

ENCLOSURE 1

**WATTS BAR NUCLEAR PLANT, UNIT 1
FUKUSHIMA NEAR-TERM TASK FORCE RECOMMENDATION 2.3:
SEISMIC RESPONSE REPORT**



WATTS BAR NUCLEAR PLANT – UNIT 1 FUKUSHIMA NEAR-TERM TASK FORCE RECOMMENDATION 2.3: SEISMIC RESPONSE REPORT

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1. Executive Summary

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

In support of conducting the NTTF-2.3 Seismic Walkdowns, the Electrical Power Research Institute (EPRI) issued a report entitled *Seismic Walkdown Guidance* (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.

At Unit 1 of the Watts Bar Nuclear Power Plant, a total of 120 general Seismic Category I equipment items were selected from the original IPEEE Safe Shutdown Equipment List (SSEL) to fulfill the requirements of the NTTF-2.3 Seismic Walkdowns. The selected items were located in various environments and included many different types of equipment from multiple safety shutdown systems. A total of 49 areas were included for area walk-bys. The equipment walkdowns and area walk-bys were performed by two teams, each consisting of two seismic engineers and operations personnel, between July 16, 2012 and August 15, 2012.

All 120 equipment items in the Seismic Walkdown Equipment List (SWEL) were completed during the walkdown phase. Eleven potential adverse seismic conditions were found and addressed through the TVA Corrective Action Program.



2. Seismic Licensing Basis

The seismic licensing basis for the Watts Bar Nuclear Power Plant is derived from Reference 4 – *Watts Bar Nuclear Plant Living Final Safety Analysis Report Amendment 9*.

2.1. General Plant Description

The Watts Bar Nuclear Power Plant site is located on a tract of approximately 1770 acres in Rhea County on the west bank of the Tennessee River at river mile 528. The site is approximately 1-1/4 miles south of the Watts Bar Dam and approximately 31 miles north-northeast of the Sequoyah Nuclear Plant. The 1770 acre reservation is owned by the United States and is in the custody of TVA. Also located within the reservation are the Watts Bar Dam and Hydro-Electric Plant, the Watts Bar Steam Plant, the TVA Central Maintenance Facility, and the Watts Bar Resort Area. The plant is designed, built, and operated by TVA. The unit employs a four-loop Pressurized Water Reactor Nuclear Steam Supply System (NSSS) furnished by Westinghouse Electric Corporation. The unit is similar to those of the Sequoyah Nuclear Plant and other similar Westinghouse plants licensed by the U. S. Nuclear Regulatory Commission. The Watts Bar Nuclear Power Plant was designed to meet the intent of the "Proposed General Design Criteria for Nuclear Power Plant Construction Permits" published in July, 1967. The Watts Bar construction permit was issued in January, 1973. This UFSAR, however, addresses the NRC General Design Criteria (GDC) published as Appendix A to 10 CFR 50 in July, 1971, including Criterion 4 as amended October 27, 1987.

2.2. Ground Response Spectra

The Watts Bar Nuclear Power Plant is located in the Southern Appalachian Tectonic Province. The Giles County, Virginia, earthquake of 1897, rated as an MMVIII, was assumed to occur at the site for purposes of defining the SSE. Vibratory ground motions are defined by two sets of site seismic design response spectra: the Modified Newmark Ground Response Spectra or Original Site Design Response Spectra for Set A and Set C analyses and the Site Specific Ground Response Spectra for Set B analyses.

Set B in-structure response spectra were developed using updated seismic analysis building models and the site-specific ground response spectra. The Set B in-structure response spectra are used for verification of existing plant features. Set C in-structure response spectra were developed using the original Set A ground response spectra and the updated seismic analysis building models that were developed for Set B. The envelope of Set B and Set C in-structure response spectra are termed set B+C, and these are used for design of new plant features and modification of existing plant features.

2.2.1. Original Site Ground Response Spectra (Set A & Set C)

The original site seismic design response spectra which define the vibratory ground motion of the Operating Basis Earthquake (OBE) and the Safe Shutdown Earthquake (SSE) for rock supported structures are shown in Figures 1 and 2. The maximum rock acceleration for the SSE is 0.18g for horizontal motion and 0.12g for vertical motion. The OBE is equal to one-half the SSE, with maximum horizontal and vertical rock accelerations of 0.09g and 0.06g, respectively.

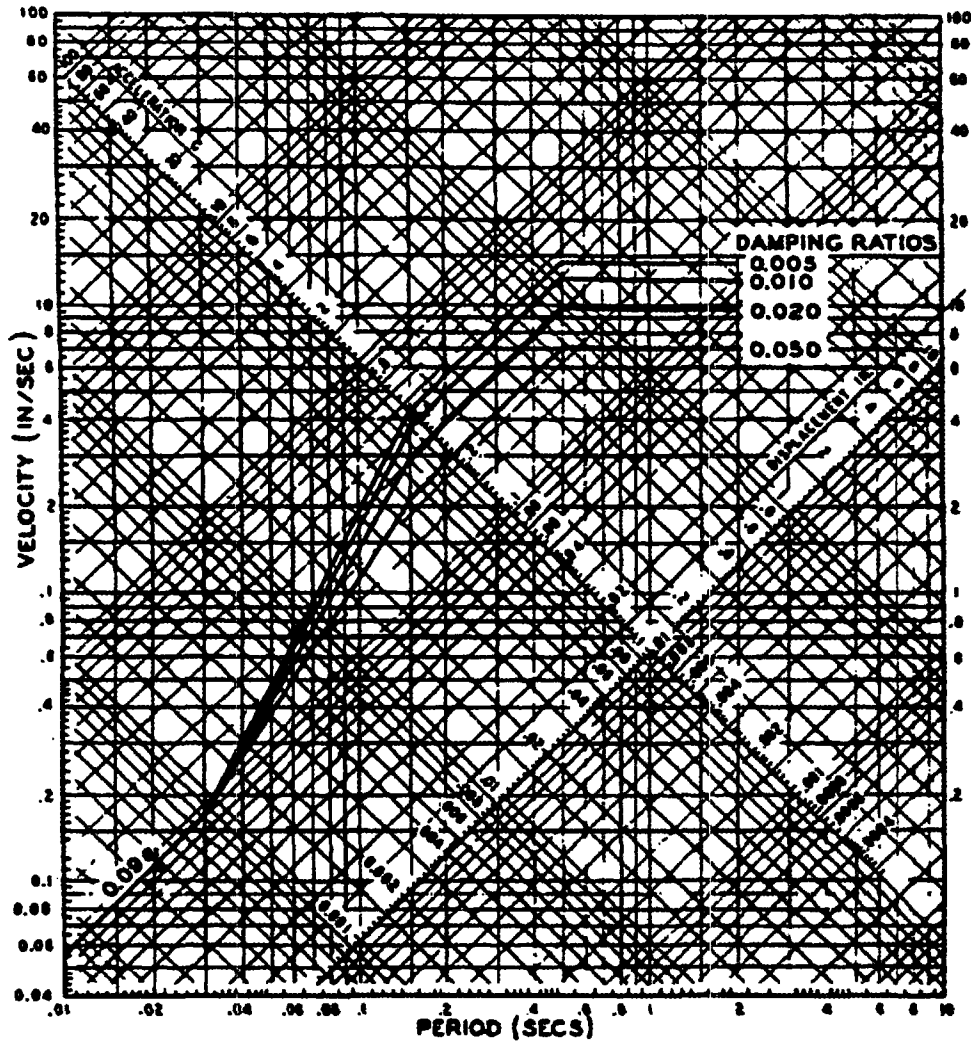


Figure 1 – OBE Response Spectrum for Rock Support Structures

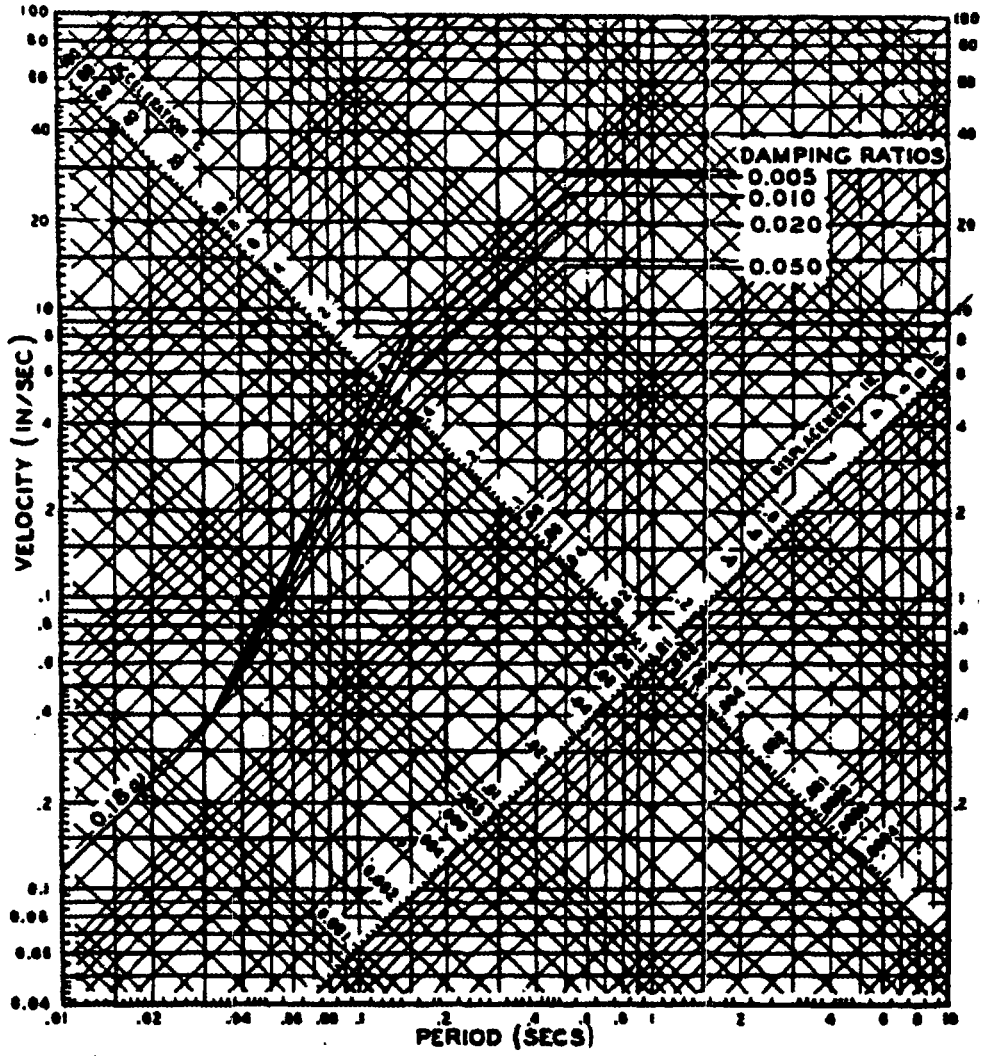


Figure 2 – SSE Response Spectrum for Rock Support Structures



2.2.2. Site Specific Ground Response Spectra (Set B)

Seismic input motions for the evaluation of existing structures, systems, and components are defined by the top-of-rock SSRS shown in Figures 3 through 5. Peak SSE and OBE top-of-rock accelerations are 0.215g (horizontal SSE), 0.15g (vertical SSE), 0.09g (horizontal OBE), and 0.06g (vertical OBE).

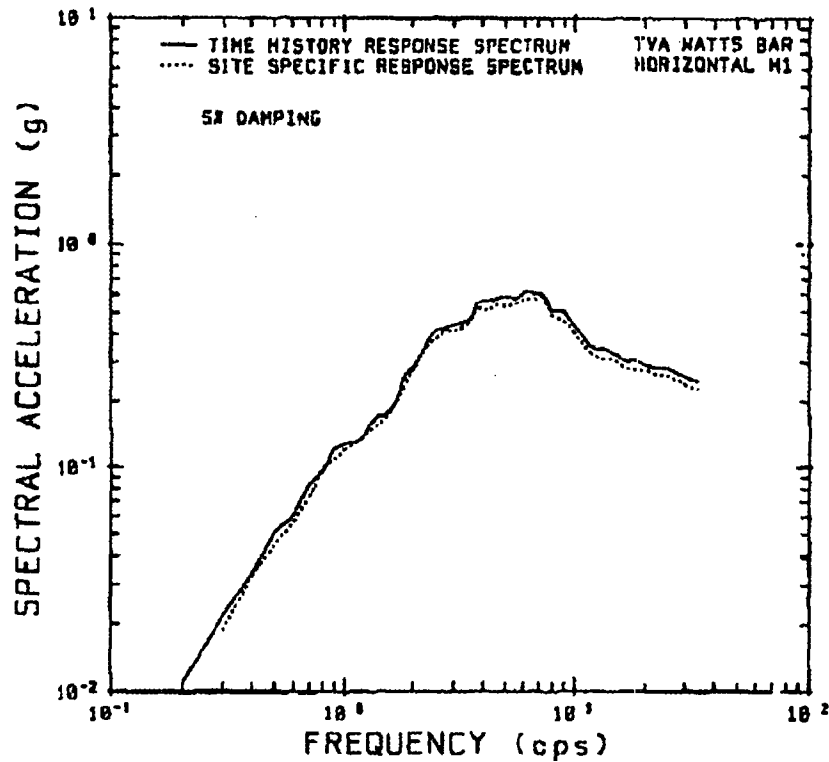


Figure 3 – N-S SSE Response Spectrum at 5% Damping

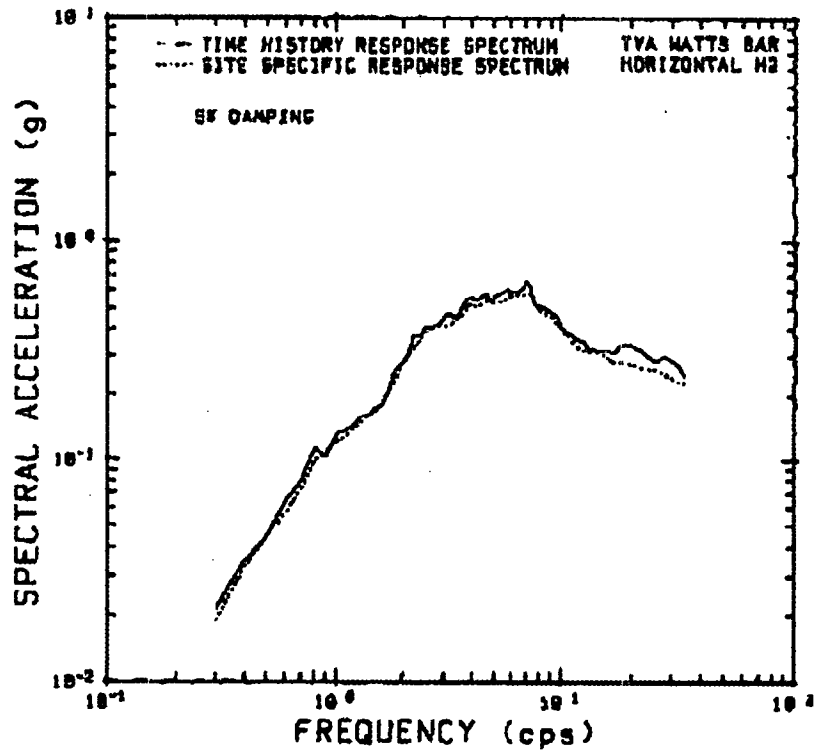


Figure 4 – E-W SSE Response Spectrum at 5% Damping

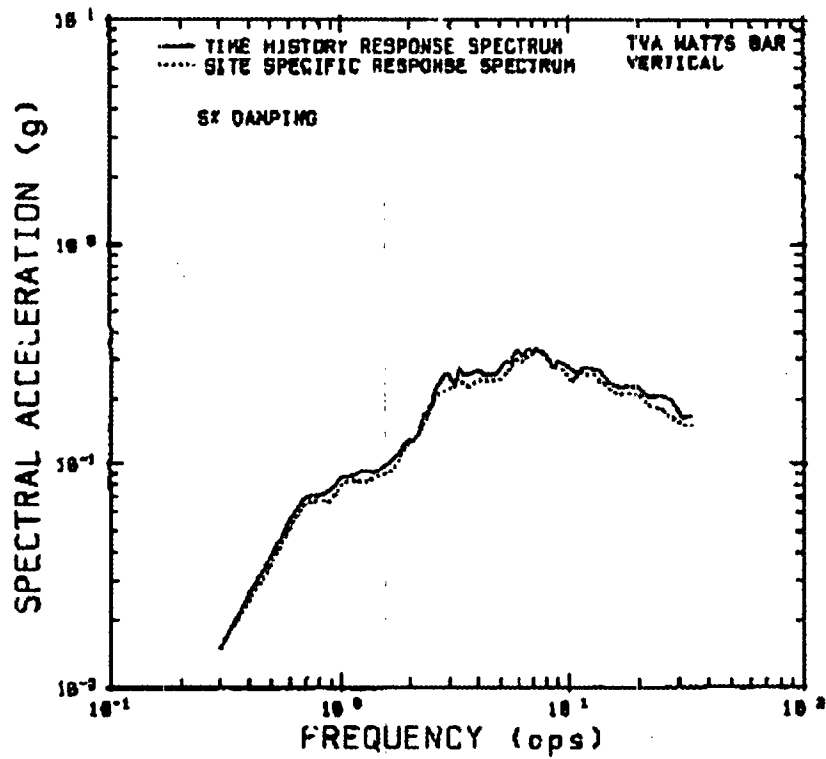


Figure 5 – Vertical SSE Response Spectrum at 5% Damping



2.3. Structures

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

- American Concrete Institute (ACI)
 - ACI 214-77 Recommended Practice for Evaluation of Strength Test Results of Concrete
 - ACI 318-71 Building Code Requirements for Reinforced Concrete
 - ACI 359 Code for Concrete Containments, (Proposed ACI-ASME Code ACI-359 (Article CC-3000) As issued for trial use April, 1973)
 - ACI 347-68 Recommended Practice for Concrete Formwork
 - ACI 305-72 Recommended Practice for Hot Weather Concreting
 - ACI 211.1-70 Recommended Practice for Selecting Proportions for Normal Weight Concrete
 - ACI 307-69 Specification For the Design and Construction of Reinforced Concrete Chimneys
- American Institute of Steel Construction (AISC)
 - "Specification for the Design, Fabrication, and Erection of Structural Steel for Buildings," February 12, 1969
- American Society for Testing and Materials (ASTM)
 - 1975 Annual Book of ASTM Standards. Specific standards are identified in Section 3.8.1.6.
- American Welding Society (AWS):
 - Structural Welding Code, AWS D1.1-72 with Revisions 1-73 and 2-74 except later editions may be used for prequalified joint details, base materials, and qualification of welding procedures and welders.
 - "Recommended Practice for Welding Reinforcing Steel, Metal Inserts, and Connections in Reinforced Concrete Connections," AWS D12.1-61.
- NRC Regulatory Guides:
 - RG 1.10 Mechanical (Cadmild) Splices in Reinforcing Bars of Category I Concrete Structures
 - RG 1.12 Instrumentation for Earthquakes
 - RG 1.15 Testing of Reinforcing Bars for Category I Concrete Structures
 - RG 1.31 Control of Ferrite Content in Stainless Steel Weld Metal
 - RG 1.55 Concrete Placement in Category I Structures.



2.4. Equipment

NSSS components and equipment supplied by Westinghouse have been qualified in accordance with the applicable seismic qualification requirements.

Seismic qualification requirements for Seismic Category I systems and components are consistent with IEEE Standard 344-1975/Regulatory Guide 1.100 for equipment procured after September 1, 1974, or in accordance with a program which provides as a minimum, qualification to the requirements of IEEE 344-1971 and in addition addresses the guidelines of SRP 3.10.

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

- American Society of Mechanical Engineers (ASME) Boiler and Pressure Vessel, Sec. III Class 1, 2, and 3 Codes for Nuclear Power Plants, 1971 thru Summer 1973 Addenda
- American Society of Mechanical Engineers (ASME) Boiler and Pressure Vessel Sec. VIII Div. 1.
- American Nuclear Society/American National Standards Institute (ANS/ANSI) N 18.2, Nuclear Safety Criteria for the Design of Stationary Pressurized Water Reactor Plants. August 1970 Draft.
- American National Standards Institute (ANSI) N18.2a 1975/ANS 51.8, American National Standard Revision and Addendum to Nuclear Safety Criteria for the Design of Stationary Pressurized Water Reactor Plants, ANSI N18.2 1973.
- American Nuclear Society/American National Standards Institute (ANS/ANSI) 51.1, Nuclear Safety Criteria for the Design of Stationary Pressurized Water Reactor Plants.
- AISC Specification for the Design, Fabrication and Erection of Structural Steel for Buildings, February 12, 1969
- AISC-ANSI-N690-1984 "Nuclear Facilities Steel Safety-Related Structures for Design, Fabrication and Erection"



3. Personnel Qualifications

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

3.1. Equipment Selection Personnel

The personnel who performed equipment selection and review are:

- Mike Earles, Watts Bar Reactor Operator and Senior Reactor Operator for 18 years.
- Bill Sprinkle, Reactor Operator at various nuclear power plants for over 15 years, including Arkansas Nuclear One and Watts Bar.
- Mike Gordon, Professional Engineer in the State of Tennessee with over nineteen years of experience, including stress analysis, pipe support design, pipe material, and valve specifications.
- Travis Hockenberry, Professional Engineer in the State of Pennsylvania with 5 years of engineering experience, including 2 years in the nuclear power industry.

3.2. Seismic Walkdown Engineers

The personnel who performed the seismic walkdowns are:

- Mike Gordon
- Travis Hockenberry
- Phillip York, Associate Structural Engineer with 5 years of engineering experience, including 2 years in the nuclear power industry.
- 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 who performed the licensing basis reviews are:

- Bryce Cusick, Civil Engineer with 3 years of experience with the Tennessee Valley Authority at Watts Bar Nuclear Plant.

3.4. IPEEE Reviewers

The personnel who performed the review of IPEEE vulnerabilities are:

- Phillip York
- Joshua Best, Project Mechanical Engineer with 5 years engineering experience, including 4 years in the nuclear power industry.



3.5. Peer Review Team

The personnel who performed the peer review are:

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

Steve Eder is the Peer Review Team Leader



4. Selection of Structures, Systems and Components

The selection of Structures, Systems and Components (SSCs) for the Recommendation 2.3 Seismic followed the guidelines provided in Reference 3 - *The Electrical Power Research Institute's "Seismic Walkdown Guidance."*

4.1. SWEL Selection

The development of SWEL 1 began with the Safe Shutdown Equipment List (SSEL) that was developed as part of the Individual Plant Examination for External Events (IPEEE) implementation at Watts Bar, found in Reference 5 – *IPEEE Seismic Margin Evaluations – Safe Shutdown Paths and Safe Shutdown Equipment List*. This list fulfills the requirements of Screens #1 through #3 found in the EPRI walkdown guidance document. The SSEL was then categorized by unit, location, system, equipment class, and safety function. These categories fulfill the Screen #4 requirements of systems, equipment types, and environments. Safety Function "0 – Support Function" was added in addition to the EPRI guidance to categorize equipment that does not perform one particular safety function but does support all five safety functions. The locations included in the SSEL include the:

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

The 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

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. This sample was reviewed and compared to plant documentation to locate any new or modified equipment, also required by EPRI Screen #4.

In accordance with the EPRI guidance, SWEL 1 includes consideration of the importance of the contribution of risk for the SSCs. SWEL1 was compared to the Core



Damage Frequency (CDF) and Large Early Release Frequency (LERF) Rankings, and any shared equipment was noted.

Some of the equipment classes that were listed in the EPRI walkdown guidance were not covered in the original IPEEE 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 this seismic walkdown to include other Category I 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 I equipment list. SWEL 1 can be found in Appendix D.

Base List 2, presented in Appendix C, is a complete list of all spent fuel pool systems and equipment. SWEL 2 is derived from this list and includes any equipment or system that could cause rapid drain-down of the pool and accidental exposures of fuel assemblies. After review of spent fuel pool layout drawings and consulting with plant personnel, it was determined that no equipment or system failure could cause rapid drain-down of the pool and accidental exposure of the fuel assemblies. SWEL 2 can be found in Appendix D.

4.2. SWEL Analysis

The combined SWEL for Watts Bar Unit 1, which consists of 120 items of equipment, adequately addresses all criteria that were required for the selection of SSCs in the EPRI “Seismic Walkdown Guidance.” These criteria include a distribution of environments, systems, safety functions, and classes of equipment.

The following items were selected in order to address the new and improved equipment criteria of EPRI Screen #4 for Watts Bar Unit 1:

UNID	Description
WBN-0-XSW-236-68DC2-S	125V DC TRANSFER SWITCH, BATTERY BOARDS I/II
WBN-0-XSW-236-79DC1-S	125V DC TRANSFER SWITCH, CHARGERS 7S/9S
WBN-0-CHGR-236-0001-D	125V VITAL BATTERY CHARGER I
WBN-0-CHGR-236-0003-F	125V VITAL BATTERY CHARGER III
WBN-0-INV-235-0001-D	120V AC VITAL INSTR INVERTER 0-I
WBN-1-INV-235-0001-D	120V AC VITAL INVERTER 1-I
WBN-1-INV-235-0002-E	120VAC VITAL INVERTER 1-II
WBN-1-INV-235-0003-F	120V AC VITAL INVERTER 1-III

Table 1 – New and Improved Equipment



5. Seismic Walkdowns and Area Walk-Bys

Guidance for performing the walkdowns and walk-bys required for Fukushima NTTF Recommendation 2.3 Seismic 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 this guideline and each was given a final status. If no issues were noted or only 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 a Corrective Action Program (CAP) Entry was written to begin a functional evaluation. If any equipment was inaccessible, or if a portion of an item of equipment was unobservable, an UNKNOWN status was given. It is noted that there were no inaccessible SWEL items at Watts Bar Unit 1.

5.1. Seismic Walkdown Procedure

All one hundred and twenty (120) Seismic Walkdowns Checklists (SWCs) were completed at Watts Bar Unit 1. These checklists can be found in Appendix E of this document. The primary types of potentially adverse seismic conditions that were addressed during these walkdowns include:

- Bent, broken, missing, or loose hardware
- Corrosion (beyond mild surface oxidation)
- Visible cracks in surrounding concrete
- Impact of soft targets
- Collapsing equipment
- Inadequate line flexibility

Forty-nine (49) Area Walk-by Checklists (AWCs) were completed at Watts Bar Unit 1. These checklists can be found in Appendix F of this document. The primary areas of observation for potentially adverse seismic conditions that were considered during these walk-bys include:

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

Anchorage configuration for 55 items of equipment in Watts Bar Unit 1 was verified by drawings and/or calculations.



For cabinets and panels that were selected for walkdown, NRC guidance was followed to determine which could and could not be opened for internal inspection. 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 for Watts Bar Unit 1 are summarized below:

- 110 SWCs and 45 AWCs resulted in a YES status
- 10 SWCs and 4 AWCs resulted in a NO status
 - Potentially Adverse Seismic Condition 1
 - WBN-1-TANK-082-0160-A, Diesel Gen Engine 1A1 Start Air Receiver A
 - Potentially Adverse Seismic Condition 2
 - WBN-WB-001, Diesel Generator 1A-A, Room D104
 - Potentially Adverse Seismic Condition 3
 - WBN-0-PNL-278-M012, Radiation Monitoring MCR PNL
 - WBN-0-PNL-278-M026A-A, D.G. 1A-A MCR PNL
 - WBN-0-PNL-278-M026D-B, D.G. 2B-B MCR PNL
 - Potentially Adverse Seismic Condition 4
 - WBN-WB-010, ERCW Pump Room A, Room I105
 - Potentially Adverse Seismic Condition 5
 - WBN-1-MCC-232-B-B, Reactor Vent Board 1B-B
 - Potentially Adverse Seismic Condition 6
 - WBN-WB-030, 480V Board Room 1A, Room A851
 - Potentially Adverse Seismic Condition 7
 - WBN-0-DBD-238-0003, Distribution BD PNL 3 120V AC Preferred
 - Potentially Adverse Seismic Condition 9
 - WBN-0-CHR-031-0036/2-A, Shutdown Board Room Chiller A-A
 - Potentially Adverse Seismic Condition 8
 - WBN-WB-032, Mechanical Equipment Room 1B, Room A924
 - Potentially Adverse Seismic Condition 10
 - WBN-0-CHR-031-0049/2-B, Shutdown Board Room Chiller B-B
 - Potentially Adverse Seismic Condition 11
 - WBN-0-INV-235-0001-D, 120V AC Vital Inverter 0-I
 - WBN-1-INV-235-0003-F, 120V AC Vital Inverter 1-III



6. Licensing Basis Evaluations

6.1. Licensing Basis Calculations

When a potentially adverse seismic condition was identified at WBN, 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 WBN engineering on each CAP entry.

Multiple CAP entries were generated during the seismic walkdown process at Watts Bar Unit 1. There were a total of eleven CAP entries that were considered potential seismically adverse conditions. No degraded or non-conforming conditions were found during the course of this walkdown process.

6.2. Potential Seismically Adverse Conditions

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

6.2.1. Potential Adverse Seismic Condition 1

During the walkdown for WBN-1-TANK-082-0160-A, it was found that the bottom connection on the south U-bolt connection to the support saddle is not tight to the restraint. On the north U-bolt connection to the support side, the bottom connection is missing the washer. A CAP entry was submitted to correct the loose and missing hardware.

6.2.2. Potential Adverse Seismic Condition 2

During the area walk-by for the Diesel Generator Room D104 (WBN-WB-001) a problem with the 1A-A Air Receiver Tank was noted. Of the two inboard anchor plates, the south anchor plate on the tank is installed such that it is resting inside the saddle. This limits its ability to function properly. A CAP entry was submitted to address the issue and site engineering performed an evaluation.

6.2.3. Potential Adverse Seismic Condition 3

During the walkdown for WBN-0-PNL-278-M026A-A and WBN-0-PNL-278-M012, it was found that one of the four visible connecting bolts on the south side of the bolted joint between MCR panels WBN-0-PNL-278-M012 and WBN-0-PNL-278-M015 was sheared off and one was missing. Two bolts were missing between panels WBN-0-PNL-278-M012 and WBN-0-PNL-278-M026D-B on the south side. A CAP entry was submitted and work was scheduled to replace the missing bolts.



6.2.4. Potential Adverse Seismic Condition 4

During the area walk-by for room I105 of the Intake Pumping Station (WBN-WB-010) it was found that temporary scaffolding near ERCW pump 0-PMP-67-32 is not adequately restrained to prevent interaction with the pump motor during a seismic event. Lateral restraint was not provided in one direction at a sufficient height to prevent tipping towards the pump motor. A CAP entry was submitted to address the issue and the scaffolding was removed.

6.2.5. Potential Adverse Seismic Condition 5

During the walkdown for WBN-1-MCC-232-B-B, it was found that a cap plate on a tube steel cable tray support was in direct contact with a conduit collar on the MCC. The conduit number in question was not legible. A CAP entry was submitted to address this issue.

6.2.6. Potential Adverse Seismic Condition 6

During the area walk by in the 480V Board Room 1A (WBN-WB-030) a fire protection sprinkler head deflector was found to be in direct contact with a four inch conduit. The conduit in question is PLC-1709, which runs into 1-JB-282-1770, and is located behind panel 10 of WBN-1-MCC-213-A001-A. A CAP entry was submitted to address this issue.

6.2.7. Potential Adverse Seismic Condition 7

During the walkdown for WBN-0-DBD-238-0003, in the Main Control Room, a copier was observed in close proximity of the breaker side of the panel. The copier is not restrained and does not meet the overturn criteria that would indicate it would be safe from tipping during a seismic event. Additionally, there is a drawing table in the area that is not restrained but would not cause a risk to the panel. A CAP entry was submitted to address the issue and it will be evaluated by Civil Engineering in the form of a Specific Case Engineering Evaluation.

6.2.8. Potential Adverse Seismic Condition 8

During the area walk by in the Mechanical Equipment Room A924 (WBN-WB-032) a sheared anchor bolt was observed on the 480V Board Room Condenser B-B. All remaining anchor bolts appear to be in good condition with only minor to moderate surface corrosion. A CAP entry was submitted to address this issue.



6.2.9. Potential Adverse Seismic Condition 9

During the walkdown for WBN-0-CHR-031-0036/2-A, significant corrosion was observed on the south pedestal baseplate and anchor bolts. The amount of material reduction was approximately 1/8" or less. The north pedestal had significant corrosion as well. A CAP entry was submitted to address the issue and it was determined that sufficient material exists to meet seismic requirements.

It should be noted that the anchorage was not visible during the initial walkdown of the equipment. The condition was observed during a subsequent inspection after the insulation surrounding the baseplate and anchorage was removed.

6.2.10. Potential Adverse Seismic Condition 10

During the walkdown for WBN-0-CHR-031-0049/2-B, significant corrosion was observed on the south pedestal baseplate and anchor bolts. The amount of material reduction was in excess of 1/8". The north pedestal had significant corrosion as well. A CAP entry was submitted to address the issue and it was determined that sufficient material exists to meet seismic requirements.

6.2.11. Potential Adverse Seismic Condition 11

During the walkdown for WBN-0-INV-235-0001-D, the spacing tolerance of +/- 3" is violated between the third and fourth anchor bolts on the front of the inverter. The field measured spacing between these bolts is 9-3/4". Per plant documentation, this spacing should be 1'-1-3/16", which is 3-7/16" greater than the as-installed anchor spacing.

The as built dimension for one anchor bolt on the front of WBN-1-INV-235-0003-F does not match plant documentation. Per plant documentation, the first anchor spacing on the right side of the cabinet should be 15-5/8". The dimension in the field was measured to be 18-1/4".

A CAP entry was submitted to address these issues and the calculation and drawings shall be revised as necessary to document the acceptability of the as-installed anchorage configuration.



7. IPEEE Vulnerabilities Resolution Report

Information for the IPEEE Vulnerabilities Resolution Report is derived from Reference 5 – *IPEEE Seismic Margin Evaluations – Safe Shutdown Paths and Safe Shutdown Equipment List*.

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 focused on the vulnerabilities associated with the occurrence of external events.

7.2. IPEEE Findings and Vulnerabilities

For Watts Bar Nuclear Power Plant the Response Level Earthquake (RLE) is specified as a median spectral shape from NUREG/CR-0098 anchored to a peak ground acceleration of 0.3g. Screening and evaluation of outliers is performed at the level of the RLE through the use of scaled existing amplified response spectra. The vertical ground response spectrum for the RLE is taken as 2/3 of the horizontal.

The items walked down during the IPEEE program were found to be rugged and robust. The IPEEE walkdowns note whether or not the items could be screened out as a result of the walkdown observations coupled with the walkdown team knowledge of the design basis conservatism's for each item.

High confidence low probability of failure (HCLPF) seismic capacity calculations were prepared for items which could not be screened by other means and in all cases, the calculated HCLPF seismic capacities are greater than 0.3g. Table 2 summarizes the WBN HCLPF calculations and results.



Item	Resolution HCLPF
Masonry Walls	0.53g
6900V Shutdown Boards	0.45g
DG Air Intake Filters	1.78g
Main Control Room AHU	0.56g
Aux. Building Roof Diaphragm	0.75g
RHR Pumps	0.50g
480V Shutdown Board Transformers	0.38g
Control Air Pre and Aft Filters	1.08g
CCS Heat Exchangers	0.38g
ERCW Pumps	0.40g
IPS Screen Wash Pumps	0.36g
480V Reactor MOV, Vent, Cont. and Aux Boards	0.40g
Main Control Room Ceiling Structure	0.52g*
Main Control Room Electrical Panels	0.70g

* Original HCLPF capacity of 0.36g was updated to 0.52g based on non-linear analyses of the ceiling system. No modifications were required.

Table 2 – Resolution of Seismic IPEEE Outliers

For observations such as maintenance and housekeeping issues, maintenance was notified and responded to these issues. It was not necessary to prepare any DCN's as part of the IPEEE seismic walkdowns.



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 Report 1025286	Electric Power Research Institute
4	Watts Bar Nuclear Plant Living Final Safety Analysis Report Amendment 9	WBNP-9	Tennessee Valley Authority
5	IPEEE Seismic Margin Evaluations – Safe Shutdown Paths and Safe Shutdown Equipment List	WBNIPPEE-001	Tennessee Valley Authority



10. Appendices



Appendix A: Resumes

Resumes included in this Appendix are alphabetized by last name.

- Joshua Best – Fukushima Project Engineer
- Bryce Cusick – Site Engineer
- John Dizon – Facility Risk Consultants
- Mike Earles – Senior Reactor Operator
- Steve Eder – Facility Risk Consultants
- James Edgar – Lead Technical Engineer
- Travis Hockenberry – Walkdown Engineer
- Mike Gordon – Lead Engineer
- Bill Sprinkle - Tennessee Valley Authority
- Phillip York - Walkdown Engineer

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



Bryce C. Cusick
Civil Engineer

SUMMARY

Civil Engineer with 3 years of experience with the Tennessee Valley Authority at Watts Bar Nuclear Plant. Job Experience includes designing structural modifications with plant system, equipment seismic qualification, design change field implementation, and other various roles of a Civil Engineer. Familiar with AISC Steel Construction Manual, ACI 318 Building Code, and ASCE 7 Minimum Design Loads for buildings and other structures. Proficient with current design software including AutoCAD and MathCAD.

EXPERIENCE

Tennessee Valley Authority- Served as a Civil Engineer within the Civil Engineering Design Group at Watts Bar Nuclear Plant since May 2009. Is qualified in Equipment Seismic Qualification and performed numerous evaluations of equipment during the procurement process. Responsible for field support for many torque applications and design change implementation. Familiar with the TVA CAP process and how it is used for problem identification and resolution. Qualified Civil Engineer in the Maintenance Rule Program responsible for maintaining structural condition of plant buildings and entering them into the CAP program and Maintenance Rule Tracking Calculation in order to monitor and drive resolution. Pipe Support Design and qualification using TVA software including FAPPS (ME150), BASEPLATE II (ME035), AutoCAD, MathCAD. Other responsibilities include field support, design change packages, verification of others work, and interface with other departments within and outside of the Engineering Organization.

EDUCATION

B.S., Civil Engineering, University of Tennessee, Knoxville, Tennessee, 2008

JOHN O. DIZON, P.E.

PROFESSIONAL HISTORY

Facility Risk Consultants, Inc., Huntsville, Alabama, President, 2002-present
ABS Consulting (formerly EQE International), Oakland, California, Director and
Vice President of Facility Risk Division, 2000-2002
EQE International, Oakland, California, Vice President, 1998-2000; Associate, 1991-1998;
Senior Engineer, 1986-1991
Engineering Decision Analysis Company, Cupertino, California, Senior Engineer,
1984-1986
General Electric Company, San Jose, California, Senior Engineer, 1984
URS/John A. Blume & Associates, San Francisco, California, Senior Engineer, 1982-1984;
Associate Engineer, 1977-1980
Structural Systems Engineering, Inc., Lafayette, California, Senior Engineer,
1980-1982
Stanford University, John A. Blume Earthquake Engineering Center, Palo Alto, California,
Teaching and Research Assistant, 1975-1977

PROFESSIONAL EXPERIENCE

Mr. Dizon has over 30 years of experience in the field of civil and structural engineering, earthquake engineering, risk assessment and project management. He has extensive knowledge in the areas of seismic analyses and design assessments of primary structures and piping systems, seismic upgrade and retrofit design, seismic qualification of mechanical and electrical systems and components, and technical development of seismic evaluation criteria and programs for various industries, including power, oil and gas, petrochemical, and high tech process and manufacturing facilities. Mr. Dizon has undertaken and managed a wide variety of seismic projects, ranging from traditional structural engineering design and seismic retrofits to complex nuclear power plant and DOE facilities' seismic verification projects. He is also a guest instructor for the ASME Continuing Education Institute on seismic design and retrofit of piping systems and mechanical equipment.

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

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

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

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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.

Mike Earles

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Dayton, Tn. 37321
Home phone - 423-775-0220
Home e-mail - jmlce@bellsouth.net
Work phone - 423-365-3796
Work e-mail - jmearles@tva.gov

Professional experience

1968 - 1972: United States Marine Corps.

1977 - 2005: TVA Watts Bar Nuclear Plant.

Nuclear Assistant Unit Operator

- Performed field activities in support of Pre-Operational testing.

Nuclear Unit Operator (NRC RO License)

- Performed Hot Functional testing and Startup testing.

Unit Supervisor (NRC SRO License)

- Responsible for managing the safe operation of WBN Unit 1.

Simulator and Classroom Instructor (NRC SRO License)

- Instructor for Cold License Reactor Operator (RO) upgrade training.
- Lead Instructor for Advanced Electrical training.
- Lead Licensed Operator Requalification Instructor, responsible for the conduct of the Licensed Operator Requalification Training program.

Unit Manager (NRC SRO License)

- Review, prioritize, coordinate, and approve plant work activities.
50.59 qualified. IQR qualified.

Operations Shift Manager 1987 - 2005 (NRC SRO License).

- Responsible for the safe operation of the Watts Bar Nuclear Plant.

2005 - Present : Retired, contracted to TVA;

- Revised Operating and Test procedures.
- Assisted in developing the U1C7 Refueling Outage plan.
- Directed Tagging Office during U1C7 S/G replacement RFO.
- Conducted Electrical training for Initial License class ILT 607.
- Lead Instructor for ILC 607, conducted both simulator and classroom training for subsequent ILT classes.
- Developed, administered and reviewed all of the Initial License Training weekly and NRC prep exams from 2009 through early 2012.
- Currently on-site coordinator for WBN Fukushima Flood Walkdowns.

Special assignments

Approved and Coordinated WBN system transfers from Construction/Start Up Testing organization to the Plant Operations department.

Qualified as Startup Advisor (6 month training tour at McGuire Nuclear Plant).

Team Leader for verification, validation, and implementation of WBN Emergency Operating Procedures Upgrade.

Coordinated Operations activities, and participated in, NRC 'Force on Force' drills.

STEPHEN J. EDER

PROFESSIONAL HISTORY

Facility Risk Consultants, Huntsville, Alabama, Chief Executive Officer, 2003-present
ABS Consulting, Houston, Texas, Vice President, North Asia Pacific Region, 2001-2003
EQE International, San Francisco, California, Senior Vice President, 1985-2001 (ABS Purchased EQE in 2000).
URS/John A. Blume & Associates, Engineers, San Francisco, California, 1982-1985
J. G. Bouwkamp, Inc., Structural Engineers, Berkeley, California, 1981-1982

PROFESSIONAL EXPERIENCE

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

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

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

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

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

EDUCATION

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

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

REGISTRATION

California: Civil Engineer, 1985

Alabama: Civil Engineer, 2003

PROFESSIONAL AND BUSINESS AFFILIATIONS

American Society of Civil Engineers

Earthquake Engineering Research Institute

Structural Engineers Association of Northern California

Applied Technology Council

Tau Beta Pi National Engineering Honor Society

Phi Kappa Phi National Honor Society

American and British Chambers of Commerce in Japan

COMMITTEES -- PAST EXPERIENCE

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

SELECTED PUBLICATIONS & PRESENTATIONS

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

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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.

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"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.

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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.

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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.

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"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

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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.

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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.

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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.

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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.



SUMMARY

Chief Engineer 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

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

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

Typical inspections include:

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

Responsible Engineer, TVA Project Partnership

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

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

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

2005 - 2006

Structural Engineer, WorleyParsons, Chattanooga, Tennessee

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

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

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



Resume

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

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

2001 - 2005

Structural Engineer, Alstom Power, Chattanooga, Tennessee

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

Tucson Electric – Springerville Units 1 and 2 LowNOx Retrofit Project. Responsible for overall layout and design of ductwork, structural steel, SOFA, air registers, access platforms, and modifications to the existing ductwork. In addition, 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



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



SUMMARY

Senior Supervising Engineer with over nineteen years of industry experience including stress analysis using Caesar II per AMSE B31 codes including both static and dynamic analysis, pipe support design, pipe material, and valve specifications for carbon steel, alloy steel, and fiber reinforced plastics (FRP); and FRP pipe and tank design per NBS PS15-69, AMSE B31, and RTP-1. Experienced using Cameron Hydraulic and Crane 410 for pump calculations. Worked as project engineer with projects ranging in size from \$14 Million to \$120 Million. Department manager responsible for both designers and engineers ranging from 25-33 staff members. Experienced in Pulp and Paper, Chemical, and Power Industries.

EXPERIENCE

2010 - Present Senior Supervising Engineer, WorleyParsons, Chattanooga, Tennessee

Arizona Public Service Co. (APS) – Cholla Unit 2 Air Quality Control (AQC) Systems Project. Perform duties of the Owners Engineering Project Engineer on \$120 MM baghouse and scrubber upgrade project including managing owners engineering resources to complete project procurement specifications for the installation of a new baghouse and retrofitting the existing Research-Cotrell scrubber to an open spray tower design.

APS – Capital Budget Items. Lead a twelve-member multidiscipline team of engineers to develop Capital Budget Item packages for 40 projects to support the development of APS' 2012 capital spending plan.

Tennessee Valley Authority (TVA) – Sequoyah Fire Protection Pipe Support Project. Duties as Responsible Engineer include verification of quality-related pipe support calculations and coordination of calculation packages to be issued to the client.

TVA – Watts Bar Unit 2 Project. Duties include Verification of Class I safety related pipe support calculations and coordination of calculation packages to be issued to the client.

2010 Pipe Stress Engineer, Parsons Infrastructure, Aiken, South Carolina

Department of Energy – Savannah River Salt Waste Processing Facility (SWPF). Duties included performing pipe stress analysis using Caesar II on both PC-1 and PC-3 systems per B31.3. Analysis included seismic analysis, both static and dynamic. Also designed pipe supports using SmartPlant.

2009 Senior Supervising Engineer, WorleyParsons, Chattanooga, Tennessee

Florida Power and Light Projects. Duties as Pipe Stress Engineer included performing pipe stress analysis using AutoPIPE XM on boiler drain, attemperator spray, extraction steam, and condensate piping.

Designed pipe supports for water circulation project using high density polyethylene (HDPE) piping above ground. Performed engineering calculations for span and thermal expansion.

Developed proposals for projects including both stress analysis and support design. Helped to refine WorleyParsons of Chattanooga's method for performing man-hour estimates for both stress analysis and pipe support design.



2008 Senior Pipe Stress Engineer, Parsons Infrastructure, Aiken, South Carolina

Duties as Pipe Stress Engineer included performing pipe stress analysis using Caesar II on both PC-1 and PC-3 systems per B31.3. Analysis included seismic analysis, both static and dynamic. Also designed pipe supports using SmartPlant.

2007 - 2008 Department Manager, Mechanical Engineering, ALSTOM Power, Inc., Knoxville, Tennessee

Duties as Department Manager (33 engineers) included maintaining manpower database and work assignments, and insuring that mechanical activities are completed on time and to budget. Also responsible for proposal development efforts on large projects including man-hour estimates, and front-end engineering (FEE) to support development of the project estimate.

Coordinated the development of a Piping Group within the Mechanical Engineering Department. The group consisted of a Principal Piping Engineer and six support engineers. Developed training plan to bring new engineers up-to-speed on piping engineering including stress analysis, pipe supports, and pump calculations.

PSEG – Mercer and Hudson Back-end Technology (BET) Projects. Project engineer for projects estimated at \$70 million each in Alstom scope. Oversaw all aspects of work, which included managing the schedule and deliverables, interfacing with the Client's project team, and coordinating multi-discipline activities such as weekly meetings and design reviews. Also facilitated all vendor meetings and responded to both field and vendor requests for information.

2005 - 2007 Department Manager, Mechanical Engineering, Mesa Associates, Inc. Knoxville, Tennessee

Duties as Department Manager (25 designers and engineers) included maintaining manpower database, work assignments, and insuring that multi-discipline oversight is maintained on all projects. Responsible for training new engineers in the use of Caesar II. Also responsible for proposal development efforts on large projects including man-hour estimates, and FEE to support development of the project estimate.

Performed stress analysis with Caesar II of package boiler steam and condensate piping per ASME B31.3 and boiler feed water piping per ASME B31.1. Included determining support location and selection.

Huber Industries Waste Water Treatment Project. Project engineer on multiple projects including a wastewater treatment facility project estimated at \$14 Million installed cost. Responsible for equipment selection and evaluation, development of process and instrumentation diagrams (P&ID), management of schedule and deliverables, interfacing with the Client's project team, and coordination of multi-discipline activities such as weekly meetings and design reviews.

2001 - 2005 Senior Mechanical Engineer – ALSTOM Power, Inc. Knoxville, Tennessee

Design lead for environmental control system projects on the following fossil power plants:

- ▶ TVA – Cumberland, Kingston, Widows Creek, and Bull Run Plants
- ▶ Duke Power – Marshall, Cliffsides, and Belews Creek Plant
- ▶ Edison Power – Homer City Plant



Duties included:

- ▶ Supporting the development of the project schedule, man-hour estimates, requesting staff as needed, writing equipment specifications, preparing bid evaluations, performing reviews of vendor engineering, and helping resolve questions from the erector.
- ▶ Performing stress analysis of hot air systems (700 °F) per SMACNA Round Duct Specification, FRP piping per ASME B31.1 and NBS PS 15-69 for limestone slurry systems, and steam piping per ASME B31.1 using both Caesar II and hand calculations. Included the development of support arrangements and movements for the purchase of expansion joints.
- ▶ Developing standard piping and valve specifications. Established method for performing stress analysis for fiberglass reinforced piping, and facilitated in-house training for piping designers. Also developed standard pipe support details to be used in piping design.

2000 - 2001 Design Engineer IV, Washington Group International, Birmingham, Alabama

Corning Fiber Optic Plant. Designed various piping systems for industrial process facility using Microstation PDS 3D software.

1992 - 2000 Design Engineer II, BE & K Engineering, Birmingham, Alabama

- ▶ Piping design using PDMS, MicroStation, and AutoCAD. Duties included piping design, P&ID development, and 3D design of various types of process equipment and piping. Also experienced with Digital Photogrammetry. Most projects included pulp and paper and chemical process.
- ▶ Piping engineering included stress analysis of both FRP and carbon/alloy steel piping systems using Caesar II. Included the analysis of steam piping, stock piping, and various other services. Duties also included determining pipe support location and types. Pump calculations performed using Cameron Hydraulics, Crane 410, and in-house developed program. Other duties included line sizing and PDMS catalog and specification development.

EDUCATION

B.S., Mechanical Engineering, University of Alabama at Birmingham, Birmingham, Alabama

Completed a Transfer Program in Pre-engineering, East Tennessee State University, Johnson City, Tennessee

REGISTRATIONS/AFFILIATIONS

Professional Registered Engineer, Tennessee

SPECIFIC TECHNICAL EXPERTISE/SPECIALIST COURSES

Piping Design using PDMS, PDS, Microstation, and AutoCAD®

Bullet Proof Management by Crestcom, 2006

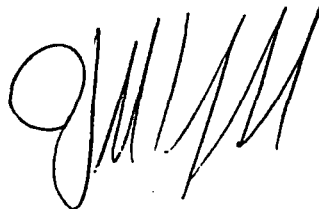
Nuclear Training for Un-escorted Badge, TVA, 1995

William E Sprinkle, Jr.
Manager Nuclear Plant Shift Operations
Watts Bar Nuclear

- Licensed Senior Reactor Operator at WBN in 2008 (License No 22066)
- Qualified Shift Manager at WBN in 2010
- Currently filling position of Operations Support Superintendent.

Previous experience:

- Licensed Reactor Operator at Arkansas Nuclear One from 1995 - 2001
- Licensed Senior Reactor Operator at Arkansas Nuclear One from 2001 - 2005

 10/30/2012

**SUMMARY**

Structural Engineer with five years of experience with WorleyParsons. Experience includes engineering and design of ductwork, duct support structures, foundations and retrofit, modification, and re-design of existing structures. Experienced in managing multiple responsibilities in engineering delivery including the completion of calculation packages, design sketches, drawing mark-ups, final drawing reviews, budget proposals, and project meetings. Familiar with current code provisions, including but not limited to, AISC Steel Construction Manual, ACI 318 Building Code and Commentary, ASCE 7 Minimum Design Loads for Buildings and Other Structures, and IBC (International Building Code). Familiar with current analysis and design software, which includes STAAD Pro, PCA Column, L-Pile, AutoCAD, SmartPlant Review, and other tools such as Microsoft Excel and MathCAD.

EXPERIENCE**2007 - Present Structural Engineer II, WorleyParsons, Chattanooga, Tennessee****Tennessee Valley Authority (TVA) – Sequoyah Nuclear Power Plant, Soddy-Daisy, Tennessee.**

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

Tennessee Valley Authority (TVA) – Watts Bar Nuclear Power Plant Unit 2, 1200 MW Unit, Spring City, Tennessee.

Qualification of existing nuclear pipe supports for new loading conditions, following appropriate design criteria, code provisions, and NRC requirements. Design of modifications to existing pipe supports as required in order to meet specifications. Qualification and specification of both existing and new pipe supports components, such as snubbers, struts, clamps, and anchors. Qualification and design of non-standard welded connections. Pipe supports qualified using computer modeling, utilizing TVA supplied software. Software includes FAPPS (ME150), BASEPLATE II (ME035), MAPPS (ME153), CONAN, and IAP. Creation of supporting calculation packages utilizing MathCAD, Microsoft Excel and Word. Responsible for design input and verification of DRA (Drawing Revision Authorization), which serves as the working document for required pipe support modifications and final support drawings to be issued into the TVA database. Other responsibilities include checking and verification of pipe support calculation packages prior to issuance and coordination between multiple offices to ensure quality, completeness, and consistency.

Pacific Gas and Electric Company (PG&E) – Diablo Canyon Nuclear Power Plant, Avila Beach, California.

Qualification of existing transformer foundations for seismic loading, following appropriate design criteria, code provisions, and NRC requirements. Design and qualification of transformer anchorage. Creation of supporting design calculation packages and sketches.

Georgia Power Company – Plant Scherer Units 1 and 2 (Booster Fan Outlet Ducts). Computer modeling, analysis, and design of pile cap foundations. Creation of supporting calculation packages and design sketches. Review of final foundation drawings.



CPS Energy – Braunig Peaking Turbines Project. Computer modeling, analysis, and design of both soil and pile supported mat foundations. Analysis and design of small equipment foundations. Analysis and design of transformer containments and firewalls. Analysis and design of tank ring-wall foundations. Computer modeling, analysis, and design of steel pipe bridge and supporting foundations. Creation of supporting calculation packages and design sketches. Interfacing with client at design review meetings, updating project schedule, attending weekly meetings, review of final design drawings, and field support.

Alstom, Pacificorp – Ductwork Pressure Upgrade Study. Computer modeling and analysis of existing ductwork for increased pressure loads. Design of necessary modifications to existing ductwork and supports. Creation of calculation package, design sketches, and final study report issued to client.

Alstom – Salt River Project, SOFA Upgrade for the Navajo Generating Station. Computer modeling of SOFA ductwork and new support steel. Analysis and design of ductwork and verification of results. Analysis of existing structural steel for additional load, which included modeling the existing structural steel. Design of necessary modifications to existing structural steel. Analysis of existing furnace buckstays for new load configuration and design of necessary modifications for inadequate members. Re-design of existing furnace guide for new location and loading. Creation of calculation package and design sketches.

Georgia Power Company – Plant Scherer Unit 4. Design steel support structure and pile cap foundations for ductwork. Responsibilities include computer modeling of support structure and ductwork. Analysis and design of support structure and verification of modeling results. Determination of pile loads. Analysis and design of pile cap foundations. Preparation of design sketches.

Tennessee Valley Authority (TVA) – Bull Run Fossil Plant. Retrofit of existing handling facility weather enclosure. Responsibilities include computer modeling of existing weather enclosure. Verify need for modification to existing structure and propose and design modification to meet code requirements. Prepare design calculations and drawings.

TVA – Cumberland Fossil Plant. LPA screen assembly and hopper addition. Responsibilities include verification of existing structural steel for additional load due to ash hopper and large particle ash (LPA) screen assembly. Design necessary modifications and prepare calculation package.

TVA – Allen, Colbert, Cumberland, Widows Creek, and Paradise Fossil Plants. Foundation design and analysis. Responsibilities include analysis and design of concrete foundations for ammonia handling weather enclosures. Preparation of design calculations and design sketches.

TVA – Cherokee Hydroelectric. Switchyard transformer replacement, bus support upgrade, and foundation modifications. Responsibilities include analysis and design of steel bus support structure, including modeling of structure and determination of loading. Verification and analysis of existing concrete foundations for new loading. Design of replacement foundations and modifications to existing foundations. Preparation of design calculations and design sketches.

2005 - 2007

Graduate Research Assistant, The Pennsylvania State University, State College, Pennsylvania

Conducted research on the shear behavior of fiber reinforced concrete beams. Design and fabrication of 42 reinforced concrete beams with variations in geometry and reinforcement detail. Research aimed at determining the effects of combining steel fiber reinforcement with conventional transverse reinforcement.



Teaching Assistant, The Pennsylvania State University, State College, Pennsylvania

Prepared and presented lectures and tutorials for Steel and Concrete Member Design. Assisted students with course work as well as exam preparation. Prepared lab exercises for civil engineering surveying. Responsible for four sections of approximately 25 students.

2004 - 2005

Undergraduate Research Assistant, The Pennsylvania State University, State College, Pennsylvania

Conducted research on the flexural behavior of fiber reinforced concrete. Designed and machined custom loading setup for specialized four-point bending tests. Fabricated and tested 120 concrete specimens, which included four-point bending, compression, and split tensile tests. Analyzed data obtained from testing. Co-authored publication, resulting from the research.

EDUCATION

M.S., Civil Engineering, The Pennsylvania State University, University Park, Pennsylvania, 2007

B.S., Civil Engineering, The Pennsylvania State University, University Park, Pennsylvania, 2005

REGISTRATIONS/AFFILIATIONS

Member of AISC, American Institute of Steel Construction

Professional Engineer, State of Pennsylvania (PE078696)

PUBLICATIONS/PRESENTATIONS

"Evaluation of Shear Capacity of Hooked Steel Fiber Reinforced Concrete Beams with Stirrups," Master's Thesis in Civil Engineering, The Pennsylvania State University, University Park, , 2007.

Co-author, "Enhanced Performance of Fiber Reinforced Concrete with Low Volume Fractions," Indo-U.S. Conference Proceedings, Chennai, India, 2005.



SUMMARY

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

EXPERIENCE

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

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

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

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

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

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

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

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

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

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

EDUCATION

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

REGISTRATIONS/AFFILIATIONS

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

SPECIFIC TECHNICAL EXPERTISE

AutoCAD®, 2D and 3D Drafting

SolidWorks, 2D and 3D Drafting

STAAD.Pro, Structural Analysis and Design

RISA, 2D and 3D Structural Analysis

Appendix B: Base List 1

This Appendix includes the Watts Bar Unit 1 Base List 1.

No.	UNID	Description	Safety Function
1	0-ACUM-032-0060A-A	AUX CNT AIR COMP ACC TNK	0
2	0-ACUM-032-0086B-B	AUX CNT AIR COMP ACC TNK	0
3	0-AHU-031-0012	MAIN CONTROL ROOM AHU A-A	5
4	0-AHU-031-011	MAIN CONTROL ROOM AHU B-B	5
5	0-AHU-031-030B	EL 692.0 ELEC BOARD ROOM AHU A-A	5
6	0-AHU-031-030D	EL 692.0 ELEC BOARD ROOM AHU B-A	5
7	0-AHU-031-0497	COMPUTER RM SUPPLEMENTAL AHU 1	5
8	0-AHU-031-0498	COMPUTER RM SUPPLEMENTAL AHU 2	5
9	0-AHU-031-31B	EL 692.0 ELEC BD RM AHU C-B	5
10	0-AHU-031-31D	EL 692.0 ELEC BD RM AHU D-B	5
11	0-AHU-031-45	SHUTDOWN BD ROOM A AHU A-A	5
12	0-AHU-031-55	SHUTDOWN BD ROOM A AHU C-B	5
13	0-AHU-031-61	SHUTDOWN BD RM B AHU D-B	5
14	0-BAT-236-0001-D	125V VITAL BATTERY I	0
15	0-BAT-236-0002-E	125V VITAL BATTERY II	0
16	0-BAT-236-0003-F	125V VITAL BATTERY III	0
17	0-BAT-236-0004-G	125V VITAL BATTERY IV	0
18	0-BD-236-0001-D	125V VITAL BATTERY BD I	0
19	0-BD-236-0002-E	125V VITAL BATTERY BD II	0
20	0-BD-236-0003-F	125V VITAL BATTERY BD III	0
21	0-BD-236-0004-G	125V VITAL BATTERY BD IV	0
22	0-CHGR-236-0001-D	125V VITAL BTRY CHARGER I	0
23	0-CHGR-236-0002-E	125V VITAL BTRY CHARGER II	0
24	0-CHGR-236-0003-F	125V VITAL BTRY CHARGER III	0
25	0-CHGR-236-0004-G	125V VITAL BTRY CHARGER IV	0
26	0-CHGR-236-0006-S	125V VITAL BTRY CHARGER 6-S	0
27	0-CHGR-236-0007-S	125V VITAL BTRY CHARGER 7-S	0
28	0-CHR-031-0080	MAIN CONTROL ROOM CHILLER PKG A-A	5
29	0-CHR-031-0096	MAIN CONTROL ROOM CHILLER PKG B-B	5
30	0-CHR-031-0128	EL 692.0 ELEC BOARD ROOM CHILLER PKG A-A	5
31	0-CHR-031-0129	EL 692.0 ELEC BOARD ROOM CHILLER PKG B-B	5
32	0-CHR-031-36/2	SHUTDOWN BD ROOMS A&B CHILLER PKG A-A	5
33	0-CHR-031-49/2	SHUTDOWN BD ROOMS A&B CHILLER PKG B-B	5

No.	UNID	Description	Safety Function
34	0-COMP-032-0060	AUX CNTL AIR COMPRES A-A	0
35	0-COMP-032-0086	AUX CNTL AIR COMPRES B-B	0
36	0-CRV-271-A1	REFUEL FLOOR CRANE	0
37	0-DPL-236-0001-D	125V VITAL BTRY BD I DISTRIBUTION PANEL	0
38	0-DPL-236-0002-E	125V VITAL BTRY BD II DISTRIBUTION PANEL	0
39	0-DPL-236-0003-F	125V VITAL BTRY BD III DISTRIBUTION PANE	0
40	0-DPL-236-0004-G	125V VITAL BTRY BD IV DISTRIBUTION PANEL	0
41	0-DRYR-032-0074	ESSNT CON AIR TRAN A DRYR 2	0
42	0-DRYR-032-0075	ESSNT CON AIR TRAN A DRYR 1	0
43	0-DRYR-032-0099	ESSNT CON AIR TRAN B DRYR 2	0
44	0-DRYR-032-0100	ESSNT CON AIR TRAN B DRYR 1	0
45	0-FAN-031-27	CONTROL BLDG BTRY RM EXHAUST FAN C-B	5
46	0-FAN-031-28	CONTROL BLDG BTRY RM EXHAUST FAN A-A	5
47	0-FAN-031-29	CONTROL BLDG BTRY RM EXHAUST FAN B-B	5
48	0-FCO-031-002	PRESS AIR ISOLATION DAMPER	5
49	0-FCO-031-002A	PRESS AIR ISOLATION DAMPER	5
50	0-FCO-031-003	PRESS AIR ISOLATION DAMPER	5
51	0-FCO-031-004	PRESS AIR ISOLATION DAMPER	5
52	0-FCO-031-1	PRESS AIR ISOLATION DAMPER	5
53	0-FCO-031-11	MCR AHU B-B ISOLATION DAMPER	5
54	0-FCO-031-12	MCR AHU A-A ISOLATION DAMPER	5
55	0-FCO-031-13	BTRY RM EXH FAN TORNADO DAMPER	5
56	0-FCO-031-14	BTRY RM EXH FAN TORNADO DAMPER	5
57	0-FCO-031-1A	PRESS AIR ISOLATION DAMPER	5
58	0-FCO-031-23	BTRY RM EXH FAN C-B TORNADO DAMPER	5
59	0-FCO-031-24	BTRY RM EXH FAN C-B TORNADO DAMPER	5
60	0-FCO-031-27	BTRY RM EXH FAN C-B ISOLATION DAMPER	5
61	0-FCO-031-28	BTRY RM EXH FAN A-A ISOLATION DAMPER	5
62	0-FCO-031-29	BTRY RM EXH FAN B-B ISOLATION DAMPER	5
63	0-FCO-031-30	EL 692.0 ELEC BD RM AHU ISOLATION DAMPER	5
64	0-FCO-031-31	EL 692.0 ELEC BD RM AHU ISOLATION DAMPER	5
65	0-FCO-031-32	PRESS AIR TORNADO DAMPER	5
66	0-FCO-031-33	PRESS AIR TORNADO DAMPER	5

No.	UNID	Description	Safety Function
67	0-FCO-031-335	EBR AHU A-A MODULATING DAMPER	5
68	0-FCO-031-336	EBR AHU B-A MODULATING DAMPER	5
69	0-FCO-031-337	EBR AHU C-B MODULATING DAMPER	5
70	0-FCO-031-34	PRESS AIR TORNADO DAMPER	5
71	0-FCO-031-35	PRESS AIR TORNADO DAMPER	5
72	0-FCO-031-82	MCR AHU A-A MODULATING DAMPER	5
73	0-FCO-031-91	MCR AHU B-B MODULATING DAMPER	5
74	0-FCV-032-82-A	ACAS COMPRESSOR A-A, ACAS ISOLATION	0
75	0-FCV-032-85-B	ACAS COMPRESSOR B-B, ACAS ISOLATION	0
76	0-FCV-067-0144	CCS HTX OUTLET	0
77	0-FCV-067-0151	CCS HTX OUTLET	0
78	0-FCV-067-0152	CCS HTX C DISCH CONTROL VLV	0
79	0-FCV-070-0140	RC PUMP OIL CLR HDR CONT ISOL VALVE	0,5
80	0-FLTR-032-0060A-A	AUX CNTL AIR COMP INTK FLTR	0
81	0-FLTR-032-0076	ESSNT CON AIR TRN A AFT-FLTR	0
82	0-FLTR-032-0086B-B	AUX CNTL AIR COMP INTK FLTR	0
83	0-FLTR-032-0101	ESSNT CON AIR TRN B AFT-FLTR	0
84	0-FS-031-117A	ELEC BD RM AHU A-A AIR FLOW	5
85	0-FS-031-123-A	ELEC BD RM AHU B-A AIR FLOW	5
86	0-FS-031-126-B	ELEC BD RM AHU C-B AIR FLOW	5
87	0-FS-031-154-B	ELEC BD RM AHU D-B AIR FLOW	5
88	0-FS-031-38-A	SHUTDOWN BD RM AHU A-A AIR FLOW	5
89	0-FS-031-401-A	BATTERY ROOM EL 692 EXH FAN B-B FLOW	5
90	0-FS-031-402-B	BATTERY ROOM EL 692 EXH FAN A-A FLOW	5
91	0-FS-031-43-A	SHUTDOWN BD RM AHU B-A AIR FLOW	5
92	0-FS-031-51-B	SHUTDOWN BD RM AHU C-B AIR FLOW	5
93	0-FS-031-57-B	SHUTDOWN BD RM AHU D-B AIR FLOW	5
94	0-FS-031-84-A	MAIN CONTROL RM AHU A-A AIR FLOW	5
95	0-FS-031-94-B	MAIN CONTROL RM AHU B-B AIR FLOW	5
96	0-FSV-032-82-A	ACAS COMPRESSOR A-A, ACAS ISOLATION	0
97	0-FSV-032-85-B	ACAS COMPRESSOR B-B, ACAS ISOLATION	0
98	0-HTX-032-0060A-A	AUX CNTL AIR COMP AFTRCOOL	0
99	0-HTX-032-0086B-B	AUX CNTL AIR COMP AFTRCOOL	0

No.	UNID	Description	Safety Function
100	0-HTX-070-0186	COMPONENT COOLING HX C	0
101	0-HTX-077-0096	W.GAS COMP. HTX	0
102	0-HTX-077-0111	W.GAS COMP. HTX	0
103	0-HTX-078-0031	SPENT FUEL PIT HEAT EXCHANGER B	0
104	0-HTX-078-0032	SPENT FUEL PIT HEAT EXCHANGER B	0
105	0-PDIS-031-101-A	SHUTDOWN BD RM CW PUMP A-A DIFF PRESS	5
106	0-PDIS-031-131-B	SHUTDOWN BD RM CW PUMP B-B DIFF PRESS	5
107	0-PDIS-031-161-A	MAIN CONTROL ROOM CW PUMP A-A DIFF PRE	5
108	0-PDIS-031-186-B	MAIN CONTROL ROOM CW PUMP B-B DIFF PRE	5
109	0-PDIS-031-211-A	ELEC BD ROOM CW PUMP A-A DIFF PRESS	5
110	0-PDIS-031-241-B	ELEC BD ROOM CW PUMP B-B DIFF PRESS	5
111	0-PMCL-030-192	CCS TB BSTR & SFP PUMP COOLER A-A	5
112	0-PMCL-030-193	CCS TB BSTR & SFP PUMP COOLER B-B	5
113	0-PMP-031-128/1	ELEC BD RM CHILLER PKG A-A CIR PMP A-A	5
114	0-PMP-031-129/1	ELEC BD RM CHILLER PKG B-B CIR PMP B-B	5
115	0-PMP-031-36/1	SDBR CHLR PKG A-A CW CIRC PUMP A-A	5
116	0-PMP-031-49/1	SDBR CHLR PKG B-B CW CIRC PUMP B-B	5
117	0-PMP-031-80/1	CW CIRC PMP A-A (MCR)	5
118	0-PMP-031-96/1	CW CIRC PMP B-B (MCR)	5
119	0-PMP-067-0028	ERCW PUMP A-A	0
120	0-PMP-067-0032	ERCW PUMP B-A	0
121	0-PMP-067-0036	ERCW PUMP C-A	0
122	0-PMP-067-0040	ERCW PUMP D-A	0
123	0-PMP-067-0047	ERCW PUMP E-B	0
124	0-PMP-067-0051	ERCW PUMP F-B	0
125	0-PMP-067-0055	ERCW PUMP G-B	0
126	0-PMP-067-0059	ERCW PUMP H-B	0
127	0-PMP-070-0051	CCS PUMP C-S	0
128	0-PMP-078-0012	SPENT FUEL PMP	0
129	0-PMP-087-0009	SPENT FUEL PMP	0
130	0-PNL-278-M012	RADIATION MONITORING MCR PNL	0
131	0-PNL-278-M26A	D.G. 1A-A MCR PNL	0
132	0-PNL-278-M26B	D.G. 1B-B MCR PNL	0

No.	UNID	Description	Safety Function
133	0-PNL-278-M26C	D.G. 2A-A MCR PNL	0
134	0-PNL-278-M26D	D.G. 2B-B MCR PNL	0
135	0-PNL-278-M27A	ERCW MCR PNL	0
136	0-PNL-278-M27B	CCW MCR PNL	0
137	0-PS-032-62-A	AUXILIARY CONTROL AIR RECEIVER A LPS	0
138	0-PS-032-62A-A	AUXILIARY AIR COMPRESSOR A-A UNLOAD SW	0
139	0-PS-032-62B-A	AUXILIARY AIR COMPRESSOR A-A LOAD CTL SW	0
140	0-PS-032-82-A	CAS LOW PRESSURE ACAS ISOLATION	0
141	0-PS-032-85-B	CAS LOW PRESSURE ACAS ISOLATION	0
142	0-PS-032-88A	AUXILIARY AIR COMPRESOR B-B UNLOAD SWIT	0
143	0-PS-032-88B	AUXILIARY AIR COMPRESSOR B-B	0
144	0-PS-032-88-B	AUXILIARY CONTROL AIR RECEIVER B LPS	0
145	0-PT-070-0221	CCS HTX C INLET PRESSURE	0
146	0-RCVR-032-0062	ESSNT CON AIR TR A AIR RECVR	0
147	0-RCVR-032-0088	ESSNT CON AIR TR B AIR RECVR	0
148	0-SEP-031-128	AIR SEPARATOR A-(EBR)	5
149	0-SEP-031-129	AIR SEPARATOR B-(EBR)	5
150	0-SEP-031-36	SDBR CHLR PKG A-A CW AIR SEPARATOR A	5
151	0-SEP-031-49	SDBR CHLR PKG B-B CW AIR SEPARATOR B	5
152	0-SEP-031-80	AIR SEPARATOR-A-(MCR)	5
153	0-SEP-031-96	AIR SEPARATOR-B-(MCR)	5
154	0-SGEN-031-0156	ELECT BD RM AHU A-A STEAM GENERATOR	5
155	0-SGEN-031-0158	MAIN CONT RM AHU A-A STEAM GENERATOR	5
156	0-STN-031-128	STRAINER (EBR CHR A-A)	5
157	0-STN-031-129	STRAINER (EBR CHR B-B)	5
158	0-STN-031-36	STRAINER (SDBR CHR A-A)	5
159	0-STN-031-49	STRAINER (SDBR CHR B-B)	5
160	0-STN-031-80	STRAINER (MCR CHR A-A)	5
161	0-STN-031-96	STRAINER (MCR CHR B-B)	5
162	0-TANK-031-128	CHEM TREATMENT TANK A-(EBR)	5
163	0-TANK-031-129	CHEM TREATMENT TANK B-(EBR)	5
164	0-TANK-031-149	SDBR CHLR PKG B-B CW COMPRESSION TK B	5
165	0-TANK-031-175	COMPRESSION TANK A-(MCR)	5

No.	UNID	Description	Safety Function
166	0-TANK-031-200	COMPRESSION TANK B-(MCR)	5
167	0-TANK-031-225	COMPRESSION TANK A-(EBR)	5
168	0-TANK-031-255	COMPRESSION TANK B-(EBR)	5
169	0-TANK-031-36	SDBR CHLR PKG A-A CW CHEM TREATMENT TK	5
170	0-TANK-031-49	SDBR CHLR PKG B-B CW CHEM TREATMENT TK	5
171	0-TANK-031-73	SDBR CHLR PKG A-A CW COMPRESSION TK A	5
172	0-TANK-031-80	CHEM TREATMENT TANK A-(MCR)	5
173	0-TANK-031-96	CHEM TREATMENT TANK B-(MCR)	5
174	0-TC-31-82	MCR AHU A-A MODULATING DAMPER - CONTRO	5
175	0-TC-31-91	MCR AHU B-B MODULATING DAMPER - CONTRO	5
176	0-TCV-031-499	SUPPLEMENTAL AHU 1 CW TCV	5
177	0-TCV-031-500	SUPPLEMENTAL AHU 2 CW TCV	5
178	0-TCV-067-1050	REGULATING VLV EBR CHILLER A-A	0
179	0-TCV-067-1051	REGULATING VLV MCR CHILLER A-A	0
180	0-TCV-067-1052	REGULATING VLV EBR CHILLER B-B	0
181	0-TCV-067-1053	REGULATING VLV MCR CHILLER B-B	0
182	0-TE-070-0162-B	CCS HEAT EXCHANGER C OUTLET TEMP	0
183	0-TS-030-192A-A	SFP PUMP/TBBP SPARE CLR A-A TEMP	5
184	0-TS-030-192B-A	SFT PUMP/TBBP SPARE CLR A-A TEMP	5
185	0-TS-030-193A-B	SFP PUMP/TBBP SPARE CLR B-B TEMP	5
186	0-TS-030-193B-B	SFP PUMP/TBBP SPARE CLR B-B TEMP	5
187	0-TS-031-150B-A	ELEC BD RM AHU AA/BA SUPPLY TEMP	5
188	0-TS-031-157B-B	ELEC BD RM AHU CB/DB SUPPLY TEMP	5
189	0-TS-031-40B-A	SD BD ROOM AHU A-A INLET TEMP	5
190	0-TS-031-48B-A	SD BD ROOM AHU B-A INLET TEMP	5
191	0-TS-031-52B-B	SD BD ROOM AHU C-B INLET TEMP	5
192	0-TS-031-60B-B	SB BD ROOM AHU D-B INLET TEMP	5
193	0-TS-031-88B-A	MAIN CONTROL RM AHU A-A SUPPLY TEMP	5
194	0-TS-031-89B-B	MAIN CONTROL RM AHU B-B SUPPLY TEMP	5
195	0-TT-031-82	MCR AHU A-A MODULATING DAMPER - THERMO	5
196	0-TT-031-91	MCR AHU B-B MODULATING DAMPER - THERMO	5
197	1-ACUM-063-0001	SIS ACCUMULATOR TANK NO 1	1,3
198	1-ACUM-063-0002	SIS ACCUMULATOR TANK NO 2	1,3

No.	UNID	Description	Safety Function
199	1-ACUM-063-0003	SIS ACCUMULATOR TANK NO 3	1,3
200	1-ACUM-063-0004	SIS ACCUMULATOR TANK NO 4	1,3
201	1-AHU-031-461	480V BD ROOM 1A SUPPLY AHU 1A-A	5
202	1-AHU-031-475	480V BOARD ROOM 1B SUPPLY AHU 1 B-B	5
203	1-ARB-082-A-A	DG 1A-A PROT. RELAY BRD	0
204	1-ARB-082-B-B	DG 1B-B PROT. RELAY PNL	0
205	1-BAT-215-A-A	DG 1A-A 125V BATTERY	0
206	1-BAT-215-B-B	DG 1B-B 125V BATTERY	0
207	1-BD-211-A-A	6.9KV SHUTDOWN BOARD 1A-A	0
208	1-BD-211-B-B	6.9KV SHUTDOWN BOARD 1B-B	0
209	1-BD-212-A1-A	480V SHUTDOWN BD 1A1-A	0
210	1-BD-212-A2-A	480V SHUTDOWN BD 1A2-A	0
211	1-BD-212-B1-B	480V SHUTDOWN BD 1B1-B	0
212	1-BD-212-B2-B	480V SHUTDOWN BD 162-B	0
213	1-BD-235-0001-D	120V AC VITAL INST POWER BOARD 1-I	0
214	1-BD-235-0002-E	120V AC VITAL INST POWER BOARD 1-11	0
215	1-BD-235-0003-F	120V AC VITAL INST POWER BOARD 1-111	0
216	1-BD-235-0004-G	120V AC VITAL INST POWER BOARD 1-IV	0
217	1-BD-237-A	120V AC INSTRU POWER DISTR PNL 1A	0
218	1-BD-237-B	120V AC INSTRU POWER DISTR PNL 1B	0
219	1-BD-278-M7A	120V AC INSTRUMENT POWER RACK	0
220	1-BD-278-M7B	120V AC INSTRUMENT POWER RACK	0
221	1-CDPL-082-A-A	DG 1A-A CNTL.DIST PNL	0
222	1-CDPL-082-B-B	DG 1B-B CONT. DIST PNL	0
223	1-CHGR-215-A-A	DG 1A-A BATTERY CHARGER	0
224	1-CHGR-215-B-B	DG 1B-B BATTERY CHARGER	0
225	1-CLR-030-186	EL 692 PENETRATION ROOM CLLER 1A-A	5
226	1-CLR-030-187	EL 692 PENETRATION ROOM COOLER 1B-B	5
227	1-CLR-030-194	EL 737 PENETRATION ROOM COOLER 1A-A	5
228	1-CLR-030-195	EL 737 PENETRATION ROOM COOLER 1B-B	5
229	1-CLR-030-196	EL 713 PENETRATION ROOM COOLER 1A-A	5
230	1-CLR-030-197	EL 713 PENETRATION ROOM COOLER 1B-B	5
231	1-CLR-030-201	PIPE CHASE COOLER 1A-A	5

No.	UNID	Description	Safety Function
232	1-CLR-030-202	PIPE CHASE COOLER 1B-B	5
233	1-CMP-031-447	480V BD RM 1B RECIP COMP 1B-B	5
234	1-CMP-031-465	480V BD RM 1A RECIP COMP 1A-A	5
235	1-COND-031-289	480V BD RM 1B AIR COOLED COND	5
236	1-COND-031-290	480V BD RM 1A AIR COOLED COND	5
237	1-CRN-271-R1	175 TON POLAR CRANE	0
238	1-DEMN-062-1/1B	DEMIN	3
239	1-DIEG-082-A1	DIESEL ENGINE 1A1	0
240	1-DIEG-082-A2	DIESEL GENERATOR ENGINE 1A2	0
241	1-DIEG-082-B1	DIESEL GENERATOR ENGINE 1B1	0
242	1-DIEG-082-B2	DIESEL GENERATOR ENGINE 1B2	0
243	1-DOOR-061-LXXX	LWR INLET DOORS (L101 THRU L124)	4
244	1-DPL-082-A-A	DG 1A-A 125VDC DIST PNL	0
245	1-DPL-082-B-B	DG 1B-B 125VDC DIST PNL	0
246	1-DXF-237-A	INSTRUMENT POWER TRANSFORMER 1A	0
247	1-DXF-237-B	INSTRUMENT POWER TRANSFORMER 1B	0
248	1-FAN-030-0038-A	CNTMT AIR RETURN FAN A-A	5
249	1-FAN-030-0039-B	CNTMT AIR RETURN FAN B-B	5
250	1-FAN-030-0244F	480V TRANSFORMER ROOM 1A EXH FAN 1A1-A	5
251	1-FAN-030-0244G	480V TRANSFORMER ROOM 1A EXH FAN 1A2-A	5
252	1-FAN-030-0244H	480V TRANSFORMER ROOM 1A EXH FAN 1A3-A	5
253	1-FAN-030-0248E	480V TRANSFORMER ROOM 1B EXH FAN 1B1-B	5
254	1-FAN-030-0248F	480V TRANSFORMER ROOM 1B EXH FAN 1B2-B	5
255	1-FAN-030-0248G	480V TRANSFORMER ROOM 1B EXH FAN 1B3-B	5
256	1-FAN-030-0447-A	D-G RM 1A-A EXHAUST FAN 1	5
257	1-FAN-030-0449-B	D-G RM 1B-B EXHAUST FAN 1	5
258	1-FAN-030-0451-A	D-G RM 1A-A EXHAUST FAN 2	5
259	1-FAN-030-0453-B	D-G RM 1B-B EXHAUST FAN 2	5
260	1-FAN-030-0459-A	DIESEL GEN 1A-A ELECT BD ROOM EXHAUST	5
261	1-FAN-030-0461-B	DIESEL GEN 1B-B ELECT BD ROOM EXHAUST	5
262	1-FAN-030-491	DIESEL PANEL 1A-A VENT FAN	5
263	1-FAN-030-493	DIESEL PANEL 1B-B VENT FAN	5
264	1-FAN-031-0285	BATTERY ROOM II EXHAUST FAN 1B1-A	5

No.	UNID	Description	Safety Function
265	1-FAN-031-0286	BATTERY ROOM II EXHAUST FAN 1B2-B	5
266	1-FAN-031-0287	BATTERY ROOM I EXHAUST FAN 1A1-A	5
267	1-FAN-031-0288	BATTERY ROOM I EXHAUST FAN 1A2-B	5
268	1-FCO-030-0244A	TRANSFORMER ROOM 1A DAMPER	5
269	1-FCO-030-0244B	TRANSFORMER ROOM 1A DAMPER	5
270	1-FCO-030-0248A	TRANSFORMER ROOM 1B DAMPER	5
271	1-FCO-030-0248B	TRANSFORMER ROOM 1B DAMPER	5
272	1-FCO-030-443	DG RM 1A-A AIR INTAKE DAMPER	5
273	1-FCO-030-445	DG RM 1B-B AIR INTAKE DAMPER	5
274	1-FCO-030-447	DG RM 1A-A EXH FAN DAMPER	5
275	1-FCO-030-449	DG RM 1B-B EXH FAN DAMPER	5
276	1-FCO-030-451	DG RM 1A-A EXH FAN DAMPER	5
277	1-FCO-030-453	DG RM 1B-B EXH FAN DAMPER	5
278	1-FCO-030-455	DG RM 1A-A EXH FAN DAMPER	5
279	1-FCO-030-457	DG RM 1B-B EXH FAN DAMPER	5
280	1-FCO-030-459	DG 1A-A ELEC BD RM EXH FAN DAMPER	5
281	1-FCO-030-461	DG 1B-B ELEC BD RM EXH FAN DAMPER	5
282	1-FCO-031-0286	BATTERY ROOM II DAMPER FOR FAN 1B2-B	5
283	1-FCO-031-0287	BATTERY ROOM I DAMPER FOR FAN A1-A	5
284	1-FCO-031-0288	BATTERY ROOM I DAMPER FOR FAN 1A2-B	5
285	1-FCO-031-0289	BOARD ROOM CONDENSER 1B-B DAMPER	5
286	1-FCO-031-285	BATTERY ROOM II DAMPER FOR FAN 1B1-A	5
287	1-FCO-031-290	BOARD ROOM CONDENSER 1A-A DAMPER	5
288	1-FCO-031-291	480V BD RM 1A COND 1A-A DAMPER	5
289	1-FCV-001-0004-T	SG 1 MAIN STM HDR ISOLATION VALVE	5
290	1-FCV-001-0007-B	BLOWDOWN ISOLATION VALVE SG-1	5
291	1-FCV-001-0011-T	SG 2 MAIN STM HDR ISOLATION VALVE	5
292	1-FCV-001-0014-A	BLOWDOWN HDR FLOW CONTROL VALVE, SG-2	5
293	1-FCV-001-0015-A	TD AUX FW PMP STM SUPPLY FROM SG NO 1	4,5
294	1-FCV-001-0016-A	AUX FW PMP TURB STM SUPPLY FROM SG NO 4	4,5
295	1-FCV-001-0022-T	SG 3 MAIN STM HDR ISOLATION VALVE	5
296	1-FCV-001-0025-B	BLOWDOWN HDR ISOLATION VALVE, SG-3	5
297	1-FCV-001-0029-T	SG 4 MAIN STM HDR ISOLATION VALVE	5

No.	UNID	Description	Safety Function
298	1-FCV-001-0032-A	BLOWDOWN HDR FLOW CONTROL VALVE, SG-4	5
299	1-FCV-001-0051	AUX FW PMP TV	4,5
300	1-FCV-001-0052	AUX FW PMP GVB	4,5
301	1-FCV-001-0147	MSIV BYPASS	5
302	1-FCV-001-0148	MSIV BYPASS	5
303	1-FCV-001-0149	MSIV BYPASS	5
304	1-FCV-001-0150	MSIV BYPASS	5
305	1-FCV-001-0181-A	BLOWDOWN ISOL VLV INSIDE CNTMT, SG-1	5
306	1-FCV-001-0182-B	BLOWDOWN ISOL VLV INSIDE CNTMT, SG-2	5
307	1-FCV-001-0183-A	BLOWDOWN ISOL VLV INSIDE CNTMT, SG-3	5
308	1-FCV-001-0184-B	BLOWDOWN ISOL VLV INSIDE CNTMT, SG-4	5
309	1-FCV-003-0033	SG#1 FW ISOLATION VALVE	5
310	1-FCV-003-0047	STM GEN #2 ISOLATION VALVE	5
311	1-FCV-003-0087	STM GEN #3 ISOLATION VALVE	5
312	1-FCV-003-0100	STM GEN #4 FW ISOLATION VALVE	5
313	1-FCV-003-0179A	ERCW HEADER B ISOLATION VALVE	4,5
314	1-FCV-003-0236	CONT ISO	5
315	1-FCV-003-0239	CONT ISO	5
316	1-FCV-003-0242	CONT ISO	5
317	1-FCV-003-0245	CONT ISO	5
318	1-FCV-003-116A	AUX FEED ISOLATION VALVE	4
319	1-FCV-003-116B	AUX FEED ISOLATION VALVE	4
320	1-FCV-003-126A	AUX FEED ISOLATION VALVE	4
321	1-FCV-003-126B	AUX FEED ISOLATION VALVE	4
322	1-FCV-003-136A	ERCW HEADER A ISOLATION VALVE	4,5
323	1-FCV-003-355-A	AFW PMP MINI FLOW	4
324	1-FCV-003-359-B	AFW PMP MINI FLOW	4
325	1-FCV-003-563-A	AFW PMP MINI FLOW	4
326	1-FCV-003-564-A	AFW PMP MINI FLOW	4
327	1-FCV-003-565-A	AFW PMP MINI FLOW	4
328	1-FCV-026-0240	RB STANDPIPE ISOLATION VLV	5
329	1-FCV-026-0243	REACTOR COOLANT PUMP SPRAY ISOL VALVE	5
330	1-FCV-030-0007-A	UPPPER COMPT PURGE ISOLATION VALVE	5

No.	UNID	Description	Safety Function
331	1-FCV-030-0008-B	UPPER COMPT PURGE ISOLATION VALVE	5
332	1-FCV-030-0009-B	UPPER COMPT PURGE ISOLATION VALVE	5
333	1-FCV-030-0010-A	UPPER COMPT PURGE ISOLATION VALVE	5
334	1-FCV-030-0014A	LOWER COMPT PURGE ISOLATION VALVE	5
335	1-FCV-030-0015-B	LOWER COMPT PURGE ISOLATION VALVE	5
336	1-FCV-030-0016-B	LOWER COMPT PURGE ISOLATION VALVE	5
337	1-FCV-030-0017-A	LOWER COMPT PURGE ISOLATION VALVE	5
338	1-FCV-030-0019-B	INCORE INSTR ROOM PURGE ISOLATION VALV	5
339	1-FCV-030-0020-A	INCORE INSTR ROOM PURGE ISOLATION VALV	5
340	1-FCV-030-0037-B	LOWER COMPT PURGE PRESS RELIEF	5
341	1-FCV-030-0040-A	LOWER COMPT PURGE PRESS RELIEF	5
342	1-FCV-030-0050	UPPER CNTMT EXH ISOLATION VALVE	5
343	1-FCV-030-0051	UPPER CNTMT EXH ISOLATION VALVE	5
344	1-FCV-030-0052	UPPER CNTMT EXH ISOLATION VALVE	5
345	1-FCV-030-0053	UPPER CNTMT EXH ISOLATION VALVE	5
346	1-FCV-030-0056	LOWER CNTMT EXH ISOLATION VALVE	5
347	1-FCV-030-0057	LOWER CNTMT EXH ISOLATION VALVE	5
348	1-FCV-030-0058	INCORE INSTR ROOM EXH ISOLATION VALVE	5
349	1-FCV-030-0059	INCORE INSTR ROOM EXH ISOLATION VALVE	5
350	1-FCV-031-0305	CONT ISOLATION VALVE	5
351	1-FCV-031-0306	CONT ISOLATION VALVE	5
352	1-FCV-031-0308	CONT ISOLATION VALVE	5
353	1-FCV-031-0309	CONT ISOLATION VALVE	5
354	1-FCV-031-0326	CONT ISOLATION VALVE	5
355	1-FCV-031-0327	CONT ISOLATION VALVE	5
356	1-FCV-031-0329	CONT ISOLATION VALVE	5
357	1-FCV-031-0330	CONT ISOLATION VALVE	5
358	1-FCV-032-0080A	ESSNT CONTR AIR CONTA ISO	5
359	1-FCV-032-0102B	ESSNT CONTR AIR CONTA ISO	5
360	1-FCV-032-0110A	CONTR AIR CONTA ISO	5
361	1-FCV-043-0002B	PRSZR GAS SAMPL ISOL	5
362	1-FCV-043-0003A	PRSZR GAS SAMPL ISOL	5
363	1-FCV-043-0011B	PRSZR LIQUID SAMPL ISO	5

No.	UNID	Description	Safety Function
364	1-FCV-043-0012A	PRSZR LIQUID SAMPL ISO	5
365	1-FCV-043-0022B	HOT LEGS 1/3 SPL ISO	5
366	1-FCV-043-0023A	HOT LEGS 1/3 SPL ISO	5
367	1-FCV-043-0034B	ACCUM TANK SMPL HDR ISOL	5
368	1-FCV-043-0035A	ACCUM TANK SMPL HDR ISOL	5
369	1-FCV-043-0055A	STEAM GEN 1 DRM SPL ISO	5
370	1-FCV-043-0058A	STEAM GEN 2 DRM SPL ISO	5
371	1-FCV-043-0061A	STEAM GEN 3 DRM SPL ISO	5
372	1-FCV-043-0064A	STEAM GEN 4 DRM SPL ISO	5
373	1-FCV-043-0201A	LOCA H2 CNTMT MN IS	5
374	1-FCV-043-0202A	LOCA H2 CNTMT MN OT	5
375	1-FCV-043-0207B	LOCA H2 CNTMT MN IS	5
376	1-FCV-043-0208B	LOCA H2 CNTMT MN OT	5
377	1-FCV-043-0433A	LOCA H2 CNTMT MN IS	5
378	1-FCV-043-0434A	LOCA H2 CNTMT MN IS	5
379	1-FCV-043-0435B	LOCA H2 CNTMT MN IS	5
380	1-FCV-043-0436B	LOCA H2 CNTMT MN IS	5
381	1-FCV-043-054D	STGR 1 DRM SPL ISO	5
382	1-FCV-043-056D	STGR 2 DRM SPL ISO	5
383	1-FCV-043-059D	STGR 3 DRM SPL ISO	5
384	1-FCV-043-063D	STGR 4 DRM SPL ISO	5
385	1-FCV-061-0096-A	GLYCOL SUPPLY HEADER ISO VALVE	5
386	1-FCV-061-0097-B	GLYCOL SUPPLY HEADER ISO VALVE	5
387	1-FCV-061-0110-A	GLYCOL RETURN HEADER ISO VALVE	5
388	1-FCV-061-0122-B	GLYCOL RETURN HEADER VALVE	5
389	1-FCV-061-0191-A	GLYCOL SUPPLY C.I.	5
390	1-FCV-061-0192-B	GLYCOL SUPPLY C.I.	5
391	1-FCV-061-0193-A	GLYCOL FLOOR RETURN ISOLATION VALVE	5
392	1-FCV-061-0194-A	GLYCOL FLOOR RETURN ISOLATION VALVE	5
393	1-FCV-062-0009	RCP 1 SEAL INJECTION ISOLATION VALVE	3
394	1-FCV-062-0022	RCP 2 SEAL INJECTION ISOLATION VALVE	3
395	1-FCV-062-0035	RCP 3 SEAL INJECTION ISOLATION VALVE	3
396	1-FCV-062-0048	RCP 4 SEAL INJECTION ISOLATION VALVE	3

No.	UNID	Description	Safety Function
397	1-FCV-062-0061-B	SEAL WATER ISOLATION VALVE	3,5
398	1-FCV-062-0063-A	RCP SEAL INJECTION ISOLATION VALVE	3,5
399	1-FCV-062-0069-A	RC LOOP 3 LETDOWN ISOLATION FLOW	5,3
400	1-FCV-062-0070-A	RC LOOP 3 LETDOWN ISOLATION FLOW	5,3
401	1-FCV-062-0072-A	REGEN HT EXCH LETDOWN ORIFICE A ISOL V	5
402	1-FCV-062-0073	REGEN HT EXCH LETDOWN ORIFICE B ISOL V	5,3
403	1-FCV-062-0074	REGEN HT EXCH LETDOWN ORIFICE C ISOL V	5,3
404	1-FCV-062-0076	LETDOWN ORIFICE ISOLATION VALVE	5,3
405	1-FCV-062-0077	LETDOWN LINE ISOL VLV FLOW CONTROL	5,3
406	1-FCV-062-0084	AUX PRESSURIZER SPRAY	2
407	1-FCV-062-0085-B	NORMAL CHARGING ISOL VALVE	3
408	1-FCV-062-0089	SEAL REG VALVE	3,5
409	1-FCV-062-0090-A	CHARGING HEADER ISOL VALVE	3
410	1-FCV-062-0090-A	CHARGING HEADER ISOL VALVE	5
411	1-FCV-062-0091-B	CHARGING FLOW ISOLATION VALVE	5
412	1-FCV-062-0091-B	CHARGING FLOW ISOLATION VALVE	3
413	1-FCV-062-0093	PRZR LEVEL CONT	3
414	1-FCV-062-0138-B	EMERGENCY BORATION FLOW CONT VLV	3
415	1-FCV-062-1228-B	BORIC ACID ISOLATION VLV	3
416	1-FCV-062-1229-A	BORIC ACID ISOLATION VLV	3
417	1-FCV-063-0001-A	RWST TO RHR PMP FLOW CNTL VLV	1,3,4
418	1-FCV-063-0003-A	SIS PUMP DISCHARGE TO RWST SHUTOFF VALV	3,4
419	1-FCV-063-0004-B	SIS PUMP A-A DISCH TO RWST SHUTOFF VALVE	3,4
420	1-FCV-063-0005-B	RWST TO SIS PUMP FLOW CONTROL VALVE	1,3,4
421	1-FCV-063-0006-B	SIS PUMP INLET TO CVCS CHARGING PUMP	3,4
422	1-FCV-063-0007-A	SIS PUMP INLET TO CVCS CHARGING PUMP	3,4
423	1-FCV-063-0008-A	RHR HTX A TO CVCS CHARGING PUMPS	3,4
424	1-FCV-063-0011-B	RHR HTX B TO SIS PUMPS	3,4
425	1-FCV-063-0021	SIS PUMP OUTLET TO SIS TEST LINE	5
426	1-FCV-063-0022-B	SIS PUMPS COLD LEG INJECTION CONTROL VLV	3,4
427	1-FCV-063-0023-B	SIS ACCUM FILL LINE ISOLATION VALVE	5
428	1-FCV-063-0025-B	SIS CCP INJ TANK SHUTOFF VALVE	1,3,4
429	1-FCV-063-0026-A	SIS BORON INJ TANK SHUTOFF VALVE	1,3,4

No.	UNID	Description	Safety Function
430	1-FCV-063-0047-A	SIS PUMP A-A INLET VLV	1,3,4
431	1-FCV-063-0048-B	SIS PUMP B-B INLET VLV	1,3,4
432	1-FCV-063-0064-A	SIS ACCUM TANK N2 HDR INLET VALVE	5
433	1-FCV-063-0067-B	SIS ACCUMULATOR TNK 4 FLOW ISOL VALVE	3
434	1-FCV-063-0071-A	SIS CHECK VALVE FLOW ISOLATION VALVE	5
435	1-FCV-063-0072-A	RHR CONTAINMENT SUMP FLOW ISOL VLV	4,3,5
436	1-FCV-063-0073-B	RHR CONTAINMENT SUMP FLOW ISOL VLV	4,3,5
437	1-FCV-063-0080-A	SIS ACCUMULATOR TNK 3 FLOW ISOL VALVE	3
438	1-FCV-063-0084-B	SIS CHK VLV ISOL HDR FLOW ISOLATION VLV	5
439	1-FCV-063-0093-A	RHR PUMP A-A DISCHARGE TO CL 2&3	1,3,4
440	1-FCV-063-0094-B	RHR PUMP B-B DISCHARGE TO CL 1&4	1,3,4
441	1-FCV-063-0098-B	SIS ACCUMULATOR TNK 2 FLOW ISOL VALVE	3
442	1-FCV-063-0111	SIS CHECK VLV LEAK TEST ISOLATION VALVE	5
443	1-FCV-063-0112	SIS CHECK VLV LEAK TEST ISOLATION VALVE	5
444	1-FCV-063-0118-A	SIS ACCUMULATOR TNK 1 FLOW ISOL VALVE	3
445	1-FCV-063-0121	SIS FLOW TO CL CHECK VALVE TEST	5
446	1-FCV-063-0152-A	SIS PUMP A-A OUTLET FLOW CONTROL VALVE	1,3,4
447	1-FCV-063-0153-B	SIS PUMP B-B OUTLET FLOW CONTROL VALVE	1,3,4
448	1-FCV-063-0156-A	SIS PUMP OUTLET TO RCS LP 1&3 HL	1,3,4
449	1-FCV-063-0157-B	SIS PUMP OUTLET TO RCS LP 2&4 HL	1,3,4
450	1-FCV-063-0158	CONT ISO	5
451	1-FCV-063-0167	SIS PUMP OUTLET TEST LINE	5
452	1-FCV-063-0172-B	RHR INJECTION OR RECIRC AFTER LOCA	3,4
453	1-FCV-063-0174	SIS TEST LINE CHECK VALVE TEST	5
454	1-FCV-063-0175-B	SIS PUMP B-B DISCH TO RWST SHUTOFF VLV	3,4
455	1-FCV-063-0177	SUMP RECIRC FROM RHR TO SIP	3,4
456	1-FCV-063-0185	CONT ISO	5
457	1-FCV-067-0009A	ERCW HEADER A STRAINER BACKWASH VALV	0
458	1-FCV-067-0009B	ERCW HEADER A STRAINER FLUSHOUT VALVE	0
459	1-FCV-067-0010A	ERCW HEADER B STRAINER BACKWASH VALV	0
460	1-FCV-067-0010B	ERCW HEADER B STRAINER FLUSHOUT VALVE	0
461	1-FCV-067-0065	EMERG DSL HTXS B1&B2 SUP VLV FROM HDR	0
462	1-FCV-067-0068	EMERG DSL HTXS A1 &A2 SUP VLV FROM HDR	0

No.	UNID	Description	Safety Function
463	1-FCV-067-0083	LOWER CNTMT A COOLERS SUPPLY ISOL VAL	0,5
464	1-FCV-067-0087	LWR CNTMT A CLRS DISCH ISOL VLV	0,5
465	1-FCV-067-0088	LOWER CNTMT A COOLERS DISCH ISOL VALVE	0,5
466	1-FCV-067-0089	LWR CNTMT A COOLERS SUPPLY ISOL VLV	0,5
467	1-FCV-067-0091	LOWER CNTMT C COOLERS SUPPLY ISOL VAL	0,5
468	1-FCV-067-0095	LWR CNTMT C CLRS DISCH ISOL VLV	0,5
469	1-FCV-067-0096	LOWER CNTMT C COOLERS DISCH ISOL VALV	0,5
470	1-FCV-067-0097	LWR CNTMT C COOLERS SUPPLY ISOL VLV	0,5
471	1-FCV-067-0099	LOWER CNTMT B COOLERS SUPPLY ISOL VAL	0,5
472	1-FCV-067-0103	LWR CNTMT B CLRS DISCH ISOL VLV	0,5
473	1-FCV-067-0104	LOWER CNTMT B COOLERS DISCH ISOL VALVE	0,5
474	1-FCV-067-0105	LWR CNTMT B COOLERS SUPPLY ISOL VLV	0,5
475	1-FCV-067-0107	LOWER CNTMT D COOLERS SUPPLY ISOL VAL	0,5
476	1-FCV-067-0111	LWR CNTMT D CLRS DISCH ISOL VLV	0,5
477	1-FCV-067-0112	LOWER CNTMT D COOLERS DISCH ISOL VALV	0,5
478	1-FCV-067-0113	LWR CNTMT D CLRS SUPPLY ISOL VLV	0,5
479	1-FCV-067-0123	CNTMT SPRAY HTX B SUPPLY CONTROL VALV	0,5
480	1-FCV-067-0124	CONTAINMENT SPRAY HTX B DISCHARGE VAL	0,5
481	1-FCV-067-0125	CNTMT SPRAY HTX A SUPPLY CONTROL VALV	0,5
482	1-FCV-067-0126	CONTAINMENT SPRAY HTX A DISCHARGE VAL	0,5
483	1-FCV-067-0130	UPPER CNTMT VENT CLR A SUPPLY ISOL VLV	0,5
484	1-FCV-067-0131	UPPER CNTMT VENT CLR A DISCH ISOL VLV	0,5
485	1-FCV-067-0133	UPPER CNTMT VENT CLR C Supply ISOL VLV	0,5
486	1-FCV-067-0134	UPPER CNTMT VENT CLR C DISCH ISOL VLV	0,5
487	1-FCV-067-0138	UPPER CNTMT VENT CLR B SUPPLY ISOL VLV	0,5
488	1-FCV-067-0139	UPPER CNTMT VENT CLR B DISCH ISOL VLV	0,5
489	1-FCV-067-0141	UPPER CNTMT VENT CLR D SUPPLY ISOL VLV	0,5
490	1-FCV-067-0142	UPPER CNTMT VENT CLR D DISCH ISOL VLV	0,5
491	1-FCV-067-0143	CCS HTX OUTLET	0
492	1-FCV-067-0176	SIS PUMP RM CLR SUPPLY CNTL VLV	0
493	1-FCV-067-0182	SIS PUMP RM CLR SUPPLY CNTL VLV	0
494	1-FCV-067-0184	CS PUMP RM CLR SUPPLY CNTL VLV	0
495	1-FCV-067-0186	CS PUMP RM CLR SUPPLY CNTL VLV	0

No.	UNID	Description	Safety Function
496	1-FCV-067-0295	UPPER CNTMT VENT CLR A DISCH ISOL VLV	0,5
497	1-FCV-067-0296	UPPER CNTMT VENT CLR C DISCH ISOL VLV	0,5
498	1-FCV-067-0297	UPPER CNTMT VENT CLR B DISCH ISOL VLV	0,5
499	1-FCV-067-0298	UPPER CNTMT VENT CLR D DISCH ISOL VLV	0,5
500	1-FCV-067-162	CCS PMP & AUX FW PMP AREA CLR A-A	0,5
501	1-FCV-067-164	CCS PMP & AUX FW PMP AREA CLR B-B	0,5
502	1-FCV-067-213	SFP PIT PMP & TB BOOSTER PMP AREA CLR A-	0,5
503	1-FCV-067-215	SFP PIT PMP & TB BOOSTER PMP AREA CLR B-	0,5
504	1-FCV-067-342	PIPE CHASE CLR 1A-A	0,5
505	1-FCV-067-344	PIPE CHASE CLR 1B-B	0,5
506	1-FCV-067-346	EL 692 PEN RM CLR 1A-A	0,5
507	1-FCV-067-348	EL 692 PEN RM CLR 1B-B	0,5
508	1-FCV-067-350	EL 713 PEN RM CLR 1A-A	0,5
509	1-FCV-067-352	EL 713 PEN RM CLR 1B-B	0,5
510	1-FCV-067-354	EL 737 PEN RM CLR 1A-A	0,5
511	1-FCV-067-356	EL 737 PEN RM CLR 1B-B	0,5
512	1-FCV-068-0305-A	RCS FLOW CNTL VLV WDS N2 MAN TO PRT	5
513	1-FCV-068-0307-A	RCS FLOW CNTL VLV WDS GA TO PRT	5
514	1-FCV-068-0308-B	RCS FLOW CNTL VLV WDS GA TO PRT	5
515	1-FCV-068-0332	PORV BLOCK VALVE	2,4
516	1-FCV-068-0332-B	RCS PRESSURIZER RELIEF FLOW CTRL VALVE	2
517	1-FCV-068-0333	PORV BLOCK VALVE	2,4
518	1-FCV-068-0333-A	RCS PRESSURIZER RELIEF FLOW CTRL VALVE	2
519	1-FCV-070-0066	CCS SURGE TANK VENT VALVE	0
520	1-FCV-070-0085	EXCESS LETDOWN HTX OUTLET VALVE	5
521	1-FCV-070-0087	RC PUMP THERM BARRIER RET CNTNMT ISOL	0,5
522	1-FCV-070-0089	RC PUMP OIL CLR RET CNTNMT ISOL VALVE	0,5
523	1-FCV-070-0090	RC PUMP THERM BARRIER RET CNTNMT ISOL	0,5
524	1-FCV-070-0092	RC PUMP OIL CLR RET CNTNMT ISOL VALVE	0,5
525	1-FCV-070-0100	RC PUMP OIL CLR HDR CONT ISOL VALVE	0,5
526	1-FCV-070-0133	RC PUMP THERM BARRIER CONT ISOL VALVE	0
527	1-FCV-070-0134	RC PUMP THERM BARRIER CONT ISOL VALVE	0,5
528	1-FCV-070-0143	EXCESS LETDOWN HTX CONT INLET ISOL VLV	5

No.	UNID	Description	Safety Function
529	1-FCV-070-0153	RHR HTX B OUTLET VALVE	0,4
530	1-FCV-070-0156	RHR HTX A OUTLET VALVE	0,4
531	1-FCV-070-0183	SAMPLE HTX HDR OUTLET VALVE	0
532	1-FCV-070-0215	SAMP HTX INLET	0
533	1-FCV-072-0002	CONTAINMENT SPRAY HDR B ISOLATION VALVE	5
534	1-FCV-072-0021	RWST TO SPRAY HDR B FLOW CONTROL VALVE	5
535	1-FCV-072-0022	RWST TO SPRAY HDR A FLOW CONTROL VALVE	5
536	1-FCV-072-0039	CONTAINMENT SPRAY HDR A ISOLATION VALVE	5
537	1-FCV-072-0040	RHR SPRAY HEADER A ISOLATION VALVE	5
538	1-FCV-072-0041	RHR SPRAY HEADER B ISOLATION VALVE	5
539	1-FCV-072-0044	CNTMT SUMP SPRAY HDR A FLOW CONTROL VLV	5
540	1-FCV-072-0045	CNTMT SUMP SPRAY HDR B FLOW CONTROL VLV	5
541	1-FCV-074-0001-A	RHR SYSTEM ISOLATION VALVE	4
542	1-FCV-074-0002-B	RHR SYSTEM ISOLATION VALVE	4,5
543	1-FCV-074-0003-A	RHR PUMP 1A-A INLET FLOW CONTROL VALVE	1,3,4
544	1-FCV-074-0008	RHR SYSTEM ISOLATION VALVE	4,5
545	1-FCV-074-0009	RHR SYSTEM ISOLATION VALVE	4,5
546	1-FCV-074-0012-A	RHR PUMP 1A-A MINIMUM FLOW VALVE	1,3,4
547	1-FCV-074-0016	RHR HT EX A OUTLET FLOW CONTROL VALVE	1,3,4
548	1-FCV-074-0021-B	RHR PUMP 1B-B INLET FLOW CONTROL VALVE	1,3,4
549	1-FCV-074-0024-B	RHR PUMP 1 B-B MINIMUM FLOW VALVE	1,3,4
550	1-FCV-074-0028	RHR HT EX B OUT FLOW CONTROL VALVE	1,3,4
551	1-FCV-074-0032	RHR HT EX NB BYPASS FCV	3,4
552	1-FCV-074-0033-A	RHR HT EX A BYPASS	3,4
553	1-FCV-074-0035-B	RHR HT EX BY BYPASS	3,4
554	1-FCV-077-0009-B	R C DRAIN TANK FLOW CNTL VALVE	5
555	1-FCV-077-0010-A	R C DRAIN TANK FLOW CNTL VALVE	5
556	1-FCV-077-0016-B	R C DRN TNK GAS ANALY FLW CON	5
557	1-FCV-077-0017	R C DRN TNK GAS ANALY FLW CON	5
558	1-FCV-077-0018-B	R C DRN TNK TO VENT HDR ISOL	5
559	1-FCV-077-0019-A	R C DRN TNK TO VENT HDR ISOL	5
560	1-FCV-077-0020	R C DRAIN TANK N2 SUPPLY FLOW	5
561	1-FCV-077-0127-B	REACT BLDG SUMP DISCH FLOW CONTROL VA	5

No.	UNID	Description	Safety Function
562	1-FCV-077-0128-A	REACT BLDG SUMP DISCH FLOW CONTROL VA	5
563	1-FCV-081-0012	PW RCS PRESS RELF TNK & RCP STANDPIPES	5
564	1-FCV-090-0107	CNTNMT BLDG LWR COMPT MON ISOL VALVE	5
565	1-FCV-090-0108	CNTNMT BLDG LWR COMPT MON ISOL VALVE	5
566	1-FCV-090-0109	CNTNMT BLDG LWR COMPT MON ISOL VALVE	5
567	1-FCV-090-0110	CNTNMT BLDG LWR COMPT MON ISOL VALVE	5
568	1-FCV-090-0111	CNTNMT BLDG LWR COMPT MON ISOL VALVE	5
569	1-FCV-090-0113	CNTNMT BLDG UPR COMPT MON ISOL VALVE	5
570	1-FCV-090-0114	CNTNMT BLDG UPR COMPT MON ISOL VALVE	5
571	1-FCV-090-0115	CNTNMT BLDG UPR COMPT MON ISOL VALVE	5
572	1-FCV-090-0116	CNTNMT BLDG UPR COMPT MON ISOL VALVE	5
573	1-FCV-090-0117	CNTNMT BLDG UPR COMPT MON ISOL VALVE	5
574	1-FE-074-0012	RHR FLOW INDICATOR, TRAIN A	3,4
575	1-FE-074-0024	RHR FLOW INDICATOR, TRAIN B	3,4
576	1-FIS-070-0081	THERMAL BARRIER CCS HDR FLOW	0
577	1-FIS-074-12-A	RHR PMP 1A-A MIN FLOW VALV SW	1,3,4
578	1-FIS-074-24-B	RHR PMP 1B-B MIN FLOW VALV SW	1,3,4
579	1-FLTR-031-447	480V BD RM 1B FILTER DRIER	5
580	1-FLTR-031-465	480V BD RM 1A FILTER DRIER	5
581	1-FLTR-062-0065	SEAL WATER RETURN FILTER	3
582	1-FLTR-062-0096	SEAL WATER INJECTION FILTER B	3
583	1-FLTR-062-0097	SEAL WATER INJECTION FILTER A	3
584	1-FLTR-062-0117	REACTOR COOLANT FILTER	3
585	1-FS-030-447-A	DG 1A-A RM EXH LOW FLOW	5
586	1-FS-030-449-B	DG 1B-B RM EXH LOW FLOW	5
587	1-FS-030-451-A	DG 1A-A RM EXH LOW FLOW	5
588	1-FS-030-453-B	DG 1A-A RM EXH LOW FLOW	5
589	1-FSV-001-0004A	SG1 MAIN STM HDR ISO VLV	5
590	1-FSV-001-0004B	SG1 MAIN STM HDR ISO VLV	5
591	1-FSV-001-0004D	SG1 MAIN STM HDR ISO VLV	5
592	1-FSV-001-0004E	SG1 MAIN STM HDR ISO VLV	5
593	1-FSV-001-0004G	SG1 MAIN STM HDR ISO VLV	5
594	1-FSV-001-0004H	SG1 MAIN STM HDR ISO VLV	5

No.	UNID	Description	Safety Function
595	1-FSV-001-0011A	SG2 MAIN STM HDR ISO VLV	5
596	1-FSV-001-0011B	SG2 MAIN STM HDR ISO VLV	5
597	1-FSV-001-0011D	SG2 MAIN STM HDR ISO VLV	5
598	1-FSV-001-0011E	SG2 MAIN STM HDR ISO VLV	5
599	1-FSV-001-0011G	SG2 MAIN STM HDR ISO VLV	5
600	1-FSV-001-0011H	SG2 MAIN STM HDR ISO VLV	5
601	1-FSV-001-0022A	SG3 MAIN STM HDR ISO VLV	5
602	1-FSV-001-0022B	SG3 MAIN STM HDR ISO VLV	5
603	1-FSV-001-0022D	SG3 MAIN STM HDR ISO VLV	5
604	1-FSV-001-0022E	SG3 MAIN STM HDR ISO VLV	5
605	1-FSV-001-0022G	SG3 MAIN STM HDR ISO VLV	5
606	1-FSV-001-0022H	SG3 MAIN STM HDR ISO VLV	5
607	1-FSV-001-0029A	SG4 MAIN STM HDR ISO VLV	5
608	1-FSV-001-0029B	SG4 MAIN STM HDR ISO VLV	5
609	1-FSV-001-0029D	SG4 MAIN STM HDR ISO VLV	5
610	1-FSV-001-0029E	SG4 MAIN STM HDR ISO VLV	5
611	1-FSV-001-0029G	SG4 MAIN STM HDR ISO VLV	5
612	1-FSV-001-0029H	SG4 MAIN STM HDR ISO VLV	5
613	1-FSV-030-0134	CONT ANNULUS DP ISOLATION VALVE	5
614	1-FSV-030-0135	CONT ANNULUS DP ISOLATION VALVE	5
615	1-FSV-031-441	480V BD RM 1A REFRIGERANT LINE FSV	5
616	1-FSV-031-447	480V BD RM 1B REFRIGERANT LINE FSV	5
617	1-FSV-043-0075B	DNSTR EXCSW ITDN HT EXC ISO	5
618	1-FSV-043-0077A	EXCESS ITDN HX SMPL ISOL	5
619	1-FSV-043-0250A	PAS HOT LEG 1 SAMPLE ISOL	5
620	1-FSV-043-0251A	PAS HOT LEG 1 SAMPLE ISOL	5
621	1-FSV-043-0287A	PAS CONT AIR SUPPLY ISOL	5
622	1-FSV-043-0288A	PAS CONT AIR SUPPLY ISOL	5
623	1-FSV-043-0307A	PAS CONT AIR RETURN ISOL	5
624	1-FSV-043-0309B	PAS HOT LEG 3 SAMPLE ISOL	5
625	1-FSV-043-0310B	PAS HOT LEG 3 SAMPLE ISOL	5
626	1-FSV-043-0318B	PAS CONT AIR SPL ISO	5
627	1-FSV-043-0319B	PAS CONT AIR SPL ISO	5

No.	UNID	Description	Safety Function
628	1-FSV-043-0325B	PAS CNTMT AIR RETRN ISOL	5
629	1-FSV-043-0341B	PAS WASTE TO CONT SUMP ISO	5
630	1-FSV-043-0342A	PAS WASTE TO CONT SMP ISOL	5
631	1-FSV-061-0096-A	GLYCOL SUPPLY HDR ISO VLV	5
632	1-FSV-061-0097-B	GLYCOL SUPPLY HDR ISO VLV	5
633	1-FSV-061-0110-A	GLYCOL RETURN HDR ISO VLV	5
634	1-FSV-061-01220B	GLYCOL RETURN HDR ISO VLV	5
635	1-FSV-061-0191-A	GLYCOL CUPPLY CONT ISO VLV	5
636	1-FSV-061-0192-B	GLYCOL CUPPLY CONT ISO VLV	5
637	1-FSV-061-0193-A	GLYCOL FLOOR RETURN ISO VLV	5
638	1-FSV-061-0194-BA	GLYCOL CLOOR RETURN ISO VLV	5
639	1-FSV-062-0009	RCP 1 SEAL INJECT ISO VLV SOLENOID	3
640	1-FSV-062-0022	RCP 2 SEAL INJECT ISO VLV SOLENOID	3
641	1-FSV-062-0035	RCP 3 SEAL INJECT ISO VLV SOLENOID	3
642	1-FSV-062-0048	RCP 4 SEAL INJECT ISO VLV SOLENOID	3
643	1-FSV-062-0069-A	RC LOOP 3 LETDOWN ISOLATION VALVE	5,3
644	1-FSV-062-0070-A	RC LOOP 3 LETDOWN ISOLATION VALVE	5,3
645	1-FSV-062-0072-A	REGEN HT EXCH LETDOWN ORIFICE A ISO VL	5
646	1-FSV-062-0073	REGEN HT EXCH LETDOWN ORIFICE B ISO VL	5,3
647	1-FSV-062-0074	REGEN HT EXCH LETDOWN ORIFICE C ISO VL	5,3
648	1-FSV-062-0076	LETDOWN ORIFICE ISOLATION	5,3
649	1-FSV-062-0077	LETDOWN ORIFICE ISOLATION	5,3
650	1-FSV-062-0084	AUX PRZR SPRAY	2
651	1-FSV-062-0085-B	NORMAL CHARGING ISOLATION VALVE	3
652	1-FSV-063-0021	SIS PUMP OUTLET TO SIS TEST LINE	3,4,5
653	1-FSV-063-0023-B	SIS ACUM FILL LINE ISO VLV	3,4,5
654	1-FSV-063-0064-A	SIS ACUM TANK N2 HDR INLET VLV	5
655	1-FSV-063-0071-A	SIS CHECK VLV FLOW ISO VLV	5
656	1-FSV-063-0084-B	SIS CHECK VLV HDR FLOW ISO VLV	5
657	1-FSV-063-0185	RHR SUPPLY TEST LINE VLV	5
658	1-FSV-068-0305-A	RCS FLOW CNTL VLV WDS N2 TO PRT	5
659	1-FSV-068-0307-A	RCS FLOW CNTL VLV WDS GA TO PRT	5
660	1-FSV-068-0308-A	RCS FLOW CNTL VLV WDS GA TO PRT	5

No.	UNID	Description	Safety Function
661	1-FSV-068-0394-A	REACTOR HEAD VENT ISOLATION VALVE	4
662	1-FSV-068-0395-B	REACTOR HEAD VENT ISOLATION VALVE	4
663	1-FSV-068-0396-B	REACTOR HEAD VENT ISOLATION VALVE	4
664	1-FSV-068-0397-A	REACTOR HEAD VENT ISOLATION VALVE	4
665	1-FSV-077-0009-B	R C DRAIN TANK FLOW CNTL VALVE	5
666	1-FSV-077-0010-A	R C DRAIN TANK FLOW CNTL VALVE	5
667	1-FSV-077-0016-A	R C DRAIN TK GAS ANALYZ FLOW	5
668	1-FSV-077-0017-A	R C DRAIN TK GAS ANALYZ FLOW	5
669	1-FSV-077-0019-A	R C DRAIN TK TO VENT HDR	5
670	1-FSV-077-0020	R C DRAIN TK TO VENT HDR	5
671	1-FSV-081-0012	PW RCS PRESS RELF TNK & RCP STANDPIPES	5
672	1-FT-062-0001	RCP NO.1 SEAL INJECTION FLOW	3
673	1-FT-062-0014	RCP NO.2 SEAL INJECTION FLOW	3
674	1-FT-062-0027	RCP NO.3 SEAL INJECTION FLOW	3
675	1-FT-062-0040	RCP NO.4 SEAL WATER FLOW	3
676	1-FT-062-93A	CHARGING HEADER FLOW CONTROL	3
677	1-FT-067-0061-A	ERCW HDR 1A SUPPLY	0
678	1-FT-067-0062-B	ERCW HDR 1B SUPPLY	0
679	1-FT-067-0122	CNTMT SPRAY HX 1B-B ERCW INLET FLOW	0
680	1-FT-067-0136	CNTMT SPRAY HX 1A-A ERCW INLET FLOW	0
681	1-FT-070-0159-A	1A ESF EQUIP - CCS SUPPLY HDR	0
682	1-FT-070-0165-B	1B ESF EQUIP - CCS SUPPLY HDR	0
683	1-FT-070-0215A-A	SAMPLE HTX HDR INLET FLOW	0
684	1-FT-070-0215B-A	SAMPLE HTX HDR OUTLET FLOW	0
685	1-FT-072-0013-G	CONTAINMENT SPRAY HEADER B MINI FLOW CTL	5
686	1-FT-072-0034-F	CONTAINMENT SPRAY HEADER A MINI FLOW CTL	5
687	1-GEN-082-0001A	DIESEL GENERATOR 1A-A	0
688	1-GEN-082-0001B	DIESEL GENERATOR 1B-B	0
689	1-HIC-062-89A	RCP SEAL INJECTION FLOW	3
690	1-HIC-062-93A	CHARGING HEADER FLOW CONTROL-PER LE	3
691	1-HS-067-0431B-A	SCRN WASH PUMP 1A-A HAND SWITCH	0
692	1-HS-067-0440B-B	SCRN WASH PUMP 1B-B HAND SWITCH	0
693	1-HTX-062-0066	SEAL WATER HEAT EXCHANGER	3

No.	UNID	Description	Safety Function
694	1-HTX-062-0120	REGENERATIVE HEAT EXCHANGER	3
695	1-HTX-062-0121	EXCESS LETDOWN HTX	0
696	1-HTX-062-0124	LETDOWN HEAT EXCHANGER	3
697	1-HTX-070-0185	COMPONENT COOLING HX A	0
698	1-HTX-072-0001A	CONTAINMENT SPRAY HEAT EXCHANGER 1A	5
699	1-HTX-072-0001B	CONTAINMENT SPREAY HEAT EXCHANGER 1B	5
700	1-HTX-074-0010-A	RHR PUMP 1A-A SEAL HEAT EXCHANGER	1,3,4
701	1-HTX-074-0020-B	RHR PUMP 1B-B INLET SEAL HEAT EXCHANGER	1,3,4
702	1-HTX-074-0030-A	RHR HEAT EXCHANGER 1A	1,3,4
703	1-HTX-074-0031-B	RHR HEAT EXCHANGER 1B	1,3,4
704	1-IACL-082-0101	DG EN 1A1 INTAKE AIR CLEANER	0
705	1-IACL-082-0102	DG EN 1A2 INTAKE AIR CLEANER	0
706	1-IACL-082-0103	DG EN 1B1 INTAKE AIR CLEANER	0
707	1-IACL-082-0104	DG EN 1B2 INTAKE AIR CLEANER	0
708	1-INV-235-0001-D	120VAC VITAL INVERTER 1-I	0
709	1-INV-235-0002-E	120VAC VITAL INVERTER 1-11	0
710	1-INV-235-0003-F	120VAC VITAL INVERTER 1-111	0
711	1-INV-235-0004-G	120VAC VITAL INVERTER 1-IV	0
712	1-JB-290-5235	SG 1,2,3,4 BLOWDOWN CNTL & ISO VLV RELAY	5
713	1-JB-290-5250	SG 1,2,3,4 BLOWDOWN CNTL & ISO VLV RELAY	5
714	1-JB-292-3351	0-XFMR-31-33B & 0-XFMR-31-35-B	0
715	1-JB-292-3352	0-XFMR-31-32-A & 0-XFMR-31-34-A	0
716	1-JB-293-6294	1-RLY-043-207-B & 208-B, H2 MONITOR	5
717	1-JB-293-6295	1-RLY-043-201-A & 202-A, H2 MONITOR	5
718	1-LCV-003-0148	STM GEN #3 LEVEL CONTROL VALVE	4,5
719	1-LCV-003-0148A	CONT ISO	4,5
720	1-LCV-003-0156	STM GEN #2 LEVEL CONTROL VALVE	4,5
721	1-LCV-003-0156A	CONT ISO	4,5
722	1-LCV-003-0164	STM GEN #1 LEVEL CONTROL VALVE	4,5
723	1-LCV-003-0164A	CON ISO	4,5
724	1-LCV-003-0171	STM GEN #4 LEVEL CONTROL VALVE	4,5
725	1-LCV-003-0171A	CONT ISO	4,5
726	1-LCV-003-0172	STM GEN #3 LEVEL CONTROL VALVE	5

No.	UNID	Description	Safety Function
727	1-LCV-003-0173	STM GEN #2 LEVEL CONTROL VALVE	5
728	1-LCV-003-0174	STM GEN #1 LEVEL CONTROL VALVE	5
729	1-LCV-003-0175	STM GEN #4 LEVEL CONTROL VALVE	5
730	1-LCV-062-0118-A	HOLDUP TANK VALVE	3
731	1-LCV-062-0132-A	VCT OUTLET ISOLATION VALVE LEVEL CONTR	3
732	1-LCV-062-0133-B	VCT OUTLET ISOLATION VALVE LEVEL CONTR	3
733	1-LCV-062-0135-A	RWST CVCS SUPPLY HDR ISOLATION	3
734	1-LCV-062-0136-B	RWST CVCS SUPPLY HDR ISOLATION	3
735	1-LCV-070-0063	CCS SURGE TANK DEMIN WATER INLET VALVE	0
736	1-LSV-062-0118A	HOLDUP TANK - DIVERSION VALVE	3
737	1-LSV-062-0118B	HOLDUP TANK - DIVERSION VALVE	3
738	1-LT-003-0038	STM GEN 1 LEVEL XMTR (NR)	4
739	1-LT-003-0039	STM GEN 1 LEVEL XMTR (NR)	4
740	1-LT-003-0042	STM GEN 1 LEVEL XMTR (NR)	4
741	1-LT-003-0043	STM GEN 1 LEVEL XMTR (NR)	4
742	1-LT-003-0051	STM GEN 2 LEVEL XMTR (NR)	4
743	1-LT-003-0052	STM GEN 2 LEVEL XMTR (NR)	4
744	1-LT-003-0055	STM GEN 2 LEVEL XMTR (NR)	4
745	1-LT-003-0056	STM GEN 2 LEVEL XMTR (WR)	4
746	1-LT-003-0093	STM GEN 3 LEVEL XMTR (NR)	4
747	1-LT-003-0094	STM GEN 3 LEVEL XMTR (NR)	4
748	1-LT-003-0097	STM GEN 3 LEVEL XMTR (NR)	4
749	1-LT-003-0098	STM GEN 3 LEVEL XMTR (WR)	4
750	1-LT-003-0106	STM GEN 4 LEVEL XMTR (NR)	4
751	1-LT-003-0107	STM GEN 4 LEVEL XMTR (NR)	4
752	1-LT-003-0110	STM GEN 4 LEVEL XMTR (NR)	4
753	1-LT-003-0111	STM GEN 4 LEVEL XMTR (WR)	4
754	1-LT-003-148	AFW PMP 1B-B, SG 3 LVL	4
755	1-LT-003-156	AFW PMP 1A-A, SG 2 LVL	4
756	1-LT-003-164	AFW PMP 1A-A, SG 1 LVL	4
757	1-LT-003-171	AFW PMP 1B-B, SG 4 LVL	4
758	1-LT-062-0129A	VOLUME CONTROL TANK LEVEL XMITTER	3
759	1-LT-062-0129C	VOLUME CONTROL TANK LEVEL XMITTER	3

No.	UNID	Description	Safety Function
760	1-LT-062-0130A	VOLUME CONTROL TANK LEVEL XMITTER	3
761	1-LT-062-0130C	VOLUME CONTROL TANK LEVEL XMITTER	3
762	1-LT-063-0050D	RWST LEVEL	0
763	1-LT-063-0051-E	RWST LEVEL	0
764	1-LT-063-0052-F	RWST LEVEL	0
765	1-LT-063-0053-G	RWST LEVEL	0
766	1-LT-063-0180-D	CNTMT SUMP LEVEL	0
767	1-LT-063-0181-E	CNTMT SUMP LEVEL	0
768	1-LT-063-0182-F	CNTMT SUMP LEVEL	0
769	1-LT-063-0183-G	CNTMT SUMP LEVEL	0
770	1-LT-068-0320-F	RCS PRESSURIZER LEVEL TRANSMITTER	3
771	1-LT-068-0335-E	RCS PRESSURIZER LEVEL TRANSMITTER	3
772	1-LT-068-0339-D	RCS PRESSURIZER LEVEL TRANSMITTER	3
773	1-LT-068-367-D	REACTOR VESSEL WIDE RANGE LEVEL	0
774	1-LT-068-368-D	REACTOR VESSEL NARROW RANGE LEVEL	0
775	1-LT-068-369-D	REACTOR VESSEL UPPER PLENUM LEVEL	0
776	1-LT-068-370-E	REACTOR VESSEL WIDE RANGE LEVEL	0
777	1-LT-068-371-E	REACTOR VESSEL NARROW RANGE LEVEL	0
778	1-LT-068-372-E	REACTOR VESSEL UPPER PLENUM LEVEL	0
779	1-LT-070-0063A	CCS SURGE TANK 1A SIDE LEVEL	0
780	1-LT-070-0099A	CCS SURGE TANK 1B SIDE LEVEL	0
781	1-MCC-213-A1-A	REACTOR MOV BOARD 1A1-A	0
782	1-MCC-213-A2-A	REACTOR MOV BOARD 1A2-A	0
783	1-MCC-213-B1-B	REACTOR MOV BOARD 1B1-B	0
784	1-MCC-213-B2-B	REACTOR MOV BOARD 1B2-B	0
785	1-MCC-214-A1-A	480V CONT & AUX BLDG VENT BD 1A1-A	0
786	1-MCC-214-A2-A	480V CONT & AUX BLDG VENT BD 1A2-A	0
787	1-MCC-214-B1-B	480V CONT & AUX BLDG VENT BD 1B1-B	0
788	1-MCC-214-B2-B	480V CONT & AUX BLDG VENT BD 1B2-B	0
789	1-MCC-215-A1-A	DIESEL AUX POWER BOARD 1A1-A	0
790	1-MCC-215-A2-A	DIESEL AUX POWER BOARD 1A2-A	0
791	1-MCC-215-B1-B	DIESEL AUX POWER BOARD 1B1-B	0
792	1-MCC-215-B2-B	DIESEL AUX POWER BOARD 1B2-B	0

No.	UNID	Description	Safety Function
793	1-MCC-232-A-A	REACTOR VENT BOARD 1A-A	0
794	1-MCC-232-B-B	REACTOR VENT BOARD 1B-B	0
795	1-NM-092-131-D	CH 1 NEUT MON SOURCE/INTER RNG AMP	0
796	1-NM-092-132-E	CH 2 NEUT MON SOURCE/INTER RNG AMP	0
797	1-NM-092-138-D	CHI NEUT MON APP R ISOLATOR	0
798	1-OFX-212-B2-B	480V SHUTDOWN XFMR 2B2-B	0
799	1-OXF-068-341 D-B	PZR BACKUP HTR TRANSFORMER	0
800	1-OXF-068-341A-A	PZR BACKUP HTR TRANSFORMER	0
801	1-OXF-212-A1-A	480V SHUTDOWN XFMR 1A1-A	0
802	1-OXF-212-A2-A	480V SHUTDOWN XFMR 1B2-A	0
803	1-OXF-212-A-A	480V SHUTDOWN BD EMERG XFMR 1A-A	0
804	1-OXF-212-B1-B	480V SHUTDOWN XFMR 1B1-B	0
805	1-OXF-212-B-B	480V SHUTDOWN BD EMERG XFMR 1B-B	0
806	1-PCV-001-0005-T	SG 1 MAIN STM HDR PWR RELIEF CONTROL VLV	4,5
807	1-PCV-001-0012-T	SG 2 MAIN STM HDR PWR RELIEF CONTROL VLV	4,5
808	1-PCV-001-0023-T	SG 3 MAIN STM HDR PWR REFLIEF CONTROL VLV	4,5
809	1-PCV-001-0030-T	SG 4 MAIN STM HDR PWR RELIEF CONTROL VLV	4,5
810	1-PCV-003-0122	MDP THROTTLE VLV	4
811	1-PCV-003-0132	MDP THROTTLE VLV	4
812	1-PCV-062-0081	LETDOWN HEAT EXCH PRESS CONT	3
813	1-PCV-068-0334-E	RCS PRESSURIZER POWER RELIEF VALVE	2,4
814	1-PCV-068-0340A-A	RCS PRESSURIZER POWER RELIEF VALVE	2,4
815	1-PDT-030-0042	CNTMT/ANNULUS DIFFERENTIAL PRESS	5
816	1-PDT-030-0043	CNTMT/ANNULUS DIFFERENTIAL PRESS	5
817	1-PDT-030-0044	CNTMT/ANNULUS DIFFERENTIAL PRESS	5
818	1-PDT-030-0045	CNTMT/ANNULUS DIFFERENTIAL PRESS	5
819	1-PMCL-030-175	RHR PUMP 1A-A ROOM COOLER	5
820	1-PMCL-030-176	RHR PUMP 1B-B ROOM COOLER	5
821	1-PMCL-030-177	CONT SPRAY PUMP 1A-A ROOM COOLER	5
822	1-PMCL-030-178	CONT SPRAY PUMP 1B-B ROOM COOLER	5
823	1-PMCL-030-179	SIS PUMP 1B-B ROOM COOLER	5
824	1-PMCL-030-180	SIS PUMP 1A-A ROOM COOLER	5
825	1-PMCL-030-182	CENT CHARGING PUMP 1B-B COOLER	5

No.	UNID	Description	Safety Function
826	1-PMCL-030-183	CENT CHARGING PUMP 1A-A COOLER	5
827	1-PMCL-030-190	CCS & AUX FEEDWATER PUMP AREA COOLER	5
828	1-PMCL-030-191	CCS & AUX FEEDWATER PUMP AREA COOLER	5
829	1-PMP-003-0118	MOTOR DRIVEN AUX FEEDWATER PUMP 1A-A	4
830	1-PMP-003-0128	MOTOR DRIVEN AUX FEEDWATER PUMP 1B-B	4
831	1-PMP-018-0054/1	DAY TNK XFER PMP	0,4
832	1-PMP-018-0054/2	DAY TNK XFER PMP	0,4
833	1-PMP-018-0055/1	DAY TNK XFER PMP	0,4
834	1-PMP-018-055/2	DAY TNK XFER PMP	0,4
835	1-PMP-062-0104-B	CENTRIFUGAL CHARGING PUMP 1B-B	3
836	1-PMP-062-0108-A	CENTRIFUGAL CHARGING PUMP 1A-A	3
837	1-PMP-063-0010-A	SIS PUMP 1A-A	1,3,4
838	1-PMP-063-0015-B	SIS PUMP 1B-B	1,3,4
839	1-PMP-067-0431	ERCW SCREEN WASH PUMP 1A-A	0
840	1-PMP-067-0440	ERCW SCREEN WASH PUMP 1B-B	0
841	1-PMP-068-0008	REACTOR COOLANT PUMP 1	2
842	1-PMP-068-0031	REACTOR COOLANT PUMP 2	2
843	1-PMP-068-0050	REACTOR COOLANT PUMP 3	2
844	1-PMP-068-0073	REACTOR COOLANT PUMP 4	2
845	1-PMP-070-0038	CCS PUMP 1B-B	0
846	1-PMP-070-0046	CCS PUMP 1A-A	0
847	1-PMP-070-0130	CCS THERMAL BARRIER BOOSTER PUMP 1B-B	0
848	1-PMP-070-0131	CCS THERMAL BARRIER BOOSTER PUMP 1A-A	0
849	1-PMP-072-0010	CONTAINMENT SPRAY PUMP 1B-B	5
850	1-PMP-072-0027	CONTAINMENT SPRAY PUMP 1A-A	5
851	1-PMP-074-0010-A	RHR PUMP 1A-A	1,3,4
852	1-PMP-074-0020-B	RHR PUMP 1B-B	1,3,4
853	1-PNL-082-A-A	DG 1A-A CONT. BRD	0
854	1-PNL-082-B-B	DG 1B-B CONT. BRD	0
855	1-PNL-099-L116	REACT TRIP SG	1
856	1-PNL-099-R001-D	REACTOR PROTECTION SET 1	0
857	1-PNL-099-R002-D	REACTOR PROTECTION SET 1	0
858	1-PNL-099-R003-D	REACTOR PROTECTION SET 1	0

No.	UNID	Description	Safety Function
859	1-PNL-099-R004-D	REACTOR PROTECTION SET 1	0
860	1-PNL-099-R005-E	REACTOR PROTECTION SET 2	0
861	1-PNL-099-R006-E	REACTOR PROTECTION SET 2	0
862	1-PNL-099-R007-E	REACTOR PROTECTION SET 2	0
863	1-PNL-099-R008-E	REACTOR PROTECTION SET 2	0
864	1-PNL-099-R009-F	REACTOR PROTECTION SET 3	0
865	1-PNL-099-R010-F	REACTOR PROTECTION SET 3	0
866	1-PNL-099-R011-F	REACTOR PROTECTION SET 3	0
867	1-PNL-099-R012-G	REACTOR PROTECTION SET 4	0
868	1-PNL-099-R013-G	REACTOR PROTECTION SET 4	0
869	1-PNL-099-R046-A	SOLID STATE PROTECTION TRAIN A	0
870	1-PNL-099-R047-A	SOLID STATE PROTECTION TRAIN A	0
871	1-PNL-099-R048-A	SOLID STATE PROTECTION TRAIN A	0
872	1-PNL-099-R049-B	SOLID STATE PROTECTION TRAIN B	0
873	1-PNL-099-R050-B	SOLID STATE PROTECTION TRAIN B	0
874	1-PNL-099-R051-B	SOLID STATE PROTECTION TRAIN B	0
875	1-PNL-099-R052-A	TEST PANEL A	0
876	1-PNL-099-R053-B	TEST PANEL B	0
877	1-PNL-099-R054-A	NSSS AUXILIARY RELAY PANEL A	0
878	1-PNL-099-R055-B	NSSS AUXILIARY RELAY PANEL B	0
879	1-PNL-099-R058	NSSS AUXILIARY RELAY PANEL COMMON	0
880	1-PNL-099-R28-G	REACTOR PROTECTION SET 4	0
881	1-PNL-211-A-A	6.9KV LOGIC RELAY PANEL 1A-A	0
882	1-PNL-211-B-B	6.9KV LOGIC RELAY PANEL 1B-B	0
883	1-PNL-275-R127-A	TRAIN A BOP INSTRUMENT RACK	0
884	1-PNL-275-R131-B	TRAIN B BOP INSTRUMENT RACK	0
885	1-PNL-275-R140-B	TRAIN B BOP INSTRUMENT RACK	0
886	1-PNL-275-R143-A	TRAIN A BOP INSTRUMENT RACK	0
887	1-PNL-275-R148	REACTOR VESSEL LEVEL IND. SYS	0
888	1-PNL-275-R71	TURBO-GEN AUX RELAY PANEL	0
889	1-PNL-275-R72	FEEDWATER AUX RELAY PANEL	0
890	1-PNL-275-R73-A	SEPARATIONS AUX RELAY PANEL A	0
891	1-PNL-275-R74-A	SEPARATIONS AUX RELAY PANEL A	0

No.	UNID	Description	Safety Function
892	1-PNL-275-R75	SEPARATIONS AUX RELAY PANEL A COMM	0
893	1-PNL-275-R77-B	SEPARATIONS AUX RELAY PANEL B	0
894	1-PNL-275-R78-B	SEPARATIONS AUX RELAY PANEL B	0
895	1-PNL-276-L010	AUX CONT RM PNL	0
896	1-PNL-276-L011A	AUX CONT RM PNL	0
897	1-PNL-276-L011B	AUX CONT RM PNL	0
898	1-PNL-278-M(ALL)	ALL U1 MCR PANELS	0
899	1-PRES-068-PR	PRESSURIZER	2,3
900	1-PS-003-139A	AFW PMP 1A-A, SUCTION PRESS	2
901	1-PS-003-139B	AFW PMP 1A-A, SUCTION PRESS	2
902	1-PS-003-139D	AFW PMP 1A-A, SUCTION PRESS C	2
903	1-PS-003-144A	AFW PMP 1B-B, SUCTION PRESS	2
904	1-PS-003-144B	AFW PMP 1B-B, SUCTION PRESS	2
905	1-PS-003-144D	AFW PMP 1B-B, SUCTION PRESS	2
906	1-PS-031-447A-B	480V BD RM 1B R-22 GAS PRESS	5
907	1-PS-031-465-A	480V BD RM 1A R-22 GAS PRESS	5
908	1-PS-067-0434	TRAVEL SCR N 1A-A INLET PRESS	0
909	1-PS-067-0445	TRAVEL SCR N 1B-B INLET PRESS	0
910	1-PSV-001-006A	SG 1 MAIN PWR RELIEF CONT VLV	4,5
911	1-PSV-001-006B	SG 1 MAIN PWR RELIEF CONT VLV	4,5
912	1-PSV-001-006C	SG 1 MAIN PWR RELIEF CONT VLV	4,5
913	1-PSV-001-013A	SG 1 MAIN PWR RELIEF CONT VLV	4,5
914	1-PSV-001-013B	SG 2 MAIN PWR RELIEF CONT VLV	4,5
915	1-PSV-001-013C	SG 2 MAIN PWR RELIEF CONT VLV	4,5
916	1-PSV-001-024A	SG 3 MAIN PWR RELIEF CONT VLV	4,5
917	1-PSV-001-024B	SG 3 MAIN PWR RELIEF CONT VLV	4,5
918	1-PSV-001-024C	SG 3 MAIN PWR RELIEF CONT VLV	4,5
919	1-PSV-001-031A	SG 4 MAIN PWR RELIEF CONT VLV	4,5
920	1-PSV-001-031B	SG 4 MAIN PWR RELIEF CONT VLV	4,5
921	1-PSV-001-031C	SG 4 MAIN PWR RELIEF CONT VLV	4,5
922	1-PT-001-0002A	MAIN STEAM LOOP 1 PRESS	0,4
923	1-PT-001-0002B	MAIN STEAM LOOP 1 PRESS	0,4
924	1-PT-001-0009A	MAIN STEAM LOOP 2 PRESSURE	0,4

No.	UNID	Description	Safety Function
925	1-PT-001-0009B	MAIN STEAM LOOP 2 PRESSURE	0,4
926	1-PT-001-0020A	MAIN STEAM LOOP 3 PRESSURE	0,4
927	1-PT-001-0020B	MAIN STEAM LOOP 3 PRESSURE	0,4
928	1-PT-001-0027A	MAIN STEAM LOOP 4 PRESSURE	0,4
929	1-PT-001-0027B	MAIN STEAM LOOP 4 PRESSURE	0,4
930	1-PT-030-0310	CONTAINMENT PRESS TRANSMITTER	5
931	1-PT-030-0311	CONTAINMENT PRESS TRANSMITTER	5
932	1-PT-068-0070-G	RCS WIDE RANGE PRESSURE LOOP 4 HOT LEG	2,4
933	1-PT-068-0322-G	RCS PRESSURIZER PRESSURE TRANSMITTER	2
934	1-PT-068-0323-F	RCS PRESSURIZER PRESSURE TRANSMITTER	2
935	1-PT-068-0334-E	RCS PRESSURIZER PRESSURE TRANSMITTER	2
936	1-PT-068-0340-D	RCS PRESSURIZER PRESSURE TRANSMITTER	2
937	1-PT-070-0024A-A	CCS HTX A INLET PRESSURE	0
938	1-RE-090-0271	CNTNMT RAD MONITOR	0
939	1-RE-090-0272	CNTNMT RAD MONITOR	0
940	1-RE-090-0273	CNTNMT RAD MONITOR	0
941	1-RE-090-0274	CNTNMT RAD MONITOR	0
942	1-RFV-062-0636	SEAL LINE RELIEF	3
943	1-RFV-068-0563	PRESS. SAFETY VALVE	2,4
944	1-RFV-068-0564	PRESS. SAFETY VALVE	2,4
945	1-RFV-068-0565	PRESS. SAFETY VALVE	2,4
946	1-RPV-068-U1	REACTOR VESSEL	2
947	1-SEP-031-447	480V BD RM 1B OIL SEPARATOR	5
948	1-SEP-031-465	480V BD RM 1A OIL SEPARATOR	5
949	1-SFV-001-0512	MAIN STEAM SAFETY VALVES, SG-3	4
950	1-SFV-001-0513	MAIN STEAM SAFETY VALVES, SG-3	4
951	1-SFV-001-0514	MAIN STEAM SAFETY VALVES, SG-3	4
952	1-SFV-001-0515	MAIN STEAM SAFETY VALVES, SG-3	4
953	1-SFV-001-0516	MAIN STEAM SAFETY VALVES, SG-3	4
954	1-SFV-001-0517	MAIN STEAM SAFETY VALVES, SG-2	4
955	1-SFV-001-0518	MAIN STEAM SAFETY VALVES, SG-2	4
956	1-SFV-001-0519	MAIN STEAM SAFETY VALVES, SG-2	4
957	1-SFV-001-0520	MAIN STEAM SAFETY VALVES, SG-2	4

No.	UNID	Description	Safety Function
958	1-SFV-001-0521	MAIN STEAM SAFETY VALVES, SG-2	4
959	1-SFV-001-0522	MAIN STEAM SAFETY VALVES, SG-1	4
960	1-SFV-001-0523	MAIN STEAM SAFETY VALVES, SG-1	4
961	1-SFV-001-0524	MAIN STEAM SAFETY VALVES, SG-1	4
962	1-SFV-001-0525	MAIN STEAM SAFETY VALVES, SG-1	4
963	1-SFV-001-0526	MAIN STEAM SAFETY VALVES, SG-1	4
964	1-SFV-001-0527	MAIN STEAM SAFETY VALVES, SG-4	4
965	1-SFV-001-0528	MAIN STEAM SAFETY VALVES, SG-4	4
966	1-SFV-001-0529	MAIN STEAM SAFETY VALVES, SG-4	4
967	1-SFV-001-0530	MAIN STEAM SAFETY VALVES, SG-4	4
968	1-SFV-001-0531	MAIN STEAM SAFETY VALVES, SG-4	4
969	1-SGEN-068-SG1	STEAM GENERATOR 1	2
970	1-SGEN-068-SG2	STEAM GENERATOR 2	2
971	1-SGEN-068-SG3	STEAM GENERATOR 3	2
972	1-SGEN-068-SG4	STEAM GENERATOR 4	2
973	1-SILN-082-0101-A	DG ENG 1A1 INTAKE SILENCER	0
974	1-SILN-082-0102-A	DG ENG 1A2 INTAKE SILENCER	0
975	1-SILN-082-0103-B	DG ENG 1B1 INTAKE SILENCER	0
976	1-SILN-082-0104-B	DG ENG 1B2 INTAKE SILENCER	0
977	1-SILN-082-0105-A	DG ENG 1A1 EXHST SILENCER	0
978	1-SILN-082-0106-A	DG ENG 1A2 EXHST SILENCER	0
979	1-SILN-082-0107-B	DG ENG 1B EXHST SILENCER	0
980	1-SILN-082-0108-B	DG ENG 1B EXHST SILENCER	0
981	1-STN-067-0009	ERCW STRAINER A1A-A	0
982	1-STN-067-0010	ERCW STRAINER B1B-B	0
983	1-TANK-062-0129	VOLUME CONTROL TANK	3
984	1-TANK-062-1A	HOLD UP TANK	3
985	1-TANK-063-0036	BORON INJECTION TANK 1A (CCP INJ TNK)	1,3,4
986	1-TANK-063-0046	REFUELING WATER STORAGE TANK	1,3,4
987	1-TANK-068-PRT	PRESSURIZER RELIEF TANK	2,4
988	1-TCV-062-0079	LETDOWN FLOW TEMP DIVERSION CONT VLV	3
989	1-TE-068-0001-D	RCS LOOP 1 HOT LEG TEMP	2,4
990	1-TE-068-0018-D	RCS LOOP 1 COLD LEG TEMP	2,4

No.	UNID	Description	Safety Function
991	1-TE-068-0024-D	RCS LOOP 2 HOT LEG TEMP	2,4
992	1-TE-068-0041-D	RCS LOOP 2 COLD LEG TEMP	2,4
993	1-TE-068-0043-E	RCS LOOP 3 HOT LEG TEMP	2,4
994	1-TE-068-0060-E	RCS LOOP 3 COLD LEG TEMP	2,4
995	1-TE-068-0065-E	RCS LOOP 4 HOT LEG TEMP	2,4
996	1-TE-068-0083-E	RCS LOOP 4 COLD LEG TEMP	2,4
997	1-TE-068-373-D	REACTOR LEVEL CAPILLARY TUBE TEMP COMP	0
998	1-TE-068-376-D	REACTOR LEVEL TEMP COMP GUIDE TUBE	0
999	1-TE-068-377-D	REACTOR LEVEL CAPILLARY TUBE TEMP COMP	0
1000	1-TE-068-378-D	REACTOR LEVEL CAPILLARY TUBE TEMP COMP	0
1001	1-TE-068-379-D	REACTOR LEVEL CAPILLARY TUBE TEMP COMP	0
1002	1-TE-068-380-E	REACTOR LEVEL CAPILLARY TUBE TEMP COMP	0
1003	1-TE-068-383-E	REACTOR LEVEL TEMP COMP GUIDE TUBE	0
1004	1-TE-068-384-E	REACTOR LEVEL CAPILLARY TUBE TEMP COMP	0
1005	1-TE-068-385-E	REACTOR LEVEL CAPILLARY TUBE TEMP COMP	0
1006	1-TE-068-386	REACTOR LEVEL CAPILLARY TUBE TEMP COMP	0
1007	1-TE-068-393-E	REACTOR LEVEL CAPILLARY TUBE TEMP COMP	0
1008	1-TE-070-0161-A	CCS HEAT EXCHANGER A OUTLET TEMP	0
1009	1-TIS-062-79	LETDOWN FLOW TEMP SWITCH	3
1010	1-TNK-018-0061/1	DG DAY TANK 1A1	0,4
1011	1-TNK-018-0061/2	DG DAY TANK 1B1	0,4
1012	1-TNK-018-0076/1	DG DAY TANK 1A2	0,4
1013	1-TNK-018-0076/2	DG DAY TANK 1B2	0,4
1014	1-TNK-070-0001	COMPONENT COOLING WATER SURGE TANK	0
1015	1-TS-030-175-A	RHR PUMP 1A-A ROOM CLR TEMP	5
1016	1-TS-030-176-B	RHR PUMP 1B-B ROOM CLR TEMP	5
1017	1-TS-030-177-A	CS PUMP 1A-A ROOM CLR TEMP	5
1018	1-TS-030-178-B	CS PUMP 1B-B ROOM CLR TEMP	5
1019	1-TS-030-179-B	SIS PUMP 1B-B ROOM CLR TEMP	5
1020	1-TS-030-180-A	SIS PUMP 1A-A ROOM CLR TEMP	5
1021	1-TS-030-182-B	CENT CHARG PUMP 1B-B RM CLR TEMP	5
1022	1-TS-030-183-A	CENT CHARG PUMP 1A-A RM CLR TEMP	5
1023	1-TS-030-186A-A	PENETRATION RM EL 692 CLR 1A-A TEMP	5

No.	UNID	Description	Safety Function
1024	1-TS-030-186B-A	PENETRATION RM EL 692 CLR 1A-A TEMP	5
1025	1-TS-030-187A-B	PENETRATION RM EL 692 CLR 1B-B TEMP	5
1026	1-TS-030-187B-B	PENETRATION RM EL 692 CLR 1B-B TEMP	5
1027	1-TS-030-190A-A	CCS & AFW PUMP SPACE CLR 1A-A TEMP	5
1028	1-TS-030-190B-A	CCS & AFW PUMP SPACE CLR 1A-A TEMP	5
1029	1-TS-030-191A-B	CCS & AFW PUMP SPACE CLR 1B-B TEMP	5
1030	1-TS-030-191B-B	CCw & AFW PUMP SPACE CLR 1B-B TEMP	5
1031	1-TS-030-194A-A	PENETRATION RM EL 737 CLR 1A-A TEMP	5
1032	1-TS-030-194B-A	PENETRATION RM EL 737 CLR 1A-A TEMP	5
1033	1-TS-030-195A-B	PENETRATION RM EL 737 CLR 1B-B TEMP	5
1034	1-TS-030-195B-B	PENETRATION RM EL 737 CLR 1B-B TEMP	5
1035	1-TS-030-196A-A	PENETRATION RM EL 713 CLR 1A-A TEMP	5
1036	1-TS-030-196B-A	PENETRATION RM EL 713 CLR 1A-A TEMP	5
1037	1-TS-030-197A-B	PENETRATION RM EL 713 CLR 1B-B TEMP	5
1038	1-TS-030-197B-B	PENETRATION RM EL 713 CLR 1B-B TEMP	5
1039	1-TS-030-201A-A	AB EL 692 PIPE CHASE CLR 1A-A TEMP	5
1040	1-TS-030-201B-A	AB EL 692 PIPE CHASE CLR 1A-A TEMP	5
1041	1-TS-030-202A-B	AB EL 692 PIPE CHASE CLR 1B-B TEMP	5
1042	1-TS-030-202B-B	AB EL 692 PIPE CHASE CLR 1B-B TEMP	5
1043	1-TS-030-244A-A	TRANSFORMER RM 1A EXH FAN 1A1-A TEMP	5
1044	1-TS-030-244B-A	TRANSFORMER RM 1A EXH FAN 1A2-A TEMP	5
1045	1-TS-030-244D-A	TRANSFORMER RM 1A EXH FAN 1A3-A TEMP	5
1046	1-TS-030-244E	TRANSFORMER RM 1A EXH FAN 1A4-A TEMP	5
1047	1-TS-030-248A-B	TRANSFORMER RM 1B EXH FAN 1B1-B TEMP	5
1048	1-TS-030-248B-B	TRANSFORMER RM 1B EXH FAN 1B1-B TEMP	5
1049	1-TS-030-248D-B	TRANSFORMER RM 1B EXH FAN 1B1-B TEMP	5
1050	1-TS-030-447A-A	DG 1A-A RM EXH FAN 1A HI TEMP	5
1051	1-TS-030-447B-A	DG 1A-A RM EXH FAN 1A LO TEMP	5
1052	1-TS-030-449A-B	DG 1B-B RM EXH FAN 1B HI TEMP	5
1053	1-TS-030-449B-B	DG 1B-B RM EXH FAN 1B LO TEMP	5
1054	1-TS-030-451A-A	DG 1A-A RM EXH FAN 2A HI TEMP	5
1055	1-TS-030-451A-A	DG 1A-A RM EXH FAN 2A LO TEMP	5
1056	1-TS-030-453A-B	DG 1B-B RM EXH FAN 2B HI TEMP	5

No.	UNID	Description	Safety Function
1057	1-TS-030-453B-B	DG 1B-B RM EXH FAN 2B LO TEMP	5
1058	1-TS-031-441A-A	480V BD RM 1A AHU 1A-A TEMP	5
1059	1-TS-031-441C-A	480V BD RM 1A AHU 1A-A TEMP	5
1060	1-TS-031-447A-B	480V BD RM 1B AHU 1B-B TEMP	5
1061	1-TSV-062-79	LETDOWN FLOW TEMP DIVERSION CONTROL	3
1062	1-TWS-067-0434-A	TRAVELING SCREEN 1A-A	0
1063	1-TWS-067-0445-B	TRAVELING SCREEN 1B-B	0
1064	1-XSW-278-M7	PANEL 1-M-7 TRANSFER RACK	0
1065	2-AHU-031-461	480V BD RM 2A AHU 2A-A	5
1066	2-AHU-031-475	480V BD RM 2B AHU 2B-B	5
1067	2-ARB-082-A-A	DG 2A-A PROT RELAY PNL	0
1068	2-ARB-082-B-B	DG 2B-B PROT RELAY PNL	0
1069	2-BAT-215-A-A	DG 2A-A 125V BATTERY	0
1070	2-BAT-215-B-B	DG 2B-B 125V BATTERY	0
1071	2-BD-211-A-A	6.9KV SHUTDOWN BOARD 2A-A	0
1072	2-BD-211-B-B	6.9KV SHUTDOWN BOARD 2B-B	0
1073	2-BD-212-A1-A	480V SHUTDOWN BD 2A1-A	0
1074	2-BD-212-A2-A	480V SHUTDOWN BD 2A2-A	0
1075	2-BD-212-B1-B	480V SHUTDOWN BD 2B1-B	0
1076	2-BD-212-B2-B	480V SHUTDOWN BD 2B2-B	0
1077	2-BD-235-0001-D	120VAC VITAL INST POWER BOARD 2-1	0
1078	2-BD-235-0002-E	120V AC VITAL INST POWER BOARD 2-11	0
1079	2-BD-235-0003-F	120V AC VITAL INST POWER BOARD 2-111	0
1080	2-BD-235-0004-G	120V VITAL INST POWER BOARD 2-IV	0
1081	2-BD-237-A	120V AC INSTRU POWER DISTR PNL 2A	0
1082	2-BD-237-B	120C AC INSTRU POWER DISTR PNL 2B	0
1083	2-CDPL-082-A-A	DG 2A-A CONT.DIST PNL	0
1084	2-CDPL-082-B-B	DG 2B-B CONT DIST PNL	0
1085	2-CHGR-215-A-A	DG 2A-A BATTERY CHARGER	0
1086	2-CHGR-215-B-B	DG 2B-B BATTERY CHARGER	0
1087	2-CLR-030-194	EL 737 PENETRATION ROOM COOLER 2A-A	5
1088	2-CLR-030-195	EL 737 PENETRATION ROOM COOLER 2B-B	5
1089	2-CLR-030-207	EMERGENCY GAS TREATMENT RM COOLER B-	5

No.	UNID	Description	Safety Function
1090	2-COMP-031-447	480V BD RM 2B RECIP COMP 2B-B	5
1091	2-COMP-031-465	480V BD RM 2A RECIP COMP 2A-A	5
1092	2-COND-031-289	480V BD RM 2B AIR COOLED COND	5
1093	2-COND-031-290	480V BD RM 2A AIR COOLED COND	5
1094	2-DIEG-082-A1	DIESEL GENERATOR ENGINE 2A1	0
1095	2-DIEG-082-A2	DIESEL GENERATOR ENGINE 2A2	0
1096	2-DIEG-082-B1	DIESEL GENERATOR ENGINE 2B1	0
1097	2-DIEG-082-B2	DIESEL GENERATOR ENGINE 2B2	0
1098	2-DPL-082-A-A	DG 2B-B 125 VDC DIST PNL	0
1099	2-DPL-082-B-B	DG 2B-B125 VDC DIST PNL	0
1100	2-DXF-237-A	INSTRUMENT POWER TRANSFORMER 2A	0
1101	2-DXF-237-B	INSTRUMENT POWER TRANSFORMER 2B	0
1102	2-FAN-030-246F	480V TRANSFORMER RM 2B EXH FAN 2B1-B	5
1103	2-FAN-030-246G	480V TRANSFORMER RM 2B EXH FAN 2B2-B	5
1104	2-FAN-030-246H	480V TRANSFORMER RM 2B EXH FAN 2B3-B	5
1105	2-FAN-030-250E	480V TRANSFORMER RM 2A EXH FAN 2A1-A	5
1106	2-FAN-030-250F	480V TRANSFORMER RM 2A EXH FAN 2A2-A	5
1107	2-FAN-030-250G	480V TRANSFORMER RM 2A EXH FAN 2A3-A	5
1108	2-FAN-030-448	DG RM 2A-A EXH FAN 1	5
1109	2-FAN-030-450	DG RM 2B-B EXH FAN 1	5
1110	2-FAN-030-452	DG RM 2A-A EXH FAN 2	5
1111	2-FAN-030-454	DG RM 2B-B EXH FAN 2	5
1112	2-FAN-030-460	DG 2A-A ELEC BD RM EXHAUST	5
1113	2-FAN-030-462	DG 2B-B ELEC BD RM EXHAUST	5
1114	2-FAN-030-492	DIESEL PANEL 2A-A VENT FAN	5
1115	2-FAN-030-494	DIESEL PANEL 2B-B VENT FAN	5
1116	2-FAN-031-285	BTRY RM III EXHAUST FAN 2B1-A	5
1117	2-FAN-031-286	BTRY RM III EXHAUST FAN 281-B	5
1118	2-FAN-031-287	BTRY RM IV EXHAUST FAN 2A1-A	5
1119	2-FAN-031-288	BTRY RM IV EXHAUST FAN 2A2-B	5
1120	2-FCO-030-246A	480V TRANSFORMER RM 2B DAMPER	5
1121	2-FCO-030-246B	480V TRANSFORMER RM 2B DAMPER	5
1122	2-FCO-030-250A	480V TRANSFORMER RM 2A DAMPER	5

No.	UNID	Description	Safety Function
1123	2-FCO-030-250B	480V TRANSFORMER RM 2A DAMPER	5
1124	2-FCO-030-444	DG RM 2A-A AIR INTAKE DAMPER	5
1125	2-FCO-030-446	DG RM 2B-B AIR INTAKE DAMPER	5
1126	2-FCO-030-448	DG RM 2A-A EXH FAN DAMPER	5
1127	2-FCO-030-450	DG RM 2B-B EXH FAN DAMPER	5
1128	2-FCO-030-452	DG RM 2A-A EXH FAN DAMPER	5
1129	2-FCO-030-454	DG RM 2B-B EXH FAN DAMPER	5
1130	2-FCO-030-456	DG RM 2A-A EXH FAN DAMPER	5
1131	2-FCO-030-458	DG RM 2B-B EXH FAN DAMPER	5
1132	2-FCO-030-460	DG 2A-A ELEC BD RM EXH FAN DAMPER	5
1133	2-FCO-030-462	DG 2B-B ELEC BD RM EXH FAN DAMPER	5
1134	2-FCO-031-285	BTRY RM III DAMPER FOR FAN 2B1-A	5
1135	2-FCO-031-286	BTRY RM III DAMPER FOR FAN 2B1-B	5
1136	2-FCO-031-287	BTRY RM IV DAMPER FOR FAN 2A1-A	5
1137	2-FCO-031-288	BTRY RM IV DAMPER FOR FAN 2A2-B	5
1138	2-FCO-031-289	480V BD RM COND UNIT 2B-B DAMPER	5
1139	2-FCO-031-290	480V BD RM 2A COND 2A-A DAMPER	5
1140	2-FCO-031-291	480V BD RM 2A COND 2A-A DAMPER	5
1141	2-FCV-067-0009A	ERCW STRAINER 2A-A BACKWASH VLV	0
1142	2-FCV-067-0009B	ERCW STRAINER 2A-A FLUSH VLV	0
1143	2-FCV-067-0010A	ERCW STRAINER 2B-B BACKWASH VLV	0
1144	2-FCV-067-0010B	ERCW STRAINER 2B-B FLUSH VLV	0
1145	2-FCV-067-0065	EMERG DSL HTXS B1 & B2 SUP VLV HDR A	0
1146	2-FCV-067-0068	EMERG DSL HTXS AI & A2 SUP VLV HDR B	0
1147	2-FCV-067-217	EL 713 AFW & BA TRANS PMP CLR A-A	0,5
1148	2-FCV-067-219	EL 713 AFW & BA TRANS PMP CLR B-B	0,5
1149	2-FCV-067-336	EGTS RM CLR A-A	0,5
1150	2-FCV-067-338	EGTS RM CLR B-B	0,5
1151	2-FCV-067-354	EL 737 PEN RM CLR 2A-A	0,5
1152	2-FCV-067-356	EL 737 PEN RM CLR 2B-B	0,5
1153	2-FLTR-031-447	480V BD RM 2B FILTER DRIER	5
1154	2-FLTR-031-465	480V BD RM 2A FILTER DRIER	5
1155	2-FS-030-448-A	DG 2A-A RM EXH LO FLOW	5

No.	UNID	Description	Safety Function
1156	2-FS-030-450-B	DG 2B-B RM EXH LOW FLOW	5
1157	2-FS-030-452-A	DG 2A-A RM EXH FAN 2A LOW FLOW	5
1158	2-FS-030-454-B	DG 2B-B RM EXH LOW FLOW	5
1159	2-FSV-031-441	480V BD RM 2A REFRIGERANT LINE FSV	5
1160	2-FSV-031-447	480V BD RM 2B REFRIGERANT LINE FSV	5
1161	2-FT-067-0061-A	ERCW HDR 2A SUPPLY	0
1162	2-FT-067-0062-B	ERCW HDR 2B SUPPLY	0
1163	2-GEN-082-0002A	DIESEL GENERATOR 2A-A	0
1164	2-GEN-082-0002B	DIESEL GENERATOR 2B-B	0
1165	2-HS-067-0437B-A	SCRN WASH PUMP 2A-A HAND SWITCH	0
1166	2-HS-067-0447A-B	SCRN WASH PUMP 2B-B HAND SWITCH	0
1167	2-IACL-082-0201-A	DG EN 2A1 INTAKE AIR CLEANER	0
1168	2-IACL-082-0202-A	DG EN 2A2 INTAKE AIR CLEANER	0
1169	2-IACL-082-0203-B	DG EN 2B1 INTAKE AIR CLEANER	0
1170	2-IACL-082-0204-B	DG EN 2B2 INTAKE AIR CLEANER	0
1171	2-INV-235-0001-D	120V AC VITAL INVERTER 2-I	0
1172	2-INV-235-0002-E	120V AC VITAL INVERTER 2-II	0
1173	2-INV-235-0003-F	120V AC VITAL INVERTER 2-III	0
1174	2-INV-235-0004-G	120V AC VITAL INVERTER 2-IV	0
1175	2-MCC-213-A1-A	REACTOR MOV BOARD 2A1-A	0
1176	2-MCC-213-A2-A	REACTOR MOV BOARD 2A2-A	0
1177	2-MCC-213-B1-B	REACTOR MOV BOARD 2B1-B	0
1178	2-MCC-213-B2-B	REACTOR MOV BOARD 2B2-B	0
1179	2-MCC-214-A1-A	480V CONT & AUX BLDG VENT BD 2A1-A	0
1180	2-MCC-214-A2-A	480V CONT & AUX BLDG VENT BD 2A2-A	0
1181	2-MCC-214-B1-B	480V CONT & AUX BLDG VENT BD 2B1-B	0
1182	2-MCC-214-B2-B	480V CONT & AUX BLDG VENT BD 2B2-B	0
1183	2-MCC-215-A1-A	DIESEL AUX POWER BOARD 2A1-A	0
1184	2-MCC-215-A2-A	DIESEL AUX POWER BOARD 2A2-A	0
1185	2-MCC-215-B1-B	DIESEL AUX POWER BOARD 2B1-B	0
1186	2-MCC-215-B2-B	DIESEL AUX POWER BOARD 2B2-B	0
1187	2-MCC-232-A-A	REACTOR VENT BOARD 2A-A	0
1188	2-MCC-232-B-B	REACTOR VENT BOARD 2B-B	0

No.	UNID	Description	Safety Function
1189	2-OXF-212-A1-A	480V SHUTDOWN XFMR 2A1-A	0
1190	2-OXF-212-A2-A	480V SHUTDOWN XFMR 2A2-A	0
1191	2-OXF-212-A-A	480V SHUTDOWN BD EMERG XFMR 2A-A	0
1192	2-OXF-212-B1-B	480V SHUTDOWN XFMR 2B1-B	0
1193	2-OXF-212-B2-B	480V SHUTDOWN XFMR 1B2-B	0
1194	2-OXF-212-B-B	480V SHUTDOWN BD EMERG XFMR 2B-B	0
1195	2-PMCL-030-184	AUX FW & BORIC ACID TRANSFER PMP CLR A-A	5
1196	2-PMCL-030-185	AUX FW & BORIC ACID TRANSFER PMP CLR B-B	5
1197	2-PMP-018-0054/3	DAY TNK XFER PMP	0
1198	2-PMP-018-0054/4	DAY TNK XFER PMP	0
1199	2-PMP-018-0055/3	DAY TNK XFER PMP	0
1200	2-PMP-018-0055/4	DAY TNK XFER PMP	0
1201	2-PMP-067-0437	ERCW SCREEN WASH PUMP 2A-A	0
1202	2-PMP-067-0447	ERCW SCREEN WASH PUMP 2B-B	0
1203	2-PNL-082-A-A	DG 2A-A CONT.BRD	0
1204	2-PNL-082-B-B	DG 2B-B CONT BRD.	0
1205	2-PNL-099-R48-A	SSPS I/O PANEL TR-A	0
1206	2-PNL-099-R51-B	SSPS I/O PANEL TR-B	0
1207	2-PNL-211-A-A	6.9KV LOGIC RELAY PANEL 2A-A	0
1208	2-PNL-211-B-B	6.9KV LOGIC RELAY PANEL 2B-B	0
1209	2-PNL-275-R140-B	TRAIN B BOP INSTRUMENT RACK	0
1210	2-PNL-275-R143-A	TRAIN A BOP INSTRUMENT RACK	0
1211	2-PNL-278-M001	U2 MCR PANEL	0
1212	2-PNL-278-M009	U2 MCR PANEL	0
1213	2-PS-031-447A-B	480V BD RM 2B R-22 GAS PRESS	5
1214	2-PS-031-465-A	480V BD RM 2A R-22 GAS PRESS	5
1215	2-PS-067-0439	TRAVEL SCRN 2A-A INLET PRESS	0
1216	2-PS-067-0451	TRAVEL SCRN 2B-B INLET PRESS	0
1217	2-S1LN-082-0202-A	DG ENG 2A2 INTK SILENCER	0
1218	2-S1LN-082-0206-A	DG ENG 2A2 EXHST SILENCER	0
1219	2-SEP-031-447	480V BD RM 2B OIL SEPARATOR	5
1220	2-SEP-031-465	480V BD RM 2A OIL SEPARATOR	5
1221	2-SILN -082-0208-B	DG ENG 282 EXHST SILENCER	0

No.	UNID	Description	Safety Function
1222	2-SILN-082-0201-A	DG ENG 2A1 INTK SILENCER	0
1223	2-SILN-082-0203-B	DG ENG 2B1 INTK SILENCER	0
1224	2-SILN-082-0204-B	DG ENG 2B2 INTK SILENCER	0
1225	2-SILN-082-0205-A	DG ENG 2A1 EXHST SILENCER	0
1226	2-SILN-082-0207-B	DG ENG 2B1 EXHST SILENCER	0
1227	2-STN-067-0009	ERCW STRAINER 2A-A	0
1228	2-STN-067-0010	ERCW STRAINER 2B-B	0
1229	2-TANK-018-0061/3	DG DAY TANK 2A1	0
1230	2-TANK-018-0061/4	DG DAY TANK 2B1	0
1231	2-TANK-018-0076/3	DG DAY TANK 2A2	0
1232	2-TANK-018-0076/4	DG DAY TANK 2B2	0
1233	2-TANK-062-1B	HOLD UP TANK	3
1234	2-TS-030-184A-A	AFW & BA TRANSFER PUMP CLR 2A-A	5
1235	2-TS-030-184B-A	AFW & BA TRANSFER PUMP CLR 2A-A	5
1236	2-TS-030-185A-B	AFW & BA TRANSFER PUMP CLR 2B-B	5
1237	2-TS-030-185B-B	AFW & BA TRANSFER PUMP CLR 2B-B	5
1238	2-TS-030-194A-A	PENETRATION RM EL 737 CLR 2A-A TEMP	5
1239	2-TS-030-194B-A	PENETRATION RM EL 737 CLR 2A-A TEMP	5
1240	2-TS-030-195A-B	PENETRATION RM EL 737 CLR 2B-B TEMP	5
1241	2-TS-030-195B-B	PENETRATION RM EL 737 CLR 2B-B TEMP	5
1242	2-TS-030-200A-A	EGTS ROOM COOLER 2A-A TEMP	5
1243	2-TS-030-207A-B	EGTS ROOM COOLER 2B-B TEMP	5
1244	2-TS-030-246A-B	TRANSFORMER RM 2B EXH FAN 2B1-B	5
1245	2-TS-030-246B-B	TRANSFORMER RM 2B EXH FAN 2B2-B	5
1246	2-TS-030-246D-B	TRANSFORMER RM 2B EXH FAN 2B3-B	5
1247	2-TS-030-250A-A	TRANSFORMER RM 2A EXH FAN 2A1-A TEMP	5
1248	2-TS-030-250B-A	TRANSFORMER RM 2A EXH FAN 2A2-A	5
1249	2-TS-030-250D-A	TRANSFORMER RM 2A EXH FAN 2A3-A	5
1250	2-TS-030-448A-A	DG 2A-A RM EXH FAN 1A HI TEMP	5
1251	2-TS-030-448B	EG 2A-A RM EXH FAN 1A LOW TEMP	5
1252	2-TS-030-450A	DG 2B-B RM EXH FAN 1B HI TEMP	5
1253	2-TS-030-450B	DG 2B-B RM EXH FAN 1B LOW TEMP	5
1254	2-TS-030-452A-A	DG 2A-A RM EXH FAN 2A HI TEMP	5

No.	UNID	Description	Safety Function
1255	2-TS-030-452B-A	DG 2A-A RM EXH FAN 2A LOW TEMP	5
1256	2-TS-030-454A-B	DG 2B-B RM EXH FAN 2B HI TEMP	5
1257	2-TS-030-454B-B	DG 2B-B RM EXH FAN 2B LOW TEMP	5
1258	2-TS-031-441A-A	480V BD RM 2A AHU 2A-A TEMP	5
1259	2-TS-031-441C-A	480V BD RM 2A AHU 2A-A TEMP	5
1260	2-TS-031-447A-B	480V ELEC BD RM 2B AHU 2B-B TEMP	5
1261	2-TWS-067-0439-A	TRAVELING SCREEN 2A-A	0
1262	2-TWS-067-0451-B	TRAVELING SCREEN 2B-B	0
1263	O-AHU-031-44	SHUTDOWN BD RM B AHU B-A	5
1264	O-FCO-031-338	EBR AHU D-B MODULATING DAMPER	5

Appendix C: Base List 2

This Appendix includes the Watts Bar Unit 1 Base List 2.

No.	UNID	Description
1	WBN-0-HTX-078-0031	SPENT FUEL PIT HEAT EXCHANGER A
2	WBN-0-HTX-078-0032	SPENT FUEL PIT HEAT EXCHANGER B
3	WBN-0-ISIV-078-0201C	ISOL VLV TO PI-78-2
4	WBN-0-ISIV-078-0202C	ISOL VLV TO PI-78-7
5	WBN-0-ISIV-078-0203C	ISOL VLV TO PI-78-8
6	WBN-0-ISIV-078-0204C	ISOL VLV TO PI-78-10
7	WBN-0-ISIV-078-0205C	ISOL VLV TO PI-78-11
8	WBN-0-ISIV-078-0206C	ISOL VLV TO PI-78-13
9	WBN-0-ISIV-078-0207B	ISOL VLV TO O-PI-78-14
10	WBN-0-ISIV-078-0208B	ISOL VLV TO O-PI-78-15
11	WBN-0-ISIV-078-0209B	ISOL VLV TO FI-78-16
12	WBN-0-ISIV-078-0209C/H	ISOL VLV TO FI-78-16
13	WBN-0-ISIV-078-0210B	ISOL VLV TO FI-78-16
14	WBN-0-ISIV-078-0210C/L	ISOL VLV TO FI-78-16
15	WBN-0-ISIV-078-0211C	ISOL VLV TO PI-78-21
16	WBN-0-ISIV-078-0212C	ISOL VLV TO PI-78-22
17	WBN-0-ISIV-078-0213C	ISOL VLV TO PI-78-23
18	WBN-0-ISIV-078-0214C	ISOL VLV TO PI-78-24
19	WBN-0-ISIV-078-0215C	ISOL VLV TO PI-78-25
20	WBN-0-ISIV-078-0216C	ISOL VLV TO PI-78-26
21	WBN-0-ISIV-078-0217C	ISOL VLV TO PI-78-27
22	WBN-0-ISIV-078-0218C	ISOL VLV TO PI-78-29
23	WBN-0-ISIV-078-0219C	ISOL VLV TO PDI-78-30
24	WBN-0-ISIV-078-0219D/H	ISOL VLV TO PDI-78-30
25	WBN-0-ISIV-078-0220C	ISOL VLV TO PDI-78-30
26	WBN-0-ISIV-078-0220D/L	ISOL VLV TO PDI-78-30
27	WBN-0-ISIV-078-0223C	ISOL VLV TO PI-78-37
28	WBN-0-ISIV-078-0224C	ISOL VLV TO PI-78-38
29	WBN-0-ISV-078-0501-A	SFP CIRC PUMP A-A SUCT ISOL
30	WBN-0-ISV-078-0502-B	SFP CIRC PUMP B-B SUCT ISOL
31	WBN-0-ISV-078-0513	COOL LOOP ISOLATION VLV
32	WBN-0-ISV-078-0514-S	SFP DEMIN WATER MAKE-UPISOL
33	WBN-0-ISV-078-0516-S	SFP CASK LOAD AREA SUP ISOL
34	WBN-0-ISV-078-0517-A	SFP COOLING HDR A SUP TO SFP DEMIN/FILTER
35	WBN-0-ISV-078-0518-B	SFP COOLING HDR B SUP TO SFP DEMIN/FILTER
36	WBN-0-ISV-078-0519	SFP PUMP SUP TO CVCS HOLD-UP TANK
37	WBN-0-ISV-078-0521	SFP PUMP SUP TO SFP FILTER
38	WBN-0-ISV-078-0522	SFP PRIMARY WATER SUP ISOL
39	WBN-0-ISV-078-0523	SFP DEMIN SUP TO SFP FILTER
40	WBN-0-ISV-078-0524	SFP FILTER INLET ISOL
41	WBN-0-ISV-078-0525	SFP FILTER OUTLET ISOL
42	WBN-0-ISV-078-0526	SFP DEMINERALIZER INLET ISOL
43	WBN-0-ISV-078-0528	SFP DEMINERALIZER RESIN FILL CONN ISOL

No.	UNID	Description
44	WBN-0-ISV-078-0530	SFP DEMINERALIZER RESIN DISCH ISOL
45	WBN-0-ISV-078-0532	SFP DEMIN SUP FROM REFLG WTR PURIF PUMPS
46	WBN-0-ISV-078-0533	SFP DEMINERALIZER OUTLET ISOL
47	WBN-0-ISV-078-0535	REFLG WATER PURIF FLTR SUP ISOL
48	WBN-0-ISV-078-0536	SFP REFLG WATER PURIF FILTER B INLET ISOL
49	WBN-0-ISV-078-0537	SFP REFLG WATER PURIF FILTER A INLET ISOL
50	WBN-0-ISV-078-0542	SFP REFLG WATER PURIF FILTER B OUTLET ISOL
51	WBN-0-ISV-078-0543	SFP REFLG WATER PURIF FILTER A OUTLET ISOL
52	WBN-0-ISV-078-0544	REFLG WATER PUMP FLTR SUP TO CVCS HUT
53	WBN-0-ISV-078-0547	FUEL TRANSFER CANAL SUP ISOL
54	WBN-0-ISV-078-0549-B	REFLG WATER PURIF PUMP B-B DISCH ISOL
55	WBN-0-ISV-078-0550-A	REFLG WATER PURIF PUMP A-A DISCH ISOL
56	WBN-0-ISV-078-0555-B	REFLG WATER PURIF PUMP B-B SUCT ISOL
57	WBN-0-ISV-078-0556-A	REFLG WATER PURIF PUMP A-A SUCT ISOL
58	WBN-0-ISV-078-0564	REFLG WTR PURIF PMP SUCT HDR ISOL
59	WBN-0-ISV-078-0568	FUEL TRANSFER CANAL CVCS SUP ISOL
60	WBN-0-ISV-078-0569	SFP SKIMMER PUMP SUCT ISOL
61	WBN-0-ISV-078-0570	SFP SKIMMER PUMP SUCT CLEANING CONN
62	WBN-0-ISV-078-0574	SFP SKIMMER FILTER INLET ISOL
63	WBN-0-ISV-078-0577	SFP SKIMMER FILTER OUTLET ISOL
64	WBN-0-ISV-078-0581-S	SFP CIRC PUMP C-S TR A SUCT ISOL
65	WBN-0-ISV-078-0582-S	SFP CIRC PUMP C-S TR B SUCT ISOL
66	WBN-0-ISV-078-0587-S	SFP CIRC PUMP C-S TR B DISCH ISOL
67	WBN-0-ISV-078-0588-S	SFP CIRC PUMP C-S TR A DISCH ISOL
68	WBN-0-ISV-078-0589	REFLG WATER PURIF PUMP DISCH HDR ISOL
69	WBN-0-ISV-078-0590-S	REFLG WATER PURIF PUMP TO SPENT FUEL PIT ISOL
70	WBN-0-MTR-078-0001	SPENT FUEL PIT SKIMMER PMP
71	WBN-0-MTR-078-0009-B	SPENT FUEL PIT PUMP B-B
72	WBN-0-MTR-078-0012-A	SPENT FUEL PIT PUMP A-A
73	WBN-0-MTR-078-0019-A	REFUELING WATER PURIFICATION PMP A
74	WBN-0-MTR-078-0020-B	REFUEL WTR PUR1 PMP BB
75	WBN-0-MTR-078-0035-S	SPENT FUEL PIT PUMP C-S
76	WBN-0-MTR-078-0155	SPENT FUEL PIT SKIMMERS (2)
77	WBN-0-PMP-078-0001	SPENT FUEL PIT SKIMMER PUMP
78	WBN-0-PMP-078-0009-B	SPENT FUEL PIT CIRC PUMP B-B
79	WBN-0-PMP-078-0012-A	SPENT FUEL PIT CIRC PUMP A-A
80	WBN-0-PMP-078-0019	REFUELING WATER PURIFICATION PUMP A
81	WBN-0-PMP-078-0020	REFUELING WATER PURIFICATION PUMP B
82	WBN-0-PMP-078-0035-S	SPENT FUEL PIT CIRC PUMP C-S
83	WBN-0-PNL-078-L208	SPENT FUEL PIT PMP C PNL
84	WBN-0-PNL-078-L370	SPENT FUEL PIT PNL
85	WBN-0-TE-078-0004	SPENT FUEL PIT WATER TEMP
86	WBN-0-TI-078-0017	SFP HEAT EXCHANGER B OUTLET TEMP

No.	UNID	Description
87	WBN-0-TI-078-0018	SFP HEAT EXCHANGER A OUTLET TEMP
88	WBN-0-TIS-078-0004	SPENT FUEL PIT WATER TEMP
89	WBN-0-TUBE-078-B	RECORD ID
90	WBN-0-XS-078-0036A-A	SFP CIRC PUMP C-S NORM PWR XFER SW
91	WBN-0-XS-078-0036B-B	SFP CIRC PUMP C-S ALT PWR XFER SW
92	WBN-0-XSW-078-0036-S	SFP CIRC PUMP C-S XFER SW

Appendix D: SWELs and Area List

This Appendix includes the Watts Bar Unit 1 SWELs and Area List.

Watts Bar Seismic Walkdown Equipment List 1

Created By: *Philip H. Huchenbery* Via Decon

Approved By: *W. Carles*

Item #	Class	ID	Description	System	BLDG	ELEV	Risk Significant (Yes/No/NA)	New or Replaced	Safety Functions	Enhanced for IPSEE	Area Walkby	Date Completed	Notes
1	0	WBN-0-RE-090-0205-A	MCR EMERG AIR INTAKE RADIATION MONITOR	090	CNTL BLDG	755			5		046	08/10/12	2
2	0	WBN-1-ACUM-063-0003	SIS COLD LEG ACCUMULATOR 3	063	RB	716			1,2,3		049	09/17/12	2
3	0	WBN-1-COND-031-0290-A	AB MECH EQ ROOM CONDENSER UNIT 1A-A	031	AUX BLDG	772			5		047	08/13/12	2
4	0	WBN-1-PMCL-030-0176-B	RHR PUMP 1B-B ROOM COOLER	030	AUX BLDG	676			5		004	07/18/12	2
5	0	WBN-1-STN-067-0009-A	ESSENTIAL RAW COOLING WATER STRAINER 1A-A	067	IPS BLDG	722			5		011	07/24/12	2 & 3
6	0	WBN-1-TANK-082-0160-A	DIESEL GEN ENGINE 1A1 START AIR RECEIVER A	082	DG BLDG	742			0		001	07/17/12	2 & 3
7	1	WBN-1-MCC-213-A001-A	REACTOR MOV BOARD 1A1-A	213	AUX BLDG	772			0		030	08/03/12	2
8	1	WBN-1-MCC-214-A001-A	480V C&A BUILDING VENT BOARD 1A1-A	214	AUX BLDG	757	Y		0		003	07/26/12	2
9	1	WBN-1-MCC-214-A002-A	480V CONT & AUX BLDG VENT BD 1A2-A	214	AUX BLDG	757			0		003	08/08/12	2
10	1	WBN-1-MCC-215-A001-A	DIESEL AUX POWER BOARD 1A1-A	215	DG BLDG	760			0		031	08/05/12	2
11	1	WBN-1-MCC-232-B-B	REACTOR VENT BOARD 1B-B	232	AUX BLDG	772			0		014	08/03/12	2
12	2	WBN-1-BD-212-A001-A	480V SHUTDOWN BOARD 1A1-A	212	AUX BLDG	757	Y		0		003	07/18/12	2
13	2	WBN-1-BD-212-A002-A	480V SHUTDOWN BOARD 1A2-A	212	AUX BLDG	757	Y		0		015	08/03/12	2
14	2	WBN-1-BD-212-B001-B	480V SHUTDOWN BOARD 1B1-B	212	AUX BLDG	757	Y		0		040	08/09/12	2
15	2	WBN-1-BD-212-B002-B	480V SHUTDOWN BOARD 1B2-B	212	AUX BLDG	757	Y		0		040	08/09/12	2
16	3	WBN-1-BD-211-A-A	6.9KV SHUTDOWN BOARD 1A-A	211	AUX BLDG	757	Y		0		015	07/26/12	2 & 3
17	3	WBN-1-BD-211-B-B	6.9KV SHUTDOWN BOARD 1B-B	211	AUX BLDG	757	Y		0		038	08/08/12	2 & 3
18	3	WBN-2-BD-211-A-A	6.9KV SHUTDOWN BOARD 2A-A	211	AUX BLDG	757			0		015	08/08/12	2 & 3
19	3	WBN-2-BD-211-B-B	6.9KV SHUTDOWN BOARD 2B-B	211	AUX BLDG	757			0		038	08/08/12	2 & 3
20	4	WBN-1-DMF-237-A	INSTRUMENT POWER TRANSFORMER 1A	237	AUX BLDG	757	Y		0		016	08/03/12	2
21	4	WBN-1-DMF-237-B	INSTRUMENT POWER TRANSFORMER 1B	237	AUX BLDG	757			0		039	08/08/12	2
22	4	WBN-1-DMF-242-0001	RAD MONITORING AND SAMPLING POWER XFMR	242	AUX BLDG	757			0		003	07/18/12	2
23	4	WBN-1-DMF-068-0341A-A	PZR BACKUP HTR GRP 1A-A TRANSFORMER	068	AUX BLDG	782			2		043	09/17/12	2
24	4	WBN-1-DMF-068-0341F	PZR CONTROL HTR GRP 1D TRANSFORMER	068	AUX BLDG	782			2		043	09/17/12	2
25	4	WBN-1-DMF-212-A002-A	480V SHUTDOWN BOARD TRANSFORMER 1A2-A	212	AUX BLDG	772	Y		0		018	07/26/12	2 & 3
26	4	WBN-1-DMF-212-B002-B	480V SHUTDOWN BOARD TRANSFORMER 1B2-B	212	AUX BLDG	772	Y		0		019	07/26/12	2 & 3
27	5	WBN-0-PMP-070-0051-S	CCS PUMP C-S	070	AUX BLDG	713	Y		4		008	07/23/12	2 & 3
28			See SWEL 2 for Item 28.										
29			See SWEL 2 for Item 29.										
30	5	WBN-1-PMP-003-0001A-S	TD AUX FEEDWATER PUMP 1A-S	003	AUX BLDG	692	Y		4		042	08/09/12	2 & 3
31	5	WBN-1-PMP-003-0128-B	AUX FEEDWATER PMP 1B-B	003	AUX BLDG	713	Y		4		008	07/23/12	2 & 3
32	5	WBN-1-PMP-062-0108-A	CENTRIFUGAL CHARGING PUMP 1A-A	062	AUX BLDG	692	Y		1,3,4		006	07/23/12	2 & 3
33	5	WBN-1-PMP-063-0015-B	SAFETY INJECTION PUMP 1B-B	063	AUX BLDG	692			1,3,4		007	07/23/12	2 & 3
34	6	WBN-1-PMP-067-0431	ERCW SCREEN WASH PUMP 1A-A	067	IPS BLDG	741			5		012	07/24/12	2 & 3
35	6	WBN-1-PMP-067-0440	ERCW SCREEN WASH PUMP 1B-B	067	IPS BLDG	741			5		012	07/24/12	2 & 3
36	5	WBN-1-PMP-070-0131-A	CCS THERMAL BARRIER BOOSTER PUMP 1A-A	070	AUX BLDG	737			4,5		024	08/01/12	2 & 3
37	6	WBN-0-PMP-067-0028-A	ERCW PUMP A-A	067	IPS BLDG	741	Y		5		010	07/24/12	2 & 3
38	6	WBN-0-PMP-067-0036-A	ERCW PUMP C-A	067	IPS BLDG	741	Y		5		010	07/24/12	2 & 3
39	6	WBN-0-PMP-067-0047-B	ERCW PUMP E-B	067	IPS BLDG	741	Y		5		009	07/24/12	2 & 3
40	6	WBN-1-PMP-074-0020-B	RHR PUMP 1B-B	074	AUX BLDG	676			1,3,4		004	07/18/12	2
41	7	WBN-0-FCV-032-0082-A	ESSENTIAL CONTROL AIR TR A NORM FLOW ISOL	032	AUX BLDG	757			5		026	08/06/12	
42	7	WBN-1-FCV-062-0089	CVCS CHARGING HEADER/ RCP SEAL INJ FLOW CNTL	062	AUX BLDG	692			35		006	08/07/12	
43	7	WBN-1-FCV-062-0093	CVCS CHARGING HEADER FLOW/PZR LEVEL CONTROL	062	AUX BLDG	692	Y		3		033	08/07/12	
44	7	WBN-1-FCV-063-0048-B	SAFETY INJ PUMP 1B-B SUCTION ISOLATION	063	AUX BLDG	692			1,3,4		007	08/06/12	

Item #	Class	ID	Description	System	BLDG	ELEV	Risk Significant (Yes/No/NA)	New or Replaced	Safety Functions	Enhanced for IPEEE	Area Walkby	Date Completed	Notes
45	7	WBN-1-FCV-067-0213-A	SFP/TBBP SPACE CLR 1A ERCW SUP FLOW CNTL	067	AUX BLDG	737			5		024	08/01/12	
46	7	WBN-1-FCV-067-0215-B	SFP/TBBP SPACE CLR 1B ERCW SUP FLOW CNTL	067	AUX BLDG	737			5		024	08/01/12	
47	8	WBN-1-FCV-063-0175-B	SI PUMP 1B-B MINI FLOW RECIRC TO RWST	063	AUX BLDG	692			3,4		007	07/23/12	
48	8	WBN-1-FCV-074-0021-B	RHR PUMP 1B-B SUCTION	074	AUX BLDG	676			1,3,4		004	07/18/12	
49	8	WBN-1-FSV-031-0447-B	480V BD RM 1B REFRIGERANT LINE FSV	031	AUX BLDG	786			5		032	08/06/12	
50	8	WBN-1-LCV-062-0135-A	RWST CVCS SUPPLY HDR ISOLATION	062	AUX BLDG	692			1,3		034	08/06/12	
51	8	WBN-1-LCV-062-0136-B	RWST CVCS SUPPLY HDR ISOLATION	062	AUX BLDG	692			1,3		034	08/06/12	
52	9	WBN-1-FAN-030-0038-A	CNTMT AIR RETURN FAN 1A-A	030	RB	716			2		049	09/17/12	2
53	9	WBN-1-FAN-030-0447-A	DG 1A-A ROOM EXHAUST FAN 1A	030	DG BLDG	760	Y		5		020	07/31/12	2 & 3
54	9	WBN-1-FAN-030-0449-B	DG 1B-B ROOM EXHAUST FAN 1B	030	DG BLDG	760	Y		5		002	07/17/12	2 & 3
55	9	WBN-1-FAN-030-0459-A	DIESEL GEN 1A-A ELECT BD ROOM EXHAUST FAN	030	DG BLDG	760	Y		5		020	07/31/12	2 & 3
56	10	WBN-0-AHU-031-0012-A	MAIN CONTROL ROOM AHU A-A	031	CNTL BLDG	755			5		046	08/10/12	2 & 3
57	10	WBN-0-AHU-031-0045	SHUTDOWN BOARD ROOM AIR HANDLING UNIT A-A	031	AUX BLDG	757			5		041	08/09/12	2
58	10	WBN-1-AHU-031-0461-A	480V BD ROOM 1A SUPPLY AHU 1A-A	031	AUX BLDG	772			5		047	08/10/12	2
59	11	WBN-0-CHR-031-0036/2-A	SHUTDOWN BOARD ROOM CHILLER A-A	031	AUX BLDG	737			5		013	07/25/12	2 & 3
60	11	WBN-0-CHR-031-0049/2-B	SHUTDOWN BOARD ROOM CHILLER B-B	031	AUX BLDG	737			5		036	08/07/12	2 & 3
61	11	WBN-0-CHR-031-0080-A	MAIN CONTROL ROOM CHILLER A-A	031	AUX BLDG	737			5		013	07/25/12	2
62	11	WBN-0-CHR-031-0128	ELECTRICAL BOARD ROOM CHILLER A-A	031	CNTL BLDG	692			5		037	08/07/12	2
63	11	WBN-0-CHR-031-0129	ELECTRICAL BOARD ROOM CHILLER B-B	031	CNTL BLDG	692			5		037	08/07/12	2
64	12	WBN-0-COMP-032-0026	STATION AIR COMPRESSOR B	032	TURB BLDG	708	Y		5		035	08/13/12	2 & 3
65	12	WBN-0-COMP-032-0060	AUX CONTROL AIR COMPRESSOR A-A	032	AUX BLDG	757	Y		5		026	08/02/12	2 & 3
66	12	WBN-0-COMP-032-0086	AUX CONTROL AIR COMPRESSOR B-B	032	AUX BLDG	757	Y		5		026	08/02/12	2 & 3
67	12	WBN-1-COMP-082-0180	DG 1A-A AIR START COMPRESSOR 1	082	DG BLDG	742			0		001	07/17/12	2 & 3
68	12	WBN-1-COMP-082-0210	DG 1B-B AIR START COMPRESSOR 1	082	DG BLDG	742			0		021	07/31/12	2 & 3
69	13	WBN-1-GEN-085-A	CONTROL ROD DRIVE M-G SET 1A	085	AUX BLDG	782			1		025	08/02/12	2 & 3
70	13	WBN-1-GEN-085-B	CONTROL ROD DRIVE M-G SET 1B	085	AUX BLDG	782			1		025	08/02/12	2 & 3
71	14	WBN-0-BD-236-0001/1-D	125V VITAL BATTERY BOARD I PANEL I	236	AUX BLDG	757	Y		0		016	07/26/12	2
72	14	WBN-0-DBD-238-0003	DISTRIBUTION BD PNL 3 120 VAC PREFERRED	238	CNTL BLDG	755			0		005	08/10/12	2
73	14	WBN-0-DPL-236-0001-D	125V VITAL BTRY BD I DISTRIBUTION PANEL O	236	AUX BLDG	757			0		016	07/26/12	2
74	14	WBN-0-XSW-236-68DC2-S	125V DC TRANSFER SWITCH, SELECT BATTERY BOARDS I/II	236	AUX BLDG	772		Y	0		014	07/25/12	2 & 3
75	14	WBN-0-XSW-236-79DC1-S	125V DC TRANSFER SWITCH, SELECT CHARGERS 7S/9S	236	AUX BLDG	772		Y	0		017	07/26/12	2 & 3
76	14	WBN-1-BD-235-0001-D	120V AC VITAL INSTR POWER BOARD 1-I	235	AUX BLDG	757	Y		0		016	07/26/12	2
77	14	WBN-1-BD-278-M007B	120V AC INSTRUMENT POWER RACK	278	CNTL BLDG	755			0		005	07/19/12	2
78	15	WBN-0-BAT-236-0001-D	125V VITAL BATTERY I	236	AUX BLDG	772	Y		0		027	08/02/12	2
79	15	WBN-0-BAT-236-0002-E	125V VITAL BATTERY II	236	AUX BLDG	772	Y		0		028	08/02/12	2
80	15	WBN-0-BAT-236-0003-F	125V VITAL BATTERY III	236	AUX BLDG	772			0		029	08/02/12	2
81	15	WBN-1-BAT-215-A-A	125V DIESEL GENERATOR BATTERY 1A-A	215	DG BLDG	742			0		001	07/18/12	2
82	15	WBN-1-BAT-215-B-B	125V DIESEL GENERATOR BATTERY 1B-B	215	DG BLDG	742			0		021	07/31/12	2
83	16	WBN-0-CHGR-236-0001-D	125V VITAL BATTERY CHARGER I	236	AUX BLDG	772	Y	Y	0		014	07/25/12	2 & 3
84	16	WBN-0-CHGR-236-0003-F	125V VITAL BATTERY CHARGER III	236	AUX BLDG	772	Y	Y	0		017	07/26/12	2 & 3
85	16	WBN-0-INV-235-0001-D	120V AC VITAL INSTR INVERTER O-I	235	AUX BLDG	772		Y	0		014	07/25/12	2 & 3
86	16	WBN-1-CHGR-215-A-A	DG 1A-A BATTERY CHARGER	215	DG BLDG	742			0		001	08/06/12	2
87	16	WBN-1-INV-235-0001-D	120V AC VITAL INVERTER 1-I	235	AUX BLDG	772	Y	Y	0		014	07/25/12	2 & 3
88	16	WBN-1-INV-235-0002-E	120VAC VITAL INVERTER 1-II	235	AUX BLDG	772	Y	Y	0		014	08/08/12	2 & 3
89	16	WBN-1-INV-235-0003-F	120V AC VITAL INVERTER 1-III	235	AUX BLDG	772	Y	Y	0		017	07/26/12	2 & 3
90	17	WBN-1-DIEG-082-A1-A	DIESEL GENERATOR ENGINE 1A1	082	DG BLDG	742			0		001	07/17/12	2 & 3

Item #	Class	ID	Description	System	BLDG	ELEV	Risk Significant (Yes/No/NA)	New or Replaced	Safety Functions	Enhanced for IPEEE	Area Walkby	Date Completed	Notes
91	17	WBN-1-DIEG-082-A2-A	DIESEL GENERATOR ENGINE 1A2	082	DG BLDG	742			0		001	07/17/12	2 & 3
92	17	WBN-1-DIEG-082-B1-B	DIESEL GENERATOR ENGINE 1B1	082	DG BLDG	742			0		021	07/31/12	2 & 3
93	17	WBN-1-DIEG-082-B2-B	DIESEL GENERATOR ENGINE 1B2	082	DG BLDG	742			0		021	07/31/12	2 & 3
94	17	WBN-1-GEN-082-0001A-A	DIESEL GENERATOR 1A-A	082	DG BLDG	742	Y		0		001	07/17/12	2 & 3
95	17	WBN-1-GEN-082-0001B-B	DIESEL GENERATOR 1B-B	082	DG BLDG	742	Y		0		021	07/31/12	2 & 3
96	17	WBN-2-GEN-082-0002A-A	DIESEL GENERATOR 2A-A	082	DG BLDG	742			0		022	07/31/12	2 & 3
97	17	WBN-2-GEN-082-0002B-B	DIESEL GENERATOR 2B-B	082	DG BLDG	742			0		023	07/31/12	2 & 3
98	18	WBN-0-L-147/C	INSTRUMENT RACK (1-PI-67-434)	067	IPS BLDG	722			5		011	07/24/12	2
99	18	WBN-0-L-155	INSTRUMENT RACK (0-PI-70-49 & 0-PT-70-222C)	070	AUX BLDG	713			4,5		008	07/23/12	2
100	18	WBN-1-PNL-275-R127-A	TRAIN A BOP INSTRUMENT RACK	275	CNTL BLDG	708			0		048	08/13/12	2
101	18	WBN-1-PNL-275-R143-A	TRAIN A BOP INSTRUMENT RACK	275	CNTL BLDG	708			0		048	08/13/12	2
102	18	WBN-1-PNL-278-M7	TRANSFER, PFD PWR, AND INSTRUMENT PWR RACKS (1-M-7)	278	CNTL BLDG	755			0		005	07/19/12	2
103	19	WBN-0-TS-030-0192B-A	SFP PUMP/TBBP SPACE COOLER A-A TEMP	030	AUX BLDG	737			5		024	08/01/12	2
104	19	WBN-1-TS-001-0017A-A	TD AUX FEEDWATER PMP ROOM TEMP	001	AUX BLDG	692			4,5		042	08/09/12	2
105	19	WBN-1-TS-030-0179-B	SIS PUMP 1B-B ROOM COOLER TEMP	030	AUX BLDG	692			5		007	07/23/12	2
106	19	WBN-1-TS-030-0183-A	CENT CHARGING PUMP 1A-A RM COOLER TEMP	030	AUX BLDG	692			5		006	08/09/12	2
107	19	WBN-1-TS-030-0453A-B	DG 1B-B ROOM EXHAUST HIGH TEMP	030	DG BLDG	760			5		002	07/17/12	2
108	19	WBN-1-TS-030-5237A-A	RHR PUMP RM B HI TEMP SW	030	AUX BLDG	676			5		004	07/18/12	2
109	20	WBN-0-PNL-278-M012	RADIATION MONITORING MCR PNL	278	CNTL BLDG	755			0		005	07/19/12	2
110	20	WBN-0-PNL-278-M026A-A	D.G. 1A-A MCR PNL	278	CNTL BLDG	755			0		005	07/19/12	2
111	20	WBN-0-PNL-278-M026D-B	D.G. 2B-B MCR PNL	278	CNTL BLDG	755			0		005	07/19/12	2
112	20	WBN-0-PNL-278-M027A	ERCW MCR PNL	278	CNTL BLDG	755			0		005	07/19/12	2
113	20	WBN-0-PNL-278-M027B	CCS MCR PNL	278	CNTL BLDG	755			0		005	07/19/12	2
114	21	WBN-0-HTX-070-0186	CCS HEAT EXCHANGER C	070	AUX BLDG	737	Y		4,5		013	07/25/12	2
115			See SWEL 2 for Item 115.										
116			See SWEL 2 for Item 116.										
117	21	WBN-1-HTX-070-0185	CCS HEAT EXCHANGER A	070	AUX BLDG	737	Y		4,5		013	07/25/12	2
118	21	WBN-1-TANK-063-0046	REFUELING WATER STORAGE TANK	063	YARD	729	Y		1		044	08/10/12	2 & 3
119	21	WBN-1-TANK-068-PRT	PRESSURIZER RELIEF TANK	068	RB	708			2,4		045	09/17/12	2 & 3
120	21	WBN-1-TANK-070-0001	CCS SURGE TANK A	070	AUX BLDG	757			4,5		026	08/02/12	2 & 3

Notes:

2. Has anchorage
3. Detailed anchorage inspection to be performed

Safety Function(s):

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

Watts Bar Seismic Walkdown Equipment List 2

Created By:

Approved By:

Item #	Class	ID	Description	System	BLDG	ELEV	Risk Significant (Yes/No/NA)	New or Replaced	Safety Functions	Enhanced for IPEEE	Area Walkby	Date Completed	Notes
28	5	WBN-0-PMP-078-0009-B	SPENT FUEL PIT CIRC PUMP B-B	078	AUX BLDG	737			0		024	08/01/12	2 & 3
29	5	WBN-0-PMP-078-0035-S	SPENT FUEL PIT CIRC PUMP C-S	078	AUX BLDG	737			0		024	08/01/12	2 & 3
115	21	WBN-0-HTX-078-0031	SPENT FUEL PIT HEAT EXCHANGER A	078	AUX BLDG	737			0		024	08/01/12	2 & 3
116	21	WBN-0-HTX-078-0032	SPENT FUEL PIT HEAT EXCHANGER B	078	AUX BLDG	737			0		024	08/01/12	2 & 3

Notes:

- 2. Has anchorage
- 3. Detailed anchorage inspection to be performed




Safety Function(s):

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

Area Walkby ID	Building	Elevation	Additional Descriptor
WBN-WB-001	DG BLDG	742	DIESEL GENERATOR 1A-A, ROOM D104
WBN-WB-002	DG BLDG	760	AIR EXHAUST ROOM, ROOM D209
WBN-WB-003	AUX BLDG	757	SHUTDOWN BOARD A, ROOM A802
WBN-WB-004	AUX BLDG	676	RHR PUMP 1B-B, ROOM A210
WBN-WB-005	CNTL BLDG	755	MAIN CONTROL ROOM, ROOM C412
WBN-WB-006	AUX BLDG	692	CENTRIFUGAL CHARGING PUMP 1A-A, ROOM A309
WBN-WB-007	AUX BLDG	692	SAFETY INJECTION PUMP 1B-B, ROOM A312
WBN-WB-008	AUX BLDG	713	AREA BOUNDED BY A1-T/A5-R
WBN-WB-009	IPS BLDG	741	ERCW PUMP ROOM B, ROOM I109
WBN-WB-010	IPS BLDG	741	ERCW PUMP ROOM A, ROOM I105
WBN-WB-011	IPS BLDG	722	ERCW STRAINER, ROOM I110
WBN-WB-012	IPS BLDG	741	ERCW TRAVELING SCREEN, ROOM I107
WBN-WB-013	AUX BLDG	737	AREA BOUNDED BY A2-Q/A13-U
WBN-WB-014	AUX BLDG	772	480V BOARD ROOM 1B, ROOM A852
WBN-WB-015	AUX BLDG	757	6.9KV SHUTDOWN BOARD ROOM A, ROOM A802
WBN-WB-016	AUX BLDG	757	125V VITAL BATTERY BOARD ROOM I, ROOM A804
WBN-WB-017	AUX BLDG	772	480V BOARD ROOM 2B, ROOM A864
WBN-WB-018	AUX BLDG	772	480V TRANSFORMER ROOM 1A, ROOM A856
WBN-WB-019	AUX BLDG	772	480V TRANSFORMER ROOM 1B, ROOM A855
WBN-WB-020	DG BLDG	760	AIR EXHAUST ROOM, ROOM D203
WBN-WB-021	DG BLDG	742	DIESEL GENERATOR 1B-B, ROOM D106
WBN-WB-022	DG BLDG	742	DIESEL GENERATOR 2A-A, ROOM D105
WBN-WB-023	DG BLDG	742	DIESEL GENERATOR 2B-B, ROOM D107
WBN-WB-024	AUX BLDG	737	SPENT FUEL PIT HTX AND PUMPS
WBN-WB-025	AUX BLDG	782	CONTROL ROD DRIVE ROOM, ROOM A901
WBN-WB-026	AUX BLDG	757	REFUELING ROOM, ROOM A813
WBN-WB-027	AUX BLDG	772	125V VITAL BATTERY ROOM I, ROOM A854
WBN-WB-028	AUX BLDG	772	125V VITAL BATTERY ROOM II, ROOM A853
WBN-WB-029	AUX BLDG	772	125V VITAL BATTERY ROOM III, ROOM A864
WBN-WB-030	AUX BLDG	772	480V BOARD ROOM 1A, ROOM A851
WBN-WB-031	DG BLDG	760	480V BOARD ROOM 1A, ROOM D204
WBN-WB-032	AUX BLDG	786	MECHANICAL EQUIPMENT ROOM 1B, ROOM A924
WBN-WB-033	AUX BLDG	692	CENTRIFUGAL CHARGING PUMP 1B-B, ROOM A310
WBN-WB-034	AUX BLDG	692	UNIT 1 PENETRATION ROOM, ROOM A307
WBN-WB-035	TURB BLDG	708	RADIUS AROUND COLUMN T7-K
WBN-WB-036	AUX BLDG	737	RADIUS AROUND COLUMN A13-R
WBN-WB-037	CNTL BLDG	692	MECHANICAL EQUIPMENT ROOM, ROOM C110
WBN-WB-038	AUX BLDG	757	6.9KV SHUTDOWN BOARD ROOM B, ROOM A824
WBN-WB-039	AUX BLDG	757	125V VITAL BATTERY BOARD ROOM II, ROOM A803
WBN-WB-040	AUX BLDG	757	480V BOARD ROOM 1B
WBN-WB-041	AUX BLDG	757	UNIT 1 PERSONNEL AND EQUIPMENT ACCESS AREA, ROOM A809
WBN-WB-042	AUX BLDG	692	TURBINE DRIVEN AUX FEED PUMP 1A-S, ROOM A306
WBN-WB-043	AUX BLDG	782	TRAIN A PRESSURIZER HEATER TRANSFORMER RM, ROOM A902
WBN-WB-044	YARD	729	REFUELING WATER STORAGE TANK
WBN-WB-045	RB	708	LOWER CONTAINMENT, PRT
WBN-WB-046	CNTL BLDG	755	MECHANICAL EQUIPMENT ROOM, C401
WBN-WB-047	AUX BLDG	772	MECHANICAL EQUIPMENT ROOM 1A, ROOM A857
WBN-WB-048	CNTL BLDG	708	UNIT 1 AUXILIARY INSTRUMENT ROOM, ROOM C201
WBN-WB-049	RB	716	LOWER CONTAINMENT, ACCUMULATOR 3

Appendix E: SWCs

The following signatures are provided for the engineers responsible for the Seismic Walkdown Checklists in Watts Bar Unit 1.

Name	Signature	Date
Travis Hockenberry		10/30/12
Mike Gordon		10/30/12
Phillip York		10/30/12

Seismic Walkdown Checklist (SWC)

Equipment ID No. 0-RE-090-0205-A Equip. Class³ 0, Other

Equipment Description MCR Emergency Air Intake Radiation Monitor

Location: Bldg. CNTL Floor El. 755 Room, Area C401, WBN-WB-046

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
All items are present and in good condition.

3. Is the anchorage free of corrosion that is more than mild surface oxidation? Y N U N/A
All items are painted and in good condition.

4. Is the anchorage free of visible cracks in the concrete near the anchors? Y N U N/A
No significant cracks observed.

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

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

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

Equipment ID No. 0-RE-090-0205-A Equip. Class³ 0, Other

Equipment Description MCR Emergency Air Intake Radiation Monitor

Interaction Effects

7. Are soft targets free from impact by nearby equipment or structures? Y N U N/A
All items have adequate clearance.

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
No masonry block walls. No ceiling tiles present. Lights have safety cables. All items overhead are rigidly mounted.

9. Do attached lines have adequate flexibility to avoid damage? Y N U N/A
All electrical connections are flex type conduit. Top tube connection does not appear to be flexible enough. After further review, deemed to not be an adverse seismic condition.

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

Other Adverse Conditions

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

Comments (Additional pages may be added as necessary)

Housekeeping is very good in this area.

Evaluated by: Travis Hockenberry Date: 8-10-2012

Mike Gordon 8-10-2012

Seismic Walkdown Checklist (SWC)

Equipment ID No. 1-ACUM-063-0003 Equip. Class³ 0, Other

Equipment Description SIS Cold Leg Accumulator 3

Location: Bldg. RB Floor El. 716 Room, Area Lower Containment, WBN-WB-049

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
Observed (1) missing anchor bolt near pipe. This configuration is allowed per Note A of DWG 48N949.

3. Is the anchorage free of corrosion that is more than mild surface oxidation? Y N U N/A
All surfaces painted and in good 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? Y N U N/A
 (Note: This question only applies if the item is one of the 50% for which an anchorage configuration verification is required.)

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

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

Equipment ID No. 1-ACUM-063-0003 Equip. Class³ 0, Other

Equipment Description SIS Cold Leg Accumulator 3

Interaction Effects

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

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

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

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

Other Adverse Conditions

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

Comments (Additional pages may be added as necessary)

Congested area with some work in-progress. No areas for concern.

Evaluated by: Travis Hockenberry Date: 9-17-2012

Mike Gordon 9-17-2012

Seismic Walkdown Checklist (SWC)

Equipment ID No. 1-COND-031-0290-A Equip. Class³ 0, Other

Equipment Description AB Mech. Eq. Room Condenser Unit 1A-A

Location: Bldg. AUX Floor El. 772 Room, Area A857, WBN-WB-047

Manufacturer, Model, Etc. (optional but recommended) Ellis and Watts

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
No observed bent, broken, missing, or loose hardware.

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

4. Is the anchorage free of visible cracks in the concrete near the anchors? Y N U N/A
No visible cracks observed.

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

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

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

Equipment ID No. 1-COND-031-0290-A Equip. Class³ 0, Other

Equipment Description AB Mech. Eq. Room Condenser Unit 1A-A

Interaction Effects

7. Are soft targets free from impact by nearby equipment or structures? Y N U N/A
Adequate clearance maintained around 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
Cable trays rigidly mounted. No masonry block walls in the area. Conduit is rigidly mounted.
9. Do attached lines have adequate flexibility to avoid damage? Y N U N/A
Small metal pipe attached to bottom of condenser unit does not appear to have any flexibility. Pipe is condensate drain pan drain and does not affect operability of equipment.
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
Duct sections located next to condenser appears to have adequate clearances and utilizes expansion joints.
-

Comments (Additional pages may be added as necessary)

General housekeeping is good in this area.

Evaluated by: Travis Hockenberry Date: 8-13-2012

Mike Gordon 8-13-2012

Seismic Walkdown Checklist (SWC)

Equipment ID No. 1-PMCL-030-0176-B Equip. Class³ 0, Other

Equipment Description RHR Pump 1B-B Room Cooler

Location: Bldg. AUX Floor El. 676 Room, Area A210, WBN-WB-004

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
All hardware/anchors in place and in good condition.

3. Is the anchorage free of corrosion that is more than mild surface oxidation? Y N U N/A
Mild surface corrosion present, but not significant.

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

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

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

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

Equipment ID No. 1-PMCL-030-0176-B Equip. Class³ 0, Other

Equipment Description RHR Pump 1B-B Room Cooler

Interaction Effects

- 7. Are soft targets free from impact by nearby equipment or structures? Y N U N/A
Pipe nearby with 1" clearance and minimum 2" insulation (credible but not significant).

- 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 pipe and conduit rigidly supported.

- 9. Do attached lines have adequate flexibility to avoid damage? Y N U N/A
Attached piping has flexible hose/fittings. Conduit has flexible connections.

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

Other Adverse Conditions

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

Comments (Additional pages may be added as necessary)

Evaluated by: Travis Hockenberry Date: 7-18-2012

Mike Gordon 7-18-2012

Seismic Walkdown Checklist (SWC)

Equipment ID No. 1-STN-067-0009-A Equip. Class³ 0, Other

Equipment Description ERCW Strainer 1A-A

Location: Bldg. IPS Floor El. 722 Room, Area I110, WBN-WB-011

Manufacturer, Model, Etc. (optional but recommended) P.X. Engineering Co.

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
Nothing is missing or bent, broken, etc.

3. Is the anchorage free of corrosion that is more than mild surface oxidation? Y N U N/A
Significant surface corrosion, however base material is intact.

4. Is the anchorage free of visible cracks in the concrete near the anchors? Y N U N/A
No observed cracks

5. Is the anchorage configuration consistent with plant documentation? Y N U N/A
(Note: This question only applies if the item is one of the 50% for which an anchorage configuration verification is required.)
Verified per DWG 38N219.

6. Based on the above anchorage evaluations, is the anchorage free of potentially adverse seismic conditions? Y N U
Poor housekeeping, extremely wet environment, and neglected paint. Significant surface corrosion. Still should meet seismic requirements.

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

Equipment ID No. 1-STN-067-0009-A Equip. Class³ 0, Other

Equipment Description ERCW Strainer 1A-A

Interaction Effects

7. Are soft targets free from impact by nearby equipment or structures? Y N U N/A
Scaffolding on pressure boundary bolts. There are several areas of concern. They are credible, but not significant. (1) Drain pipe to scaffolding, (2) Pipe valve water operator to scaffolding, (3) top cover plate bolts to scaffolding, (4) pipe valve in the vertical to the scaffolding.
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
Significant Appendix R scaffolding is in place and has ample restraint to the building. No masonry walls present. Conduit is rigidly supported.
9. Do attached lines have adequate flexibility to avoid damage? Y N U N/A
All electrical connections are flexible. Tubing has adequate flexibility. Piping is rigidly supported.
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
All components are rigidly supported and guided.

Comments (Additional pages may be added as necessary)

Housekeeping is poor in this area. Significant degradation of protective coatings has occurred. Significant surface corrosion is present. Scaffolding is in direct contact with the equipment.

Evaluated by: Travis Hockenberry Date: 7-24-2012

Mike Gordon 7-24-2012

Seismic Walkdown Checklist (SWC)

Equipment ID No. 1-TANK-082-0160-A Equip. Class³ 0, Other

Equipment Description Diesel Gen Engine 1A1 Start Air Receiver A

Location: Bldg. DG BLDG Floor El. 742 Room, Area D104, WBN-WB-001

Manufacturer, Model, Etc. (optional but recommended) McDaniel Tank

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
Loose nut on bottom south anchor strap. Missing washer on bottom north anchor strap.

3. Is the anchorage free of corrosion that is more than mild surface oxidation? Y N U N/A
Corrosion observed on south bottom anchor washer, surface corrosion only.

4. Is the anchorage free of visible cracks in the concrete near the anchors? Y N U N/A
Bolted to steel frame attached to diesel engine skid.

5. Is the anchorage configuration consistent with plant documentation? Y N U N/A
 (Note: This question only applies if the item is one of the 50% for which an anchorage configuration verification is required.)
Verified per DWGs C80-0277-1 and 6036C07004.

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

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

Equipment ID No. 1-TANK-082-0160-A Equip. Class³ 0, Other

Equipment Description Diesel Gen Engine 1A1 Start Air Receiver A

Interaction Effects

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

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

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

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

Other Adverse Conditions

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

Comments (Additional pages may be added as necessary)

Receiver factory steel name plate is loose on the sides. Could be a personnel hazard.

Evaluated by: Travis Hockenberry Date: 7-17-2012

Mike Gordon 7-17-2012

Seismic Walkdown Checklist (SWC)

Equipment ID No. 1-MCC-213-A001-A Equip. Class³ 1, MCC and Wall Mounted Contactors

Equipment Description Reactor MOV Board 1A1-1

Location: Bldg. AUX Floor El. 772 Room, Area A851, WBN-WB-030

Manufacturer, Model, Etc. (optional but recommended) ITE Imperial 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
All anchorage is in good condition. No bent, broken, missing, or loose hardware. Welded to embed. Full length weld on outside of cabinet, appears to be 1/4" – 5/16". Kick panels removed on 50-75% of the panels to visually observe bolts in base of MCC. Front panels could not be opened due to sensitive equipment that is utilized in all modes of operation. Back panels required extensive disassembly to open.

- 3. Is the anchorage free of corrosion that is more than mild surface oxidation? Y N U N/A
All surfaces are painted. There is minor surface corrosion.

- 4. Is the anchorage free of visible cracks in the concrete near the anchors? Y N U N/A
There are no credible cracks. All appear to be legacy typical cracking for a floor.

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

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

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

Equipment ID No. 1-MCC-213-A001-A Equip. Class³ 1, MCC and Wall Mounted Contactors

Equipment Description Reactor MOV Board 1A1-1

Interaction Effects

7. Are soft targets free from impact by nearby equipment or structures? Y N U N/A
Several support structures are in close proximity to flexible conduit connections. However, they have adequate clearance.
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 are safety chained. No masonry walls present. All overhead items are rigidly supported. No ceiling tiles in the area. No Masonry block walls.
9. Do attached lines have adequate flexibility to avoid damage? Y N U N/A
All conduit connections are flexible type.
10. Based on the above seismic interaction evaluations, is equipment free of potentially adverse seismic interaction effects? Y N U
-

Other Adverse Conditions

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

Comments (Additional pages may be added as necessary)

Housekeeping barricades in the area for work in progress. No adverse seismic conditions.

Evaluated by: Travis Hockenberry

Date: 8-3-2012

Mike Gordon

8-3-2012

Seismic Walkdown Checklist (SWC)Equipment ID No. 1-MCC-214-A001-A Equip. Class³ 1, MCCs and Wall-Mounted ContactorsEquipment Description 480V C&A Building Vent Board 1A1-ALocation: Bldg. AUX Floor El. 757 Room, Area A802, WBN-WB-003Manufacturer, Model, Etc. (optional but recommended) ITE Imperial 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
Welded to embed plate in floor. All welds in good condition. No observed damage. Kick panels at base of MCC were removed on approximately 50-75% of the panels to verify the bolting details inside the enclosure. Front panels could not be opened due to sensitive equipment that is utilized in all modes of operation. Back panels required extensive disassembly to open.

3. Is the anchorage free of corrosion that is more than mild surface oxidation? Y N U N/A
Clean and painted (minor chipping).

4. Is the anchorage free of visible cracks in the concrete near the anchors? Y N U N/A
No visible cracks in concrete or damage.

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

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

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

Equipment ID No. 1-MCC-214-A001-A Equip. Class³ 1, MCCs and Wall-Mounted Contactors

Equipment Description 480V C&A Building Vent Board 1A1-A

Interaction Effects

7. Are soft targets free from impact by nearby equipment or structures? Y N U N/A
Overhead lighting restrained with safety chain/wire. Local emergency light restrained adequately.
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
Cable tray and piping rigidly supported. All in good working condition.
9. Do attached lines have adequate flexibility to avoid damage? Y N U N/A
All electrical connections through top of cabinet 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
-

Comments (Additional pages may be added as necessary)

General housekeeping is clean and orderly. Temporary rolling scaffolding noted previously in area walk-by still in same condition tied-off in 1 spot instead of 2.

Evaluated by: Travis Hockenberry

Date: 7-26-2012

Mike Gordon

7-26-2012

Seismic Walkdown Checklist (SWC)

Equipment ID No. 1-MCC-214-A002-A Equip. Class³ 1, MCCs and Wall-Mounted Contactors

Equipment Description 480V C&A Building Vent Board 1A2-A

Location: Bldg. AUX Floor El. 757 Room, Area A802, WBN-WB-003

Manufacturer, Model, Etc. (optional but recommended) ITE Imperial 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
Welded to embed plate in floor. All welds in good condition. No observed damage. Kick panels at base of MCC were removed on approximately 50-75% of the panels to verify the bolting details inside the enclosure. Front panels could not be opened due to sensitive equipment that is utilized in all modes of operation. Back panels required extensive disassembly to open.

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

4. Is the anchorage free of visible cracks in the concrete near the anchors? Y N U N/A
Normal floor cracking around the embed plates is present. Nothing significant observed.

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

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

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

Equipment ID No. 1-MCC-214-A002-A Equip. Class³ 1, MCCs and Wall-Mounted Contactors

Equipment Description 480V C&A Building Vent Board 1A2-A

Interaction Effects

7. Are soft targets free from impact by nearby equipment or structures? Y N U N/A
All items appear to have adequate clearance. All items above are rigidly mounted.
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
No masonry block wall present. No ceiling tiles. All lights are safety chained. All items above are rigidly supported.
9. Do attached lines have adequate flexibility to avoid damage? Y N U N/A
All electrical connections are flexible conduit type.
10. Based on the above seismic interaction evaluations, is equipment free of potentially adverse seismic interaction effects? Y N U
-

Other Adverse Conditions

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

Comments (Additional pages may be added as necessary)

Housekeeping is good.

Evaluated by: Travis Hockenberry

Date: 8-8-2012

Mike Gordon

8-8-2012

Seismic Walkdown Checklist (SWC)

Equipment ID No. 1-MCC-215-A001-A Equip. Class³ 1, MCCs and Wall-Mounted Contactors

Equipment Description 480V Diesel Auxiliary Power Board 1A1-A

Location: Bldg. DG BLDG Floor El. 760 Room, Area D204, WBN-WB-031

Manufacturer, Model, Etc. (optional but recommended) ITE Imperial 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
MCC is welded to embed plates (visually observed on outside of MCC only). No observed issues. Front panels could not be opened due to sensitive equipment that is utilized in all modes of operation. Back panels required extensive disassembly to open.

3. Is the anchorage free of corrosion that is more than mild surface oxidation? Y N U N/A
Mild chipping of paint is present with mild surface corrosion. No adverse seismic conditions.

4. Is the anchorage free of visible cracks in the concrete near the anchors? Y N U N/A
No significant cracking observed. Floor cracking at the embeds is present but typical for this arrangement.

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

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

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

Equipment ID No. 1-MCC-215-A001-A Equip. Class³ 1, MCCs and Wall-Mounted Contactors

Equipment Description 480V Diesel Auxiliary Power Board 1A1-A

Interaction Effects

7. Are soft targets free from impact by nearby equipment or structures? Y N U N/A
All connections and switches on the front of the MCC are clear of impact.
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
Reinforced masonry block wall is present and in good condition. Overhead temperature sensor TS-13-132B does not have a safety cable (housekeeping). All else looks good.
9. Do attached lines have adequate flexibility to avoid damage? Y N U N/A
Electrical connections are all flexible conduit type.
10. Based on the above seismic interaction evaluations, is equipment free of potentially adverse seismic interaction effects? Y N U
-

Other Adverse Conditions

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

Comments (Additional pages may be added as necessary)

Housekeeping in the area is good.

Evaluated by: Travis Hockenberry

Date: 8-6-2012

Mike Gordon

8-6-2012

Seismic Walkdown Checklist (SWC)

Equipment ID No. 1-MCC-232-B-B Equip. Class³ 1, MCC and Wall Mounted Contactors

Equipment Description Reactor Vent Board 1B-B

Location: Bldg. AUX Floor El. 772 Room, Area A852, WBN-WB-014

Manufacturer, Model, Etc. (optional but recommended) ITE Imperial 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
All anchorage is in good condition. No bent, broken, missing, or loose hardware. Welded to embed. Full length weld on outside of cabinet, appears to be 1/4" – 5/16". Kick panels removed on 50-75% of the panels to visually observe bolts in base of MCC. Front panels could not be opened due to sensitive equipment that is utilized in all modes of operation. Back panels required extensive disassembly to open.

3. Is the anchorage free of corrosion that is more than mild surface oxidation? Y N U N/A
Painted with some minor chipping. No observed corrosion.

4. Is the anchorage free of visible cracks in the concrete near the anchors? Y N U N/A
No observed cracking >0.5mm near embed plate. Cracking present typical of concrete floor, nothing of significance or concern.

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

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

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

Equipment ID No. 1-MCC-232-B-B Equip. Class³ 1, MCC and Wall Mounted Contactors

Equipment Description Reactor Vent Board 1B-B

Interaction Effects

7. Are soft targets free from impact by nearby equipment or structures? Y N U N/A
Cap plate of cable tray support in contact with conduit collar on top of cabinet (Panel 8).
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 cable tray and conduit rigidly supported and in good condition. Lighting has safety chain/wire. (One light previously noted in walk-by does not have safety chain.)
9. Do attached lines have adequate flexibility to avoid damage? Y N U N/A
Conduit connections on top of MCC cabinet 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
No temporary equipment or scaffolding in immediate vicinity (within 5 ft)
-

Comments (Additional pages may be added as necessary)

General housekeeping is good.

Evaluated by: Travis Hockenberry

Date: 8-3-2012

Mike Gordon

8-3-2012

Seismic Walkdown Checklist (SWC)

Equipment ID No. 1-BD-212-A001-A Equip. Class³ 3, Medium Voltage Switchgear

Equipment Description 480V Shutdown Board 1A1-A

Location: Bldg. AUX Floor El. 757 Room, Area A802, WBN-WB-003

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

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
Outside of cabinet is welded to embed plate. Observed bolting to channel on inside of cabinet as well as panel to panel connections.

3. Is the anchorage free of corrosion that is more than mild surface oxidation? Y N U N/A
Welds painted and observed bolts in good condition.

4. Is the anchorage free of visible cracks in the concrete near the anchors? Y N U N/A
No visible cracks in weld.

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

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

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

Equipment ID No. 1-BD-212-A001-A Equip. Class³ 3, Medium Voltage Switchgear

Equipment Description 480V Shutdown Board 1A1-A

Interaction Effects

7. Are soft targets free from impact by nearby equipment or structures? Y N U N/A
Clearance of ~5' maintained around 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
Piping and cable tray rigidly supported and in good working condition.
9. Do attached lines have adequate flexibility to avoid damage? Y N U N/A
Attached conduit is rigidly supported, cables free to move inside. All other have flexible connections.
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
Doors closed, no missing bolts or panels. Scaffolding located near south end of cabinet. Appears to be supported properly/adequately.
-

Comments (Additional pages may be added as necessary)

Evaluated by: Travis Hockenberry Date: 7-18-2012

Mike Gordon 7-18-2012

Phillip York 9-28-2012

Seismic Walkdown Checklist (SWC)

Equipment ID No. 1-BD-212-A002-A Equip. Class³ 2, Low Voltage Switchgear and Breaker Panels

Equipment Description 480V Shutdown Board 1A2-A

Location: Bldg. AUX Floor El. 757 Room, Area A802, WBN-WB-015

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

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
No bent, broken, missing, or loose hardware. Outside of cabinet is welded to embed plate. Observed bolting to channel on inside of cabinet as well as panel to panel connections.

3. Is the anchorage free of corrosion that is more than mild surface oxidation? Y N U N/A
All surface painted and in good condition. No corrosion observed.

4. Is the anchorage free of visible cracks in the concrete near the anchors? Y N U N/A
No cracks observed of significance. Cracks typical for a concrete floor.

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

6. Based on the above anchorage evaluations, is the anchorage free of potentially adverse seismic conditions? Y N U
No areas of concern.

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

Equipment ID No. 1-BD-212-A002-A Equip. Class³ 2, Low Voltage Switchgear and Breaker Panels

Equipment Description 480V Shutdown Board 1A2-A

Interaction Effects

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

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 are safely chained. No masonry walls present. No ceiling tiles. Cable tray and conduit is rigidly supported.

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

Comments (Additional pages may be added as necessary)

New scaffolding in the area added since WBN-WB-003 was completed. The scaffolding is adequately restrained. Also observed a sprinkler head touching HVAC Duct Insulation. Duct and pipes are both rigidly supported and of no concern.

Evaluated by: Travis Hockenberry Date: 8-3-2012

Mike Gordon 8-3-2012

Phillip York 9-28-2012

Seismic Walkdown Checklist (SWC)

Equipment ID No. 1-BD-212-B001-B Equip. Class³ 2, Low Voltage Switchgear and Breaker Panels

Equipment Description 480V Shutdown Board 1B1-B

Location: Bldg. AUX Floor El. 757 Room, Area WBN-WB-040

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

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
Outside of cabinet is welded to embed plate. Observed bolting to channel on inside of cabinet as well as panel to panel connections.

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

4. Is the anchorage free of visible cracks in the concrete near the anchors? Y N U N/A
Normal cracks observed in the floor near the embed plate. No significant cracks observed.

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

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

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

Equipment ID No. 1-BD-212-B001-B Equip. Class³ 2, Low Voltage Switchgear and Breaker Panels
Equipment Description 480V Shutdown Board 1B1-B

Interaction Effects

7. Are soft targets free from impact by nearby equipment or structures? Y N U N/A
Soft targets are all clear of objects. All items in the area are well restrained.
8. Are overhead equipment, distribution systems, ceiling tiles and lighting, and masonry block walls not likely to collapse onto the equipment? Y N U N/A
No masonry block wall present. No ceiling tiles. All lights are safety chained. All overhead items are rigidly supported.
9. Do attached lines have adequate flexibility to avoid damage? Y N U N/A
All electrical connections are flexible conduit type.
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
There is significant scaffolding in the area. It looks to have adequate clearance and is well restrained.
-

Comments (Additional pages may be added as necessary)

Housekeeping is good.

Evaluated by: Travis Hockenberry Date: 8-9-2012

Mike Gordon 8-9-2012

Phillip York 9-28-2012

Seismic Walkdown Checklist (SWC)

Equipment ID No. 1-BD-212-B002-B Equip. Class³ 2, Low Voltage Switchgear and Breaker Panels

Equipment Description 480V Shutdown Board 1B2-B

Location: Bldg. AUX Floor El. 757 Room, Area WBN-WB-040

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

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
Outside of cabinet is welded to embed plate. Observed bolting to channel on inside of cabinet as well as panel to panel connections.

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

4. Is the anchorage free of visible cracks in the concrete near the anchors? Y N U N/A
Normal floor cracking observed at the embed plate. No significant cracks observed.

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

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

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

Equipment ID No. 1-BD-212-B002-B Equip. Class³ 2, Low Voltage Switchgear and Breaker Panels

Equipment Description 480V Shutdown Board 1B2-B

Interaction Effects

7. Are soft targets free from impact by nearby equipment or structures? Y N U N/A
All items in the area are well restrained and soft targets have adequate clearance.
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
No masonry block wall present. No ceiling tiles. All lights are safety chained. All overhead items are rigidly supported.
9. Do attached lines have adequate flexibility to avoid damage? Y N U N/A
All electrical connections are flexible conduit type.
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
There is significant scaffolding in the area, but it all has acceptable clearance and restraint.
-

Comments (Additional pages may be added as necessary)

Housekeeping is good.

Evaluated by: Travis Hockenberry Date: 8-9-2012

Mike Gordon 8-9-2012

Phillip York 9-28-2012

Seismic Walkdown Checklist (SWC)

Equipment ID No. 1-BD-211-A-A Equip. Class³ 3, Medium Voltage Switchgear

Equipment Description 6.9KV Shutdown Board 1A-A

Location: Bldg. AUX Floor El. 757 Room, Area A802, WBN-WB-015

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
All panels/cabinets opened to verify all (6) bolts per bay as well as panel to panel connections. All bolts present and in good condition.

3. Is the anchorage free of corrosion that is more than mild surface oxidation? Y N U N/A
No observed corrosion.

4. Is the anchorage free of visible cracks in the concrete near the anchors? Y N U N/A
No visible cracks in concrete.

5. Is the anchorage configuration consistent with plant documentation? Y N U N/A
 (Note: This question only applies if the item is one of the 50% for which an anchorage configuration verification is required.)
Verified per DWG 45N247-1 and Calculation WCG11846.

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

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

Equipment ID No. 1-BD-211-A-A Equip. Class³ 3, Medium Voltage Switchgear

Equipment Description 6.9KV Shutdown Board 1A-A

Interaction Effects

7. Are soft targets free from impact by nearby equipment or structures? Y N U N/A
In close proximity to Reactor Coolant Pump Pot XFMR and Relay Panel. Appears to have adequate clearance to allow for differential displacement. Credible but not significant. Light near 1-BKR-68-341A does not have safety chain/wire, but associated conduit/wire would prevent it from falling.
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 conduit, piping, and cable tray is rigidly supported and in good condition.
9. Do attached lines have adequate flexibility to avoid damage? Y N U N/A
Attached electrical lines are made with flexible connections.
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
Temporary scaffolding near cabinet appears to be adequately restrained to prevent seismic interaction.
-

Comments (Additional pages may be added as necessary)

General housekeeping is clean and orderly. Rolling scaffolding in front of cabinet is tied-off appropriately with 2 chains and wheel stops are engaged.

Evaluated by: Travis Hockenberry Date: 7-26-2012

Mike Gordon 7-26-2012

Phillip York 9-28-2012

Seismic Walkdown Checklist (SWC)

Equipment ID No. 1-BD-211-B-B Equip. Class³ 3, Medium Voltage Switchgear

Equipment Description 6.9KV Shutdown Board 1B-B

Location: Bldg. AUX Floor El. 757 Room, Area A824, WBN-WB-038

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
All panels/cabinets opened to verify all (6) bolts per bay as well as panel to panel connections. All bolts present and in good condition.

3. Is the anchorage free of corrosion that is more than mild surface oxidation? Y N U N/A
No corrosion observed.

4. Is the anchorage free of visible cracks in the concrete near the anchors? Y N U N/A
Normal floor cracking. No significant cracking observed.

5. Is the anchorage configuration consistent with plant documentation? Y N U N/A
 (Note: This question only applies if the item is one of the 50% for which an anchorage configuration verification is required.)
Verified per DWG 45N247-2 and Calculation WCG11846.

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

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

Equipment ID No. 1-BD-211-B-B Equip. Class³ 3, Medium Voltage Switchgear

Equipment Description 6.9KV Shutdown Board 1-B-B

Interaction Effects

7. Are soft targets free from impact by nearby equipment or structures? Y N U N/A
All items have adequate clearance.

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
No masonry block walls present. No ceiling tiles. All lights are safety chained. All overhead items are rigidly supported.

9. Do attached lines have adequate flexibility to avoid damage? Y N U N/A
All electrical connections are flexible conduit type.

10. Based on the above seismic interaction evaluations, is equipment free of potentially adverse seismic interaction effects? Y N U
There is significant scaffolding in the area, but it appears to be well restrained.

Other Adverse Conditions

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

Comments (Additional pages may be added as necessary)

Housekeeping is reasonable.

Evaluated by: Travis Hockenberry Date: 8-8-2012

Mike Gordon 8-8-2012

Phillip York 9-28-2012

Seismic Walkdown Checklist (SWC)

Equipment ID No. 2-BD-211-A-A Equip. Class³ 3, Medium Voltage Switchgear

Equipment Description 6.9KV Shutdown Board 2A-A

Location: Bldg. AUX Floor El. 757 Room, Area A802, WBN-WB-015

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
All panels/cabinets opened to verify all (6) bolts per bay as well as panel to panel connections. All bolts present and in good condition.

3. Is the anchorage free of corrosion that is more than mild surface oxidation? Y N U N/A
No corrosion observed.

4. Is the anchorage free of visible cracks in the concrete near the anchors? Y N U N/A
Normal floor cracking around the embed plates is present. Nothing significant observed.

5. Is the anchorage configuration consistent with plant documentation? Y N U N/A
 (Note: This question only applies if the item is one of the 50% for which an anchorage configuration verification is required.)
Verified per DWG 45N247-1 and Calculation WCG11846.

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

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

Equipment ID No. 2-BD-211-A-A Equip. Class³ 3, Medium Voltage Switchgear

Equipment Description 6.9KV Shutdown Board 2A-A

Interaction Effects

7. Are soft targets free from impact by nearby equipment or structures? Y N U N/A
All items appear to have adequate clearance.
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
No masonry block walls present. No ceiling tiles. All lights are safety chained. All overhead electrical is rigidly supported.
9. Do attached lines have adequate flexibility to avoid damage? Y N U N/A
All electrical connections are flexible conduit type.
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
Observed scaffolding in the immediate area—well restrained. Also work-in-progress—cables entering the back of the cabinet. Panels are bolted lower than normal.
-

Comments (Additional pages may be added as necessary)

Housekeeping is reasonable.

Evaluated by: Travis Hockenberry Date: 8-8-2012

Mike Gordon 8-8-2012

Phillip York 9-28-2012

Seismic Walkdown Checklist (SWC)

Equipment ID No. 2-BD-211-B-B Equip. Class³ 3, Medium Voltage Switchgear

Equipment Description 6.9KV Shutdown Board 2B-B

Location: Bldg. AUX Floor El. 757 Room, Area A824, WBN-WB-038

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
All panels/cabinets opened to verify all (6) bolts per bay as well as panel to panel connections. All bolts present and in good condition.

3. Is the anchorage free of corrosion that is more than mild surface oxidation? Y N U N/A
No corrosion observed.

4. Is the anchorage free of visible cracks in the concrete near the anchors? Y N U N/A
Normal floor cracking is present. No significant cracking observed.

5. Is the anchorage configuration consistent with plant documentation? Y N U N/A
 (Note: This question only applies if the item is one of the 50% for which an anchorage configuration verification is required.)
Verified per DWG 45N247-2 and Calculation WCG11846.

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

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

Equipment ID No. 2-BD-211-B-B Equip. Class³ 3, Medium Voltage Switchgear

Equipment Description 6.9KV Shutdown Board 2B-B

Interaction Effects

7. Are soft targets free from impact by nearby equipment or structures? Y N U N/A
All items have adequate clearance.
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
No masonry walls present. No ceiling tiles. All lights are safety chained. All overhead items are rigidly supported.
9. Do attached lines have adequate flexibility to avoid damage? Y N U N/A
All electrical connections are flexible conduit type.
10. Based on the above seismic interaction evaluations, is equipment free of potentially adverse seismic interaction effects? Y N U
There is significant scaffolding in the area, but it appears to be well restrained.
-

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
Also work-in-progress—cables are inserted into the back of several cabinets with the cover panels bolted in a lower position.
-

Comments (Additional pages may be added as necessary)

Housekeeping is reasonable.

Evaluated by: Travis Hockenberry Date: 8-8-2012

Mike Gordon 8-8-2012

Phillip York 9-28-2012

Seismic Walkdown Checklist (SWC)

Equipment ID No. 1-DXF-237-A Equip. Class³ 4, Transformers

Equipment Description Instrument Power Transformer 1A

Location: Bldg. AUX Floor El. 757 Room, Area A804, WBN-WB-016

Manufacturer, Model, Etc. (optional but recommended) Federal Pacific

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
No bent, broken, missing, or loose hardware. All hardware present.

3. Is the anchorage free of corrosion that is more than mild surface oxidation? Y N U N/A
All surfaces painted or galvanized. No corrosion observed.

4. Is the anchorage free of visible cracks in the concrete near the anchors? Y N U N/A
No visible cracks.

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

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

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

Equipment ID No. 1-DXF-237-A Equip. Class³ 4, Transformers

Equipment Description Instrument Power Transformer 1A

Interaction Effects

7. Are soft targets free from impact by nearby equipment or structures? Y N U N/A
The only soft targets are the connections and they have adequate clearance.
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 are safely chained. All conduit is rigidly supported. No masonry walls present.
9. Do attached lines have adequate flexibility to avoid damage? Y N U N/A
Flexible conduit is in place.
10. Based on the above seismic interaction evaluations, is equipment free of potentially adverse seismic interaction effects? Y N U

Other Adverse Conditions

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

Comments (Additional pages may be added as necessary)

Housekeeping is very good. There is a lot of scaffolding in the room, but it all has good clearance and well restrained.

Evaluated by: Travis Hockenberry Date: 8-3-2012

Mike Gordon 8-3-2012

Seismic Walkdown Checklist (SWC)

Equipment ID No. 1-DXF-237-B Equip. Class³ 4, Transformers

Equipment Description Instrument Power Transformer 1B

Location: Bldg. AUX Floor El. 757 Room, Area A803, WBN-WB-039

Manufacturer, Model, Etc. (optional but recommended) Federal Pacific

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
All items are present and in good condition.

3. Is the anchorage free of corrosion that is more than mild surface oxidation? Y N U N/A
All items are painted and in good condition. No corrosion observed. Minor corrosion observed at the grounding connection.

4. Is the anchorage free of visible cracks in the concrete near the anchors? Y N U N/A
No cracks observed.

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

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

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

Equipment ID No. 1-DXF-237-B Equip. Class³ 4, Transformers

Equipment Description Instrument Power Transformer 1B

Interaction Effects

7. Are soft targets free from impact by nearby equipment or structures? Y N U N/A
Scaffolding is in close proximity to 4" connection. Scaffold is well restrained and should not be a problem. (1" clearance)
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
No masonry block wall present. No ceiling tiles. All lights are safety chained. All overhead items are rigidly supported.
9. Do attached lines have adequate flexibility to avoid damage? Y N U N/A
Electrical connections are flexible conduit type.
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
There is scaffolding nearby, but has adequate restraint.

Comments (Additional pages may be added as necessary)

Housekeeping is good.

Evaluated by: Travis Hockenberry Date: 8-8-2012

Mike Gordon 8-8-2012

Seismic Walkdown Checklist (SWC)Equipment ID No. 1-DXF-242-0001 Equip. Class³ 4, TransformersEquipment Description Rad Monitoring and Sampling Power XFMRLocation: Bldg. AUX Floor El. 757 Room, Area A802, WBN-WB-003Manufacturer, Model, Etc. (optional but recommended) Federal Pacific**Instructions for Completing Checklist**

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

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

Anchorage

1. Is the anchorage configuration verification required (i.e., is the item one of the 50% of SWEL items requiring such verification)? Y N
2. Is the anchorage free of bent, broken, missing or loose hardware? Y N U N/A
3. Is the anchorage free of corrosion that is more than mild surface oxidation? Y N U N/A
4. Is the anchorage free of visible cracks in the concrete near the anchors? Y N U N/A
5. Is the anchorage configuration consistent with plant documentation?
(Note: This question only applies if the item is one of the 50% for which an anchorage configuration verification is required.) Y N U N/A
6. Based on the above anchorage evaluations, is the anchorage free of potentially adverse seismic conditions? Y N U

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

Equipment ID No. 1-DXF-242-0001 Equip. Class³ 4, Transformers

Equipment Description Rad Monitoring and Sampling Power XFMR

Interaction Effects

7. Are soft targets free from impact by nearby equipment or structures? Y N U N/A
Nearby conduit rigidly connected.

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 pipe and conduit rigidly supported.

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
No adverse seismic conditions observed.

Comments (Additional pages may be added as necessary)

Good housekeeping, no temporary equipment nearby.

Evaluated by: Travis Hockenberry

Date: 7-18-2012

Mike Gordon

7-18-2012

Seismic Walkdown Checklist (SWC)

Equipment ID No. 1-OXF-068-0341A-A Equip. Class³ 4, Transformers

Equipment Description PZR Backup HTR GRP 1A-A Transformer

Location: Bldg. AUX Floor El. 782 Room, Area A902, WBN-WB-043

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
Wide flange frame welded full-length to embed plates in floor.

3. Is the anchorage free of corrosion that is more than mild surface oxidation? Y N U N/A
All surfaces painted and in good 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? Y N U N/A
 (Note: This question only applies if the item is one of the 50% for which an anchorage configuration verification is required.)

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

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

Equipment ID No. 1-OXF-068-0341A-A Equip. Class³ 4, Transformers

Equipment Description PZR Backup HTR GRP 1A-A Transformer

Interaction Effects

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

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

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

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

Other Adverse Conditions

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

Comments (Additional pages may be added as necessary)

Evaluated by: Travis Hockenberry

Date: 9-17-2012

Mike Gordon

9-17-2012

Seismic Walkdown Checklist (SWC)

Equipment ID No. 1-OXF-068-0341F Equip. Class³ 4, Transformers

Equipment Description PZR Control HTR GRP 1D Transformer

Location: Bldg. AUX Floor El. 782 Room, Area A902, WBN-WB-043

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
Wide flange frame welded full-length to embed plates in floor.

3. Is the anchorage free of corrosion that is more than mild surface oxidation? Y N U N/A
All surfaces painted and in good 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? Y N U N/A
(Note: This question only applies if the item is one of the 50% for which an anchorage configuration verification is required.)

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

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

Equipment ID No. 1-OXF-068-0341F Equip. Class³ 4, Transformers

Equipment Description PZR Control HTR GRP 1D Transformer

Interaction Effects

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

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

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

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

Other Adverse Conditions

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

Comments (Additional pages may be added as necessary)

Evaluated by: Travis Hockenberry

Date: 9-17-2012

Mike Gordon

9-17-2012

Seismic Walkdown Checklist (SWC)

Equipment ID No. 1-OXF-212-A002-A Equip. Class³ 4, Transformers

Equipment Description 480V Shutdown board Transformer 1A2-A

Location: Bldg. AUX Floor El. 772 Room, Area A856, WBN-WB-018

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

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
All viewable hardware is in good condition.

3. Is the anchorage free of corrosion that is more than mild surface oxidation? Y N U N/A
All surfaces are painted and in reasonably good condition.

4. Is the anchorage free of visible cracks in the concrete near the anchors? Y N U N/A
No cracks observed.

5. Is the anchorage configuration consistent with plant documentation? Y N U N/A
 (Note: This question only applies if the item is one of the 50% for which an anchorage configuration verification is required.)
Verified per DWGs 48W1227-3 and 48W1227-4.

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

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

Equipment ID No. 1-OXF-212-A002-A Equip. Class³ 4, Transformers

Equipment Description 480V Shutdown board Transformer 1A2-A

Interaction Effects

7. Are soft targets free from impact by nearby equipment or structures? Y N U N/A
No objects in close proximity of soft targets.

8. Are overhead equipment, distribution systems, ceiling tiles and lighting, Y N U N/A
and masonry block walls not likely to collapse onto the equipment?
*No masonry block walls present. Overhead lights have safety chains.
All other items are rigidly supported or very robust structural steel.*

9. Do attached lines have adequate flexibility to avoid damage? Y N U N/A
Exposed conduits are flexible type.

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

Other Adverse Conditions

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

Comments (Additional pages may be added as necessary)

Evaluated by: Travis Hockenberry

Date: 7-26-2012

Mike Gordon

7-26-2012

Seismic Walkdown Checklist (SWC)

Equipment ID No. 1-OXF-212-B002-B Equip. Class³ 4, Transformers

Equipment Description 480V Shutdown Board Transformer 1B2-B

Location: Bldg. AUX Floor El. 772 Room, Area A855, WBN-WB-019

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

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
All anchorage is in good condition.

3. Is the anchorage free of corrosion that is more than mild surface oxidation? Y N U N/A
Mild surface corrosion is present but is in good working condition.

4. Is the anchorage free of visible cracks in the concrete near the anchors? Y N U N/A
No cracks observed.

5. Is the anchorage configuration consistent with plant documentation? Y N U N/A
 (Note: This question only applies if the item is one of the 50% for which an anchorage configuration verification is required.)
Verified per DWGs 48W1227-3 and 48W1227-4.

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

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

Equipment ID No. 1-OXF-212-B002-B Equip. Class³ 4, Transformers

Equipment Description 480V Shutdown Board Transformer 1B2-B

Interaction Effects

7. Are soft targets free from impact by nearby equipment or structures? Y N U N/A
Soft targets are free of any possible interaction.

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 have safety chains. All other overhead objects are rigidly supported.

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

Comments (Additional pages may be added as necessary)

Upper railing of temporary scaffold No. 113600645 is held together with wire instead of pins. Top railing is not very stable, but not a seismic concern.

Evaluated by: Travis Hockenberry

Date: 7-26-2012

Mike Gordon

7-26-2012

Seismic Walkdown Checklist (SWC)

Equipment ID No. 0-PMP-070-0051-S Equip. Class³ 5, Horizontal Pumps

Equipment Description CCS Pump C-S

Location: Bldg. AUX Floor El. 713 Room, Area A1-T/A5-R, WBN-WB-008

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

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
All bolting was present and in good condition.

2. Is the anchorage free of bent, broken, missing or loose hardware? Y N U N/A
All bolting was present and in good condition.

3. Is the anchorage free of corrosion that is more than mild surface oxidation? Y N U N/A
No corrosion was observed.

4. Is the anchorage free of visible cracks in the concrete near the anchors? Y N U N/A
Minor visible cracks. None > 0.5mm.

5. Is the anchorage configuration consistent with plant documentation? Y N U N/A
(Note: This question only applies if the item is one of the 50% for which an anchorage configuration verification is required.)
Verified per DWGs 41N353-5, 48N1221-2, and 48N1221-6.

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

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

Equipment ID No. 0-PMP-070-0051-S Equip. Class³ 5, Horizontal Pumps

Equipment Description CCS Pump C-S

Interaction Effects

7. Are soft targets free from impact by nearby equipment or structures? Y N U N/A
The pump and motor are not soft targets. But all other components have adequate clearance to prevent spatial interaction.
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
No block walls or ceiling tiles present. All lights are complete with safety cables.
9. Do attached lines have adequate flexibility to avoid damage? Y N U N/A
All piping is rigidly mounted and power connections 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

Comments (Additional pages may be added as necessary)

Area is clean and all equipment is painted. Good housekeeping is being maintained.

Evaluated by: Travis Hockenberry Date: 7-23-2012

Mike Gordon 7-23-2012

Seismic Walkdown Checklist (SWC)

Equipment ID No. 0-PMP-078-0009-B Equip. Class³ 5, Horizontal Pumps

Equipment Description Spent Fuel Pit Circ. Pump B-B

Location: Bldg. AUX Floor El. 737 Room, Area WBN-WB-024

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
No loose, missing, or broken.

3. Is the anchorage free of corrosion that is more than mild surface oxidation? Y N U N/A
All surfaces are painted with minor chipping. No visible surface corrosion.

4. Is the anchorage free of visible cracks in the concrete near the anchors? Y N U N/A
No visible cracking in concrete near anchors.

5. Is the anchorage configuration consistent with plant documentation? Y N U N/A
(Note: This question only applies if the item is one of the 50% for which an anchorage configuration verification is required.)
Verified per DWGs 48N1223-2 and 48N1223-8.

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

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

Equipment ID No. 0-PMP-078-0009-B Equip. Class³ 5, Horizontal Pumps

Equipment Description Spent Fuel Pit Circ. Pump B-B

Interaction Effects

7. Are soft targets free from impact by nearby equipment or structures? Y N U N/A
Temporary scaffolding present, but adequate clearance and appears to be properly restrained.
8. Are overhead equipment, distribution systems, ceiling tiles and lighting, and masonry block walls not likely to collapse onto the equipment? Y N U N/A
Overhead conduit, piping, and duct rigidly supported and in good condition.
9. Do attached lines have adequate flexibility to avoid damage? Y N U N/A
Electrical connections are flexible and attached lines are properly supported.
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
No observed adverse conditions.
-

Comments (Additional pages may be added as necessary)

Evaluated by: Travis Hockenberry Date: 8-1-2012

Mike Gordon 8-1-2012

Seismic Walkdown Checklist (SWC)

Equipment ID No. 0-PMP-078-0035-S Equip. Class³ 5, Horizontal Pumps

Equipment Description Spent Fuel Pit Circ. Pump C-S

Location: Bldg. AUX Floor El. 737 Room, Area WBN-WB-024

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
All anchorage is in place with no broken, bent, or loose parts.

3. Is the anchorage free of corrosion that is more than mild surface oxidation? Y N U N/A
All surfaces are painted and well maintained.

4. Is the anchorage free of visible cracks in the concrete near the anchors? Y N U N/A
No cracks observed.

5. Is the anchorage configuration consistent with plant documentation? Y N U N/A
(Note: This question only applies if the item is one of the 50% for which an anchorage configuration verification is required.)
Verified per DWGs 48N1223-2 and 48N1223-8.

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

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

Equipment ID No. 0-PMP-078-0035-S Equip. Class³ 5, Horizontal Pumps

Equipment Description Spent Fuel Pit Circ. Pump C-S

Interaction Effects

7. Are soft targets free from impact by nearby equipment or structures? Y N U N/A
Everything has adequate clearance.
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
All items are rigidly mounted overhead. No masonry black walls are present. No ceiling tiles are present.
9. Do attached lines have adequate flexibility to avoid damage? Y N U N/A
Piping is rigidly mounted and qualified. Conduit connections 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
Scaffolding in the area is not secured properly per "TI-276". Scaffold #27076 with only (1) horizontal restraint.
-

Comments (Additional pages may be added as necessary)

Housekeeping in the area is acceptable. Lots of scaffolding in place.

Evaluated by: Travis Hockenberry Date: 8-1-2012

Mike Gordon 8-1-2012

Seismic Walkdown Checklist (SWC)

Equipment ID No. 1-PMP-003-0001A-S Equip. Class³ 5, Horizontal Pumps

Equipment Description TD Aux Feedwater Pump 1A-S

Location: Bldg. AUX Floor El. 692 Room, Area A306, WBN-WB-042

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 in place and in good condition.

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

4. Is the anchorage free of visible cracks in the concrete near the anchors? Y N U N/A
No significant cracks observed.

5. Is the anchorage configuration consistent with plant documentation? Y N U N/A
 (Note: This question only applies if the item is one of the 50% for which an anchorage configuration verification is required.)
Verified per DWGs 41N353-3, 48N1219-2, and 48N1219-4.

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

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

Equipment ID No. 1-PMP-003-0001A-S Equip. Class³ 5, Horizontal Pumps

Equipment Description TD Aux Feedwater Pump 1A-S

Interaction Effects

7. Are soft targets free from impact by nearby equipment or structures? Y N U N/A
All soft targets have adequate clearance.
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
All items overhead are adequately supported. No masonry walls present. No ceiling tiles. Lights are safety wired.
9. Do attached lines have adequate flexibility to avoid damage? Y N U N/A
Electrical connections are flexible type. Piping is flexible and rod/hung piping is analyzed ASME pipe.
10. Based on the above seismic interaction evaluations, is equipment free of potentially adverse seismic interaction effects? Y N U
-

Other Adverse Conditions

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

Comments (Additional pages may be added as necessary)

Housekeeping is reasonable in the area.

Evaluated by: Travis Hockenberry

Date: 8-9-2012

Mike Gordon

8-9-2012

Seismic Walkdown Checklist (SWC)

Equipment ID No. 1-PMP-003-0128-B Equip. Class³ 5, Horizontal Pumps

Equipment Description Aux Feedwater Pump 1B-B

Location: Bldg. AUX Floor El. 713 Room, Area A1-T / A5-R, WBN-WB-008

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
Everything was in good condition.

3. Is the anchorage free of corrosion that is more than mild surface oxidation? Y N U N/A
No corrosion was observed.

4. Is the anchorage free of visible cracks in the concrete near the anchors? Y N U N/A
There were cracks observed, but they were smaller than 0.5mm.

5. Is the anchorage configuration consistent with plant documentation? Y N U N/A
(Note: This question only applies if the item is one of the 50% for which an anchorage configuration verification is required.)
Verified per DWGs 41N353-6, 48N1221-2, and 48N1221-6.

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

³ Enter the equipment class name from **Error! Reference source not found. Error! Reference source not found.**

Equipment ID No. 1-PMP-003-0128-B Equip. Class³ 5, Horizontal Pumps

Equipment Description Aux Feedwater Pump 1B-B

Interaction Effects

7. Are soft targets free from impact by nearby equipment or structures? Y N U N/A
The pumps and motor assembly are not soft targets. However, all other items in the area were acceptable.
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
No block walls or ceiling tile were present. Lights have safety cables.
9. Do attached lines have adequate flexibility to avoid damage? Y N U N/A
Main piping connections were rigid. Power connections were flexible conduit.
10. Based on the above seismic interaction evaluations, is equipment free of potentially adverse seismic interaction effects? Y N U
-

Other Adverse Conditions

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

Comments (Additional pages may be added as necessary)

The area was well maintained and painted. Good housekeeping was being maintained.

Evaluated by: Travis Hockenberry Date: 7-23-2012

Mike Gordon 7-23-2012

Seismic Walkdown Checklist (SWC)

Equipment ID No. 1-PMP-062-0108-A Equip. Class³ 5, Horizontal Pumps

Equipment Description Centrifugal Charging Pump 1A-A

Location: Bldg. AUX Floor El. 692 Room, Area A309, WBN-WB-006

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
All bolts in place. No apparent problems with bolting.

3. Is the anchorage free of corrosion that is more than mild surface oxidation? Y N U N/A
No corrosion was observed.

4. Is the anchorage free of visible cracks in the concrete near the anchors? Y N U N/A
No cracks were observed.

5. Is the anchorage configuration consistent with plant documentation? Y N U N/A
(Note: This question only applies if the item is one of the 50% for which an anchorage configuration verification is required.)
Verified per DWGs 41N353-4, 48N1219-2, and 48N1219-4.

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

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

Equipment ID No. 1-PMP-062-0108-A Equip. Class³ 5, Horizontal Pumps

Equipment Description Centrifugal Charging Pump 1A-A

Interaction Effects

7. Are soft targets free from impact by nearby equipment or structures? Y N U N/A
The pump and motor assembly is not a soft target. However, there were no potential threats in the area.
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
Everything was well supported and the lights had safety cables.
9. Do attached lines have adequate flexibility to avoid damage? Y N U N/A
10. Based on the above seismic interaction evaluations, is equipment free of potentially adverse seismic interaction effects? Y N U
-

Other Adverse Conditions

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

Comments (Additional pages may be added as necessary)

Area was very well maintained. Good housekeeping was being maintained. Everything was painted and clean.

Evaluated by: Travis Hockenberry Date: 7-23-2012

Mike Gordon 7-23-2012

Seismic Walkdown Checklist (SWC)

Equipment ID No. 1-PMP-063-0015-B Equip. Class³ 5, Horizontal Pumps

Equipment Description Safety Injection Pump 1B-B

Location: Bldg. AUX Floor El. 692 Room, Area A312, WBN-WB-007

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
All anchorage is present and in good condition.

3. Is the anchorage free of corrosion that is more than mild surface oxidation? Y N U N/A
No corrosion was 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? Y N U N/A
(Note: This question only applies if the item is one of the 50% for which an anchorage configuration verification is required.)
Verified per DWGs 41N353-2, 48N1219-2, and 48N1219-4.

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

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

Equipment ID No. 1-PMP-063-0015-B Equip. Class³ 5, Horizontal Pumps

Equipment Description Safety Injection Pump 1B-B

Interaction Effects

7. Are soft targets free from impact by nearby equipment or structures? Y N U N/A
The pump and motor assembly are not soft targets. No adverse conditions were observed.
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
All lights were safety cabled and all piping was well supported.
9. Do attached lines have adequate flexibility to avoid damage? Y N U N/A
Piping and conduit connections 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
-

Comments (Additional pages may be added as necessary)

Area was very well maintained. Good housekeeping was being maintained. Everything was painted and clean.

Evaluated by: Travis Hockenberry Date: 7-23-2012

Mike Gordon 7-23-2012

Seismic Walkdown Checklist (SWC)

Equipment ID No. 1-PMP-067-0431 Equip. Class³ 6, Vertical Pumps

Equipment Description ERCW Screen wash Pump 1A-A

Location: Bldg. IPS Floor El. 741 Room, Area 1107, WBN-WB-012

Manufacturer, Model, Etc. (optional but recommended) Johnston Pump Co.

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
No bent, broken, missing, or loose hardware

3. Is the anchorage free of corrosion that is more than mild surface oxidation? Y N U N/A
Mild surface corrosion, paint is degraded and chipped away

4. Is the anchorage free of visible cracks in the concrete near the anchors? Y N U N/A
No cracks observed

5. Is the anchorage configuration consistent with plant documentation? Y N U N/A
 (Note: This question only applies if the item is one of the 50% for which an anchorage configuration verification is required.)
Verified per DWG PCS434485-01

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

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

Equipment ID No. 1-PMP-067-0431 Equip. Class³ 6, Vertical Pumps

Equipment Description ERCW Screen wash Pump 1A-A

Interaction Effects

7. Are soft targets free from impact by nearby equipment or structures? Y N U N/A
No potential interactions
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
No masonry walls or lights overhead. No ceiling tiles. All overhead structures are anchored in place.
9. Do attached lines have adequate flexibility to avoid damage? Y N U N/A
Pipes are rigidly supported and electrical connections 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

Comments (Additional pages may be added as necessary)

Housekeeping is reasonable—but could be better

Evaluated by: Travis Hockenberry

Date: 7-24-2012

Mike Gordon

7-24-2012

Seismic Walkdown Checklist (SWC)

Equipment ID No. 1-PMP-067-0440 Equip. Class³ 6, Vertical Pumps

Equipment Description ERCW Screen Wash Pump 1B-B

Location: Bldg. IPS Floor El. 741 Room, Area 1107, WBN-WB-012

Manufacturer, Model, Etc. (optional but recommended) Johnston Pump Co.

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
No bent, broken, or loose hardware.

3. Is the anchorage free of corrosion that is more than mild surface oxidation? Y N U N/A
Free of corrosion—all painted, good housekeeping

4. Is the anchorage free of visible cracks in the concrete near the anchors? Y N U N/A
No cracks observed

5. Is the anchorage configuration consistent with plant documentation? Y N U N/A
(Note: This question only applies if the item is one of the 50% for which an anchorage configuration verification is required.)
Verified per DWG PCS434485-01

6. Based on the above anchorage evaluations, is the anchorage free of potentially adverse seismic conditions? Y N U
No concerns

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

Equipment ID No. 1-PMP-067-0440 Equip. Class³ 6, Vertical Pumps

Equipment Description ERCW Screen Wash Pump 1B-B

Interaction Effects

7. Are soft targets free from impact by nearby equipment or structures? Y N U N/A
No potential interactions

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
No masonry block walls or lights overhead. No ceiling tiles, all overhead structures are anchored in place.

9. Do attached lines have adequate flexibility to avoid damage? Y N U N/A
Yes, all piping is rigidly mounted and all electrical has flex connections

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
No other seismic concerns

Comments (Additional pages may be added as necessary)

Good housekeeping—area clean and painted.

Evaluated by: Travis Hockenberry

Date: 7-24-2012

Mike Gordon

7-24-2012

Seismic Walkdown Checklist (SWC)

Equipment ID No. 1-PMP-070-0131-A Equip. Class³ 5, Horizontal Pumps

Equipment Description CCS Thermal Barrier Booster Pump 1A-A

Location: Bldg. AUX Floor El. 737 Room, Area WBN-WB-024

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
No loose, missing, or broken. Bolted through channel on pedestal.

3. Is the anchorage free of corrosion that is more than mild surface oxidation? Y N U N/A
Painted with minor chipping, no observed corrosion.

4. Is the anchorage free of visible cracks in the concrete near the anchors? Y N U N/A
No observed cracking or degradation.

5. Is the anchorage configuration consistent with plant documentation? Y N U N/A
 (Note: This question only applies if the item is one of the 50% for which an anchorage configuration verification is required.)
Verified per DWGs 41N353-12, 41N353-16, and N757039 #1 (contract 8324301).

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

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

Equipment ID No. 1-PMP-070-0131-A Equip. Class³ 5, Horizontal Pumps

Equipment Description CCS Thermal Barrier Booster Pump 1A-A

Interaction Effects

7. Are soft targets free from impact by nearby equipment or structures? Y N U N/A
Adequate clearance around pedestal. Temporary flood barrier and scaffolding present with adequate clearance and appears to be restrained properly.
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
Conduit, piping, and duct rigidly supported and in good condition.
9. Do attached lines have adequate flexibility to avoid damage? Y N U N/A
Electrical connection is flexible and attached lines are supported with 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
No observed adverse seismic conditions.
-

Comments (Additional pages may be added as necessary)

General housekeeping is good.

Evaluated by: Travis Hockenberry

Date: 8-1-2012

Mike Gordon

8-1-2012

Seismic Walkdown Checklist (SWC)

Equipment ID No. 0-PMP-067-0028-A Equip. Class³ 6, Vertical Pumps

Equipment Description ERCW Pump A-A

Location: Bldg. IPS Floor El. 741 Room, Area 1105, WBN-WB-010

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

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
No missing, damaged, or loose.

3. Is the anchorage free of corrosion that is more than mild surface oxidation? Y N U N/A
Mild surface corrosion where paint has chipped away.

4. Is the anchorage free of visible cracks in the concrete near the anchors? Y N U N/A
No visible cracks > 0.5mm.

5. Is the anchorage configuration consistent with plant documentation? Y N U N/A
(Note: This question only applies if the item is one of the 50% for which an anchorage configuration verification is required.)
Verified there are (8) 1-1/2" anchors equally spaced on sole plate, per DWG 2E-2373.

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

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

Equipment ID No. 0-PMP-067-0028-A Equip. Class³ 6, Vertical Pumps

Equipment Description ERCW Pump A-A

Interaction Effects

7. Are soft targets free from impact by nearby equipment or structures? Y N U N/A
Over head scaffolding close to level indicator, but scaffolding is adequately restrained. Close proximity of electrical conduit and prelube throttle (0-THU-67-506A). Deemed credible, but not significant.
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
Cable tray and conduit rigidly supported and in good working condition.
9. Do attached lines have adequate flexibility to avoid damage? Y N U N/A
All electrical connections 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

Comments (Additional pages may be added as necessary)

Housekeeping reasonable, area is dirty and wet as expected.

Evaluated by: Travis Hockenberry

Date: 7-24-2012

Mike Gordon

7-24-2012

Seismic Walkdown Checklist (SWC)

Equipment ID No. 0-PMP-067-0036-A Equip. Class³ 6, Vertical Pumps

Equipment Description ERCW Pump C-A

Location: Bldg. IPS Floor El. 741 Room, Area I105, WBN-WB-010

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

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
No missing, damaged, or loose.

3. Is the anchorage free of corrosion that is more than mild surface oxidation? Y N U N/A
Mild surface corrosion where paint is chipped away.

4. Is the anchorage free of visible cracks in the concrete near the anchors? Y N U N/A
(1) Minor crack between anchors. Not a significant seismic concern.

5. Is the anchorage configuration consistent with plant documentation? Y N U N/A
(Note: This question only applies if the item is one of the 50% for which an anchorage configuration verification is required.)
Verified there are (8) 1-1/2" anchors equally spaced on sole plate, per DWG 2E-2373.

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

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

Equipment ID No. 0-PMP-067-0036-A Equip. Class³ 6, Vertical Pumps

Equipment Description ERCW Pump C-A

Interaction Effects

7. Are soft targets free from impact by nearby equipment or structures? Y N U N/A
Piping in close proximity to motor enclosure, but vertical displacement is negligible.
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
Cable tray rigidly and in good working condition.
9. Do attached lines have adequate flexibility to avoid damage? Y N U N/A
All electrical connections 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
Observed oil container in area not restrained adequately to resist tipping. See area walk-by WBN-WB-010.
-

Comments (Additional pages may be added as necessary)

Housekeeping reasonable, area is dirty and wet as expected.

Evaluated by: Travis Hockenberry

Date: 7-24-2012

Mike Gordon

7-24-2012

Seismic Walkdown Checklist (SWC)

Equipment ID No. 0-PMP-067-0047-B Equip. Class³ 6, Vertical Pumps

Equipment Description ERCW Pump E-B

Location: Bldg. IPS Floor El. 741 Room, Area 1109, WBN-WB-009

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

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
No missing, damaged, or loose.

3. Is the anchorage free of corrosion that is more than mild surface oxidation? Y N U N/A
Anchorage is mostly painted with some paint chipping away with mild surface corrosion.

4. Is the anchorage free of visible cracks in the concrete near the anchors? Y N U N/A
No visible cracks > 0.5mm near anchorage.

5. Is the anchorage configuration consistent with plant documentation? Y N U N/A
(Note: This question only applies if the item is one of the 50% for which an anchorage configuration verification is required.)
Verified there are (8) 1-1/2" anchors equally spaced on sole plate, per DWG 2E-2373.

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

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

Equipment ID No. 0-PMP-067-0047-B Equip. Class³ 6, Vertical Pumps

Equipment Description ERCW Pump E-B

Interaction Effects

7. Are soft targets free from impact by nearby equipment or structures? Y N U N/A
No nearby equipment. Overhead scaffolding present and properly restrained.
8. Are overhead equipment, distribution systems, ceiling tiles and lighting, and masonry block walls not likely to collapse onto the equipment? Y N U N/A
Cable tray rigidly supported and not overloaded. No masonry block walls.
9. Do attached lines have adequate flexibility to avoid damage? Y N U N/A
All electrical connections are flexible and piping is rigidly supported.
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
Reasonably good housekeeping/maintained.
-

Comments (Additional pages may be added as necessary)

Evaluated by: Travis Hockenberry

Date: 7-24-2012

Mike Gordon

7-24-2012

Seismic Walkdown Checklist (SWC)

Equipment ID No. 1-PMP-074-0020-B Equip. Class³ 6, Vertical Pumps

Equipment Description RHR Pump 1B-B

Location: Bldg. AUX Floor El. 676 Room, Area A210, WBN-WB-004

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
Welded frame to embed plate, painted and in good working condition.

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

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? Y N U N/A
 (Note: This question only applies if the item is one of the 50% for which an anchorage configuration verification is required.)

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

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

Equipment ID No. 1-PMP-074-0020-B Equip. Class³ 6, Vertical Pumps

Equipment Description RHR Pump 1B-B

Interaction Effects

7. Are soft targets free from impact by nearby equipment or structures? Y N U N/A
Nearby chain hoist (credible but not significant). All other equipment and structures have adequate clearance.
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 conduit and piping rigidly supported.
9. Do attached lines have adequate flexibility to avoid damage? Y N U N/A
Seismic piping supports in place to minimize load to nozzles.
10. Based on the above seismic interaction evaluations, is equipment free of potentially adverse seismic interaction effects? Y N U
-

Other Adverse Conditions

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

Comments (Additional pages may be added as necessary)

Evaluated by: Travis Hockenberry Date: 7-18-2012

Mike Gordon 7-18-2012

Seismic Walkdown Checklist (SWC)Equipment ID No. 0-FCV-032-0082-A Equip. Class³ 7, Pneumatic-Operated ValvesEquipment Description Essent. Control Air TR A Norm Flow Isol.Location: Bldg. AUX Floor El. 757 Room, Area A813, WBN-WB-026

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
Mounted in ASME piping.

3. Is the anchorage free of corrosion that is more than mild surface oxidation? Y N U N/A
No corrosion identified. All surfaces were painted, galvanized, or stainless steel.

4. Is the anchorage free of visible cracks in the concrete near the anchors? Y N U N/A
Inline mounted in ASME piping.

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

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

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

Equipment ID No. 0-FCV-032-0082-A Equip. Class³ 7, Pneumatic-Operated Valves

Equipment Description Essent. Control Air TR A Norm Flow Isol.

Interaction Effects

7. Are soft targets free from impact by nearby equipment or structures? Y N U N/A
All items have adequate clearance. No objects overhead to be an issue.
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
None present—this is on the refueling floor.
9. Do attached lines have adequate flexibility to avoid damage? Y N U N/A
All connections 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
-

Comments (Additional pages may be added as necessary)

Housekeeping is very good in this area.

Evaluated by: Travis Hockenberry Date: 8-6-2012

Mike Gordon 8-6-2012

Seismic Walkdown Checklist (SWC)

Equipment ID No. 1-FCV-062-0089 Equip. Class³ 7, Pneumatic-Operated Valves

Equipment Description CVCS Charging Header/RCP Seal Inj. Flow Cntl

Location: Bldg. AUX Floor El. 692 Room, Area A309

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

Instructions for Completing Checklist

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

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

Anchorage

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

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

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

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

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

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

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

Equipment ID No. 1-FCV-062-0089 Equip. Class³ 7, Pneumatic-Operated Valves

Equipment Description CVCS Charging Header/RCP Seal Inj. Flow Cntl

Interaction Effects

7. Are soft targets free from impact by nearby equipment or structures? Y N U N/A
 tubing to scaffolding clearance is greater than 1". Is not a concern.

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
 No masonry block walls present.

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

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

Other Adverse Conditions

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

Comments (Additional pages may be added as necessary)

Evaluated by: Travis Hockenberry Date: 8-7-2012

Mike Gordon 8-7-2012

Seismic Walkdown Checklist (SWC)

Equipment ID No. 1-FCV-062-0093 Equip. Class³ 7, Pneumatic-Operated Valves

Equipment Description CVCS Charging Header Flow/PZR Level Control

Location: Bldg. AUX Floor El. 692 Room, Area A310, WBN-WB-033

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, in-line mounted in ASME piping.

2. Is the anchorage free of bent, broken, missing or loose hardware? Y N U N/A
Welded in-line in ASME piping, everything appears to be in place.

3. Is the anchorage free of corrosion that is more than mild surface oxidation? Y N U N/A
All items are painted, galvanized, or stainless steel. No corrosion 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? Y N U N/A
 (Note: This question only applies if the item is one of the 50% for which an anchorage configuration verification is required.)

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

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

Equipment ID No. 1-FCV-062-0093 Equip. Class³ 7, Pneumatic-Operated Valves

Equipment Description CVCS Charging Header Flow/PZR Level Control

Interaction Effects

7. Are soft targets free from impact by nearby equipment or structures? Y N U N/A
Observed clearance of ¾" – 1" between the AOD operator and civil/ structural feature.
8. Are overhead equipment, distribution systems, ceiling tiles and lighting, and masonry block walls not likely to collapse onto the equipment? Y N U N/A
A non-reinforced masonry block wall is in the room, but is in good condition and properly restrained. Not in the area of the valve. All overhead items are rigidly supported.
9. Do attached lines have adequate flexibility to avoid damage? Y N U N/A
Tubing connections have good 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
There is scaffolding present in the room and it appears to be well restrained.
-

Comments (Additional pages may be added as necessary)

Housekeeping in this area is good.

Evaluated by: Travis Hockenberry

Date: 8-7-2012

Mike Gordon

8-7-2012

Seismic Walkdown Checklist (SWC)

Equipment ID No. 1-FCV-063-0048-B Equip. Class³ 7, Pneumatic-Operated Valves

Equipment Description Safety Injection Pump 1B-B Suction Isolation

Location: Bldg. AUX Floor El. 692 Room, Area A312, WBN-WB-007

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 mounted in ASME piping.

2. Is the anchorage free of bent, broken, missing or loose hardware? Y N U N/A
All components are in place and in good condition.

3. Is the anchorage free of corrosion that is more than mild surface oxidation? Y N U N/A
In-line mounted in ASME piping.

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? Y N U N/A
 (Note: This question only applies if the item is one of the 50% for which an anchorage configuration verification is required.)

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

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

Equipment ID No. 1-FCV-063-0048-B Equip. Class³ 7, Pneumatic-Operated Valves

Equipment Description Safety Injection Pump 1B-B Suction Isolation

Interaction Effects

7. Are soft targets free from impact by nearby equipment or structures? Y N U N/A
All soft targets are free of spatial interactions.

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
Conduits, pipe, and duct are all rigidly mounted. No masonry walls in the area.

9. Do attached lines have adequate flexibility to avoid damage? Y N U N/A
All conduit connections are flexible. Piping is rigidly supported ASME.

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

Other Adverse Conditions

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

Comments (Additional pages may be added as necessary)

Scaffolding was present in the area, but was adequately restrained.

Evaluated by: Travis Hockenberry Date: 8-6-2012

Mike Gordon 8-6-2012

Seismic Walkdown Checklist (SWC)

Equipment ID No. 1-FCV-067-0213-A Equip. Class³ 7, Pneumatic-Operated Valves

Equipment Description SFP/TBBP Space Cooler 1A ERCW Sup Flow CNTL

Location: Bldg. AUX Floor El. 737 Room, Area WBN-WB-024

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
In-line piping component.

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? Y N U N/A
(Note: This question only applies if the item is one of the 50% for which an anchorage configuration verification is required.)

6. Based on the above anchorage evaluations, is the anchorage free of potentially adverse seismic conditions? Y N U
In-line component in ASME piping.

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

Equipment ID No. 1-FCV-067-0213-A Equip. Class³ 7, Pneumatic-Operated Valves

Equipment Description SFP/TBBP Space Cooler 1A ERCW Sup Flow CNTL

Interaction Effects

7. Are soft targets free from impact by nearby equipment or structures? Y N U N/A
More than 2" clearance to all items.
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
No masonry walls present. All overhead items are rigidly mounted. Scaffolding is in close proximity but well restrained.
9. Do attached lines have adequate flexibility to avoid damage? Y N U N/A
All tubing connections have adequate spans and changes in direction to provide adequate flexibility. All electrical connections are flexible conduit.
10. Based on the above seismic interaction evaluations, is equipment free of potentially adverse seismic interaction effects? Y N U
-

Other Adverse Conditions

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

Comments (Additional pages may be added as necessary)

Congested area—but has required clearances.

Evaluated by: Travis Hockenberry Date: 8-1-2012

Mike Gordon 8-1-2012

Seismic Walkdown Checklist (SWC)

Equipment ID No. 1-FCV-067-0215-B Equip. Class³ 7, Pneumatic-Operated Valves

Equipment Description SFP/TBBP Space Cooler 1B ERCW Sup Flow CNTL

Location: Bldg. AUX Floor El. 737 Room, Area WBN-WB-024

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
Line mounted.

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? Y N U N/A
(Note: This question only applies if the item is one of the 50% for which an anchorage configuration verification is required.)

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

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

Equipment ID No. 1-FCV-067-0215-B Equip. Class³ 7, Pneumatic-Operated Valves

Equipment Description SFP/TBBP Space Cooler 1B ERCW Sup Flow CNTL

Interaction Effects

7. Are soft targets free from impact by nearby equipment or structures? Y N U N/A
Temporary scaffolding in the area with adequate clearance and appears to be properly restrained.
8. Are overhead equipment, distribution systems, ceiling tiles and lighting, and masonry block walls not likely to collapse onto the equipment? Y N U N/A
Overhead piping and conduit is rigidly supported.
9. Do attached lines have adequate flexibility to avoid damage? Y N U N/A
Tubing connections have adequate spans and bends to provide flexibility. Electrical connections 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
-

Comments (Additional pages may be added as necessary)

Congested area with scaffolding.

Evaluated by: Travis Hockenberry Date: 8-1-2012

Mike Gordon 8-1-2012

Seismic Walkdown Checklist (SWC)

Equipment ID No. 1-FCV-063-0175-B Equip. Class³ 8, Motor-Operated and Solenoid-Operated Valves

Equipment Description SI Pump 1B-B Min Flow Recirc. to RWST

Location: Bldg. AUX Floor El. 692 Room, Area A312, WBN-WB-007

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
This MOV is inline mounted. All flange bolts were in place.

3. Is the anchorage free of corrosion that is more than mild surface oxidation? Y N U N/A
No corrosion was 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? Y N U N/A
 (Note: This question only applies if the item is one of the 50% for which an anchorage configuration verification is required.)

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

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

Equipment ID No. 1-FCV-063-0175-B Equip. Class³ 8, Motor-Operated and Solenoid-Operated Valves

Equipment Description SI Pump 1B-B Min Flow Recirc. to RWST

Interaction Effects

7. Are soft targets free from impact by nearby equipment or structures? Y N U N/A
There was adequate clearance between the valve and operator to prevent spatial interactions.
8. Are overhead equipment, distribution systems, ceiling tiles and lighting, and masonry block walls not likely to collapse onto the equipment? Y N U N/A
9. Do attached lines have adequate flexibility to avoid damage? Y N U N/A
Conduit was a flexible connection.
10. Based on the above seismic interaction evaluations, is equipment free of potentially adverse seismic interaction effects? Y N U
-

Other Adverse Conditions

11. Have you looked for and found no other seismic conditions that could adversely affect the safety functions of the equipment? Y N U
The pipe that the valve is installed in is rigidly mounted.
-

Comments (Additional pages may be added as necessary)

All surfaces were clean and painted. Good housekeeping was being maintained.

Evaluated by: Travis Hockenberry

Date: 7-23-2012

Mike Gordon

7-23-2012

Seismic Walkdown Checklist (SWC)

Equipment ID No. 1-FCV-074-0021-B Equip. Class³ 8, Motor-Operated and Solenoid-Operated Valves

Equipment Description RHR Pump 1B-B Suction

Location: Bldg. AUX Floor El. 676 Room, Area A210, WBN-WB-004

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
Line mounted to piping, no additional anchorage provided for MOV. All hardware is present and in good condition.

3. Is the anchorage free of corrosion that is more than mild surface oxidation? Y N U N/A
See Question 2.

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? Y N U N/A
 (Note: This question only applies if the item is one of the 50% for which an anchorage configuration verification is required.)

6. Based on the above anchorage evaluations, is the anchorage free of potentially adverse seismic conditions? Y N U
Adequately mounted/supported by piping.

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

Equipment ID No. 1-FCV-074-0021-B Equip. Class³ 8, Motor-Operated and Solenoid-Operated Valves

Equipment Description RHR Pump 1B-B Suction

Interaction Effects

7. Are soft targets free from impact by nearby equipment or structures? Y N U N/A
No nearby equipment, adequate clearance around MOV.
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
All overhead piping/conduit rigidly mounted and in good working condition.
9. Do attached lines have adequate flexibility to avoid damage? Y N U N/A
Attached lines are made with flexible connections.
10. Based on the above seismic interaction evaluations, is equipment free of potentially adverse seismic interaction effects? Y N U
-

Other Adverse Conditions

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

Comments (Additional pages may be added as necessary)

Evaluated by: Travis Hockenberry

Date: 7-18-2012

Mike Gordon

7-18-2012

Seismic Walkdown Checklist (SWC)

Equipment ID No. 1-FSV-031-0447-B Equip. Class³ 8, Motor-Operated and Solenoid-Operated Valves

Equipment Description 480V Bd Rm 1B Refrigerant Line FSV

Location: Bldg. AUX Floor El. 786 Room, Area A924, WBN-WB-032

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
Inline to ASME piping.

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

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

4. Is the anchorage free of visible cracks in the concrete near the anchors? Y N U N/A
Inline to ASME piping.

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

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

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

Equipment ID No. 1-FSV-031-0447-B Equip. Class³ 8, Motor-Operated and Solenoid-Operated Valves
Equipment Description 480V Bd Rm 1B Refrigerant Line FSV

Interaction Effects

7. Are soft targets free from impact by nearby equipment or structures? Y N U N/A
No soft impact issues.
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
All overhead duct and electrical are rigidly mounted. No masonry walls present. No ceiling tiles.
9. Do attached lines have adequate flexibility to avoid damage? Y N U N/A
Conduit is flexible conduit type.
10. Based on the above seismic interaction evaluations, is equipment free of potentially adverse seismic interaction effects? Y N U
-

Other Adverse Conditions

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

Comments (Additional pages may be added as necessary)

Housekeeping is very bad in this area. Very wet environment. Anchor bolts on associated pipe support are corroded. Not a significant concern.

Evaluated by: Travis Hockenberry Date: 8-6-2012

Mike Gordon 8-6-2012

Seismic Walkdown Checklist (SWC)

Equipment ID No. 1-LCV-062-0135-A Equip. Class³ 8, Motor-Operated and Solenoid-Operated Valves

Equipment Description RWST CVCS Supply HDR Isolation

Location: Bldg. AUX Floor El. 692 Room, Area A 307, WBN-WB-034

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
Line mounted in ASME piping.

3. Is the anchorage free of corrosion that is more than mild surface oxidation? Y N U N/A
All surfaces are painted, galvanized, or stainless steel. No corrosion was 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? Y N U N/A
(Note: This question only applies if the item is one of the 50% for which an anchorage configuration verification is required.)

6. Based on the above anchorage evaluations, is the anchorage free of potentially adverse seismic conditions? Y N U
Inline mounted in ASME piping.

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

Equipment ID No. 1-LCV-062-0135-A Equip. Class³ 8, Motor-Operated and Solenoid-Operated Valves

Equipment Description RWST CVCS Supply HDR Isolation

Interaction Effects

7. Are soft targets free from impact by nearby equipment or structures? Y N U N/A
All soft targets are clear of spatial interactions.
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
No masonry walls present. No lights or ceiling tiles overhead. All other items are rigidly mounted.
9. Do attached lines have adequate flexibility to avoid damage? Y N U N/A
All connections are flexible. Rigidly mounted in piping.
10. Based on the above seismic interaction evaluations, is equipment free of potentially adverse seismic interaction effects? Y N U
-

Other Adverse Conditions

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

Comments (Additional pages may be added as necessary)

Housekeeping in the area is reasonable.

Evaluated by: Travis Hockenberry

Date: 8-6-2012

Mike Gordon

8-6-2012

Seismic Walkdown Checklist (SWC)Equipment ID No. 1-LCV-062-0136-B Equip. Class³ 8, Motor-Operated and Solenoid-Operated ValvesEquipment Description RWST CVCS Supply HDR IsolationLocation: Bldg. AUX Floor El. 692 Room, Area A307, WBN-WB-034

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
Inline mounted in ASME piping.

2. Is the anchorage free of bent, broken, missing or loose hardware? Y N U N/A
Line mounted in piping. All hardware is in good condition.

3. Is the anchorage free of corrosion that is more than mild surface oxidation? Y N U N/A
Line mounted in ASME piping.

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? Y N U N/A
(Note: This question only applies if the item is one of the 50% for which an anchorage configuration verification is required.)

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

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

Equipment ID No. 1-LCV-062-0136-B Equip. Class³ 8, Motor-Operated and Solenoid-Operated Valves

Equipment Description RWST CVCS Supply HDR Isolation

Interaction Effects

7. Are soft targets free from impact by nearby equipment or structures? Y N U N/A
All soft targets have sufficient clearance.
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
No masonry walls present. No lights or ceiling tiles overhead. All overhead items are rigidly supported.
9. Do attached lines have adequate flexibility to avoid damage? Y N U N/A
All connections are flexible. The valve is rigidly mounted in ASME piping.
10. Based on the above seismic interaction evaluations, is equipment free of potentially adverse seismic interaction effects? Y N U
-

Other Adverse Conditions

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

Comments (Additional pages may be added as necessary)

Housekeeping in the area is reasonable.

Evaluated by: Travis Hockenberry

Date: 8-6-2012

Mike Gordon

8-6-2012

Seismic Walkdown Checklist (SWC)

Equipment ID No. 1-FAN-030-0038-A Equip. Class³ 9, Fans

Equipment Description CNTMT Air Return Fan 1A-A

Location: Bldg. RB Floor El. 716 Room, Area Lower Containment, WBN-WB-049

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
Observed from floor of Accumulator 3. Supported by rigid structural steel frame that is bolted to the wall.

3. Is the anchorage free of corrosion that is more than mild surface oxidation? Y N U N/A
All surfaces are painted an in good 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? Y N U N/A
 (Note: This question only applies if the item is one of the 50% for which an anchorage configuration verification is required.)

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

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

Equipment ID No. 1-FAN-030-0038-A Equip. Class³ 9, Fans

Equipment Description CNTMT Air Return Fan 1A-A

Interaction Effects

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

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

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

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

Other Adverse Conditions

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

Comments (Additional pages may be added as necessary)

Evaluated by: Travis Hockenberry Date: 9-17-2012

Mike Gordon 9-17-2012

Seismic Walkdown Checklist (SWC)

Equipment ID No. 1-FAN-030-0447-A Equip. Class³ 9, Fans

Equipment Description DG 1A-A Room Exhaust Fan 1A

Location: Bldg. DG BLDG Floor El. 760 Room, Area D203, WBN-WB-020

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

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
No loose, missing, or broken hardware.

3. Is the anchorage free of corrosion that is more than mild surface oxidation? Y N U N/A
No visible surface corrosion. Fan bolts are painted and in good condition.

4. Is the anchorage free of visible cracks in the concrete near the anchors? Y N U N/A
Some observed hairline cracking. No observed structural cracks near anchorage > 0.5mm.

5. Is the anchorage configuration consistent with plant documentation? Y N U N/A
(Note: This question only applies if the item is one of the 50% for which an anchorage configuration verification is required.)
Verified per DWGs 10N320-3, 18N304, and 18N305.

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

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

Equipment ID No. 1-FAN-030-0447-A Equip. Class³ 9, Fans

Equipment Description DG 1A-A Room Exhaust Fan 1A

Interaction Effects

7. Are soft targets free from impact by nearby equipment or structures? Y N U N/A
Adequate clearance around fan
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 conduit, pipe, and air duct rigidly supported and in good condition.
9. Do attached lines have adequate flexibility to avoid damage? Y N U N/A
Attached lines are flexible conduit/wire.
10. Based on the above seismic interaction evaluations, is equipment free of potentially adverse seismic interaction effects? Y N U

Other Adverse Conditions

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

Comments (Additional pages may be added as necessary)

Good housekeeping. No observed temporary equipment or scaffolding.

Evaluated by: Travis Hockenberry Date: 7-31-2012

Mike Gordon 7-31-2012

Seismic Walkdown Checklist (SWC)

Equipment ID No. 1-FAN-030-0449-B Equip. Class³ 9, Fans

Equipment Description DG 1B-B Room Exhaust Fan 1B

Location: Bldg. DG BLDG Floor El. 760 Room, Area D209, WBN-WB-002

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

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
All hardware present and in good condition.

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

4. Is the anchorage free of visible cracks in the concrete near the anchors? Y N U N/A
Hair-line cracking near anchorage in grout – No cracks apparent in foundation.

5. Is the anchorage configuration consistent with plant documentation? Y N U N/A
(Note: This question only applies if the item is one of the 50% for which an anchorage configuration verification is required.)
Verified per DWGs 10N320-3, 18N304, and 18N305.

6. Based on the above anchorage evaluations, is the anchorage free of potentially adverse seismic conditions? Y N U
In good working condition

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

Equipment ID No. 1-FAN-030-0449-B Equip. Class³ 9, Fans

Equipment Description DG 1B-B Room Exhaust Fan 1B

Interaction Effects

7. Are soft targets free from impact by nearby equipment or structures? Y N U N/A
All adjacent equipment is adequately anchored and supported.
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 are safety cable restrained. No other fall concerns.
9. Do attached lines have adequate flexibility to avoid damage? Y N U N/A
Duct has expansion joint for isolation and there are flexible conduit connections.
10. Based on the above seismic interaction evaluations, is equipment free of potentially adverse seismic interaction effects? Y N U
-

Other Adverse Conditions

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

Comments (Additional pages may be added as necessary)

Equipment is clear for the intended service. All components are present and in good working condition.

Evaluated by: Travis Hockenberry Date: 7-17-2012

Mike Gordon 7-17-2012

Seismic Walkdown Checklist (SWC)

Equipment ID No. 1-FAN-030-0459-A Equip. Class³ 9, Fans

Equipment Description Diesel Gen 1A-A Elect Board Room Exhaust Fan

Location: Bldg. DG BLDG Floor El. 760 Room, Area D203, WBN-WB-020

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

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
No loose, missing, or broken hardware.

3. Is the anchorage free of corrosion that is more than mild surface oxidation? Y N U N/A
No visible surface corrosion.

4. Is the anchorage free of visible cracks in the concrete near the anchors? Y N U N/A
No observed structural cracks near anchorage >0.5mm

5. Is the anchorage configuration consistent with plant documentation? Y N U N/A
(Note: This question only applies if the item is one of the 50% for which an anchorage configuration verification is required.)
Verified per DWGs 10N320-3 and 18N305.

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

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

Equipment ID No. 1-FAN-030-0459-A Equip. Class³ 9, Fans

Equipment Description Diesel Gen 1A-A Elect Board Room Exhaust Fan

Interaction Effects

7. Are soft targets free from impact by nearby equipment or structures? Y N U N/A
Adequate clearance around fan

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 conduit, pipe, and air duct rigidly supported and in good condition. Masonry wall present and in good condition..

9. Do attached lines have adequate flexibility to avoid damage? Y N U N/A
Electrical connection made with flexible conduit/wire.

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

Other Adverse Conditions

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

Comments (Additional pages may be added as necessary)

Good housekeeping. No observed temporary equipment or scaffolding.

Evaluated by: Travis Hockenberry Date: 7-31-2012

Mike Gordon 7-31-2012

Seismic Walkdown Checklist (SWC)

Equipment ID No. 0-AHU-031-0012-A Equip. Class³ 10, Air Handlers

Equipment Description Main Control Room AHU A-A

Location: Bldg. CNTL Floor El. 755 Room, Area C401, WBN-WB-046

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
All hardware is in place and in good condition.

3. Is the anchorage free of corrosion that is more than mild surface oxidation? Y N U N/A
Moderate surface corrosion was observed on the anchor bolts.

4. Is the anchorage free of visible cracks in the concrete near the anchors? Y N U N/A
No significant cracks observed.

5. Is the anchorage configuration consistent with plant documentation? Y N U N/A
(Note: This question only applies if the item is one of the 50% for which an anchorage configuration verification is required.)
Verified per DWG 48N1305.

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

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

Equipment ID No. 0-AHU-031-0012-A Equip. Class³ 10, Air Handlers

Equipment Description Main Control Room AHU A-A

Interaction Effects

7. Are soft targets free from impact by nearby equipment or structures? Y N U N/A
All items have adequate clearance.
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
No masonry block walls, no ceiling tiles or lights overhead. All items overhead are rigidly mounted.
9. Do attached lines have adequate flexibility to avoid damage? Y N U N/A
All piping and tubing have adequate changes in direction. All electrical connections are cable or flex type conduit. Some pipe also has flex hose connections.
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
Observed electrical connection that appears to be cable, not conduit. After further review was determined to be flex conduit as required.
-

Comments (Additional pages may be added as necessary)

Housekeeping is reasonable in this area.

Evaluated by: Travis Hockenberry

Date: 8-10-2012

Mike Gordon

8-10-2012

Seismic Walkdown Checklist (SWC)

Equipment ID No. 0-AHU-031-0045 Equip. Class³ 10, Air Handlers

Equipment Description Shutdown Board Room Air Handling Unit A-A

Location: Bldg. AUX Floor El. 757 Room, Area A809, WBN-WB-041

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
All anchorage present and painted. Good condition.

3. Is the anchorage free of corrosion that is more than mild surface oxidation? Y N U N/A
All surfaces are painted. No corrosion observed.

4. Is the anchorage free of visible cracks in the concrete near the anchors? Y N U N/A
No significant cracks observed.

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

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

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

Equipment ID No. 0-AHU-031-0045 Equip. Class³ 10, Air Handlers

Equipment Description Shutdown Board Room Air Handling Unit A-A

Interaction Effects

7. Are soft targets free from impact by nearby equipment or structures? Y N U N/A
Electrical connection is clear of all possible impact items. Expansion joint at duct connection has good clearance.
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
No masonry block walls present. No ceiling tiles. All lights are safety chained. All overhead items are rigidly supported.
9. Do attached lines have adequate flexibility to avoid damage? Y N U N/A
Electrical connections are flexible conduit type. Piping is rigidly supported with changes in direction.
10. Based on the above seismic interaction evaluations, is equipment free of potentially adverse seismic interaction effects? Y N U

Other Adverse Conditions

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

Comments (Additional pages may be added as necessary)

Housekeeping is good in the area.

Evaluated by: Travis Hockenberry

Date: 8-9-2012

Mike Gordon

8-9-2012

Seismic Walkdown Checklist (SWC)

Equipment ID No. 1-AHU-031-0461-A Equip. Class³ 10, Air Handlers

Equipment Description 480V BD Room 1A Supply AHU 1A-A

Location: Bldg. AUX Floor El. 772 Room, Area A857, WBN-WB-047

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
All items are in place—no bent broken missing or loose hardware.

3. Is the anchorage free of corrosion that is more than mild surface oxidation? Y N U N/A
The anchor bolts have significant corrosion. After further review and comparison with other examples of corrosion, this was deemed to be only moderate corrosion.

4. Is the anchorage free of visible cracks in the concrete near the anchors? Y N U N/A
No significant cracks observed.

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

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

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

Equipment ID No. 1-AHU-031-0461-A Equip. Class³ 10, Air Handlers

Equipment Description 480V BD Room 1A Supply AHU 1A-A

Interaction Effects

7. Are soft targets free from impact by nearby equipment or structures? Y N U N/A
Cable tray supports in the area are close—the frame has been notched to allow for a ¼" clearance. All other items are good.
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
No masonry block walls, no ceiling tiles or lights overhead. All items overhead are rigidly mounted.
9. Do attached lines have adequate flexibility to avoid damage? Y N U N/A
All piping has flexible connections. Electrical connections are flex type.
10. Based on the above seismic interaction evaluations, is equipment free of potentially adverse seismic interaction effects? Y N U
-

Other Adverse Conditions

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

Comments (Additional pages may be added as necessary)

Housekeeping is reasonable in this area.

Evaluated by: Travis Hockenberry

Date: 8-10-2012

Mike Gordon

8-10-2012

Seismic Walkdown Checklist (SWC)

Equipment ID No. 0-CHR-031-0036/2-A Equip. Class³ 11, Chillers

Equipment Description Shutdown Board Room Chiller A-A

Location: Bldg. AUX Floor El. 737 Room, Area A2-Q / A13-U, WBN-WB-013

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
Covered with insulation, but intact and no visible maintenance. Insulation was removed to verify anchorage. All anchorage was present.

3. Is the anchorage free of corrosion that is more than mild surface oxidation? Y N U N/A
Significant corrosion was observed following removal of insulation around base.

4. Is the anchorage free of visible cracks in the concrete near the anchors? Y N U N/A
No visible cracks.

5. Is the anchorage configuration consistent with plant documentation? Y N U N/A
 (Note: This question only applies if the item is one of the 50% for which an anchorage configuration verification is required.)
Verified per DWGs 41N353-13 and 366-79594 (Sht. 1-3).

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

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

Equipment ID No. 0-CHR-031-0036/2-A Equip. Class³ 11, Chillers

Equipment Description Shutdown Board Room Chiller A-A

Interaction Effects

7. Are soft targets free from impact by nearby equipment or structures? Y N U N/A
Covered by structural steel frame and sheet metal. Pipe penetrating sheet metal. Potential for impact, but not significant.
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
Cable tray and conduit rigidly supported. No block walls in vicinity
9. Do attached lines have adequate flexibility to avoid damage? Y N U N/A
Electrical connections are flexible and attached piping is rigidly supported with flexible connections.
10. Based on the above seismic interaction evaluations, is equipment free of potentially adverse seismic interaction effects? Y N U
-

Other Adverse Conditions

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

Comments (Additional pages may be added as necessary)

General housekeeping is good. Moderately wet environment.

Evaluated by: Travis Hockenberry

Date: 7-25-2012

Mike Gordon

7-25-2012

Seismic Walkdown Checklist (SWC)

Equipment ID No. 0-CHR-031-0049/2-B Equip. Class³ 11, Chillers

Equipment Description Shutdown Board Room Chiller B-B

Location: Bldg. AUX Floor El. 737 Room, Area A13-R, WBN-WB-036

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

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
Anchor points are covered with insulation. Will return with AUO to remove insulation.

2. Is the anchorage free of bent, broken, missing or loose hardware? Y N U N/A
All hardware is present and not loose, bent, or broken. (Observed after removal of insulation)

3. Is the anchorage free of corrosion that is more than mild surface oxidation? Y N U N/A
The south and north pedestals have significant corrosion. The south base plate has bubbled. Bolts on south side of pedestal have significant corrosion as well.

4. Is the anchorage free of visible cracks in the concrete near the anchors? Y N U N/A
Observed spider web type cracking mainly in the paint. No significant cracks (greater than 0.5 mm).

5. Is the anchorage configuration consistent with plant documentation? Y N U N/A
 (Note: This question only applies if the item is one of the 50% for which an anchorage configuration verification is required.)
Verified per DWGs 41N353-13 and 366-79594 (Sht. 1-3).

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

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

Equipment ID No. 0-CHR-031-0049/2-B Equip. Class³ 11, Chillers

Equipment Description Shutdown Board Room Chiller B-B

Interaction Effects

7. Are soft targets free from impact by nearby equipment or structures? Y N U N/A
Adequate clearance is provided to all soft targets. All overhead items are rigidly mounted.
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
No masonry walls present. No ceiling tiles. All systems overhead are rigidly supported.
9. Do attached lines have adequate flexibility to avoid damage? Y N U N/A
 tubing is guided when leaving skid, but has change in direction to allow for flexibility. All electrical connections are flexible type.
10. Based on the above seismic interaction evaluations, is equipment free of potentially adverse seismic interaction effects? Y N U
-

Other Adverse Conditions

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

Comments (Additional pages may be added as necessary)

Housekeeping is not bad—but there is significant condensation under the insulation leading to the corrosion.

Evaluated by: Travis Hockenberry

Date: 8-7-2012

Mike Gordon

8-7-2012

Seismic Walkdown Checklist (SWC)Equipment ID No. 0-CHR-031-0080-A Equip. Class³ 11, ChillersEquipment Description Main Control Room Chiller A-ALocation: Bldg. AUX Floor El. 737 Room, Area A2-Q / A13-U, WBN-WB-013

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
No loose, missing, or broken.

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

4. Is the anchorage free of visible cracks in the concrete near the anchors? Y N U N/A
No visible cracks.

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

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

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

Equipment ID No. 0-CHR-031-0080-A Equip. Class³ 11, Chillers

Equipment Description Main Control Room Chiller A-A

Interaction Effects

7. Are soft targets free from impact by nearby equipment or structures? Y N U N/A
Covered with structural steel frame and sheet metal.
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
HVAC and cable tray rigidly supported.
9. Do attached lines have adequate flexibility to avoid damage? Y N U N/A
Electrical and piping have flexible connections.
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
Temporary scaffolding in area, but appears to be adequately restrained/supported.

Comments (Additional pages may be added as necessary)

Protected equipment stanchions left in area. Should be removed.

Evaluated by: Travis Hockenberry Date: 7-25-2012

Mike Gordon 7-25-2012

Seismic Walkdown Checklist (SWC)

Equipment ID No. 0-CHR-031-0128 Equip. Class³ 11, Chillers

Equipment Description Electrical Board Room Chiller A-A

Location: Bldg. CNTL Floor El. 692 Room, Area C110, WBN-WB-037

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

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
No missing, loose, or damaged. Insulation was removed for inspection.
- 3. Is the anchorage free of corrosion that is more than mild surface oxidation? Y N U N/A
No observed corrosion. Insulation was removed for inspection.
- 4. Is the anchorage free of visible cracks in the concrete near the anchors? Y N U N/A
No significant cracking observed.
- 5. Is the anchorage configuration consistent with plant documentation? Y N U N/A
(Note: This question only applies if the item is one of the 50% for which an anchorage configuration verification is required.)
- 6. Based on the above anchorage evaluations, is the anchorage free of potentially adverse seismic conditions? Y N U

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

Equipment ID No. 0-CHR-031-0128 Equip. Class³ 11, Chillers

Equipment Description Electrical Board Room Chiller A-A

Interaction Effects

7. Are soft targets free from impact by nearby equipment or structures? Y N U N/A
Everything is rigidly supported and/or has sufficient clearance. Note small bore connection at the end of the chiller does not have a guide.
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
Equipment is protected by a permanent hood. All items in the area are rigidly mounted.
9. Do attached lines have adequate flexibility to avoid damage? Y N U N/A
One large 4" conduit passes through the permanent hood. After review of WB-DC-20-32, deemed to not be an adverse seismic condition.
10. Based on the above seismic interaction evaluations, is equipment free of potentially adverse seismic interaction effects? Y N U
-

Other Adverse Conditions

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

Comments (Additional pages may be added as necessary)

Housekeeping is good in the area.

Evaluated by: Travis Hockenberry Date: 8-7-2012

Mike Gordon 8-7-2012

Seismic Walkdown Checklist (SWC)Equipment ID No. 0-CHR-031-0129 Equip. Class³ 11, ChillersEquipment Description Electrical Board Room Chiller B-BLocation: Bldg. CNTL Floor El. 692 Room, Area C110, WBN-WB-037Manufacturer, Model, Etc. (optional but recommended) PCX**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
Insulation was not on this Unit. All items present and in good condition.

3. Is the anchorage free of corrosion that is more than mild surface oxidation? Y N U N/A
Surfaces are greasy and dirty—no corrosion observed.

4. Is the anchorage free of visible cracks in the concrete near the anchors? Y N U N/A
No cracking observed.

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

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

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

Equipment ID No. 0-CHR-031-0129 Equip. Class³ 11, Chillers

Equipment Description Electrical Board Room Chiller B-B

Interaction Effects

7. Are soft targets free from impact by nearby equipment or structures? Y N U N/A
Small bore connection at the end of the chiller does not appear to have adequate protection/guide. Needs further review.
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
Equipment is protected by a permanent hood.
9. Do attached lines have adequate flexibility to avoid damage? Y N U N/A
Potential adverse condition—(2) 2" pipes penetrate the permanent hood. One of them continues on to 1" screwed connections. A 4" conduit penetrating the permanent hood—has a guide and continues on with flexible type conduit. Not an adverse seismic condition (after review of WB-DC-20-32).
10. Based on the above seismic interaction evaluations, is equipment free of potentially adverse seismic interaction effects? Y N U
-

Other Adverse Conditions

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

Comments (Additional pages may be added as necessary)

Housekeeping is reasonable.

Evaluated by: Travis Hockenberry Date: 8-7-2012

Mike Gordon 8-7-2012

Seismic Walkdown Checklist (SWC)Equipment ID No. 0-COMP-032-0026 Equip. Class³ 12, Air CompressorsEquipment Description Station Air Compressor BLocation: Bldg. TURB Floor El. 708 Room, Area T7-K, WBN-WB-035Manufacturer, Model, Etc. (optional but recommended) Ingersoll-Rand**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
No observed bent, broken or missing hardware.
3. Is the anchorage free of corrosion that is more than mild surface oxidation? Y N U N/A
All hardware painted with minor chipping.
4. Is the anchorage free of visible cracks in the concrete near the anchors? Y N U N/A
No observed cracking.
5. Is the anchorage configuration consistent with plant documentation? Y N U N/A
(Note: This question only applies if the item is one of the 50% for which an anchorage configuration verification is required.)
Verified per DWG L-9257.
6. Based on the above anchorage evaluations, is the anchorage free of potentially adverse seismic conditions? Y N U

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

Equipment ID No. 0-COMP-032-0026 Equip. Class³ 12, Air Compressors

Equipment Description Station Air Compressor B

Interaction Effects

7. Are soft targets free from impact by nearby equipment or structures? Y N U N/A
Adequate clearance maintained around equipment. Portable exhaust fan located near compressor, wheels are locked to avoid rolling.
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
All cable tray is rigidly supported. Piping is rod hung and in good condition. No masonry block walls in the area.
9. Do attached lines have adequate flexibility to avoid damage? Y N U N/A
Electrical line has flexible connection. Attached piping is rod hung and properly supported.
10. Based on the above seismic interaction evaluations, is equipment free of potentially adverse seismic interaction effects? Y N U

Other Adverse Conditions

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

Comments (Additional pages may be added as necessary)

No staged or housekeeping items in the area.

Evaluated by: Travis Hockenberry Date: 8-13-2012

Mike Gordon 8-13-2012

Seismic Walkdown Checklist (SWC)

Equipment ID No. 0-COMP-032-0060 Equip. Class³ 12, Air Compressors

Equipment Description Aux Control Air Compressor A-A

Location: Bldg. AUX Floor El. 757 Room, Area A813, WBN-WB-026

Manufacturer, Model, Etc. (optional but recommended) Ingersol-Rand

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
No loose, missing, or broken.

3. Is the anchorage free of corrosion that is more than mild surface oxidation? Y N U N/A
All hardware is painted. No observed corrosion.

4. Is the anchorage free of visible cracks in the concrete near the anchors? Y N U N/A
No visible cracks in concrete. Minor cracking in paint on grout. Does not appear to be structural cracking.

5. Is the anchorage configuration consistent with plant documentation? Y N U N/A
(Note: This question only applies if the item is one of the 50% for which an anchorage configuration verification is required.)
Bolts appeared to be incorrect size per DWG 13220-D-1K (contract 821044). Verified per DWGs 41N353-8 and 41N353-18 (the as-built bolt size was qualified by Calculation WCG-1-1853).

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

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

Equipment ID No. 0-COMP-032-0060 Equip. Class³ 12, Air Compressors

Equipment Description Aux Control Air Compressor A-A

Interaction Effects

7. Are soft targets free from impact by nearby equipment or structures? Y N U N/A
Adequate clearance around compressor.

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 building steel and crane in good condition.

9. Do attached lines have adequate flexibility to avoid damage? Y N U N/A
Piping has adequate support with flex connections. Electrical connections 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

Comments (Additional pages may be added as necessary)

Good housekeeping practice.

Evaluated by: Travis Hockenberry Date: 8-2-2012

Mike Gordon 8-2-2012

Seismic Walkdown Checklist (SWC)

Equipment ID No. 0-COMP-032-0086 Equip. Class³ 12, Air Compressors

Equipment Description Aux Control Air Compressor B-B

Location: Bldg. AUX Floor El. 757 Room, Area A813, WBN-WB-026

Manufacturer, Model, Etc. (optional but recommended) Ingersol-Rand

Instructions for Completing Checklist

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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
No loose, missing, or broken.

3. Is the anchorage free of corrosion that is more than mild surface oxidation? Y N U N/A
Painted and in good condition.

4. Is the anchorage free of visible cracks in the concrete near the anchors? Y N U N/A
No visible cracks in concrete. Minor cracking in paint on grout. Does not appear to be structural cracking.

5. Is the anchorage configuration consistent with plant documentation? Y N U N/A
 (Note: This question only applies if the item is one of the 50% for which an anchorage configuration verification is required.)
Bolts appeared to be incorrect size per DWG 13220-D-1K (contract 821044). Verified per DWGs 41N353-8 and 41N353-18 (the as-built bolt size was qualified by Calculation WCG-1-1853).

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

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

Equipment ID No. 0-COMP-032-0086 Equip. Class³ 12, Air Compressors

Equipment Description Aux Control Air Compressor B-B

Interaction Effects

7. Are soft targets free from impact by nearby equipment or structures? Y N U N/A
Adequate clearance around compressor. Temporary scaffolding in area and appears to be adequately restrained.
8. Are overhead equipment, distribution systems, ceiling tiles and lighting, and masonry block walls not likely to collapse onto the equipment? Y N U N/A
Overhead building steel and crane in good condition.
9. Do attached lines have adequate flexibility to avoid damage? Y N U N/A
Piping has adequate support with flex connections. Electrical connections 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
No observed adverse conditions.
-

Comments (Additional pages may be added as necessary)

Good housekeeping items observed, see area walk-by WBN-WB-026.

Evaluated by: Travis Hockenberry Date: 8-2-2012

Mike Gordon 8-2-2012

Seismic Walkdown Checklist (SWC)

Equipment ID No. 1-COMP-082-0180 Equip. Class³ 12, Air Compressors

Equipment Description DG 1A-A Air Start Compressor 1

Location: Bldg. DG BLDG Floor El. 742 Room, Area D104, WBN-WB-001

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

Instructions for Completing Checklist

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

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

Anchorage

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

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

3. Is the anchorage free of corrosion that is more than mild surface oxidation? Y N U N/A
No rust/corrosion observed.

4. Is the anchorage free of visible cracks in the concrete near the anchors? Y N U N/A
No cracks observed.

5. Is the anchorage configuration consistent with plant documentation? Y N U N/A
(Note: This question only applies if the item is one of the 50% for which an anchorage configuration verification is required.)
Verified per DWGs 10N320-2, 18N302, and 18N303.

6. Based on the above anchorage evaluations, is the anchorage free of potentially adverse seismic conditions? Y N U
All items in good working condition painted and free of defects.

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

Equipment ID No. 1-COMP-082-0180 Equip. Class³ 12, Air Compressors

Equipment Description DG 1A-A Air Start Compressor 1

Interaction Effects

7. Are soft targets free from impact by nearby equipment or structures? Y N U N/A
*Observed plastic posts and chain for protection of nearby batteries.
Determined to not be a significant risk.*
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 have safety cables.
9. Do attached lines have adequate flexibility to avoid damage? Y N U N/A
Flex hose included for air discharge pipe.
10. Based on the above seismic interaction evaluations, is equipment free of potentially adverse seismic interaction effects? Y N U
Equipment is properly supported and anchored with no proximity interaction risks of significance.

Other Adverse Conditions

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

Comments (Additional pages may be added as necessary)

Evaluated by: Travis Hockenberry Date: 7-17-2012

Mike Gordon 7-17-2012

Seismic Walkdown Checklist (SWC)

Equipment ID No. 1-COMP-082-0210 Equip. Class³ 12, Air Compressors

Equipment Description DG 1B-B Air Start Compressor 1

Location: Bldg. DG BLDG Floor El. 742 Room, Area D106, WBN-WB-021

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

Instructions for Completing Checklist

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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
All hardware is in place and in good condition.

3. Is the anchorage free of corrosion that is more than mild surface oxidation? Y N U N/A
All surfaces are painted or galvanized. No corrosion observed.

4. Is the anchorage free of visible cracks in the concrete near the anchors? Y N U N/A
No observed cracks.

5. Is the anchorage configuration consistent with plant documentation? Y N U N/A
(Note: This question only applies if the item is one of the 50% for which an anchorage configuration verification is required.)
Verified per DWGs 10N320-2, 18N302, and 18N303.

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

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

Equipment ID No. 1-COMP-082-0210 Equip. Class³ 12, Air Compressors

Equipment Description DG 1B-B Air Start Compressor 1

Interaction Effects

7. Are soft targets free from impact by nearby equipment or structures? Y N U N/A
All piping is rigidly mounted. Nothing in close proximity. Plastic barricade in the area, but not a significant issue.
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
No masonry walls present. No overhead lights or tiles. All items above are rigidly supported.
9. Do attached lines have adequate flexibility to avoid damage? Y N U N/A
Pipe has a flex hose and conduit is 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
-

Comments (Additional pages may be added as necessary)

No housekeeping issues, very clean area.

Evaluated by: Travis Hockenberry Date: 7-31-2012

Mike Gordon 7-31-2012

Seismic Walkdown Checklist (SWC)

Equipment ID No. 1-GEN-085-A Equip. Class³ 13, Motor Generators

Equipment Description Control Rod Drive M-G Set 1A

Location: Bldg. AUX Floor El. 782 Room, Area A901, WBN-WB-025

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

Instructions for Completing Checklist

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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
Wide flange frame welded to embed plate. Weld is full-length both sides and across embed plate.

3. Is the anchorage free of corrosion that is more than mild surface oxidation? Y N U N/A
Welds are painted and in good condition. No visible deterioration.

4. Is the anchorage free of visible cracks in the concrete near the anchors? Y N U N/A
Minor cracking observed around embed plate. Does not appear to be adverse seismic condition.

5. Is the anchorage configuration consistent with plant documentation? Y N U N/A
 (Note: This question only applies if the item is one of the 50% for which an anchorage configuration verification is required.)
Verified per DWGs 45N226-2 and 48W1228-1.

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

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

Equipment ID No. 1-GEN-085-A Equip. Class³ 13, Motor Generators

Equipment Description Control Rod Drive M-G Set 1A

Interaction Effects

7. Are soft targets free from impact by nearby equipment or structures?
Adequate clearance around equipment 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?
*Cable tray, piping, and conduit properly supported and in good
condition. Cable tray does not appear to be overloaded. Overhead hoist
frame present and in good condition (see WBN-WB-025). Safety
chains/wire on all lights.* Y N U N/A
9. Do attached lines have adequate flexibility to avoid damage?
Electrical connections are flexible. Y N U N/A
10. Based on the above seismic interaction evaluations, is equipment free
of potentially adverse seismic interaction effects? Y N U
-

Other Adverse Conditions

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

Comments (Additional pages may be added as necessary)

General housekeeping is good. (2) light bulbs overhead are out.

Evaluated by: Travis Hockenberry

Date: 8-2-2012

Mike Gordon

8-2-2012

Seismic Walkdown Checklist (SWC)

Equipment ID No. 1-GEN-085-B Equip. Class³ 13, Motor Generators

Equipment Description Control Rod Drive M-G Set 1B

Location: Bldg. AUX Floor El. 782 Room, Area A901, WBN-WB-025

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

Instructions for Completing Checklist

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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
Wide flange frame welded to embed plate. Weld is full-length both sides and across embed plate.

3. Is the anchorage free of corrosion that is more than mild surface oxidation? Y N U N/A
Welds are painted and in good condition. No visible deterioration

4. Is the anchorage free of visible cracks in the concrete near the anchors? Y N U N/A
Minor cracking observed around embed plate. Does not appear to be adverse seismic condition.

5. Is the anchorage configuration consistent with plant documentation? Y N U N/A
 (Note: This question only applies if the item is one of the 50% for which an anchorage configuration verification is required.)
Verified per DWGs 45N226-2 and 48W1228-1.

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

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

Equipment ID No. 1-GEN-085-B Equip. Class³ 13, Motor Generators

Equipment Description Control Rod Drive M-G Set 1B

Interaction Effects

7. Are soft targets free from impact by nearby equipment or structures? Y N U N/A
Adequate clearance around 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
Cable tray, piping, and conduit properly supported and in good condition. Cable tray does not appear to be overloaded. Overhead hoist frame present and in good condition (see WBN-WB-025). Safety chains/wire on all lights.

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

Comments (Additional pages may be added as necessary)

General housekeeping is good.

Evaluated by: Travis Hockenberry Date: 8-2-2012

Mike Gordon 8-2-2012

Seismic Walkdown Checklist (SWC)Equipment ID No. 0-BD-236-0001/1-D Equip. Class³ 14, Distribution Panels and Transfer SwitchesEquipment Description 125V Vital Battery Board I Panel 1Location: Bldg. AUX Floor El. 757 Room, Area A804, WBN-WB-016

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

Instructions for Completing Checklist

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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
Welded to embed plate in floor; appears to be free of damage (observed on outside of cabinet). Back panels were opened and anchorage to structure was verified as well as the panel-to-panel connections. Front panels required extensive disassembly to open.

3. Is the anchorage free of corrosion that is more than mild surface oxidation? Y N U N/A
No visible corrosion. All surfaces painted and in good condition

4. Is the anchorage free of visible cracks in the concrete near the anchors? Y N U N/A
No visible cracks in concrete.

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

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

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

Equipment ID No. 0-BD-236-0001/1-D Equip. Class³ 14, Distribution Panels and Transfer Switches

Equipment Description 125V Vital Battery Board I Panel 1

Interaction Effects

7. Are soft targets free from impact by nearby equipment or structures? Y N U N/A
*Scaffolding in close proximity to panel on west end (~3/4" clearance).
After further review, the clearance was deemed satisfactory.*
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 cable tray, conduit, and piping is rigidly supported and in good condition. No masonry block walls present.
9. Do attached lines have adequate flexibility to avoid damage? Y N U N/A
Flexible electrical connections at top of panel/cabinet.
10. Based on the above seismic interaction evaluations, is equipment free of potentially adverse seismic interaction effects? Y N U
-

Other Adverse Conditions

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

Comments (Additional pages may be added as necessary)

Light burnt out in south-east corner and center of room. Scaffolding in close proximity to emergency light battery. Could impact seat angle/support, but not significant seismic impact.

Evaluated by: Travis Hockenberry

Date: 7-26-2012

Mike Gordon

7-26-2012

Phillip York

9-28-2012

Seismic Walkdown Checklist (SWC)

Equipment ID No. 0-DBD-238-0003 Equip. Class³ 14, Distribution Panels and Transfer Switches

Equipment Description Distribution BD PNL 3 120V AC Preferred

Location: Bldg. CNTL Floor El. 755 Room, Area C412, WBN-WB-005

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

Instructions for Completing Checklist

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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
All hardware appears to be in place and in good condition (observed from inside cabinet/panel). Cabinet base is bolted to channel that is welded to embed plate.

3. Is the anchorage free of corrosion that is more than mild surface oxidation? Y N U N/A
All items are painted. No corrosion observed.

4. Is the anchorage free of visible cracks in the concrete near the anchors? Y N U N/A
No significant cracks observed.

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

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

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

Equipment ID No. 0-DBD-238-0003 Equip. Class³ 14, Distribution Panels and Transfer Switches

Equipment Description Distribution BD PNL 3 120V AC Preferred

Interaction Effects

7. Are soft targets free from impact by nearby equipment or structures? Y N U N/A
Observed printer and drawing table in the aisle way adjacent to the equipment that is not properly restrained. Could potentially impact breaker switches on front of panel.
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
No masonry walls present. Ceiling tiles and lights are properly restrained. All other items are well restrained.
9. Do attached lines have adequate flexibility to avoid damage? Y N U N/A
10. Based on the above seismic interaction evaluations, is equipment free of potentially adverse seismic interaction effects? Y N U
-

Other Adverse Conditions

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

Comments (Additional pages may be added as necessary)

Evaluated by: Travis Hockenberry

Date: 8-10-2012

Mike Gordon

8-10-2012

Seismic Walkdown Checklist (SWC)

Equipment ID No. 0-DPL-236-0001-D Equip. Class³ 14, Distribution Panels and Transfer Switches

Equipment Description 125V Vital Battery Board / Distribution Panel 0

Location: Bldg. AUX Floor El. 757 Room, Area A804, WBN-WB-016

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
No loose, missing, or damaged.
- 3. Is the anchorage free of corrosion that is more than mild surface oxidation? Y N U N/A
Clean and painted.
- 4. Is the anchorage free of visible cracks in the concrete near the anchors? Y N U N/A
Wall mounted, no visible cracks in concrete or damage.
- 5. Is the anchorage configuration consistent with plant documentation? Y N U N/A
(Note: This question only applies if the item is one of the 50% for which an anchorage configuration verification is required.)
- 6. Based on the above anchorage evaluations, is the anchorage free of potentially adverse seismic conditions? Y N U

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

Equipment ID No. 0-DPL-236-0001-D Equip. Class³ 14, Distribution Panels and Transfer Switches

Equipment Description 125V Vital Battery Board / Distribution Panel 0

Interaction Effects

7. Are soft targets free from impact by nearby equipment or structures? Y N U N/A
Scaffolding pick board in close proximity to flex connection on top of panel (~2"), credible but not significant.
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
Cable tray, conduit, and piping is rigidly supported and in good condition.
9. Do attached lines have adequate flexibility to avoid damage? Y N U N/A
Flexible electrical connections on top of cabinet.
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
Door is missing bolts but appears to be closed securely. Missing bolts are for shipping and transport; they are not required for operation.
-

Comments (Additional pages may be added as necessary)

General housekeeping is good..

Evaluated by: Travis Hockenberry

Date: 7-26-2012

Mike Gordon

7-26-2012

Phillip York

9-28-2012

Seismic Walkdown Checklist (SWC)

Equipment ID No. 0-XSW-236-68DC2-S Equip. Class³ 14, Distribution Panels and Transfer Switches

Equipment Description 125V DC Transfer Switch Select Battery Board I/II

Location: Bldg. AUX Floor El. 772 Room, Area A852, WBN-WB-014

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

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
Mounted to a steel frame. Box is bolted to the frame and the bolts are in good condition. Frame is welded to embed, welds in good condition as well.

3. Is the anchorage free of corrosion that is more than mild surface oxidation? Y N U N/A
All surfaces painted or galvanized. No corrosion present.

4. Is the anchorage free of visible cracks in the concrete near the anchors? Y N U N/A
Steel frame is welded to embed and no cracks are visible.

5. Is the anchorage configuration consistent with plant documentation? Y N U N/A
 (Note: This question only applies if the item is one of the 50% for which an anchorage configuration verification is required.)
Verified per DCA 53437-400 and Calculation WCG-ACQ-0443.

6. Based on the above anchorage evaluations, is the anchorage free of potentially adverse seismic conditions? Y N U
All is in very good condition with good housekeeping observed.

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

Equipment ID No. 0-XSW-236-68DC2-S Equip. Class³ 14, Distribution Panels and Transfer Switches

Equipment Description 125V DC Transfer Switch Select Battery Board I/II

Interaction Effects

7. Are soft targets free from impact by nearby equipment or structures? Y N U N/A
No nearby equipment. Hood in place overhead.

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
No masonry walls. Cable tray is rigidly supported. Fire protection piping is rigidly supported as well.

9. Do attached lines have adequate flexibility to avoid damage? Y N U N/A
Yes, conduits are flexible type.

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

Other Adverse Conditions

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

Comments (Additional pages may be added as necessary)

Evaluated by: Travis Hockenberry

Date: 7-25-2012

Mike Gordon

7-25-2012

Seismic Walkdown Checklist (SWC)

Equipment ID No. 0-XSW-236-79DC1-S Equip. Class³ 14, Distribution Panels and Transfer Switches

Equipment Description 125V DC Transfer Switch Select Chargers 7S/9S

Location: Bldg. AUX Floor El. 772 Room, Area A864, WBN-WB-017

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

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
All hardware appears to be in place and in new condition.

3. Is the anchorage free of corrosion that is more than mild surface oxidation? Y N U N/A
All surfaces are clean and painted or galvanized.

4. Is the anchorage free of visible cracks in the concrete near the anchors? Y N U N/A
No cracks observed.

5. Is the anchorage configuration consistent with plant documentation? Y N U N/A
(Note: This question only applies if the item is one of the 50% for which an anchorage configuration verification is required.)
Verified per DCA 53437-400 and Calculation WCG-ACQ-0443.

6. Based on the above anchorage evaluations, is the anchorage free of potentially adverse seismic conditions? Y N U
Rigid frame welded to embeds in the floor. Cabinet is bolted to the frame.

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

Equipment ID No. 0-XSW-236-79DC1-S Equip. Class³ 14, Distribution Panels and Transfer Switches

Equipment Description 125V DC Transfer Switch Select Chargers 7S/9S

Interaction Effects

7. Are soft targets free from impact by nearby equipment or structures? Y N U N/A
Has a protective hood over it and no other items are in close proximity.

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
No masonry walls present. All items above are rigidly mounted.

9. Do attached lines have adequate flexibility to avoid damage? Y N U N/A
Two conduit connections are hard tube conduit. After further consideration and review with FRC, deemed to not be an adverse seismic condition.

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
Wood form work correctly in place for new cabling. Work in-progress.

Comments (Additional pages may be added as necessary)

Some housekeeping issues related to in progress work. Nothing of significance.

Evaluated by: Travis Hockenberry

Date: 7-26-2012

Mike Gordon

7-26-2012

Seismic Walkdown Checklist (SWC)

Equipment ID No. 1-BD-235-0001-D Equip. Class³ 14, Distribution Panels and Transfer Switches

Equipment Description 120V AC Vital Instrument Power Board 1-l

Location: Bldg. AUX Floor El. 757 Room, Area A804, WBN-WB-016

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
Welded to embed plate in floor; appears to be free of damage (observed on outside of cabinet). Back panels were opened and anchorage to structure was verified. The power boards exist in one continuous cabinet and no panel-to-panel anchorage was observed. Front panels required extensive disassembly to open.

3. Is the anchorage free of corrosion that is more than mild surface oxidation? Y N U N/A
No visible corrosion. All surfaces painted and in good condition.

4. Is the anchorage free of visible cracks in the concrete near the anchors? Y N U N/A
No visible cracks in concrete.

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

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

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

Equipment ID No. 1-BD-235-0001-D Equip. Class³ 14, Distribution Panels and Transfer Switches

Equipment Description 120V AC Vital Instrument Power Board 1-I

Interaction Effects

7. Are soft targets free from impact by nearby equipment or structures? Y N U N/A
Scaffolding pole near conduit/flex connection on top of cabinet. After further consideration, deemed not to be a significant spatial interaction. However, it does not meet the requirements of MMTP-102.
8. Are overhead equipment, distribution systems, ceiling tiles and lighting, and masonry block walls not likely to collapse onto the equipment? Y N U N/A
9. Do attached lines have adequate flexibility to avoid damage? Y N U N/A
Flexible electrical connections.
10. Based on the above seismic interaction evaluations, is equipment free of potentially adverse seismic interaction effects? Y N U
-

Other Adverse Conditions

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

Comments (Additional pages may be added as necessary)

General housekeeping is good.

Evaluated by: Travis Hockenberry

Date: 7-26-2012

Mike Gordon

7-26-2012

Seismic Walkdown Checklist (SWC)

Equipment ID No. 1-BD-278-M007B Equip. Class³ 14, Distribution Panels and Transfer Switches

Equipment Description 120V AC Instrument Power Rack

Location: Bldg. CNTL Floor El. 755 Room, Area C412, WBN-WB-005

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

Instructions for Completing Checklist

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

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

Anchorage

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

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

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

4. Is the anchorage free of visible cracks in the concrete near the anchors? Y N U N/A
Concrete was not observable due to carpet.

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

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

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

Equipment ID No. 1-BD-278-M007B Equip. Class³ 14, Distribution Panels and Transfer Switches

Equipment Description 120V AC Instrument Power Rack

Interaction Effects

7. Are soft targets free from impact by nearby equipment or structures? Y N U N/A
8. Are overhead equipment, distribution systems, ceiling tiles and lighting, and masonry block walls not likely to collapse onto the equipment? Y N U N/A
9. Do attached lines have adequate flexibility to avoid damage? Y N U N/A
10. Based on the above seismic interaction evaluations, is equipment free of potentially adverse seismic interaction effects? Y N U
-

Other Adverse Conditions

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

Comments (Additional pages may be added as necessary)

Evaluated by: Travis Hockenberry

Date: 7-19-2012

Mike Gordon

7-19-2012

Seismic Walkdown Checklist (SWC)

Equipment ID No. 0-BAT-236-0001-D Equip. Class³ 15, Battery Racks

Equipment Description 125V Vital Battery I

Location: Bldg. AUX Floor El. 772 Room, Area A854, WBN-WB-027

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 very good condition. No bent, broken, missing, or loose hardware.

3. Is the anchorage free of corrosion that is more than mild surface oxidation? Y N U N/A
All surfaces are painted and in good condition. No corrosion observed.

4. Is the anchorage free of visible cracks in the concrete near the anchors? Y N U N/A
No observed cracks.

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

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

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

Equipment ID No. 0-BAT-236-0001-D Equip. Class³ 15, Battery Racks

Equipment Description 125V Vital Battery I

Interaction Effects

7. Are soft targets free from impact by nearby equipment or structures? Y N U N/A
All items have adequate clearance.

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 are safety cabled and there are no ceiling tiles. All overhead items are rigidly mounted. No masonry walls present.

9. Do attached lines have adequate flexibility to avoid damage? Y N U N/A
All cables have additional length to allow for 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
The room is clear of temporary equipment. Wood scaffolding is present but adequately restrained.

Comments (Additional pages may be added as necessary)

Housekeeping is excellent.

Evaluated by: Travis Hockenberry Date: 8-2-2012

Mike Gordon 8-2-2012

Seismic Walkdown Checklist (SWC)

Equipment ID No. 0-BAT-236-0002-E Equip. Class³ 15, Battery Racks

Equipment Description 125V Vital Battery II

Location: Bldg. AUX Floor El. 772 Room, Area A854, WBN-WB-028

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 very good condition. No bent, broken, missing, or loose hardware.

3. Is the anchorage free of corrosion that is more than mild surface oxidation? Y N U N/A
All surfaces are painted and in good condition. No corrosion observed.

4. Is the anchorage free of visible cracks in the concrete near the anchors? Y N U N/A
No observed cracks.

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

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

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

Equipment ID No. 0-BAT-236-0002-E Equip. Class³ 15, Battery Racks

Equipment Description 125V Vital Battery II

Interaction Effects

7. Are soft targets free from impact by nearby equipment or structures? Y N U N/A
All items have adequate clearance.

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 are safety cabled and there are no ceiling tiles. All overhead items are rigidly mounted. No masonry walls present.

9. Do attached lines have adequate flexibility to avoid damage? Y N U N/A
All cables have additional length to allow for 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
The room is clear of temporary equipment.

Comments (Additional pages may be added as necessary)

Housekeeping is excellent.

Evaluated by: Travis Hockenberry Date: 8-2-2012

Mike Gordon 8-2-2012

Seismic Walkdown Checklist (SWC)

Equipment ID No. 0-BAT-236-0003-F Equip. Class³ 15, Battery Racks

Equipment Description 125V Vital Battery III

Location: Bldg. AUX Floor El. 772 Room, Area A854, WBN-WB-029

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 very good condition. No bent, broken, missing, or loose hardware.

3. Is the anchorage free of corrosion that is more than mild surface oxidation? Y N U N/A
All surfaces are painted and in good condition. No corrosion observed.

4. Is the anchorage free of visible cracks in the concrete near the anchors? Y N U N/A
No observed cracks.

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

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

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

Equipment ID No. 0-BAT-236-0003-F Equip. Class³ 15, Battery Racks

Equipment Description 125V Vital Battery III

Interaction Effects

7. Are soft targets free from impact by nearby equipment or structures? Y N U N/A
All items have adequate clearance.
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 are safety cabled and there are no ceiling tiles. All overhead items are rigidly mounted. No masonry walls present.
9. Do attached lines have adequate flexibility to avoid damage? Y N U N/A
All cables have additional length to allow for 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
The room is clear of temporary equipment.

Comments (Additional pages may be added as necessary)

Housekeeping is excellent. (2) light fixtures contain burnt out light bulbs.

Evaluated by: Travis Hockenberry

Date: 8-2-2012

Mike Gordon

8-2-2012

Seismic Walkdown Checklist (SWC)

Equipment ID No. 1-BAT-215-A-A Equip. Class³ 15, Battery Racks

Equipment Description 125V Diesel Generator Battery 1A-A

Location: Bldg. DG BLDG Floor El. 742 Room, Area D104, WBN-WB-001

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
All hardware in good condition, appears to be set properly and tight.

3. Is the anchorage free of corrosion that is more than mild surface oxidation? Y N U N/A
No visible corrosion.

4. Is the anchorage free of visible cracks in the concrete near the anchors? Y N U N/A
No visible cracking (majority of concrete covered by rack base plate).

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

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

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

Equipment ID No. 1-BAT-215-A-A Equip. Class³ 15, Battery Racks

Equipment Description 125V Diesel Generator Battery 1A-A

Interaction Effects

7. Are soft targets free from impact by nearby equipment or structures? Y N U N/A
Closest equipment is panel mounted on wall (greater than 1" clearance)
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
Hood/structure mounted above rack.
9. Do attached lines have adequate flexibility to avoid damage? Y N U N/A
Flexible battery connections.
10. Based on the above seismic interaction evaluations, is equipment free of potentially adverse seismic interaction effects? Y N U
-

Other Adverse Conditions

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

Comments (Additional pages may be added as necessary)

General good housekeeping

Evaluated by: Travis Hockenberry Date: 7-18-2012

Mike Gordon 7-18-2012

Seismic Walkdown Checklist (SWC)

Equipment ID No. 1-BAT-215-B-B Equip. Class³ 15, Battery Racks

Equipment Description 125V Diesel Generator Battery 1B-B

Location: Bldg. DG BLDG Floor El. 742 Room, Area D106, WBN-WB-021

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
No loose, missing, or broken hardware. Could not touch equipment—trip hazard—nothing looked loose.

3. Is the anchorage free of corrosion that is more than mild surface oxidation? Y N U N/A
There is mild surface corrosion, not significant.

4. Is the anchorage free of visible cracks in the concrete near the anchors? Y N U N/A
Some observed hairline cracking at south grounding lug connection. No observed structural cracks near anchorage > 0.5mm

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

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

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

Equipment ID No. 1-BAT-215-B-B Equip. Class³ 15, Battery Racks

Equipment Description 125V Diesel Generator Battery 1B-B

Interaction Effects

7. Are soft targets free from impact by nearby equipment or structures? Y N U N/A
Plastic barricade poles observed in the area—but not significant.
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
Batteries and the rack are protected by an overhead plate steel ventilation hood. No masonry walls present.
9. Do attached lines have adequate flexibility to avoid damage? Y N U N/A
All cabling has loops allowing 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
-

Comments (Additional pages may be added as necessary)

Good housekeeping, no concerns. All components in the area are rigidly mounted.

Evaluated by: Travis Hockenberry Date: 7-31-2012

Mike Gordon 7-31-2012

Seismic Walkdown Checklist (SWC)

Equipment ID No. 0-CHGR-236-0001-D Equip. Class³ 16, Battery Chargers and Inverters

Equipment Description 125V Vital Battery Charger I

Location: Bldg. AUX Floor El. 772 Room, Area A852, WBN-WB-014

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

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
Everything is in good condition.

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

3. Is the anchorage free of corrosion that is more than mild surface oxidation? Y N U N/A
All surfaces are painted or galvanized. No corrosion.

4. Is the anchorage free of visible cracks in the concrete near the anchors? Y N U N/A
No cracks observed.

5. Is the anchorage configuration consistent with plant documentation? Y N U N/A
(Note: This question only applies if the item is one of the 50% for which an anchorage configuration verification is required.)
Verified per DCA 53437-427 and 53437-428.

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

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

Equipment ID No. 0-CHGR-236-0001-D Equip. Class³ 16, Battery Chargers and Inverters

Equipment Description 125V Vital Battery Charger I

Interaction Effects

7. Are soft targets free from impact by nearby equipment or structures? Y N U N/A
Scaffolding horizontal pole in close proximity with flexible conduit on south face of charger.
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
Covered by a structural steel frame and hood.
9. Do attached lines have adequate flexibility to avoid damage? Y N U N/A
Flex conduit is utilized.
10. Based on the above seismic interaction evaluations, is equipment free of potentially adverse seismic interaction effects? Y N U
-

Other Adverse Conditions

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

Comments (Additional pages may be added as necessary)

Evaluated by: Travis Hockenberry Date: 7-25-2012

Mike Gordon 7-25-2012

Seismic Walkdown Checklist (SWC)

Equipment ID No. 0-CHGR-236-0003-F Equip. Class³ 16, Battery Chargers and Inverters

Equipment Description 125V Vital Battery Charger III

Location: Bldg. AUX Floor El. 772 Room, Area A864, WBN-WB-017

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

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
All anchorage appears to be in place and in new condition.

3. Is the anchorage free of corrosion that is more than mild surface oxidation? Y N U N/A
All surfaces are clean and painted or galvanized. No corrosion observed.

4. Is the anchorage free of visible cracks in the concrete near the anchors? Y N U N/A
No cracks observed.

5. Is the anchorage configuration consistent with plant documentation? Y N U N/A
(Note: This question only applies if the item is one of the 50% for which an anchorage configuration verification is required.)
Verified per DCAs 53437-427 and 53437-428.

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

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

Equipment ID No. 0-CHGR-236-0003-F Equip. Class³ 16, Battery Chargers and Inverters

Equipment Description 125V Vital Battery Charger III

Interaction Effects

7. Are soft targets free from impact by nearby equipment or structures? Y N U N/A
Nothing in proximity of soft areas of equipment. No proximity interactions expected.
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 are safely chained. Area heater above equipment is rigidly mounted.
9. Do attached lines have adequate flexibility to avoid damage? Y N U N/A
Connections are flex conduit type.
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
None observed.
-

Comments (Additional pages may be added as necessary)

Housekeeping is good. Light directly over the equipment is burnt out. Another fixture 10' north of the equipment is burnt out as well.

Evaluated by: Travis Hockenberry Date: 7-26-2012

Mike Gordon 7-26-2012

Seismic Walkdown Checklist (SWC)

Equipment ID No. 0-INV-235-0001-D Equip. Class³ 16, Battery Chargers and Inverters

Equipment Description 120V AC Vital Instrument Inverter 0-1

Location: Bldg. AUX Floor El. 772 Room, Area A852, WBN-WB-014

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

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
No missing, damaged, or loose (like new condition).

3. Is the anchorage free of corrosion that is more than mild surface oxidation? Y N U N/A
All surfaces painted or galvanized.

4. Is the anchorage free of visible cracks in the concrete near the anchors? Y N U N/A
No visible cracks in concrete.

5. Is the anchorage configuration consistent with plant documentation? Y N U N/A
 (Note: This question only applies if the item is one of the 50% for which an anchorage configuration verification is required.)
Bolt spacing on front of inverter does not meet the tolerance requirement indicated on DCA 51370-517.

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

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

Equipment ID No. 0-INV-235-0001-D Equip. Class³ 16, Battery Chargers and Inverters

Equipment Description 120V AC Vital Instrument Inverter 0-1

Interaction Effects

7. Are soft targets free from impact by nearby equipment or structures? Y N U N/A
Covered by structural steel and sheet metal. Adequate clearance around equipment all around.
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
HVAC and cable tray rigidly mounted.
9. Do attached lines have adequate flexibility to avoid damage? Y N U N/A
Electrical connections rigidly mounted near floor.
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
No adverse seismic conditions observed.
-

Comments (Additional pages may be added as necessary)

Housekeeping is good and orderly.

Evaluated by: Travis Hockenberry Date: 7-25-2012

Mike Gordon 7-25-2012

Seismic Walkdown Checklist (SWC)

Equipment ID No. 1-CHGR-215-A-A Equip. Class³ 16, Battery Chargers and Inverters

Equipment Description DG 1A-A Battery Charger

Location: Bldg. DG BLDG Floor El. 742 Room, Area D104, WBN-WB-001

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

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
All hardware/anchorage is free of bent, broken, missing, or loose hardware.

3. Is the anchorage free of corrosion that is more than mild surface oxidation? Y N U N/A
All surface are painted or galvanized. No corrosion observed.

4. Is the anchorage free of visible cracks in the concrete near the anchors? Y N U N/A
No cracks observed.

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

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

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

Equipment ID No. 1-CHGR-215-A-A Equip. Class³ 16, Battery Chargers and Inverters

Equipment Description DG 1A-A Battery Charger

Interaction Effects

7. Are soft targets free from impact by nearby equipment or structures? Y N U N/A
The only soft targets are the electrical connections and switches on the front panel. All have adequate clearance.
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
All items above are rigidly mounted.
9. Do attached lines have adequate flexibility to avoid damage? Y N U N/A
Electrical connections are flexible conduit type.
10. Based on the above seismic interaction evaluations, is equipment free of potentially adverse seismic interaction effects? Y N U
-

Other Adverse Conditions

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

Comments (Additional pages may be added as necessary)

Housekeeping is very good in this area. Plastic barricade is present but not a significant issue.

Evaluated by: Travis Hockenberry Date: 8-6-2012

Mike Gordon 8-6-2012

Seismic Walkdown Checklist (SWC)

Equipment ID No. 1-INV-235-0001-D Equip. Class³ 16, Battery Chargers and Inverters

Equipment Description 120V AC vital Inverter 1-1

Location: Bldg. AUX Floor El. 772 Room, Area A852, WBN-WB-014

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

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
No missing or damaged parts. All surfaces are painted or galvanized.

3. Is the anchorage free of corrosion that is more than mild surface oxidation? Y N U N/A
No corrosion. Excellent housekeeping. All surface painted or galvanized.

4. Is the anchorage free of visible cracks in the concrete near the anchors? Y N U N/A
No cracks observed.

5. Is the anchorage configuration consistent with plant documentation? Y N U N/A
(Note: This question only applies if the item is one of the 50% for which an anchorage configuration verification is required.)
Verified per DCAs 51370-114 and 51370-135.

6. Based on the above anchorage evaluations, is the anchorage free of potentially adverse seismic conditions? Y N U
No adverse conditions observed.

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

Equipment ID No. 1-INV-235-0001-D Equip. Class³ 16, Battery Chargers and Inverters

Equipment Description 120V AC vital Inverter 1-1

Interaction Effects

7. Are soft targets free from impact by nearby equipment or structures? Y N U N/A
Covered by a hood. No items are close enough for spatial interactions.
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
No masonry walls. Lights have safety chains. All items above are rigidly mounted.
9. Do attached lines have adequate flexibility to avoid damage? Y N U N/A
Electrical connection utilizes flex conduit.
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
Scaffolding in the immediate area, but properly restrained.
-

Comments (Additional pages may be added as necessary)

Very good housekeeping, no adverse conditions observed.

Evaluated by: Travis Hockenberry Date: 7-25-2012

Mike Gordon 7-25-2012

Seismic Walkdown Checklist (SWC)

Equipment ID No. 1-INV-235-0002-E Equip. Class³ 16, Battery Chargers and Inverters

Equipment Description 120V AC Vital Inverter 1-II

Location: Bldg. AUX Floor El. 772 Room, Area A852, WBN-WB-014

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

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
All items present and in new condition.

3. Is the anchorage free of corrosion that is more than mild surface oxidation? Y N U N/A
No corrosion observed.

4. Is the anchorage free of visible cracks in the concrete near the anchors? Y N U N/A
Normal floor cracking is present. Nothing significant observed.

5. Is the anchorage configuration consistent with plant documentation? Y N U N/A
(Note: This question only applies if the item is one of the 50% for which an anchorage configuration verification is required.)
Verified per DCA 51370-214.

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

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

Equipment ID No. 1-INV-235-0002-E Equip. Class³ 16, Battery Chargers and Inverters

Equipment Description 120V AC Vital Inverter 1-II

Interaction Effects

7. Are soft targets free from impact by nearby equipment or structures? Y N U N/A
All items have adequate clearance.
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
No masonry block wall present. No ceiling tiles. All lights are safety chained. All other items are rigidly supported. Smoke detector with missing cable.
9. Do attached lines have adequate flexibility to avoid damage? Y N U N/A
Connections are low at anchorage point. No differential motion expected.
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
There is scaffolding nearby, but has adequate restraint.
-

Comments (Additional pages may be added as necessary)

Housekeeping is reasonable.

Evaluated by: Travis Hockenberry Date: 8-8-2012

Mike Gordon 8-8-2012

Seismic Walkdown Checklist (SWC)

Equipment ID No. 1-INV-235-0003-F Equip. Class³ 16, Battery Chargers and Inverters

Equipment Description 120V AC Vital Inverter 1-III

Location: Bldg. AUX Floor El. 772 Room, Area A864, WBN-WB-017

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

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
All hardware is in new condition.

3. Is the anchorage free of corrosion that is more than mild surface oxidation? Y N U N/A
All surfaces are painted or galvanized. No corrosion.

4. Is the anchorage free of visible cracks in the concrete near the anchors? Y N U N/A
No cracks observed.

5. Is the anchorage configuration consistent with plant documentation? Y N U N/A
(Note: This question only applies if the item is one of the 50% for which an anchorage configuration verification is required.)
Anchor spacing shown on DCA 51370-314 does not match as-built condition.

6. Based on the above anchorage evaluations, is the anchorage free of potentially adverse seismic conditions? Y N U
The cabinet is welded to angles that are anchor bolted to the floor. All are in new condition.

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

Equipment ID No. 1-INV-235-0003-F Equip. Class³ 16, Battery Chargers and Inverters

Equipment Description 120V AC Vital Inverter 1-III

Interaction Effects

7. Are soft targets free from impact by nearby equipment or structures? Y N U N/A
No equipment or structure within close proximity.

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
No masonry walls. Lights are safety cabled. HVAC is rigidly mounted.

9. Do attached lines have adequate flexibility to avoid damage? Y N U N/A
Yes, conduit is flex type and other connections are low at the floor where the movement would be the same.

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
Scaffolding in the general area, however it is adequately restrained.

Comments (Additional pages may be added as necessary)

Housekeeping is excellent.

Evaluated by: Travis Hockenberry Date: 7-26-2012

Mike Gordon 7-26-2012

Seismic Walkdown Checklist (SWC)

Equipment ID No. 1-DIEG-082-A1-A Equip. Class³ 17, Engine Generators

Equipment Description Diesel Generator Engine 1A1

Location: Bldg. DG BLDG Floor El. 742 Room, Area D104, WBN WB-001

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
Clean/painted in very good condition.

3. Is the anchorage free of corrosion that is more than mild surface oxidation? Y N U N/A
Clean and painted, no observable rust.

4. Is the anchorage free of visible cracks in the concrete near the anchors? Y N U N/A
No observable cracks.

5. Is the anchorage configuration consistent with plant documentation? Y N U N/A
(Note: This question only applies if the item is one of the 50% for which an anchorage configuration verification is required.)
Verified per DWGs 10N320-1 and 18N302.

6. Based on the above anchorage evaluations, is the anchorage free of potentially adverse seismic conditions? Y N U
There were no observed adverse seismic conditions.

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

Equipment ID No. 1-DIEG-082-A1-A Equip. Class³ 17, Engine Generators

Equipment Description Diesel Generator Engine 1A1

Interaction Effects

7. Are soft targets free from impact by nearby equipment or structures? Y N U N/A
There are no nearby items for seismic interaction.

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
Piping is rigidly mounted, lights have safety cables, no masonry block walls, and duct is rigidly mounted.

9. Do attached lines have adequate flexibility to avoid damage? Y N U N/A
All conduit, exhaust, air intake, and piping have flex joints for isolation.

10. Based on the above seismic interaction evaluations, is equipment free of potentially adverse seismic interaction effects? Y N U
No items are close enough for impact, and all adjacent items are rigidly mounted.

Other Adverse Conditions

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

Comments (Additional pages may be added as necessary)

Equipment is in very good condition and well maintained. Good housekeeping practices have been implemented.

Evaluated by: Travis Hockenberry Date: 7-17-2012

Mike Gordon 7-17-2012

Seismic Walkdown Checklist (SWC)

Equipment ID No. 1-DIEG-082-A2-A Equip. Class³ 17, Engine Generators

Equipment Description Diesel Generator Engine 1A2

Location: Bldg. DG BLDG Floor El. 742 Room, Area D104, WBN WB-001

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
Clean/painted in very good condition.

3. Is the anchorage free of corrosion that is more than mild surface oxidation? Y N U N/A
Clean and painted, no observable rust.

4. Is the anchorage free of visible cracks in the concrete near the anchors? Y N U N/A
No observable cracks.

5. Is the anchorage configuration consistent with plant documentation? Y N U N/A
(Note: This question only applies if the item is one of the 50% for which an anchorage configuration verification is required.)
Verified per DWGs 10N320-1 and 18N302.

6. Based on the above anchorage evaluations, is the anchorage free of potentially adverse seismic conditions? Y N U
There were no observed adverse seismic conditions.

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

Equipment ID No. 1-DIEG-082-A2-A Equip. Class³ 17, Engine Generators

Equipment Description Diesel Generator Engine 1A2

Interaction Effects

7. Are soft targets free from impact by nearby equipment or structures? Y N U N/A
There are no nearby items for seismic interaction.
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
Piping is rigidly mounted, lights have safety cables, no masonry block walls, and duct is rigidly mounted.
9. Do attached lines have adequate flexibility to avoid damage? Y N U N/A
All conduit, exhaust, air intake, and piping have flex joints for isolation.
10. Based on the above seismic interaction evaluations, is equipment free of potentially adverse seismic interaction effects? Y N U
No items are close enough for impact, and all adjacent items are rigidly mounted.
-

Other Adverse Conditions

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

Comments (Additional pages may be added as necessary)

Equipment is in very good condition and well maintained. Good housekeeping practices have been implemented.

Evaluated by: Travis Hockenberry Date: 7-17-2012

Mike Gordon 7-17-2012

Seismic Walkdown Checklist (SWC)

Equipment ID No. 1-DIEG-082-B1-B Equip. Class³ 17, Engine Generators

Equipment Description Diesel Generator Engine 1B1

Location: Bldg. DG BLDG Floor El. 742 Room, Area D106, WBN-WB-021

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
All anchorage is present and painted. Nothing damaged.

3. Is the anchorage free of corrosion that is more than mild surface oxidation? Y N U N/A
All surfaces are painted. There is no visible corrosion.

4. Is the anchorage free of visible cracks in the concrete near the anchors? Y N U N/A
No observed cracks.

5. Is the anchorage configuration consistent with plant documentation? Y N U N/A
(Note: This question only applies if the item is one of the 50% for which an anchorage configuration verification is required.)
Verified per DWGs 10N320-1 and 18N302.

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

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

Equipment ID No. 1-DIEG-082-B1-B Equip. Class³ 17, Engine Generators

Equipment Description Diesel Generator Engine 1B1

Interaction Effects

7. Are soft targets free from impact by nearby equipment or structures? Y N U N/A
All items are adequate and or rigidly supported. There is sufficient clearance between all soft targets and items in close proximity.
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
No masonry walls present. All lights are equipped with safety cables.
9. Do attached lines have adequate flexibility to avoid damage? Y N U N/A
All connections 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

Comments (Additional pages may be added as necessary)

Good housekeeping observed, very clean area.

Evaluated by: Travis Hockenberry Date: 7-31-2012

Mike Gordon 7-31-2012

Seismic Walkdown Checklist (SWC)

Equipment ID No. 1-DIEG-082-B2-B Equip. Class³ 17, Engine Generators

Equipment Description Diesel Generator Engine 1B2

Location: Bldg. DG BLDG Floor El. 742 Room, Area D106, WBN-WB-021

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
All anchorage is present and painted. Nothing damaged.

- 3. Is the anchorage free of corrosion that is more than mild surface oxidation? Y N U N/A
All surfaces are painted. There is no visible corrosion.

- 4. Is the anchorage free of visible cracks in the concrete near the anchors? Y N U N/A
No observed cracks.

- 5. Is the anchorage configuration consistent with plant documentation? Y N U N/A
(Note: This question only applies if the item is one of the 50% for which an anchorage configuration verification is required.)
Verified per DWGs 10N320-1 and 18N302.

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

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

Equipment ID No. 1-DIEG-082-B2-B Equip. Class³ 17, Engine Generators

Equipment Description Diesel Generator Engine 1B2

Interaction Effects

7. Are soft targets free from impact by nearby equipment or structures? Y N U N/A
All items are adequate and or rigidly supported. There is sufficient clearance between all soft targets and items in close proximity.
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
No masonry walls present. All lights are equipped with safety cables.
9. Do attached lines have adequate flexibility to avoid damage? Y N U N/A
All connections 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

Comments (Additional pages may be added as necessary)

Good housekeeping observed, very clean area.

Evaluated by: Travis Hockenberry Date: 7-31-2012

Mike Gordon 7-31-2012

Seismic Walkdown Checklist (SWC)

Equipment ID No. 1-GEN-082-0001A-A Equip. Class³ 17, Engine Generators

Equipment Description Diesel Generator 1A-A

Location: Bldg. DG BLDG Floor El. 742 Room, Area D104, WBN WB-001

Manufacturer, Model, Etc. (optional but recommended) GM/Porter (Electric Product Division)

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
Clean/painted in very good condition.

3. Is the anchorage free of corrosion that is more than mild surface oxidation? Y N U N/A
Clean and painted, no observable rust.

4. Is the anchorage free of visible cracks in the concrete near the anchors? Y N U N/A
No observable cracks.

5. Is the anchorage configuration consistent with plant documentation? Y N U N/A
(Note: This question only applies if the item is one of the 50% for which an anchorage configuration verification is required.)
Verified per DWGs 10N320-1 and 18N302.

6. Based on the above anchorage evaluations, is the anchorage free of potentially adverse seismic conditions? Y N U
There were no observed adverse seismic conditions.

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

Equipment ID No. 1-GEN-082-0001A-A Equip. Class³ 17, Engine Generators

Equipment Description Diesel Generator 1A-A

Interaction Effects

7. Are soft targets free from impact by nearby equipment or structures? Y N U N/A
There are no nearby items for seismic interaction.

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
Piping is rigidly mounted, lights have safety cables, no masonry block walls, and duct is rigidly mounted.

9. Do attached lines have adequate flexibility to avoid damage? Y N U N/A
All conduit, exhaust, air intake, and piping have flex joints for isolation.

10. Based on the above seismic interaction evaluations, is equipment free of potentially adverse seismic interaction effects? Y N U
No items are close enough for impact, and all adjacent items are rigidly mounted.

Other Adverse Conditions

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

Comments (Additional pages may be added as necessary)

Equipment is in very good condition and well maintained. Good housekeeping practices have been implemented.

Evaluated by: Travis Hockenberry

Date: 7-17-2012

Mike Gordon

7-17-2012

Seismic Walkdown Checklist (SWC)

Equipment ID No. 1-GEN-082-0001B-B Equip. Class³ 17, Engine Generators

Equipment Description Diesel Generator 1B-B

Location: Bldg. DG BLDG Floor El. 742 Room, Area D106, WBN-WB-021

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
All anchorage is present and painted. Nothing damaged.

3. Is the anchorage free of corrosion that is more than mild surface oxidation? Y N U N/A
All surfaces are painted. There is no visible corrosion.

4. Is the anchorage free of visible cracks in the concrete near the anchors? Y N U N/A
No observed cracks.

5. Is the anchorage configuration consistent with plant documentation? Y N U N/A
 (Note: This question only applies if the item is one of the 50% for which an anchorage configuration verification is required.)
Verified per DWGs 10N320-1 and 18N302.

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

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

Equipment ID No. 1-GEN-082-0001B-B Equip. Class³ 17, Engine Generators

Equipment Description Diesel Generator 1B-B

Interaction Effects

7. Are soft targets free from impact by nearby equipment or structures? Y N U N/A
All items are adequate and or rigidly supported. There is sufficient clearance between all soft targets and items in close proximity.
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
No masonry walls present. All lights are equipped with safety cables. Temperature sensor overhead is not safety cabled as noted in area walk-by (WBN-WB-021).
9. Do attached lines have adequate flexibility to avoid damage? Y N U N/A
All connections 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
-

Comments (Additional pages may be added as necessary)

Good housekeeping observed, very clean area.

Evaluated by: Travis Hockenberry Date: 7-31-2012

Mike Gordon 7-31-2012

Seismic Walkdown Checklist (SWC)

Equipment ID No. 2-GEN-082-0002A-A Equip. Class³ 17, Engine Generators

Equipment Description Diesel Generator 2A-A

Location: Bldg. DG BLDG Floor El. 742 Room, Area D105, WBN-WB-022

Manufacturer, Model, Etc. (optional but recommended) Parsons Peebles Electric Product

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
All anchorage is present and painted. Nothing damaged.

3. Is the anchorage free of corrosion that is more than mild surface oxidation? Y N U N/A
All surfaces are painted. No corrosion observed.

4. Is the anchorage free of visible cracks in the concrete near the anchors? Y N U N/A
No observed cracks.

5. Is the anchorage configuration consistent with plant documentation? Y N U N/A
 (Note: This question only applies if the item is one of the 50% for which an anchorage configuration verification is required.)
Verified per DWGs 10N320-1 and 18N302.

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

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

Equipment ID No. 2-GEN-082-0002A-A Equip. Class³ 17, Engine Generators

Equipment Description Diesel Generator 2A-A

Interaction Effects

7. Are soft targets free from impact by nearby equipment or structures? Y N U N/A
All items have adequate clearance for proximity interactions. All items are rigidly mounted.
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
Temperature sensor at north end of the A2 engine does not have a safety cable. Everything else is rigidly supported, no masonry walls, lights have cables.
9. Do attached lines have adequate flexibility to avoid damage? Y N U N/A
All pipe and conduit connections 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

Comments (Additional pages may be added as necessary)

Housekeeping is very good. Scaffolding installed over the south end of the A1 engine. No spatial interactions observed. Observed 2" clearance to fuel pipe, not a concern.

Evaluated by: Travis Hockenberry Date: 7-31-2012

Mike Gordon 7-31-2012

Seismic Walkdown Checklist (SWC)

Equipment ID No. 2-GEN-082-0002B-B Equip. Class³ 17, Engine Generators

Equipment Description Diesel Generator 2B-B

Location: Bldg. DG BLDG Floor El. 742 Room, Area D107, WBN-WB-023

Manufacturer, Model, Etc. (optional but recommended) The Electric Products Division

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
All anchorage is present and in good condition.

3. Is the anchorage free of corrosion that is more than mild surface oxidation? Y N U N/A
All surfaces are painted. No corrosion observed.

4. Is the anchorage free of visible cracks in the concrete near the anchors? Y N U N/A
No observed cracks.

5. Is the anchorage configuration consistent with plant documentation? Y N U N/A
(Note: This question only applies if the item is one of the 50% for which an anchorage configuration verification is required.)
Verified per DWGs 10N320-1 and 18N302.

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

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

Equipment ID No. 2-GEN-082-0002B-B Equip. Class³ 17, Engine Generators

Equipment Description Diesel Generator 2B-B

Interaction Effects

- 7. Are soft targets free from impact by nearby equipment or structures? Y N U N/A
Relief valve on south-west accumulator is within 5/8" of rigid pipe support. Tank axial stop will allow 3/8" travel in that direction. After further review, clearance deemed to be adequate.

- 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
No masonry walls, light fixture directly over generator is missing (broken) a safety cable. This is not significant.

- 9. Do attached lines have adequate flexibility to avoid damage? Y N U N/A
All pipe and conduit connections 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

Comments (Additional pages may be added as necessary)

Housekeeping is very good. Light with missing safety chain.

Evaluated by: Travis Hockenberry Date: 7-31-2012

Mike Gordon 7-31-2012

Seismic Walkdown Checklist (SWC)

Equipment ID No. 0-L-147/C Equip. Class³ 18, Instrument Racks

Equipment Description Instrument Rack That Contains: 1-PI-067-0434 (Traveling Screen Inlet Pressure)

Location: Bldg. IPS Floor El. 722 Room, Area 1110, WBN-WB-011

Manufacturer, Model, Etc. (optional but recommended) N/A

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 broken, missing, and loose.

3. Is the anchorage free of corrosion that is more than mild surface oxidation? Y N U N/A
Bolts are painted and no corrosion was present. Mounting plates have some minor surface corrosion.

4. Is the anchorage free of visible cracks in the concrete near the anchors? Y N U N/A
No cracks observed.

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

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

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

Equipment ID No. 0-L-147/C Equip. Class³ 18, Instrument Racks

Equipment Description Instrument Rack That Contains: 1-PI-067-0434 (Traveling Screen Inlet Pressure)

Interaction Effects

7. Are soft targets free from impact by nearby equipment or structures? Y N U N/A
See comments from area walk-by WBN-WB-011. Stored scaffolding in immediate area.
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 smoke detector does not appear to have a safety chain. All conduits are well supported.
9. Do attached lines have adequate flexibility to avoid damage? Y N U N/A
All conduit 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

Comments (Additional pages may be added as necessary)

Evaluated by: Travis Hockenberry Date: 7-24-2012

Mike Gordon 7-24-2012

Equipment ID No. 0-L-147/C Equip. Class³ 18, Instrument Racks

Equipment Description Instrument Rack That Contains: 1-PI-067-0434 (Traveling Screen Inlet Pressure)

Interaction Effects

7. Are soft targets free from impact by nearby equipment or structures? Y N U N/A
See comments from area walk-by WBN-WB-011. Stored scaffolding in immediate area.
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 smoke detector does not appear to have a safety chain. All conduits are well supported.
9. Do attached lines have adequate flexibility to avoid damage? Y N U N/A
All conduit 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

Comments (Additional pages may be added as necessary)

Evaluated by: Travis Hockenberry Date: 7-24-2012

Mike Gordon 7-24-2012

Status: Y N U

Seismic Walkdown Checklist (SWC)

Equipment ID No. 0-L-155 Equip. Class³ 18, Instrument Racks

Equipment Description Instrument Rack that Contains: 0-PI-70-49 and 0-PT-70-222C

Location: Bldg. AUX Floor El. 713 Room, Area A1-T / A5-R, WBN-WB-008

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
No missing or loose hardware.

3. Is the anchorage free of corrosion that is more than mild surface oxidation? Y N U N/A
No corrosion, bolts are painted.

4. Is the anchorage free of visible cracks in the concrete near the anchors? Y N U N/A
No visible cracking.

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

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

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

Equipment ID No. 0-L-155 Equip. Class³ 18, Instrument Racks

Equipment Description Instrument Rack that Contains: 0-PI-70-49 and 0-PT-70-222C

Interaction Effects

7. Are soft targets free from impact by nearby equipment or structures? Y N U N/A
Adequate clearance between rack and rigid pipe support. See question 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 piping and conduit rigidly supported and in good working condition.
9. Do attached lines have adequate flexibility to avoid damage? Y N U N/A
Connections to panel/rack 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
There is a temporary lifting device restrained with rope to an adjacent pipe support. The planned removal date has expired. Device is adequately restrained to prevent interaction, but it is not restrained properly per TI-276.

Comments (Additional pages may be added as necessary)

Evaluated by: Travis Hockenberry Date: 7-23-2012

Mike Gordon 7-23-2012

Status: Y N U

Seismic Walkdown Checklist (SWC)

Equipment ID No. 1-PNL-275-R127-A Equip. Class³ 18, Instrument Racks

Equipment Description Train A BOP Instrument Rack

Location: Bldg. CNTL Floor El. 708 Room, Area C201, WBN-WB-048

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
Visible anchorage is free bent, missing or loose hardware. Rack is welded to embed plates at bottom and bolted to adjoining racks at the top inside of the cabinets.

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

4. Is the anchorage free of visible cracks in the concrete near the anchors? Y N U N/A
No visible cracks surrounding embed plates.

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

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

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

Equipment ID No. 1-PNL-275-R127-A Equip. Class³ 18, Instrument Racks

Equipment Description Train A BOP Instrument Rack

Interaction Effects

7. Are soft targets free from impact by nearby equipment or structures? Y N U N/A
Racks are bolted together.

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
Cable trays, conduit, and piping all rigidly supported. Nearby lighting has proper tie-offs and properly attached.

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

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
Scaffolding is properly supported and secured.

Comments (Additional pages may be added as necessary)

General housekeeping is good in this area.

Evaluated by: Travis Hockenberry Date: 8-13-2012

Mike Gordon 8-13-2012

Status: Y N U

Seismic Walkdown Checklist (SWC)

Equipment ID No. 1-PNL-275-R143-A Equip. Class³ 18, Instrument Racks

Equipment Description Train A BOP Instrument Rack

Location: Bldg. CNTL Floor El. 708 Room, Area C201, WBN-WB-048

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
Rack is welded to embed plates at bottom and bolted to adjacent racks on outside at the top of the cabinets. No visible anchorage deficiencies.

3. Is the anchorage free of corrosion that is more than mild surface oxidation? Y N U N/A
Welds and bolting is painted with no signs of oxidation.

4. Is the anchorage free of visible cracks in the concrete near the anchors? Y N U N/A
No visible cracks surrounding embed plates.

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

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

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

Equipment ID No. 1-PNL-275-R143-A Equip. Class³ 18, Instrument Racks

Equipment Description Train A BOP Instrument Rack

Interaction Effects

7. Are soft targets free from impact by nearby equipment or structures? Y N U N/A
Racks are bolted together.
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
Cable trays, conduit, and piping all rigidly supported. Nearby lighting has proper tie-offs and properly attached.
9. Do attached lines have adequate flexibility to avoid damage? Y N U N/A
Conduit connections 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
Scaffolding is properly supported and secured.
-

Comments (Additional pages may be added as necessary)

General housekeeping is good in this area.

Evaluated by: Travis Hockenberry

Date: 8-13-2012

Mike Gordon

8-13-2012

Status: Y N U

Seismic Walkdown Checklist (SWC)

Equipment ID No. 1-PNL-278-M7 Equip. Class³ 18, Instrument Racks

Equipment Description Transfer, PFD PWR, and Instrument Power Racks (1-M-7)

Location: Bldg. CNTL Floor El. 755 Room, Area C412, WBN-WB-005

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

Instructions for Completing Checklist

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

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

Anchorage

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

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

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

4. Is the anchorage free of visible cracks in the concrete near the anchors? Y N U N/A
Concrete was not observable due to carpet.

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

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

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

Equipment ID No. 1-PNL-278-M7 Equip. Class³ 18, Instrument Racks

Equipment Description Transfer, PFD PWR, and Instrument Power Racks (1-M-7)

Interaction Effects

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

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

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

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

Other Adverse Conditions

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

Comments (Additional pages may be added as necessary)

Evaluated by: Travis Hockenberry Date: 7-19-2012

Mike Gordon 7-19-2012

Status: Y N U

Seismic Walkdown Checklist (SWC)

Equipment ID No. 0-TS-030-0192B-A Equip. Class³ 19, Temperature Sensors

Equipment Description SFP Pump/TBBP Space Cooler A-A Temp

Location: Bldg. AUX Floor El. 737 Room, Area WBN-WB-024

Manufacturer, Model, Etc. (optional but recommended) NOR

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
No bent, broken, missing, or loose parts.

3. Is the anchorage free of corrosion that is more than mild surface oxidation? Y N U N/A
All surfaces are painted or stainless steel. No corrosion observed.

4. Is the anchorage free of visible cracks in the concrete near the anchors? Y N U N/A
No cracks observed.

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

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

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

Equipment ID No. 0-TS-030-0192B-A Equip. Class³ 19, Temperature Sensors

Equipment Description SFP Pump/TBBP Space Cooler A-A Temp

Interaction Effects

7. Are soft targets free from impact by nearby equipment or structures? Y N U N/A
Scaffolding in the area, but it is clear of proximity interaction and well restrained.
8. Are overhead equipment, distribution systems, ceiling tiles and lighting, and masonry block walls not likely to collapse onto the equipment? Y N U N/A
No masonry block walls present. All overhead items are rigidly supported.
9. Do attached lines have adequate flexibility to avoid damage? Y N U N/A
Conduit connection is 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
-

Comments (Additional pages may be added as necessary)

General housekeeping is good.

Evaluated by: Travis Hockenberry Date: 8-1-2012

Mike Gordon 8-1-2012

Status: Y N U

Seismic Walkdown Checklist (SWC)

Equipment ID No. 1-TS-001-0017A-A Equip. Class³ 19, Temperature Sensors

Equipment Description TD Aux Feedwater Pump Room Temp

Location: Bldg. AUX Floor El. 692 Room, Area A306, WBN-WB-042

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
All painted and in good condition. Wall mounted.

3. Is the anchorage free of corrosion that is more than mild surface oxidation? Y N U N/A
All painted, no corrosion observed.

4. Is the anchorage free of visible cracks in the concrete near the anchors? Y N U N/A
No cracks observed.

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

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

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

Equipment ID No. 1-TS-001-0017A-A Equip. Class³ 19, Temperature Sensors

Equipment Description TD Aux Feedwater Pump Room Temp

Interaction Effects

7. Are soft targets free from impact by nearby equipment or structures? Y N U N/A
All items and connections are rigidly mounted and have adequate clearance.
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
All items overhead are rigidly mounted. No masonry walls present.
9. Do attached lines have adequate flexibility to avoid damage? Y N U N/A
All items are rigidly mounted.
10. Based on the above seismic interaction evaluations, is equipment free of potentially adverse seismic interaction effects? Y N U

Other Adverse Conditions

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

Comments (Additional pages may be added as necessary)

Evaluated by: Travis Hockenberry Date: 8-9-2012

Mike Gordon 8-9-2012

Status: Y N U

Seismic Walkdown Checklist (SWC)

Equipment ID No. 1-TS-030-0179-B Equip. Class³ 19, Temperature Sensors

Equipment Description SIS Pump 1B-B Room Cooler Temp

Location: Bldg. AUX Floor El. 692 Room, Area A312, WBN-WB-007

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

Instructions for Completing Checklist

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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
Anchored to concrete wall with finger clamp. All hardware is in good working condition.

3. Is the anchorage free of corrosion that is more than mild surface oxidation? Y N U N/A
No corrosion.

4. Is the anchorage free of visible cracks in the concrete near the anchors? Y N U N/A
No visible cracks near anchorage.

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

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

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

Equipment ID No. 1-TS-030-0179-B Equip. Class³ 19, Temperature Sensors

Equipment Description SIS Pump 1B-B Room Cooler Temp

Interaction Effects

7. Are soft targets free from impact by nearby equipment or structures? Y N U N/A
No nearby 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
All overhead piping rigidly supported and in good working condition.
9. Do attached lines have adequate flexibility to avoid damage? Y N U N/A
Rigidly mounted to wall.
10. Based on the above seismic interaction evaluations, is equipment free of potentially adverse seismic interaction effects? Y N U
-

Other Adverse Conditions

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

Comments (Additional pages may be added as necessary)

Evaluated by: Travis Hockenberry Date: 7-23-2012

Mike Gordon 7-23-2012

Status: Y N U

Seismic Walkdown Checklist (SWC)

Equipment ID No. 1-TS-030-0183-A Equip. Class³ 19, Temperature Sensors

Equipment Description Cent. Charging Pump 1A-A Room Cooler Temp

Location: Bldg. AUX Floor El. 692 Room, Area A309, WBN-WB-006

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
All anchorage is in place and in good condition.

3. Is the anchorage free of corrosion that is more than mild surface oxidation? Y N U N/A
All items are painted and in good condition. No corrosion observed.

4. Is the anchorage free of visible cracks in the concrete near the anchors? Y N U N/A
No significant cracks observed.

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

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

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

Equipment ID No. 1-TS-030-0183-A Equip. Class³ 19, Temperature Sensors

Equipment Description Cent. Charging Pump 1A-A Room Cooler Temp

Interaction Effects

7. Are soft targets free from impact by nearby equipment or structures? Y N U N/A
All items have adequate clearance.

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
No masonry block walls present. No ceiling tiles. Lights are safety chained. All other items overhead are rigidly mounted.

9. Do attached lines have adequate flexibility to avoid damage? Y N U N/A
Every piece is rigidly mounted to the wall.

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

Other Adverse Conditions

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

Comments (Additional pages may be added as necessary)

Evaluated by: Travis Hockenberry Date: 8-9-2012

Mike Gordon 8-9-2012

Status: Y N U

Seismic Walkdown Checklist (SWC)

Equipment ID No. 1-TS-030-453A-B Equip. Class³ 19, Temperature Sensor

Equipment Description DG 1B-B Room Exhaust High Temperature

Location: Bldg. DG BLDG Floor El. 760 Room, Area D209, WBN-WB-002

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

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?
Finger strap in good condition and in place. Y N U N/A

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

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

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

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

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

Equipment ID No. 1-TS-030-453A-B Equip. Class³ 19, Temperature Sensor

Equipment Description DG 1B-B Room Exhaust High Temperature

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?
Mounted on a reinforced block wall. Y N U N/A
9. Do attached lines have adequate flexibility to avoid damage?
All components are supported from the same wall. Y N U N/A
10. Based on the above seismic interaction evaluations, is equipment free of potentially adverse seismic interaction effects? Y N U
-

Other Adverse Conditions

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

Comments (Additional pages may be added as necessary)

Evaluated by: Travis Hockenberry Date: 7-17-2012

Mike Gordon 7-17-2012

Status: Y N U

Seismic Walkdown Checklist (SWC)

Equipment ID No. 1-TS-030-5237A-A Equip. Class³ 19, Temperature Sensors

Equipment Description RHR Pump Room B High Temperature Switch

Location: Bldg. AUX Floor El. 676 Room, Area A210, WBN-WB-004

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
Rigidly mounted to unistrut bolted to concrete wall, no loose or missing hardware.

3. Is the anchorage free of corrosion that is more than mild surface oxidation? Y N U N/A
No rust or corrosion, painted.

4. Is the anchorage free of visible cracks in the concrete near the anchors? Y N U N/A
No visible cracking or deterioration.

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

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

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

Equipment ID No. 1-TS-030-5237A-A Equip. Class³ 19, Temperature Sensors

Equipment Description RHR Pump Room B High Temperature Switch

Interaction Effects

7. Are soft targets free from impact by nearby equipment or structures? Y N U N/A
Cabinet/box mounted overhead is bolted to concrete wall.
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
Conduit rigidly mounted and in good working condition.
9. Do attached lines have adequate flexibility to avoid damage? Y N U N/A
Attached line is 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

Comments (Additional pages may be added as necessary)

Good housekeeping in area and clean.

Evaluated by: Travis Hockenberry Date: 7-18-2012

Mike Gordon 7-18-2012

Status: Y N U

Seismic Walkdown Checklist (SWC)

Equipment ID No. 0-PNL-278-M012 Equip. Class³ 20, Instrumentation and Control Panels

Equipment Description Radiation Monitoring MCR PNL

Location: Bldg. CNTL Floor El. 755 Room, Area C412, WBN-WB-005

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?
Welded to floor at the base. Y N U N/A

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

4. Is the anchorage free of visible cracks in the concrete near the anchors?
Concrete was not observable due to carpet. Y N U N/A

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

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

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

Equipment ID No. 0-PNL-278-M012 Equip. Class³ 20, Instrumentation and Control Panels

Equipment Description Radiation Monitoring MCR PNL

Interaction Effects

7. Are soft targets free from impact by nearby equipment or structures? Y N U N/A
South face of east end was missing 2 bolts and south face of west end had 1 bolt missing and 1 bolt was sheared off. Condition needs to be further evaluated.
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
Suspended ceiling is supported adequately and overhead emergency lighting is tied off.
9. Do attached lines have adequate flexibility to avoid damage? Y N U N/A
Connections to the cabinet are through the floor.
10. Based on the above seismic interaction evaluations, is equipment free of potentially adverse seismic interaction effects? Y N U
-

Other Adverse Conditions

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

Comments (Additional pages may be added as necessary)

Evaluated by: Travis Hockenberry Date: 7-19-2012

Mike Gordon 7-19-2012

Status: Y N U

Seismic Walkdown Checklist (SWC)

Equipment ID No. 0-PNL-278-M026A-A Equip. Class³ 20, Instrumentation and Control Panels

Equipment Description DG 1A-A MCR PNL

Location: Bldg. CNTL Floor El. 755 Room, Area C412, WBN-WB-005

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
Welded to floor at the base of the cabinet. All welds are in good condition.

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
Concrete was not observable due to carpet.

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

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

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

Equipment ID No. 0-PNL-278-M026A-A Equip. Class³ 20, Instrumentation and Control Panels

Equipment Description DG 1A-A MCR PNL

Interaction Effects

7. Are soft targets free from impact by nearby equipment or structures? Y N U N/A
The south face of the cabinet on the west end had 2 missing bolts. This could potentially be an adverse seismic condition as it could affect the cabinet functionality. Condition needs to be further evaluated.
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
Suspended ceiling is supported adequately and overhead emergency lighting is tied-off.
9. Do attached lines have adequate flexibility to avoid damage? Y N U N/A
Connections to the cabinet are through floor.
10. Based on the above seismic interaction evaluations, is equipment free of potentially adverse seismic interaction effects? Y N U
-

Other Adverse Conditions

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

Comments (Additional pages may be added as necessary)

Some of the ceiling tile clips were missing 1 or 2 bolts.

Evaluated by: Travis Hockenberry

Date: 7-19-2012

Mike Gordon

7-19-2012

Status: Y N U

Seismic Walkdown Checklist (SWC)

Equipment ID No. 0-PNL-278-M026D-B Equip. Class³ 20, Instrumentation and Control Panels

Equipment Description DG 2B-B MCR PNL

Location: Bldg. CNTL Floor El. 755 Room, Area C412, WBN-WB-005

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

Instructions for Completing Checklist

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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
Welded at base of cabinet, welds in good condition.

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

4. Is the anchorage free of visible cracks in the concrete near the anchors? Y N U N/A
Concrete was not observable due to carpet.

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

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

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

Equipment ID No. 0-PNL-278-M026D-B Equip. Class³ 20, Instrumentation and Control Panels

Equipment Description DG 2B-B MCR PNL

Interaction Effects

7. Are soft targets free from impact by nearby equipment or structures? Y N U N/A
South face on west end of cabinet is missing 2 bolts. Further evaluation required.
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
Suspended ceiling is adequately supported and emergency lighting is tied-off.
9. Do attached lines have adequate flexibility to avoid damage? Y N U N/A
Connections to cabinet are through floor.
10. Based on the above seismic interaction evaluations, is equipment free of potentially adverse seismic interaction effects? Y N U
-

Other Adverse Conditions

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

Comments (Additional pages may be added as necessary)

Several of the ceiling clips were missing 1 or 2 bolts.

Evaluated by: Travis Hockenberry

Date: 7-19-2012

Mike Gordon

7-19-2012

Status: Y N U

Seismic Walkdown Checklist (SWC)

Equipment ID No. 0-PNL-278-M027A Equip. Class³ 20, Instrumentation and Control Panels

Equipment Description ERCW MCR PNL

Location: Bldg. CNTL Floor El. 755 Room, Area C412, WBN-WB-005

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

Instructions for Completing Checklist

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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
Welded at base of cabinet, welds are in good condition.

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
Concrete was not observable due to carpet.

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

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

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

Equipment ID No. 0-PNL-278-M027A Equip. Class³ 20, Instrumentation and Control Panels

Equipment Description ERCW MCR PNL

Interaction Effects

7. Are soft targets free from impact by nearby equipment or structures? Y N U N/A
Adequate clearance around cabinet and securely fastened to adjacent panel/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
Suspended ceiling is supported adequately and emergency lighting is tied-off.
9. Do attached lines have adequate flexibility to avoid damage? Y N U N/A
Connections to cabinet through floor.
10. Based on the above seismic interaction evaluations, is equipment free of potentially adverse seismic interaction effects? Y N U
-

Other Adverse Conditions

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

Comments (Additional pages may be added as necessary)

Evaluated by: Travis Hockenberry

Date: 7-19-2012

Mike Gordon

7-19-2012

Status: Y N U

Seismic Walkdown Checklist (SWC)

Equipment ID No. 0-PNL-278-M027B Equip. Class³ 20, Instrumentation and Control Panels

Equipment Description CCS MCR PNL

Location: Bldg. CNTL Floor El. 755 Room, Area C412, WBN-WB-005

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

Instructions for Completing Checklist

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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
Welded at base of cabinet, welds in good condition.

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

4. Is the anchorage free of visible cracks in the concrete near the anchors? Y N U N/A
Concrete was not observable due to carpet.

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

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

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

Equipment ID No. 0-PNL-278-M027B Equip. Class³ 20, Instrumentation and Control Panels

Equipment Description CCS MCR PNL

Interaction Effects

7. Are soft targets free from impact by nearby equipment or structures? Y N U N/A
Adequate clearance around cabinet and securely fastened to adjacent 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
Suspended ceiling supported adequately and emergency lighting tied-off.
9. Do attached lines have adequate flexibility to avoid damage? Y N U N/A
Connections to cabinet through floor.
10. Based on the above seismic interaction evaluations, is equipment free of potentially adverse seismic interaction effects? Y N U
-

Other Adverse Conditions

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

Comments (Additional pages may be added as necessary)

Evaluated by: Travis Hockenberry

Date: 7-24-2012

Mike Gordon

7-24-2012

Status: Y N U

Seismic Walkdown Checklist (SWC)

Equipment ID No. 0-HTX-070-0186 Equip. Class³ 21, Tanks and Heat Exchangers

Equipment Description CCS Heat Exchanger C

Location: Bldg. AUX Floor El. 737 Room, Area A2-Q / A13-U, WBN-WB-013

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

Instructions for Completing Checklist

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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?
No loose, missing, or broken. Y N U N/A

3. Is the anchorage free of corrosion that is more than mild surface oxidation?
Mild surface corrosion near cracks/chips in paint. All hardware is painted and in fair condition. Y N U N/A

4. Is the anchorage free of visible cracks in the concrete near the anchors?
No visible cracks in concrete. Y N U N/A

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

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

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

Equipment ID No. 0-HTX-070-0186 Equip. Class³ 21, Tanks and Heat Exchangers

Equipment Description CCS Heat Exchanger C

Interaction Effects

7. Are soft targets free from impact by nearby equipment or structures? Y N U N/A
All connecting hardware is rigidly supported. Valves have adequate clearance.

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
Cable tray is rigidly supported and not overloaded.

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

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

Other Adverse Conditions

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

Comments (Additional pages may be added as necessary)

General housekeeping is good.

Evaluated by: Travis Hockenberry Date: 7-25-2012

Mike Gordon 7-25-2012

Status: Y N U

Seismic Walkdown Checklist (SWC)

Equipment ID No. 0-HTX-078-0031 Equip. Class³ 21, Tanks and Heat Exchangers

Equipment Description Spent Fuel Pit Heat Exchanger A

Location: Bldg. AUX Floor El. 737 Room, Area WBN-WB-024

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

Instructions for Completing Checklist

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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
All anchorage is in place with no broken, bent, or loose parts.

3. Is the anchorage free of corrosion that is more than mild surface oxidation? Y N U N/A
All surfaces are painted. No corrosion observed.

4. Is the anchorage free of visible cracks in the concrete near the anchors? Y N U N/A
No cracks observed.

5. Is the anchorage configuration consistent with plant documentation? Y N U N/A
(Note: This question only applies if the item is one of the 50% for which an anchorage configuration verification is required.)
Verified per DWGs 5598 and 5599 (contract 5411401).

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

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

Equipment ID No. 0-HTX-078-0031 Equip. Class³ 21, Tanks and Heat Exchangers

Equipment Description Spent Fuel Pit Heat Exchanger A

Interaction Effects

7. Are soft targets free from impact by nearby equipment or structures? Y N U N/A
Only soft target is a drain pipe and valve. Adequately protected.
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
No masonry walls present. All overhead items are rigidly mounted.
9. Do attached lines have adequate flexibility to avoid damage? Y N U N/A
All piping connections are rigidly mounted.
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
Scaffolding is present in the area, but well restrained.
-

Comments (Additional pages may be added as necessary)

Housekeeping is good in this area.

Evaluated by: Travis Hockenberry Date: 8-1-2012

Mike Gordon 8-1-2012

Status: Y N U

Seismic Walkdown Checklist (SWC)

Equipment ID No. 0-HTX-078-0032 Equip. Class³ 21, Tanks and Heat Exchangers

Equipment Description Spent Fuel Pit Heat Exchanger B

Location: Bldg. AUX Floor El. 737 Room, Area WBN-WB-024

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

Instructions for Completing Checklist

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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
All anchorage is in place with no broken, bent, or loose parts. Appears that south east anchor bolts are missing lock nuts. Double nut configuration is not indicated on the drawing.

3. Is the anchorage free of corrosion that is more than mild surface oxidation? Y N U N/A
All hardware is painted. No visible corrosion.

4. Is the anchorage free of visible cracks in the concrete near the anchors? Y N U N/A
No cracks observed >0.5mm

5. Is the anchorage configuration consistent with plant documentation? Y N U N/A
(Note: This question only applies if the item is one of the 50% for which an anchorage configuration verification is required.)
Verified per DWGs 5598 and 5599 (contract 5411401).

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

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

Equipment ID No. 0-HTX-078-0032 Equip. Class³ 21, Tanks and Heat Exchangers

Equipment Description Spent Fuel Pit Heat Exchanger B

Interaction Effects

7. Are soft targets free from impact by nearby equipment or structures? Y N U N/A
No nearby equipment. Temporary scaffolding is present with adequate clearance and appears to be properly supported.

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 piping and conduit is rigidly supported.

9. Do attached lines have adequate flexibility to avoid damage? Y N U N/A
All piping connected is analyzed and rigidly mounted.

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
Good housekeeping, no observed adverse seismic conditions.

Comments (Additional pages may be added as necessary)

Temperature sensor around HTX has the safety chain disconnected (not credible).

Evaluated by: Travis Hockenberry Date: 8-1-2012

Mike Gordon 8-1-2012

Status: Y N U

Seismic Walkdown Checklist (SWC)

Equipment ID No. 1-HTX-070-0185 Equip. Class³ 21, Tanks and Heat Exchangers

Equipment Description CCS Heat Exchanger A

Location: Bldg. AUX Floor El. 737 Room, Area A2-Q / A13-U, WBN-WB-013

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?
No loose, missing, or broken. Y N U N/A

3. Is the anchorage free of corrosion that is more than mild surface oxidation?
Mild surface corrosion near cracks/chips in paint. All hardware is painted and in fair condition. Y N U N/A

4. Is the anchorage free of visible cracks in the concrete near the anchors?
No visible cracks in concrete near anchorage. Y N U N/A

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

6. Based on the above anchorage evaluations, is the anchorage free of potentially adverse seismic conditions?
No potential adverse seismic conditions noted for the anchorage. Y N U

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

Equipment ID No. 1-HTX-070-0185 Equip. Class³ 21, Tanks and Heat Exchangers

Equipment Description CCS Heat Exchanger A

Interaction Effects

7. Are soft targets free from impact by nearby equipment or structures? Y N U N/A
All connecting hardware is rigidly supported. Valves have adequate clearance.
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
Cable tray is rigidly supported and not overloaded.
9. Do attached lines have adequate flexibility to avoid damage? Y N U N/A
Attached lines are rigidly supported
10. Based on the above seismic interaction evaluations, is equipment free of potentially adverse seismic interaction effects? Y N U
-

Other Adverse Conditions

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

Comments (Additional pages may be added as necessary)

Scaffolding near east end of heat exchanger (~1" clearance). Scaffolding appears to be rigidly supported/restrained by structural steel framing.

Evaluated by: Travis Hockenberry Date: 7-25-2012

Mike Gordon 7-25-2012

Status: Y N U

Seismic Walkdown Checklist (SWC)

Equipment ID No. 1-TANK-063-0046 Equip. Class³ 21, Tanks and Heat Exchangers

Equipment Description Refueling Water Storage Tank

Location: Bldg. N/A Floor El. 729 Room, Area Yard, WBN-WB-044

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?
All items present and in good condition. Y N U N/A

3. Is the anchorage free of corrosion that is more than mild surface oxidation?
Tank is S.S. and in good condition. Anchor bolts are painted with some minor corrosion present. Y N U N/A

4. Is the anchorage free of visible cracks in the concrete near the anchors?
The well surrounding the tank had standing water. Direct inspection was not possible. Looking through the water the concrete appeared to be in very good condition. 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.)
Verified per DWG Y N U N/A

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

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

Equipment ID No. 1-TANK-063-0046 Equip. Class³ 21, Tanks and Heat Exchangers

Equipment Description Refueling Water Storage Tank

Interaction Effects

7. Are soft targets free from impact by nearby equipment or structures? Y N U N/A
Outdoor installation. All items on the tank perimeter were protected by a rain hood.

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
Outside.

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

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

Other Adverse Conditions

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

Comments (Additional pages may be added as necessary)

Housekeeping in this area is reasonable.

Evaluated by: Travis Hockenberry Date: 8-10-2012

Mike Gordon 8-10-2012

Status: Y N U

Seismic Walkdown Checklist (SWC)

Equipment ID No. 1-TANK-068-PRT Equip. Class³ 21, Tanks and Heat Exchangers

Equipment Description Pressurizer Relief Tank

Location: Bldg. RB Floor El. 708 Room, Area Lower Containment, WBN-WB-045

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

Instructions for Completing Checklist

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

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

Anchorage

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

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

3. Is the anchorage free of corrosion that is more than mild surface oxidation? Y N U N/A
All surfaces painted and in good condition, minor chipping present.

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? Y N U N/A
(Note: This question only applies if the item is one of the 50% for which an anchorage configuration verification is required.)
Verified per DWG 48N949.

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

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

Equipment ID No. 1-TANK-068-PRT Equip. Class³ 21, Tanks and Heat Exchangers

Equipment Description Pressurizer Relief Tank

Interaction Effects

7. Are soft targets free from impact by nearby equipment or structures? Y N U N/A
No exposed soft targets. Tank is covered by structural steel platform.
8. Are overhead equipment, distribution systems, ceiling tiles and lighting, and masonry block walls not likely to collapse onto the equipment? Y N U N/A
9. Do attached lines have adequate flexibility to avoid damage? Y N U N/A
10. Based on the above seismic interaction evaluations, is equipment free of potentially adverse seismic interaction effects? Y N U
-

Other Adverse Conditions

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

Comments (Additional pages may be added as necessary)

Substantial work in-progress during refueling outage. Temporary scaffolding and shielding in immediate area. No areas of concern.

Evaluated by: Travis Hockenberry Date: 9-17-2012

Mike Gordon 9-17-2012

Status: Y N U

Seismic Walkdown Checklist (SWC)

Equipment ID No. 1-TANK-070-0001 Equip. Class³ 21, Tanks and Heat Exchangers

Equipment Description CCS Surge Tank A

Location: Bldg. AUX Floor El. 757 Room, Area A813, WBN-WB-026

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
No loose, missing, or broken.

3. Is the anchorage free of corrosion that is more than mild surface oxidation? Y N U N/A
Painted with minor chipping. No observed corrosion.

4. Is the anchorage free of visible cracks in the concrete near the anchors? Y N U N/A
No observed structural cracking.

5. Is the anchorage configuration consistent with plant documentation? Y N U N/A
(Note: This question only applies if the item is one of the 50% for which an anchorage configuration verification is required.)
Verified per DWGs ISI-0496-C-01 and N-1-2504.

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

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

Equipment ID No. 1-TANK-070-0001 Equip. Class³ 21, Tanks and Heat Exchangers

Equipment Description CCS Surge Tank A

Interaction Effects

7. Are soft targets free from impact by nearby equipment or structures? Y N U N/A
(2) soft targets, but well protected.
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 conduit rigidly supported. Lights have safety chain/wire.
9. Do attached lines have adequate flexibility to avoid damage? Y N U N/A
Piping rigidly mounted and tubing is 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
No observed adverse conditions.

Comments (Additional pages may be added as necessary)




General housekeeping is good. No temporary equipment. Overhead scaffolding appears to be supported adequately (~30' above floor level).

Evaluated by: Travis Hockenberry Date: 8-2-2012

Mike Gordon 8-2-2012

Appendix F: AWCs

The following signatures are provided for the engineers responsible for the Area Walk-By Checklists in Watts Bar Unit 1.

Name	Signature	Date
Travis Hockenberry		10/30/12
Mike Gordon		10/30/12
Phillip York		10/30/12

Status: Y N U

Area Walk-By Checklist (AWC)

Location: Bldg. DG BLDG Floor El. 742 Room, Area⁴ D104, WBN-WB-001

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
Shear lug on north-west air receiver is resting inside support saddle.

2. Does anchorage of equipment in the area appear to be free of significant degraded conditions? Y N U N/A
See question 1.

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
All cable tray, duct, and conduit are rigidly supported. Cable trays are not over loaded.

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
All equipment rigidly supported. Lights have cable to prevent them from falling.

⁴ If the room in which the SWEL item is located is very large (e.g., Turbine Hall), the area selected should be described. This selected area should be based on judgment, e.g., on the order of about 35 feet from the SWEL item.

Location: Bldg. DG BLDG Floor El. 742 Room, Area⁴ D104, WBN-WB-001

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
No spray hazard. CO2 system implemented.

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
Observed lube oil pipe support clamp not properly seated. Not a significant seismic concern.

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
Observed bent finger clamp on crosstie pipe to receivers. Found loose pipe support hardware on start-up air line 1082-586-2-2-3. Loose double nuts not carrying load.

Comments (Additional pages may be added as necessary)

Room was very clean and good housekeeping is being practiced. Observed missing bolts in 1-PNL-82-A/1 "Diesel Engine Control Panel". Temporary eye wash station tied off using rope, not per TI-276. Observed missing anchor on pipe support near south end of room (tag not legible). Calculations for similar supports 17A586-1-69 and 17A586-1-92 confirm the as-built configuration.

The following equipment is included in the area encompassed by this Area Walk-By:

- 1-BAT-215-A-A
- 1-CHGR-215-A-A
- 1-COMP-082-0180
- 1-DIEG-082-A1
- 1-DIEG-082-A2
- 1-GEN-082-0001A-A
- 1-TANK-082-0160-A

Evaluated by: Travis Hockenberry Date: 7-17-2012

Mike Gordon 7-17-2012

Status: Y N U

Area Walk-By Checklist (AWC)

Location: Bldg. DG BLDG Floor El. 760 Room, Area⁴ D209, WBN-WB-002

Instructions for Completing Checklist

This checklist may be used to document the results of the Area Walk-By near one or more SWEL items. The space below each of the following questions may be used to record the results of judgments and findings. Additional space is provided at the end of this checklist for documenting other comments.

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

1. Does anchorage of equipment in the area appear to be free of potentially adverse seismic conditions (if visible without necessarily opening cabinets)? Y N U N/A

2. Does anchorage of equipment in the area appear to be free of significant degraded conditions? Y N U N/A

3. Based on a visual inspection from the floor, do the cable/conduit raceways and HVAC ducting appear to be free of potentially adverse seismic conditions (e.g., condition of supports is adequate and fill conditions of cable trays appear to be inside acceptable limits)? Y N U N/A

4. Does it appear that the area is free of potentially adverse seismic spatial interactions with other equipment in the area (e.g., ceiling tiles and lighting)? Y N U N/A
Good clearances on all items in the rooms. No concerns.

⁴ If the room in which the SWEL item is located is very large (e.g., Turbine Hall), the area selected should be described. This selected area should be based on judgment, e.g., on the order of about 35 feet from the SWEL item.

Location: Bldg. DG BLDG Floor El. 760 Room, Area⁴ D209, WBN-WB-002

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
No flood potential in the room. No sprinklers present.

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
No combustible products and no ignition source.

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 housekeeping issues or temporary equipment.

-
8. Have you looked for and found no other seismic conditions that could adversely affect the safety functions of the equipment in the area? Y N U

Comments (Additional pages may be added as necessary)

Everything is rigidly supported.

The following equipment is included in the area encompassed by this Area Walk-By:

1-FAN-030-0449-B

1-TS-030-0453A-B

Evaluated by: Travis Hockenberry Date: 7-17-2012

Mike Gordon 7-17-2012

Status: Y N U

Area Walk-By Checklist (AWC)

Location: Bldg. AUX Floor El. 757 Room, Area⁴ A802, WBN-WB-003

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 corrosion or rust. All welded anchorage painted with no signs of damage.

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 and cable tray rigidly supported and does not appear to be overloaded.

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
All overhead items rigidly supported with adequate clearance.

⁴ If the room in which the SWEL item is located is very large (e.g., Turbine Hall), the area selected should be described. This selected area should be based on judgment, e.g., on the order of about 35 feet from the SWEL item.

Location: Bldg. AUX Floor El. 757 Room, Area⁴ A802, WBN-WB-003

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
All sprinkler heads in area have adequate clearance.

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
No fuel source or combustibles.

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 storage cabinet tied off with cable to rigid cable tray frame. Temporary scaffolding secured properly. Rolling scaffolding/buck not secured/tied off in two places, as indicated when not in use (wheel stop is engaged).

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

Comments (Additional pages may be added as necessary)

Concern with clearance to security feature (Raise question with security contact, Ext. 8495).

The following equipment is included in the area encompassed by this Area Walk-By:

- 1-BD-212-A001-A*
- 1-DXF-242-0001*
- 1-MCC-214-A001-A*
- 1-MCC-214-A002-A*

Evaluated by: Travis Hockenberry Date: 7-18-2012

Mike Gordon 7-18-2012

Location: Bldg. AUX Floor El. 757 Room, Area⁴ A802, WBN-WB-003

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
All sprinkler heads in area have adequate clearance.

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
No fuel source or combustibles.

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 storage cabinet tied off with cable to rigid cable tray frame. Temporary scaffolding secured properly. Rolling scaffolding/buck not secured/tied off in two places, as indicated when not in use (wheel stop is engaged).

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

Comments (Additional pages may be added as necessary)

Concern with clearance to security feature (Raise question with security contact, Ext. 8495).

The following equipment is included in the area encompassed by this Area Walk-By:

- 1-BD-212-A001-A*
- 1-DXF-242-0001*
- 1-MCC-214-A001-A*
- 1-MCC-214-A002-A*

Evaluated by: Travis Hockenberry Date: 7-18-2012

Mike Gordon 7-18-2012

Area Walk-By Checklist (AWC)Location: Bldg. AUX Floor El. 676 Room, Area⁴ A210, WBN-WB-004**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
Minor/mild surface rust on pump room cooler, but not significant.

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
Cable/conduit rigidly supported.

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
All equipment appears to have adequate clearance and supported appropriately to minimize interaction.

⁴ If the room in which the SWEL item is located is very large (e.g., Turbine Hall), the area selected should be described. This selected area should be based on judgment, e.g., on the order of about 35 feet from the SWEL item.

Location: Bldg. AUX Floor El. 676 Room, Area⁴ A210, WBN-WB-004

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
No sprinkler heads in the 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
No fuel source or combustibles in the area.

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 portable/temporary equipment or installations.

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

Comments (Additional pages may be added as necessary)

The following equipment is included in the area encompassed by this Area Walk-By:

1-FCV-074-0021-B
1-PMCL-030-0176-B
1-PMP-074-0020-B
1-TS-030-5237A-A

Evaluated by: Travis Hockenberry Date: 7-18-2012

Mike Gordon 7-18-2012

Area Walk-By Checklist (AWC)

Location: Bldg. CNTL Floor El. 755 Room, Area⁴ C412, WBN-WB-005

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

All visible anchorage is clean and painted.

2. Does anchorage of equipment in the area appear to be free of significant degraded conditions? Y N U N/A

No corrosion visible. All surfaces are clean and painted.

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

No cable/conduit raceways or HVAC duct were present or visible.

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

All cabinets, book shelves, lights, and smoke detectors are anchored or cable restrained.

⁴ If the room in which the SWEL item is located is very large (e.g., Turbine Hall), the area selected should be described. This selected area should be based on judgment, e.g., on the order of about 35 feet from the SWEL item.

Location: Bldg. CNTL Floor El. 755 Room, Area⁴ C412, WBN-WB-005

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
No water sources were present.

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
Combustible items were present (carpet, paper, cardboard) but all electrical connections were contained in industrial grade cabinets that would contain sparks or flash.

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 portable equipment was present. Some notebooks were in shelves with no restraints but were not a significant risk.

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

Comments (Additional pages may be added as necessary)

Some missing bolts were observed in the restraint plates holding the ceiling tiles. In all but one case it was 1 out of 4 bolts missing. In one plate there were 2 bolts out of 4 missing. Maintenance was called to correct the problem immediately. Returned to the area at a later date and confirmed the issue was resolved.

The following equipment is included in the area encompassed by this Area Walk-By:

0-DBD-238-0003
0-PNL-278-M012
0-PNL-278-M026A-A
0-PNL-278-M026D-B
0-PNL-278-M027A
0-PNL-278-M027B
1-BD-278-M007B
1-PNL-278-M7

Evaluated by: Travis Hockenberry Date: 7-19-2012

Mike Gordon 7-19-2012

Area Walk-By Checklist (AWC)

Location: Bldg. AUX Floor El. 692 Room, Area⁴ A309, WBN-WB-006

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
Room cooler anchorage in good working condition with no loose or missing parts.

2. Does anchorage of equipment in the area appear to be free of significant degraded conditions? Y N U N/A
No corrosion or cracking visible.

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 adequately supported.

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
Adequate clearance around all equipment.

⁴ If the room in which the SWEL item is located is very large (e.g., Turbine Hall), the area selected should be described. This selected area should be based on judgment, e.g., on the order of about 35 feet from the SWEL item.

Location: Bldg. AUX Floor El. 692 Room, Area⁴ A309, WBN-WB-006

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
All sprinkler heads have adequate clearance and piping is properly supported.

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
Lube oil piping is adequately supported and in good working condition.

7. Does it appear that the area is free of potentially adverse seismic interactions associated with housekeeping practices, storage of portable equipment, and temporary installations (e.g., scaffolding, lead shielding)? Y N U N/A
Scaffolding is present and adequately supported/restrained.

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

Comments (Additional pages may be added as necessary)

The following equipment is included in the area encompassed by this Area Walk-By:

1-FCV-062-0089
1-PMP-062-0108-A
1-TS-030-0183-A

Evaluated by: Travis Hockenberry

Date: 7-23-2012

Mike Gordon

7-23-2012

Area Walk-By Checklist (AWC)Location: Bldg. AUX Floor El. 692 Room, Area⁴ A312, WBN-WB-007**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

All anchorage appears to be correct and complete.

2. Does anchorage of equipment in the area appear to be free of significant degraded conditions? Y N U N/A

No degraded conditions were observed. Good housekeeping was being conducted.

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

Most pipe, duct, cable tray and equipment is rigidly supported. No significant spatial interactions are expected.

⁴ If the room in which the SWEL item is located is very large (e.g., Turbine Hall), the area selected should be described. This selected area should be based on judgment, e.g., on the order of about 35 feet from the SWEL item.

5. Does it appear that the area is free of potentially adverse seismic interactions that could cause flooding or spray in the area? Y N U N/A
The fire protection piping is rod hung, but the sprinklers all have adequate clearance.

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
Lube oil was present, but the piping was designed with adequate flexibility and support. It is also a welded system.

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
Good housekeeping is performed. No temporary equipment was observed.

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

Comments (Additional pages may be added as necessary)

The area was clean and painted. Most all items in the room were rigidly mounted.

The following equipment is included in the area encompassed by this Area Walk-By:

- 1-FCV-063-0048-B
- 1-FCV-063-0175-B
- 1-PMP-063-0015-B
- 1-TS-030-0179-B

Evaluated by: Travis Hockenberry

Date: 7-23-2012

Mike Gordon

7-23-2012

Area Walk-By Checklist (AWC)

Location: Bldg. AUX Floor El. 713 Room, Area⁴ A1-T/A5-R, WBN-WB-008

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

No loose, bent, or broken hardware.

2. Does anchorage of equipment in the area appear to be free of significant degraded conditions? Y N U N/A

All equipment anchorage painted and in good condition. No visible cracking in concrete.

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

All HVAC, conduit, and cable tray rigidly supported.

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

Adequate clearances between piping systems and support steel and equipment.

⁴ If the room in which the SWEL item is located is very large (e.g., Turbine Hall), the area selected should be described. This selected area should be based on judgment, e.g., on the order of about 35 feet from the SWEL item.

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

Sprinkler heads have adequate clearance and are properly supported.

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 lifting device restrained with rope near instrument rack (0-L-155). Adequately restrained, but not per TI-276. Lifting device should be removed.

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

Comments (Additional pages may be added as necessary)

The following equipment is included in the area encompassed by this Area Walk-By:

*0-L-155
0-PMP-070-0051-S
1-PMP-003-0128-B*

Evaluated by: Travis Hockenberry

Date: 7-23-2012

Mike Gordon

7-23-2012

Area Walk-By Checklist (AWC)

Location: Bldg. IPS Floor El. 741 Room, Area⁴ 1109, WBN-WB-009

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

No loose, missing, or broken.

2. Does anchorage of equipment in the area appear to be free of significant degraded conditions? Y N U N/A

Paint chipped away with mild surface rust.

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

Cable/conduit properly supported with flexible connections on/off of tray.

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

Adequate clearance around all equipment.

⁴ If the room in which the SWEL item is located is very large (e.g., Turbine Hall), the area selected should be described. This selected area should be based on judgment, e.g., on the order of about 35 feet from the SWEL item.

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

Water pipe resting against motor enclosure; credible but not significant spatial interaction.

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

Container with combustibile material in area and restrained with chain.

7. Does it appear that the area is free of potentially adverse seismic interactions associated with housekeeping practices, storage of portable equipment, and temporary installations (e.g., scaffolding, lead shielding)? Y N U N/A

Two trash cans in area, credible but not significant and one ladder not restrained resting on the floor. One trash can in front of the fire extinguisher.

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

Comments (Additional pages may be added as necessary)

Housekeeping is reasonable, area is dirty and wet (as expected). Temporary rolling scaffolding with wheel stops engaged, but tied-off in 2 spots with rope, not per TI-276.

The following equipment is included in the area encompassed by this Area Walk-By:

0-PMP-067-0047-B

Evaluated by: Travis Hockenberry

Date: 7-24-2012

Mike Gordon

7-24-2012

Area Walk-By Checklist (AWC)Location: Bldg. IPS Floor El. 741 Room, Area⁴ 1105, WBN-WB-010**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
No, loose, missing, or broken anchorage.

2. Does anchorage of equipment in the area appear to be free of significant degraded conditions? Y N U N/A
Mild surface corrosion where paint has chipped away.

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
Cable tray and conduit rigidly supported and in good working condition.

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
Temporary scaffolding near 0-PMP-67-32 not adequately restrained to prevent seismic interaction with pump motor.

⁴ If the room in which the SWEL item is located is very large (e.g., Turbine Hall), the area selected should be described. This selected area should be based on judgment, e.g., on the order of about 35 feet from the SWEL item.

Location: Bldg. IPS Floor El. 741 Room, Area⁴ I105, WBN-WB-010

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
All piping adequately supported, no sprinkler heads in the 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
Oil container not restrained properly to prevent tipping (near 0-PMP-67-36).

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 cabinet not restrained to prevent tipping. Rain hood not properly restrained.

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

Comments (Additional pages may be added as necessary)

Observed light fixture (PS504A) with safety cover not restrained with safety tie-off. Credible but not significant.

The following equipment is included in the area encompassed by this Area Walk-By:

0-PMP-067-0028-A

0-PMP-067-0036-A

Evaluated by: Travis Hockenberry

Date: 7-24-2012

Mike Gordon

7-24-2012

Area Walk-By Checklist (AWC)

Location: Bldg. IPS Floor El. 722 Room, Area⁴ I110, WBN-WB-011

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

All area equipment is in good working order with mild surface corrosion.

2. Does anchorage of equipment in the area appear to be free of significant degraded conditions? Y N U N/A

Mild surface corrosion.

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

All conduit and it is rigidly supported.

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

Monorails on temporary scaffolding appear to be only friction held. They could fall off and strike the equipment below.

⁴ If the room in which the SWEL item is located is very large (e.g., Turbine Hall), the area selected should be described. This selected area should be based on judgment, e.g., on the order of about 35 feet from the SWEL item.

Location: Bldg. IPS Floor El. 722 Room, Area⁴ I110, WBN-WB-011

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
No sprinkler heads in the area. All pipe is properly supported.

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
Overhead lube oil line, but it is adequately supported.

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
Lube oil bottle on electrical panel. Scaffolding and barricade storage area—pieces not restrained. Barrels not restrained in area of SSEL Instrument Rack. Credible but not significant.

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
Smoke detector missing safety cable—not connected. Could fall on an instrument rack.

Comments (Additional pages may be added as necessary)

General housekeeping issues. Light bulb burnt out in the South end of the room.

The following equipment is included in the area encompassed by this Are Walk-By:

0-L-147/C

1-STN-067-0009-A

Evaluated by: Travis Hockenberry Date: 7-24-2012

Mike Gordon 7-24-2012

Area Walk-By Checklist (AWC)

Location: Bldg. IPS Floor El. 741 Room, Area⁴ I107, WBN-WB-012

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

No missing parts observed.

2. Does anchorage of equipment in the area appear to be free of significant degraded conditions? Y N U N/A

Some chipped and missing paint, minor surface corrosion, but acceptable.

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

Conduit only and it is rigidly supported.

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

All items have plenty of clearance.

⁴ If the room in which the SWEL item is located is very large (e.g., Turbine Hall), the area selected should be described. This selected area should be based on judgment, e.g., on the order of about 35 feet from the SWEL item.

Location: Bldg. IPS Floor El. 741 Room, Area⁴ I107, WBN-WB-012

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
All piping is rigidly mounted. No sprinkler heads present.

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
No lube oil lines present.

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 security equipment is not adequately secured. Heat trace connections are not restrained on all screen wash pumps.

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

Comments (Additional pages may be added as necessary)

- Safety lights not properly positioned or directed
- Hand hole cover in HPFP Sump A sump cover is not on or bolted
- Bolts missing in HPFP Sump B sump cover

The following equipment is included in the area encompassed by this Area Walk-By:

- 1-PMP-067-0431
- 1-PMP-067-0440

Evaluated by: Travis Hockenberry Date: 7-24-2012

Mike Gordon 7-24-2012

Area Walk-By Checklist (AWC)

Location: Bldg. AUX Floor El. 737 Room, Area⁴ A2-Q / A13-U, WBN-WB-013

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
The equipment in the area appears to be free of loose, missing, or broken anchorage.

2. Does anchorage of equipment in the area appear to be free of significant degraded conditions? Y N U N/A
No significant degradation. Only minor surface corrosion as noted in heat exchanger and chiller walk-downs.

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
Cable tray rigidly supported and does not appear to be overloaded. HVAC ducting is rigidly supported and in good working condition.

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 significant spatial interaction with 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
Hoist not parked in proper zone due to scaffolding. In close proximity to fire protection pipe strut. Could potentially damage strut and/or pipe. Deemed credible but not significant.

⁴ If the room in which the SWEL item is located is very large (e.g., Turbine Hall), the area selected should be described. This selected area should be based on judgment, e.g., on the order of about 35 feet from the SWEL item.

Location: Bldg. AUX Floor El. 737 Room, Area⁴ A2-Q / A13-U, WBN-WB-013

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
No combustibles in area.

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, fall hardness and mop bucket stored behind XFMR Coil. Bottle cart not tied-off.

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
See general comments.

Comments (Additional pages may be added as necessary)

- *Loose rods under temporary storage box, should be restrained or stored somewhere else.*
- *Radcon cabinet not visually bolted or restrained, but appears to be permanently restrained (did not move when pushed).*
- *Loose table with instrument on it. (Not in proximity of anything that would be damaged if it fell).*
- *Scaffolding resting on pipe to support ladder (not properly supported).*
- *Ladder tied off but resting on conduit near A2-R.*
- *Stored unistrut and tools near A2-Q.*
- *Cable tray covers on floor near A6-R (appears to be work-in-progress, but no work-in-progress tag).*
- *Ladder tied-off with rope to conduit. A12-S.*

The following equipment is included in the area encompassed by this Area Walk-By:

*0-CHR-031-0036/2-A
0-CHR-031-0080-A
0-HTX-070-0186
1-HTX-070-0185*

Evaluated by: Travis Hockenberry

Date: 7-25-2012

Mike Gordon

7-25-2012

Area Walk-By Checklist (AWC)Location: Bldg. AUX Floor El. 772 Room, Area⁴ A852, WBN-WB-014**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
All anchorage free of loose, missing and damaged hardware (like new condition).

2. Does anchorage of equipment in the area appear to be free of significant degraded conditions? Y N U N/A
No signs of corrosion or cracking in concrete. All surfaces painted or galvanized.

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, cable tray, conduit, and piping rigidly supported and in good condition.

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
Adequate clearance around all equipment.

⁴ If the room in which the SWEL item is located is very large (e.g., Turbine Hall), the area selected should be described. This selected area should be based on judgment, e.g., on the order of about 35 feet from the SWEL item.

Location: Bldg. AUX Floor El. 772 Room, Area⁴ A852, WBN-WB-014

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
Fire protection piping is rigidly supported and sprinkler heads have adequate clearance.

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
No combustibles observed in area.

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 scaffolding present and appears to be adequately restrained. Housekeeping clean and orderly.

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
No observed adverse seismic conditions

Comments (Additional pages may be added as necessary)

The following equipment is included in the area encompassed by this Area Walk-By:

- 0-CHGR-236-0001-D
- 0-INV-235-0001-D
- 0-XSW-236-68DC2-S
- 1-INV-235-0001-D
- 1-INV-235-0002-E
- 1-MCC-232-B-B

Evaluated by: Travis Hockenberry

Date: 7-25-2012

Mike Gordon

7-25-2012

Area Walk-By Checklist (AWC)

Location: Bldg. AUX Floor El. 757 Room, Area⁴ A802, WBN-WB-015

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

All visible anchorage is free of potentially adverse seismic conditions.

2. Does anchorage of equipment in the area appear to be free of significant degraded conditions? Y N U N/A

No visible signs of rust/corrosion or damage.

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

Cable tray rigidly supported and not overloaded. Conduit and piping is rigidly supported as well.

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 observed spatial interactions.

⁴ If the room in which the SWEL item is located is very large (e.g., Turbine Hall), the area selected should be described. This selected area should be based on judgment, e.g., on the order of about 35 feet from the SWEL item.

Location: Bldg. AUX Floor El. 757 Room, Area⁴ A802, WBN-WB-015

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
Sprinkler heads in area, but have adequate clearance.

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
No combustibles observed.

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
Appendix R work in progress and tagged/staged appropriately. Temporary scaffolding in place and appears to be adequately restrained.

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

Comments (Additional pages may be added as necessary)

Good housekeeping observed. Everything in area is rigidly mounted.

The following equipment is included in the area encompassed by this Area Walk-By:

- 1-BD-211-A-A*
- 1-BD-212-A002-A*
- 2-BD-211-A-A*

Evaluated by: Travis Hockenberry Date: 7-26-2012

Mike Gordon 7-26-2012

Area Walk-By Checklist (AWC)

Location: Bldg. AUX Floor El. 757 Room, Area⁴ A804, WBN-WB-016

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

All visible anchorage is free of potentially adverse seismic conditions.

2. Does anchorage of equipment in the area appear to be free of significant degraded conditions? Y N U N/A

All visible anchorage is painted and free of corrosion. No observed concrete cracking or damage.

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

Cable tray, conduit, and piping rigidly supported and in good condition.

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

Overhead lighting has safety chain/wire. Temporary scaffolding within a 1/4" of top of XFMR (WBN-1-DXF-237-A), potential for seismic spatial interaction. Upon return for walk-down of transformer the scaffolding pole in question was moved to provided proper clearance.

⁴ If the room in which the SWEL item is located is very large (e.g., Turbine Hall), the area selected should be described. This selected area should be based on judgment, e.g., on the order of about 35 feet from the SWEL item.

Location: Bldg. AUX Floor El. 757 Room, Area⁴ A804, WBN-WB-016

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
Sprinkler heads present, but appear to have adequate clearance.

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
No combustibles observed.

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
Good housekeeping practice. Temporary scaffolding present and appears to be adequately restrained.

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

Comments (Additional pages may be added as necessary)

The following equipment is included in the area encompassed by this Area Walk-By:

0-BD-236-0001/1-D
0-DPL-236-0001-D
1-BD-235-0001-D
1-DXF-237-A

Evaluated by: Travis Hockenberry

Date: 7-26-2012

Mike Gordon

7-26-2012

Area Walk-By Checklist (AWC)

Location: Bldg. AUX Floor El. 772 Room, Area⁴ A864, WBN-WB-017

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

Good Housekeeping—everything is painted and clean. All objects are well restrained.

2. Does anchorage of equipment in the area appear to be free of significant degraded conditions? Y N U N/A

All welds and bolts are clean and painted.

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

All cable tray and ducts are rigidly mounted on robust steel.

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

All items appear to have more than adequate clearance.

⁴ If the room in which the SWEL item is located is very large (e.g., Turbine Hall), the area selected should be described. This selected area should be based on judgment, e.g., on the order of about 35 feet from the SWEL item.

Location: Bldg. AUX Floor El. 772 Room, Area⁴ A864, WBN-WB-017

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

All items in the area are rigidly mounted. Sprinklers in the area are rigidly supported.

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

No observed combustible material. Older cabling is coated with Fire retardant.

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

Some temporary scaffolding is present, but well installed.

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

Comments (Additional pages may be added as necessary)

General housekeeping is good. Several light fixtures need bulbs in the area.

The following equipment is included in the area encompassed by this Area Walk-By:

0-CHGR-236-0003-F

0-XSW-236-79DC1-S

1-INV-235-0003-F

Evaluated by: Travis Hockenberry

Date: 7-26-2012

Mike Gordon

7-26-2012

Area Walk-By Checklist (AWC)

Location: Bldg. AUX Floor El. 772 Room, Area⁴ A856, WBN-WB-018

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

All anchorage is in good condition. No loose, missing, or broken.

2. Does anchorage of equipment in the area appear to be free of significant degraded conditions? Y N U N/A

No significant corrosion observed. No observed cracking in concrete near anchorage.

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

All conduit and cable tray rigidly mounted.

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

Adequate clearance provided around all equipment. Suspended lighting has appropriate safety wire.

⁴ If the room in which the SWEL item is located is very large (e.g., Turbine Hall), the area selected should be described. This selected area should be based on judgment, e.g., on the order of about 35 feet from the SWEL item.

Location: Bldg. AUX Floor El. 772 Room, Area⁴ A856, WBN-WB-018

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
Sprinkler heads present, but have adequate clearances.

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
Combustibles stored in portable fire cabinet. Oil reservoirs have adequate clearance.

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 fire cabinet not restrained to prevent tipping, but adequate clearance to avoid interaction. Other temporary equipment and storage with work-in-progress tags.

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

Comments (Additional pages may be added as necessary)

The following equipment is included in the area encompassed by this Area Walk-By:

1-OXF-212-A002-A

Evaluated by: Travis Hockenberry Date: 7-26-2012

Mike Gordon 7-26-2012

Area Walk-By Checklist (AWC)Location: Bldg. AUX Floor El. 772 Room, Area⁴ A855, WBN-WB-019**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
All anchorage is in good condition. All items are rigidly mounted on steel. Some conduits are rod hung but have adequate clearance.

2. Does anchorage of equipment in the area appear to be free of significant degraded conditions? Y N U N/A
Mild surface corrosion present, no impact.

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
Rigidly mounted on structural tube steel.

4. Does it appear that the area is free of potentially adverse seismic spatial interactions with other equipment in the area (e.g., ceiling tiles and lighting)? Y N U N/A

⁴ If the room in which the SWEL item is located is very large (e.g., Turbine Hall), the area selected should be described. This selected area should be based on judgment, e.g., on the order of about 35 feet from the SWEL item.

Location: Bldg. AUX Floor El. 772 Room, Area⁴ A855, WBN-WB-019

5. Does it appear that the area is free of potentially adverse seismic interactions that could cause flooding or spray in the area? Y N U N/A

6. Does it appear that the area is free of potentially adverse seismic interactions that could cause a fire in the area? Y N U N/A
Oil reservoirs are clear of all objects. No expected spatial interactions.

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
There is significant scaffolding in the area but it appears to be well restrained.

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

Comments (Additional pages may be added as necessary)

The following equipment is included in the area encompassed by this Area Walk-By:

1-OXF-212-B002-B

Evaluated by: Travis Hockenberry

Date: 7-26-2012

Mike Gordon

7-26-2012

Area Walk-By Checklist (AWC)

Location: Bldg. DG BLDG Floor El. 760 Room, Area⁴ D203, WBN-WB-020

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

All anchorage in good condition.

2. Does anchorage of equipment in the area appear to be free of significant degraded conditions? Y N U N/A

Anchorage is painted with only accumulated dust. No corrosion obvious.

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

All are rigidly supported and acceptable fill capacities. HVAC is rigidly supported as well.

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

Possible issue with overhung duct work connected to fan (1-FAN-30-455). Original design calculation and drawings confirm the configuration.

⁴ If the room in which the SWEL item is located is very large (e.g., Turbine Hall), the area selected should be described. This selected area should be based on judgment, e.g., on the order of about 35 feet from the SWEL item.

Location: Bldg. DG BLDG Floor El. 760 Room, Area⁴ D203, WBN-WB-020

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
No sprinklers present. Fire protection piping is rigidly mounted.

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
No combustible source observed.

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
None 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

Comments (Additional pages may be added as necessary)

TS-13-128A is missing a safety cable. Reinforced masonry wall in the area and is in good condition.

The following equipment is included in the area encompassed by this Area Walk-By:

1-FAN-030-0447-A

1-FAN-030-0459-A

Evaluated by: Travis Hockenberry

Date: 7-31-2012

Mike Gordon

7-31-2012

Area Walk-By Checklist (AWC)

Location: Bldg. DG BLDG Floor El. 742 Room, Area⁴ D106, WBN-WB-021

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

No observed loose, missing, or broken anchorage (equipment).

2. Does anchorage of equipment in the area appear to be free of significant degraded conditions? Y N U N/A

All equipment anchorage painted and in good condition with exception of air receiver tanks. Observed mild surface corrosion on bottom hardware of receiver strap. (Not significant)

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

Cable tray, conduit, and ducting rigidly supported and in good condition.

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

Adequate clearance maintained around equipment. Overhead lighting has safety chain/wire.

⁴ If the room in which the SWEL item is located is very large (e.g., Turbine Hall), the area selected should be described. This selected area should be based on judgment, e.g., on the order of about 35 feet from the SWEL item.

Location: Bldg. DG BLDG Floor El. 742 Room, Area⁴ D106, WBN-WB-021

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
No fire protection sprinkler heads. CO2 system in place, adequately supported and in good condition.

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
Lube oil and fuel lines rigidly mounted on skids. Flexible connection utilized between engine and generator skid/frame. Overhead lines rigidly supported as well.

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 observed temporary equipment or scaffolding.

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

Comments (Additional pages may be added as necessary)

General housekeeping is reasonable. Observed safety chain/restraint not attached to sensors 0-TS-13-119B, 119A, and 2 TS on north side of room (unable to read UNID/tag). Observed 1 missing anchor bolt on pipe support 17A586-1-69 (south end of room). Calculation 17A58601069 for the support confirms the as-built configuration.

The following equipment is included in the area encompassed by this Area Walk-By:

- 1-BAT-215-B-B
- 1-COMP-082-0210
- 1-DIEG-082-B1
- 1-DIEG-082-B2
- 1-GEN-082-0001B-B

Evaluated by: Travis Hockenberry

Date: 7-31-2012

Mike Gordon

7-31-2012

Area Walk-By Checklist (AWC)

Location: Bldg. DG BLDG Floor El. 742 Room, Area⁴ D105, WBN-WB-022

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

No loose, missing, or broken anchorage observed on equipment.

2. Does anchorage of equipment in the area appear to be free of significant degraded conditions? Y N U N/A

All hardware is painted or galvanized and in good condition.

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

Cable tray, conduit, and HVAC/air duct rigidly supported.

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

Adequate clearance around equipment. See general comment about temperature sensor.

⁴ If the room in which the SWEL item is located is very large (e.g., Turbine Hall), the area selected should be described. This selected area should be based on judgment, e.g., on the order of about 35 feet from the SWEL item.

Location: Bldg. DG BLDG Floor El. 742 Room, Area⁴ D105, WBN-WB-022

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
No sprinkler heads present. CO2 fire protection system in place.

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
Lube oil/ fuel line rigidly mounted to skid with flex connection between DG and Engine.

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 scaffolding in place and appears to be adequately supported.

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

Comments (Additional pages may be added as necessary)

TS-13-120E and 120B missing safety chain/wire. TS-13-120E could potentially impact panel/instrument of 2-PNL-82-A/1. (1 additional noted in walk-down of DG 2A-A). Observed missing anchor on pipe support near south end of room (tag not legible). Calculations for similar supports 17A586-1-69 and 17A586-1-92 confirm the as-built configuration.

The following equipment is included in the area encompassed by this Area Walk-By:

2-GEN-082-0002A-A

Evaluated by: Travis Hockenberry

Date: 7-31-2012

Mike Gordon

7-31-2012

Area Walk-By Checklist (AWC)

Location: Bldg. DG BLDG Floor El. 742 Room, Area⁴ D107, WBN-WB-023

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

No loose, missing, or broken anchorage observed on equipment.

2. Does anchorage of equipment in the area appear to be free of significant degraded conditions? Y N U N/A

All anchorage painted or galvanized. Some mild surface oxidation near bottom of air receiver tanks.

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

Cable tray, conduit, and HVAC/air duct rigidly supported.

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

Adequate clearance around equipment. Observed loose double nuts on trapeze support on north end of room.

⁴ If the room in which the SWEL item is located is very large (e.g., Turbine Hall), the area selected should be described. This selected area should be based on judgment, e.g., on the order of about 35 feet from the SWEL item.

Location: Bldg. DG BLDG Floor El. 742 Room, Area⁴ D107, WBN-WB-023

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
No sprinkler heads present. CO2 F.P. system in place.

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
Lube oil/ fuel line rigidly supported and utilizes flex connections.

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
Rolling scaffolding on north side of room; it appears to be restrained properly.

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

Comments (Additional pages may be added as necessary)

Observed (2) temperature sensors on south end and (3) on east end all missing safety chains. Light on south end of room is burnt out. One missing bolt on pipe support 17A586-1-92. Calculation 17A58601092 for support confirms as-built configuration.

The following equipment is included in the area encompassed by this Area Walk-By:

2-GEN-082-0002B-B

Evaluated by: Travis Hockenberry

Date: 7-31-2012

Mike Gordon

7-31-2012

Area Walk-By Checklist (AWC)Location: Bldg. AUX Floor El. 737 Room, Area⁴ WBN-WB-024**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
All anchorage is free of loose, missing, or broken.
2. Does anchorage of equipment in the area appear to be free of significant degraded conditions? Y N U N/A
No observed degradation or corrosion.
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
Cable tray, conduit and piping are rigidly supported. Cable tray does not appear overloaded.
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
Adequate clearances around equipment.

⁴ If the room in which the SWEL item is located is very large (e.g., Turbine Hall), the area selected should be described. This selected area should be based on judgment, e.g., on the order of about 35 feet from the SWEL item.

Location: Bldg. AUX Floor El. 737 Room, Area⁴ WBN-WB-024

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
Sprinkler heads have appropriate clearance and support.
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
No observed fuel source/combustibles.
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
Observed housekeeping/portable equipment issues noted in general comments. Comments do not adversely affect equipment in 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

Comments (Additional pages may be added as necessary)

- *Job box not restrained (near CCS booster pump 2A and B)*
- *Rolling cart not restrained*
- *50 gallon drums with loose chain around base*
- *Some bulbs burnt out in the area*

The following equipment is included in the area encompassed by this Area Walk-By:

*0-HTX-078-0031
0-HTX-078-0032
0-PMP-078-0009-B
0-PMP-078-0035-S
0-TS-030-0192B-A
1-FCV-067-0213-A
1-FCV-067-0215-B
1-PMP-070-0131-A*

Evaluated by: Travis Hockenberry

Date: 8-1-2012

Mike Gordon

8-1-2012

Area Walk-By Checklist (AWC)Location: Bldg. AUX Floor El. 782 Room, Area⁴ A901, WBN-WB-025**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
Observed anchor bolts on several pipe supports are not true—one was bent but still should function as intended.

2. Does anchorage of equipment in the area appear to be free of significant degraded conditions? Y N U N/A
ACU Units have minor surface corrosion.

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
All conduit, cable tray, and raceway are rigidly supported and adequately supported. Fill levels look acceptable. HVAC duct is rod hung but has good clearance around it.

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 present and lights are secured with safety cables.

⁴ If the room in which the SWEL item is located is very large (e.g., Turbine Hall), the area selected should be described. This selected area should be based on judgment, e.g., on the order of about 35 feet from the SWEL item.

Location: Bldg. AUX Floor El. 782 Room, Area⁴ A901, WBN-WB-025

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
All piping appears to be correctly supported. All sprinklers have 2" minimum clearance.

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
No combustible sources observed.

7. Does it appear that the area is free of potentially adverse seismic interactions associated with housekeeping practices, storage of portable equipment, and temporary installations (e.g., scaffolding, lead shielding)? Y N U N/A
Step ladder is not stowed per "TI-276"; it has a rope restraining it.

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
Cover plate removed and improperly stored on 1-ACU-30-CRB Control Rod Drive EQRM Air Conditioner 1B.

Comments (Additional pages may be added as necessary)

Several lights are out in the area. Observed monorail support structure with only (3) anchor bolts installed. There are only 3 holes in the base plate. By engineering judgment, the frame is structurally sound. Not a significant concern.

The following equipment is included in the area encompassed by this Area Walk-By:

- 1-GEN-085-A
- 1-GEN-085-B

Evaluated by: Travis Hockenberry Date: 8-2-2012

Mike Gordon 8-2-2012

Area Walk-By Checklist (AWC)Location: Bldg. AUX Floor El. 757 Room, Area⁴ A813, WBN-WB-026**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
All anchorage visible was in very good condition. All hardware was in place and tight. No significant cracking observed.
2. Does anchorage of equipment in the area appear to be free of significant degraded conditions? Y N U N/A
All surfaces are painted and free of corrosion. Some mild surface corrosion was observed on some surfaces where paint has chipped or worn away.
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
Cable tray and conduit are rigidly mounted. HVAC is a combination of rod hung and rigid. However, both are good.
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
There is good clearance between items in the area. Very congested area but still has adequate clearance.

⁴ If the room in which the SWEL item is located is very large (e.g., Turbine Hall), the area selected should be described. This selected area should be based on judgment, e.g., on the order of about 35 feet from the SWEL item.

Location: Bldg. AUX Floor El. 757 Room, Area⁴ A813, WBN-WB-026

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

No sprinklers in the area. All fire water piping is rigidly supported. All other piping has proper supports.

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

No combustible sources observed.

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

Observed (2) fire extinguisher bottles on portable cart that are not properly restrained per "TI-276". Two flammable storage cabinets with no restraint.continued under general comments.

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

Comments (Additional pages may be added as necessary)

Barrels not properly stored. TE stored under the stairs not chained to within "2". Poor housekeeping.

The following equipment is included in the area encompassed by this Area Walk-By:

*0-COMP-032-0060
0-COMP-032-0086
0-FCV-032-0082-A
1-TANK-070-0001*

Evaluated by: Travis Hockenberry

Date: 8-2-2012

Mike Gordon

8-2-2012

Area Walk-By Checklist (AWC)Location: Bldg. AUX Floor El. 772 Room, Area⁴ A854, WBN-WB-027**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

All anchorage is painted and well maintained. No visible cracks, missing hardware, loose, or damaged hardware.

2. Does anchorage of equipment in the area appear to be free of significant degraded conditions? Y N U N/A

All surfaces are painted and clean. No visible corrosion.

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

All conduit and HVAC duct are rigidly supported. No interaction or overload issues.

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

Lights have safety cables. All equipment has sufficient clearance.

⁴ If the room in which the SWEL item is located is very large (e.g., Turbine Hall), the area selected should be described. This selected area should be based on judgment, e.g., on the order of about 35 feet from the SWEL item.

Location: Bldg. AUX Floor El. 772 Room, Area⁴ A854, WBN-WB-027

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
Sprinkler heads are present and have adequate clearance. No other flooding concerns.

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
All batteries are secured and protected by racks. No other combustible source. Wood scaffolding is present, but would be protected by sprinklers in the area.

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
Observed wooden scaffolding in the room. Per procedure MMTP-102, wood scaffolding is evaluated by site SE. Scaffolding appears to be adequately restrained.

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

Comments (Additional pages may be added as necessary)

Housekeeping in this area is very good.

The following equipment is included in the area encompassed by this Area Walk-By:

0-BAT-236-0001-D

Evaluated by: Travis Hockenberry

Date: 8-2-2012

Mike Gordon

8-2-2012

Area Walk-By Checklist (AWC)

Location: Bldg. AUX Floor El. 772 Room, Area⁴ A853, WBN-WB-028

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

All anchorage is painted and well maintained. No visible cracks, missing hardware, loose, or damaged hardware.

2. Does anchorage of equipment in the area appear to be free of significant degraded conditions? Y N U N/A

All surfaces are painted and clean. No visible corrosion.

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

All conduit and HVAC duct are rigidly supported. No interaction or overload issues.

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

Lights have safety cables. All equipment has sufficient clearance.

⁴ If the room in which the SWEL item is located is very large (e.g., Turbine Hall), the area selected should be described. This selected area should be based on judgment, e.g., on the order of about 35 feet from the SWEL item.

Location: Bldg. AUX Floor El. 772 Room, Area⁴ A853, WBN-WB-028

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
Sprinkler heads are present and have adequate clearance. No other flooding concerns.

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
All batteries are secured and protected by racks. No other combustible source.

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
Housekeeping in this area is excellent, no temporary equipment observed.

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

Comments (Additional pages may be added as necessary)

Housekeeping is excellent

The following equipment is included in the area encompassed by this Area Walk-By:

0-BAT-236-0002-E

Evaluated by: Travis Hockenberry Date: 8-2-2012

Mike Gordon 8-2-2012

Area Walk-By Checklist (AWC)

Location: Bldg. AUX Floor El. 772 Room, Area⁴ A864, WBN-WB-029

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

All anchorage visible is painted and well maintained. No visible cracks, missing hardware, loose, or damaged hardware.

2. Does anchorage of equipment in the area appear to be free of significant degraded conditions? Y N U N/A

All surfaces are painted and clean. No visible corrosion.

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

All conduit and HVAC duct are rigidly supported. No interaction or overload issues.

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

Lights have safety cables. All equipment has sufficient clearance.

⁴ If the room in which the SWEL item is located is very large (e.g., Turbine Hall), the area selected should be described. This selected area should be based on judgment, e.g., on the order of about 35 feet from the SWEL item.

Location: Bldg. AUX Floor El. 772 Room, Area⁴ A864, WBN-WB-029

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
Sprinkler heads are present and have adequate clearance. No other flooding concerns.

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
All batteries are secured and protected by racks. No other combustible source.

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
Housekeeping in this area is excellent, no temporary equipment observed.

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

Comments (Additional pages may be added as necessary)

Housekeeping is excellent.

The following equipment is included in the area encompassed by this Area Walk-By:

0-BAT-236-0003-F

Evaluated by: Travis Hockenberry Date: 8-2-2012

Mike Gordon 8-2-2012

Area Walk-By Checklist (AWC)

Location: Bldg. AUX Floor El. 772 Room, Area⁴ A851, WBN-WB-030

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

All MCCs welded to embed, new charger with bolts all in good condition.

2. Does anchorage of equipment in the area appear to be free of significant degraded conditions? Y N U N/A

All welds painted with some minor chipping, bolts are galvanized.

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

Cable tray is rigidly supported and does not appear to be overfilled. HVAC duct is rigidly supported and in good condition.

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

Cable tray support cap plate in close proximity to conduit (1PLC-803A) collar (top of MCC-213-A2, Panel 13). Upon further review with FRC it was deemed to have adequate clearance.

⁴ If the room in which the SWEL item is located is very large (e.g., Turbine Hall), the area selected should be described. This selected area should be based on judgment, e.g., on the order of about 35 feet from the SWEL item.

Location: Bldg. AUX Floor El. 772 Room, Area⁴ A851, WBN-WB-030

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
Sprinkler head touching conduit (PLC-1709), behind panel 10 of 1-MCC-213-A1. All other sprinkler heads have adequate clearance.

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
No combustibles observed in the area.

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 scaffolding in area appears to be restrained properly. Rolling scaffold (113652196) tied-off with chain in (2) 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

Comments (Additional pages may be added as necessary)

General housekeeping is reasonable. Some work-in-progress, but well maintained.

The following equipment is included in the area encompassed by this Area Walk-By:

1-MCC-213-A001-A

Evaluated by: Travis Hockenberry Date: 8-3-2012

Mike Gordon 8-3-2012

Area Walk-By Checklist (AWC)

Location: Bldg. DG BLDG Floor El. 760 Room, Area⁴ D204, WBN-WB-031

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

All cabinets welded to embed plates and in good condition.

2. Does anchorage of equipment in the area appear to be free of significant degraded conditions? Y N U N/A

All welds painted with minor chipping. No observed corrosion.

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

Cable tray, conduit, and piping is rigidly supported. Cable tray does not appear to be overloaded.

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

Adequate clearance maintained around all equipment.

⁴ If the room in which the SWEL item is located is very large (e.g., Turbine Hall), the area selected should be described. This selected area should be based on judgment, e.g., on the order of about 35 feet from the SWEL item.

Location: Bldg. DG BLDG Floor El. 760 Room, Area⁴ D204, WBN-WB-031

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
No flood source. CO2 fire protection system utilized.

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
No fuel source observed in the area. No stored combustibles.

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 temporary equipment or installations.

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

Comments (Additional pages may be added as necessary)

General housekeeping is good. TS-13-132A (above 1-MCC-215-A002) does not have a safety chain.

The following equipment is included in the area encompassed by this Area Walk-By:

1-MCC-215-A001-A

Evaluated by: Travis Hockenberry

Date: 8-6-2012

Mike Gordon

8-6-2012

Area Walk-By Checklist (AWC)Location: Bldg. AUX Floor El. 786 Room, Area⁴ A 924, WBN-WB-032**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
Sheared bolt on 1-COND-31-289.

2. Does anchorage of equipment in the area appear to be free of significant degraded conditions? Y N U N/A
Significant corrosion on 1-ACU-31-475 and 1-COND-31-289. After further review, deemed to be moderate corrosion.

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
Conduit and ducting rigidly supported. HVAC has flexible connections.

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
Overhead lighting has safety chains. Adequate clearance around equipment.

⁴ If the room in which the SWEL item is located is very large (e.g., Turbine Hall), the area selected should be described. This selected area should be based on judgment, e.g., on the order of about 35 feet from the SWEL item.

Location: Bldg. AUX Floor El. 786 Room, Area⁴ A 924, WBN-WB-032

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
Coolant lines present but adequately supported with proper drainage.

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
No combustibles present

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 temporary equipment or installations.

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

Comments (Additional pages may be added as necessary)

Observed (5) Lights out in room. Fairly moist/wet environment.

The following equipment is included in the area encompassed by this Area Walk-By:

1-FSV-031-0447-B

Evaluated by: Travis Hockenberry

Date: 8-6-2012

Mike Gordon

8-6-2012

Area Walk-By Checklist (AWC)

Location: Bldg. AUX Floor El. 692 Room, Area⁴ A310, WBN-WB-033

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

No loose, missing, or broken.

2. Does anchorage of equipment in the area appear to be free of significant degraded conditions? Y N U N/A

All hardware is painted and in good condition. No observed degradation.

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

Conduit rigidly supported and in good condition.

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

Adequate clearance maintained around equipment.

⁴ If the room in which the SWEL item is located is very large (e.g., Turbine Hall), the area selected should be described. This selected area should be based on judgment, e.g., on the order of about 35 feet from the SWEL item.

Location: Bldg. AUX Floor El. 692 Room, Area⁴ A310, WBN-WB-033

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
Sprinkler heads present, but no observed clearance issues.

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
No combustibles in area.

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 scaffolding present, but appears to have adequate clearance and proper restraint.

8. Have you looked for and found no other seismic conditions that could adversely affect the safety functions of the equipment in the area? Y N U
Removable masonry black wall present. Restrained with steel straps and anchored to concrete wall. In good condition.

Comments (Additional pages may be added as necessary)

General housekeeping is good.

The following equipment is included in the area encompassed by this Area Walk-By:

1-FCV-062-0093

Evaluated by: Travis Hockenberry

Date: 8-6-2012

Mike Gordon

8-6-2012

Area Walk-By Checklist (AWC)

Location: Bldg. AUX Floor El. 692 Room, Area⁴ A307, WBN-WB-034

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

No observed loose, missing, or broken anchorage.

2. Does anchorage of equipment in the area appear to be free of significant degraded conditions? Y N U N/A

No observed degradation or corrosion.

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 HVAC rigidly supported and free of potentially adverse seismic conditions.

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

Adequate clearance around equipment. Overhead lighting has safety chain/wire.

⁴ If the room in which the SWEL item is located is very large (e.g., Turbine Hall), the area selected should be described. This selected area should be based on judgment, e.g., on the order of about 35 feet from the SWEL item.

Location: Bldg. AUX Floor El. 692 Room, Area⁴ A307, WBN-WB-034

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
Sprinkler heads have adequate clearance and piping appears to be adequately supported.

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
No observed combustibles in the area.

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 scaffolding present, but appears to be properly restrained with adequate clearance. Work-in-progress equipment in area with tag and housekeeping barrier tape. Rolling scaffolding chained in two places.

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

Comments (Additional pages may be added as necessary)

Fall harness stored under pipe chase cooler 1A-A (1-CLR-30-201). Loose unistrut supports on floor without work-in-progress tag (no interaction concern). Located on north side of pipe chase cooler. Deemed work-in-progress.

The following equipment is included in the area encompassed by this Area Walk-By:

1-LCV-062-0135-A
1-LCV-062-0136-B

Evaluated by: Travis Hockenberry

Date: 8-6-2012

Mike Gordon

8-6-2012

Area Walk-By Checklist (AWC)

Location: Bldg. TURB Floor El. 708 Room, Area⁴ T7-K, WBN-WB-035

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
All equipment anchorage appears to be free of potentially adverse seismic conditions.

2. Does anchorage of equipment in the area appear to be free of significant degraded conditions? Y N U N/A
No significant degradation. Most surfaces painted with minor chipping and mild surface corrosion.

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
Cable tray rigidly supported and does not appear to be overloaded. Conduit rigidly supported as well. Piping adequately supported.

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
Adequate clearance maintained around equipment and piping.

⁴ If the room in which the SWEL item is located is very large (e.g., Turbine Hall), the area selected should be described. This selected area should be based on judgment, e.g., on the order of about 35 feet from the SWEL item.

Location: Bldg. TURB Floor El. 708 Room, Area⁴ T7-K, WBN-WB-035

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
No sprinkler heads present. No other concerns.

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
Oily waste container present and stored/restrained. No other combustibles observed.

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
Exhaust fans in area with wheel locks engaged. Scaffolding staging area well maintained/stored. See general comments.

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

Comments (Additional pages may be added as necessary)

General housekeeping is good. Some temporary scaffolding, but appears to have adequate restraint and clearance. Job box not restrained (chain present but not secure). Rolling conduit storage with (1) wheel lock (mechanical). Several 50 gal. drums, trash can, and oil container not restrained. All deemed to be work-in-progress. Not a significant concern. Observed bolt missing on 0-HTX-32-27 A/B. Determined to be non-safety related equipment and therefore is not a potential adverse seismic condition.

The following equipment is included in the area encompassed by this Area Walk-By:

0-COMP-032-0026

Evaluated by: Travis Hockenberry Date: 8-7-2012

Mike Gordon 8-7-2012

Area Walk-By Checklist (AWC)Location: Bldg. AUX Floor El. 737 Room, Area⁴ A13-R, WBN-WB-036**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
All visible anchorage appears to be free of any adverse seismic conditions. No loose, missing, or broken hardware.

2. Does anchorage of equipment in the area appear to be free of significant degraded conditions? Y N U N/A
No significant degradation. Some mild surface corrosion except on 0-PMP-31-49/1 (moderate to significant).

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
Cable tray and conduit rigidly supported and in good condition. Cable tray is not overloaded.

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
Adequate clearance around equipment. Piping properly supported.

⁴ If the room in which the SWEL item is located is very large (e.g., Turbine Hall), the area selected should be described. This selected area should be based on judgment, e.g., on the order of about 35 feet from the SWEL item.

Location: Bldg. AUX Floor El. 737 Room, Area⁴ A13-R, WBN-WB-036

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
Adequate clearance around sprinkler heads.

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
No observed combustibles/fuel source.

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
Unit 2 work-in-progress. Appears to be properly tagged and 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

Comments (Additional pages may be added as necessary)

Unistrut strap on top of tube steel frame (7' southwest of A15-R).

The following equipment is included in the area encompassed by this Area Walk-By:

0-CHR-031-0049/2-B

Evaluated by: Travis Hockenberry

Date: 8-7-2012

Mike Gordon

8-7-2012

Area Walk-By Checklist (AWC)

Location: Bldg. CNTL Floor El. 692 Room, Area⁴ C110, WBN-WB-037

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

No observed loose, missing, or broken hardware.

2. Does anchorage of equipment in the area appear to be free of significant degraded conditions? Y N U N/A

No significant degradation. Some mild surface corrosion. Most hardware is painted and in good condition.

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

Conduit and large bore piping is rigidly supported. All other piping is adequately supported.

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

Adequate clearance around equipment. Chillers covered by tube steel frame and sheet metal. Lights have safety chain/wire.

⁴ If the room in which the SWEL item is located is very large (e.g., Turbine Hall), the area selected should be described. This selected area should be based on judgment, e.g., on the order of about 35 feet from the SWEL item.

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
Adequate clearance around sprinkler heads.

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
No observed combustibles/fuel source.

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
Motor stored on cart with mechanical wheel locks. Work-in-progress staged equipment/panels not properly restrained (no interaction concern, in process of being removed). Service cart with wire restraint and wheel stop (planned removal date expired).

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

Comments (Additional pages may be added as necessary)

General housekeeping is good. Trashcan not restrained (housekeeping).

The following equipment is included in the area encompassed by this Area Walk-By:

0-CHR-031-0128

0-CHR-031-0129

Evaluated by: Travis Hockenberry

Date: 8-7-2012

Mike Gordon

8-7-2012

Area Walk-By Checklist (AWC)

Location: Bldg. AUX Floor El. 757 Room, Area⁴ A824, WBN-WB-038

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
6.9KV cabinets have all (6) anchors per panel. Relay panels are welded to embed plates.

2. Does anchorage of equipment in the area appear to be free of significant degraded conditions? Y N U N/A
No observed degradation or corrosion. All visible anchorage is in good condition.

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
Cable tray is rigidly supported and does not appear to be overloaded. Ducting is rigidly supported as well.

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
Overhead lighting has safety chains/wire. Equipment has adequate clearances.

⁴ If the room in which the SWEL item is located is very large (e.g., Turbine Hall), the area selected should be described. This selected area should be based on judgment, e.g., on the order of about 35 feet from the SWEL item.

Location: Bldg. AUX Floor El. 757 Room, Area⁴ A824, WBN-WB-038

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
Adequate clearance around sprinkler heads. Piping is adequately supported.

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
No observed combustibles/fuel source.

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 scaffolding in place and appears to be restrained properly. Portable job boxes and ladders restrained. Rolling scaffolding in front of 2-BD-211-B with wheel locks and (2) chains.

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
No other observed potential adverse seismic conditions.

Comments (Additional pages may be added as necessary)

General housekeeping is good. Work-in-progress well maintained/stored and labeled.

The following equipment is included in the area encompassed by this Area Walk-By:

1-BD-211-B-B

2-BD-211-B-B

Evaluated by: Travis Hockenberry

Date: 8-8-2012

Mike Gordon

8-8-2012

Area Walk-By Checklist (AWC)Location: Bldg. AUX Floor El. 757 Room, Area⁴ A803, WBN-WB-039**Instructions for Completing Checklist**

This checklist may be used to document the results of the Area Walk-By near one or more SWEL items. The space below each of the following questions may be used to record the results of judgments and findings. Additional space is provided at the end of this checklist for documenting other comments.

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

-
1. Does anchorage of equipment in the area appear to be free of potentially adverse seismic conditions (if visible without necessarily opening cabinets)? Y N U N/A
Cabinets/panels welded to embed plates. Switches and dist. panels bolted to wall. All visible anchorage appears to be in place.
2. Does anchorage of equipment in the area appear to be free of significant degraded conditions? Y N U N/A
Welds are painted, no observed damage or corrosion.
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
Cable tray and conduit is rigidly supported. Cable tray does not appear to be overloaded.
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
Adequate clearance maintained around all equipment. Observed scaffolding within 1/4" of cabinet (0-BD-236-2/4). After further review, clearance was deemed to be acceptable.

⁴ If the room in which the SWEL item is located is very large (e.g., Turbine Hall), the area selected should be described. This selected area should be based on judgment, e.g., on the order of about 35 feet from the SWEL item.

Location: Bldg. AUX Floor El. 757 Room, Area⁴ A803, WBN-WB-039

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
No sprinkler head clearance issues observed.

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
No combustibles observed in area.

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 scaffolding in place and appears to be restrained properly. See question 4.

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

Comments (Additional pages may be added as necessary)

General housekeeping is good.

The following equipment is included in the area encompassed by this Area Walk-By:

1-DXF-237-B

Evaluated by: Travis Hockenberry Date: 8-8-2012

Mike Gordon 8-8-2012

Area Walk-By Checklist (AWC)Location: Bldg. AUX Floor El. 757 Room, Area⁴ 480V Board Rm 1B, WBN-WB-040**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
All MCCs and Shutdown BDs welded to embed plates. At least 50-75% of bolts observed on front of Shutdown BD anchorage.

2. Does anchorage of equipment in the area appear to be free of significant degraded conditions? Y N U N/A
Welds are painted, observed bolts are free of corrosion.

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 and cable tray is rigidly supported and in good condition. Cable tray does not appear overloaded. Conduit rigidly supported as well.

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
Overhead lighting has safety chain/wire. Equipment has adequate clearance.

⁴ If the room in which the SWEL item is located is very large (e.g., Turbine Hall), the area selected should be described. This selected area should be based on judgment, e.g., on the order of about 35 feet from the SWEL item.

Location: Bldg. AUX Floor El. 757 Room, Area⁴ 480V Board Rm 1B, WBN-WB-040

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
No observed clearance issues with sprinkler heads. Fire protection piping is rigidly supported.

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
No observed combustibles.

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 scaffolding in place and appears to have adequate clearance and restraint.

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

Comments (Additional pages may be added as necessary)

General housekeeping is good. Observed cable transition from conduit through floor without flex conduit (north end of shutdown boards). After further review, deemed to not have any seismic related significance or concern.

The following equipment is included in the area encompassed by this Area Walk-By:

1-BD-212-B001-B
1-BD-212-B002-B

Evaluated by: Travis Hockenberry Date: 8-9-2012

Mike Gordon 8-9-2012

Area Walk-By Checklist (AWC)

Location: Bldg. AUX Floor El. 757 Room, Area⁴ A809, WBN-WB-041

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

Observed anchorage is free of bent, broken, or missing hardware.

2. Does anchorage of equipment in the area appear to be free of significant degraded conditions? Y N U N/A

All anchorage is painted with minor chipping. No observed corrosion.

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

Cable tray, conduit, and ducting is rigidly supported. All in good condition, cable tray not overloaded.

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 observed interaction concerns. Adequate clearance maintained around air handlers and piping.

⁴ If the room in which the SWEL item is located is very large (e.g., Turbine Hall), the area selected should be described. This selected area should be based on judgment, e.g., on the order of about 35 feet from the SWEL item.

Location: Bldg. AUX Floor El. 757 Room, Area⁴ A809, WBN-WB-041

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
Adequate sprinkler head clearance. Fire protection piping is rigidly supported.

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
No observed combustibles.

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 observed temporary equipment or installations.

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

Comments (Additional pages may be added as necessary)

General housekeeping is good.

The following equipment is included in the area encompassed by this Area Walk-By:

0-AHU-031-0045

Evaluated by: Travis Hockenberry

Date: 8-9-2012

Mike Gordon

8-9-2012

Area Walk-By Checklist (AWC)

Location: Bldg. AUX Floor El. 692 Room, Area⁴ A306, WBN-WB-042

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

No observed missing, loose, or damaged hardware.

2. Does anchorage of equipment in the area appear to be free of significant degraded conditions? Y N U N/A

Most visible anchorage is painted or galvanized. No observed degradation or corrosion.

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 piping is rigidly supported.

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

Observed FCV with 1" clearance to pipe support steel. All other equipment appears to have adequate clearance. After further review with FRC, the valve was deemed to have adequate clearance.

⁴ If the room in which the SWEL item is located is very large (e.g., Turbine Hall), the area selected should be described. This selected area should be based on judgment, e.g., on the order of about 35 feet from the SWEL item.

Location: Bldg. AUX Floor El. 692 Room, Area⁴ A306, WBN-WB-042

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
Adequate clearance around sprinkler heads.

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
No observed combustibles/fuel source.

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 temporary equipment or scaffolding.

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

Comments (Additional pages may be added as necessary)

General housekeeping is good.

The following equipment is included in the area encompassed by this Area Walk-By:

1-PMP-003-0001A-S

1-TS-001-0017A-A

Evaluated by: Travis Hockenberry Date: 8-9-2012

Mike Gordon 8-9-2012

Area Walk-By Checklist (AWC)Location: Bldg. AUX Floor El. 782 Room, Area⁴ A902, WBN-WB-043**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
Observed anchorage is free of bent, broken, or missing hardware.

2. Does anchorage of equipment in the area appear to be free of significant degraded conditions? Y N U N/A
All anchorage is painted with minor chipping. No observed corrosion.

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
Cable tray, conduit, and piping is rigidly supported. All in good condition, cable tray not overloaded.

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 observed interaction concerns. Adequate clearance maintained around transformers and panels.

⁴ If the room in which the SWEL item is located is very large (e.g., Turbine Hall), the area selected should be described. This selected area should be based on judgment, e.g., on the order of about 35 feet from the SWEL item.

Location: Bldg. AUX Floor El. 782 Room, Area⁴ A902, WBN-WB-043

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
Adequate sprinkler head clearance. Fire protection piping is rigidly supported.

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 observed temporary equipment or installations.

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

Comments (Additional pages may be added as necessary)

General housekeeping is good.

The following equipment is included in the area encompassed by this Area Walk-By:

0-OXF-068-0341A-A

0-OXF-068-0341F

Evaluated by: Travis Hockenberry

Date: 9-17-2012

Mike Gordon

9-17-2012

Area Walk-By Checklist (AWC)

Location: Bldg. N/A Floor El. 729 Room, Area⁴ Yard, WBN-WB-044

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
Adjacent Tank is anchored to concrete foundation. No observed missing, loose, or damaged anchors.

2. Does anchorage of equipment in the area appear to be free of significant degraded conditions? Y N U N/A
Anchor assembly is painted. Some minor surface corrosion observed. (outside/wet environment)

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
No HVAC or cable/conduit raceways.

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 spatial interaction concerns.

⁴ If the room in which the SWEL item is located is very large (e.g., Turbine Hall), the area selected should be described. This selected area should be based on judgment, e.g., on the order of about 35 feet from the SWEL item.

Location: Bldg. N/A Floor El. 729 Room, Area⁴ Yard, WBN-WB-044

5. Does it appear that the area is free of potentially adverse seismic interactions that could cause flooding or spray in the area? Y N U N/A

6. Does it appear that the area is free of potentially adverse seismic interactions that could cause a fire in the area? Y N U N/A

7. Does it appear that the area is free of potentially adverse seismic interactions associated with housekeeping practices, storage of portable equipment, and temporary installations (e.g., scaffolding, lead shielding)? Y N U N/A

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

Comments (Additional pages may be added as necessary)

Construction of new tank foundation in area. No observed concerns.

The following equipment is included in the area encompassed by this Area Walk-By:

1-TANK-063-0046

Evaluated by: Travis Hockenberry

Date: 8-10-2012

Mike Gordon

8-10-2012

Area Walk-By Checklist (AWC)

Location: Bldg. RB Floor El. 708 Room, Area⁴ Lower Containment, WBN-WB-045

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

Observed anchorage is free of bent, broken, or missing hardware.

2. Does anchorage of equipment in the area appear to be free of significant degraded conditions? Y N U N/A

All anchorage is painted with minor chipping. No observed corrosion.

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

No observed interaction concerns. Adequate clearance maintained around equipment in area.

⁴ If the room in which the SWEL item is located is very large (e.g., Turbine Hall), the area selected should be described. This selected area should be based on judgment, e.g., on the order of about 35 feet from the SWEL item.

Location: Bldg. RB Floor El. 708 Room, Area⁴ Lower Containment, WBN-WB-045

5. Does it appear that the area is free of potentially adverse seismic interactions that could cause flooding or spray in the area? Y N U N/A

6. Does it appear that the area is free of potentially adverse seismic interactions that could cause a fire in the area? Y N U N/A
No observed combustibles.

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
Observed temporary scaffolding and shielding for the refueling outage activities. No areas of concern.

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

Comments (Additional pages may be added as necessary)

General housekeeping is good.

The following equipment is included in the area encompassed by this Area Walk-By:

1-TANK-068-PRT

Evaluated by: Travis Hockenberry

Date: 9-17-2012

Mike Gordon

9-17-2012

Area Walk-By Checklist (AWC)Location: Bldg. CNTL Floor El. 755 Room, Area⁴ C401, WBN-WB-046**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
No observed loose, missing, or broken anchorage. Rad monitors, fans and panels/racks all in good condition.
2. Does anchorage of equipment in the area appear to be free of significant degraded conditions? Y N U N/A
Majority of anchorage is painted with minor chipping. Some minor corrosion present on anchorage for AHUs, but not a concern.
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
Conduit and HVAC rigidly supported and in good condition. Overhead piping is rigidly supported as well.
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. Overhead lighting has safety chain/wire.

⁴ If the room in which the SWEL item is located is very large (e.g., Turbine Hall), the area selected should be described. This selected area should be based on judgment, e.g., on the order of about 35 feet from the SWEL item.

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
Observed sprinkler head in close proximity to HVAC duct insulation. It does not appear to be touching. Insulation will allow for some movement/flexibility. Piping and HVAC duct is supported nearby.

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
No observed combustibles/fuel source.

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 temporary equipment or installations.

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

Comments (Additional pages may be added as necessary)

General housekeeping is good/reasonable.

The following equipment is included in the area encompassed by this Area Walk-By:

0-AHU-031-0012-A

0-RE-090-0205-A

Evaluated by: Travis Hockenberry

Date: 8-10-2012

Mike Gordon

8-10-2012

Area Walk-By Checklist (AWC)

Location: Bldg. AUX Floor El. 772 Room, Area⁴ A 857, WBN-WB-047

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

No observed loose, missing or broken hardware.

2. Does anchorage of equipment in the area appear to be free of significant degraded conditions? Y N U N/A

No observed degradation other than minor/mild surface corrosion.

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 duct rigidly supported. Cable tray and conduit are rigidly supported. Cable tray does not appear to be overloaded.

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

Adequate clearance maintained around equipment.

⁴ If the room in which the SWEL item is located is very large (e.g., Turbine Hall), the area selected should be described. This selected area should be based on judgment, e.g., on the order of about 35 feet from the SWEL item.

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
Sprinkler heads have adequate clearance.

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
No observed combustibles in the area.

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
Minor temporary scaffolding, but appears to have adequate clearance restraint.

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

Comments (Additional pages may be added as necessary)

General housekeeping is good. Fire protection pipe (1-1/2" dia.) within 1/2" of ACU-31-461. After review of WB-DC-20-32, potential spatial interaction was deemed to be credible, but not significant (not near threaded joint).

The following equipment is included in the area encompassed by this Area Walk-By:

- 1-AHU-031-0461-A*
- 1-COND-031-0290-A*

Evaluated by: Travis Hockenberry

Date: 8-13-2012

Mike Gordon

8-13-2012

Area Walk-By Checklist (AWC)

Location: Bldg. CNTL Floor El. 708 Room, Area⁴ C201, WBN-WB-048

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
All visible anchorage appears to be free of loose, missing or broken hardware. Majority of panels are welded to embed plates.

2. Does anchorage of equipment in the area appear to be free of significant degraded conditions? Y N U N/A
All visible welds are painted and in good condition.

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
Cable tray is rigidly supported and does not appear overloaded. Ducting is also rigidly supported and in good condition.

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
Adequate clearance maintained between rows of panels. Overhead lighting has safety chain/wire.

⁴ If the room in which the SWEL item is located is very large (e.g., Turbine Hall), the area selected should be described. This selected area should be based on judgment, e.g., on the order of about 35 feet from the SWEL item.

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
No flood source/concern. CO2 fire suppression system.

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
No observed combustibles/fuel source in the area.

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 scaffolding is present but appears to be restrained properly.

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

Comments (Additional pages may be added as necessary)

General housekeeping is good. Folding chairs and fan chained, but would not prevent items from falling. Does not appear that this is an adverse seismic condition. Deemed work-in-progress.

The following equipment is included in the area encompassed by this Area Walk-By:

1-PNL-275-R127-A

1-PNL-275-R143-A

Evaluated by: Travis Hockenberry

Date: 8-13-2012

Mike Gordon

8-13-2012

Area Walk-By Checklist (AWC)

Location: Bldg. RB Floor El. 716 Room, Area⁴ Lower Containment, WBN-WB-049

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

Observed anchorage is free of bent, broken, or missing hardware.

2. Does anchorage of equipment in the area appear to be free of significant degraded conditions? Y N U N/A

All anchorage is painted or galvanized. No observed corrosion.

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

All conduit and piping rigidly supported and in good condition.

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

Very congested area, but no observed interaction concerns.

⁴ If the room in which the SWEL item is located is very large (e.g., Turbine Hall), the area selected should be described. This selected area should be based on judgment, e.g., on the order of about 35 feet from the SWEL item.

Location: Bldg. RB Floor El. 716 Room, Area⁴ Lower Containment, WBN-WB-049

5. Does it appear that the area is free of potentially adverse seismic interactions that could cause flooding or spray in the area? Y N U N/A

6. Does it appear that the area is free of potentially adverse seismic interactions that could cause a fire in the area? Y N U N/A
No observed combustibles.

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
Some minor temporary scaffolding and ladders present in 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

Comments (Additional pages may be added as necessary)

General housekeeping is good.

The following equipment is included in the area encompassed by this Area Walk-By:

1-ACUM-063-0003

1-FAN-030-0038-A

Evaluated by: Travis Hockenberry

Date: 9-17-2012

Mike Gordon

9-17-2012

Appendix G: Peer Review Report



NTTF 2.3/WBN-01
November 12, 2012

PEER REVIEW REPORT Watts Bar Nuclear Plant Unit 1 Near-Term Task Force 2.3 Seismic Walkdowns

A peer review of the Tennessee Valley Authority (TVA) Watts Bar Nuclear Plant - Unit 1 (WBN1) 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 WBN1 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 WBN1 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 WBN1 Seismic Response Report. All of the walkdown team members successfully completed the EPRI developed training on NTTF Recommendation 2.3 - Plant Seismic Walkdowns. 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 WBN1. 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 WBN1.

Examples of the additional plant-specific training material provided for the team members include the following:

- Description of WBN1 seismic design basis including application of Set B and B+C seismic design response spectra for evaluation of existing plant features and new seismic design activity, respectively.
- Overview of WBN1 seismic design criteria for structures, systems, and components and discussion of how to locate calculation packages documenting acceptance.

- Nuclear Performance Plan and Civil/Seismic Corrective Action Plans (CAPs) implemented prior to WBN1 start-up. This included a summary of the following major programs:
 - Seismic Analysis Program
 - Hanger Analysis and Update Program (HAAUP)
 - Equipment Seismic Qualification (ESQ)
 - Structural Steel Attachment loads, Thermal Effects, SCV Movements
 - Seismic Verification of Conduit, Cable Trays, HVAC Ducting, & Supports
 - Concrete/Masonry Wall /Embedded Plates Issues
- Integrated Interaction Program (IIP)
 - Verification of non-safety-related Seismic Category I(L) plant features, equipment items, conduit, and HVAC duct
 - Seismic verification of Seismic category I(L) piping under the II/I spray program
 - Suspended systems proximity clearance verifications
 - Safety-related equipment seismic proximity reviews
 - Verification of Shakespace crossings
 - SCV proximity review
 - Commodity clearance procedures in place (MAI 2.3)
- Seismic Individual Plant Examination for External Events (IPEEE)
 - Review Level Earthquake (RLE) for seismic IPEEE implementation at WBN1
 - Scope of review and Safe Shutdown Equipment List (SSEL)
 - Summary of WBN1 seismic IPEEE walkdown results
 - Presentation of results and governing High Confidence Low Probability of Failure (HCLPF) capacities (minimum of 0.36g)
 - Ongoing enhanced seismic IPEEE efforts to increase plant HCLPF capacity

SELECTION OF ITEMS ON THE SEISMIC WALKDOWN EQUIPMENT LIST (SWEL)

The completed SWEL as described in Section 4 of the WBN1 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 WBN1 IPEEE review was performed using the EPRI margins methodology and that success path based SSEL was used as a starting point for SWEL 1. No seismic PRA has been performed for WBN1 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 WBN1 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:

- In the preliminary SWEL, the safety functions were not listed for each item of equipment. This made it very difficult to ensure that all five safety functions were adequately represented. The team updated the list to clearly include the respective safety functions.
- Based on review of the update list from the above comment, it was discovered that the reactor pressure control safety function was not adequately represented on the preliminary SWEL. It was recommended that the team add additional equipment items representative of the reactor coolant pressure control safety function. Items were added as indicated in the final SWEL.
- In order to include representative equipment items for all of the 21 classes of equipment listed in Table B-1 of the EPRI Report 1025286, items of equipment were added to the SWEL that were not part of the IPEEE review. It was noted that this was unnecessary yet conservative, so the items remained on the SWEL.
- In the preliminary SWEL there was confusion regarding the equipment class definition of distribution panels, and low and medium voltage switchgears. This is corrected in the final SWEL, such that the 120V vital instrument power board is in the distribution panel equipment class, and the 480V shutdown boards are in the low voltage equipment class.
- It is noted that the final SWEL adequately includes equipment in each major building structure and encompasses mild to more severe environments.
- It is noted that there were no outliers in the WBN1 seismic IPEEE review, so there were no items of equipment that had to be added to the SWEL for confirmation of seismic IPEEE upgrades.

SEISMIC EQUIPMENT WALKDOWNS AND AREA WALKBYS

The peer review team spent considerable time interfacing with the walkdown team members during the WBN1 seismic equipment walkdowns and area walkbys. This included responding to questions regarding the scope and content of the reviews. This also included in-plant observations of the teams during the reviews as well as independent in-plant reviews of individual equipment components. Walkdown observations and results were reviewed and discussed on a weekly basis with the walkdown team members. Particular emphasis was given to any items preliminarily identified as potential adverse seismic conditions (see discussion in the next section). In the end, the peer review addressed over 50% of the completed walkdown documentation forms.

It is noted that the in-plant activity and over 50% documentation review is above and beyond the peer review requirements as defined in EPRI Report 1025286. As a result of this effort, we are highly confident that the teams conducted the reviews in a thorough and competent manner, and that the reviews are fully in compliance with the intent of the NRC 50.54 (f) letter.

Examples of seismic issues discussed and resolved during the course of the peer review process for the WBN1 equipment seismic walkdowns and area walkbys include the following:

- On the RHR Pump Room Cooler 1B-B, it was confirmed that the anchorage had only minor surface rust that would not significantly impact capacity. Also, it was concluded that proximity interaction with a nearby small bore pipe was credible but not significant.

- On the ERCW Strainer 1A-1, minor surface rust was judged to be acceptable, and proximity interaction due to vertical contact with a scaffolding pole was determined to not be significant due to massive size of strainer.
- On the ERCW Pump A-A, the walkdown team observed that overhead scaffolding was in close proximity to a level indicator, but it was determined that the scaffolding is rigidly restrained and that the impact was not credible. Also, close proximity of an electrical conduit and a pre-lube throttle was deemed to be credible, but not significant, so accepted as-is.
- A civil/structural feature was observed to be in close proximity (3/4" to 1") to 1-FCV-062-0093. Based on closer review, the clearance was found to be sufficient and the interaction was not credible.
- Minor cracking of concrete was observed by the walkdown team at DG 1A-A Room Exhaust Fan 1A anchor bolts. The cracking in proximity to the anchors was determined to be less than 0.5mm and judged to not be a seismic concern.
- The corrosion noted by the walkdown on anchor bolts for the 480V BD Room 1A Supply AHU 1A-A was determined to be only minor surface rust and accepted. In addition, the close proximity of a cable tray support member to the AHU was determined to have sufficient clearance and was determined to be non-credible.
- The walkdown team observed a potential seismic interaction flexibility concern at Electrical Board Room Chiller B-B. A 2" pipe penetrating the permanent hood continued to a rigid attachment to a 1" pipe. The screening tools in WB-DC-20-32 were implemented and the flexibility was determined to be adequate.
- Scaffolding was observed by the walkdown team to be in close proximity to the 125V Vital Battery Board I Panel 1. Based upon further review, the 3/4" clearance was determined to be sufficient to preclude the interaction.
- On the 125V DC Transfer Switch Select Chargers 7S/9S, the walkdown team observed that two conduit interfaces had hard connections and questioned whether flex conduit should have been used. After further consideration including implementation of screening tools from WB-DC-20-32, the configuration was determined to be acceptable.
- Minor hairline cracking at the grounding bus connection bolt for 125V Diesel Generator Battery 1B-B was identified by the walkdown team. No significant cracks were in the vicinity of the anchors and the condition was determined to not be a potential adverse seismic condition.
- Temperature sensors lacking a safety cable were identified by the walkdown teams for several items of equipment. After more detailed assessment utilizing Seismic Category I(L) screening criteria of WB-DC-20-32 and WCG-2-409, these were determined to not represent a failing and falling concern.
- During the walk-by of area A851 WBN-WB-030, a cable tray support end cap was found to be in close proximity to a conduit exiting MCC-213-A2. Based on the screening tools in WB-DC-20-32, the clearance was found to be adequate.
- During the walkby of area A306 WBN-WB-042, 1" clearance was observed between a flow control valve and adjacent pipe support steel. Based on the screening tools in WB-DC-20-32, the clearance was found to be adequate.

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 WBN1 Seismic Response Report.

POTENTIAL ADVERSE SEISMIC CONDITIONS

The peer review team spent considerable time with the walkdown teams addressing preliminary potential adverse seismic conditions identified during walkdowns. It is noted that there were very many questions early in the walkdown review process on the conservative side of issues, and these kinds of questions diminished towards the end of the project as the judgment of the teams significantly improved. Most of these early concerns were in regards to potential seismic interaction effects. In most cases, these issues were resolved by review of prior evaluations or the TVA procedures and guidance already in place at the plant.

All potential adverse seismic conditions were reviewed in detail, including working with the teams to address seismic licensing basis and operability issues for the confirmed potential adverse seismic conditions that resulted in the initiation of Problem Evaluation Reports (PERs) as part of the Corrective Action Program (CAP). In the end, the peer review team is in full concurrence with all of the potential adverse seismic conditions summarized in Section 6.2 of the WBN1 Seismic Response Report.

Comments regarding the individual potential adverse seismic conditions for WBN1 include the following:

- Potentially Adverse Seismic Condition 1 addresses a U-bolt connection that was not tight on the Diesel Generator Engine 1A1 Start Air Receiver A. In our opinion the loose connection still provides an adequate load path for design basis seismic effects. The walkdown team conservatively noted this as a potential adverse seismic condition and entered it into the CAP.
- Potentially Adverse Seismic Condition 2 addresses a similar issue noted during the walkby for Diesel Generator Room D104, where an air receiver tank is not properly aligned. We judged that that the existing configuration still provided an adequate load path for design basis seismic effects. The walkdown team conservatively noted this as a potential adverse seismic condition and entered it into the CAP.
- Potentially Adverse Seismic Condition 3 addresses missing and damaged bolts connecting adjacent Diesel Generator system I&C panels. Although the present bolts were determined to be adequate to hold the adjacent panels together, the walkdown team conservatively noted this as a potential adverse seismic condition and entered it into the CAP.
- Potentially Adverse Seismic Condition 4 addresses a temporary scaffold near ERCW Pump 0-PMP-67-32 (area walkby) as a seismic interaction concern. The pump was determined to be sufficiently rugged that the potential interaction was not significant. The walkdown team noted the non-conforming scaffold as a potential adverse seismic condition and entered it into the CAP.
- Potentially Adverse Seismic Condition 5 addresses a cable tray support cap plate in contact with a conduit collar on 1-MCC-232-B-B. Detailed inspections ascertained that the adjacent MCC cubicles falling within a vertical 45 degree line of the impact location

were free of safety-related plant features. The walkdown team noted this as a potential adverse seismic condition and entered it into the CAP.

- Potentially Adverse Seismic Condition 6 addresses a fire protection sprinkler head in contact with a conduit in the 480V Board Room 1A (area walkby). This represents a potential water spray hazard for equipment in the area. The walkdown team noted this as a potential adverse seismic condition and entered it into the CAP. The PER review by plant operations concluded that it did not affect plant safety, and a non-essential priority work order was forwarded to plant fire protection for later resolution.

The basis for the disposition of the PER was not clear. Based on our recommendations, another CAP entry was initiated to enable a more thorough review of the configuration. This corrective action is currently in process.

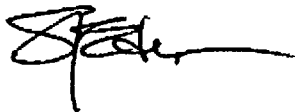
- Potentially Adverse Seismic Condition 7 addresses an unrestrained copy machine in the vicinity of a control room panel. It is our judgment that the seismic accelerations and configuration geometry preclude overturning, and operations concluded that the potential impact condition to the panel did not adversely impact the functionality of the affected equipment. The walkdown team noted the non-conforming copy machine as a potential adverse seismic condition and entered it into the CAP.
- Potentially Adverse Seismic Condition 8 addresses a sheared off anchor bolt on 480V Board Room Condenser B-B (from the area walkby). The remaining bolts were judged to possess sufficient capacity for adequate anchorage of the component. The walkdown team conservatively noted this as a potential adverse seismic condition and entered it into the CAP.
- Potentially Adverse Seismic Condition 9 addresses significant corrosion on the anchorage and base pedestal of Shutdown Board Room Chiller A-A. There is evidence of some material reduction. The remaining material was determined to possess adequate margin to resist design basis seismic loads. The walkdown team noted this as a potential adverse seismic condition and entered it into the CAP.
- Potentially Adverse Seismic Condition 10 addresses significant corrosion on the anchorage and base pedestal of Shutdown Board Room Chiller B-B. There is evidence of some material reduction. The remaining material was determined to possess adequate margin to resist design basis seismic loads. The walkdown team noted this as a potential adverse seismic condition and entered it into the CAP.
- Potentially Adverse Seismic Condition 11 addresses anchor spacing not in compliance with design output documentation for 120V AC Vital Inverters 0-I and 1-III. The anchorage is robust and meets design basis seismic requirements by inspection, but is outside of the dimension tolerance on the drawings. The walkdown team conservatively noted this as a potential adverse seismic condition and entered it into the CAP.

SUBMITTAL REPORT

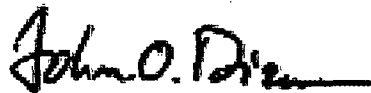
The peer review team has reviewed the WBN1 submittal report in detail and we are in full concurrence with the documented observations and findings. The report is in compliance with the guidance in EPRI Report 1025286 and meets the requirements and objectives of the NRC 50.54 (f) letter.

In our opinion, the potential adverse seismic conditions identified by the program are in general only minor issues, and this is a reflection of the adequate seismic design criteria as well as the seismic-related construction and maintenance procedures that TVA has in place at WBN1. Further evaluation is ongoing for Potential Adverse Seismic Condition 6 as noted above.

Sincerely,



Stephen J. Eder, P.E.
Lead Peer Reviewer



John O. Dizon, P.E.
Peer Reviewer