Status: Y☒ N☐ U☐ R1

Seismic Walkdown Checklist (SWC) SWEL1-064

Equipment ID No. *31PP* Equip. Class[1] *14*

Equipment Description *125VDC POWER PANEL 31*

Location: Bldg. *CB* Floor El. *33'-0"* Room, Area

Manufacturer, Model, Etc. (optional but recommended)

Instructions for Completing Checklist

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

Anchorage

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

   The anchorage configuration verification is required.

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

   The panel is mounted to the wall and the anchorage cannot be visually inspected since the anchorage is behind a panel cover. The panel cover is secured with 3 bolts on each side. Panel was removed in 3R17 to allow for inspection of the anchorage and interiors. No bent, broken, missing, or loose hardware was observed.

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

   Panel was removed in 3R17 to allow for inspection of the anchorage and interiors. The anchorage is free of corrosion that is more than mild surface oxidation.

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

   Panel was removed in 3R17 to allow for inspection of the anchorage and interiors. The anchorage is the through bolt type and is free of visible cracks in the masonry block near the anchors.

R1

[1] Enter the equipment class name from EPRI 1025286, Appendix B: Classes of Equipment.

Status: Y☒ N☐ U☐ R1

Seismic Walkdown Checklist (SWC) SWEL1-064

Equipment ID No. *31PP* Equip. Class[1] *14*

Equipment Description *125VDC POWER PANEL 31*

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

   See #2 details.
   A drawing of the panel anchorage shows 6 bolts. Inspection of the anchorage was performed inside Battery Room 31 and verified to be (6)- ¾" through bolts.
   Anchorage details provided in SEWS for 125 VDC Power 31 conservatively used (4) - 3/8" Wegit bolts even though verified to be through bolts. The allowable capacity for the (4) – 3/8" Wegit bolts are much smaller than the actual capacity of the (6) – ¾" through bolts used. R1

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

   See #2 for details.

Interaction Effects

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

   Yes, soft targets are free from impact by nearby equipment or structures.

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

   The masonry block wall for Battery Room 32 is adjacent to the equipment. This wall was evaluated as part of the IEB 80-11 analysis and found to be seismically qualified (Calculation 6620.210-1-CB-001-L, wall 52B)

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

   Attached lines have adequate flexibility to avoid damage.

Status: Y☒ N☐ U☐ R1

Seismic Walkdown Checklist (SWC) **SWEL1-064**

Equipment ID No. *31PP* Equip. Class[1] *14*

Equipment Description *125VDC POWER PANEL 31*

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

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

Other Adverse Conditions

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

We have looked for and found no other seismic conditions that could adversely affect the safety functions of the equipment.

Comments (Additional pages may be added as necessary)

The door on the panel cover plate was opened and faces of the breaker/switches were examined. Panel cover was removed in 3R17 for proper anchorage and internal examination. The through bolts anchorage was inspected from the inside of Battery Room 31. R1

References:
SEWS for 125 VDC Power Panel #31
9321-F-30523, Rev. 50, EQUIPMENT ARRANGEMENT CONTROL BUILDING
AWC-007

Evaluated by: *Dan Nuta* Date: *3/18/2013*

Kai Lo *3/18/2013*

Status: Y☒ N☐ U☐ R1

Seismic Walkdown Checklist (SWC) **SWEL1-064**

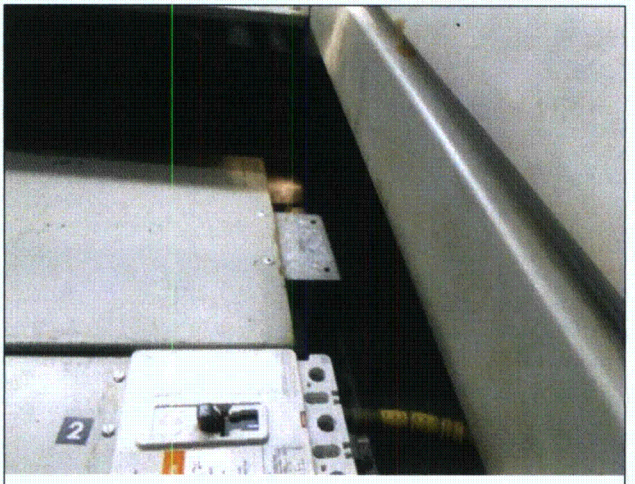
Equipment ID No. *31PP* Equip. Class[1] *14*

Equipment Description *125VDC POWER PANEL 31*

Photographs

Note:

31PP

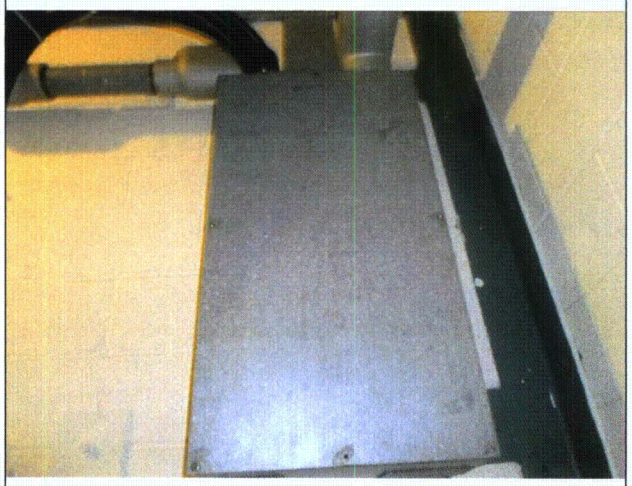


R1

Note:

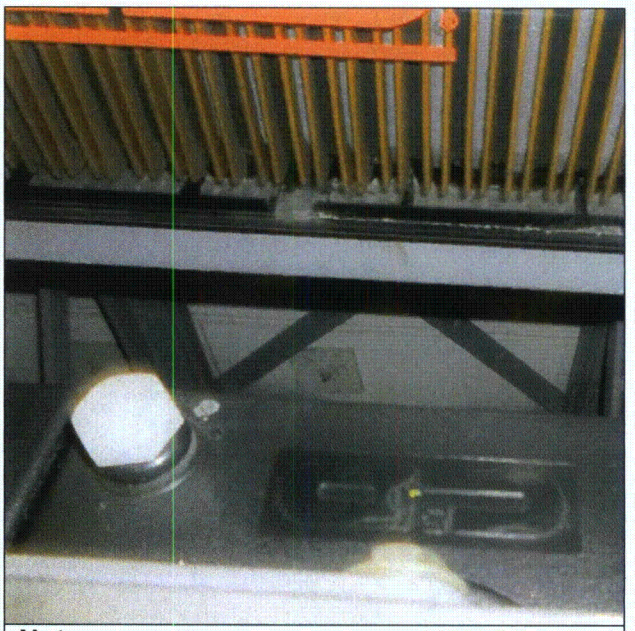
Through bolts from panel side

Photographs



Note:

Through bolts from inside of Battery Room 31



Note:

Through bolts from inside of Battery Room 31

R1

Photographs

Note:

Through bolts from inside of Battery Room 31

R1

Status: Y☒ N☐ U☐ R1

Seismic Walkdown Checklist (SWC) SWEL1-071

Equipment ID No. *BATT CHGR 33* Equip. Class[1] *16*

Equipment Description *BATTERY*

Location: Bldg. *CB* Floor El. *15'-0"* Room, Area *SWITCHGEAR ROOM*

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

Instructions for Completing Checklist

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

Anchorage

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

   The anchorage configuration verification is required.

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

   Anchorage is free of bent, broken, missing or loose hardware.

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

   The anchorage is free of corrosion that is more than mild surface oxidation.

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

   The anchorage is free of visible cracks in the concrete near the anchors.

[1] Enter the equipment class name from EPRI 1025286, Appendix B: Classes of Equipment.

Status: Y☒ N☐ U☐ R1

Seismic Walkdown Checklist (SWC) SWEL1-071

Equipment ID No. *BATT CHGR 33* Equip. Class[1] *16*

Equipment Description *BATTERY*

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

   SQUG analysis shows bolt pattern at 18" x 30.5" and field measurement is 16 ½" x 29". The load factor from SQUG is equal to 2.18. Based on the as-found bolt dimensions, it is estimated that the variation will not affect the acceptability of the anchorage.

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

   Yes, based on the above anchorage evaluations, the anchorage is free of potentially adverse seismic conditions.

Interaction Effects

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

   There is approximately 3" clearance to a telephone acoustic shelter. The telephone structure appears to be solidly anchored to the floor and was accepted in the SQUG analysis as being rigid and not subject to interaction effects. Although the anchorage method could not be determined by a visual examination it was confirmed that the assembly is rigid and is not expected to deflect sufficiently during a seismic event to result in interaction with the cabinet.

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

   The fluorescent fixture above the cabinet is well anchored to its supporting structure. However, there is no restraint for the fluorescent bulb in the fixture. In a seismic event it could loosen and fall. CR-IP3-2012-03123 was issued to address the lack of restraint of the bulbs.

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

   Attached lines have adequate flexibility to avoid damage.

Status: Y☒ N☐ U☐ R1

Seismic Walkdown Checklist (SWC) SWEL1-071

Equipment ID No. *BATT CHGR 33* Equip. Class[1] *16*

Equipment Description *BATTERY*

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

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

Other Adverse Conditions

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

Yes, we have looked for and found no other seismic conditions that could adversely affect the safety functions of the equipment. Cabinet was able to be opened pre-outage and a review of the integrity of the contents was performed. Internal component connections are good. There is no corrosion except for a slightly rusted nut with no washer on the back cover panel.The panel has 6 screws and structurally is acceptable. R1

Comments (Additional pages may be added as necessary)

References:
9321-F-30523, Rev. 50
SEWS for Battery Charger 33
AWC-002

Evaluated by:

Dan Nuta Dragos A. Nuta Date: *2/20/13*

Kai Lo K.C. Date: *2/20/13*

Status: Y☒ N☐ U☐ R1

Seismic Walkdown Checklist (SWC) SWEL1-071

Equipment ID No. *BATT CHGR 33* Equip. Class[1] *16*

Equipment Description *BATTERY*

Photographs

Note: *Front View of BATT CHGR 33*

Note: *Acoustic telephone shelter adjacent to battery charger.*

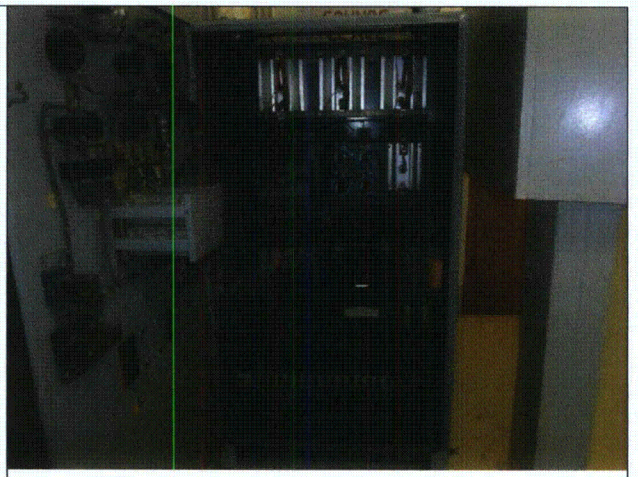
Status: Y☒ N☐ U☐ R1

Seismic Walkdown Checklist (SWC) **SWEL1-071**

Equipment ID No. *BATT CHGR 33* Equip. Class[1] *16*

Equipment Description *BATTERY*

Note: *Base plate of acoustic telephone shelter*



Note:

Cabinet door opened to reveal the interior components and connections..

R1

Status: Y☒ N☐ U☐ R1

Seismic Walkdown Checklist (SWC) SWEL1-072

Equipment ID No. *BATT CHGR 34* Equip. Class[1] *16*

Equipment Description *BATTERY CHARGER*

Location: Bldg. *CB* Floor El. *33'-0"* Room, Area

Manufacturer, Model, Etc. (optional but recommended)

Instructions for Completing Checklist

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

Anchorage

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

   The anchorage configuration verification is required.

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

   The anchorage is free of bent, broken, missing or loose hardware.

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

   The anchorage is free of corrosion that is more than mild surface oxidation.

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

   The anchorage is free of visible cracks in the concrete near the anchors.

[1] Enter the equipment class name from EPRI 1025286, Appendix B: Classes of Equipment.

Status: Y☒ N☐ U☐ R1

Seismic Walkdown Checklist (SWC) SWEL1-072

Equipment ID No. *BATT CHGR 34* Equip. Class[1] *16*

Equipment Description *BATTERY CHARGER*

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

   Anchorage configuration is consistent with SEWS for Battery Charger 34.

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

   The anchorage is free of potentially adverse seismic conditions.

Interaction Effects

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

   Obeserved a Unistrut frame with two Unistrut columns on both sides of the cabinet with approximately 1" of clearance (see attached photo). LB-03 evaluation was performed for the seismic interaction and the 1" clearance is adequate for the combined seismic displacement of the Battery Charger and the Unistrut frame.

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

   Overhead equipment, distribution systems, ceiling tiles and lighting, and masonry block walls not likely to collapse.

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

   Attached lines have adequate flexibility to avoid damage.

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

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

Status: Y☒ N☐ U☐ R1

Seismic Walkdown Checklist (SWC) SWEL1-072

Equipment ID No. *BATT CHGR 34* Equip. Class[1] *16*

Equipment Description *BATTERY CHARGER*

Other Adverse Conditions

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

Internal connections are good and no corrosion was observed. The back cover panel is missing 1 out of 6 screws. The remaining five screws will have adequate structural capability to hold the panel in place during a design basis seismic event because the panel's weight is light. R1

Yes, we have looked for and found no other seismic conditions that could adversely affect the safety functions of the equipment.

Comments (Additional pages may be added as necessary)

Cabinet was opened pre-outage to examine internal components. R1

References:
9321-F-30523, Rev. 50
SEWS for Battery Charger 34

Evaluated by: *Dan Nuta* Date: *2/20/13*

Kai Lo *2/20/13*

Status: Y☒ N☐ U☐ R1

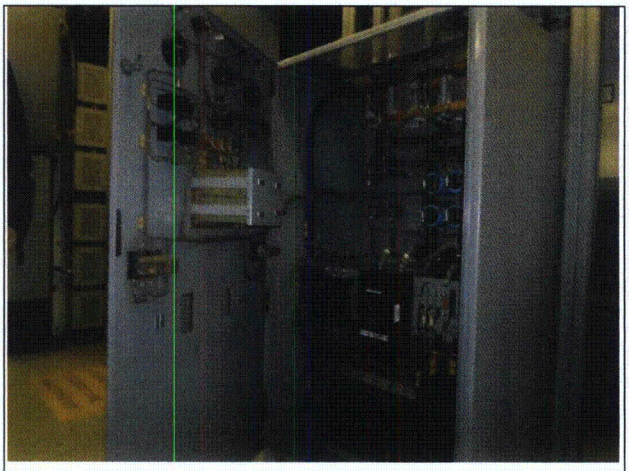
Seismic Walkdown Checklist (SWC) **SWEL1-072**

Equipment ID No. *BATT CHGR 34* Equip. Class[1] *16*

Equipment Description *BATTERY CHARGER*

Photographs

Note: *Battery charger 34*



R1

Note:

Cabinet door opened to reveal the interior and connections.

-Status: Y☒ N☐ U☐ R1

Seismic Walkdown Checklist (SWC) SWEL1-073

Equipment ID No. *31 INVERTER* Equip. Class[1] *16*

Equipment Description *STATIC INVERTER 31*

Location: Bldg. *CB* Floor El. *33'-0"* Room, Area

Manufacturer, Model, Etc. (optional but recommended)

Instructions for Completing Checklist

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

Anchorage

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

   The anchorage configuration verification is required.

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

   The anchorage is free of bent, broken, missing or loose hardware.

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

   The anchorage is free of corrosion that is more than mild surface oxidation.

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

   The anchorage is free of visible cracks in the concrete near the anchors.

[1] Enter the equipment class name from EPRI 1025286, Appendix B: Classes of Equipment.

-Status: Y☒ N☐ U☐ R1

Seismic Walkdown Checklist (SWC) SWEL1-073

Equipment ID No. *31 INVERTER* Equip. Class[1] *16*

Equipment Description *STATIC INVERTER 31*

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

   Anchorage configuration is consistent with SEWS for STATIC INV 31.

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

   Yes, based on the above anchorage evaluations, the anchorage is free of potentially adverse seismic conditions.

Interaction Effects

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

   Masonry block wall at adjacent Battery Room 34 is remote from the equipment and was evaluated as part of the IEB 80-11 analysis and found to be seismically qualified.

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

   Fluorescent bulbs in overhead lighting are not secured to the light fixture. This has been addressed by CR-IP3-2012-03123.

   Masonry block wall at Battery Room 31 which is near the equipment was evaluated as part of the IEB 80-11 analysis (Calculation 6620.210-1-CB-001-L, wall 52B) and found to be seismically qualified.

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

   Attached lines have adequate flexibility to avoid damage.

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

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

-Status: Y☒ N☐ U☐ R1

Seismic Walkdown Checklist (SWC) SWEL1-073

Equipment ID No. *31 INVERTER* Equip. Class[1] *16*

Equipment Description *STATIC INVERTER 31*

Other Adverse Conditions

11. Have you looked for and found no other seismic conditions that could adversely affect the safety functions of the equipment? Y☒ N☐ U☐ R1

Cabinet doors were opened in 3R17 to evaluate internal components. There are no other seismic conditions that could adversely affect the safety functions of the equipment.

Comments (Additional pages may be added as necessary)

References:
9321-F-65013, Rev. 1
9321-F-30523, Rev. 50
SEWS for 25 KVA Static Inverter #32
AWC-007

Evaluated by:

Dan Nuta Date: *3/15/2013*

Kai Lo Date: *3/15/2013*

-Status: Y☒ N☐ U☐ R1

Seismic Walkdown Checklist (SWC) SWEL1-073

Equipment ID No. *31 INVERTER* Equip. Class[1] *16*

Equipment Description *STATIC INVERTER 31*

Photographs

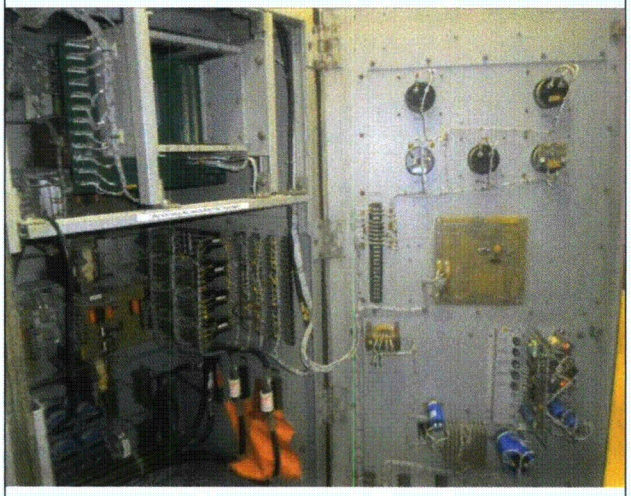
Note: *STATIC INVERTER 31*

R1

Note:

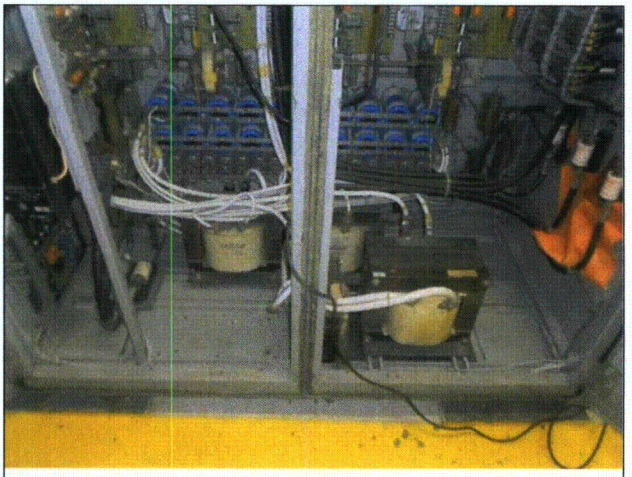
Cabinet door opened to reveal the interior and connections.

Photographs



Note:

Cabinet door opened to reveal the interior and connections.



Note:

Cabinet door opened to reveal the interior and connections.

R1

Status: Y☒ N☐ U☐ R1

Seismic Walkdown Checklist (SWC) SWEL1-074

Equipment ID No. *32 INVERTER* Equip. Class[1] *16*

Equipment Description *STATIC INVERTER 32*

Location: Bldg. *CB* Floor El. *33'-0"* Room, Area

Manufacturer, Model, Etc. (optional but recommended)

Instructions for Completing Checklist

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

Anchorage

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

   The anchorage configuration verification is required.

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

   The anchorage is free of bent, broken, missing or loose hardware.

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

   The anchorage is free of corrosion that is more than mild surface oxidation.

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

   The anchorage is free of visible cracks in the concrete near the anchors.

[1] Enter the equipment class name from EPRI 1025286, Appendix B: Classes of Equipment.

Status: Y☒ N☐ U☐ R1

Seismic Walkdown Checklist (SWC) SWEL1-074

Equipment ID No. *32 INVERTER* Equip. Class[1] *16*

Equipment Description *STATIC INVERTER 32*

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

   Anchorage is consistent with SEWS for STATIC INV 32.

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

   Yes, based on the above anchorage evaluations, the anchorage is free of potentially adverse seismic conditions.

Interaction Effects

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

   Yes, soft targets are free from impact by nearby equipment or structures.

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

   Flourescent bulbs in overhead lighting are not secured to the light fixture. This is addressed in CR-IP3-2012-03123.

   The masonry block wall at Battery Room 32 adjacent to the equipment was evaluated in the IEB 80-11 analysis (Calculation 6620.210-1-CB-001-K, wall 52B) and found to be adequate.

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

   Attached lines have adequate flexibility to avoid damage.

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

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

Status: Y☒ N☐ U☐ R1

Seismic Walkdown Checklist (SWC) SWEL1-074

Equipment ID No. *32 INVERTER* Equip. Class[1] *16*

Equipment Description *STATIC INVERTER 32*

Other Adverse Conditions

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

Cabinet doors were opened in 3R17 to evaluate internal components. There are no other seismic conditions that could adversely affect the safety functions of the equipment. R1

Comments (Additional pages may be added as necessary)

References:
SEWS for 25 KVA Static Inverter #32
9321-F-50523, Rev. 50
9321-F-65013
AWC-007

Evaluated by:

Dan Nuta Date: *3/11/2013*

Kai Lo Date: *3/11/2013*

Status: Y☒ N☐ U☐ R1

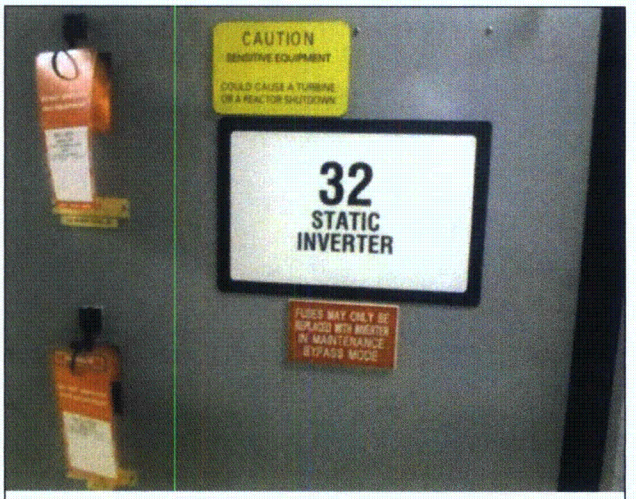
Seismic Walkdown Checklist (SWC) SWEL1-074

Equipment ID No. *32 INVERTER* Equip. Class[1] *16*

Equipment Description *STATIC INVERTER 32*

Photographs

Note: 32 INVERTER

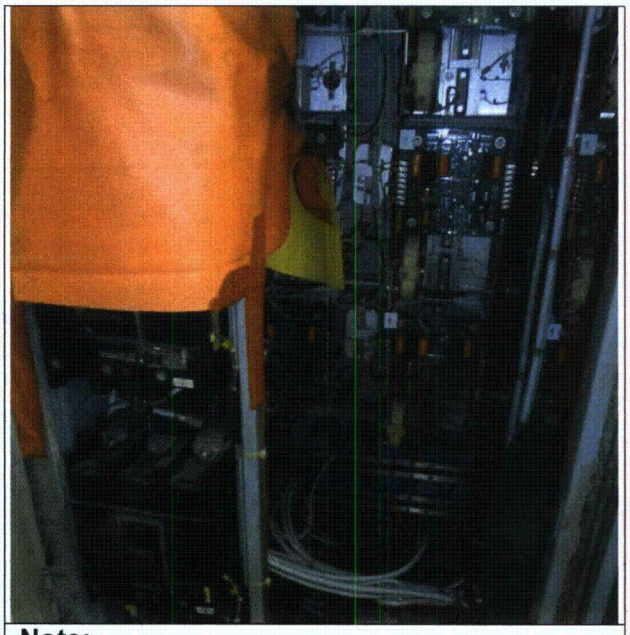


R1

Note:

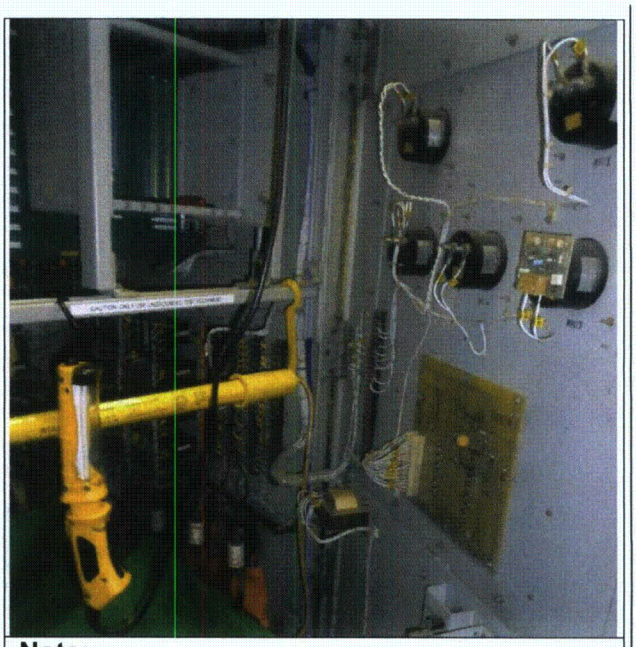
Cabinet door opened to reveal the interior and connections.

Photographs



Note:

Cabinet door opened to reveal the interior and connections.



Note:

Cabinet door opened to reveal the interior and connections.

R1

Status: Y☒ N☐ U☐ R1

Seismic Walkdown Checklist (SWC) SWEL1-075

Equipment ID No. *33 INVERTER* Equip. Class[1] *16*

Equipment Description *STATIC INVERTER 33*

Location: Bldg. *CB* Floor El. *33'-0"* Room, Area

Manufacturer, Model, Etc. (optional but recommended)

Instructions for Completing Checklist

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

Anchorage

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

   Yes, the anchorage configuration verification is required.

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

   Yes, the anchorage is free of bent, broken, missing or loose hardware.

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

   Yes, the anchorage is free of corrosion that is more than mild surface oxidation.

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

   Yes, the anchorage is free of visible cracks in the concrete near the anchor.

[1] Enter the equipment class name from EPRI 1025286, Appendix B: Classes of Equipment.

Status: Y☒ N☐ U☐ R1

Seismic Walkdown Checklist (SWC) SWEL1-075

Equipment ID No. *33 INVERTER* Equip. Class[1] *16*

Equipment Description *STATIC INVERTER 33*

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

   Yes, the anchorage configuration is consistent with SEWS for STATIC INV 33.

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

   Yes, based on the above anchorage evaluations, the anchorage is free of potentially adverse seismic conditions.

Interaction Effects

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

   Yes, soft targets are free from impact by nearby equipment or structures.

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

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

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

   Yes, attached lines have adequate flexibility to avoid damage.

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

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

Status: Y☒ N☐ U☐ R1

Seismic Walkdown Checklist (SWC) SWEL1-075

Equipment ID No. *33 INVERTER* Equip. Class[1] *16*

Equipment Description *STATIC INVERTER 33*

Other Adverse Conditions

11. Have you looked for and found no other seismic conditions that could adversely affect the safety functions of the equipment? Y☒ N☐ U☐ R1

Cabinet doors were opened in 3R17 to evaluate internal components. There are no other seismic conditions that could adversely affect the safety functions of the equipment.
Two pieces of tie wrap were found in the bottom shelf of the inverter cabinet. This is a house keeping issue. The supervisor performing the maintenance was notified to remove the tie wraps.

Comments (Additional pages may be added as necessary)

References:
SEWS for 25 KVA Static Inverter #33
9321-F-30523, Rev. 50
AWC-007

Evaluated by: *Dan Nuta* Date: *3/7/2013*

Kai Lo *3/7/2013*

Status: Y☒ N☐ U☐ R1

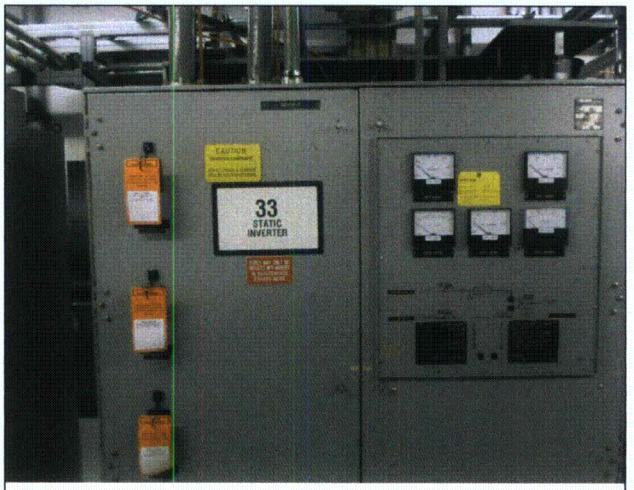
Seismic Walkdown Checklist (SWC) **SWEL1-075**

Equipment ID No. *33 INVERTER* Equip. Class[1] *16*

Equipment Description *STATIC INVERTER 33*

Photographs

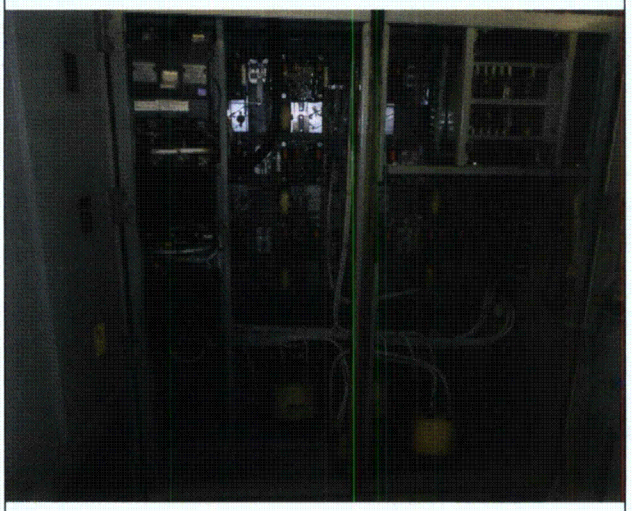
Note: *STATIC INVERTER 33*



R1

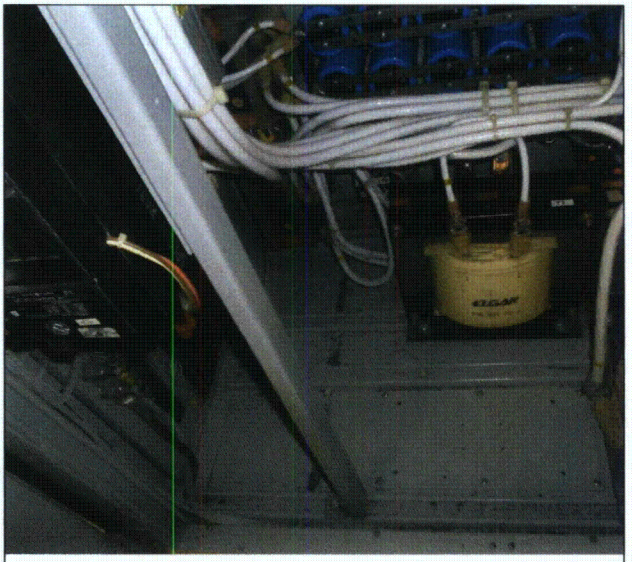
Note: *STATIC INVERTER 33*

Photographs



Note: *STATIC INVERTER 33*

Cabinet door opened to reveal the interior and connections.



Note:

Ttie wraps on bottom shelf

R1

Status: Y☒ N☐ U☐

Seismic Walkdown Checklist (SWC) SWEL1-079

Equipment ID No. *RACK#19* Equip. Class[1] *18*

Equipment Description *PRESSURIZER LEVEL TRANSMITTER CABINET*

Location: Bldg. *VC* Floor El. *68'-0"* Room, Area

Manufacturer, Model, Etc. (optional but recommended)

Instructions for Completing Checklist

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

Anchorage

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

   YES CHECK THE ANCHORAGE

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

   The top of Hilti bolt hex nut is flush with the bolt head. This is acceptable per calculation IP3-CALC-MULT-00734. (page 6)

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

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

[1] Enter the equipment class name from EPRI 1025286. Appendix B: Classes of Equipment.

Status: Y☒ N☐ U☐

Seismic Walkdown Checklist (SWC) SWEL1-079

Equipment ID No. *RACK#19* Equip. Class[1] *18*

Equipment Description *PRESSURIZER LEVEL TRANSMITTER CABINET*

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

The following discrepancies were found between the anchorage configuration shown on Drawing 9321-F-70553 Section A-A and the as built condition:

1. The drawing shows all anchor bolts are ¾" but six of the bolts observed in the three accessible compartments are ½" diameter.A second walkdown confired that there is a total of six ½" bolts in all 4 compartments.

2. The bolts located on the front side of the rack are 1.5" to 2.25" to the concrete edge, less than the normal required edge distance to achieve full capacity per the Hilti Bolt requirements.

3. Section A-A of Dwg. 9321-F-70553 is typical for both Rack 19 and 21. The two racks must have their own individual anchorage plan because the two configurations, including the floor penetrations, are different.

CR-IP3-2013-01440 was generated to resolve the above issues.

There is no operability concern because a license basis evaluation (LB-22) for the as-built anchorage configuration was performed and found that the as-built configuration is structurally adequate when analyzed for seismic loads associated with a postulated SSE occurrence.

The drawing and calculation need to be revised to show the actual as built configuration.

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

Interaction Effects

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

Status: Y☒ N☐ U☐

Seismic Walkdown Checklist (SWC) SWEL1-079

Equipment ID No. *RACK#19* Equip. Class[1] *18*

Equipment Description *PRESSURIZER LEVEL TRANSMITTER CABINET*

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

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

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

Other Adverse Conditions

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

Comments (Additional pages may be added as necessary)

References:
9321-F-70273 Containment Building Instrument Arrangement Sheet 1 Instrumentation
9321-F-70513 Transmitter Racks Piping Arrangement – Sheet No. 4 Instrument
9321-F-70553 Transmitter Racks Piping Arrangement – Sheet No. 5 Instrument
208247 Modification to Pressurizer Level Transmitter Cabinet _ Rack No. 19 Instrumentation
Calculation 6604-003-CALC-322, Transmitter Rack 19 – Seismic Qualification
SEWS for Rack 19
CR-IP3-2013-01440
AWC-51

Status: Y☒ N☐ U☐

Seismic Walkdown Checklist (SWC) SWEL1-079

Equipment ID No. *RACK#19* Equip. Class[1] *18*

Equipment Description *PRESSURIZER LEVEL TRANSMITTER CABINET*

Evaluated by: *Dan Nuta* Date: *3-9-2013*

Kai Lo *3-9-2013*

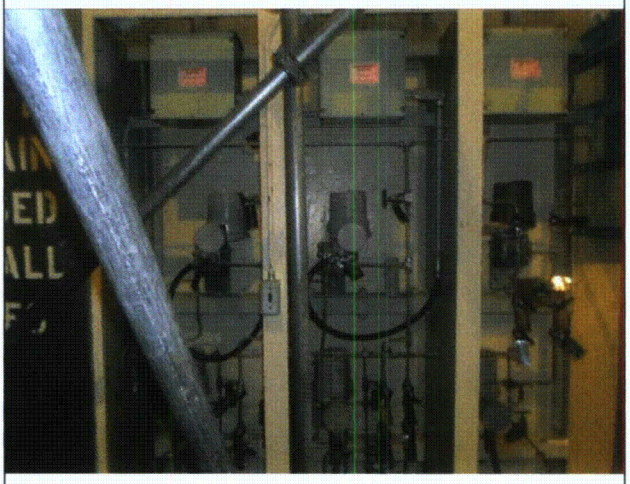
Status: Y☒ N☐ U☐

Seismic Walkdown Checklist (SWC) **SWEL1-079**

Equipment ID No. *RACK#19* Equip. Class[1] *18*

Equipment Description *PRESSURIZER LEVEL TRANSMITTER CABINET*

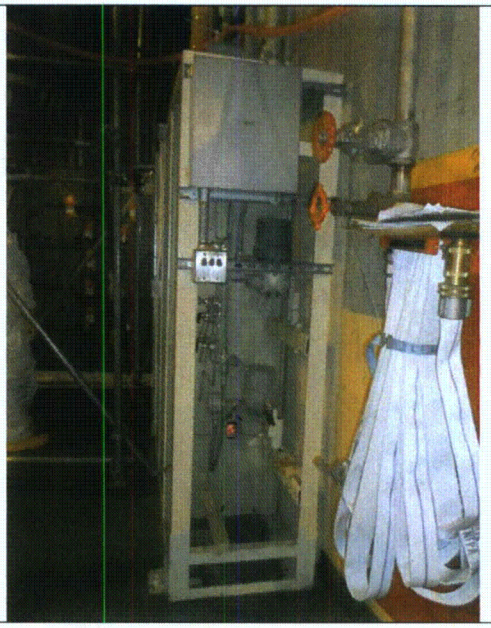
Photographs



Note:

PRESSURIZER LEVEL TRANSMITTER CABINET

Rack 19



Note:

Side view of the rack

Status: Y☒ N☐ U☐

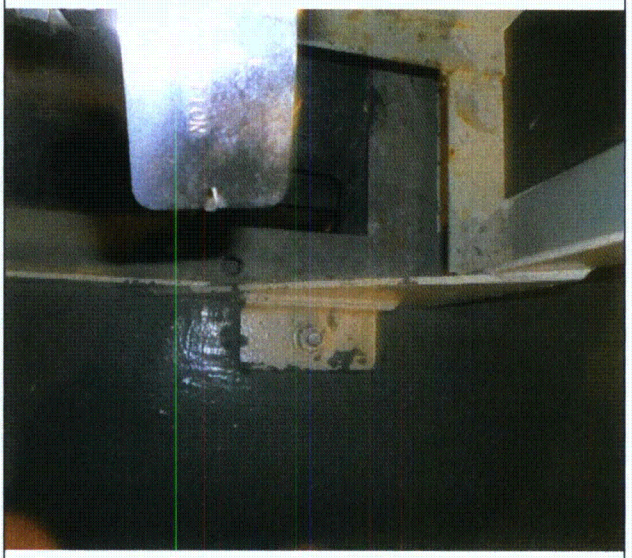
Seismic Walkdown Checklist (SWC) SWEL1-079

Equipment ID No. *RACK#19* Equip. Class[1] *18*

Equipment Description *PRESSURIZER LEVEL TRANSMITTER CABINET*

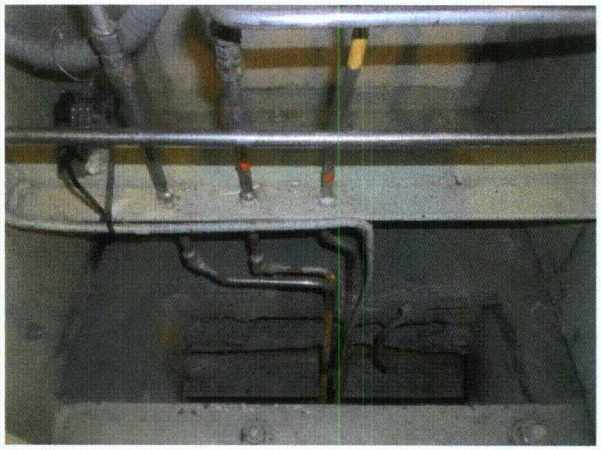
Note:

When facing the rack, this is the right side, first compartment.



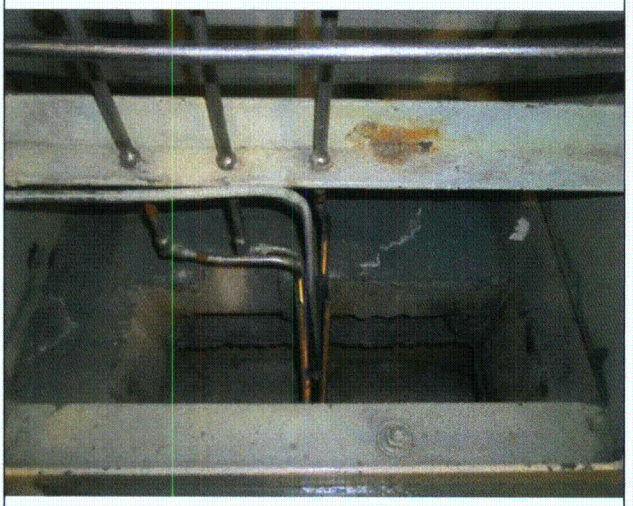
Note:

First compartment from the right side



Note:

Third compartment from the right



Note:

Second compartment from the right

Status: Y☒ N☐ U☐

Seismic Walkdown Checklist (SWC) SWEL1-080

Equipment ID No. *RACK#21* Equip. Class[1] *18*

Equipment Description *STEAM GENERATORS LEVEL TRANSMITTER*

Location: Bldg. *VC* Floor El. *68'-0"* Room, Area

Manufacturer, Model, Etc. (optional but recommended)

Instructions for Completing Checklist

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

Anchorage

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

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

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

   Mild surface corrosion on one hex nut in the first compartment from the left side. (facing the rack)

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

[1] Enter the equipment class name from EPRI 1025286, Appendix B: Classes of Equipment.

Status: Y☒ N☐ U☐

Seismic Walkdown Checklist (SWC) SWEL1-080

Equipment ID No. *RACK#21* Equip. Class[1] *18*

Equipment Description *STEAM GENERATORS LEVEL TRANSMITTER*

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

The following discrepancies between the anchorage configuration shown on Drawing 9321-F-70553 Section A-A and the as built condition were found:

1. The drawing shows all anchor bolts are 0.75 inch but the bolts are all 0.5" diameter.

2. The drawing shows 16 anchor bolts but the as built condition shows 8 of them were not installed. (Note: One compartment cannot be accessed with a sign "Door to Remain Closed at all Times").

3. Section A-A of Dwg. 9321-F-70553 is typical for both Rack 19 and 21. The two racks must have their own individual anchorage plan because the two configurations, including proximity to the edge of floor penetrations, are different.

CR-IP3-2013-01346 was generated to resolve the above issues.(The CR incorrectly stated that 17 bolts were shown on the drawing)

There is no operability concern because the existing SQUG evaluation of the rack bounds the discrepancies noted above.The as built configuration is structurally adequate when analyzed for seismic loads associated with a postulated SSE occurrence. The calculation for this rack needs to be revised.

The drawing needs to be revised to show the actual as built configurations for the rack.

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

Interaction Effects

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

Status: Y☒ N☐ U☐

Seismic Walkdown Checklist (SWC) SWEL1-080

Equipment ID No. *RACK#21* Equip. Class[1] *18*

Equipment Description *STEAM GENERATORS LEVEL TRANSMITTER*

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

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

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

Other Adverse Conditions

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

Comments (Additional pages may be added as necessary)

There is a slight, minor surface corrosion on a tubing clip angle support in the first compartment from the left side.

References:

9321-F-70273 Containment Building Instrument Arrangement Sheet 1 Instrumentation
9321-F-70513 Transmitter Racks Piping Arrangement – Sheet No. 4 Instrument
9321-F-70553 Transmitter Racks Piping Arrangement – Sheet No. 5 Instrument
208247 Modification to Pressurizer Level Transmitter Cabinet _ Rack No. 19 Instrumentation
Calculation C/S DA-83-0090-A, IP3 Containment Building Rack 21 – Structural Analysis
SEWS for Rack 19
CR-IP3-2013-01346
AWC-50

Status: Y☒ N☐ U☐

Seismic Walkdown Checklist (SWC) SWEL1-080

Equipment ID No. *RACK#21* Equip. Class[1] *18*

Equipment Description *STEAM GENERATORS LEVEL TRANSMITTER*

Evaluated by: *Dan Nuta* Date: *3-9-2013*

Kai Lo *3-9-2013*

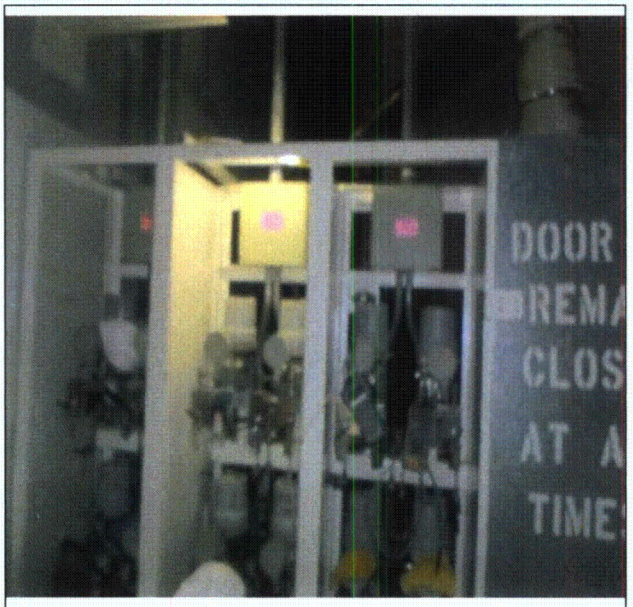
Status: Y☒ N☐ U☐

Seismic Walkdown Checklist (SWC) **SWEL1-080**

Equipment ID No. *RACK#21* Equip. Class[1] *18*

Equipment Description *STEAM GENERATORS LEVEL TRANSMITTER*

Photographs



Note:

STEAM GENERATORS LEVEL TRANSMITTER RACK 21

Note:

1st compartment from the left side

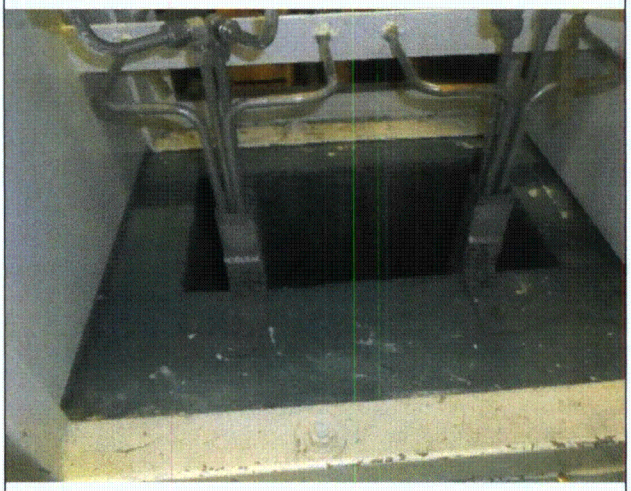
- *Mild surface corrosion on Hilti Bolt hex nut*
- *Mild surface corrosion on tubing angle clip support*

Status: Y☒ N☐ U☐

Seismic Walkdown Checklist (SWC) SWEL1-080

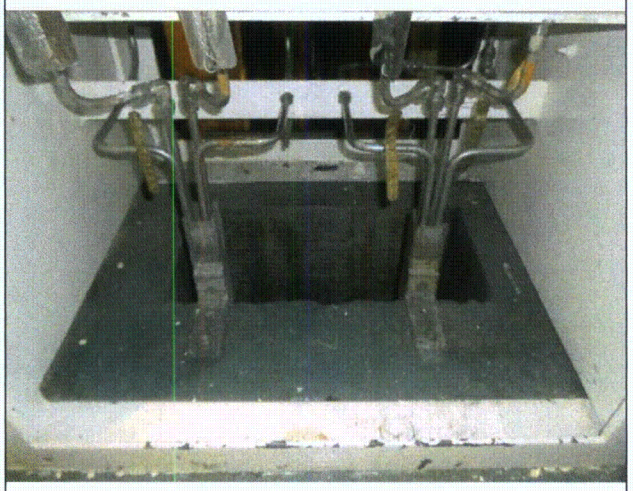
Equipment ID No. *RACK#21* Equip. Class[1] *18*

Equipment Description *STEAM GENERATORS LEVEL TRANSMITTER*



Note:

2nd compartment from the left side



Note:

3rd compartment from the left side

Status: Y☒ N☐ U☐

Seismic Walkdown Checklist (SWC) SWEL1-082

Equipment ID No. *RACK#4A* Equip. Class[1] *18*

Equipment Description *SG #31 & #32 MAIN STM FLOW TRANSMITTER RACK*

Location: Bldg. *VC* Floor El. *68'-0"* Room, Area

Manufacturer, Model, Etc. (optional but recommended)

Instructions for Completing Checklist

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

Anchorage

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

   YES CHECK THE ANCHORAGE

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

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

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

[1] Enter the equipment class name from EPRI 1025286, Appendix B: Classes of Equipment.

Status: Y☒ N☐ U☐

Seismic Walkdown Checklist (SWC) SWEL1-082

Equipment ID No. *RACK#4A* Equip. Class[1] *18*

Equipment Description *SG #31 & #32 MAIN STM FLOW TRANSMITTER RACK*

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

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

Interaction Effects

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

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

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

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

Status: Y☒ N☐ U☐

Seismic Walkdown Checklist (SWC) SWEL1-082

Equipment ID No. *RACK#4A* Equip. Class[1] *18*

Equipment Description *SG #31 & #32 MAIN STM FLOW TRANSMITTER RACK*

Other Adverse Conditions

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

The back of Rack 4A is adjacent to the handrail and the side is adjacent to Rack 27A. The handrail is bolted to Rack 27A at two places to increase its rigidity so it cannot move and impact Rack 4A and Rack 27A during a seismic event. Attaching the handrail to Rack 27A is acceptable because a less than 200 pounds potential horizontal live load and light inertial mass for the hadrail are not structurally significant when compared to the compacity of the frame and anchorage.

Comments (Additional pages may be added as necessary)

References:
9321-H-72733, Separation of Main Steam Flow Transmitter Racks 4A from 27A & 4B from 27B
9321-F-70015, Main Steam Flow Transmitter Racks Piping Arrangement Instrumentation
9321-F-70283, Containment Building Instrument Arrangement Sheet No. 2 Instrumentation
SEWS for Rack 4A
AWC-56

Evaluated by: *Dan Nuta* Date: *3-4-2013*

Kai Lo *3-4-2013*

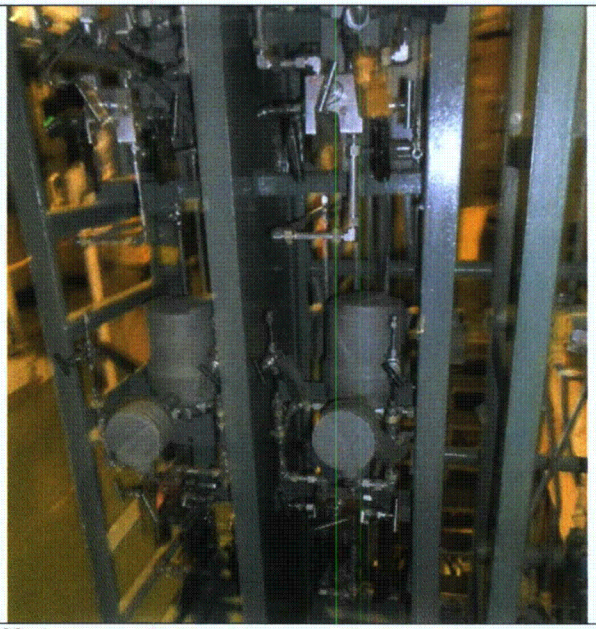
Status: Y☒ N☐ U☐

Seismic Walkdown Checklist (SWC) SWEL1-082

Equipment ID No. *RACK#4A* Equip. Class[1] *18*

Equipment Description *SG #31 & #32 MAIN STM FLOW TRANSMITTER RACK*

Photographs



Note:

SG #31 & #32 MAIN STM FLOW TRANSMITTER RACK No. 4A

Note:

Rack 4A anchorage

Status: Y☒ N☐ U☐

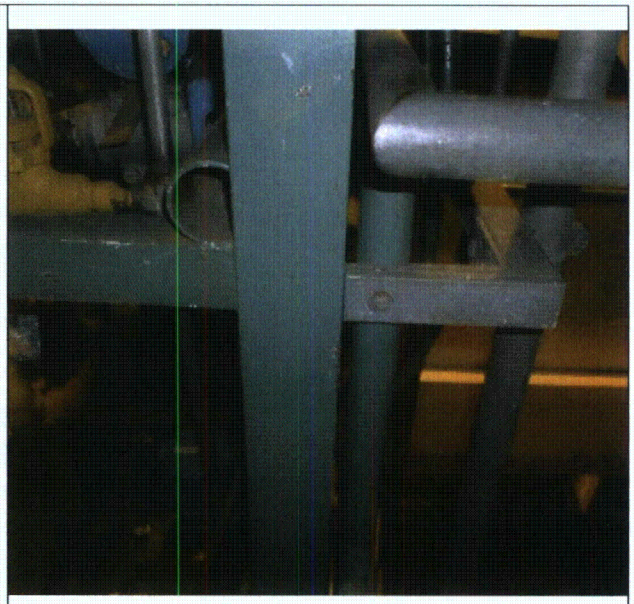
Seismic Walkdown Checklist (SWC) SWEL1-082

Equipment ID No. *RACK#4A* Equip. Class[1] *18*

Equipment Description *SG #31 & #32 MAIN STM FLOW TRANSMITTER RACK*

Note:

One side of adjacent Rack 27A is bolted to the post of the handrail.



Note:

The other side of Rack 27A is bolted to the post of the handrail.

Status: Y☒ N☐ U☐

Seismic Walkdown Checklist (SWC) SWEL1-083

Equipment ID No. *RACK#4B* Equip. Class[1] *18*

Equipment Description *SG #33 & #34 MAIN STM FLOW TRANSMITTER RACK*

Location: Bldg. *VC* Floor El. *68'-0"* Room, Area _____

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

Instructions for Completing Checklist

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

Anchorage

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

   YES CHECK THE ANCHORAGE

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

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

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

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

[1] Enter the equipment class name from EPRI 1025286, Appendix B: Classes of Equipment.

Status: Y☒ N☐ U☐

Seismic Walkdown Checklist (SWC) SWEL1-083

Equipment ID No. *RACK#4B* Equip. Class[1] *18*

Equipment Description *SG #33 & #34 MAIN STM FLOW TRANSMITTER RACK*

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

Interaction Effects

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

   ¾" (1.05" OD) vertical riser, Station Air pipe is supported at EL. 68' and 93' (near column 5). The vertical span is 25'. License Basis evaluation (LB-21) was generated to evaluate the condition. The stresses and displacements induced during a DBE are acceptable.

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

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

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

Other Adverse Conditions

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

Status: Y☒ N☐ U☐

Seismic Walkdown Checklist (SWC) **SWEL1-083**

Equipment ID No. *RACK#4B* Equip. Class[1] *18*

Equipment Description *SG #33 & #34 MAIN STM FLOW TRANSMITTER RACK*

Comments (Additional pages may be added as necessary)

References:
9321-H-72733, Separation of Main Steam Flow Transmitter Racks 4A from 27A & 4B from 27B
9321-F-70015, Main Steam Flow Transmitter Racks Piping Arrangement Instrumentation
9321-F-70273, Containment Building Instrument Arrangement Sheet No. 1 Instrumentation
SEWS for Rack 4B
AWC-48

Evaluated by: *Dan Nuta* Date: *3-5-2013*

Kai Lo *3-5-2013*

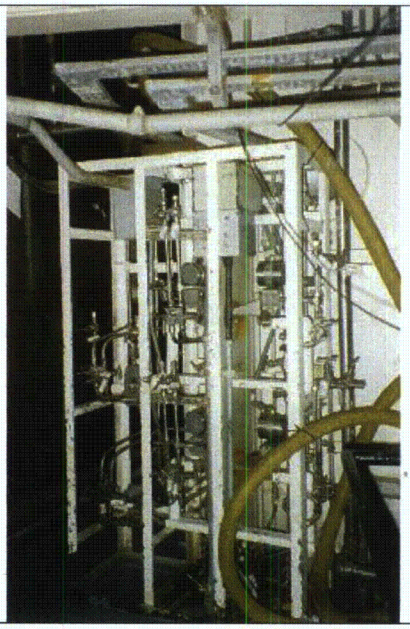
Status: Y☒ N☐ U☐

Seismic Walkdown Checklist (SWC) SWEL1-083

Equipment ID No. *RACK#4B* Equip. Class[1] *18*

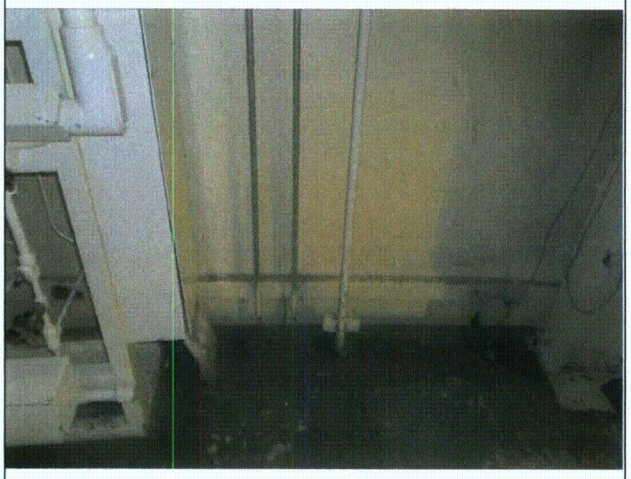
Equipment Description *SG #33 & #34 MAIN STM FLOW TRANSMITTER RACK*

Photographs



Note:

Rack 4B



Note:

¾" (1.05" OD) Station Air riser

Status: Y☒ N☐ U☐

Seismic Walkdown Checklist (SWC) SWEL1-085

Equipment ID No. *TE-122* Equip. Class[1] *19*

Equipment Description *EXCESS LETDOWN TEMP ELEMENT*

Location: Bldg. *VC* Floor El. *46'-0"* Room, Area

Manufacturer, Model, Etc. (optional but recommended)

Instructions for Completing Checklist

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

Anchorage

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

   NOT PART OF ANCHOR CHECKS

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

   TE-122 has piping that is well supported inside the VC sump barrier.

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

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

   There is no concrete involved.

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

   This is not part of the 50% for which an anchorage configuration verification is required.

[1] Enter the equipment class name from EPRI 1025286, Appendix B: Classes of Equipment.

Status: Y☒ N☐ U☐

Seismic Walkdown Checklist (SWC) SWEL1-085

Equipment ID No. *TE-122* Equip. Class[1] *19*

Equipment Description *EXCESS LETDOWN TEMP ELEMENT*

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

Interaction Effects

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

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

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

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

Other Adverse Conditions

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

Status: Y☒ N☐ U☐

Seismic Walkdown Checklist (SWC) SWEL1-085

Equipment ID No. *TE-122* Equip. Class[1] *19*

Equipment Description *EXCESS LETDOWN TEMP ELEMENT*

Comments (Additional pages may be added as necessary)

Mild surface corrosion is found in the following locations:

1. *TE-122 fitting.*
2. *The bolts on the nearby valve 215 and a few others.*
3. *The flanges where the bolts in item 2 are attached to.*
4. *See AWC-54*

References:
9321-F-70283, Containment Building Instrument Arrangement Sheet No. 2 Instrumentation
9321-F-25813, Containment Building Chemical & Volume Control System Sheet No. 1
AWC-54

Evaluated by: *Dan Nuta* Date: *3-13-2013*

Kai Lo *3-13-2013*

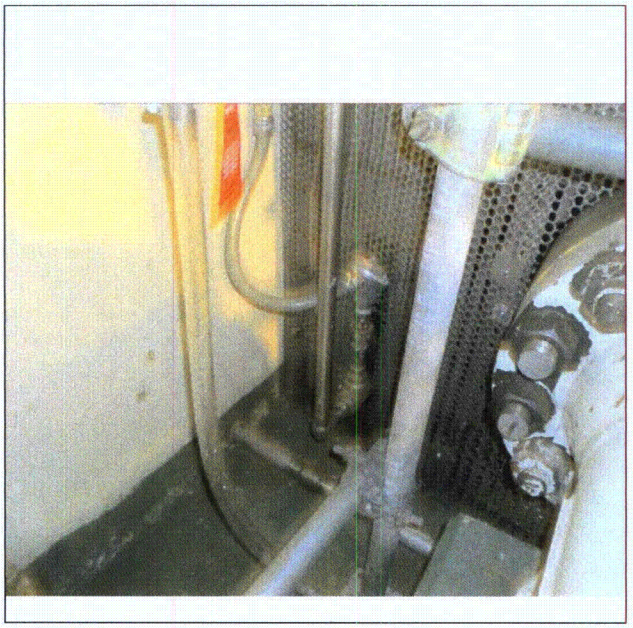
Status: Y☒ N☐ U☐

Seismic Walkdown Checklist (SWC) SWEL1-085

Equipment ID No. *TE-122* Equip. Class[1] *19*

Equipment Description *EXCESS LETDOWN TEMP ELEMENT*

Photographs



Status: Y☒ N☐ U☐ R1

Seismic Walkdown Checklist (SWC) SWEL1-087

Equipment ID No. *PL6* Equip. Class[1] *20*

Equipment Description *CHARGING PUMPS SPEED CONTROL PANEL*

Location: Bldg. *PA* Floor El. *55'-0"* Room, Area

Manufacturer, Model, Etc. (optional but recommended)

Instructions for Completing Checklist

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

Anchorage

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

   The anchorage configuration verification is not required.

2. Is the anchorage free of bent, broken, missing or loose hardware? Y☒ N☐ U☐ N/A☐ R1

   Direct anchorage is to a Unistrut frame. This anchorage is inside of the cabinet and the doors were opened pre-outage. The anchorage inside the panel and the anchorage of the support frame to the concrete are free of bent, broken or loose hardware.

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

   Direct anchorage is to a Unistrut frame. and the doors were opened pre- outage. On the side panel, one bolt has a recess of 1/16" below the nut (upper right side bolt) and is acceptable per an existing calculation IP3-CALC-MULTI-00734 .The anchorage of the frame to the concrete is free of corrosion that is more than mild surface oxidation.

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

   The anchorage of the frame to the concrete is free of visible cracks in the concrete near the anchors.

[1] Enter the equipment class name from EPRI 1025286, Appendix B: Classes of Equipment.

Status: Y☒ N☐ U☐ R1

Seismic Walkdown Checklist (SWC) SWEL1-087

Equipment ID No. *PL6* Equip. Class[1] *20*

Equipment Description *CHARGING PUMPS SPEED CONTROL PANEL*

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

   Not applicable since component is not part of the anchorage configuration verification.

6. Based on the above anchorage evaluations, is the anchorage free of potentially adverse seismic conditions? Y☒ N☐ U☐ R1

   Direct anchorage is to a Unistrut frame.The doors of the panel were opened. The anchorage inside the panel and the anchorage of the frame to the concrete are free of potentially adverse seismic conditions.

Interaction Effects

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

   Fluorescent bulbs above the panel need to be restrained. This is not considered to be an impact condition for this panel.
   CR-IP3-2012-03481 has been written to address this condition.

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

   Masonry block wall near the panel needs to be evaluated. Calculation 6604.210-1-CB-001-F, G, H has evaluated the wall and found it to be seismically qualified.

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

   Yes, attached lines have adequate flexibility to avoid damage.

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

    Block wall was evaluated per the IEB 80-11 bulletin as noted in #8 above.

Status: Y☒ N☐ U☐ R1

Seismic Walkdown Checklist (SWC) SWEL1-087

Equipment ID No. *PL6* Equip. Class[1] *20*

Equipment Description *CHARGING PUMPS SPEED CONTROL PANEL*

Other Adverse Conditions

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

    Yes, we have looked for and found no other seismic conditions that could adversely affect the safety functions of the equipment.

Comments (Additional pages may be added as necessary) R1

There was a floor coating crack but is not an adverse condition.

References:

9321-F-70403-17 Prmary Auxiliary Building Instrument Arrangement Sh No. 1, Instrumentation and Restraint and Support Design

AWC-029

Evaluated by: *Dan Nuta* Date: *2/19/2013*

Kai Lo Date: *2/19/2013*

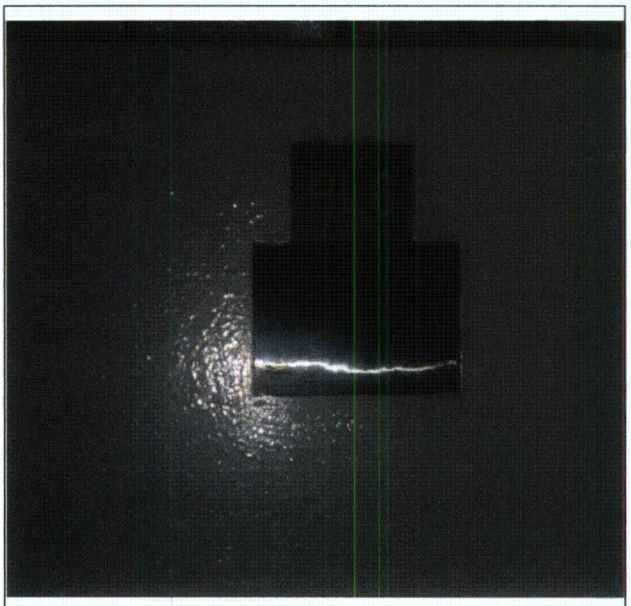
Status: Y☒ N☐ U☐ R1

Seismic Walkdown Checklist (SWC) **SWEL1-087**

Equipment ID No. *PL6* Equip. Class[1] *20*

Equipment Description *CHARGING PUMPS SPEED CONTROL PANEL*

Photographs



Note: *Equipment Tag*

Note: *Front View*

Status: Y☒ N☐ U☐ R1

Seismic Walkdown Checklist (SWC) **SWEL1-087**

Equipment ID No. *PL6* Equip. Class[1] *20*

Equipment Description *CHARGING PUMPS SPEED CONTROL PANEL*

Note: *Side View*

Note:

Status: Y☒ N☐ U☐

Seismic Walkdown Checklist (SWC) SWEL1-101

Equipment ID No. *ACCUM 31* Equip. Class[1] *21*

Equipment Description *31 SIS ACCUMULATOR*

Location: Bldg. *VC* Floor El. *46'-0"* Room, Area

Manufacturer, Model, Etc. (optional but recommended)

Instructions for Completing Checklist

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

Anchorage

1. Is the anchorage configuration verification required (i.e., is the item one of the 50% of SWEL items requiring such verification)? Y☐ N☒
   NOT PART OF ANCHOR CHECKS

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

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

   A few of the anchor bolts for the Accumulator have mild surface corrosion.(See photo)

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

[1] Enter the equipment class name from EPRI 1025286, Appendix B: Classes of Equipment.

Status: Y☒ N☐ U☐

Seismic Walkdown Checklist (SWC) SWEL1-101

Equipment ID No. *ACCUM 31* Equip. Class[1] *21*

Equipment Description *31 SIS ACCUMULATOR*

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

   Not one of the 50% for which an anchorage configuration verification is required.

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

Interaction Effects

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

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

   A corner fitting for strut (similiar to Unistrut chanel type) located approximately 12 feet above the floor and adjacent to the Accumulator, has the following of deficiencies:

   (1) The fitting is a 90 degrees fitting that was cut to accommodate the bending of the strut at the two ends because the struts come together at an angle greater than 90 degrees.
   (2) The fitting has pronounced surface corrosion on the outside.(Photo shows no observable corrosion on the inside surface of the strut.)
   (3) The strut also has pronounced surface corrosion on the outside.
   (4) The strut is in contact with the Accumulator.

   CR-IP3-2013-01530 was generated for condition 1 and 2 above.
   There is no observable structural function for the struts and they were probably abandoned in place. License BasisEevaluation LB-23 was performed for the fitting and found it to be structurally adequate for a design basis seismic event.
   The strut is very light, the kinetic energy impact from the strut onto the Accumulator's surface will be insignificant to cause any adverse effect.

Status: Y☒ N☐ U☐

Seismic Walkdown Checklist (SWC) SWEL1-101

Equipment ID No. *ACCUM 31* Equip. Class[1] *21*

Equipment Description *31 SIS ACCUMULATOR*

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

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

Other Adverse Conditions

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

Status: Y☒ N☐ U☐

Seismic Walkdown Checklist (SWC) SWEL1-101

Equipment ID No. *ACCUM 31* Equip. Class[1] *21*

Equipment Description *31 SIS ACCUMULATOR*

Comments (Additional pages may be added as necessary)

1. *Mild surface corrosion on adjacent valve's nuts and bolts.(See photo)*
2. *Mild surface corrosion on nearby support's nuts and bolts. .(See photo)*
3. *Mild surface corrosion observed on the angle iron support, valve body, bonnet, nuts and bolts. .(See photo)*
4. *Mild surface corrosion observed on the tube track support. .(See photo)*
5. *Mild surface corrosion observed on the tube track, tubing clamp, and U-bolt. .(See photo)*
6. *Boric acid residue found on valve. .(See photo)*

References:

9321-F-20188, Additional Level Transmitter for Accumulator Tank
9321-F-70273, Containment Building Instrument Arrangement Sheet No. 1 Instrumentation
CR-IP3-2013-01530
AWC-52

Evaluated by: *Dan Nuta* Date: *3-11-2013*

Kai Lo *3-11-2013*

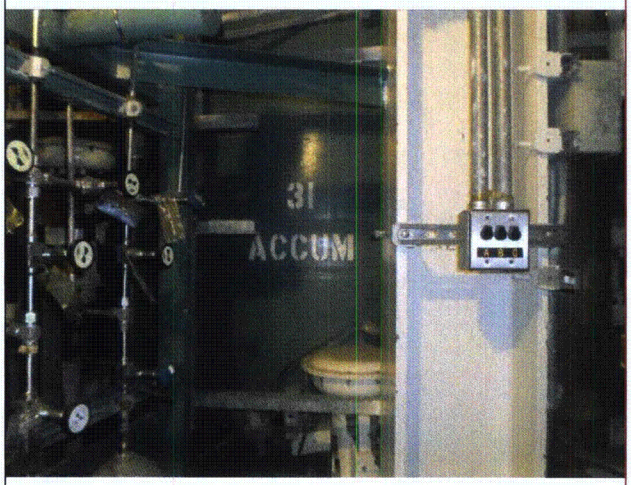
Status: Y☒ N☐ U☐

Seismic Walkdown Checklist (SWC) **SWEL1-101**

Equipment ID No. *ACCUM 31* Equip. Class[1] *21*

Equipment Description *31 SIS ACCUMULATOR*

Photographs



Note:

31 SIS ACCUMULATOR

Note:

Mild surface corrosion on the anchor bolts.

Status: Y☒ N☐ U☐

Seismic Walkdown Checklist (SWC) **SWEL1-101**

Equipment ID No. *ACCUM 31* Equip. Class[1] *21*

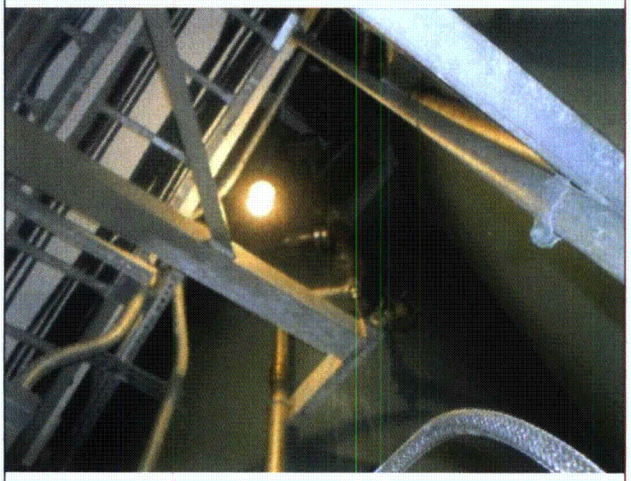
Equipment Description *31 SIS ACCUMULATOR*

Note:

Mild surface corrosion on the anchor bolt (near outer wall)

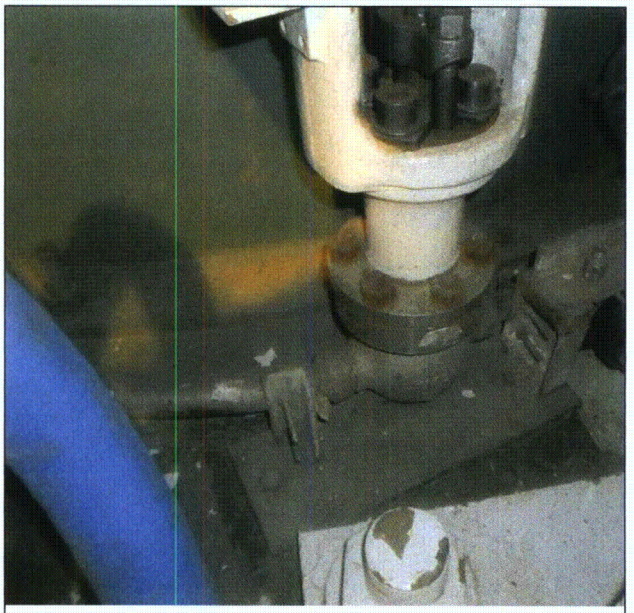
Note:

Mild surface corrosion on the supports' hex nuts and bolts.



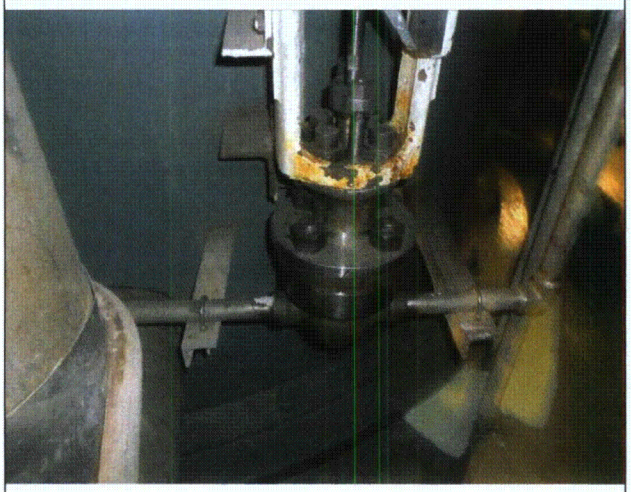
Note:

Mild surface corrosion on the valve's nuts and bolts.



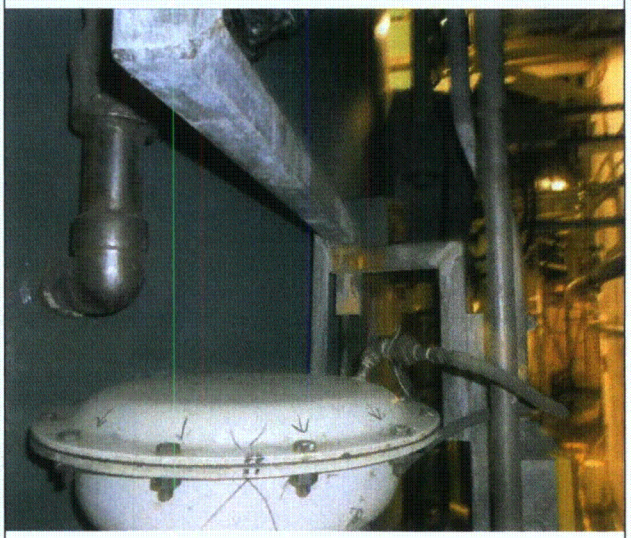
Note:

Mild surface corrosion on the valve's nuts and bolts.



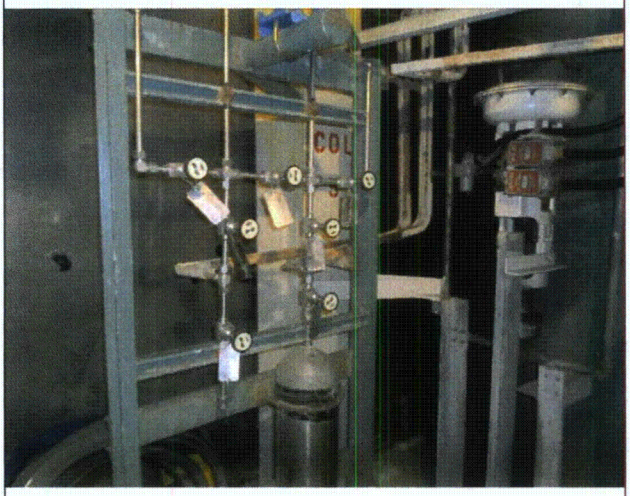
Note:

Mild surface corrosion observed on the angle iron support, valve body, bonnet, nuts and bolts



Note:

Mild surface corrosion observed on the tube track support.



Note:

Mild surface corrosion observed on the tube track, tubing clamp, and U-bolt.

Note:

Pronounced corrosion on an abandoned strut and strut corner fitting.

Note:

Abandoned strut is in contact with Accumulator.

Note:

Status: Y☒ N☐ U☐

Seismic Walkdown Checklist (SWC) SWEL1-102

Equipment ID No. *ACCUM 32* Equip. Class[1] *21*

Equipment Description *32 SIS ACCUMULATOR*

Location: Bldg. *VC* Floor El. *46'-0"* Room, Area

Manufacturer, Model, Etc. (optional but recommended)

Instructions for Completing Checklist

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

Anchorage

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

   NOT PART OF ANCHOR CHECKS

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

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

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

[1] Enter the equipment class name from EPRI 1025286, Appendix B: Classes of Equipment.

Status: Y☒ N☐ U☐

Seismic Walkdown Checklist (SWC) SWEL1-102

Equipment ID No. *ACCUM 32* Equip. Class[1] *21*

Equipment Description *32 SIS ACCUMULATOR*

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

   The item is not one of the 50% for which anchorage configuration verification is required.

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

Interaction Effects

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

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

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

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

Status: Y☒ N☐ U☐

Seismic Walkdown Checklist (SWC) SWEL1-102

Equipment ID No. *ACCUM 32* Equip. Class[1] *21*

Equipment Description *32 SIS ACCUMULATOR*

Other Adverse Conditions

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

Comments (Additional pages may be added as necessary)

See area walk-by AWC-53 for localized corrosion of various tubing and pipe supports.

References:
9321-F-20188, Additional Level Transmitter for Accumulator Tank
9321-F-70273, Containment Building Instrument Arrangement Sheet No. 1 Instrumentation
AWC-53

Evaluated by: *Dan Nuta* Date: *3-11-2013*

Kai Lo *3-11-2013*

Status: Y☒ N☐ U☐

Seismic Walkdown Checklist (SWC) SWEL1-102

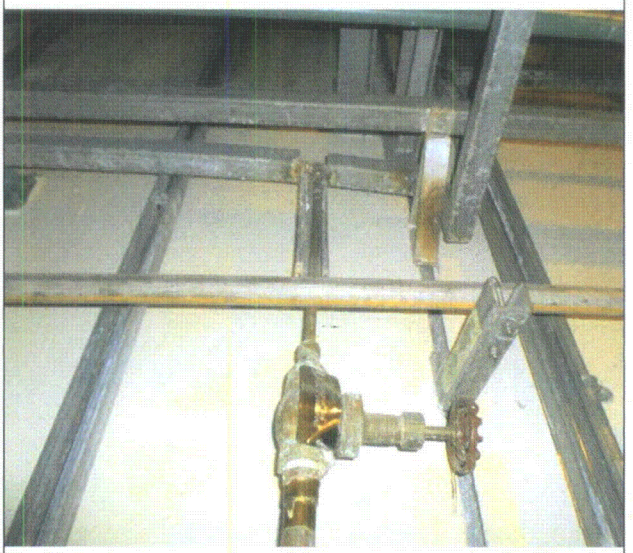
Equipment ID No. *ACCUM 32* Equip. Class[1] *21*

Equipment Description *32 SIS ACCUMULATOR*

Photographs

Note:

32 SIS ACCUMULATOR



Note:

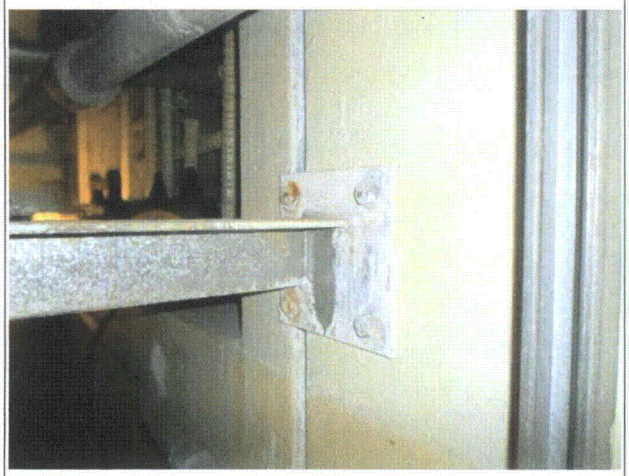
Localized mild surface corrosion, see AWC-53.

Status: Y☒ N☐ U☐

Seismic Walkdown Checklist (SWC) SWEL1-102

Equipment ID No. *ACCUM 32* Equip. Class[1] *21*

Equipment Description *32 SIS ACCUMULATOR*



Note:

Mild surface corrosion at two nuts on the base plate.

Note:

Mild surface corrosion at ceiling building steel.

ATTACHMENT K – AREA WALK-BY CHECKLISTS (AWCs)

Status: Y☒ N☐ U☐

Area Walk-By Checklist (AWC) AWC-044

Location: Bldg. *CB* Floor El. *15'-0* Room, Area[1] *SWGR Room*

SWEL Components: SWEL1-014, SWEL1-015

Instructions for Completing Checklist

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

1. Does anchorage of equipment in the area appear to be free of potentially adverse seismic conditions (if visible without necessarily opening cabinets)? Y☒ N☐ U☐ N/A☐

2. Does anchorage of equipment in the area appear to be free of significant degraded conditions? Y☒ N☐ U☐ N/A☐

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

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

Status: Y☒ N☐ U☐

Area Walk-By Checklist (AWC) AWC-044

Location: Bldg. *CB* Floor El. *15'-0* Room, Area[1] *SWGR Room*

SWEL Components: SWEL1-014, SWEL1-015

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

   The unrestrained fluorescent lighting tube was addressed by a previous CR for CB EL. 15' and the condition was generically accepted.

5. Does it appear that the area is free of potentially adverse seismic interactions that could cause flooding or spray in the area? Y☒ N☐ U☐ N/A☐

6. Does it appear that the area is free of potentially adverse seismic interactions that could cause a fire in the area? Y☒ N☐ U☐ N/A☐

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

   See item 1, 6 and 8 in comments section.

Status: Y☒ N☐ U☐

Area Walk-By Checklist (AWC) AWC-044

Location: Bldg. *CB* Floor El. *15'-0* Room, Area[1] *SWGR Room*

SWEL Components: SWEL1-014, SWEL1-015

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

Comments (Additional pages may be added as necessary)

The following conditions, which are not structurally significant and do not represent an operability concern, were observed:

1. A test instrument support built from steel wire is located right next to the Battery Charger 33. It is only 3 feet away from Switchgear 31 Bus 2A. The test instrument is estimated to weight around 20+ pounds and is less than 1 foot from the floor while the switchgear is much more massive, ~2000 ponds. In a seismic event the instrument may slide along the floor and impact the base of the switchgear, but the energy imparted to the base will be insignificant.

2. On Panel XL9, 4 out of the 14 screws are missing on the panel cover. The remaining 10 screws are structurally adequate because the seismic acceleration is low and the panel weight is minimal. Therefore, there is no adverse seismic interaction. Nevertheless, the missing screws should be re-installed.

3. On Strip Heater Panel 31, 1 out of 4 screws is missing on the side panel. The remaining screws are structurally adequate because the seismic acceleration is low and the panel weight is minimal. As such, there will be no adverse seismic interactions. Nevertheless, the missing screw should be re-installed.

4. On Panel XV2, the front panel is missing 3 out of 14 screws. The remaining 11 screw are structurally adequate because the seismic acceleration is low and the panel weight is minimal. Therefore, there is no adverse seismic interaction. Nevertheless, the missing screws should be re-installed.

5. The cabinet adjacent to EBR-16CB & EBR-17CB has 1 stripped screw and 2 missing screws out of a total of 20 screws. The remaining 17 screw are structurally adequate because the seismic acceleration is low and the panel weight is minimal. Therefore, there is no adverse seismic interaction. Nevertheless, the missing and stripped screws should be re-installed and replaced.

6. Scaffold used the Switchgear's base as a support point. Since both the base of the scaffold and the Switchgear are rigid, there is no adverse seismic interaction. Since the mass of the scaffold is light relative to the mass of the Switchgear, and the seismic acceleration is low, the additional seismic force imposed by the scaffold onto the Switchgear's base anchorage is judged to be acceptable.

7. There is a 20 feet long crack in the coating on the ceiling along the N-S direction (adjacent to the transformer section of Bus 2A). The crack is acceptable since it is at the concrete cover and the slab is reinforced with rebar that can take the tensile stress. There is also another short 4' long crack running E-W, on the ceiling near an opening. This crack is also acceptable based on similar reasoning. These two cracks will be monitored in the future by the Maintenance Rule Structural Monitoring Program.

8. An oil rag was observed on the floor under the 32 IA compressor. This is a housekeeping issue.

The above conditions are captured in CR-IP3-2013-00761 and WR-299849.

Status: Y☒ N☐ U☐

Area Walk-By Checklist (AWC) AWC-044

Location: Bldg. *CB* Floor El. *15'-0* Room, Area[1] *SWGR Room*

SWEL Components: SWEL1-014, SWEL1-015

Evaluated by:

Dan Nuta *2/21/13*

Kai Lo *2/21/13*

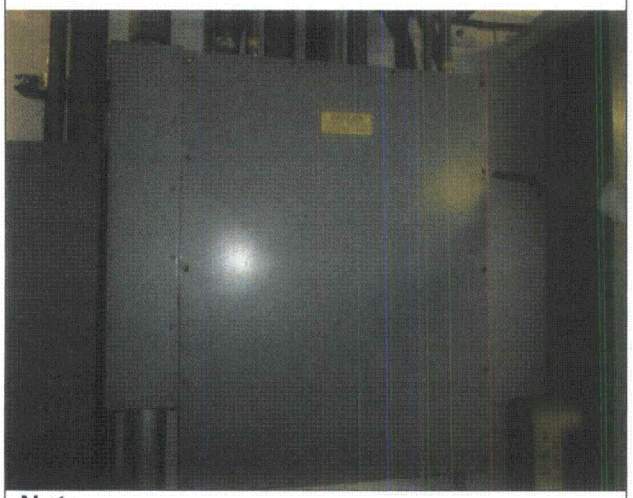
Status: Y☒ N☐ U☐

Area Walk-By Checklist (AWC) AWC-044

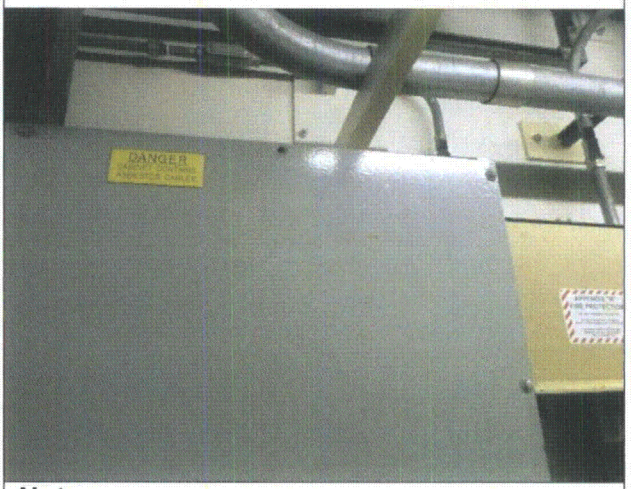
Location: Bldg. *CB* Floor El. *15'-0* Room, Area[1] *SWGR Room*

SWEL Components: SWEL1-014, SWEL1-015

Photographs



Note:



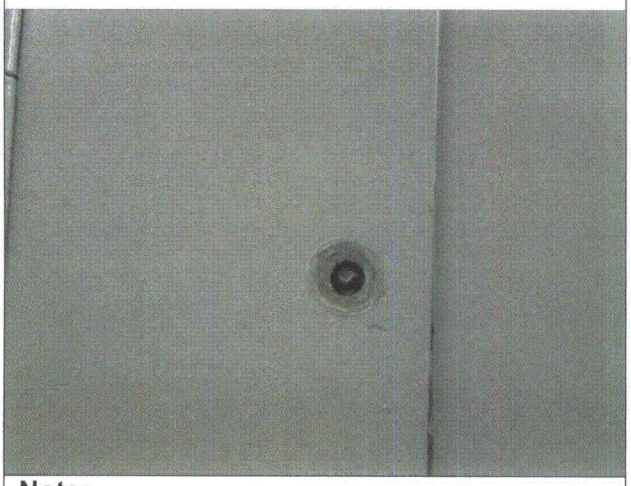
Note:

Status: Y☒ N☐ U☐

Area Walk-By Checklist (AWC) AWC-044

Location: Bldg. *CB* Floor El. *15'-0* Room, Area[1] *SWGR Room*

SWEL Components: SWEL1-014, SWEL1-015



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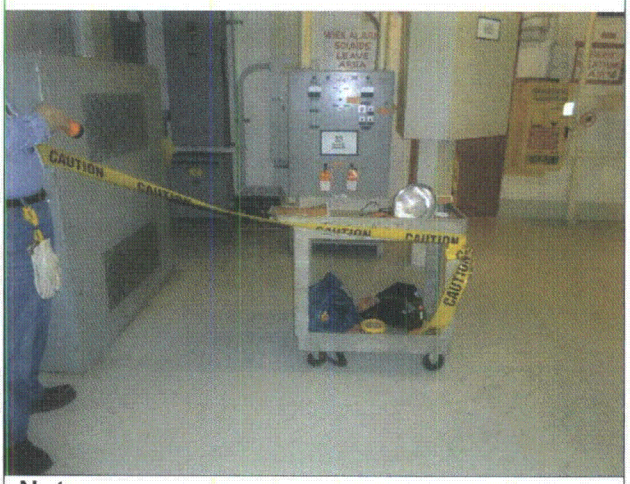


Note:

Sheet 1 of 5

Status: Y☒ N☐ U☐

Area Walk-By Checklist (AWC) AWC-045

Location: Bldg. *VC* Floor El. *68'-0* Room, Area[1] *N/A*

SWEL Components: SWEL1-049

Instructions for Completing Checklist

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

1. Does anchorage of equipment in the area appear to be free of potentially adverse seismic conditions (if visible without necessarily opening cabinets)? Y☒ N☐ U☐ N/A☐

2. Does anchorage of equipment in the area appear to be free of significant degraded conditions? Y☒ N☐ U☐ N/A☐

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

   One conduit located above has two C clamp supports. The clamp has a saddle at the bottom of the conduit and a bolt that tightens the saddle against the conduit. This is an acceptable conduit support.

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

Status: Y☒ N☐ U☐

Area Walk-By Checklist (AWC) AWC-045

Location: Bldg. *VC* Floor El. *68'-0* Room, Area[1] *N/A*

SWEL Components: SWEL1-049

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

5. Does it appear that the area is free of potentially adverse seismic interactions that could cause flooding or spray in the area? Y☒ N☐ U☐ N/A☐

6. Does it appear that the area is free of potentially adverse seismic interactions that could cause a fire in the area? Y☒ N☐ U☐ N/A☐

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

   Parts and tools were lying around the area because of the outage maintenance work around the area. The condition is temporary because there is a containment cleanliness walkdown for GSI 191 (sump clogging).

Status: Y☒ N☐ U☐

Area Walk-By Checklist (AWC) AWC-045

Location: Bldg. *VC* Floor El. *68'-0* Room, Area[1] *N/A*

SWEL Components: SWEL1-049

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

Comments (Additional pages may be added as necessary)

Two lights were out with no bulb.

Evaluated by: *Dan Nuta* Date: *3/4/2013*

Kai Lo *3/4/2013*

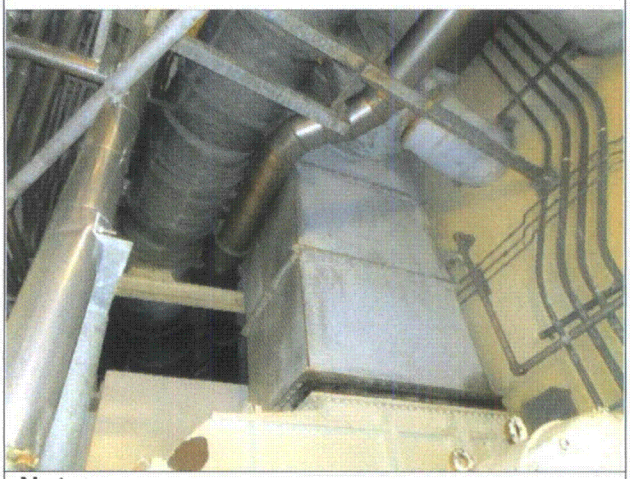
Status: Y☒ N☐ U☐

Area Walk-By Checklist (AWC) AWC-045

Location: Bldg. *VC* Floor El. *68'-0* Room, Area[1] *N/A*

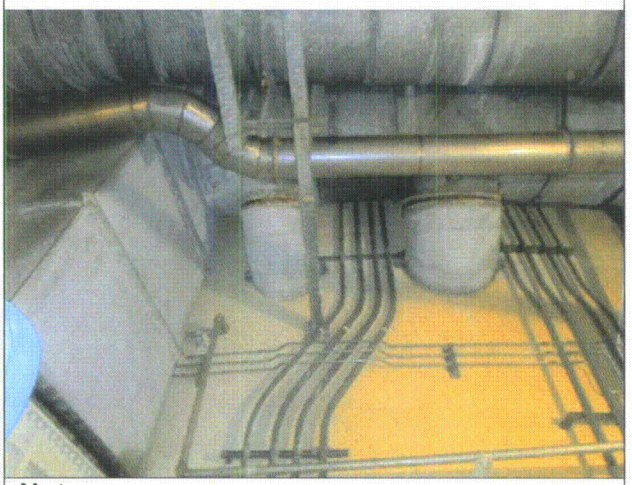
SWEL Components: SWEL1-049

Photographs



Note:

1. *Mild surface corrosion on the 12" circular duct surface and duct flange joint.*
2. *Mild surface corrosion on the rectangular duct flange joint.*



Note:

1. *Mild surface corrosion on the 30" circular duct flange joint.*

Status: Y☒ N☐ U☐

Area Walk-By Checklist (AWC) **AWC-045**

Location: Bldg. *VC* Floor El. *68'-0* Room, Area[1] *N/A*

SWEL Components: **SWEL1-049**

Note: *Mild surface corrosion on the 60" circular duct flange*

Note:

Sheet 1 of 5

Status: Y☒ N☐ U☐

Area Walk-By Checklist (AWC) AWC-046

Location: Bldg. *VC* Floor El. *68'-0* Room, Area[1] *N/A*

SWEL Components: SWEL1-051

Instructions for Completing Checklist

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

1. Does anchorage of equipment in the area appear to be free of potentially adverse seismic conditions (if visible without necessarily opening cabinets)? Y☒ N☐ U☐ N/A☐

2. Does anchorage of equipment in the area appear to be free of significant degraded conditions? Y☒ N☐ U☐ N/A☐

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

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

Status: Y☒ N☐ U☐

Area Walk-By Checklist (AWC) AWC-046

Location: Bldg. *VC* Floor El. *68'-0* Room, Area[1] *N/A*

SWEL Components: SWEL1-051

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

5. Does it appear that the area is free of potentially adverse seismic interactions that could cause flooding or spray in the area? Y☒ N☐ U☐ N/A☐

    1. *The C.S. nuts on the 3" SW pipe flange have pronounced surface corrosion. CR-IP3-2013-02092 was written by a NPO from OPS to identify this issue.(See photo)*
    2. *Fire protection tank's sheet metal enclosure base has mild surface corrosion and slight bucking.(See photo)*

6. Does it appear that the area is free of potentially adverse seismic interactions that could cause a fire in the area? Y☒ N☐ U☐ N/A☐

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

    Scaffold planks are found in the space between the crane wall and the metal enclosure. These planks will be chain link tied before Outage 3R17 reaches Mode 4.

Status: Y☒ N☐ U☐

Area Walk-By Checklist (AWC) AWC-046

Location: Bldg. *VC* Floor El. *68'-0* Room, Area[1] *N/A*

SWEL Components: SWEL1-051

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

Comments (Additional pages may be added as necessary)

Round circular duct flange joint has mild surface corrosion.(See photo)

Evaluated by: *Dan Nuta* Date: *3/12/2013*

Kai Lo *3/12/2013*

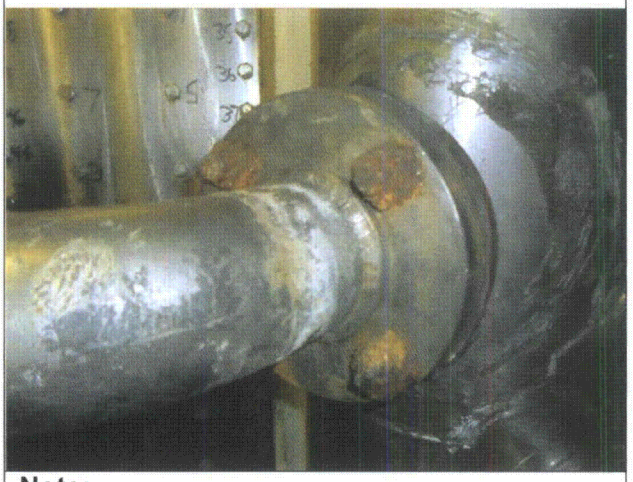
Status: Y☒ N☐ U☐

Area Walk-By Checklist (AWC) AWC-046

Location: Bldg. *VC* Floor El. *68'-0* Room, Area[1] *N/A*

SWEL Components: SWEL1-051

Photographs



Note:

CS Nuts on 3" SW pipe flange have pronounced surface corrosion.

Note:

Fire protection tank sheet metal enclosure's base has mild surface corrosion and slight bucking.

Status: Y☒ N☐ U☐

Area Walk-By Checklist (AWC) **AWC-046**

Location: Bldg. *VC* Floor El. *68'-0* Room, Area[1] *N/A*

SWEL Components: **SWEL1-051**

Note:

Circular duct flange joint has mild surface corrosion.

Note:

Sheet 1 of 4

Status: Y☒ N☐ U☐

Area Walk-By Checklist (AWC) AWC-047

Location: Bldg. *VC* Floor El. *68'-0* Room, Area[1] *N/A*

SWEL Components: SWEL1-052

Instructions for Completing Checklist

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

1. Does anchorage of equipment in the area appear to be free of potentially adverse seismic conditions (if visible without necessarily opening cabinets)? Y☒ N☐ U☐ N/A☐

2. Does anchorage of equipment in the area appear to be free of significant degraded conditions? Y☒ N☐ U☐ N/A☐

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

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

Status: Y☒ N☐ U☐

Area Walk-By Checklist (AWC) AWC-047

Location: Bldg. *VC* Floor El. *68'-0* Room, Area[1] *N/A*

SWEL Components: SWEL1-052

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

5. Does it appear that the area is free of potentially adverse seismic interactions that could cause flooding or spray in the area? Y☒ N☐ U☐ N/A☐

6. Does it appear that the area is free of potentially adverse seismic interactions that could cause a fire in the area? Y☒ N☐ U☐ N/A☐

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

Status: Y☒ N☐ U☐

Area Walk-By Checklist (AWC) AWC-047

Location: Bldg. *VC* Floor El. *68'-0* Room, Area[1] *N/A*

SWEL Components: SWEL1-052

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

Comments (Additional pages may be added as necessary)

Except for the door to the Hepa filter, the door of the other FCU compartments cannot be opened with the keys provided.

1. *Boric acid deposit on the floor between fan inlet enclosure and motor frame. (See photo)*
2. *Circular duct flange joint has mild surface corrosion.*
3. *Cracked coating on concrete floor near column 8.*
4. *Peeled coating area of approximately 2'x4' on the concrete wall.*

Evaluated by: *Dan Nuta* Date: *3/12/2012*

Kai Lo *3/12/2012*

Status: Y☒ N☐ U☐

Area Walk-By Checklist (AWC) AWC-047

Location: Bldg. *VC* Floor El. *68'-0* Room, Area[1] *N/A*

SWEL Components: SWEL1-052

Photographs

Note:

Boric acid deposit on the floor between fan inlet enclosure and motor frame..

Note:

Coating (estimated to be 2'x4') on concrete wall.

Sheet 1 of 4

Status: Y☒ N☐ U☐

Area Walk-By Checklist (AWC) AWC-048

Location: Bldg. *VC* Floor El. *68'-0* Room, Area[1] *N/A*

SWEL Components: SWEL1-083, SWEL1-053

Instructions for Completing Checklist

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

1. Does anchorage of equipment in the area appear to be free of potentially adverse seismic conditions (if visible without necessarily opening cabinets)? Y☒ N☐ U☐ N/A☐

2. Does anchorage of equipment in the area appear to be free of significant degraded conditions? Y☒ N☐ U☐ N/A☐

   - *Mild surface corrosion was found on the rectangular duct flange joint.(See photo)*
   - *Mild surface corrosion was found on the circular duct flange joint.(See photo)*

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

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

Status: Y☒ N☐ U☐

Area Walk-By Checklist (AWC) AWC-048

Location: Bldg. *VC* Floor El. *68'-0* Room, Area[1] *N/A*

SWEL Components: SWEL1-083, SWEL1-053

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

   ¾" 91.05" OD) vertical riser, Station Air pipe is supported at EL. 68' and 93' (near column 5). The vertical span is 25'. License Basis evaluation (LB-21) was generated to evaluate the condition. The stress and displacement induced during a DBE are acceptable.

5. Does it appear that the area is free of potentially adverse seismic interactions that could cause flooding or spray in the area? Y☒ N☐ U☐ N/A☐

6. Does it appear that the area is free of potentially adverse seismic interactions that could cause a fire in the area? Y☒ N☐ U☐ N/A☐

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

   1. *Scaffold poles and planks were found in the space between the crane wall and enclosure. These scaffold materials will normally be tied down before going into 3R17 Outage Mode 4.*

Status: Y☒ N☐ U☐

Area Walk-By Checklist (AWC) AWC-048

Location: Bldg. *VC* Floor El. *68'-0* Room, Area[1] *N/A*

SWEL Components: SWEL1-083, SWEL1-053

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

Comments (Additional pages may be added as necessary)

Evaluated by: *Dan Nuta* Date: *3-9-2013*

Kai Lo *3-9-2013*

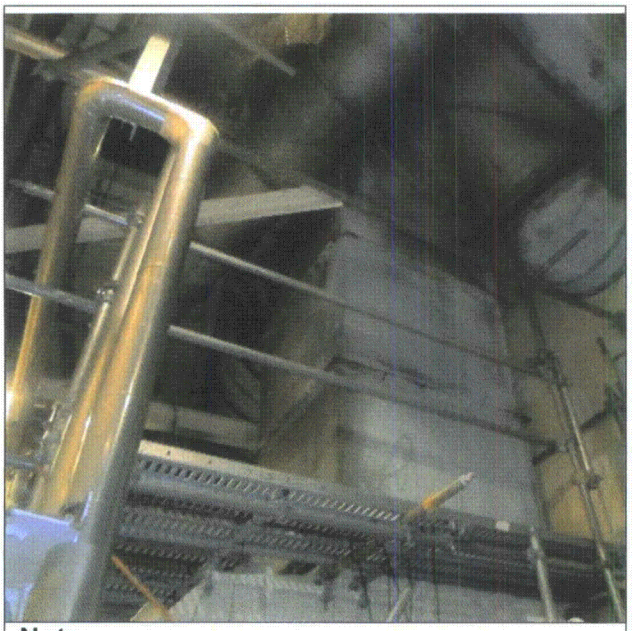
Status: Y☒ N☐ U☐

Area Walk-By Checklist (AWC) AWC-048

Location: Bldg. *VC* Floor El. *68'-0* Room, Area[1] *N/A*

SWEL Components: SWEL1-083, SWEL1-053

Photographs



Note:

Mild surface corrosion at the rectangular duct flange joint.

Note:

Minor surface corrosion was found at the duct flange joint at the following locations:

- *30" circular duct above the FCU*
- *60" circular duct above the FCU*

Sheet 1 of 4

Status: Y☒ N☐ U☐

Area Walk-By Checklist (AWC) AWC-049

Location: Bldg. *VC* Floor El. *68'-0* Room, Area[1] *N/A*

SWEL Components: SWEL1-053

Instructions for Completing Checklist

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

1. Does anchorage of equipment in the area appear to be free of potentially adverse seismic conditions (if visible without necessarily opening cabinets)? Y☒ N☐ U☐ N/A☐

2. Does anchorage of equipment in the area appear to be free of significant degraded conditions? Y☒ N☐ U☐ N/A☐

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

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

Status: Y☒ N☐ U☐

Area Walk-By Checklist (AWC) AWC-049

Location: Bldg. *VC* Floor El. *68'-0* Room, Area[1] *N/A*

SWEL Components: SWEL1-053

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

   3/4" (1.05" OD) riser, Station Air piping has support at EL. 68' and 93'. A vertical pipe span of 25' was evaluated for seismic structural adequacy, see License Basis Evaluation LB-21.The existing condition is acceptable.Note: The mass of the piping is very small while the motor and FCU enclosure is very rigid.

5. Does it appear that the area is free of potentially adverse seismic interactions that could cause flooding or spray in the area? Y☒ N☐ U☐ N/A☐

   The ¾" pipe has air inside. There is no water spraying concern.

6. Does it appear that the area is free of potentially adverse seismic interactions that could cause a fire in the area? Y☒ N☐ U☐ N/A☐

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

   Parts and tools were lying around the area because of the outage maintenance work around the area. The condition is temporary because there is a containment cleanliness walk down for GSI-191 (sump clogging) that will address the condition.

Status: Y☒ N☐ U☐

Area Walk-By Checklist (AWC) AWC-049

Location: Bldg. *VC* Floor El. *68'-0* Room, Area[1] *N/A*

SWEL Components: SWEL1-053

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

Comments (Additional pages may be added as necessary)

Evaluated by: *Dan Nuta* Date: *3/5/2013*

Kai Lo *3/5/2013*

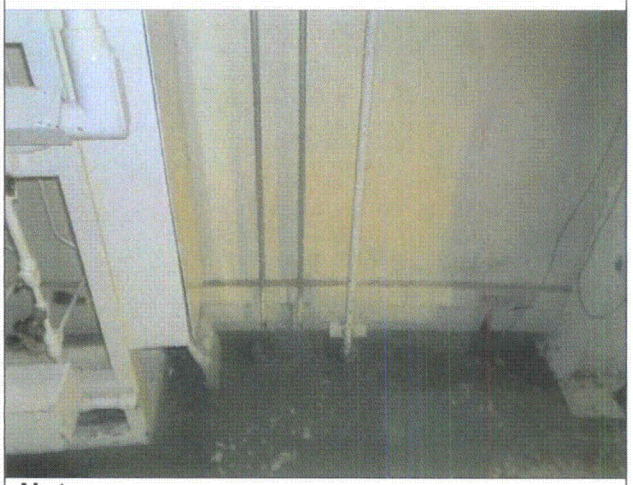
Status: Y☒ N☐ U☐

Area Walk-By Checklist (AWC) AWC-049

Location: Bldg. *VC* Floor El. *68'-0* Room, Area[1] *N/A*

SWEL Components: SWEL1-053

Photographs



Note:

3/4" (1.05" OD) riser, Station Air piping has support at EL. 68' and 93'.

Note:

Status: Y☒ N☐ U☐

Area Walk-By Checklist (AWC) AWC-050

Location: Bldg. *VC* Floor El. *68'-0* Room, Area[1] *N/A*

SWEL Components: SWEL1-080

Instructions for Completing Checklist

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

1. Does anchorage of equipment in the area appear to be free of potentially adverse seismic conditions (if visible without necessarily opening cabinets)? Y☒ N☐ U☐ N/A☐

2. Does anchorage of equipment in the area appear to be free of significant degraded conditions? Y☒ N☐ U☐ N/A☐

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

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

Status: Y☒ N☐ U☐

Area Walk-By Checklist (AWC) AWC-050

Location: Bldg. *VC* Floor El. *68'-0* Room, Area[1] *N/A*

SWEL Components: SWEL1-080

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

5. Does it appear that the area is free of potentially adverse seismic interactions that could cause flooding or spray in the area? Y☒ N☐ U☐ N/A☐

6. Does it appear that the area is free of potentially adverse seismic interactions that could cause a fire in the area? Y☒ N☐ U☐ N/A☐

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

Status: Y☒ N☐ U☐

Area Walk-By Checklist (AWC) AWC-050

Location: Bldg. *VC* Floor El. *68'-0* Room, Area[1] *N/A*

SWEL Components: SWEL1-080

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

Comments (Additional pages may be added as necessary)

Evaluated by: *Dan Nuta* Date: *3-9-2013*

Kai Lo *3-9-2013*

Status: Y☒ N☐ U☐

Area Walk-By Checklist (AWC) AWC-050

Location: Bldg. *VC* Floor El. *68'-0* Room, Area[1] *N/A*

SWEL Components: SWEL1-080

Photographs

Note:

Rack 21

Note:

Sheet 1 of 4

Status: Y☒ N☐ U☐

Area Walk-By Checklist (AWC) AWC-051

Location: Bldg. *VC* Floor El. *68'-0* Room, Area[1] *N/A*

SWEL Components: SWEL1-79, SWEL1-10

Instructions for Completing Checklist

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

1. Does anchorage of equipment in the area appear to be free of potentially adverse seismic conditions (if visible without necessarily opening cabinets)? Y☒ N☐ U☐ N/A☐

2. Does anchorage of equipment in the area appear to be free of significant degraded conditions? Y☒ N☐ U☐ N/A☐

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

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

Sheet 2 of 4

Status: Y☒ N☐ U☐

Area Walk-By Checklist (AWC) AWC-051

Location: Bldg. *VC* Floor El. *68'-0* Room, Area[1] *N/A*

SWEL Components: SWEL1-79, SWEL1-10

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

   Observed a vertical unistrut projecting above MCC 38 that is touching a horizontal 2 1/2" diameter stainless steel pipe carrying demineralized water to the Fire Hose station located east of Rack 19. CR-IP3-2013-01635 was generated.

   There is a ¾" gap between the top of the MCC and the concrete wall. Licensing Basis evaluation LB-24 was generated to evaluate the ¾" gap and found it 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☒ N☐ U☐ N/A☐

6. Does it appear that the area is free of potentially adverse seismic interactions that could cause a fire in the area? Y☒ N☐ U☐ N/A☐

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

Status: Y☒ N☐ U☐

Area Walk-By Checklist (AWC) AWC-051

Location: Bldg. *VC* Floor El. *68'-0* Room, Area[1] *N/A*

SWEL Components: SWEL1-79, SWEL1-10

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

Comments (Additional pages may be added as necessary)

The side panel of Rack 16 located near the outer containment wall has duct tape on one side of the panel because 5 out of the 10 screws are missing. CR-IP3-2013-01634 was generated.

The door locks for the control valves on Rack 16 were not locked. FSS was informed about this observation.

Reference:

CR-IP3-2013-01634

CR-IP3-2013-01635

Evaluated by: *Dan Nuta* Date: *3/15/2013*

Kai Lo *3/15/2013*

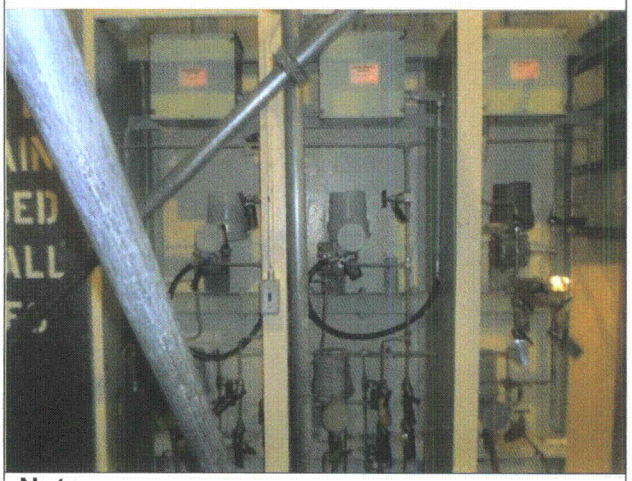
Status: Y☒ N☐ U☐

Area Walk-By Checklist (AWC) AWC-051

Location: Bldg. *VC* Floor El. *68'-0* Room, Area[1] *N/A*

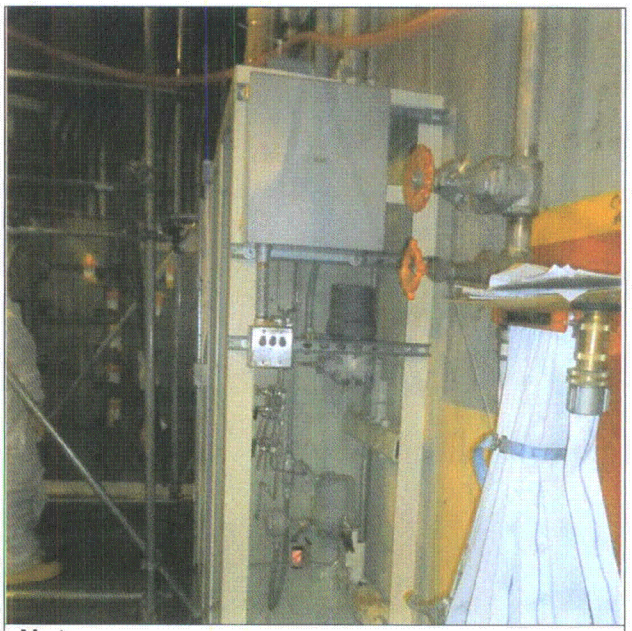
SWEL Components: SWEL1-79, SWEL1-10

Photographs



Note:

Rack 19



Note:

Rack 19

Status: Y☒ N☐ U☐

Area Walk-By Checklist (AWC) AWC-052

Location: Bldg. *VC* Floor El. *46'-0* Room, Area[1] *N/A*

SWEL Components: SWEL1-101

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

1. Does anchorage of equipment in the area appear to be free of potentially adverse seismic conditions (if visible without necessarily opening cabinets)? Y☒ N☐ U☐ N/A☐

    1. *Mild surface corrosion observed on the angle iron support, valve body, bonnet, nuts and bolts. .(See photo)*
    2. *Mild surface corrosion observed on the tube track support. .(See photo)*

2. Does anchorage of equipment in the area appear to be free of significant degraded conditions? Y☒ N☐ U☐ N/A☐

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

    Pronounced corrosion on an abandoned strut and strut corner fitting. CR-IP3-2013-01530 was generated.

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

Status: Y☒ N☐ U☐

Area Walk-By Checklist (AWC) AWC-052

Location: Bldg. *VC* Floor El. *46'-0* Room, Area[1] *N/A*

SWEL Components: SWEL1-101

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

   The strut identified in question 3 is in contact with the Accumulator. The strut is very light, the kinetic energy impact from the strut onto the Accumulator's surface will be insignificant to cause any adverse 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☒ N☐ U☐ N/A☐

6. Does it appear that the area is free of potentially adverse seismic interactions that could cause a fire in the area? Y☒ N☐ U☐ N/A☐

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

Status: Y☒ N☐ U☐

Area Walk-By Checklist (AWC) AWC-052

Location: Bldg. *VC* Floor El. *46'-0* Room, Area[1] *N/A*

SWEL Components: SWEL1-101

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

Comments (Additional pages may be added as necessary)

1. *Mild surface corrosion on an adjacent valve's nuts and bolt.*
2. *Mild surface corrosion on a nearby support's nuts and bolts.*
3. *Mild surface corrosion observed on the tube track, tubing clamp, and U-bolt.*

Evaluated by: *Dan Nuta* Date: *3-11-2013*

Kai Lo *3-11-2013*

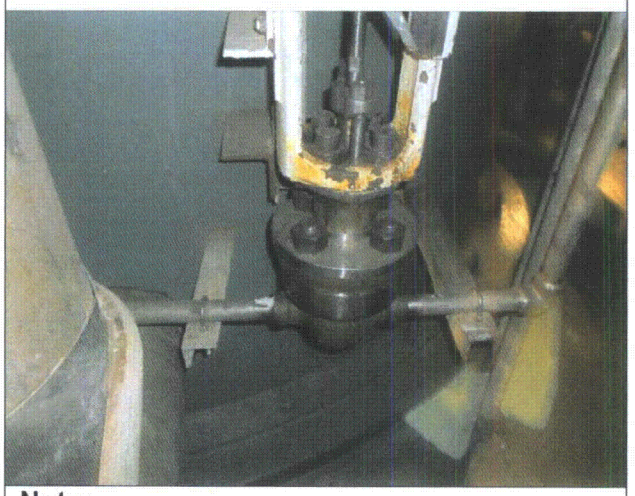
Status: Y☒ N☐ U☐

Area Walk-By Checklist (AWC) AWC-052

Location: Bldg. *VC* Floor El. *46'-0* Room, Area[1] *N/A*

SWEL Components: SWEL1-101

Photographs



Note:
Mild surface corrosion observed on the angle iron support, valve body, bonnet, nuts and bolts

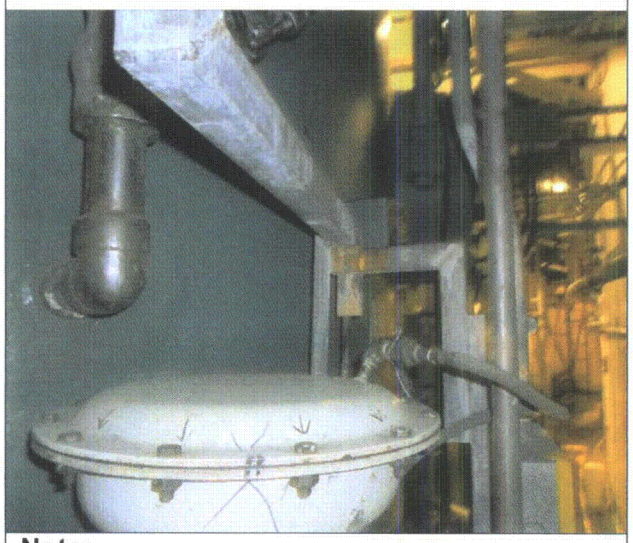
Note:
Mild surface corrosion on the supports' hex nuts and bolts.

Status: Y☒ N☐ U☐

Area Walk-By Checklist (AWC) AWC-052

Location: Bldg. *VC* Floor El. *46'-0* Room, Area[1] *N/A*

SWEL Components: SWEL1-101



Note:
Mild surface corrosion observed on the tube track support.

Note:
Pronounced corrosion on an abandoned strut and strut corner fitting.

Sheet 1 of 7

Status: Y☒ N☐ U☐

Area Walk-By Checklist (AWC) AWC-053

Location: Bldg. *VC* Floor El. *46'-0* Room, Area[1] *N/A*

SWEL Components: SWEL1-102

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

1. Does anchorage of equipment in the area appear to be free of potentially adverse seismic conditions (if visible without necessarily opening cabinets)? Y☒ N☐ U☐ N/A☐

   Mild surface corrosion wad found at the following locations:

   - *On the weld and the base plate of a pipe support.*
   - *On the two anchor bolts of a pipe support, including the bolts, nuts and the base plate area surrounding the bolts.*
   - *On a pipe support and the embedded plate.*

2. Does anchorage of equipment in the area appear to be free of significant degraded conditions? Y☒ N☐ U☐ N/A☐

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

   Mild surface corrosion was found at the following locations:

   - *On a pipe and its angle steel sup[port.*
   - *On a tube track support.*
   - *On a tube track.*
   - *On the tube track bracket support and its weld.*
   - *On a second tube track.*
   - *On the bottom flange of the structural steel on EL. 68'.*

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

Sheet 2 of 7

Status: Y☒ N☐ U☐

Area Walk-By Checklist (AWC) AWC-053

Location: Bldg. *VC* Floor El. *46'-0* Room, Area[1] *N/A*

SWEL Components: SWEL1-102

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

5. Does it appear that the area is free of potentially adverse seismic interactions that could cause flooding or spray in the area? Y☒ N☐ U☐ N/A☐

6. Does it appear that the area is free of potentially adverse seismic interactions that could cause a fire in the area? Y☒ N☐ U☐ N/A☐

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

Sheet 3 of 7

Status: Y☒ N☐ U☐

Area Walk-By Checklist (AWC) AWC-053

Location: Bldg. *VC* Floor El. *46'-0* Room, Area[1] *N/A*

SWEL Components: SWEL1-102

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

Comments (Additional pages may be added as necessary)

Mild surface corrosion was observed on the valve's bonnet.
Rust stain was observed on the concrete wall.

Evaluated by: *Dan Nuta* Date: *3-11-2013*

Kai Lo *3-11-2013*

Sheet 4 of 7

Status: Y☒ N☐ U☐

Area Walk-By Checklist (AWC) AWC-053

Location: Bldg. *VC* Floor El. *46'-0* Room, Area[1] *N/A*

SWEL Components: SWEL1-102

Photographs

Note:

Mild surface corrosion on the weld and the base plate of a pipe support.

Note:

1. *Mild surface corrosion on two anchor bolts, nuts and the area surrounding those 2 bolts.*

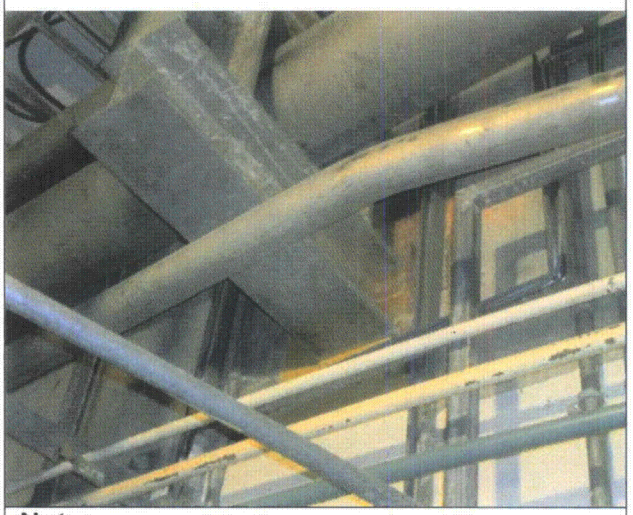
Sheet 5 of 7

Status: Y☒ N☐ U☐

Area Walk-By Checklist (AWC) AWC-053

Location: Bldg. *VC* Floor El. *46'-0* Room, Area[1] *N/A*

SWEL Components: SWEL1-102



Note:

Mild surface corrosion on pipe support and the embedded plate.

Note:

Mild surface corrosion was found on the following locations:

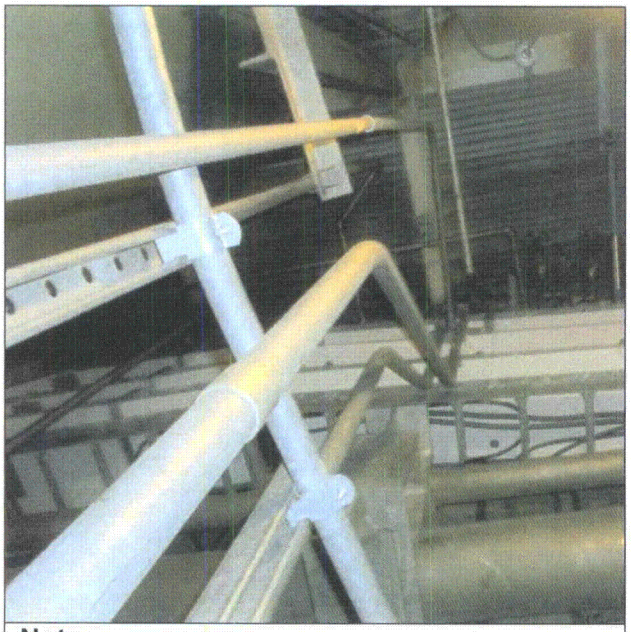
- *On a pipe and its angle steel sup[port.*
- *On a tube track support.*
- *On a tube track.*

Sheet 6 of 7

Note:

Mild surface corrosion was found on the following locations:

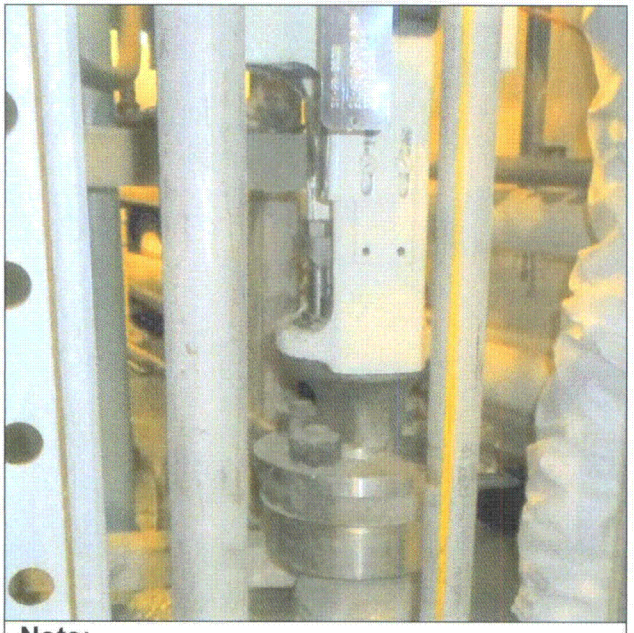
- *On the tube track bracket support and its weld.*
- *On the tube track.*



Note:

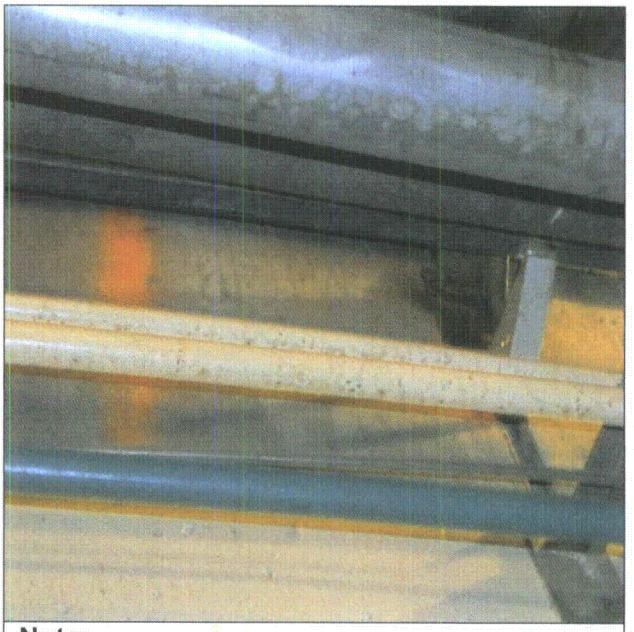
On the bottom flange of the structural steel on EL. 68'.

Sheet 7 of 7



Note:

Mild surface corrosion on the valve's bonnet.



Note:

Rust stain on the concrete wall.

Status: Y☒ N☐ U☐

Area Walk-By Checklist (AWC) AWC-054

Location: Bldg. *VC* Floor El. *46'-0* Room, Area[1] *N/A*

SWEL Components: SWEL1-085

Instructions for Completing Checklist

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

1. Does anchorage of equipment in the area appear to be free of potentially adverse seismic conditions (if visible without necessarily opening cabinets)? Y☒ N☐ U☐ N/A☐

2. Does anchorage of equipment in the area appear to be free of significant degraded conditions? Y☒ N☐ U☐ N/A☐

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

    1. *Tube track support angle steel has mild surface corrosion.(See photo)*
    2. *Duct louvers above have mild surface corrosion.(See photo)*

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

Status: Y☒ N☐ U☐

Area Walk-By Checklist (AWC) AWC-054

Location: Bldg. *VC* Floor El. *46'-0* Room, Area[1] *N/A*

SWEL Components: SWEL1-085

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

   The VC sump barrier was built around the TE-122 piping with < 1/8" gap between the pipe and expanded sheet metal sump barrier. The sheet metal is welded to the sump barrier frame. There is no interaction between the sheet metal and pipe.

5. Does it appear that the area is free of potentially adverse seismic interactions that could cause flooding or spray in the area? Y☒ N☐ U☐ N/A☐

6. Does it appear that the area is free of potentially adverse seismic interactions that could cause a fire in the area? Y☒ N☐ U☐ N/A☐

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

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

Status: Y☒ N☐ U☐

Area Walk-By Checklist (AWC) **AWC-054**

Location: Bldg. *VC* Floor El. *46'-0* Room, Area[1] *N/A*

SWEL Components: **SWEL1-085**

Comments (Additional pages may be added as necessary)

1. *Mild surface corrosion is found on the hex nuts, studs and flanges at valve 215.*
2. *Coating peeling from the concrete surface is covered by the Maintenance Rule Report.*
3. *A boric acid film exists on most nearby surfaces. The film is dry and no active leak can be observed.*

Evaluated by: *Dan Nuta* Date: *3-13-2013*

Kai Lo *3-13-2013*

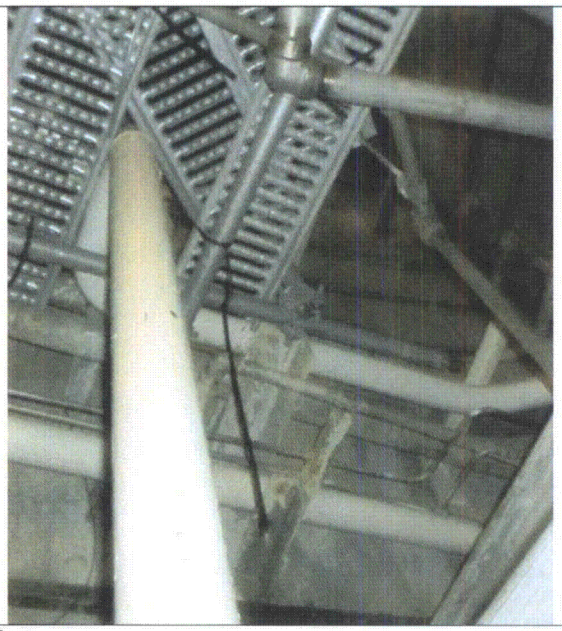
Status: Y☒ N☐ U☐

Area Walk-By Checklist (AWC) AWC-054

Location: Bldg. *VC* Floor El. *46'-0* Room, Area[1] *N/A*

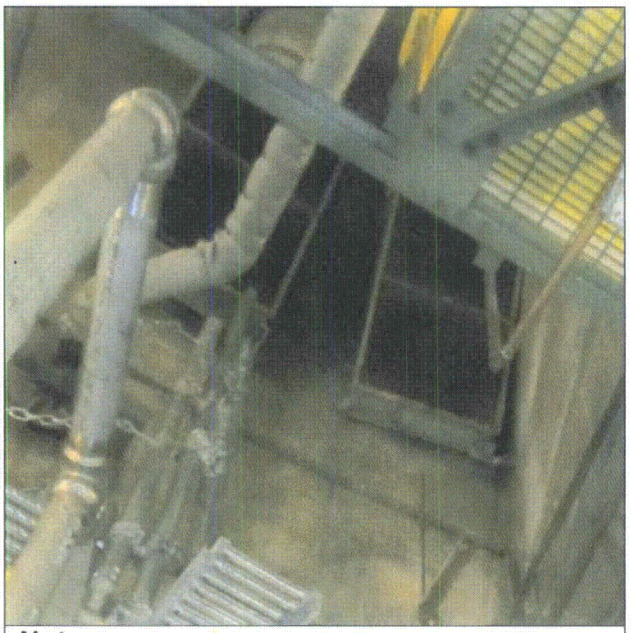
SWEL Components: SWEL1-085

Photographs



Note:

Minor surface corrosion on a angle steel support



Note:

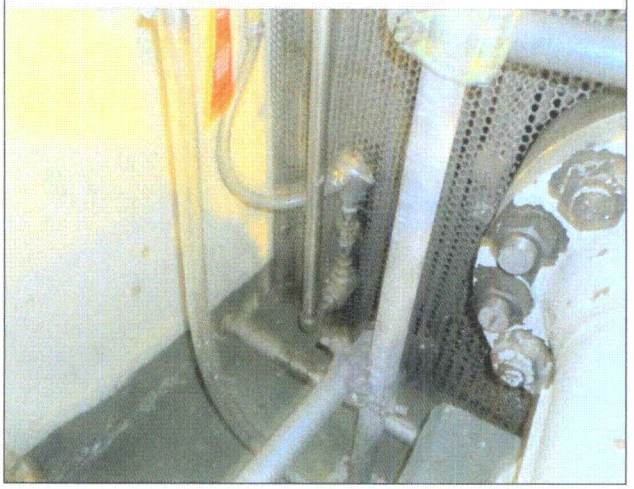
Duct louvers above have mild surface corrosion. (See photo)

Status: Y☒ N☐ U☐

Area Walk-By Checklist (AWC) AWC-054

Location: Bldg. *VC* Floor El. *46'-0* Room, Area[1] *N/A*

SWEL Components: SWEL1-085



Note:

Gap between pipe and expanded sheet metal barrier.

Sheet 1 of 4

Status: Y☒ N☐ U☐

Area Walk-By Checklist (AWC) AWC-055

Location: Bldg. *VC* Floor El. *46'-0* Room, Area[1] *N/A*

SWEL Components: SWEL1-033

Instructions for Completing Checklist

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

1. Does anchorage of equipment in the area appear to be free of potentially adverse seismic conditions (if visible without necessarily opening cabinets)? Y☒ N☐ U☐ N/A☐

2. Does anchorage of equipment in the area appear to be free of significant degraded conditions? Y☒ N☐ U☐ N/A☐

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

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

Status: Y☒ N☐ U☐

Area Walk-By Checklist (AWC) AWC-055

Location: Bldg. *VC* Floor El. *46'-0* Room, Area[1] *N/A*

SWEL Components: SWEL1-033

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

   1" spacing between a valve flywheel and the cable tray. The clearance is judged to be sufficient. .(See photo)

5. Does it appear that the area is free of potentially adverse seismic interactions that could cause flooding or spray in the area? Y☒ N☐ U☐ N/A☐

6. Does it appear that the area is free of potentially adverse seismic interactions that could cause a fire in the area? Y☒ N☐ U☐ N/A☐

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

Status: Y☒ N☐ U☐

Area Walk-By Checklist (AWC) AWC-055

Location: Bldg. *VC* Floor El. *46'-0* Room, Area[1] *N/A*

SWEL Components: SWEL1-033

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

Comments (Additional pages may be added as necessary)

Minor surface corrosion was observed on the Uni-Strut anchorage

Evaluated by: *Dan Nuta* Date: *3/13/2013*

Kai Lo *3/13/2013*

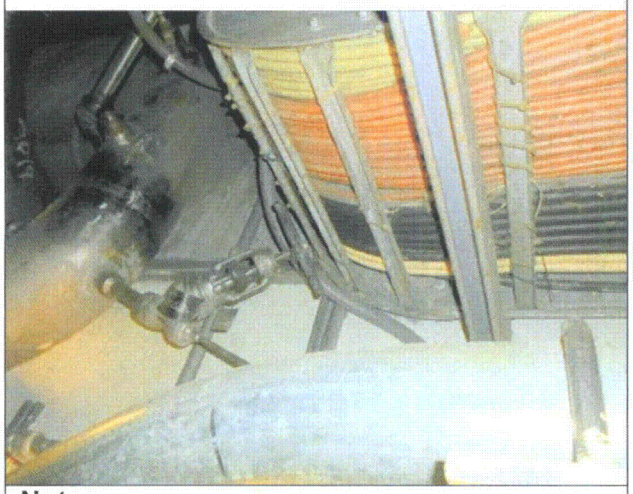
Status: Y☒ N☐ U☐

Area Walk-By Checklist (AWC) **AWC-055**

Location: Bldg. *VC* Floor El. *46'-0* Room, Area[1] *N/A*

SWEL Components: **SWEL1-033**

Photographs



Note:

1" spacing between the valve's flywheel and cable tray.

Note:

Minor surface corrosion was observed on the Uni-Strut anchorage.

Status: Y☒ N☐ U☐

Area Walk-By Checklist (AWC) AWC-056

Location: Bldg. *VC* Floor El. *68'-0* Room, Area[1] *N/A*

SWEL Components: SWEL1-082

Instructions for Completing Checklist

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

1. Does anchorage of equipment in the area appear to be free of potentially adverse seismic conditions (if visible without necessarily opening cabinets)? Y☒ N☐ U☐ N/A☐

2. Does anchorage of equipment in the area appear to be free of significant degraded conditions? Y☒ N☐ U☐ N/A☐

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

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

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

Status: Y☒ N☐ U☐

Area Walk-By Checklist (AWC) AWC-056

Location: Bldg. *VC* Floor El. *68'-0* Room, Area[1] *N/A*

SWEL Components: SWEL1-082

5. Does it appear that the area is free of potentially adverse seismic interactions that could cause flooding or spray in the area? Y☒ N☐ U☐ N/A☐

6. Does it appear that the area is free of potentially adverse seismic interactions that could cause a fire in the area? Y☒ N☐ U☐ N/A☐

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

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

Comments (Additional pages may be added as necessary)

1. *Two light bulbs above the FCU are missing.*
2. *Concrete floor spalling was identified in the Maintenance Rule Structural Monitoring Report*
3. *The cover for the knuckles container between conduit and Containment wall will be removed before entering 3R17 Outage Mode 4.*
4. *Lanyards and tools on the floor are temporary during 3R17 and will be removed before entering Mode 4.*

Status: Y☒ N☐ U☐

Area Walk-By Checklist (AWC) AWC-056

Location: Bldg. *VC* Floor El. *68'-0* Room, Area[1] *N/A*

SWEL Components: SWEL1-082

Evaluated by: *Dan Nuta* Date: *3-4-2013*

Kai Lo *3-4-2013*

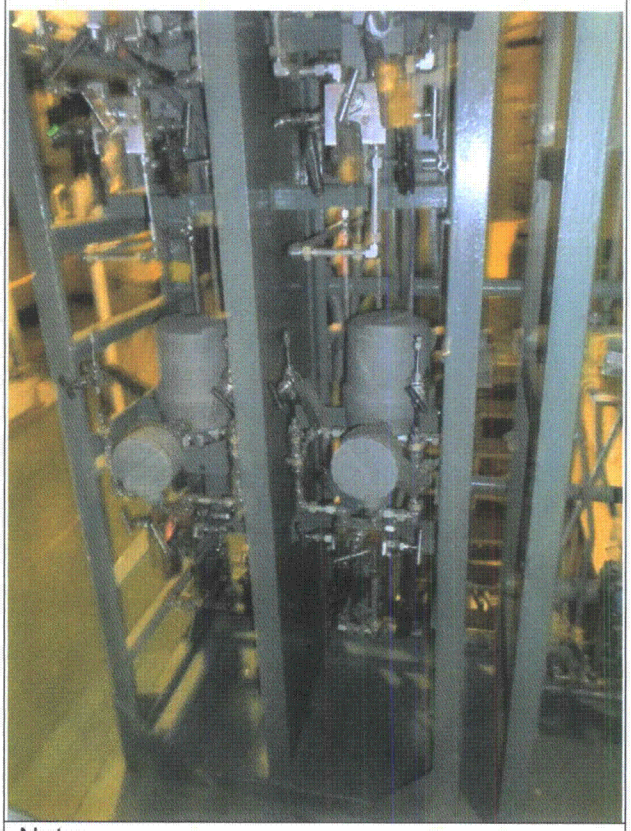
Status: Y☒ N☐ U☐

Area Walk-By Checklist (AWC) AWC-056

Location: Bldg. *VC* Floor El. *68'-0* Room, Area[1] *N/A*

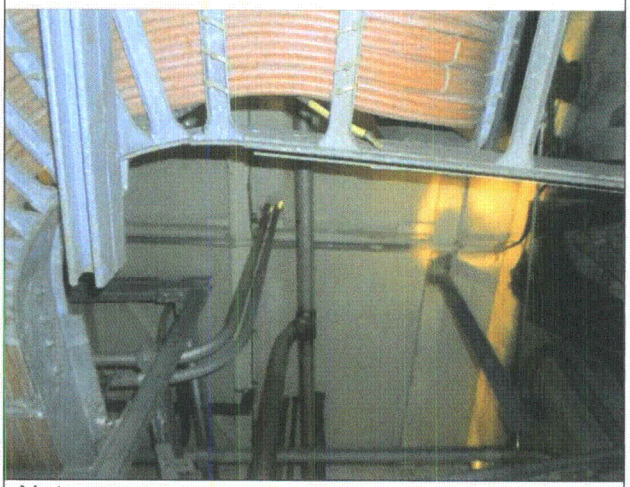
SWEL Components: SWEL1-082

Photographs



Note:

Rack 4A



Note:

Space above Rack 4A

ATTACHMENT L – DEFERRED WALKDOWNS POTENTIALLY ADVERSE SEISMIC CONDITIONS

LB #	SWC/AWC #	IDENTIFIED CONDITION	LICENSING BASIS EVALUATION CONCLUSION	RESOLUTION	STATUS
N/A	SWEL1-008 (31MCC)	1. A few of the screws near the edge of the east and west exterior panels are missing. The few missing screws will not affect the structural integrity of the frame, and there is no adverse seismic interaction. 2. The two bottom interior panels have no screws attached to the frame. There is no adverse seismic interaction because the panel can only be dislodged and move toward the exterior panel.	Condition entered directly into CAP	**Initial Action:** CR GENERATED - SEE STATUS COLUMN **CR Operability Review:** MCC-31 is not in Tech Specs or TRM, nor does it support any Tech Spec/TRM equipment operability/functionality. It is part of the CLB and thus must be functional. The missing screws do not impact the MCC's ability to power loads. The MCC is currently in service with all conditions normal and thus is functional. This is not reportable per LI-108. **CR Action:** WR# 00298807	CR-IP3-2013-00618 CLOSED
N/A	SWEL1-014 (SWGR 31)	1. Inside the fuse panel on row 32 (above the spare EC 16500), there is a spare fuse block lying on the shelf of the cubicle. The horizontal seismic acceleration is low and the weight of the fuse block is minimal. Assuming the fuse block will move under inertial effects, there will be very low energy and no adverse seismic interaction is expected. Nevertheless, the fuse block should be removed. 2. Inside cubicle 52/LT IN, there is a loose nut on the concrete floor below the breaker rack. This is a housekeeping issue only. 3. On row 33, the cubicle (above cubicle MCC33), a spare fuse block (with no fuse) is lying on the shelf of the cubicle. The horizontal seismic acceleration is low and the weight of the fuse block is minimal. Assuming the fuse block will move under inertial effects, there will be very low energy and no adverse seismic interaction is expected. Nevertheless, the fuse block should be removed. 4. On row 34, inside the first cubicle from top (above 52-2A cubicle), one of the two connectors providing support for a wireway is missing. Since the wireway with the wires inside is fairly light and the horizontal seismic acceleration is low, the seismic and normal forces acting on the connector will be minimal. One connector is judged to be adequate from a seismic perspective. Nevertheless, the missing connector should be replaced. 5. In the back of the Switchgear 31, there is an upper and lower panel on row 31. Both panels are missing one out of six screws. Since the horizontal seismic acceleration is low, the five existing screws will be structurally adequate. Nevertheless, the missing screw should be re-installed.	Condition entered directly into CAP	**Initial Action:** CR GENERATED - SEE STATUS COLUMN **CR Operability Review:** The conditions described in the CR involve spare fuse blocks inside a cubicle, a missing screw on a wire connector, and two missing screws on cover plates. As described in the body of the CR all these issue are minor and have no adverse affect on the operation 480V bus 2A and switchgear 31. The bus and all equipment powered from it remain operable. This is not reportable per IP-SMM-LI-108. **CR Action:** WR# 299488	CR-IP3-2013-00675 CLOSED

ATTACHMENT L – DEFERRED WALKDOWNS POTENTIALLY ADVERSE SEISMIC CONDITIONS

LB #	SWC/AWC #	IDENTIFIED CONDITION	LICENSING BASIS EVALUATION CONCLUSION	RESOLUTION	STATUS
N/A	AWC-044	1. A test instrument support built from steel wire is located right next to the Battery Charger 33. It is only 3 feet away from Switchgear 31 Bus 2A. The test instrument should be tied down to some fixed object such as the telephone booth to prevent any adverse seismic interaction. 2. On Panel XL9, 4 out of the 14 screws are missing on the panel cover. The remaining 10 screws are structurally adequate because the seismic acceleration is low and the panel weight is minimal. Therefore, there is no adverse seismic interaction. Nevertheless, the missing screws should be re-installed. 3. On Strip Heater Panel 31, 1 out of 4 screws is missing on the side panel. The remaining screws are structurally adequate because the seismic acceleration is low and the panel weight is minimal. As such, there will be no adverse seismic interactions. Nevertheless, the missing screw should be re-installed. 4. On Panel XV2, the front panel is missing 3 out of 14 screws. The remaining 11 screw are structurally adequate because the seismic acceleration is low and the panel weight is minimal. Therefore, there is no adverse seismic interaction. Nevertheless, the missing screws should be re-installed. 5. The cabinet adjacent to EBR-16CB & EBR-17CB has 1 stripped screw and 2 missing screws out of a total of 20 screws. The remaining 17 screw are structurally adequate because the seismic acceleration is low and the panel weight is minimal. Therefore, there is no adverse seismic interaction. Nevertheless, the missing and stripped screws should be re-installed and replaced.	Condition entered directly into CAP	**Initial Action:** CR GENERATED - SEE STATUS COLUMN **CR Operability Review:** This condition does not meet the reporting criteria of SMM-LI-108. The 480v switch gear is required to be operable per TS section 3.8.9. As discussed in the report no seismic concern exists therefore the AC sources remain operable. **CR Action:** WR# 00299849	CR-IP3-2013-00761 CLOSED

ATTACHMENT L – DEFERRED WALKDOWNS POTENTIALLY ADVERSE SEISMIC CONDITIONS

LB #	SWC/AWC #	IDENTIFIED CONDITION	LICENSING BASIS EVALUATION CONCLUSION	RESOLUTION	STATUS
		6. Scaffold used the Switchgear's base as a support point. Since both the base of both the scaffold and the Switchgear are rigid, there is no adverse seismic interaction. Since the mass of the scaffold is light relative to the mass of the Switchgear, and the seismic acceleration is low, the additional seismic force imposed by the scaffold onto the Switchgear's base anchorage is judged to be acceptable. 7. There is a 20 feet long crack in the coating on the ceiling along the N-S direction (adjacent to the transformer section of Bus 2A). The crack is acceptable since it is at the concrete cover and the slab is reinforced with rebar that can take the tensile stress. There is also another short 4' long crack running E-W, on the ceiling near the opening. This crack is also acceptable based on similar reasoning. These two cracks will be added to the Maintenance Rule Structural Monitoring Program for the Control Building at EL. 15'. 8. An oil rag was observed on the floor under the 32 IA compressor. This is a housekeeping issue.			

ATTACHMENT L – DEFERRED WALKDOWNS POTENTIALLY ADVERSE SEISMIC CONDITIONS

LB #	SWC/AWC #	IDENTIFIED CONDITION	LICENSING BASIS EVALUATION CONCLUSION	RESOLUTION	STATUS
N/A	SWEL1-015 (SWGR 32)	For Bus 3A side: Inside the fuse panel on row 7 (above 3AT6A), a control fuse block for tie breaker Bus 6A to 3A was pulled out and found lying on the shelf of the cubicle. The operator said that the IP3 SOP requires the fuse block be placed on the shelf in contradiction with the IP2 procedure which requires rotating the fuse block 180 degrees and re-inserted into the slot to show the fuse in "off" position. The horizontal seismic acceleration is low and the weight of the fuse block is minimal. Assuming the fuse block will move under inertial effects, there will be very low energy and no adverse seismic interaction is expected. Nevertheless, the practice of leaving the fuse block on the shelf can be avoided. For Bus 6A side: Inside the fuse panel on row 10, the fuse block for SWP33 was pulled out and found lying on the shelf of the cubicle. This is similar to the issue found on Bus 3A side. The horizontal seismic acceleration is low and the weight of the fuse block is minimal. Assuming the fuse block will move under inertial effects, there will be very low energy and no adverse seismic interaction is expected. Nevertheless, the practice of leaving the fuse block on the shelf can be avoided.	Condition entered directly into CAP	**Initial Action:** CR GENERATED - SEE STATUS COLUMN **CR Operability Review:** This condition does not meet the reporting criteria of SMM-LI-108. The 480v switchgear is required to be operable per TS section 3.8.9. As discussed in the report no seismic concern exists, therefore the AC sources remain operable. **CR Action:** CA will incorporate feedback IP3-11563 to change 3-SOP-EL-004 to reflect putting fuses for breakers on the 480V switchgear to OFF vice removed. Change procedure to reflect the methodology of 2-SOP-27.1.5.	CR-IP3-2013-00765

ATTACHMENT L – DEFERRED WALKDOWNS POTENTIALLY ADVERSE SEISMIC CONDITIONS

LB #	SWC/AWC #	IDENTIFIED CONDITION	LICENSING BASIS EVALUATION CONCLUSION	RESOLUTION	STATUS
N/A	SWEL1-015 (SWGR 32)	1. On row 8, inside cubicle for 6A relays, the plastic clip for the wire was detached from the wall of the metal compartment because the glue was dried out.A few instances were observed. The horizontal seismic acceleration is low and the weight of the wire is minimal. Assuming the wire will move under inertial effects, there will be very low energy, insignificant displacement and no adverse seismic interaction is expected. Nevertheless, new adhesive should be applied to the plastic clip. 2. There is a loose rivet at the door hinge for the 35FCU cubicle. WR# 00147781 was found on the door. 3. On row 14, inside the upper most cubicle, one of the two connectors providing support for a wireway is missing. Since the wireway with the wires inside is fairly light and the horizontal seismic acceleration is low, the seismic and normal forces acting on the connector will be minimal. One connector is judged to be adequate from a seismic perspective. Nevertheless, the missing connector should be replaced. 4. 3 cover panels for the Station Transformer #6 have missing screws: The front panel is missing 2 out of 10 screws. Two back panels are missing 1 out of 10 screws. Since the horizontal seismic acceleration is low, the remaining eight screws will be structurally adequate. Nevertheless, the missing screws should be re-installed. 5. 3 cover panels for the Station Transformer #3 have missing screws: The two front panels are missing 1 out of 10 screws. The back panel is missing 2out of 10 screws. Since the horizontal seismic acceleration is low, the remaining eight screws will be structurally adequate. Nevertheless, the missing screws should be re-installed. The Work Request (299868) below was created in order to: (1) Re-attach the plastic clip to the compartment's wall (2) Re-install the missing wireway connector, and (3) re-install the screws for the cover panels.	Condition entered directly into CAP	**Initial Action:** CR GENERATED - SEE STATUS COLUMN **CR Operability Review:** This condition does not meet the reporting criteria of SMM-LI-108. The 480v switchgear is required to be operable per TS section 3.8.9. As described in the report no seismic concerns exist and therefore the 480v AC sources remain operable. **CR Action:** WR#: 299868	CR-IP3-2013-00767 CLOSED

ATTACHMENT L – DEFERRED WALKDOWNS POTENTIALLY ADVERSE SEISMIC CONDITIONS

LB #	SWC/AWC #	IDENTIFIED CONDITION	LICENSING BASIS EVALUATION CONCLUSION	RESOLUTION	STATUS
N/A	SWEL1-080 (RACK#21)	The walkdown has found the following discrepancies between the anchorage configuration shown on Drawing 9321-F-70553 Section A-A and the as built condition: 1. The drawing shows all anchor bolts are 0.75 inch but as built bolts are all 0.5" diameter. 2. The drawing shows 17 anchor bolts but the as built condition shows 8 of them were not installed. (Note: One compartment cannot be accessed with a sign "Door to Remain Closed at all Times". 3. Section A-A of Dwg. 9321-F-70553 is typical for both Rack 19 and 21. The two racks must have their own individual anchorage because the two configurations, including the floor penetrations, are different. The drawing needs to be updated to show the actual as built configurations for the two racks. It should be noted that there is no operability concern because the existing SQUG evaluation of the rack bounds the discrepancies noted above.	Condition entered directly into CAP	**Initial Action:** CR GENERATED - SEE STATUS COLUMN **CR Operability Review:** Rack 21 contains Wide and Narrow Range Steam Generator level transmitters. This CR describes a condition where field conditions do not match the drawing. As stated in the body of the CR the existing SQUG evaluation of the rack bounds the discrepancies noted above. The condition does not impact the operability of the Wide and Narrow Range Steam Generator level transmitters. **CR Action:** (1) EC 43612 was initiated to revise the affected drawings to show the as-built anchor bolt numbers and sizes for Instrument Rack # 21. (2) Calculation C/S DA-83-0090-A has been revised per the as built condition found by the Fukushima Seismic Walkdown. By considering the configuration of (8) - 1/2" Hilti Kwik Bolt with 2.25" minimum embedment, the existing anchorage is structurally adequate to withstand all the postulated loads	CR-IP3-2013-01346
N/A	SWEL1-079 (RACK#19)	The walkdown has found the following discrepancies between the anchorage configuration shown on Drawing 9321-F-70553 Section A-A and the as built condition 1. The drawing shows all anchor bolts are ¾" but six of the bolts observed in the three accessible compartments are ½" diameter. 2. The bolts located on the front side of the rack are very close to the concrete edge, less than the normal required edge distance to achieve full capacity per the Hilti Bolt requirements. 3. Section A-A of Dwg. 9321-F-70553 is typical for both Rack 19 and 21. The two racks must have their own individual anchorage because the two configurations, including the floor penetrations, are different. The drawing needs to be updated to show the actual as built configuration and a revised calculation is needed. There is no operability concern because an evaluation for the as-built anchorage configuration was performed and found that the as-built configuration is structurally adequate when analyzed for seismic loads associated with a postulated SSE occurrence.	Condition entered directly into CAP	**Initial Action:** CR GENERATED - SEE STATUS COLUMN **CR Operability Review:** This condition does not meet the reporting criteria of SMM-LI-108. Based on input from Engineering; An evaluation for the as-built anchorage configuration was performed and found that the as-built configuration is structurally adequate when analyzed for seismic loads associated with a postulated SSE occurrence. Therefore no operability concern exists. **CR Action:** (1) EC 43612 was initiated to revise the affected drawings to show the as-built anchor bolt numbers and sizes for Instrument Rack # 19. (2) Calculation 6604.003-C-CT-RA-001 has been revised per the above as built condition found by the Fukushima Seismic Walkdown. (3) By conservatively considering all the existing 16 bolts as 1/4" Hilti Kwik Bolt (actual is ten 3/4" and six 1/2") with 2.5" embedment, the minimum edge distance for 100% strength is 1.25". This satisfies the minimum edge distance to assure full capacity for 1/4" Hilti Kwik Bolt with 2.5" embedment. Using the bilinear interaction equation with the tension and shear from the existing calculation above, the anchorage is adequate to withstand the postulated loads.	CR-IP3-2012-01440

ATTACHMENT L – DEFERRED WALKDOWNS POTENTIALLY ADVERSE SEISMIC CONDITIONS

LB #	SWC/AWC #	IDENTIFIED CONDITION	LICENSING BASIS EVALUATION CONCLUSION	RESOLUTION	STATUS
N/A	SWEL1-101 (ACCUM31)	A corner fitting for strut (similar to Unistrut channel type) located approximately 12 feet above the floor and adjacent to the Accumulator, has the following of deficiencies: (1) The fitting is a 90 degrees fitting that was cut to accommodate the bending of the strut at the two ends because the struts come together at an angle greater than 90 degrees. (2) The fitting has a pronounced surface corrosion on the outside. (Photo shows no observable corrosion on the inside surface of the strut.)	Condition entered directly into CAP	**Initial Action:** CR GENERATED - SEE STATUS COLUMN **CR Operability Review:** This does not meet the reportability requirements of IP-SMM-LI-108. The struts were evaluated by engineering and determined to be structurally adequate for a design basis seismic event therefore there is no sump clogging or missile hazard concern. No specific component or system is impacted as noted in CR. Operability review not required. An evaluation was performed for the fitting and found it to be structurally adequate for a design basis seismic event. **CR Action:** None	CR-IP3-2013-01530 CLOSED
N/A	SWEL1-010 (38MCC)	During the walkdown, the following items were observed: (1) On rack 16, all the doors (with the isolation valves inside) were not locked. The side panel has duct tape on one edge to replace the five missing screws. (5 out of 10 screws for the panel are missing) The duct tape is a sump clot issue. (2) On rack 17 located near 32CRF, most of the doors (with the isolation valves inside) were not locked. The side panel is missing 6 of the 10 screws. (3) On rack 18 located near 33CRF, most of the doors (with the isolation valves inside) were not locked. The side panel is missing 9 of the 10 screws. The panel cover can swing sideway during a seismic event because it only has 1 screw.	Condition entered directly into CAP	**Initial Action:** CR GENERATED - SEE STATUS COLUMN **CR Operability Review:** This does not meet the reportability requirements of IP-SMM-LI-108. These items were discussed with engineering. The components on WCCPP Rack 16 are manual valves which are rugged and insensitive to any motion of the doors. The 5 existing screws are adequate to secure the panel. The components on WCCPP Rack 17 are manual valves which are rugged and insensitive to any motion of the doors. The 4 existing screws are adequate to secure the panel. The components on WCCPP Rack 18 are manual valves which are rugged and insensitive to any motion of the doors. The panel is believed to remove for outage work. CA-1 issue to ensure tape is removed from rack 16 and that panel on rack 18 is installed. The conditions described do not impact the operability WCCPP. **CR Action:** Tape was removed and screws added to rack 18. The other 2 racks will be addressed by work order 345530 that is a priority 3G.	CR-IP3-2013-01634 CLOSED
N/A	SWEL1-010 (38MCC) AWC-015	A vertical Unistrut projecting above MCC 38 that is touching a horizontal 2 1/2" diameter stainless steel pipe carrying demineralized water to the Fire Hose station located east of Rack 19. The Unistrut supports no instrumentation over the last 6 inches of the projection above the MCC and this portion may be considered excess material that may be removed. The projecting Unistrut should be shortened by 4" to 6", or a sufficient portion, in order to eliminate the possible interaction between the 2 1/2 " diameter pipe and MCC 38.	Condition entered directly into CAP	**Initial Action:** CR GENERATED - SEE STATUS COLUMN **CR Operability Review:** This does not meet the reportability requirements of IP-SMM-LI-108. This condition was discussed with engineering. There is no impact to any to any safety related equipment. No operability review required. **CR Action:** WO# 345157 initiated and completed the removal of the upper Unistrut to clear the pipe.	CR-IP3-2013-01635 CLOSED

ATTACHMENT L – DEFERRED WALKDOWNS POTENTIALLY ADVERSE SEISMIC CONDITIONS

LB #	SWC/AWC #	IDENTIFIED CONDITION	LICENSING BASIS EVALUATION CONCLUSION	RESOLUTION	STATUS
N/A	SWEL1-009 (36AMCC) AWC-028	The following conditions are observed: (1) Two carts near the HP desk by the entrance should have their wheels blocked/choked to prevent movement during a seismic event. These carts are not near safety related equipment currently but should have their wheels choked in accordance with IP-SMM-DC-910. (2) The two exterior side panels of the MCC have missing screws. One top screw of a side panel is missing 1 out of 16 screws. For the other side panel, one bottom screw is missing out of 16. Even though there is one screw missing on each panel, the panel is judged to be supported adequately by the remaining 15 bolts during a seismic event because the weight of the panel is small when compared to the combined capacity of the 15 screws. (3) The hinged vertical wire way exterior panel (on the south side of MCC) adjacent to cubicle 10FJ and 10FM is missing one of the two screws. The one remaining screw on the panel and the hinge are structurally capable to hold the panel in place during a seismic event because the panel is light. (4) The hinged vertical wire way exterior panel (on the south side of MCC) adjacent to cubicle 10FC has one screw with a broken pin and can fall off. The hinge and the other remaining screw on the panel are structurally capable to hold the panel in place during a seismic event because the panel is light. (5) Inside the compartment above cubicle 9RC, an inside partition panel (approximately 6" wide by 10" high) is missing two screws on the right side. This panel is held in place by one screw and one inserted tab on the left side. The inserted tab and the remaining screw on the panel are structurally capable to hold the panel in place during a seismic event because the panel is light. Though the partition panel is opened up with an observable gap, it cannot interact with anything nearby. (6) In the bottom of the MCC, with the bottom panels removed, there are pieces of tie wraps, two fuses and tape lying inside. This is just a house keeping issue.	Condition entered directly into CAP	**Initial Action:** CR GENERATED - SEE STATUS COLUMN **CR Operability Review:** This does not meet the reportability requirements of IP-SMM-LI-108. The conditions described in items 1 and 6 are housekeeping issues and do not impact the operability of any equipment. As stated in the CR the fasteners described in items 2, 3, 4 and 5 are capable of supporting their associated panels on MCC-36A. MCC-36A is operable. **CR Action:** Item 1: The carts have been clamped. Item 2 to 6: WR# 00302050 has been initiated to resolve these issues.	CR-IP3-2013-01644 CLOSED
N/A	AWC-028	The walkdown team noticed a housekeeping type potential deficiency at the floor drain located in front of the Waste Disposal Panel. The floor drain appears to have an accumulation of debris that may affect the drain collection/flow capability. The drain should checked and cleaned if and as necessary.	Condition entered directly into CAP	Initial Action: CR GENERATED - SEE STATUS COLUMN CR Operability Review: This does not meet the reportability requirements of IP-SMM-LI-108. The condition described is a housekeeping issue. No operability review required CR Action: WR 00302006 has been initiated.	CR-IP3-2013-01645 CLOSED

ATTACHMENT L – DEFERRED WALKDOWNS POTENTIALLY ADVERSE SEISMIC CONDITIONS

LB #	SWC/AWC #	IDENTIFIED CONDITION	LICENSING BASIS EVALUATION CONCLUSION	RESOLUTION	STATUS
N/A	SWEL1-012 (39MCC)	The following cover panels were found to have missing screws. There is no operability concern because the weight of each panel is fairly light and the remaining screws have sufficient capacity to support the panel during a design basis earthquake. The conditions are as follow: (1) On the left side panel, 1 out of 16 screws are missing. (2) On the right side panel, 1 out of 16 screws are missing. (3) On the bottom panel, 1 out of 3 screws are missing. (4) On the cubicle 3G cover panel, 2 out of 4 screws are missing. (5) On the cover panel of the cubicle above cubicle 6K, 2 out of 4 screws are missing. (6) On the cover panel of Box XZ21, above the MCC, 1 out of 8 screws are missing.	Condition entered directly into CAP	**Initial Action:** CR GENERATED - SEE STATUS COLUMN **CR Operability Review:** This does not meet the reportability requirements of IP-SMM-LI-108 As described in the body of the CR the panels are adequately supported by the existing fasteners. The missing screws do no impact the operability of MCC-39. **CR Action:** WR# 302229	CR-IP3-2013-01788 CLOSED
N/A	AWC-041 AWC-042	NRC identified the following conditions: 1. In FSB EL. 41', a bent conduit clamp and a sagging EMT was found on the ceiling above the SFP pumps. There is no adverse seismic interaction concern because the EMT is still connected to the lighting fixture that is 1 foot away. The EMT's is light weight and the lighting fixture has adequate anchorage. The conduit's stress is very low and is well within the allowable stress limit. 2. In FSB EL. 55', pipe support SFPC-R-8 (along the south wall) for 10"-Line 329 SFP suction piping has a gap at the upper two anchor bolts. For the first bolt, there is a <1/16" gap between the washer and the plate. The washer has partially contact with the plate. For the second bolt, there is no washer and the 1/16" gap is between the nut and the base plate. The existing calculation shows the stress interaction of the upper bolts is very low. The partial contact washer can develop the tensile capacity of the expansion anchor bolt. Considering the bolt with no washer as ineffective, the remaining upper bolt's tension will be more than doubled and the stress interaction will still be within the acceptable design limit. The existing condition is structurally adequate.	Condition entered directly into CAP	**Initial Action:** CR GENERATED - SEE STATUS COLUMN **CR Operability Review:** This does not meet the reportability requirements of IP-SMM-LI-108. The condition described is a housekeeping issue. No operability review required **CR Action:** WR 00293874 is generated to replace the bent conduit clamp for the EMT above the SFP pumps. WR 00293877 is generated to re-install washer (more than 1 may be needed), and retorque the bolt to develop the tensile capacity.	CR-IP3-2013-01645 CLOSED

ATTACHMENT L – DEFERRED WALKDOWNS POTENTIALLY ADVERSE SEISMIC CONDITIONS

LB #	SWC/AWC #	IDENTIFIED CONDITION	LICENSING BASIS EVALUATION CONCLUSION	RESOLUTION	STATUS
21**	AWC-046, SWEL1-050, AWC-048, SWEL1-083	¾" (1.05" OD) station air pipe has support at EL. 68' and EL. 93'. The span length is 25 feet.	The maximum bending stress is less than the allowable yield stress for A106 Gr. B material and is located at the support. The U-bolt will restrain the pipe from interacting with FCU and rack 4B.	N/A	Acceptable As-Is
22	SWEL1-079	1. The drawing shows all anchor bolts are ¼" but six of the bolts observed in the three accessible compartments are ½" diameter. 2. The bolts located on the front side of the rack are 1.5" to the concrete edge, less than the normal required edge distance to achieve full capacity per the Hilti Bolt requirements.	Consider all the bolts as ¼" Hilti Kwik Bolt, 2.5" embedment, and the minimum edge distance for 100% strength is 1.25". Using the bilinear interaction equation with the tension and shear from an existing calculation, the anchorage is adequate to withstand the postulated loads.	Drawing needs to be updated.	CR-IP3-2013-01440
23	SWEL1-101	(1) The fitting is a 90 degrees fitting that was cut to accommodate the bending of the strut at the two ends because the struts come together at an angle greater than 90 degrees. (2) The fitting has a pronounced surface corrosion on the outside.(Photo shows no observable corrosion on the inside surface of the strut.)	By treating the cut fitting as a rectangular section 1" long and a corroded thickness of 0.03", the seismic forces acting on the section will still be less than the shear and tensile capacity.	N/A	CR-IP3-2013-01530 (CLOSED)
24	SWEL1-80	The top of the MCC has a gap of ¾" to the concrete wall. Need to determine if there is any seismic interaction.	The seismic displacement at the top of MCC is less than ¾" clearance provided and therefore existing field condition is acceptable.	N/A	Acceptable As-Is

R1

** The LB sequence number is a continuation of

Prepared by: Kai Lo Date: 3-20-2013

Reviewed by: Dan Nuta Date: 5-24-2013

Peer Review Team Member

ATTACHMENT M –

DEFERRED WALKDOWNS LICENSING BASIS EVALUATION FORM

Licensing Basis (LB) Evaluation Form

LB Evaluation No. LB-21 Originating SWC/AWC AWC-046,048,SWEL1-083

Equipment ID No. RACK#4B,CRF2 Equip. Class 18 &10

Equipment Description SG #33 & 34 Main Steam Flow Transmitter Rack, Containment Recir Fan 32

Location: Bldg. VC Floor El. 68'-0" Room, Area

Condition

The ¾" (1.05" OD) station air pipe is supported at EL. 68' and EL. 93'. The span between supports is 25 feet. This pipe is located near Rack 4B and also near the FCU. The pipe is not safety related but there is a need to determine whether there is any seismic interaction concern associated with the large span between the supports.

Documents Reviewed

No design document was found.

Licensing Basis

In seismic class I buildings such as the Containment Building, all SSC must be seismically designed to preclude seismic interaction with safety related components.

Evaluation

The maximum bending stress in the station air pipe under SSE loading is less than the yield stress for A106 Gr. B material. The maximum stress occurs at the support. The U-bolt will restrain the pipe from interacting with the FCU and rack 4B.
The evaluation is shown on the next page.

Conclusion (8) Condition Meets the Licensing Basis ☒ Yes ☐ No

Prepared by: Kai Lo Date 3-5-2013
Licensing Basis Reviewer

Reviewed by: D. Nuta Date 3-5-2013
Peer Reviewer

AWC NO 48 & 46

Vertical Station Air pipe having a long span was found adjacent to FCU and Rack 4B.
There is a need to determine the seismic interaction effect.
Vertical Station Air pipe (1.05" D) has a supported span of (93 - 68) = 25 feet

L =	25	ft =	300	inch
For K-1 spec, 3/4" sch 80, w =	1.474	plf =	0.123	#/inch

Location: VC EL. 95', use peak G value from 0.5% damping response respectra

Gh =	1.932	from 4.5 to 3.84 Hz,	OBE > DBE
MRM =	1.5		
Gv = 2Gh/3 =	1.288		

Axial stress cause by piping is negligible.

D = outside diameter =	1.05	in
S = section modulus =	0.0853	in^3

For fixed end beam uniformly load:

$M = wL^2/12$ =	921.3	in-lb

For fixed end beam uniformly load:

fb = (MRM)Gh(M)/S =	31293	psi < 0.9Fy = 0.9(35000) =	31500	psi

This pipe is nonsafety related pipe, designed for seismic interaction II over I only.
The maximum stress occurs at the fix end, where the U-bolt is located.

U-bolt tensile capacity = $(\pi(0.189)^2/4)(1.33*.6*35000)$ = 784 lb
Seismic load acting on U-bolt =(MRM)Gh(wL) = 107 lb < U-bolt capacity, o.k.

Check seismic displacement:

g = gravitational constant =	386.4
E = modulus of elasticity =	2.79E+07
I = moment of inertia =	0.0448

d = seismic displacement =$(MRM)GhwL^3/[384EI]$ = 6.01 inch,
small when compared to the > 5 feet distance to SSC.
There is no adverse seismic interaction effect.

Licensing Basis (LB) Evaluation Form

LB Evaluation No. LB-22 Originating SWC/AWC SWEL 1-079

Equipment ID No. RACK#19 Equip. Class 18

Equipment Description Pressurizer Level Transmitter Cabinet

Location: Bldg. VC_ Floor El. 68'-0" Room, Area _____

Condition

1. The drawing shows all anchor bolts are ¾" but six of the bolts observed in the three accessible compartments are ½" diameter.
2.The bolts located on the front side of the rack are 1.5" to the concrete edge, less than the normal required edge distance to achieve full capacity for a ¾" Hilti Bolt per the Hilti Bolt requirements.

Documents Reviewed

1. SQUG calculation for Rack 19
2. Calculation 6604.003-MAG-322
3. Hilti Fastening Technical Catalog
4. EPRI NP-5228SL, Rev. 1, Volume 1,"Seismic Verification of Nuclear Plant Equipment Anchorage"

Licensing Basis

Safety related SSC must be seismic class 1, i.e. maintain structural integrity and perform their intended function under a postulated SSE occurrence.

Evaluation

Drawing 9321-F-70533 section A-A shows (16)-3/4" bolts with no edge distance violation. Inspection showed 6 of the 18 visible bolts are ½" while the other 12 bolts are ¾".
Original SQUG calculation does not have a reduction factor for the edge distance even though it considered only a six ½" bolt configuration. UE & C Calculation 6604-003-CALC-CALC-322 used an eighteen bolts configuration, in conjunction with a Stardyne response spectrum finite element analysis. However, the edge distance reduction was not taken into account for the evaluation of the ¾" bolts.
On page 26, the calculation enveloped the highest reaction forces for the three directions from the anchor bolts. For a rectangular bolt pattern, the highest tensile force is at the corner because it is furthest away from the center. This evaluation will treat all the bolts as ¾" diameter.

For a ¼" Hilti Kwik Bolt, 2.5" embedment, the ultimate tensile and shear tensile strength in 3000 psi compressive strength concrete is as follow:
Note: Average of 2000psi and 4000 psi to represent the 3000 psi capacities
The minimum edge distance for 100% strength is 5(0.25") =1.25" < 1.5" provided.
Tu = ultimate tensile strength = 0.5(2800+3350) = 3075#
Su = ultimate shear strength = 0.5(1653+2612) = 2133#
Based on a factor of safety of 4,
The allowable strength is as follow:
Ta = allowable tensile capacity = 3075/4 = 769#
Sa = allowable shear capacity = 2133/4 = 533#

From the calculation 6604-003-CALC-CALC-322 page 26, the tension is 660# and the resultant shear is 173#

Using the bilinear formulation:
Resultant shear/allowable shear = 175/533 = 0.33
0.7(T/Ta) + (S/Sa) = 0.7(660/769)+ (175/533) = 0.93 < 1.0, o.k.

Under conservative assumptions, the rack 19 anchorage is adequate to withstand the postulated loads.

Conclusion (8) Condition Meets the Licensing Basis: ☒ Yes ☐ No

Prepared by: Kai Lo _____ Date 3-12-2013
Licensing Basis Reviewer

Reviewed by: Dan Nuta _____ Date 3-12-2013
Peer Reviewer

NOTE: SEE CALCULATION 6604.003-C-CT-RA-001 REV. 2 FOR LATEST RACK 19 CALCULATION.

Licensing Basis (LB) Evaluation Form

LB Evaluation No. LB-23 Originating SWEL1-101

Equipment ID No. ACCUM31 Equip. Class 21

Equipment Description SIS Accumulator 31

Location: Bldg. VC Floor El. 46'-0" Room, Area

Condition

(1) The fitting is a 90 degrees fitting that was cut to accommodate the strut at the two ends because the struts come together at an angle greater than 90 degrees.
(2) The fitting has a pronounced surface corrosion on the outside.(Photo shows no observable corrosion on the inside surface of the strut.)

Documents Reviewed

No design document is found.

Licensing Basis

In seismic class I building such as Containment Building, all SSC must be seismically designed for seismic II over I interaction.

Evaluation

Assume the strut fitting was made of carbon steel with 35 ksi yield strength. Since the fitting was cut to accommodate an angle greater than 90 degrees, the fitting is like a hinge transferring only forces.
Assume the strut metal thickness has corroded from 14 Ga to 0.03", with a height of 1".
shear capacity = (1")(0.03")(0.4)(35000psi) = 420 lb.
tension capacity = (1")(0.03")(0.6)(35000psi) = 630 lb.
For VC EL. 46' ISRS, peak seismic acceleration = 0.64g
Weight per linear foot = 1.9#/foot
Conservatively assume 20 feet length of strut.
Seismic force = 1.9(20)(1.5x0.64) = 37 lb

A seismic force of 37 lb is much smaller than the allowable capacity of the corroded fitting, therefore the struts will not collapse during a DBE. Since there is no SSC within 3 inches of the struts, there is no adverse seismic interaction

Conclusion (8) Condition Meets the Licensing Basis: Yes No

Prepared by: Kai Lo Date 3-14-2013
Licensing Basis Reviewer

Reviewed by: D. Nuta Date 3-14-2013
Peer Reviewer

Licensing Basis (LB) Evaluation Form

LB Evaluation No. LB-24 Originating SWC/AWC SWEL-010

Equipment ID No. 38MCC Equip. Class 1

Equipment Description Battery Charger

Location: Bldg. VC Floor El. 68'-0 Room, Area ____________

Condition

There is a ¾" clearance between the side of MCC and the concrete wall. Need to determine if the MCC would impact the wall during a SSE.

Documents Reviewed

No previous seismic calculation for this condition was found.

Licensing Basis

SSC providing a safety-related function needs to be supported seismically and free from adverse seismic interaction.

Evaluation

The seismic displacement of the MCC and the concrete wall are determined.
The evaluation is performed on the next page.

Conclusion (8) Condition Meets the Licensing Basis: ☒ Yes ☐ No

Prepared by: Kai Lo Date 3-16-2013
Licensing Basis Reviewer

Reviewed by: D. Nuta Date 3-16-2013
Peer Reviewer

SWEL1-010

Determine if 3/4" clearance between 38MCC and concrete wall is adequate

The concrete wall and slab which MCC 38 is anchored to move together. The relative displacement between the wall and MCC equals the MCC displacement.

Determine the seismic displacement for MCC:
This MCC has a reinforced angle steel anchorage along the two long sides of the MCC. Furthermore, there are conduits connected to the top of the MCC. Generally, MCC is in the range of 3 to 8 Hz, depending the type of anchorage, whether there is cable coming from the top, and the number of stacks connected together. Based on actual field condition, the upper range will be used here.

f = 1st mode frequency =	8.0	Hz based on EPRI TR-102180
g = gravitation constant =	386.4	
A = peak spectral acceleration based on 2% damping =	0.61	at inner VC EL. 69'
d1 = seismic displacement = $Ag/[2\pi f]^2$ =	0.093	inch < 3/4" provided, o.k.