri

Date:07/26/2012

Jeff Lawrence

07/26/2012

Seismic Walkdown Checklist (SWC)

Equipment ID No. **BFN-3-FCV-063-0008B** Equipment Class³ 0

Equipment Description SLC INJECTION VALVE B

Location: Bldg. U3-RB Floor El. 639 Room, Area 028, SLC 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

Inline Valve, no anchorage.

³Enter the equipment class name from Appendix B, Classes of Equipment.

Seismic Walkdown Checklist (SWC)

Equipment ID No. **BFN-3-FCV-063-0008B** Equipment Class³ 0

Equipment Description SLC INJECTION VALVE B

Anchorage (Continued)

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

Seismic Walkdown Checklist (SWC)

Equipment ID No. **BFN-3-FCV-063-0008B** Equipment Class³ 0

Equipment Description SLC INJECTION VALVE B

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

Seismic Walkdown Checklist (SWC)

Equipment ID No. **BFN-3-FCV-063-0008B** Equipment Class³ 0

Equipment Description SLC INJECTION VALVE B

Interaction Effects (Continued)

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

Seismic Walkdown Checklist (SWC)

Equipment ID No. **BFN-3-FCV-063-0008B** Equipment Class³0

Equipment Description SLC INJECTION VALVE B

Comments (Additional pages may be added as necessary)

Evaluated by: Avinash Chunduri

Date:07/26/2012

Jeff Lawrence

07/26/2012

Seismic Walkdown Checklist (SWC)

Equipment ID No. **BFN-3-FCV-064-0032** Equipment Class³ 7

Equipment Description SUPP CHAMBER EXHAUST INBOARD ISOLATION VALVE

Location: Bldg. U3-RB Floor El. 565 Room, Area 042, SDV WEST CAGE

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

Valve is in-line and is not anchored to concrete. The flange bolts are in good condition.

³Enter the equipment class name from Appendix B, Classes of Equipment.

Seismic Walkdown Checklist (SWC)

Equipment ID No. **BFN-3-FCV-064-0032** Equipment Class³ 7

Equipment Description SUPP CHAMBER EXHAUST INBOARD ISOLATION VALVE

Anchorage (Continued)

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

Not attached to concrete.

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

Seismic Walkdown Checklist (SWC)

Equipment ID No. **BFN-3-FCV-064-0032** Equipment Class³ 7

Equipment Description SUPP CHAMBER EXHAUST INBOARD ISOLATION VALVE

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

Seismic Walkdown Checklist (SWC)

Equipment ID No. **BFN-3-FCV-064-0032** Equipment Class³ 7

Equipment Description SUPP CHAMBER EXHAUST INBOARD ISOLATION VALVE

Interaction Effects (Continued)

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

Seismic Walkdown Checklist (SWC)

Equipment ID No. **BFN-3-FCV-064-0032** Equipment Class³ 7

Equipment Description SUPP CHAMBER EXHAUST INBOARD ISOLATION VALVE

Comments (Additional pages may be added as necessary)

Evaluated by: Patrick McCarraher

Date:7/31/2012

George Bongart

7/31/2012

Seismic Walkdown Checklist (SWC)

Equipment ID No. **BFN-3-FCV-064-0033** Equipment Class³ 7

Equipment Description SUPP CHAMBER EXHAUST OUTBOARD ISOLATION VALVE

Location: Bldg. U3-RB Floor El. 565 Room, Area 042, West SDV 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

Valve is in-line valve, flange bolts in good condition.

³Enter the equipment class name from Appendix B, Classes of Equipment.

Seismic Walkdown Checklist (SWC)

Equipment ID No. **BFN-3-FCV-064-0033** Equipment Class³ 7

Equipment Description SUPP CHAMBER EXHAUST OUTBOARD ISOLATION VALVE

Anchorage (Continued)

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

Not attached to concrete.

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

Seismic Walkdown Checklist (SWC)

Equipment ID No. **BFN-3-FCV-064-0033** Equipment Class³ 7

Equipment Description SUPP CHAMBER EXHAUST OUTBOARD ISOLATION VALVE

- 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

Seismic Walkdown Checklist (SWC)

Equipment ID No. **BFN-3-FCV-064-0033** Equipment Class³ 7

Equipment Description SUPP CHAMBER EXHAUST OUTBOARD ISOLATION VALVE

Interaction Effects (Continued)

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

Seismic Walkdown Checklist (SWC)

Equipment ID No. **BFN-3-FCV-064-0033** Equipment Class³ 7

Equipment Description SUPP CHAMBER EXHAUST OUTBOARD ISOLATION VALVE

Comments (Additional pages may be added as necessary)

Evaluated by: George Bongart

Date: 7/31/2012

Patrick McCarraher

7/31/2012

Seismic Walkdown Checklist (SWC)

Equipment ID No. **BFN-3-FCV-067-0050** Equipment Class³ 7

Equipment Description EECW NORTH HDR SUPP VALVE TO RBBCW HTXS

Location: Bldg. U3-RB Floor El. 593 Room, Area 049, RBCCW 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

The valve is in-line, the valve hardware is covered by a protective jacket. The jacket is in good condition with no water spots which would suggest the flange bolts are in good conditions.

³Enter the equipment class name from Appendix B, Classes of Equipment.

Seismic Walkdown Checklist (SWC)

Equipment ID No. **BFN-3-FCV-067-0050** Equipment Class³ 7

Equipment Description EECW NORTH HDR SUPP VALVE TO RBBCW HTXS

Anchorage (Continued)

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

The jacket covering the flange bolts does not have any water spots that suggest a leak due to corroded bolts..

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

No visible cracks in the concrete near the pipe support anchors.

- 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

Seismic Walkdown Checklist (SWC)

Equipment ID No. **BFN-3-FCV-067-0050** Equipment Class³ 7

Equipment Description EECW NORTH HDR SUPP VALVE TO RBBCW HTXS

- 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

Seismic Walkdown Checklist (SWC)

Equipment ID No. **BFN-3-FCV-067-0050** Equipment Class³ 7

Equipment Description EECW NORTH HDR SUPP VALVE TO RBBCW HTXS

Interaction Effects (Continued)

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

Seismic Walkdown Checklist (SWC)

Equipment ID No. **BFN-3-FCV-067-0050** Equipment Class³ 7

Equipment Description EECW NORTH HDR SUPP VALVE TO RBBCW HTXS

Comments (Additional pages may be added as necessary)

Evaluated by: Patrick McCarraher

Date: 8/9/2012

George Bongart

8/9/2012

Seismic Walkdown Checklist (SWC)

Equipment ID No. **BFN-3-FCV-067-0051** Equipment Class³ 7

Equipment Description EECW SOUTH HDR SUP VALVE TO RBCCW HTXS

Location: Bldg. U3-RB Floor El. 565 Room, Area 045, RBCCW 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

Valve hardware in good condition.

³Enter the equipment class name from Appendix B, Classes of Equipment.

Seismic Walkdown Checklist (SWC)

Equipment ID No. **BFN-3-FCV-067-0051** Equipment Class³ 7

Equipment Description EECW SOUTH HDR SUP VALVE TO RBCCW HTXS

Anchorage (Continued)

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

Not attached to concrete.

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

Seismic Walkdown Checklist (SWC)

Equipment ID No. **BFN-3-FCV-067-0051** Equipment Class³ 7

Equipment Description EECW SOUTH HDR SUP VALVE TO RBCCW HTXS

- 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

Seismic Walkdown Checklist (SWC)

Equipment ID No. **BFN-3-FCV-067-0051** Equipment Class³ 7

Equipment Description EECW SOUTH HDR SUP VALVE TO RBCCW HTXS

Interaction Effects (Continued)

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

Seismic Walkdown Checklist (SWC)

Equipment ID No. **BFN-3-FCV-067-0051** Equipment Class³ 7

Equipment Description EECW SOUTH HDR SUP VALVE TO RBCCW HTXS

Comments (Additional pages may be added as necessary)

Evaluated by: George Bongart

Date:7/31/2012

Patrick McCarraher

7/31/2012

Seismic Walkdown Checklist (SWC)

Equipment ID No. **BFN-3-FCV-071-0017** Equipment Class³ **8**

Equipment Description RCIC SUPPR POOL INBD SUCTION VALVE

Location: Bldg. U3-RB Floor El. 519 Room, Area 092, NW QUAD

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

³Enter the equipment class name from Appendix B, Classes of Equipment.

Seismic Walkdown Checklist (SWC)

Equipment ID No. **BFN-3-FCV-071-0017** Equipment Class³ **8**

Equipment Description RCIC SUPPR POOL INBD SUCTION VALVE

Anchorage (Continued)

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

Not attached to concrete.

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

Seismic Walkdown Checklist (SWC)

Equipment ID No. **BFN-3-FCV-071-0017** Equipment Class³ **8**

Equipment Description RCIC SUPPR POOL INBD SUCTION VALVE

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

Seismic Walkdown Checklist (SWC)

Equipment ID No. **BFN-3-FCV-071-0017** Equipment Class³ **8**

Equipment Description RCIC SUPPR POOL INBD SUCTION VALVE

Interaction Effects (Continued)

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

Seismic Walkdown Checklist (SWC)

Equipment ID No. **BFN-3-FCV-071-0017** Equipment Class³ 8

Equipment Description RCIC SUPPR POOL INBD SUCTION VALVE

Comments (Additional pages may be added as necessary)

Evaluated by: George Bongart

Date:8/8/2012

Patrick McCarraher

8/8/2012

Seismic Walkdown Checklist (SWC)

Equipment ID No. **BFN-3-FCV-071-0018** Equipment Class³ **8**

Equipment Description RCIC SUPPR POOL OUTBD SUCTION VALVE

Location: Bldg. U3-RB Floor El. 519 Room, Area 092, NW QUAD

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

Concrete anchors are in good condition.

³Enter the equipment class name from Appendix B, Classes of Equipment.

Seismic Walkdown Checklist (SWC)

Equipment ID No. **BFN-3-FCV-071-0018** Equipment Class³ **8**

Equipment Description RCIC SUPPR POOL OUTBD SUCTION VALVE

Anchorage (Continued)

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

Seismic Walkdown Checklist (SWC)

Equipment ID No. **BFN-3-FCV-071-0018** Equipment Class³ **8**

Equipment Description RCIC SUPPR POOL OUTBD SUCTION VALVE

- 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

Seismic Walkdown Checklist (SWC)

Equipment ID No. **BFN-3-FCV-071-0018** Equipment Class³ 8

Equipment Description RCIC SUPPR POOL OUTBD SUCTION VALVE

Interaction Effects (Continued)

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

Seismic Walkdown Checklist (SWC)

Equipment ID No. **BFN-3-FCV-071-0018** Equipment Class³ 8

Equipment Description RCIC SUPPR POOL OUTBD SUCTION VALVE

Comments (Additional pages may be added as necessary)

Evaluated by: George Bongart

Date:8/8/2012

Patrick McCarraher

8/8/2012

Seismic Walkdown Checklist (SWC)

Equipment ID No. **BFN-3-FCV-071-0019** Equipment Class³ **8**

Equipment Description RCIC CNDS TANK SUCTION VALAVE

Location: Bldg. U3-RB Floor El. 519 Room, Area 092, NW QUAD

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

³Enter the equipment class name from Appendix B, Classes of Equipment.

Seismic Walkdown Checklist (SWC)

Equipment ID No. **BFN-3-FCV-071-0019** Equipment Class³ 8

Equipment Description RCIC CNDS TANK SUCTION VALAVE

Anchorage (Continued)

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

Seismic Walkdown Checklist (SWC)

Equipment ID No. **BFN-3-FCV-071-0019** Equipment Class³ 8

Equipment Description RCIC CNDS TANK SUCTION VALAVE

6. Based on the above anchorage evaluations, is the anchorage free of potentially adverse seismic conditions?

Y N U

Conduit touching a wall anchor bolt on the top base plate. This is not considered to be a significant hazard.

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

Seismic Walkdown Checklist (SWC)

Equipment ID No. **BFN-3-FCV-071-0019** Equipment Class³ 8

Equipment Description RCIC CNDS TANK SUCTION VALAVE

Interaction Effects (Continued)

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

Seismic Walkdown Checklist (SWC)

Equipment ID No. **BFN-3-FCV-071-0019** Equipment Class³ 8

Equipment Description RCIC CNDS TANK SUCTION VALAVE

Comments (Additional pages may be added as necessary)

Evaluated by: George Bongart

Date:8/8/2012

Patrick McCarraher

8/8/2012

Seismic Walkdown Checklist (SWC)

Equipment ID No. **BFN-3-FCV-074-0007** Equipment Class³ **8**

Equipment Description RHR SYSTEM I MINIMUM FLOW VALVE

Location: Bldg. U3-RB Floor El. 519 Room, Area 103, SW QUAD

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

³Enter the equipment class name from Appendix B, Classes of Equipment.

Seismic Walkdown Checklist (SWC)

Equipment ID No. **BFN-3-FCV-074-0007** Equipment Class³ 8

Equipment Description RHR SYSTEM I MINIMUM FLOW VALVE

Anchorage (Continued)

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

Seismic Walkdown Checklist (SWC)

Equipment ID No. **BFN-3-FCV-074-0007** Equipment Class³ **8**

Equipment Description RHR SYSTEM I MINIMUM FLOW VALVE

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

Seismic Walkdown Checklist (SWC)

Equipment ID No. **BFN-3-FCV-074-0007** Equipment Class³ 8

Equipment Description RHR SYSTEM I MINIMUM FLOW VALVE

Interaction Effects (Continued)

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

Seismic Walkdown Checklist (SWC)

Equipment ID No. **BFN-3-FCV-074-0007** Equipment Class³ **8**

Equipment Description RHR SYSTEM I MINIMUM FLOW VALVE

Comments (Additional pages may be added as necessary)

Evaluated by: Patrick McCarraher

Date: 8/9/2012

George Bongart

8/9/2012

Seismic Walkdown Checklist (SWC)

Equipment ID No. **BFN-3-FCV-074-0030** Equipment Class³ **8**

Equipment Description RHR LOOP II MIN FLOW BYPASS VALVE

Location: Bldg. U3-RB Floor El. 519 Room, Area 097, SE QUAD

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

The valve hardware is in good condition, the valve is in-line so there is no anchorage.

³Enter the equipment class name from Appendix B, Classes of Equipment.

Seismic Walkdown Checklist (SWC)

Equipment ID No. **BFN-3-FCV-074-0030** Equipment Class³ **8**

Equipment Description **RHR LOOP II MIN FLOW BYPASS VALVE**

Anchorage (Continued)

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

Seismic Walkdown Checklist (SWC)

Equipment ID No. **BFN-3-FCV-074-0030** Equipment Class³ 8

Equipment Description RHR LOOP II MIN FLOW BYPASS VALVE

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

Soft targets are free from impact from nearby equipment or structures.

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

Seismic Walkdown Checklist (SWC)

Equipment ID No. **BFN-3-FCV-074-0030** Equipment Class³ **8**

Equipment Description RHR LOOP II MIN FLOW BYPASS VALVE

Interaction Effects (Continued)

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

Seismic Walkdown Checklist (SWC)

Equipment ID No. **BFN-3-FCV-074-0030** Equipment Class³ 8

Equipment Description RHR LOOP II MIN FLOW BYPASS VALVE

Comments (Additional pages may be added as necessary)

Evaluated by: Patrick McCarraher

Date:8/9/2012

George Bongart

8/9/2012

Seismic Walkdown Checklist (SWC)

Equipment ID No. **BFN-3-FCV-078-0062** Equipment Class³ **8**

Equipment Description POOL MAKEUP FROM RHR OUTBOARD VALVE

Location: Bldg. U3-RB Floor El. 621 Room, Area 106, Column Lines S-T, R15-R18

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

Valve is in-line component and has no anchorage to evaluate

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

No hardware/anchorage to evaluate

³Enter the equipment class name from Appendix B, Classes of Equipment.

Seismic Walkdown Checklist (SWC)

Equipment ID No. **BFN-3-FCV-078-0062** Equipment Class³ **8**

Equipment Description POOL MAKEUP FROM RHR OUTBOARD VALVE

Anchorage (Continued)

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

Seismic Walkdown Checklist (SWC)

Equipment ID No. **BFN-3-FCV-078-0062** Equipment Class³ 8

Equipment Description POOL MAKEUP FROM RHR OUTBOARD VALVE

- 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

Nothing in area has the potential to impact soft targets on this equipment

- 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

Lighting in area is screw-in type and presents no adverse condition in seismic event

Seismic Walkdown Checklist (SWC)

Equipment ID No. **BFN-3-FCV-078-0062** Equipment Class³ **8**

Equipment Description POOL MAKEUP FROM RHR OUTBOARD VALVE

Interaction Effects (Continued)

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

Seismic Walkdown Checklist (SWC)

Equipment ID No. **BFN-3-FCV-078-0062** Equipment Class³ 8

Equipment Description POOL MAKEUP FROM RHR OUTBOARD VALVE

Comments (Additional pages may be added as necessary)

Evaluated by: Jeff Lawrence

Date:08/09/2012

Jason Black

08/09/2012

Seismic Walkdown Checklist (SWC)

Equipment ID No. **BFN-3-FCV-085-0037C** Equipment Class³ Z

Equipment Description WEST SCRAM DISCH VOL DRAIN CONT VLV

Location: Bldg. U3-RB Floor El. 565 Room, Area 042, WEST SDV CAGE

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

Valve is in-line, flange bolts are in good condition.

³Enter the equipment class name from Appendix B, Classes of Equipment.

Seismic Walkdown Checklist (SWC)

Equipment ID No. **BFN-3-FCV-085-0037C** Equipment Class³ 7

Equipment Description WEST SCRAM DISCH VOL DRAIN CONT VLV

Anchorage (Continued)

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

Seismic Walkdown Checklist (SWC)

Equipment ID No. **BFN-3-FCV-085-0037C** Equipment Class³ 7

Equipment Description WEST SCRAM DISCH VOL DRAIN CONT VLV

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

Soft targets are protected by cage.

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

Seismic Walkdown Checklist (SWC)

Equipment ID No. **BFN-3-FCV-085-0037C** Equipment Class³ 7

Equipment Description WEST SCRAM DISCH VOL DRAIN CONT VLV

Interaction Effects (Continued)

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

Seismic Walkdown Checklist (SWC)

Equipment ID No. **BFN-3-FCV-085-0037C** Equipment Class³ 7

Equipment Description WEST SCRAM DISCH VOL DRAIN CONT VLV

Comments (Additional pages may be added as necessary)

Evaluated by: George Bongart

Date: 7/31/2012

Patrick McCarraher

7/31/2012

Seismic Walkdown Checklist (SWC)

Equipment ID No. **BFN-3-FCV-085-0037D** Equipment Class³ 7

Equipment Description WEST SCRAM DISCH VOL DRAIN CONT VLV

Location: Bldg. U3-RB Floor El. 565 Room, Area 042, WEST SDV CAGE

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

Valve is in-line, flange bolts are in good condition.

³Enter the equipment class name from Appendix B, Classes of Equipment.

Seismic Walkdown Checklist (SWC)

Equipment ID No. **BFN-3-FCV-085-0037D** Equipment Class³ 7

Equipment Description WEST SCRAM DISCH VOL DRAIN CONT VLV

Anchorage (Continued)

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

Seismic Walkdown Checklist (SWC)

Equipment ID No. **BFN-3-FCV-085-0037D** Equipment Class³ 7

Equipment Description WEST SCRAM DISCH VOL DRAIN CONT VLV

- 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

Soft targets are protected by cage.

- 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

Seismic Walkdown Checklist (SWC)

Equipment ID No. **BFN-3-FCV-085-0037D** Equipment Class³ 7

Equipment Description WEST SCRAM DISCH VOL DRAIN CONT VLV

Interaction Effects (Continued)

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

Seismic Walkdown Checklist (SWC)

Equipment ID No. **BFN-3-FCV-085-0037D** Equipment Class³ 7

Equipment Description WEST SCRAM DISCH VOL DRAIN CONT VLV

Comments (Additional pages may be added as necessary)

Evaluated by: Patrick McCarraher

Date:7/31/2012

George Bongart

7/31/2012

Seismic Walkdown Checklist (SWC)

Equipment ID No. **BFN-3-FCV-085-0037E** Equipment Class³ 7

Equipment Description EAST SCRAM DISCH VOL DRAIN CONT VLV

Location: Bldg. U3-RB Floor El. 565 Room, Area 046, EAST SDV CAGE

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

³Enter the equipment class name from Appendix B, Classes of Equipment.

Seismic Walkdown Checklist (SWC)

Equipment ID No. **BFN-3-FCV-085-0037E** Equipment Class³ 7

Equipment Description EAST SCRAM DISCH VOL DRAIN CONT VLV

Anchorage (Continued)

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

Seismic Walkdown Checklist (SWC)

Equipment ID No. **BFN-3-FCV-085-0037E** Equipment Class³ 7

Equipment Description EAST SCRAM DISCH VOL DRAIN CONT VLV

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

Soft targets are protected by a cage.

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

Seismic Walkdown Checklist (SWC)

Equipment ID No. **BFN-3-FCV-085-0037E** Equipment Class³ 7

Equipment Description EAST SCRAM DISCH VOL DRAIN CONT VLV

Interaction Effects (Continued)

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

Seismic Walkdown Checklist (SWC)

Equipment ID No. **BFN-3-FCV-085-0037E** Equipment Class³ 7

Equipment Description EAST SCRAM DISCH VOL DRAIN CONT VLV

Comments (Additional pages may be added as necessary)

Evaluated by: Patrick McCarraher

Date:7/31/2012

George Bongart

7/31/2012

Seismic Walkdown Checklist (SWC)

Equipment ID No. **BFN-3-FCV-085-0037F** Equipment Class³ 7

Equipment Description EAST SCRAM DISCH VOL DRAIN CONT VLV

Location: Bldg. U3-RB Floor El. 565 Room, Area 046, EAST SDV CAGE

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

³Enter the equipment class name from Appendix B, Classes of Equipment.

Seismic Walkdown Checklist (SWC)

Equipment ID No. **BFN-3-FCV-085-0037F** Equipment Class³ 7

Equipment Description EAST SCRAM DISCH VOL DRAIN CONT VLV

Anchorage (Continued)

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

Not attached to concrete.

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

Seismic Walkdown Checklist (SWC)

Equipment ID No. **BFN-3-FCV-085-0037F** Equipment Class³ 7

Equipment Description EAST SCRAM DISCH VOL DRAIN CONT VLV

- 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

Seismic Walkdown Checklist (SWC)

Equipment ID No. **BFN-3-FCV-085-0037F** Equipment Class³ 7

Equipment Description EAST SCRAM DISCH VOL DRAIN CONT VLV

Interaction Effects (Continued)

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

Seismic Walkdown Checklist (SWC)

Equipment ID No. **BFN-3-FCV-085-0037F** Equipment Class³ 7

Equipment Description EAST SCRAM DISCH VOL DRAIN CONT VLV

Comments (Additional pages may be added as necessary)

Evaluated by: George Bongart

Date:7/31/2012

Patrick McCarraher

7/31/2012

Seismic Walkdown Checklist (SWC)

Equipment ID No. **BFN-3-FSV-084-0008B** Equipment Class³ **8**

Equipment Description SUPPRESS CHAMBER N2 SUPPLY TRAIN A DIV I

Location: Bldg. U3-RB Floor El. 565 Room, Area 045, South 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

The valve is in-line; it is welded to the surrounding piping. The welds are in good condition.

³Enter the equipment class name from Appendix B, Classes of Equipment.

Seismic Walkdown Checklist (SWC)

Equipment ID No. **BFN-3-FSV-084-0008B** Equipment Class³ 8

Equipment Description SUPPRESS CHAMBER N2 SUPPLY TRAIN A DIV I

Anchorage (Continued)

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

Seismic Walkdown Checklist (SWC)

Equipment ID No. **BFN-3-FSV-084-0008B** Equipment Class³ g

Equipment Description SUPPRESS CHAMBER N2 SUPPLY TRAIN A DIV I

- 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

Seismic Walkdown Checklist (SWC)

Equipment ID No. **BFN-3-FSV-084-0008B** Equipment Class³ 8

Equipment Description SUPPRESS CHAMBER N2 SUPPLY TRAIN A DIV I

Interaction Effects (Continued)

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

Seismic Walkdown Checklist (SWC)

Equipment ID No. **BFN-3-FSV-084-0008B** Equipment Class³ **8**

Equipment Description SUPPRESS CHAMBER N2 SUPPLY TRAIN A DIV I

Comments (Additional pages may be added as necessary)

Evaluated by: Patrick McCarraher

Date:8/9/2012

George Bongart

8/9/2012

Seismic Walkdown Checklist (SWC)

Equipment ID No. **BFN-3-FSV-084-00048** Equipment Class³ **8**

Equipment Description CAD A CROSSTIE TO DW CA FLOW SOL VLV

Location: Bldg. U3-RB Floor El. 565 Room, Area 045, South 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

³Enter the equipment class name from Appendix B, Classes of Equipment.

Seismic Walkdown Checklist (SWC)

Equipment ID No. **BFN-3-FSV-084-00048** Equipment Class³ **8**

Equipment Description CAD A CROSSTIE TO DW CA FLOW SOL VLV

Anchorage (Continued)

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

The valve is in-line is not anchored to concrete.

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

Seismic Walkdown Checklist (SWC)

Equipment ID No. **BFN-3-FSV-084-00048** Equipment Class³ **8**

Equipment Description CAD A CROSSTIE TO DW CA FLOW SOL VLV

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

Seismic Walkdown Checklist (SWC)

Equipment ID No. **BFN-3-FSV-084-00048** Equipment Class³ **8**

Equipment Description CAD A CROSSTIE TO DW CA FLOW SOL VLV

Interaction Effects (Continued)

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

Seismic Walkdown Checklist (SWC)

Equipment ID No. **BFN-3-FSV-084-00048** Equipment Class³ **8**

Equipment Description CAD A CROSSTIE TO DW CA FLOW SOL VLV

Comments (Additional pages may be added as necessary)

Evaluated by: George Bongart

Date:8/9/2012

Patrick McCarraher

8/9/2012

Seismic Walkdown Checklist (SWC)

Equipment ID No. **BFN-3-FSV-085-0037A** Equipment Class³ **8**

Equipment Description CRD SCRAM DISCH VOL DR & VENT PILOT VLV A

Location: Bldg. U3-RB Floor El. 565 Room, Area 043, SCRAM DUMP VALVE

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

³Enter the equipment class name from Appendix B, Classes of Equipment.

Seismic Walkdown Checklist (SWC)

Equipment ID No. **BFN-3-FSV-085-0037A** Equipment Class³ 8

Equipment Description CRD SCRAM DISCH VOL DR & VENT PILOT VLV A

Anchorage (Continued)

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

Not attached to concrete.

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

Seismic Walkdown Checklist (SWC)

Equipment ID No. **BFN-3-FSV-085-0037A** Equipment Class³ **g**

Equipment Description CRD SCRAM DISCH VOL DR & VENT PILOT VLV A

- 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

Seismic Walkdown Checklist (SWC)

Equipment ID No. **BFN-3-FSV-085-0037A** Equipment Class³ **8**

Equipment Description CRD SCRAM DISCH VOL DR & VENT PILOT VLV A

Interaction Effects (Continued)

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

Seismic Walkdown Checklist (SWC)

Equipment ID No. **BFN-3-FSV-085-0037A** Equipment Class³ g

Equipment Description CRD SCRAM DISCH VOL DR & VENT PILOT VLV A

Comments (Additional pages may be added as necessary)

Evaluated by: Patrick McCarraher

Date:7/31/2012

George Bongart

7/31/2012

Seismic Walkdown Checklist (SWC)

Equipment ID No. **BFN-3-FSV-085-0037B** Equipment Class³ **8**

Equipment Description CRD SCRAM DISCH VOL DR & VENT PILOT VLV B

Location: Bldg. U3-RB Floor El. 565 Room, Area 043, SCRAM DUMP VALVE

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

³Enter the equipment class name from Appendix B, Classes of Equipment.

Seismic Walkdown Checklist (SWC)

Equipment ID No. **BFN-3-FSV-085-0037B** Equipment Class³ **8**

Equipment Description CRD SCRAM DISCH VOL DR & VENT PILOT VLV B

Anchorage (Continued)

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

Not attached to concrete.

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

Seismic Walkdown Checklist (SWC)

Equipment ID No. **BFN-3-FSV-085-0037B** Equipment Class³ **8**

Equipment Description CRD SCRAM DISCH VOL DR & VENT PILOT VLV B

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

Seismic Walkdown Checklist (SWC)

Equipment ID No. **BFN-3-FSV-085-0037B** Equipment Class³ 8

Equipment Description CRD SCRAM DISCH VOL DR & VENT PILOT VLV B

Interaction Effects (Continued)

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

Seismic Walkdown Checklist (SWC)

Equipment ID No. **BFN-3-FSV-085-0037B** Equipment Class³ 8

Equipment Description CRD SCRAM DISCH VOL DR & VENT PILOT VLV B

Comments (Additional pages may be added as necessary)

Evaluated by: Patrick McCarraher

Date:7/31/2012

George Bongart

7/31/2012

Seismic Walkdown Checklist (SWC)

Equipment ID No. **BFN-3-GEN-082-0003A** Equipment Class³ 17

Equipment Description DIESEL GENERATOR 3A

Location: Bldg. U3-DG Floor El. 565 Room, Area 058, DG ROOM 3A

Manufacturer, Model, Etc. (optional but recommended) General Electric

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 additional information reference drawings 3-41N590-4 and 3-48N897-2.

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

³Enter the equipment class name from Appendix B, Classes of Equipment.

Seismic Walkdown Checklist (SWC)

Equipment ID No. **BFN-3-GEN-082-0003A** Equipment Class³ 17

Equipment Description DIESEL GENERATOR 3A

Anchorage (Continued)

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

Chip present in concrete by bolt #3 on the right side. This has been determined to be insignificant.

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

The anchorage has been verified against A-46 SEWS Number 7001. The current configuration matches the reference material.

For additional information reference drawings 3-41N590-4 and 3-48N897-2.

Seismic Walkdown Checklist (SWC)

Equipment ID No. **BFN-3-GEN-082-0003A** Equipment Class³ 17

Equipment Description DIESEL GENERATOR 3A

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

Seismic Walkdown Checklist (SWC)

Equipment ID No. **BFN-3-GEN-082-0003A** Equipment Class³ 17

Equipment Description DIESEL GENERATOR 3A

Interaction Effects (Continued)

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

Seismic Walkdown Checklist (SWC)

Equipment ID No. **BFN-3-GEN-082-0003A** Equipment Class³ 17

Equipment Description DIESEL GENERATOR 3A

Comments (Additional pages may be added as necessary)

Minor oil leak by bolt #3 on the right side.

Evaluated by: Patrick McCarraher

Date:8/1/2012

George Bongart

8/1/2012

Browns Ferry Nuclear Plant

Enclosure 3 continued & Enclosure 4

Seismic Walkdown Checklist (SWC)

Equipment ID No. **BFN-3-GEN-082-0003B** Equipment Class³ 17

Equipment Description DIESEL GENERATOR 3B

Location: Bldg. U3-DG Floor El. 565 Room, Area 053, DG Engine Room 3B

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

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 additional information reference drawings 3-41N590-4 and 3-48N897-2.

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

³Enter the equipment class name from Appendix B, Classes of Equipment.

Seismic Walkdown Checklist (SWC)

Equipment ID No. **BFN-3-GEN-082-0003B** Equipment Class³ 17

Equipment Description DIESEL GENERATOR 3B

Anchorage (Continued)

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

Small crack exists in concrete where the equipment skid is attached to floor. Crack passes through bolt line but is smaller than .5mm crack. Some of the concrete pad is cracked away but this does not present a potentially adverse seismic condition.

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

Anchorage of diesel skid has been verified per drawing 3-41N590-4; Anchorage of generator to steel skid structure has been visually inspected and no defects found.

For additional information reference drawing 3-48N897-2.

Seismic Walkdown Checklist (SWC)

Equipment ID No. **BFN-3-GEN-082-0003B** Equipment Class³ 17

Equipment Description DIESEL GENERATOR 3B

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

Lighting is screw in type.

Seismic Walkdown Checklist (SWC)

Equipment ID No. **BFN-3-GEN-082-0003B** Equipment Class³ 17

Equipment Description DIESEL GENERATOR 3B

Interaction Effects (Continued)

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

Large expansion joints exists for exhaust lines penetrating ceiling.
Electrical conduits are flexible.

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

Seismic Walkdown Checklist (SWC)

Equipment ID No. **BFN-3-GEN-082-0003B** Equipment Class³ 17

Equipment Description DIESEL GENERATOR 3B

Comments (Additional pages may be added as necessary)

Evaluated by: Jeff Lawrence

Date:8/1/2012

Jason Black

8/1/2012

Seismic Walkdown Checklist (SWC)

Equipment ID No. **BFN-3-GEN-082-0003C** Equipment Class³ 17

Equipment Description DIESEL GENERATOR 3C

Location: Bldg. U3-DG Floor El. 565 Room, Area 093, DIESEL GENERATOR ROOM 3C

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 additional information reference drawings 3-41N590-4 and 3-48N897-2.

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

³Enter the equipment class name from Appendix B, Classes of Equipment.

Seismic Walkdown Checklist (SWC)

Equipment ID No. **BFN-3-GEN-082-0003C** Equipment Class³ 17

Equipment Description DIESEL GENERATOR 3C

Anchorage (Continued)

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

Anchorage was verified using A-46 SEWS Number 37001 and drawing 3-41N590-4. The current configuration matches the reference documentation.

For additional information reference drawing 3-48N897-2.

Seismic Walkdown Checklist (SWC)

Equipment ID No. **BFN-3-GEN-082-0003C** Equipment Class³ 17

Equipment Description DIESEL GENERATOR 3C

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

Scaffold overhead , no tag or ladder present, however it is anchored in three locations..

Seismic Walkdown Checklist (SWC)

Equipment ID No. **BFN-3-GEN-082-0003C** Equipment Class³ 17

Equipment Description DIESEL GENERATOR 3C

Interaction Effects (Continued)

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

Seismic Walkdown Checklist (SWC)

Equipment ID No. **BFN-3-GEN-082-0003C** Equipment Class³ 17

Equipment Description DIESEL GENERATOR 3C

Comments (Additional pages may be added as necessary)

Evaluated by: Patrick McCarraher

Date:8/8/2012

George Bongart

8/8/2012

Seismic Walkdown Checklist (SWC)

Equipment ID No. **BFN-3-GEN-082-0003D** Equipment Class³ 17

Equipment Description DIESEL GENERATOR 3D

Location: Bldg. U3-DG Floor El. 565 Room, Area 094, DIESEL GENERATOR ROOM 3D

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 additional information reference drawings 3-41N590-4 and 3-48N897-2.

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

³Enter the equipment class name from Appendix B, Classes of Equipment.

Seismic Walkdown Checklist (SWC)

Equipment ID No. **BFN-3-GEN-082-0003D** Equipment Class³ 17

Equipment Description DIESEL GENERATOR 3D

Anchorage (Continued)

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

The anchorage for the generator has been verified against plant drawing 3-41N590-4; the current anchorage configuration matches the drawing.

For additional information reference drawing 3-48N897-2.

Seismic Walkdown Checklist (SWC)

Equipment ID No. **BFN-3-GEN-082-0003D** Equipment Class³ 17

Equipment Description DIESEL GENERATOR 3D

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

Scaffold present above generator has been anchored at three points.

Seismic Walkdown Checklist (SWC)

Equipment ID No. **BFN-3-GEN-082-0003D** Equipment Class³ 17

Equipment Description DIESEL GENERATOR 3D

Interaction Effects (Continued)

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

Seismic Walkdown Checklist (SWC)

Equipment ID No. **BFN-3-GEN-082-0003D** Equipment Class³ 17

Equipment Description DIESEL GENERATOR 3D

Comments (Additional pages may be added as necessary)

Evaluated by: George Bongart

Date:8/8/2012

Patrick McCarraher

8/8/2012

Seismic Walkdown Checklist (SWC)

Equipment ID No. **BFN-3-HEX-074-0028** Equipment Class³ 21

Equipment Description RHR PUMP SEAL HEAT EXCHANGER B

Location: Bldg. U3-RB Floor El. 519 Room, Area 102, RHR 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

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

³Enter the equipment class name from Appendix B, Classes of Equipment.

Seismic Walkdown Checklist (SWC)

Equipment ID No. **BFN-3-HEX-074-0028** Equipment Class³ 21

Equipment Description RHR PUMP SEAL HEAT EXCHANGER B

Anchorage (Continued)

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

The heat exchanger is not mounted to concrete.

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

Seismic Walkdown Checklist (SWC)

Equipment ID No. **BFN-3-HEX-074-0028** Equipment Class³ 21

Equipment Description RHR PUMP SEAL HEAT EXCHANGER B

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

Seismic Walkdown Checklist (SWC)

Equipment ID No. **BFN-3-HEX-074-0028** Equipment Class³ 21

Equipment Description RHR PUMP SEAL HEAT EXCHANGER B

Interaction Effects (Continued)

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

Seismic Walkdown Checklist (SWC)

Equipment ID No. **BFN-3-HEX-074-0028** Equipment Class³ 21

Equipment Description RHR PUMP SEAL HEAT EXCHANGER B

Comments (Additional pages may be added as necessary)

Evaluated by: George Bongart

Date:8/9/2012

Patrick McCarraher

8/9/2012

Seismic Walkdown Checklist (SWC)

Equipment ID No. **BFN-3-HEX-074-0039** Equipment Class³ 21

Equipment Description RHR PUMP SEAL HEAT EXCHANGER D

Location: Bldg. U3-RB Floor El. 519 Room, Area 102, RHR 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

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

³Enter the equipment class name from Appendix B, Classes of Equipment.

Seismic Walkdown Checklist (SWC)

Equipment ID No. **BFN-3-HEX-074-0039** Equipment Class³ 21

Equipment Description RHR PUMP SEAL HEAT EXCHANGER D

Anchorage (Continued)

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

The heat exchanger is not attached to concrete.

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

Seismic Walkdown Checklist (SWC)

Equipment ID No. **BFN-3-HEX-074-0039** Equipment Class³ 21

Equipment Description RHR PUMP SEAL HEAT EXCHANGER D

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

Seismic Walkdown Checklist (SWC)

Equipment ID No. **BFN-3-HEX-074-0039** Equipment Class³ 21

Equipment Description RHR PUMP SEAL HEAT EXCHANGER D

Interaction Effects (Continued)

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

Seismic Walkdown Checklist (SWC)

Equipment ID No. **BFN-3-HEX-074-0039** Equipment Class³ 21

Equipment Description RHR PUMP SEAL HEAT EXCHANGER D

Comments (Additional pages may be added as necessary)

Evaluated by: George Bongart

Date:8/9/2012

Patrick McCarraher

8/9/2012

Seismic Walkdown Checklist (SWC)

Equipment ID No. **BFN-3-INVT-256-0001** Equipment Class³ 16

Equipment Description DIV I ECCS ATU INVERTER UNIT

Location: Bldg. U3-RB Floor El. 593 Room, Area 027, ELECTRIC BOARD ROOM 3B

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

³Enter the equipment class name from Appendix B, Classes of Equipment.

Seismic Walkdown Checklist (SWC)

Equipment ID No. **BFN-3-INV-256-0001** Equipment Class³ 16

Equipment Description DIV I ECCS ATU INVERTER UNIT

Anchorage (Continued)

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

Seismic Walkdown Checklist (SWC)

Equipment ID No. **BFN-3-INVT-256-0001** Equipment Class³ 16

Equipment Description DIV I ECCS ATU INVERTER UNIT

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

Seismic Walkdown Checklist (SWC)

Equipment ID No. **BFN-3-INV-256-0001** Equipment Class³ 16

Equipment Description DIV I ECCS ATU INVERTER UNIT

Interaction Effects (Continued)

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

Seismic Walkdown Checklist (SWC)

Equipment ID No. **BFN-3-INVT-256-0001** Equipment Class³ 16

Equipment Description DIV I ECCS ATU INVERTER UNIT

Comments (Additional pages may be added as necessary)

Evaluated by: Jeff Lawrence

Date:08/14/2012

Jason Black

08/14/2012

Seismic Walkdown Checklist (SWC)

Equipment ID No. **BFN-3-INVT-256-0002** Equipment Class³ 16

Equipment Description DIV II ECCS ATU INVERTER UNIT

Location: Bldg. U3-RB Floor El. 621 Room, Area 026, ELECTRIC BOARD ROOM 3A

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

³Enter the equipment class name from Appendix B, Classes of Equipment.

Seismic Walkdown Checklist (SWC)

Equipment ID No. **BFN-3-INVT-256-0002** Equipment Class³ 16

Equipment Description DIV II ECCS ATU INVERTER UNIT

Anchorage (Continued)

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

Anchorage verified per A-46 SEWS 39075.

Seismic Walkdown Checklist (SWC)

Equipment ID No. **BFN-3-INV-256-0002** Equipment Class³ 16

Equipment Description DIV II ECCS ATU INVERTER UNIT

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

Seismic Walkdown Checklist (SWC)

Equipment ID No. **BFN-3-INVT-256-0002** Equipment Class³ 16

Equipment Description DIV II ECCS ATU INVERTER UNIT

Interaction Effects (Continued)

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

Seismic Walkdown Checklist (SWC)

Equipment ID No. **BFN-3-INVT-256-0002** Equipment Class³ 16

Equipment Description DIV II ECCS ATU INVERTER UNIT

Comments (Additional pages may be added as necessary)

Evaluated by: Jeff Lawrence

Date:8/14/2012

Jason Black

8/14/2012

Seismic Walkdown Checklist (SWC)

Equipment ID No. **BFN-3-LPNL-925-0005A** Equipment Class³ 18

Equipment Description REACTOR PROTECTION & NSS PNL

Location: Bldg. U3-RB Floor El. 593 Room, Area 050, Column Lines P-S, R17-R20

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

³Enter the equipment class name from Appendix B, Classes of Equipment.

Seismic Walkdown Checklist (SWC)

Equipment ID No. **BFN-3-LPNL-925-0005A** Equipment Class³ 18

Equipment Description REACTOR PROTECTION & NSS PNL

Anchorage (Continued)

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

Anchorage verified per A-46 SEWS 39195.

Seismic Walkdown Checklist (SWC)

Equipment ID No. **BFN-3-LPNL-925-0005A** Equipment Class³ 18

Equipment Description REACTOR PROTECTION & NSS PNL

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

Seismic Walkdown Checklist (SWC)

Equipment ID No. **BFN-3-LPNL-925-0005A** Equipment Class³ 18

Equipment Description REACTOR PROTECTION & NSS PNL

Interaction Effects (Continued)

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

Seismic Walkdown Checklist (SWC)

Equipment ID No. **BFN-3-LPNL-925-0005A** Equipment Class³ 18

Equipment Description REACTOR PROTECTION & NSS PNL

Comments (Additional pages may be added as necessary)

Evaluated by: Jason Black.

Date:07/31/2012

Jeff Lawrence

07/31/2012

Seismic Walkdown Checklist (SWC)

Equipment ID No. **BFN-3-LPNL-925-0005B** Equipment Class³ 18

Equipment Description REACTOR PROTECTION & NSS PNL

Location: Bldg. U3-RB Floor El. 593 Room, Area 050, Column Lines P-S, R17-R20

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

³Enter the equipment class name from Appendix B, Classes of Equipment.

Seismic Walkdown Checklist (SWC)

Equipment ID No. **BFN-3-LPNL-925-0005B** Equipment Class³ 18

Equipment Description REACTOR PROTECTION & NSS PNL

Anchorage (Continued)

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

Anchorage verified per A-46 SEWS 39196.

Seismic Walkdown Checklist (SWC)

Equipment ID No. **BFN-3-LPNL-925-0005B** Equipment Class³ 18

Equipment Description REACTOR PROTECTION & NSS PNL

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

Seismic Walkdown Checklist (SWC)

Equipment ID No. **BFN-3-LPNL-925-0005B** Equipment Class³ 18

Equipment Description REACTOR PROTECTION & NSS PNL

Interaction Effects (Continued)

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

Seismic Walkdown Checklist (SWC)

Equipment ID No. **BFN-3-LPNL-925-0005B** Equipment Class³ 18

Equipment Description REACTOR PROTECTION & NSS PNL

Comments (Additional pages may be added as necessary)

Evaluated by: Jason Black

Date:07/31/2012

Jeff Lawrence

07/31/2012

Seismic Walkdown Checklist (SWC)

Equipment ID No. **BFN-3-LPNL-925-0005D** Equipment Class³ 18

Equipment Description REACTOR PROTECTION & NSS PNL

Location: Bldg. U3-RB Floor El. 593 Room, Area 050, Column Lines P-S, R17-R20

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

³Enter the equipment class name from Appendix B, Classes of Equipment.

Seismic Walkdown Checklist (SWC)

Equipment ID No. **BFN-3-LPNL-925-0005D** Equipment Class³ 18

Equipment Description REACTOR PROTECTION & NSS PNL

Anchorage (Continued)

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

Anchorage verified per A-46 SEWS 39197.

Seismic Walkdown Checklist (SWC)

Equipment ID No. **BFN-3-LPNL-925-0005D** Equipment Class³ 18

Equipment Description REACTOR PROTECTION & NSS PNL

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

Seismic Walkdown Checklist (SWC)

Equipment ID No. **BFN-3-LPNL-925-0005D** Equipment Class³ 18

Equipment Description REACTOR PROTECTION & NSS PNL

Interaction Effects (Continued)

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

Seismic Walkdown Checklist (SWC)

Equipment ID No. **BFN-3-LPNL-925-0005D** Equipment Class³ 18

Equipment Description REACTOR PROTECTION & NSS PNL

Comments (Additional pages may be added as necessary)

Evaluated by: Jason Black

Date:07/31/2012

Jeff Lawrence

07/31/2012

Seismic Walkdown Checklist (SWC)

Equipment ID No. **BFN-3-LPNL-925-0006A** Equipment Class³ 18

Equipment Description REACTOR PROTECTION & NSS PNL

Location: Bldg. U3-RB Floor El. 593 Room, Area 049, RBCCW 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

³Enter the equipment class name from Appendix B, Classes of Equipment.

Seismic Walkdown Checklist (SWC)

Equipment ID No. **BFN-3-LPNL-925-0006A** Equipment Class³ 18

Equipment Description REACTOR PROTECTION & NSS PNL

Anchorage (Continued)

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

Anchorage verified per A-46 SEWS 39198.

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

Seismic Walkdown Checklist (SWC)

Equipment ID No. **BFN-3-LPNL-925-0006A** Equipment Class³ 18

Equipment Description REACTOR PROTECTION & NSS PNL

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

Stanchions and chain located near trip sensitive equipment and are not secured down. One stanchion is missing anchor bolt. Due to low mass of stanchions and the wide base there is no risk of tipping over and interacting with equipment.

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

Seismic Walkdown Checklist (SWC)

Equipment ID No. **BFN-3-LPNL-925-0006A** Equipment Class³ 18

Equipment Description REACTOR PROTECTION & NSS PNL

Interaction Effects (Continued)

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

Seismic Walkdown Checklist (SWC)

Equipment ID No. **BFN-3-LPNL-925-0006A** Equipment Class³ 18

Equipment Description REACTOR PROTECTION & NSS PNL

Comments (Additional pages may be added as necessary)

Evaluated by: Jason Black

Date:07/31/2012

Jeff Lawrence

07/31/2012

Seismic Walkdown Checklist (SWC)

Equipment ID No. **BFN-3-LPNL-925-0006D** Equipment Class³ 18

Equipment Description REACTOR PROTECTION & NSS PNL

Anchorage (Continued)

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

Anchorage verified per A-46 SEWS 39199.

Seismic Walkdown Checklist (SWC)

Equipment ID No. **BFN-3-LPNL-925-0006D** Equipment Class³ 18

Equipment Description REACTOR PROTECTION & NSS PNL

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

Stanchions located in front of trip sensitive equipment are not bolted down. Due to the low weight of the stanchions and the large base there is no adverse condition.

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

Seismic Walkdown Checklist (SWC)

Equipment ID No. **BFN-3-LPNL-925-0006D** Equipment Class³ 18

Equipment Description REACTOR PROTECTION & NSS PNL

Interaction Effects (Continued)

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

Seismic Walkdown Checklist (SWC)

Equipment ID No. **BFN-3-LPNL-925-0006D** Equipment Class³ 18

Equipment Description REACTOR PROTECTION & NSS PNL

Comments (Additional pages may be added as necessary)

Evaluated by: Jason Black

Date:07/31/2012

Jeff Lawrence

07/31/2012

Seismic Walkdown Checklist (SWC)

Equipment ID No. **BFN-3-LPNL-925-0247A** Equipment Class³ 18

Equipment Description CAD DRYWELL & SUPP. CHAMBER V.

Location: Bldg. U3-RB Floor El. 621 Room, Area 047, S-U, R16-R18 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

³Enter the equipment class name from Appendix B, Classes of Equipment.

Seismic Walkdown Checklist (SWC)

Equipment ID No. **BFN-3-LPNL-925-0247A** Equipment Class³ 18

Equipment Description CAD DRYWELL & SUPP. CHAMBER V.

Anchorage (Continued)

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

Seismic Walkdown Checklist (SWC)

Equipment ID No. **BFN-3-LPNL-925-0247A** Equipment Class³ 18

Equipment Description CAD DRYWELL & SUPP. CHAMBER V.

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

Seismic Walkdown Checklist (SWC)

Equipment ID No. **BFN-3-LPNL-925-0247A** Equipment Class³ 18

Equipment Description CAD DRYWELL & SUPP. CHAMBER V.

Interaction Effects (Continued)

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

Seismic Walkdown Checklist (SWC)

Equipment ID No. **BFN-3-LPNL-925-0247A** Equipment Class³ 18

Equipment Description CAD DRYWELL & SUPP. CHAMBER V.

Comments (Additional pages may be added as necessary)

Evaluated by: Jason Black

Date:07/31/2012

Jeff Lawrence

07/31/2012

Seismic Walkdown Checklist (SWC)

Equipment ID No. **BFN-3-LS-078-0001D** Equipment Class³ 20

Equipment Description SKIMMER SURGE TANK LOW LOW ISOL

Location: Bldg. U3-RB Floor El. 639 Room, Area 098, SLC AREA BY STAIRS

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

The hardware holding the indicator to the panel is in good condition.

³Enter the equipment class name from Appendix B, Classes of Equipment.

Seismic Walkdown Checklist (SWC)

Equipment ID No. **BFN-3-LS-078-0001D** Equipment Class³ 20

Equipment Description SKIMMER SURGE TANK LOW LOW ISOL

Anchorage (Continued)

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

The indicator is not attached to concrete.

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

Seismic Walkdown Checklist (SWC)

Equipment ID No. **BFN-3-LS-078-0001D** Equipment Class³ 20

Equipment Description SKIMMER SURGE TANK LOW LOW ISOL

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

Seismic Walkdown Checklist (SWC)

Equipment ID No. **BFN-3-LS-078-0001D** Equipment Class³ 20

Equipment Description SKIMMER SURGE TANK LOW LOW ISOL

Interaction Effects (Continued)

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

Seismic Walkdown Checklist (SWC)

Equipment ID No. **BFN-3-LS-078-0001D** Equipment Class³ 20

Equipment Description SKIMMER SURGE TANK LOW LOW ISOL

Comments (Additional pages may be added as necessary)

Evaluated by: Patrick McCarraher

Date: 8/9/2012

George Bongart

8/9/2012

Seismic Walkdown Checklist (SWC)

Equipment ID No. **BFN-3-LS-078-0001E** Equipment Class³ 20

Equipment Description SKIMMER SURGE TANK LOW LOW ISOL

Location: Bldg. U3-RB Floor El. 639 Room, Area 098, SLC AREA BY STAIRS

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

The hardware holding the indicator to the panel is in good condition.

³Enter the equipment class name from Appendix B, Classes of Equipment.

Seismic Walkdown Checklist (SWC)

Equipment ID No. **BFN-3-LS-078-0001E** Equipment Class³ 20

Equipment Description SKIMMER SURGE TANK LOW LOW ISOL

Anchorage (Continued)

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

The indicator is not attached to concrete.

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

Seismic Walkdown Checklist (SWC)

Equipment ID No. **BFN-3-LS-078-0001E** Equipment Class³ 20

Equipment Description SKIMMER SURGE TANK LOW LOW ISOL

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

Soft targets are free from impact from nearby equipment or structures.

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

Seismic Walkdown Checklist (SWC)

Equipment ID No. **BFN-3-LS-078-0001E** Equipment Class³ 20

Equipment Description SKIMMER SURGE TANK LOW LOW ISOL

Interaction Effects (Continued)

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

Seismic Walkdown Checklist (SWC)

Equipment ID No. **BFN-3-LS-078-0001E** Equipment Class³ 20

Equipment Description SKIMMER SURGE TANK LOW LOW ISOL

Comments (Additional pages may be added as necessary)

Evaluated by: Patrick McCarraher

Date: 8/9/2012

George Bongart

8/9/2012

Seismic Walkdown Checklist (SWC)

Equipment ID No. **BFN-3-LS-078-0001F** Equipment Class³ 20

Equipment Description SKIMMER SURGE TANK LOW LOW ISOL

Location: Bldg. U3-RB Floor El. 639 Room, Area 098, SLC AREA BY STAIRS

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

The hardware holding the indicator to the panel is in good condition.

³Enter the equipment class name from Appendix B, Classes of Equipment.

Seismic Walkdown Checklist (SWC)

Equipment ID No. **BFN-3-LS-078-0001F** Equipment Class³ 20

Equipment Description SKIMMER SURGE TANK LOW LOW ISOL

Anchorage (Continued)

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

The indicator is not attached to concrete.

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

Seismic Walkdown Checklist (SWC)

Equipment ID No. **BFN-3-LS-078-0001F** Equipment Class³ 20

Equipment Description SKIMMER SURGE TANK LOW LOW ISOL

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

Soft targets are free from impact from nearby equipment or structures.

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

Seismic Walkdown Checklist (SWC)

Equipment ID No. **BFN-3-LS-078-0001F** Equipment Class³ 20

Equipment Description SKIMMER SURGE TANK LOW LOW ISOL

Interaction Effects (Continued)

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

Seismic Walkdown Checklist (SWC)

Equipment ID No. **BFN-3-LS-078-0001F** Equipment Class³ 20

Equipment Description SKIMMER SURGE TANK LOW LOW ISOL

Comments (Additional pages may be added as necessary)

Evaluated by: Patrick McCarraher

Date:8/9/2012

George Bongart

8/9/2012

Seismic Walkdown Checklist (SWC)

Equipment ID No. **BFN-3-LS-078-0001G** Equipment Class³ 20

Equipment Description SKIMMER SURGE TANK LOW LOW ISOL

Location: Bldg. U3-RB Floor El. 639 Room, Area 098, SLC AREA BY STAIRS

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

The hardware holding the indicator to the panel is in good condition.

³Enter the equipment class name from Appendix B, Classes of Equipment.

Seismic Walkdown Checklist (SWC)

Equipment ID No. **BFN-3-LS-078-0001G** Equipment Class³ 20

Equipment Description SKIMMER SURGE TANK LOW LOW ISOL

Anchorage (Continued)

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

The indicator is not attached to concrete.

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

Seismic Walkdown Checklist (SWC)

Equipment ID No. **BFN-3-LS-078-0001G** Equipment Class³ 20

Equipment Description SKIMMER SURGE TANK LOW LOW ISOL

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

Soft targets are free from impact from nearby equipment or structures.

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

Seismic Walkdown Checklist (SWC)

Equipment ID No. **BFN-3-LS-078-0001G** Equipment Class³ 20

Equipment Description SKIMMER SURGE TANK LOW LOW ISOL

Interaction Effects (Continued)

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

Seismic Walkdown Checklist (SWC)

Equipment ID No. **BFN-3-LS-078-0001G** Equipment Class³ 20

Equipment Description SKIMMER SURGE TANK LOW LOW ISOL

Comments (Additional pages may be added as necessary)

Evaluated by: Patrick McCarraher

Date:8/9/2012

George Bongart

8/9/2012

Seismic Walkdown Checklist (SWC)

Equipment ID No. **BFN-3-MGEN-268-0003DA** Equipment Class³ 13

Equipment Description 480/480 MG SET 3DA

Location: Bldg. U3-RB Floor El. 621 Room, Area 029, Column Lines S - U, R20 - R21

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

³Enter the equipment class name from Appendix B, Classes of Equipment.

Seismic Walkdown Checklist (SWC)

Equipment ID No. **BFN-3-MGEN-268-0003DA** Equipment Class³ 13

Equipment Description 480/480 MG SET 3DA

Anchorage (Continued)

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

Anchorage verified per A-46 SEWS 39208.

Seismic Walkdown Checklist (SWC)

Equipment ID No. **BFN-3-MGEN-268-0003DA** Equipment Class³ 13

Equipment Description 480/480 MG SET 3DA

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

Seismic Walkdown Checklist (SWC)

Equipment ID No. **BFN-3-MGEN-268-0003DA** Equipment Class³ 13

Equipment Description 480/480 MG SET 3DA

Interaction Effects (Continued)

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

Seismic Walkdown Checklist (SWC)

Equipment ID No. **BFN-3-MGEN-268-0003DA** Equipment Class³ 13

Equipment Description 480/480 MG SET 3DA

Comments (Additional pages may be added as necessary)

Evaluated by: Jason Black

Date:07/31/2012

Jeff Lawrence

07/31/2012

Seismic Walkdown Checklist (SWC)

Equipment ID No. **BFN-3-MGEN-268-0003DN** Equipment Class³ 13

Equipment Description 480/480 MG SET 3DN

Location: Bldg. U3-RB Floor El. 621 Room, Area 048, Column Lines S - U, R16 - R20

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

³Enter the equipment class name from Appendix B, Classes of Equipment.

Seismic Walkdown Checklist (SWC)

Equipment ID No. **BFN-3-MGEN-268-0003DN** Equipment Class³ 13

Equipment Description 480/480 MG SET 3DN

Anchorage (Continued)

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

Mild surface oxidation on anchorage below generator - not a seismic concern.

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

Anchorage verified per A-46 SEWS 39015.

Seismic Walkdown Checklist (SWC)

Equipment ID No. **BFN-3-MGEN-268-0003DN** Equipment Class³ 13

Equipment Description 480/480 MG SET 3DN

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

Temporary structure (2 ton crane) on wheels is making contact with motor generator. Crane has since been moved away from the generator to eliminate the potential for it to strike the motor generator under a seismic event.

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

Seismic Walkdown Checklist (SWC)

Equipment ID No. **BFN-3-MGEN-268-0003DN** Equipment Class³ 13

Equipment Description 480/480 MG SET 3DN

Interaction Effects (Continued)

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

Seismic Walkdown Checklist (SWC)

Equipment ID No. **BFN-3-MGEN-268-0003DN** Equipment Class³ 13

Equipment Description 480/480 MG SET 3DN

Comments (Additional pages may be added as necessary)

Evaluated by: Jason Black

Date:07/31/2012

Jeff Lawrence

07/31/2012

Seismic Walkdown Checklist (SWC)

Equipment ID No. **BFN-3-MGEN-268-0003EA** Equipment Class³ 13

Equipment Description LPCI MG SET 3EA

Location: Bldg. U3-RB Floor El. 621 Room, Area 048, Column Lines S - U, R16 - R20

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

³Enter the equipment class name from Appendix B, Classes of Equipment.

Seismic Walkdown Checklist (SWC)

Equipment ID No. **BFN-3-MGEN-268-0003EA** Equipment Class³ 13

Equipment Description LPCI MG SET 3EA

Anchorage (Continued)

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

Mild Surface oxidation on anchorage under generator - not a seismic concern.

- 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

Anchorage verified per A-46 SEWS 39212.

Seismic Walkdown Checklist (SWC)

Equipment ID No. **BFN-3-MGEN-268-0003EA** Equipment Class³ 13

Equipment Description LPCI MG SET 3EA

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

Seismic Walkdown Checklist (SWC)

Equipment ID No. **BFN-3-MGEN-268-0003EA** Equipment Class³ 13

Equipment Description LPCI MG SET 3EA

Interaction Effects (Continued)

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

Seismic Walkdown Checklist (SWC)

Equipment ID No. **BFN-3-MGEN-268-0003EA** Equipment Class³ 13

Equipment Description LPCI MG SET 3EA

Comments (Additional pages may be added as necessary)

Evaluated by: Jason Black

Date:07/31/2012

Jeff Lawrence

07/31/2012

Seismic Walkdown Checklist (SWC)

Equipment ID No. **BFN-3-MGEN-268-0003EN** Equipment Class³ 13

Equipment Description LPCI MG SET 3EN

Location: Bldg. U3-RB Floor El. 621 Room, Area 029, Column Lines S - U, R20 - R21

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

³Enter the equipment class name from Appendix B, Classes of Equipment.

Seismic Walkdown Checklist (SWC)

Equipment ID No. **BFN-3-MGEN-268-0003EN** Equipment Class³ 13

Equipment Description LPCI MG SET 3EN

Anchorage (Continued)

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

Mild surface oxidation on anchorage under generator but not an adverse condition

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

Anchorage verified per A-46 SEWS 39017.

Seismic Walkdown Checklist (SWC)

Equipment ID No. **BFN-3-MGEN-268-0003EN** Equipment Class³ 13

Equipment Description LPCI MG SET 3EN

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

Seismic Walkdown Checklist (SWC)

Equipment ID No. **BFN-3-MGEN-268-0003EN** Equipment Class³ 13

Equipment Description LPCI MG SET 3EN

Interaction Effects (Continued)

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

Seismic Walkdown Checklist (SWC)

Equipment ID No. **BFN-3-MGEN-268-0003EN** Equipment Class³ 13

Equipment Description LPCI MG SET 3EN

Comments (Additional pages may be added as necessary)

Evaluated by: Jason Black

Date:07/31/2012

Jeff Lawrence

07/31/2012

Seismic Walkdown Checklist (SWC)

Equipment ID No. **BFN-3-PCV-001-0005** Equipment Class³ 7

Equipment Description MAIN STEAM LINE A RELIEF VLV

Location: Bldg. U3 RB Floor El. 585 Room, 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

³Enter the equipment class name from Appendix B, Classes of Equipment.

Seismic Walkdown Checklist (SWC)

Equipment ID No. **BFN-3-PCV-001-0005** Equipment Class³ 7

Equipment Description MAIN STEAM LINE A RELIEF VLV

Anchorage (Continued)

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

Seismic Walkdown Checklist (SWC)

Equipment ID No. **BFN-3-PCV-001-0005** Equipment Class³ 7

Equipment Description MAIN STEAM LINE A RELIEF VLV

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

Seismic Walkdown Checklist (SWC)

Equipment ID No. **BFN-3-PCV-001-0005** Equipment Class³ 7

Equipment Description MAIN STEAM LINE A RELIEF VLV

Interaction Effects (Continued)

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

Seismic Walkdown Checklist (SWC)

Equipment ID No. **BFN-3-PCV-001-0005** Equipment Class³ 7

Equipment Description MAIN STEAM LINE A RELIEF VLV

Comments (Additional pages may be added as necessary)

Evaluated by:

Date:

Seismic Walkdown Checklist (SWC)

Equipment ID No. **BFN-3-PCV-001-0042** Equipment Class³ Z

Equipment Description MAIN STEAM LINE D RELIEF VLV

Location: Bldg. U3 RB Floor El. 585 Room, 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

³Enter the equipment class name from Appendix B, Classes of Equipment.

Seismic Walkdown Checklist (SWC)

Equipment ID No. **BFN-3-PCV-001-0042** Equipment Class³ 7

Equipment Description MAIN STEAM LINE D RELIEF VLV

Anchorage (Continued)

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

Seismic Walkdown Checklist (SWC)

Equipment ID No. **BFN-3-PCV-001-0042** Equipment Class³ 7

Equipment Description MAIN STEAM LINE D RELIEF VLV

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

Seismic Walkdown Checklist (SWC)

Equipment ID No. **BFN-3-PCV-001-0042** Equipment Class³ 7

Equipment Description MAIN STEAM LINE D RELIEF VLV

Interaction Effects (Continued)

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

Seismic Walkdown Checklist (SWC)

Equipment ID No. **BFN-3-PCV-001-0042** Equipment Class³ 7

Equipment Description MAIN STEAM LINE D RELIEF VLV

Comments (Additional pages may be added as necessary)

Evaluated by:

Date:

Seismic Walkdown Checklist (SWC)

Equipment ID No. **BFN-3-PMP-063-0006A** Equipment Class³ 5

Equipment Description Standby Liquid Control Pump A

Location: Bldg. U3-RB Floor El. 639 Room, Area 028, SLC Area

Manufacturer, Model, Etc. (optional but recommended) Union Pump Company

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 additional information reference drawing 3-41E1063.

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

³Enter the equipment class name from Appendix B, Classes of Equipment.

Seismic Walkdown Checklist (SWC)

Equipment ID No. **BFN-3-PMP-063-0006A** Equipment Class³ 5

Equipment Description Standby Liquid Control Pump A

Anchorage (Continued)

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

Anchorage verified per drawing VTD-U055-0080.

For additional information reference drawing 3-41E1063.

Seismic Walkdown Checklist (SWC)

Equipment ID No. **BFN-3-PMP-063-0006A** Equipment Class³ 5

Equipment Description Standby Liquid Control Pump A

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

Seismic Walkdown Checklist (SWC)

Equipment ID No. **BFN-3-PMP-063-0006A** Equipment Class³ 5

Equipment Description Standby Liquid Control Pump A

Interaction Effects (Continued)

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

Seismic Walkdown Checklist (SWC)

Equipment ID No. **BFN-3-PMP-063-0006A** Equipment Class³ 5

Equipment Description Standby Liquid Control Pump A

Comments (Additional pages may be added as necessary)

Evaluated by: Avinash Chunduri

Date:07/26/2012

Jeff Lawrence

07/26/2012

Seismic Walkdown Checklist (SWC)

Equipment ID No. **BFN-3-PMP-063-0006B** Equipment Class³ **5**

Equipment Description STANDBY LIQ CONT PMP B

Location: Bldg. U3-RB Floor El. 639 Room, Area 028, SLC 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 additional information reference drawing 3-41E1063.

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

³Enter the equipment class name from Appendix B, Classes of Equipment.

Seismic Walkdown Checklist (SWC)

Equipment ID No. **BFN-3-PMP-063-0006B** Equipment Class³ 5

Equipment Description STANDBY LIQ CONT PMP B

Anchorage (Continued)

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

Anchorage verified per drawing VTD-U055-0080.

For additional information reference drawing 3-41E1063.

Seismic Walkdown Checklist (SWC)

Equipment ID No. **BFN-3-PMP-063-0006B** Equipment Class³ 5

Equipment Description STANDBY LIQ CONT PMP B

- 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

Seismic Walkdown Checklist (SWC)

Equipment ID No. **BFN-3-PMP-063-0006B** Equipment Class³ 5

Equipment Description STANDBY LIQ CONT PMP B

Interaction Effects (Continued)

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

Seismic Walkdown Checklist (SWC)

Equipment ID No. **BFN-3-PMP-063-0006B** Equipment Class³ 5

Equipment Description STANDBY LIQ CONT PMP B

Comments (Additional pages may be added as necessary)

Evaluated by: Avinash Chunduri

Date:07/26/2012

Jeff Lawrence

07/26/2012

Seismic Walkdown Checklist (SWC)

Equipment ID No. **BFN-3-PMP-073-0029** Equipment Class³ 5

Equipment Description HPCI BOOSTER PUMP

Location: Bldg. U3-RB Floor El. 519 Room, Area 101, HPCI 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

The anchorage is in good condition. It should be noted that only the anchorage on the front side can be examined because the back side is in a contaminated zone and cannot be examined.

³Enter the equipment class name from Appendix B, Classes of Equipment.

Seismic Walkdown Checklist (SWC)

Equipment ID No. **BFN-3-PMP-073-0029** Equipment Class³ 5

Equipment Description HPCI BOOSTER PUMP

Anchorage (Continued)

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

Seismic Walkdown Checklist (SWC)

Equipment ID No. **BFN-3-PMP-073-0029** Equipment Class³ 5

Equipment Description HPCI BOOSTER PUMP

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

Seismic Walkdown Checklist (SWC)

Equipment ID No. **BFN-3-PMP-073-0029** Equipment Class³ 5

Equipment Description HPCI BOOSTER PUMP

Interaction Effects (Continued)

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

Seismic Walkdown Checklist (SWC)

Equipment ID No. **BFN-3-PMP-073-0029** Equipment Class³ 5

Equipment Description HPCI BOOSTER PUMP

Comments (Additional pages may be added as necessary)

Evaluated by: George Bongart

Date: 8/9/2012

Patrick McCarraher

8/9/2012

Seismic Walkdown Checklist (SWC)

Equipment ID No. **BFN-3-PMP-073-0054** Equipment Class³ 5

Equipment Description HPCI TURBINE MAIN PUMP

Location: Bldg. U3-RB Floor El. 519 Room, Area 101, HPCI 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

The anchorage is in good condition. It should be noted that only the anchorage on the front side can be examined because the back side is in a contaminated zone and cannot be examined.

³Enter the equipment class name from Appendix B, Classes of Equipment.

Seismic Walkdown Checklist (SWC)

Equipment ID No. **BFN-3-PMP-073-0054** Equipment Class³ 5

Equipment Description HPCI TURBINE MAIN PUMP

Anchorage (Continued)

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

No visible cracks in the concrete near the anchors.

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

Seismic Walkdown Checklist (SWC)

Equipment ID No. **BFN-3-PMP-073-0054** Equipment Class³ 5

Equipment Description HPCI TURBINE MAIN PUMP

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

Seismic Walkdown Checklist (SWC)

Equipment ID No. **BFN-3-PMP-073-0054** Equipment Class³ 5

Equipment Description HPCI TURBINE MAIN PUMP

Interaction Effects (Continued)

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

Seismic Walkdown Checklist (SWC)

Equipment ID No. **BFN-3-PMP-073-0054** Equipment Class³ 5

Equipment Description HPCI TURBINE MAIN PUMP

Comments (Additional pages may be added as necessary)

Evaluated by: George Bongart

Date:8/9/2012

Patrick McCarraher

8/9/2012

Seismic Walkdown Checklist (SWC)

Equipment ID No. **BFN-3-PMP-074-0028** Equipment Class³ 6

Equipment Description RESIDUAL HEAT REMOVAL PUMP 3B

Location: Bldg. U3-RB Floor El. 519 Room, Area 102, RHR 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

This equipment has been selected for anchorage verification.

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

There are no missing, broken, or loose hardware items.

³Enter the equipment class name from Appendix B, Classes of Equipment.

Seismic Walkdown Checklist (SWC)

Equipment ID No. **BFN-3-PMP-074-0028** Equipment Class³ 6

Equipment Description RESIDUAL HEAT REMOVAL PUMP 3B

Anchorage (Continued)

3. Is the anchorage free of corrosion that is more than mild surface oxidation?

Y N U N/A

Minor corrosion was discovered on one anchor bolt.

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

The anchorage was verified against plant drawing 0-41N734, the current anchorage configuration matches the plant drawing.

Seismic Walkdown Checklist (SWC)

Equipment ID No. **BFN-3-PMP-074-0028** Equipment Class³6

Equipment Description RESIDUAL HEAT REMOVAL PUMP 3B

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

Seismic Walkdown Checklist (SWC)

Equipment ID No. **BFN-3-PMP-074-0028** Equipment Class³ 6

Equipment Description RESIDUAL HEAT REMOVAL PUMP 3B

Interaction Effects (Continued)

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

Seismic Walkdown Checklist (SWC)

Equipment ID No. **BFN-3-PMP-074-0028** Equipment Class³6

Equipment Description RESIDUAL HEAT REMOVAL PUMP 3B

Comments (Additional pages may be added as necessary)

Evaluated by: George Bongart

Date:8/9/2012

Patrick McCarraher

8/9/2012

Seismic Walkdown Checklist (SWC)

Equipment ID No. **BFN-3-PMP-074-0039** Equipment Class³ **6**

Equipment Description RESIDUAL HEAT REMOVAL PUMP 3D

Location: Bldg. U3-RB Floor El. 519 Room, Area 102, RHR 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

This piece of equipment has been selected for anchorage verification.

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

The anchorage is free of missing, loose, and broken hardware.

³Enter the equipment class name from Appendix B, Classes of Equipment.

Seismic Walkdown Checklist (SWC)

Equipment ID No. **BFN-3-PMP-074-0039** Equipment Class³ 6

Equipment Description RESIDUAL HEAT REMOVAL PUMP 3D

Anchorage (Continued)

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

Anchorage has been verified using plant drawing 0-41N734; the current anchorage configuration matches the plant drawing.

Seismic Walkdown Checklist (SWC)

Equipment ID No. **BFN-3-PMP-074-0039** Equipment Class³ **6**

Equipment Description RESIDUAL HEAT REMOVAL PUMP 3D

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

Seismic Walkdown Checklist (SWC)

Equipment ID No. **BFN-3-PMP-074-0039** Equipment Class³ 6

Equipment Description RESIDUAL HEAT REMOVAL PUMP 3D

Interaction Effects (Continued)

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

Seismic Walkdown Checklist (SWC)

Equipment ID No. **BFN-3-PMP-074-0039** Equipment Class³ 6

Equipment Description RESIDUAL HEAT REMOVAL PUMP 3D

Comments (Additional pages may be added as necessary)

Evaluated by: George Bongart

Date:8/9/2012

Patrick McCarraher

8/9/2012

Seismic Walkdown Checklist (SWC)

Equipment ID No. **BFN-3-PMP-075-0005** Equipment Class³ 6

Equipment Description CORE SPRAY PUMP 3A

Location: Bldg. U3-RB Floor El. 519 Room, Area 092, NW QUAD

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

³Enter the equipment class name from Appendix B, Classes of Equipment.

Seismic Walkdown Checklist (SWC)

Equipment ID No. **BFN-3-PMP-075-0005** Equipment Class³6

Equipment Description CORE SPRAY PUMP 3A

Anchorage (Continued)

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

Minor paint chipping at the anchorage has been observed.

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

The anchorage has been verified against plant drawing 41N734. The current configuration matches the plant drawing.

Seismic Walkdown Checklist (SWC)

Equipment ID No. **BFN-3-PMP-075-0005** Equipment Class³ 6

Equipment Description CORE SPRAY PUMP 3A

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

The grating above the pump is positively attached to the structural steel at elevation 541, the grating poses no danger to the pump because it is positively attached to the structural steel and will not fall on the pump during a seismic event..

Seismic Walkdown Checklist (SWC)

Equipment ID No. **BFN-3-PMP-075-0005** Equipment Class³ 6

Equipment Description CORE SPRAY PUMP 3A

Interaction Effects (Continued)

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

Seismic Walkdown Checklist (SWC)

Equipment ID No. **BFN-3-PMP-075-0005** Equipment Class³ **6**

Equipment Description CORE SPRAY PUMP 3A

Comments (Additional pages may be added as necessary)

Evaluated by: George Bongart

Date:8/8/2012

Patrick McCarraher

8/8/2012

Seismic Walkdown Checklist (SWC)

Equipment ID No. **BFN-3-PMP-075-0014** Equipment Class³ 6

Equipment Description CORE SPRAY PUMP 3C

Location: Bldg. U3-RB Floor El. 519 Room, Area 092, NW QUAD

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

³Enter the equipment class name from Appendix B, Classes of Equipment.

Seismic Walkdown Checklist (SWC)

Equipment ID No. **BFN-3-PMP-075-0014** Equipment Class³ **6**

Equipment Description CORE SPRAY PUMP 3C

Anchorage (Continued)

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

Minor paint chipping on the pump anchorage was found.

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

Anchorage has been verified against plant drawing 41N734, the current anchorage configuration matches the plant drawing.

Seismic Walkdown Checklist (SWC)

Equipment ID No. **BFN-3-PMP-075-0014** Equipment Class³ 6

Equipment Description CORE SPRAY PUMP 3C

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

The grating above the pump is positively attached to structural steel at elevation 541, the grating poses no danger to the pump because it is positively attached to the structural steel and will not fall on the pump during a seismic event..

Seismic Walkdown Checklist (SWC)

Equipment ID No. **BFN-3-PMP-075-0014** Equipment Class³6

Equipment Description CORE SPRAY PUMP 3C

Interaction Effects (Continued)

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

Seismic Walkdown Checklist (SWC)

Equipment ID No. **BFN-3-PMP-075-0014** Equipment Class³6

Equipment Description CORE SPRAY PUMP 3C

Comments (Additional pages may be added as necessary)

Evaluated by: Patrick McCarraher

Date:8/8/2012

George Bongart

8/8/2012

Seismic Walkdown Checklist (SWC)

Equipment ID No. **BFN-3-PNLA-009-0005** Equipment Class³ 20

Equipment Description REACTOR CONTROL PANEL

Location: Bldg. U3-CB Floor El. 617 Room, Area 121, U3 Main 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

Cabinet is welded heavily on outside (~ 3" weld @ 20" centers) to steel plate. Cabinets are also welded on inside of cabinet to channel.

³Enter the equipment class name from Appendix B, Classes of Equipment.

Seismic Walkdown Checklist (SWC)

Equipment ID No. **BFN-3-PNLA-009-0005** Equipment Class³ 20

Equipment Description REACTOR CONTROL PANEL

Anchorage (Continued)

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

Seismic Walkdown Checklist (SWC)

Equipment ID No. **BFN-3-PNLA-009-0005** Equipment Class³ 20

Equipment Description REACTOR CONTROL PANEL

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

Seismic Walkdown Checklist (SWC)

Equipment ID No. **BFN-3-PNLA-009-0005** Equipment Class³ 20

Equipment Description REACTOR CONTROL PANEL

Interaction Effects (Continued)

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

Panel consists of multiple bays that are all adequately bolted together which will prevent the bays from interacting with each other in a seismic event.

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

Seismic Walkdown Checklist (SWC)

Equipment ID No. **BFN-3-PNLA-009-0005** Equipment Class³ 20

Equipment Description REACTOR CONTROL PANEL

Comments (Additional pages may be added as necessary)

OSVS 39117 Resolved.

Evaluated by: Jeff Lawrence

Date:08/14/2012

Jason Black

08/14/2012

Seismic Walkdown Checklist (SWC)

Equipment ID No. **BFN-3-PNLA-009-0009** Equipment Class³ 20

Equipment Description UNIT 3 CONTROL BD PN LA 9-9

Location: Bldg. U3-CB Floor El. 617 Room, Area 121, U3 Main 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

Cabinet is welded heavily on outside (~ 3" @ 20" centers) to steel plate. Cabinets are also welded on the inside of cabinet to the channel

³Enter the equipment class name from Appendix B, Classes of Equipment.

Seismic Walkdown Checklist (SWC)

Equipment ID No. **BFN-3-PNLA-009-0009** Equipment Class³ 20

Equipment Description UNIT 3 CONTROL BD PN LA 9-9

Anchorage (Continued)

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

Seismic Walkdown Checklist (SWC)

Equipment ID No. **BFN-3-PNLA-009-0009** Equipment Class³ 20

Equipment Description UNIT 3 CONTROL BD PN LA 9-9

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

Seismic Walkdown Checklist (SWC)

Equipment ID No. **BFN-3-PNLA-009-0009** Equipment Class³ 20

Equipment Description UNIT 3 CONTROL BD PN LA 9-9

Interaction Effects (Continued)

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

Panel consists of six (6) bays that are all adequately bolted together which will prevent the cabinets from interacting with each other in a seismic event.

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

Seismic Walkdown Checklist (SWC)

Equipment ID No. **BFN-3-PNLA-009-0009** Equipment Class³ 20

Equipment Description UNIT 3 CONTROL BD PN LA 9-9

Comments (Additional pages may be added as necessary)

Outliers on OSVS-39119 are resolved.

Evaluated by: Jeff Lawrence

Date:08/14/2012

Jason Black

08/14/2012

Seismic Walkdown Checklist (SWC)

Equipment ID No. **BFN-3-PNLA-009-0032** Equipment Class³ 20

Equipment Description RHR, CS & HPCI (CH A) PNL

Location: Bldg. U3-CB Floor El. 593 Room, Area 052, U3 - Aux Instrument 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

Anchorage is free of bent, broken, missing or loose hardware.

³Enter the equipment class name from Appendix B, Classes of Equipment.

Seismic Walkdown Checklist (SWC)

Equipment ID No. **BFN-3-PNLA-009-0032** Equipment Class³ 20

Equipment Description RHR, CS & HPCI (CH A) PNL

Anchorage (Continued)

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

Seismic Walkdown Checklist (SWC)

Equipment ID No. **BFN-3-PNLA-009-0032** Equipment Class³ 20

Equipment Description RHR, CS & HPCI (CH A) PNL

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

Lights do not have a top shield, straps are in place to keep bulbs from falling to the floor. Interior of panel lights have a cage for protection.

Seismic Walkdown Checklist (SWC)

Equipment ID No. **BFN-3-PNLA-009-0032** Equipment Class³ 20

Equipment Description RHR, CS & HPCI (CH A) PNL

Interaction Effects (Continued)

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

CO2 spray head has a slot cut into the panel to allow for the cover. Cabinet exists as one (1) rugged unit with multiple bay doors and is bolted to adjacent panels which will prohibit interaction of cabinets during seismic event.

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

Seismic Walkdown Checklist (SWC)

Equipment ID No. **BFN-3-PNLA-009-0032** Equipment Class³ 20

Equipment Description RHR, CS & HPCI (CH A) PNL

Comments (Additional pages may be added as necessary)

Evaluated by: Patrick McCarraher

Date:8/13/2012

George Bongart

8/13/2012

Seismic Walkdown Checklist (SWC)

Equipment ID No. **BFN-3-PNLA-009-0033** Equipment Class³ 20

Equipment Description RHR, CS & HPCI (CH B) PNL

Location: Bldg. U3-CB Floor El. 593 Room, Area 052, U3 - Aux Instrument 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

³Enter the equipment class name from Appendix B, Classes of Equipment.

Seismic Walkdown Checklist (SWC)

Equipment ID No. **BFN-3-PNLA-009-0033** Equipment Class³ 20

Equipment Description RHR, CS & HPCI (CH B) PNL

Anchorage (Continued)

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

Seismic Walkdown Checklist (SWC)

Equipment ID No. **BFN-3-PNLA-009-0033** Equipment Class³ 20

Equipment Description RHR, CS & HPCI (CH B) PNL

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 walls have been qualified under IEB 80-11. Refer to drawing 41N1201-1.

Seismic Walkdown Checklist (SWC)

Equipment ID No. **BFN-3-PNLA-009-0033** Equipment Class³ 20

Equipment Description RHR, CS & HPCI (CH B) PNL

Interaction Effects (Continued)

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

Panel consists of multiple bays that are bolted together and are bolted to the adjacent panels. This provides lateral restraint which will prohibit the bays from interacting with adjacent bays during a seismic event.

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

Seismic Walkdown Checklist (SWC)

Equipment ID No. **BFN-3-PNLA-009-0033** Equipment Class³ 20

Equipment Description RHR, CS & HPCI (CH B) PNL

Comments (Additional pages may be added as necessary)

Evaluated by: Patrick McCarraher

Date: 8/13/2012

George Bongart

8/13/2012

Seismic Walkdown Checklist (SWC)

Equipment ID No. **BFN-3-PNLA-0009-0036A** Equipment Class³ 20

Equipment Description UNIT 3 AUX INSTR RM TO 480V BD 3D

Location: Bldg. U3-CB Floor El. 593 Room, Area 052, Auxiliary Instrument 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

Welds anchoring cabinet to sill channel are difficult to see but have been confirmed to be present.

³Enter the equipment class name from Appendix B, Classes of Equipment.

Seismic Walkdown Checklist (SWC)

Equipment ID No. **BFN-3-PNLA-0009-0036A** Equipment Class³ 20

Equipment Description UNIT 3 AUX INSTR RM TO 480V BD 3D

Anchorage (Continued)

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

Seismic Walkdown Checklist (SWC)

Equipment ID No. **BFN-3-PNLA-0009-0036A** Equipment Class³ 20

Equipment Description UNIT 3 AUX INSTR RM TO 480V BD 3D

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

Flourescent lights in panel are covered with a cage to avoid potential fall & impact with sensitive targets in 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

Block walls verified based per A-46 SEWS (SSEL # 39228) and drawings 4N1203-1, wall 78479

Seismic Walkdown Checklist (SWC)

Equipment ID No. **BFN-3-PNLA-0009-0036A** Equipment Class³ 20

Equipment Description UNIT 3 AUX INSTR RM TO 480V BD 3D

Interaction Effects (Continued)

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

Seismic Walkdown Checklist (SWC)

Equipment ID No. **BFN-3-PNLA-0009-0036A** Equipment Class³ 20

Equipment Description UNIT 3 AUX INSTR RM TO 480V BD 3D

Comments (Additional pages may be added as necessary)

Evaluated by: Jason Black

Date:08/01/2012

Jeff Lawrence

08/01/2012

Seismic Walkdown Checklist (SWC)

Equipment ID No. **BFN-3-PNLA-009-0055** Equipment Class³ 20

Equipment Description CNMT ATMOS DILUTION PNL

Location: Bldg. U3-CB Floor El. 617 Room, Area 121, U3 Main 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

Cabinet is welded on outside (~ 3" @ 20 centers) to steel plate.
Cabinets are also welded on inside

³Enter the equipment class name from Appendix B, Classes of Equipment.

Seismic Walkdown Checklist (SWC)

Equipment ID No. **BFN-3-PNLA-009-0055** Equipment Class³ 20

Equipment Description CNMT ATMOS DILUTION PNL

Anchorage (Continued)

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

Seismic Walkdown Checklist (SWC)

Equipment ID No. **BFN-3-PNLA-009-0055** Equipment Class³ 20

Equipment Description CNMT ATMOS DILUTION PNL

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

Seismic Walkdown Checklist (SWC)

Equipment ID No. **BFN-3-PNLA-009-0055** Equipment Class³ 20

Equipment Description CNMT ATMOS DILUTION PNL

Interaction Effects (Continued)

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

Panel consists of one (1) bay which is bolted to an adjacent panel. This provides lateral restraint which will prohibit the bay from interacting with the adjacent panel during a seismic event.

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

Seismic Walkdown Checklist (SWC)

Equipment ID No. **BFN-3-PNLA-009-0055** Equipment Class³ 20

Equipment Description CNMT ATMOS DILUTION PNL

Comments (Additional pages may be added as necessary)

Evaluated by: Jeff Lawrence

Date:08/14/2012

Jason Black

08/14/2012

Seismic Walkdown Checklist (SWC)

Equipment ID No. **BFN-3-PNLA-0009-0081** Equipment Class³ 20

Equipment Description ECCS DIV 1 TRIP UNIT CABINET

Location: Bldg. U3-CB Floor El. 593' Room, Area 052, Auxiliary Instrument 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

Fan is properly anchored to panel.

³Enter the equipment class name from Appendix B, Classes of Equipment.

Seismic Walkdown Checklist (SWC)

Equipment ID No. **BFN-3-PNLA-0009-0081** Equipment Class³ 20

Equipment Description ECCS DIV 1 TRIP UNIT CABINET

Anchorage (Continued)

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

Seismic Walkdown Checklist (SWC)

Equipment ID No. **BFN-3-PNLA-0009-0081** Equipment Class³ 20

Equipment Description ECCS DIV 1 TRIP UNIT CABINET

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

Flourescent lights in inside of cabinet have cages around them.

Seismic Walkdown Checklist (SWC)

Equipment ID No. **BFN-3-PNLA-0009-0081** Equipment Class³ 20

Equipment Description ECCS DIV 1 TRIP UNIT CABINET

Interaction Effects (Continued)

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

Cabinet is bolted to the one (1) adjacent panel. A large gap (~ 4") exists between it and the adjacent panel. No interaction will occur.

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

Seismic Walkdown Checklist (SWC)

Equipment ID No. **BFN-3-PNLA-0009-0081** Equipment Class³ 20

Equipment Description ECCS DIV 1 TRIP UNIT CABINET

Comments (Additional pages may be added as necessary)

Evaluated by: Jason Black

Date:08/01/2012

Jeff Lawrence

08/01/2012

Seismic Walkdown Checklist (SWC)

Equipment ID No. **BFN-3-PNLA-0009-0082** Equipment Class³ 20

Equipment Description ECCS DIV 2 TRIP UNIT CABINET

Location: Bldg. U3-CB Floor El. 593' Room, Area 052, AUX INSTR 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

Fan inside of panel is properly anchored

³Enter the equipment class name from Appendix B, Classes of Equipment.

Seismic Walkdown Checklist (SWC)

Equipment ID No. **BFN-3-PNLA-0009-0082** Equipment Class³ 20

Equipment Description ECCS DIV 2 TRIP UNIT CABINET

Anchorage (Continued)

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

Seismic Walkdown Checklist (SWC)

Equipment ID No. **BFN-3-PNLA-0009-0082** Equipment Class³ 20

Equipment Description ECCS DIV 2 TRIP UNIT CABINET

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

Flourescent light inside of cabinet is covered with cage

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

Seismic Walkdown Checklist (SWC)

Equipment ID No. **BFN-3-PNLA-0009-0082** Equipment Class³ 20

Equipment Description ECCS DIV 2 TRIP UNIT CABINET

Interaction Effects (Continued)

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

Seismic Walkdown Checklist (SWC)

Equipment ID No. **BFN-3-PNLA-0009-0082** Equipment Class³ 20

Equipment Description ECCS DIV 2 TRIP UNIT CABINET

Comments (Additional pages may be added as necessary)

Evaluated by: Jason Black

Date:08/01/2012

Jeff Lawrence

08/01/2012

Seismic Walkdown Checklist (SWC)

Equipment ID No. **BFN-3-PNLA-082-0003A** Equipment Class³ 14

Equipment Description DIESEL GENERATOR 3A ELECTRICAL CONTROL CABINET

Location: Bldg. U3-DG Floor El. 565 Room, Area 058, DG Room 3A

Manufacturer, Model, Etc. (optional but recommended) General Electric

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 additional information see drawings 3-35N337-5, 3-41N590-1, 3-41N590-4 and 3-48N897-1.

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

³Enter the equipment class name from Appendix B, Classes of Equipment.

Seismic Walkdown Checklist (SWC)

Equipment ID No. **BFN-3-PNLA-082-0003A** Equipment Class³ 14

Equipment Description DIESEL GENERATOR 3A ELECTRICAL CONTROL CABINET

Anchorage (Continued)

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

Anchorage was verified against A-46 SEWS Number 9112. At the time of A-46 the anchorage was determined to be inadequate. Anchorage has not changed since A-46 walkdown however calculation CDQ3082950543 qualifies the current configuration as being acceptable.

For additional information see drawings 3-35N337-5, 3-41N590-1, 3-41N590-4 and 3-48N897-1.

Seismic Walkdown Checklist (SWC)

Equipment ID No. **BFN-3-PNLA-082-0003A** Equipment Class³ 14

Equipment Description DIESEL GENERATOR 3A ELECTRICAL CONTROL CABINET

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

Seismic Walkdown Checklist (SWC)

Equipment ID No. **BFN-3-PNLA-082-0003A** Equipment Class³ 14

Equipment Description DIESEL GENERATOR 3A ELECTRICAL CONTROL CABINET

Interaction Effects (Continued)

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

Seismic Walkdown Checklist (SWC)

Equipment ID No. **BFN-3-PNLA-082-0003A** Equipment Class³ 14

Equipment Description DIESEL GENERATOR 3A ELECTRICAL CONTROL CABINET

Comments (Additional pages may be added as necessary)

Evaluated by: George Bongart

Date:8/1/2012

Patrick McCarraher

8/1/2012

Seismic Walkdown Checklist (SWC)

Equipment ID No. **BFN-3-PNLA-082-0003B** Equipment Class³ 14

Equipment Description DIESEL GENERATOR 3B ELECTRICAL CONTROL CABINET

Location: Bldg. U3-DG Floor El. 565 Room, Area 053, Diesel Generator Room 3B

Manufacturer, Model, Etc. (optional but recommended) Power Systems Division/Bruce GM Diesel Inc.

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 additional information see drawings 3-35N337-5, 3-41N590-1, 3-41N590-4 and 3-48N897-1.

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

Panel is welded to embed plate that is embedded into concrete pad. Anchorage in back is inaccessible because extensive disassembly is required to enter the cabinet.

6

³Enter the equipment class name from Appendix B, Classes of Equipment.

Seismic Walkdown Checklist (SWC)

Equipment ID No. **BFN-3-PNLA-082-0003B** Equipment Class³ 14

Equipment Description DIESEL GENERATOR 3B ELECTRICAL CONTROL CABINET

Anchorage (Continued)

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

For additional information see drawings 3-35N337-5, 3-41N590-1, 3-41N590-4 and 3-48N897-1.

Seismic Walkdown Checklist (SWC)

Equipment ID No. **BFN-3-PNLA-082-0003B** Equipment Class³ 14

Equipment Description DIESEL GENERATOR 3B ELECTRICAL CONTROL CABINET

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

Everything encased in securely latched door panels.

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

Seismic Walkdown Checklist (SWC)

Equipment ID No. **BFN-3-PNLA-082-0003B** Equipment Class³ 14

Equipment Description DIESEL GENERATOR 3B ELECTRICAL CONTROL CABINET

Interaction Effects (Continued)

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

Seismic Walkdown Checklist (SWC)

Equipment ID No. **BFN-3-PNLA-082-0003B** Equipment Class³ 14

Equipment Description DIESEL GENERATOR 3B ELECTRICAL CONTROL CABINET

Comments (Additional pages may be added as necessary)

Can only get access to front of panel and could not verify anchorage of the back of the equipment.

Evaluated by: Jeff Lawrence

Date:08/01/2012

Jason Black

08/01/2012

Seismic Walkdown Checklist (SWC)

Equipment ID No. **BFN-3-PNLA-248-0003EB** Equipment Class³ 14

Equipment Description 4KV S/D BD 250V DC DISTRIBUTION PNL SB-3EB

Location: Bldg. U3-DG Floor El. 583 Room, Area 056, 3EB BATTERY ROOM 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

³Enter the equipment class name from Appendix B, Classes of Equipment.

Seismic Walkdown Checklist (SWC)

Equipment ID No. **BFN-3-PNLA-248-0003EB** Equipment Class³ 14

Equipment Description 4KV S/D BD 250V DC DISTRIBUTION PNL SB-3EB

Anchorage (Continued)

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

Anchorage has been verified against A-46 SEWS Number 9120.
The current configuration matches the reference documentation.

Seismic Walkdown Checklist (SWC)

Equipment ID No. **BFN-3-PNLA-248-0003EB** Equipment Class³ 14

Equipment Description 4KV S/D BD 250V DC DISTRIBUTION PNL SB-3EB

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

Seismic Walkdown Checklist (SWC)

Equipment ID No. **BFN-3-PNLA-248-0003EB** Equipment Class³ 14

Equipment Description 4KV S/D BD 250V DC DISTRIBUTION PNL SB-3EB

Interaction Effects (Continued)

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

Seismic Walkdown Checklist (SWC)

Equipment ID No. **BFN-3-PNLA-248-0003EB** Equipment Class³ 14

Equipment Description 4KV S/D BD 250V DC DISTRIBUTION PNL SB-3EB

Comments (Additional pages may be added as necessary)

Evaluated by: George Bongart

Date:8/1/2012

Patrick McCarraher

8/1/2012

Seismic Walkdown Checklist (SWC)

Equipment ID No. **BFN-3-TE-064-0161B** Equipment Class³ 19

Equipment Description SUPPR POOL BULK TEMP DIV I

Location: Bldg. U3 RB Floor El. 519 Room, Area 128, UNIT 3 UNDER TORUS

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

³Enter the equipment class name from Appendix B, Classes of Equipment.

Seismic Walkdown Checklist (SWC)

Equipment ID No. **BFN-3-TE-064-0161B** Equipment Class³ 19

Equipment Description SUPPR POOL BULK TEMP DIV I

Anchorage (Continued)

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

Seismic Walkdown Checklist (SWC)

Equipment ID No. **BFN-3-TE-064-0161B** Equipment Class³ **19**

Equipment Description SUPPR POOL BULK TEMP DIV I

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

Seismic Walkdown Checklist (SWC)

Equipment ID No. **BFN-3-TE-064-0161B** Equipment Class³ 19

Equipment Description SUPPR POOL BULK TEMP DIV I

Interaction Effects (Continued)

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

Seismic Walkdown Checklist (SWC)

Equipment ID No. **BFN-3-TE-064-0161B** Equipment Class³ 19

Equipment Description SUPPR POOL BULK TEMP DIV I

Comments (Additional pages may be added as necessary)

Evaluated by: Jeff Lawrence

Date:10/18/2012

Jason Black

10/18/2012

Seismic Walkdown Checklist (SWC)

Equipment ID No. **BFN-3-TE-064-0161C** Equipment Class³ 19

Equipment Description SUPPR POOL BULK TEMP DIV I

Location: Bldg. U3 RB Floor El. 519 Room, Area 128, UNIT 3 UNDER TORUS

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

³Enter the equipment class name from Appendix B, Classes of Equipment.

Seismic Walkdown Checklist (SWC)

Equipment ID No. **BFN-3-TE-064-0161C** Equipment Class³ 19

Equipment Description SUPPR POOL BULK TEMP DIV I

Anchorage (Continued)

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

Seismic Walkdown Checklist (SWC)

Equipment ID No. **BFN-3-TE-064-0161C** Equipment Class³ 19

Equipment Description SUPPR POOL BULK TEMP DIV I

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

Seismic Walkdown Checklist (SWC)

Equipment ID No. **BFN-3-TE-064-0161C** Equipment Class³ 19

Equipment Description SUPPR POOL BULK TEMP DIV I

Interaction Effects (Continued)

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

Seismic Walkdown Checklist (SWC)

Equipment ID No. **BFN-3-TE-064-0161C** Equipment Class³ 19

Equipment Description SUPPR POOL BULK TEMP DIV I

Comments (Additional pages may be added as necessary)

Evaluated by: Jeff Lawrence

Date:10/18/2012

Jason Black

10/18/2012

Seismic Walkdown Checklist (SWC)

Equipment ID No. **BFN-3-TE-064-0162B** Equipment Class³ 19

Equipment Description SUPPR POOL BULK TEMP DIV II

Location: Bldg. U3 RB Floor El. 519 Room, Area 128, UNIT 3 UNDER TORUS

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

³Enter the equipment class name from Appendix B, Classes of Equipment.

Seismic Walkdown Checklist (SWC)

Equipment ID No. **BFN-3-TE-064-0162B** Equipment Class³ 19

Equipment Description SUPPR POOL BULK TEMP DIV II

Anchorage (Continued)

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

Seismic Walkdown Checklist (SWC)

Equipment ID No. **BFN-3-TE-064-0162B** Equipment Class³ 19

Equipment Description SUPPR POOL BULK TEMP DIV II

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

Seismic Walkdown Checklist (SWC)

Equipment ID No. **BFN-3-TE-064-0162B** Equipment Class³ 19

Equipment Description SUPPR POOL BULK TEMP DIV II

Interaction Effects (Continued)

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

Seismic Walkdown Checklist (SWC)

Equipment ID No. **BFN-3-TE-064-0162B** Equipment Class³ 19

Equipment Description SUPPR POOL BULK TEMP DIV II

Comments (Additional pages may be added as necessary)

Evaluated by: Jeff Lawrence

Date:10/18/2012

Jason Black

10/18/2012

Seismic Walkdown Checklist (SWC)

Equipment ID No. **BFN-3-TE-064-0162C** Equipment Class³ 19

Equipment Description SUPPR POOL BULK TEMP DIV II

Location: Bldg. U3 RB Floor El. 519 Room, Area 128, UNIT 3 UNDER TORUS

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

³Enter the equipment class name from Appendix B, Classes of Equipment.

Seismic Walkdown Checklist (SWC)

Equipment ID No. **BFN-3-TE-064-0162C** Equipment Class³ 19

Equipment Description SUPPR POOL BULK TEMP DIV II

Anchorage (Continued)

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

Seismic Walkdown Checklist (SWC)

Equipment ID No. **BFN-3-TE-064-0162C** Equipment Class³ 19

Equipment Description SUPPR POOL BULK TEMP DIV II

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

Seismic Walkdown Checklist (SWC)

Equipment ID No. **BFN-3-TE-064-0162C** Equipment Class³ 19

Equipment Description SUPPR POOL BULK TEMP DIV II

Interaction Effects (Continued)

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

Seismic Walkdown Checklist (SWC)

Equipment ID No. **BFN-3-TE-064-0162C** Equipment Class³ 19

Equipment Description SUPPR POOL BULK TEMP DIV II

Comments (Additional pages may be added as necessary)

Evaluated by: Jeff Lawrence

Date:10/18/2012

Jason Black

10/18/2012

Seismic Walkdown Checklist (SWC)

Equipment ID No. **BFN-3-TNK-063-0583** Equipment Class³ 21

Equipment Description STANDBY LIQ CONT TANK

Location: Bldg. U3-RB Floor El. 639 Room, Area 028, SLC 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 additional information reference drawings BWPC1153 and 3-41E1063.

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

³Enter the equipment class name from Appendix B, Classes of Equipment.

Seismic Walkdown Checklist (SWC)

Equipment ID No. **BFN-3-TNK-063-0583** Equipment Class³ 21

Equipment Description STANDBY LIQ CONT TANK

Anchorage (Continued)

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

Anchorage verified per drawing 41N1063 RA.

For additional information reference drawings BWPC1153 and 3-41E1063.

Seismic Walkdown Checklist (SWC)

Equipment ID No. **BFN-3-TNK-063-0583** Equipment Class³ 21

Equipment Description STANDBY LIQ CONT TANK

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

Seismic Walkdown Checklist (SWC)

Equipment ID No. **BFN-3-TNK-063-0583** Equipment Class³ 21

Equipment Description STANDBY LIQ CONT TANK

Interaction Effects (Continued)

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

Seismic Walkdown Checklist (SWC)

Equipment ID No. **BFN-3-TNK-063-0583** Equipment Class³ 21

Equipment Description STANDBY LIQ CONT TANK

Comments (Additional pages may be added as necessary)

Evaluated by: Avinash Chunduri

Date:07/26/2012

Jeff Lawrence

07/26/2012

Seismic Walkdown Checklist (SWC)

Equipment ID No. **BFN-3-TNK-085-0901** Equipment Class³ 21

Equipment Description SCRAM DISCHARGE INSTRUMENT VOLUME (WEST)

Location: Bldg. U3-RB Floor El. 565 Room, Area 042, WEST SDV CAGE

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

³Enter the equipment class name from Appendix B, Classes of Equipment.

Seismic Walkdown Checklist (SWC)

Equipment ID No. **BFN-3-TNK-085-0901** Equipment Class³21

Equipment Description SCRAM DISCHARGE INSTRUMENT VOLUME (WEST)

Anchorage (Continued)

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

Seismic Walkdown Checklist (SWC)

Equipment ID No. **BFN-3-TNK-085-0901** Equipment Class³21

Equipment Description SCRAM DISCHARGE INSTRUMENT VOLUME (WEST)

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

Soft targets are protected by the cage.

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

Seismic Walkdown Checklist (SWC)

Equipment ID No. **BFN-3-TNK-085-0901** Equipment Class³ 21

Equipment Description SCRAM DISCHARGE INSTRUMENT VOLUME (WEST)

Interaction Effects (Continued)

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

Seismic Walkdown Checklist (SWC)

Equipment ID No. **BFN-3-TNK-085-0901** Equipment Class³ 21

Equipment Description SCRAM DISCHARGE INSTRUMENT VOLUME (WEST)

Comments (Additional pages may be added as necessary)

Evaluated by: George Bongart

Date: 7/31/2012

Patrick McCarraher

7/31/2012

Seismic Walkdown Checklist (SWC)

Equipment ID No. **BFN-3-TNK-086-0650B** Equipment Class³ 21

Equipment Description DSL GEN B RIGHT BANK STARTING AIR TANK

Location: Bldg. U3-DG Floor El. 565 Room, Area 053, Diesel Generator Room 3B

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

Tank is supported from wall of diesel generator room by steel structure which is welded to embed plate. Tank is secured by large u-bolts and is double-nutted to angle of structure.

³Enter the equipment class name from Appendix B, Classes of Equipment.

Seismic Walkdown Checklist (SWC)

Equipment ID No. **BFN-3-TNK-086-0650B** Equipment Class³ 21

Equipment Description DSL GEN B RIGHT BANK STARTING AIR TANK

Anchorage (Continued)

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

A very shallow volume of concrete is missing from the wall near the embed plate which supports the structure. The chipped portion of the concrete doesn't extend under the embed plate and does not affect the attachment of the plate to the concrete wall. The chipped concrete does not pose a threat to the anchorage capacity of the embed plate.

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

Seismic Walkdown Checklist (SWC)

Equipment ID No. **BFN-3-TNK-086-0650B** Equipment Class³ 21

Equipment Description DSL GEN B RIGHT BANK STARTING AIR TANK

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

There are several, similar air tanks supported above this tank which are all anchored in a similar fashion.

Seismic Walkdown Checklist (SWC)

Equipment ID No. **BFN-3-TNK-086-0650B** Equipment Class³ 21

Equipment Description DSL GEN B RIGHT BANK STARTING AIR TANK

Interaction Effects (Continued)

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

Air piping attached to receiver has adequate flexibility.

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

Seismic Walkdown Checklist (SWC)

Equipment ID No. **BFN-3-TNK-086-0650B** Equipment Class³ 21

Equipment Description DSL GEN B RIGHT BANK STARTING AIR TANK

Comments (Additional pages may be added as necessary)

Evaluated by: Jeff Lawrence

Date:08/01/2012

Jason Black

08/01/2012

Seismic Walkdown Checklist (SWC)

Equipment ID No. **BFN-3-TNK-086-0650C** Equipment Class³ **21**

Equipment Description DSL GEN C RIGHT BANK STARTING AIR TANK

Location: Bldg. U3-DG Floor El. 565 Room, Area 093, DG ROOM 3C

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

Welds and bolts are in good condition.

³Enter the equipment class name from Appendix B, Classes of Equipment.

Seismic Walkdown Checklist (SWC)

Equipment ID No. **BFN-3-TNK-086-0650C** Equipment Class³ 21

Equipment Description DSL GEN C RIGHT BANK STARTING AIR TANK

Anchorage (Continued)

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

Anchorage was verified using A-46 SEWS Number 37005. The current anchorage configuration matches the documentation.

Seismic Walkdown Checklist (SWC)

Equipment ID No. **BFN-3-TNK-086-0650C** Equipment Class³ 21

Equipment Description DSL GEN C RIGHT BANK STARTING AIR TANK

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

Seismic Walkdown Checklist (SWC)

Equipment ID No. **BFN-3-TNK-086-0650C** Equipment Class³ 21

Equipment Description DSL GEN C RIGHT BANK STARTING AIR TANK

Interaction Effects (Continued)

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

Seismic Walkdown Checklist (SWC)

Equipment ID No. **BFN-3-TNK-086-0650C** Equipment Class³ 21

Equipment Description DSL GEN C RIGHT BANK STARTING AIR TANK

Comments (Additional pages may be added as necessary)

Evaluated by: George Bongart

Date:8/8/2012

Patrick McCarraher

8/8/2012

Seismic Walkdown Checklist (SWC)

Equipment ID No. **BFN-3-TNK-086-0655A** Equipment Class³ 21

Equipment Description DSL GEN A LEFT BANK STARTING AIR TANK

Location: Bldg. U3-DG Floor El. 565 Room, Area 058, DG ROOM 3A

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

³Enter the equipment class name from Appendix B, Classes of Equipment.

Seismic Walkdown Checklist (SWC)

Equipment ID No. **BFN-3-TNK-086-0655A** Equipment Class³ 21

Equipment Description DSL GEN A LEFT BANK STARTING AIR TANK

Anchorage (Continued)

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

Anchorage was verified against SEWS Number 7005. The current configuration matches the documentation

Seismic Walkdown Checklist (SWC)

Equipment ID No. **BFN-3-TNK-086-0655A** Equipment Class³ 21

Equipment Description DSL GEN A LEFT BANK STARTING AIR TANK

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

Seismic Walkdown Checklist (SWC)

Equipment ID No. **BFN-3-TNK-086-0655A** Equipment Class³ 21

Equipment Description DSL GEN A LEFT BANK STARTING AIR TANK

Interaction Effects (Continued)

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

Seismic Walkdown Checklist (SWC)

Equipment ID No. **BFN-3-TNK-086-0655A** Equipment Class³ 21

Equipment Description DSL GEN A LEFT BANK STARTING AIR TANK

Comments (Additional pages may be added as necessary)

Evaluated by: George Bongart

Date:8/1/2012

Patrick McCarraher

8/1/2012

Seismic Walkdown Checklist (SWC)

Equipment ID No. **BFN-3-TNK-086-0655D** Equipment Class³ 21

Equipment Description DSL GEN D LEFT BANK STARTING AIR TANK

Location: Bldg. U3-DG Floor El. 565 Room, Area 094, DIESEL GENERATOR ROOM 3D

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

Welds and bolts are in good condition.

³Enter the equipment class name from Appendix B, Classes of Equipment.

Seismic Walkdown Checklist (SWC)

Equipment ID No. **BFN-3-TNK-086-0655D** Equipment Class³ 21

Equipment Description DSL GEN D LEFT BANK STARTING AIR TANK

Anchorage (Continued)

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

Anchorage has been verified against A-46 SEWS Number 37032.
The current configuration matches the reference documentation.

Seismic Walkdown Checklist (SWC)

Equipment ID No. **BFN-3-TNK-086-0655D** Equipment Class³ 21

Equipment Description DSL GEN D LEFT BANK STARTING AIR TANK

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

Seismic Walkdown Checklist (SWC)

Equipment ID No. **BFN-3-TNK-086-0655D** Equipment Class³ 21

Equipment Description DSL GEN D LEFT BANK STARTING AIR TANK

Interaction Effects (Continued)

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

Seismic Walkdown Checklist (SWC)

Equipment ID No. **BFN-3-TNK-086-0655D** Equipment Class³ 21

Equipment Description DSL GEN D LEFT BANK STARTING AIR TANK

Comments (Additional pages may be added as necessary)

Evaluated by: George Bongart

Date: 8/8/2012

Patrick McCarraher

8/8/2012

Seismic Walkdown Checklist (SWC)

Equipment ID No. **BFN-3-XFA-082-0003AA** Equipment Class³ 4

Equipment Description DG-3A NEUTRAL GRN XFMR

Location: Bldg. U3-DG Floor El. 565 Room, Area 058, DG ROOM 3A

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 additional information see drawings 3-35N337-5, 3-41N590-1, 3-41N590-4 and 3-48N897-1.

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

³Enter the equipment class name from Appendix B, Classes of Equipment.

Seismic Walkdown Checklist (SWC)

Equipment ID No. **BFN-3-XFA-082-0003AA** Equipment Class³ 4

Equipment Description DG-3A NEUTRAL GRN XFMR

Anchorage (Continued)

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

Anchorage was verified against Calculation CDQ3082950544. The current anchorage matches the reference material.

For additional information see drawings 3-35N337-5, 3-41N590-1, 3-41N590-4 and 3-48N897-1.

Seismic Walkdown Checklist (SWC)

Equipment ID No. **BFN-3-XFA-082-0003AA** Equipment Class³ 4

Equipment Description DG-3A NEUTRAL GRN XFMR

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

Seismic Walkdown Checklist (SWC)

Equipment ID No. **BFN-3-XFA-082-0003AA** Equipment Class³ 4

Equipment Description DG-3A NEUTRAL GRN XFMR

Interaction Effects (Continued)

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

Seismic Walkdown Checklist (SWC)

Equipment ID No. **BFN-3-XFA-082-0003AA** Equipment Class³ 4

Equipment Description DG-3A NEUTRAL GRN XFMR

Comments (Additional pages may be added as necessary)

Evaluated by: Patrick McCarraher

Date: 8/1/2012

George Bongart

8/1/2012

Seismic Walkdown Checklist (SWC)

Equipment ID No. **BFN-3-XFA-231-TS3A** Equipment Class³ **4**

Equipment Description 480V SHUTDOWN BOARD TRANSFORMER

Location: Bldg. U3-RB Floor El. 621 Room, Area 029, Column Lines S-U/R20-21

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

³Enter the equipment class name from Appendix B, Classes of Equipment.

Seismic Walkdown Checklist (SWC)

Equipment ID No. **BFN-3-XFA-231-TS3A** Equipment Class³ 4

Equipment Description 480V SHUTDOWN BOARD TRANSFORMER

Anchorage (Continued)

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

Seismic Walkdown Checklist (SWC)

Equipment ID No. **BFN-3-XFA-231-TS3A** Equipment Class³ 4

Equipment Description 480V SHUTDOWN BOARD TRANSFORMER

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

Block walls between transformers are qualified under IE bulletin 80-11 and found to be adequate per A-46 SEWS (SSEL # 39006, 9003, & 9001) and drawing 41N1202-1..

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 lights may fall during a seismic event, but this will not pose a Potentially adverse seismic condition.

Seismic Walkdown Checklist (SWC)

Equipment ID No. **BFN-3-XFA-231-TS3A** Equipment Class³ 4

Equipment Description 480V SHUTDOWN BOARD TRANSFORMER

Interaction Effects (Continued)

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

Seismic Walkdown Checklist (SWC)

Equipment ID No. **BFN-3-XFA-231-TS3A** Equipment Class³ 4

Equipment Description 480V SHUTDOWN BOARD TRANSFORMER

Comments (Additional pages may be added as necessary)

Evaluated by: Avinash Chunduri

Date:07/26/2012

Jeff Lawrence

07/26/2012

Seismic Walkdown Checklist (SWC)

Equipment ID No. **BFN-3-XFA-231-TS3B** Equipment Class³ **4**

Equipment Description **480V SHUTDOWN BOARD TRANSFORMER**

Location: Bldg. U3-RB Floor El. 621' Room, Area 029, Column Lines S-U/R20-21

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

³Enter the equipment class name from Appendix B, Classes of Equipment.

Seismic Walkdown Checklist (SWC)

Equipment ID No. **BFN-3-XFA-231-TS3B** Equipment Class³ 4

Equipment Description 480V SHUTDOWN BOARD TRANSFORMER

Anchorage (Continued)

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

Seismic Walkdown Checklist (SWC)

Equipment ID No. **BFN-3-XFA-231-TS3B** Equipment Class³ **4**

Equipment Description 480V SHUTDOWN BOARD TRANSFORMER

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

Soft targets caged. Block walls between transformers are judged to be adequate per A-46 SEWS (SSEL # 39006 & 9003) and judged adequate per IE Bulletin 80-11.

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 lights may fall during a seismic event, but this will not pose a Potentially adverse seismic condition.

Seismic Walkdown Checklist (SWC)

Equipment ID No. **BFN-3-XFA-231-TS3B** Equipment Class³ 4

Equipment Description 480V SHUTDOWN BOARD TRANSFORMER

Interaction Effects (Continued)

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

Seismic Walkdown Checklist (SWC)

Equipment ID No. **BFN-3-XFA-231-TS3B** Equipment Class³ 4

Equipment Description 480V SHUTDOWN BOARD TRANSFORMER

Comments (Additional pages may be added as necessary)

Evaluated by: Avinash Chunduri

Date:07/26/2012

Jeff Lawrence

07/26/2012

Seismic Walkdown Checklist (SWC)

Equipment ID No. **BFN-3-XFA-253-0003A1** Equipment Class³ **4**

Equipment Description **480-120/208 VAC TRANSFORMER FOR I&C BUS A**

Location: Bldg. U3-RB Floor El. 621 Room, Area 026, Electric Board Room 3A

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

³Enter the equipment class name from Appendix B, Classes of Equipment.

Seismic Walkdown Checklist (SWC)

Equipment ID No. **BFN-3-XFA-253-0003A1** Equipment Class³ 4

Equipment Description 480-120/208 VAC TRANSFORMER FOR I&C BUS A

Anchorage (Continued)

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

Seismic Walkdown Checklist (SWC)

Equipment ID No. **BFN-3-XFA-253-0003A1** Equipment Class³ 4

Equipment Description 480-120/208 VAC TRANSFORMER FOR I&C BUS A

- 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

Seismic Walkdown Checklist (SWC)

Equipment ID No. **BFN-3-XFA-253-0003A1** Equipment Class³ 4

Equipment Description 480-120/208 VAC TRANSFORMER FOR I&C BUS A

Interaction Effects (Continued)

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

Seismic Walkdown Checklist (SWC)

Equipment ID No. **BFN-3-XFA-253-0003A1** Equipment Class³ 4

Equipment Description 480-120/208 VAC TRANSFORMER FOR I&C BUS A

Comments (Additional pages may be added as necessary)

Evaluated by: Patrick McCarraher

Date:7/26/2012

George Bongart

7/26/2012

Seismic Walkdown Checklist (SWC)

Equipment ID No. **BFN-3-XFA-253-0003A2** Equipment Class³ **4**

Equipment Description 120/208-120/208 VAC REG TRANSFORMER FOR I&C BUS A

Location: Bldg. U3-RB Floor El. 621 Room, Area 026, ElectricBoard Room 3A

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

³Enter the equipment class name from Appendix B, Classes of Equipment.

Seismic Walkdown Checklist (SWC)

Equipment ID No. **BFN-3-XFA-253-0003A2** Equipment Class³ 4

Equipment Description 120/208-120/208 VAC REG TRANSFORMER FOR I&C BUS A

Anchorage (Continued)

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

Seismic Walkdown Checklist (SWC)

Equipment ID No. **BFN-3-XFA-253-0003A2** Equipment Class³ 4

Equipment Description 120/208-120/208 VAC REG TRANSFORMER FOR I&C BUS A

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

Seismic Walkdown Checklist (SWC)

Equipment ID No. **BFN-3-XFA-253-0003A2** Equipment Class³ 4

Equipment Description 120/208-120/208 VAC REG TRANSFORMER FOR I&C BUS A

Interaction Effects (Continued)

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

Lines from this piece of equipment connect to FSW-253-003A/3A1 by rigid conduit. These two cabinets are attached to the same concrete wall within a short distance from each other; relative movements during a seismic event will be negligible. Rigid conduit is acceptable.

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

Seismic Walkdown Checklist (SWC)

Equipment ID No. **BFN-3-XFA-253-0003A2** Equipment Class³ 4

Equipment Description 120/208-120/208 VAC REG TRANSFORMER FOR I&C BUS A

Comments (Additional pages may be added as necessary)

UNID is missing on the label for this piece of equipment. Verified by an SRO that this was the correct piece of equipment for the walkdown.

Evaluated by: George Bongart

Date:7/26/2012

Patrick McCarraher

7/26/2012

Seismic Walkdown Checklist (SWC)

Equipment ID No. **BFN-3-XFA-253-0003B1** Equipment Class³ **4**

Equipment Description 480-120/208 VAC TRANSFORMER FOR I&C BUS B

Location: Bldg. U3-RB Floor El. 593 Room, Area 027, Electrical Board Room 3B

Manufacturer, Model, Etc. (optional but recommended) Square D Company (Sorgel Transformers)

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

³Enter the equipment class name from Appendix B, Classes of Equipment.

Seismic Walkdown Checklist (SWC)

Equipment ID No. **BFN-3-XFA-253-0003B1** Equipment Class³ 4

Equipment Description 480-120/208 VAC TRANSFORMER FOR I&C BUS B

Anchorage (Continued)

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

Anchorage verified per A-46 SEWS 39049.

Seismic Walkdown Checklist (SWC)

Equipment ID No. **BFN-3-XFA-253-0003B1** Equipment Class³ 4

Equipment Description 480-120/208 VAC TRANSFORMER FOR I&C BUS B

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

Seismic Walkdown Checklist (SWC)

Equipment ID No. **BFN-3-XFA-253-0003B1** Equipment Class³ 4

Equipment Description 480-120/208 VAC TRANSFORMER FOR I&C BUS B

Interaction Effects (Continued)

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

Seismic Walkdown Checklist (SWC)

Equipment ID No. **BFN-3-XFA-253-0003B1** Equipment Class³ 4

Equipment Description 480-120/208 VAC TRANSFORMER FOR I&C BUS B

Comments (Additional pages may be added as necessary)

Evaluated by: Avinash Chundurii

Date:07/26/2012

Jeff Lawrence

07/26/2012



Appendix F: AWCs

The following signatures are provided for the engineers responsible for the Area Walk-By Checklists in Browns Ferry Unit 3.

Name	Signature	Date
Jason Black	<i>Jason Black</i>	11-15-12
George Bongart	<i>George Bongart</i>	11-14-12
Avinash Chunduri	<i>Avinash Chunduri</i>	11-15-12
James Edgar	<i>James Edgar</i>	11-15-12
Jeffrey Lawrence	<i>Jeffrey Lawrence</i>	11-15-12
Patrick McCarragher	<i>Patrick McCarragher</i>	11-15-12
Nicholas Pressler	<i>Nicholas Pressler</i>	11-15-12

0-YD-EL565-033

Area Walk-By Checklist (AWC)

Location: Bldg. INTAKE Floor El. 565 Area⁴ RHRSW Pump Room D

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

⁴If 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.

0-YD-EL565-033

Area Walk-By Checklist (AWC)

Location: Bldg. INTAKE Floor El. 565 Area⁴ RHRSW Pump Room D

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

Constant spray from RHRSW Pump D3, water is draining without accumulating, determined to not be significant.

0-YD-EL565-033

Area Walk-By Checklist (AWC)

Location: Bldg. INTAKE Floor El. 565 Area⁴ RHRSW Pump Room D

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

0-YD-EL565-033

Area Walk-By Checklist (AWC)

Location: Bldg. INTAKE Floor El. 565 Area⁴ RHRSW Pump Room D

Comments (Additional pages may be added as necessary)

No "Wet Floor" signs present, slip resistant matting and scaffolding planks used to elevate observers to avoid slipping. Side by side scaffolding is covered by steel diamond plate to prevent tripping.

Equipment associated with this Area Walk-by Checklist:
BFN-0-STN-067-0928

Evaluated by: George Bongart

Date: 7/27/2012

Patrick McCarraher

7/27/2012

3-CB-EL593-031

Area Walk-By Checklist (AWC)

Location: Bldg. CB Floor El. 593 Area⁴ BATTERY 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

⁴If 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.

3-CB-EL593-031

Area Walk-By Checklist (AWC)

Location: Bldg. CB Floor El. 593 Area⁴ BATTERY ROOM 3

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

3-CB-EL593-031

Area Walk-By Checklist (AWC)

Location: Bldg. CB Floor El. 593 Area⁴ BATTERY ROOM 3

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

3-CB-EL593-031

Area Walk-By Checklist (AWC)

Location: Bldg. CB Floor El. 593 Area⁴ BATTERY ROOM 3

Comments (Additional pages may be added as necessary)

Equipment associated with this Area Walk-by Checklist:
BFN-0-BATA-248-0003

Evaluated by: George Bongart

Date: 7/27/2012

Patrick McCarraher

7/27/2012

3-CB-EL593-052

Area Walk-By Checklist (AWC)

Location: Bldg. CB Floor El. 593' Area⁴ Aux Instrument 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

⁴If 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.

3-CB-EL593-052

Area Walk-By Checklist (AWC)

Location: Bldg. CB Floor El. 593' Area⁴ Aux Instrument Room

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

3-CB-EL593-052

Area Walk-By Checklist (AWC)

Location: Bldg. CB Floor El. 593' Area⁴ Aux Instrument 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

3-CB-EL593-052

Area Walk-By Checklist (AWC)

Location: Bldg. CB Floor El. 593' Area⁴ Aux Instrument Room

Comments (Additional pages may be added as necessary)

Equipment Associated with this AWC:

BFN-3-PNLA-009-0036A

BFN-3-PNLA-0009-0081

BFN-3-PNLA-0009-0082

BFN-3-PNLA-009-0032

BFN-3-PNLA-009-0033

Evaluated by: Jason Black

Date: 08/01/2012

Jeff Lawrence

08/01/2012

3-CB-EL606-122

Area Walk-By Checklist (AWC):

Location: Bldg. CB Floor El. 606 Area⁴ Chiller Room (Spreading 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

Room is a moist environment due to mechanical equipment leaks. No conditions are present that exceed mild surface corrosion. No adverse seismic conditions relating to anchorage.

⁴If 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.

3-CB-EL606-122

Area Walk-By Checklist (AWC):

Location: Bldg. CB Floor El. 606 Area⁴ Chiller Room (Spreading Room)

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

3-CB-EL606-122

Area Walk-By Checklist (AWC):

Location: Bldg. CB Floor El. 606 Area⁴ Chiller Room (Spreading 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

Portable eyewash station in area not chained down but is located far away from equipment in room and will not interact with equipment during seismic event.

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

3-CB-EL606-122

Area Walk-By Checklist (AWC):

Location: Bldg. CB Floor El. 606 Area⁴ Chiller Room (Spreading Room)

Comments (Additional pages may be added as necessary)

This area walk-by includes the following equipment:

BFN-3-CHR-031-1943

BFN-3-CHR-031-1951

Evaluated by: Jeff Lawrence

Date: 08/14/2012

Jason Black

08/14/2012

3-CB-EL617-121

Area Walk-By Checklist (AWC):

Location: Bldg. CB Floor El. 617 Area⁴ Main Control 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

⁴If 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.

3-CB-EL617-121**Area Walk-By Checklist (AWC):**

Location: Bldg. CB Floor El. 617 Area⁴ Main Control Room

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
-

3-CB-EL617-121

Area Walk-By Checklist (AWC):

Location: Bldg. CB Floor El. 617 Area⁴ Main Control 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

3-CB-EL617-121

Area Walk-By Checklist (AWC):

Location: Bldg. CB Floor El. 617 Area⁴ Main Control Room

Comments (Additional pages may be added as necessary)

This area walk-by includes the following equipment:

BFN-3-PNLA-009-0005

BFN-3-PNLA-009-0009

BFN-3-PNLA-009-0055

Evaluated by: Jeff Lawrence

Date: 08/14/2012

Jason Black

08/14/2012

3-DG-EL565-053

Area Walk-By Checklist (AWC)

Location: Bldg. DG Floor El. 565 Area⁴ 3B DG 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

⁴If 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.

3-DG-EL565-053

Area Walk-By Checklist (AWC)

Location: Bldg. DG Floor El. 565 Area⁴ 3B DG ROOM

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

3-DG-EL565-053

Area Walk-By Checklist (AWC)

Location: Bldg. DG Floor El. 565 Area⁴ 3B DG 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

3-DG-EL565-053

Area Walk-By Checklist (AWC)

Location: Bldg. DG Floor El. 565 Area⁴ 3B DG ROOM

Comments (Additional pages may be added as necessary)

The area walk-by checklist includes the following pieces of equipment:

BFN-3-TNK-086-0650B

BFN-3-PNLA-082-0003B

BFN-3-GEN-082-0003B

BFN-3-BDGG-254-0003B

BFN-3-FCO-030-0233B

BFN-3-BATB-254-0003B

Evaluated by: Jeff Lawrence

Date: 8/1/2012

Jason Black

8/1/2012

3-DG-EL565-057

Area Walk-By Checklist (AWC)

Location: Bldg. DG Floor El. 565 Area⁴ ELECTRICAL TUNNEL

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

⁴If 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.

3-DG-EL565-057

Area Walk-By Checklist (AWC)

Location: Bldg. DG Floor El. 565 Area⁴ ELECTRICAL TUNNEL

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
-

3-DG-EL565-057

Area Walk-By Checklist (AWC)

Location: Bldg. DG Floor El. 565 Area⁴ ELECTRICAL TUNNEL

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

3-DG-EL565-057

Area Walk-By Checklist (AWC)

Location: Bldg. DG Floor El. 565 Area⁴ ELECTRICAL TUNNEL

Comments (Additional pages may be added as necessary)

Equipment covered under this Area Walk-by Checklist:
BFN-3-CHGB-254-0000AA

Evaluated by:Patrick McCarraher

Date:8/1/2012

George Bongart

8/1/2012

3-DG-EL565-058

Area Walk-By Checklist (AWC)

Location: Bldg. DG Floor El. 565 Area⁴ DIESEL GENERATOR ROOM A

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

⁴If 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.

3-DG-EL565-058

Area Walk-By Checklist (AWC)

Location: Bldg. DG Floor El. 565 Area⁴ DIESEL GENERATOR ROOM 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

3-DG-EL565-058

Area Walk-By Checklist (AWC)

Location: Bldg. DG Floor El. 565 Area⁴ DIESEL GENERATOR ROOM 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

Scaffold present anchored in three locations: erected 3/20/12 last inspected 4/27/12.

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

3-DG-EL565-058

Area Walk-By Checklist (AWC)

Location: Bldg. DG Floor El. 565 Area⁴ DIESEL GENERATOR ROOM A

Comments (Additional pages may be added as necessary)

Equipment covered under this Area Walk-by Checklist:

- BFN-3-FCO-030-0230B
- BFN-3-BDGG-254-0003A
- BFN-3-BATB-254-0000A
- BFN-3-GEN-082-0003A
- BFN-3-XFA-082-0003AA
- BFN-3-PNLA-082-0003A
- BFN-3-TNK-086-0655A

Evaluated by: George Bongart

Date: 8/1/2012

Patrick McCarraher

8/1/2012

3-DG-EL565-093

Area Walk-By Checklist (AWC)

Location: Bldg. DG Floor El. 565 Area⁴ DIESEL GENERATOR ROOM C

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

⁴If 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.

3-DG-EL565-093

Area Walk-By Checklist (AWC)

Location: Bldg. DG Floor El. 565 Area⁴ DIESEL GENERATOR ROOM C

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

Funnel is channeling leaking water away from the batteries. The water is leaking from the overhead water supply line.

3-DG-EL565-093

Area Walk-By Checklist (AWC)

Location: Bldg. DG Floor El. 565 Area⁴ DIESEL GENERATOR ROOM C

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

Scaffold present above the diesel generator, does not have a tag or ladder for access. Scaffold is anchored in three spots.

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

3-DG-EL565-093

Area Walk-By Checklist (AWC)

Location: Bldg. DG Floor El. 565 Area⁴ DIESEL GENERATOR ROOM C

Comments (Additional pages may be added as necessary)

Equipment covered under this Area Walk-by Checklist:

BFN-3-TNK-086-0650C

BFN-3-GEN-082-0003C

BFN-3-CHGB-254-0000CB

BFN-3-BATB-254-0000C

Evaluated by:George Bongart

Date:8/8/2012

Patrick McCarraher

8/8/2012

3-DG-EL565-094

Area Walk-By Checklist (AWC)

Location: Bldg. DG Floor El. 565 Area⁴ DIESEL GENERATOR ROOM D

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

⁴If 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.

3-DG-EL565-094

Area Walk-By Checklist (AWC)

Location: Bldg. DG Floor El. 565 Area⁴ DIESEL GENERATOR ROOM D

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

3-DG-EL565-094

Area Walk-By Checklist (AWC)

Location: Bldg. DG Floor El. 565 Area⁴ DIESEL GENERATOR ROOM D

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

Scaffold present above the diesel generator, tagged as being installed or removed. The scaffold is anchored in three spots.

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

3-DG-EL565-094

Area Walk-By Checklist (AWC)

Location: Bldg. DG Floor El. 565 Area⁴ DIESEL GENERATOR ROOM D

Comments (Additional pages may be added as necessary)

Equipment covered under this Area Walk-by Checklist:

- BFN-3-TNK-086-0655D
- BFN-3-GEN-082-0003D
- BFN-3-CHGB-254-0000DB
- BFN-3-BATB-254-0000D
- BFN-3-BDGG-254-0003D

Evaluated by: George Bongart

Date: 8/8/2012

Patrick McCarraher

8/8/2012

3-DG-EL565-117

Area Walk-By Checklist (AWC)

Location: Bldg. DG Floor El. 565 Area⁴ ELECTRIC BOARD ROOM 3EB

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

⁴If 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.

3-DG-EL565-117

Area Walk-By Checklist (AWC)

Location: Bldg. DG Floor El. 565 Area⁴ ELECTRIC BOARD ROOM 3EB

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

3-DG-EL565-117

Area Walk-By Checklist (AWC)

Location: Bldg. DG Floor El. 565 Area⁴ ELECTRIC BOARD ROOM 3EB

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

Breaker mover is secured to the wall.

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

3-DG-EL565-117

Area Walk-By Checklist (AWC)

Location: Bldg. DG Floor El. 565 Area⁴ ELECTRIC BOARD ROOM 3EB

Comments (Additional pages may be added as necessary)

Equipment covered under this Area Walk-by Checklist:

BFN-3-BDAA-211-0003EB

BFN-3-BDAA-211-0003ED

Evaluated by:Patrick McCarraher

Date:8/13/2012

George Bongart

8/13/2012

3-DG-EL583-051

Area Walk-By Checklist (AWC)

Location: Bldg. DG Floor El. 583 Area⁴ Fan Rm B

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

⁴If 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.

3-DG-EL583-051

Area Walk-By Checklist (AWC)

Location: Bldg. DG Floor El. 583 Area⁴ Fan Rm B

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

Coaxle cable missing straps, but cable cannot reach any equipment

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
-

3-DG-EL583-051

Area Walk-By Checklist (AWC)

Location: Bldg. DG Floor El. 583 Area⁴ Fan Rm B

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

3-DG-EL583-051

Area Walk-By Checklist (AWC)

Location: Bldg. DG Floor El. 583 Area⁴ Fan Rm B

Comments (Additional pages may be added as necessary)

This area walk-by checklist includes the following pieces of equipment:

BFN-3-FCO-030-0233A

BFN-3-FAN-030-0233

BFN-3-FAN-030-0232

Evaluated by: Jeff Lawrence

Date: 8/1/2012

Jason Black

8/1/2012

3-RB-EL583-054

Area Walk-By Checklist (AWC)

Location: Bldg. DG Floor El. 583 Area⁴ FAN ROOM A

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

⁴If 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.

3-RB-EL583-054

Area Walk-By Checklist (AWC)

Location: Bldg. DG Floor El. 583 Area⁴ FAN ROOM 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

3-RB-EL583-054

Area Walk-By Checklist (AWC)

Location: Bldg. DG Floor El. 583 Area⁴ FAN ROOM 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

3-RB-EL583-054

Area Walk-By Checklist (AWC)

Location: Bldg. DG Floor El. 583 Area⁴ FAN ROOM A

Comments (Additional pages may be added as necessary)

Equipment covered under this Area Walk-by Checklist:

BFN-3-FAN-030-0230

BFN-3-FAN-030-0231

BFN-3-FCO-030-0230A

Evaluated by: George Bongart

Date: 8/1/2012

Patrick McCarraher

8/1/2012

3-DG-EL583-055

Area Walk-By Checklist (AWC)

Location: Bldg. DG Floor El. 583 Area⁴ EB BATTERY 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

⁴If 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.

3-DG-EL583-055

Area Walk-By Checklist (AWC)

Location: Bldg. DG Floor El. 583 Area⁴ EB BATTERY ROOM

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
-

3-DG-EL583-055

Area Walk-By Checklist (AWC)

Location: Bldg. DG Floor El. 583 Area⁴ EB BATTERY 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

ERROR: syntaxerror
OFFENDING COMMAND:

STACK:

/U
true
true
false

3-DG-EL565-093

Area Walk-By Checklist (AWC)

Location: Bldg. DG Floor El. 565 Area⁴ DIESEL GENERATOR ROOM C

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

Funnel is channeling leaking water away from the batteries. The water is leaking from the overhead water supply line.

3-DG-EL565-093

Area Walk-By Checklist (AWC)

Location: Bldg. DG Floor El. 565 Area⁴ DIESEL GENERATOR ROOM C

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

Scaffold present above the diesel generator, does not have a tag or ladder for access. Scaffold is anchored in three spots.

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

3-DG-EL565-093

Area Walk-By Checklist (AWC)

Location: Bldg. DG Floor El. 565 Area⁴ DIESEL GENERATOR ROOM C

Comments (Additional pages may be added as necessary)

Equipment covered under this Area Walk-by Checklist:

BFN-3-TNK-086-0650C

BFN-3-GEN-082-0003C

BFN-3-CHGB-254-0000CB

BFN-3-BATB-254-0000C

Evaluated by:George Bongart

Date:8/8/2012

Patrick McCarraher

8/8/2012

3-DG-EL565-094

Area Walk-By Checklist (AWC)

Location: Bldg. DG Floor El. 565 Area⁴ DIESEL GENERATOR ROOM D

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

⁴If 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.

3-DG-EL565-094

Area Walk-By Checklist (AWC)

Location: Bldg. DG Floor El. 565 Area⁴ DIESEL GENERATOR ROOM D

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

3-DG-EL565-094

Area Walk-By Checklist (AWC)

Location: Bldg. DG Floor El. 565 Area⁴ DIESEL GENERATOR ROOM D

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

Scaffold present above the diesel generator, tagged as being installed or removed. The scaffold is anchored in three spots.

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

3-DG-EL565-094

Area Walk-By Checklist (AWC)

Location: Bldg. DG Floor El. 565 Area⁴ DIESEL GENERATOR ROOM D

Comments (Additional pages may be added as necessary)

Equipment covered under this Area Walk-by Checklist:

- BFN-3-TNK-086-0655D
- BFN-3-GEN-082-0003D
- BFN-3-CHGB-254-0000DB
- BFN-3-BATB-254-0000D
- BFN-3-BDGG-254-0003D

Evaluated by: George Bongart

Date: 8/8/2012

Patrick McCarraher

8/8/2012

3-DG-EL565-117

Area Walk-By Checklist (AWC)

Location: Bldg. DG Floor El. 565 Area⁴ ELECTRIC BOARD ROOM 3EB

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

⁴If 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.

3-DG-EL565-117

Area Walk-By Checklist (AWC)

Location: Bldg. DG Floor El. 565 Area⁴ ELECTRIC BOARD ROOM 3EB

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

3-DG-EL565-117

Area Walk-By Checklist (AWC)

Location: Bldg. DG Floor El. 565 Area⁴ ELECTRIC BOARD ROOM 3EB

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

Breaker mover is secured to the wall.

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

3-DG-EL565-117

Area Walk-By Checklist (AWC)

Location: Bldg. DG Floor El. 565 Area⁴ ELECTRIC BOARD ROOM 3EB

Comments (Additional pages may be added as necessary)

Equipment covered under this Area Walk-by Checklist:

BFN-3-BDAA-211-0003EB

BFN-3-BDAA-211-0003ED

Evaluated by:Patrick McCarraher

Date:8/13/2012

George Bongart

8/13/2012

3-DG-EL583-051

Area Walk-By Checklist (AWC)

Location: Bldg. DG Floor El. 583 Area⁴ Fan Rm B

Instructions for Completing Checklist

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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

⁴If 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.

3-DG-EL583-051

Area Walk-By Checklist (AWC)

Location: Bldg. DG Floor El. 583 Area⁴ Fan Rm B

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

Coaxle cable missing straps, but cable cannot reach any equipment

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
-

3-DG-EL583-051

Area Walk-By Checklist (AWC)

Location: Bldg. DG Floor El. 583 Area⁴ Fan Rm B

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

3-DG-EL583-051

Area Walk-By Checklist (AWC)

Location: Bldg. DG Floor El. 583 Area⁴ Fan Rm B

Comments (Additional pages may be added as necessary)

This area walk-by checklist includes the following pieces of equipment:

BFN-3-FCO-030-0233A

BFN-3-FAN-030-0233

BFN-3-FAN-030-0232

Evaluated by: Jeff Lawrence

Date: 8/1/2012

Jason Black

8/1/2012

3-RB-EL583-054

Area Walk-By Checklist (AWC)

Location: Bldg. DG Floor El. 583 Area⁴ FAN ROOM A

Instructions for Completing Checklist

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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

⁴If 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.

3-RB-EL583-054

Area Walk-By Checklist (AWC)

Location: Bldg. DG Floor El. 583 Area⁴ FAN ROOM 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
-

3-RB-EL583-054

Area Walk-By Checklist (AWC)

Location: Bldg. DG Floor El. 583 Area⁴ FAN ROOM 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

3-RB-EL583-054

Area Walk-By Checklist (AWC)

Location: Bldg. DG Floor El. 583 Area⁴ FAN ROOM A

Comments (Additional pages may be added as necessary)

Equipment covered under this Area Walk-by Checklist:

BFN-3-FAN-030-0230

BFN-3-FAN-030-0231

BFN-3-FCO-030-0230A

Evaluated by: George Bongart

Date: 8/1/2012

Patrick McCarraher

8/1/2012

3-DG-EL583-055

Area Walk-By Checklist (AWC)

Location: Bldg. DG Floor El. 583 Area⁴ EB BATTERY 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

⁴If 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.

3-DG-EL583-055

Area Walk-By Checklist (AWC)

Location: Bldg. DG Floor El. 583 Area⁴ EB BATTERY ROOM

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

3-DG-EL583-055

Area Walk-By Checklist (AWC)

Location: Bldg. DG Floor El. 583 Area⁴ EB BATTERY 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

3-DG-EL583-055

Area Walk-By Checklist (AWC)

Location: Bldg. DG Floor El. 583 Area⁴ EB BATTERY ROOM

Comments (Additional pages may be added as necessary)

Equipment covered under this Area Walk-by Checklist:
BFN-3-BATA-248-0003EB

Evaluated by: George Bongart

Date: 8/1/2012

Patrick McCarraher

8/1/2012

3-DG-EL583-056

Area Walk-By Checklist (AWC)

Location: Bldg. DG Floor El. 583 Area⁴ EB BATTERY 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

⁴If 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.

3-DG-EL583-056

Area Walk-By Checklist (AWC)

Location: Bldg. DG Floor El. 583 Area⁴ EB BATTERY ROOM AREA

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
-

3-DG-EL583-056

Area Walk-By Checklist (AWC)

Location: Bldg. DG Floor El. 583 Area⁴ EB BATTERY ROOM 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

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

3-DG-EL583-056

Area Walk-By Checklist (AWC)

Location: Bldg. DG Floor El. 583 Area⁴ EB BATTERY ROOM AREA

Comments (Additional pages may be added as necessary)

Equipment covered under this Area Walk-by Checklist:

BFN-3-PNLA-248-0003EB

BFN-3-CHGA-248-0003EB

Evaluated by:Patrick McCarraher

Date:8/1/2012

George Bongart

8/1/2012

3-DG-EL583-112

Area Walk-By Checklist (AWC)

Location: Bldg. DG Floor El. 583 Area⁴ 3EA ELECTRIC 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

⁴If 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.

3-DG-EL583-112

Area Walk-By Checklist (AWC)

Location: Bldg. DG Floor El. 583 Area⁴ 3EA ELECTRIC BOARD ROOM

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

3-DG-EL583-112

Area Walk-By Checklist (AWC)

Location: Bldg. DG Floor El. 583 Area⁴ 3EA ELECTRIC BOARD 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

Breakers by the "EA" board are secure with a chain to prevent sliding, they are also on a mat that will prevent sliding.

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

3-DG-EL583-112

Area Walk-By Checklist (AWC)

Location: Bldg. DG Floor El. 583 Area⁴ 3EA ELECTRIC BOARD ROOM

Comments (Additional pages may be added as necessary)

Equipment associated with this Area Walk-by Checklist:

BFN-3-BDAA-211-0003EA

BFN-3-BDAA-211-0003EC

Water leaking from the ceiling over the "EA" board. Leak scheduled to be fixed, but is not a potentially adverse seismic condition.

Evaluated by: George Bongart

Date: 8/13/2012

Patrick McCarraher

8/13/2012

3-DG-EL583-116

Area Walk-By Checklist (AWC)

Location: Bldg. DG Floor El. 583 Area⁴ 480V DIESEL SHUTDOWN 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

⁴If 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.

3-DG-EL583-116

Area Walk-By Checklist (AWC)

Location: Bldg. DG Floor El. 583 Area⁴ 480V DIESEL SHUTDOWN BOARD ROOM

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

3-DG-EL583-116

Area Walk-By Checklist (AWC)

Location: Bldg. DG Floor El. 583 Area⁴ 480V DIESEL SHUTDOWN BOARD 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

3-DG-EL583-116

Area Walk-By Checklist (AWC)

Location: Bldg. DG Floor El. 583 Area⁴ 480V DIESEL SHUTDOWN BOARD ROOM

Comments (Additional pages may be added as necessary)

Equipment covered under this Area Walk-by Checklist:

BFN-3-BDBB-219-0003EA

BFN-3-BDBB-219-0003EB

Evaluated by:Patrick McCarraher

Date:8/13/2012

George Bongart

8/13/2012

3-RB-EL519-092

Area Walk-By Checklist (AWC):

Location: Bldg. RB Floor El. 519 Area⁴ NW QUAD

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

⁴If 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.

3-RB-EL519-092

Area Walk-By Checklist (AWC):

Location: Bldg. RB Floor El. 519 Area⁴ NW QUAD

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

HVAC ducting above Core Spray Pump 3A is in contact with conduit from Core Spray Pump 3A. This is not considered a concern as the conduit has flexibility to deflect during a seismic event and will not fall or have loss of function during a seismic event.

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

Check valve 075-0570A is close to the steel support structure of the elevated platform. This is not considered a concern as the platform is judged to be rigid and will not deflect significantly during a seismic event. Also, check valves are passive devices and are inherently rugged.

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

3-RB-EL519-092

Area Walk-By Checklist (AWC):

Location: Bldg. RB Floor El. 519 Area⁴ NW QUAD

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

Area Walk-By Checklist (AWC): 3-RB-EL519-092

Location: Bldg. RB Floor El. 519 Area⁴ NW QUAD

Comments (Additional pages may be added as necessary)

This AWC covers the following equipment:

BFN-3-PMP-075-0005

BFN-3-PMP-075-0014

BFN-3-FCV-071-0017

BFN-3-FCV-071-0018

BFN-3-FCV-071-0019

Evaluated by: George Bongart

Date: 8/8/2012

Patrick McCarraher

8/8/2012

3-RB-EL519-101

Area Walk-By Checklist (AWC)

Location: Bldg. RB Floor El. 519 Area⁴ HPCI 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

⁴If 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.

3-RB-EL519-101

Area Walk-By Checklist (AWC)

Location: Bldg. RB Floor El. 519 Area⁴ HPCI ROOM

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

3-RB-EL519-101

Area Walk-By Checklist (AWC)

Location: Bldg. RB Floor El. 519 Area⁴ HPCI 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

3-RB-EL519-101

Area Walk-By Checklist (AWC)

Location: Bldg. RB Floor El. 519 Area⁴ HPCI ROOM

Comments (Additional pages may be added as necessary)

Equipment covered under this Area Walk-by Checklist:

BFN-3-PMP-073-0029

BFN-3-PMP-073-0054

Evaluated by: George Bongart

Date: 8/9/2012

Patrick McCarraher

8/9/2012

3-RB-EL519-102

Area Walk-By Checklist (AWC)

Location: Bldg. RB Floor El. 519 Area⁴ RHR 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

⁴If 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.

3-RB-EL519-102

Area Walk-By Checklist (AWC)

Location: Bldg. RB Floor El. 519 Area⁴ RHR Pump Room

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

3-RB-EL519-102

Area Walk-By Checklist (AWC)

Location: Bldg. RB Floor El. 519 Area⁴ RHR Pump 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

3-RB-EL519-102

Area Walk-By Checklist (AWC)

Location: Bldg. RB Floor El. 519 Area⁴ RHR Pump Room

Comments (Additional pages may be added as necessary)

Equipment covered under this Area Walk-by Checklist:

BFN-3-PMP-074-0039

BFN-3-PMP-074-0028

BFN-3-HEX-074-0028

BFN-3-HEX-074-0039

Evaluated by: Patrick McCarraher

Date: 8/9/2012

George Bongart

8/9/2012

3-RB-EL519-128

Area Walk-By Checklist (AWC)

Location: Bldg. RB Floor El. 519 Room, Area⁴ UNIT 3 UNDER TORUS

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

⁴If 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.

3-RB-EL519-128

Area Walk-By Checklist (AWC)

Location: Bldg. RB Floor El. 519 Room, Area⁴ UNIT 3 UNDER TORUS

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

3-RB-EL519-128**Area Walk-By Checklist (AWC)**

Location: Bldg. RB Floor El. 519 Room, Area⁴ UNIT 3 UNDER TORUS

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

3-RB-EL519-128

Area Walk-By Checklist (AWC)

Location: Bldg. RB Floor El. 519 Room, Area⁴ UNIT 3 UNDER TORUS

Comments (Additional pages may be added as necessary)

BFN-3-TE-064-0161B
BFN-3-TE-064-0161C
BFN-3-TE-064-0162B
BFN-3-TE-064-0162C

Evaluated by: Jeff Lawrence

Date: 8/14/2012

Jason Black

8/14/2012

3-RB-EL519-097

Area Walk-By Checklist (AWC)

Location: Bldg. RB Floor El. 519 Room, Area⁴ SE QUAD

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

The anchorage of the equipment in the area does not appear to have any significant degraded conditions.

⁴If 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.

3-RB-EL519-097**Area Walk-By Checklist (AWC)**

Location: Bldg. RB Floor El. 519 Room, Area⁴ SE QUAD

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

There is a leaking valve overhead, however there is also a funnel to catch and channel the water. This does not appear to be a problem to any equipment in the area.

3-RB-EL519-097

Area Walk-By Checklist (AWC)

Location: Bldg. RB Floor El. 519 Room, Area⁴ SE QUAD

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 in the area is not secured to the wall, this has been determined to be insignificant to causing damage to equipment in the area.

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

3-RB-EL519-097

Area Walk-By Checklist (AWC)

Location: Bldg. RB Floor El. 519 Room, Area⁴ SE QUAD

Comments (Additional pages may be added as necessary)

Equipment covered under this Area Walk-by Checklist:
BFN-3-FCV-074-0030

Evaluated by: Patrick McCarraher

Date: 8/9/2012

George Bongart

8/9/2012

3-RB-EL519-103

Area Walk-By Checklist (AWC)

Location: Bldg. RB Floor El. 519 Area⁴ SW QUAD

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

⁴If 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.

3-RB-EL519-103

Area Walk-By Checklist (AWC)

Location: Bldg. RB Floor El. 519 Area⁴ SW QUAD

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

3-RB-EL519-103

Area Walk-By Checklist (AWC)

Location: Bldg. RB Floor El. 519 Area⁴ SW QUAD

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

3-RB-EL519-103

Area Walk-By Checklist (AWC)

Location: Bldg. RB Floor El. 519 Area⁴ SW QUAD

Comments (Additional pages may be added as necessary)

Equipment covered under this Area Walk-by Checklist:
BFN-3-FCV-074-0007.

Evaluated by:Patrick McCarraher

Date:8/9/2012

George Bongart

8/9/2012

3-RB-EL565-042

Area Walk-By Checklist (AWC)

Location: Bldg. RB Floor El. 565 Area⁴ WEST SDV 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

⁴If 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.

3-RB-EL565-042

Area Walk-By Checklist (AWC)

Location: Bldg. RB Floor El. 565 Area⁴ WEST SDV AREA

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

3-RB-EL565-042**Area Walk-By Checklist (AWC)**

Location: Bldg. RB Floor El. 565 Area⁴ WEST SDV 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
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

3-RB-EL565-042

Area Walk-By Checklist (AWC)

Location: Bldg. RB Floor El. 565 Area⁴ WEST SDV AREA

Comments (Additional pages may be added as necessary)

Equipment associated with this Area Walk-by Checklist:

BFN-3-TNK-085-0901

BFN-3-FCV-085-0037C

BFN-3-FCV-085-0037D

BFN-3-FCV-064-0032

BFN-3-FCV-064-0033

Evaluated by: George Bongart

Date: 7/31/2012

Patrick McCarraher

7/31/2012

3-RB-EL565-043

Area Walk-By Checklist (AWC)

Location: Bldg. RB Floor El. 565 Area⁴ SCRAM DUMP VALVES

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

⁴If 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.

3-RB-EL565-043

Area Walk-By Checklist (AWC)

Location: Bldg. RB Floor El. 565 Area⁴ SCRAM DUMP VALVES

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

3-RB-EL565-043

Area Walk-By Checklist (AWC)

Location: Bldg. RB Floor El. 565 Area⁴ SCRAM DUMP VALVES

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

3-RB-EL565-043

Area Walk-By Checklist (AWC)

Location: Bldg. RB Floor El. 565 Area⁴ SCRAM DUMP VALVES

Comments (Additional pages may be added as necessary)

Equipment associated with this Area Walk-by Checklist:

BFN-3-FSV-085-0037A

BFN-3-FSV-085-0037B

Evaluated by: George Bongart

Date: 7/31/2012

Patrick McCarraher

7/31/2012

3-RB-EL565-045

Area Walk-By Checklist (AWC)

Location: Bldg. RB Floor El. 565 Area⁴ SOUTH 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

⁴If 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.

3-RB-EL565-045

Area Walk-By Checklist (AWC)

Location: Bldg. RB Floor El. 565 Area⁴ SOUTH WALL

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

3-RB-EL565-045

Area Walk-By Checklist (AWC)

Location: Bldg. RB Floor El. 565 Area⁴ SOUTH WALL

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

3-RB-EL565-045

Area Walk-By Checklist (AWC)

Location: Bldg. RB Floor El. 565 Area⁴ SOUTH WALL

Comments (Additional pages may be added as necessary)

The equipment covered under this Area Walk-by Checklist is:

BFN-3-FSV-084-008B

BFN-3-FSV-084-0048

BFN-3-FCV-067-0051

BFN-3-FCV-023-0046

BFN-3-FCV-023-0034

Evaluated by: George Bongart

Date: 7/31/2012

Patrick McCarraher

7/31/2012

3-RB-EL565-046

Area Walk-By Checklist (AWC)

Location: Bldg. RB Floor El. 565 Area⁴ SDV CAGE EAST

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

⁴If 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.

3-RB-EL565-046

Area Walk-By Checklist (AWC)

Location: Bldg. RB Floor El. 565 Area⁴ SDV CAGE EAST

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

3-RB-EL565-046

Area Walk-By Checklist (AWC)

Location: Bldg. RB Floor El. 565 Area⁴ SDV CAGE EAST

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

3-RB-EL565-046

Area Walk-By Checklist (AWC)

Location: Bldg. RB Floor El. 565 Area⁴ SDV CAGE EAST

Comments (Additional pages may be added as necessary)

Equipment associated with this Area Walk-by Checklist:

BFN-3-FCV-085-0037E

BFN-3-FCV-085-0037F

Evaluated by: George Bongart

Date: 7/31/2012

Patrick McCarraher

7/31/2012

3-RB-EL593-027

Area Walk-By Checklist (AWC)

Location: Bldg. RB Floor El. 593 Area⁴ Electrical Board Room 3B

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

⁴If 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.

3-RB-EL593-027

Area Walk-By Checklist (AWC)

Location: Bldg. RB Floor El. 593 Area⁴ Electrical Board Room 3B

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
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3-RB-EL593-027

Area Walk-By Checklist (AWC)

Location: Bldg. RB Floor El. 593 Area⁴ Electrical Board Room 3B

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

3-RB-EL593-027

Area Walk-By Checklist (AWC)

Location: Bldg. RB Floor El. 593 Area⁴ Electrical Board Room 3B

Comments (Additional pages may be added as necessary)

This area includes the following SSC's:

BFN-3-BDDD-281-0003B

BFN-3-INVT-256-0001

BFN-3-XFA-253-0003B1

Evaluated by: Avinash Chunduri

Date: 07/26/2012

Jeff Lawrence

07/26/2012

3-RB-EL621-047

Area Walk-By Checklist (AWC)

Location: Bldg. RB Floor El. 621 Area⁴ S-U R16-R18 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

⁴If 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.

3-RB-EL621-047

Area Walk-By Checklist (AWC)

Location: Bldg. RB Floor El. 621 Area⁴ S-U R16-R18 Area

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

3-RB-EL621-047

Area Walk-By Checklist (AWC)

Location: Bldg. RB Floor El. 621 Area⁴ S-U R16-R18 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

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

3-RB-EL621-047

Area Walk-By Checklist (AWC)

Location: Bldg. RB Floor El. 621 Area⁴ S-U R16-R18 Area

Comments (Additional pages may be added as necessary)

This area walk-by checklist includes the following pieces of equipment:

BFN-3-LPNL-925-0247A

Evaluated by: Jeff Lawrence

Date: 7/31/2012

Jason Black

7/31/2012

3-RB-EL593-049

Area Walk-By Checklist (AWC)

Location: Bldg. RB Floor El. 593 Area⁴ RBCCW Heat Exchanger 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

Missing washers on saddle support on 3-HEX-070-0728 RBCCW Heat Exchanger 3B and on 3-HEX-070-0727 RBCCW Heat Exchanger 3A. Bolts and nuts are in good condition and missing washers do not affect the structural integrity of the supports. No adverse seismic conditions exist with the condition of the supports.

2. Does anchorage of equipment in the area appear to be free of significant degraded conditions? Y N U N/A

⁴If 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.

3-RB-EL593-049

Area Walk-By Checklist (AWC)

Location: Bldg. RB Floor El. 593 Area⁴ RBCCW Heat Exchanger Area

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

3-RB-EL593-049

Area Walk-By Checklist (AWC)

Location: Bldg. RB Floor El. 593 Area⁴ RBCCW Heat Exchanger 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

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

3-RB-EL593-049

Area Walk-By Checklist (AWC)

Location: Bldg. RB Floor El. 593 Area⁴ RBCCW Heat Exchanger Area

Comments (Additional pages may be added as necessary)

This area walk-by checklist includes the following pieces of equipment:

BFN-3-LPNL-925-0006A

BFN-3-LPNL-925-0006D

BFN-3-FCV-067-0050

Evaluated by: Jeff Lawrence

Date: 7/31/2012

Jason Black

7/31/2012

3-RB-EL593-113

Area Walk-By Checklist (AWC):

Location: Bldg. RB Floor El. 593 Area⁴ T/R20 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

⁴If 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.

3-RB-EL593-113

Area Walk-By Checklist (AWC): 3-RB-EL593-113

Location: Bldg. RB Floor El. 593 Area⁴ T/R20 Area

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

There is a floor drain pipe by the right front corner that is located close to the MCC, however the drain pipe will not rupture if it makes contact with the MCC corner as the MCC corner has been mitered.

3-RB-EL593-113

Area Walk-By Checklist (AWC): 3-RB-EL593-113

Location: Bldg. RB Floor El. 593 Area⁴ T/R20 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

A calorie arc flash protection suit is laying on the ground behind the MCC this does not pose a significant hazard.

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

3-RB-EL593-113

Area Walk-By Checklist (AWC): 3-RB-EL593-113

Location: Bldg. RB Floor El. 593 Area⁴ T/R20 Area

Comments (Additional pages may be added as necessary)

Equipment covered under this Area Walk-by Checklist:
BFN-3-BDBB-268-0003D

Evaluated by: George Bongart

Date: 8/10/2012

Patrick McCarraher

8/10/2012

3-RB-EL621-026

Area Walk-By Checklist (AWC)

Location: Bldg. RB Floor El. 621 Area⁴ Electric Board Room 3A

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

⁴If 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.

3-RB-EL621-026

Area Walk-By Checklist (AWC)

Location: Bldg. RB Floor El. 621 Area⁴ Electric Board Room 3A

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

3-RB-EL621-026

Area Walk-By Checklist (AWC)

Location: Bldg. RB Floor El. 621 Area⁴ Electric Board Room 3A

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

3-RB-EL621-026

Area Walk-By Checklist (AWC)

Location: Bldg. RB Floor El. 621 Area⁴ Electric Board Room 3A

Comments (Additional pages may be added as necessary)

Equipment covered under this Area Walk-by Checklist:

BFN-3-INVT-256-0002

BFN-3-XFA-253-0003A1

BFN-3-XFA-253-0003A2

BFN-3-BDBB-268-0003A

Evaluated by: George Bongart

Date: 7/26/2012

Patrick McCarraher

7/26/2012

3-RB-EL639-028

Area Walk-By Checklist (AWC)

Location: Bldg. RB Floor El. 639 Area⁴ SLC 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

⁴If 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.

3-RB-EL639-028

Area Walk-By Checklist (AWC)

Location: Bldg. RB Floor El. 639 Area⁴ SLC Area

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

3-RB-EL639-028

Area Walk-By Checklist (AWC)

Location: Bldg. RB Floor El. 639 Area⁴ SLC 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

Temporary equipment properly tagged and chained.

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

3-RB-EL639-028

Area Walk-By Checklist (AWC)

Location: Bldg. RB Floor El. 639 Area⁴ SLC Area

Comments (Additional pages may be added as necessary)

Reference SSC's in area:

BFN-3-TNK-063-0528

BFN-3-PMP-063-0006A

BFN-3-PMP-063-0006B

BFN-3-FCV-063-0008A

BFN-3-FCV-063-0008B

Evaluated by: Avinash Chunduri

Date: 07/26/2012

Jeff Lawrence

07/26/2012

3-RB-EL621-029

Area Walk-By Checklist (AWC)

Location: Bldg. RB Floor El. 621 Area⁴ S-U, R20-R21 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

⁴If 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.

3-RB-EL621-029

Area Walk-By Checklist (AWC)

Location: Bldg. RB Floor El. 621 Area⁴ S-U, R20-R21 Area

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

Overhead conduit and lighting secured properly.

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
-

3-RB-EL621-029

Area Walk-By Checklist (AWC)

Location: Bldg. RB Floor El. 621 Area⁴ S-U, R20-R21 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

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

3-RB-EL621-029

Area Walk-By Checklist (AWC)

Location: Bldg. RB Floor El. 621 Area⁴ S-U, R20-R21 Area

Comments (Additional pages may be added as necessary)

This area walk-by checklist includes the following pieces of equipment:

BFN-3-XFA-231-TS3A

BFN-3-XFA-231-TS3B

BFN-3-MGEN-268-0003DA

BFN-3-MGEN-268-0003EN

Evaluated by: Avinash Chunduri

Date: 07/26/2012

Jeff Lawrence

07/26/2012

3-RB-EL621-048

Area Walk-By Checklist (AWC)

Location: Bldg. RB Floor El. 621 Area⁴ S-U, R16-R20 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

⁴If 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.

3-RB-EL621-048**Area Walk-By Checklist (AWC)**

Location: Bldg. RB Floor El. 621 Area⁴ S-U, R16-R20 Area

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
-

3-RB-EL621-048

Area Walk-By Checklist (AWC)

Location: Bldg. RB Floor El. 621 Area⁴ S-U, R16-R20 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

Temporary structure (mobile 2-ton crane) on wheels is touching generator and is not properly secured down. Temporary crane has since been moved.

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

3-RB-EL621-048

Area Walk-By Checklist (AWC)

Location: Bldg. RB Floor El. 621 Area⁴ S-U, R16-R20 Area

Comments (Additional pages may be added as necessary)

This area walk-by checklist includes the following pieces of equipment:

BFN-3-MGEN-268-0003EA

BFN-3-MGEN-268-0003DN

Evaluated by: Jason Black

Date: 07/31/2012

Jeff Lawrence

07/31/2012

3-RB-EL593-050

Area Walk-By Checklist (AWC)

Location: Bldg. RB Floor El. 593 Area⁴ P-S, R17-R20 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

⁴If 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.

3-RB-EL593-050

Area Walk-By Checklist (AWC)

Location: Bldg. RB Floor El. 593 Area⁴ P-S, R17-R20 Area

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

Nozzle heads close to HVAC. Heads have shielding and are rigidly supported in the vertical direction. HVAC aslso supported in vertical direction. Spacing is adequate.

3-RB-EL593-050

Area Walk-By Checklist (AWC)

Location: Bldg. RB Floor El. 593 Area⁴ P-S, R17-R20 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

Cart in area is not tied down but is not in close proximity to any critical equipment and is not a potential adverse seismic 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

3-RB-EL593-050

Area Walk-By Checklist (AWC)

Location: Bldg. RB Floor El. 593 Area⁴ P-S, R17-R20 Area

Comments (Additional pages may be added as necessary)

This area walk-by checklist includes the following pieces of equipment:

BFN-3-LPNL-925-0005A

BFN-3-LPNL-925-0005B

BFN-3-LPNL-925-0005D

Evaluated by: Jeff Lawrence

Date: 7/31/2012

Jason Black

7/31/2012

3-RB-EL621-114

Area Walk-By Checklist (AWC):

Location: Bldg. RB Floor El. 621 Area⁴ U / R17 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

⁴If 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.

3-RB-EL621-114

Area Walk-By Checklist (AWC):

Location: Bldg. RB Floor El. 621 Area⁴ U / R17 Area

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

There is a cable tray that is very close to the MCC however there is an anchored vertical beam next to the tray to keep the tray from making contact with the MCC.

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

3-RB-EL621-114

Area Walk-By Checklist (AWC):

Location: Bldg. RB Floor El. 621 Area⁴ U / R17 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

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

3-RB-EL621-114

Area Walk-By Checklist (AWC):

Location: Bldg. RB Floor El. 621 Area⁴ U / R17 Area

Comments (Additional pages may be added as necessary)

Equipment associated with this Area Walk-by Checklist:
BFN-3-BDBB-268-0003E

Evaluated by: George Bongart

Date: 8/10/2012

Patrick McCarraher

8/10/2012

3-RB-EL621-123

Area Walk-By Checklist (AWC)

Location: Bldg. RB Floor El. 621 Area⁴ 480V SHUTDOWN BOARD ROOM 3A

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

⁴If 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.

3-RB-EL621-123

Area Walk-By Checklist (AWC)

Location: Bldg. RB Floor El. 621 Area⁴ 480V SHUTDOWN BOARD ROOM 3A

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

3-RB-EL621-123**Area Walk-By Checklist (AWC)**

Location: Bldg. RB Floor El. 621 Area⁴ 480V SHUTDOWN BOARD ROOM 3A

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 in area up against wall. It will make contact with switchgear during seismic event. Three breakers on floor. Breakers are not on wheels and have low center of gravity. The distance between the panels and breakers is sufficient. Therefore breakers are not a potentially adverse seismic interaction. However, all breakers and ladder have been removed from area by operations.

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

3-RB-EL621-123

Area Walk-By Checklist (AWC)

Location: Bldg. RB Floor El. 621 Area⁴ 480V SHUTDOWN BOARD ROOM 3A

Comments (Additional pages may be added as necessary)

This area walk-by checklist includes the following pieces of equipment:

BFN-3-BDBB-231-0003A

Evaluated by: Jeff Lawrence

Date: 8/14/2012

Jason Black

8/14/2012

3-RB-EL621-124

Area Walk-By Checklist (AWC)

Location: Bldg. RB Floor El. 621 Area⁴ 480V SHUTDOWN BOARD ROOM 3B

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

⁴If 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.

3-RB-EL621-124

Area Walk-By Checklist (AWC)

Location: Bldg. RB Floor El. 621 Area⁴ 480V SHUTDOWN BOARD ROOM 3B

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

3-RB-EL621-124**Area Walk-By Checklist (AWC)**

Location: Bldg. RB Floor El. 621 Area⁴ 480V SHUTDOWN BOARD ROOM 3B

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

3-RB-EL621-124

Area Walk-By Checklist (AWC)

Location: Bldg. RB Floor El. 621 Area⁴ 480V SHUTDOWN BOARD ROOM 3B

Comments (Additional pages may be added as necessary)

This area walk-by checklist includes the following pieces of equipment:

BFN-3-BDBB-231-0003B

Evaluated by: Jeff Lawrence

Date: 8/14/2012

Jason Black

8/14/2012

3-RB-EL639-098

Area Walk-By Checklist (AWC)

Location: Bldg. RB Floor El. 639 Area⁴ SLC Area by Stairs

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

⁴If 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.

3-RB-EL639-098

Area Walk-By Checklist (AWC)

Location: Bldg. RB Floor El. 639 Area⁴ SLC Area by Stairs

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

3-RB-EL639-098

Area Walk-By Checklist (AWC)

Location: Bldg. RB Floor El. 639 Area⁴ SLC Area by Stairs

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

Portable equipment stored in the area has been properly stored.

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

3-RB-EL639-098

Area Walk-By Checklist (AWC)

Location: Bldg. RB Floor El. 639 Area⁴ SLC Area by Stairs

Comments (Additional pages may be added as necessary)

Equipment covered under this Area Walk-by Checklist:

BFN-3-LS-078-0001D

BFN-3-LS-078-0001E

BFN-3-LS-078-0001F

BFN-3-LS-078-0001G

Evaluated by: Patrick McCarraher

Date: 8/9/2012

George Bongart

8/9/2012

3-RB-EL621-106

Area Walk-By Checklist (AWC)

Location: Bldg. U3-RB Floor El. 621 Room, Area⁴ Column Lines S-T, R15-R18

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

No degradation observed

⁴If 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.

3-RB-EL621-106

Area Walk-By Checklist (AWC)

Location: Bldg. U3-RB Floor El. 621 Room, Area⁴Column Lines S-T, R15-R18

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

Low fill conditions of cables in trays. No adverse seismic conditions were observed.

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

No ceiling tiles were present in the area and lighting is secure.

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

3-RB-EL621-106

Area Walk-By Checklist (AWC)

Location: Bldg. U3-RB Floor El. 621Room, Area⁴Column Lines S-T, R15-R18

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

No poor housekeeping practices were observed in area. Tool cabinet on wheels was properly locked down with wheel locks.

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

3-RB-EL621-106

Area Walk-By Checklist (AWC)

Location: Bldg. U3-RB Floor El. 621Room, Area⁴ Column Lines S-T, R15-R18

Comments (Additional pages may be added as necessary)

This area walk-by includes the following equipment: 3-FCV-078-0062

Evaluated by: Jeff Lawrence

Date: 08/09/2012

Jason Black

08/09/2012



Appendix G: Peer Review Report



FACILITY RISK CONSULTANTS, INC.

Structural & Seismic Engineering • Risk Management

NTTF 2.3/BFN-03
November 26, 2012

PEER REVIEW REPORT Browns Ferry Nuclear Plant Unit 3 Near-Term Task Force 2.3 Seismic Walkdowns

A peer review of the Tennessee Valley Authority (TVA) Browns Ferry Nuclear Plant - Unit 3 (BFN3) 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 BFN3 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 BFN3 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 BFN3 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 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 BFN. This provided team members with historical background on the scope and findings of prior seismic reviews, as well as to deepened their understanding of the seismic licensing basis for BFN.

Many seismic programs were implemented at BFN starting from about 1985, and these programs addressed all structures, systems, and components. The seismic licensing-basis for mechanical and electrical equipment components is a combination of Unresolved Safety Issue (USI) A-46, rigorous analysis, and IEEE 344 qualification packages. The additional plant-specific training material provided for the team members included the following:

- Description of BFN seismic design basis 0.20g Housner-shaped ground motion response spectrum
- Scope and overview of the various seismic programs implemented as part of the Nuclear Performance Plan (NPP, NUREG 1232) for BFN:
 - Large-bore piping and supports
 - Small-bore piping and supports
 - Torus piping (both internal and external)
 - Control rod drive (CRD) piping and supports
 - Instrument tubing
 - Cable trays and supports
 - Electrical conduit and supports
 - HVAC ductwork and supports
 - Drywell steel platforms
 - Miscellaneous steel
 - Torus structure (including internal)
 - Mechanical and electrical equipment
 - Effect of the failures of seismic Class II features on seismic Class I systems
 - Secondary containment penetrations
 - Seismic ground motion
 - Dynamic analysis of Class I structures
 - Generation of amplified response spectra (ARS) Programmatic control of safety-related design modifications
- Scope and overview of the additional special seismic programs completed for BFN:
 - I/I spray program
 - MSIV leakage
- Discussion of USI A-46 implementation and the results of the program:
 - Safe Shutdown Equipment List (SSEL)
 - 100% walkdown and anchorage evaluation
 - Seismic Evaluation Work Sheets (SEWS)
 - Includes seismic interaction proximity and falling evaluations
 - Area walkdowns used for conduit and cable trays, including limited analytical reviews
 - All outliers resolved by further evaluations, work orders, or modifications
- The Seismic Individual Plant Examination for External Events (IPEEE) program was performed in parallel with the USI A-46 program at BFN. Presentations included:
 - Expanded Safe Shutdown Equipment List
 - Summary of BFN seismic IPEEE walkdown results
 - Results, governing HCLPF capacities, and planned upgrades
- Plant procedures that overlap with the NTTF 2.3 seismic walkdowns:
 - Temporary Equipment -- NPG-SPP-09.17 & TI-471
 - Scaffolding -- MMTP-102
 - Seismic Interaction Commodity Clearance Requirements -- MAI-4.10

SELECTION OF ITEMS ON THE SEISMIC WALKDOWN EQUIPMENT LIST (SWEL)

The completed SWEL as described in Section 4 of the BFN3 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 BFN IPEEE review was performed using the EPRI margins methodology and that success path based SSEL associated with BFN3 was used as a starting point for SWEL 1. No seismic PRA has been performed for BFN3 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 BFN3 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, minor clarifications to the designation of certain equipment classes were made, such as those of equipment classes 14 - Distribution Panels and 20 - Instrumentation and Control Panels. Furthermore, it was noted that there were no equipment items selected inside the Drywell. As such, representative MSIV's and MSRV's are added to the final SWEL.
- To enhance reactivity control and coolant inventory control safety functions, selected components of the Standby Liquid Control (SLC) and the HPCI & RCIC systems were added to the SWEL.
- In order to include representative equipment items covering 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 USI A-46 & IPEEE reviews. It was noted that this was unnecessary yet conservative, so the items remained on the SWEL.
- 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 BFN3 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 more than 50% of the completed walkdown documentation forms.

It is noted that the in-plant activity and 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 BFN3 equipment seismic walkdowns and area walkbys include the following:

- For many items of equipment, the seismic licensing basis for equipment anchorage was the USI A-46 review Screening Evaluation Work Sheet (SEWS) documentation or anchorage calculation. On 480V Diesel Auxiliary Board 3EB, the walkdown team noted one missing bolt. This issue was previously documented in the USI A-46 Screening Evaluation Work Sheet (SEWS) and seismically verified as-is, so no further action was required. On Water Chiller 3A, the walkdown team identified that 1 of 8 bolts was missing. They found that this configuration was qualified as-is by the design calculation.
- During the area walkby in the RBCCW Heat Exchanger Area, missing washers were noted on a saddle support. It was agreed that the bolts and nuts appeared to be in good condition and that the missing washers do not affect the structural integrity of the supports.
- The walkdown teams noted instances of cracks and previously repaired cracks, and each of the identified cases was evaluated and resolved. On the 480V RMOV Board 3D, it was noted that there was evidence of previous cracking in the grout that was repaired, and the team concluded that this was not a potential adverse seismic condition. On Diesel Generator Room 3A Exhaust Fans A and B, minor cracking was noted on one side of a grout pad and judged to be insignificant. On Diesel Generator Room 3B Exhaust Fan A, the walkdown team noted that the grout is chipped near one anchor. The grout is otherwise in good condition, the crack does not pass through the bolt, and the concrete under the grout is not damaged, so the configuration was judged to be adequate as-is. We concur with these evaluations.

On the Standby Diesel Generator 3A Engine, a minor chip in the concrete near one bolt was judged to be insignificant. On the Standby Diesel Generator 3B Engine, a similar chip was observed and judged to be insignificant. Also on this engine, a small crack in the concrete was identified that passes through one of the anchor bolts. The crack width is less than 5mm so the configuration was accepted as-is. On the Diesel Generator 3B Starting Air Receiver Tanks, a minor concrete chip was noted and determined to be insignificant. We concur with these evaluations of cracks in concrete.

- The walkdown team noted instances of visible corrosion and each case was discussed and evaluated in more detail. On the LPCI MG Set 3EA and 3DN, mild surface rust was observed on anchorage and judged to be insignificant. On Residual Heat Removal Pump 3B, the minor corrosion observed on one bolt was concluded to be only surface rust and judged to be insignificant. On Core Spray Pumps 3A and 3C, minor paint chipping observed was determined to be insignificant. The Control Bay Floor Elevation

606 ft. Cable Spreading Room Chiller Area was noted to be a moist environment but no conditions were observed that exceed mild surface rust so it was judged to not be a potential adverse seismic condition. We concur with these evaluations.

- The walkdown teams were alert for potential seismic proximity interactions involving vulnerable targets. On the RHR Heat Exchanger 3B Cool Water Outlet Valve 3-FCV-023-0046, it was observed that its hand-wheel is close to adjacent piping with coped insulation. This configuration was judged to be acceptable since both the large diameter pipe and the valve/operator are very stiff and rugged. On RCIC Condensate Tank Suction Valve 3-FCV-071-0019, an instrument line in contact with an anchor bolt on a base plate for nearby pipe support was not considered to be a potential adverse seismic condition.

On LPCI MG Set 3DN, it was noted that there was a temporary crane on wheels in contact with the motor generator. The motor generator is rugged and the crane was stable against overturning. The crane has since been moved away from the generator to eliminate any potential seismic interaction. In the Auxiliary Instrument Room, the 4" gap between panel 9-81 and an adjacent panel was judged sufficient to preclude any seismic interaction.

In the NW Quad Room, HVAC ducting above Core Spray Pump 3A is in contact with conduit from the pump. This was judged to not be a significant interaction and was acceptable as-is. In the same area, it was observed that check valve 075-0570A is close to an elevated steel platform support member. This was not considered a concern because the platform is rigid and the valve is inherently rugged.

In the Reactor Building Floor Elevation 593 ft. Area at column lines T / R20, it was noted that an MCC was modified to preclude interaction with a floor drain line. In the Reactor Building Floor Elevation 621 ft. Area at column lines P / R17 - S / R20, the small vertical clearance between fire protection sprinkler heads and an HVAC duct was judged to be adequate because both commodities are rigid in the vertical direction. On the same floor at column lines U / R17, a cable tray was identified that is in proximity to a MCC panel. The team noted that a vertical beam next to the tray served as an interfering structure to prevent any credible seismic interaction.

We concur with these proximity evaluations.

- The walkdown teams checked for adequate flexibility of conduit and tubing attached to SWEL equipment. On 120/208-120/208 VAC Regulating Transformer for I&C Bus A, rigid conduit were observed connecting this cabinet with an adjacent item. The configuration was judged to be adequate because both cabinets are rigidly attached to the same concrete wall and thus relative movements during a seismic event will be negligible. We concur with this assessment.
- The walkdown teams diligently reviewed overhead lighting as potential seismic interaction falling sources. Fluorescent lights held in place with only compression fittings were accepted for items of equipment and in areas where the zone of influence did not contain sensitive safety-related targets. Examples include overhead lighting in the vicinity of 480V Shutdown Board Transformers 3A and 3B.
- During the equipment walkdowns and area walkbys, the teams diligently identified and assessed miscellaneous items and temporary equipment as possible seismic interaction sources. Stanchions for chained equipment barriers in the vicinity of Local Panels 25-6A

and 25-6D were judged to be acceptable as-is due to their low mass and large base which prevents overturning. In the Control Bay Floor Elevation 606 ft. Cable Spreading Room Chiller Area, an unrestrained portable eyewash station was deemed adequate because it was sufficiently distant from any sensitive equipment. In Diesel Generator Fan Room B, the team identified that a coaxed cable was missing straps, and concluded that the cable was sufficiently distant from any sensitive equipment.

In the SE Quad Room, the walkdown team noted that a ladder was not secured to the wall. This was determined to be insignificant because there were no sensitive equipment nearby. In 480V Shutdown Board Room 3A, the team noted that a ladder in the area up against a wall could possibly make minor contact with a switchgear panel. The ladder was relocated by operations staff. In addition, there were 3 loose breakers on the floor in the same area. These had sufficient distance from the panel yet were also relocated by operations staff.

In the Reactor Building Floor Elevation 593 ft. Area at column lines U / R17, the team noted that an arc flash protection suit lying on the ground behind the MCC did not pose a significant adverse seismic condition. In the Reactor Building Floor Elevation 621 ft. Area defined by column lines P / R17 - S / R20, the team identified an unrestrained equipment cart. Because the cart was not in close proximity to any critical equipment it was judged to not be a potential adverse seismic condition.

We concur with these temporary equipment assessments.

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 BFN3 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.

In the end, the peer review team is in concurrence with the conclusions derived from the detailed reviews and evaluations of these conditions. There were no potential adverse seismic conditions identified during the BFN3 seismic walkdowns.

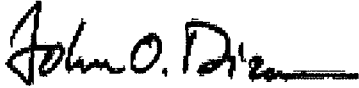
SUBMITTAL REPORT

The peer review team has reviewed the BFN3 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.

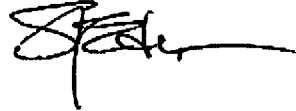
In our opinion, the above seismic walkdowns reflect the adequate seismic design criteria as well as sufficiently rigorous seismic-related construction and maintenance procedures that TVA has in place at BFN3. The walkdown demonstrates that the current plant configuration is in

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,



John O. Dizon, P.E.
Lead Peer Reviewer



Stephen J. Eder, P.E.
Peer Reviewer

ENCLOSURE 4

LIST OF COMMITMENTS

LIST OF COMMITMENTS

1. TVA will complete seismic walkdowns of the areas that were unable to be inspected due to inaccessibility at Browns Ferry Nuclear Plant, Unit 2, during the next refueling outage scheduled for the spring of 2013.
2. TVA will complete seismic walkdowns of the areas that were unable to be inspected due to inaccessibility at Browns Ferry Nuclear Plant, Unit 3, during the next refueling outage scheduled for the spring of 2014.
3. TVA will replace transformers BFN-0-OXF-219-TDA and BFN-0-OXF-219-TDB by September 30, 2014.