Seismic Walkdown Checklist (SWC)

Status: Y

Equipment ID No DC-2-67-E-BTC-BTC21 Equipment Class: 16

Equipment Description: 125V DC Battery Chargers

Location: Building: Auxiliary Floor El. 115 Room, Area: 2-BTC21

Manufacturer, model, Etc. Ametek Solidstate Controls

Instructions for Completing Checklist

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

Anchorage

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

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

Nothing broken, bent, or missing.

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

No corrosion observed

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

No cracks observed

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

The anchorage is consistent with drawing 050053 sheet 241

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

Interaction Effects

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

Switches on the front panel are protected by plexiglass panels. Selector switch knobs are located on the front panel. However, no credible interaction sources

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

Conduit and cable trays are well supported. Lighting is conduit hung with ball and socket and closed hook connections at the ceiling. Masonry wall has been strengthened for seismic loads

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

Conduit at the top has a flex connection

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

PA speaker and junction box are adequately anchored to the wall behind the panel. The emergency light is seismically qualified.

Other Adverse Conditions

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

Seismic Walkdown Checklist (SWC)

Status: Y

Equipment ID No DC-2-67-E-BTC-BTC21 Equipment Class: 16

Equipment Description: 125V DC Battery Chargers

Comment:

Evaluated by: DKN Date: 10/17/2012

DRC 10/19/2012

Seismic Walkdown Checklist (SWC)

Status: Y

Equipment ID No DC-2-67-E-LC-PD25 Equipment Class: 14

Equipment Description: 125V DC Distribution Panels

Location: Building: Turbine Floor El. 85 Room, Area: 2-PD25

Manufacturer, model, Etc.

Instructions for Completing Checklist

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

Anchorage

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

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

Anchored at corners of wall-mounted panel by (4) 1/2" through-bolts through the 8" reinforced masonry block wall that forms the battery room.

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

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

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

Consistent with calculation sketch ES-21,attachment 28.

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

Interaction Effects

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

Panel does not contain soft targets.

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

Nearby conduit is class 1 but most overhead conduit and piping is class 2 and is rod or spring hung including SCW, CCW and Service Air piping systems. All piping appears to be welded piping.

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

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

Panel is essentially shielded by block wall on which it is mounted.

Other Adverse Conditions

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

Seismic Walkdown Checklist (SWC)

Status: Y

Equipment ID No DC-2-67-E-LC-PD25 Equipment Class: 14

Equipment Description: 125V DC Distribution Panels

Comment:

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

DRC D.R. Lee 10/18/2012

Seismic Walkdown Checklist (SWC)

Status: Y

Equipment ID No DC-2-96-E-PNL-2CC1 Equipment Class: 20

Equipment Description: Main Control Boards (Console)

Location: Building: Auxiliary Floor El. 140 Room, Area: 2-VB1

Manufacturer, model, Etc.

Instructions for Completing Checklist

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

Anchorage

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

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

No bent, broken, or missing hardware.

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

No signs of corrosion were observed. The room maintains a very controlled environment.

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

No cracks observed in the concrete where visible. The carpet was not pulled up.

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

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

Interaction Effects

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

No credible sources.

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

Suspended ceiling is hung by a braced unistrut system. The lighting over the control consoles and vertical boards are independently hung. The HVAC duct is braced and the registers are independently rod hung. No masonry walls.

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

Cables enter the panel from the floor

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

Other Adverse Conditions

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

Seismic Walkdown Checklist (SWC)

Status: Y

Equipment ID No DC-2-96-E-PNL-2CC1 Equipment Class: 20

Equipment Description: Main Control Boards (Console)

Comment:

The panel is welded to steel plates embedded in the concrete floor below. The internal hardware is securely mounted. The length and spacing of the welds to the embedded plates were confirmed by probing under the panel base cove. The existence of the welds joining the tab plates to the panel base channel was confirmed by locating the heat scorch marks on the inside face of the base channel.

Evaluated by: DKN Date: 10/17/2012

SMM 10/19/2012

Seismic Walkdown Checklist (SWC)

Status: Y

Equipment ID No DC-2-96-E-PNL-2VB1 Equipment Class: 20

Equipment Description: Main Control Boards (Vertical)

Location: Building: Auxiliary Floor El. 140 Room, Area: 2-VB1

Manufacturer, model, Etc.

Instructions for Completing Checklist

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

Anchorage

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

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

No bent, broken, or missing hardware

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

No signs of corrosion observed

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

No cracks observed where the concrete was visible. The control room carpet was not pulled up.

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

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

Interaction Effects

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

No credible interaction sources.

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

Suspended ceiling is hung by a braced unistrut system. The lighting over the control consoles and vertical boards are independently hung. The HVAC duct is braced and the registers are independently rod hung. No masonry walls.

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

Cables come into the cabinet from below.

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

The panels behind 2-VB1 are anchored.

Other Adverse Conditions

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

Seismic Walkdown Checklist (SWC)

Status: Y

Equipment ID No DC-2-96-E-PNL-2VB1 Equipment Class: 20

Equipment Description: Main Control Boards (Vertical)

Comment:

The vertical board is welded to steel plates embedded in the concrete floor. All hardware is securely mounted in the panel. The length and spacing of the welds to the embedded plates were confirmed by probing under the panel base cove. The existence of the welds joining the tab plates to the panel base channel was confirmed by locating the heat scorch marks on the inside face of the base channel.

Includes subcomponents: DC-2-09-E-S-SI-2-8923A-CS, DC-2-14-E-S-CCW-2-FCV-430-CS

Evaluated by: DKN Date: 10/19/2012

SMM 10/19/2012

Seismic Walkdown Checklist (SWC)

Status: Y

Equipment ID No DC-2-96-E-PNL-HSP Equipment Class: 20

Equipment Description: Hot Shutdown Panel

Location: Building: Auxiliary Floor El. 100 Room, Area: 2-TRY21

Manufacturer, model, Etc. Westinghouse

Instructions for Completing Checklist

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

Anchorage

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

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

The panel is anchored to a structural wide-flange frame by (4) 5/8" bolts both front and back. The outer flange of the wide-flange beam is anchored to the concrete floor slab by (6) 5/8" embedded studs both front and back. There are (2) additional anchor studs for the inner flange that are located opposite the (2) center studs both front and back which could not be seen (See drawing 443480-1). Y

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

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

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

Anchorage is consistent with drawing 443480-1 and calculation sketch IS-04 sheet 41.

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

Interaction Effects

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

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

Conduit and HVAC ducting is rigidly supported. Room lighting is supported by ball and socket connections. Reinforced masonry wall has additional support both at the base and top.

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

Connections are rigid conduit.

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

Other Adverse Conditions

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

Seismic Walkdown Checklist (SWC)

Status: Y

Equipment ID No DC-2-96-E-PNL-HSP Equipment Class: 20

Equipment Description: Hot Shutdown Panel

Comment:

Includes CCW Pump Control Switch DC-2-14-E-S-CCWP1-CSH which was reviewed.

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

DRC [signature] 10/18/2012

Seismic Walkdown Checklist (SWC)

Status: Y

Equipment ID No DC-2-96-M-PNL-PM-101 Equipment Class: 20

Equipment Description: Mechanical Panel No. PM-101(Component Cooling Water Supply Header Instrumentation)

Location: Building: Auxiliary Floor El. 85 Room, Area: 2-PM-101

Manufacturer, model, Etc. 88'

Instructions for Completing Checklist

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

Anchorage

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

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

Anchorage to the concrete wall consists (2) tabs that are welded to the back of the cabinet near the top and bottom corners and are bolted to Unistrut sections by 1/2" bolts and spring nuts. The Unistrut sections are in turn bolted to the concrete wall by (3) 1/2" expansion anchors. Y

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

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

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

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

Interaction Effects

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

Soft targets consist of runs of stainless steel tubing to the panel which run along the wall.

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

Overhead conduit and CCW piping are well supported.

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

Tubing and panel mounted on common wall.

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

Other Adverse Conditions

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

Minor housekeeping issues in room will not affect function of panel.

Seismic Walkdown Checklist (SWC)

Status: Y

Equipment ID No DC-2-96-M-PNL-PM-101 Equipment Class: 20

Equipment Description: Mechanical Panel No. PM-101(Component Cooling Water Supply Header Instrumentation)

Comment:

Includes Flow Transmitter DC-2-14-I-T-FT-65 which was reviewed.

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

DRC [signature] 10/18/2012

Seismic Walkdown Checklist (SWC)

Status: Y

Equipment ID No DC-2-96-M-PNL-PM-103 Equipment Class: 20

Equipment Description: Mechanical Panel No. PM-103(Steam Generator No. 1 Instrumentation)

Location: Building: Pipeway Floor El. 85 Room, Area: 2-PM-103

Manufacturer, model, Etc.

Instructions for Completing Checklist

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

Anchorage

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

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

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

Mild corrosion on the plate attaching the panel to the frame. Mild corrosion on the roof of the panel. A notification had already been written (SAPN 50267143). Y

Panel feet had recently been replaced and show no signs of corrosion.

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

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

Drawings show 5/8" expansion bolts connecting back struts to mounting plate. As built conditions show normal 5/8" bolts. Judged to be ok due to equivalent capacities. Base anchors are 6 5/8" bolts (3 on each side of panel).

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

Interaction Effects

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

No credible sources for impact.

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

No overhead equipment, ceiling tiles, lighting, or masonry block walls. Piping above is mounted securely.

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

All attached lines appeared to have adequate flexibility.

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

No seismic interaction issues.

Other Adverse Conditions

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

Seismic Walkdown Checklist (SWC)

Status: Y

Equipment ID No DC-2-96-M-PNL-PM-103 Equipment Class: 20

Equipment Description: Mechanical Panel No. PM-103 (Steam Generator No. 1 Instrumentation)

Comment:

Includes subcomponent DC-2-04-I-T-PT-514.

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

SMM [signature] 10/16/2012

Seismic Walkdown Checklist (SWC)

Status: Y

Equipment ID No DC-2-96-M-PNL-PM-185 Equipment Class: 20

Equipment Description: Mechanical Panel No. PM-185 (Condensate Storage Tank Instrumentation)

Location: Building: Auxiliary Floor El. 100 Room, Area: 2-PM-185

Manufacturer, model, Etc.

Instructions for Completing Checklist

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

Anchorage

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

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

No bent, broken, missing or loose hardware.

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

No corrosion observed.

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

No cracks noted near the anchors.

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

Anchorage is consistent with drawing 101903-9

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

Interaction Effects

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

No soft targets.

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

Overhead cable trays and conduit are well supported. Adjacent cage partition is anchored to the concrete wall. Lighting won't impact the panel even if it falls.

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

Attached conduits are tied to the concrete wall.

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

Overhead fire water piping is laterally braced. No interaction issues observed.

Other Adverse Conditions

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

Seismic Walkdown Checklist (SWC)

Status: Y

Equipment ID No DC-2-96-M-PNL-PM-185 Equipment Class: 20

Equipment Description: Mechanical Panel No. PM-185(Condensate Storage Tank Instrumentation)

Comment:

PM-185 is a lightweight wall mounted panel. The interal components are securely mounted inside the panel.

Includes DC-2-16-I-T-LT-40

Evaluated by: DKN Date: 10/17/2012

DRC 10/19/2012

Seismic Walkdown Checklist (SWC)

Status: Y

Equipment ID No DC-2-96-M-PNL-PM-79 Equipment Class: 20

Equipment Description: Mechanical Panel No. PM-79 (Reactor Level/Wide Range Pressure Instrumentation)

Location: Building: Auxiliary Floor El. 85 Room, Area: 2-PM-79

Manufacturer, model, Etc.

Instructions for Completing Checklist

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

Anchorage

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

2. Is the anchorage free of bent, broken, missing or loose hardware? ✓ DRC 10/18/12 JRK 11/20/12 Y

Anchorage to the floor slab consists of (3) 3/8" anchor bolts on either side. In addition, ~~(2)~~ the back of the cabinet near the top corners is bolted to a Unistrut section by 1/2" bolts and spring nuts. The Unistrut section is in turn bolted to the concrete wall by (3) 1/2" expansion anchors. Y

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

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

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

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

Interaction Effects

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

The panel only houses (4) transmitters and there are no soft targets except for the stainless steel tubing running to/from the panel. The tubing runs along the wall.

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

Piping, conduit and junction boxes are well supported. Room lighting fixtures are hung from pipe sections with robust hook or ball and socket connections.

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

All cabinet electrical connections are rigid conduit. Pneumatic lines are small diameter stainless steel tubing that are adequately flexible.

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

Other Adverse Conditions

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

Seismic Walkdown Checklist (SWC)

Status: Y

Equipment ID No DC-2-96-M-PNL-PM-79 Equipment Class: 20

Equipment Description: Mechanical Panel No. PM-79 (Reactor Level/Wide Range Pressure Instrumentation)

Comment:

Includes Pressure Transmitter DC-2-07-I-T-PT-403 which was reviewed.

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

DRC DJ R. Chr 10/18/2012

Seismic Walkdown Checklist (SWC)

Status: ~~N~~ Y

Equipment ID No DC-2-99-I-PNL-RNO1A Equipment Class: 18 JRK 11/20/12 DRC 11/9/12

Equipment Description: Process Control and Protection System - Process Control Racks

Location: Building: Auxiliary Floor El. 128 Room, Area: 2-Eagle21

Manufacturer, model, Etc.

Instructions for Completing Checklist

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

Anchorage

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

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

Anchorage consists of (4) 3/16" welds that are 2-1/2" long and spaced 6" on center both front and back.

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

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

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

Anchorage is consistent with drawings 050053-66.

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

Interaction Effects

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

Nearby panels also welded to false floor I-beams.

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

Overhead conduit and cable trays are rigidly supported. Two room lighting fixtures immediately in front of the panel are hung from the wiring conduit by very light weight chains in a manner that makes the fixtures free to rotate relatively large distances. Rugged safety chains have been provided preventing the fixtures from falling to the floor. However they are oriented such that should the light weight chains break, the fixtures will swing and impact the upper portion of the front of the cabinet. For disposition see Attachment 1. JRK 11/20/12 DRC 11/9/12

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

Electrical connections at the top of the cabinet are rigid conduit.

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

Other Adverse Conditions

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

Large overhead junction box is anchored to the ceiling by (4) 1/2" expansion anchors.

Seismic Walkdown Checklist (SWC)

Status: N Y DRC 11/19/12

Equipment ID No DC-2-99-I-PNL-RNO1A Equipment Class: 18 TRK 11/20/12

Equipment Description: Process Control and Protection System - Process Control Racks

Comment:

Evaluated by: TRK Thomas R. Kipp Date: 10/25/2012

DRC [signature] 10/23/12

Seismic Walkdown Checklist (SWC)

Diablo Canyon Power Plant, Unit 2

Equipment No. DC-2-99-I-PNL-RNO1A

Licensing Basis Evaluation

Issue:

A potential seismically-induced interaction between Rack No. RNO1A and two light fixtures immediately in front of the rack was identified. Due to the very light-weight nature of some of the chains which support the light fixtures from the ceiling, an earthquake could break the chains, allowing the fixtures to swing and impact the front of the rack, near its top.

Evaluation:

Per SISIP Manual Figure No. 11, the rack is in Target Area No. 2H-127-01. The associated target description table indicates that this rack is a SISIP target. Therefore, the potential interaction must be addressed.

Based on a review of the configuration of the light fixtures (e.g., estimated weight, crushability, etc.) and the potential impact location (e.g., near top, fairly strong and stiff) it is judged that potential interaction will not damage the rack to an extent that will prevent performance of the required functions.

Therefore, this interaction does not impact the safe operation of DCPP. However, the support configuration for the light fixture should be modified to prevent this potential seismically-induced interaction.

Notification Required: Yes (50513649)

Evaluated by: WRH William R. Hall 10/22/12

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

Attachment J
Unit 2: Area Walk-By Checklists

AWC Number	Number of AWC Checklist pages	Number of LBEs	Number of LBE pages
2-8700A	1	0	0
2-AFWP1	1	0	0
2-AFWP2	1	1	4
2-ASP1	1	0	0
2-BAT21	1	0	0
2-BF-2E-1	1	0	0
2-BFE4	1	0	0
2-BFS-33	1	1	1
2-BTC21	1	0	0
2-CCP1	1	0	0
2-CCP3	1	0	0
2-CCWHE	1	0	0
2-CCWP1	1	0	0
2-CCWST1	1	3	3
2-CP-37	1	1	18
2-CR-37	1	1	1
2-DEG-21	1	0	0
2-DEG-23	1	1	1
2-DEG-ES-21	1	0	0
2-DEG-ES-23	1	1	1
2-E-45	1	6	6
2-EAGLE21	1	0	0
2-EJ2	2	0	0
2-FCV-365	1	0	0
2-FCV-37	1	0	0
2-FCV-41	1	1	1
2-FCV-641A	1	0	0
2-FCV700	1	0	0
2-HT-EH-29A	1	2	2
2-LCV-110	1	2	2
2-LCV-112B	1	2	2
2-LCV115	1	0	0
2-LD30	1	0	0
2-LPH79	1	0	0
2-LT-102	1	1	1

AWC Number	Number of AWC Checklist pages	Number of LBEs	Number of LBE pages
2-PCV-20	1	0	0
2-PD25	1	2	2
2-PM-101	1	0	0
2-PM-103	1	2	2
2-PM-185	1	0	0
2-PM-79	1	1	1
2-PNL-ARP	1	0	0
2-RHE1	1	0	0
2-RHRP2	1	0	0
2-RNAR-A	1	0	0
2-RV-13	1	0	0
2-SFPHE1	1	0	0
2-SFPP1	1	0	0
2-SIP1	1	0	0
2-SSPS	1	0	0
2-SWHE1	1	0	0
2-TE117	1	0	0
2-TRY21	1	0	0
2-VB1	1	0	0

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

Area Walk-By Checklist (AWC)

Status Y

Location: Building: Auxiliary Floor El. 73 Room, Area: 2-8700A

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

1. Does the anchorage of equipment in the area appear to be free of potentially adverse seismic conditions (if visible without necessarily opening cabinets) Y

2.Does anchorage of equipment in the area appear to be free of significant degraded conditions? Y

No degradation noted.

3.Based on visual inspection from the floor, do the cable/conduit raceways and HVAC ducting appear to be free of potentially adverse seismic conditions (e.g., condition of supports is adequate and fill conditions of cable trays appear to be inside acceptable limits)? Y

Ventilation duct is supported by two hangers over a 10 ft span. Judged not to have adverse affects due to fixed anchorage at both ends.

4. Does it appear that the area is free of potentially adverse seismic spatial interactions with other equipment in the area(e.g., ceiling tiles and lighting)? Y

5. Does it appear that the area is free of potentially adverse seismic interactions that could cause flooding or spray in the area? Y

No credible sources were identified.

6. Does it appear that the area is free of potentially adverse seismic interactions that could cause fire in the area? Y

7. Does it appear that the area is free of potentially adverse seismic interactions associated with housekeeping practices, storage of portable equipment, and temporary installations (e.g. scaffolding, lead shielding)? Y

Ladders are secured in place by a locked chain.

8. Have you looked for and found no other seismic conditions that could adversely affect the safety functions of the equipment in the area? Y

Comments

Includes DC-2-10-P-VOM-RHR-2-8700A.

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

SMM Scott M May 10/10/2012

Area Walk-By Checklist (AWC)

Status Y

Location: Building: Auxiliary | Floor El. 100 | Room, Area: 2-AFWP1

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

1. Does the anchorage of equipment in the area appear to be free of potentially adverse seismic conditions (if visible without necessarily opening cabinets) — Y

All anchorage appears to be free from adverse conditions.

2.Does anchorage of equipment in the area appear to be free of significant degraded conditions? — Y

No degrade conditions were identified.

3.Based on visual inspection from the floor, do the cable/conduit raceways and HVAC ducting appear to be free of potentially adverse seismic conditions (e.g., condition of supports is adequate and fill conditions of cable trays appear to be inside acceptable limits)? — Y

The cable raceways and HVAC ducting are free from potentially adverse seismic conditions.

4. Does it appear that the area is free of potentially adverse seismic spatial interactions with other equipment in the area(e.g., ceiling tiles and lighting)? — Y

No adverse seismic interaction issues were found.

5. Does it appear that the area is free of potentially adverse seismic interactions that could cause flooding or spray in the area? — Y

6. Does it appear that the area is free of potentially adverse seismic interactions that could cause fire in the area? — Y

All hydrogen piping looks to be adequately secured.

7. Does it appear that the area is free of potentially adverse seismic interactions associated with housekeeping practices, storage of portable equipment, and temporary installations (e.g. scaffolding, lead shielding)? — Y

No temporary or portable equipment issues were found.

8. Have you looked for and found no other seismic conditions that could adversely affect the safety functions of the equipment in the area? — Y

No issues.

Comments

Includes DC-2-03-M-PP-AFWP1 and DC-2-04-P-V-MS-2-FCV-152.

Evaluated by: KTM — Date: 10/15/2012

SMM — 10/18/2012

Area Walk-By Checklist (AWC)

Status Y

Location: Building: Auxiliary Floor El. 100 Room, Area: 2-AFWP2

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

1. Does the anchorage of equipment in the area appear to be free of potentially adverse seismic conditions (if visible without necessarily opening cabinets) Y

2. Does anchorage of equipment in the area appear to be free of significant degraded conditions? Y

3. Based on visual inspection from the floor, do the cable/conduit raceways and HVAC ducting appear to be free of potentially adverse seismic conditions (e.g., condition of supports is adequate and fill conditions of cable trays appear to be inside acceptable limits)? Y

4. Does it appear that the area is free of potentially adverse seismic spatial interactions with other equipment in the area(e.g., ceiling tiles and lighting)? Y

There is minimal clearance between this RV-537 and a nearby 2" FW Line. Expected displacement of the valve is small and the fire water pipe is rigidly supported. Therefore, interaction will not occur during an earthquake. See Attachment 1 for disposition.

Speaker is over a soft target on AFW 2-1, however it is anchored to wall with 4 kwik bolts and relatively lightweight; acceptable as is.

5. Does it appear that the area is free of potentially adverse seismic interactions that could cause flooding or spray in the area? Y

6. Does it appear that the area is free of potentially adverse seismic interactions that could cause fire in the area? Y

7. Does it appear that the area is free of potentially adverse seismic interactions associated with housekeeping practices, storage of portable equipment, and temporary installations (e.g. scaffolding, lead shielding)? Y

8. Have you looked for and found no other seismic conditions that could adversely affect the safety functions of the equipment in the area? Y

Comments

Includes DC-2-03-M-PP-AFWP2.

Evaluated by: FFG Date: 10-24-12

SMM 10/22/12

Area Walk-By Checklist (AWC)

Diablo Canyon Power Plant, Unit 2

Building: Auxiliary Floor El. 100 Room, Row/Col: 2-AFWP2

Licensing Basis Evaluation

Issue:

There appears to be minimal clearance between valve FW-2-RV-537 and a nearby 2" firewater line. Seismic motion could cause the RV to leak, causing a spray or flood issue.

Evaluation:

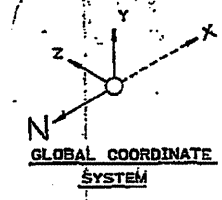
From a field walkdown, there is a minimum gap of ¼" (0.25 inches). The RV in question is mounted to the top of Aux Feed Water Pump Suction line K-238-8. The attached piping analysis run (pages 2-4) shows that the RV is attached at Node 523, and the deflections at this node in the x-direction (i.e. the direction of the nearby firewater piping) are equal to 0.01" when both the thermal and seismic displacements are added together (load cases THRM(N1) and SEISHX). Additionally, the firewater line has rigid supports both upstream and downstream of the RV, so it's lateral displacements will be minimal.

Therefore, there is more than adequate clear space to accommodate seismic motions and an interaction will not occur.

Notification Required: No

Evaluated by: Scott M. Maze 8/24/12

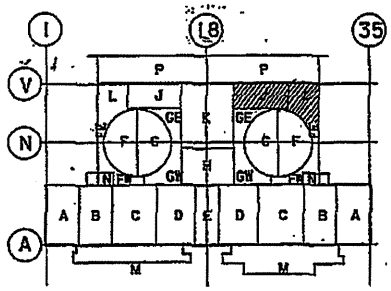
Reviewed by: Bill Hamilton 8/27/12



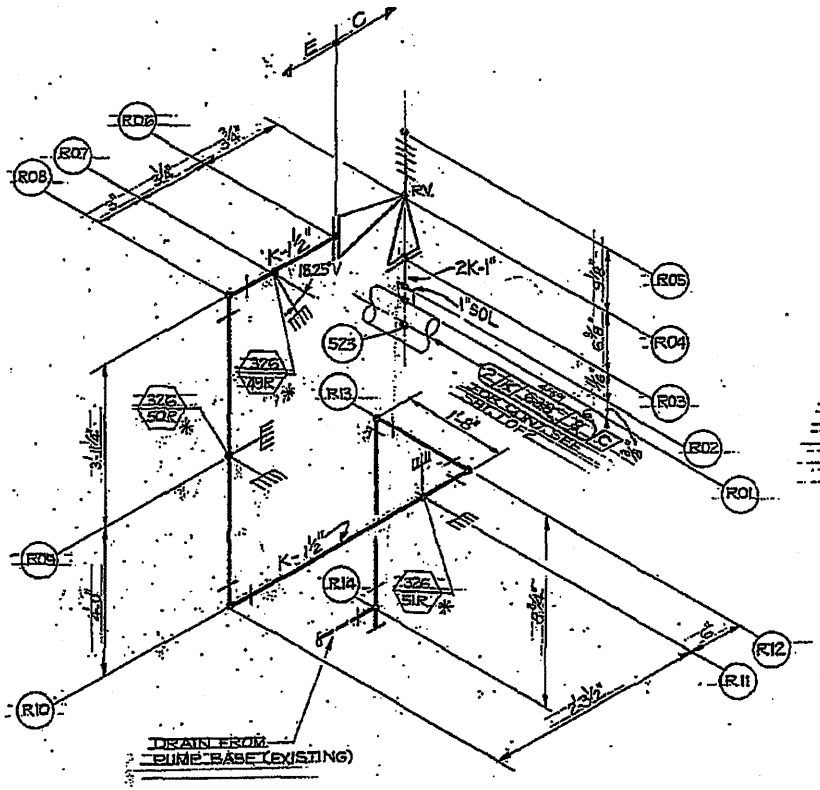
GLOBAL COORDINATE SYSTEM

LEGEND:

- NODAL POINT
- RESTRAINT
- SNUBBER
- SPRING HANGER
- ANCHOR
- GUIDE



KEY PLAN



NOTE:
* THESE SUPPORTS SHOULD BE DESIGNED FOR 250# ADDITIONAL LOAD IN EACH DIRECTION IN THE EMERGENCY CONDITION.

PG&E MECH & NU. ENG. DEPT. DIABLO CANYON PROJECT	
ANALYSIS ISSUE	
ANAL. NO.	REV.
CASE	
ANALYST	
CHECKER	
APPROVED	DATE

UNIT	SPEC.	LINE NO.	SIZE	INS	CODE	SCH

NO.	DATE	DESCRIPTION	GW/SPEC	DWN.	CHKD.	SUPV.	APVD. BY
		REVISIONS					

APPROVED BY	
GM	
SUPV.	
DSGN.	
DWN. TV.	
CHKD.	
OK:	
DATE 1-27-87	
SCALES	NONE

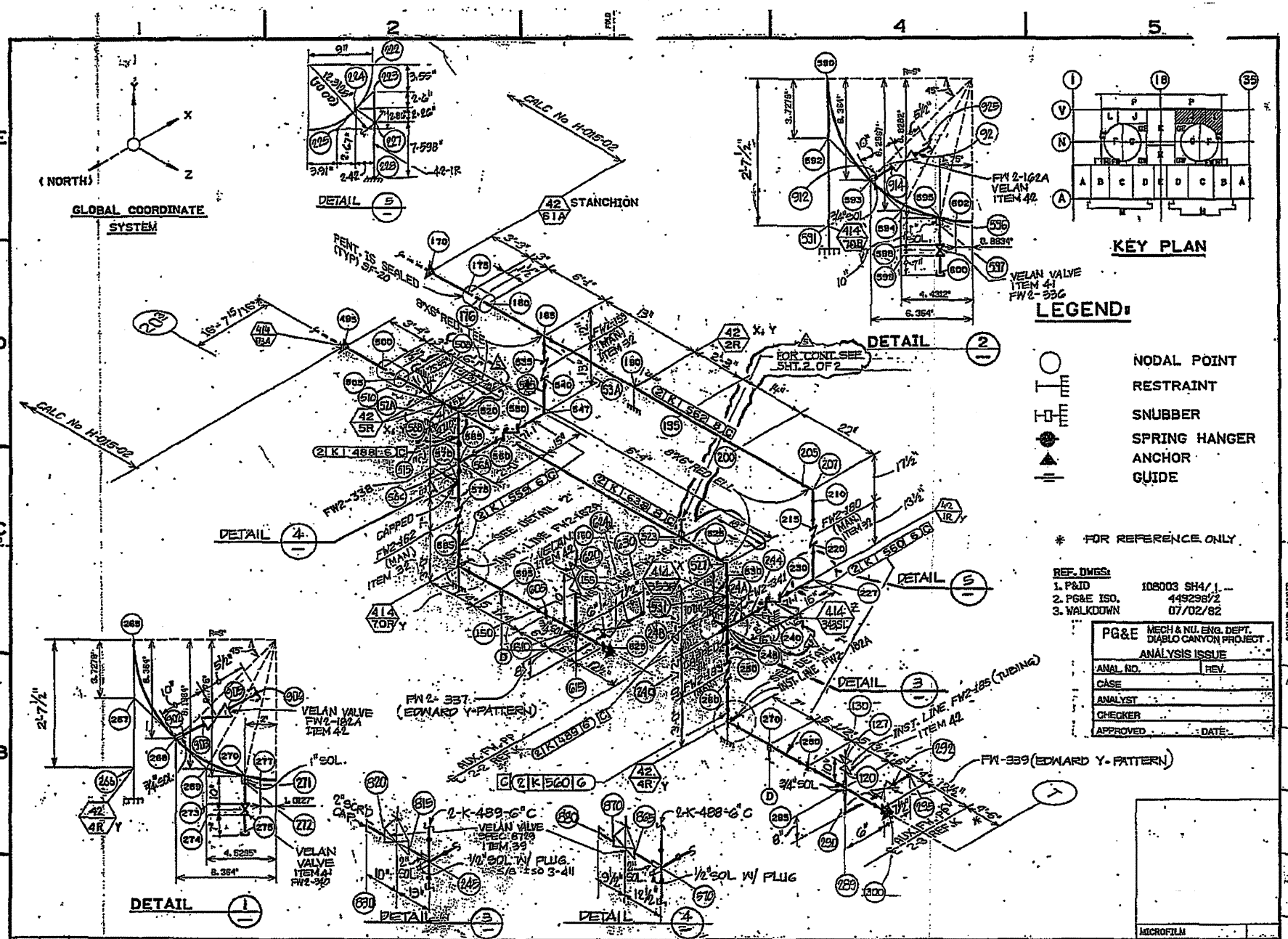
DIABLO CANYON NUCLEAR POWER PLANT UNIT NO. 2

AUXILIARY FEEDWATER PUMP SUCTION

PACIFIC GAS AND ELECTRIC COMPANY
SAN FRANCISCO, CALIFORNIA

MICROFILM	
BILL OF MATL	
DWG LIST	
SUPSDS	
SUPSD BY	
SHEET No. 2 OF 2	SHEETS
SK-H-015-03	REV. 5

ANC 2-AFWP2 ATTACH. 1 SH. 2 OF 4



ANC 2-AFWP2

ATTACH. 1 SH. 3 OF 4

AWC 2-AFWP2

ATTACH. 1
SH. 4 OF 4

Pacific Gas and Electric Company®

69-392(10, Engineeri

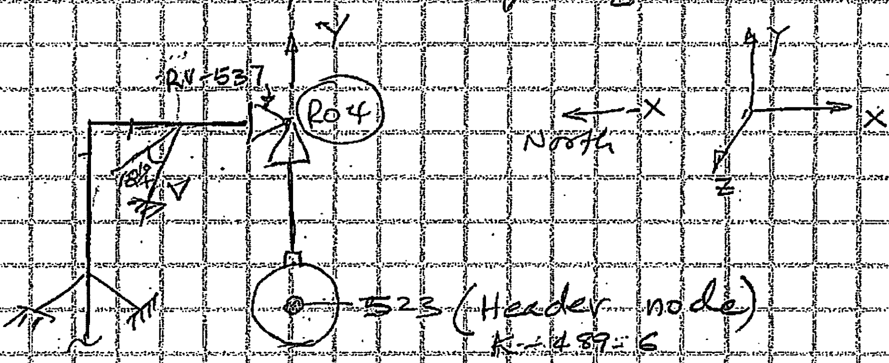
Engineering-Calculation Sheet

Project: Diablo Canyon Unit ( ) 1 (X) 2 ( ) 1 & 2

CALC. NO. H-015-03
REV. NO.
SHEET NO. ____ OF ____

SUBJECT RV-537 on Line # 489 ; Header # 2-K-638-8

MADE BY AKhatri DATE 8/22/12 CHECKED BY JERangel DATE 8/22/12



Displacement

Loadcase	Node	523 X	523 Y	523 Z
DW01	523	0.0"	-.001"	0.0"
THRM(N1)	523	-.008"	0.029"	-0.044"
THRM(N2)	523	0.006"	-0.022"	-0.033"
SEISDX	523	0.001"	0.0"	0.0"
SEISDZ	523	0.0"	0.0"	0.0"
SEISHX	523	0.002"	0.001"	0.0"
SEISHZ	523	0.000"	0.001"	0.001"

Ref # ME101 output → Dated 1/20/87

NO ME101 ID

Area Walk-By Checklist (AWC)

Status Y

Location: Building: Intake Floor El. -2.1 Room, Area: 2-ASP1

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

1. Does the anchorage of equipment in the area appear to be free of potentially adverse seismic conditions (if visible without necessarily opening cabinets) Y

No Issues were identified other than those already addressed in DC-1-17-M-PP-ASP1 SWC.

2.Does anchorage of equipment in the area appear to be free of significant degraded conditions? Y

See notes from question 1. No other issues were identified.

3.Based on visual inspection from the floor, do the cable/conduit raceways and HVAC ducting appear to be free of potentially adverse seismic conditions (e.g., condition of supports is adequate and fill conditions of cable trays appear to be inside acceptable limits)? Y

Conduit raceways and HVAC ducting appear to be adequately secured.

4. Does it appear that the area is free of potentially adverse seismic spatial interactions with other equipment in the area(e.g., ceiling tiles and lighting)? Y

Lights could impact DC-2-23-M-BF-E-104 fan. It is judged that the light is incapable of damaging the functionality of the fan. No seismic issues.

5. Does it appear that the area is free of potentially adverse seismic interactions that could cause flooding or spray in the area? Y

No potential adverse seismic interactions were identified that could cause flooding or spraying.

6. Does it appear that the area is free of potentially adverse seismic interactions that could cause fire in the area? Y

No potential sources for fire in the area.

7. Does it appear that the area is free of potentially adverse seismic interactions associated with housekeeping practices, storage of portable equipment, and temporary installations (e.g. scaffolding, lead shielding)? Y

No temporary equipment in the area.

8. Have you looked for and found no other seismic conditions that could adversely affect the safety functions of the equipment in the area? Y

No issues were identified.

Comments

Includes DC-2-17-M-PP-ASP1 and DC-2-23-M-BF-E-104.

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

SMM Scott McMillan 10/18/2012

Area Walk-By Checklist (AWC)

Status Y

Location: Building: Auxiliary Floor El. 115 Room, Area: 2-BAT21

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

1. Does the anchorage of equipment in the area appear to be free of potentially adverse seismic conditions (if visible without necessarily opening cabinets) Y

The equipment in the room is adequately anchored

2.Does anchorage of equipment in the area appear to be free of significant degraded conditions? Y

No degraded conditions.

3.Based on visual inspection from the floor, do the cable/conduit raceways and HVAC ducting appear to be free of potentially adverse seismic conditions (e.g., condition of supports is adequate and fill conditions of cable trays appear to be inside acceptable limits)? Y

Conduit and HVAC duct are well supported. Lighting is hung with chains but also each light has a safety chain.

4. Does it appear that the area is free of potentially adverse seismic spatial interactions with other equipment in the area(e.g., ceiling tiles and lighting)? Y

The adjacent masonry walls have been strengthened for out of plane seismic loads

5. Does it appear that the area is free of potentially adverse seismic interactions that could cause flooding or spray in the area? Y

6. Does it appear that the area is free of potentially adverse seismic interactions that could cause fire in the area? Y

No significant fuel source

7. Does it appear that the area is free of potentially adverse seismic interactions associated with housekeeping practices, storage of portable equipment, and temporary installations (e.g. scaffolding, lead shielding)? Y

The eyewash station is restrained to the adjacent masonry wall.

8. Have you looked for and found no other seismic conditions that could adversely affect the safety functions of the equipment in the area? Y

Comments

Includes DC-2-67-E-BT-BAT21.

Evaluated by: DKN Date: 10/17/2012

DRC 10/19/2012

Area Walk-By Checklist (AWC)

Status Y

Location: Building: Auxiliary Floor El. 140 Room, Area: 2-BF-2E-1

Instructions for Completing Checklist

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

1. Does the anchorage of equipment in the area appear to be free of potentially adverse seismic conditions (if visible without necessarily opening cabinets) Y

No adverse seismic conditions were identified.

2.Does anchorage of equipment in the area appear to be free of significant degraded conditions? Y

Mild surface corrosion on backdraft dampers. No structural issues were identified.

3.Based on visual inspection from the floor, do the cable/conduit raceways and HVAC ducting appear to be free of potentially adverse seismic conditions (e.g., condition of supports is adequate and fill conditions of cable trays appear to be inside acceptable limits)? Y

No HVAC ducting above the fan. Raceways in area are adequately supported.

4. Does it appear that the area is free of potentially adverse seismic spatial interactions with other equipment in the area(e.g., ceiling tiles and lighting)? Y

Lighting was rod hung with a ball and socket joint on one end and an S-hook on the opposite end of the fixture. Seismic interaction is judged to be incapable of damaging equipment and soft targets.

5. Does it appear that the area is free of potentially adverse seismic interactions that could cause flooding or spray in the area? Y

No fire water piping in the room.

6. Does it appear that the area is free of potentially adverse seismic interactions that could cause fire in the area? Y

No flammable sources were identified.

7. Does it appear that the area is free of potentially adverse seismic interactions associated with housekeeping practices, storage of portable equipment, and temporary installations (e.g. scaffolding, lead shielding)? Y

No temporary equipment in the area.

8. Have you looked for and found no other seismic conditions that could adversely affect the safety functions of the equipment in the area? Y

No issues were identified. Room relatively open with minimal sources.

Comments

Includes DC-2-23-M-BF-2E-1.

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

SMM Scott Miller 10/18/2012

Area Walk-By Checklist (AWC)

Status Y

Location: Building: Auxiliary Floor El. 140 Room, Area: 2-BFE4

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

1. Does the anchorage of equipment in the area appear to be free of potentially adverse seismic conditions (if visible without necessarily opening cabinets) Y

The fan is the only equipment in the room. Reviewed conduit, cable trays, instrument tubing, room lighting, HVAC ducting, and HEPA Filter system.

2.Does anchorage of equipment in the area appear to be free of significant degraded conditions? Y

3.Based on visual inspection from the floor, do the cable/conduit raceways and HVAC ducting appear to be free of potentially adverse seismic conditions (e.g., condition of supports is adequate and fill conditions of cable trays appear to be inside acceptable limits)? Y

Conduit and HVAC ducting are rigidly supported.

4. Does it appear that the area is free of potentially adverse seismic spatial interactions with other equipment in the area(e.g., ceiling tiles and lighting)? Y

Room lighting is either wall mounted or hung from the ceiling by pipe sections with ball and socket connections. HEPA filters are well restrained.

5. Does it appear that the area is free of potentially adverse seismic interactions that could cause flooding or spray in the area? Y

6. Does it appear that the area is free of potentially adverse seismic interactions that could cause fire in the area? Y

7. Does it appear that the area is free of potentially adverse seismic interactions associated with housekeeping practices, storage of portable equipment, and temporary installations (e.g. scaffolding, lead shielding)? Y

Area is clean.

8. Have you looked for and found no other seismic conditions that could adversely affect the safety functions of the equipment in the area? Y

Comments

Includes DC-2-23-M-BF-2E-4.

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

DRC DAR. Lin 10/18/2012

Area Walk-By Checklist (AWC)

Status Y

Location: Building: Auxiliary Floor El. 140 Room, Area: 2-BFS-33

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

1. Does the anchorage of equipment in the area appear to be free of potentially adverse seismic conditions (if visible without necessarily opening cabinets) Y

2.Does anchorage of equipment in the area appear to be free of significant degraded conditions? Y

Heavily corroded frame between the air filters and the fan room, see photo on page 3. Frame was abandoned in place (Not safety related). See Attachment 1 for resolution.

3.Based on visual inspection from the floor, do the cable/conduit raceways and HVAC ducting appear to be free of potentially adverse seismic conditions (e.g., condition of supports is adequate and fill conditions of cable trays appear to be inside acceptable limits)? Y

4. Does it appear that the area is free of potentially adverse seismic spatial interactions with other equipment in the area(e.g., ceiling tiles and lighting)? Y

Lights in the room are well supported with no open hooks. A chain hung light is outside of the room (near the air filters) but no interaction issues with nearby equipment.

5. Does it appear that the area is free of potentially adverse seismic interactions that could cause flooding or spray in the area? Y

Fire piping in the room is adequately supported.

6. Does it appear that the area is free of potentially adverse seismic interactions that could cause fire in the area? Y

No flammable sources in the room.

7. Does it appear that the area is free of potentially adverse seismic interactions associated with housekeeping practices, storage of portable equipment, and temporary installations (e.g. scaffolding, lead shielding)? Y

No temporary equipment or housekeeping issues noted.

8. Have you looked for and found no other seismic conditions that could adversely affect the safety functions of the equipment in the area? Y

Comments

Includes DC-2-23-M-BF-S-33.

Evaluated by: KTM Date: 10/19/2012

SMM 10/22/12

Area Walk By Checklist (AWC)

Diablo Canyon Power Plant, Unit 2

Building: Auxiliary Floor El. 140 Room, Row/Col: 2-BFS-33 Attachment 1, Page 1 of 1

Licensing Basis Evaluation

Issue:

Heavily corroded frame between the air filters and the fan room housing fans 2S-33 and 2S-34.

Evaluation of As-found Condition:

System engineer determined that there is no impact on the system function. Rusty frames do not inhibit the supply fans ability to perform their function. Aux bldg supply fans are not required per tech specs, not an operability concern (Ref. SAPN 50081388.)

Two SAPNs 50081388 and 50233539 already exist against the as-found condition. An order 60004590 has been prepared for the replacement of the corroded filter frame.

Notification Required: No ( )

Evaluated by: SMM 10/19/12

Reviewed by: 10/19/12

Area Walk-By Checklist (AWC)

Status Y

Location: Building: Auxiliary Floor El. 115 Room, Area: 2-BTC21

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

1. Does the anchorage of equipment in the area appear to be free of potentially adverse seismic conditions (if visible without necessarily opening cabinets) Y

Anchorage of components in the room do not show adverse conditions. Warning light, PA speaker, small panels, junction boxes are adequately supported. and battery operated light (BOL) AMC 10/19/2012 DKN 10/19/12

2.Does anchorage of equipment in the area appear to be free of significant degraded conditions? Y

No degraded conditions observed

3.Based on visual inspection from the floor, do the cable/conduit raceways and HVAC ducting appear to be free of potentially adverse seismic conditions (e.g., condition of supports is adequate and fill conditions of cable trays appear to be inside acceptable limits)? Y

Conduit and cable trays are well supported. HVAC duct is braced.

4. Does it appear that the area is free of potentially adverse seismic spatial interactions with other equipment in the area(e.g., ceiling tiles and lighting)? Y

Lighting is conduit hung with ball and socket and closed hook connections at the ceiling. The lights can sway but maintain vertical load.

5. Does it appear that the area is free of potentially adverse seismic interactions that could cause flooding or spray in the area? Y

No likely flood or spray sources.

6. Does it appear that the area is free of potentially adverse seismic interactions that could cause fire in the area? Y

No significant fuel sources

7. Does it appear that the area is free of potentially adverse seismic interactions associated with housekeeping practices, storage of portable equipment, and temporary installations (e.g. scaffolding, lead shielding)? Y

No temporary items. The fire extinguisher is adequately restrained.

8. Have you looked for and found no other seismic conditions that could adversely affect the safety functions of the equipment in the area? Y

The adjacent masonry wall has been seismically strengthened.

Comments

Includes DC-2-65-E-LC-PY21, DC-2-65-E-UPS-IY21, DC-2-67-E-BTC-BTC21, and DC-2-67-E-LC-SD21.

Evaluated by: DKN Date: 10/17/2012

DRC 10/19/2012

Area Walk-By Checklist (AWC)

Status Y

Location: Building: Auxiliary Floor El. 73 Room, Area: 2-CCP1

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

1. Does the anchorage of equipment in the area appear to be free of potentially adverse seismic conditions (if visible without necessarily opening cabinets) Y

All anchorage appears to be in good condition.

2.Does anchorage of equipment in the area appear to be free of significant degraded conditions? Y

No corrosion was seen in the area.

3.Based on visual inspection from the floor, do the cable/conduit raceways and HVAC ducting appear to be free of potentially adverse seismic conditions (e.g., condition of supports is adequate and fill conditions of cable trays appear to be inside acceptable limits)? Y

All overhead distribution systems appear to be adequately restrained. HVAC ducting and firewater piping adequately restrained with seismic supports.

4. Does it appear that the area is free of potentially adverse seismic spatial interactions with other equipment in the area(e.g., ceiling tiles and lighting)? Y

Piping extending from pump is about 1" from monorail. Judged not to be a seismic concern due to the rugged supports of both the monorail and the piping.

5. Does it appear that the area is free of potentially adverse seismic interactions that could cause flooding or spray in the area? Y

All fire water piping are adequately secured with no credible sources for interaction at the sprinkler heads.

6. Does it appear that the area is free of potentially adverse seismic interactions that could cause fire in the area? Y

No flammable sources in the area.

7. Does it appear that the area is free of potentially adverse seismic interactions associated with housekeeping practices, storage of portable equipment, and temporary installations (e.g. scaffolding, lead shielding)? Y

Monorail crane had its chain securely stowed in a wall mounted box. No other temporary or portable equipment.

8. Have you looked for and found no other seismic conditions that could adversely affect the safety functions of the equipment in the area? Y

No issues.

Comments

Includes DC-2-08-M-PP-CCP1 and subcomponent DC-2-08-M-PP-AP1.

Evaluated by: KTM Date: 10/15/2012

SMM 10/18/2012

Area Walk-By Checklist (AWC)

Status Y

Location: Building: Auxiliary Floor El. 73 Room, Area: 2-CCP3

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

1. Does the anchorage of equipment in the area appear to be free of potentially adverse seismic conditions (if visible without necessarily opening cabinets) Y

All anchorage visible from floor appears to be adequate.

2.Does anchorage of equipment in the area appear to be free of significant degraded conditions? Y

No degraded conditions in the area.

3.Based on visual inspection from the floor, do the cable/conduit raceways and HVAC ducting appear to be free of potentially adverse seismic conditions (e.g., condition of supports is adequate and fill conditions of cable trays appear to be inside acceptable limits)? Y

Conduit in the area are anchored securely to the walls or ceiling.

4. Does it appear that the area is free of potentially adverse seismic spatial interactions with other equipment in the area(e.g., ceiling tiles and lighting)? Y

No potentially adverse seismic spatial interactions in the area.

5. Does it appear that the area is free of potentially adverse seismic interactions that could cause flooding or spray in the area? Y

6. Does it appear that the area is free of potentially adverse seismic interactions that could cause fire in the area? Y

No sources in the room were identified.

7. Does it appear that the area is free of potentially adverse seismic interactions associated with housekeeping practices, storage of portable equipment, and temporary installations (e.g. scaffolding, lead shielding)? Y

8. Have you looked for and found no other seismic conditions that could adversely affect the safety functions of the equipment in the area? Y

Overhead monorail has a support on the ceiling that is missing a rod that connects the monorail to the support, see photo on page 3. Another support with a rod attached is adjacent to the support with the missing rod. The adjacent support with the rod attached was found to be an upgraded design and the original support was left abandoned in place.

Comments

Includes DC-2-08-M-PP-CCP3.

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

SMM Scott Miller 10/18/2012

Area Walk-By Checklist (AWC)

Status Y

Location: Building: Turbine Floor El. 85 Room, Area: 2-CCWHE

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

1. Does the anchorage of equipment in the area appear to be free of potentially adverse seismic conditions (if visible without necessarily opening cabinets) Y

Reviewed room lighting, emergency lighting, reinforced masonry wall, fire water piping, cable trays, conduit, and junction boxes.

2.Does anchorage of equipment in the area appear to be free of significant degraded conditions? Y

3.Based on visual inspection from the floor, do the cable/conduit raceways and HVAC ducting appear to be free of potentially adverse seismic conditions (e.g., condition of supports is adequate and fill conditions of cable trays appear to be inside acceptable limits)? Y

4. Does it appear that the area is free of potentially adverse seismic spatial interactions with other equipment in the area(e.g., ceiling tiles and lighting)? Y

Virtually all components in this area have no soft targets or are located in places that preclude impact from falling hazards. The only credible falling hazard appears to be the fluorescent tubes in the room lighting fixtures but these are of no impact on the components of interest in this evaluation.

5. Does it appear that the area is free of potentially adverse seismic interactions that could cause flooding or spray in the area? Y

6. Does it appear that the area is free of potentially adverse seismic interactions that could cause fire in the area? Y

7. Does it appear that the area is free of potentially adverse seismic interactions associated with housekeeping practices, storage of portable equipment, and temporary installations (e.g. scaffolding, lead shielding)? Y

8. Have you looked for and found no other seismic conditions that could adversely affect the safety functions of the equipment in the area? Y

Reinforced masonry wall includes additional reinforcement at base and at the top.

Comments

Includes DC-2-14-M-HX-CCWHE1, DC-2-14-E-P-VOM-CCW-2-FCV-430, DC-2-14-I-E-TE-6, DC-2-17-P-VOA-SW-2-FCV-602, and DC-2-25-M-TK-BUAS-602.

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

KA A. Mantanga 10/23/2012.

Area Walk-By Checklist (AWC)

Status Y

Location: Building: Auxiliary Floor El. 73 Room, Area: 2-CCWP1

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

1. Does the anchorage of equipment in the area appear to be free of potentially adverse seismic conditions (if visible without necessarily opening cabinets) Y

No potentially adverse anchorage conditions in the area.

2.Does anchorage of equipment in the area appear to be free of significant degraded conditions? Y

No corrosion is present.

3.Based on visual inspection from the floor, do the cable/conduit raceways and HVAC ducting appear to be free of potentially adverse seismic conditions (e.g., condition of supports is adequate and fill conditions of cable trays appear to be inside acceptable limits)? Y

HVAC ducting and conduit appear to be adequately secured. Cable tray fill is minimal.

4. Does it appear that the area is free of potentially adverse seismic spatial interactions with other equipment in the area(e.g., ceiling tiles and lighting)? Y

No adverse seismic spatial interaction. Lights are chain hung and could interact with monorail and piping supports but judge to be incapable of damaging the supports. See notes for question 5.

5. Does it appear that the area is free of potentially adverse seismic interactions that could cause flooding or spray in the area? Y

Sprinkler cover is touching the support for K-2994-20 pipe. The pipe and the fire piping are well supported near the point of contact. Interaction is judged not to be an issue.

6. Does it appear that the area is free of potentially adverse seismic interactions that could cause fire in the area? Y

No flammable material in the area.

7. Does it appear that the area is free of potentially adverse seismic interactions associated with housekeeping practices, storage of portable equipment, and temporary installations (e.g. scaffolding, lead shielding)? Y

No temporary or portable equipment in the area.

8. Have you looked for and found no other seismic conditions that could adversely affect the safety functions of the equipment in the area? Y

No issues to note.

Comments

Includes DC-2-14-M-PP-CCWP1 and subcomponent DC-2-20-M-PP-CCWAP1.

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

SMM Scott Miller 10/18/2012

Area Walk-By Checklist (AWC)

Status N

Location: Building: Auxiliary Floor El. 163 Room, Area: 2-CCWST1

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

1. Does the anchorage of equipment in the area appear to be free of potentially adverse seismic conditions (if visible without necessarily opening cabinets) — Y

Tank is outside on the roof. Reviewed CCW Surge Tank instrumentation and supports.

2. Does anchorage of equipment in the area appear to be free of significant degraded conditions? — N

Moderate corrosion on tank related piping, and supports. See. Attachment No. 1 for disposition.

3. Based on 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)? — N/A

4. Does it appear that the area is free of potentially adverse seismic spatial interactions with other equipment in the area(e.g., ceiling tiles and lighting)? — Y

5. Does it appear that the area is free of potentially adverse seismic interactions that could cause flooding or spray in the area? — Y

6. Does it appear that the area is free of potentially adverse seismic interactions that could cause fire in the area? — Y

7. Does it appear that the area is free of potentially adverse seismic interactions associated with housekeeping practices, storage of portable equipment, and temporary installations (e.g. scaffolding, lead shielding)? — Y

No housekeeping Issues are noted.

8. Have you looked for and found no other seismic conditions that could adversely affect the safety functions of the equipment in the area? — Y

Surface corrosion was noted on the clamps on numerous conduit supports in the area of the tank. See Attachment No. 2 for disposition.
Corrosion was noted on CRPS duct and support to southeast of tank. See Attachment No. 3 for disposition.

Comments

Includes DC-2-14-M-TK-CCWST1.

Evaluated by: TRK Thomas R. Kipp Date: 10/25/2012

DRC D.R.Lm 10/23/12

Area Walk-By Checklist (AWC)

Diablo Canyon Power Plant, Unit 2

Building: Auxiliary Floor El. 163 Room, Row/Col: 2-CCWST1

Licensing Basis Evaluation

Issue:

Moderate corrosion was noted on pipe supports, including base plates, for piping located on the east side of the CCW Surge Tank.

Evaluation:

Based on a visual examination, the corrosion is considered to be surface corrosion, so it will not impact the structural integrity of the pipe supports at this time.

Recommendation:

Prepared and recoated pipe support steel, including base plates.

Notification Required: Yes (50515145)

Evaluated by: Wm R. Hone 9/28/12

Reviewed by: DJ R. Lin 10/19/12

Area Walk-By Checklist (AWC)

Diablo Canyon Power Plant, Unit 2

Building: Auxiliary Floor El. 163 Room, Row/Col: 2-CCWST1 Attachment 2, Page 1 of 1

Licensing Basis Evaluation

Issue:

Surface corrosion was noted on the conduit clamps associated with numerous conduits on the roof to the east of the CCW Surge Tank.

Evaluation:

Based on the fact that the conduits are color-banded, they contain vital electric circuits. Therefore, the conduit supports are Design Class I. Visual examination indicates that this is surface corrosion and will not impact the structural integrity of the clamps at this time.

Recommendation:

Replace clamps.

Notification Required: Yes (50515146)

Evaluated by: [signature] 9/20/12

Reviewed by: [signature] 10/19/12

Area Walk-By Checklist (AWC)

Diablo Canyon Power Plant, Unit 2

Building: Auxiliary Floor El. 163 Room, Row/Col: 2-CCWST1 Attachment 3, Page 1 of 1

Licensing Basis Evaluation

Issue:

Significant corrosion was noted on a support for the Control Room Pressurization Duct, south-east of the CCW Surge Tank, and surface corrosion was noted on the duct, on a weld adjacent to the support.

Evaluation:

The CRPS duct and supports are Design Class I and seismically qualified. Visual examination indicates that this is surface corrosion, and does not impact the structural integrity of the support or duct at this time.

Recommendation:

Duct and duct support be prepared and recoated.

Notification Required: Yes (50515170)

Evaluated by: William R. Horstman 10/19/12

Reviewed by: [signature] 10/19/12

Area Walk-By Checklist (AWC)

Status X N
TRK 11/20/12
KTM 11/20/12

Location: Building: Auxiliary | Floor El. 154 | Room, Area: 2-CP-37

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

1. Does the anchorage of equipment in the area appear to be free of potentially adverse seismic conditions (if visible without necessarily opening cabinets) — Y

MOVE TO QUEST. 8

Dampers for fan S-38 (DC-2-23-P-D-VAC-2-MOD-12 and -MOD-12A) are cantilevered off the ventilation ducting. (2) channel sections at 19 lbs/ft were added at the top and bottom of the damper. See Attachment 1 for disposition.

2. Does anchorage of equipment in the area appear to be free of significant degraded conditions? — Y

TRK 11/20/12

Mild surface corrosion is visible on some anchor bolts for equipment S-38 and CP-38. Judged to be ok.

3. Based on visual inspection from the floor, do the cable/conduit raceways and HVAC ducting appear to be free of potentially adverse seismic conditions (e.g., condition of supports is adequate and fill conditions of cable trays appear to be inside acceptable limits)? — Y

KTM 11/20/12

Cable/conduit raceways and HVAC ducting are adequately secured. Cable trays are within acceptable limits in terms of fill conditions.

4. Does it appear that the area is free of potentially adverse seismic spatial interactions with other equipment in the area(e.g., ceiling tiles and lighting)? — Y

Lights are rod hung with either a closed hook and a ball and socket connection, two ball and socket connections or a trapeze frame. All are judged to be adequate.

5. Does it appear that the area is free of potentially adverse seismic interactions that could cause flooding or spray in the area? — Y

6. Does it appear that the area is free of potentially adverse seismic interactions that could cause fire in the area? — Y

No credible sources that could cause a fire were identified.

7. Does it appear that the area is free of potentially adverse seismic interactions associated with housekeeping practices, storage of portable equipment, and temporary installations (e.g. scaffolding, lead shielding)? — Y

Temporary scaffolding in the area has been properly qualified with adequate clearances (scaffold handrail is touching overhead CRVS damper #4 ducting insulation). Judged to be ok.

8. Have you looked for and found no other seismic conditions that could adversely affect the safety functions of the equipment in the area? — X N

TRK 11/20/12
KTM 11/20/12

~~*No issues were identified.*~~

INSERT FROM QUEST. 1

Comments

Includes DC-2-23-E-PNL-CRC1, DC-2-23-M-BC-CP-37, DC-2-23-M-BF-2S-37, DC-2-23-P-D-VAC-2-MOD-10, DC-2-23-P-D-VAC-2-MOD-9, and DC-2-23-P-FL-FU41. Equipment CP-37 and CP-38 are leaking water. Both items were already tagged with notifications.

TRK 11/20/12
KTM 11/20/12

Evaluated by: KTM Keri Munn Date: 10/25/2012

TRK Thomas R. Kipp 10/25/2012

Area Walkdown Checklist (AWC)

Diablo Canyon Power Plant, Unit 2

Building: Auxiliary Floor El. 154 Room, Row/Col: 2-CP-37

Licensing Basis Evaluation

Issue:

Motor Operated Damper DC-2-23-P-D-VAC-2-MOD-12 was modified at some time in the past by adding structural steel channel stiffeners on the top and bottom of the damper. The channel sections also extend to and stiffen the damper immediately adjacent to MOD-12 (DC-2-23-P-D-VAC-2-MOD-12A). Reference PG&E Drawing 59353 for a layout of the dampers. The concern is that the heavy channel stiffeners may adversely impact the seismic qualification of the ducting/duct supports associated with the MOD Dampers.

Evaluation:

A review of the seismic calculation for the ducting/duct supports associated with the MOD Dampers (Calculation HV-86, Revision 0) shows that the additional mass from the channel sections was not considered in the qualification of the ducting/duct supports. A copy of this calculation has been revised (marked up) such that it now accounts for this extra mass. This markup is found under sheets 2 thru 18. The mark up demonstrates that the ducting/duct supports would remain seismically qualified (with significant margin) if the additional mass from the channel stiffeners is considered.

Therefore, this condition has no impact on the safe operation of DCPP.

Recommendation:

- Revise Calculation HV-86 to account for the additional mass from the channel stiffeners.

- Issue the appropriate Design Change Vehicle to update the affected drawing(s)

Notification Required: Yes (50518932)

Evaluated by: DRC D R. Lynn 10/18/12

Reviewed by: WRH William R. Hamel 10/18/12

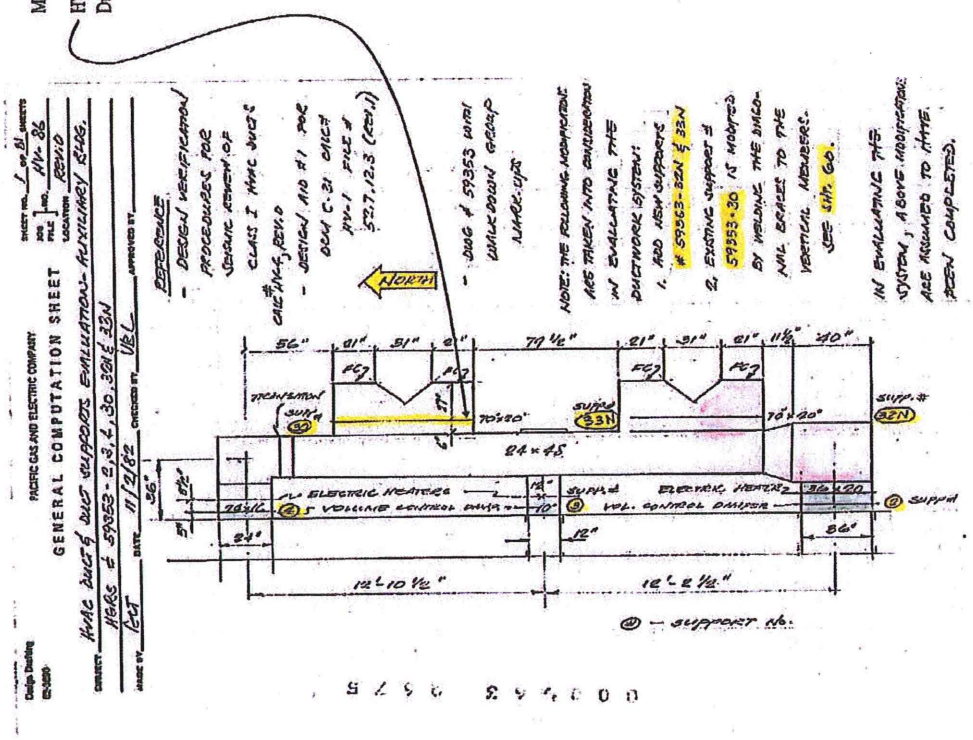
Area Walkdown Checklist (AWC)

Diablo Canyon Power Plant, Unit 2

Building: Auxiliary Floor El. 154 Room, Row/Col: 2-CP-37 Attachment 1, Page 2 of 18

Markups By: BMO4 Date: 9/27/12 Sheet 1/81

HVAC Duct Support Nos. 30 and 33N are impacted due to unaccounted weight of Duct stiffeners. (70"x20").



Design Drafting 88-0880

PACIFIC GAS AND ELECTRIC COMPANY

GENERAL COMPUTATION SHEET

SHEET NO. 3 OF 81 SHEETS
JOB FILE NO. HV-86
LOCATION REV. 0

SUBJECT: HVAC DUCT & DUCT SUPPORT EVALUATION - AUXILIARY BLDG.
HGRS # 59353-2, 3, 4, 30, 32N & 33N
MADE BY: RCT DATE: 11/2/82 CHECKED BY: VBC APPROVED BY:

5,12 $P_{5,12}$ = [½(78.5)(24+48)(2)(.0095) + ½(70)(24+45)(2)(.0095)] 1.1
= 111.7 #
(½ WT OF SPANS ⑤ & ⑦)

6,13 $P_{6,13}$ = 2(7) + 68 + (70+20)(2)(.0149)(6+½×27)(1.1) = 138.4 #
(WT OF DAMPERS + (WT OF SPAN ⑤ + ½ WT OF ⑥)

7,14 $P_{7,14}$ (½)(27)(.0146)(70+20)(2)(1.1) = 39 #
(WT OF ½ SPANS 6, 13)

8 P_8 = [½(70)(24+45)(2)(.0095) + ½(26.75)(12+10)(2)(.0076) + ½(17)(24+45)(2)(.0095)] 1.1+15
= 76.4 #
(½ WT OF SPANS 7 & 8 + ADDITIONAL WEIGHT ASSUMED FOR THE 12"×10" DUCT.)

11 P_{11} = [(½)(13)(24+45)(2)(.0095) + (½)(63.5)(24+45)(2)(.0095)] 1.1 + 150 = 210.0 #
(½ WT OF SPANS 10, 11 + WT. OF SUPPORT # 33)

15 P_{15} = [(½)(70)(24+48)(2)(.0095) + (½)(26.75)(36+20)(2)(.0095)] 1.1 + 71 = 139.3 #
(½ WT OF SPANS 14 & 15 + WT OF SUPPORT # 32)

16 P_{16} = [(½)(26.75)(36+20)(2)(.0095) + ½(9.25)(36+20)(2)(.0095)] 1.1 + 40 + 53 = 114.4 #
(½ WT OF SPANS 15 & 16 + WT OF HEATER + DAMPER)

17 P_{17} = [(½)(9.25)(36+20)(2)(.0095)] 1.1 + 44 = 49 #
(½ WT OF SPAN ⑯ + WT OF SUPPORT # 2)

SUMMARY OF K VALUES (AS CALC'D ON THE FOLLOWING PAGES):

JOINT			
1	KFX = KFY = 16.67 K/IN.		(p. 4)
4	KFX = 36.36; KFY = 25.0*	FIXED IN Z-DIR.	(pp. 25-27)
11	KFX = 11.43; KFY = 19.05*	FIXED IN Z-DIR.	(p. 38-43)
15	KFX = KFY = 94.34	KFZ = 6.16	(p. 4)
17	KFX = KFY = 16.67		(p. 4)

* ACTUAL IS 23.53, SAY OK.

Markups By: BMO4 Date: 9/27/12 Sheet 3/81

<u>Tributary weight for Duct Support No. 30</u>

P_4 = 176.4 lbs.

½(P_2 + P_3) = ½ (87 lbs. + 17 lbs.) = 52 lbs.

½(P_5 + P_6 + P_7) = ½(111.7 lbs. + 138.4 lbs. + 39 lbs.) = 144.5 lbs.

½(P_8) = 38.2 lbs.

P_{30} = 176.4 lbs + 144.5 lbs + 52 lbs + 38.2 lbs. = 411.1 lbs.

adding two 70" stiffeners at w = 19 lbs/ft

P'_{30} = 411.1 lbs. + ½(2 x 70"/12 x 19 lbs/ft) = 522 lbs.

% increase = 522/411.1 = <u>127%</u>

<u>Tributary weight for Duct Support No. 33N</u>

P_{11} = 210.0 lbs.

½(P_{12} + P_{13} + P_{14}) = ½(111.7 lbs. + 138.4 lbs. + 39 lbs.) = 144.5 lbs.

½(P_5 + P_6 + P_7) = ½(111.7 lbs. + 138.4 lbs. + 39 lbs.) = 144.5 lbs.

½(P_8) = 38.2 lbs.

P_{33} = 210.0 lbs + 2 x 144.5 lbs + 38.2 lbs. = 537.2 lbs.

adding two 70" stiffeners at w = 19 lbs/ft

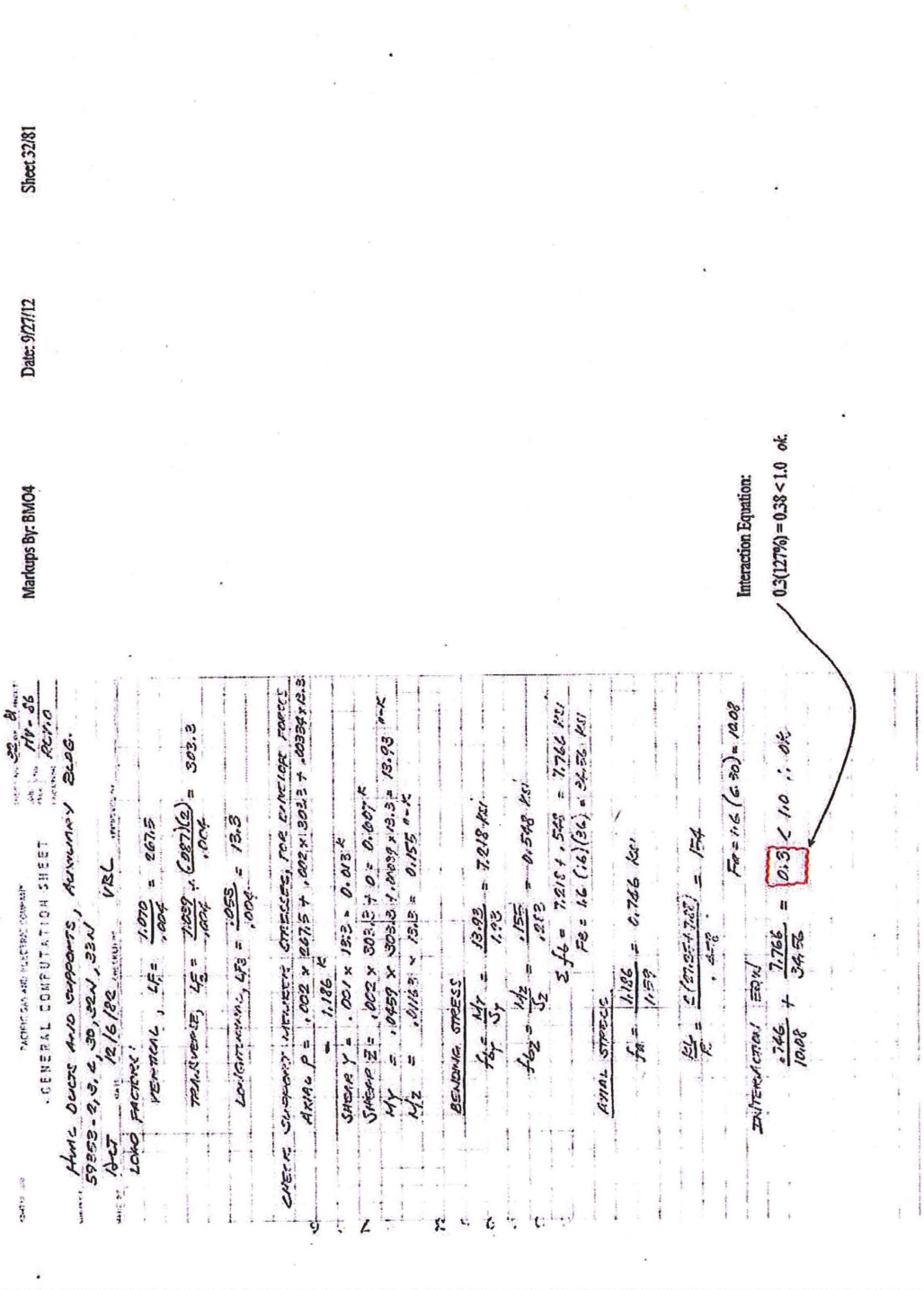
P'_{30} = 537.2 lbs. + ½(2 x 70"/12 x 19 lbs/ft) = 648 lbs.

% increase = 648/537.2 = 121% ← use 127%.

Area Walkdown Checklist (AWC)

Diablo Canyon Power Plant, Unit 2

Building: Auxiliary Floor El. 154 Room, Row/Col: 2-CP-37 Attachment 1, Page 4 of 18



Area Walkdown Checklist (AWC)

Diablo Canyon Power Plant, Unit 2

Building: Auxiliary Floor El. 154 Room, Row/Col: 2-CP-37 Attachment 1, Page 5 of 18

Markups By: BMO4 Date: 9/27/12 Sheet 34/81

PACIFIC GAS AND ELECTRIC COMPANY — GENERAL COMPUTATION SHEET

Sheet 34 of 81 — HV-86 — REV. 0

HVAC DUCTS AND SUPPORTS, AUXILIARY BLDG

59353-2,3,4,30,32N, 33N

MADE BY DLJ DATE 12/6/82 CHECKED BY VBL

EVALUATE MEMBER ⑥ L3×2×3/8

$S_x = .781$

$S_y = .371$

$r_z = .422$

$L = 28.50'$

Σ(V+EW) LOAD:

MEMBER FORCES ⑥

USE THE SAME LOAD FACTORS

AXIAL = 0 (NEGLIGIBLE)

BY INSPECTION, ALL FORCES = 0

∴ MEMBER IS OK FOR BOTH LOAD COMBINATIONS OF Σ(V+EW) AND Σ(V+NS)

EVALUATE MEMBERS ① AND ⑩ L2½×2½×¼

$A = 1.19$ $S = .394$

$r_z = .491$

Σ(V+EW) USE THE SAME LOAD FACTORS:

AXIAL $P = 0.004 \times 13.3 = 0.05^k$

$M_z = .00402 \times 13.3 = 0.05^{k\text{-}ft}$

Σ(V+NS) USE THE SAME LOAD FACTORS:

AXIAL $P = .004 \times 200.3 = 0.801^k$

$M_z = .00405 \times 200.3 = 0.817^{k\text{-}ft}$

AXIAL STRESS

$f_a = \frac{.801}{1.19} = 0.673$ ksi

$\frac{KL}{R} = \frac{2.0(41.5)}{.491} = 169$ $F_a = 1.2(5.23) = 8.37^k$

BENDING STRESS

$f_b = \frac{M}{S} = \frac{.817}{.394} = 2.074$ ksi

$F_b = 1.2(16^k) = 34.56$

INTERACTION EQ'N

$\frac{0.673}{8.37} + \frac{2.074}{34.56} = 0.14 < 1.00$ ∴ ok.

MEMBERS ① & ⑩ ARE OK.

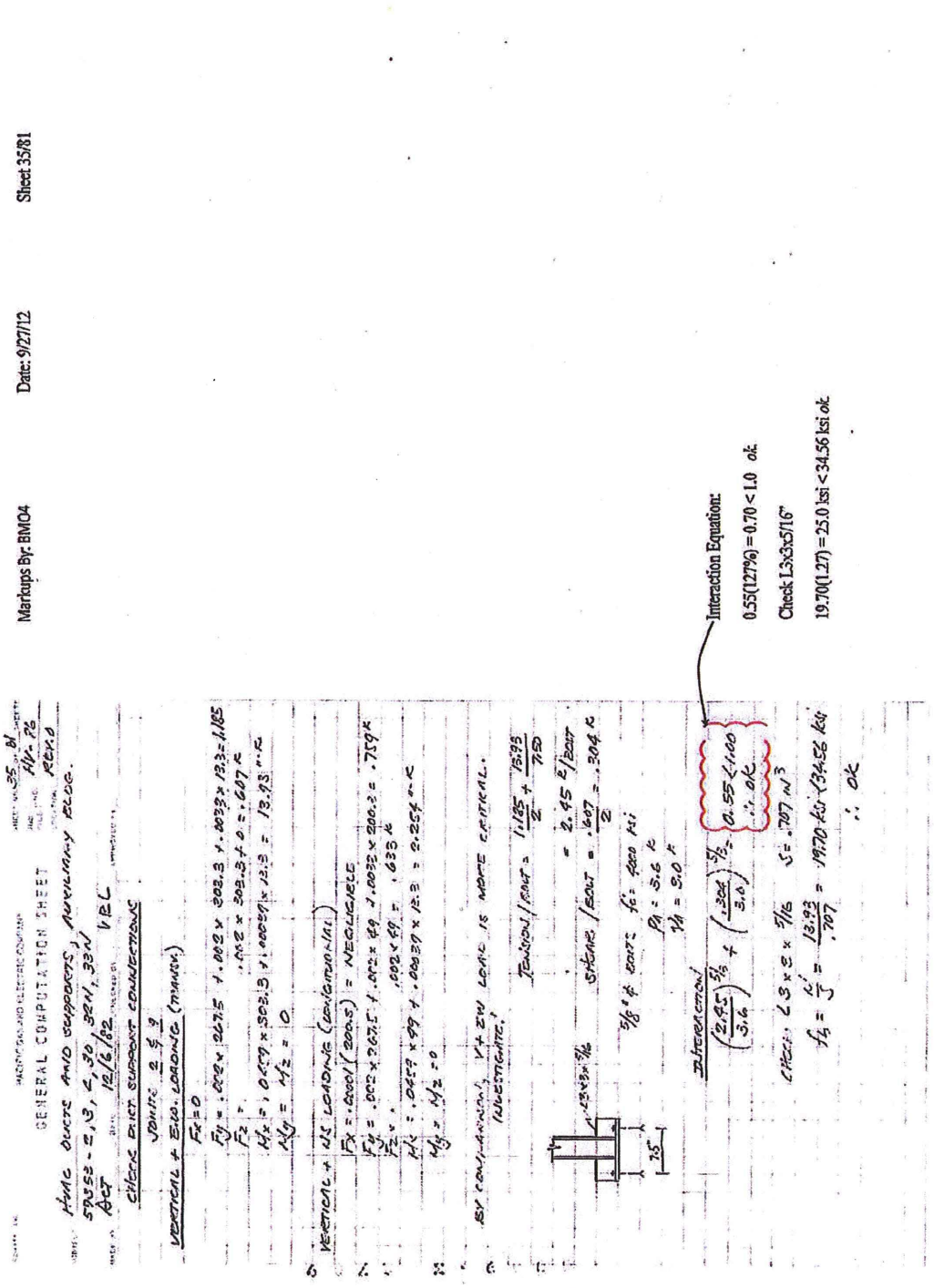
Interaction Equation:

0.14(1.27) = 0.18 < 1.0 ok

Area Walkdown Checklist (AWC)

Diablo Canyon Power Plant, Unit 2

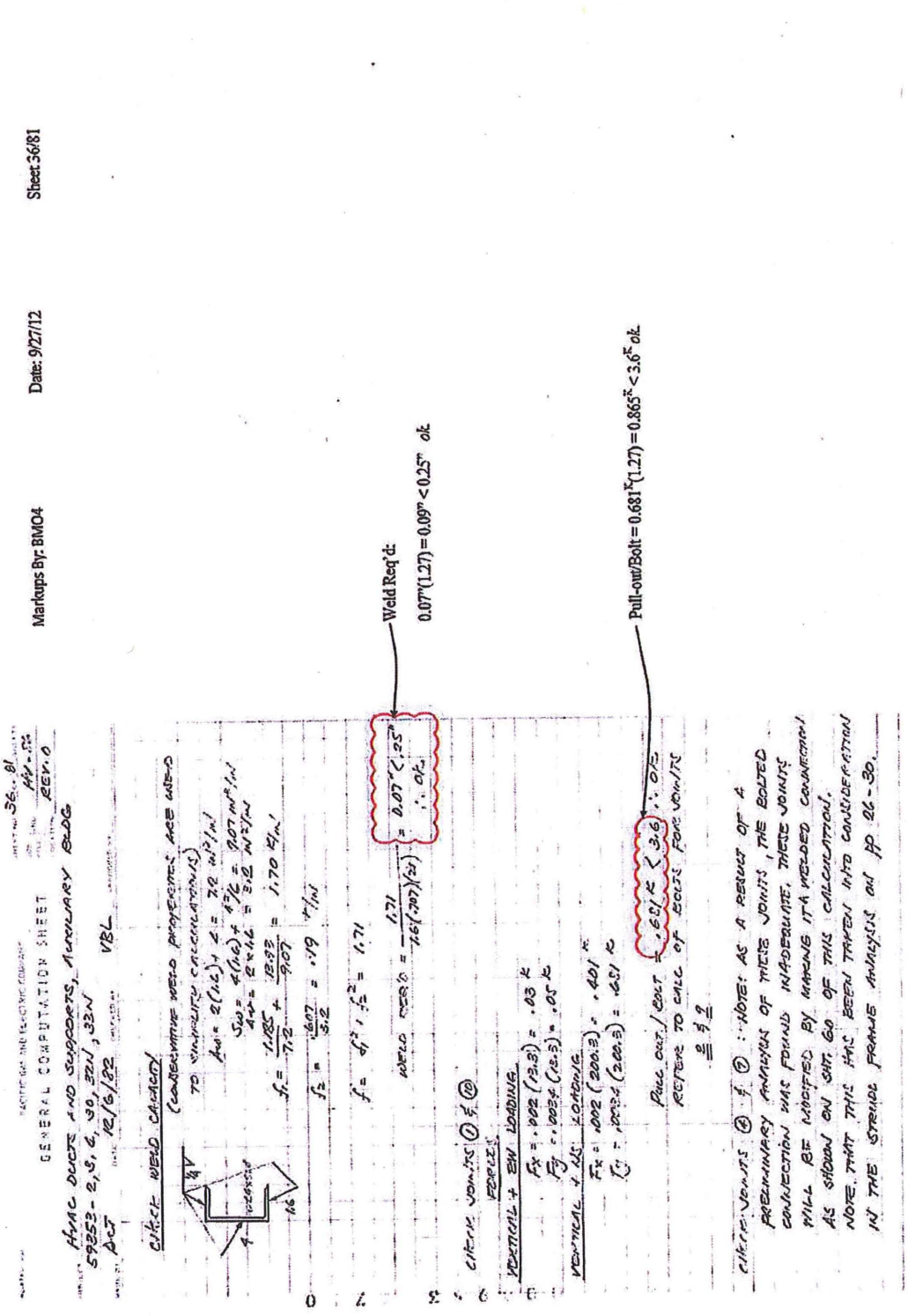
Building: Auxiliary Floor El. 154 Room, Row/Col: 2-CP-37 Attachment 1, Page 6 of 18



Area Walkdown Checklist (AWC)

Diablo Canyon Power Plant, Unit 2

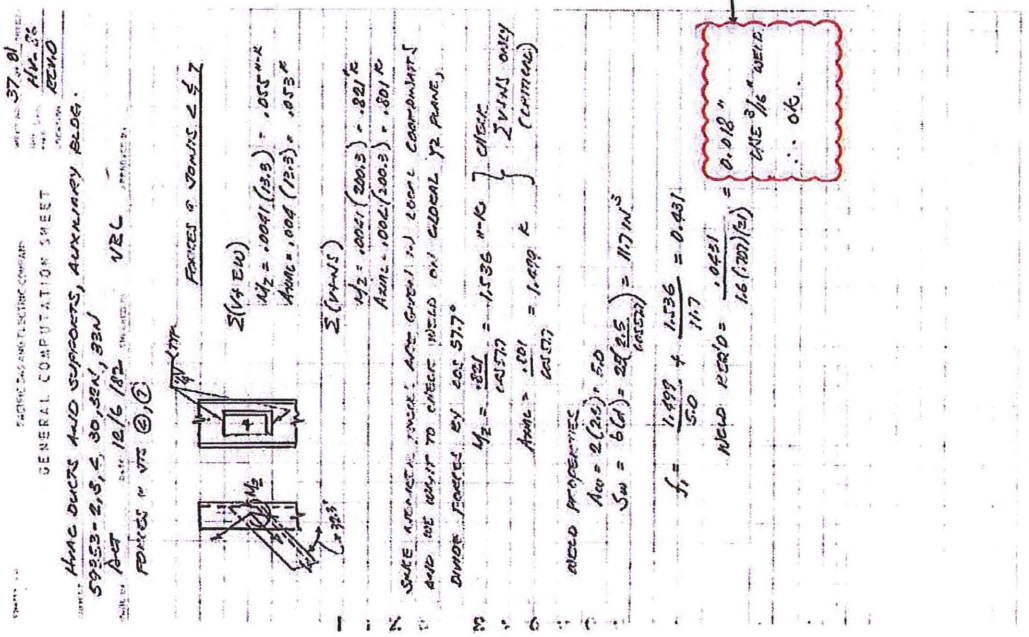
Building: Auxiliary Floor El. 154 Room, Row/Col: 2-CP-37



Area Walkdown Checklist (AWC)

Diablo Canyon Power Plant, Unit 2

Building: Auxiliary Floor El. 154 Room, Row/Col: 2-CP-37 Attachment 1, Page 8 of 18



Area Walkdown Checklist (AWC)

Diablo Canyon Power Plant, Unit 2

Building: Auxiliary Floor El. 154 Room, Row/Col: 2-CP-37 Attachment 1, Page 9 of 18

Markups By: BMO4 Date: 9/27/12 Sheet 45/81

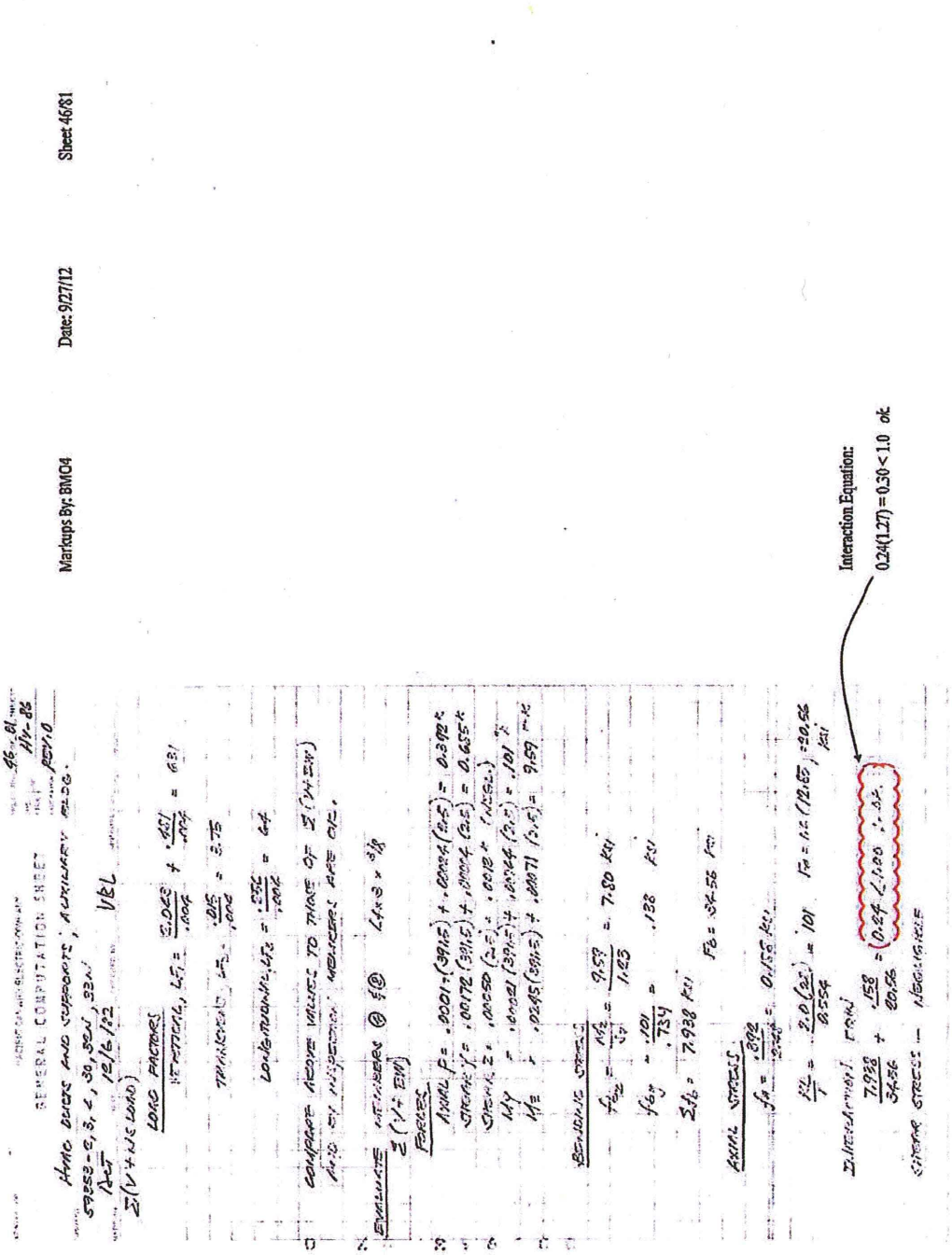
Interaction Equation:

0.183(1.27) = 0.232 < 1.0 ok

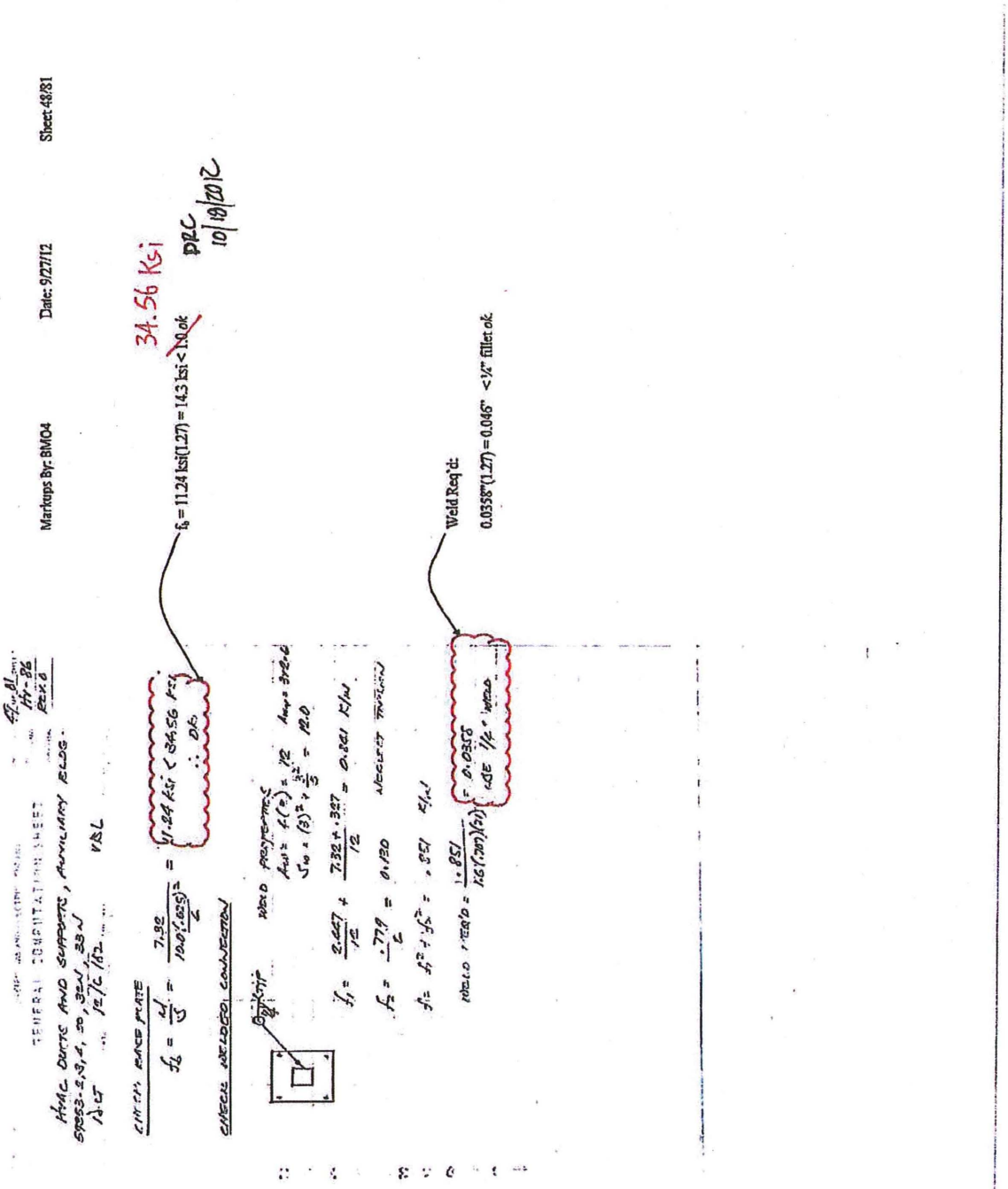
Area Walkdown Checklist (AWC)

Diablo Canyon Power Plant, Unit 2

Building: Auxiliary Floor El. 154 Room, Row/Col: 2-CP-37 Attachment 1, Page 10 of 18



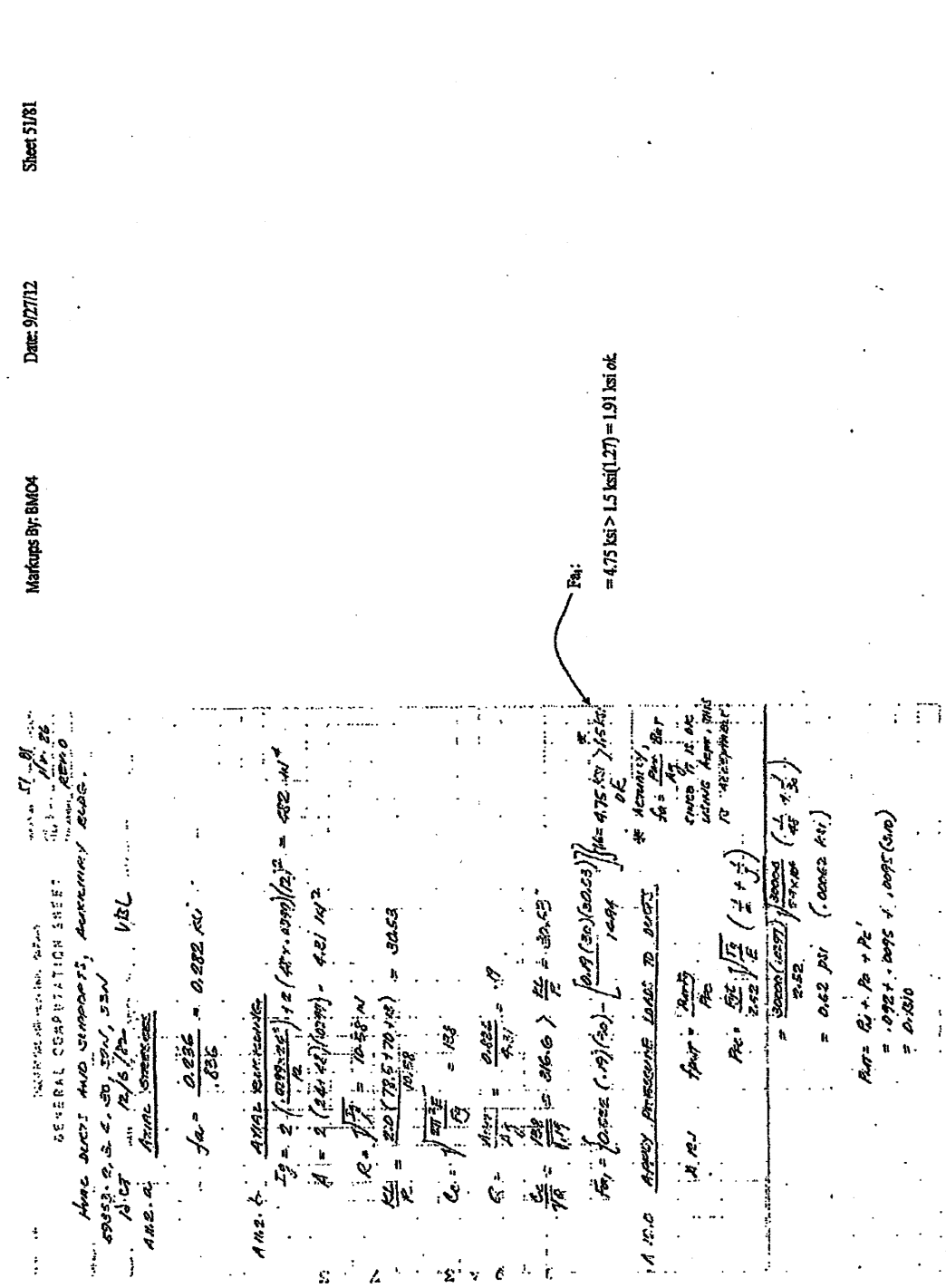
Markups By: BM/04
Date: 9/27/12
Sheet 48/81
Interaction Equation:
0.16(1.27) = 0.20 < 1.0 ok


Markups By: BM04
Date: 9/27/12
Sheet 48/81
34.56 ksi
DRC
10/19/2012
Weld Req'd:
0.0338"(1.27) = 0.046" <1/4" fillet ok.

Area Walkdown Checklist (AWC)

Diablo Canyon Power Plant, Unit 2

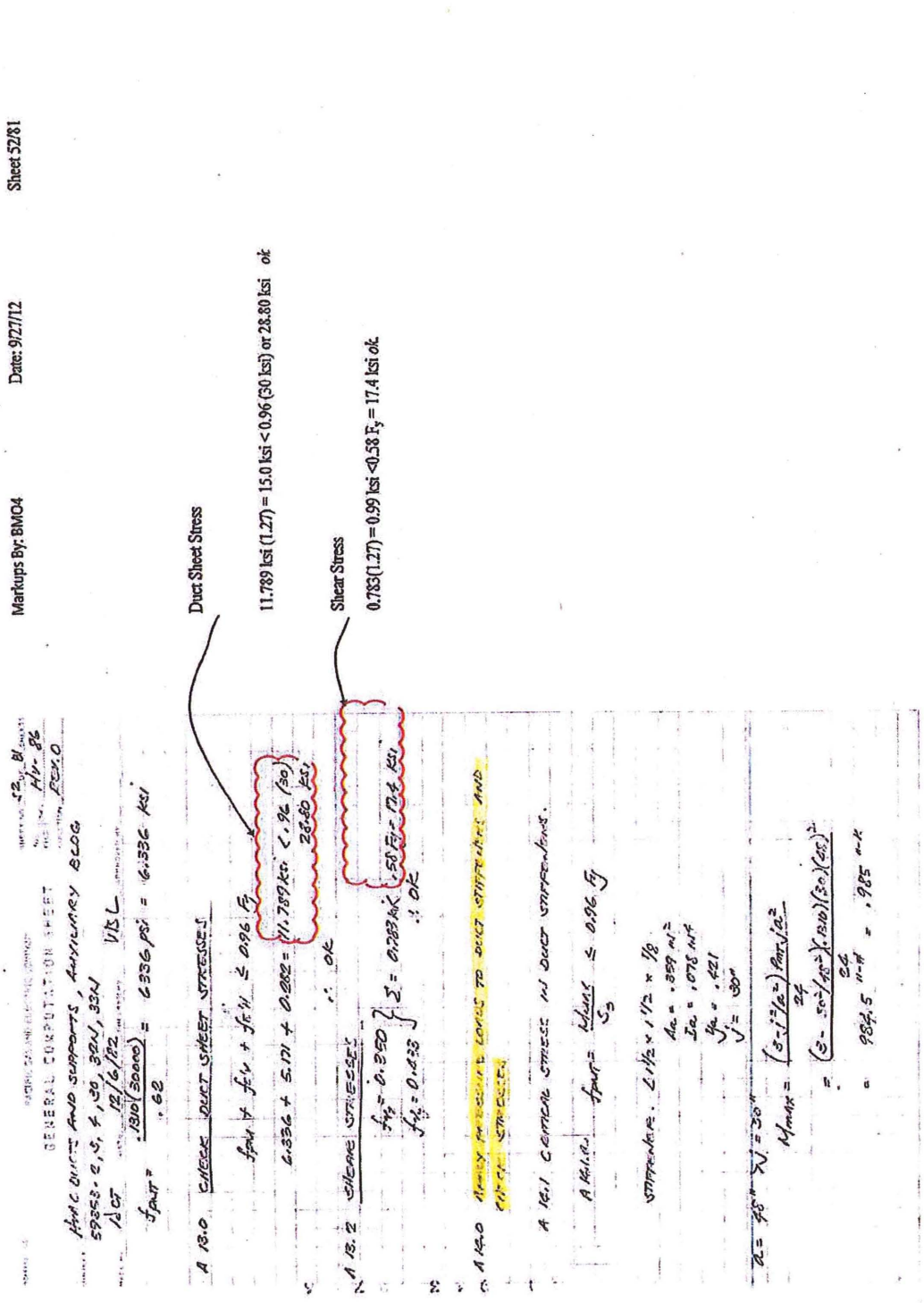
Building: Auxiliary Floor El. 154 Room, Row/Col: 2-CP-37 Attachment 1, Page 13 of 18



Area Walkdown Checklist (AWC)

Diablo Canyon Power Plant, Unit 2

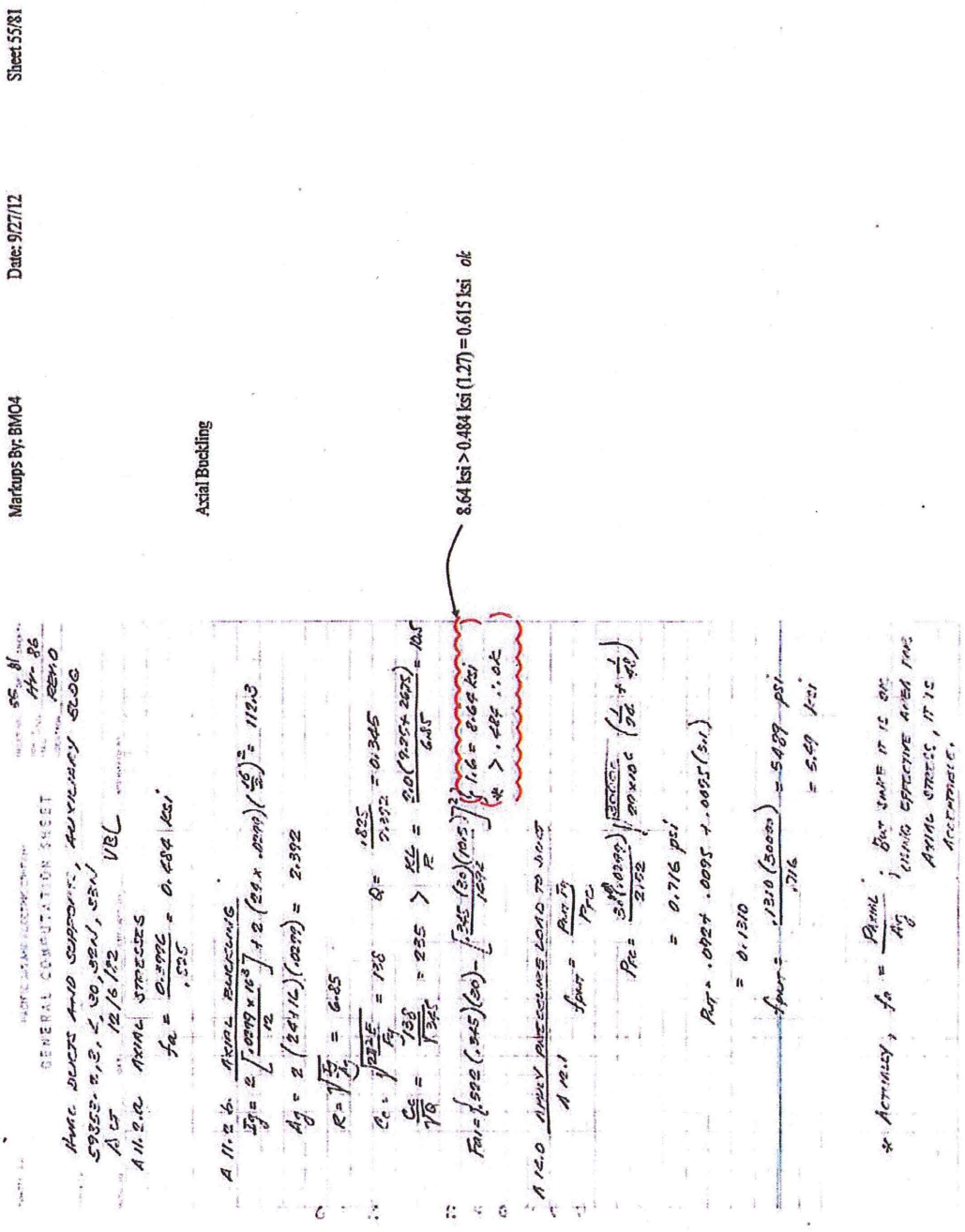
Building: Auxiliary Floor El. 154 Room, Row/Col: 2-CP-37 Attachment 1, Page 14 of 18



Area Walkdown Checklist (AWC)

Diablo Canyon Power Plant, Unit 2

Building: Auxiliary Floor El. 154 Room, Row/Col: 2-CP-37 Attachment 1, Page 15 of 18



Area Walkdown Checklist (AWC)

Diablo Canyon Power Plant, Unit 2

Building: Auxiliary | Floor El. 154 | Room, Row/Col: 2-CP-37 | Attachment 1, Page 16 of 18

Markups By: BMO4 Date: 9/27/12 Sheet 56/81

PACIFIC GAS AND ELECTRIC COMPANY
GENERAL COMPUTATION SHEET

56 of 81
W.O. 86
REV. 0

HVAC DUCTS AND SUPPORTS, AUXILIARY BLDG.
59352-2,3,4,33,324, 321
BY ACT DATE 12/6/82 CHKD. VBL

A 13.0 CHECK DUCT SHEET STRESSES

$f_{pm} + f_{cv} + f_{cx} \leq 0.96 F_y$

$5.49 + 1.982 + .484 = 7.956 \text{ ksi} \leq .96 F_y = 28.80 \text{ ksi}$
$\therefore$ ok

A 13.2 SHEAR STRESSES

$f_v = 0.241 \text{ ksi} \leq .58 F_y = 17.4 \text{ ksi}$ $\therefore$ ok

$f_v = 0.246 \text{ ksi} \leq 17.4$ $\therefore$ OK

A 14.0 APPLY PRESSURE LOADS TO DUCT STIFFENERS
SEE SH. 52, 53 FOR COMPARISON, THIS IS MORE CRITICAL THAN STIFFENERS FOR 24"x16" DUCT. $\therefore$ OK.

CHECK 36" x 20" DUCT. (SPANS 15, 16, SEE SH. 2)

VERTICAL (SH. 12)
SHEAR $E = 0.121 \times 3.10 = .375^K$
$M_y = 1.319 \times 3.10 = 4.09^{"-K}$

EAST-WEST (SH. 12)
AXIAL = .0884 x 3.10 = 0.274K
SHEAR Y = .1176 x 3.10 = .364 K
$M_z = 4.228 \times 3.10 = 15.11^{"-K}$

NORTH-SOUTH
AXIAL = .00216 (2.20) = .005 K
SHEAR Y = .085 (2.20) = .187 K
$M_z = .789 (2.20) = 1.725^{"K}$

BY COMPARISON, $\Sigma V + EN$ IS MORE CRITICAL.

Duct Sheet Stresses

7.956 ksi (1.27) > 10.10 ksi < 0.96 Fy or 28.8 ksi *ok*

Shear Stresses

= 0.24(1.27) = 0.306 ksi < 17.4 ksi *ok*

= 0.294(1.27) = 0.373 ksi < 17.4 ksi *ok*

PACIFIC GAS AND ELECTRIC COMPANY
GENERAL COMPUTATION SHEET

SHEET NO. 58 OF 81 SHEETS
HV-86
REV. 0

HVAC DUCTS AND SUPPORTS, AUXILIARY BLDG
59353-2, 3, 4, 30, 32N, 33N
B-CT DATE 12/7/82 CHECKER VBL

A 12.0: CHECK DUCT SHEET STRESSES
$f_{bw} + f_{bv} + f_{bw} \le 0.96\ F_y$
$6.504 + 1.625 + .345 = 8.477\ KSI < .96(F_y) = 28.80\ KSI$
∴ OK

A 13.2 SHEAR STRESSES
(NEGLIGIBLE)

A 14.0 - REF. TO SH 52, 53 FOR QUALIFICATION OF DUCT STIFFENERS.

CONCLUSION:
THE HVAC DUCTS AND DUCT SUPPORTS ARE FOUND TO BE ACCEPTABLE WITH THE FOLLOWING MODIFICATIONS TO BE MADE IN THE FIELD. (REQUIRED)

1. SUPPT # 59353-30 : WELD DIAGONAL BRACES (L2½×2½×¼) TO THE VERTICAL MEMBERS (C4×5.4) AS SHOWN ON p. 50 OF THIS CALC
2. ADD NEW SUPPORTS, # 59353-32W AND 33W AS SHOWN ON pp. 61-65 OF THIS CALC.

Markups By: BMO4 Date: 9/27/12 Sheet 58/81

Conclusion:

After accounting for existing stiffener weight on HVAC spans 5 and 6, the ducting and associated duct supports are ok.

A 11.0 Apply Seismic and Dead Loads to Duct
Check 70" x 20" Rectangular Duct (Spans 5 and 6)

Vertical Load
Shear $z = 0.178^{K}(1.27)(3.10) = 0.7^{K}$
Torsional = 0
$M_y = 2.15^{in\text{-}K}(1.27)(3.10) = 8.46^{in\text{-}K}$

East West Load
Axial $P = 0.178^{K}(1.27)(3.10) = 0.7^{K}$
Shear Y = 0
$M_z = 0$

North South Load
Axial P = 0
Shear $Y = 0.178^{K}(1.27)(2.20) = 0.5^{K}$
$M_z = 2.15^{in\text{-}K}(1.27)(2.20) = 6.0^{in\text{-}K}$

By comparison, the more critical combination load will be (ΣV + NS)

A 11.1.a. Bending Stresses (See Sheet 7 of HV-86)

$S_z = 1015.044/10 = 101.5\ in^3$
$S_y = 89.897/35 = 2.57\ in^3$

$f_b = 8.46/101.5 + 6.0/2.57 = 2.42$ ksi

A 11.1.b. Shear Stress
$A_{vy} = 2(70)0.0359 = 5.03\ in^2$
$A_{vz} = 2(20)0.0359 = 1.44\ in^2$

$f_{vy} = 0.7^{K}/1.44 + 0 = 0.49$ ksi
$f_{vz} = 0.5^{K}/5.03 + 0 = 0.099$ ksi

A 11.2.a Axial Stresses

$f_a = P_f/A_f = 0.7/0.926 = 0.756$ ksi

A 11.2.b Axial Buckling (See Sheet 9 of HV-4)

$f_{ac} = P_f/A_e$ where $A_e = 2(h+w)t$
$= 2(70 + 20)0.0359$
$= 6.46\ in^2$
$f_{ac} = 0.7/6.46 = 0.11$ ksi < 1.6Fa *ok*

A 12.0 Apply Pressure Loads to Ducts

$$P_{FC} = \frac{30000(0.0359)}{2.52}\sqrt{\frac{30000}{29000000}\left(\frac{1}{70}+\frac{1}{20}\right)} = 0.796 \text{ ksi}$$

$P_{MT} = P_M + P_D + P_E = 0.092 + 0.0114 + 0.0359 = 0.1387$ psi

$f_{pmt} = P_{PMT}F_y/P_{FC} = 0.1387(30,000)/0.796 = 5.41$ ksi

A 13.0 Check Duct Stresses

5.41 + 0.756 + 2.42 = 8.59 ksi < 28.80 ksi

A 13.2 Shear Stresses

$f_v = 0.49 + 0.099 = 5.89$ ksi *ok* (i.e., < 17.4 ksi)

A 14.0 Apply Pressure Loads (See AISC 7th for angle and channel properties)

L1x1x1/8" and MC 8x18.7

$f_{PMT} = M_{max}/S_s < 0.96\ F_y$
Stiffener type: MC8x18.7 atop two angles. (above and below ducting).

$$M_{max} = \frac{(3-j^2/a^2)P_{MT}(j)a^2}{j} = \frac{(3-24^2/70^2)0.1387(24)70^2}{24} = 1959^{b\text{-}in}$$

$S_s = I_s/(h_s + t - \bar{y})$
where h_s = height of composite stiffener = 1" + 2.9" = 3.9"
t = 0.0359"

$I_s = 5.0 + 12(0.0359)(1.86 - 0.0359/2)^2 + 5.97(2.0 + 0.0359 - 1.86)^2 = 6.64$

I_s is about 5.0 in^4 by engineering judgement
$b_s = 12$ or 1/2j
$y_s = 2.0$ in by engineering judgment

$$\bar{y} = \frac{12^{0.0359}t^2 + 5.96(2.0+0.0359)}{5.96 + 12^{0.0359}} = 1.86$$

$S_s = 6.64/(3.9 + 0.0359 - 1.86) = 13.79$

bending stress on stiffener
$f_{PMT} = M_{max}/S_s = 1.959/13.79 = 0.142$ ksi < 0.96 F_y = 28.8 ksi *ok*

Area Walk-By Checklist (AWC)

Status N

Location: Building: Auxiliary Floor El. 154' Room, Area: 2-CR-37

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

1. Does the anchorage of equipment in the area appear to be free of potentially adverse seismic conditions (if visible without necessarily opening cabinets) — Y

Reviewed room lighting, emergency lighting batteries, masonry wall, conduit, fire water piping, copper piping, and adjacent Class 2 Communication Room Chiller.

2. Does anchorage of equipment in the area appear to be free of significant degraded conditions? — N

Moderate corrosion exists on pneumatic actuators, copper tubing, copper piping and anchorage at various locations in the room. Corrosion at legs and braces of CR-38 appears to be more than surface corrosion, see photos on pages 8 and 9. See Attachment No. 1 for disposition

3. Based on visual inspection from the floor, do the cable/conduit raceways and HVAC ducting appear to be free of potentially adverse seismic conditions (e.g., condition of supports is adequate and fill conditions of cable trays appear to be inside acceptable limits)? — Y

Conduit, and Piping (fire water and copper) are well anchored.

4. Does it appear that the area is free of potentially adverse seismic spatial interactions with other equipment in the area(e.g., ceiling tiles and lighting)? — Y

Room lighting includes safety chains. Batteries for outside emergency lighting are supported by Unistrut members bolted to the concrete wall.

5. Does it appear that the area is free of potentially adverse seismic interactions that could cause flooding or spray in the area? — Y

6. Does it appear that the area is free of potentially adverse seismic interactions that could cause fire in the area? — Y

No credible sources could cause a fire in the area.

7. Does it appear that the area is free of potentially adverse seismic interactions associated with housekeeping practices, storage of portable equipment, and temporary installations (e.g. scaffolding, lead shielding)? — Y

No temporary equipment in the area.

8. Have you looked for and found no other seismic conditions that could adversely affect the safety functions of the equipment in the area? — Y

A relatively large number of sheet metal screws attaching the access cover plates for the Communication Room Chiller are missing (Class 2 component). Even so the access plate is adequately held in place. No other issues were identified.

Comments

Includes DC-2-23-M-HX-CR37.

Evaluated by: KTM Keri Munn Date: 10/25/2012

TRK Thomas R. Kipp 10/25/2012

Area Walk By Checklist (AWC)

Diablo Canyon Power Plant, Unit 2

Building: Auxiliary Floor El. 154 Room, Row/Col: 2-CR-37

Licensing Basis Evaluation

Issue:

Severe corrosion was noted on the rear support legs and braces for the filter housing of Condenser No. CR38.

Evaluation:

This component is Design Class I and seismically qualified. The seismic qualification of CR38 is shown in Calculation No. DHV-4.1. A review of this calculation indicates that the vertical legs are not credited in providing support to the filter housing, instead, all vertical and lateral loading is resisted by the triangular frames. The triangular frames, even in their corroded condition, adequately support the filter housing. Based on the evaluation, it can be seen that the corrosion has no adverse effects on the seismic qualification of CR38. Therefore, CR38 will perform its intended safety functions during a seismic event.

Recommendations:

Replace or repair corroded members and recoat.

Notification Required: Yes (50518935)

Evaluated by: PWH Patrick Hwang 10/19/12

Reviewed by: WRH Wenn R. Hon 10/19/12

Area Walk-By Checklist (AWC)

Status Y

Location: Building: Turbine Floor El. 85 Room, Area: 2-DEG-21

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

1. Does the anchorage of equipment in the area appear to be free of potentially adverse seismic conditions (if visible without necessarily opening cabinets) Y

Reviewed emergency lighting, lighting fixtures, Cardox fire suppression piping conduit, crane rails, and PA speakers.
Also reviewed electrical panels, wall mounted panels, and compressor

2.Does anchorage of equipment in the area appear to be free of significant degraded conditions? Y

3.Based on visual inspection from the floor, do the cable/conduit raceways and HVAC ducting appear to be free of potentially adverse seismic conditions (e.g., condition of supports is adequate and fill conditions of cable trays appear to be inside acceptable limits)? Y

No cable trays or HVAC duct in the 2-DEG-21 room, conduits are well supported

4. Does it appear that the area is free of potentially adverse seismic spatial interactions with other equipment in the area(e.g., ceiling tiles and lighting)? Y

5. Does it appear that the area is free of potentially adverse seismic interactions that could cause flooding or spray in the area? Y

No likely sources

6. Does it appear that the area is free of potentially adverse seismic interactions that could cause fire in the area? Y

7. Does it appear that the area is free of potentially adverse seismic interactions associated with housekeeping practices, storage of portable equipment, and temporary installations (e.g. scaffolding, lead shielding)? Y

8. Have you looked for and found no other seismic conditions that could adversely affect the safety functions of the equipment in the area? Y

Comments

Includes DC-2-21-M-EN-DEG1, DC-2-21-E-PNL-GQD21, DC-2-21-E-PNL-SED21, DC-2-21-E-S-EQD-21, DC-2-21-M-MISC-IS1, DC-2-21-M-TK-AR1A, DC-2-21-P-FL-CAF1, and DC-2-21-P-V-DEG-2-LCV-89.

Evaluated by: DKN Date: 10/17/2012

DRC 10/19/2012

Area Walk-By Checklist (AWC)

Status Y

Location: Building: Turbine Floor El. 85 Room, Area: 2-DEG-23

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

1. Does the anchorage of equipment in the area appear to be free of potentially adverse seismic conditions (if visible without necessarily opening cabinets) Y

Reviewed room lighting fixtures, emergency lighting, conduit, cable trays, Halon system including signal lighting, crane rails, water piping, Class II air start compressor and supporting equipment, fire extinguishers, and speakers.

2.Does anchorage of equipment in the area appear to be free of significant degraded conditions? Y

3.Based on visual inspection from the floor, do the cable/conduit raceways and HVAC ducting appear to be free of potentially adverse seismic conditions (e.g., condition of supports is adequate and fill conditions of cable trays appear to be inside acceptable limits)? Y

No HVAC ducting in room. Both cable trays and conduit are well supported.

4. Does it appear that the area is free of potentially adverse seismic spatial interactions with other equipment in the area(e.g., ceiling tiles and lighting)? Y

Room area lighting fixtures are restrained by a carabiner-like link to supporting structure bolted to the ceiling.

5. Does it appear that the area is free of potentially adverse seismic interactions that could cause flooding or spray in the area? Y

6. Does it appear that the area is free of potentially adverse seismic interactions that could cause fire in the area? Y

The Lube Oil and Fuel Oil systems contain combustible materials. The lube oil piping runs are short and adequately supported. The fuel oil is contained in a tank that is contained within the framework of the skid system. Again short piping runs are adequately supported.

7. Does it appear that the area is free of potentially adverse seismic interactions associated with housekeeping practices, storage of portable equipment, and temporary installations (e.g. scaffolding, lead shielding)? Y

8. Have you looked for and found no other seismic conditions that could adversely affect the safety functions of the equipment in the area? Y

Fire extinguisher near door rests in a wall bracket with one bolt into the concrete wall but is not restrained against uplift. Could potentially lift out of bracket if vertical acceleration is greater than 1g. Extinguisher could also fall if bracket is bent or if prying action causes anchor bolt to fail. For disposition see Attachment 1.

Comments

Includes DC-2-21-M-EN-DEG3, DC-2-21-E-PNL-GQD23, DC-2-21-E-PNL-SED23, DC-2-21-E-S-EQD-23, DC-2-21-M-MISC-IS3, DC-2-21-M-TK-AR3A, DC-2-21-P-FL-CAF3, and DC-2-21-P-VOA-DEG-2-LCV-87.

Evaluated by: TRK Thomas L. Kipp Date: 10/25/2012

KA A. K. Chaitanya 10/23/12.

Area Walk By Checklist (AWC)

Diablo Canyon Power Plant, Unit 2

Building: Turbine Floor El. 85 Room, Row/Col: 2-DEG-23

Licensing Basis Evaluation

Issue:

The support mounting configuration of the fire extinguisher located in Unit 2 EDG 2-3 room (FE-T85.24-2) may cause the fire extinguisher to dislodge from its support and fall to the concrete floor. Since the fire extinguisher contains pressurized gas, impact with the floor could damage the valve, nozzle, or regulator, resulting in the extinguisher becoming a self-propelled missile which could adversely interact with the adjacent safety-related Excitation Cubicle and DG Control Panel..

Evaluation:

The fire extinguisher is supported per manufacturer design. It is hooked onto an "L" shape bracket which, in turn, is anchored to the concrete wall with multiple anchor bolts. The fire extinguisher is Design Class II and is not seismically qualified. Therefore, a seismic evaluation has not been performed for this mounting detail.

The fire extinguisher is located in the Emergency Diesel Generator (EDG) Room at elev. 85' in the Turbine Building. Per DCM C-17, Attachment B, the Zero Period Acceleration (ZPA) of the floor response spectra for this location is 0.54 g in horizontal direction and 0.5 g in vertical direction. Since the vertical acceleration is less than 1.0 g, the fire extinguisher will not uplift from its support. In addition, the horizontal acceleration at this elevation is not sufficiently large to cause rocking motion severe enough for the fire extinguisher to be dislodged from its support. Therefore, it is unlikely that the fire extinguisher will become dislodged from its support, impact the concrete floor and become a missile that could impact the Excitation Cubicle or Control Panel during a seismic event.

Based on the above assessment, the fire extinguisher is adequately restrained.

Recommendation: Acceptable as-is.

Notification Required: No

Evaluated by: WRH William P. Hamel 10/23/12

Reviewed by: A K Drautzburg 10/23/12.

Area Walk-By Checklist (AWC)

Status Y

Location: Building: Turbine Floor El. 107 Room, Area: 2-DEG-ES-21

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

1. Does the anchorage of equipment in the area appear to be free of potentially adverse seismic conditions (if visible without necessarily opening cabinets) Y

No credible interaction sources

2.Does anchorage of equipment in the area appear to be free of significant degraded conditions? Y

No significant degradation.

3.Based on visual inspection from the floor, do the cable/conduit raceways and HVAC ducting appear to be free of potentially adverse seismic conditions (e.g., condition of supports is adequate and fill conditions of cable trays appear to be inside acceptable limits)? Y

No cable trays, no condult, no HVAC duct, only small drain pipe over the exhaust pipe, overhead light fixture has safety chain restraint

4. Does it appear that the area is free of potentially adverse seismic spatial interactions with other equipment in the area(e.g., ceiling tiles and lighting)? Y

5. Does it appear that the area is free of potentially adverse seismic interactions that could cause flooding or spray in the area? Y

No likely sources. Only a small overhead drain line is in the area.

6. Does it appear that the area is free of potentially adverse seismic interactions that could cause fire in the area? Y

7. Does it appear that the area is free of potentially adverse seismic interactions associated with housekeeping practices, storage of portable equipment, and temporary installations (e.g. scaffolding, lead shielding)? Y

8. Have you looked for and found no other seismic conditions that could adversely affect the safety functions of the equipment in the area? Y

Comments

Includes DC-2-21-M-MISC-ES1.

Evaluated by: DKN Date: 10/17/2012

DRC 10/19/2012

Area Walk-By Checklist (AWC)

Status Y

Location: Building: Turbine | Floor El. 107 | Room, Area: 2-DEG-ES-23

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

1. Does the anchorage of equipment in the area appear to be free of potentially adverse seismic conditions (if visible without necessarily opening cabinets) Y

Fan exhaust chamber is low in profile and well anchored. Otherwise the room is empty of other than the silencer and its exhaust piping.

2.Does anchorage of equipment in the area appear to be free of significant degraded conditions? Y

Some corrosion in line (possibly conduit) over silencer. Surface corrosion noted on lower anchor plate and connection pin for horizontal strut support for piping exiting from the silencer. The web of the building column at South end of room, to which the anchor plate is attached, has an area of moderate corrosion. For disposition see Attachment 1.

3.Based on visual inspection from the floor, do the cable/conduit raceways and HVAC ducting appear to be free of potentially adverse seismic conditions (e.g., condition of supports is adequate and fill conditions of cable trays appear to be inside acceptable limits)? Y

4. Does it appear that the area is free of potentially adverse seismic spatial interactions with other equipment in the area(e.g., ceiling tiles and lighting)? Y

No soft targets for items it room.

5. Does it appear that the area is free of potentially adverse seismic interactions that could cause flooding or spray in the area? Y

6. Does it appear that the area is free of potentially adverse seismic interactions that could cause fire in the area? Y

7. Does it appear that the area is free of potentially adverse seismic interactions associated with housekeeping practices, storage of portable equipment, and temporary installations (e.g. scaffolding, lead shielding)? Y

8. Have you looked for and found no other seismic conditions that could adversely affect the safety functions of the equipment in the area? Y

Comments

Includes DC-2-21-M-MISC-ES3.

Evaluated by: TRK Thomas R. Kipp Date: 10/25/2012

KA A.K. Chaitanya 10/23/2012.

Area Walk-By Checklist (AWC)

Diablo Canyon Power Plant, Unit 2

Building: Turbine Floor El. 107 Room, Row/Col: 2-DEG-ES-23 Attachment 1, Page 1 of 1

Licensing Basis Evaluation

Issue:

Moderate corrosion was noted on Pipe Support 414-588R and minor surface corrosion was noted on the web of the building column to which this sway-strut type support is attached. More specifically, corrosion was noted on the following for Support 414-588R:

- *Lower end of sway strut*
- *Paddle @ lower end of sway strut*
- *Rear bracket @ lower end of sway strut, including the load pin*

Corrosion on web of building column is minor surface corrosion, primarily confined to the region of the attachment point of the rear bracket for 414-588R.

Evaluation:

Pipe Support 414-588R is a Design Class I, safety-related pipe support located on the exhaust line exiting from the Exhaust Silencer for DEG 2-3 (Line 4405). Both it and an adjacent sway-strut-type pipe support, provide both vertical and perpendicular restraint to the exhaust line. These supports are located immediately adjacent to the outside air louvers @ the south end of the Turbine Building (exhaust line exits through these louvers). The corrosion on the support components appears to be moderate, with insignificant material loss. Based on a review of the extent of corrosion, the current condition is not sufficiently severe to impact the ability of the pipe support to perform its design function (providing restraint of the piping system). The surface corrosion on the web of the building column appears to be confined to the coating, with insignificant material loss.

Therefore, these as-found conditions do not impact the safe operation of DCPP

Recommendation:

Clean and recoat pipe support, including its attachment to the Turbine Building column on Line 35.

Notification Required: Yes (50518936)

Evaluated by: drc [signature] 10/18/12

Reviewed by: wrh [signature] 10/18/12

Area Walk-By Checklist (AWC)

Status Y

Location: Building: Auxiliary Floor El. 163 Room, Area: 2-E-45

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

1. Does the anchorage of equipment in the area appear to be free of potentially adverse seismic conditions (if visible without necessarily opening cabinets) Y

The nearby duct and fans are well supported.

2. Does anchorage of equipment in the area appear to be free of significant degraded conditions? Y

Surface corrosion observed on base plates, anchor bolts, nuts for HVAC duct supports. See Attachment No. 5 for disposition Surface corrosion was observed on condult clips in the area. See Attachment No. 6 for disposition.

3. Based on visual inspection from the floor, do the cable/conduit raceways and HVAC ducting appear to be free of potentially adverse seismic conditions (e.g., condition of supports is adequate and fill conditions of cable trays appear to be inside acceptable limits)? Y

Adjacent duct is well supported. Piping is well supported also. Conduit is generally well supported. See comments section.

4. Does it appear that the area is free of potentially adverse seismic spatial interactions with other equipment in the area(e.g., ceiling tiles and lighting)? Y

5. Does it appear that the area is free of potentially adverse seismic interactions that could cause flooding or spray in the area? Y

6. Does it appear that the area is free of potentially adverse seismic interactions that could cause fire in the area? Y

No significant fuel sources.

7. Does it appear that the area is free of potentially adverse seismic interactions associated with housekeeping practices, storage of portable equipment, and temporary installations (e.g. scaffolding, lead shielding)? Y

8. Have you looked for and found no other seismic conditions that could adversely affect the safety functions of the equipment in the area? Y

Comments

A nut on a nearby fire water pipe support U-bolt is significantly corroded. See Attachment No. 2 for disposition.

Surface corrosion is observed on the adjacent damper (Damper No. VAC-2-BDD-46). The top plates of all damper units in the area have surface corrosion from standing water. The position of the existing drain holes permit a small amount of standing water. See Attachment No. 3 for disposition.

On a roof mounted conduit to the north of fan 2-S45, two consecutive clamps are loose. See Attachment No. 4 for disposition.

Corrosion was noted on damper no. FCV-5046, including the actuator, damper, ducting, and miscellaneous steel. See Attachment No. 1 for disposition.

Evaluated by: DKN Date: 10/24/2012

DRC 10/24/2012

Area Walk-By Checklist (AWC)

Diablo Canyon Power Plant, Unit 2

Building: Auxiliary Floor El. 163 Room, Row/Col: 2-E-45 Attachment 1, Page 1 of 1

Licensing Basis Evaluation

Issue:

Various degrees (surface to significant) coating and material degradation on 2-FCV-5046. Material corrosion was noted on the following:

- *supporting steel*
- *mechanical linkages*
- *ducting*
- *base plates*
- *top cover of the damper housing*

Evaluation:

The conditions as noted do not affect seismic qualification of the component to perform its functions based on the current inspection.

Recommendation:

Coating/corrosion needs to be cleaned, inspected, and repaired.

Notification Required: Yes (50510119)

Evaluated by: [signature] 9/28/12

Reviewed by: [signature] 10/19/12

Area Walk-By Checklist (AWC)

Diablo Canyon Power Plant, Unit 2

Building: Auxiliary Floor El. 163 Room, Row/Col: 2-E-45

Licensing Basis Evaluation

Issue:

The nut for a u-bolt on a fire water pipe running across the roof, near Fan No. E-45 was severely corroded.

Evaluation:

The firewater pipe is the supply header to the Unit 2 Outage Access Control Facility (Line No. 5959), which is Design Class II/Non-Seismic per the FLOC data. The extent of the corrosion will not compromise the ability of the u-bolt to transmit loading from the pipe to the support steel, so the support remains functional.

Recommendation:

Corroded nut should be replaced and pipe support cleaned/recoated.

Notification Required: Yes (50510142)

Evaluated by: _____ 9/28/12

Reviewed by: _____ 10/19/12

Area Walk-By Checklist (AWC)

Diablo Canyon Power Plant, Unit 2

Building: Auxiliary Floor El. 163 Room, Row/Col: 2-E-45 Attachment 3, Page 1 of 1

Licensing Basis Evaluation

Issue:

Significant corrosion was noted on the top and sides of 480V Switchgear Room ventilation system damper no. VAC-2-BDD-46 (associated with Fan No. E-46).

Evaluation:

The corrosion is considered to be limited to surface-type corrosion, which will not impact the seismic qualification of the damper. Therefore, the damper is still capable of performing its intended functions.

Recommendation:

- clean and recoat corroded areas

- provide provisions for the draining of rainwater from the top of the damper housing

Notification Required: Yes (50510457)

Evaluated by: William R. Horstman 10/01/12

Reviewed by: [signature] 10/19/12

Area Walk-By Checklist (AWC)

Diablo Canyon Power Plant, Unit 2

Building: Auxiliary Floor El. 163 Room, Row/Col: 2-E-45

Licensing Basis Evaluation

Issue:

The conduit clamps on two conduit supports for a conduit located on the Auxiliary Building roof, to the north of Fan No. S-45 were found to be loose and disengaged from the supporting Unistrut channel.

Evaluation:

The conduit is still attached to additional supports on the roof, and due to the support configuration, it is unlikely that the would fall off of its supports sufficiently to cause damage to the electrical conductors inside.

Recommendation:

Reattach conduit clamps to the supports.

Notification Required: Yes (50509961)

Evaluated by: William R. Hall 10/1/12

Reviewed by: J.R. Lin 10/19/12

Area Walk-By Checklist (AWC)

Diablo Canyon Power Plant, Unit 2

Building: Auxiliary Floor El. 163 Room, Row/Col: 2-E-45

Licensing Basis Evaluation

Issue:

Corrosion was noted on various HVAC duct supports (e.g. structural steel, base plates, anchor bolts) attached to the roof in the vicinity of the Fan No. E-45.

Evaluation:

The condition is limited to surface corrosion at this time, so there is no impact on the structural integrity of the HVAC duct supports. Therefore, the functionality of the HVAC system is not affected.

Recommendation:

Prepare and recoat HVAC duct supports.

Notification Required: Yes (50515601)

Evaluated by: _____ 10/19/12

Reviewed by: _____ 10/19/12

Area Walk-By Checklist (AWC)

Diablo Canyon Power Plant, Unit 2

Building: Auxiliary Floor El. 163 Room, Row/Col: 2-E-45

Licensing Basis Evaluation

Issue:

Corrosion was noted on the conduit clamps for various conduit supports attached to the roof in the vicinity of the Fan No. S-45.

Evaluation:

The condition is limited to surface corrosion at this time, so there is no impact on the structural integrity of the conduit supports. Therefore, the functionality of the electrical circuits inside the conduits is not affected.

Recommendation:

Replace conduit clamps

Notification Required: Yes (50515600)

Evaluated by: Wm R. Hone 10/1/12

Reviewed by: [signature] 10/19/12

Area Walk-By Checklist (AWC)

Status Y

Location: Building: Auxiliary Floor El. 128 Room, Area: 2-Eagle21

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

1. Does the anchorage of equipment in the area appear to be free of potentially adverse seismic conditions (if visible without necessarily opening cabinets) Y

Nearby panels are welded to the steel beams that support the raised floor

2.Does anchorage of equipment in the area appear to be free of significant degraded conditions? Y

No degradation observed.

3.Based on visual inspection from the floor, do the cable/conduit raceways and HVAC ducting appear to be free of potentially adverse seismic conditions (e.g., condition of supports is adequate and fill conditions of cable trays appear to be inside acceptable limits)? Y

Conduit, cable trays, and duct are well supported.

4. Does it appear that the area is free of potentially adverse seismic spatial interactions with other equipment in the area(e.g., ceiling tiles and lighting)? Y

Lighting is hung with 3/8" threaded rods in spring nuts in unistrut members embedded in the concrete slab above and with chains with closed s-hooks. Some lights have safety chains.

5. Does it appear that the area is free of potentially adverse seismic interactions that could cause flooding or spray in the area? Y

No likely flood or spray sources. Fire protection in this room is provided by a Cardox system.

6. Does it appear that the area is free of potentially adverse seismic interactions that could cause fire in the area? Y

No significant fuel sources

7. Does it appear that the area is free of potentially adverse seismic interactions associated with housekeeping practices, storage of portable equipment, and temporary installations (e.g. scaffolding, lead shielding)? Y

Good housekeeping practices. Items with casters are restrained. Fire extinguisher is clamped.

8. Have you looked for and found no other seismic conditions that could adversely affect the safety functions of the equipment in the area? Y

Comments

Includes DC-2-36-I-PNL-RNP1A and DC-2-99-I-PNL-RNO1A. Raised floor steel beams are anchored with 5/8" expansion anchors spaced at 24" on center. Cardox pipe runs very close to a cable tray. However pipe and cable tray are braced so impact is not expected.

Evaluated by: DKN Date: 10/18/2012

DRC 10/19/2012

Status: Y

Area Walk-By Checklist (AWC)

Location: Bldg. Auxiliary Floor El. 100' Room, Area[13] 2-EJ2

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 the 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)? Y

   Note: see "Comments" section of AWC for definition of sides:

   - West Side: There is no equipment in this area, but the massive Fuel Transfer Tube radiation shield blocks, anchored to the concrete walls, do not exhibit any adverse conditions.
   - East Side: There is not equipment at the bottom of the fuel transfer canal that is in-scope of the seismic walkdowns.

2. Is anchorage of equipment in the area appear to be free of significant degraded conditions? Y

   - West Side: The anchorage for the Fuel Transfer Tube radiation shield blocks shows signs of minor surface corrosion, but is acceptable.
   - East Side: There is not equipment at the bottom of the fuel transfer canal that is in-scope of the seismic walkdowns.

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 support s is adequate and fill conditions of cable trays appear to be inside acceptable limits)? Y

   - West Side: There are several conduits attached to the ceiling in this area which visually appear to be adequate. There are no HVAC ducts in this area.
   - East Side: There are various HVAC ducts and electrical conduits located above the Fuel Transfer Canal that are attached to the underside of the roof of the Fuel Handling Building Steel Superstructure. There items are free of adverse seismic conditions.

4. Does it appear that the area is free of potentially adverse seismic spatial interactions with other equipment in the area (e.g., ceiling tiles and lighting)? Y

   - West Side: There is one light fixture in this area, but there are no targets located near the fixture that could be affected by spatial interactions. There Fuel Transfer Tube radiation shielding is adequately anchored to the concrete to prevent spatial interaction.
   - East Side: There are no ceiling tiles in this area, but there various light fixtures, HVAC ducts, and electrical conduits located above the Fuel Transfer Canal that are attached to the underside of the roof of the Fuel Handling Building Steel Superstructure. In addition, the reach rod for the Fuel Transfer Tube 20" dia. gate valve (SFS-2-50), is attached to the west wall of the Fuel Transfer Canal. These items appear to be adequately supported to prevent spatial interaction.

5. Does it appear that the area is free of potentially adverse seismic interactions that could cause flooding or spray in the area? Y

   - West Side: The Fuel Transfer Tube, which is filled with water during fuel handling operations, is the only fluid containing pipe in the area. This is a Design Class I, seismically qualified pipe, and is designed to not break and leak during a seismic event.
   - East Side: There are no fluid-containing piping systems in this area, other than the pipe used to fill the Fuel Transfer Canal. Since the Fuel Transfer Canal is designed to be filled with water during fuel handling activities, flooding is not an issue.

[13] If the room in which the SWEL item is located is very large (e.g., Turbine Hall), the area selected should be described. This selected area should be based on judgment, e.g., on the order of 35 feet from the SWEL item.

Status: Y

Area Walk-By Checklist (AWC)

Location: Bldg. Auxiliary Floor El. 100' Room, Area[13] 2-EJ2

6. Does it appear that the area is free of potentially adverse seismic interactions that could cause a fire in the area? Y
   - West Side: There are no systems containing flammable liquids or gases in this area.
   - East Side: There is hydrogen piping (yellow) running along the west wall of the fuel handling area. These pipes are well supported and should not be damaged during an earthquake.
7. Does it appear that the area is free of potentially adverse seismic interactions associated with housekeeping practices, storage of equipment, and temporary installations (e.g., scaffolding, lead shielding)? Y
   - West Side: No issues noted.
   - East Side: No issues noted.

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

Comments (Additional pages may be added as necessary)

This AWC applies to the area around the Fuel Transfer Tube (FTT) expansion joint, which is divided into two sub-areas (see figure on sheet 3):

- West (Seismic Gap Side) - this is a small empty room in the Auxiliary Building, located between the west wall of the Fuel Handling Area of the Auxiliary Building and the exterior shell of the Containment Structure. This is the location where the walkdown of the expansion joint was performed (SWC no. DC-2-42-M-EJ-FTC-2-EJ2).
- East (Fuel Transfer Canal Side) - this is a 40 foot deep, narrow channel adjacent to the Spent Fuel Pool, with the expansion joint located at the bottom of the canal (elev. 99'-6"). This area is currently flooded and is not readily accessible, so the inspection was performed from the floor at elev. 140'.

Evaluated by: wrh *[signature]* Date: 10/23/12

SXM9 *[signature]* 10/23/12

[13] If the room in which the SWEL item is located is very large (e.g., Turbine Hall), the area selected should be described. This selected area should be based on judgment, e.g., on the order of 35 feet from the SWEL item.

Area Walk-By Checklist (AWC)

Status Y

Location: Building: Auxiliary Floor El. 85 Room, Area: 2-FCV-365

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

1. Does the anchorage of equipment in the area appear to be free of potentially adverse seismic conditions (if visible without necessarily opening cabinets)	Y
2.Does anchorage of equipment in the area appear to be free of significant degraded conditions?	Y
3.Based on visual inspection from the floor, do the cable/conduit raceways and HVAC ducting appear to be free of potentially adverse seismic conditions (e.g., condition of supports is adequate and fill conditions of cable trays appear to be inside acceptable limits)?	Y
4. Does it appear that the area is free of potentially adverse seismic spatial interactions with other equipment in the area(e.g., ceiling tiles and lighting)?	Y
5. Does it appear that the area is free of potentially adverse seismic interactions that could cause flooding or spray in the area?	Y
6. Does it appear that the area is free of potentially adverse seismic interactions that could cause fire in the area?	Y
7. Does it appear that the area is free of potentially adverse seismic interactions associated with housekeeping practices, storage of portable equipment, and temporary installations (e.g. scaffolding, lead shielding)?	Y
8. Have you looked for and found no other seismic conditions that could adversely affect the safety functions of the equipment in the area?	Y

Comments

Includes DC-2-14-P-VOA-CCW-2-FCV-365 and DC-2-09-VOM-SI-2-8805A. Emergency lighting has no cable but it has been analyzed as-is.

Evaluated by: FFG Fred Grant Date: 10-19-12

SMM Scott Miller 10/22/12

Area Walk-By Checklist (AWC)

Status Y

Location: Building: Pipeway | Floor El. 124 | Room, Area: 2-FCV-37

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

1. Does the anchorage of equipment in the area appear to be free of potentially adverse seismic conditions (if visible without necessarily opening cabinets) — Y

No issues were identified.

2.Does anchorage of equipment in the area appear to be free of significant degraded conditions? — Y

See DC-2-04-P-VOM-MS-2-FCV-37 SWC for corrosion. All other equipment in the area appear to be free of corrosion.

3.Based on 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)? — N/A

4. Does it appear that the area is free of potentially adverse seismic spatial interactions with other equipment in the area(e.g., ceiling tiles and lighting)? — Y

No spatial interaction issues were found.

5. Does it appear that the area is free of potentially adverse seismic interactions that could cause flooding or spray in the area? — Y

The area is free of potential adverse seismic interactions that could cause flooding or spray.

6. Does it appear that the area is free of potentially adverse seismic interactions that could cause fire in the area? — Y

No credible sources that could cause a fire in the area.

7. Does it appear that the area is free of potentially adverse seismic interactions associated with housekeeping practices, storage of portable equipment, and temporary installations (e.g. scaffolding, lead shielding)? — Y

Nearby scaffolding is in accordance with plant procedures and is properly secured. Small section of removed handrail is adequately tied off.

8. Have you looked for and found no other seismic conditions that could adversely affect the safety functions of the equipment in the area? — Y

No issues were identified.

Comments

Includes DC-2-04-P-VOM-MS-2-FCV-37

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

SMM Scott M Mc 10/18/2012

Area Walk-By Checklist (AWC)

Status Y

Location: Building: Pipeway Floor El. 115 Room, Area: 2-FCV-41

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

1. Does the anchorage of equipment in the area appear to be free of potentially adverse seismic conditions (if visible without necessarily opening cabinets) Y

Piping and conduit are well supported.

2.Does anchorage of equipment in the area appear to be free of significant degraded conditions? Y

Minor surface corrosion observed on structural steel, valves, and supports. No significant issues.

3.Based on visual inspection from the floor, do the cable/conduit raceways and HVAC ducting appear to be free of potentially adverse seismic conditions (e.g., condition of supports is adequate and fill conditions of cable trays appear to be inside acceptable limits)? Y

Conduit is well supported. No ducts or cable trays in the area.

4. Does it appear that the area is free of potentially adverse seismic spatial interactions with other equipment in the area(e.g., ceiling tiles and lighting)? Y

FCV-41 is relatively protected from falling items by structural steel, walkway grating, and piping.

5. Does it appear that the area is free of potentially adverse seismic interactions that could cause flooding or spray in the area? Y

6. Does it appear that the area is free of potentially adverse seismic interactions that could cause fire in the area? Y

No likely sources

7. Does it appear that the area is free of potentially adverse seismic interactions associated with housekeeping practices, storage of portable equipment, and temporary installations (e.g. scaffolding, lead shielding)? Y

Scaffolding is braced and clamped with u-bolts to the steel structure and handrails

8. Have you looked for and found no other seismic conditions that could adversely affect the safety functions of the equipment in the area? Y

Loose shim plate on rupture restraint found in area. See Attachment 1 for resolution.

Comments

Includes DC-2-04-V-MS-2-FCV-41.

Evaluated by: DKN Date: 10/22/2012

SMM 10/24/2012

Area Walk-By Checklist (AWC)

Diablo Canyon Power Plant, Unit 2

Building: Pipeway Floor El. 115 Room, Row/Col: 2-FCV-41 Attachment 1, Page 1 of 1

Licensing Basis Evaluation

Issue:

A loose shim plate was found on a rupture restraint in the area of FCV-41. This plate could become an SISI source during a seismic event.

Evaluation:

This loose shim is a 3/4" thick plate on Rupture Restraint 2025-8RT. This rupture restraint is on Main Steam Lead 2-2, approximately 20' downstream of FCV-41, and is shown in drawings 460076 and 443376. Subsequent review of these drawings shows that this restraint is inactive and abandoned in place. An ATMM was issued to remove the shim plates at this restraint location, per A/R A0623615 and associated EDT 29539 (SAP DIR 4000000039). Since this restraint is inactive and abandoned in place, the main steam system will not be adversely affected by the loss of this plate.

The shim plate was found on the bottom north corner, and slid down in a slanted orientation towards the bottom of the restraint. There is floor grating on both sides of the restraint approximately 1' below the shim location. The shim was removed from the slanted location and set on this grating nearby, greater than 5' from any SISI targets. The shim plate itself is therefore not an SISI source, and the as-left condition is acceptable.

Therefore, this condition does not impact the safe operation of DCPP, but the loose shim plate should be removed and coatings repaired on the abandoned rupture restraint.

Notification Required: Yes (50511722)

Evaluated by: SMM 10/22/12

Reviewed by: 10/22/12

Area Walk-By Checklist (AWC)

Status Y

Location: Building: Auxiliary Floor El. 62 Room, Area: 2-FCV-641A

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

1. Does the anchorage of equipment in the area appear to be free of potentially adverse seismic conditions (if visible without necessarily opening cabinets) Y

Piping and RHR pump 2-1 are well supported

2.Does anchorage of equipment in the area appear to be free of significant degraded conditions? Y

No significant degradation observed.

3.Based on visual inspection from the floor, do the cable/conduit raceways and HVAC ducting appear to be free of potentially adverse seismic conditions (e.g., condition of supports is adequate and fill conditions of cable trays appear to be inside acceptable limits)? Y

Duct and conduits are well supported. No cable trays. Steel wall ladders are anchored.

4. Does it appear that the area is free of potentially adverse seismic spatial interactions with other equipment in the area(e.g., ceiling tiles and lighting)? Y

Lights are conduit hung with balls and socket connections at the ceiling. No issues.

5. Does it appear that the area is free of potentially adverse seismic interactions that could cause flooding or spray in the area? Y

6. Does it appear that the area is free of potentially adverse seismic interactions that could cause fire in the area? Y

No likely sources

7. Does it appear that the area is free of potentially adverse seismic interactions associated with housekeeping practices, storage of portable equipment, and temporary installations (e.g. scaffolding, lead shielding)? Y

Good housekeeping practices were observed in the room. Crane hoist chains are restrained

8. Have you looked for and found no other seismic conditions that could adversely affect the safety functions of the equipment in the area? Y

No other concerns

Comments

Includes DC-2-10-P-VOM-RHR-2-FCV-641A

Evaluated by: DKN Date: 10/18/2012

SMM 10/19/2012

Area Walk-By Checklist (AWC)

Status Y

Location: Building: Auxiliary Floor El. 100 Room, Area: 2-FCV700

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

1. Does the anchorage of equipment in the area appear to be free of potentially adverse seismic conditions (if visible without necessarily opening cabinets) Y

Reviewed piping, conduit, cable trays, junction boxes. HVAC ducting and equipment, backup air bottle, and area lighting.

2.Does anchorage of equipment in the area appear to be free of significant degraded conditions? Y

HVAC axial fan is adequately supported. Backup air bottle for AOV is properly restrained.

3.Based on visual inspection from the floor, do the cable/conduit raceways and HVAC ducting appear to be free of potentially adverse seismic conditions (e.g., condition of supports is adequate and fill conditions of cable trays appear to be inside acceptable limits)? Y

Piping, conduit and cable trays are rigidly supported. Some piping in the area is rod-hung and flexible, but no safety related components are underneath. Wall mounted junction boxes are small and adequately supported. Room lighting fixtures are hung by chains.

4. Does it appear that the area is free of potentially adverse seismic spatial interactions with other equipment in the area(e.g., ceiling tiles and lighting)? Y

5. Does it appear that the area is free of potentially adverse seismic interactions that could cause flooding or spray in the area? Y

6. Does it appear that the area is free of potentially adverse seismic interactions that could cause fire in the area? Y

7. Does it appear that the area is free of potentially adverse seismic interactions associated with housekeeping practices, storage of portable equipment, and temporary installations (e.g. scaffolding, lead shielding)? Y

8. Have you looked for and found no other seismic conditions that could adversely affect the safety functions of the equipment in the area? Y

All conduit runs connected to both the Reactor Building wall and the Auxiliary Building room ceiling have flexible connections.

Comments

Includes DC-2-23-P-VOS-VAC-2-FCV-700.

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

DRC D. R. Pan 10/18/2012

DLC 11/19/12

Area Walk-By Checklist (AWC)

Status N Y

Location: Building: Auxiliary | Floor El. 100 | Room, Area: 2-HT-EH-29A | JRK 11/20/12

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

1. Does the anchorage of equipment in the area appear to be free of potentially adverse seismic conditions (if visible without necessarily opening cabinets) — Y

Reviewed room lighting, piping, conduit, junction boxes, HVAC ducting, filters, and blowers. Three sides of the room and the ceiling are formed from sheet metal insulated panels that are connected at the seams.

2. Does anchorage of equipment in the area appear to be free of significant degraded conditions? — Y

3. Based on visual inspection from the floor, do the cable/conduit raceways and HVAC ducting appear to be free of potentially adverse seismic conditions (e.g., condition of supports is adequate and fill conditions of cable trays appear to be inside acceptable limits)? — Y

No cable trays in room and conduit is generally well supported.

4. Does it appear that the area is free of potentially adverse seismic spatial interactions with other equipment in the area(e.g., ceiling tiles and lighting)? — Y

Lighting fixtures are supported from lighting conduit which is adequately anchored from the sheet metal panels that form the ceiling of the room.

5. Does it appear that the area is free of potentially adverse seismic interactions that could cause flooding or spray in the area? — Y

6. Does it appear that the area is free of potentially adverse seismic interactions that could cause fire in the area? — Y

7. Does it appear that the area is free of potentially adverse seismic interactions associated with housekeeping practices, storage of portable equipment, and temporary installations (e.g. scaffolding, lead shielding)? — Y

8. Have you looked for and found no other seismic conditions that could adversely affect the safety functions of the equipment in the area? — N Y

In the northeast corner, the roof of metal room is severely corroded. A North-South running roof seam is also degraded but to a lesser extent. For disposition see Attachment 1. A nearby pipe support has minor corrosion at the welds which appear to have remained unpainted since the support was installed (does not impact integrity of the support). For disposition see Attachment 2.

JRK DLC 11/20/12 11/19/12

Comments

Includes DC-2-23-E-HT-2EH-29A.

Evaluated by: TRK Thomas R. Kipp Date: 10/25/2012

DRC [signature] 10/23/12

Area Walk By Checklist (AWC)

Diablo Canyon Power Plant, Unit 2

Building: Auxiliary Floor El. 100 Room, Row/Col: 2-HT-EH-29A

Licensing Basis Evaluation

Issue:

U-2 Post Accident Sampling Room (Mechanical Room at Elev. 100' Aux. Bldg) it was noted that the sheet metal ceiling panel is severely corroded in the northeast corner of the room and one batten section is corroded and hanging down from the ceiling.

Evaluation:

In the current condition, it's judged that the ceiling panel section will remain in place as the remaining (3) panel battens remain intact and capable of performing their intended design function. This condition needs to be corrected to eliminate a potential SISI issue and a potential personnel hazard.

This issue is within the scope of the Maintenance Rule Program. The Post Accident Sampling Room and its associated Mechanical Room @ Elevation 100' are required as part of the EOP (Emergency Operating Procedures). The corrosion, as found, does not affect the room's ability to perform its function as related to the EOP.

The System Engineer indicated that the above condition is similar to the past condition found in the Unit 1 Post LOCA Sampling Mechanical Room. The Unit 1 solution was to replace the entire Post-LOCA Sampling Mechanical Room steel enclosure.

Recommendation:

Replace the Unit 2 Post-LOCA Sampling Mechanical Room steel enclosure.

Notification Required: Yes (50511306)

Evaluated by: Patricia Huang 10/23/12

Reviewed by: J R. Lynn 10/23/12

Area Walk By Checklist (AWC)

Diablo Canyon Power Plant, Unit 2

Building: Auxiliary Floor El. 100 Room, Row/Col: 2-HT-EH-29A

Licensing Basis Evaluation

Issue:

A nearby pipe support has minor corrosion at the welds which appear to have remained unpainted since the support was installed (does not impact integrity of the support). The Pipe Support number is 2EE-641. It is Design Class II and is located on Line 2-H-3108-2" (Auxiliary Building Steam Heater Return Header).

Evaluation:

The corrosion seems do not affect the structural integrity of the pipe support. The pipe support remains capable of performing its intended design function.

Recommendation:

Clean, prepare and recoat this pipe support

Notification Required: Yes (50519965)

Evaluated by: Patrick Huang 10/23/12

Reviewed by: [signature] 10/23/12

Area Walk-By Checklist (AWC)

Status Y

Location: Building: Pipeway Floor El. 115 Room, Area: 2-LCV-110

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

1. Does the anchorage of equipment in the area appear to be free of potentially adverse seismic conditions (if visible without necessarily opening cabinets) Y

Concrete anchors holding fluorescent lamp ballast on the containment wall are corroded. Degradation is judged to not significantly impact the capacity of the expansion anchors at this time. See Attachment 1 for disposition.

2. Does anchorage of equipment in the area appear to be free of significant degraded conditions? Y

See question 1 above. Attachment 1 addresses corrosion of the anchors.

3. Based on visual inspection from the floor, do the cable/conduit raceways and HVAC ducting appear to be free of potentially adverse seismic conditions (e.g., condition of supports is adequate and fill conditions of cable trays appear to be inside acceptable limits)? Y

4. Does it appear that the area is free of potentially adverse seismic spatial interactions with other equipment in the area(e.g., ceiling tiles and lighting)? Y

5. Does it appear that the area is free of potentially adverse seismic interactions that could cause flooding or spray in the area? Y

6. Does it appear that the area is free of potentially adverse seismic interactions that could cause fire in the area? Y

7. Does it appear that the area is free of potentially adverse seismic interactions associated with housekeeping practices, storage of portable equipment, and temporary installations (e.g. scaffolding, lead shielding)? Y

8. Have you looked for and found no other seismic conditions that could adversely affect the safety functions of the equipment in the area? Y

Valves FW-2-LCV-106 & -107, FW-2-142 have corrosion at base of yokes that may be significant. Attachment 2 addresses the corrosion.

Comments

Includes DC-2-03-P-VOH-FW-2-LCV-110 and DC-2-03-P-VOM-FW-2-LCV-106.

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

SMM Scott Miller 10/22/12

Area Walk-By Checklist (AWC)

Diablo Canyon Power Plant, Unit 2

Building: Pipeway Floor El. 115 Room, Row/Col: 2-LCV-110 Attachment 1, Page 1 of 1

Licensing Basis Evaluation

Issue:

Concrete anchors holding a fluorescent lamp on the containment wall are corroded.

Evaluation:

The level of degradation due to the corrosion is currently not sufficient to compromise the structural integrity of the expansion anchor. Therefore, the light fixture is adequately support and will not become a SISIP source during an earthquake.

Therefore, this condition does not impact the safe operation of DCPP, but the expansion anchor should be cleaned and recoated.

Notification Required: Yes (50509188)

Evaluated by: William R. Horstman WRH5 8/27/12

Reviewed by: Scott Miller SXM9 10/22/12

Area Walk-By Checklist (AWC)

Diablo Canyon Power Plant, Unit 1

Building: Pipeway Floor El. 115 Room, Row/Col: 2-LCV-110 Attachment 2, Page 1 of 1

Licensing Basis Evaluation

Issue:

Significant corrosion on yokes for valve nos. FW-2-LCV-106, FW-2-LCV-107, FW-1-142.

Evaluation:

SAP Notification search located the following notifications which previously identified this corrosion:

- 50033778 - FW-2-LCV-106 Bonnet Replacement Request
- 50033779 - FW-2-LCV-107 Bonnet Replacement Request
- 50289375 - Clean and Paint FW-2-137
- 50289376 - Clean and Paint FW-2-142

Notifications have been updated to indicate current findings.

Notification Required: No (documented in existing Notifications)

Evaluated by: William R. Hor 8/21/12

Reviewed by: Scott Miller SxM9 10/22/12

Area Walk-By Checklist (AWC)

Status Y

Location: Building: Auxiliary Floor El. 100 Room, Area: 2-LCV112B

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

1. Does the anchorage of equipment in the area appear to be free of potentially adverse seismic conditions (if visible without necessarily opening cabinets) Y

No adverse conditions observed.

2. Does anchorage of equipment in the area appear to be free of significant degraded conditions? Y

3. Based on visual inspection from the floor, do the cable/conduit raceways and HVAC ducting appear to be free of potentially adverse seismic conditions (e.g., condition of supports is adequate and fill conditions of cable trays appear to be inside acceptable limits)? Y

No cable trays. Conduit and pipe are all well supported. HVAC duct is braced.

4. Does it appear that the area is free of potentially adverse seismic spatial interactions with other equipment in the area(e.g., ceiling tiles and lighting)? Y

Overhead lighting has a safety chain restraint.

5. Does it appear that the area is free of potentially adverse seismic interactions that could cause flooding or spray in the area? Y

6. Does it appear that the area is free of potentially adverse seismic interactions that could cause fire in the area? Y

No likely sources.

7. Does it appear that the area is free of potentially adverse seismic interactions associated with housekeeping practices, storage of portable equipment, and temporary installations (e.g. scaffolding, lead shielding)? Y

8. Have you looked for and found no other seismic conditions that could adversely affect the safety functions of the equipment in the area? Y

Comments

Includes DC-2-08-P-VOM-CVCS-2-LCV-112, DC-2-08-P-VOM-CVCS-2-8104, and DC-2-08-P-VOA-CVCS-2-FCV-110A. Some loose pipe insulation was observed on a pipe at the south wall of the room (Line 1451-2). Valve on the line is CVS-2-8471. See Attachment No. 1 for disposition. The emergency lighting does not have cable restraint. See Attachment No. 2 for disposition.

Evaluated by: DKN Date: 10/24/2012

DRC 10/23/12

Area Walk By Checklist (AWC)

Diablo Canyon Power Plant, Unit 2

Building: Auxiliary Floor El. 100 Room, Row/Col: 2-LCV112B Attachment 1, Page 1 of 1

Licensing Basis Evaluation

Issue:

Loose insulation was noted on nearby pipe line no. 1451 (Boric Acid Bypass to Charging Pumps). Specifically, the insulation has become loose along the bottom of the pipe, and is simply sitting on top of the pipe.

Evaluation:

The affected pipe line is safety-related/seismically qualified, but the loose insulation does not impact the qualification of the pipe. Due to the light weight and flexibility of the insulation, it is not considered to be a potential SISIP source that could fall during an earthquake and cause damage to SISIP targets in the area.

Recommendation:

Repair/replace insulation.

Notification Required: Yes (50510550)

Evaluated by: Patrick Huang 10/23/12

Reviewed by: [signature] 10/23/12

Area Walk By Checklist (AWC)

Diablo Canyon Power Plant, Unit 2

Building: Auxiliary Floor El. 100 Room, Row/Col: 2-LCV112B

Licensing Basis Evaluation

Issue:

The emergency lighting does not have cable restraint.

Evaluation:

The emergency battery operated lights have been seismically tested and documented in Legacy Calculation No ES-098. Test results show that the BOLs are seismically qualified in the Auxiliary Building up to elevation 163', and Turbine Building elevation 94.5'. No modification is required in these areas (see Sheet 21 of the calculation.) Therefore, the cable restraint is not required for the subject BOL.

Notification Required: No

Evaluated by: Patricia Huang 10/23/12

Reviewed by: [signature] 10/23/12

Area Walk-By Checklist (AWC)

Status Y

Location: Building: Auxiliary Floor El. 115 Room, Area: 2-LCV115

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

1. Does the anchorage of equipment in the area appear to be free of potentially adverse seismic conditions (if visible without necessarily opening cabinets) Y

All anchorage in the area appears to be in good condition.

2.Does anchorage of equipment in the area appear to be free of significant degraded conditions? Y

No corrosion or other degradation was identified in the area.

3.Based on visual inspection from the floor, do the cable/conduit raceways and HVAC ducting appear to be free of potentially adverse seismic conditions (e.g., condition of supports is adequate and fill conditions of cable trays appear to be inside acceptable limits)? Y

All cable/conduit raceways are properly anchored. No trays appear overfilled. No HVAC ducting in area.

4. Does it appear that the area is free of potentially adverse seismic spatial interactions with other equipment in the area(e.g., ceiling tiles and lighting)? Y

No seismic interaction issues were identified.

5. Does it appear that the area is free of potentially adverse seismic interactions that could cause flooding or spray in the area? Y

All fire water piping appears to be adequately secured.

6. Does it appear that the area is free of potentially adverse seismic interactions that could cause fire in the area? Y

Two hydrogen lines in area appear to be adequately secured.

7. Does it appear that the area is free of potentially adverse seismic interactions associated with housekeeping practices, storage of portable equipment, and temporary installations (e.g. scaffolding, lead shielding)? Y

Mobile cart (rad monitor) has its wheels locked in place. Air monitor is small and located >5 ft from any targets. Portable fan has been tied off to a steel support. (6) Ladders next to cabinet 2-PM-205 are chained in designated ladder storage area. Panel 2-PM-205 was determined to be non safety related. No issues to report.

8. Have you looked for and found no other seismic conditions that could adversely affect the safety functions of the equipment in the area? Y

No issues were identified.

Comments

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

SMM Scott Miller 10/18/2012

Area Walk-By Checklist (AWC)

Status Y

Location: Building: Auxiliary | Floor El. 115 | Room, Area: 2-LD30

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

1. Does the anchorage of equipment in the area appear to be free of potentially adverse seismic conditions (if visible without necessarily opening cabinets) Y

All anchorage appears to be in good condition.

2. Does anchorage of equipment in the area appear to be free of significant degraded conditions? Y

No corrosion is present.

3. Based on visual inspection from the floor, do the cable/conduit raceways and HVAC ducting appear to be free of potentially adverse seismic conditions (e.g., condition of supports is adequate and fill conditions of cable trays appear to be inside acceptable limits)? Y

All cable/conduit raceways and HVAC ducting appear to be properly secured.

4. Does it appear that the area is free of potentially adverse seismic spatial interactions with other equipment in the area(e.g., ceiling tiles and lighting)? Y

Lights are rod hung and could impact conduit and cable trays. Judged to be incapable of damaging either the conduit or the cable trays. Ball and socket type joints restrain lights from falling.

5. Does it appear that the area is free of potentially adverse seismic interactions that could cause flooding or spray in the area? Y

No fire water piping in the area.

6. Does it appear that the area is free of potentially adverse seismic interactions that could cause fire in the area? Y

No credible sources that could cause a fire were found.

7. Does it appear that the area is free of potentially adverse seismic interactions associated with housekeeping practices, storage of portable equipment, and temporary installations (e.g. scaffolding, lead shielding)? Y

No temporary equipment in the area.

8. Have you looked for and found no other seismic conditions that could adversely affect the safety functions of the equipment in the area? Y

No issues were identified.

Comments

Includes DC-2-04-LD30.

Evaluated by: KTM Date: 10/15/2012

SMM 10/18/2012

Area Walk-By Checklist (AWC)

Status Y

Location: Building: Auxiliary Floor El. 100 Room, Area: 2-LPH79

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

1. Does the anchorage of equipment in the area appear to be free of potentially adverse seismic conditions (if visible without necessarily opening cabinets) Y

All anchorage appears to be in good condition.

2.Does anchorage of equipment in the area appear to be free of significant degraded conditions? Y

No corrosion was identified in the area.

3.Based on visual inspection from the floor, do the cable/conduit raceways and HVAC ducting appear to be free of potentially adverse seismic conditions (e.g., condition of supports is adequate and fill conditions of cable trays appear to be inside acceptable limits)? Y

All conduit and HVAC ducting appear to be properly secured.

4. Does it appear that the area is free of potentially adverse seismic spatial interactions with other equipment in the area(e.g., ceiling tiles and lighting)? Y

Lights are rod hung and are incapable of damaging nearby equipment or conduit. No ceiling tiles in the area.

5. Does it appear that the area is free of potentially adverse seismic interactions that could cause flooding or spray in the area? Y

No fire water piping in the area.

6. Does it appear that the area is free of potentially adverse seismic interactions that could cause fire in the area? Y

No credible sources that could cause a fire were found.

7. Does it appear that the area is free of potentially adverse seismic interactions associated with housekeeping practices, storage of portable equipment, and temporary installations (e.g. scaffolding, lead shielding)? Y

No adverse seismic interaction conditions were found related to temporary equipment.

8. Have you looked for and found no other seismic conditions that could adversely affect the safety functions of the equipment in the area? Y

No issues were identified.

Comments

Includes DC-2-13-SFPPTS.

Evaluated by: KTM Date: 10/15/2012

SMM 10/18/2012

Area Walk-By Checklist (AWC)

Status Y

Location: Building: Auxiliary Floor El. 115 Room, Area: 2-LT-102

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

1. Does the anchorage of equipment in the area appear to be free of potentially adverse seismic conditions (if visible without necessarily opening cabinets) Y

Reviewed room lighting, overhead piping, cable trays, conduit, HVAC ducting, threaded fire protection piping, and junction box. All appear to be adequately restrained.

2. Does anchorage of equipment in the area appear to be free of significant degraded conditions? Y

3. Based on visual inspection from the floor, do the cable/conduit raceways and HVAC ducting appear to be free of potentially adverse seismic conditions (e.g., condition of supports is adequate and fill conditions of cable trays appear to be inside acceptable limits)? Y

4. Does it appear that the area is free of potentially adverse seismic spatial interactions with other equipment in the area(e.g., ceiling tiles and lighting)? Y

5. Does it appear that the area is free of potentially adverse seismic interactions that could cause flooding or spray in the area? Y

6. Does it appear that the area is free of potentially adverse seismic interactions that could cause fire in the area? Y

7. Does it appear that the area is free of potentially adverse seismic interactions associated with housekeeping practices, storage of portable equipment, and temporary installations (e.g. scaffolding, lead shielding)? Y

An unrestrained trash can is located near safety related components. Trash can does not pose an interaction hazard for the transmitter DC-2-08-I-T-LT-102. For disposition see Attachment 1.

8. Have you looked for and found no other seismic conditions that could adversely affect the safety functions of the equipment in the area? Y

Comments

Includes DC-2-08-I-T-LT-102.

Evaluated by: TRK Thomas R. Kipp Date: 10/25/2012

DRC 10/23/12

Area Walk-By Checklist (AWC)

Diablo Canyon Power Plant, Unit 2

Building: Auxiliary Floor El. 115 Room, Row/Col: 2-LT-102 Attachment 1, Page 1 of 1

Licensing Basis Evaluation

Issue:

Large, unrestrained trash can was found adjacent to unistrut-type frame for tubing associated with Level Transmitter DC-2-08-I-T-LT-102.

Evaluation:

The trash can was found @ elevation 115' in the Unit 2 Auxiliary Building, approximately 4 feet to the southeast of the exterior of Boric Acid Storage Tank No. 2-2 and approximately 3 feet to the southeast of the unistrut-type frame for the tubing. The actual tubing and Level Transmitter 2-LT-102 are located high enough such that a direct interaction hazard does not exist between them and the trash can.

The unistrut-type tubing support is fairly robust. It has a primary member comprised of back-to-back unistrut channels as well as knee braces comprised of single unistrut channels. All three members are anchored to the 115' elevation floor with concrete expansion anchors. Based on the close proximity of the trash can to these members and the relatively small, distributed mass of the trash can, it is judged that the impact load from the trash can during a seismic event would not compromise the structural integrity of the tubing support.

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

Recommendations:

Acceptable as-is. No action required

Notification Required: No

Evaluated by: DRC D J R Lee 10/18/12

Reviewed by: WRH William R. Hon 10/18/12

Area Walk-By Checklist (AWC)

Status Y

Location: Building: Pipeway Floor El. 115 Room, Area: 2-PCV-20

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

1. Does the anchorage of equipment in the area appear to be free of potentially adverse seismic conditions (if visible without necessarily opening cabinets) Y

Lights and conduit are well supported. Structural steel framing is braced and rugged. Floor grating has anchor clips.

2. Does anchorage of equipment in the area appear to be free of significant degraded conditions? Y

Some surface corrosion observed on components. No significant issues.

3. Based on visual inspection from the floor, do the cable/conduit raceways and HVAC ducting appear to be free of potentially adverse seismic conditions (e.g., condition of supports is adequate and fill conditions of cable trays appear to be inside acceptable limits)? Y

Conduit is well supported.

4. Does it appear that the area is free of potentially adverse seismic spatial interactions with other equipment in the area(e.g., ceiling tiles and lighting)? Y

Lighting is well supported

5. Does it appear that the area is free of potentially adverse seismic interactions that could cause flooding or spray in the area? Y

6. Does it appear that the area is free of potentially adverse seismic interactions that could cause fire in the area? Y

No likely sources.

7. Does it appear that the area is free of potentially adverse seismic interactions associated with housekeeping practices, storage of portable equipment, and temporary installations (e.g. scaffolding, lead shielding)? Y

Good housekeeping practices in the area. Ladder is tied off. Jib crane above is tied off.

8. Have you looked for and found no other seismic conditions that could adversely affect the safety functions of the equipment in the area? Y

Comments

Includes DC-2-04-P-VR-MS-2-RV-3 and DC-2-04-P-VR-MS-2-RV-8 and DC-2-04-P-VOA-MS-2-PCV-20

Evaluated by: DKN Date: 10/18/2012

SMM 10/19/2012

DRC 11/19/12 TRK 11/20/12

Area Walk-By Checklist (AWC)

Status N Y

Location: Building: Turbine Floor El. 85 Room, Area: 2-PD25

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

1. Does the anchorage of equipment in the area appear to be free of potentially adverse seismic conditions (if visible without necessarily opening cabinets) N Y

DRC 11/19/12 TRK 11/20/12

Reviewed adjacent panels, conduit, large and small diameter piping, room lighting fixtures, and cable trays. There are a lot of class 2 systems overheadA clevis for the rod hanger for a 2" copper air line located Northeast of panel PD25 and behind MCC-221 (column line 23-G) is loose and is not carrying the dead load as expected. For disposition see Attachment 1.

2. Does anchorage of equipment in the area appear to be free of significant degraded conditions? Y

3. Based on visual inspection from the floor, do the cable/conduit raceways and HVAC ducting appear to be free of potentially adverse seismic conditions (e.g., condition of supports is adequate and fill conditions of cable trays appear to be inside acceptable limits)? Y

Cable trays are rigidly supported from the ceiling and piping is rod or spring hung.

4. Does it appear that the area is free of potentially adverse seismic spatial interactions with other equipment in the area(e.g., ceiling tiles and lighting)? Y

A Room lighting fixture is secured to a suspended Unistrut beam by ball and socket connections which constitutes a very flexible system. Lighting will certainly impact adjacent piping and may impact MCC 221 should it fall. However, the likely failure will be falling of the fluorescent bulbs which may be jarred loose. Such a failure will have no impact on the panels.

5. Does it appear that the area is free of potentially adverse seismic interactions that could cause flooding or spray in the area? Y

6. Does it appear that the area is free of potentially adverse seismic interactions that could cause fire in the area? Y

7. Does it appear that the area is free of potentially adverse seismic interactions associated with housekeeping practices, storage of portable equipment, and temporary installations (e.g. scaffolding, lead shielding)? Y

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

DRC 11/19/12 TRK 11/20/12

The Service Air line in the area is very flexible. The 3" piping is rod hung behind MCC 221 and then runs upward where it rests on plates at the next two supports. This seems to be marginal even for class 2 piping where class 1 components are located below. If the pipe slips off the plates there will be approximately 60' of unsupported piping. For disposition see Attachment 2.

Comments

Includes DC-2-67-E-LC-PD25.

Evaluated by: TRK Thomas R. Kipp Date: 10/25/2012

DRC [signature] 10/23/12

Area Walk-By Checklist (AWC)

Diablo Canyon Power Plant, Unit 2

Building: Turbine Floor El. 85 Room, Row/Col: 2-PD25

Licensing Basis Evaluation

Issue:

The clevis on a rod hanger for a copper airline in the overhead was noted as being loose. The Airline runs north-south, just to the west of column line G. The rod hanger is near column line 23.

Evaluation:

The copper airline is non-safety related. Per SISIP Manual Figure No. 14, there are no SISIP targets in this area, so seismic interaction is not a concern. Therefore, the loose clevis has no impact on safe operation of DCPP.

Recommendation:

Clevis be tightened.

Notification Required: Yes (50513642).

Evaluated by: _____ 10/18/12

Reviewed by: _____ 10/19/12

Area Walk-By Checklist (AWC)

Diablo Canyon Power Plant, Unit 2

Building: Turbine Floor El. 85 Room, Row/Col: 2-PD25

Licensing Basis Evaluation

Issue:

The supports for service air line no. 2149-3" are potentially inadequate for any lateral seismic loading. This air line is located in the overhead, running north-south just to the west of column line G, between column lines 23 and 28. The supports in-question provide vertical support through the 3" diameter pipe resting on top of a tube steel stanchion, without any provisions to prevent the pipe from sliding off during an earthquake. Support nos. include 334-4132R, 334-4134R, and 334-4135R.

Evaluation:

The airline is non-safety related. Per SISIP Manual Figure No. 14, there are no SISIP targets in this area, so seismic interaction is not a concern. Therefore, the support configuration has no impact on safe operation of DCPP.

Recommendation:

The supports be modified to provide lateral restraint for the airline.

Notification Required: Yes (50513646).

Evaluated by: William R. Hons 10/19/12

Reviewed by: [signature] 10/19/12

Area Walk-By Checklist (AWC)

Status Y

Location: Building: Auxiliary Floor El. 85 Room, Area: 2-PM-101

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

1. Does the anchorage of equipment in the area appear to be free of potentially adverse seismic conditions (if visible without necessarily opening cabinets) Y

Reviewed piping including large diameter CCW piping, conduit, stainless steel tubing, and minor housekeeping items.

2.Does anchorage of equipment in the area appear to be free of significant degraded conditions? Y

3.Based on visual inspection from the floor, do the cable/conduit raceways and HVAC ducting appear to be free of potentially adverse seismic conditions (e.g., condition of supports is adequate and fill conditions of cable trays appear to be inside acceptable limits)? Y

Piping, including large diameter CCW piping is well supported. Conduit is rigidly supported. Small diameter piping near ceiling is rod supported. Horizontal load will concentrate at short rods.

4. Does it appear that the area is free of potentially adverse seismic spatial interactions with other equipment in the area(e.g., ceiling tiles and lighting)? Y

5. Does it appear that the area is free of potentially adverse seismic interactions that could cause flooding or spray in the area? Y

6. Does it appear that the area is free of potentially adverse seismic interactions that could cause fire in the area? Y

7. Does it appear that the area is free of potentially adverse seismic interactions associated with housekeeping practices, storage of portable equipment, and temporary installations (e.g. scaffolding, lead shielding)? Y

Old fans are stored unrestrained in the room. Temporary lighting is clamped to nearby supports. Neither of these are expected to affect the function of components in the room.

8. Have you looked for and found no other seismic conditions that could adversely affect the safety functions of the equipment in the area? Y

Comments

Includes DC-2-96-M-PNL-PM-101.

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

DRC [signature] 10/18/2012

Area Walk-By Checklist (AWC)

Status Y

Location: Building: Pipeway Floor El. 85 Room, Area: 2-PM-103

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

1. Does the anchorage of equipment in the area appear to be free of potentially adverse seismic conditions (if visible without necessarily opening cabinets) Y

2. Does anchorage of equipment in the area appear to be free of significant degraded conditions? Y

Piping anchors show signs of corrosion.

No issues, except for mild corrosion on the plate attaching the panel to the frame and the panel roof identified in the SWC DC-2-96-M-PNL-PM-103.

3. Based on visual inspection from the floor, do the cable/conduit raceways and HVAC ducting appear to be free of potentially adverse seismic conditions (e.g., condition of supports is adequate and fill conditions of cable trays appear to be inside acceptable limits)? Y

4. Does it appear that the area is free of potentially adverse seismic spatial interactions with other equipment in the area(e.g., ceiling tiles and lighting)? Y

Some conduit are closely spaced but judged not to have a significant adverse seismic effect.

5. Does it appear that the area is free of potentially adverse seismic interactions that could cause flooding or spray in the area? Y

6. Does it appear that the area is free of potentially adverse seismic interactions that could cause fire in the area? Y

7. Does it appear that the area is free of potentially adverse seismic interactions associated with housekeeping practices, storage of portable equipment, and temporary installations (e.g. scaffolding, lead shielding)? Y

8. Have you looked for and found no other seismic conditions that could adversely affect the safety functions of the equipment in the area? Y

Security grating shows corrosion, see photos on pages 3 and 4. A temporary fix was tagged which used rope to secure the grating. See Attachment 1 for disposition. Two conduit lines are closely spaced but judged not to have potentially adverse seismic interaction effects due to the closely spaced anchorage points. Flaking paint and oxidation were noted on conduits in the vicinity, including vital conduit no. K5882 and junction box BJF19, see photo on page 2. See Attachment 2 for disposition.

Comments

Includes DC-2-96-M-PNL-PM-103 and subcomponent DC-2-04-I-T-PT-514.

Evaluated by: KTM Date: 10/23/2012

SMM 10/22/12

Area Walk-By Checklist (AWC)

Diablo Canyon Power Plant, Unit 2

Building: Pipeway Floor El. 85 Room, Row/Col: 2-PM-103 Attachment 1, Page 1 of 1

Licensing Basis Evaluation

Issue:

General corrosion of the Architectural/Security grating was noted in the vicinity of Panel No. PM-103. Loose portion is secured with a rope.

Evaluation:

This condition has already been identified in Notification No. 50462075 (02/28/2012), which indicates that the degraded condition will not result in a hazard to SISIP targets in the vicinity (see Task No. 3) and that funding for repairs has been requested through the PHIP processes (see Task No. 7). Therefore, not further action is required.

Notification Required: No

Evaluated by: William R. Horn WRHS 8/27/12

Reviewed by: SxMG 10/22/12

Area Walk-By Checklist (AWC)

Diablo Canyon Power Plant, Unit 2

Building: Pipeway Floor El. 85 Room, Row/Col: 2-PM-103 Attachment 2, Page 1 of 1

Licensing Basis Evaluation

Issue:

Flaking paint and oxidation were noted on conduits in the vicinity, including vital conduit no. K5882 and junction box BJF19.

Evaluation:

The extent of corrosion is not sufficient to compromise the integrity of the conduit, but should be cleaned and recoated in order to prevent further degradation.

Notification Required: Yes (50509235)

Evaluated by: William R. Howe WRH5 8/28/12

Reviewed by: [signature] SXM9 10/22/12

Area Walk-By Checklist (AWC)

Status Y

Location: Building: Auxiliary Floor El. 100 Room, Area: 2-PM-185

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

1. Does the anchorage of equipment in the area appear to be free of potentially adverse seismic conditions (if visible without necessarily opening cabinets) Y

No adverse conditions observed for cable tray and conduit supports.

2.Does anchorage of equipment in the area appear to be free of significant degraded conditions? Y

No significant degradation observed.

3.Based on visual inspection from the floor, do the cable/conduit raceways and HVAC ducting appear to be free of potentially adverse seismic conditions (e.g., condition of supports is adequate and fill conditions of cable trays appear to be inside acceptable limits)? Y

Cable trays and conduits are well supported. Cable trays are not overfilled.

4. Does it appear that the area is free of potentially adverse seismic spatial interactions with other equipment in the area(e.g., ceiling tiles and lighting)? Y

The panel is protected from overhead lighting.

5. Does it appear that the area is free of potentially adverse seismic interactions that could cause flooding or spray in the area? Y

The overhead fire water piping is braced.

6. Does it appear that the area is free of potentially adverse seismic interactions that could cause fire in the area? Y

No significant fuel sources.

7. Does it appear that the area is free of potentially adverse seismic interactions associated with housekeeping practices, storage of portable equipment, and temporary installations (e.g. scaffolding, lead shielding)? Y

No house keeping issues.

8. Have you looked for and found no other seismic conditions that could adversely affect the safety functions of the equipment in the area? Y

Comments

Includes DC-2-96-M-PNL-PM-185.

Evaluated by: DKN Date: 10/18/2012

DRC 10/19/2012

DRC 11/19/12

Area Walk-By Checklist (AWC)

Status N Y JRK 11/20/12

Location: Building: Auxiliary Floor El. 85 Room, Area: 2-PM-79

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

1. Does the anchorage of equipment in the area appear to be free of potentially adverse seismic conditions (if visible without necessarily opening cabinets) — Y

Reviewed piping, conduit, junction boxes, room lighting, wall panels, adjacent panel, sample station, sink and work area, storage cabinet, floor mounted panels, air diffuser panels, fire extinguisher, and gas bottle.

2. Does anchorage of equipment in the area appear to be free of significant degraded conditions? — Y

Clean environment.

3. Based on visual inspection from the floor, do the cable/conduit raceways and HVAC ducting appear to be free of potentially adverse seismic conditions (e.g., condition of supports is adequate and fill conditions of cable trays appear to be inside acceptable limits)? — Y

Piping, conduit, HVAC ducting are all well supported. Room lighting is adequately hung. Fire extinguisher and gas bottle are properly restrained.

4. Does it appear that the area is free of potentially adverse seismic spatial interactions with other equipment in the area(e.g., ceiling tiles and lighting)? — Y

What appears to be air deflector panels that are hung by thin wire from conduit running along the ceiling are clearly not seismically qualified and could impact nearby panels should they fall. The air diffusers are light weight and will likely have not impact on the function of the panels.

5. Does it appear that the area is free of potentially adverse seismic interactions that could cause flooding or spray in the area? — Y

6. Does it appear that the area is free of potentially adverse seismic interactions that could cause fire in the area? — Y

There are a number of combustible items related to the housekeeping items. The potential for fire will be essentially eliminated if the housekeeping issues are resolved. For disposition see Attachment 1.

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)? — N Y DRC 11/19/12 JRK 11/20/12

It appears that many of the items in the room may not be safety related. However there are numerous housekeeping issues in the room, some in the vicinity of safety related items. These include unrestrained garbage cans, unrestrained items on an unrestrained cabinet which has a broken door resting alongside the cabinet (required to be 12" horizontally and 3" vertically from any component), unrestrained equipment on wheels, a broom and an unrestrained bench in front of panels. For disposition see Attachment 1.

8. Have you looked for and found no other seismic conditions that could adversely affect the safety functions of the equipment in the area? — Y

Comments

Includes DC-2-96-M-PNL-PM-79.

Evaluated by: TRK Thomas R. Kipp Date: 10/25/2012

DRC DJK 10/23/12

Area Walk-By Checklist (AWC)

Diablo Canyon Power Plant, Unit 2

Building: Auxiliary Floor El. 85 Room, Row/Col: 2-PM-79 Attachment 1, Page 1 of 1

Licensing Basis Evaluation

Issue:

Various loose/unrestrained items were found in the Post-LOCA Sampling Room, including garbage cans, cabinets, broken cabinet door, equipment on wheels, loose items on top of cabinet, etc.

Evaluation:

SISIP Manual Figure 18 indicates that the Post-LOCA Sampling Room is Target Area No. 2GW-85-03. The corresponding targets are identified in the associated table. Based on the locations of the unrestrained items, and the vulnerability of the targets (PM-78, PM-79, tubing, conduits, etc.), the unrestrained items doe not present a hazard to the targets.

However, the condition is not in conformance with AD4.ID3 (SISIP Housekeeping Activities) and should be resolved by the Area Owner.

Notification Required: Yes (50513515)

Evaluated by: Wm R. Howe 9/19/12

Reviewed by: [signature] 10/19/12

Area Walk-By Checklist (AWC)

Status Y

Location: Building: Auxiliary Floor El. Room, Area: 2-PNL-ARP

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

1. Does the anchorage of equipment in the area appear to be free of potentially adverse seismic conditions (if visible without necessarily opening cabinets) Y

All visible anchorage to cabinets are in good condition.

2.Does anchorage of equipment in the area appear to be free of significant degraded conditions? Y

No degradation noted on any anchorage in the area.

3.Based on visual inspection from the floor, do the cable/conduit raceways and HVAC ducting appear to be free of potentially adverse seismic conditions (e.g., condition of supports is adequate and fill conditions of cable trays appear to be inside acceptable limits)? Y

Equipment in the area appear to be within acceptable limits.

4. Does it appear that the area is free of potentially adverse seismic spatial interactions with other equipment in the area(e.g., ceiling tiles and lighting)? Y

No potential adverse seismic spatial interactions in the room.

5. Does it appear that the area is free of potentially adverse seismic interactions that could cause flooding or spray in the area? Y

There is no fire piping in the room.

6. Does it appear that the area is free of potentially adverse seismic interactions that could cause fire in the area? Y

No fire or explosion sources found in the room.

7. Does it appear that the area is free of potentially adverse seismic interactions associated with housekeeping practices, storage of portable equipment, and temporary installations (e.g. scaffolding, lead shielding)? Y

There were no housekeeping items or temporary installations in the room.

8. Have you looked for and found no other seismic conditions that could adversely affect the safety functions of the equipment in the area? Y

Block walls have been retrofitted with steel members as restraints.

Comments

Includes DC-2-64-E-PNL-ARP & DC-2-23-E-PNL-PCCFC1.

Evaluated by: KTM Date: 10/15/2012

SMM 10/18/2012

Area Walk-By Checklist (AWC)

Status Y

Location: Building: Auxiliary Floor El. 73 Room, Area: 2-RHE1

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

1. Does the anchorage of equipment in the area appear to be free of potentially adverse seismic conditions (if visible without necessarily opening cabinets) Y

No adverse seismic conditions were identified.

2. Does anchorage of equipment in the area appear to be free of significant degraded conditions? Y

No anchorage issues in the area.

3. Based on visual inspection from the floor, do the cable/conduit raceways and HVAC ducting appear to be free of potentially adverse seismic conditions (e.g., condition of supports is adequate and fill conditions of cable trays appear to be inside acceptable limits)? Y

There are no cable/conduit raceways or HVAC ducting in the room.

4. Does it appear that the area is free of potentially adverse seismic spatial interactions with other equipment in the area(e.g., ceiling tiles and lighting)? Y

No ceiling tiles and no seismic interaction effects related to lighting.

5. Does it appear that the area is free of potentially adverse seismic interactions that could cause flooding or spray in the area? Y

No fire piping in the area.

6. Does it appear that the area is free of potentially adverse seismic interactions that could cause fire in the area? Y

No sources in the area that could cause a fire.

7. Does it appear that the area is free of potentially adverse seismic interactions associated with housekeeping practices, storage of portable equipment, and temporary installations (e.g. scaffolding, lead shielding)? Y

Temporary lighting was securely fastened to the handrails.

8. Have you looked for and found no other seismic conditions that could adversely affect the safety functions of the equipment in the area? Y

No adverse seismic conditions in the area.

Comments

Includes DC-2-10-M-HX-RHE1.

Evaluated by: KTM Date: 10/15/2012

SMM 10/16/2012

Area Walk-By Checklist (AWC)

Status Y

Location: Building: Auxiliary Floor El. 60 Room, Area: 2-RHRP2

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

1. Does the anchorage of equipment in the area appear to be free of potentially adverse seismic conditions (if visible without necessarily opening cabinets) Y

2.Does anchorage of equipment in the area appear to be free of significant degraded conditions? Y

3.Based on visual inspection from the floor, do the cable/conduit raceways and HVAC ducting appear to be free of potentially adverse seismic conditions (e.g., condition of supports is adequate and fill conditions of cable trays appear to be inside acceptable limits)? Y

Lights are suspended from junction boxes attached to the ceiling. Attachment of suspended conduit to box appears to allow hinge rotation (ball joint). The lights would be expected to swing in a seismic event, but they are judged unlikely to fall.

4. Does it appear that the area is free of potentially adverse seismic spatial interactions with other equipment in the area(e.g., ceiling tiles and lighting)? Y

5. Does it appear that the area is free of potentially adverse seismic interactions that could cause flooding or spray in the area? Y

6. Does it appear that the area is free of potentially adverse seismic interactions that could cause fire in the area? Y

7. Does it appear that the area is free of potentially adverse seismic interactions associated with housekeeping practices, storage of portable equipment, and temporary installations (e.g. scaffolding, lead shielding)? Y

Some temporary rad monitors appear to be adequately restrained and no targets that would be affected by it falling.

8. Have you looked for and found no other seismic conditions that could adversely affect the safety functions of the equipment in the area? Y

Comments

Includes DC-2-10-M-PP-RHRP2 and DC-2-10-P-VOM-RHR-2-FCV-641B

Evaluated by: FFG Fred Grant Date: 10-19-12

SMM Scott Miller 10/22/12

Area Walk-By Checklist (AWC)

Status Y

Location: Building: Auxiliary Floor El. 128' Room, Area: 2-RNAR-A

Instructions for Completing Checklist

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

1. Does the anchorage of equipment in the area appear to be free of potentially adverse seismic conditions (if visible without necessarily opening cabinets) Y

Reviewed conduit, cable trays, halon line, room lighting, HVAC ducting, and junction boxes.

2. Does anchorage of equipment in the area appear to be free of significant degraded conditions? Y

3. Based on visual inspection from the floor, do the cable/conduit raceways and HVAC ducting appear to be free of potentially adverse seismic conditions (e.g., condition of supports is adequate and fill conditions of cable trays appear to be inside acceptable limits)? Y

Cable trays are rigidly supported and the fill level is acceptable. The various layers of conduit are also rigidly supported (Class 1).

4. Does it appear that the area is free of potentially adverse seismic spatial interactions with other equipment in the area(e.g., ceiling tiles and lighting)? Y

The halon piping is quite rigid but contacts larger conduit runs at several places. These impacts will not affect the function of the halon system.

5. Does it appear that the area is free of potentially adverse seismic interactions that could cause flooding or spray in the area? Y

6. Does it appear that the area is free of potentially adverse seismic interactions that could cause fire in the area? Y

7. Does it appear that the area is free of potentially adverse seismic interactions associated with housekeeping practices, storage of portable equipment, and temporary installations (e.g. scaffolding, lead shielding)? Y

No significant housekeeping issues were noted.

8. Have you looked for and found no other seismic conditions that could adversely affect the safety functions of the equipment in the area? Y

Comments

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

DRC [signature] 10/18/2012

Area Walk-By Checklist (AWC)

Status Y

Location: Building: Auxiliary Floor El. 140 Room, Area: 2-RV-13

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

1. Does the anchorage of equipment in the area appear to be free of potentially adverse seismic conditions (if visible without necessarily opening cabinets) Y

All the anchorage is free of potentially adverse seismic conditions.

2.Does anchorage of equipment in the area appear to be free of significant degraded conditions? Y

Surface corrosion is present on some valves and panels. Judged to be ok.

3.Based on visual inspection from the floor, do the cable/conduit raceways and HVAC ducting appear to be free of potentially adverse seismic conditions (e.g., condition of supports is adequate and fill conditions of cable trays appear to be inside acceptable limits)? Y

Conduit lines appear to be properly anchored. No HVAC ducting in the area.

4. Does it appear that the area is free of potentially adverse seismic spatial interactions with other equipment in the area(e.g., ceiling tiles and lighting)? Y

No spatial interaction issues were identified.

5. Does it appear that the area is free of potentially adverse seismic interactions that could cause flooding or spray in the area? Y

No sources for flooding or spraying in the area.

6. Does it appear that the area is free of potentially adverse seismic interactions that could cause fire in the area? Y

No credible sources that could cause a fire were found.

7. Does it appear that the area is free of potentially adverse seismic interactions associated with housekeeping practices, storage of portable equipment, and temporary installations (e.g. scaffolding, lead shielding)? Y

A box containing "MSSV gags" are properly tied off to a handrail. Wrench near box is laying on the grating. Judged to be ok.

8. Have you looked for and found no other seismic conditions that could adversely affect the safety functions of the equipment in the area? Y

No issues were identified.

Comments

Includes DC-2-04-P-VR-MS-2-RV-13 and DC-2-04-P-VR-MS-2-RV-61.

Evaluated by: KTM Date: 10/15/2012

SMM 10/18/2012

Area Walk-By Checklist (AWC)

Status Y

Location: Building: Auxiliary Floor El. 100 Room, Area: 2-SFPHE1

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

1. Does the anchorage of equipment in the area appear to be free of potentially adverse seismic conditions (if visible without necessarily opening cabinets) Y

No other adjacent equipment.

2.Does anchorage of equipment in the area appear to be free of significant degraded conditions? Y

No observed degradation.

3.Based on visual inspection from the floor, do the cable/conduit raceways and HVAC ducting appear to be free of potentially adverse seismic conditions (e.g., condition of supports is adequate and fill conditions of cable trays appear to be inside acceptable limits)? Y

HVAC duct is braced. Pipe and conduit are well supported. No cable trays.

4. Does it appear that the area is free of potentially adverse seismic spatial interactions with other equipment in the area(e.g., ceiling tiles and lighting)? Y

Lighting is conduit hung pendant lights. Warning light and PA speaker are supported.

5. Does it appear that the area is free of potentially adverse seismic interactions that could cause flooding or spray in the area? Y

6. Does it appear that the area is free of potentially adverse seismic interactions that could cause fire in the area? Y

No significant fuel sources

7. Does it appear that the area is free of potentially adverse seismic interactions associated with housekeeping practices, storage of portable equipment, and temporary installations (e.g. scaffolding, lead shielding)? Y

Nearby cart is tied off. The adjacent shielding door is top restrained.

8. Have you looked for and found no other seismic conditions that could adversely affect the safety functions of the equipment in the area? Y

Comments

Includes DC-2-13-M-HX-SFPHE1 and DC-2-13-I-I-TI-653

Evaluated by: DKN Date: 10/18/2012

DRC 10/19/2012

Area Walk-By Checklist (AWC)

Status Y

Location: Building: Auxiliary Floor El. 100 Room, Area: 2-SFPP1

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

1. Does the anchorage of equipment in the area appear to be free of potentially adverse seismic conditions (if visible without necessarily opening cabinets) Y

Anchorage of other pumps in the area have no adverse conditions.

2.Does anchorage of equipment in the area appear to be free of significant degraded conditions? Y

No significant degradation observed.

3.Based on visual inspection from the floor, do the cable/conduit raceways and HVAC ducting appear to be free of potentially adverse seismic conditions (e.g., condition of supports is adequate and fill conditions of cable trays appear to be inside acceptable limits)? Y

HVAC duct is braced. Pipe is well supported. Conduit is well supported. No cable trays.

4. Does it appear that the area is free of potentially adverse seismic spatial interactions with other equipment in the area(e.g., ceiling tiles and lighting)? Y

Lights are conduit hung pendant lights. No issues. Warning light and PA speaker are adequately supported. Overhead crane rail is braced.

5. Does it appear that the area is free of potentially adverse seismic interactions that could cause flooding or spray in the area? Y

6. Does it appear that the area is free of potentially adverse seismic interactions that could cause fire in the area? Y

No likely sources.

7. Does it appear that the area is free of potentially adverse seismic interactions associated with housekeeping practices, storage of portable equipment, and temporary installations (e.g. scaffolding, lead shielding)? Y

Wall mounted fire extinguisher is strapped.

8. Have you looked for and found no other seismic conditions that could adversely affect the safety functions of the equipment in the area? Y

Comments

Includes DC-2-13-M-PP-SFPP1.

Demin pipe behind the pump almost touches (approx 3/16 in gap) the steel of pipe support 42-50R. Restraint of 3 inch demin pipe will prevent interaction. No issue.

Evaluated by: DKN Date: 10/18/2012

DRC 10/19/2012

Area Walk-By Checklist (AWC)

Status Y

Location: Building: Auxiliary | Floor El. 85 | Room, Area: 2-SIP1

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

1. Does the anchorage of equipment in the area appear to be free of potentially adverse seismic conditions (if visible without necessarily opening cabinets) Y

All anchorage appears to be in good condition.

2.Does anchorage of equipment in the area appear to be free of significant degraded conditions? Y

No corrosion is present.

3.Based on visual inspection from the floor, do the cable/conduit raceways and HVAC ducting appear to be free of potentially adverse seismic conditions (e.g., condition of supports is adequate and fill conditions of cable trays appear to be inside acceptable limits)? Y

All overhead distribution systems appear to be adequately secured.

4. Does it appear that the area is free of potentially adverse seismic spatial interactions with other equipment in the area(e.g., ceiling tiles and lighting)? Y

No interaction issues to note.

5. Does it appear that the area is free of potentially adverse seismic interactions that could cause flooding or spray in the area? Y

No fire water piping in the room.

6. Does it appear that the area is free of potentially adverse seismic interactions that could cause fire in the area? Y

No flammable sources in the area.

7. Does it appear that the area is free of potentially adverse seismic interactions associated with housekeeping practices, storage of portable equipment, and temporary installations (e.g. scaffolding, lead shielding)? Y

Chain from monorail crane is properly stowed in wall mounted box to prevent swinging during a seismic event.

8. Have you looked for and found no other seismic conditions that could adversely affect the safety functions of the equipment in the area? Y

No issues were identified.

Comments

Includes DC-2-09-M-PP-SIP1 and DC-2-09-P-VOM-SI-2-8923A.

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

SMM Scott Miller 10/18/2012

Area Walk-By Checklist (AWC)

Status Y

Location: Building: Auxiliary Floor El. 140 Room, Area: 2-SSPS

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

1. Does the anchorage of equipment in the area appear to be free of potentially adverse seismic conditions (if visible without necessarily opening cabinets) Y

All visible anchorage in the room appears to be free of adverse seismic conditions.

2.Does anchorage of equipment in the area appear to be free of significant degraded conditions? Y

No corrosion or degraded conditions were found.

3.Based on visual inspection from the floor, do the cable/conduit raceways and HVAC ducting appear to be free of potentially adverse seismic conditions (e.g., condition of supports is adequate and fill conditions of cable trays appear to be inside acceptable limits)? Y

No HVAC ducting in the room. Conduit entered from ceiling, passed through a metal tray, and ran into cabinets. No issues were identified.

4. Does it appear that the area is free of potentially adverse seismic spatial interactions with other equipment in the area(e.g., ceiling tiles and lighting)? Y

Ceiling tiles have been reviewed in 2-VB1 AWC.

5. Does it appear that the area is free of potentially adverse seismic interactions that could cause flooding or spray in the area? Y

No fire piping in the room.

6. Does it appear that the area is free of potentially adverse seismic interactions that could cause fire in the area? Y

No adverse seismic interactions that could cause a fire in the area were identified.

7. Does it appear that the area is free of potentially adverse seismic interactions associated with housekeeping practices, storage of portable equipment, and temporary installations (e.g. scaffolding, lead shielding)? Y

No temporary equipment in the area.

8. Have you looked for and found no other seismic conditions that could adversely affect the safety functions of the equipment in the area? Y

No issues were identified.

Comments

Includes DC-2-38-I-PNL-RNSIA, DC-2-38-I-PNL-RNSLA, DC-2-38-I-PNL-RNSOA, and DC-2-38-I-PNL-RNSTA.

Evaluated by: KTM Date: 10/15/2012

SMM 10/18/2012

Area Walk-By Checklist (AWC)

Status Y

Location: Building: Auxiliary Floor El. 85 Room, Area: 2-SWHE1

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

1. Does the anchorage of equipment in the area appear to be free of potentially adverse seismic conditions (if visible without necessarily opening cabinets) Y

All anchorage appears to be in good condition.

2.Does anchorage of equipment in the area appear to be free of significant degraded conditions? Y

No corrosion is present.

3.Based on visual inspection from the floor, do the cable/conduit raceways and HVAC ducting appear to be free of potentially adverse seismic conditions (e.g., condition of supports is adequate and fill conditions of cable trays appear to be inside acceptable limits)? Y

Conduit and HVAC appeared to be properly secured.

4. Does it appear that the area is free of potentially adverse seismic spatial interactions with other equipment in the area(e.g., ceiling tiles and lighting)? Y

No seismic interaction issues were identified.

5. Does it appear that the area is free of potentially adverse seismic interactions that could cause flooding or spray in the area? Y

No fire water piping in the room.

6. Does it appear that the area is free of potentially adverse seismic interactions that could cause fire in the area? Y

No credible sources could cause a fire.

7. Does it appear that the area is free of potentially adverse seismic interactions associated with housekeeping practices, storage of portable equipment, and temporary installations (e.g. scaffolding, lead shielding)? Y

No temporary equipment in the area.

8. Have you looked for and found no other seismic conditions that could adversely affect the safety functions of the equipment in the area? Y

No issues were identified.

Comments

Includes DC-2-08-M-HX-SWHE1.

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

SMM Scott M Miller 10/18/2012

Area Walk-By Checklist (AWC)

Status Y

Location: Building: Auxiliary Floor El. 115 Room, Area: 2-TE117

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

1. Does the anchorage of equipment in the area appear to be free of potentially adverse seismic conditions (if visible without necessarily opening cabinets) Y

2.Does anchorage of equipment in the area appear to be free of significant degraded conditions? Y

Only minor surface corrosion observed on structural members and connections in the area

3.Based on visual inspection from the floor, do the cable/conduit raceways and HVAC ducting appear to be free of potentially adverse seismic conditions (e.g., condition of supports is adequate and fill conditions of cable trays appear to be inside acceptable limits)? Y

Conduit and piping are well supported in the area.

4. Does it appear that the area is free of potentially adverse seismic spatial interactions with other equipment in the area(e.g., ceiling tiles and lighting)? Y

2-TE-117 is relatively sheltered by it's location and the structural steel above.

5. Does it appear that the area is free of potentially adverse seismic interactions that could cause flooding or spray in the area? Y

6. Does it appear that the area is free of potentially adverse seismic interactions that could cause fire in the area? Y

No likely sources

7. Does it appear that the area is free of potentially adverse seismic interactions associated with housekeeping practices, storage of portable equipment, and temporary installations (e.g. scaffolding, lead shielding)? Y

No housekeeping issues observed. Scaffolding in the area is braced and clamped to the structural steel and platform handrails.

8. Have you looked for and found no other seismic conditions that could adversely affect the safety functions of the equipment in the area? Y

Comments

Includes DC-2-03-I-E-TE-117.

Evaluated by: DKN Date: 10/18/2012

SMM 10/17/2012

Area Walk-By Checklist (AWC)

Status Y

Location: Building: Auxiliary Floor El. 100 Room, Area: 2-TRY21

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

1. Does the anchorage of equipment in the area appear to be free of potentially adverse seismic conditions (if visible without necessarily opening cabinets) Y

Reviewed adjacent panels, room lighting fixtures, emergency lighting, fire extinguishers, HVAC Ducting, and speakers.

2.Does anchorage of equipment in the area appear to be free of significant degraded conditions? Y

3.Based on visual inspection from the floor, do the cable/conduit raceways and HVAC ducting appear to be free of potentially adverse seismic conditions (e.g., condition of supports is adequate and fill conditions of cable trays appear to be inside acceptable limits)? Y

HVAC ducting is rigidly supported.

4. Does it appear that the area is free of potentially adverse seismic spatial interactions with other equipment in the area(e.g., ceiling tiles and lighting)? Y

All items attached to the masonry wall are anchored by through-bolts. Room lighting is supported by a pipe section with a ball and socket connection.

5. Does it appear that the area is free of potentially adverse seismic interactions that could cause flooding or spray in the area? Y

6. Does it appear that the area is free of potentially adverse seismic interactions that could cause fire in the area? Y

7. Does it appear that the area is free of potentially adverse seismic interactions associated with housekeeping practices, storage of portable equipment, and temporary installations (e.g. scaffolding, lead shielding)? Y

8. Have you looked for and found no other seismic conditions that could adversely affect the safety functions of the equipment in the area? Y

Comments

Includes DC-2-65-E-XF-TRY21 and DC-2-96-E-PNL-HSP.

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

KA A. Chintapalli 10/23/2012

Area Walk-By Checklist (AWC)

Status Y

Location: Building: Auxiliary Floor El. 140 Room, Area: 2-VB1

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

1. Does the anchorage of equipment in the area appear to be free of potentially adverse seismic conditions (if visible without necessarily opening cabinets) Y

Panels behind 2-VB-1 are anchored

2.Does anchorage of equipment in the area appear to be free of significant degraded conditions? Y

No degradation observed in the visible areas, nor were any signs of corrosion noted. The control room carpet was not pulled up. This is a very controlled environment so corrosion is not expected.

3.Based on visual inspection from the floor, do the cable/conduit raceways and HVAC ducting appear to be free of potentially adverse seismic conditions (e.g., condition of supports is adequate and fill conditions of cable trays appear to be inside acceptable limits)? Y

The suspended ceiling is hung with a braced unistrut system. The HVAC duct is braced and the registers are independently rod hung.

4. Does it appear that the area is free of potentially adverse seismic spatial interactions with other equipment in the area(e.g., ceiling tiles and lighting)? Y

The lighting over the control consoles and vertical boards is independently hung from the suspended ceiling. No issues.

5. Does it appear that the area is free of potentially adverse seismic interactions that could cause flooding or spray in the area? Y

6. Does it appear that the area is free of potentially adverse seismic interactions that could cause fire in the area? Y

No likely sources

7. Does it appear that the area is free of potentially adverse seismic interactions associated with housekeeping practices, storage of portable equipment, and temporary installations (e.g. scaffolding, lead shielding)? Y

Good housekeeping practices in the area. No portable or temporary components nearby.

8. Have you looked for and found no other seismic conditions that could adversely affect the safety functions of the equipment in the area? Y

Comments

Includes DC-2-43-I-PNL-RNCI1 and DC-2-96-E-PNL-2VB1 and DC-2-96-E-PNL-2CC1

Evaluated by: DKN Date: 10/18/2012

SMM 10/19/2012

Attachment K
Summary Findings of the Peer Reviews

Peer Review: SWEL-1 and SWEL-2

The peer review of the SWEL-1 and SWEL-2 was performed during several meetings held while these lists were being developed and during the performance of the inspections. A summary of the issues identified during the peer review, and their resolution, is provided in Table 1.

Table 1: Peer Review Issues and Resolutions for SWEL-1 and SWEL-2

Issue	Resolution
SWEL development does not consistently identify SSCs by their Q-List Item No.	Updated to include reference to the Q-List Item No. where applicable.
SWEL-1, Screen No. 2 allows exclusion of valves associated with containment penetrations, but the final SWEL-1 included certain CIVs.	These valves were included to meet other criteria. Discussion of Screen No. 2 exclusions updated to indicate that this exclusion was not used in its entirety.
SWEL-1 should consider safe shutdown equipment identified in UFSAR Appendix 9.5G "Equipment Required for Safe Shutdown."	The safe shutdown equipment identified in UFSAR Appendix 9.5G was added to SWEL development documentation to address these components and their inclusion as candidates for the selection of SWEL-1.
SWEL-1 should include AFW pump discharge to SG LCVs, since these are important to the AFW system operation.	Valves LCV-111 through LCV-115 added to list of candidates for the SWEL-1.
SWEL-1 should include RHR pump recirculation valve since these are important to the RHR operation.	Valves FCV-641A and FCV-641B added to list of candidates for the SWEL-1.
SWEL-1 should include FCVs for the motor-driven AFW pumps since these are important to the operation of the pumps.	Valves FCV-106, FCV-107, FCV-108, and FCV-109 added to list of candidate for the SWEL-1.
SWEL-1 should include auxiliary building ventilation system supply and exhaust fans since these are important to the cooling of the auxiliary building and are subjected to a corrosive environment.	Fans E-1, E-2, S-31, S-32, S-33, and S-34 added to list of candidates for the SWEL-1.
SWEL-1 should include chemical and volume control system spray valves, since these are important to system operation.	Valves 8145 and 8148 added to list of candidates for the SWEL-1.
SWEL-1 should include valves in the RHR system normal shutdown cooling flowpath.	Valves 8701, 8702, 8809A, 8809B, 8700A, 8700B, HCV-637, and HCV 638 added to list of candidates for the SWEL-1.
SWEL-1 should include valves in charging system flowpath to reactor.	Valves 8107, 8108, and HCV-142 added to list of candidates for the SWEL-1.

Issue	Resolution
SWEL-1 should include valves associated with boric acid storage tank and transfer pumps.	Valves 8104, FCV-110A, and FCV-111A added to list of candidates for the SWEL-1.
SWEL-1 should include the main annunciator.	This is not seismically qualified, so it is excluded at Screen No. 1.
SWEL-1 should include SG level and pressure instrumentation.	SG level transmitters (LT-516, LT-517, etc.) and pressure transmitters (PT-538, etc.) added to list of candidates for the SWEL-1.
SWEL-1 should include wide range and source range neutron detectors.	These detectors are included in the list of candidates for the SWEL-1, but were not selected in the finalization of the SWEL-1.
SWEL-1 assignment of five safety functions (Screen No. 3) - certain seismically qualified SSCs do not perform any of these functions, so they will screen-out, but still may be added back-in under Screen No. 4 (diversity) or under SWEL-2 (SFP-related SSCs).	This is addressed in SWEL development documentation.
Risk significance is not well defined and must be addressed more clearly.	Risk significance data was received from the PRA group and incorporated into SWEL-1
SWEL-2 development uses 10 feet above top of fuel assemblies as an absolute number, but EPRI 1025286 states "for SFP penetrations below about 10 feet above the top of the fuel assemblies..." This gives some latitude as to the exact elevation for drain-down.	SWEL-2 development documentation revised to be consistent with EPRI 1025286.
Operating experience report IER L3-12-63, "Anti-Siphon Devices in Spent Fuel Pool Missing" was recently received and should be addressed in the development of the SWEL-2.	IER L3-12-63 added as an input reference for the SWEL-2 and verification of the presence of anti-siphon holes added as an inspection attribute for piping entering the SFP.
Question was asked if EPRI guideline requires consideration of SFP drain-down during various operating modes, specifically during refueling operations, when the SFP gate is open, transfer canal is flooded, etc.	The NEI frequently asked questions clarified this issue and it is addressed in SWEL-1.

Issue	Resolution
During the 1980s, the blind flange on the Containment end of the fuel transfer tube was replaced with a QOTTC device. If the SFP gate (not seismically qualified) and the fuel transfer tube manual gate valve (not seismically qualified per the component data) were to fail during an earthquake, the QOTTC would act as a part of the SFP pressure boundary. The concern is whether the QOTTC has been designed to resist the hydrostatic and hydrodynamic loads associated with this scenario.	This concern was entered into the CAP. Development documentation for SWEL-2 updated to show gate as being seismically qualified.
The FLOC data for the SFP gate indicates that this SSC is not seismically qualified, and that the air supply and back-up nitrogen supply for the inflatable gate seals is not seismically qualified. However, it appears that the gate is very robust and even with deflation of the seals, the rate of leakage through the SFP gate into the fuel transfer canal will not allow the SFP to drain-down within 72 hours.	Review of the civil engineering calculation files located a seismic qualification calculation for the SFP gate. Therefore, gate can be credited to survive an earthquake. Request to update the FLOC data was entered into CAP.
Even though the SFP skimmers are anchored to the wall at the SFP water surface, we need to investigate possibility that they break loose (non-seismic support) and sink into the pool, allowing siphoning of the pool inventory.	SWEL-2 updated to include check of the maximum depth based on hose/tubing length between wall penetration and skimmer to inspection attributes. This will address the maximum depth to which skimmers could sink.
Monitoring of the SFP level is a key issue, so the SFP level monitoring instrumentation should be added to the SWEL-2.	The SFP level instrumentation was considered for inclusion in the SWEL-2, but it was determined that this instrumentation is not seismically qualified, so it initially screened-out at Screen No. 1.
The SFP cooling water pump transfer switch (a local contactor) is key to the cooling of the SFP and should be added to the SWEL-2.	SWEL-2 updated to include switch.

Issue	Resolution
The various ways to provide pure water (to replace evaporation/boiling) or borated water (to replace leakage) to the SFP were discussed. OP AP-22 (Spent Fuel Pool Abnormalities), Appendix A (Addition of Water to the SFP) indicates that the condensate storage tank is the "only source of makeup water to the SFP with a flow path that is completely Design Class I." This flow path should be included in the SWEL-2. See OP B-7:II for details of flow path	SWEL-2 development basis document enhanced to discuss this flow path.
The FHBVS is required to cool various SFP-related equipment. Portions associated with the mitigation of a fuel handling accident do not need to be included (e.g., filters), but other equipment should be considered for inclusion.	The SWEL-1 already includes the auxiliary building ventilation system, which has components that are similar to the FHB ventilation system. However, an FHB exhaust fan was added to the SWEL-2.
SFP cooling system pressure instrumentation does not serve any post-earthquake function and can be exclude from the SWEL-2.	Pressure instrumentation deleted from the SWEL-2.
Screen No. 3 of the EPRI guidelines for the development of the SWEL-2 require the inclusion of a diversity of equipment classes (similar to Screen No. 4 for the SWEL-1), but due to the limited scope of equipment associated with the SFP, it is not possible to include representatives of all 21 classes.	This is acceptable, since the SWEL-1 already includes a diverse selection of equipment classes. A discussion of this was added to the SWEL-2 development documentation.
Difficulties associated with the verification of the elevation of the various underwater pipe penetrations through the walls of the SFP were discussed.	The following methods were selected for the verification of elevations: • Underwater cameras • Verification of the elevation of the pipe where it exits the concrete on the outside of the SFP • Approximate visual verification from the water surface

Issue	Resolution
Fuel transfer tube expansion joint has been included in SWEL-2 (failure could drain SFP, if SFP gate is open during a refueling outage). Suggest reviewing DCM C-28 (Seismic and LOCA displacements) to determine differential displacements.	Review of DCM C-28 indicates that the seismic differential displacements (containment structure vs. auxiliary building) are small at this location (less than 0.2 inches), but the LOCA differential displacement is large (approximately 1 inch). The combination of seismic and LOCA displacements is enveloped by the vendor-allowed differential displacements for the expansion joint.
SWEL-2 includes various pipes which penetrate the SFP wall that are potential rapid drain-down paths. How do we document the walkdowns of these pipes?	The EPRI guidelines do not address this. Since these guidelines require the use of the SWC form, the walkdown will be documented on an SWC, with most of the inspection attributes marked as "N/A". The "comments" section will be used to describe any observations.
Operating procedure AP-22 includes the use of a fire hose for emergency refilling of the SFP. The associated hose reel stations should be included in the SWEL-2.	Hose reel station FW-120-A38-1 added to the SWEL-2.
Document "Frequently Asked Questions on Seismic Walkdown Guidance" (August 10, 2012) was provided by the NEI, not the EPRI.	The SWEL development documentation was revised.
Discussion of seismic classification system relative to Regulatory Guide 1.29 is not clear.	Clarified discussion in the SWEL development documentation.
EPRI definition of SFP rapid drain-down applies to the "top of fuel assemblies", and could result in exclusion of SFP gate from SWEL-2, while the "about 10 ft above fuel assemblies" applies to penetrations through walls of SFP.	Clarified discussion to distinguish between two applications in SWEL development documentation.
Rationale for the exclusion of the fuel storage racks from the SWEL-2 is not adequate.	Expanded discussion to address criticality/spacing criteria, lack of anchorage, submersion in borated water, etc., in the SWEL development documentation.
SWEL-1 did not adequately address risk significance.	Risk significance data was received from the PRA group and incorporated into SWEL-1

Peer Review: Seismic Walkdown Checklists and Area Walk-by Checklists

Introduction

In accordance with the guidance provided in EPRI 1025286, the results of the seismic walkdowns and area walk-bys were peer reviewed. Daily debrief of the walkdown team and peer review of a sample of SWCs and AWCs were performed early in the process to check the initial quality of the checklists and to ensure that any the general comments are incorporated in the remaining checklists prepared at later stages. In addition to the early peer reviews, all the SWCs and AWCs were reviewed to verify that the SWEs followed the guidance provided in EPRI 1025286 for performing the walkdowns.

Peer Review Team

The seismic walkdown and area walk-by results peer review team was led by the project team leader, with various individuals acting as team members.

Peer Review Process

The results of the seismic walkdowns and area walk-bys were peer reviewed in two steps:

(1) Each completed SWC or AWC was reviewed by a peer review team member. This step included a review of the completed checklist and any attached photographs and in some cases discussion with walkdown team members. Depending on the complexity of the issue, this step included visiting the plant and visually inspecting the subject equipment or area. Any peer review questions or comments were discussed with the SWEs and after all the questions and comments had been resolved, the completed checklist was signed by both the SWEs.

(2) All completed SWCs/AWCs were reviewed by peer review team leader for overall accuracy and consistency. Comments or questions from the team leader were discussed with the SWEs and resolved.

Summary of Peer Review Findings and Resolutions

The peer review findings are divided into two categories: generic findings and specific findings. The following are the general comments:

(1) Problem Identification: Provide a clear and concise description of the problem/issue. Do not provide extraneous details or opinions.

(2) Redundant Problems: A specific problem should only be identified on one check list. If the problem is identified on the SWC for the specific SSC, do not describe the same problem on the AWC or assign a status of N or U on the AWC. It is okay to cross reference between the AWC and SWC for a problem.

(3) Recommendations: The AWC/SWC should identify and characterize the potential issue. Do not include statements such as, "valve should be cleaned and painted", "means of anchoring should be improved," or "further evaluation is recommended."

(4) Disposition of Problems: The goal is to not have any remaining open problems on the checklists. Therefore, as part of the checklist finalization, each problem should be linked to its disposition. Create supplemental sheets to be added to the checklists as attachments for this purpose. The AWC/SWC should reference these attachments (e.g., "See Attachment No. xx for disposition."). The SAP notification number is to be referenced on the attachment, not the checklist.

(5) Final Checklist Status: Once all of the issues and comments on a checklist have been dispositioned, the "U" statuses in the checklist should be changed to either "Y" (the condition is acceptable) or "N" (the condition is not acceptable, but will be addressed in the CAP). It is not necessary for the checklist to address any follow-up on CAP actions.

(6) Electronic AWC and SWC Templates: Some aspects of the electronic templates used to generate the hardcopies of the completed checklists from the Access database do not match the format of the checklist forms included in EPRI 1025286, Appendix C. The templates should be reviewed against Appendix C and corrected as necessary.

(7) Description of Room, Area for AWCs: The AWC form (EPRI 1025286, Appendix C), includes a field for "Room, Area." DCPP has used this field for the AWC number (typically the unit number, followed by an acronym for the piece of equipment in the room - e.g., "1-ASP1"). Since this entry does not actually define the room/area covered by the AWC (as required by Footnote 13 in EPRI 1025286), it is recommended that a set of maps be developed to define the areas.

Table 2: Specific Findings for Unit 2 – AWCs

No.	AWC/SWC Title	Issue	Resolution
1	2-BFS-33	The AWC documents degradation of the fan skid and corrosion of anchor bolts of the fan belt shroud support. These were already identified in the component SWC.	Reference to the degradation of fan skid and corrosion of anchor bolts deleted from the AWC.

No.	AWC/SWC Title	Issue	Resolution
2	2-PM-103	Identify the specific conduit and junction box which are corroded.	Included the following in response to Question 8 "Flaking paint and oxidation were noted on conduits in the vicinity, including vital conduit no. K5882 and junction box BJF19. See Attachment 2 for disposition."
3	2-E-45	In the comments section include "corrosion was noted on damper No. FCV-5046, including valve actuator, damper, ducting and miscellaneous steel. See Attachment 1 for disposition.	Comment incorporated as requested.
4	2-FCV-641B	Delete the AWC and incorporate the information in AWC 2-RHRP2, as this area is a subset of the area covered by 2-RHRP2.	AWC 2-FCV-641B is deleted and SWC for the component now refers to the Area 2-RHRP2.
5	2-CP-37	In response to Question 1, the SWE suggests "Further evaluation is needed to justify the structural integrity" of the identified issue. Delete the above mentioned statement, prepare a LBE to address the issue and refer to the LBE in the AWC.	The suggestion for further evaluation is deleted, a LBE was performed, and Attachment 1 is referenced for disposition.
6	2-FCV-41	Loose shim plates on rupture restraints found in the area were not mentioned in the AWC.	Included the following observation in response to Question 8: "Loose Shim plate on rupture restraint found in area. See Attachment 1 for disposition."

Table 3: Specific Findings for Unit 2 – SWCs

No.	AWC/SWC Title	Issue	Resolution
1	DC-2-13-M-HX-SFPHE1	Response to question 2 refers to Unit 1 anchorage "Same anchorage as DC-1-13-M-HX-SFPHX1".	Reference to Unit 1 component anchorage is deleted.

No.	AWC/SWC Title	Issue	Resolution
2	DC-2-65-E-UPS-IY21	The SWC does not identify the transformer anchorage non-conformance issue.	Included in response to question 11, "The mounting brackets for the transformers at the bottom left side of the panel have (8) locations for securing the transformers to the grating on the panel bottom. Only (6) of the holes have bolts. Similarly, only (5) of the (8) holes are utilized (have bolts) for securing the transformers on the bottom right side of the panel. See Attachment 1 for disposition."
3	DC-2-04-P-VOA-MS-2-FCV-41	Response to question 7 suggests that contact is possible between the air operator valve MS-2-FCV - 25 and the support for the limit switch MS-2-FCV-41. The Status of question 7 and the checklist is still shown as "Y" in spite of a possible impact on soft target.	The status of the checklist and question 7 changed to "N."
4	DC-2-38-I-PNL-RNSLA	Include the observations on the ceiling tiles and space above false ceiling from AWC 2-VB1 and delete "Further evaluation is needed to verify that the ceiling tiles are seismically restrained."	Deleted the statement and included the following information from AWC 2-VB1 "The suspended ceiling is hung with a braced unistrut system. The HVAC is braced and the registers are independently rod hung."
5	DC-2-17-M-PP-ASP1	The inconsistency of the shim on the bumpers with the design drawings is not identified on the SWC.	Included the following statement in response to question 5 "The shims on these bumpers are not consistent with the drawings. See Attachment 2 for disposition."
6	DC-2-10-M-HX-RHE1	In response to question 5, the anchorage details are explained in great detail. A reference to the original design drawing could be provided instead.	Reference provided to the design drawings.

No.	AWC/SWC Title	Issue	Resolution
7	DC-2-14-M-TK-CCWST1	The SWC currently does not identify the corrosion on base plates associated with the lateral braces on the east and west side of the CCW surge tank. This should be identified in response to question 3 of the checklist.	Included the following in response to question 3: "Surface corrosion on base plates associated with lateral braces on the east and west sides of the CCW surge tank. See Attachment 1 for disposition."
8	DC-2-23-M-HX-CR37	In response to question 3, heavy corrosion is identified on the unit skid and it is identified that a design change is in process for replacing the skid and no evaluation is performed of the existing condition.	Prepared a LBE for the existing condition.
9	DC-2-36-E-PNAL-RNARA	The status of question 5 is currently shown as "N" although the component is not part of the 50% anchorage check.	The status of question 5 changed to "N."
10	DC-2-23-E-PNL-PCCFC1	The room, row/column information on the SWC is currently identified as "2-PCCFC1" although the area is now replaced with 2-PNL-ARP.	Room, row/column information changed from "2-PCCFC1" to "2-PNL-ARP."

Peer Review: Licensing Basis Evaluations

Introduction

A LBE was performed for each potentially adverse seismic issue identified on the SWC and AWC. The LBEs, which are documented in attachments to the individual checklists, include a determination of the need for entry of the issue into the CAP.

Peer Review Team

The LBE peer review team was led by the project team leader, with various individuals acting as team members.

Peer Review Process

The LBE peer review was performed in two steps:

(1) Each potentially adverse seismic condition was evaluated by a cognizant engineer and peer reviewed by a designated review team member. This step included a review of the completed checklist, review of the photograph (if applicable), discussions with the preparer of the LBE, review of the supporting documentation (e.g., drawings, design criteria memoranda, calculations) and, in some cases, discussions with the walkdown team members who performed the field inspections.

The completed LBE was signed by the preparer and the peer reviewer.

(2) All completed LBEs were reviewed by the peer review team leader for overall accuracy and consistency. Comments or questions from the team leader were discussed with the preparer and reviewer, and resolved as necessary.

Summary of Peer Review Findings and Resolutions

The peer review findings are divided into two categories: (a) generic findings; and (b) specific findings. The following provides an overall summary of the two categories of findings, and their resolution.

Table 4: General Findings from the Licensing Basis Evaluation Peer Review

Finding	Resolution
Each LBE should be self-contained within the attachment and not reference other attachments to the same checklist for input.	LBEs that were split between multiple attachments were restructured to be self-contained.
The seismic requirements for the SSC being addressed should be clearly stated, using DCPP's classification as defined in the FLOC data (i.e., design classification and seismic qualification requirement).	LBEs were updated, as appropriate.
A LBE for one unit should not reference the LBE for a similar issue in the other unit.	Cross references between units eliminated.
A LBE should provide specific reference to the source of information (e.g., calculation number, drawing number, etc.)	References added to LBE, as appropriate.

Table 5: Specific Findings from the Licensing Basis Evaluation Peer Review

LBE No.	Finding	Resolution
2-CP-37, Attach. 1	The LBE recommendations did not address the need to revise the design drawing to reflect the as-built configuration of the dampers.	Recommendation to update the drawings added to the LBE.
2-CP-37, Attach. 2	The LBE recommendations did not address the need to revise the design drawing to reflect the as-built configuration of the dampers.	Recommendation to update the drawings added to the LBE.
2-CR-37, Attach. 1	The LBE did not clearly indicate the function of the vertical legs and the triangular frames.	LBE updated to clarify functions of these support components.
2-DEG-23, Attach. 1	LBE used incorrect values for the vertical and horizontal Hosgri earthquake accelerations for the location of the fire extinguisher, and did not provide a source reference.	LBE updated to reference DCM C-17 as source of accelerations and use the correct values.
2-DEG-ES-23, Attach. 1	LBE addressed the impact of the corrosion on the functionality of the pipe support, but did not address the impact on the building column.	LBE updated to discuss impact on building column function.
2-E-45, Attach. 2	LBE recommendation indicated that the corroded nut should be cleaned and replaced, but this is not practical, based on the extent of the corrosion.	LBE recommendation changed to request that the corroded nut be replaced.

Peer Review: Submittal Response

To meet this requirement, David Miklush, Philippe Soenen, and Tom Baldwin performed independent peer reviews of this submittal. In addition, San Onofre Nuclear Generating Station personnel performed a review of the submittals. All comments were evaluated and resolved.

Comments included:

(1) Clarify how unique DCPP seismic categories compare to SC I.
(2) Clarify independence of peer reviewers.
(3) Clarify where engineering evaluations of potentially seismically adverse conditions are included in the submittal.
(4) Indicate status of the walkdown observations entered in to CAP.

Attachment L
List of Acronyms

2R17	Unit 2 Refueling Outage 17
AC	Alternating current
ACI	American Concrete Institute
AFW	Auxiliary feedwater
AISC	American Institute of Steel Construction
ANSI	American National Standards Institute
ASW	Auxiliary saltwater
AWC	Area walk-by checklist
CAP	Corrective Action Program
CCP	Centrifugal charging pump
CCW	Component cooling water
CF	Containment function
CFCU	Containment fan cooler unit
CIV	Containment isolation valve
dc	Direct current
DCM	Design criteria memorandum
DCPP	Diablo Canyon Power Plant
DEG	Diesel emergency generator
DFODT	Diesel fuel oil day tank
DG	Diesel generator
DHR	Decay heat removal
DIE	Damp indoor environment
EOC	Extent of condition
EPRI	Electric Power Research Institute
ESP	Equipment selection personnel
FCV	Flow control valve
FHB	Fuel handling building
FHBVS	Fuel handling building ventilation system
FLOC	Functional location
ft	Feet
HEPA	High efficiency particulate air
HVAC	Heating, ventilating, and air conditioning
Hx	Heat exchanger
ICE	Inside containment environment
IEEE	Institute of Electrical and Electronics Engineers
IER	Industry Event Response
IPEEE	Individual Plant Examination for External Events
LBE	Licensing basis evaluation
LCV	Level control valve
LOCA	Loss of coolant accident
LTSP	Long Term Seismic Program

MIE	Mild indoor environment
MS	Main steam
MSSV	Main steam safety valve
N	No
NEI	Nuclear Energy Institute
No.	Number
NRC	Nuclear Regulatory Committee
NTTF	Near-term Task Force
OE	Outside environment
Ops	Operations
PCV	Pressure control valve
PE	Professional Engineer
PG&E	Pacific Gas and Electric Company
PHD	Doctor of Philosophy
PORV	Power operated relief valve
PRA	Probabilistic risk assessment
Q-List	Quality classification list
QOTTC	Quick opening transfer tube closure
RC	Reactor coolant
RCIC	Reactor coolant inventory control
RCP	Reactor coolant pump
RCPC	Reactor coolant pressure control
RCS	Reactor coolant system
RCV	Radiation control valve
RHR	Residual heat removal
RRC	Reactor reactivity control
RV	Reactor vessel
RWST	Raw water storage tank
SC	Seismic category
SF	Safety function
SG	Steam generator
SFP	Spent fuel pool
SFPCS	Spent fuel pool cooling system
SI	Safety injection
SISI	Seismically induced system interaction
SISIP	Seismically induced system interaction program
SPRA	Seismic probabilistic risk assessment
SQUG	Seismic Qualification Utilities Group
SSC	Structures, systems, and components
SSEL	Safe shutdown equipment lList
SSER	Supplemental Safety Evaluation Report
SSPS	Solid state protection system
SWC	Seismic walkdown checklist
SWE	Seismic walkdown engineer

SWIE	Saltwater interior environment
TD	Turbine-driven
SWEL	Seismic walkdown equipment list
U	Unknown
UFSAR	Updated Final Safety Analysis Report
UPS	Uninterruptable power supply
Y	Yes

Regulatory Commitments

Pacific Gas and Electric Company is making the following regulatory commitments (as defined by NEI 99-04) in this submittal:

Commitment	Due Date
Attachment H of this enclosure provides a listing of components that were inaccessible in accordance with EPRI 1025286 and could not be inspected prior to submittal of this response. These inaccessible items will be inspected prior to the end of the unit's next refueling outage for Unit 2 (2R17). 2R17 is currently scheduled to be completed in March 2013.	Prior to the end of 2R17
An update from those inspections will be submitted within 60 days following the completion of 2R17.	60 days following completion of 2R17