Pacific Gas and Electric Company®

Edward D. Halpin
Senior Vice President
Nuclear Generation & Chief Nuclear Officer

Diablo Canyon Power Plant
Mail Code 104/6
P. O. Box 56
Avila Beach, CA 93424

805.545.4100
E-Mail: E1H8@pge.com

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PG&E Letter DCL-12-118

U.S. Nuclear Regulatory Commission
ATTN: Document Control Desk
11555 Rockville Pike
Rockville, MD 20852

10 CFR 50.54(f)

Docket No. 50-275, OL-DPR-80
Diablo Canyon Power Plant Unit 1
Response to Request for Information Pursuant to 10 CFR 50.54(f) Regarding Recommendation 2.3 Seismic Unit 1

References:

1. NRC 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 Dai-ichi Accident", dated March 12, 2012

2. NRC Letter, "Endorsement of Electric Power Research Institute (EPRI) Draft Report 1025286, 'Seismic Walkdown Guidance'", dated May 31, 2012

3. PG&E Letter DCL-12-065, "Pacific Gas and Electric Company's 120-Day Response to NRC Request for Information Pursuant to 10 CFR 50.54(f) Regarding the Seismic Aspects of Recommendation 2.3 of the Near-Term Task Force Review of Insights from the Fukushima Dai-Ichi Accident", dated July 10, 2012

Dear Commissioners and Staff:

On March 12, 2012, the Nuclear Regulatory Commission (NRC) issued Reference 1 to Pacific Gas and Electric Company (PG&E). Enclosure 3 of Reference 1 contains the requested information and required responses associated with Recommendation 2.3 Seismic.

In Reference 1, the NRC requested that each addressee confirm that it will use the industry-developed NRC-endorsed seismic walkdown procedures. Reference 2 documents the NRC's endorsement of EPRI 1025286. In Reference 3, PG&E confirmed that it would use EPRI 1025286, as endorsed by Reference 2, as the basis for the seismic walkdowns at the Diablo Canyon Power Plant (DCPP).

Enclosure 3 of Reference 1 states that within 180 days of the NRC's endorsement of the walkdown process, each addressee will submit its final response for the requested information. Enclosure 3 of Reference 1 also states that the response should include a list of any areas that are unable to be inspected due to inaccessibility and a schedule for when the walkdown will be completed.

Enclosure 1 of this letter provides PG&E's response to Recommendation 2.3 Seismic for DCPP Unit 1 accessible components. PG&E will submit an updated response after inspection of currently inaccessible items.

PG&E is making regulatory commitments (as defined by NEI 99-04) in Enclosure 2 of this letter. This letter includes no revisions to existing regulatory commitments.

If you have any questions, or require additional information, please contact Mr. Terence L. Grebel at (805) 545-4160.

I declare under penalty of perjury that the foregoing is true and correct.

Executed on November 27, 2012.

Sincerely,

Edward D. Halpin
Senior Vice President – Chief Nuclear Officer

dmfn/SAPN 50465913
Enclosures
cc: Diablo Distribution
cc/enc: Elmo E. Collins, NRC Region IV
Eric J. Leeds, NRC Director, Office of Nuclear Reactor Regulation
Laura H. Micewski, Acting NRC Senior Resident Inspector
Joseph M. Sebrosky, NRR Project Manager

Response to Recommendation 2.3 Seismic
Diablo Canyon Power Plant Unit 1

Acronyms used in this response are defined in Attachment L to this enclosure.

Introduction:

On March 12, 2012, the NRC issued 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 Dai-ichi Accident" (Reference 1). Enclosure 3 of Reference 1 contains a request for information related to the results of the seismic design basis walkdowns performed in accordance with NRC Letter, "Endorsement of Electric Power Research Institute (EPRI) Draft Report 1025286, 'Seismic Walkdown Guidance'", dated May 31, 2012, (Reference 2).

Purpose:

Reference 1 requests that within 180 days of NRC's endorsement of the walkdown procedure, each addressee will submit its final response for the requested information and that the response should include a list of any areas that are unable to be inspected due to inaccessibility and a schedule for when the walkdowns will be completed. This Enclosure contains PG&E's response for the requested information for Unit 1, which includes the results of the walkdowns performed and any further actions required. This response also includes a list of any components that PG&E was unable to inspect due to inaccessibility and a schedule for when PG&E will complete those walkdowns.

NRC Request:

a. *Describe the plant-specific hazard licensing bases and a description of the protection and mitigation features considered in the licensing basis evaluation*

PG&E Response:

The seismic inputs applicable to the design of DCPP are described in the DCPP UFSAR, Sections 2.5 and 3.7. Since the development of the seismic inputs for DCPP predates the issuance of 10 CFR 100, Appendix A, "Seismic and Geologic Siting Criteria for Nuclear Power Plants," the following DCPP-specific earthquakes are defined:

Design Earthquake

The design earthquake (0.2g) is defined as the maximum size earthquake that can be expected to occur at DCPP during the life of the reactor. The design earthquake is the equivalent of the operating basis earthquake, as described in 10 CFR 100, Appendix A.

Double Design Earthquake

The double design earthquake (0.4g) is defined as the hypothetical earthquake that would produce accelerations twice those of the design earthquake. The double design earthquake is the equivalent of the safe shutdown earthquake, as described in 10 CFR 100, Appendix A.

Hosgri Earthquake

The Hosgri earthquake (0.75g) is defined as the predicted ground motion at DCPP due to a Richter magnitude 7.5 earthquake on the offshore Hosgri fault. The Hosgri earthquake does not correspond to an operating basis earthquake or safe shutdown earthquake.

Long Term Seismic Program

In addition to the above three earthquakes, PG&E implemented a program to reevaluate DCPP's seismic design, as described below. As part of the operating license issuance for DCPP Unit 1, the NRC imposed a license condition that required in part: "PG&E shall develop and implement a program to reevaluate the seismic design bases used for the DCPP".

PG&E's reevaluation effort in response to the license condition was titled the "Long Term Seismic Program." In June 1991, the NRC issued SSER 34, in which the NRC concluded that PG&E had satisfied the license condition described above. In SSER 34, the NRC requested certain confirmatory analyses from PG&E, and PG&E subsequently submitted the requested analyses. The NRC's final acceptance of the LTSP is documented in a letter to PG&E dated April 17, 1992.

Although the LTSP contains extensive databases and analyses that update the basic geologic and seismic information in the UFSAR, the LTSP material does not alter the design bases for DCPP. In SSER 34, the NRC states: "The Staff notes that the seismic qualification basis for Diablo Canyon will continue to be the original design basis plus the Hosgri evaluation basis, along with associated analytical methods, initial conditions, etc."

Classification of SSCs

The classification system applicable to SSCs at DCPP is described in UFSAR, Section 3.2. Since the development of the classification system for DCPP predates Regulatory Guide 1.29, "Seismic Design Classification," DCPP does not use SC I terminology. Instead, DCPP uses the following classifications:

Design Class I: SSCs necessary to ensure: (a) the integrity of the reactor coolant pressure boundary, (b) the capability to shut down the reactor and maintain it in a safe

shutdown condition, or (c) the capability to prevent or mitigate the consequences of accidents that could result in potential offsite exposures comparable to the guideline exposures of 10 CFR 100 are classified as Design Class I. Design Class I SSCs are designed for the design earthquake, double design earthquake, and Hosgri earthquake. Design Class I SSCs correspond to SC I SSCs, as defined in Regulatory Guide 1.29.

Design Class II: SSCs important to reactor operation but not essential to safe shutdown and isolation of the reactor, and failure of which would not result in the release of substantial amounts of radioactivity, are classified as Design Class II. In general, Design Class II SSCs correspond to non-SC I SSCs, as defined in Regulatory Guide 1.29. Some Design Class II SSCs are required for the operation of certain Design Class I features and are designed for the double design earthquake or the Hosgri earthquake.

Therefore, as discussed above, all Design Class I and selected Design Class II components that are designed for the double design earthquake or the Hosgri earthquake are scoped in as equivalent to SC I for the purpose of this evaluation.

Codes, Standards, and Methodology

Given the above considerations regarding Design Class I and II equipment, some of the major codes and standards used include:

(1) ANSI B31.1, "Power Piping" (1967 Edition up to and including 1973 Addenda)
(2) ANSI B31.7, "Nuclear Power Piping" (1969 Edition with 1970 Addenda)
(3) ACI-318-63, "Building Code Requirements for Reinforced Concrete
(4) AISC, "Specification for the Design, Fabrication, and Erection of Structural Steel for Buildings" (1969)
(5) IEEE 344-1971, "IEEE Recommended Practices for Seismic Qualification of Class I Electric Equipment for Nuclear Power Generating Stations." Specific cases have been supplemented by seismic qualification criteria per IEEE 344-1975.

Additional codes and standards are identified in the UFSAR.

NRC-approved methodologies were used for design, construction and any modification of seismic-related SSCs at DCPP Unit 1. The various methodologies used for the SSCs are identified in the UFSAR.

NRC Request:

b. Present information related to the implementation of the walkdown process

PG&E Response:

Personnel Qualifications:

The development of the various teams of personnel for the DCPP seismic walkdown effort was consistent with EPRI 1025286, Section 2.

The equipment selection personnel were responsible for identifying the sample of SSCs to be walked down in accordance with the guidance of EPRI 1025286, Section 4. The equipment selection personnel were selected based on their knowledge of the following areas:

(1) plant operations
(2) plant documentation
(3) associated SSCs
(4) the IPEEE program

The SWEs were responsible for the required walkdown inspections per the approved plant procedures and/or practices. The SWEs were required to have the following qualifications:

(1) a degree in mechanical or civil/structural engineering or equivalent
(2) experience in seismic engineering as it applies to nuclear power plants
(3) successful completion of either the NTTF 2.3 seismic walkdown training course or the SQUG walkdown training course

The licensing basis reviewers were responsible for the performance of evaluations of potentially adverse seismic conditions identified during the walkdowns against the licensing basis for the SSCs. They were selected based on having knowledge and experience in the following areas:

(1) the seismic licensing bases of DCPP
(2) seismic qualification methods and documentation used at DCPP
(3) the DCPP requirements and procedures for entering documentation into the plant records system and the CAP

The peer review personnel were responsible for collectively reviewing the following:

(1) the SWEL for scope
(2) a sample of completed SWCs and AWCs to validate the process and to identify and communicate any lessons learned for the remaining walkdown efforts

(3) LBEs and the decisions on entering potentially adverse seismic conditions into CAP
(4) this response being submitted to the NRC to determine that the objectives and requirements of the NRC and the endorsed EPRI guidance were met

The peer reviewers included members of the teams above and other plant personnel that have expertise in related plant processes.

Attachment A to this enclosure provides a summary of the qualifications of each of the team members and a table of activities that they performed.

SWEL Development

The process for selecting the DCPP SSCs for the SWEL included appropriate variety of classes of equipment, environments, primary and secondary systems, new and replacement equipment, and other elements consistent with EPRI 1025286, Section 3.

The DCPP SWELs were developed for the following two groups of SSCs:

(1) a sample of SSCs required to safely shutdown the reactor and maintain containment integrity (SWEL-1)
(2) a sample of SSCs required to support SFP-related processes including components that could potentially allow rapid drain-down of the SFP in the event of an earthquake (SWEL-2)

Development of SWEL-1

The development of the SWEL-1 followed a process defined in EPRI 1025286 through the application of the following four screens:

(1) Screen No.1 – Seismic Category I
(2) Screen No. 2 - Equipment or System
(3) Screen No. 3 - Support for Five Safety Functions
(4) Screen No. 4 - Sample Considerations

Screen No. 1 – Seismic Category I

Screen No. 1 narrowed the scope of SSCs included in SWEL-1 from the total population of SSCs to those that are classified as SC I, where SC I is defined in Regulatory Guide 1.29. However, as discussed in the UFSAR Section 3.2.1, the licensing basis for the seismic classification system for DCPP does not include Regulatory Guide 1.29, so SSCs are not explicitly classified as SC I. However, as discussed in the UFSAR Section 3.2.1, the licensing basis for the seismic classification system for SSCs meets the intent of Safety Guide 29, which uses the term "Category I" for "all structures,

systems, and components important to safety" that must remain functional in the event of a safe shutdown earthquake.

The application of Screen No. 1 was based on the equivalency between DCPP's classification system and SC I as discussed previously in this enclosure. Design Class I SSCs and those Design Class II SSCs that have been seismically qualified for double design earthquake or Hosgri earthquake screened-in under Screen No. 1.

Screen No. 2 - Equipment or Systems

Screen No. 2 narrowed the scope of SSCs in SWEL-1 by selecting only those SSCs that do not regularly undergo inspections to confirm that their configuration continues to be consistent with the DCPP licensing basis. The following types of SSCs screened-out of SWEL-1 under Screen No. 2:

(1) SC I - equivalent structures
(2) Containment penetrations (SWEL-1 includes certain CIVs)
(3) SC I - equivalent piping systems

Screen No. 3 - Support for the Five Safety Functions

Screen No. 3 narrowed the scope of SSCs in the SWEL-1 to those that are associated with maintaining the following five safety functions:

(1) Reactor reactivity control
(2) Reactor coolant pressure control
(3) Reactor coolant inventory control
(4) Decay heat removal
(5) Containment function

Screen No. 3 was applied in two steps: (1) application to the output of Screen No. 2 and (2) application to the "previous equipment list." These steps are described in the following subsections.

(1) Application to the Output of Screen No. 2

The application of Screen No. 3 to the output from Screen No. 2 was completed and the list of SSCs that screen-in through the application of Screen No. 3 served as input to Screen No. 4

(2) Application to the Previous Equipment List

In accordance with EPRI 1025286, Section 3, DCPP used "previous equipment lists" as part of the application of Screen No. 3. DCPP used a combination of all SSCs from the following previous equipment lists that are SC I-equivalent:

(a) DCPP IPEEE, completed in 1994, and documented in the "Individual Plant Examination for External Events Report for Diablo Canyon Power Plant Units 1 and 2 in Response to Generic Letter 88-20 Supplement 4"

(b) UFSAR, Appendix 9.5G, "Equipment Required for Safe Shutdown", includes a tabulation of the minimum equipment required to bring the plant to a cold shutdown condition

Screen No. 4 - Sample Considerations

Screen No. 4 modifies the scope of the SWEL-1 from that selected in Screen No. 3 to sufficiently represent a broad population of SC I-equivalent SSCs in order to meet the overall objective of the seismic walkdowns. The following five sample selection attributes were applied under Screen No. 4:

(1) a variety of types of systems
(2) major new and replacement equipment
(3) a variety of types of equipment
(4) a variety of environments
(5) equipment enhancements associated with the IPEEE program (note that no vulnerabilities were identified during the implementation of the IPEEE program for DCPP).

Finalization of the SWEL-1

The SWEL-1 was finalized to include representative item(s) from each of the above five attributes. In addition, the risk significance of specific SSCs was considered in the final selection process. See Attachment C of this enclosure for the final SWEL-1 list.

Development of SWEL-2

The development of the DCPP SWEL-2 followed a process defined by EPRI 1025286 through the application of the following four screens:

(1) Screen No. 1 – Seismic Category I
(2) Screen No. 2 - Equipment or System
(3) Screen No. 3 - Sample Considerations
(4) Screen No. 4 - Rapid Drain-Down

Screen No. 1 – Seismic Category I

Screen No. 1 narrowed the scope of SFP-related SSCs included in the SWEL-2 from the total population of SFP-related SSCs at DCPP to those that are classified as SC I, where SC I is defined in Regulatory Guide 1.29. Since Regulatory Guide 1.29 is not

directly applicable to DCPP, the screening was based on the equivalency between DCPP's classification system and SC I.

Screen No. 2 - Equipment or Systems

Screen No. 2 narrowed the scope of SSCs in the DCPP SWEL-2 by selecting only those that do not regularly undergo inspections to confirm that their configuration continues to be consistent with the DCPP licensing basis. The following types of SSCs were screened-out of the SWEL-2 under Screen No. 2:

(1) SC I - equivalent structures
(2) SC I - equivalent piping systems

Screen No. 3 - Sample Considerations

Screen No. 3 modified the scope of the SWEL-2 from that selected in Screen No. 2 to sufficiently represent a broad population of SC I-equivalent SSCs in order to meet the overall objective of the seismic walkdowns. The following sample selection attributes were applied under Screen No. 3:

(1) a variety of types of systems
(2) major new and replacement equipment
(3) a variety of types of equipment
(4) a variety of environments

Screen No. 4 - Rapid Drain-down

Screen No. 4 identified items that could allow the SFP to drain rapidly. The scope of these items was typically limited to hydraulic lines connected to the SFP and the equipment connected to those lines.

All piping entering the SFP was added to the SWEL-2 to verify that siphoning of water from the SFP was not possible.

SFP Penetrations

EPRI 1025286 requires for Screen No. 4 that penetrations below about 10 feet above the top of the fuel assemblies be evaluated for rapid drain-down. At DCPP there are no such penetrations.

SFP Configurations Associated with Refueling Outages

Drain-down flow paths that could exist as a result of the various SFP configurations associated with refueling outages at DCPP were investigated. SSCs associated with these flow paths were added to the SWEL-2.

Finalization of the SWEL-2

The SWEL-2 was finalized to include representative item(s) having each of the attributes associated with Screen No. 3 and all items associated with potential rapid drain-down.

The Unit 1 components excluded from the SWEL-2 are listed in Table 1 below:

Table 1: Unit 1 Components Excluded from the SWEL-2 Listing

Component	Basis for Exclusion
Refueling water purification pump	Not required for SFP inventory control or cooling
Refueling water purification filter	Not required for SFP inventory control or cooling
SFP demineralizers and resin traps	Not required for SFP inventory control or cooling, inaccessible due to high radiation levels
FHB crane	No functional relationship to SFP inventory control or cooling
Spent fuel storage racks	Racks are free-standing (no anchorage to SFP), are passive (no moving parts), and are not classified as targets in the SISIP
Cask pit platform	Used for anchorage of spent fuel transfer cask during cask loading operations. No functional relationship to SFP cooling or inventory control
New fuel storage rack	Not located in SFP
SFP bridge crane	No functional relationship to SFP inventory control or cooling
New fuel elevator	No functional relationship to SFP inventory control or cooling
480-V electric power	Provides power to the SFP cooling system pumps, but components from this system have already been included in the SWEL-1
120-V electric power	Provides power for SFP-related instrumentation, but components from this system have already been included in the SWEL-1
SFP cooling system pressure instrumentation	No functional relationship to SFP inventory control or cooling
FHBVS fire dampers	Associated with fires, not seismic events
FHBVS fan air monitors	Not required for operation of FHBVS
FHBVS emergency exhaust section	Post-accident mitigation components; not required for normal operation of FHBVS
FHBVS normal roughing and HEPA filters	Post-accident mitigation components; not required for normal operation of FHBVS

Combination of the SWEL-1 and the SWEL-2

Based on the guidance in EPRI 1025286, Figure 1-3, "Seismic Walkdowns, Area Walk-Bys, and Licensing Evaluations," the final DCPP SWEL is the combination of SWEL-1 and SWEL-2.

Requested Summary Lists

(1) Attachment B to this enclosure provides the Unit 1 SWEL-1 Base List 1, which is the equipment coming out of Screen No. 3 and entering Screen No. 4 of the SWEL-1.
(2) Attachment C to this enclosure provides the Unit 1 SWEL-1 list which is the equipment coming out of Screen No. 4 selected for seismic walkdown.
(3) Attachment D to this enclosure provides the Unit 1 SWEL-2 Base List 2 of the equipment coming out of Screen No. 2 and entering Screen No. 3 SWEL-2.
(4) Attachment E to this enclosure provides the Unit 1 SWEL-2 Rapid Drain-Down list of equipment coming out of Screen No. 4 determined to potentially cause SFP to rapidly drain-down.
(5) Attachment F to this enclosure provides the Unit 1 SWEL-2 list, which is a combination of the equipment coming out of Screens No. 3 and No. 4.

The system diversity of these lists is shown below in Table 2 and the equipment class diversity is shown in Table 3:

Table 2: Unit 1 Diablo Canyon Power Plant System Diversity Listing (SWEL-1)

System No.	System Description	Selected Equipment Count
03	Feedwater	6
04	Turbine Steam Supply	9
08	Chemical and Volume Control	7
09	Safety Injection	5
10	Residual Heat Removal	5
14	Component Cooling Water	6
17	Salt Water	3
18	Fire Protection	1
21	Diesel Engine Generator	14
23	Ventilation and Air Conditioning	20
25	Compressed Air	1
36	Eagle 21	2
38	Solid State Protection	4
41	Reactor Control Rods	1
43	Plant Annunciators	1
63	4.16-kV Electrical	3
64	480-V Electrical	3
65	120-V Instrument AC	3
67	125-V and 250-Vdc	4
96	Multiple System Panels	9
	Total	107

Table 3: Unit 1 Diablo Canyon Power Plant Equipment Class Diversity Listing (SWEL-1)

Equipment Class	Class Title	Selected Equipment Count
0	Miscellaneous	8
1	Motor Control Centers	2
2	Low Voltage Switchgear	3
3	Medium Voltage Switchgear	1
4	Transformers	3
5	Horizontal Pumps	8
6	Vertical Pumps	2
7	Fluid Operated Valves	15
8	Motor Operated Valves, Solenoid Operated Valves	15
9	Fans	4
10	Air Handlers	5
11	Chillers	0[1]
12	Air Compressors	1
13	Motor Generators	0[2]
14	Distribution Panels	2
15	Batteries on Racks	1
16	Battery Chargers and Inverters	2
17	Engine Generators	1
18	Instruments on Racks	4
19	Temperature Sensors	2
20	Instrumentation and Control Panels and Racks	21
21	Tanks and Heat Exchangers	7
	Total	107

Notes:
1. DCPP does not have any chillers, since there is not a chilled-water system. Seismically qualified air conditioning systems at DCPP use Freon-based cooling coils, condensers, and compressors.
2. The only motor generators at DCPP are those for the control rod drive system, which are not seismically qualified (excluded at Screen No. 1), so they cannot be included in the seismic walkdowns.

Summary of Walkdown Process

An SWC or an AWC package was prepared for each item on the SWEL. The actual walkdowns and walk-bys were performed by a minimum of two qualified SWEs.

Each walkdown or walk-by package contains, as a minimum, the following:

(1) SWC or AWC, as appropriate
(2) relevant drawings (components, locations, etc.)
(3) location (unit, area, etc.)
(4) relevant anchorage details (for components subject to configuration verification)
(5) relevant technical information

Each component walkdown and area walk-by was completed by a team of at least two qualified SWEs. Any potentially adverse seismic conditions identified by the team were noted in the SWCs and AWCs. For each of the potentially adverse seismic related conditions and observations a LBE was performed to determine the component's ability to perform its required function. If this evaluation resulted in no potentially adverse seismic conditions, no further action was necessary and the results were documented in the walkdown checklists. For seismic conditions or observations that were determined to be adverse, the condition or observation was documented in the walkdown checklist and entered into the CAP. Other non-seismic related items identified during the team walkdowns were documented on the checklists and entered into the CAP.

The LBEs were performed by DCPP cognizant engineers and subject to a peer review. Potentially adverse seismic conditions that could not readily be resolved were entered into the CAP. The peer review team consisted of a minimum of two individuals and any comments were addressed.

NRC Request:

c. *Present a list of plant-specific vulnerabilities (including any seismic anomalies, outliers, or other findings) identified by the IPEEE and a description of the actions taken to eliminate or reduce them (including their completion dates)*

PG&E Response:

As provided in PG&E Letter DCL 94-133, "Response to Generic Letter 88-20 Supplement 4, 'Individual Plant Examination of External Events for Severe Accident Vulnerabilities,'" dated June 27, 1994, (Reference 3), based on the results presented in the IPEEE study, no vulnerabilities with regard to seismic induced core damage exist at DCPP. There were other completed plant improvements that have a beneficial impact on the PRA that were included in the SWEL development.

NRC Request:

d. *Results of the walkdown including key findings and identified degraded, non-conforming, or unanalyzed conditions. Include a detailed description of the actions taken or planned to address these conditions using the guidance in Regulatory Issues Summary 2005-20, Rev 1, Revision to NRC Inspection Manual Part 9900 Technical Guidance, "Operating Conditions Adverse to Quality or Safety," including entering the condition in the corrective action program.*

PG&E Response:

The completed walkdowns (SWEL-1 and SWEL-2 combined) for Unit 1 was comprised of 106 SWCs and 59 AWCs. Twenty-two potentially adverse seismic conditions were identified, placed in CAP, and evaluated. The engineering evaluations were completed

and the conditions did not adversely affect the performance of any required safety function. The CAP status of these items is identified in Attachment G of this enclosure.

Attachment H of this enclosure provides a listing of components that were inaccessible in accordance with EPRI 1025286 and could not be inspected prior to submitting this response. These inaccessible items will be inspected prior to the end of the next refueling outage for Unit 1 (1R18). 1R18 is currently scheduled to be completed in March 2014. An update from those inspections will be submitted within 60 days following the completion of 1R18.

Attachment I of this enclosure contains the SWCs including any associated LBEs.

Attachment J of this enclosure contains AWCs including any associated LBEs.

In summary, there were no deficiencies entered into CAP for Unit 1 that resulted in any safety-related SSCs being inoperable or non-functional.

NRC Request:

e. Discuss any planned or newly installed protection and mitigation features

PG&E Response:

There are currently no planned or newly-installed changes to the plant as a result of implementing this seismic walkdown guidance.

NRC Request:

f. Results and any subsequent actions taken in response to the peer review

PG&E Response:

Various members of the peer review team reviewed the entire process of the DCPP seismic walkdown guidance, as well as each element. Peer reviewers did not review their own work. The peer review process included a review of the following:

(1) the selection of the SSCs in the SWEL
(2) a sample of the SWCs and the AWCs
(3) the LBEs and decisions for entering the potentially adverse conditions into CAP
(4) the submittal response

Attachment K of this enclosure provides a table that corresponds to each of these activities and includes the results of the reviews and any actions taken to address those results.

References:

1. NRC Letter dated March 12, 2012, "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 Dai-ichi Accident"

2. NRC Letter, "Endorsement of Electric Power Research Institute (EPRI) Draft Report 1025286, 'Seismic Walkdown Guidance'", dated May 31, 2012

3. PG&E Letter DCL 94-133, dated June 27, 1994, Response to Generic Letter 88-20. Supplement 4, "Individual Plant Examination of External Events for Severe Accident Vulnerabilities"

Attachment List

Attachment	Title
A	Seismic Walkdown Equipment List Team Personnel Qualifications
B	Unit 1: Seismic Walkdown Equipment List-1 Base List 1
C	Unit 1: Seismic Walkdown Equipment List-1 List
D	Unit 1: Seismic Walkdown Equipment List-2 Base List 2
E	Unit 1: Seismic Walkdown Equipment List-2 Rapid Drain-Down List
F	Unit 1: Seismic Walkdown Equipment List- 2 List
G	Unit 1: Potentially Adverse Seismic Conditions Entered into the Corrective Action Program
H	Unit 1: Inaccessible Component List
I	Unit 1: Seismic Walkdown Checklists
L	Unit 1: Area Walk-By Checklists
K	Unit 1: Summary Findings of the Peer Reviews
L	List of Acronyms

Attachment A
Seismic Walkdown Equipment List Team Personnel Qualifications

The following contains a brief summary of the industry and educational qualification of the personnel that were directly involved with the equipment selection, seismic walkdowns, licensing basis reviews, individual plant examination of external events reviews, and peer reviews.

Team Members

Nozar Jahangir, PE is DCPP's manager of project engineering and the seismic project team lead. Mr. Jahangir is a degreed civil engineer and has over 30 years in the nuclear power industry at DCPP involved in plant seismic design and qualifications.

William Horstman, PE is a DCPP senior civil engineer on the Fukushima Response Project. Mr. Horstman is a degreed civil engineer specializing in structural engineering. Mr. Horstman has 32 years of experience in the commercial nuclear power industry, including over 22 years at DCPP, where he has provided services in civil engineering, seismic design, seismic analysis, license amendments, design criteria development, and licensing basis impact evaluations.

David Miklush is a degreed mechanical engineer with 34 years of experience in the nuclear industry at DCPP. Mr. Miklush was licensed as an operator for both units at DCPP for 7 years. Mr. Miklush has also served as operations director, maintenance director, and engineering director.

Patrick Huang, PE is a degreed civil engineer and has over 30 years of experience in the nuclear industry. Mr. Huang has worked for DCPP performing seismic equipment qualification for 23 years.

Matthew Sage is a degreed mechanical engineer and provided engineering support for this project.

Scott Maze, PE is a degreed civil engineer and has over 23 years of structural engineering experience including experience in seismic design, most of that in support of DCPP.

David Cryer is a degreed mechanical engineer, and has over 34 years in the nuclear power industry. Most of Mr. Cryer's work has been for DCPP in seismic qualification of equipment and pipe support.

Thomas Kipp is a degreed aeronautical engineer and has 42 years of experience in the nuclear power industry in fields including PRA, fragility analysis and the LTSP at DCPP.

Kevin Moore is a degreed structural engineer with over a year of experience in the nuclear power industry, including work at several nuclear generating stations. Mr. Moore also participated in seismic walkdowns for San Onofre Nuclear Generating Station.

Fred Grant is a degreed engineer specializing in mechanics of structures and has 7 years of experience in mechanical and structural engineering. Four of Mr. Grant's years in the industry have been dedicated to seismic walkdowns and seismic fragility analysis.

Krishna Amirineni, PE is a degreed civil engineer with 4 years of seismic structural engineering experience in the nuclear power industry.

David Nakaki, Ph.D, PE is a degreed engineer with 25 years in the nuclear power industry. Mr. Nakaki has been involved with DCPP LTSP program in developing equipment fragility evaluations since the 1980s.

Nathan Barber is a degreed nuclear engineer with 10 years of experience in PRA at DCPP.

Murrell Evans provided operations support for this project. Mr. Evans has 36 years of experience in the nuclear industry, over 31 of which have been in support of DCPP, including holding positions as an operations shift manager and maintenance operation support manager.

Philippe Soenen is a degreed mechanical engineer and has 10 years of licensing experience in the nuclear industry, most of that in support of DCPP. Mr. Soenen is a licensing supervisor.

Thomas Baldwin, PE is a degreed mechanical engineer with 26 years of experience with DCPP, holding positions such as a design engineer, senior reactor operator; engineering supervisor, procedure services manager, and licensing manager.

Personnel	SWE Training	Personnel Functions and Qualifications							
Individuals	EPRI / SQUG	SWE	ESP	Ops	Ops / Systems	IPEEE	Licensing Basis Reviewer	Peer Reviewer (see note)	Support Personnel
Nozar Jahangir	EPRI	x					x	1, 2, 3	
William Horstman	EPRI	x	x				x	2, 3	
Scott Maze	EPRI	x					x	3	
David Cryer	EPRI	x					x	3	
David Miklush	N/A		x	x	x			4	
Murrell Evans	N/A			x				1	
David Nakaki	SQUG	x							
Thomas Kipp	SQUG	x							
Kevin Moore	Both	x							
Fred Grant	EPRI	x							
Krishna Amirineni	EPRI	x					x	1, 2, 3	x
Nathan Barber	N/A					x		1	
Matthew Sage	N/A								x
Patrick Huang	N/A						x	3	
Philippe Soenen	N/A							4	
Thomas Baldwin	N/A							4	
System Engineers	N/A				x				x

Note: There are four peer review activities listed below. The numbers correspond to the review performed

1. Peer review of the selection of the SSCs in the SWEL
2. Peer review of a sample of the SWCs and the AWCs
3. Peer review of the LBEs and the decisions for entering the potentially adverse conditions into CAP
4. Review of the submittal report

Attachment B
Unit 1: Seismic Walkdown Equipment List-1 Base List 1

Structure, System, or Component	EPRI 1025286 Screen No. 3 (Five SF or CF)					IPEEE	SSEL	Remarks
	RRC (Y/N)	RCPC (Y/N)	RCIC (Y/N)	DHR (Y/N)	CF (Y/N)	(Y/N)	(Y/N)	
Volume control tank outlet to CCP suction valves (LCV-112B, LCV-112C)	Y	Y	Y	N	Y	Y	Y	Flow path pressure boundary and CIVs
Emergency borate valve to charging pump flow path (8104)	Y	Y	Y	N	Y	N	Y	Added from SSEL.
Valves in flow path to RCS through regenerative Hx (8107, 8108, 8145, 8146, 8147, 8148)	Y	Y	Y	N	Y	N	Y	Added from SSEL.
Charging pump discharge FCV-128	Y	Y	Y	N	Y	N	Y	Added from SSEL.
RCP seal water RV-8121	Y	Y	Y	N	Y	N	Y	Added from SSEL.
RWST to charging pump suction valves (8805A, 8805B)	N	N	N	N	Y	Y	Y	Valves in the recirculation between RHR SI and CCP are not safe shutdown equipment; only valves that are CIVs are included.
RWST to SI pump suction valves (8976)	N	N	N	N	Y	Y	N	Valves in the recirculation between RHR SI and CCP are not safe shutdown equipment; only valves that are CIVs are included.
RHR discharge to charging pump suction valves (8804A, 8804B)	N	N	N	N	Y	Y	N	Valves in the recirculation between RHR SI and CCP are not safe shutdown equipment; only valves that are CIVs are included.
Charging pump injection valves (8801A, 8801B, 8803A, 8803B)	N	N	N	N	Y	Y	Y	Valves in the recirculation between RHR SI and CCP are not safe shutdown equipment; only valves that are CIVs are included.
Containment recirculation suction valves (8982A, 8982B)	N	N	N	N	Y	Y	N	Valves in the recirculation between RHR SI and CCP are not safe shutdown equipment; only valves that are CIVs are included.
Accumulator outlet valves to cold leg valve	N	N	N	N	Y	N	Y	Added from SSEL.
CCW pumps	N	N	Y	Y	Y	Y	Y	Safe shutdown equipment

Structure, System, or Component	EPRI 1025286 Screen No. 3 (Five SF or CF)					IPEEE	SSEL	Remarks
	RRC	RCPC	RCIC	DHR	CF			
	(Y/N)	(Y/N)	(Y/N)	(Y/N)	(Y/N)	(Y/N)	(Y/N)	
CCW Hx	N	N	Y	Y	Y	Y	Y	Safe shutdown equipment
CCW surge tank	N	N	Y	Y	Y	Y	Y	Safe shutdown equipment
CCW header A and B FCV-430 and FCV-431	N	N	N	N	Y	Y	Y	CIVs only
SG blowdown isolation valves (FCV-151, 157, 160, 244, 246, 248, 250, 760, 761, 762, 763)	N	N	N	N	Y	N	Y	Added from SSEL.
CCW pump auxiliary lube oil pumps (CCWAP1, CCWAP2, CCWAP3)	N	N	Y	Y	Y	N	Y	Added from SSEL.
DG fuel off shutoff valves (LCV-85 to LCV-90)	Y	Y	Y	Y	Y	Y	Y	Safe shutdown equipment
DG engines and generator	Y	Y	Y	Y	Y	Y	Y	Safe shutdown equipment
DG main lead terminal/box	Y	Y	Y	Y	Y	Y	N	Safe shutdown equipment
DFO storage tanks (0-1, 0-2)	Y	Y	Y	Y	Y	Y	Y	Safe shutdown equipment. Buried tank, permanently accessible for inspection.
DFO filters	Y	Y	Y	Y	Y	Y	N	Safe shutdown equipment
DFO pumps	Y	Y	Y	Y	Y	Y	Y	Safe shutdown equipment
DG air start receiver	Y	Y	Y	Y	Y	Y	N	Safe shutdown equipment
DG inlet air filter	Y	Y	Y	Y	Y	Y	N	Safe shutdown equipment
DG inlet silencer	Y	Y	Y	Y	Y	Y	N	Safe shutdown equipment
DG exhaust silencer	Y	Y	Y	Y	Y	Y	N	Safe shutdown equipment
DFODT	Y	Y	Y	Y	Y	Y	N	Safe shutdown equipment
DG radiator/water pump	Y	Y	Y	Y	Y	Y	N	Safe shutdown equipment
4160 V Switchgear (Bus F, G, H)	Y	Y	Y	Y	Y	Y	Y	Safe shutdown equipment
ASW pump overcurrent relays	Y	Y	Y	Y	Y	Y	Y	Safe shutdown equipment
ASW pump undervoltage relays	Y	Y	Y	Y	Y	Y	Y	Safe shutdown equipment

Structure, System, or Component	EPRI 1025286 Screen No. 3 (Five SF or CF)					IPEEE	SSEL	Remarks
	RRC	RCPC	RCIC	DHR	CF			
	(Y/N)	(Y/N)	(Y/N)	(Y/N)	(Y/N)	(Y/N)	(Y/N)	
CCW pump undervoltage relay	Y	Y	Y	Y	Y	Y	Y	Safe shutdown equipment
CCW pump overcurrent relays	Y	Y	Y	Y	Y	Y	Y	Safe shutdown equipment
4160-V load center transformer overcurrent relays (51HF10 to 51HH10)	Y	Y	Y	Y	Y	Y	Y	Safe shutdown equipment
CCP overcurrent relays	Y	Y	Y	Y	Y	Y	Y	Safe shutdown equipment
AFW motor driven pump overcurrent relays	Y	Y	Y	Y	Y	Y	N	Safe shutdown equipment
Startup transformer overcurrent relays (Bus F, G, H)	Y	Y	Y	Y	Y	Y	N	Safe shutdown equipment
ASW pump control transfer switch relay	Y	Y	Y	Y	Y	Y	Y	Safe shutdown equipment
CCW pump control transfer switch relays	Y	Y	Y	Y	Y	Y	Y	Safe shutdown equipment
4160-V potential transformers (Bus F, G, H)	Y	Y	Y	Y	Y	Y	N	Safe shutdown equipment
DG shutdown relays	Y	Y	Y	Y	Y	Y	N	Safe shutdown equipment
DG overcurrent relays	Y	Y	Y	Y	Y	Y	N	Safe shutdown equipment
DG oil pressure timer relays	Y	Y	Y	Y	Y	Y	N	Safe shutdown equipment
DG overcrank timer relays	Y	Y	Y	Y	Y	Y	N	Safe shutdown equipment
DG oil pressure relays	Y	Y	Y	Y	Y	Y	N	Safe shutdown equipment
DG jacket water temperature trip relays	Y	Y	Y	Y	Y	Y	N	Safe shutdown equipment
DG engine start relays	Y	Y	Y	Y	Y	Y	N	Safe shutdown equipment
DG overcrank relays	Y	Y	Y	Y	Y	Y	N	Safe shutdown equipment
DG excitation cubicle	Y	Y	Y	Y	Y	Y	N	Safe shutdown equipment
DG control panel	Y	Y	Y	Y	Y	Y	N	Safe shutdown equipment
Safeguard relay panel (Bus F, G, H)	Y	Y	Y	Y	Y	Y	N	Safe shutdown equipment
480-V breaker cabinets (load centers) (SPF to SPH)	Y	Y	Y	Y	Y	Y	Y	Safe shutdown equipment

Structure, System, or Component	EPRI 1025286 Screen No. 3 (Five SF or CF)					IPEEE	SSEL	Remarks
	RRC	RCPC	RCIC	DHR	CF			
	(Y/N)	(Y/N)	(Y/N)	(Y/N)	(Y/N)	(Y/N)	(Y/N)	
CCW FCV motor control contactors	Y	Y	Y	Y	Y	Y	Y	Safe shutdown equipment
CCW FCV control switches (FCV-430 , FCV-431)	Y	Y	Y	Y	Y	N	Y	Added from SSEL.
480-V auxiliary relay panel	Y	Y	Y	Y	Y	Y	N	Safe shutdown equipment
4160-V/480-V transformers (THF10 to THH10)	Y	Y	Y	Y	Y	Y	N	Safe shutdown equipment
Instrument breaker panels (PY11 to PY16)	Y	Y	Y	Y	Y	Y	N	Safe shutdown equipment
120-V inverters (IY11 to IY14)	Y	Y	Y	Y	Y	Y	Y	Safe shutdown equipment
125-Vdc batteries (BAT11 to BAT13)	Y	Y	Y	Y	Y	Y	Y	Safe shutdown equipment
Vital battery racks	Y	Y	Y	Y	Y	Y	Y	Safe shutdown equipment
Vital battery chargers (BTC11, BTC12, BTC121, BTC131, BTC132)	Y	Y	Y	Y	Y	Y	Y	Safe shutdown equipment
125-Vdc and 125-Vdc switchgear/breaker panels (SD11 to SD13)	Y	Y	Y	Y	Y	Y	Y	Safe shutdown equipment
Nuclear auxiliary relay rack	Y	Y	Y	Y	Y	Y		Safe shutdown equipment
SSPS	Y	N	Y	Y	Y	Y	N	Safe shutdown equipment
Auxiliary safeguards cabinet	Y	N	Y	Y	Y	Y	N	Safe shutdown equipment
Process control and protection system	N	Y	Y	N	Y	Y	N	Safe shutdown equipment
Process control and protection system instrument racks (P1A to P1C)	N	Y	Y	N	Y	Y	N	Safe shutdown equipment
Main control boards (1VB1 to 1VB5) and control console (CC1 to CC3)	Y	Y	Y	Y	Y	Y		Safe shutdown equipment
Hot shutdown panel	Y	Y	Y	Y	Y	Y		Safe shutdown equipment

Structure, System, or Component	EPRI 1025286 Screen No. 3 (Five SF or CF)					IPEEE	SSEL	Remarks
	RRC	RCPC	RCIC	DHR	CF			
	(Y/N)	(Y/N)	(Y/N)	(Y/N)	(Y/N)	(Y/N)	(Y/N)	
Containment fan coolers	N	N	N	N	Y	Y		Safe shutdown equipment
Containment purge valves (RCV-11, RCV-12, FCV-660, FCV-661)	N	N	N	N	Y	Y		Safe shutdown equipment
Auxiliary building supply fans (S-35, S-36)	N	Y	Y	Y	Y	Y		Safe shutdown equipment
480-V switchgear room supply fans (S-43, S-44)	N	Y	Y	Y	Y	Y		Safe shutdown equipment
Auxiliary building exhaust fans (E-43, E-44)	N	Y	Y	Y	Y	Y		Safe shutdown equipment
Auxiliary building shutoff (discharge) dampers (FCV-5045, FCV-5046)	N	Y	Y	Y	Y	Y		Safe shutdown equipment
Auxiliary building backdraft dampers (BDD-43, BDD-44)	N	Y	Y	Y	Y	Y		Safe shutdown equipment
ASW pump control switch relays	Y	Y	Y	Y	Y	Y		Safe shutdown equipment
ASW pump control switch relays at hot shutdown panel	Y	Y	Y	Y	Y	Y		Safe shutdown equipment
CCW pump control switch relays	Y	Y	Y	Y	Y	Y		Safe shutdown equipment
CCW pump control switch relays at hot shutdown panel	Y	Y	Y	Y	Y	Y		Safe shutdown equipment
Auxiliary transformer overcurrent relays (Bus F, G, H)	Y	Y	Y	Y	Y	Y		Safe shutdown equipment

Attachment C
Unit 1: Seismic Walkdown Equipment List-1 List

					Safety Function										
Component	System No.	Equipment Class	Environment	New or Replacement (Y/N)	RRC	RCPC	RCIC	DHR	CF	Risk Significance (Y/N)	SSEL (Y/N)	IPEEE (Y/N)	IPEEE Enhancement (Y/N)	Walkdown Package No.	Remarks
ASW crosstie valve FCV-601	17	8	SWIE	N	N	N	Y	Y	N	Y	Y	Y	N	DC-0-17-P-VOM-SW-1-FCV-601	Valve shared by both units.
Fire pump No. 1	18	5	MIE	N	N	N	N	N	N	N	N	N	Y	DC-0-18-M-PP-FP1	Added due to association with LTSP/IPEEE modification. Pump common to both units.
DFO transfer pump 0-2	21	5	DIE	N	Y	Y	Y	Y	Y	Y	Y	Y	Y	DC-0-21-M-PP-DFOTP2	Associated with LTSP/IPEE modifications. DFO transfer pumps common to both units.
DFO transfer pump 0-2 filters	21	0	DIE	N	Y	Y	Y	Y	Y	N	N	Y	N	DC-0-21-P-FL-DFOTF2	DFO filters common to both units.
AFW lead 1 temperature element	3	19	MIE	N	N	N	N	N	N	N	N	N	N	DC-1-03-I-E-TE-117	Added for variety of types of systems and variety of equipment types (19).
AFW pump 1 (turbine-driven)	3	5	MIE	N	N	N	N	Y	N	Y	Y	Y	N	DC-1-03-M-PP-AFWP1	
AFW pump 2 (motor- driven)	3	5	MIE	N	N	N	N	Y	N	Y	Y	Y	N	DC-1-03-M-PP-AFWP2	
TD AFW pump Discharge to SG LCV-110	3	7	OE	N	N	N	N	N	Y	N	N	Y	N	DC-1-03-P-VOH-FW-1-LCV-110	
AFW pump discharge to SG LCV-115	3	7	MIE	N	N	N	N	N	Y	N	N	Y	N	DC-1-03-P-VOH-FW-1-LCV-115	Added based on peer review.
TD AFW pump discharge to SG LCV-106	3	8	OE	N	N	N	N	N	Y	N	N	Y	N	DC-1-03-P-VOM-FW-1-LCV-106	Added based on peer review.
FCV-95 control switch contactor (supply to TD AFW pump)	4	1	MIE	N	N	N	N	Y	N	N	N	N	N	DC-1-04-LD30	Added for Equipment Type (1).
Stop valve No. FCV-152 on supply to TD AFW pump 1	4	0	MIE	N	N	N	N	Y	N	N	Y	N	N	DC-1-04-P-V-MS-1-FCV-152	Added from SSEL. Special type of control valve for steam turbine.
MS isolation valve FCV-41	4	7	OE	N	N	N	N	Y	N	N	Y	Y	N	DC-1-04-P-VOA-MS-1-FCV-41	
MS PCV-20 (10% dump)	4	7	OE	N	N	N	N	Y	N	N	Y	Y	N	DC-1-04-P-VOA-MS-1-PCV-20	
Isolation valves on supply to TD AFW pump (FCV-37)	4	8	OE	N	N	N	N	Y	N	N	Y	N	N	DC-1-04-P-VOM-MS-1-FCV-37	Added from SSEL
MSSV RV-13	4	7	MIE	N	N	N	N	Y	N	N	N	Y	N	DC-1-04-P-VR-MS-1-RV-13	
MSSV RV-3	4	7	OE	N	N	N	N	Y	N	N	N	Y	N	DC-1-04-P-VR-MS-1-RV-3	
MSSV RV-61	4	7	MIE	N	N	N	N	Y	N	N	N	Y	N	DC-1-04-P-VR-MS-1-RV-61	

					Safety Function										
Component	System No.	Equipment Class	Environment	New or Replacement (Y/N)	RRC	RCPC	RCIC	DHR	CF	Risk Significance (Y/N)	SSEL (Y/N)	IPEEE (Y/N)	IPEEE Enhancement (Y/N)	Walkdown Package No.	Remarks
MSSV RV-8	4	7	OE	N	N	N	N	Y	N	N	N	Y	N	DC-1-04-P-VR-MS-1-RV-8	
Boric acid storage tank 1 level transmitter LT-102	8	18	MIE	N	Y	N	Y	N	N	N	Y	N	N	DC-1-08-I-T-LT-102	Added from SSEL and variety of systems. Mounted in local panel no. XLT102.
Seal water Hx	8	21	MIE	N	Y	Y	Y	N	N	N	N	N	N	DC-1-08-M-HX-SWHE1	Added based on recommendation from PRA Group. Variety of equipment types (21). Added for variety of systems
CCP 1 (Emergency)	8	5	MIE	N	Y	Y	Y	N	N	Y	Y	Y	N	DC-1-08-M-PP-CCP1	Includes subcomponent: AP1
CCP 3 (Normal)	8	5	MIE	Y	Y	Y	Y	N	N	N	Y	Y	N	DC-1-08-M-PP-CCP3	Originally a reciprocal charging pump, replacement dissimilar to CCP1. Major Modification.
Boric acid blender inlet valve FCV-110A	8	7	MIE	Y	N	N	N	N	Y	N	N	Y	N	DC-1-08-P-VOA-CVCS-1-FCV-110A	Added based on modification. Seismically supported valve.
Emergency borate valve to charging pump (8104)	8	8	MIE	N	Y	Y	Y	N	Y	N	Y	N	N	DC-1-08-P-VOM-CVCS-1-8104	Added from SSEL. Seismically supported.
Volume control tank outlet to CCP suction valve LCV-112B	8	8	MIE	N	Y	Y	Y	N	Y	N	Y	Y	N	DC-1-08-P-VOM-CVCS-1-LCV-112B	
SI pump 1	9	5	MIE	N	N	N	N	N	N	Y	N	Y	Y	DC-1-09-M-PP-SIP1	Added due to association with LTSP/IPEEE modification.
Containment recirculation sump, sump strainer, trash rack, and vortex suppressor	9	0	ICE	Y	N	N	Y	Y	Y	N	N	N	N	DC-1-09-M-STR-STR-RHR1	Added as major modification.
SI accumulator 1	9	21	ICE	N	N	N	N	N	N	N	N	Y	N	DC-1-09-M-TK-AT1	Added for variety of environments.
RWST to charging pump suction valve 8805A	9	8	MIE	N	N	N	N	N	Y	N	Y	Y	N	DC-1-09-P-VOM-SI-1-8805A	
SI pump suction valves from RWST (8923A)	9	8	MIE	N	N	N	N	N	Y	N	N	N	Y	DC-1-09-P-VOM-SI-1-8923A	Added due to association with LTSP/IPEEE modification.
RHR Hx 1	10	21	MIE	N	N	N	N	Y	N	N	Y	Y	N	DC-1-10-M-HX-RHE1	
RHR pump 2	10	6	MIE	N	N	N	N	Y	N	Y	Y	Y	N	DC-1-10-M-PP-RHRP2	
RHR pump suction valve 8700A	10	8	MIE	N	N	N	N	Y	N	N	N	Y	N	DC-1-10-P-VOM-RHR-1-8700A	
RHR pump recirculation valve FCV-641A	10	8	MIE	Y	N	N	N	Y	N	N	N	Y	N	DC-1-10-P-VOM-RHR-1-FCV-641A	Added based on peer review.
RHR pump recirculation valve FCV-641B	10	8	MIE	Y	N	N	N	Y	N	N	N	Y	N	DC-1-10-P-VOM-RHR-1-FCV-641B	
CCW header A flow FCV-430	14	8	MIE	Y	N	N	N	N	N	N	Y	Y	Y	DC-1-14-E-P-VOM-CCW-1-FCV-430	Associated with LTSP/IPEEE modification.
CCW Hx output thermocouple TE-6	14	19	MIE	N	N	N	N	Y	N	N	Y	N	N	DC-1-14-I-E-TE-6	Added for variety of equipment (19). Electrical location code XTE-006.

					Safety Function										
Component	System No.	Equipment Class	Environment	New or Replacement (Y/N)	RRC	RCPC	RCIC	DHR	CF	Risk Significance (Y/N)	SSEL (Y/N)	IPEEE (Y/N)	IPEEE Enhancement (Y/N)	Walkdown Package No.	Remarks
CCW Hx 1	14	21	MIE	N	N	N	Y	Y	Y	Y	Y	Y	N	DC-1-14-M-HX-CCWHE1	
CCW pump 1	14	5	MIE	N	N	N	Y	Y	Y	Y	Y	Y	N	DC-1-14-M-PP-CCWP1	Includes component No. CCWAP1
CCW surge tank	14	21	OE	N	N	N	Y	Y	Y	N	Y	Y	N	DC-1-14-M-TK-CCWST1	
CCW Hx FCV-365	14	7	MIE	Y	N	N	N	N	N	N	Y	N	N	DC-1-14-P-VOA-CCW-1-FCV-365	Added from SSEL
ASW pump 1	17	6	SWIE	N	N	N	Y	Y	N	Y	Y	Y	N	DC-1-17-M-PP-ASP1	
ASW FCV-602	17	7	MIE	N	N	N	Y	Y	N	N	Y	Y	N	DC-1-17-P-VOA-SW-1-FCV-602	
DG No. 1 lube oil electric heater	21	0	DIE	Y	Y	Y	Y	Y	Y	N	N	N	N	DC-1-21-E-HT-LOH1	New component
DG No. 1 control panel	21	20	DIE	N	Y	Y	Y	Y	Y	N	N	Y	N	DC-1-21-E-PNL-GQD11	
DG No. 1 excitation cubicle	21	20	DIE	N	Y	Y	Y	Y	Y	N	N	Y	N	DC-1-21-E-PNL-SED11	
DG No. 1 DC power supply transfer switches	21	14	DIE	N	Y	Y	Y	Y	Y	N	N	N	N	DC-1-21-E-S-EQD-11	Added for variety of types of equipment (14).
DFO transfer pump 0-1 local contactor panel	21	1	MIE	N	Y	Y	Y	Y	Y	Y		N	N	DC-1-21-LPH65	Added for equipment type (1).
DG No. 1 engine	21	17	DIE	N	Y	Y	Y	Y	Y	Y	Y	Y	N	DC-1-21-M-EN-DEG1	Includes DFOTD1, JWP1, main lead terminal box 1, generator 1
DG No. 1 radiator A	21	0	DIE	N	Y	Y	Y	Y	Y	N	N	Y	N	DC-1-21-M-HX-JWR1A	
DG No. 1 exhaust silencer	21	0	DIE	N	Y	Y	Y	Y	Y	N	N	Y	N	DC-1-21-M-MISC-ES1	
DG No. 1 inlet silencer	21	0	DIE	N	Y	Y	Y	Y	Y	N	N	Y	N	DC-1-21-M-MISC-IS1	
DG No. 1 air start receiver A	21	21	DIE	N	Y	Y	Y	Y	Y	N	N	Y	N	DC-1-21-M-TK-AR1A	
DG No. 1 inlet air filter	21	0	DIE	N	Y	Y	Y	Y	Y	N	N	Y	N	DC-1-21-P-FL-CAF1	
DG No. 1 fuel off shutoff valve header B	21	7	DIE	N	Y	Y	Y	Y	Y	N	Y	Y	N	DC-1-21-P-VOA-DEG-1-LCV-85	
Post-LOCA sampling room ventilation duct heater No. 29A	23	0	MIE	N	N	N	N	N	N	N	N	N	N	DC-1-23-E-HT-EH-29A	Added per recommendation by PRA group. Added for variety of systems and for a variety of types of equipment (10).
Control room ventilation control cabinet CCR1	23	20	MIE	N	N	N	N	N	N	N	N	Y	N	DC-1-23-E-PNL-CRC1	

					Safety Function										
Component	System No.	Equipment Class	Environment	New or Replacement (Y/N)	RRC	RCPC	RCIC	DHR	CF	Risk Significance (Y/N)	SSEL (Y/N)	IPEEE (Y/N)	IPEEE Enhancement (Y/N)	Walkdown Package No.	Remarks
CFCU SI system and auto bus transfer relay cabinet, Bus F	23	20	MIE	Y	Y	Y	Y	Y	Y	N	N	N	N	DC-1-23-E-PNL-PCCFC1	
Control room ventilation air conditioning compressor CP-35	23	12	DIE	N	N	N	N	N	N	N	N	Y	N	DC-1-23-M-BC-CP-35	Added for variety of environments.
Containment fan cooler No. 1	23	10	ICE	N	N	N	N	N	Y	N	N	Y	N	DC-1-23-M-BF-CFC1-1	
Auxiliary building ventilation exhaust fan E-1	23	9	DIE	N	N	Y	Y	Y	Y	N	N	N	N	DC-1-23-M-BF-E-1	Added for safety function
ASW pump compartment exhaust fan E-103	23	9	SWIE	N	Y	Y	Y	Y	Y	N	Y	N	N	DC-1-23-M-BF-E-103	Added from SSEL. Added for variety of environments.
480-V switchgear ventilation exhaust fan E-43	23	10	OE	N	N	Y	Y	Y	Y	N	Y	Y	N	DC-1-23-M-BF-E-43	
Auxiliary building ventilation supply fan S-31	23	9	DIE	N	N	Y	Y	Y	Y	N	N	N	N	DC-1-23-M-BF-S-31	Added for safety function
Control room ventilation supply fan S-35	23	10	DIE	N	N	Y	Y	Y	Y	Y	N	Y	N	DC-1-23-M-BF-S-35	Includes CR35
480-V switchgear ventilation supply fan S-43	23	9	OE	N	N	Y	Y	Y	Y	N	Y	Y	N	DC-1-23-M-BF-S-43	
Control room ventilation air conditioning condenser CR35	23	10	DIE	N	N	N	N	N	N	N	N	Y	N	DC-1-23-M-HX-CR35	Added for variety of environments. Variety of types of equipment (10)
480-V switchgear ventilation shutoff (discharge) damper FCV-5045	23	7	OE	N	N	Y	Y	Y	Y	N	N	Y	N	DC-1-23-P-D-VAC-1-FCV-5045	Associated with IPEEE modification.
Control room ventilation supply fan suction damper MOD-10	23	8	DIE	N	N	N	N	N	N	N	N	N	N	DC-1-23-P-D-VAC-1-MOD-10	Added per recommendation from PRA group.
Control room ventilation supply fan suction damper MOD-9	23	8	DIE	N	N	N	N	N	N	N	N	N	N	DC-1-23-P-D-VAC-1-MOD-9	Added per recommendation from PRA group.
Control room ventilation filter unit FU39	23	18	DIE	N	N	N	N	N	N	N	N	N	N	DC-1-23-P-FL-FU39	Added per recommendation from PRA group.
Containment purge valve FCV-660	23	7	ICE	N	N	N	N	N	Y	N	N	Y	N	DC-1-23-P-VOA-VAC-1-FCV-660	
Containment purge valve RCV-11	23	7	ICE	N	N	N	N	N	Y	N	N	Y	N	DC-1-23-P-VOA-VAC-1-RCV-11	
Hydrogen monitoring system supply valve FCV-238	23	8	ICE	N	N	N	N	N	Y	N	N	N	N	DC-1-23-P-VOS-VAC-1-FCV-238	Added for variety of equipment types (8)
Post-LOCA sample system return line to containment valve FCV-700	23	8	MIE	N	N	N	N	N	Y	N	N	N	N	DC-1-23-P-VOS-VAC-1-FCV-700	Added for variety of equipment types (8)
ASW FCV-602 backup air accumulator	25	21	MIE	N	N	N	Y	Y	N	N	N	N	N	DC-1-25-M-TK-BUAS-602	Added for variety of systems.

					Safety Function										
Component	System No.	Equipment Class	Environment	New or Replacement (Y/N)	RRC	RCPC	RCIC	DHR	CF	Risk Significance (Y/N)	SSEL (Y/N)	IPEEE (Y/N)	IPEEE Enhancement (Y/N)	Walkdown Package No.	Remarks
Auxiliary relay rack No. RNARA	36	20	MIE	N	N	Y	N	N	N	N	N	Y	N	DC-1-36-E-PNL-RNARA	
Process control and protection system - process control rack No. 1A	36	18	MIE	N	N	Y	Y	N	Y	N	N	Y	Y	DC-1-36-I-PNL-RNO1A	Associated with IPEEE modification.
SSPS - input relay cabinet No. RNSIA	38	20	MIE	N	Y	N	Y	Y	Y	Y	N	Y	N	DC-1-38-I-PNL-RNSIA	
SSPS - logic cabinet No. RNSLA	38	20	MIE	N	Y	N	Y	Y	Y	Y	N	Y	N	DC-1-38-I-PNL-RNSLA	
SSPS - output relay cabinet No. RNSOA	38	20	MIE	N	Y	N	Y	Y	Y	Y	N	Y	N	DC-1-38-I-PNL-RNSOA	
SSPS - test cabinet No. RNSTA	38	20	MIE	N	Y	N	Y	Y	Y	Y	N	Y	N	DC-1-38-I-PNL-RNSTA	
Reactor trip switchgear/control panel No. B1	41	20	MIE	N	Y	N	N	N	N	N	N	Y	N	DC-1-41-E-PNL-PORTB1	
Process control and protection system - computer input rack No. RNCI1	43	18	MIE	N	N	Y	Y	N	Y	N	N	Y	Y	DC-1-43-I-PNL-RNCI1	Associated with IPEEE modification.
4160-V switchgear, Bus G	63	3	MIE	Y	Y	Y	Y	Y	Y	N	Y	Y	N	DC-1-63-E-LC-SHG	
4160-V safeguard relay panels	63	20	MIE	N	Y	Y	Y	Y	Y	N	N	Y	N	DC-1-63-E-PNL-RHG	
4160-V potential transformer, Bus G	63	4	MIE	N	Y	Y	Y	Y	Y	N	N	Y	N	DC-1-63-E-XF-SHG12PT	
480-V breaker cabinets (load centers), Bus F	64	2	MIE	N	Y	Y	Y	Y	Y	N	Y	Y	N	DC-1-64-E-LC-SPF	
Auxiliary relay panel	64	20	MIE	N	Y	Y	Y	Y	Y	N	N	Y	N	DC-1-64-E-PNL-ARP	Associated with 480-V Motor Control Centers
4160-V/480-V transformer No. THF10	64	4	MIE	N	Y	Y	Y	Y	Y	N	N	Y	N	DC-1-64-E-XF-THF10	
120-Vac instrument breaker panel No. PY11	65	2	MIE	N	Y	Y	Y	Y	Y	N	N	Y	N	DC-1-65-E-LC-PY11	
120-Vac inverter No. IY11	65	16	MIE	Y	Y	Y	Y	Y	Y	N	Y	Y	N	DC-1-65-E-UPS-IY11	
Regulating transformer No. TRY11	65	4	MIE	Y	Y	Y	Y	Y	Y	N	N	N	N	DC-1-65-E-XF-TRY11	Added for variety of types of equipment (4) and as replacement equipment
125-Vdc batteries and battery rack No. BAT11	67	15	MIE	Y	Y	Y	Y	Y	Y	N	Y	Y	N	DC-1-67-E-BT-BAT11	Batteries and racks replaced as part of major modification.
125-Vdc battery charger No. BTC11	67	16	MIE	Y	Y	Y	Y	Y	Y	Y	Y	Y	N	DC-1-67-E-BTC-BTC11	

					Safety Function										
Component	System No.	Equipment Class	Environment	New or Replacement (Y/N)	RRC	RCPC	RCIC	DHR	CF	Risk Significance (Y/N)	SSEL (Y/N)	IPEEE (Y/N)	IPEEE Enhancement (Y/N)	Walkdown Package No.	Remarks
125-Vdc distribution panel No. PD25	67	14	MIE	N	N	N	N	N	N	N	N	N	N	DC-1-67-E-LC-PD25	No safety function, but seismically qualified. Added for a variety of types of equipment (14).
125-Vdc switchgear/breaker panel No. SD11	67	2	MIE	N	Y	Y	Y	Y	Y	N	Y	Y	N	DC-1-67-E-LC-SD11	
Control console No. CC1	96	20	MIE	N	Y	Y	Y	Y	Y	N	N	Y	N	DC-1-96-E-PNL-1CC1	
Main control board No. VB1	96	20	MIE	N	Y	Y	Y	Y	Y	N	N	Y	N	DC-1-96-E-PNL-1VB1	
Hot shutdown panel	96	20	MIE	N	Y	Y	Y	Y	Y	N	N	Y	N	DC-1-96-E-PNL-HSP	
Mechanical panel PM-101 (CCW supply header instrumentation)	96	20	MIE	N	N	N	N	Y	N	N	Y	N	N	DC-1-96-M-PNL-PM-101	Contains transmitter No.: - FT-65, FT-68, FT-69
Mechanical panel PM-103 (SG No. 1 instrumentation)	96	20	OE	Y	N	N	N	N	N	N	Y	N	N	DC-1-96-M-PNL-PM-103	Added from SSEL. Contains transmitter No.: - PT-514, PI-518
Mechanical panel PM-185 (condensate storage tank instrumentation)	96	20	MIE	Y	N	N	N	N	N	N	Y	N	N	DC-1-96-M-PNL-PM-185	Contains transmitter No.: - LT-40
Mechanical panel PM-45 (SG level instrumentation)	96	20	ICE	Y	N	N	N	N	N	N	Y	N	N	DC-1-96-M-PNL-PM-45	Contains transmitter No.: - LT-529.
Mechanical panel PM-79 (reactor level/wide range pressure instrumentation)	96	20	MIE	N	N	N	Y	Y	N	N	Y	N	N	DC-1-96-M-PNL-PM-79	Contains transmitter No.: - PT-403
Mechanical panel PM-89 (RC Loop 2 cold leg instrumentation)	96	20	ICE	N	N	N	Y	Y	N	N	Y	N	N	DC-1-96-M-PNL-PM-89	Contains transmitter No.: - PT-460

Attachment D
Unit 1: Seismic Walkdown Equipment List -2 Base List 2

Component
Quick opening transfer tube closure
Spent fuel pool pumps
Spent fuel pool heat exchanger
Makeup water transfer pump
Indoor hose reel stations
Spent fuel pool pump transfer switches
Spent fuel pool cooling system temperature instrumentation
Fuel handling building ventilation system supply fans
Fuel handling building ventilation system fan flow control damper
Fuel handling building ventilation system mode dampers
Fuel handling building ventilation system backdraft dampers (fan shutoff dampers)
Fuel handling building ventilation system normal exhaust fan
Fuel handling building ventilation system normal backdraft dampers (fan shutoff dampers)
Fuel handling building ventilation system normal fan flow control damper

Attachment E
Unit 1: Seismic Walkdown Equipment List-2 Rapid Drain-Down List

Spent Fuel Pool Rapid Drain-Down Equipment List	
Component	**Comments**
QOTTC	Verify condition of QOTTC
SFP fill piping from hold-up tank recirculation pumps	Verify that pipe terminates above elevation 122 ft and check for anti-siphon hole
Suction piping to SFP pumps	Verify that the SFP wall penetration is above elevation 122 ft
Return piping from SFPCS Hxs	Verify that anti-siphon hole is present and unobstructed
SFP skimmer suction piping	Verify that suction point is above elevation 122 ft
SFP skimmer return piping	Verify that termination point is above elevation 122 ft
Fuel transfer tube expansion joint	Verify condition of expansion joint
Return piping from makeup water transfer pumps	Verify that removable spool has been removed or that submerged termination of pipe is above elevation 122 ft

Attachment F
Unit 1: Seismic Walkdown Equipment List-2 List

Structure, System, or Component	System No.	Equipment. Class	Environment	S-Q (Y/N)	Rapid Drain-down	New or Replacement (Y/N)	W/D Package No.	Remarks
Makeup water transfer pump No. 1	16	5	MIE	Y	N	N	DC-0-16-M-PP-MUWTP1	Primary source for refilling SFP.
Indoor hose reel station FW-120-A38-1	18	0	MIE	Y	N	N	DC-1-18-F-HR-FW-120-A38-1	Added due to use for SFP makeup per OP AP-22. The same hose reel station is used to refill the SFP in either unit.
Fuel transfer tube expansion joint	42	0	MIE	Y	Y	N	DC-1-42-M-EJ-FTC-1-EJ2	
QOTTC	42	0	ICE	Y	Y	N	DC-1-42-M-MISC-QOTTC	
SFP fill piping from hold-up tank recirculation pumps	8	0	MIE	N	Y	N	DC-1-08-P-P-LINE-1119	Verify that pipe terminates above elevation 122 ft and check for anti-siphon hole.
SFP pump No. 1	13	5	MIE	Y	N	N	DC-1-13-M-PP-SFPP1	
SFP Hx	13	21	MIE	Y	N	N	DC-1-13-M-HX-SFPHE1	
SFP pump transfer switch No. 2	13	1	MIE	Y	N	N	DC-1-13-SFPPTS1	

Structure, System, or Component	System No.	Equipment. Class	Environment	S-Q (Y/N)	Rapid Drain-down	New or Replacement (Y/N)	W/D Package No.	Remarks
Suction piping to SFP pumps	13	0	MIE	Y	Y	N	DC-1-13-P-P-LINE-154	Verify that the SFP wall penetration is above elevation 122 ft.
Return piping from SFPCS Hx	13	21	MIE	N	Y	N	DC-1-13-P-P-LINE-159	Verify that anti-siphon hole is present and unobstructed.
SFPC temperature instrumentation	13	19	MIE	Y	N	N	DC-1-13-I-I-TI-653	Mounted on SFPCS Hx Outlet piping
SFP skimmer suction piping Line-1080	13	0	MIE	N	Y	N	DC-1-13-P-P-LINE-1080	Verify that suction point is above elevation 122 ft.
SFP skimmer suction piping Line-1118	13	0	MIE	N	Y	N	DC-1-13-P-P-LINE-1118	Verify that suction point is above elevation 122 ft.
SFP skimmer return piping Line-1121	13	0	MIE	N	Y	N	DC-1-13-P-P-LINE-1121	Verify that termination point is above elevation 122 ft.
SFP skimmer return piping Line-1122	13	0	MIE	N	Y	N	DC-1-13-P-P-LINE-1122	Verify that termination point is above elevation 122 ft.
SFP skimmer return piping Line-1123	13	0	MIE	N	Y	N	DC-1-13-P-P-LINE-1123	Verify that termination point is above elevation 122 ft.
Return piping from makeup water transfer pump (Line-2242)	16	0	MIE	N	Y	N	DC-1-16-P-P-LINE-2242	Verify that removable spool has been removed or that submerged termination of pipe is above elevation 122 ft.
FHBVS Normal exhaust Fan E-4	23	9	DIE	Y	N	N	DC-1-23-M-BF-E-4	

Attachment G
Unit 1: Potentially Adverse Seismic Conditions Entered into the Corrective Action Program

Description	Walkdown Checklist	Finding	CAP Status
Potential seismic interaction between sprinkler and conduit	1-AFWP1	Spatial Interaction - Fire/Flood	Note
Light fixture near S-31 filters could swing into filter housing	1-BFS-31	Spatial Interaction - SISI	Note
Seismically induced flooding potential found in piping close to service cooling water piping in CCW Hx room	1-CCWHE	Spatial Interaction - Fire/Flood	Closed
Improperly latched doors on Eagle racks	1-RNAR-A	Configuration	Closed
Missing grating clips near MSSV	1-RV-13	Configuration	Note
Missing grating clip near 1-PCV-20	1-RV-3	Configuration	Note
LD-30 anchor bolts installed undersized	DC-1-04-LD30	Configuration	Note
CCW Hx 1-1 support: spalled concrete (edge of pedestal)	DC-1-14-M-HX-CCWHE1	Degraded-Other	Note
Hoist chain SISI issue with CCW Pump 1-1	DC-1-14-M-PP-CCWP1	Spatial Interaction - SISI	Note
Light fixture in ASW pump 1-1 room Issue	DC-1-17-M-PP-ASP1	Spatial Interaction - SISI	Note
Hose reel A38 gaps at wall brackets	DC-1-18-F-HR-FW-120-A38-1	Configuration	Note
Feedwater hose reel A38 swings into valve	DC-1-18-F-HR-FW-120-A38-1	Spatial Interaction - SISI	Note
Screws missing from DFO grating (1-1)	DC-1-21-P-VOA-DEG-1-LCV-85	Configuration	Note
Screws missing at DFO grating (1-2); (EOC From DEG 1-1 inspection)	DC-1-21-P-VOA-DEG-1-LCV-85 -EOC	Configuration	Note
Screw missing from DFO grating (1-3) (EOC from DEG 1-1 inspection)	DC-1-21-P-VOA-DEG-1-LCV-85-EOC	Configuration	Note
Fan E-103 anchor bolt lacks full thread engagement	DC-1-23-M-BF-E-103	Configuration	Note
Weld size discrepancy for Fan S-35	DC-1-23-M-BF-S-35	Configuration	Note

Description	Walkdown Checklist	Finding	CAP Status
Modification to damper (channel stiffeners) not shown on drawings.	DC-1-23-P-D-VAC-1-MOD-10	Configuration	Note
Incorrect drawing for FU39 support anchor	DC-1-23-P-FL-FU39	Configuration	Note
Weak light fixture support connection	DC-1-36-E-PNL-RNARA	Spatial Interaction - SISI	Note
UPS IY11 missing some mounting bolts for transformers	DC-1-65-E-UPS-IY11	Configuration	Note
Expansion anchor edge distance issue on Panel TRNM	DC-1-65-E-XF-TRY11	Configuration	Note
Potential clearance issue at MS-1-FCV-41	DC-1-04-P-VOA-MS-1-FCV-41	Configuration	Note

Note: In accordance with EPRI 1025286, these conditions have been entered into the CAP. These items are open and have been prioritized in accordance with CAP guidance.

Attachment H
Unit 1: Inaccessible Component List

Component Description	Seismic Walkdown Checklist	Area Walkdown Checklist	Outage
DG 1-1 control panel	DC-1-21-E-PNL-GQD11	1-DEG-11	1R18
DG 1-1 excitation cubicle	DC-1-21-E-PNL-SED11	1-DEG-11	1R18
DG 1-1 radiator No. 1A	DC-1-21-M-HX-JWR1A	1-DEG-11	1R18
480-V breaker cabinet (load center) Bus G	DC-1-64-E-LC-SPG	1-MCCBUSG	1R18
4160-V/480-V transformer THG10	DC-1-64-E-XF-THG10	1-MCCBUSG	1R18
Reactor trip switchgear/control panel No. PORTB1	DC-1-41-E-PNL-PORTB1	1-PORTB1	1R18
Mechanical panel PM-89 (RC Loop 2 cold leg instrumentation)	DC-1-96-M-PNL-PM-89	1-PM-89	1R18
SI accumulator 1-1	DC-1-09-M-TK-AT1	1-SIAT1	1R18
Containment recirculation sump, sump strainer, trash rack, and vortex suppressor	DC-1-09-M-STR-STR-RHR1	1-STR-RHR1	1R18
Quick Opening Transfer Tube Closure	DC-1-42-M-MISC-QOTTC	1-QOTTC	1R18
Hydrogen monitoring system supply valve VAC-1-FCV-238	DC-1-23-P-VOS-VAC-1-FCV-238	1-FCV-238	1R18
Containment purge valve VAC-1-RCV-11	DC-1-23-P-VOA-VAC-1-RCV-11	1-PEN62	1R18
Containment purge valve VAC-1-FCV-660	DC-1-23-P-VOA-VAC-1-FCV-660	1-PEN61	1R18
Mechanical panel PM-45 (SG level instrumentation)	DC-1-96-M-PNL-PM-45	1-PM-45	1R18
Containment fan cooler No. 1-1	DC-1-23-M-BF-CFC1-1	1-CFC1	1R18
4160-V switchgear Bus G	DC-1-63-E-LC-SHG	1-4KV-G	1R18
4160-V safeguard relay panel Bus G	DC-1-63-E-PNL-RHG	1-4KV-G	1R18
125-Vdc switchgear/breaker panel No. SD11	DC-1-67-E-LC-SD11	1-BTC11	1R18
4160-V potential transformer No. SHG12PT	DC-1-63-E-XF-SHG12PT	1-4KV-G	1R18

Attachment I
Unit 1: Seismic Walkdown Checklists

SWC Number	Number of SWC Checklist pages	Number of LBEs	Number of LBE pages
DC-0-16-M-PP-MUWTP1	2	0	0
DC-0-17-P-VOM-SW-1-FCV-601	2	0	0
DC-0-18-M-PP-FP1	2	1	1
DC-0-21-M-PP-DFOTP2	2	1	1
DC-0-21-P-FL-DFOTF2	2	0	0
DC-1-03-I-E-TE-117	2	0	0
DC-1-03-M-PP-AFWP1	2	0	0
DC-1-03-M-PP-AFWP2	2	0	0
DC-1-03-P-VOH-FW-1-LCV-110	2	1	1
DC-1-03-P-VOH-FW-1-LCV-115	2	0	0
DC-1-03-P-VOM-FW-1-LCV-106	2	1	1
DC-1-04-LD30	2	1	2
DC-1-04-P-V-MS-1-FCV-152	2	1	1
DC-1-04-P-VOA-MS-1-FCV-41	2	2	2
DC-1-04-P-VOA-MS-1-PCV-20	2	0	0
DC-1-04-P-VOM-MS-1-FCV-37	2	0	0
DC-1-04-P-VR-MS-1-RV-13	2	0	0
DC-1-04-P-VR-MS-1-RV-3	2	0	0
DC-1-04-P-VR-MS-1-RV-61	2	0	0
DC-1-04-P-VR-MS-1-RV-8	2	0	0
DC-1-08-I-T-LT-102	2	0	0
DC-1-08-M-HX-SWHE1	2	0	0
DC-1-08-M-PP-CCP1	2	0	0
DC-1-08-M-PP-CCP3	2	1	1
DC-1-08-P-P-LINE-1119	2	0	0
DC-1-08-P-VOA-CVCS-1-FCV-110A	2	0	0
DC-1-08-P-VOM-CVCS-1-8104	2	0	0
DC-1-08-P-VOM-CVCS-1-LCV-112B	2	0	0
DC-1-09-M-PP-SIP1	2	0	0
DC-1-09-P-VOM-SI-1-8805A	2	0	0
DC-1-09-P-VOM-SI-1-8923A	2	0	0
DC-1-10-M-HX-RHE1	2	0	0
DC-1-10-M-PP-RHRP2	2	0	0
DC-1-10-P-VOM-RHR-1-8700A	2	0	0
DC-1-10-P-VOM-RHR-1-FCV-641A	2	0	0

SWC Number	Number of SWC Checklist pages	Number of LBEs	Number of LBE pages
DC-1-10-P-VOM-RHR-1-FCV-641B	2	0	0
DC-1-13-I-I-TI-653	2	0	0
DC-1-13-M-HX-SFPHE1	2	0	0
DC-1-13-M-PP-SFPP1	2	0	0
DC-1-13-P-P-LINE-154	2	0	0
DC-1-13-P-P-LINE-159	2	0	0
DC-1-13-P-P-LINE-1080	2	0	0
DC-1-13-P-P-LINE-1118	2	0	0
DC-1-13-P-P-LINE-1121	2	0	0
DC-1-13-P-P-LINE-1122	2	0	0
DC-1-13-P-P-LINE-1123	2	0	0
DC-1-13-SFPPTS1	2	2	2
DC-1-14-E-P-VOM-CCW-1-FCV-430	2	0	0
DC-1-14-I-E-TE-6	2	0	0
DC-1-14-M-HX-CCWHE1	2	1	1
DC-1-14-M-PP-CCWP1	2	1	1
DC-1-14-M-TK-CCWST1	2	0	0
DC-1-14-P-VOA-CCW-1-FCV-365	2	0	0
DC-1-16-P-P-LINE-2242	2	0	0
DC-1-17-M-PP-ASP1	2	2	2
DC-1-17-P-VOA-SW-1-FCV-602	2	0	0
DC-1-18-F-HR-FW-120-A38-1	2	2	2
DC-1-21-E-HT-LOH1	2	0	0
DC-1-21-E-S-EQD-11	2	0	0
DC-1-21-LPH65	2	0	0
DC-1-21-M-EN-DEG1	2	0	0
DC-1-21-M-MISC-ES1	2	0	0
DC-1-21-M-MISC-IS1	2	0	0
DC-1-21-M-TK-AR1A	2	0	0
DC-1-21-P-FL-CAF1	2	0	0
DC-1-21-P-VOA-DEG-1-LCV-85	2	1	1
DC-1-23-E-HT-EH-29A	2	0	0
DC-1-23-E-PNL-CRC1	2	0	0
DC-1-23-E-PNL-PCCFC1	2	0	0
DC-1-23-M-BC-CP-35	2	0	0
DC-1-23-M-BF-E-1	2	0	0
DC-1-23-M-BF-E-4	2	0	0
DC-1-23-M-BF-E-103	2	1	1

SWC Number	Number of SWC Checklist pages	Number of LBEs	Number of LBE pages
DC-1-23-M-BF-E-43	2	1	1
DC-1-23-M-BF-S-31	2	0	0
DC-1-23-M-BF-S-35	2	2	4
DC-1-23-M-BF-S-43	2	1	1
DC-1-23-M-HX-CR35	2	0	0
DC-1-23-P-D-VAC-1-FCV-5045	2	1	1
DC-1-23-P-D-VAC-1-MOD-10	2	1	18
DC-1-23-P-D-VAC-1-MOD-9	2	0	0
DC-1-23-P-FL-FU39	2	1	1
DC-1-23-P-VOS-VAC-1-FCV-700	2	0	0
DC-1-25-M-TK-BUAS-602	2	0	0
DC-1-36-E-PNL-RNARA	2	1	1
DC-1-38-I-PNL-RNSIA	2	0	0
DC-1-38-I-PNL-RNSLA	2	0	0
DC-1-38-I-PNL-RNSOA	2	0	0
DC-1-38-I-PNL-RNSTA	2	0	0
DC-1-42-M-EJ-FTC-1-EJ2	2	1	1
DC-1-43-I-PNL-RNCI1	2	0	0
DC-1-64-E-PNL-ARP	2	0	0
DC-1-65-E-LC-PY11	2	0	0
DC-1-65-E-UPS-IY11	2	1	3
DC-1-65-E-XF-TRY11	2	1	1
DC-1-67-E-BT-BAT11	2	0	0
DC-1-67-E-BTC-BTC11	2	0	0
DC-1-67-E-LC-PD15	2	0	0
DC-1-96-E-PNL-1CC1	2	0	0
DC-1-96-E-PNL-1VB1	2	0	0
DC-1-96-E-PNL-HSP	2	0	0
DC-1-96-M-PNL-PM-101	2	0	0
DC-1-96-M-PNL-PM-103	2	1	1
DC-1-96-M-PNL-PM-185	2	0	0
DC-1-96-M-PNL-PM-79	2	0	0
DC-1-99-I-PNL-RNO1A	2	0	0

Note: Pages include applicable portions of the checklists and LBE required by EPRI 1025286 guidelines.

Seismic Walkdown Checklist (SWC)

Status: Y

Equipment ID No DC-0-16-M-PP-MUWTP1 Equipment Class: 5

Equipment Description: Makeup Water Transfer Pump

Location: Building: Auxiliary Floor El. 100 Room, Area: 1-MUWTP1

Manufacturer, model, Etc.

Instructions for Completing Checklist

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

Anchorage

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

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

No bent, broken, or missing hardware.

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

No corrosion observed on pump anchorage

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

No cracks observed

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.) N/A

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

Interaction Effects

7. Are soft targets free from impact by nearby equipment or structures? Y

No credible interaction sources

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

Piping and conduit are well supported overhead. No masonry walls.

9. Do attached lines have adequate flexibility to avoid damage? Y

Expansion joints on both inlet and outlet piping. Conduit to pump goes through flex.

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

Other Adverse Conditions

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

Firewater manual valve hand wheel chains are restrained to prevent swinging. Overhead firewater pipe with sprinkler head is restrained so interaction causing a spray is unlikely.

Seismic Walkdown Checklist (SWC)

Status: Y

Equipment ID No DC-0-16-M-PP-MUWTP1 Equipment Class: 5

Equipment Description: Makeup Water Transfer Pump

Comment:

Evaluated by: DKN Date: 10/17/2012

SMM 10/19/2012

Seismic Walkdown Checklist (SWC)

Status: Y

Equipment ID No DC-0-17-P-VOM-SW-1-FCV-601 Equipment Class: 8

Equipment Description: ASW Cross-Tie Valve

Location: Building: Intake Floor El. -3.1 Room, Area: 1-ASP1

Manufacturer, model, Etc. Limitorque

Instructions for Completing Checklist

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

Anchorage

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

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

All attached anchors appear to be in good condition.

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

No corrosion is visible.

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

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

No adverse conditions were identified.

Interaction Effects

7. Are soft targets free from impact by nearby equipment or structures? Y

No credible sources were seen that could impact soft targets.

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

Overhead lighting and conduit were adequately secured to prevent collapse.

9. Do attached lines have adequate flexibility to avoid damage? Y

All attached lines used flexible conduit.

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

No seismic interaction issues were identified.

Other Adverse Conditions

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

Seismic Walkdown Checklist (SWC)

Status: Y

Equipment ID No DC-0-17-P-VOM-SW-1-FCV-601 Equipment Class: 8

Equipment Description: ASW Cross-Tie Valve

Comment:

Approximately 30" from operator to center of ~30" pipe.

Evaluated by: KTM Date: 10/15/2012

SMM 10/18/2012

Seismic Walkdown Checklist (SWC)

Status: Y

Equipment ID No DC-0-18-M-PP-FP1 Equipment Class: 5

Equipment Description: Fire Pump No. 1

Location: Building: Auxiliary Floor El. 115 Room, Area: 0-FP1

Manufacturer, model, Etc.

Instructions for Completing Checklist

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

Anchorage

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

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

All anchorage is in good condition.

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

Anchorage is free of corrosion. Top of skid and pump couplings show signs of corrosion. No structural issues were identified but Operations Shift Foreman was notified about the leaking couplings and mechanical corrosion. Y

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

Some minor spalling of the concrete was seen. No cracks in the concrete were found. No issues were identified.

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

(8) 1/2" anchor bolts (4 on each side of the pump). 3/8" fillet welds attaching the channel section to the skid.

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

Anchorage appears to be free of adverse seismic conditions.

Interaction Effects

7. Are soft targets free from impact by nearby equipment or structures? Y

No credible sources were identified that could impact soft targets.

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

Lights and overhead ducting are adequately secured. No masonry walls or other overhead equipment nearby.

9. Do attached lines have adequate flexibility to avoid damage? Y

Attached lines appear to have adequate flexibility.

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

No issues were identified.

Other Adverse Conditions

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

Seismic Walkdown Checklist (SWC)

Status: Y

Equipment ID No DC-0-18-M-PP-FP1 Equipment Class: 5

Equipment Description: Fire Pump No. 1

Comment:

Active leaks on both pump couplings. Shift foreman notified. Also, there is visible corrosion on the pump couplings. See Attachment No. 1 for disposition.

Evaluated by: KTM Date: 10/23/2012

SMM 10/22/12

Seismic Walkdown Checklist (SWC)

Diablo Canyon Power Plant, Unit 0

Equipment No. DC-0-18-M-PP-FP1

Licensing Basis Evaluation

Issue:

Corrosion noted on the inboard and outboard pump seals of Firewater Pump 0-1 on the 115' elevation of the U-1 Aux. Building.

Evaluation:

The corrosion is on the exterior face of the seal. There is no active leakage from the corrosion area (i.e. the exposed face of the seal); therefore, the corrosion is not impacting the ability of the seal to perform its function.

SAPN has been prepared for seals to be inspected by a corrosion engineer, and a plan developed based on the results of that inspection.

Notification Required: Yes (50515811)

Evaluated by: SMM 10/18/12

Reviewed by: PWH Patrick Hwang 10/18/12

Seismic Walkdown Checklist (SWC)

Status: Y

Equipment ID No DC-0-21-M-PP-DFOTP2 Equipment Class: 5

Equipment Description: Diesel Fuel Oil Transfer Pump No. 0-2

Location: Building: CPSE Floor El. 85 Room, Area: 0-DFOVAULT

Manufacturer, model, Etc.

Instructions for Completing Checklist

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

Anchorage

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

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

The "J" bolts were in good shape and the nuts were secured on top of an inverted channel section.

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

Anchors ok , channel connections mild corrosion see pictures (at the interface between the channel and the concrete). See Attachment No. 1 for disposition.

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

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.) N/A

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

The J bolts appear to be in good shape.

Interaction Effects

7. Are soft targets free from impact by nearby equipment or structures? Y

No falling objects could impact the metal braided flex hoses.

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

The light fixtures, conduits are all well anchored and secure. No masonry walls. The room is a confined space underground concrete vault.

9. Do attached lines have adequate flexibility to avoid damage? Y

Metal flex hoses are connected to the pump suction and discharge.

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

PP is well secured with adequate protective coating, no significant corrosion. The concrete vault with sealed cover environment does not appear to be conducive to excessive corrosion.

Other Adverse Conditions

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

There are no spatial interactions and the pump can safely perform its safety function.

Seismic Walkdown Checklist (SWC)

Status: Y

Equipment ID No DC-0-21-M-PP-DFOTP2 Equipment Class: 5

Equipment Description: Diesel Fuel Oil Transfer Pump No. 0-2

Comment:

Inspection was performed on 0-2 vault due to availability of the confined space at this date.

Evaluated by: SMM Date: 10/19/2012

NXJ 10/19/12

Seismic Walkdown Checklist (SWC)

Diablo Canyon Power Plant, Unit 0

Equipment No. DC-0-21-M-PP-DFOTP2 Attachment 1, Page 1 of 1

Licensing Basis Evaluation

Issue:

Coatings damage ("bubbled" coatings) was noted on the side of the inverted steel channel supporting the pump, indicating corrosion underneath.

Evaluation:

The structural integrity of the support is maintained as there are no visible signs of severe steel degradation affecting structural capacity of the supporting steel.

Recommendation:
As outlined in the below SAPN, engineering recommends that the steel channel (topside and underside surfaces) be inspected and coatings repaired as appropriate.

Notification Required: Yes (50511275)

Evaluated by: SMM 10/19/2012

Reviewed by: NJ 10/19/2012

Seismic Walkdown Checklist (SWC)

Status: Y

Equipment ID No DC-0-21-P-FL-DFOTF2 Equipment Class: 0

Equipment Description: Diesel Fuel Oil Transfer Pump No. 0-2 Filters

Location: Building: CPSE Floor El. 85 Room, Area: 0-DFOVAULT

Manufacturer, model, Etc.

Instructions for Completing Checklist

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Anchorage

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

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

No visible Damage to 4 studs

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

Some mild surface corrosion on south side of base plate.

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

Welded studs to plate that's welded to embed. No visible cracks noted.

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

Anchorage to embed plate per design drawings.

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

The welded studs are secure in place and the base plate is welded to embedded plates which appear to be in good condition (ie Free of visible cracks).

Interaction Effects

7. Are soft targets free from impact by nearby equipment or structures? Y

No potential for falling or swinging objects. The instrument gauges and tubing connected to the wall behind the filter are seismically secured and no adverse interactions were noted.

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

The components connected to the vault ceiling (eg conduits) were all well anchored and seismically secure.

9. Do attached lines have adequate flexibility to avoid damage? Y

The system is seismically qualified.

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

No sources nearby. A two inch pipe on west side is securely tied down. There is about 1/4" clearance; however the two components are rigidly anchored with insignificant relative displacement.

Other Adverse Conditions

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

The filter housing appears to be in good structural condition with no adverse spatial interaction.

Seismic Walkdown Checklist (SWC)

Status: Y

Equipment ID No DC-0-21-P-FL-DFOTF2 Equipment Class: 0

Equipment Description: Diesel Fuel Oil Transfer Pump No. 0-2 Filters

Comment:

Inspection was performed on 0-2 vault due to availability of the confined space at this date.

Evaluated by: SMM Date:

10/19/2012

NXJ

10/19/2012

Seismic Walkdown Checklist (SWC)

Status: Y

Equipment ID No DC-1-03-I-E-TE-117 Equipment Class: 19

Equipment Description: AFW Lead Temperature Element

Location: Building: Pipeway Floor El. 115 Room, Area: 1-TE117

Manufacturer, model, Etc.

Instructions for Completing Checklist

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

Anchorage

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

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

No bent, broken, or missing hardware.

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

No corrosion on the anchor bolts

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

No cracks in the concrete were observed

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.) N/A

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

Interaction Effects

7. Are soft targets free from impact by nearby equipment or structures? Y

The structural steel and grating protect the temperature element

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

The temperature element is shielded by the structural steel. Conduit and piping are well supported.

9. Do attached lines have adequate flexibility to avoid damage? Y

Conduit is supported close to the box mounted on the concrete wall and where the element enters the pipe. The element has a flex section adjacent to the pipe.

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

Other Adverse Conditions

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

Seismic Walkdown Checklist (SWC)

Status: Y

Equipment ID No DC-1-03-I-E-TE-117 Equipment Class: 19

Equipment Description: AFW Lead Temperature Element

Comment:

The anchor bolts are galvanized. No corrosion observed.

Evaluated by: DKN Date: 10/17/2012

SMM 10/19/2012

Seismic Walkdown Checklist (SWC)

Status: Y

Equipment ID No DC-1-03-M-PP-AFWP1 Equipment Class: 5

Equipment Description: AFW Pump No. 1 (Turbine-Driven)

Location: Building: Auxiliary Floor El. 100 Room, Area: 1-AFWP1

Manufacturer, model, Etc.

Instructions for Completing Checklist

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

Anchorage

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

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

All anchor bolts are present and in good condition.

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

No corrosion is present.

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

Very mild spalling has occurred on the concrete pedestal. No structural issues. No cracks in concrete or pedestal.

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.) N/A

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

No issues were identified.

Interaction Effects

7. Are soft targets free from impact by nearby equipment or structures? Y

No credible sources could impact soft targets.

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

Overhead piping and cable trays looked adequately secured. Lights are wall mounted. No ceiling tiles or block walls in the area.

9. Do attached lines have adequate flexibility to avoid damage? Y

All attached lines appear to have adequate flexibility.

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

No issues were identified.

Other Adverse Conditions

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

Seismic Walkdown Checklist (SWC)

Status: Y

Equipment ID No DC-1-03-M-PP-AFWP1 Equipment Class: 5

Equipment Description: AFW Pump No. 1 (Turbine-Driven)

Comment:

Evaluated by: KTM Keri Moore Date: 10/15/2012

SMM [signature] 10/18/2012

Seismic Walkdown Checklist (SWC)

Status: Y

Equipment ID No DC-1-03-M-PP-AFWP2 Equipment Class: 5

Equipment Description: AFW Pump No. 2 (Motor- Driven)

Location: Building: Auxiliary Floor El. 100 Room, Area: 1-AFWP2

Manufacturer, model, Etc. Louis Allis COGS 600HP Motor; Byron Jackson 3X6X9E-9STG Pump

Instructions for Completing Checklist

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Anchorage

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

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

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

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

Some minor spalling or chipping of concrete pad around perimeter. Judged to be structurally insignificant.

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

(6) 1-1/4" anchor bolts through skid

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

Interaction Effects

7. Are soft targets free from impact by nearby equipment or structures? Y

Some lube oil reservoirs at ends of pump and motor and some flexible tubing may be considered soft targets. Judged to be well protected and no visible sources that would fall to impact them. One of the lube oil reservoirs is spaced about an inch away from a conduit support - judged to be sufficient spacing since conduit support and pump are very rigid. An electrical instrument is in contact with a small manual valve (FW-1-173). Both are rigidly supported and differential motion between the two is judged unlikely.

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

Some 2" threaded FP piping overhead - judged to be well supported by U-bolts generally at about 6'-8' centers on welded steel brackets. No credible sources to impact and damage FP piping to cause flood or spray.

9. Do attached lines have adequate flexibility to avoid damage? Y

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

Other Adverse Conditions

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

Seismic Walkdown Checklist (SWC)

Status: Y

Equipment ID No DC-1-03-M-PP-AFWP2 Equipment Class: 5

Equipment Description: AFW Pump No. 2 (Motor- Driven)

Comment:

Evaluated by: FFG Date: 10-16-12

SMM 10/22/12

Seismic Walkdown Checklist (SWC)

Status: Y

Equipment ID No DC-1-03-P-VOH-FW-1-LCV-110 Equipment Class: 7

Equipment Description: AFW Pump Discharge to Steam Generator Level Control Valves

Location: Building: Pipeway Floor El. 116 Room, Area: 1-LCV-110

Manufacturer, model, Etc. ASCO NH92W6002E2RND304XXX00X18

Instructions for Completing Checklist

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

Anchorage

1. Is the anchorage configuration verification required (i.e, is the item one of the 50% of SWEL items requiring such verification)?	N
2. Is the anchorage free of bent, broken, missing or loose hardware?	Y
3. Is the anchorage free of corrosion that is more than mild surface oxidation?	Y
4. Is the anchorage free of visible cracks in the concrete near the anchors?	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.)	N/A
6. Based on the above anchorage evaluations, is the anchorage free of potentially adverse seismic conditions?	Y

Interaction Effects

7. Are soft targets free from impact by nearby equipment or structures? *No nearby credible interaction sources.*	Y
8. Are overhead equipment, distribution systems, ceiling tiles, and lighting, and masonry block walls not likely to collapse onto the equipment?	Y
9. Do attached lines have adequate flexibility to avoid damage?	Y
10. Based on the above seismic interaction evaluations, is equipment free of potentially adverse seismic interaction effects?	Y

Other Adverse Conditions

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

One of the yoke support strut attachment points appears to be significantly corroded beyond just surface corrosion. Attachment 1 addresses the corrosion.

Seismic Walkdown Checklist (SWC)

Status: Y

Equipment ID No DC-1-03-P-VOH-FW-1-LCV-110 Equipment Class: 7

Equipment Description: AFW Pump Discharge to Steam Generator Level Control Valves

Comment:

3" line reduced to 2" at valve. Supported within 18" of valve with U-bolts. Operator is supported independently with a strut connected to steel structure. Not likely to be any significant differential displacement between pipe anchor point and yoke anchor point on structure.

Evaluated by: FFG Fred Grant Date: 10-24-12

SMM Scott Miller 10/22/12

Seismic Walkdown Checklist (SWC)

Diablo Canyon Power Plant, Unit 1

Equipment No. DC-1-03-P-VOH-FW-1-LCV-110

Licensing Basis Evaluation

Issue:

One of the yoke support strut attachment points appears to be significantly corroded beyond just surface corrosion.

Evaluation:

Strut is associated with pipe hanger no. 1/43R (drawing no. 049302, sheets 50, 50A, 50B, and 50X) and is attached to the structural framing of the Pipeway Structure with a pin and welded lug (Item No. 6)..

The hanger calculation (calculation no. H-1501, rev. 7, page 12) indicates that the qualification of this supported is based on similarity to hanger no. 1/37R (calculation no. I-477, rev. 8). Based on the magnitude of the support load (<350lbs per calculation I-477, page 11) and the stress interaction ratios, the loss in metal area due to the noted corrosion is not significant. Therefore, the hanger is acceptable in its current degraded condition.

Notification Required: Yes (50508447)

Evaluated by: _____ 8/23/12

Reviewed by: _____ SKM 8/24/12

Seismic Walkdown Checklist (SWC)

Status: Y

Equipment ID No DC-1-03-P-VOH-FW-1-LCV-115 Equipment Class: 7

Equipment Description: AFW Pump Discharge to Steam Generator Level Control Valves

Location: Building: Auxiliary Floor El. 115 Room, Area: 1-LCV115

Manufacturer, model, Etc.

Instructions for Completing Checklist

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Anchorage

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

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

All attaching bolts are present and in good condition.

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

No corrosion is present.

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

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

No Issues were identified. There is approx. 3/4" clearance between strut on motor and diagonal brace and nearby conduit support. Judged adequate.

Interaction Effects

7. Are soft targets free from impact by nearby equipment or structures? Y

No credible sources can impact soft targets.

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

All overhead equipment and lights are adequately secured. No block walls or ceiling tiles in the area.

9. Do attached lines have adequate flexibility to avoid damage? Y

All attached lines use flexible conduit.

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

No Interaction issues were identified.

Other Adverse Conditions

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

Seismic Walkdown Checklist (SWC)

Status: Y

Equipment ID No DC-1-03-P-VOH-FW-1-LCV-115 Equipment Class: 7

Equipment Description: AFW Pump Discharge to Steam Generator Level Control Valves

Comment:

45" operator height to the center of the pipe. 2" diameter pipe at valve/pipe interface and widens to 3" diameter pipe. Seismic bracing at top of yoke.

Evaluated by: KTM Date: 10/15/2012

SMM 10/18/2012

Seismic Walkdown Checklist (SWC)

Status: Y

Equipment ID No DC-1-03-P-VOM-FW-1-LCV-106 Equipment Class: 8

Equipment Description: Turbine-Driven AFW Pump Discharge to Steam Generator Level Control Valves

Location: Building: Pipeway Floor El. 115 Room, Area: 1-LCV-110

Manufacturer, model, Etc. Limitorque

Instructions for Completing Checklist

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

Anchorage

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

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

All attaching bolts appear to be adequately secured.

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

Surface corrosion had already been identified and called for cleaning the rust and recoating the valve. Judged to be ok.

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

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

No issues were identified.

Interaction Effects

7. Are soft targets free from impact by nearby equipment or structures? Y

Soft targets appear to be free from impact by nearby equipment and structures.

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

Nothing is likely to collapse on the valve.

9. Do attached lines have adequate flexibility to avoid damage? Y

All attached lines use flexible conduit.

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

No interaction issues were found.

Other Adverse Conditions

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

Seismic Walkdown Checklist (SWC)

Status: Y

Equipment ID No DC-1-03-P-VOM-FW-1-LCV-106 Equipment Class: 8

Equipment Description: Turbine-Driven AFW Pump Discharge to Steam Generator Level Control Valves

Comment:

3" line reduced to 2" at valve. Valve is leaking at about 2 drops per minute near the yoke. SFM notified. See Attachment 1 for disposition.

Evaluated by: KTM Date: 10/23/2012

SMM 10/22/12

Seismic Walkdown Checklist (SWC)

Diablo Canyon Power Plant, Unit 1

Equipment No. DC-1-03-P-VOM-FW-1-LCV-106

Licensing Basis Evaluation

Issue:

Unit 1 LCV-106 has a slow leak (1-2 drops per minute) from the valve stem/packing.

Evaluation of As-Found Condition

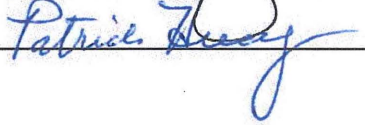
SAPN 50492014 was prepared for this issue prior to the Fukushima seismic walkdowns (June of 2012). It states that during a Section XI pressure test walkdown, aux feedwater leakage was identified at the stem/packing area of LCV-106 on the Unit 1 pipe rack. This 1 dpm leakage was evaluated by operation in Task #2 and determined to not impact the function of the valve. This notification was updated with information provided by the Fukushima walkdown team.

Fukushima seismic walk downs also identified that LCV-106 has a slow leak in SAPN 50510829. The leak rate appears to have remained stable since originally identified in June of 2012. Therefore, SAPN 50510829 was considered a duplicate and subsequently closed.

As discussed above, this condition does not impact the operation of DCPP.

Notification Required: No, since it was previously identified. However 50510829 was created and subsequently closed to avoid duplication.

Evaluated by: SMM  10/19/12

Reviewed by: PWH  10/19/12

Seismic Walkdown Checklist (SWC)

Status: N

Equipment ID No DC-1-04-LD30 Equipment Class: 1

Equipment Description: Isolation Valve FCV-95 Control Switch Contactor (Supply to Turbine-Driven AFW Pump)

Location: Building: Auxiliary Floor El. 115 Room, Area: 1-LD30

Manufacturer, model, Etc.

Instructions for Completing Checklist

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

Anchorage

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

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

All anchor bolts appear to be in good condition.

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

No corrosion is present.

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

No visible cracks in the wall behind the panel.

6. 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.) N

(4) 3/8" as built wall mounting anchors at each corner of the panel should be 1/2" according to the design drawings. (6) anchor bolts attaching the interior mounting plate to the panel itself are consistent with plant drawings. See Attachment 1 for disposition.

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

No issues were identified.

Interaction Effects

7. Are soft targets free from impact by nearby equipment or structures? Y

No soft targets exist.

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

Block walls in the room are properly restrained. Lights are rod hung. Overhead distribution systems appear to be properly secured.

9. Do attached lines have adequate flexibility to avoid damage? Y

Attached lines appear to have adequate flexibility.

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

No seismic interaction issues were identified.

Other Adverse Conditions

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

Seismic Walkdown Checklist (SWC)

Status: N

Equipment ID No DC-1-04-LD30 Equipment Class: 1

Equipment Description: Isolation Valve FCV-95 Control Switch Contactor (Supply to Turbine-Driven AFW Pump)

Comment:

Evaluated by: KTM Date: 10/23/2012

SMM 10/22/12

Seismic Walkdown Checklist (SWC)

Diablo Canyon Power Plant, Unit 1

Equipment No. DC-1-04-LD30

Licensing Basis Evaluation

Issue:

Anchor bolt of Unit 1 FCV-95 control panel LD-30 is found to be 3/8"ø, which is smaller than what was qualified -- ½"ø anchor bolts.

Evaluation:

Control panel LD-30 is safety related. The seismic evaluation of LD-30 is documented in seismic legacy calc # ES-031. According to the original field walk down sketch, LD-30 was supported by four (4) ½" ø anchor bolts. Therefore, LD-30 was qualified by seismic testing with four (4) ½" ø anchor bolts.

The as-found condition is evaluated and shown on Page 2. The results show that the as-found condition has significant margin. Therefore, the as-found condition has no adverse effects on the seismic qualification of Unit 1 LD-30.

Therefore, this condition does not impact the operation of DCPP.

Notification Required: Yes (50510947)

Evaluated by: Patrick Kwong 10/22/12

Reviewed by: [signature] 10/22/12

Seismic Walkdown Checklist (SWC)

Diablo Canyon Power Plant, Unit 1

Equipment No. DC-1-4-LD-30

Unit 1 LD-30:

Enclosure: 44x28x12, weight = 190 lbs

Components: (see Sheet 28 and Attachment 18 sheets 18-3 & 18-4 of ES-31)

Description	Unit Weight (lbs)	Qty	Weight (lbs)
Terminal Block	2	5	10
Starter & Contactor	10	1	10
Fuse & Fuse Block	4	1	4
Relay	4	2	8
Fuse & Fuse Block	1	1	1

Total weight = 190 + 33 = 223 lbs, Conservatively used 250 lbs.

Floor Peak RRS : DDE/HE (Attachment 7, Sheet 3)

Static coefficient factor 1.5 is applied to consider multi-modes and multi-frequency effects.

Horizontal : 3.69 g*1.5 = 5.535 g

Vertical : 1.73 g*1.5 = 2.6 g

Calculated Anchor Bolt Forces:

$$Tension: \ (250*1*6)/(41*2)+\left(\sqrt{\left(\frac{250*5.535}{4}\right)^2+\left(\frac{250*2.6*6}{41*2}\right)^2+\left(\frac{250*5.535*6}{24*2}\right)^2}\right)=408\ lbs$$

$$Shear: \sqrt{[250*(1+2.6)]^2+[250*5.535]^2}\ /4=413\ lbs$$

Allowable: 3/8" anchor bolt, f'c = 5000 psi (drawing 054162, Page 11)

P = 700 lbs , S = 730 lbs

$$\left(\frac{408}{700}\right)^{5/3}+\left(\frac{413}{730}\right)^{5/3}=.794<1.0\ "OK"$$

Conclusion: 3/8" ø anchor bolts are adequate.

Seismic Walkdown Checklist (SWC)

Status: Y

Equipment ID No DC-1-04-P-V-MS-1-FCV-152 Equipment Class: 0

Equipment Description: Stop Valve on Supply to Turbine-Driven AFW Pump No. 1

Location: Building: Auxiliary Floor El. 100 Room, Area: 1-AFWP1

Manufacturer, model, Etc.

Instructions for Completing Checklist

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

Anchorage

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

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

Anchorage to the pipeline appears to be adequate.

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

Anchorage is free of corrosion that is more than mild surface oxidation.

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

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

No issues were identified.

Interaction Effects

7. Are soft targets free from impact by nearby equipment or structures? Y

No credible sources could impact soft targets.

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

No ceiling tiles or masonry walls in the area. Lights are wall mounted. Overhead piping and cable/conduit raceways appear to be adequately secured.

9. Do attached lines have adequate flexibility to avoid damage? Y

No flexibility issues were identified. All electrical connections are made with flex conduit.

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

No adverse seismic interaction effects were found.

Other Adverse Conditions

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

Seismic Walkdown Checklist (SWC)

Status: Y

Equipment ID No DC-1-04-P-V-MS-1-FCV-152 Equipment Class: 0

Equipment Description: Stop Valve on Supply to Turbine-Driven AFW Pump No. 1

Comment:

Pipe near DC-1-04-P-V-MS-1-FCV-152 is leaking. See Attachment 1 for disposition. Operator height of the valve is 32" from the center line of the attaching pipe. Pipe is heavily insulated so the diameter could not be measured. Pipe has about a 10" diameter with the insulation.

Evaluated by: KTM Date: 10/23/2012

SMM 10/24/12

Seismic Walkdown Checklist (SWC)

Diablo Canyon Power Plant, Unit 1

Equipment No. DC-1-04-P-V-MS-1-FCV-152

Licensing Basis Evaluation

Issue:

A leaking pipe was noted near DC-1-04-P-V-MS-1-FCV-152..

Evaluation:

The leaking pipe does not impact the structural integrity of the pipe valve and therefore no further evaluation is required.

Notification Required: Yes (50510687)

Evaluated by: _____ 10/22/12

Reviewed by: _____ 10/22/12

Seismic Walkdown Checklist (SWC)

KA 11/21/12

Status: ~~Y~~ N SWU 11/14/12

Equipment ID No DC-1-04-P-VOA-MS-1-FCV-41 Equipment Class: 7

Equipment Description: MS Isolation Valves

Location: Building: Pipeway Floor El. 115 Room, Area: 1-FCV-41

Manufacturer, model, Etc. 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 judgements and findings. Additional space is provided at the end of this checklist for documenting other comments.

Anchorage

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

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

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

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

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

Interaction Effects

KA 11/21/12

7. Are soft targets free from impact by nearby equipment or structures? ~~Y~~ N SWU 11/14/12

1.5" clearance between bottom of valve and floor grating below on north side of pipe. On south side, clearance is 1/2" at one location and 5/32" at a second location. If main steam line moves significantly the valve actuator may impact floor. See Attachment 1 for resolution.

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

Overhead floor grating may fall and impact valve instrumentation but the grating is judged to be adequately secured so falling is unlikely.

9. Do attached lines have adequate flexibility to avoid damage? Y

10. Based on the above seismic interaction evaluations, is equipment free of potentially adverse seismic interaction effects? ~~Y~~ N SWU 11/14/12

Other Adverse Conditions

11. Have you looked for and found no other seismic conditions that could adversely affect the safety function of the equipment? Y KA 11/21/12

Corrosion on valve body (not on actuator) was noted. Some flaking of corrosion product and pitting is visible. MSIVs are inspected per MP M-51.14. Observed corrosion is acceptable. See Atachment 2 for disposition.

KA 11/21/12

Seismic Walkdown Checklist (SWC)

Status: X N SMM 11/19/12

Equipment ID No DC-1-04-P-VOA-MS-1-FCV-41 Equipment Class: I

Equipment Description: MS Isolation Valves

Comment:

Evaluated by: FFG Fred Gaunt Date: 10-24-12

SMM Scott M. Mills 10/22/12

Seismic Walkdown Checklist (SWC)

Diablo Canyon Power Plant, Unit 1

Equipment No. DC-1-04-P-VOA-MS-1-FCV-41

Licensing Basis Evaluation

Issue:

Vertical clearance between bottom of valve actuators appears to be insufficient to accommodate vertical seismic differential displacements of valve relative to Pipeway structure:

- *1.5 in. to grating on north side*
- *5/32 in to structural bolt on south side*

Evaluation:

See discussion in Notification No. 50507811.

This condition does not impact the operation of DCPP, but modifications are required.

Notification Required: Yes (50507376)

Evaluated by: W. Mun. Hom WMH 8/27/12

Reviewed by: SxM9 10/22/12

Seismic Walkdown Checklist (SWC)

Diablo Canyon Power Plant, Unit 1

Equipment No. DC-1-04-P-VOA-MS-1-FCV-41

Licensing Basis Evaluation

Issue:

Corrosion of valve body (not on actuator) may be significant. Some flaking of corrosion product and pitting is visible.

Evaluation:

A SAP notification search was performed, but this corrosion issue in not explicitly addressed. However, Notification No. 50503202 indicates that the MSIVs are inspected per MP M-51.14 (Generic Check Valve Inspection), so the routine inspections should determine if the corrosion is sufficient to compromise valve integrity.

This condition does not impact the operation of DCPP.

Notification Required: No

Evaluated by: William R. Hom UMS 8/27/12

Reviewed by: [signature] SMS 10/22/12

Seismic Walkdown Checklist (SWC)

Status: Y

Equipment ID No DC-1-04-P-VOA-MS-1-PCV-20 Equipment Class: 7

Equipment Description: MS Power Operated Relief Valves (10% Dump)

Location: Building: Pipeway Floor El. 134 Room, Area: 1-RV-3

Manufacturer, model, Etc. Copes Vulcan D-100-160

Instructions for Completing Checklist

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

Anchorage

1. Is the anchorage configuration verification required (i.e, is the item one of the 50% of SWEL items requiring such verification)?	N
2. Is the anchorage free of bent, broken, missing or loose hardware?	Y
3. Is the anchorage free of corrosion that is more than mild surface oxidation?	Y
4. Is the anchorage free of visible cracks in the concrete near the anchors?	Y
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.)	N/A
6. Based on the above anchorage evaluations, is the anchorage free of potentially adverse seismic conditions?	Y

Interaction Effects

7. Are soft targets free from impact by nearby equipment or structures?	Y
Position sensors/indicators are potential soft targets but they are judged to be sufficiently far from adjacent structures and components so that there are no credible interaction sources.	
8. Are overhead equipment, distribution systems, ceiling tiles, and lighting, and masonry block walls not likely to collapse onto the equipment?	Y
Overhead is structural steel - not likely to collapse.	
9. Do attached lines have adequate flexibility to avoid damage?	Y
Flexible rubber pneumatic lines and flexible conduit attached to air actuators.	
10. Based on the above seismic interaction evaluations, is equipment free of potentially adverse seismic interaction effects?	Y

Other Adverse Conditions

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

Seismic Walkdown Checklist (SWC)

Status: Y

Equipment ID No DC-1-04-P-VOA-MS-1-PCV-20 Equipment Class: 7

Equipment Description: MS Power Operated Relief Valves (10% Dump)

Comment:

Evaluated by: FFG Fred Grant Date: 10-16-12

SMM Scott M Mey Date: 10/22/12

Seismic Walkdown Checklist (SWC)

Status: Y

Equipment ID No DC-1-04-P-VOM-MS-1-FCV-37 Equipment Class: 8

Equipment Description: Isolation Valves on Supply to Turbine-Driven AFW Pump

Location: Building: Pipeway Floor El. 124 Room, Area: 1-FCV-37

Manufacturer, model, Etc. Limitorque (SMB size-00)

Instructions for Completing Checklist

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

Anchorage

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

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

All attaching bolts are in good condition.

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

Mild surface corrosion on valve body and attaching bolts. Judged to be ok.

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

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

No issues were identified.

Interaction Effects

7. Are soft targets free from impact by nearby equipment or structures? Y

No credible sources could impact soft targets.

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

Floor grating above the valve would prevent any overhead equipment from collapsing on the valve.

9. Do attached lines have adequate flexibility to avoid damage? Y

Attached lines use flexible conduit.

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

No issues were identified.

Other Adverse Conditions

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

Seismic Walkdown Checklist (SWC)

Status: Y

Equipment ID No DC-1-04-P-VOM-MS-1-FCV-37 Equipment Class: 8

Equipment Description: Isolation Valves on Supply to Turbine-Driven AFW Pump

Comment:

Evaluated by: KTM Date: 10/15/2012

SMM 10/18/2012

Seismic Walkdown Checklist (SWC)

Status: Y

Equipment ID No DC-1-04-P-VR-MS-1-RV-13 Equipment Class: 7

Equipment Description: MS Safety Valves

Location: Building: Auxiliary Floor El. 140 Room, Area: 1-RV-13

Manufacturer, model, Etc.

Instructions for Completing Checklist

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

Anchorage

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

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

All attaching bolts are present.

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

Surface corrosion is visible on the anchorage. Judged to be ok

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

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

No issues were identified.

Interaction Effects

7. Are soft targets free from impact by nearby equipment or structures? Y

Overhead security grating protects the soft targets on the valve. Grating itself is adequately supported.

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

Nothing is likely to collapse on the equipment.

9. Do attached lines have adequate flexibility to avoid damage? Y

Attached line uses a flexible conduit.

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

No issues were identified.

Other Adverse Conditions

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

Seismic Walkdown Checklist (SWC)

Status: Y

Equipment ID No DC-1-04-P-VR-MS-1-RV-13 Equipment Class: 7

Equipment Description: MS Safety Valves

Comment:

Evaluated by: KTM Date: 10/15/2012

SMM 10/18/2012

Seismic Walkdown Checklist (SWC)

Status: Y

Equipment ID No DC-1-04-P-VR-MS-1-RV-3 Equipment Class: 7

Equipment Description: MS Safety Valves

Location: Building: Pipeway Floor El. 115 Room, Area: 1-RV-3

Manufacturer, model, Etc. Maxiflow Consolidated Safety Valve Dresser 3707RA-RT21

Instructions for Completing Checklist

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

Anchorage

1. Is the anchorage configuration verification required (i.e, Is the item one of the 50% of SWEL items requiring such verification)?	N
2. Is the anchorage free of bent, broken, missing or loose hardware?	Y
3. Is the anchorage free of corrosion that is more than mild surface oxidation?	Y
4. Is the anchorage free of visible cracks in the concrete near the anchors?	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.)	N/A
6. Based on the above anchorage evaluations, is the anchorage free of potentially adverse seismic conditions?	Y

Interaction Effects

7. Are soft targets free from impact by nearby equipment or structures?	Y
Instrument tubing may be a soft target but no credible or significant interaction sources visible. It is well protected from above by steel frame and corrugated steel roof. If containment structure spalls, concrete fragments may fall, but concrete is ASME inspection item so spalling is unlikely.	
8. Are overhead equipment, distribution systems, ceiling tiles, and lighting, and masonry block walls not likely to collapse onto the equipment?	Y
9. Do attached lines have adequate flexibility to avoid damage?	Y
10. Based on the above seismic interaction evaluations, is equipment free of potentially adverse seismic interaction effects?	Y

Other Adverse Conditions

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

Seismic Walkdown Checklist (SWC)

Status: Y

Equipment ID No DC-1-04-P-VR-MS-1-RV-3 Equipment Class: 7

Equipment Description: MS Safety Valves

Comment:

Some minor corrosion on steel frame judged insignificant.

Evaluated by: FFG Date: 10-19-12

SMM 10/22/12

Seismic Walkdown Checklist (SWC)

Status: Y

Equipment ID No DC-1-04-P-VR-MS-1-RV-61 Equipment Class: 7

Equipment Description: MS Safety Valves

Location: Building: Auxiliary Floor El. 140 Room, Area: 1-RV-13

Manufacturer, model, Etc.

Instructions for Completing Checklist

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

Anchorage

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

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

All attaching bolts are present.

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

No corrosion is present on the valve.

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

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

No issues were identified.

Interaction Effects

7. Are soft targets free from impact by nearby equipment or structures? Y

Overhead security grating protects the soft targets on the valve. Grating itself is adequately supported.

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

Nothing is likely to collapse on the equipment.

9. Do attached lines have adequate flexibility to avoid damage? Y

Attached line uses a flexible conduit.

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

No issues were identified.

Other Adverse Conditions

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

Seismic Walkdown Checklist (SWC)

Status: Y

Equipment ID No DC-1-04-P-VR-MS-1-RV-61 Equipment Class: 7

Equipment Description: MS Safety Valves

Comment:

Evaluated by: KTM Date: 10/15/2012

SMM 10/18/2012

Seismic Walkdown Checklist (SWC)

Status: Y

Equipment ID No DC-1-04-P-VR-MS-1-RV-8 Equipment Class: 7

Equipment Description: MS Safety Valves

Location: Building: Pipeway Floor El. 115 Room, Area: 1-RV-3

Manufacturer, model, Etc. Maxiflow Consolidated

Instructions for Completing Checklist

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

Anchorage

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

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

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

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

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

Interaction Effects

7. Are soft targets free from impact by nearby equipment or structures? Y

Instrument tubing may be a soft target but no credible or significant interaction sources visible. Corrugated roofing above may fall but judged unlikely to impact the tubing and unlikely to damage tubing if it impacts. If containment structure spalls, concrete fragments may fall and impact soft targets, but concrete is ASME inspection item so spalling is unlikely.

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

See comments on question 7.

9. Do attached lines have adequate flexibility to avoid damage? Y

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

Other Adverse Conditions

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

Seismic Walkdown Checklist (SWC)

Status: Y

Equipment ID No DC-1-04-P-VR-MS-1-RV-8 Equipment Class: 7

Equipment Description: MS Safety Valves

Comment:

Evaluated by: FFG Fred Grant Date: 10.16.12

SMM Scott M. Mey 10/22/12

Seismic Walkdown Checklist (SWC)

Status: Y

Equipment ID No DC-1-08-I-T-LT-102 Equipment Class: 18

Equipment Description: Boric Acid Storage Tank No. 1 Level Transmitter

Location: Building: Auxiliary Floor El. 115 Room, Area: 1-LT-102

Manufacturer, model, Etc. Rosemount

Instructions for Completing Checklist

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

Anchorage

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

Transmitter has a flange with (4) bolts that is mounted to a pipe flange that is part of a valve/pipe run welded to the tank. Y

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

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

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

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

Interaction Effects

7. Are soft targets free from impact by nearby equipment or structures? Y

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

9. Do attached lines have adequate flexibility to avoid damage? Y

The stainless steel tubing runs in a straight line from the transmitter to the next support and thus has limited flexibility. However, it is judged that the relative movement between the transmitter and the top of the braced tubing support, which is bolted to the floor, will be minimal.

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

Other Adverse Conditions

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

Seismic Walkdown Checklist (SWC)

Status: Y

Equipment ID No DC-1-08-I-T-LT-102 Equipment Class: 18

Equipment Description: Boric Acid Storage Tank No. 1 Level Transmitter

Comment:

Evaluated by: TRK Thomas L. Kipp Date: 10/14/2012

DRC DT R. Cruz 10/18/2012

Seismic Walkdown Checklist (SWC)

Status: Y

Equipment ID No DC-1-08-M-HX-SWHE1 Equipment Class: 21

Equipment Description: Seal Water Heat Exchanger

Location: Building: Auxiliary Floor El. 85 Room, Area: 1-SWHE1

Manufacturer, model, Etc. Atlas Industrial

Instructions for Completing Checklist

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

Anchorage

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

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

All anchorage is present and in good condition.

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

No corrosion is present on the anchorage.

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

Paint overlaying concrete pedestal has started to crack. No visible cracks in the concrete itself.

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

(4) 3/4" anchor bolts (2 on each side of the heat exchanger). One end of the heat exchanger is single nutted and the opposite end is double nutted where the slotted holes are.

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

No issues were identified.

Interaction Effects

7. Are soft targets free from impact by nearby equipment or structures? Y

No credible sources can impact soft targets.

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

Nothing is likely to collapse on the equipment.

9. Do attached lines have adequate flexibility to avoid damage? Y

All attached lines appear to have adequate flexibility.

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

No seismic interaction issues were identified.

Other Adverse Conditions

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

Seismic Walkdown Checklist (SWC)

Status: Y

Equipment ID No DC-1-08-M-HX-SWHE1 Equipment Class: 21

Equipment Description: Seal Water Heat Exchanger

Comment:

Evaluated by: KTM Date: 10/15/2012

SMM 10/10/2012

Seismic Walkdown Checklist (SWC)

Status: Y

Equipment ID No DC-1-08-M-PP-CCP1 Equipment Class: 5

Equipment Description: Centrifugal Charging Pump No. 1 (Emergency)

Location: Building: Auxiliary Floor El. 73 Room, Area: 1-CCP1

Manufacturer, model, Etc.

Instructions for Completing Checklist

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

Anchorage

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

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

All anchor bolts are present and in good condition.

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

Very mild surface corrosion had already been identified on the top of the skid (ref SAPN 50367401). Not a seismic concern.

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

Some of the concrete pedestal has spalled off near the edge at west end. Not a seismic issue.

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

(16) 1" bolts are consistent with plant documentation. 6 anchors on each side of the pump and 2 on each end. See drawing 439519 for details.

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

No seismic concerns to note.

Interaction Effects

7. Are soft targets free from impact by nearby equipment or structures? Y

No credible sources can impact soft targets.

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

All overhead lighting and distribution systems appear to be adequately secured.

9. Do attached lines have adequate flexibility to avoid damage? Y

Attached lines appear to have adequate flexibility.

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

No seismic interaction issues.

Other Adverse Conditions

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

No issues.

Seismic Walkdown Checklist (SWC)

Status: Y

Equipment ID No DC-1-08-M-PP-CCP1 Equipment Class: 5

Equipment Description: Centrifugal Charging Pump No. 1 (Emergency)

Comment:

Includes subcomponent DC-1-08-M-PP-AP1.

Evaluated by: KTM Date: 10/15/2012

SMM 10/18/2012

Seismic Walkdown Checklist (SWC)

Status: Y

Equipment ID No DC-1-08-M-PP-CCP3 Equipment Class: 5

Equipment Description: Centrifugal Charging Pump No. 3(Normal)

Location: Building: Auxiliary Floor El. 73 Room, Area: 1-CCP3

Manufacturer, model, Etc.

Instructions for Completing Checklist

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

Anchorage

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

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

All 12 anchor bolts are present and securely fastened.

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

Anchors are coated and no corrosion is present.

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

Small cracks are seen on the concrete pedestal on both sides of the pump. Likely due to shrinkage. See Attachment No. 1 for disposition.

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

(12) 7/8" anchor bolts attaching the skid to the concrete pedestal.

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

See notes from question #4 and see Attachment No. 1 for disposition.

Interaction Effects

7. Are soft targets free from impact by nearby equipment or structures? Y

No credible sources to impact soft targets on the pump.

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

All overhead conduit and lighting are securely restrained to either the ceiling are the walls.

9. Do attached lines have adequate flexibility to avoid damage? Y

Attached lines use flexible conduit.

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

No interaction effects to note.

Other Adverse Conditions

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

See Auxiliary 1-CCP3-AWC about fire piping seismic interaction.

Seismic Walkdown Checklist (SWC)

Status: Y

Equipment ID No DC-1-08-M-PP-CCP3 Equipment Class: 5

Equipment Description: Centrifugal Charging Pump No. 3(Normal)

Comment:

Evaluated by: KTM Date: 10/23/2012

SMM 10/24/12

Seismic Walkdown Checklist (SWC)

Diablo Canyon Power Plant, Unit 1

Equipment No. DC-1-08-M-PP-CCP3

Licensing Basis Evaluation

Issue:

Small cracks are visible on the concrete pedestal on both sides of the pump.

Evaluation:

According to Civil foundation drawing 4038877, twelve (12) 7/8" ø anchor thread rods hold the pump and motor skid, extend through the concrete pedestal and into the concrete slab with at least 7" minimum embedment length and epoxy grout. Furthermore, #4 rebar hairpins are installed around the anchor rods (North-south direction) as well as four corners (East-west direction) of the concrete pedestal. Therefore, the small cracks have no significant effects on the structural integrity of the concrete pedestal. Civil Calculation No. EQP-387 remains valid.

Therefore, this condition does not impact the operation of DCPP.

Notification Required: No.

Evaluated by: Patrick Huang 10/22/12

Reviewed by: [signature] 10/22/12

Status: Y

Seismic Walkdown Checklist (SWC)

Equipment ID No. DC-1-08-P-P-LINE-1119 Equipment Class[12] 0. (Other)

Equipment Description: SFP Fill Piping from Hold-up Tank Recirculation Pumps

Location: Bldg. Auxiliary Floor El. 140' Room, Area Unit 1 Fuel Handling Area

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 the checklist for documenting other comments.

Anchorage

1.	Is the anchorage configuration verification required (i.e., is the item one of the 50% of SWEL items requiring such verification)?	N
2.	Is the anchorage free of bent, broken, missing or loose hardware? This SWC applies to potential SFP rapid drain-down through a pipe entering the SFP. Therefore, anchorage is not applicable.	N/A
3.	Is the anchorage free of corrosion that is more than mild surface corrosion?	N/A
4.	Is the anchorage free of visible cracks in the concrete near the anchorage?	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 anchorage configuration verification is required.)	N/A
6.	Based on the above anchorage evaluations, is the anchorage free of potentially adverse seismic conditions?	N/A

Interaction Effects

7.	Are soft targets free from impact by nearby equipment or structures? This SWC applies to potential SFP rapid drain-down through a pipe entering the SFP. Therefore, seismic interaction effects are not applicable.	N/A
8.	Are overhead equipment, distribution systems, ceiling tiles and lighting, and masonry block walls not likely to collapse onto the equipment?	N/A
9.	Do attached lines have adequate flexibility to avoid damage?	N/A
10.	Based on the above seismic interaction evaluations, is the equipment free of potentially adverse seismic interaction effects?	N/A

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

Status: Y

Seismic Walkdown Checklist (SWC)

Equipment ID No. DC-1-08-P-P-LINE-1119 Equipment Class[12] 0. (Other)

Equipment Description: SFP Fill Piping from Hold-up Tank Recirculation Pumps

Other Adverse Conditions

11.	Have you looked for and found no other seismic conditions that could adversely affect the safety function of the plant equipment? This SWC applies to potential SFP rapid drain-down through a pipe entering the SFP. Therefore, safety functions are not applicable.	N/A

Comments (Additional pages may be added as necessary)

This SWC applies to potential SFP rapid drain-down through the fill piping which enters the fuel transfer canal area of the SFP. Drawing no. 500086 specifies that a 1/2" diameter anti-siphon hole be provided in the pipe at elev. 136'-3". Visual inspection verified the presence of the hole (see photo on sheet 3) and its approximate elevation (just below the girth weld between the vertical section of the pipe and the elbow). Since the hole is located significantly more than 10' above the spent fuel assemblies stored in the SFP (approx. elevation 122'), rapid drain-down of the SFP inventory through this pipe is not possible.

Evaluated by:	WRH	Date:	10/04/2012
	DRC		10/04/2012

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

Seismic Walkdown Checklist (SWC)

Status: Y

Equipment ID No DC-1-08-P-VOA-CVCS-1-FCV-110A Equipment Class: 7

Equipment Description: Boric Acid Blender inlet valve

Location: Building: Auxiliary Floor El. 100 Room, Area: 1-LCV112B

Manufacturer, model, Etc.

Instructions for Completing Checklist

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

Anchorage

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

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

No broken, bent , or missing hardware.

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

No significant corrosion.

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

No cracks observed near pipe support anchors.

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

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

Interaction Effects

7. Are soft targets free from impact by nearby equipment or structures? Y

Only the air lines are likely soft targets. However no credible interaction sources

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

Conduit and piping are well supported. The lighting above has a safety chain.

9. Do attached lines have adequate flexibility to avoid damage? Y

The attached air lines have adequate slack.

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

Other Adverse Conditions

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

Seismic Walkdown Checklist (SWC)

Status: Y

Equipment ID No DC-1-08-P-VOA-CVCS-1-FCV-110A Equipment Class: 7

Equipment Description: Boric Acid Blender inlet valve

Comment:

1-FCV-110A is a line mounted cylindrically shaped AOV. The pipe is restrained by pipe supports vertically and in the transverse direction on either side of the valve. The pipe is restrained in the axial direction by a u-bolt connected to a stiff support anchored to the adjacent wall. This valve is in the same room as valves 1-FCV-112B and 8104

Evaluated by: DKN Date: 10/17/2012

SMM 10/19/2012

Seismic Walkdown Checklist (SWC)

Status: Y

Equipment ID No DC-1-08-P-VOM-CVCS-1-8104 Equipment Class: 8

Equipment Description: Emergency Borate Valve to Charging Pump

Location: Building: Auxiliary Floor El. 100 Room, Area: 1-LCV112B

Manufacturer, model, Etc. Limitorque Actuator

Instructions for Completing Checklist

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

Anchorage

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

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

No broken, bent, or missing hardware.

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

Some minor surface corrosion on the support pedestal. No impact on the design capacity.

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

No cracks observed near the pipe support anchors.

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

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

Interaction Effects

7. Are soft targets free from impact by nearby equipment or structures? Y

The valve operator has a plastic cover piece over the position indicator. There are no credible interaction sources to impact this target. The valve operator touches the insulation of the attached pipe. However, the operator and pipe are well supported and will have little or no relative displacement. Also the pipe insulation is very deformable. Therefore, no issues.

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

The overhead conduit is well supported. The overhead lighting has a safety chain restraint. No masonry walls.

9. Do attached lines have adequate flexibility to avoid damage? Y

Attached pipe is supported adjacent to the valve and the valve operator is braced.

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

Other Adverse Conditions

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

Seismic Walkdown Checklist (SWC)

Status: Y

Equipment ID No DC-1-08-P-VOM-CVCS-1-8104 Equipment Class: 8

Equipment Description: Emergency Borate Valve to Charging Pump

Comment:

The valve operator is braced to the floor. The operator has a pipe clamp which is supported by a steel angle frame. The angle legs are welded to a steel pedestal which is welded to a base plate. The operator support base plate has 6 - 1/2 inch diameter anchor bolts.

Evaluated by: DKN Date: 10/17/2012

DRC 10/19/2012

Seismic Walkdown Checklist (SWC)

Status: Y

Equipment ID No DC-1-08-P-VOM-CVCS-1-LCV-112B Equipment Class: 8

Equipment Description: Volume Control Tank Outlet to Centrifugal Charging Pump Suction Valves

Location: Building: Auxiliary Floor El. 100 Room, Area: 1-LCV112B

Manufacturer, model, Etc. Anchor Valve Company body, Limitorque actuator

Instructions for Completing Checklist

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

Anchorage

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

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

No broken, bent, or missing hardware.

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

No significant corrosion.

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

No cracks observed near the support anchors.

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

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

Interaction Effects

7. Are soft targets free from impact by nearby equipment or structures? Y

Power cable is relatively protected under the adjacent pipe, Unistrut frame, and the operator. The small tubing is also protected by the operator.

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

The nearby condult is well supported. The overhead light has a safety chain restraint. No masonry walls.

9. Do attached lines have adequate flexibility to avoid damage? Y

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

Other Adverse Conditions

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

Seismic Walkdown Checklist (SWC)

Status: Y

Equipment ID No DC-1-08-P-VOM-CVCS-1-LCV-112B Equipment Class: 8

Equipment Description: Volume Control Tank Outlet to Centrifugal Charging Pump Suction Valves

Comment:

The valve operator is restrained by a structural steel collar which is supported to the floor with two L4x4x3/8 vertical members. The L4x4s are bolted to a stiffened base plate. The base plate is anchored to the concrete floor with 4 - 1 inch Hilti Kwik Bolts. The pipe is well supported adjacent to the valve. No significant relative displacements are expected between the pipe and operator.

Evaluated by: DKN Date: 10/17/2012

DRC 10/19/2012

Seismic Walkdown Checklist (SWC)

Status: Y

Equipment ID No DC-1-09-M-PP-SIP1 Equipment Class: 5

Equipment Description: SI Pump No. 1

Location: Building: Auxiliary Floor El. 85 Room, Area: 1-SIP1

Manufacturer, model, Etc.

Instructions for Completing Checklist

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

Anchorage

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

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

All anchorage appears to be in good condition.

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

No corrosion is present.

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

No visible cracks.

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

(10) 5/8" anchor bolts are consistent with plant documentation. See drawing 443481 for details.

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

No adverse conditions were seen.

Interaction Effects

7. Are soft targets free from impact by nearby equipment or structures? Y

No credible sources are present to impact soft targets.

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

No block walls in the area. Lighting is ball and socket type to allow movement. HVAC duct anchorage appears to be adequate.

9. Do attached lines have adequate flexibility to avoid damage? Y

All attached lines appear to have adequate flexibility.

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

No seismic interaction scenarios were seen.

Other Adverse Conditions

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

No issues.

Seismic Walkdown Checklist (SWC)

Status: Y

Equipment ID No DC-1-09-M-PP-SIP1 Equipment Class: 5

Equipment Description: SI Pump No. 1

Comment:

Evaluated by: KTM Date: 10/15/2012

SMM 10/18/2012

Seismic Walkdown Checklist (SWC)

Status: Y

Equipment ID No DC-1-09-P-VOM-SI-1-8805A Equipment Class: 8

Equipment Description: RWST to Charging Pump Suction Valves

Location: Building: Auxiliary Floor El. 85 Room, Area: 1-FCV-365

Manufacturer, model, Etc. Limitorque (D-L200)

Instructions for Completing Checklist

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

Anchorage

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

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

All attaching bolts are in good condition.

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

No corrosion is present.

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

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

The MOV is seismically restrained in both lateral directions by struts. 2 struts attached to a steel flange restrain the valve in one direction and 1 strut attached to a 10"x6" box steel member.

Interaction Effects

7. Are soft targets free from impact by nearby equipment or structures? Y

No credible sources were identified that could impact any soft targets.

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

No overhead equipment is likely to collapse on the valve. No ceiling tiles, block walls or overhead lighting in the area.

9. Do attached lines have adequate flexibility to avoid damage? Y

All attached lines have flexible connections.

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

No issues were identified.

Other Adverse Conditions

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

Seismic Walkdown Checklist (SWC)

Status: Y

Equipment ID No DC-1-09-P-VOM-SI-1-8805A Equipment Class: 8

Equipment Description: RWST to Charging Pump Suction Valves

Comment:

37" from operator to center of 8" diameter pipe.

Evaluated by: KTM Date: 10/15/2012

SMM 10/10/2012

Seismic Walkdown Checklist (SWC)

Status: Y

Equipment ID No DC-1-09-P-VOM-SI-1-8923A Equipment Class: 8

Equipment Description: SI Pump Suction Valves from RWST

Location: Building: Auxiliary Floor El. 85 Room, Area: 1-SIP1

Manufacturer, model, Etc. Limitorque

Instructions for Completing Checklist

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

Anchorage

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

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

All attached bolts appear to be in good condition.

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

No corrosion is present.

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

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

No adverse seismic conditions were seen.

Interaction Effects

7. Are soft targets free from impact by nearby equipment or structures? Y

No credible sources can impact soft targets.

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

All overhead equipment appears to be properly secured.

9. Do attached lines have adequate flexibility to avoid damage? Y

Flexible conduit run into the motor operator. Sensor line attached to valve support not a seismic concern due to its light weight.

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

No interaction effects to note.

Other Adverse Conditions

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

No issues.

Seismic Walkdown Checklist (SWC)

Status: Y

Equipment ID No DC-1-09-P-VOM-SI-1-8923A

Equipment Class: 8

Equipment Description: SI Pump Suction Valves from RWST

Comment:

32 inch distance from middle of operator to piping. 6" pipe diameter.

Evaluated by: KTM

Date: 10/15/2012

SMM

10/18/2012

Seismic Walkdown Checklist (SWC)

Status: Y

Equipment ID No DC-1-10-M-HX-RHE1 Equipment Class: 21

Equipment Description: RHR Heat Exchanger No. 1

Location: Building: Auxiliary Floor El. 73 Room, Area: 1-RHE1

Manufacturer, model, Etc.

Instructions for Completing Checklist

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

Anchorage

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

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

All anchorage is in good condition.

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

No corrosion is present.

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

Some superficial spalling of concrete near bottom slab support. Not structurally significant.

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

(4) 1-1/4" anchor bolts at the base of the heat exchanger and horizontal restraints at two locations are installed per the details shown in drawings 451596 and 439520

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

Interaction Effects

7. Are soft targets free from impact by nearby equipment or structures? Y

The only soft target is a valve at the top of the heat exchanger but there are no sources for interaction.

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

No overhead equipment, distribution systems, ceiling tiles, or lighting exists in the room. The room does not have block walls.

9. Do attached lines have adequate flexibility to avoid damage? Y

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

There are no potential adverse interaction effects.

Other Adverse Conditions

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

Seismic Walkdown Checklist (SWC)

Status: Y

Equipment ID No DC-1-10-M-HX-RHE1 Equipment Class: 21

Equipment Description: RHR Heat Exchanger No. 1

Comment:

Evaluated by: KTM Date: 10/22/2012

SMM 10/23/2012

Seismic Walkdown Checklist (SWC)

Status: Y

Equipment ID No DC-1-10-M-PP-RHRP2 Equipment Class: 6

Equipment Description: RHR Pump No. 2

Location: Building: Auxiliary Floor El. 60 Room, Area: 1-RHRP2

Manufacturer, model, Etc. Westinghouse VSW1

Instructions for Completing Checklist

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

Anchorage

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

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

3 of the nuts on the north floor baseplate on the north snubber support frame are visibly loose. Confirmed on Drawing No. 049305 Sheet Set 25 that the anchors with loose nuts are abandoned in place. Acceptable as is. Y

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

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

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

See item 2 above.

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

Interaction Effects

7. Are soft targets free from impact by nearby equipment or structures? Y

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

9. Do attached lines have adequate flexibility to avoid damage? Y

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

Other Adverse Conditions

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

Seismic Walkdown Checklist (SWC)

Status: Y

Equipment ID No DC-1-10-M-PP-RHRP2 Equipment Class: 6

Equipment Description: RHR Pump No. 2

Comment:

Pump and base concealed by insulation.

Evaluated by: FFG Fred Grant Date: 10.16.12

SMM Scott M Mc 10/22/12

Seismic Walkdown Checklist (SWC)

Status: Y

Equipment ID No DC-1-10-P-VOM-RHR-1-8700A Equipment Class: 8

Equipment Description: RHR Pump Suction Valves

Location: Building: Auxiliary Floor El. 73 Room, Area: 1-8700A

Manufacturer, model, Etc. Limitorque SMB-0

Instructions for Completing Checklist

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

Anchorage

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

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

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

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

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

No issues were identified.

Interaction Effects

7. Are soft targets free from impact by nearby equipment or structures? Y

No nearby equipment or structures that can impact the soft targets.

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

All overhead conduit lines are securely attached to the celling.

9. Do attached lines have adequate flexibility to avoid damage? Y

Flexible conduit runs into the valve.

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

No seismic interaction issues.

Other Adverse Conditions

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

Seismic Walkdown Checklist (SWC)

Status: Y

Equipment ID No DC-1-10-P-VOM-RHR-1-8700A

Equipment Class: 8

Equipment Description: RHR Pump Suction Valves

Comment:

Motor operator is 57" horizontal from center line of pipe. 14" pipe diameter.

Evaluated by: KTM

Date: 10/15/2012

SMM

10/18/2012

Seismic Walkdown Checklist (SWC)

Status: Y

Equipment ID No DC-1-10-P-VOM-RHR-1-FCV-641A Equipment Class: 8

Equipment Description: RHR Pump Recirculation Valves

Location: Building: Auxiliary Floor El. 62 Room, Area: 1-FCV-641A

Manufacturer, model, Etc. Limitorque

Instructions for Completing Checklist

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

Anchorage

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

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

No broken, bent or missing hardware

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

No corrosion observed

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

No cracks observed near the snubber anchorage

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.) N/A

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

Interaction Effects

7. Are soft targets free from impact by nearby equipment or structures? Y

No credible interaction sources.

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

Duct and conduit are well supported. The lighting is conduit hung with a ball and socket connection at the ceiling. No masonry walls. No issues.

9. Do attached lines have adequate flexibility to avoid damage? Y

Attached cables have adequate slack

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

Other Adverse Conditions

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

Seismic Walkdown Checklist (SWC)

Status: Y

Equipment ID No DC-1-10-P-VOM-RHR-1-FCV-641A Equipment Class: 8

Equipment Description: RHR Pump Recirculation Valves

Comment:

1-FCV-641A has its yoke restrained by two snubbers that are anchored to the same concrete wall. The attached piping is well supported near the valve.

Evaluated by: DKN Date: 10/17/2012

SMM 10/19/2012

Seismic Walkdown Checklist (SWC)

Status: Y

Equipment ID No DC-1-10-P-VOM-RHR-1-FCV-641B Equipment Class: 8

Equipment Description: RHR Pump Recirculation Valves

Location: Building: Auxiliary Floor El. 64 Room, Area: 1-RHRP2

Manufacturer, model, Etc. Limitorque SMB-00-10

Instructions for Completing Checklist

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

Anchorage

1. Is the anchorage configuration verification required (i.e, is the item one of the 50% of SWEL items requiring such verification)?	N
2. Is the anchorage free of bent, broken, missing or loose hardware?	Y
3. Is the anchorage free of corrosion that is more than mild surface oxidation?	Y
4. Is the anchorage free of visible cracks in the concrete near the anchors?	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.)	N/A
6. Based on the above anchorage evaluations, is the anchorage free of potentially adverse seismic conditions?	Y

Interaction Effects

7. Are soft targets free from impact by nearby equipment or structures?	Y
8. Are overhead equipment, distribution systems, ceiling tiles, and lighting, and masonry block walls not likely to collapse onto the equipment?	Y
9. Do attached lines have adequate flexibility to avoid damage?	Y
10. Based on the above seismic interaction evaluations, is equipment free of potentially adverse seismic interaction effects?	Y

Other Adverse Conditions

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

Seismic Walkdown Checklist (SWC)

Status: Y

Equipment ID No DC-1-10-P-VOM-RHR-1-FCV-641B

Equipment Class: 8

Equipment Description: RHR Pump Recirculation Valves

Comment:

No seismic concerns.

Evaluated by: FFG Date: 10.19.12

SMM 10/22/12

Seismic Walkdown Checklist (SWC)

Status: Y

Equipment ID No DC-1-13-I-I-TI-653 Equipment Class: 19

Equipment Description: SFPC Temperature Instrumentation

Location: Building: Auxiliary Floor El. 100 Room, Area: 1-SFPHE1

Manufacturer, model, Etc. Dresser.

Instructions for Completing Checklist

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

Anchorage

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

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

No broken, bent, or missing hardware.

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

No corrosion observed.

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

Consistent with drawing DC-663230-140--1

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

1-TI-653 is a small line mounted instrument. No anchorage issues.

Interaction Effects

7. Are soft targets free from impact by nearby equipment or structures? Y

The gage is a potential soft target, but there are no credible interaction sources.

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

PA speaker is anchored to the slab above. Overhead pendant light is hung with conduit. Conduit is well supported. No credible interaction sources.

9. Do attached lines have adequate flexibility to avoid damage? Y

The instrument is mounted directly on the pipe.

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

The adjacent shielding door is top restrained.

Other Adverse Conditions

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

Seismic Walkdown Checklist (SWC)

Status: Y

Equipment ID No DC-1-13-I-I-TI-653 Equipment Class: 19

Equipment Description: SFPC Temperature Instrumentation

Comment:

Evaluated by: DKN Date: 10/17/2012

DRC 10/19/2012

Seismic Walkdown Checklist (SWC)

Status: Y

Equipment ID No DC-1-13-M-HX-SFPHE1 Equipment Class: 21

Equipment Description: Spent Fuel Pool Heat Exchanger

Location: Building: Auxiliary Floor El. 100 Room, Area: 1-SFPHE1

Manufacturer, model, Etc. Joseph Oat and Sons

Instructions for Completing Checklist

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

Anchorage

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

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

No broken, bent, or missing hardware.

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

No significant corrosion.

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

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

The anchorage is consistent with drawing 443222

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

Interaction Effects

7. Are soft targets free from impact by nearby equipment or structures? Y

No soft targets.

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

Conduit is supported. Nearby HVAC is braced. Connected piping is well supported.

9. Do attached lines have adequate flexibility to avoid damage? Y

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

The adjacent shielding door is top restrained.

Other Adverse Conditions

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

Seismic Walkdown Checklist (SWC)

Status: Y

Equipment ID No DC-1-13-M-HX-SFPHE1 Equipment Class: 21

Equipment Description: Spent Fuel Pool Heat Exchanger

Comment:

The heat exchanger is supported by two steel saddles. Each saddle is anchored to a concrete pier with 4 - 7/8 inch bolts. The bottom of each bolt is welded to an embedded steel plate anchored in the El. 100 ft concrete floor. One support permits sliding in the long direction.

Evaluated by: DKN Date: 10/17/2012

DRC 10/19/2012

Seismic Walkdown Checklist (SWC)

Status: Y

Equipment ID No DC-1-13-M-PP-SFPP1 Equipment Class: 5

Equipment Description: Spent Fuel Pool Pumps

Location: Building: Auxiliary Floor El. 100 Room, Area: 1-SFPP1

Manufacturer, model, Etc. Goulds Pumps, Model 3405

Instructions for Completing Checklist

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

Anchorage

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

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

No broken, bent, or missing hardware.

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

No significant corrosion.

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

No cracks were observed near the anchors.

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

The anchorage is consistent with Drawing 443222

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

Interaction Effects

7. Are soft targets free from impact by nearby equipment or structures? Y

The pump has two small glass oil levelizers. However there are no credible interaction sources.

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

The HVAC duct is braced. The crane rail above the pump is well braced. The conduit and pipe are well supported. Piping attached to the pump is very well supported.

9. Do attached lines have adequate flexibility to avoid damage? Y

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

Other Adverse Conditions

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

Seismic Walkdown Checklist (SWC)

Status: Y

Equipment ID No DC-1-13-M-PP-SFPP1 Equipment Class: 5

Equipment Description: Spent Fuel Pool Pumps

Comment:

The pump and motor are mounted to a common steel skid. The skid is anchored to the concrete floor by 6 - 1/2 inch bolts. The bolts are welded to steel insert plates in the floor. A 6 inch concrete pad is placed between the El. 100 floor and the pump skid. The anchor bolts are cast in the pad.

Evaluated by: DKN Date: 10/17/2012

DRC 10/19/2012

Status: Y

Seismic Walkdown Checklist (SWC)

Equipment ID No. DC-1-13-P-P-LINE-154 Equipment Class[12] 0. (Other)

Equipment Description: Suction Piping to SFP Heat Exchangers

Location: Bldg. Auxiliary Floor El. 140' Room, Area Unit 1 Fuel Handling Area

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 the checklist for documenting other comments.

Anchorage

1.	Is the anchorage configuration verification required (i.e., is the item one of the 50% of SWEL items requiring such verification)?	N
2.	Is the anchorage free of bent, broken, missing or loose hardware? This SWC applies to potential SFP rapid drain-down through a pipe entering the SFP. Therefore, anchorage is not applicable.	N/A
3.	Is the anchorage free of corrosion that is more than mild surface corrosion?	N/A
4.	Is the anchorage free of visible cracks in the concrete near the anchorage?	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 anchorage configuration verification is required.)	N/A
6.	Based on the above anchorage evaluations, is the anchorage free of potentially adverse seismic conditions?	N/A

Interaction Effects

7.	Are soft targets free from impact by nearby equipment or structures? This SWC applies to potential SFP rapid drain-down through a pipe entering the SFP. Therefore, seismic interaction effects are not applicable.	N/A
8.	Are overhead equipment, distribution systems, ceiling tiles and lighting, and masonry block walls not likely to collapse onto the equipment?	N/A
9.	Do attached lines have adequate flexibility to avoid damage?	N/A
10.	Based on the above seismic interaction evaluations, is the equipment free of potentially adverse seismic interaction effects?	N/A

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

Status: Y

Seismic Walkdown Checklist (SWC)

Equipment ID No. DC-1-13-P-P-LINE-154 Equipment Class[12] 0. (Other)

Equipment Description: Suction Piping to SFP Heat Exchangers

Other Adverse Conditions

11.	Have you looked for and found no other seismic conditions that could adversely affect the safety function of the plant equipment? This SWC applies to potential SFP rapid drain-down through a pipe entering the SFP. Therefore, safety functions are not applicable.	N/A

Comments (Additional pages may be added as necessary)

This SWC applies to potential SFP rapid drain-down through the suction piping to the SFP heat exchangers, which exits the SFP near its south-west corner. The inlet to the pipe is through a screen/strainer mounted flush with the surface of the west wall of the SFP. Drawing no. 500129 indicates that the centerline of this pipe is at elevation 131'-0". Visual inspection verified that the pipe exits the wall of the SFP from the Cask Washdown Area at approx. elevation 131' (see photo on sheet 3) and that the screen/strainer does not extend significantly below the water level in the SFP. Since the termination of the pipe inside the SFP is located significantly more than 10' above the spent fuel assemblies stored in the SFP (approx. elevation 122'), rapid drain-down of the SFP inventory through this pipe is not possible.

Evaluated by:	WRH		Date: 10/04/2012
	DRC		10/04/2012

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

Status: Y

Seismic Walkdown Checklist (SWC)

Equipment ID No. DC-1-13-P-P-LINE-159 Equipment Class[12] 0. (Other)

Equipment Description: Return Piping from SFP Heat Exchangers

Location: Bldg. Auxiliary Floor El. 140' Room, Area Unit 1 Fuel Handling Area

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 the checklist for documenting other comments.

Anchorage

1.	Is the anchorage configuration verification required (i.e., is the item one of the 50% of SWEL items requiring such verification)?	N
2.	Is the anchorage free of bent, broken, missing or loose hardware? This SWC applies to potential SFP rapid drain-down through a pipe entering the SFP. Therefore, anchorage is not applicable.	N/A
3.	Is the anchorage free of corrosion that is more than mild surface corrosion?	N/A
4.	Is the anchorage free of visible cracks in the concrete near the anchorage?	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 anchorage configuration verification is required.)	N/A
6.	Based on the above anchorage evaluations, is the anchorage free of potentially adverse seismic conditions?	N/A

Interaction Effects

7.	Are soft targets free from impact by nearby equipment or structures? This SWC applies to potential SFP rapid drain-down through a pipe entering the SFP. Therefore, seismic interaction effects are not applicable.	N/A
8.	Are overhead equipment, distribution systems, ceiling tiles and lighting, and masonry block walls not likely to collapse onto the equipment?	N/A
9.	Do attached lines have adequate flexibility to avoid damage?	N/A
10.	Based on the above seismic interaction evaluations, is the equipment free of potentially adverse seismic interaction effects?	N/A

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

Status: Y

Seismic Walkdown Checklist (SWC)

Equipment ID No. DC-1-13-P-P-LINE-159 Equipment Class[12] 0. (Other)

Equipment Description: Return Piping from SFP Heat Exchangers

Other Adverse Conditions

11.	Have you looked for and found no other seismic conditions that could adversely affect the safety function of the plant equipment? This SWC applies to potential SFP rapid drain-down through a pipe entering the SFP. Therefore, safety functions are not applicable.	N/A

Comments (Additional pages may be added as necessary)

This SWC applies to potential SFP rapid drain-down through the return piping from the SFP heat exchangers, which enters the SFP near its north-east corner. Drawing no. 500086 specifies that a 1/2" diameter anti-siphon hole be provided in the pipe at elev. 136'-3". Visual inspection verified the presence of the hole (see photo on sheet 3) and its approximate elevation (just below the girth weld between the vertical section of the pipe and the elbow). Since the hole is located significantly more than 10' above the spent fuel assemblies stored in the SFP (approx. elevation 122'), rapid drain-down of the SFP inventory through this pipe is not possible.

Evaluated by:	WRH	William R. Horn	Date: 10/04/2012
	DRC	[signature]	10/04/2012

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

Status: Y

Seismic Walkdown Checklist (SWC)

Equipment ID No. DC-1-13-P-P-LINE-1080 Equipment Class[12] 0. (Other)

Equipment Description: Suction Piping from SFP Skimmer

Location: Bldg. Auxiliary Floor El. 140' Room, Area Unit 1 Fuel Handling Area

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 the checklist for documenting other comments.

Anchorage

1.	Is the anchorage configuration verification required (i.e., is the item one of the 50% of SWEL items requiring such verification)?	N
2.	Is the anchorage free of bent, broken, missing or loose hardware? This SWC applies to potential SFP rapid drain-down through a pipe entering the SFP. Therefore, anchorage is not applicable.	N/A
3.	Is the anchorage free of corrosion that is more than mild surface corrosion?	N/A
4.	Is the anchorage free of visible cracks in the concrete near the anchorage?	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 anchorage configuration verification is required.)	N/A
6.	Based on the above anchorage evaluations, is the anchorage free of potentially adverse seismic conditions?	N/A

Interaction Effects

7.	Are soft targets free from impact by nearby equipment or structures? This SWC applies to potential SFP rapid drain-down through a pipe entering the SFP. Therefore, seismic interaction effects are not applicable.	N/A
8.	Are overhead equipment, distribution systems, ceiling tiles and lighting, and masonry block walls not likely to collapse onto the equipment?	N/A
9.	Do attached lines have adequate flexibility to avoid damage?	N/A
10.	Based on the above seismic interaction evaluations, is the equipment free of potentially adverse seismic interaction effects?	N/A

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

Status: Y

Seismic Walkdown Checklist (SWC)

Equipment ID No. DC-1-13-P-P-LINE-1080 Equipment Class[12] 0. (Other)

Equipment Description: Suction Piping from SFP Skimmer

Other Adverse Conditions

11.	Have you looked for and found no other seismic conditions that could adversely affect the safety function of the plant equipment? This SWC applies to potential SFP rapid drain-down through a pipe entering the SFP. Therefore, safety functions are not applicable.	N/A

Comments (Additional pages may be added as necessary)

This SWC applies to potential SFP rapid drain-down through the suction piping for one of the SFP skimmers, which exits the SFP on its west side. The skimmer is maintained even with the surface of the SFP inventory and includes a short length of flexible hose to permit the skimmer elevation to be adjusted (see drawing no. 500093). Drawing no. 500093 indicates that the centerline of this pipe is at elevation 138'-6". Visual inspection verified that the pipe exits the wall of the SFP at approx. elevation 138' (see photo on sheet 3 for typical configuration) and that the length of the flexible hose is not sufficient to allow the skimmer to sink more than several feet into the SFP. Since the lowest possible elevation that could be reached by the skimmer inside the SFP is located significantly more than 10' above the spent fuel assemblies stored in the SFP (approx. elevation 122'), rapid drain-down of the SFP inventory through this pipe is not possible.

Evaluated by:	WRH	Date:	10/04/2012
	DRC		10/04/2012

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

Status: Y

Seismic Walkdown Checklist (SWC)

Equipment ID No. DC-1-13-P-P-LINE-1118 Equipment Class[12] 0. (Other)

Equipment Description: Suction Piping from SFP Skimmer

Location: Bldg. Auxiliary Floor El. 140' Room, Area Unit 1 Fuel Handling Area

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 the checklist for documenting other comments.

Anchorage

1.	Is the anchorage configuration verification required (i.e., is the item one of the 50% of SWEL items requiring such verification)?	N
2.	Is the anchorage free of bent, broken, missing or loose hardware? This SWC applies to potential SFP rapid drain-down through a pipe entering the SFP. Therefore, anchorage is not applicable.	N/A
3.	Is the anchorage free of corrosion that is more than mild surface corrosion?	N/A
4.	Is the anchorage free of visible cracks in the concrete near the anchorage?	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 anchorage configuration verification is required.)	N/A
6.	Based on the above anchorage evaluations, is the anchorage free of potentially adverse seismic conditions?	N/A

Interaction Effects

7.	Are soft targets free from impact by nearby equipment or structures? This SWC applies to potential SFP rapid drain-down through a pipe entering the SFP. Therefore, seismic interaction effects are not applicable.	N/A
8.	Are overhead equipment, distribution systems, ceiling tiles and lighting, and masonry block walls not likely to collapse onto the equipment?	N/A
9.	Do attached lines have adequate flexibility to avoid damage?	N/A
10.	Based on the above seismic interaction evaluations, is the equipment free of potentially adverse seismic interaction effects?	N/A

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

Status: Y

Seismic Walkdown Checklist (SWC)

Equipment ID No. DC-1-13-P-P-LINE-1118 Equipment Class[12] 0. (Other)

Equipment Description: Suction Piping from SFP Skimmer

Other Adverse Conditions

11.	Have you looked for and found no other seismic conditions that could adversely affect the safety function of the plant equipment? This SWC applies to potential SFP rapid drain-down through a pipe entering the SFP. Therefore, safety functions are not applicable.	N/A

Comments (Additional pages may be added as necessary)

This SWC applies to potential SFP rapid drain-down through the suction piping for one of the SFP skimmers, which exits the SFP on its west side. The skimmer is maintained even with the surface of the SFP inventory and includes a short length of flexible hose to permit the skimmer elevation to be adjusted (see drawing no. 500093). Drawing no. 500093 indicates that the centerline of this pipe is at elevation 138'-6". Visual inspection verified that the pipe exits the wall of the SFP at approx. elevation 138' (see photo on sheet 3 for typical configuration) and that the length of the flexible hose is not sufficient to allow the skimmer to sink more than several feet into the SFP. Since the lowest possible elevation that could be reached by the skimmer inside the SFP is located significantly more than 10' above the spent fuel assemblies stored in the SFP (approx. elevation 122'), rapid drain-down of the SFP inventory through this pipe is not possible.

Evaluated by:	WRH	Date:	10/04/2012
	DRC		10/04/2012

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

Status: Y

Seismic Walkdown Checklist (SWC)

Equipment ID No. DC-1-13-P-P-LINE-1121 Equipment Class[12] 0. (Other)

Equipment Description: Return Piping from SFP Skimmer

Location: Bldg. Auxiliary Floor El. 140' Room, Area Unit 1 Fuel Handling Area

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 the checklist for documenting other comments.

Anchorage

1.	Is the anchorage configuration verification required (i.e., is the item one of the 50% of SWEL items requiring such verification)?	N
2.	Is the anchorage free of bent, broken, missing or loose hardware? This SWC applies to potential SFP rapid drain-down through a pipe entering the SFP. Therefore, anchorage is not applicable.	N/A
3.	Is the anchorage free of corrosion that is more than mild surface corrosion?	N/A
4.	Is the anchorage free of visible cracks in the concrete near the anchorage?	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 anchorage configuration verification is required.)	N/A
6.	Based on the above anchorage evaluations, is the anchorage free of potentially adverse seismic conditions?	N/A

Interaction Effects

7.	Are soft targets free from impact by nearby equipment or structures? This SWC applies to potential SFP rapid drain-down through a pipe entering the SFP. Therefore, seismic interaction effects are not applicable.	N/A
8.	Are overhead equipment, distribution systems, ceiling tiles and lighting, and masonry block walls not likely to collapse onto the equipment?	N/A
9.	Do attached lines have adequate flexibility to avoid damage?	N/A
10.	Based on the above seismic interaction evaluations, is the equipment free of potentially adverse seismic interaction effects?	N/A

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

Status: Y

Seismic Walkdown Checklist (SWC)

Equipment ID No. DC-1-13-P-P-LINE-1121 Equipment Class[12] 0. (Other)

Equipment Description: Return Piping from SFP Skimmer

Other Adverse Conditions

11.	Have you looked for and found no other seismic conditions that could adversely affect the safety function of the plant equipment? This SWC applies to potential SFP rapid drain-down through a pipe entering the SFP. Therefore, safety functions are not applicable.	N/A

Comments (Additional pages may be added as necessary)

This SWC applies to potential SFP rapid drain-down through one of the three return pipes for the SFP skimmers, which enters the SFP on its east side. Drawing no. 500086 indicates that the centerline of this pipe is at elevation 137'-6". Visual inspection verified that the pipe enters the wall of the SFP at approx. elevation 138' (see photo on sheet 3) . Since the elevation of this pipe is located significantly more than 10' above the spent fuel assemblies stored in the SFP (approx. elevation 122'), rapid drain-down of the SFP inventory through this pipe is not possible.

Evaluated by:	WRH		Date: 10/04/2012
	DRC		10/04/2012

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

Status: Y

Seismic Walkdown Checklist (SWC)

Equipment ID No. DC-1-13-P-P-LINE-1122 Equipment Class[12] 0. (Other)

Equipment Description: Return Piping from SFP Skimmer

Location: Bldg. Auxiliary Floor El. 140' Room, Area Unit 1 Fuel Handling Area

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 the checklist for documenting other comments.

Anchorage

1.	Is the anchorage configuration verification required (i.e., is the item one of the 50% of SWEL items requiring such verification)?	N
2.	Is the anchorage free of bent, broken, missing or loose hardware? This SWC applies to potential SFP rapid drain-down through a pipe entering the SFP. Therefore, anchorage is not applicable.	N/A
3.	Is the anchorage free of corrosion that is more than mild surface corrosion?	N/A
4.	Is the anchorage free of visible cracks in the concrete near the anchorage?	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 anchorage configuration verification is required.)	N/A
6.	Based on the above anchorage evaluations, is the anchorage free of potentially adverse seismic conditions?	N/A

Interaction Effects

7.	Are soft targets free from impact by nearby equipment or structures? This SWC applies to potential SFP rapid drain-down through a pipe entering the SFP. Therefore, seismic interaction effects are not applicable.	N/A
8.	Are overhead equipment, distribution systems, ceiling tiles and lighting, and masonry block walls not likely to collapse onto the equipment?	N/A
9.	Do attached lines have adequate flexibility to avoid damage?	N/A
10.	Based on the above seismic interaction evaluations, is the equipment free of potentially adverse seismic interaction effects?	N/A

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

Status: Y

Seismic Walkdown Checklist (SWC)

Equipment ID No. DC-1-13-P-P-LINE-1122 Equipment Class[12] 0. (Other)

Equipment Description: Return Piping from SFP Skimmer

Other Adverse Conditions

11.	Have you looked for and found no other seismic conditions that could adversely affect the safety function of the plant equipment? This SWC applies to potential SFP rapid drain-down through a pipe entering the SFP. Therefore, safety functions are not applicable.	N/A

Comments (Additional pages may be added as necessary)

This SWC applies to potential SFP rapid drain-down through one of the three return pipes for the SFP skimmers, which enters the SFP on its east side. Drawing no. 500086 indicates that the centerline of this pipe is at elevation 137'-6". Visual inspection verified that the pipe enters the wall of the SFP at approx. elevation 138' (see photo on sheet 3 for typical configuration). Since the elevation of this pipe is located significantly more than 10' above the spent fuel assemblies stored in the SFP (approx. elevation 122'), rapid drain-down of the SFP inventory through this pipe is not possible.

Evaluated by:	WRH		Date: 10/04/2012
	DRC		10/04/2012

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

Status: Y

Seismic Walkdown Checklist (SWC)

Equipment ID No. DC-1-13-P-P-LINE-1123 Equipment Class[12] 0. (Other)

Equipment Description: Return Piping for SFP Skimmer

Location: Bldg. Auxiliary Floor El. 140' Room, Area Unit 1 Fuel Handling Area

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 the checklist for documenting other comments.

Anchorage

1.	Is the anchorage configuration verification required (i.e., is the item one of the 50% of SWEL items requiring such verification)?	N
2.	Is the anchorage free of bent, broken, missing or loose hardware? This SWC applies to potential SFP rapid drain-down through a pipe entering the SFP. Therefore, anchorage is not applicable.	N/A
3.	Is the anchorage free of corrosion that is more than mild surface corrosion?	N/A
4.	Is the anchorage free of visible cracks in the concrete near the anchorage?	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 anchorage configuration verification is required.)	N/A
6.	Based on the above anchorage evaluations, is the anchorage free of potentially adverse seismic conditions?	N/A

Interaction Effects

7.	Are soft targets free from impact by nearby equipment or structures? This SWC applies to potential SFP rapid drain-down through a pipe entering the SFP. Therefore, seismic interaction effects are not applicable.	N/A
8.	Are overhead equipment, distribution systems, ceiling tiles and lighting, and masonry block walls not likely to collapse onto the equipment?	N/A
9.	Do attached lines have adequate flexibility to avoid damage?	N/A
10.	Based on the above seismic interaction evaluations, is the equipment free of potentially adverse seismic interaction effects?	N/A

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

Status: Y

Seismic Walkdown Checklist (SWC)

Equipment ID No. DC-1-13-P-P-LINE-1123 Equipment Class[12] 0. (Other)

Equipment Description: Return Piping for SFP Skimmer

Other Adverse Conditions

11.	Have you looked for and found no other seismic conditions that could adversely affect the safety function of the plant equipment? This SWC applies to potential SFP rapid drain-down through a pipe entering the SFP. Therefore, safety functions are not applicable.	N/A

Comments (Additional pages may be added as necessary)

This SWC applies to potential SFP rapid drain-down through one of the three return pipes for the SFP skimmers, which enters the SFP on its east side. Drawing no. 500086 indicates that the centerline of this pipe is at elevation 137'-6". Visual inspection verified that the pipe enters the wall of the SFP at approx. elevation 138' (see photo on sheet 3 for typical configuration). Since the elevation of this pipe is located significantly more than 10' above the spent fuel assemblies stored in the SFP (approx. elevation 122'), rapid drain-down of the SFP inventory through this pipe is not possible.

Evaluated by:	WRH		Date: 10/04/2012
	DRC		10/04/2012

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

Seismic Walkdown Checklist (SWC)

Status: Y

Equipment ID No DC-1-13-SFPPTS1 Equipment Class: 1

Equipment Description: Spent Fuel Pool Pump Transfer Switches

Location: Building: Auxiliary Floor El. 100 Room, Area: 1-LPH47

Manufacturer, model, Etc.

Instructions for Completing Checklist

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

Anchorage

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

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

All anchors are present and in good condition.

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

No corrosion is present.

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

No cracks in the wall near the anchors.

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

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

(4) anchor bolts secure the panel to the wall. The anchor bolts are smaller than the corresponding panel in unit 2 (LPH-79). The bolt diameters are about 3/8". note that the configuration is slightly different - U2 panel is mounted on unistrut. See Attachment 1 for disposition. Panel mounting tabs have key-hole slots at the top and open-ended slots at bottom, which cannot resist uplift loads. See Attachment 2 for disposition.

Interaction Effects

7. Are soft targets free from impact by nearby equipment or structures? Y

No credible sources could impact soft targets on the panel.

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

Overhead distribution systems and lighting appear to be properly secured. No ceiling tiles or block walls in the area. PA speaker over panel is adequately secured.

9. Do attached lines have adequate flexibility to avoid damage? Y

Attached lines and panel are secured to the wall.

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

No issues were identified.

Other Adverse Conditions

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

Seismic Walkdown Checklist (SWC)

Status: Y

Equipment ID No DC-1-13-SFPPTS1 Equipment Class: 1

Equipment Description: Spent Fuel Pool Pump Transfer Switches

Comment:

Evaluated by: KTM Date: 10/23/2012

SMM 10/22/12

Seismic Walkdown Checklist (SWC)

Diablo Canyon Power Plant, Unit 1

Equipment No. DC-1-13-SFPPTS1

Licensing Basis Evaluation

Issue:

The mounting configuration for this panel is different than that used for the corresponding panel in Unit 2 (LPH-79) and the expansion anchors have a smaller diameter.

Evaluation:

Since this panel was not selected for anchorage configuration verification, and there is no DCPP requirement that the anchorage for corresponding components in each unit are the same, this is not an issue. The mounting for this type of electrical panel is specified on generic drawing no. 050030, which permits numerous variations of the anchorage for such components.

Notification Required: No

Evaluated by: Wm R. Hon 9/18/12

Reviewed by: 10/22/12

Seismic Walkdown Checklist (SWC)

Diablo Canyon Power Plant, Unit 1

Equipment No. DC-1-13-SFPPTS1

Licensing Basis Evaluation

Issue:

The panel mounting tabs have the following anchor bolt hole configurations:

- *Upper Tab: vertically oriented "key-hole" slots, with the anchor located at the top of the slot*
- *Lower Tab: vertically oriented, open-ended slots, with the anchor located near the mid-point of the slot.*

This mounting configuration will not transfer upwards-acting vertical loading, which may impact the qualification of the anchorage.

Evaluation:

The vertical Hosgri Earthquake zero period acceleration values (panel is assumed to be rigid in the vertical direction, so ZPA is applicable) for this location (Auxiliary Building, between elev. 100' and 115') from DCM C-17 (Hosgri Response Spectra), Attachment H (Auxiliary Building) are as follows:

- Elev. 100': 0.6 g (Spectra ID No. H-AB-N-VR-100-09-01)
- Elev. 115': 0.6 g (Spectra ID No. H-AB-N-VR-115-09-01)

Since the vertical acceleration is less than 1.0 g, the vertical seismic load will not exceed the dead weight, so there is no uplift. Therefore, the configuration of the slotted holes is acceptable.

Notification Required: No

Evaluated by: William B. Hall 9/18/12

Reviewed by: Scott M. Mayes 10/22/12

Seismic Walkdown Checklist (SWC)

Status: Y

Equipment ID No DC-1-14-E-P-VOM-CCW-1-FCV-430 Equipment Class: 8

Equipment Description: CCW Flow Control Valve No. FCV-430 (CCW Header A and B Flow Control Valves

Location: Building: Turbine Floor El. 85 Room, Area: 1-CCWHE

Manufacturer, model, Etc. Limitorque

Instructions for Completing Checklist

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

Anchorage

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

Pipe-mounted 30" butterfly valve between flanges. Yoke is very robust and operator height is 54" (horizontal).

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

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

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

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

Interaction Effects

7. Are soft targets free from impact by nearby equipment or structures? Y

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

Overhead piping, conduit, and junction boxes are well restrained.

9. Do attached lines have adequate flexibility to avoid damage? Y

Limited flexibility in electrical line, but it appears to be adequate.

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

Other Adverse Conditions

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

Seismic Walkdown Checklist (SWC)

Status: Y

Equipment ID No DC-1-14-E-P-VOM-CCW-1-FCV-430 Equipment Class: 8

Equipment Description: CCW Flow Control Valve No. FCV-430 (CCW Header A and B Flow Control Valves

Comment:

Evaluated by: TRK Thomas R. Kipp Date: 10/14/2012

KA A.K. Kantamneni 10/23/2012.

Seismic Walkdown Checklist (SWC)

Status: Y

Equipment ID No DC-1-14-I-E-TE-6 Equipment Class: 19

Equipment Description: CCW Heat Exhanger Output Thermocouples

Location: Building: Turbine Floor El. 85 Room, Area: 1-CCWHE

Manufacturer, model, Etc. Leeds and Northrup Company

Instructions for Completing Checklist

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

Anchorage

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

The thermocouple is light in weight and is mounted on the CCW shell-side outlet line by a welded coupling and short sections of 1/2" threaded pipe.

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

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

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

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

Interaction Effects

7. Are soft targets free from impact by nearby equipment or structures? Y

There is about 3/8" clearance between the head of the thermocouple and an adjacent conduit run, but the conduit is supported by clamps on either side.

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

9. Do attached lines have adequate flexibility to avoid damage? Y

There are two electrical connections to the thermocouple both of which include rubber tube sections. There is limited flexibility in these electrical lines, but it appears to be adequate.

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

Other Adverse Conditions

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

Seismic Walkdown Checklist (SWC)

Status: Y

Equipment ID No DC-1-14-I-E-TE-6 Equipment Class: 19

Equipment Description: CCW Heat Exhanger Output Thermocouples

Comment:

Evaluated by: TRK Thomas R. Kipps Date: 10/14/2012

KA A.K. Chaitanya 10/23/2012.

Seismic Walkdown Checklist (SWC)

Status: TN

Equipment ID No DC-1-14-M-HX-CCWHE1 Equipment Class: 21 KA 11/19/12 JRK 11/20/12

Equipment Description: CCW Heat Exchanger No. 1

Location: Building: Turbine Floor El. 85 Room, Area: 1-CCWHE

Manufacturer, model, Etc. Yuba Heat Transfer 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 judgements and findings. Additional space is provided at the end of this checklist for documenting other comments.

Anchorage

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

The CCW Heat Exchanger has (2) saddle supports one of which is fixed and the other sliding. The stiffened sliding support has (3) 1-3/8" bolts located within the diameter of the HX. The support is also stiffened at the outside and is secured by (4) additional 7/8" boltsThe fixed support is similarly anchored but has an additional axial brace on either side that stiffens the fixed support. The baseplate for the axial braces is secured by (8) 1-1/4" kwik-bolt expansion anchors. Y

2. Is the anchorage free of bent, broken, missing or loose hardware?

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

4. Is the anchorage free of visible cracks in the concrete near the anchors? TN KA 11/19/12 JRK 11/20/12

The pedestal supporting the sliding support exhibits some deteriorization and spalling of the concrete on the west edge of the pedestal. For disposition see Attachment 1.

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

Anchorage is consistent with Hosgri modification drawing 463683-1and modification As Built drawing 061342 sheets 2 - 23.

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

Interaction Effects

7. Are soft targets free from impact by nearby equipment or structures? Y

No significant soft targets.

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

There is a reinforced masonry wall near the south end of the HX. However the wall has additional support at the bottom and near the top.

9. Do attached lines have adequate flexibility to avoid damage? Y

Tube-side nozzles penetrate via control valves directly through the floor below and are connected by means of flexible joints. The shell-side piping is well supported.

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

Other Adverse Conditions

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

Seismic Walkdown Checklist (SWC)

Status: N

Equipment ID No DC-1-14-M-HX-CCWHE1 Equipment Class: 21 KA 11-19-12 TRK 11/20/12

Equipment Description: CCW Heat Exchanger No. 1

Comment:

Evaluated by: TRK Thomas R. Kipp Date: 10/25/2012

KA A.W. Montemayor 10/23/12.

Seismic Walkdown Checklist (SWC)

Diablo Canyon Power Plant, Unit 1

Equipment No. DC-1-14-M-HX-CCWHE1

Licensing Basis Evaluation

Issue:

Minor concrete spalling was noted on the concrete pedestal associated with the support at the south end (sliding end) of the Heat Exchanger 1-1.

Evaluation:

The CCW Heat Exchanger, including its support pedestals, is Design Class I and Seismically Qualified. The configuration of the support allows for thermal growth of the heat exchanger in the north-south direction, through the inclusion of slotted holes at the anchors (see drawing no. 463683 and calculation no. EQP-306.1). Therefore, loading in the north-south direction is not applied to the concrete pedestal.

Since the spalled concrete is on the south face of the pedestal, and loading is not applied in the north-south direction, the spalling will not affect the structural capacity of the concrete.

Therefore, this issue does not impact the structural integrity of the pedestal or the ability of the CCW Heat Exchanger to perform its design function during or after an earthquake.

Recommendation:

Repair the spalling of concrete on the concrete pedestal.

Notification Required: Yes (50519950)

Evaluated by: KA A.K. Kartanya 10/23/12.

Reviewed by: Wm R. Hon 10/23/12

Seismic Walkdown Checklist (SWC)

Status: Y

Equipment ID No DC-1-14-M-PP-CCWP1 Equipment Class: 5

Equipment Description: CCW Pump No. 1

Location: Building: Auxiliary Floor El. 73 Room, Area: 1-CCWP1

Manufacturer, model, Etc. Bingham

Instructions for Completing Checklist

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

Anchorage

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

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

All anchor bolts are present with no signs of damage.

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

All anchors are coated and in good condition.

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

Grout does not extend past the bottom of the base plate. No structural issues as a result of the missing grout. No visible cracks present. Some excess grout overflowed onto the surface of the concrete at the base of the pedestal.

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

There are (2) 7/8" diameter and (4) 1" diameter anchor bolts on skid, in accordance with design drawing 470769.

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

No potentially adverse seismic conditions.

Interaction Effects

7. Are soft targets free from impact by nearby equipment or structures? Y

Hanging chain from the overhead monorail could impact a soft target on the pump's motor, see photo on page 5. Chain was recoiled around monorail to shorten the length and prevent possible seismic interaction. Suggest a change or modification to prevent future interactions after use. See Attachment 1 for disposition.

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

Overhead equipment and lighting are secured. Lights have chains to ceiling.

9. Do attached lines have adequate flexibility to avoid damage? Y

All attached lines appear to have adequate flexibility.

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

See question 7 notes. No further issues.

Other Adverse Conditions

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

Seismic Walkdown Checklist (SWC)

Status: Y

Equipment ID No DC-1-14-M-PP-CCWP1 Equipment Class: 5

Equipment Description: CCW Pump No. 1

Comment:

Includes subcomponent DC-1-20-M-PP-CCWAP1.

Evaluated by: KTM Keri Munn Date: 10/23/2012

SMM 10/22/12

Seismic Walkdown Checklist (SWC)

Diablo Canyon Power Plant, Unit 1

Equipment No. DC-1-14-M-PP-CCWP1

Licensing Basis Evaluation

Issue:

Chains attached to a rigging hoist mounted on an overhead monorail were found in an arrangement that could cause them to swing into the CCW Pump 1-1 Motor.

Background:

The hoist is mounted on the monorail number MS-3-1, as shown in drawing 59652. It is in its designated storage location directly south of CCWP 1-1, and is restrained by angle clips on each side to prevent it rolling in a seismic event (in accordance with Section F of drawing 512482.) Note 1 of this detail states to "locate seismic hoist stops on monorail where hoist chain are clear from Class I equipment."

Evaluation:

Immediate action was taken to recoil the chain on existing chain hangers on the hoist, effectively decreasing the amount of chain hanging from the hoist in half. In this configuration, the chain is not long enough to swing into the pump, and the SISI concern is resolved.

Since the chain was re-hung in a configuration that prevents a potential seismic interaction, there is no impact on the ability of CCW Pump 1-1 to perform its intended function. Seismic qualification of CCWP 1-1 remains valid.

Therefore, this condition does not impact the operation of DCPP.

Notification Required: Yes (50516011)

Evaluated by: Patrick Huang 10/22/12

Reviewed by: Scott Mc 10/22/12

Seismic Walkdown Checklist (SWC)

Status: Y

Equipment ID No DC-1-14-M-TK-CCWST1 Equipment Class: 21

Equipment Description: CCW Surge Tank

Location: Building: Auxiliary Floor El. 163 Room, Area: 1-CCWST1

Manufacturer, model, Etc.

Instructions for Completing Checklist

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

Anchorage

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

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

The CCW Surge Tank is supported on two stiffened saddle supports that are welded to the tank shell through doubler plates. One of the supports is fixed and the other is a sliding support. The fixed support is anchored to the support pedestal by (6) 1-1/2" embedded bolts and through bolts. The fixed saddle is stiffened axially by structural members that run from the outside base of the support to the vertical center of the tank on either side. The sliding support is anchored by (4) 1-1/2" through bolts. The view of the anchorage is limited by a skirt that covers the lower half of the tank. Only a portion of the anchorage could be seen through the access doorway without entering the confined space. Horizontal displacement of the tank is restrained by large structural side restraints located on both sides of the tank and at both ends. These side restraints are anchored to the roof slab and contact the tank at its vertical center. Y

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

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

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.) N/A

What could be seen of the anchorage is consistent with drawings 446511-1 and 463694-1.

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

Interaction Effects

7. Are soft targets free from impact by nearby equipment or structures? Y

The tank is outside having no soft targets. All components located on the West side of the tank are well supported.

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

9. Do attached lines have adequate flexibility to avoid damage? Y

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

Other Adverse Conditions

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

Seismic Walkdown Checklist (SWC)

Status: Y

Equipment ID No DC-1-14-M-TK-CCWST1 Equipment Class: 21

Equipment Description: CCW Surge Tank

Comment:

Evaluated by: TRK Thomas R. Kipp Date: 10/14/2012

DRC DJR. Date: 10/18/2012

Seismic Walkdown Checklist (SWC)

Status: Y

Equipment ID No DC-1-14-P-VOA-CCW-1-FCV-365 Equipment Class: 7

Equipment Description: CCW Heat Exchanger Flow Control Valve

Location: Building: Auxiliary Floor El. 85 Room, Area: 1-FCV-365

Manufacturer, model, Etc.

Instructions for Completing Checklist

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

Anchorage

1. Is the anchorage configuration verification required (i.e, is the item one of the 50% of SWEL items requiring such verification)?	N
2. Is the anchorage free of bent, broken, missing or loose hardware?	Y
3. Is the anchorage free of corrosion that is more than mild surface oxidation?	Y
4. Is the anchorage free of visible cracks in the concrete near the anchors?	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.)	N/A
6. Based on the above anchorage evaluations, is the anchorage free of potentially adverse seismic conditions?	Y

Interaction Effects

7. Are soft targets free from impact by nearby equipment or structures?	Y
8. Are overhead equipment, distribution systems, ceiling tiles, and lighting, and masonry block walls not likely to collapse onto the equipment?	Y
9. Do attached lines have adequate flexibility to avoid damage?	Y
10. Based on the above seismic interaction evaluations, is equipment free of potentially adverse seismic interaction effects?	Y

Other Adverse Conditions

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

Seismic Walkdown Checklist (SWC)

Status: Y

Equipment ID No DC-1-14-P-VOA-CCW-1-FCV-365 Equipment Class: 7

Equipment Description: CCW Heat Exchanger Flow Control Valve

Comment:

No seismic concerns.

Evaluated by: FFG Fred Grant Date: 10-19-12

SMM Scott M. Murray 10/22/12

Status: Y

Seismic Walkdown Checklist (SWC)

Equipment ID No. DC-1-16-P-P-LINE-2242 Equipment Class[12] 0. (Other)

Equipment Description: Return Piping from Make-Up Water Transfer Pump

Location: Bldg. Auxiliary Floor El. 140' Room, Area Unit 1 Fuel Handling Area

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 the checklist for documenting other comments.

Anchorage

1.	Is the anchorage configuration verification required (i.e., is the item one of the 50% of SWEL items requiring such verification)?	N
2.	Is the anchorage free of bent, broken, missing or loose hardware? This SWC applies to potential SFP rapid drain-down through a pipe entering the SFP. Therefore, anchorage is not applicable.	N/A
3.	Is the anchorage free of corrosion that is more than mild surface corrosion?	N/A
4.	Is the anchorage free of visible cracks in the concrete near the anchorage?	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 anchorage configuration verification is required.)	N/A
6.	Based on the above anchorage evaluations, is the anchorage free of potentially adverse seismic conditions?	N/A

Interaction Effects

7.	Are soft targets free from impact by nearby equipment or structures? This SWC applies to potential SFP rapid drain-down through a pipe entering the SFP. Therefore, seismic interaction effects are not applicable.	N/A
8.	Are overhead equipment, distribution systems, ceiling tiles and lighting, and masonry block walls not likely to collapse onto the equipment?	N/A
9.	Do attached lines have adequate flexibility to avoid damage?	N/A
10.	Based on the above seismic interaction evaluations, is the equipment free of potentially adverse seismic interaction effects?	N/A

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

Status: Y

Seismic Walkdown Checklist (SWC)

Equipment ID No. DC-1-16-P-P-LINE-2242 Equipment Class[12] 0. (Other)

Equipment Description: Return Piping from Make-Up Water Transfer Pump

Other Adverse Conditions

11.	Have you looked for and found no other seismic conditions that could adversely affect the safety function of the plant equipment? This SWC applies to potential SFP rapid drain-down through a pipe entering the SFP. Therefore, safety functions are not applicable.	N/A

Comments (Additional pages may be added as necessary)

This SWC applies to potential SFP rapid drain-down through the return pipe from the Make-Up Water Transfer Pump, which enters the SFP at its south end. This pipe crosses over the top of the concrete wall which separates the SFP from the Cask Washdown Area (CWA) (see photo on sheet 3). The open end of the pipe is located above the water surface in the SFP, so rapid draindown via suction through this pipe is not possible.

Evaluated by:	WRH	Date:	10/04/2012
	DRC		10/04/2012

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

Seismic Walkdown Checklist (SWC)

Status: Y

Equipment ID No DC-1-17-M-PP-ASP1 Equipment Class: 6

Equipment Description: ASW Pump No. 1

Location: Building: Intake Floor El. -3.1 Room, Area: 1-ASP1

Manufacturer, model, Etc.

Instructions for Completing Checklist

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

Anchorage

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

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

There is no free, bent, broken, missing or loose hardware in the anchorage.

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

Outer (6) J-bolts shows some corrosion. See Attachment 1 for disposition.

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

No visible cracks were seen in the concrete near the anchors.

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

The anchorage is consistent with plant documentation. (6) 1-1/4" bolts are present on the bottom base plate. (12) 1-1/4" bolts on the top base plate are present. Lateral supports at the top of the pump are (2) struts attached to welded embeds (1 in each lateral direction).

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

Interaction Effects

7. Are soft targets free from impact by nearby equipment or structures? Y

Open hook on light fixture could cause light to impact soft target on the pump. See Attachment 2 for disposition.

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

No overhead Block walls or ceiling tiles in the area. There is an open hook on one of the light fixtures, the light is judged to be incapable of "jumping" out of the hook based on the maximum vertical spectral acceleration at the anchor points.

9. Do attached lines have adequate flexibility to avoid damage? Y

All attached lines appear to have adequate flexibility.

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

No credible interaction effects were identified. See notes from question 8 for more detail.

Other Adverse Conditions

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

Seismic Walkdown Checklist (SWC)

Status: Y

Equipment ID No DC-1-17-M-PP-ASP1 Equipment Class: 6

Equipment Description: ASW Pump No. 1

Comment:

Evaluated by: KTM Date: 10/23/2012

SMM 10/22/12

Seismic Walkdown Checklist (SWC)

Diablo Canyon Power Plant, Unit 1

Equipment No. DC-1-17-M-PP-ASP1

Licensing Basis Evaluation

Issue:

Outer (6) J-bolts show some corrosion.

Evaluation:

Corrosion will not compromise structural integrity of the connection. The base support, in conjunction with the seismic braces still adequately restrain the pump and motor. Cleaning and recoating required.

Notification Required: Yes (50509828)

Evaluated by: WRH William R. Hon 10/19/12

Reviewed by: SMM Scott Miller 10/19/12

Seismic Walkdown Checklist (SWC)

Diablo Canyon Power Plant, Unit 1

Equipment No. DC-1-17-M-PP-ASP1

Licensing Basis Evaluation

Issue:

Open hook on overhead light fixture could allow fixture to fall during an earthquake, impacting soft targets on the pump.

Evaluation:

Based on DCM C-17 (Hosgri Response Spectra), Attachment J (Intake Structure), Spectra ID No. H-IS-E-VR_017-05-03 (Vertical Response Spectra on Top Deck at Aux. Saltwater Pump Rooms and East Crane Rail), the vertical zero period acceleration is approximately 0.55 g. Since this is less than 1.0 g, the light fixture will not uplift and become disengaged from the hook. Even if it were to become disengaged, the support at the other end (a swivel connection) should partially support the fixture, minimizing the chance for damage to soft targets.

Open hook should be crimped to prevent seismically-induced falling.

Notification Required: Yes (50509850)

Evaluated by: William R. Hosler WRHS 8/30/12

Reviewed by: Scott McMurry SXM9 10/19/2012

Seismic Walkdown Checklist (SWC)

Status: Y

Equipment ID No DC-1-17-P-VOA-SW-1-FCV-602 Equipment Class: 7

Equipment Description: ASW Flow Control Valves

Location: Building: Turbine Floor El. 85 Room, Area: 1-CCWHE

Manufacturer, model, Etc. Fisher Governor Company

Instructions for Completing Checklist

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

Anchorage

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

The bottom side of the valve is bolted to a pipe flange that is located just above the penetration to the floor. At the top, the valve is bolted to a flexible bellows section that is in turn bolted to the tube-side nozzle of the CCW Heat Exchanger. Y

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

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

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

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

Interaction Effects

7. Are soft targets free from impact by nearby equipment or structures? Y

The valve is located in a pit under one end of the CCW Heat Exchanger which protects it from falling objects.

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

Reinforced block wall near valve has additional reinforcement at the base and near the top.

9. Do attached lines have adequate flexibility to avoid damage? Y

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

Other Adverse Conditions

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

The valve is housed in a pit and the electrical lines to the valve position indicators are supported off Unistrut members bolted to the bottom of the pit. Although there is a drain in the pit, it would be possible for water to collect in the pit which could result in loss of the position indication signal. However, the only credible source of water in the pit is the threaded fire protection piping near CCW HX 1-2 which is well supported.

Seismic Walkdown Checklist (SWC)

Status: Y

Equipment ID No DC-1-17-P-VOA-SW-1-FCV-602 Equipment Class: 7

Equipment Description: ASW Flow Control Valves

Comment:

Evaluated by: TRK Thomas L. Kipp Date: 10/14/2012

KA A K Chaitanya 10/23/2012.

Seismic Walkdown Checklist (SWC)

Status: N

Equipment ID No DC-1-18-F-HR-FW-120-A38-1 Equipment Class: 0

Equipment Description: Indoor Hose Reel Stations

Location: Building: Auxiliary Floor El. 115 Room, Area: 1-FWHRA38

Manufacturer, model, Etc.

Instructions for Completing Checklist

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

Anchorage

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

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

Top (2) and bottom (1) anchor bolts of the 6 total are backed away from the wall, see photo on page 9. There appears to be about a 1/4" gap from the mounting plate and the wall at the very top and bottom of the mounting plates. See Attachment 1 for disposition. Y

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

No corrosion is identified.

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

No cracks in the wall were seen.

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

6 - 3/8" diameter anchor bolts installed in accordance with drawing 047483.

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

See question 2 notes.

Interaction Effects

7. Are soft targets free from impact by nearby equipment or structures? N

Fire hose rack could swing and hit the valve body and possibly the operator (hand wheel). See Attachment 2 for disposition.

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

Nothing was identified that could collapse on the equipment.

9. Do attached lines have adequate flexibility to avoid damage? Y

The fire hose itself is flexible.

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

Other Adverse Conditions

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

Seismic Walkdown Checklist (SWC)

Status: N

Equipment ID No DC-1-18-F-HR-FW-120-A38-1 Equipment Class: 0

Equipment Description: Indoor Hose Reel Stations

Comment:

Evaluated by: KTM Date: 10/23/2012

SMM 10/22/2012

Seismic Walkdown Checklist (SWC)

Diablo Canyon Power Plant, Unit 1

Equipment No. DC-1-18-F-HR-FW-120-A38-1

Licensing Basis Evaluation

Issue:

Firewater Hose Reel # A38 located in the Unit-1 Auxiliary Building, Area K, elev. 115', a gap was found behind the brackets that mount the hose reel to the wall in two locations. The top of the upper bracket and the bottom of the lower bracket have an approx. 1/8" gap between the bracket and the wall. This gap is under the anchor bolts, and it is unclear if the brackets were not originally installed flush, or if the anchor bolts have slipped over time.

Evaluation:

Hose reel stations are Seismic Category I up to the isolation valve, and the hose reel support is non-seismic, Design Class II per the DCPP Q-List (Ref. fire protection note F-18). Therefore, the as-found condition will not affect the operation or the availability of the hose reel station. Additionally, if the hose reel were to fall in a seismic event, there are no SISI targets in the area below or around hose reel station A38 that would be affected, and the fire hose on the reel would still be available for firefighting use. Therefore, this condition will not adversely affect the function of the hose reel.

SAPN 50512523 has been written. Engineering recommends that the anchor bolts be verified to be properly set and installed in accordance with MIP C-2.0. Shims behind the brackets may be used as necessary. If proper installation cannot be verified, then the anchor bolts should be replaced if possible.

Notification Required: Yes (50512523)

Evaluated by: Patrick Huang 10/22/12

Reviewed by: Scott Mc 10/22/12

Seismic Walkdown Checklist (SWC)

Diablo Canyon Power Plant, Unit 1

Equipment No. DC-1-18-F-HR-FW-120-A38-1

Issue:

During the Fukushima 2.3 seismic walk down of the Firewater Hose Reel # A38 located in the Unit-1 Auxiliary Building, Area K, elev. 115', it was found that the hose reel could swing and impact the supply valve for the hose. The outside circular member of the hose reel (about 1/2 inch diameter tube shape) could only impact the body of the valve; the stem and handwheel are not affected.

Evaluation:

This is an SISI concern, since swinging of the hose could impact the valve. However, since the reel is relatively free to swing on its hinges (i.e. there is very little friction), there is very small input motion in a horizontal direction to cause the reel to swing. Seismic testing of large panels with their doors open has shown that the door itself swings very little, and the impact forces associated with the door hitting the panel are very small (reference EPRI Seismic Walkdown Engineer training for Fukushima Recommendation 2.3 Seismic Walkdowns). Engineering concludes that due to this experience, coupled with the fact that the valve body is very robust and could withstand the postulated impact forces, the as-found condition is acceptable from an SISI standpoint and the hose reel is capable of performing its intended function.

During use of the hose reel; however, in the unlikely event that the hose reel were to be swung directly at the valve as it were spinning, the radial members of the reel could impact the valve handle. It is unlikely that it would damage the valve, but engineering recommends the installation of a mechanical stop be installed, similar to other hose reel stations in the Aux. Building (ref. hose reel No. A39-2 located on elev. 115', U-2, near column lines 20 and N and dwg. 6003029-51 for typical details).

Notification Required: Yes (50512606)

Evaluated by: Patrick Huang 10/22/12

Reviewed by: Scott Miller 10/22/12

Seismic Walkdown Checklist (SWC)

Status: Y

Equipment ID No DC-1-21-E-HT-LOH1 Equipment Class: 0

Equipment Description: DG No 1 Lube Oil Electric Heater

Location: Building: Turbine Floor El. 85' Room, Area: 1-DEG-11

Manufacturer, model, Etc.

Instructions for Completing Checklist

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

Anchorage

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

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

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

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

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.) N/A

Small electrical heater set on (2) pedestals that are each anchored to the floor slab by (4) 1/2" shell anchors. The heater is secured to the pedestals by 5/8" U-bolts.

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

Interaction Effects

7. Are soft targets free from impact by nearby equipment or structures? Y

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

Located under permanent maintenance platform.

9. Do attached lines have adequate flexibility to avoid damage? Y

Oil lines include flexible hoses near heater. Electrical connections have adequate flexibility.

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

Other Adverse Conditions

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

Seismic Walkdown Checklist (SWC)

Status: Y

Equipment ID No DC-1-21-E-HT-LOH1 Equipment Class: 0

Equipment Description: DG No 1 Lube Oil Electric Heater

Comment:

Evaluated by: TRK Thomas L. Kipp Date: 10/14/2012

DRC Dd R. Lm 10/18/2012

Seismic Walkdown Checklist (SWC)

Status: Y

Equipment ID No DC-1-21-E-S-EQD-11 Equipment Class: 14

Equipment Description: DG No. 1 DC Power Supply Transfer Switches

Location: Building: Turbine Floor El. 85 Room, Area: 1-DEG-11

Manufacturer, model, Etc. Square D Company

Instructions for Completing Checklist

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

Anchorage

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

The small panel includes (4) welded tabs at each corner through which (4) 3/8" bolts secure the panel to (2) Unistrut assemblies located at the top and bottom of the panel. The Unistrut assemblies are in turn welded to a building column (covered by fire resistant material). Y

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

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

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

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.) N/A

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

Interaction Effects

7. Are soft targets free from impact by nearby equipment or structures? Y

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

9. Do attached lines have adequate flexibility to avoid damage? Y

Conduit running from top of enclosure is well supported

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

Other Adverse Conditions

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

Seismic Walkdown Checklist (SWC)

Status: Y

Equipment ID No DC-1-21-E-S-EQD-11 Equipment Class: 14

Equipment Description: DG No. 1 DC Power Supply Transfer Switches

Comment:

Evaluated by: TRK Thomas L. Kipp Date: 10/14/2012

DRC DJR Date: 10/18/2012

Seismic Walkdown Checklist (SWC)

Status: Y

Equipment ID No DC-1-21-LPH65 Equipment Class: 1

Equipment Description: Diesel Fuel Oil Transfer Pump No. 0-1 Local Contactor Panel

Location: Building: Auxiliary Floor El. 100 Room, Area: 1-LPH65

Manufacturer, model, Etc. Cutler Hammer

Instructions for Completing Checklist

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

Anchorage

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

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

Anchored by (4) bolts and spring nuts into (2) horizontal Unistrut members located top and bottom. The Unistrut members are each in turn bolted to the reinforced masonry block wall by (2) 1/2" through bolts. Y

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

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

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.) N/A

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

Interaction Effects

7. Are soft targets free from impact by nearby equipment or structures? Y

There are contactors inside.

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

Conduit, cable trays, and room lighting fixtures are well supported. Panel is mounted on reinforced masonry block wall. Masonry wall has additional reinforcement at both the base and the top including horizontal braces that span to the concrete wall.

9. Do attached lines have adequate flexibility to avoid damage? Y

Connections are rigid conduit.

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

Other Adverse Conditions

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

Seismic Walkdown Checklist (SWC)

Status: Y

Equipment ID No DC-1-21-LPH65 Equipment Class: 1

Equipment Description: Diesel Fuel Oil Transfer Pump No. 0-1 Local Contactor Panel

Comment:

Evaluated by: TRK Thomas R. Kipp Date: 10/14/2012

DRC D.R. Lynn 10/18/2012

Seismic Walkdown Checklist (SWC)

Status: Y

Equipment ID No DC-1-21-M-EN-DEG1 Equipment Class: 17

Equipment Description: Diesel Generator No. 1 (Engine and Generator)

Location: Building: Turbine Floor El. 85 Room, Area: 1-DEG-11

Manufacturer, model, Etc. Alco Engine Inc.

Instructions for Completing Checklist

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Anchorage

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

The Diesel Generator skid is anchored by (14) 1-1/4" sleeved anchor bolts and (10) lateral stops (3 on each side and 2 on each end). Y

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

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

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

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

The anchorage of the skid is identical to that shown on drawings 663082-103 (4 pages), 438309- sheet 1, and 4004946-sheet1.

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

Interaction Effects

7. Are soft targets free from impact by nearby equipment or structures? Y

Soft targets consist only of small tubing lines. No credible falling sources we're identified.

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

9. Do attached lines have adequate flexibility to avoid damage? Y

All parts are on a common skid and all skid-mounted items appear to be properly anchored to the skid.

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

Other Adverse Conditions

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

Seismic Walkdown Checklist (SWC)

Status: Y

Equipment ID No DC-1-21-M-EN-DEG1 Equipment Class: 17

Equipment Description: Diesel Generator No. 1 (Engine and Generator)

Comment:

Includes The following subcomponents.
Fuel Oil Day Tank DC-1-21-M-TK-DFODT1 which is a welded steel box that is located under the engine and integral with the skid. No structural integrity issues were identified.
Radiator Water Pump DC-1-21-M-PP-JWP1 which is attached to the engine and was reviewed.
Electrical Generator DC-1-21-M-GN-DEG1 which was reviewed.

Evaluated by: TRK Thomas R. Kipp Date: 10/14/2012

DRC DTR. Date: 10/18/2012

Seismic Walkdown Checklist (SWC)

Status: Y

Equipment ID No DC-1-21-M-MISC-ES1 Equipment Class: 0

Equipment Description: DG No. 1 Exhaust Silencer

Location: Building: Turbine Floor El. 107 Room, Area: 1-DEG-ES-11

Manufacturer, model, Etc.

Instructions for Completing Checklist

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Anchorage

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

The Exhaust Silencer is supported by two saddle supports set on short concrete pillars. The inlet side support is fixed and the outlet side support is sliding. Two (2) embedded bolts anchor each saddle. The fixed saddle is additionally braced by (2) square tube sections run to a baseplate that is well anchored to the floor. The sliding end of the silencer is also additionally braced in the lateral direction by struts that run from the discharge piping immediately adjacent to the end of the silencer to anchor plates that are bolted to the concrete structure. Y

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

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

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

One minor hairline crack extends approximately 2' from center of fixed support. No impact on anchorage expected.

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

Anchorage configuration matches drawings 438390-1 and 463671-1

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

Interaction Effects

7. Are soft targets free from impact by nearby equipment or structures? Y

Room is essentially empty and the silencer has no soft targets.

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

Block walls are reinforced and seismically qualified.

9. Do attached lines have adequate flexibility to avoid damage? Y

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

Other Adverse Conditions

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

Seismic Walkdown Checklist (SWC)

Status: Y

Equipment ID No DC-1-21-M-MISC-ES1 Equipment Class: 0

Equipment Description: DG No. 1 Exhaust Silencer

Comment:

Evaluated by: TRK Thomas L. Kipp Date: 10/14/2012

DRC D.R. Lee 10/18/2012

Seismic Walkdown Checklist (SWC)

Status: Y

Equipment ID No DC-1-21-M-MISC-IS1 Equipment Class: 0

Equipment Description: DG No. 1 Inlet Silencer

Location: Building: Turbine Floor El. 85 Room, Area: 1-DEG-11

Manufacturer, model, Etc. Kittell Muffler & Engineering

Instructions for Completing Checklist

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Anchorage

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

Bolted to 22" diameter inlet pipe flange by (20) 1-1/4" bolts. Connection to turbo-charger is by means of a flexible connection. Y

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

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

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

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.) N/A

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

Just above the silencer the inlet pipe is anchored to the concrete wall through a massive box-section framework that is anchored by (4) approximately 1-1/2" through-bolts on either side (8 bolts total).

Interaction Effects

7. Are soft targets free from impact by nearby equipment or structures? Y

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

9. Do attached lines have adequate flexibility to avoid damage? Y

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

Other Adverse Conditions

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

Seismic Walkdown Checklist (SWC)

Status: Y

Equipment ID No DC-1-21-M-MISC-IS1 Equipment Class: 0

Equipment Description: DG No. 1 Inlet Silencer

Comment:

Evaluated by: TRK Thomas R. Kipp Date: 10/14/2012

DRC [signature] 10/18/2012

Seismic Walkdown Checklist (SWC)

Status: Y

Equipment ID No DC-1-21-M-TK-AR1A Equipment Class: 21

Equipment Description: DG No. 1 Air Start Receiver A

Location: Building: Turbine Floor El. 85 Room, Area: 1-DEG-11

Manufacturer, model, Etc. HSBC Company

Instructions for Completing Checklist

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Anchorage

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

   The vertical tank is anchored by four (4) 7/8" embedded anchors. The tank does not have an upper support.

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

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

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

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

   The anchorage is consistent with anchorage calculation D-21-7-1.

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

Interaction Effects

7. Are soft targets free from impact by nearby equipment or structures? Y

   Soft targets consist of small diameter SS tubing which could cause the tank to vent if broken by falling objects. No credible seismic interaction sources were found.

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

   No masonry walls; lighting fixtures are positively restrained. Emergency lighting secured to walls through Unistrut members.

9. Do attached lines have adequate flexibility to avoid damage? Y

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

Other Adverse Conditions

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

Seismic Walkdown Checklist (SWC)

Status: Y

Equipment ID No DC-1-21-M-TK-AR1A

Equipment Class: 21

Equipment Description: DG No. 1 Air Start Receiver A

Comment:

Evaluated by: TRK Thomas L. Kipp Date: 10/14/2012

DRC D J R. Lynn 10/18/2012

Seismic Walkdown Checklist (SWC)

Status: Y

Equipment ID No DC-1-21-P-FL-CAF1 Equipment Class: 0

Equipment Description: DG No. 1 Inlet Air Filter

Location: Building: Turbine Floor El. 85 Room, Area: 1-DEG-11

Manufacturer, model, Etc. Paullin Equipment Company

Instructions for Completing Checklist

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Anchorage

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

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

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

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

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.) N/A

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

At the back end, the filter is connected to the piping by a flange connection with (10) 1-1/4" bolts. A vertical pipe strut supports the piping just downstream of the filter. At the front end, a 4 x 4 structural tube section is welded to the air filter cover. Rigid struts connect the filter cover to the concrete structure, supporting the front end in both the horizontal and vertical directions.

Interaction Effects

7. Are soft targets free from impact by nearby equipment or structures? Y

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

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

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

Other Adverse Conditions

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

Seismic Walkdown Checklist (SWC)

Status: Y

Equipment ID No DC-1-21-P-FL-CAF1 Equipment Class: 0

Equipment Description: DG No. 1 Inlet Air Filter

Comment:

Evaluated by: TRK Thomas R. Kipp Date: 10/14/2012

DRC D J R. Lum 10/18/2012

Seismic Walkdown Checklist (SWC)

Status: Y

Equipment ID No DC-1-21-P-VOA-DEG-1-LCV-85 Equipment Class: 7

Equipment Description: DG No. 1 Fuel Oil Shutoff Valve Header B

Location: Building: Turbine Floor El. 85 Room, Area: 1-DEG-11

Manufacturer, model, Etc. Anchor-Darling Valve with Bettis Actuator

Instructions for Completing Checklist

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Anchorage

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

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

1-1/2" pipe-mounted valve. Pipe supported within 6' of valve on either side.

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

Trench is dry and pipe supports are covered with tar-like material to suppress corrosion.

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

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.) N/A

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

Interaction Effects

7. Are soft targets free from impact by nearby equipment or structures? Y

Set screws securing floor grating over valve are missing. However, configuration of trench and floor grating section precludes grating from falling on valve. For disposition see Attachment 1.

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

Floor grating provides general protection for the valve.

9. Do attached lines have adequate flexibility to avoid damage? Y

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

Other Adverse Conditions

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

Seismic Walkdown Checklist (SWC)

Status: Y

Equipment ID No DC-1-21-P-VOA-DEG-1-LCV-85 Equipment Class: 7

Equipment Description: DG No. 1 Fuel Oil Shutoff Valve Header B

Comment:

Evaluated by: TRK Thomas R. Kipp Date: 10/25/2012

DRC [signature] 10/23/12

Seismic Walkdown Checklist (SWC)

Diablo Canyon Power Plant, Unit 1

Equipment No. DC-1-21-P-VOA-DEG-1-LCV-85

Licensing Basis Evaluation

Issue:

Set screws securing the floor grating over the valve are missing.

Evaluation:

The grating is non-safety related, but must not become dislodged during an earthquake such that it could damage the LCVs or other SISIP targets in the DG rooms.

Since the grating is located in a recess in the floor, it cannot move horizontally during an earthquake. The maximum vertical seismic acceleration (Hosgri Earthquake per DCM C-17) is 0.5 g, so the unanchored grating will not be lifted upwards during an earthquake.

Therefore, this condition does not impact the operation of DCPP.

Notification Required: Yes (50508115)

Evaluated by: Wm R. Hoe 9/23/12

Reviewed by: [illegible] 9/25/12

Seismic Walkdown Checklist (SWC)

Status: Y

Equipment ID No DC-1-23-E-HT-EH-29A Equipment Class: 0

Equipment Description: Post-LOCA Sampling Room Ventilation Duct Heater No. 29A

Location: Building: Auxiliary Floor El. 100 Room, Area: 1-HT-EH-29A

Manufacturer, model, Etc. Nutherm International

Instructions for Completing Checklist

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Anchorage

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

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

In-line heater mounted between duct flanges . The heater is also individually supported by an angle bracket system that is bolted to the wall. Wall bracket system is secured to the wall by (8) 3/8" expansion anchors. Y

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

Only surface corrosion on flange bolts and nuts.

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

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.) N/A

Anchorage is consistent with drawing 513145-1

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

Interaction Effects

7. Are soft targets free from impact by nearby equipment or structures? Y

No visible soft targets.

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

Room lighting fixtures pose the only falling source and all are well anchored to the lighting conduit runs.

9. Do attached lines have adequate flexibility to avoid damage? Y

Connecting lines are in rigid conduit.

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

Other Adverse Conditions

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

Seismic Walkdown Checklist (SWC)

Status: Y

Equipment ID No DC-1-23-E-HT-EH-29A Equipment Class: 0

Equipment Description: Post-LOCA Sampling Room Ventilation Duct Heater No. 29A

Comment:

Evaluated by: TRK Thomas R. Kipp Date: 10/14/2012

DRC [signature] 10/18/2012

Seismic Walkdown Checklist (SWC)

Status: Y

Equipment ID No DC-1-23-E-PNL-CRC1 Equipment Class: 20

Equipment Description: Control Room Ventilation Control Cabinets

Location: Building: Auxiliary Floor El. 154 Room, Area: 1-CP-35

Manufacturer, model, Etc.

Instructions for Completing Checklist

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Anchorage

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

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

Anchorage consists of (4) bolts with spring nuts to (2) horizontal Unistrut members that are in turn bolted to the concrete wall with (4) concrete anchors.

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

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

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.) N/A

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

Interaction Effects

7. Are soft targets free from impact by nearby equipment or structures? Y

All nearby wall-mounted panels and junction boxes are well anchored.

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

Overhead HVAC ducting has rigid frame supports combined with rod hangers.

9. Do attached lines have adequate flexibility to avoid damage? Y

All connections are class 1 supported rigid conduit.

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

Other Adverse Conditions

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

Seismic Walkdown Checklist (SWC)

Status: Y

Equipment ID No DC-1-23-E-PNL-CRC1 Equipment Class: 20

Equipment Description: Control Room Ventilation Control Cabinets

Comment:

Evaluated by: TRK Thomas R. Kipp Date: 10/14/2012

DRC [signature] 10/18/2012

Seismic Walkdown Checklist (SWC)

Status: Y

Equipment ID No DC-1-23-E-PNL-PCCFC1 Equipment Class: 20

Equipment Description: CFCU SIS and Auto Bus Transfer Relay Cabinet, Bus F

Location: Building: Auxillary Floor El. . 100 Room, Area: 1-PNL-ARP

Manufacturer, model, Etc.

Instructions for Completing Checklist

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Anchorage

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

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

All anchor bolts are securely fastened.

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

No corrosion is present.

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

No cracks are visible.

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

(4) 1/2" anchor bolts at the base. Internal components are mounted on a plate with 4 anchor bolts.

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

The frame is braced laterally in-plane with the panel. The bottom of the panel has stiffener plates welded to the frame and the floor in the out-of-plane direction of the panel.

Interaction Effects

7. Are soft targets free from impact by nearby equipment or structures? Y

All nearby cabinets and conduit are seismically restrained.

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

Block walls have been retrofitted with steel members which are anchored to the floor and to the ceiling.

9. Do attached lines have adequate flexibility to avoid damage? Y

No issues with attached lines.

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

Other Adverse Conditions

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

Seismic Walkdown Checklist (SWC)

Status: Y

Equipment ID No DC-1-23-E-PNL-PCCFC1 Equipment Class: 20

Equipment Description: CFCU SIS and Auto Bus Transfer Relay Cabinet, Bus F

Comment:

Evaluated by: KTM Keri Moore Date: 10/18/2012

SMM Scott Mahoney 10/22/12

Seismic Walkdown Checklist (SWC)

Status: Y

Equipment ID No DC-1-23-M-BC-CP-35 Equipment Class: 12

Equipment Description: Control Room Ventilation Air Conditioning Compressors

Location: Building: Auxiliary Floor El. 154 Room, Area: 1-CP-35

Manufacturer, model, Etc. Trane

Instructions for Completing Checklist

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

Anchorage

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

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

The compressor unit is bolted to (2) transverse base channels by (4) 1/2" bolts. The heavy structural channel sections are in turn secured to the floor slab by (4) 5/8" embedded anchors that have anchor plates at the bottom. Y

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

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

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.) N/A

Anchorage is consistent with drawing 443333-1.

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

Interaction Effects

7. Are soft targets free from impact by nearby equipment or structures? Y

Soft targets consist of very small diameter copper tubing. However, the tubing is in general protected by the adjacent control panel and it's support frame.

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

Overhead conduit and fire water piping are well supported and an overhead floor drain line that is rod-hung is partially embedded in the HVAC duct insulation which provides lateral restraint. Both the fire water and floor drain lines penetrate a reinforced masonry wall immediately behind the compressorThe reinforced masonry wall includes additional support both at the base and the top.

9. Do attached lines have adequate flexibility to avoid damage?

Both the electrical connections and the compressor inlet and outlet nozzles include flexible sections. Y

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

Other Adverse Conditions

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

Seismic Walkdown Checklist (SWC)

Status: Y

Equipment ID No DC-1-23-M-BC-CP-35 Equipment Class: 12

Equipment Description: Control Room Ventilation Air Conditioning Compressors

Comment:

Evaluated by: TRK Thomas R. Kipp Date: 10/14/2012.

DRC D. R. Lee 10/18/2012

Seismic Walkdown Checklist (SWC)

Status: Y

Equipment ID No DC-1-23-M-BF-E-1 Equipment Class: 9

Equipment Description: Aux. Bldg Ventilation Exhaust Fans

Location: Building: Auxiliary Floor El. 140 Room, Area: 1-BFE-1

Manufacturer, model, Etc.

Instructions for Completing Checklist

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Anchorage

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

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

All anchorage is present and in good condition.

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

Part of the fan skid and some anchor bolts at the bottom of the skid had minor surface corrosion. Backdraft dampers have mild surface corrosion. No structural issues.

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

No visible cracks were seen.

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.) N/A

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

No adverse seismic conditions were identified.

Interaction Effects

7. Are soft targets free from impact by nearby equipment or structures? Y

No credible sources were identified that could impact soft targets.

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

closed JAS 10/12/12 glm 10/12/12

No overhead equipment, distribution systems, ceiling tiles ~~or lighting~~ in the room. Lighting was rod hung with a ball and socket joint on one end and an S-hook on the opposite end of the fixture. Seismic interaction is judged to be incapable of damaging equipment or soft targets.

9. Do attached lines have adequate flexibility to avoid damage? Y

All attached lines use flexible conduit.

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

No issues were identified.

Other Adverse Conditions

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

Seismic Walkdown Checklist (SWC)

Status: Y

Equipment ID No DC-1-23-M-BF-E-1 Equipment Class: 9

Equipment Description: Aux. Bldg Ventilation Exhaust Fans

Comment:

Evaluated by: KTM Date: 10/15/2012

SMM 10/18/2012

Seismic Walkdown Checklist (SWC)

Status: Y

Equipment ID No DC-1-23-M-BF-E-4 Equipment Class: 9

Equipment Description: FHBVS Normal Exhaust Fan

Location: Building: Auxiliary Floor El. 140 Room, Area: 1-BFE4

Manufacturer, model, Etc. Buffalo Forge Company

Instructions for Completing Checklist

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Anchorage

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

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

Belt-driven squirrel cage fan that is bolted to a 6" I-beam frame by (3) 5/8" bolts on either side. The frame is in turn bolted to the concrete floor slab by (4) 5/8" embedded anchor bolts on either side and by (3) additional 5/8" embedded bolts on the motor end. The motor is bolted to a motor base that is welded to the base frame for the fan. Y

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

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

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.) N/A

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

Interaction Effects

7. Are soft targets free from impact by nearby equipment or structures? Y

The only soft targets for the fan consist of the electrical lines and tubing connections for the fan actuator which is separately supported. The wall-mounted HEPA filters are adequately restrained.

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

The ventilation ducting is rigidly supported and a flexible connection exists between the fan and the exhaust ducting. Room lighting is either wall mounted or hung from the ceiling by pipe sections with ball and socket connections.

9. Do attached lines have adequate flexibility to avoid damage? Y

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

Other Adverse Conditions

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

The overhead crane has been removed from the crane rail.

Seismic Walkdown Checklist (SWC)

Status: Y

Equipment ID No DC-1-23-M-BF-E-4 Equipment Class: 9

Equipment Description: FHBVS Normal Exhaust Fan

Comment:

Evaluated by: TRK Thomas R. Kipp Date: 10/14/2012

DRC [signature] 10/18/2012

Seismic Walkdown Checklist (SWC)

Status: Y

Equipment ID No DC-1-23-M-BF-E-103 Equipment Class: 9

Equipment Description: ASW Pump Compartment Exhaust Fans

Location: Building: Intake Floor El. -3.1 Room, Area: 1-ASP1

Manufacturer, model, Etc.

Instructions for Completing Checklist

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

Anchorage

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

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

All anchorage is present top and bottom (6 total, 1/2" expansion anchors). The nut on the middle bolt is not completely threaded due to the grounding plate between the nut and the washer. There is approximately 1/8" gap between the bolt face and the outer face of the nut. The 1/2" nut is judged to be sufficient to restrain the fan, but a notification should be made. The top 3 bolts also had less than full thread engagement. East bolt was less than 1/16" from flush and other two were approx. 1/8" from flush. See Attachment No. 1 for disposition. Y

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

No corrosion is present

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

No cracks were visible near the anchorage.

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

Anchorage appears to be consistent with plant drawings. 3 each, 1/2" dia. Expansion bolts top and bottom.

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

No adverse conditions other than thread engagement discussed in Item 2 were identified.

Interaction Effects

7. Are soft targets free from impact by nearby equipment or structures? Y

No soft targets were identified on the fan.

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

No block walls or overhead equipment in the area. The HVAC attached to the fan appears to be adequately secured. Light next to the fan could impact during a seismic event, but it is judged that the impact would not have an adverse affect on the functionality of the fan.

9. Do attached lines have adequate flexibility to avoid damage? Y

The attached line uses a flexible conduit.

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

See notes from question 8. No issues were identified.

Other Adverse Conditions

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

Seismic Walkdown Checklist (SWC)

Status: Y

Equipment ID No DC-1-23-M-BF-E-103 Equipment Class: 9

Equipment Description: ASW Pump Compartment Exhaust Fans

Comment:

Bottom anchors inspected visually on 8/29/2012. Upper bolts inspected via remote video on 9/19/2012.

Evaluated by: KTM, KA Date: 10/23/2012

10/23/12.

SMM

10/23/12.

Seismic Walkdown Checklist (SWC)

Diablo Canyon Power Plant, Unit 1

Equipment No. DC-1-23-M-BF-E-103

Licensing Basis Evaluation

Issue:

All anchorage is present top and bottom (6 total, 1/2" expansion anchors). The nut on the middle bolt is not completely threaded due to the grounding plate between the nut and the washer. There is approximately 1/8" gap between the bolt face and the outer face of the nut. The 1/2" nut is judged to be sufficient to restrain the fan, but a notification should be made. The top 3 bolts also had less than full thread engagement. East bolt was less than 1/16" from flush and other two were approx. 1/8" from flush.

Evaluation:

The lack full thread engagement on the Exhaust Fan E-103 bottom anchor bolts was found in 1997 (Ref. AR A0431367). The evaluation of as-found condition is documented in seismic Legacy Calc DHV-2.3, Rev. 6. It is concluded that the thread engagement is acceptable.

In addition to the above finding, Fukushima 2.3 walkdown also identified that the top 3 anchor bolts have less full thread engagement. However, by comparison of the thread engagements previously evaluated, the top three anchor bolts are not as critical as the bottom one. Therefore, the previous evaluation is applicable to the as-found condition of top anchor bolts. E-103 remains seismically qualified for DCPP design basis seismic events.

Recommendation: Update the drawing 59614 to reflect the as-found condition

Notification Required: Yes (50519852)

Evaluated by: Patrick Hwang 10/23/12

Reviewed by: [signature] 10/23/12

Seismic Walkdown Checklist (SWC)

Status: Y

Equipment ID No DC-1-23-M-BF-E-43 Equipment Class: 10

Equipment Description: 480-V Switchgear Ventilation Exhaust Fans

Location: Building: Auxiliary Floor El. 163 Room, Area: 1-E43

Manufacturer, model, Etc. Joy Technologies Inc

Instructions for Completing Checklist

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

Anchorage

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

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

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

Some minor surface corrosion present around the bottom edge of the perimeter of the pedestal base plate

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

No concrete cracks observed.

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.) N/A

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

Interaction Effects

7. Are soft targets free from impact by nearby equipment or structures? Y

Potential soft target is the electrical flex conduit. However there are no credible interaction sources since the fan is roof mounted.

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

No overhead systems

9. Do attached lines have adequate flexibility to avoid damage? Y

The attached conduit has a flexible connection. The attached duct is braced. One end of the fan has a flex connection.

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

Other Adverse Conditions

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

Seismic Walkdown Checklist (SWC)

Status: Y

Equipment ID No DC-1-23-M-BF-E-43 Equipment Class: 10

Equipment Description: 480-V Switchgear Ventilation Exhaust Fans

Comment:

Fan 1-E43 is supported by two steel saddles which are mounted on a structural steel pedestal. The pedestal base plate is anchored to the concrete roof slab with 8 anchor bolts. On the east and west sides of the base plate, the middle anchor bolts are slightly off-center (does not significantly affect design capacity)

Inspection includes backdraft damper DC-1-23-P-C-VAC-1-BDD-43
Surface corrosion was noted on the backdraft damper (VAC-1-BDD-43). See Attachment No. 1 for disposition.

Evaluated by: DKN [signature] Date: 10/24/2012

DRC [signature] 10/23/12

Seismic Walkdown Checklist (SWC)

Diablo Canyon Power Plant, Unit 1

Equipment No. DC-1-23-M-BF-E-43

Licensing Basis Evaluation

Issue:

Surface corrosion was noted on the backdraft damper for Fan No. E-43 (VAC-1-BDD-43).

Evaluation:

The condition is considered to be surface corrosion at this time, so it does not impact the structural integrity of the damper. Therefore, the seismic qualification of the damper is not affected, and the damper remains capable of performing its required functions.

Recommendation:

Clean and recoat damper.

Notification Required: Yes (50510493)

Evaluated by: William R Hon 9/26/12

Reviewed by: [signature] 10/22/12