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CENG
a joint venture of
Constellation Energy
EDF

June 28, 2013

U.S. Nuclear Regulatory Commission
11555 Rockville Pike
Rockville, MD 20852

ATTENTION: Document Control Desk

SUBJECT: **Calvert Cliffs Nuclear Power Plant, Unit 2**
Renewed Facility Operating License No. DPR-69
Docket No. 50-318

Supplemental Response to 10 CFR 50.54(f) Request for Information, Recommendation 2.3, Seismic

REFERENCES:

(a) Letter from E. J. Leeds (NRC) and M. R. Johnson (NRC) to All Power Reactor Licensees and Holders of Construction Permits in Active or Deferred Status, 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

(b) Letter from M. G. Korsnick (CENG) to Document Control Desk (NRC), dated November 27, 2012, Response to 10 CFR 50.54(f) Request for Information, Recommendation 2.3, Seismic (ML12339A349)

On March 12, 2012, the U.S. Nuclear Regulatory Commission (NRC) issued Reference (a) to all power reactor licensees. The NRC letter requests further information from addressees to support the evaluation of NRC Staff Recommendation 2.3: Seismic, from the Near-Term Task Force review of the accident at the Fukushima Dai-ichi nuclear facility.

Reference (b) is the Calvert Cliffs Nuclear Power Plant, LLC's response to the request in Reference (a). In that response a regulatory commitment was made to submit an updated walkdown report in June 2013. This letter closes that Regulatory Commitment.

As stated in Attachment 5 of Reference (b), there were 11 Seismic Walkdown Equipment List (SWEL) items that were deferred until the next refueling outage. Table 0-1 of Attachment 5 summarized the reasons each item was inaccessible during normal plant operation, and noted the planned Seismic Walkdown date. All 11 inaccessible items were walked down.

A001
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Table 0-2 of Reference (b) included a list of 8 equipment items that required supplemental internal inspections because they were not opened during the original walkdowns. The supplemental internal inspections were completed on 6 of 8 of those electrical components. Two components were inspected during the original walkdowns and should not have been included in Table 0-2 as needing an additional internal inspection.

Attachment 1 to this letter is the supplemental seismic walkdown report. Attachment 2 provides the seismic walkdown checklists, Attachment 3 contains the area walk-by checklists, and Attachment 4 provides the supplemental internal inspections of electrical cabinets.

There are no new regulatory commitments in this letter.

If there are any questions concerning this letter, please contact Everett (Chip) Perkins at everett.perkins@cengllc.com or 410-470-3928.

I declare under penalty of perjury that the foregoing is true and correct. Executed on June 28, 2013.

Sincerely,

Mary G. Korsnick

MGK/EMT/bjd

Attachments:
(1) Supplemental Seismic Walkdown Report
(2) Seismic Walkdown Checklists
(3) Area Walk-By Checklists
(4) SWCs for Supplemental Internal Inspections of Electrical Cabinets

cc: B. K. Vaidya, NRC
M. C. Thadani, NRC
N. S. Morgan, NRC
W. M. Dean, NRC
Resident Inspector, Calvert Cliffs
S. Gray, DNR

ATTACHMENT (1)

SUPPLEMENTAL SEISMIC WALKDOWN REPORT

Constellation Energy Nuclear Group, LLC
June 28, 2013

SUPPLEMENTAL SEISMIC WALKDOWN REPORT

IN RESPONSE TO THE 50.54(f) INFORMATION REQUEST REGARDING FUKUSHIMA NEAR-TERM TASK FORCE RECOMMENDATION 2.3: SEISMIC

for

Calvert Cliffs Nuclear Power Plant Unit 2

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ATTACHMENT 1
SUPPLEMENTAL SEISMIC WALKDOWN REPORT

Executive Summary

This Supplemental Seismic Walkdown Report documents walkdowns performed at Calvert Cliffs Nuclear Power Plant (CCNPP) for components that were not accessible during the initial walkdowns and were not included in the Response to 10 CFR 50.54(f) Request for Information, Recommendation 2.3, Seismic [Ref. 1]. These seismic walkdowns identified two adverse seismic condition associated with the 4 Containment Air Cooling units (CACs) as well as the 3 Iodine Removal Units (IRUs) on Unit 2. These issues were entered into the station corrective action program, evaluated, repaired and subsequently determined to have been operable in the as-found condition. The operability determination was applicable to Unit 1 CACs and IRUs for extent of condition. These issues are discussed in more detail in sections 4 and 5 of this report.

EPRI Technical Report 1025286, Seismic Walkdown Guidance for Resolution of Fukushima Near-Term Task Force Recommendation 2.3: Seismic [Ref. 2]. was used to perform the engineering walkdowns and evaluations described in this report. In accordance with Reference 2, the following topics are addressed in the subsequent sections of this report.

- Personnel Qualifications
- Selection of Systems, Structures and Components (SSCs)
- Seismic Walkdowns and Area Walk-Bys
- Seismic Licensing Basis Evaluations
- Peer Review

Personnel Qualifications

Personnel qualifications are discussed in Section 2 of this report. The personnel who performed the key activities required to fulfill the objectives and requirements of the "Request for Information Pursuant to Title 10 of the Code of Federal Regulations 50.54(f) Regarding Recommendation 2.1, 2.3, and 9.3, of the Near-Term Task Force Review of Insights from the Fukushima Dai-ichi Accident," Enclosure 2.3, "Recommendation 2.3: Seismic, [Ref. 3], letter are qualified and trained as required in Reference 2. These personnel are responsible for:

- Performing the Seismic Walkdowns and Area Walk-Bys,
- Performing the seismic licensing basis evaluations, as applicable,
- Performing the peer reviews

Selection of SSCs

The selection of SSCs was completed and documented within Reference 1.

Seismic Walkdowns and Area Walk-Bys

ATTACHMENT 1
SUPPLEMENTAL SEISMIC WALKDOWN REPORT

Section 4 of this report documents the equipment Seismic Walkdowns, Area Walk-Bys and Internal Inspections. The supplemental seismic walkdowns for CCNPP were performed during the Spring of 2013 during power operation and during the plant's refueling outage. The walkdown team consisted of two Seismic Walkdown Engineers (SWE's) from the station's Design Engineering group. Operations/Maintenance personnel were also available and called upon as needed.

The seismic walkdowns focused primarily on the seismic adequacy of the Seismic Walkdown Equipment List (SWEL) items and on identifying:

- Adverse anchorage conditions
- Adverse seismic spatial interactions
- Other adverse seismic conditions (e.g., degradation)

Area Walk-Bys were conducted in each area of the plant that contained an item on the SWEL. The purpose of an Area Walk-by is to identify potentially adverse seismic conditions associated with other SSCs located within the vicinity of a SWEL item. There was 1 Area Walk-by completed for CCNPP Unit 2 during the refueling outage. The key examination factors considered in the Area Walk-Bys included:

- Anchorage conditions (if visible without opening equipment)
- Significantly degraded equipment in the area
- Potential seismic interactions
- A visual assessment (from the floor) of cable/conduit raceways and HVAC ducting (e.g., condition of supports or fill conditions of cable trays)
- Miscellaneous other conditions including conformance of temporary installations to general seismic housekeeping procedures

The seismic walkdown team inspected the remaining inaccessible components on the SWEL as described in Reference 1. All SWEL components in Unit 2 Containment have been inspected.

CCNPP was required to complete a supplemental internal inspection of 8 cabinets/components. The walkdown team completed supplemental internal inspections on 6 of 8 items. One substitution was made on the supplemental internal inspection list due to industrial safety concerns as the original selected cabinet contained high voltage components. Two components (2HS-5204A and 2HS-5204A1) were not required to be inspected. They consisted of a remote start hand switch enclosure which was inspected and documented in Reference 1. They should not have been identified as needing an internal inspection as the enclosure mounting is visible externally.

During the CCNPP walkdown, there were two adverse seismic conditions discovered that challenged the licensing basis for the plant. These two issues were entered into the station Corrective Action Program (CAP) and evaluated. The components were initially determined to be inoperable at the time of discovery and have subsequently been returned to Operable status prior to the return to service of Unit 2 from a refueling outage. The mountings of several components were welded to comply with design requirements prior to restart of Unit 2. An operability determination subsequently concluded these components were

operable in the as-found condition. These conditions are further discussed in section 4 and 5 of this report.

Under this supplemental inspection an additional three (3) Condition Reports (CRs) were issued to address conditions such as missing welds and degraded fasteners. These issues were identified in the Seismic Walkdown Checklists (SWCs), and Area Walk-by Checklists (AWCs) of this report. Disposition of the identified issues was completed within the station's corrective action process.

SWCs and AWCs were completed for all components and areas that were walked down as required.

The status of previously identified issues that were entered into the Corrective Action Program in References 1 (with outstanding actions) is updated in Section 3.

Seismic Licensing Basis Evaluations

Reference 2 provides a detailed process to perform and document seismic licensing basis evaluations of SSCs when potentially adverse seismic conditions are identified during the equipment Seismic Walkdowns or Area Walk-Bys. The process provides a means to identify, evaluate and document how the identified potentially adverse seismic condition meets a station's seismic licensing basis without entering the condition into a station's Corrective Action Program. Further, the process directs that if a condition cannot be readily shown to meet the seismic licensing basis, then the identified condition should be entered into the station's CAP where it will be determined that the condition does or does not meet the seismic licensing basis.

Constellation Energy Group/CCNPP staff did not utilize the process provided in Reference 2 to perform and document seismic licensing bases evaluations of SSCs with potentially adverse seismic conditions. Instead, all questionable conditions identified by the SWEs during the equipment Seismic Walkdowns or Area Walk-Bys were entered into the station CAP to be further evaluated and addressed as required. Therefore, no seismic licensing basis evaluations were completed in accordance with the process documented in Reference 2. Table 4-1 of Section 4 of this report provides a summary of the conditions identified during the Seismic Walkdowns and Area Walk-Bys.

Peer Reviews

A peer review consisting of one qualified individual who has seismic engineering experience as it applies to nuclear power plants and peer reviews were performed in accordance with Reference 2. The Peer Review process included the following activities:

- Review of the Seismic Walkdown Checklists (SWCs) and Area Walk-Bys (AWCs)
- Review of Licensing basis evaluations, as applicable
- Review of the decisions for entering the potentially adverse conditions into the CAP process
- Review of the submittal report
- Provide a summary report of the peer review process in the submittal report

ATTACHMENT 1
SUPPLEMENTAL SEISMIC WALKDOWN REPORT

Section 6 of this report contains the Peer Review summary report. The Peer Review determined that the objectives and requirements of Reference 3 are met. Further, the efforts completed and documented within this report are in accordance with Reference 2.

Summary

In summary, the supplemental outage seismic walkdowns have been completed at Calvert Cliffs Nuclear Power Plant, Unit 2, in accordance with the NRC-endorsed walkdown methodology. All potentially degraded, nonconforming, or unanalyzed conditions identified as a result of the seismic walkdowns have been entered into the corrective action program to be addressed.

ATTACHMENT 1
SUPPLEMENTAL SEISMIC WALKDOWN REPORT

1 Introduction

1.1 BACKGROUND

In response to the Near-Term Task Force (NTTF) Recommendation 2.3 and 10CFR50.54 (f) letter, CCNPP performed seismic walkdowns in accordance with Reference 2. Results of the walkdowns are documented within Reference 1. The walkdown team was unable to inspect some equipment due to plant configuration and personnel qualifications. This supplemental report documents completion of the required seismic walkdowns for inaccessible equipment and equipment required to be opened for inspection.

1.2 APPROACH

In accordance with the Reference 2 the following topics are addressed in this supplemental report:

- Personnel Qualifications
- Selection of SSC's
- Seismic Walkdowns, Area Walk-Bys, and Supplemental Internal Inspections
- Licensing Basis Evaluations
- Peer Review

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Personnel Qualifications

2.1 OVERVIEW

This section of the report identifies the personnel that participated in the supplemental inspections for the NTTF 2.3 Seismic Walkdown effort. A description of the responsibilities of each Seismic Walkdown participant's role(s) is provided in Reference 2. Note that for this report, the only roles required were for the walkdown team, licensing basis reviewer, and peer reviewer. Personnel responsible for equipment selection and IPEEE review are noted within Section 3 of Reference 1.

2.2 WALKDOWN PERSONNEL

Table 2-1 below summarizes the names and corresponding roles of personnel who participated in the NTTF 2.3 Seismic Walkdown effort.

Table 2-1 Personnel Included in NTTF 2.3 Supplemental Walkdown

Personnel / Role	Seismic Walkdown Engineer	Licensing Basis Reviewer	Peer Reviewer
Mr. Joe Crunkleton	X	X	
Mr. Emran Hussain	X	X	
Mr. Mark Wright	X		
Mr. Jeff Gardiner			X
Dr. Charles Merritt			X

The following includes a short synopsis of each individual's qualifications.

Emran Hussain: Mr. Hussain is a Principal Engineer in the Design Engineering department at the Calvert Cliffs Nuclear Power Plant. He is a fully qualified seismic engineer and worked in the Mechanical Design Group for over 13 years. He has over 30 years of engineering experience in the nuclear field. Mr. Hussain has extensive experience in seismic area. He is thoroughly familiar with various aspects of seismic qualification of equipment and structures. He has performed numerous seismic analysis, seismic test report reviews, evaluation of "as-found" degraded condition, etc. Since 2012, he has been working as a

seismic engineer for the Fukushima Response Team. He completed the EPRI sponsored seismic walkdown training for the Fukushima project. Mr. Hussain has a Masters degree in Mechanical Engineering.

Mr. Hussain participated in the initial 2.3 seismic walkdowns at CCNPP.

Mark A. Wright, PE: Mr. Wright is a Principal Engineer in the Nuclear Engineering Services group at the Calvert Cliffs Nuclear Power Plant. Mr. Wright is a fully qualified Civil/Seismic engineer and has worked in the Nuclear Industry for over 34 years. During this time Mr. Wright has been involved in the seismic analysis of new and replacement components (mechanical and electrical), the design and implementation of safety-related modifications and the evaluation of "as-found" degraded conditions at the site. Mr. Wright is knowledgeable in the site seismic licensing basis, and is a qualified to perform and review 50.59 Screens and Applicability Determinations. Mr. Wright has been involved with the site's response to the Fukushima Event since March 2011. Mr. Wright has a BS degree in Civil Engineering from the University of Delaware. He is a Registered Professional Engineer in Maryland and Pennsylvania and has completed the 5-day SQUG Walkdown Screening and Seismic Evaluation Training Course.

Joseph Crunkleton: Mr. Crunkleton has worked at the Calvert Cliffs Nuclear Power Plant for 20 years. A majority of his tenure included working in the Mechanical and Civil Engineering Unit. Mr. Crunkleton supports major modifications as well as day to day plant support. SQUG Walkdown Screening and Seismic Evaluation Training were completed in 2007. Training on Near Term Task Force Recommendation 2.3 – Plant Seismic Walkdown was completed in 2012. Mr. Crunkleton has professional experience in the following areas: Structural Engineering, Seismic Engineering, Construction, Pipe Stress / Pipe Support Analysis, Load Handling / Rigging, Scaffolding / Radiation Shielding Design. Mr. Crunkleton has a BS degree in Microbiology and a BS in Aerospace Engineering.

Mr. Crunkleton is a member of the American Society of Mechanical Engineers

Mr. Crunkleton participated in the initial SWEL development and 2.3 seismic walkdowns at CCNPP.

Jeffrey Gardiner: Mr. Gardiner is an engineer in the Nuclear Engineering Services group at the R.E. Ginna Nuclear Power Plant. Mr. Gardiner is a fully qualified Civil/Seismic engineer and has worked in the Mechanical Design Group at Ginna for over 4 years. During this time Mr. Gardiner has been involved in the seismic analysis of new and replacement components (mechanical and electrical), the design and implementation of safety-related modifications and the evaluation of "as-found" degraded conditions at the site. Mr. Gardiner is knowledgeable in the site seismic licensing basis, and is a qualified to perform and review 50.59 Screens and Applicability Determinations. For the last 6 months Mr. Gardiner has served as the seismic engineer for the site's Fukushima Response Team. Mr. Gardiner has a BSCE in Civil Engineering and an MS degree in Civil Engineering with concentrations in Structural and Seismic Engineering from the University at Buffalo. He has passed the E.I.T. in New York and has completed the 5-day SQUG Walkdown Screening and Seismic Evaluation Training Course.

Mr. Gardiner participated in the initial and supplemental 2.3 seismic walkdowns at R.E.Ginna. Nuclear Power Plant, and was the peer team lead for this supplement.

Charles R. Merritt, Jr., D.Sc., PE, PMP: Dr. Merritt is a Sr. Project Manager in the Fukushima Lessons Learned Implementation project department at CENG. He became the Site Lead for the Fukushima Lessons Learned project at the Calvert Cliffs Nuclear Power Plant in September 2012. He has over 28 years of engineering and project leadership experience in the nuclear field. Dr. Merritt holds a Bachelor of Science in Marine Engineering from the U. S. Naval Academy, as well as Master of Engineering Management and Doctor of Science in Engineering Management from The George Washington University. He is a registered professional engineer in the Commonwealth of Virginia and is a certified Project Management Professional.

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Selection of SSC's

3.1 OVERVIEW

Section 4.0 of Reference 1 details the selection methodology utilized for this report and SWEL development. Selection of SSC's is outside the scope of work performed within this report.

3.2 SCOPE

The scope of the components in this supplement consist of the SWEL items previously deemed inaccessible or required a supplemental inspection as outlined in Reference 1, tables E1 & E2. These tables are shown here for reference.

Table E-1: Summary of Inaccessible Equipment

SWEL Item #	Component ID	Description	Location
17	2CV3938	22 MS HDR ATMOS DUMP	CAL-AB-408
18	2CV3939	21 MS HDR ATMOS DUMP	CAL-AB-408
19	2CV3939OP	21 MS HDR ADV CV OPERATOR	CAL-AB-408
25	2CV4150	CNTMT SPRAY HDR 21 ISOL VALVE	CAL-CTMT-229
26	2CV4151	CNTMT SPRAY HDR 22 ISOL VALVE	CAL-CTMT-229
32	2ERV402	PZR PWR OP RV	CAL-CTMT-229E
34	2FANHVACCTCLR21	CONTAINMENT COOLER 21 FAN	CAL-CTMT-229S
35	2FANHVACCTCLR22	CONTAINMENT COOLER 22 FAN	CAL-CTMT-229S
36	2FANHVACCTCLR23	CONTAINMENT COOLER 23 FAN	CAL-CTMT-229S
37	2FANHVACCTCLR24	CONTAINMENT COOLER 24 FAN	CAL-CTMT-229S
93	2PUMPSW23	23 SW PUMP	CAL-ISPR-INT2

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SUPPLEMENTAL SEISMIC WALKDOWN REPORT

Table E-2: Summary of Equipment Subject to Supplemental Internal Inspection

SWEL Item #	Component ID	Description	Location
5	2BUS2B01A(Note 1)	480V BUS 21A	CAL-AB-311
6	2BUS2B01B	480V BUS 21B	CAL-AB-311
44	2HS5204A	SW AIR COMPR 21 CONTROL	CAL-AB-532
45	2HS5204A1	21 SWAC LCL/REMOTE HS	CAL-AB-532
74	2PNL2C61B(Note 1)	2B DG LOCAL CONTROL PANEL	CAL-AB-416
75	2PNL2C61C(Note 2)	2B DG LOCAL CONTROL PANEL	CAL-AB-416
97	2RY51G/T21A(Note 1)	480V SERV XFMR U-440-21A GROUND RELAY	CAL-AB-311
98	2RY51G/T21B)	480V SERV XFMR U-440-21B GROUND RELAY	CAL-AB-311
**	2PNL2C61A(Note 2)	2B DG LOCAL CONTROL PANEL	CAL-AB-416

Notes:

1) Additional internal anchorage also needs verification during this supplementary walkdown.
2) 2PNL2C61C could not be inspected due to cabinet containing high voltage components. 2PNL2C261A was inspected as a substitute for SWEL item #75.

Table 3-2: Status of Corrective Action Program Items Identified in Reference 1 Component Seismic Walkdowns

No.	Item	Description	Action(s)	Resolutions
1	2BATT21	Information provided has not satisfied the information needed for the SWE to determine if we are in our designs configuration	CR-2012-009780 (Operable, but degraded or nonconforming)	ADC-12-001337 revised battery rack drawing. CR is closed

Table 3-2: Status of Corrective Action Program Items Identified in Reference 1 Component Seismic Walkdowns

No.	Item	Description	Action(s)	Resolutions
2	2ENGEDG2B	2G2B unit mounted on vibration isolators.	CR -2012-010381 (Operable) to investigate the seismic adequacy of this unit's anchorage	ADC-12-001335 created to capture as-built installation. CR is closed
3	2HS5204A	Complete drawing 91061 sheet 3. The anchorage is not consistent with drawing 91061 sheet 3.	CR-2012-009711 (Operable but degraded)	ECP-12-001031 qualified as-found configuration. CR is closed
4	2PCV3939A	Information provided has not satisfied the information needed for the SWE to determine if we are in our designs configuration	CR-2012-009779 (Operable, but degraded or nonconforming)	Appropriate documents found to accept installed configuration. CR is closed
5	2PNL2C08	Used details that are not shown on drawing, but may be construed as equivalent. See as-built on Dwg G19925H004 Rev. 9	CR-2012-009752 (Operable)	Appropriate documents found to accept installed configuration. CR is closed
6	2PO5430	Information provided has not satisfied the information needed for the SWE to determine if we are in our designs configuration	CR-2012-009778 (Operable, but degraded or nonconforming)	Appropriate documents found to accept installed configuration. CR is closed
7	2PT5313A	Oxidation on bolts and corrosion on base plate. The left base plate is flaking. Also, channel is not fully welded between the base plate and its web.	CR-2012-009661 (Operable) CR-2012-010259 (Operable)	WO C92057336 to clean bolts and base plate corrosion WO is open ECP-13-000065 qualified support. CR's are closed
8	2PT5313B	Corrosion and oxidation on anchor bolts and plate. Base plates on both sides are flaking and missing anchor bolt washer.	CR-2012-009622 (Operable) for corrosion CR-2012-009624 (Operable) for missing washer	WO C92056165 created to clean bolts. WO C92056184 to install washer. WO"s are open

Table 3-2: Status of Corrective Action Program Items Identified in Reference 1 Component Seismic Walkdowns

No.	Item	Description	Action(s)	Resolutions
9	2PT5315C	The bottom bolt on the right side is not fully engaged. Also, channel is not fully welded between the base plate and its web.	CR -2012-009754 (Operable)	ECP-13-000065 qualified support. CR is closed
10	2PT5315D	Only 3" long weld on vertical side of channel, not fully welded as shown on typical detail.	CR-2012-009714 (Operable)	ECP-13-000065 qualified support. CR is closed
11	2PUMPSICS21	2.25" conduit and J-Box is supported on a frame that is pinned to the floor.	CR-2012-009304 (Operable)	WO C92049017 issued to replace bolt. WO is open
12	2RYRPS-K1 & 2RYRPS-K4	Anchorage varies from drawings in that the cabinet is anchored by a single 13/16" F-F CEA per bay, not as shown on DWG.	CR-2012-009775 (Operable, but degraded or nonconforming)	ADC-12-001365 captured as-built configuration. CR is closed
13	2SV5313A	Pipe line heading into containment is resting on angle iron stanchion, but not supported approx. 1" of outside wall.	CR-2012-009626 (Operable)	ECP-12-001032 issued to install missing U-bolt. CR is closed WO C92056259 is open
14	2TK4802	Two bottom headed studs are engaged. Top four headed studs are engaged.	CR-2012-009759 (Operable, but degraded or nonconforming)	Appropriate documents found to accept installed configuration. CR is closed
15	2TKRWT21	Approximately 6 bolts are showing signs of corrosion to the bolt shaft. Approximately 8 visible cracks appear to go down along foundation.	CR-2012-008380 (Operable) for corrosion CR-2012-009629 (Operable) for cracks	WO C92018872 issued to clean and preserve bolts WO C92056298 was created to repair cracks. CR's are closed WO's are open

Table 3-2: Status of Corrective Action Program Items Identified in Reference 1

Area Seismic Walkdowns

No.	Area	Description	Action(s)	Resolutions
16	CAL-AB-204	Non-seismic scaffold near SWC fan	CR-2012-009762 Relocate or seismically restrain scaffolding.	Scaffold is seismically installed per site procedure. CR is closed
17	CAL-AB-311	Tool hanging on side of RCP22AP01 (trip sensitive equipment) which may bang during earthquake.	CR-2012-08676 (operable) for RCP Breaker Racking tool	CA-2012-003696 - identify new storage area and relocate racking tool
18	CAL-AB-408	There is scaffold part staging behind valve 2MS-3938-CV. The staging consist of racks those seismic adequacy is questionable. The racks may move and strike a drain line and MSS valves enclosure, therefore a potential seismic concern.	CR-2012-009724 (Operable)	Scaffold arrangement corrected per Design Engineering input. See CA-2012-003936. CR is closed
19	CAL-AB-409	Crack in wall runs through fire protection panel anchor bolt and conduit supports.	CR-2012-009757 (Operable, but degraded or nonconforming)	WO C92081952 created to repair cracks.
20	CAL-AB-414	Unsupported measurement pole resting against wall near MCC.	CR-2012-008679 (Operable)	CA-2012-003697 - Evaluate J Hook bracket CA is open
21	CAL-AB-416	Air receiver anchorages are not fully seated on concrete pad; some have 1/16" to 3/16" gap.	CR-2012-009782 (Operable but degraded)	- Acceptable as is-Shims causing gap-Per design. CR is closed

Table 3-2: Status of Corrective Action Program Items Identified in Reference 1

Area Seismic Walkdowns

No.	Area	Description	Action(s)	Resolutions
22	CAL-AB-422	Air receiver anchorages are not fully seated on concrete pad; some have 1/16" to 1/8" gap. DG concrete pad shows considerable cracking.	CR-2012-009782 (Operable but degraded) for gaps CR-2012-009785 for cracks (Operable)	Appropriate documents found to accept installed configuration. CR is closed Cracks were determined to Non Structural. Acceptance documented in ECP-13-000067. CR is closed

ATTACHMENT 1
SUPPLEMENTAL SEISMIC WALKDOWN REPORT

4

Seismic Walkdowns, Area Walk-By's and Internal Inspections

4.1 OVERVIEW

Seismic Walkdowns and Area Walk-Bys were conducted by a two-person team of trained Seismic Walkdown Engineers, in accordance with the Reference 2. Each engineer has completed the 5-day SQUG Walkdown Training course, a recognized equivalent to the NTTF 2.3 Seismic Walkdown Training Course outlined in Reference 2.

4.2 SEISMIC WALKDOWNS

The components included in the Seismic Walkdowns are shown on the CCNPP SWEL 1 in Attachment 3 of Reference 1. A Seismic Walkdown Checklist (SWC) from Appendix C of [Ref. 1] was completed for each item on the SWEL. Additionally, photos are included with most SWCs to provide a visual record of the walkdowns. Seismic Walkdowns were completed for the remaining 11 SWEL 1 items noted in table E-1 of Reference 1. Supplemental internal inspections were completed for 6 electrical components listed in Table E-3 of Reference 1. Two components, 2HS-5204A and 2HS-5204A1, on Table E-2 of Reference 1 were determined to not need an internal inspection. These components are not located in a cabinet but consist of a remote switch control box which was included and evaluated in the initial walk down. The switch box anchorage is visible externally and the mounting stanchions were evaluated as acceptable in CR-2012-009711. This CR generated an Engineering Change Package (ECP) to update the drawings showing the actual weld configuration. These should not have been included Table E2 in Reference 1.

Four components were identified as having missing welds for mounting to structural steel. These components were initially determined to be inoperable at the time of discovery, with a subsequent restoration to Operable, prior to restart from a refuel outage, and are discussed further in section 5. Subsequent evaluation found these components were operable in the as-found configuration.

4.2.1 Anchorage Configuration Confirmation

As required by the EPRI Seismic Walkdown Guidance [Ref. 1] (pg. 4-3), 50% of the items (excluding line mounted equipment) were confirmed to have anchorage configurations consistent with plant documentation. The 50% anchorage configuration verifications were satisfied by Reference 1. Three additional anchorage verifications were performed during the panel internal inspections.

4.2.2 Issues Identification during Seismic Walkdowns

There was one issue identified by the SWEs during the equipment walkdowns that were ultimately judged to be a "Potentially Adverse Seismic Condition." Table 4-1 provides a summary of the issues identified during the Seismic Walkdowns.

4.3 AREA WALK-BYS

In accordance with Reference 1, Area Walk-by Checklists (AWC) was performed for each room or area within a large room (35 foot radius) which included one or more items on the SWEL. Completed AWCs are included in Appendix C. A total of 1 supplemental AWC was completed to encompass various elevations in the Containment. All other areas were reviewed as part of Reference 1.

4.3.1 Issue Identification during Area Walk-bys

One issue identified by the SWEs during the area walk-bys was ultimately judged to be a "Potentially Adverse Seismic Condition". The 3 Iodine Removal Units (IRUs) were found to have missing welds for mounting to structural steel. These issues were entered into the CAP system. The IRUs were repaired during the outage by installing welds to meet design requirements. This issue is discussed further in section 5. No additional issues were identified by the AWC's.

4.4 ELECTRICAL CABINET INTERNAL INSPECTIONS

The initial walkdowns at CCNPP were completed prior to NRC direction to perform internal inspections of electrical cabinets. During this supplemental inspection, CCNPP personnel opened and inspected cabinets to the extent practical. Per plant management direction, the team did not break the plane of the energized cabinets and was unable to move or relocate wires to enhance the inspection. One substitution was made due do to industrial safety concerns as the selected cabinet contained high voltage components. SWCs for internal inspections of the cabinets are located within Appendix D of this report.

4.4.1 Supplemental Internal Inspection Checklists

Supplemental internal inspections of electrical cabinets are documented with Appendix D of this report. This internal inspection concentrated on adverse internal mounting and missing fasteners. No issues were identified during these supplemental inspections.

To gain access to the remainder of the component would require disassembly of the panel cover and potential exposure of the team to critical safety-related loads. Given the external anchorage available on these components at CCNPP, and the relative ruggedness of these components, the inspection at CCNPP was limited to opening the installed panel doors. No further disassembly was performed.

ATTACHMENT 1

SUPPLEMENTAL SEISMIC WALKDOWN REPORT

Table 4-1: Table of Potentially Degraded, Nonconforming or Unanalyzed Conditions for Equipment Items at CCNPP Identified During Supplemental Walkdowns.

Component ID	Potentially Adverse Seismic Condition	Action Taken to Address the Condition	Current Status
Containment Air Coolers 2FANHVACCTCLR21 2FANHVACCTCLR22 2FANHVACCTCLR23 2FANHVACCTCLR24	The housing for the unit 2 CACs are not welded per design drawings. Drawings 61779 and 61780 indicate the 4x4 tube steel support columns should be welded to base plates with all-around welds. Walkdown Indicates sparse welds on a few locations and no visible welds on others. There are 8 support locations per CAC. This issue applies to 21, 22, 23 and 24 CACs.	CR-2013-001820. Inoperable (initial Operations Determination) Work orders were generated and executed to install welds CR-2013-002038 written and OD 13-002 (Operability Determination) was subsequently completed and determined both CACs and IRUs were operable in the as-found condition, i.e. with the welds missing. Documented in ECP-13-000235.	CACs welded per initial design requirements prior to startup of Unit 2. Equipment returned to operable status. Unit 1 CACs verified by previous photos and walkdowns to have proper welds. CR-2013-001820 Closed CR-2013-002038 Remains open to document U1 walkdown.

Table 4-1: Table of Potentially Degraded, Nonconforming or Unanalyzed Conditions for Equipment Items at CCNPP Identified During Supplemental Walkdowns.			
Component ID	Potentially Adverse Seismic Condition	Action Taken to Address the Condition	Current Status
Iodine Removal Units (IRUs) 2FANHVAC/PIR21 2FANHVAC/PIR22 2FANHVAC/PIR23	The housing for charcoal filters 21, 22 and 23 are not welded to the 69-ft elevation per design drawings. Drawing 61780 indicates 21 and 22 filter housings should be welded all-around with a 3/16-inch fillet weld. No welds could be seen. Drawings 61760 and 61763 show 23 filter housing is welded to base plates on two corners and continuously on edges where it sits on building steel. These welds were not observed.	CR-2013-002002. Inoperable (Initial Operations Determination) WO's generated and executed to install welds CR-2013-002038 written and OD 13-002 (Operability Determination) was completed and subsequently determined both CACs and IRUs were operable in the as-found condition, i.e. with the welds missing. Documented in ECP-13-000235.	IRUs welded per design requirements prior to startup of Unit 2. Equipment returned to operable status. Unit 1, 11 & 13 IRUs, verified by previous photos and walkdowns to have proper welds. IRU 12 photographic evidence unavailable but OD determined IRU 12 is operable. CR-2013-002002 Closed CR-2013-002038 Remains open to document U1 walkdown.

Table 4-1: Table of Potentially Degraded, Nonconforming or Unanalyzed Conditions for Equipment Items at CCNPP Identified During Supplemental Walkdowns.

Component ID	Potentially Adverse Seismic Condition	Action Taken to Address the Condition	Current Status
2PUMPSW23	Degradation was-found on the hold-down nuts. Additional pumps inspected and work orders generated to repair	CR-2013-004351 written to address Not an operability issue Note: 2PUMPSW23 had an existing CR-2012-007927 for pump volute corrosion. New hold down nuts will be included in WO C91983612.	WO's generated for the following pumps hold down nuts. 1PUMPSW11 C92288332 - WITH WO FOR PMP REPL PM 10122026[B]. 1PUMPSW12 C92288334 – WITH WO FOR PMP REPL PM 10122027[B]. 1PUMPSW13 C92288335 – WITH WO C91966439 FOR PMP REPL PM 10122047[B]. 2PUMPSW21 C92288337 - WITH WO FOR PMP REPL PM 20122006[B]. 2PUMPSW22 C92288338 – WITH WO C92108772 FOR PMP REPL PM 20122007[B]. 2PUMPSW23 C92288339 - WITH WO C91521300 FOR PMP REPL PM 20122027[B].

5

Licensing Basis Evaluations

Constellation Energy Group/CCNPP staff did not utilize the process provided in Reference 2 to perform and document seismic licensing bases evaluations of SSCs with potentially adverse seismic condition. Instead, all questionable conditions identified by the SWEs during the equipment Seismic Walkdowns or Area Walk-Bys were entered into the station CAP to be further evaluated and addressed as required. Therefore, no seismic licensing basis evaluations were completed in accordance with the process documented in Reference 2. Table 4-1 in Section 4 of this report provides a summary of the conditions identified during the Seismic Walkdowns and Area Walk-Bys.

Two issues identified by the SWEs during the supplemental Seismic Walkdowns, and Area Walk -Bys were ultimately judged to be a "Potentially Adverse Seismic Condition". The Containment Air Cooling units (CACs) and Iodine Removal Units (IRUs) were both found to have missing welds for mounting to structural steel.. These issues were entered into the CAP system and Operations initially declared the equipment inoperable. An operability determination was subsequently performed and the SSC's were determined to be Operable in the as-found condition. Both the CACs and IRUs were restored to full design requirements during the outage by installing welds per the design drawings. All issues were corrected prior to the restart of the unit form the outage.

An extent of condition review was conducted as part of the resolution of the Unit 2 CACs and IRUs. Specifically, the condition of the Unit CACs and IRUs was reviewed. Photographic evidence was reviewed, that depicted the welds in place on the Unit 1 CACs and 2 of the 3 IRUs. No photographic evidence or walkdown documentation was located identifying the number 12 IRU had the proper welds on its mounting plates. As stated previously an Operability Determination (OD) was conducted and it was determined the CACs and IRUs are operable without the welds in place. This OD is applicable to both Unit 1 and 2. A condition report and corrective actions remain open to complete the Unit 1 walkdowns and verify and/or install welds as needed.

6 Peer Review

6.1 PEER REVIEW INTRODUCTION

6.1.1 *Overview*

The peer review was performed in accordance with the walkdown guidance document [Ref. 2]. The scope of the Peer Review was limited to the following activities, as the SWEL development process has already been peer reviewed by the original peer review team:

- Review of all the checklists completed for the supplemental Seismic Walkdowns & Area Walk-Bys & Internal Inspections
- Interview with supplemental Seismic Walkdown Team
- Review of any licensing basis evaluations
- Review of the final submittal report
- The inclusion of a summary of the peer review process in the submittal report

6.2 REVIEW OF SAMPLE CHECKLIST & AREA WALK-BYS

6.2.1 *Walkdown Review and Review of Checklists*

The peer team completed a peer review of all SWC's and AWC's completed by the team. The peer review comments shown are those provided to the SWE walkdown team at the time of the review. All comments have been addressed in the final SWCs.

Table 6-1: Table of Peer Review Comments for SWC's

Item Tag No.	Equipment Class	Walkdown Item	Location	Observations
2CV3938	7	22 MS HDR ATMOS DUMP	CAL-AB-408	Enclosure removed for supplemental inspection as required by original submittal.
2CV3939	7	21 MS HDR ATMOS DUMP	CAL-AB-408	Enclosure removed for supplemental inspection as required by original submittal.

ATTACHMENT 1
SUPPLEMENTAL SEISMIC WALKDOWN REPORT

Table 6-1: Table of Peer Review Comments for SWC's				
Item Tag No.	**Equipment Class**	**Walkdown Item**	**Location**	**Observations**
2CV3939OP	7	21 MS HDR ADV CV OPERATOR	CAL-AB-408	Enclosure removed for supplemental inspection as required by original submittal.
2CV4150	7	CNTMT SPRAY HDR 21 ISOL VALVE	CAL-CTMT-229	None
2CV4151	7	CNTMT SPRAY HDR 22 ISOL VALVE	CAL-CTMT-229	None
2ERV402	0	PZR PWR OP RV	CAL-CTMT-229E	None
2FANHVACCTCLR21	10	CONTAINMENT COOLER 21 FAN	CAL-CTMT-229S	Update checklist question 5 to N/A, this component anchorage was not required to be verified. Suggest adding reference drawings.
2FANHVACCTCLR22	10	CONTAINMENT COOLER 22 FAN	CAL-CTMT-229S	Update checklist question 5 to N/A, this component anchorage was not required to be verified. Suggest adding reference drawings.
2FANHVACCTCLR23	10	CONTAINMENT COOLER 23 FAN	CAL-CTMT-229S	Update checklist question 5 to N/A, this component anchorage was not required to be verified. Suggest adding reference drawings.
2FANHVACCTCLR24	10	CONTAINMENT COOLER 24 FAN	CAL-CTMT-229S	Update checklist question 5 to N/A, this component anchorage was not required to be verified. Suggest adding reference drawings.
2PUMPSW23	6	23 SW PUMP	CAL-ISPR-INT2	No photographs available for peer review team to review due to inspection device utilized for confined space.

ATTACHMENT 1
SUPPLEMENTAL SEISMIC WALKDOWN REPORT

Table 6-1: Table of Peer Review Comments for SWC's				
Item Tag No.	**Equipment Class**	**Walkdown Item**	**Location**	**Observations**
2BUS2B01A	2	480V BUS 21A	CAL-AB-311	Update checklist to include anchorage verification reference drawing or calculation.
2BUS2B01B	2	480V BUS 21B	CAL-AB-311	Anchorage inspection complete as required per original submittal, agree does not require verification.
2PNL2C61B	20	2B DG LOCAL CONTROL PANEL	CAL-AB-416	Update checklist to include anchorage verification reference drawing or calculation.
2PNL2C61A	20	2B DG LOCAL CONTROL PANEL	CAL-AB-416	Alternate for 2PNL2C61C due to high-voltage. Agree with methodology, completed new external inspection (potential seismic interactions) and supplemental internal inspection required as per original submittal.
2RY51G/T21A	0	480V SERV XFMR U-440-21A GROUND RELAY	CAL-AB-311	Update checklist to include anchorage verification reference drawing or calculation.
2RY51G/T21B	0	480V SERV XFMR U-440-21B GROUND RELAY	CAL-AB-311	None

Table 6-2: Table of Peer Review Comments for AWC's			
229S	Unit 2 Containment	Elevations 45 and 69 foot	Area Walk-by conducted after finding missing welds on CACs located missing support welds on IRU's. Team noted that scaffold rack configuration was procedurally controlled.

6.2.2 *Evaluation of Findings*

In all cases, the issues identified would not prevent the equipment from performing its safety-related function. The peer review team has reviewed the identified issues and associated disposition and agree with the conclusions of Section 4.

ATTACHMENT 1
SUPPLEMENTAL SEISMIC WALKDOWN REPORT

7
References

Reference drawings related to SWEL items are cited in the Seismic Walkdown Checklists and if applicable, in the Area-Walkdown Checklists.

1. Letter from M. G. Korsnick to Document Control Desk (NRC) dated November 27, 2012, Response to 10 CFR 50.54(f) Request for Information, Recommendation 2.3, Seismic

2. EPRI Technical Report 1025286, Seismic Walkdown Guidance for Resolution of Fukushima Near-Term Task Force Recommendation 2.3: Seismic, dated June 2012

3. NRC (E Leeds and M Johnson) Letter to All Power Reactor Licensees et al., "Request for Information Pursuant to Title 10 of the Code of Federal Regulations 50.54(f) Regarding Recommendation 2.1, 2.3, and 9.3, of the Near-Term Task Force Review of Insights from the Fukushima Dai-ichi Accident," Enclosure 2.3, "Recommendation 2.3: Seismic."

A

Project Personnel Certificates

SQUG

Certificate of Achievement

This is to Certify that

Mark A. Wright

has Completed the SQUG Walkdown Screening and Seismic Evaluation Training Course Held June 22-26, 1992

Neil P. Smith, Commonwealth Edison
SQUG Chairman

David A. Freed, MPR Associates
SQUG Training Coordinator

Robert P. Kassawara, EPRI
SQUG Program Manager

SQUG

Certificate of Achievement

This is to Certify that

Jeff Gardiner

has Completed the SQUG Walkdown Screening and Seismic Evaluation Training Course
June 11-15, 2012
Glen Allen, Virginia

Paul D. Baughman, ARES Corporation
SQUG Instructor

Divakar Bhargava, Dominion Generation
SQUG Chairman

SQUG

Certificate of Achievement

This is to Certify that

Joseph Crunkleton

has Completed the SQUG Walkdown Screening and Seismic Evaluation Training Course Held June 11-15, 2007

Richard G. Starck II, MPR Associates, Inc.
SQUG Instructor

Paul D. Baughman, ARES Corporation
SQUG Instructor

EPRI | ELECTRIC POWER RESEARCH INSTITUTE

Certificate of Completion

Emran Hussain

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

July 11, 2012
Date

R.P. Kassawara

Robert K. Kassawara
EPRI Manager,
Structural Reliability & Integrity

ATTACHMENT (2)

SEISMIC WALKDOWN CHECKLISTS

B
Seismic Walkdown Checklists (SWCs)

Table B-1. Summary of Seismic Walkdown Checklists Completed by CCNPP Personnel (SWEL 1)		
Component ID	**Description**	**Anchorage Verification Required**
2CV3938	22 MS HDR ATMOS DUMP	no
2CV3939	21 MS HDR ATMOS DUMP	no
2CV3939OP	21 MS HDR ADV CV OPERATOR	no
2CV4150	CNTMT SPRAY HDR 21 ISOL VALVE	no
2CV4151	CNTMT SPRAY HDR 22 ISOL VALVE	no
2ERV402	PZR PWR OP RV	no
2FANHVACCTCLR21	CONTAINMENT COOLER 21 FAN	no
2FANHVACCTCLR22	CONTAINMENT COOLER 22 FAN	no
2FANHVACCTCLR23	CONTAINMENT COOLER 23 FAN	no
2FANHVACCTCLR24	CONTAINMENT COOLER 24 FAN	no
2PUMPSW23	23 SW PUMP	no

ATTACHMENT 2
SEISMIC WALKDOWN CHECKLISTS

Status: [Y] N U

Seismic Walkdown Checklist (SWC)

Equipment ID No.: 2CV3938

Equipment Class: (7) Fluid-Operated Valves

Equipment Description: 22 MS HDR ATMOS DUMP

Project: CCNPP 2 SWEL

Location (Bldg, Elev, Room/Area): AUX, 45.00 ft, CAL-AB-408

Manufacturer/Model:

Instructions for Completing Checklist

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

Anchorage

1. Is anchorage configuration verification required (i.e., is the item one of the 50% of SWEL items requiring such verification)? — No

   This walkdown included the valve enclosure. Anchorage inspection was completed for the enclosure.

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

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

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

5. Is the anchorage configuration consistent with plant documentation? (Note: — N/A

ATTACHMENT 2
SEISMIC WALKDOWN CHECKLISTS

Status: [Y] N U

Seismic Walkdown Checklist (SWC)

Equipment ID No.: 2CV3938

Equipment Class: (7) Fluid-Operated Valves

Equipment Description: 22 MS HDR ATMOS DUMP

This question only applies if the item is one of the 50% for which an anchorage configuration verification is required.)

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

Interaction Effects

7.	Are soft targets free from impact by nearby equipment or structures?	Yes
8.	Are overhead equipment, distribution systems, ceiling tiles and lighting, and masonry block walls not likely to collapse onto the equipment?	Yes
9.	Do attached lines have adequate flexibility to avoid damage?	Yes
10.	Based on the above seismic interaction evaluations, is equipment free of potentially adverse seismic interaction effects?	Yes

ATTACHMENT 2
SEISMIC WALKDOWN CHECKLISTS

Status: [Y] N U

Seismic Walkdown Checklist (SWC)

Equipment ID No.: 2CV3938

Equipment Class: (7) Fluid-Operated Valves

Equipment Description: 22 MS HDR ATMOS DUMP

Other Adverse Conditions

11.	Have you looked for and found no adverse seismic conditions that could adversely affect the safety functions of the equipment?	Yes

Comments

The Area Walkdown Checklist for this area was submitted with the NRC report in 2012 (Reference 7.1).

Evaluated by: J. A. Crunkleton Date: 4/30/2013

E. M. Hussain 4/30/2013

ATTACHMENT 2
SEISMIC WALKDOWN CHECKLISTS

Status: [Y] N U

Seismic Walkdown Checklist (SWC)

Equipment ID No.: 2CV3938

Equipment Class: (7) Fluid-Operated Valves

Equipment Description: 22 MS HDR ATMOS DUMP

Photos

2CV3938 3-4-2013

ATTACHMENT 2
SEISMIC WALKDOWN CHECKLISTS

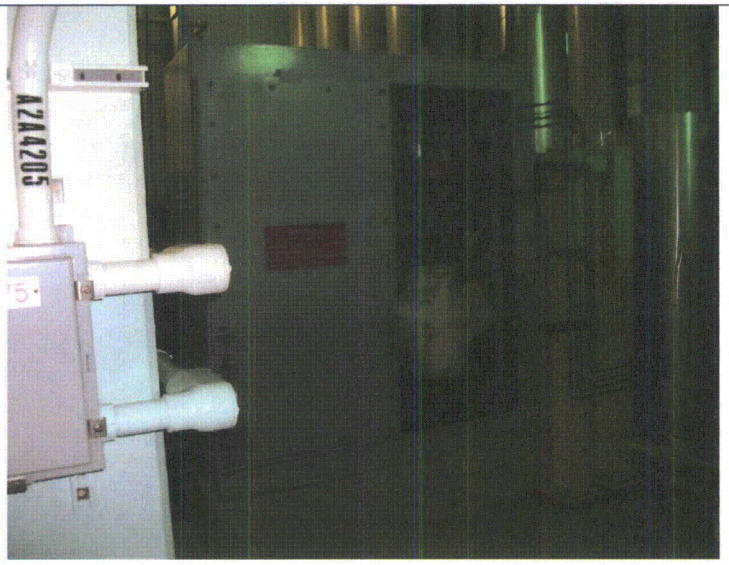
Status: [Y] N U

Seismic Walkdown Checklist (SWC)

Equipment ID No.: 2CV3938

Equipment Class: (7) Fluid-Operated Valves

Equipment Description: 22 MS HDR ATMOS DUMP



2CV3938 3-4-2013

ATTACHMENT 2
SEISMIC WALKDOWN CHECKLISTS

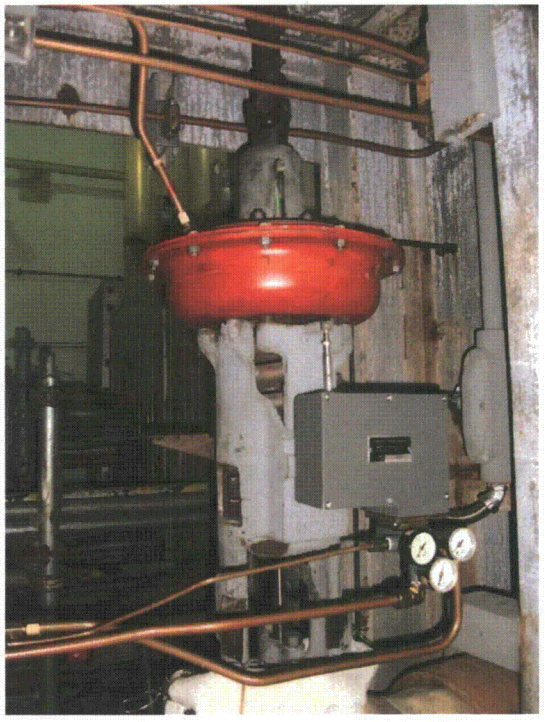
Status: [Y] N U

Seismic Walkdown Checklist (SWC)

Equipment ID No.: 2CV3938

Equipment Class: (7) Fluid-Operated Valves

Equipment Description: 22 MS HDR ATMOS DUMP



2CV3938 3-4-2013

ATTACHMENT 2
SEISMIC WALKDOWN CHECKLISTS

Status: [Y] N U

Seismic Walkdown Checklist (SWC)

Equipment ID No.: 2CV3938

Equipment Class: (7) Fluid-Operated Valves

Equipment Description: 22 MS HDR ATMOS DUMP

2CV3938 3-4-2013

ATTACHMENT 2
SEISMIC WALKDOWN CHECKLISTS

Status: [Y] N U

Seismic Walkdown Checklist (SWC)

Equipment ID No.: 2CV3938

Equipment Class: (7) Fluid-Operated Valves

Equipment Description: 22 MS HDR ATMOS DUMP

2CV3938 3-4-2013

ATTACHMENT 2
SEISMIC WALKDOWN CHECKLISTS

Status: [Y] N U

Seismic Walkdown Checklist (SWC)

Equipment ID No.: 2CV3939

Equipment Class: (7) Fluid-Operated Valves

Equipment Description: 21 MS HDR ATMOS DUMP

Project: CCNPP 2 SWEL

Location (Bldg, Elev, Room/Area): AUX, 45.00 ft, CAL-AB-408

Manufacturer/Model:

Instructions for Completing Checklist

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

Anchorage

1. Is anchorage configuration verification required (i.e., is the item one of the 50% of SWEL items requiring such verification)? — No

   This walkdown included the valve enclosure.

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

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

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

ATTACHMENT 2
SEISMIC WALKDOWN CHECKLISTS

Status: [Y] N U

Seismic Walkdown Checklist (SWC)

Equipment ID No.: 2CV3939

Equipment Class: (7) Fluid-Operated Valves

Equipment Description: 21 MS HDR ATMOS DUMP

Cracking in the caulk was noted between the valve enclosure and its concrete pedestal. This is a cosmetic defect which has no adverse affect the enclosure design function.

5.	Is the anchorage configuration consistent 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?	Yes

Interaction Effects

7.	Are soft targets free from impact by nearby equipment or structures?	Yes
8.	Are overhead equipment, distribution systems, ceiling tiles and lighting, and masonry block walls not likely to collapse onto the equipment?	Yes
9.	Do attached lines have adequate flexibility to avoid damage?	Yes

ATTACHMENT 2
SEISMIC WALKDOWN CHECKLISTS

Status: [Y] N U

Seismic Walkdown Checklist (SWC)

Equipment ID No.: 2CV3939

Equipment Class: (7) Fluid-Operated Valves

Equipment Description: 21 MS HDR ATMOS DUMP

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

Other Adverse Conditions

11.	Have you looked for and found no adverse seismic conditions that could adversely affect the safety functions of the equipment?	Yes

Comments

The Area Walkdown Checklist for this area was submitted with the NRC report in 2012.

Evaluated by: J. A. Crunkleton Date: 4/30/2013

E. M. Hussain 4/30/2013

ATTACHMENT 2
SEISMIC WALKDOWN CHECKLISTS

Status: [Y] N U

Seismic Walkdown Checklist (SWC)

Equipment ID No.: 2CV3939

Equipment Class: (7) Fluid-Operated Valves

Equipment Description: 21 MS HDR ATMOS DUMP

Photos

ATTACHMENT 2
SEISMIC WALKDOWN CHECKLISTS

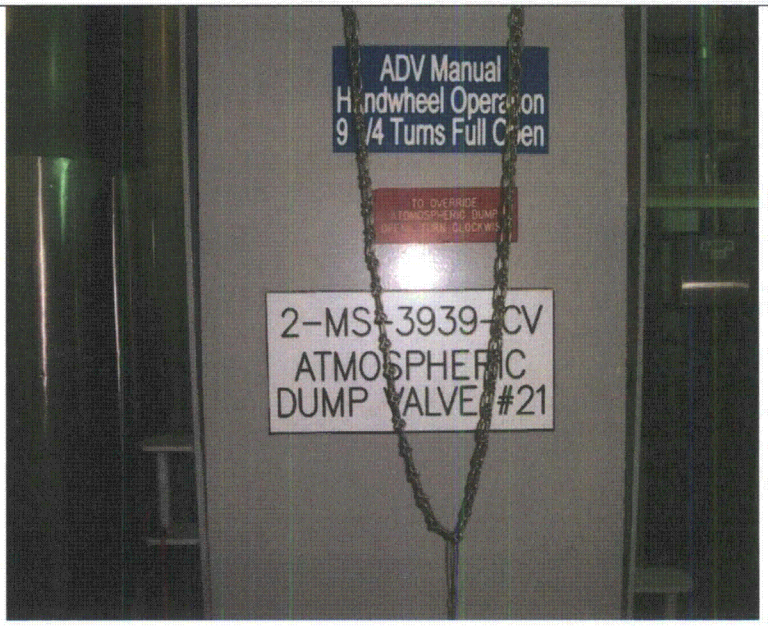
Status: [Y] N U

Seismic Walkdown Checklist (SWC)

Equipment ID No.: 2CV3939

Equipment Class: (7) Fluid-Operated Valves

Equipment Description: 21 MS HDR ATMOS DUMP



2CV3939 3-4-2013

ATTACHMENT 2
SEISMIC WALKDOWN CHECKLISTS

Status: [Y] N U

Seismic Walkdown Checklist (SWC)

Equipment ID No.: 2CV3939

Equipment Class: (7) Fluid-Operated Valves

Equipment Description: 21 MS HDR ATMOS DUMP

2CV3939 3-4-2013

ATTACHMENT 2
SEISMIC WALKDOWN CHECKLISTS

Status: [Y] N U

Seismic Walkdown Checklist (SWC)

Equipment ID No.: 2CV3939

Equipment Class: (7) Fluid-Operated Valves

Equipment Description: 21 MS HDR ATMOS DUMP

2CV3939 3-4-2013

ATTACHMENT 2
SEISMIC WALKDOWN CHECKLISTS

Status: [Y] N U

Seismic Walkdown Checklist (SWC)

Equipment ID No.: 2CV3939

Equipment Class: (7) Fluid-Operated Valves

Equipment Description: 21 MS HDR ATMOS DUMP

2CV3939 3-4-2013

ATTACHMENT 2
SEISMIC WALKDOWN CHECKLISTS

Status: [Y] N U

Seismic Walkdown Checklist (SWC)

Equipment ID No.: 2CV3939

Equipment Class: (7) Fluid-Operated Valves

Equipment Description: 21 MS HDR ATMOS DUMP

2CV3939 3-4-2013

ATTACHMENT 2
SEISMIC WALKDOWN CHECKLISTS

Status: [Y] N U

Seismic Walkdown Checklist (SWC)

Equipment ID No.: 2CV3939OP

Equipment Class: (7) Fluid-Operated Valves

Equipment Description: 21 MS HDR ADV CV OPERATOR

Project: CCNPP 2 SWEL

Location (Bldg, Elev, Room/Area): AUX, 45.00 ft, CAL-AB-408

Manufacturer/Model:

Instructions for Completing Checklist

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

Anchorage

1.	Is anchorage configuration verification required (i.e., is the item one of the 50% of SWEL items requiring such verification)?	No
2.	Is the anchorage free of bent, broken, missing or loose hardware?	Yes
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

ATTACHMENT 2
SEISMIC WALKDOWN CHECKLISTS

Status: [Y] N U

Seismic Walkdown Checklist (SWC)

Equipment ID No.: 2CV3939OP

Equipment Class: (7) Fluid-Operated Valves

Equipment Description: 21 MS HDR ADV CV OPERATOR

5.	Is the anchorage configuration consistent 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?	Yes

Interaction Effects

7.	Are soft targets free from impact by nearby equipment or structures?	Yes
8.	Are overhead equipment, distribution systems, ceiling tiles and lighting, and masonry block walls not likely to collapse onto the equipment?	Yes
9.	Do attached lines have adequate flexibility to avoid damage?	Yes
10.	Based on the above seismic interaction evaluations, is equipment free of	Yes

ATTACHMENT 2
SEISMIC WALKDOWN CHECKLISTS

Status: [Y] N U

Seismic Walkdown Checklist (SWC)

Equipment ID No.: 2CV3939OP

Equipment Class: (7) Fluid-Operated Valves

Equipment Description: 21 MS HDR ADV CV OPERATOR

potentially adverse seismic interaction effects?

Other Adverse Conditions

11.	Have you looked for and found no adverse seismic conditions that could adversely affect the safety functions of the equipment?	Yes

Comments

The Area Walkdown Checklist for this area was submitted with the NRC report in 2012 (Reference 7.1).

Evaluated by: J. A. Crunkleton Date: 4/30/2013

E. M. Hussain 4/30/2013

ATTACHMENT 2
SEISMIC WALKDOWN CHECKLISTS

Status: [Y] N U

Seismic Walkdown Checklist (SWC)

Equipment ID No.: 2CV3939OP

Equipment Class: (7) Fluid-Operated Valves

Equipment Description: 21 MS HDR ADV CV OPERATOR

Photos

2CV3939OP 3-4-2013

ATTACHMENT 2
SEISMIC WALKDOWN CHECKLISTS

Status: [Y] N U

Seismic Walkdown Checklist (SWC)

Equipment ID No.: 2CV3939OP

Equipment Class: (7) Fluid-Operated Valves

Equipment Description: 21 MS HDR ADV CV OPERATOR

2CV3939OP 3-4-2013

ATTACHMENT 2
SEISMIC WALKDOWN CHECKLISTS

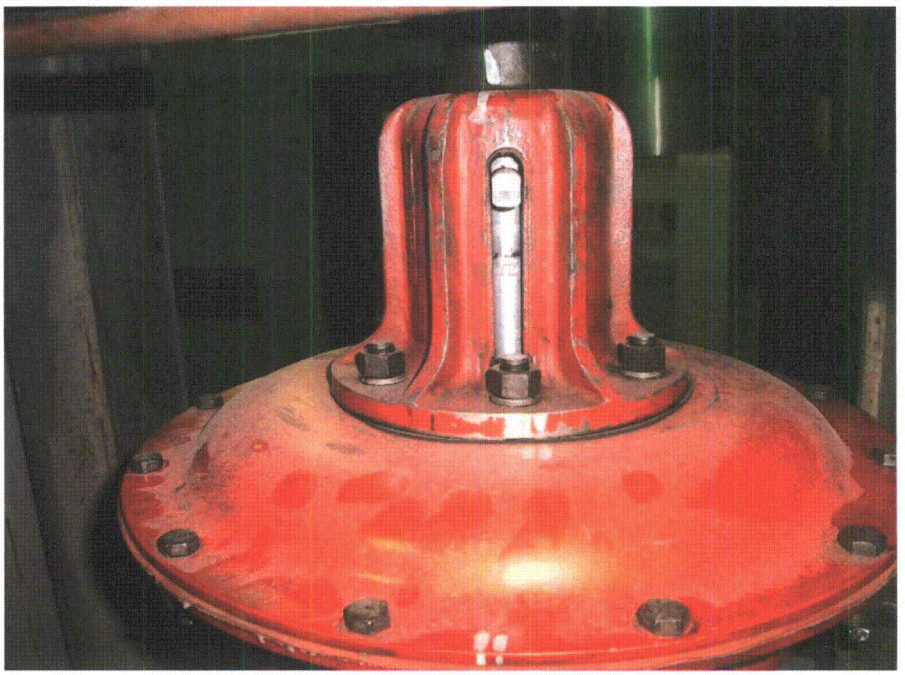
Status: [Y] N U

Seismic Walkdown Checklist (SWC)

Equipment ID No.: 2CV3939OP

Equipment Class: (7) Fluid-Operated Valves

Equipment Description: 21 MS HDR ADV CV OPERATOR



2CV3939OP 3-4-2013

ATTACHMENT 2
SEISMIC WALKDOWN CHECKLISTS

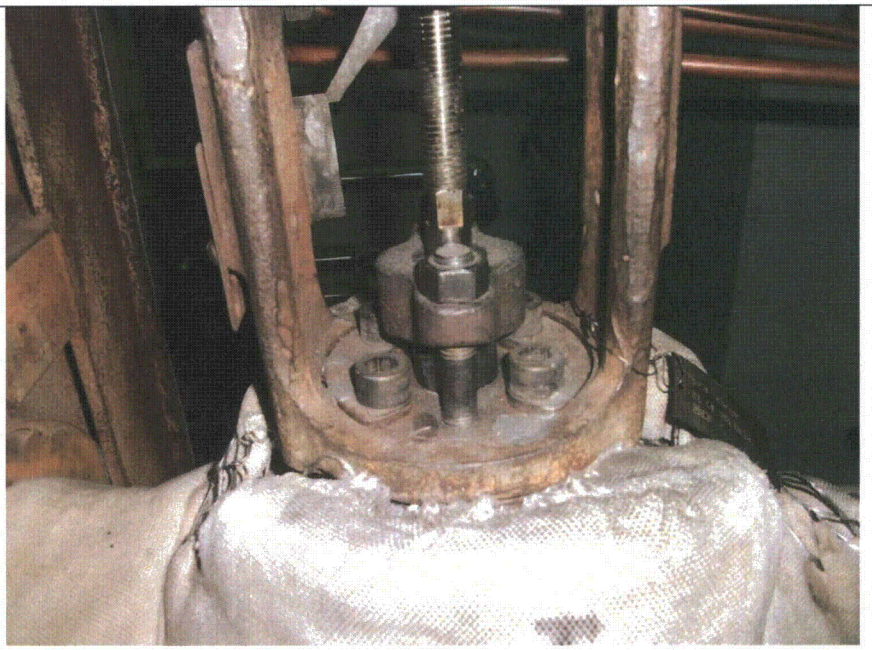
Status: [Y] N U

Seismic Walkdown Checklist (SWC)

Equipment ID No.: 2CV3939OP

Equipment Class: (7) Fluid-Operated Valves

Equipment Description: 21 MS HDR ADV CV OPERATOR



2CV3939OP 3-4-2013

ATTACHMENT 2
SEISMIC WALKDOWN CHECKLISTS

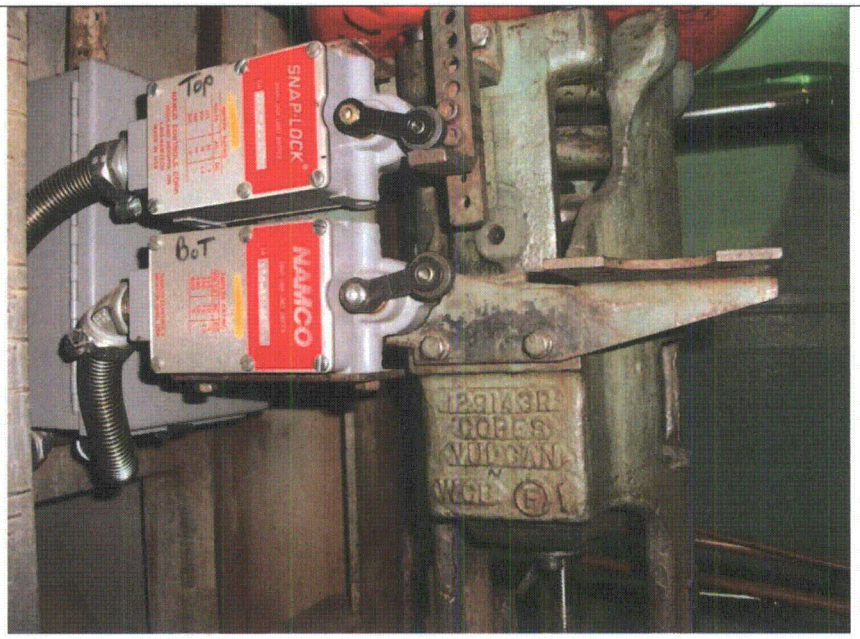
Status: [Y] N U

Seismic Walkdown Checklist (SWC)

Equipment ID No.: 2CV3939OP

Equipment Class: (7) Fluid-Operated Valves

Equipment Description: 21 MS HDR ADV CV OPERATOR



2CV3939OP 3-4-2013

ATTACHMENT 2
SEISMIC WALKDOWN CHECKLISTS

Status: [Y] N U

Seismic Walkdown Checklist (SWC)

Equipment ID No.: 2CV3939OP

Equipment Class: (7) Fluid-Operated Valves

Equipment Description: 21 MS HDR ADV CV OPERATOR

2CV3939OP 3-4-2013

ATTACHMENT 2
SEISMIC WALKDOWN CHECKLISTS

Status: [Y] N U

Seismic Walkdown Checklist (SWC)

Equipment ID No.: 2CV4150

Equipment Class: (7) Fluid-Operated Valves

Equipment Description: CNTMT SPRAY HDR 21 ISOL VALVE

Project: CCNPP 2 SWEL

Location (Bldg, Elev, Room/Area): CAL-CTMT-229, EL. 37-FT

Manufacturer/Model:

Instructions for Completing Checklist

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

Anchorage

1. Is anchorage configuration verification required (i.e., is the item one of the 50% of SWEL items requiring such verification)? — No

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

Status: [Y] N U

Seismic Walkdown Checklist (SWC)

Equipment ID No.: 2CV4150

Equipment Class: (7) Fluid-Operated Valves

Equipment Description: CNTMT SPRAY HDR 21 ISOL 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?	Yes

Interaction Effects

7.	Are soft targets free from impact by nearby equipment or structures?	Yes
8.	Are overhead equipment, distribution systems, ceiling tiles and lighting, and masonry block walls not likely to collapse onto the equipment?	Yes
9.	Do attached lines have adequate flexibility to avoid damage?	Yes

ATTACHMENT 2
SEISMIC WALKDOWN CHECKLISTS

Status: [Y] N U

Seismic Walkdown Checklist (SWC)

Equipment ID No.: 2CV4150

Equipment Class: (7) Fluid-Operated Valves

Equipment Description: CNTMT SPRAY HDR 21 ISOL VALVE

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

Other Adverse Conditions

11.	Have you looked for and found no adverse seismic conditions that could adversely affect the safety functions of the equipment?	Yes

Comments

Evaluated by: J. A. Crunkleton Date: 4/30/2013

E. M. Hussain 4/30/2013

ATTACHMENT 2
SEISMIC WALKDOWN CHECKLISTS

Status: [Y] N U

Seismic Walkdown Checklist (SWC)

Equipment ID No.: 2CV4150

Equipment Class: (7) Fluid-Operated Valves

Equipment Description: CNTMT SPRAY HDR 21 ISOL VALVE

Photos

ATTACHMENT 2
SEISMIC WALKDOWN CHECKLISTS

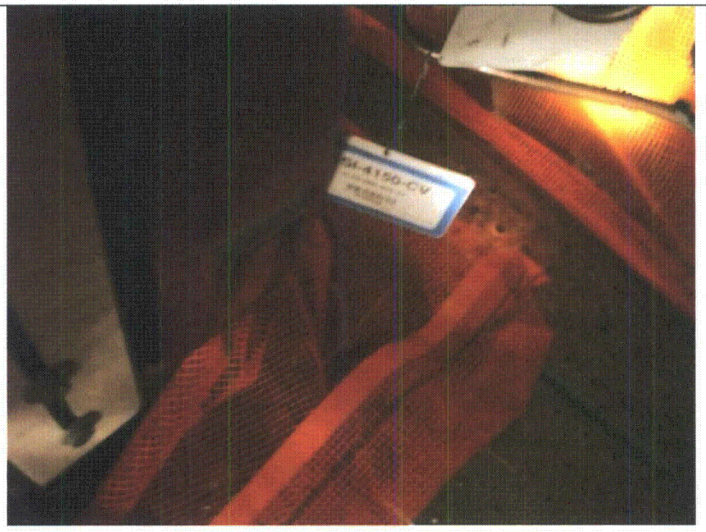
Status: [Y] N U

Seismic Walkdown Checklist (SWC)

Equipment ID No.: 2CV4150

Equipment Class: (7) Fluid-Operated Valves

Equipment Description: CNTMT SPRAY HDR 21 ISOL VALVE



2CV4150 2-22-2013

ATTACHMENT 2
SEISMIC WALKDOWN CHECKLISTS

Status: [Y] N U

Seismic Walkdown Checklist (SWC)

Equipment ID No.: 2CV4150

Equipment Class: (7) Fluid-Operated Valves

Equipment Description: CNTMT SPRAY HDR 21 ISOL VALVE

2CV4150 2-22-2013

ATTACHMENT 2
SEISMIC WALKDOWN CHECKLISTS

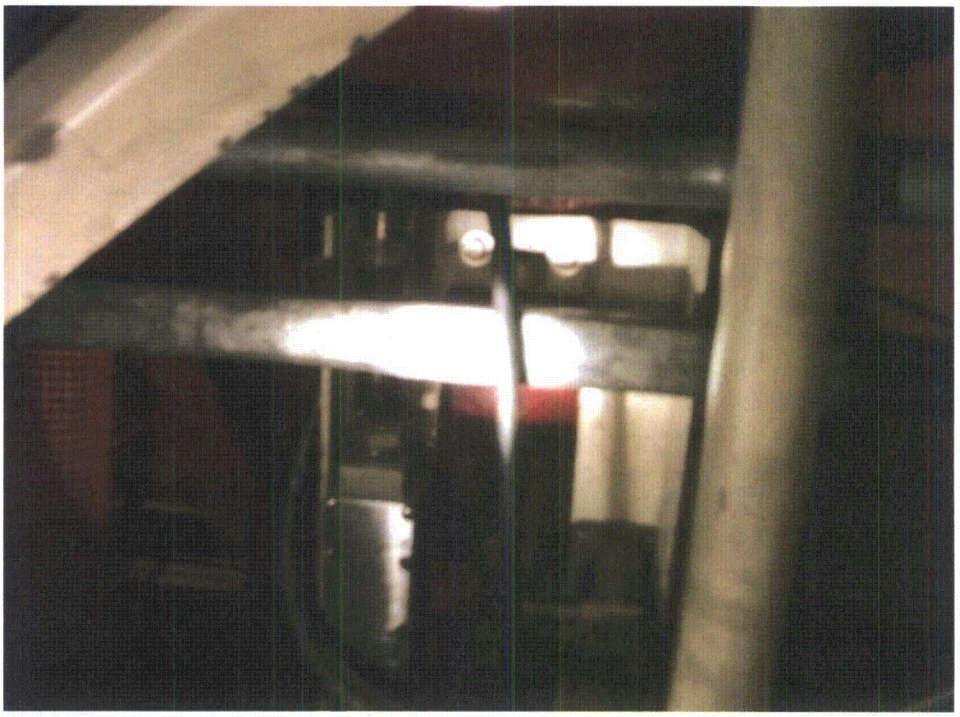
Status: [Y] N U

Seismic Walkdown Checklist (SWC)

Equipment ID No.: 2CV4150

Equipment Class: (7) Fluid-Operated Valves

Equipment Description: CNTMT SPRAY HDR 21 ISOL VALVE



2CV4150 2-222013

ATTACHMENT 2
SEISMIC WALKDOWN CHECKLISTS

Status: [Y] N U

Seismic Walkdown Checklist (SWC)

Equipment ID No.: 2CV4151

Equipment Class: (7) Fluid-Operated Valves

Equipment Description: CNTMT SPRAY HDR 22 ISOL VALVE

Project: CCNPP 2 SWEL

Location (Bldg, Elev, Room/Area): CAL-CTMT-229, EL. 39-FT

Manufacturer/Model:

Instructions for Completing Checklist

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

Anchorage

1.	Is anchorage configuration verification required (i.e., is the item one of the 50% of SWEL items requiring such verification)?	No
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

ATTACHMENT 2
SEISMIC WALKDOWN CHECKLISTS

Status: [Y] N U

Seismic Walkdown Checklist (SWC)

Equipment ID No.: 2CV4151

Equipment Class: (7) Fluid-Operated Valves

Equipment Description: CNTMT SPRAY HDR 22 ISOL VALVE

5.	Is the anchorage configuration consistent 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?	Yes

Interaction Effects

7.	Are soft targets free from impact by nearby equipment or structures?	Yes
8.	Are overhead equipment, distribution systems, ceiling tiles and lighting, and masonry block walls not likely to collapse onto the equipment?	Yes
9.	Do attached lines have adequate flexibility to avoid damage?	Yes
10.	Based on the above seismic interaction evaluations, is equipment free of	Yes

ATTACHMENT 2
SEISMIC WALKDOWN CHECKLISTS

Status: [Y] N U

Seismic Walkdown Checklist (SWC)

Equipment ID No.: 2CV4151

Equipment Class: (7) Fluid-Operated Valves

Equipment Description: CNTMT SPRAY HDR 22 ISOL VALVE

potentially adverse seismic interaction effects?

Other Adverse Conditions

11.	Have you looked for and found no adverse seismic conditions that could adversely affect the safety functions of the equipment?	Yes

Comments

Evaluated by: J. A. Crunkleton Date: 4/30/2013

E. M. Hussain 4/30/2013

ATTACHMENT 2
SEISMIC WALKDOWN CHECKLISTS

Status: [Y] N U

Seismic Walkdown Checklist (SWC)

Equipment ID No.: 2CV4151

Equipment Class: (7) Fluid-Operated Valves

Equipment Description: CNTMT SPRAY HDR 22 ISOL VALVE

Photos

2CV4151 2-22-2013

ATTACHMENT 2
SEISMIC WALKDOWN CHECKLISTS

Status: [Y] N U

Seismic Walkdown Checklist (SWC)

Equipment ID No.: 2CV4151

Equipment Class: (7) Fluid-Operated Valves

Equipment Description: CNTMT SPRAY HDR 22 ISOL VALVE

2CV4151 2-22-2013

ATTACHMENT 2
SEISMIC WALKDOWN CHECKLISTS

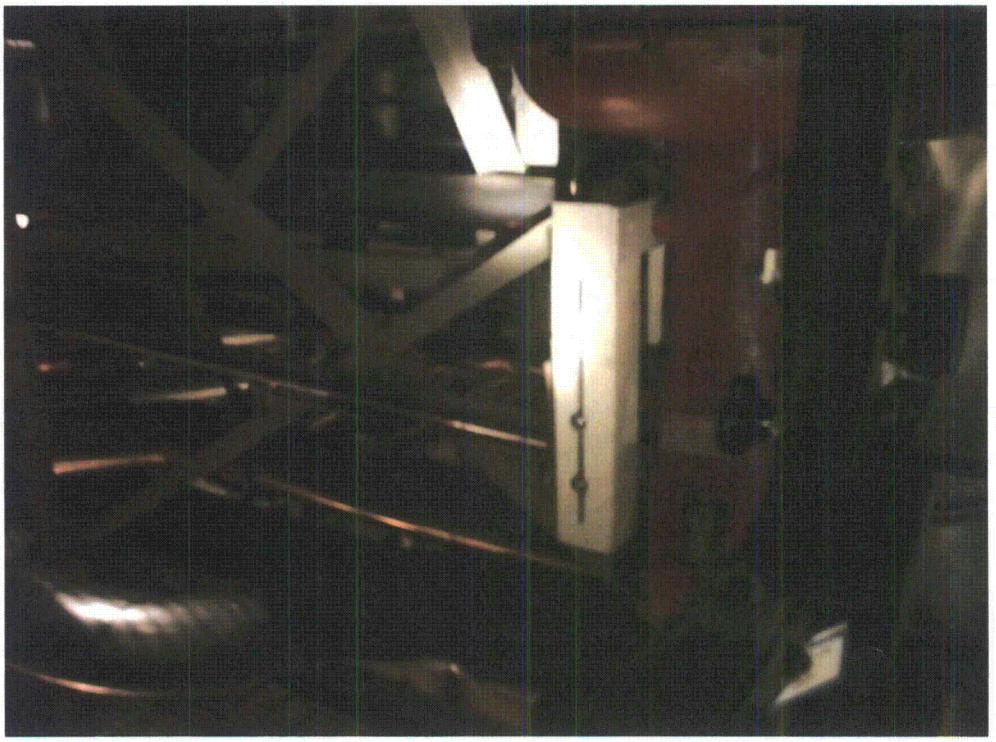
Status: [Y] N U

Seismic Walkdown Checklist (SWC)

Equipment ID No.: 2CV4151

Equipment Class: (7) Fluid-Operated Valves

Equipment Description: CNTMT SPRAY HDR 22 ISOL VALVE



2CV4151 2-22-2013

ATTACHMENT 2
SEISMIC WALKDOWN CHECKLISTS

Status: [Y] N U

Seismic Walkdown Checklist (SWC)

Equipment ID No.: 2ERV402

Equipment Class: (0) Other

Equipment Description: PZR PWR OP RV

Project: CCNPP 2 SWEL

Location (Bldg, Elev, Room/Area): CAL-CTMT-229E

Manufacturer/Model:

Instructions for Completing Checklist

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

Anchorage

1.	Is anchorage configuration verification required (i.e., is the item one of the 50% of SWEL items requiring such verification)?	No
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

Status: [Y] N U

Seismic Walkdown Checklist (SWC)

Equipment ID No.: 2ERV402

Equipment Class: (0) Other

Equipment Description: PZR PWR OP RV

5.	Is the anchorage configuration consistent 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?	Yes

Interaction Effects

7.	Are soft targets free from impact by nearby equipment or structures? *The valve is located in the Pressurzer Enclosure, which is a congested area. Adequate clearance around the valve was observed.*	Yes
8.	Are overhead equipment, distribution systems, ceiling tiles and lighting, and masonry block walls not likely to collapse onto the equipment?	Yes
9.	Do attached lines have adequate flexibility to avoid damage?	Yes
10.	Based on the above seismic interaction evaluations, is equipment free of	Yes

ATTACHMENT 2
SEISMIC WALKDOWN CHECKLISTS

Status: [Y] N U

Seismic Walkdown Checklist (SWC)

Equipment ID No.: 2ERV402

Equipment Class: (0) Other

Equipment Description: PZR PWR OP RV

potentially adverse seismic interaction effects?

Other Adverse Conditions

11.	Have you looked for and found no adverse seismic conditions that could adversely affect the safety functions of the equipment?	Yes

Comments

Evaluated by: J. A. Crunkleton Date: 4/30/2013

E. M. Hussain 4/30/2013

ATTACHMENT 2
SEISMIC WALKDOWN CHECKLISTS

Status: [Y] N U

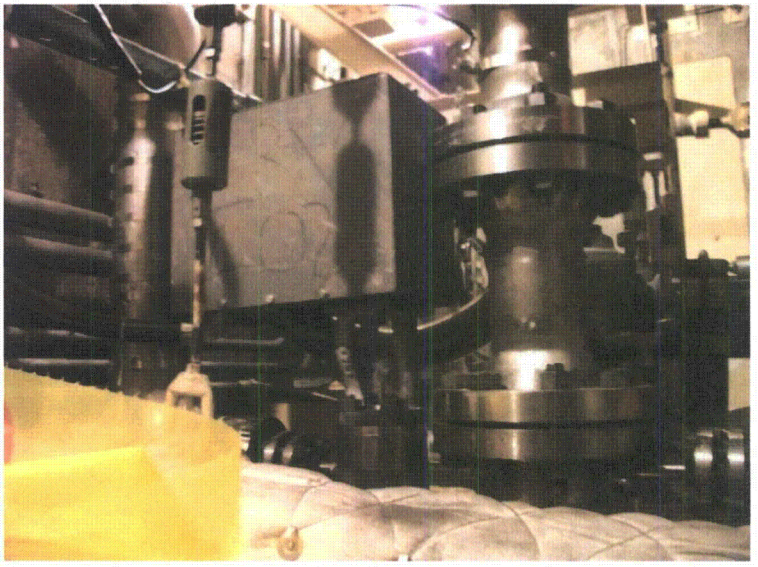
Seismic Walkdown Checklist (SWC)

Equipment ID No.: 2ERV402

Equipment Class: (0) Other

Equipment Description: PZR PWR OP RV

Photos



ATTACHMENT 2
SEISMIC WALKDOWN CHECKLISTS

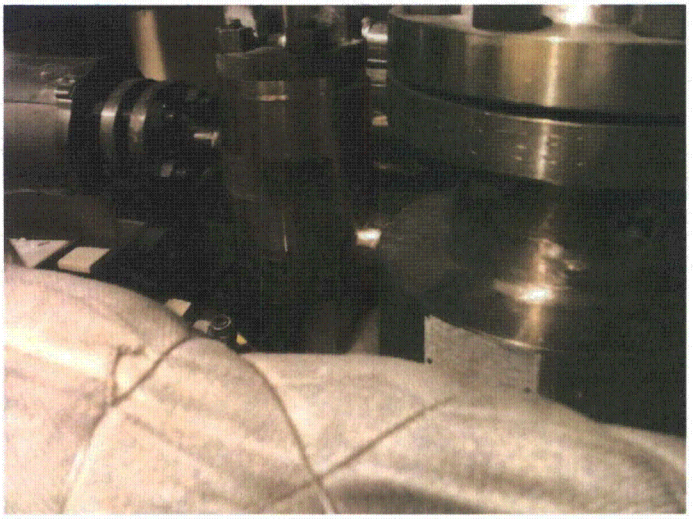
Status: [Y] N U

Seismic Walkdown Checklist (SWC)

Equipment ID No.: 2ERV402

Equipment Class: (0) Other

Equipment Description: PZR PWR OP RV



2ERV402 2-22-2013

Status: Y [N] U

Seismic Walkdown Checklist (SWC)

Equipment ID No.: 2FANHVACCTCLR21

Equipment Class: (10) Air Handlers

Equipment Description: CONTAINMENT COOLER 21 FAN

Project: CCNPP 2 SWEL

Location (Bldg, Elev, Room/Area): CAL-CTMT-229S, EL. 45-FT

Manufacturer/Model:

ATTACHMENT 2
SEISMIC WALKDOWN CHECKLISTS

Status: Y [N] U

Seismic Walkdown Checklist (SWC)

Equipment ID No.: 2FANHVACCTCLR21

Equipment Class: (10) Air Handlers

Equipment Description: CONTAINMENT COOLER 21 FAN

Instructions for Completing Checklist

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

Anchorage

1.	Is anchorage configuration verification required (i.e., is the item one of the 50% of SWEL items requiring such verification)?	No
2.	Is the anchorage free of bent, broken, missing or loose hardware? *The housing for the Air Cooler was missing welds between corner columns and base plates. CR-2013-001820 captured the issue.*	No
3.	Is the anchorage free of corrosion that is more than mild surface oxidation?	Yes
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.) *Anchorage is shown on drawings 61779 and 61780*	N/A

ATTACHMENT 2
SEISMIC WALKDOWN CHECKLISTS

Status: Y [N] U

Seismic Walkdown Checklist (SWC)

Equipment ID No.: 2FANHVACCTCLR21

Equipment Class: (10) Air Handlers

Equipment Description: CONTAINMENT COOLER 21 FAN

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

Interaction Effects

7.	Are soft targets free from impact by nearby equipment or structures? *A scaffold rack is located near the Air Cooler. The rack was open and scaffold components were being used at other location in Containment. Restoration and securing of the scaffold rack is controlled by site procedure prior to startup.*	Yes
8.	Are overhead equipment, distribution systems, ceiling tiles and lighting, and masonry block walls not likely to collapse onto the equipment?	Yes
9.	Do attached lines have adequate flexibility to avoid damage?	Yes
10.	Based on the above seismic interaction evaluations, is equipment free of potentially adverse seismic interaction effects?	Yes

Other Adverse Conditions

11.	Have you looked for and found no adverse seismic conditions that could	No

ATTACHMENT 2
SEISMIC WALKDOWN CHECKLISTS

Status: Y [N] U

Seismic Walkdown Checklist (SWC)

Equipment ID No.: 2FANHVACCTCLR21

Equipment Class: (10) Air Handlers

Equipment Description: CONTAINMENT COOLER 21 FAN

adversely affect the safety functions of the equipment?

Comments

Equivalent Air Cooler housing welds were installed during the 2013 RFO per engineering package ECP-13-000235.

Evaluated by: J. A. Crunkleton Date: 4/30/2013

E. M. Hussain 4/30/2013

Photos

ATTACHMENT 2
SEISMIC WALKDOWN CHECKLISTS

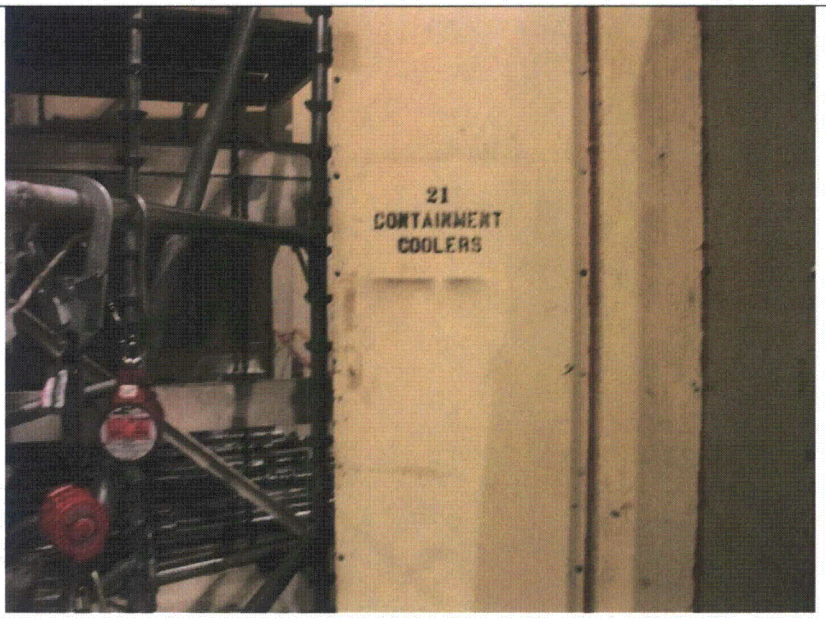
Status: Y [N] U

Seismic Walkdown Checklist (SWC)

Equipment ID No.: 2FANHVACCTCLR21

Equipment Class: (10) Air Handlers

Equipment Description: CONTAINMENT COOLER 21 FAN



2FANHVACCTCLR21 2-22-2013

ATTACHMENT 2
SEISMIC WALKDOWN CHECKLISTS

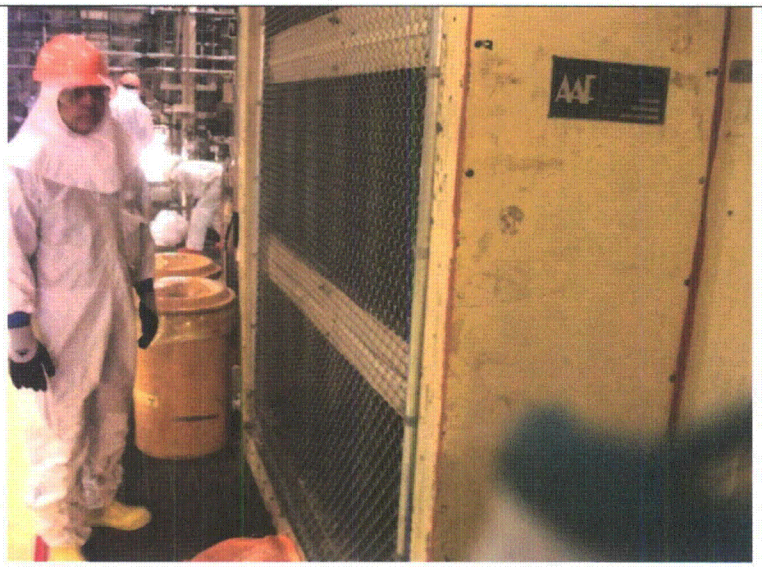
Status: Y [N] U

Seismic Walkdown Checklist (SWC)

Equipment ID No.: 2FANHVACCTCLR21

Equipment Class: (10) Air Handlers

Equipment Description: CONTAINMENT COOLER 21 FAN



2FANHVACCTCLR21 2-22-2013

ATTACHMENT 2
SEISMIC WALKDOWN CHECKLISTS

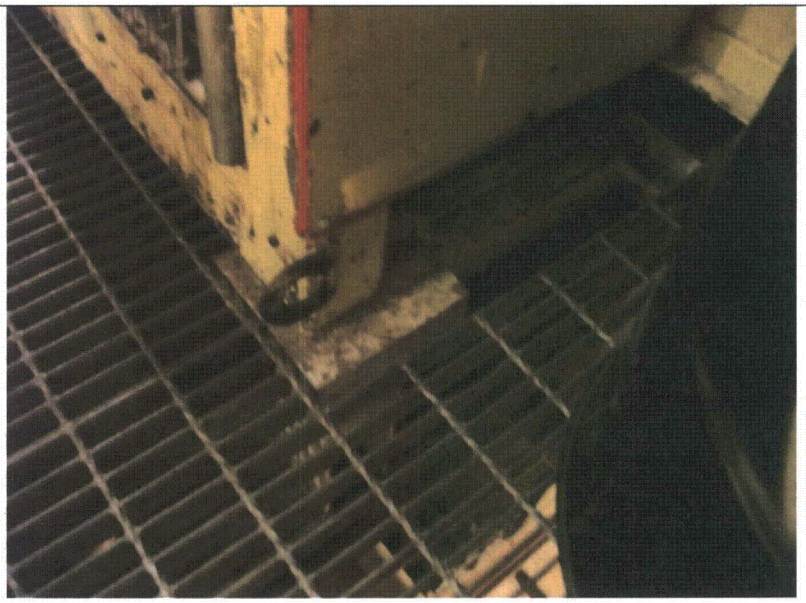
Status: Y [N] U

Seismic Walkdown Checklist (SWC)

Equipment ID No.: 2FANHVACCTCLR21

Equipment Class: (10) Air Handlers

Equipment Description: CONTAINMENT COOLER 21 FAN



2FANHVACCTCLR21 2-22-2013

ATTACHMENT 2
SEISMIC WALKDOWN CHECKLISTS

Status: Y [N] U

Seismic Walkdown Checklist (SWC)

Equipment ID No.: 2FANHVACCTCLR21

Equipment Class: (10) Air Handlers

Equipment Description: CONTAINMENT COOLER 21 FAN

2FANHVACCTCLR21 2-22-2013

ATTACHMENT 2
SEISMIC WALKDOWN CHECKLISTS

Status: Y [N] U

Seismic Walkdown Checklist (SWC)

Equipment ID No.: 2FANHVACCTCLR22

Equipment Class: (10) Air Handlers

Equipment Description: CONTAINMENT COOLER 22 FAN

Project: CCNPP 2 SWEL

Location (Bldg, Elev, Room/Area): CAL-CTMT-229S, EL. 45-FT

Manufacturer/Model:

Instructions for Completing Checklist

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

Anchorage

1. Is anchorage configuration verification required (i.e., is the item one of the 50% of SWEL items requiring such verification)? — No

2. Is the anchorage free of bent, broken, missing or loose hardware? — No

   The housing for the Air Cooler was missing welds between corner columns and base plates. CR-2013-001820 captured the issue.

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

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

ATTACHMENT 2
SEISMIC WALKDOWN CHECKLISTS

Status: Y [N] U

Seismic Walkdown Checklist (SWC)

Equipment ID No.: 2FANHVACCTCLR22

Equipment Class: (10) Air Handlers

Equipment Description: CONTAINMENT COOLER 22 FAN

5.	Is the anchorage configuration consistent with plant documentation? (Note: This question only applies if the item is one of the 50% for which an anchorage configuration verification is required.) *Anchorage is shown on drawings 61779 and 61780*	N/A
6.	Based on the above anchorage evaluations, is the anchorage free of potentially adverse seismic conditions?	No

Interaction Effects

7.	Are soft targets free from impact by nearby equipment or structures? *A scaffold rack is located near the Air Cooler. The rack was open and scaffold components were being used at other location in Containment. Restoration and securing of the scaffold rack is controlled by site procedure prior to startup.*	Yes
8.	Are overhead equipment, distribution systems, ceiling tiles and lighting, and masonry block walls not likely to collapse onto the equipment?	Yes
9.	Do attached lines have adequate flexibility to avoid damage?	Yes

ATTACHMENT 2
SEISMIC WALKDOWN CHECKLISTS

Status: Y [N] U

Seismic Walkdown Checklist (SWC)

Equipment ID No.: 2FANHVACCTCLR22

Equipment Class: (10) Air Handlers

Equipment Description: CONTAINMENT COOLER 22 FAN

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

Other Adverse Conditions

11.	Have you looked for and found no adverse seismic conditions that could adversely affect the safety functions of the equipment?	No

Comments

Equivalent Air Cooler housing welds were installed during the 2013 RFO per engineering package ECP-13-000235..

Evaluated by: J. A. Crunkleton J.A Crunkleton Date: 4/30/2013

E. M. Hussain E. M. Hussain 4/30/2013

ATTACHMENT 2
SEISMIC WALKDOWN CHECKLISTS

Status: Y [N] U

Seismic Walkdown Checklist (SWC)

Equipment ID No.: 2FANHVACCTCLR22

Equipment Class: (10) Air Handlers

Equipment Description: CONTAINMENT COOLER 22 FAN

Photos

2FANHVACCTCLR22 2-22-2013

ATTACHMENT 2
SEISMIC WALKDOWN CHECKLISTS

Status: Y [N] U

Seismic Walkdown Checklist (SWC)

Equipment ID No.: 2FANHVACCTCLR22

Equipment Class: (10) Air Handlers

Equipment Description: CONTAINMENT COOLER 22 FAN

2FANHVACCTCLR22 2-22-2013

ATTACHMENT 2
SEISMIC WALKDOWN CHECKLISTS

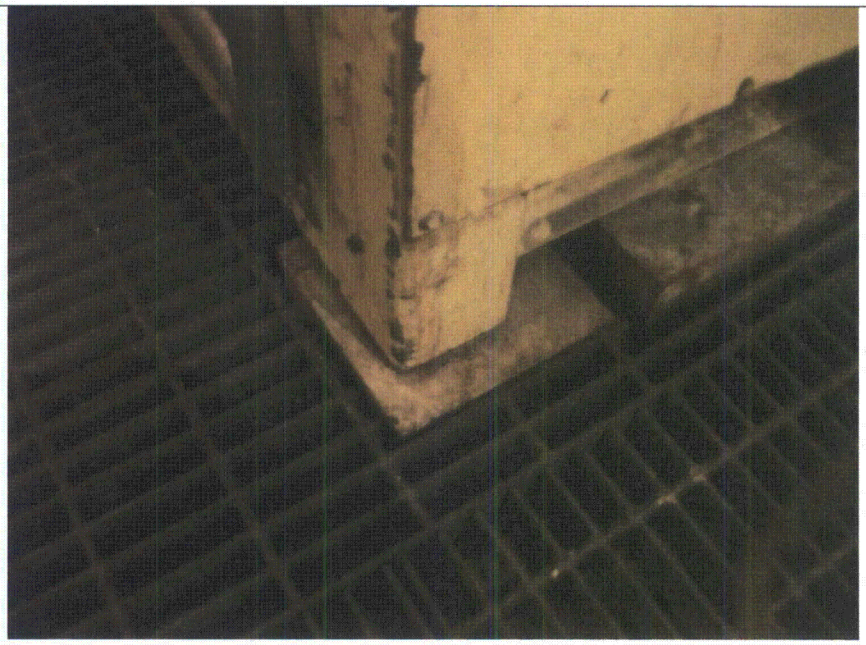
Status: Y [N] U

Seismic Walkdown Checklist (SWC)

Equipment ID No.: 2FANHVACCTCLR22

Equipment Class: (10) Air Handlers

Equipment Description: CONTAINMENT COOLER 22 FAN



2FANHVACCTCLR22 2-22-2013

ATTACHMENT 2
SEISMIC WALKDOWN CHECKLISTS

Status: Y [N] U

Seismic Walkdown Checklist (SWC)

Equipment ID No.: 2FANHVACCTCLR22

Equipment Class: (10) Air Handlers

Equipment Description: CONTAINMENT COOLER 22 FAN

2FANHVACCTCLR22 2-22-2013

ATTACHMENT 2
SEISMIC WALKDOWN CHECKLISTS

Status: Y [N] U

Seismic Walkdown Checklist (SWC)

Equipment ID No.: 2FANHVACCTCLR23

Equipment Class: (10) Air Handlers

Equipment Description: CONTAINMENT COOLER 23 FAN

Project: CCNPP 2 SWEL

Location (Bldg, Elev, Room/Area): CAL-CTMT-229S, EL. 69-FT

Manufacturer/Model:

Instructions for Completing Checklist

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

Anchorage

1. Is anchorage configuration verification required (i.e., is the item one of the 50% of SWEL items requiring such verification)? — No

2. Is the anchorage free of bent, broken, missing or loose hardware? — No

   The housing for the Air Cooler was missing welds between corner columns and base plates. CR-2013-001820 captured the issue.

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

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: — N/A

ATTACHMENT 2
SEISMIC WALKDOWN CHECKLISTS

Status: Y [N] U

Seismic Walkdown Checklist (SWC)

Equipment ID No.: 2FANHVACCTCLR23

Equipment Class: (10) Air Handlers

Equipment Description: CONTAINMENT COOLER 23 FAN

This question only applies if the item is one of the 50% for which an anchorage configuration verification is required.)

Anchorage is shown on drawings 61779 and 61780

6. Based on the above anchorage evaluations, is the anchorage free of potentially adverse seismic conditions? — No

Interaction Effects

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

   A scaffold rack is located near the Air Cooler. The rack was open and scaffold components were being used at other location in Containment. Restoration and securing of the scaffold rack is controlled by site procedure prior to startup.

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

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

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

ATTACHMENT 2
SEISMIC WALKDOWN CHECKLISTS

Status: Y [N] U

Seismic Walkdown Checklist (SWC)

Equipment ID No.: 2FANHVACCTCLR23

Equipment Class: (10) Air Handlers

Equipment Description: CONTAINMENT COOLER 23 FAN

Other Adverse Conditions

11.	Have you looked for and found no adverse seismic conditions that could adversely affect the safety functions of the equipment?	No

Comments

Equivalent Air Cooler housing welds were installed during the 2013 RFO per engineering package ECP-13-000235.

Evaluated by: J. A. Crunkleton Date: 4/30/2013

E. M. Hussain 4/30/2013

Photos

ATTACHMENT 2
SEISMIC WALKDOWN CHECKLISTS

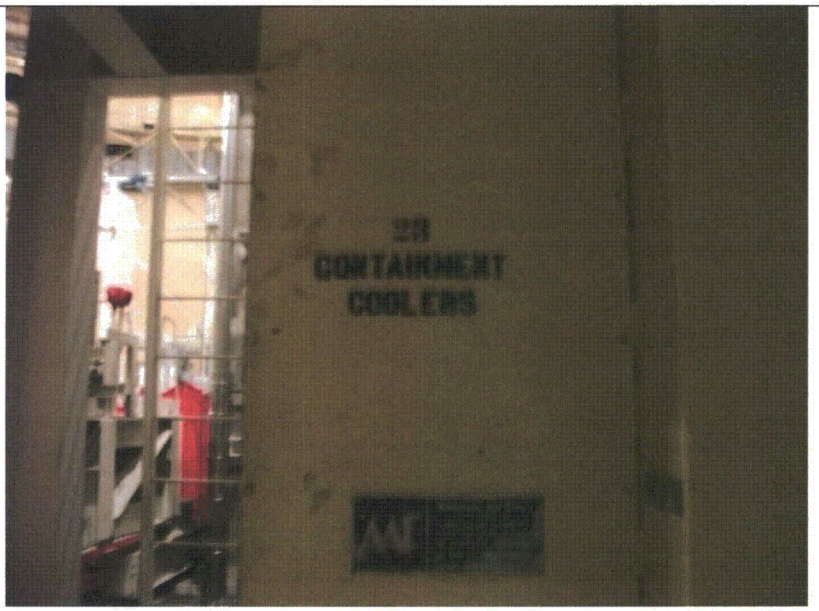
Status: Y [N] U

Seismic Walkdown Checklist (SWC)

Equipment ID No.: 2FANHVACCTCLR23

Equipment Class: (10) Air Handlers

Equipment Description: CONTAINMENT COOLER 23 FAN



2FANHVACCTCLR23 2-22-2013

ATTACHMENT 2
SEISMIC WALKDOWN CHECKLISTS

Status: Y [N] U

Seismic Walkdown Checklist (SWC)

Equipment ID No.: 2FANHVACCTCLR23

Equipment Class: (10) Air Handlers

Equipment Description: CONTAINMENT COOLER 23 FAN

ATTACHMENT 2
SEISMIC WALKDOWN CHECKLISTS

Status: Y [N] U

Seismic Walkdown Checklist (SWC)

Equipment ID No.: 2FANHVACCTCLR23

Equipment Class: (10) Air Handlers

Equipment Description: CONTAINMENT COOLER 23 FAN

2FANHVACCTCLR23 2-22-2013

ATTACHMENT 2
SEISMIC WALKDOWN CHECKLISTS

Status: Y [N] U

Seismic Walkdown Checklist (SWC)

Equipment ID No.: 2FANHVACCTCLR23

Equipment Class: (10) Air Handlers

Equipment Description: CONTAINMENT COOLER 23 FAN

2FANHVACCTCLR23 2-22-2013

ATTACHMENT 2
SEISMIC WALKDOWN CHECKLISTS

Status: Y [N] U

Seismic Walkdown Checklist (SWC)

Equipment ID No.: 2FANHVACCTCLR24

Equipment Class: (10) Air Handlers

Equipment Description: CONTAINMENT COOLER 23 FAN

Project: CCNPP 2 SWEL

Location (Bldg, Elev, Room/Area): CAL-CTMT-229S, EL. 69-FT

Manufacturer/Model:

Instructions for Completing Checklist

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

Anchorage

1. Is anchorage configuration verification required (i.e., is the item one of the 50% of SWEL items requiring such verification)? — No

2. Is the anchorage free of bent, broken, missing or loose hardware? — No

   The housing for the Air Cooler was missing welds between corner columns and base plates. CR-2013-001820 captured the issue.

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

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: — N/A

ATTACHMENT 2
SEISMIC WALKDOWN CHECKLISTS

Status: Y [N] U

Seismic Walkdown Checklist (SWC)

Equipment ID No.: 2FANHVACCTCLR24

Equipment Class: (10) Air Handlers

Equipment Description: CONTAINMENT COOLER 23 FAN

This question only applies if the item is one of the 50% for which an anchorage configuration verification is required.)

Anchorage is shown on drawings 61779 and 61780

6. Based on the above anchorage evaluations, is the anchorage free of potentially adverse seismic conditions? — No

Interaction Effects

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

   A scaffold rack is located near the Air Cooler. The rack was open and scaffold components were being used at other location in Containment. Restoration and securing of the scaffold rack is controlled by site procedure prior to startup.

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

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

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

ATTACHMENT 2
SEISMIC WALKDOWN CHECKLISTS

Status: Y [N] U

Seismic Walkdown Checklist (SWC)

Equipment ID No.: 2FANHVACCTCLR24

Equipment Class: (10) Air Handlers

Equipment Description: CONTAINMENT COOLER 23 FAN

Other Adverse Conditions

11.	Have you looked for and found no adverse seismic conditions that could adversely affect the safety functions of the equipment?	No

Comments

Equivalent Air Cooler housing welds were installed during the 2013 RFO per engineering package ECP-13-000235.

Evaluated by: J. A. Crunkleton J.A. Crunkleton Date: 4/30/2013

E. M. Hussain E. M. Hussain 4/30/2013

Photos

ATTACHMENT 2
SEISMIC WALKDOWN CHECKLISTS

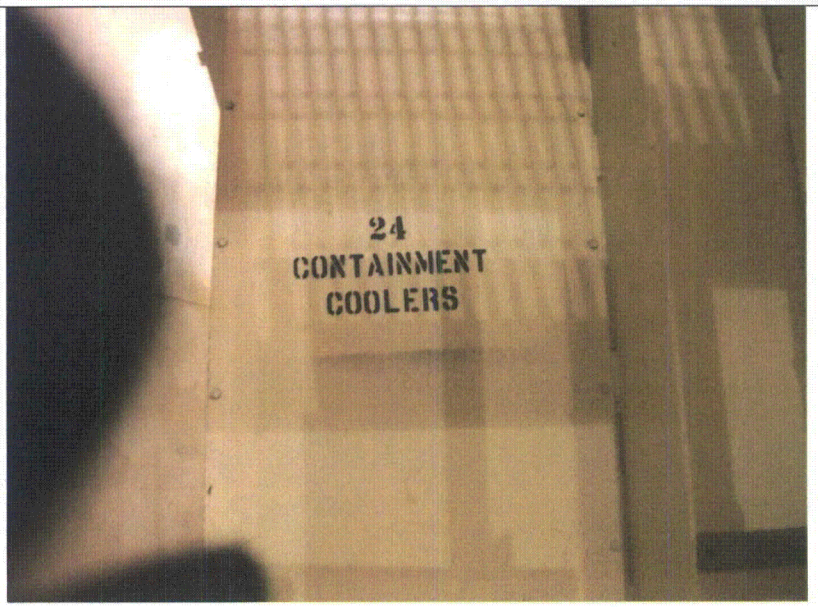
Status: Y [N] U

Seismic Walkdown Checklist (SWC)

Equipment ID No.: 2FANHVACCTCLR24

Equipment Class: (10) Air Handlers

Equipment Description: CONTAINMENT COOLER 23 FAN



2FANHVACCTCLR24 2-22-2013

ATTACHMENT 2
SEISMIC WALKDOWN CHECKLISTS

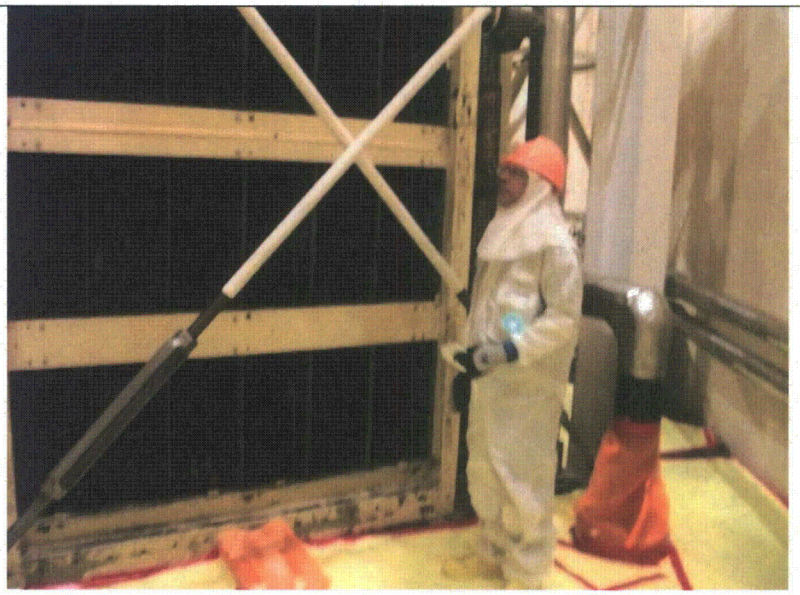
Status: Y [N] U

Seismic Walkdown Checklist (SWC)

Equipment ID No.: 2FANHVACCTCLR24

Equipment Class: (10) Air Handlers

Equipment Description: CONTAINMENT COOLER 23 FAN



2FANHVACCTCLR24 2-22-2013

ATTACHMENT 2
SEISMIC WALKDOWN CHECKLISTS

Status: Y [N] U

Seismic Walkdown Checklist (SWC)

Equipment ID No.: 2FANHVACCTCLR24

Equipment Class: (10) Air Handlers

Equipment Description: CONTAINMENT COOLER 23 FAN

2FANHVACCTCLR24 2-22-2013

ATTACHMENT 2
SEISMIC WALKDOWN CHECKLISTS

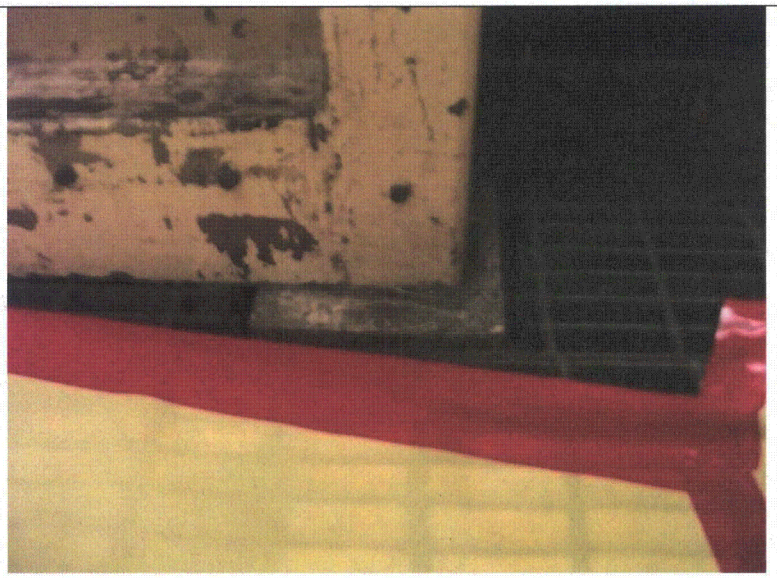
Status: Y [N] U

Seismic Walkdown Checklist (SWC)

Equipment ID No.: 2FANHVACCTCLR24

Equipment Class: (10) Air Handlers

Equipment Description: CONTAINMENT COOLER 23 FAN



2FANHVACCTCLR24 2-22-2013

ATTACHMENT 2
SEISMIC WALKDOWN CHECKLISTS

Status: Y [N] U

Seismic Walkdown Checklist (SWC)

Equipment ID No.: 2PUMPSW23

Equipment Class: (6) Vertical Pumps

Equipment Description: 23 SW Pump

Project: CCNPP 2 SWEL

Location (Bldg, Elev, Room/Area): Intake Structure EL. (-) 7-FT, CAL-ISPR-INT2

Manufacturer/Model:

Instructions for Completing Checklist

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

Anchorage

1. Is anchorage configuration verification required (i.e., is the item one of the 50% of SWEL items requiring such verification)? — No

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

3. Is the anchorage free of corrosion that is more than mild surface oxidation? — No

   Degradation was-found on the hold-down nuts. CR-2013-004351 was written to document this issue. Corrosion is surface only and SWT team judged fasteners have adequate capacity.

   Note that CR-2012-007927 is in the CAP system to capture corrosion on 23 SW Pump Volute. Work Order C91983612 is open to make repairs during the next 23 SW Pump Replacment. Nut replacement will be included in WO.

ATTACHMENT 2
SEISMIC WALKDOWN CHECKLISTS

Status: Y [N] U

Seismic Walkdown Checklist (SWC)

Equipment ID No.: 2PUMPSW23

Equipment Class: (6) Vertical Pumps

Equipment Description: 23 SW Pump

4.	Is the anchorage free of visible cracks in the concrete near the anchors?	Yes
5.	Is the anchorage configuration consistent 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? *Based on nut material remaining and adequate bolt projection the SW Pump is judged to be operable.*	No

Interaction Effects

7.	Are soft targets free from impact by nearby equipment or structures?	Yes
8.	Are overhead equipment, distribution systems, ceiling tiles and lighting, and masonry block walls not likely to collapse onto the equipment?	Yes
9.	Do attached lines have adequate flexibility to avoid damage?	N/A

ATTACHMENT 2
SEISMIC WALKDOWN CHECKLISTS

Status: Y [N] U

Seismic Walkdown Checklist (SWC)

Equipment ID No.: 2PUMPSW23

Equipment Class: (6) Vertical Pumps

Equipment Description: 23 SW Pump

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

Other Adverse Conditions

11.	Have you looked for and found no adverse seismic conditions that could adversely affect the safety functions of the equipment?	Yes

Comments

Area Walkdown Checklist for the Unit 2 Intake Structure was completed and issued with the 2012 NRC walkdown report (Reference 7.1).

The Saltwater Pumps are located in pits that are confined spaces. The walkdown was conducted remotely using a camera on an extension pole. No pictures were taken.

ATTACHMENT 2
SEISMIC WALKDOWN CHECKLISTS

Status: Y [N] U

Seismic Walkdown Checklist (SWC)

Equipment ID No.: 2PUMPSW23

Equipment Class: (6) Vertical Pumps

Equipment Description: 23 SW Pump

Evaluated by: J. A. Crunkleton Date: 5/13/2013

M. A Wright 5/13/2013

Photos - NONE

ATTACHMENT (3)

AREA WALK-BY CHECKLISTS

C
Area Walk-By Checklists (AWCs)

Table C-1: Summary of Area Walk-By Check Lists Completed by CCNPP Personnel		
Area Number	**Location**	**Elevation**
CTMT-229S	Unit 2 Containment	45' and 69'

ATTACHMENT 3
AREA WALK-BY CHECKLISTS

Area Walk-By Checklist (AWC) **Staus: Y [N] U**

Location (Bldg, Elev, Room/Area): Area : CTMT-229S; El 45 & 69-FT

Instructions for Completing Checklist

This checklist may be used to document the results of the Area Walk-By near one or more SWEL items. The space below each of the following questions may be used to record the results of judgments and findings. Additional space is provided at the end of this checklist for documenting other comments.

1.	Does anchorage of equipment in the area appear to be free of potentially adverse seismic conditions (if visible without necessarily opening cabinets)? *Iodine Removal Units (IRUs) located adjacent to the Containment Air Coolers (CACs) had missing welds. The condition was documented in CR-2013-002002.*	No
2.	Does anchorage of equipment in the area appear to be free of significant degraded conditions? *Yes – except for the the IRUs identified in Section 1 above.*	Yes
3.	Based on a visual inspection from the floor, do the cable/conduit raceways and HVAC ducting appear to be free of potentially adverse seismic conditions (e.g., condition of supports is adequate and fill conditions of cable trays appear to be inside acceptable limits)?	Yes
4.	Does it appear that the area is free of potentially adverse seismic spatial interactions with other equipment in the area (e.g., ceiling tiles and lighting)? *Scaffold racks located on Elevation 45-FT were open during the Area Walkdown. Site procedures exist that ensure these racks are secured prior to startup.*	Yes
5.	Does it appear that the area is free of potentially adverse seismic interactions that could cause flooding or spray in the area?	Yes

ATTACHMENT 3
AREA WALK-BY CHECKLISTS

Area Walk-By Checklist (AWC) **Staus: Y [N] U**

Location (Bldg, Elev, Room/Area): Area : CTMT-229S; El 45 & 69-FT

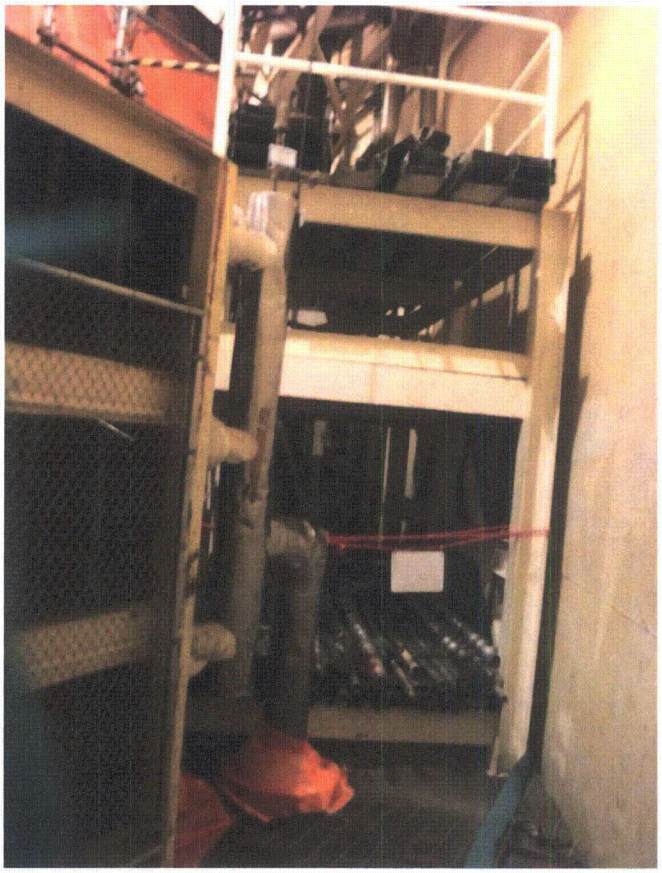
6.	Does it appear that the area is free of potentially adverse seismic interactions that could cause a fire in the area?	Yes
7.	Does it appear that the area is free of potentially adverse seismic interactions associated with housekeeping practices, storage of portable equipment, and temporary installations (e.g., scaffolding, lead shielding)?	Yes
8.	Have you looked for and found no other seismic conditions that could adversely affect the safety functions of the equipment in the area?	Yes

Comments

Welds for the IRUs were restored during the 2013 RFO.

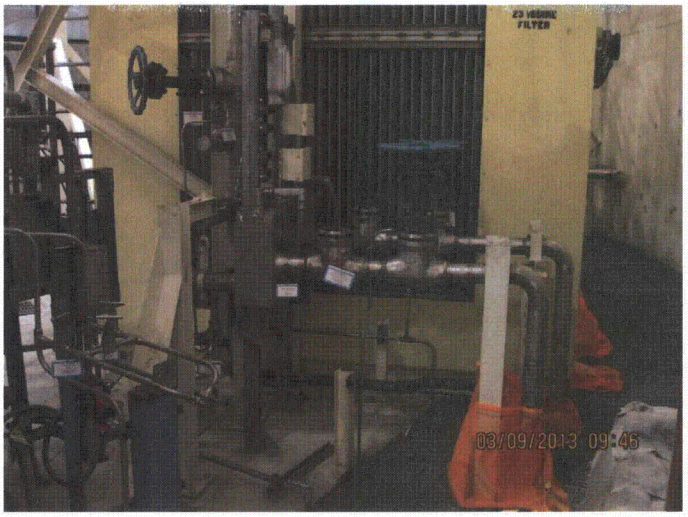
Evaluated by: J. A. Crunkleton Date: 4/30/2012

E. M. Hussain 4/30/2013



Scaffold Rack near 21 Containment Air Cooler EL. 45-FT
Screens are temporarily attached to the Cooler Housing to protect their coils during outages.

Missing welds from 21 Iodine Removal Unit base



23 Iodine Removal Unit

Missing welds from 23 Iodine Removal Unit base

ATTACHMENT (4)

SWCs FOR SUPPLEMENTAL INTERNAL INSPECTIONS OF ELECTRICAL CABINETS

D

SWC's for Supplemental Internal Inspections of Electrical Cabinets

Table D-1: Summary of Supplemental Internal Inspections Completed by CCNPP		
Equipment Class	**Component ID**	**Description**
2	2BUS2B01A(Note 1)	480V BUS 21A
2	2BUS2B01B	480V BUS 21B
20	2PNL2C61B(Note 1)	2B DG LOCAL CONTROL PANEL
20	2PNL2C61C(Note 2)	2B DG LOCAL CONTROL PANEL
0	2RY51G/T21A(Note 1)	480V SERV XFMR U-440-21A GROUND RELAY
0	2RY51G/T21B	480V SERV XFMR U-440-21B GROUND RELAY
20	2PNL2C61A(Note 2)	2B DG LOCAL CONTROL PANEL

Notes:

1) Additional internal anchorage also needs verification during this supplementary walkdown.
2) 2PNL2C61C could not be inspected due to cabinet containing high voltage components. 2PNL2C261A was inspected as a substitute for SWEL item #75.

ATTACHMENT 4

SWCS FOR SUPPLEMENTAL INTERNAL INSPECTIONS OF ELECTRICAL CABINETS

Status: [Y] N U

Seismic Walkdown Checklist (SWC)

Equipment ID No.: 2BUS2B01A

Equipment Class: (2) Low Voltage Switchgear

Equipment Description: 480V BUS 21A

Project: CCNPP 2 SWEL

Location (Bldg, Elev, Room/Area): AUX, 27.00 ft, CAL-AB-311

Manufacturer/Model:

Instructions for Completing Checklist

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

Anchorage

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

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

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

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

ATTACHMENT 4

SWCS FOR SUPPLEMENTAL INTERNAL INSPECTIONS OF ELECTRICAL CABINETS

Status: [Y] N U

Seismic Walkdown Checklist (SWC)

Equipment ID No.: 2BUS2B01A

Equipment Class: (2) Low Voltage Switchgear

Equipment Description: 480V BUS 21A

5.	Is the anchorage configuration consistent with plant documentation? (Note: This question only applies if the item is one of the 50% for which an anchorage configuration verification is required.) *Anchorage is shown in calculation CA02066.*	Yes
6.	Based on the above anchorage evaluations, is the anchorage free of potentially adverse seismic conditions?	Yes

Interaction Effects

7.	Are soft targets free from impact by nearby equipment or structures?	Yes
8.	Are overhead equipment, distribution systems, ceiling tiles and lighting, and masonry block walls not likely to collapse onto the equipment?	Yes
9.	Do attached lines have adequate flexibility to avoid damage?	Yes
10.	Based on the above seismic interaction evaluations, is equipment free of potentially adverse seismic interaction effects?	Yes

ATTACHMENT 4

SWCS FOR SUPPLEMENTAL INTERNAL INSPECTIONS OF ELECTRICAL CABINETS

Status: [Y] N U

Seismic Walkdown Checklist (SWC)

Equipment ID No.: 2BUS2B01A

Equipment Class: (2) Low Voltage Switchgear

Equipment Description: 480V BUS 21A

Other Adverse Conditions

11.	Have you looked for and found no adverse seismic conditions that could adversely affect the safety functions of the equipment?	Yes

Comments

Area Walk-by completed 8/15/2012. AWC was included in NRC Report submitted in 2012 (Reference 7.1).

Pictures from 8/15/2012 walkdown showing the outside of the cabinets are also included in this report.

Cabinet base is welded to embedded floor steel per design.

Evaluated by: J. A. Crunkleton J.A Crunkleton Date: 4/30/2013

ATTACHMENT 4

SWCS FOR SUPPLEMENTAL INTERNAL INSPECTIONS OF ELECTRICAL CABINETS

Status: [Y] N U

Seismic Walkdown Checklist (SWC)

Equipment ID No.: 2BUS2B01A

Equipment Class: (2) Low Voltage Switchgear

Equipment Description: 480V BUS 21A

E. M. Hussain E. M. Hussain 4/30/2013

Photos

2BUS2B01A 8-15-2012

2BUS2B01A 8-15-2012

ATTACHMENT 4

SWCS FOR SUPPLEMENTAL INTERNAL INSPECTIONS OF ELECTRICAL CABINETS

Status: [Y] N U

Seismic Walkdown Checklist (SWC)

Equipment ID No.: 2BUS2B01A

Equipment Class: (2) Low Voltage Switchgear

Equipment Description: 480V BUS 21A

2BUS2B01A 8-15-2012

2BUS2B01A 8-15-2012

ATTACHMENT 4

SWCS FOR SUPPLEMENTAL INTERNAL INSPECTIONS OF ELECTRICAL CABINETS

Status: [Y] N U

Seismic Walkdown Checklist (SWC)

Equipment ID No.: 2BUS2B01A

Equipment Class: (2) Low Voltage Switchgear

Equipment Description: 480V BUS 21A

2BUS2B01A 2-19-2013

2BUS2B01A 2-19-2013

ATTACHMENT 4

SWCS FOR SUPPLEMENTAL INTERNAL INSPECTIONS OF ELECTRICAL CABINETS

Status: [Y] N U

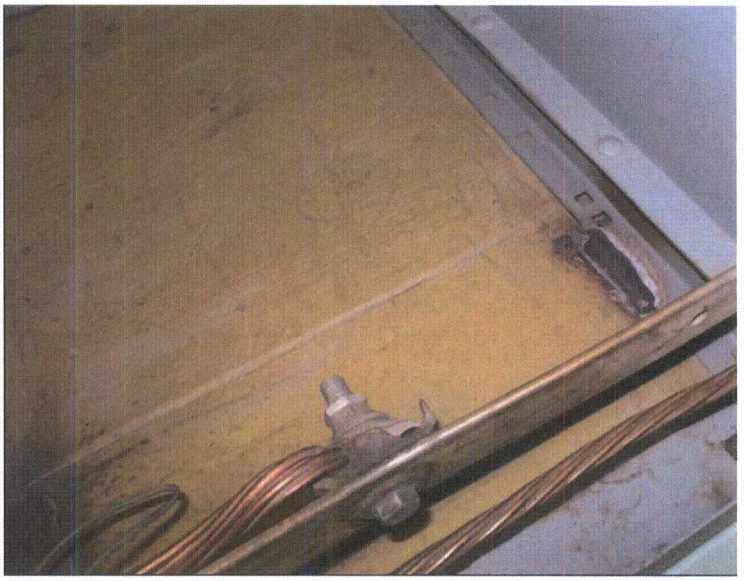
Seismic Walkdown Checklist (SWC)

Equipment ID No.: 2BUS2B01A

Equipment Class: (2) Low Voltage Switchgear

Equipment Description: 480V BUS 21A

2BUS2B01A 2-19-2013



2BUS2B01A 2-19-2013

ATTACHMENT 4

SWCS FOR SUPPLEMENTAL INTERNAL INSPECTIONS OF ELECTRICAL CABINETS

Status: [Y] N U

Seismic Walkdown Checklist (SWC)

Equipment ID No.: 2BUS2B01B

Equipment Class: (2) Low Voltage Switchgear

Equipment Description: 480V BUS 21B

Project: CCNPP 2 SWEL

Location (Bldg, Elev, Room/Area): AUX, 27.00 ft, CAL-AB-311

Manufacturer/Model:

Instructions for Completing Checklist

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

Anchorage

1. Is anchorage configuration verification required (i.e., is the item one of the 50% of SWEL items requiring such verification)? — No

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

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

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

ATTACHMENT 4

SWCS FOR SUPPLEMENTAL INTERNAL INSPECTIONS OF ELECTRICAL CABINETS

Status: [Y] N U

Seismic Walkdown Checklist (SWC)

Equipment ID No.: 2BUS2B01B

Equipment Class: (2) Low Voltage Switchgear

Equipment Description: 480V BUS 21B

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?	Yes

Interaction Effects

7.	Are soft targets free from impact by nearby equipment or structures?	Yes
8.	Are overhead equipment, distribution systems, ceiling tiles and lighting, and masonry block walls not likely to collapse onto the equipment?	Yes
9.	Do attached lines have adequate flexibility to avoid damage?	Yes
10.	Based on the above seismic interaction evaluations, is equipment free of potentially adverse seismic interaction effects?	Yes

ATTACHMENT 4

SWCS FOR SUPPLEMENTAL INTERNAL INSPECTIONS OF ELECTRICAL CABINETS

Status: [Y] N U

Seismic Walkdown Checklist (SWC)

Equipment ID No.: 2BUS2B01B

Equipment Class: (2) Low Voltage Switchgear

Equipment Description: 480V BUS 21B

Other Adverse Conditions

11.	Have you looked for and found no adverse seismic conditions that could adversely affect the safety functions of the equipment?	Yes

Comments

Area Walk-by completed 8/15/2012. AWC was included in NRC Report submitted in 2012 (Reference 7.1).

Pictures from 8/15/2012 walkdown showing the outside of the cabinets are also included in this report.

Cabinet base is welded to embedded floor steel per design.

Evaluated by: J. A. Crunkleton Date: 4/30/2013

E. M. Hussain 4/30/2013

ATTACHMENT 4

SWCS FOR SUPPLEMENTAL INTERNAL INSPECTIONS OF ELECTRICAL CABINETS

Status: [Y] N U

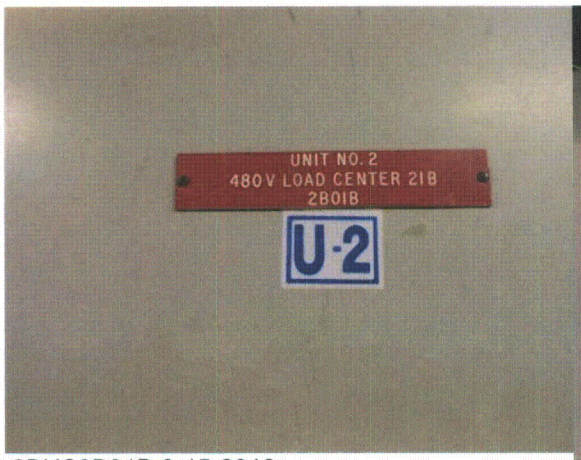
Seismic Walkdown Checklist (SWC)

Equipment ID No.: 2BUS2B01B

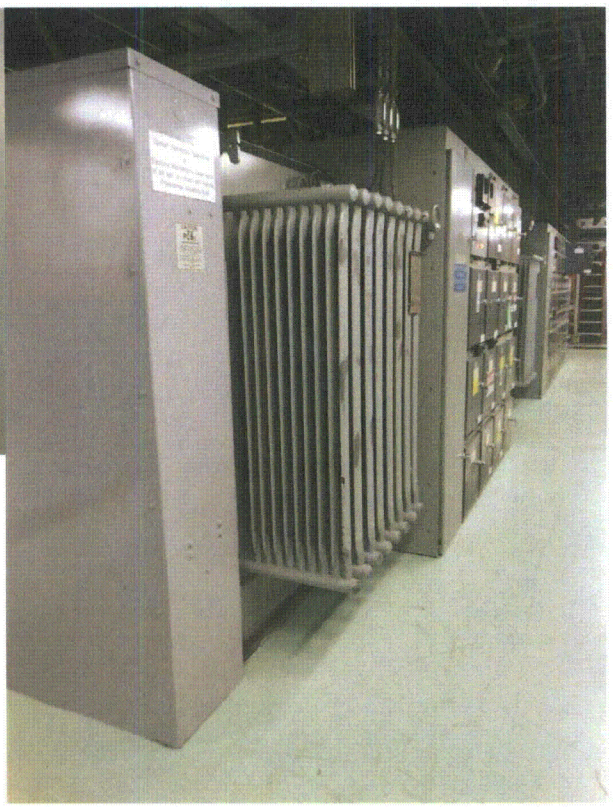
Equipment Class: (2) Low Voltage Switchgear

Equipment Description: 480V BUS 21B

Photos



2BUS2B01B 8-15-2012



2BUS2B01B

8-15-2012

ATTACHMENT 4
SWCS FOR SUPPLEMENTAL INTERNAL INSPECTIONS OF ELECTRICAL CABINETS

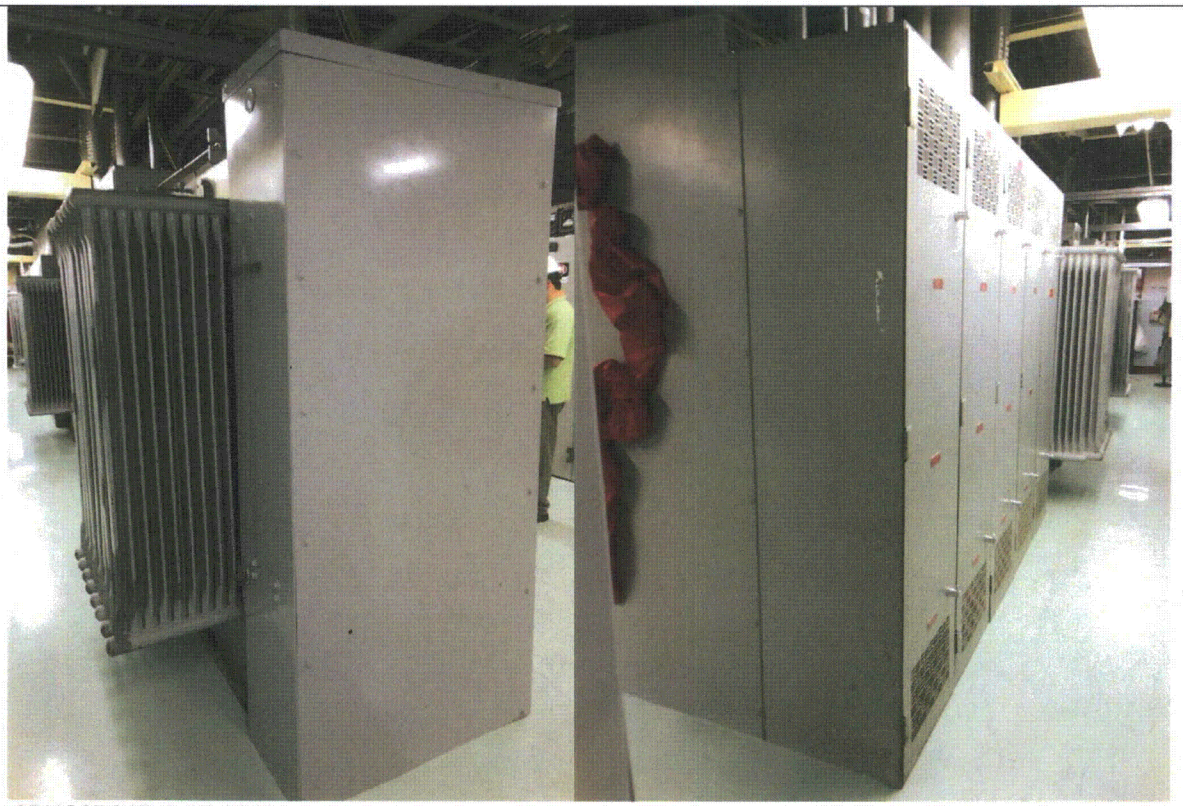
Status: [Y] N U

Seismic Walkdown Checklist (SWC)

Equipment ID No.: 2BUS2B01B

Equipment Class: (2) Low Voltage Switchgear

Equipment Description: 480V BUS 21B



2BUS2B01B 8-15-2012

2BUS2B01B 8-15-2012

ATTACHMENT 4

SWCS FOR SUPPLEMENTAL INTERNAL INSPECTIONS OF ELECTRICAL CABINETS

Status: [Y] N U

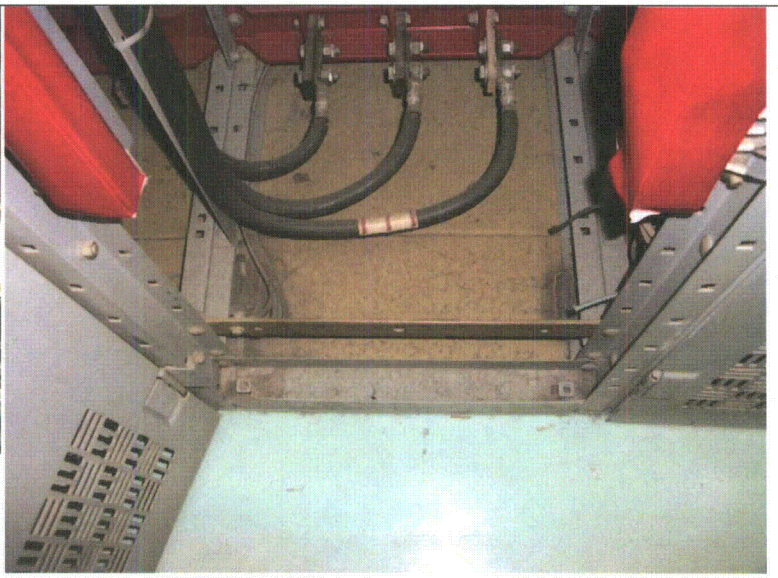
Seismic Walkdown Checklist (SWC)

Equipment ID No.: 2BUS2B01B

Equipment Class: (2) Low Voltage Switchgear

Equipment Description: 480V BUS 21B

2BUS2B01B 8-15-2012



2BUS2B01B 2-23-2013

ATTACHMENT 4

SWCS FOR SUPPLEMENTAL INTERNAL INSPECTIONS OF ELECTRICAL CABINETS

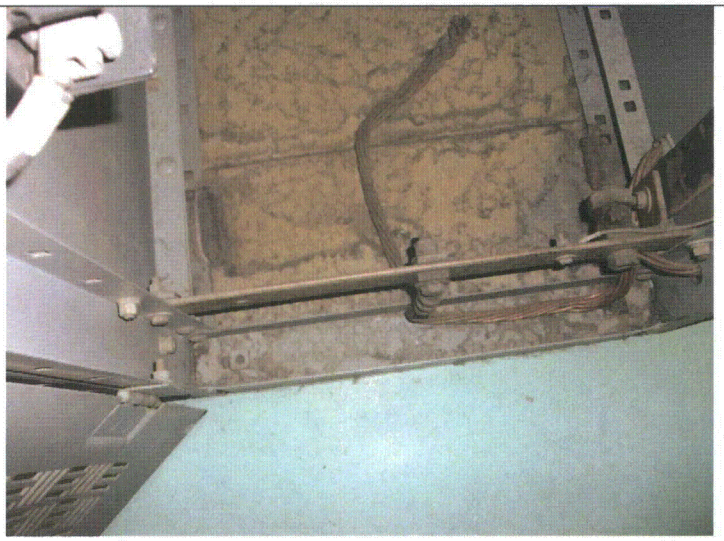
Status: [Y] N U

Seismic Walkdown Checklist (SWC)

Equipment ID No.: 2BUS2B01B

Equipment Class: (2) Low Voltage Switchgear

Equipment Description: 480V BUS 21B



2BUS2B01B 2-23-2013

ATTACHMENT 4

SWCS FOR SUPPLEMENTAL INTERNAL INSPECTIONS OF ELECTRICAL CABINETS

Status: [Y] N U

Seismic Walkdown Checklist (SWC)

Equipment ID No.: 2BUS2B01B

Equipment Class: (2) Low Voltage Switchgear

Equipment Description: 480V BUS 21B

2BUS2B01B 2-23-2013

ATTACHMENT 4

SWCS FOR SUPPLEMENTAL INTERNAL INSPECTIONS OF ELECTRICAL CABINETS

Status: [Y] N U

Seismic Walkdown Checklist (SWC)

Equipment ID No.: 2PNL2C61A

Equipment Class: (20) Instrumentation and Control Panels and Cabinets

Equipment Description: 2B DG LOCAL CONTROL PANEL

Project: CCNPP 2 SWEL

Location (Bldg, Elev, Room/Area): AUX, 45.00 ft, CAL-AB-416

Manufacturer/Model:

Instructions for Completing Checklist

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

Anchorage

1.	Is anchorage configuration verification required (i.e., is the item one of the 50% of SWEL items requiring such verification)?	No
2.	Is the anchorage free of bent, broken, missing or loose hardware?	Yes
3.	Is the anchorage free of corrosion that is more than mild surface oxidation?	Yes
4.	Is the anchorage free of visible cracks in the concrete near the anchors?	Yes

ATTACHMENT 4

SWCS FOR SUPPLEMENTAL INTERNAL INSPECTIONS OF ELECTRICAL CABINETS

Status: [Y] N U

Seismic Walkdown Checklist (SWC)

Equipment ID No.: 2PNL2C61A

Equipment Class: (20) Instrumentation and Control Panels and Cabinets

Equipment Description: 2B DG LOCAL CONTROL PANEL

5.	Is the anchorage configuration consistent with plant documentation? (Note: This question only applies if the item is one of the 50% for which an anchorage configuration verification is required.) *Cabinet anchorage was modified under the A-46 Project (MCR 94-024-011-00)*	N/A
6.	Based on the above anchorage evaluations, is the anchorage free of potentially adverse seismic conditions?	Yes

Interaction Effects

7.	Are soft targets free from impact by nearby equipment or structures?	Yes
8.	Are overhead equipment, distribution systems, ceiling tiles and lighting, and masonry block walls not likely to collapse onto the equipment?	Yes
9.	Do attached lines have adequate flexibility to avoid damage?	Yes

ATTACHMENT 4
SWCS FOR SUPPLEMENTAL INTERNAL INSPECTIONS OF ELECTRICAL CABINETS

Status: [Y] N U

Seismic Walkdown Checklist (SWC)

Equipment ID No.: 2PNL2C61A

Equipment Class: (20) Instrumentation and Control Panels and Cabinets

Equipment Description: 2B DG LOCAL CONTROL PANEL

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

Other Adverse Conditions

11.	Have you looked for and found no adverse seismic conditions that could adversely affect the safety functions of the equipment?	Yes

Comments

The AWC for Room AB-416 was completed and documented with the 2013 NRC Submittal

Evaluated by: J. A. Crunkleton Date: 5/17/2013

E. M. Hussain 5/17/2013

ATTACHMENT 4

SWCS FOR SUPPLEMENTAL INTERNAL INSPECTIONS OF ELECTRICAL CABINETS

Status: [Y] N U

Seismic Walkdown Checklist (SWC)

Equipment ID No.: 2PNL2C61A

Equipment Class: (20) Instrumentation and Control Panels and Cabinets

Equipment Description: 2B DG LOCAL CONTROL PANEL

Photos

2PNL2C61A

ATTACHMENT 4

SWCS FOR SUPPLEMENTAL INTERNAL INSPECTIONS OF ELECTRICAL CABINETS

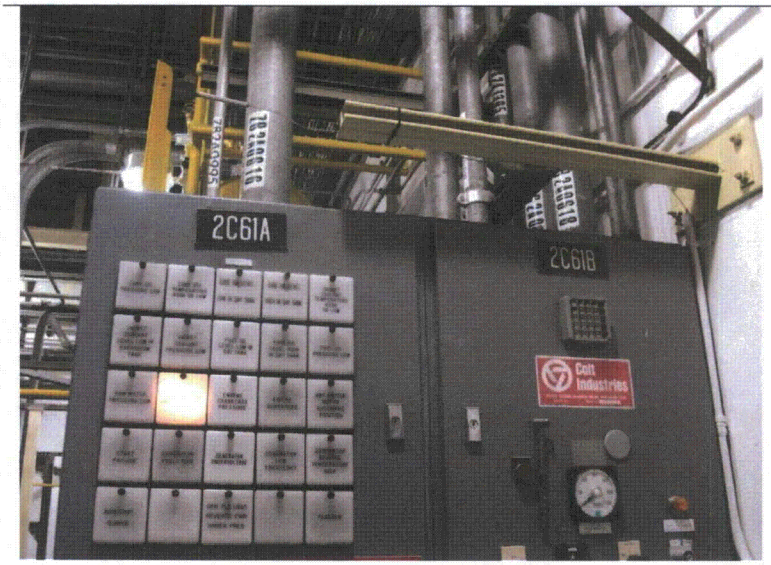
Status: [Y] N U

Seismic Walkdown Checklist (SWC)

Equipment ID No.: 2PNL2C61A

Equipment Class: (20) Instrumentation and Control Panels and Cabinets

Equipment Description: 2B DG LOCAL CONTROL PANEL



ATTACHMENT 4

SWCS FOR SUPPLEMENTAL INTERNAL INSPECTIONS OF ELECTRICAL CABINETS

Status: [Y] N U

Seismic Walkdown Checklist (SWC)

Equipment ID No.: 2PNL2C61A

Equipment Class: (20) Instrumentation and Control Panels and Cabinets

Equipment Description: 2B DG LOCAL CONTROL PANEL

2PNL2C61A

ATTACHMENT 4

SWCS FOR SUPPLEMENTAL INTERNAL INSPECTIONS OF ELECTRICAL CABINETS

Status: [Y] N U

Seismic Walkdown Checklist (SWC)

Equipment ID No.: 2PNL2C61A

Equipment Class: (20) Instrumentation and Control Panels and Cabinets

Equipment Description: 2B DG LOCAL CONTROL PANEL

2PNL2C61A

ATTACHMENT 4

SWCS FOR SUPPLEMENTAL INTERNAL INSPECTIONS OF ELECTRICAL CABINETS

Status: [Y] N U

Seismic Walkdown Checklist (SWC)

Equipment ID No.: 2PNL2C61B

Equipment Class: (20) Instrumentation and Control Panels and Cabinets

Equipment Description: 2B DG LOCAL CONTROL PANEL

Project: CCNPP 2 SWEL

Location (Bldg, Elev, Room/Area): AUX, 45.00 ft, CAL-AB-416

Manufacturer/Model:

Instructions for Completing Checklist

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

Anchorage

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

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

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

ATTACHMENT 4

SWCS FOR SUPPLEMENTAL INTERNAL INSPECTIONS OF ELECTRICAL CABINETS

Status: [Y] N U

Seismic Walkdown Checklist (SWC)

Equipment ID No.: 2PNL2C61B

Equipment Class: (20) Instrumentation and Control Panels and Cabinets

Equipment Description: 2B DG LOCAL CONTROL PANEL

4.	Is the anchorage free of visible cracks in the concrete near the anchors?	Yes
5.	Is the anchorage configuration consistent with plant documentation? (Note: This question only applies if the item is one of the 50% for which an anchorage configuration verification is required.) *Cabinet anchorage was modified under the A-46 Project. Anchorage is shown in MCR 94-024-011-00.*	Yes
6.	Based on the above anchorage evaluations, is the anchorage free of potentially adverse seismic conditions?	Yes

Interaction Effects

7.	Are soft targets free from impact by nearby equipment or structures?	Yes
8.	Are overhead equipment, distribution systems, ceiling tiles and lighting, and masonry block walls not likely to collapse onto the equipment?	Yes

ATTACHMENT 4

SWCS FOR SUPPLEMENTAL INTERNAL INSPECTIONS OF ELECTRICAL CABINETS

Status: [Y] N U

Seismic Walkdown Checklist (SWC)

Equipment ID No.: 2PNL2C61B

Equipment Class: (20) Instrumentation and Control Panels and Cabinets

Equipment Description: 2B DG LOCAL CONTROL PANEL

9.	Do attached lines have adequate flexibility to avoid damage?	Yes
10.	Based on the above seismic interaction evaluations, is equipment free of potentially adverse seismic interaction effects?	Yes

Other Adverse Conditions

11.	Have you looked for and found no adverse seismic conditions that could adversely affect the safety functions of the equipment?	Yes

Comments

The AWC for Room AB-416 was completed and documented with the 2013 NRC Submittal (Reference 7.1).

Evaluated by: J. A. Crunkleton J.A Crunkleton Date: 5/17/2013

ATTACHMENT 4

SWCS FOR SUPPLEMENTAL INTERNAL INSPECTIONS OF ELECTRICAL CABINETS

Status: [Y] N U

Seismic Walkdown Checklist (SWC)

Equipment ID No.: 2PNL2C61B

Equipment Class: (20) Instrumentation and Control Panels and Cabinets

Equipment Description: 2B DG LOCAL CONTROL PANEL

E. M. Hussain E. M. Hussain 5/17/2013

Photos

ATTACHMENT 4

SWCS FOR SUPPLEMENTAL INTERNAL INSPECTIONS OF ELECTRICAL CABINETS

Status: [Y] N U

Seismic Walkdown Checklist (SWC)

Equipment ID No.: 2PNL2C61B

Equipment Class: (20) Instrumentation and Control Panels and Cabinets

Equipment Description: 2B DG LOCAL CONTROL PANEL

2PNL2C61B

ATTACHMENT 4

SWCS FOR SUPPLEMENTAL INTERNAL INSPECTIONS OF ELECTRICAL CABINETS

Status: [Y] N U

Seismic Walkdown Checklist (SWC)

Equipment ID No.: 2PNL2C61B

Equipment Class: (20) Instrumentation and Control Panels and Cabinets

Equipment Description: 2B DG LOCAL CONTROL PANEL

2PNL2C61B

ATTACHMENT 4
SWCS FOR SUPPLEMENTAL INTERNAL INSPECTIONS OF ELECTRICAL CABINETS

Status: [Y] N U

Seismic Walkdown Checklist (SWC)

Equipment ID No.: 2PNL2C61B

Equipment Class: (20) Instrumentation and Control Panels and Cabinets

Equipment Description: 2B DG LOCAL CONTROL PANEL

2PNL2C61B

Status: [Y] N U

Seismic Walkdown Checklist (SWC)

Equipment ID No.: 2RY51G/T21A

Equipment Class: (0) Other

Equipment Description: 480V SERV XFMR U-440-21A GROUND RELAY

Project: CCNPP 2 SWEL

Location (Bldg, Elev, Room/Area): AUX, 27.00 ft, CAL-AB-311

ATTACHMENT 4

SWCS FOR SUPPLEMENTAL INTERNAL INSPECTIONS OF ELECTRICAL CABINETS

Status: [Y] N U

Seismic Walkdown Checklist (SWC)

Equipment ID No.: 2RY51G/T21A

Equipment Class: (0) Other

Equipment Description: 480V SERV XFMR U-440-21A GROUND RELAY

Manufacturer/Model:

Instructions for Completing Checklist

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

Anchorage

1.	Is anchorage configuration verification required (i.e., is the item one of the 50% of SWEL items requiring such verification)? *Relay on 2BUS2B01A*	Yes
2.	Is the anchorage free of bent, broken, missing or loose hardware?	Yes
3.	Is the anchorage free of corrosion that is more than mild surface oxidation?	Yes
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.)	Yes

ATTACHMENT 4

SWCS FOR SUPPLEMENTAL INTERNAL INSPECTIONS OF ELECTRICAL CABINETS

Status: [Y] N U

Seismic Walkdown Checklist (SWC)

Equipment ID No.: 2RY51G/T21A

Equipment Class: (0) Other

Equipment Description: 480V SERV XFMR U-440-21A GROUND RELAY

Relay mounting information is noted in seismic report WEST01.

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

Interaction Effects

7.	Are soft targets free from impact by nearby equipment or structures?	Yes
8.	Are overhead equipment, distribution systems, ceiling tiles and lighting, and masonry block walls not likely to collapse onto the equipment?	Yes
9.	Do attached lines have adequate flexibility to avoid damage?	Yes
10.	Based on the above seismic interaction evaluations, is equipment free of potentially adverse seismic interaction effects?	Yes

Other Adverse Conditions

ATTACHMENT 4
SWCS FOR SUPPLEMENTAL INTERNAL INSPECTIONS OF ELECTRICAL CABINETS

Status: [Y] N U

Seismic Walkdown Checklist (SWC)

Equipment ID No.: 2RY51G/T21A

Equipment Class: (0) Other

Equipment Description: 480V SERV XFMR U-440-21A GROUND RELAY

11.	Have you looked for and found no adverse seismic conditions that could adversely affect the safety functions of the equipment?	Yes

Comments

Evaluated by: J. A. Crunkleton Date: 4/30/2013

E. M. Hussain 4/30/2013

Photos

ATTACHMENT 4

SWCS FOR SUPPLEMENTAL INTERNAL INSPECTIONS OF ELECTRICAL CABINETS

Status: [Y] N U

Seismic Walkdown Checklist (SWC)

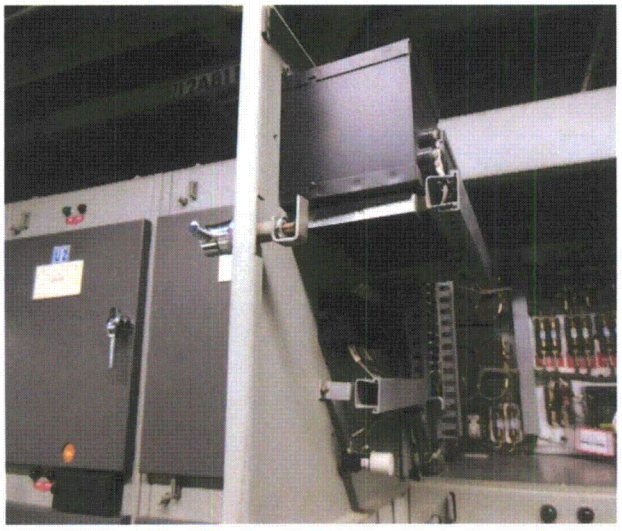
Equipment ID No.: 2RY51G/T21A

Equipment Class: (0) Other

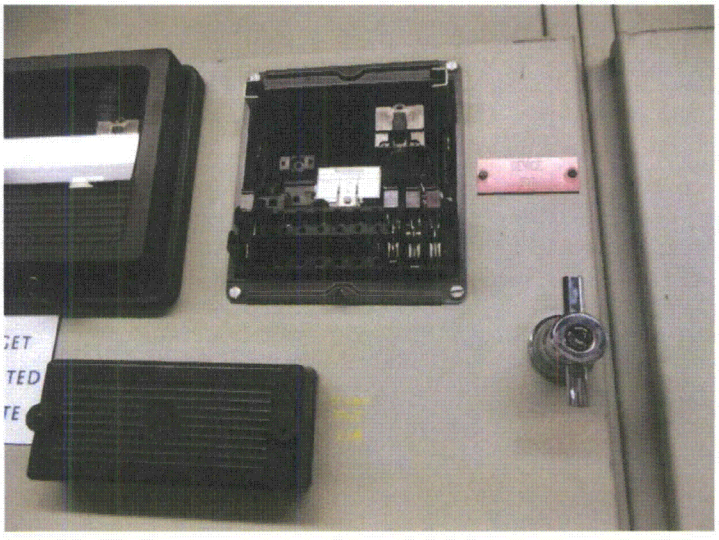
Equipment Description: 480V SERV XFMR U-440-21A GROUND RELAY

2RY51G/T21A 8-15-2012

2RY51G/T21A 8-15-2012



2RY51G/T21A 2-19-2013



2RY51G/T21A 2-19-2013

ATTACHMENT 4

SWCS FOR SUPPLEMENTAL INTERNAL INSPECTIONS OF ELECTRICAL CABINETS

Status: [Y] N U

Seismic Walkdown Checklist (SWC)

Equipment ID No.: 2RY51G/T21A

Equipment Class: (0) Other

Equipment Description: 480V SERV XFMR U-440-21A GROUND RELAY

Status: [Y] N U

Seismic Walkdown Checklist (SWC)

Equipment ID No.: 2RY51G/T21B

Equipment Class: (0) Other

Equipment Description: 480V SERV XFMR U-440-21B GROUND RELAY

Project: CCNPP 2 SWEL

Location (Bldg, Elev, Room/Area): AUX, 27.00 ft, CAL-AB-311

Manufacturer/Model:

Instructions for Completing Checklist

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

Anchorage

1. Is anchorage configuration verification required (i.e., is the item one of the 50% of SWEL items requiring such verification)? No

   Relay on 2BUS2B01B

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

ATTACHMENT 4

SWCS FOR SUPPLEMENTAL INTERNAL INSPECTIONS OF ELECTRICAL CABINETS

Status: [Y] N U

Seismic Walkdown Checklist (SWC)

Equipment ID No.: 2RY51G/T21B

Equipment Class: (0) Other

Equipment Description: 480V SERV XFMR U-440-21B GROUND RELAY

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

Interaction Effects

7.	Are soft targets free from impact by nearby equipment or structures?	Yes
8.	Are overhead equipment, distribution systems, ceiling tiles and lighting, and	Yes

ATTACHMENT 4
SWCS FOR SUPPLEMENTAL INTERNAL INSPECTIONS OF ELECTRICAL CABINETS

Status: [Y] N U

Seismic Walkdown Checklist (SWC)

Equipment ID No.: 2RY51G/T21B

Equipment Class: (0) Other

Equipment Description: 480V SERV XFMR U-440-21B GROUND RELAY

masonry block walls not likely to collapse onto the equipment?

9.	Do attached lines have adequate flexibility to avoid damage?	Yes
10.	Based on the above seismic interaction evaluations, is equipment free of potentially adverse seismic interaction effects?	Yes

Other Adverse Conditions

11.	Have you looked for and found no adverse seismic conditions that could adversely affect the safety functions of the equipment?	Yes

Comments

ATTACHMENT 4

SWCS FOR SUPPLEMENTAL INTERNAL INSPECTIONS OF ELECTRICAL CABINETS

Status: [Y] N U

Seismic Walkdown Checklist (SWC)

Equipment ID No.: 2RY51G/T21B

Equipment Class: (0) Other

Equipment Description: 480V SERV XFMR U-440-21B GROUND RELAY

Evaluated by: J. A. Crunkleton J.A. Crunkleton Date: 4/30/2013

E. M. Hussain E. M. Hussain Date 4/30/2013

Photos

2RY51G/T21B 8-15-2012

2RY51G/T21B 2-23-2013

ATTACHMENT 4

SWCS FOR SUPPLEMENTAL INTERNAL INSPECTIONS OF ELECTRICAL CABINETS

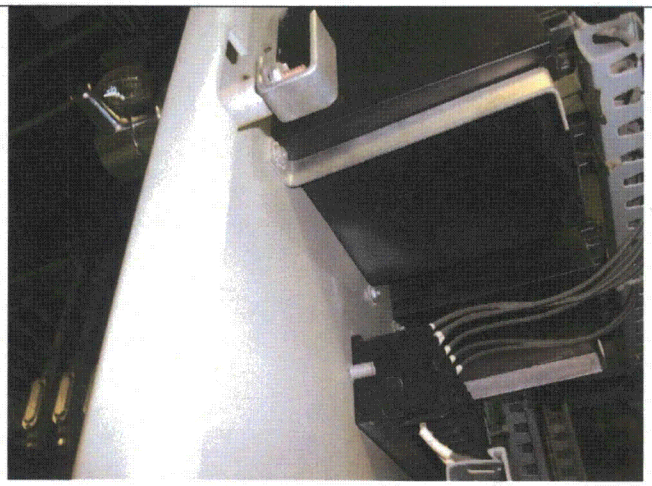
Status: [Y] N U

Seismic Walkdown Checklist (SWC)

Equipment ID No.: 2RY51G/T21B

Equipment Class: (0) Other

Equipment Description: 480V SERV XFMR U-440-21B GROUND RELAY



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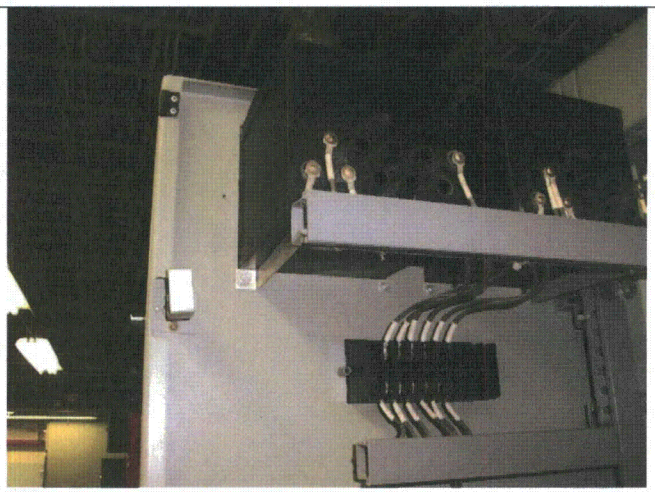

2RY51G/T21B 2-23-2013