

Sheet 1 of 3

Status: Y  N  U **Seismic Walkdown Checklist (SWC)**Equipment ID No. 2R43-B002A Equip. Class<sup>1</sup> 21Equipment Description DG 2A LUBE OIL HEAT EXCHLocation: Bldg. DIESEL Floor El. 130 Room, Area 2A

Manufacturer, Model, Etc. (optional but recommended) \_\_\_\_\_

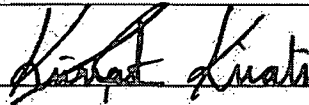
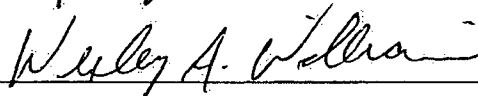
**Instructions for Completing Checklist**

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

<sup>1</sup> Enter the equipment class name from Appendix B: Classes of Equipment.

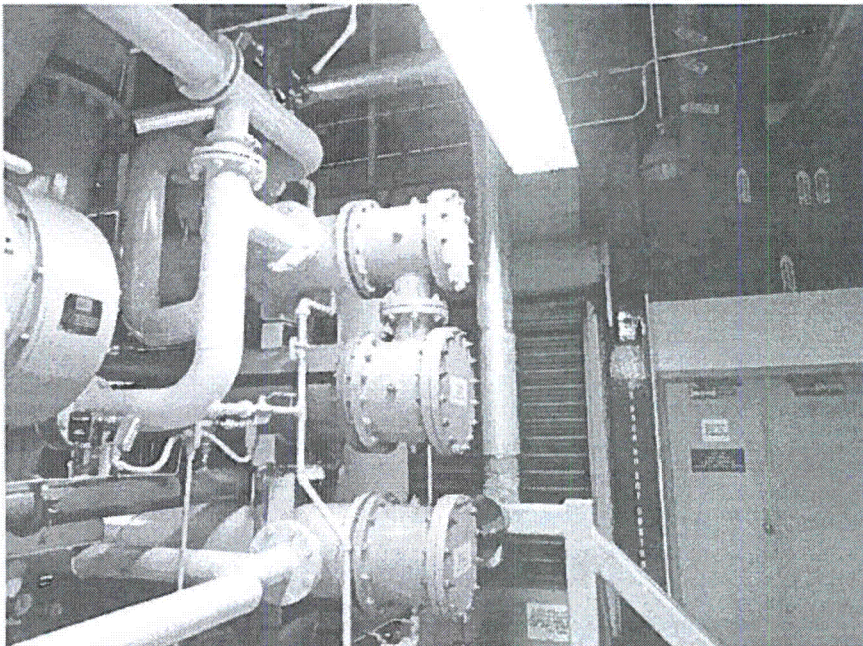
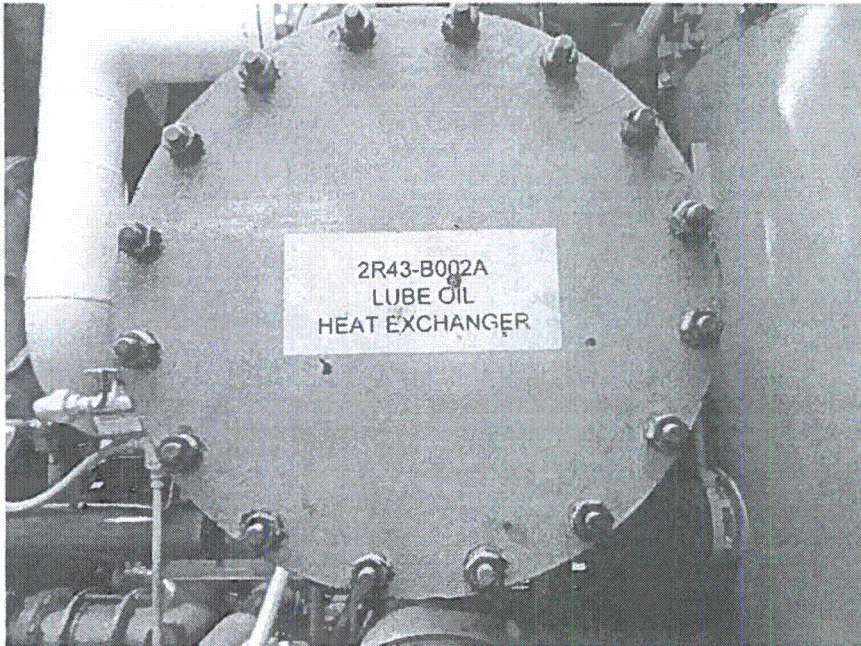
Status: Y  N  U **Seismic Walkdown Checklist (SWC)**Equipment ID No. 2R43-B002A Equip. Class<sup>1</sup> 21Equipment Description DG 2A LUBE OIL HEAT EXCH**Interaction Effects**7. Are soft targets free from impact by nearby equipment or structures? Y  N  U  N/A 8. Are overhead equipment, distribution systems, ceiling tiles and lighting, and masonry block walls not likely to collapse onto the equipment? Y  N  U  N/A   
*Light bulbs might fall on the equipment, however, the damage is judged to be not significant since the bulb is very light and the equipment is rugged.*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)*The area walk by was performed with item 2R43-S001A.*Evaluated by: Kursat KinaliDate: 9/7/2012Wesley Williams9/7/2012

**Seismic Walkdown Checklist (SWC)**

Equipment ID No. 2R43-B002A Equip. Class<sup>1</sup> 21

Equipment Description DG 2A LUBE OIL HEAT EXCH

**Photographs**



**Seismic Walkdown Checklist (SWC)**Equipment ID No. 2E11-B001A Equip. Class<sup>1</sup> 21Equipment Description RHR Heat Exchanger ALocation: Bldg. REACTOR Floor El. 108 Room, Area NE Diagonal

Manufacturer, Model, Etc. (optional but recommended) \_\_\_\_\_

**Instructions for Completing Checklist**

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**Anchorage**

1. Is the anchorage configuration verification required (i.e., is the item one of the 50% of SWEL items requiring such verification)? Y  N
  
2. Is the anchorage free of bent, broken, missing or loose hardware? Y  N  U  N/A   
*There are eight anchors attached to the steel frame in four mounting chairs. Two of the bolts have full thread engagement but do not have the required minimum of two threads above the nut; an additional two bolts have bolts approximately 1/4" below the nuts and so do not have full thread engagement (CR 516593). The bolts are welded to the steel frame, providing additional support for the connection. In addition, the heat exchanger is also supported by four sway struts below the roof above to prevent overturning of the equipment. The shear strength is not impacted, overturning is restrained, and the center of gravity of the equipment is below the bolts and the vertical seismic acceleration at that level will not exceed 1.0, so the largest tension load the bolts will see is the preload, which is already applied. Therefore, the bolts are judged to be acceptable and do not create a potentially adverse seismic condition.*  
*Also, each of the HX anchoring chairs have two additional holes drilled in them. These bolt holes appear to be the original holes for the installation of the RHR HX. Bolts installed in these holes would not be able to reach the structural steel flanges in the existing building structure. Therefore, new mounting holes have been provided for installing the RHR HX on the existing building structure. The current bolts used for the anchorage of this component are judged by the SWE's to be the same size and strength as the original connections for the holes on the bolting chairs for this component.*
  
3. Is the anchorage free of corrosion that is more than mild surface oxidation? Y  N  U  N/A
  
4. Is the anchorage free of visible cracks in the concrete near the anchors? Y  N  U  N/A   
*Equipment is bolted to steel structure, so there is no concrete.*

<sup>1</sup> Enter the equipment class name from Appendix B: Classes of Equipment.

**Seismic Walkdown Checklist (SWC)**

Equipment ID No. 2E11-B001A Equip. Class<sup>1</sup> 21

Equipment Description RHR Heat Exchanger A

- 5. Is the anchorage configuration consistent with plant documentation?  
(Note: This question only applies if the item is one of the 50% for which an anchorage configuration verification is required.) Y N U N/A
  
- 6. Based on the above anchorage evaluations, is the anchorage free of potentially adverse seismic conditions? Y N U

**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  
*The cable raceway support impinges on the RHR Heat Exchanger insulation, and the insulation has been cut away from the member. The raceway support only impacts the insulation, but is at least one inch from the body of the heat exchanger, so there will be no impact between the two components. Therefore, it is judged that there is no potentially adverse seismic condition.*

**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)**

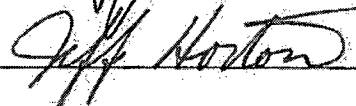
Equipment ID No. 2E11-B001A Equip. Class: 21

Equipment Description: RHR Heat Exchanger A

**Comments** (Additional pages may be added as necessary)

*None*

Evaluated by: John McFarland  Date: 09/12/2012

Jeff Horton  09/12/2012

Status:  Y  N  U

**Seismic Walkdown Checklist (SWC)**

Equipment ID No. 2E11-B001A Equip. Class<sup>1</sup> 21

Equipment Description RHR Heat Exchanger A

**Photographs**



Figure 1 – Equipment ID No (2E11-B001A)



Figure 2 – Equipment Elevation (2E11-B001A)





Figure 3 – Bolt Threads below Nut (2E11-B001A)



Figure 4 – Bolt Threads Flush with Nuts (2E11-B001A)

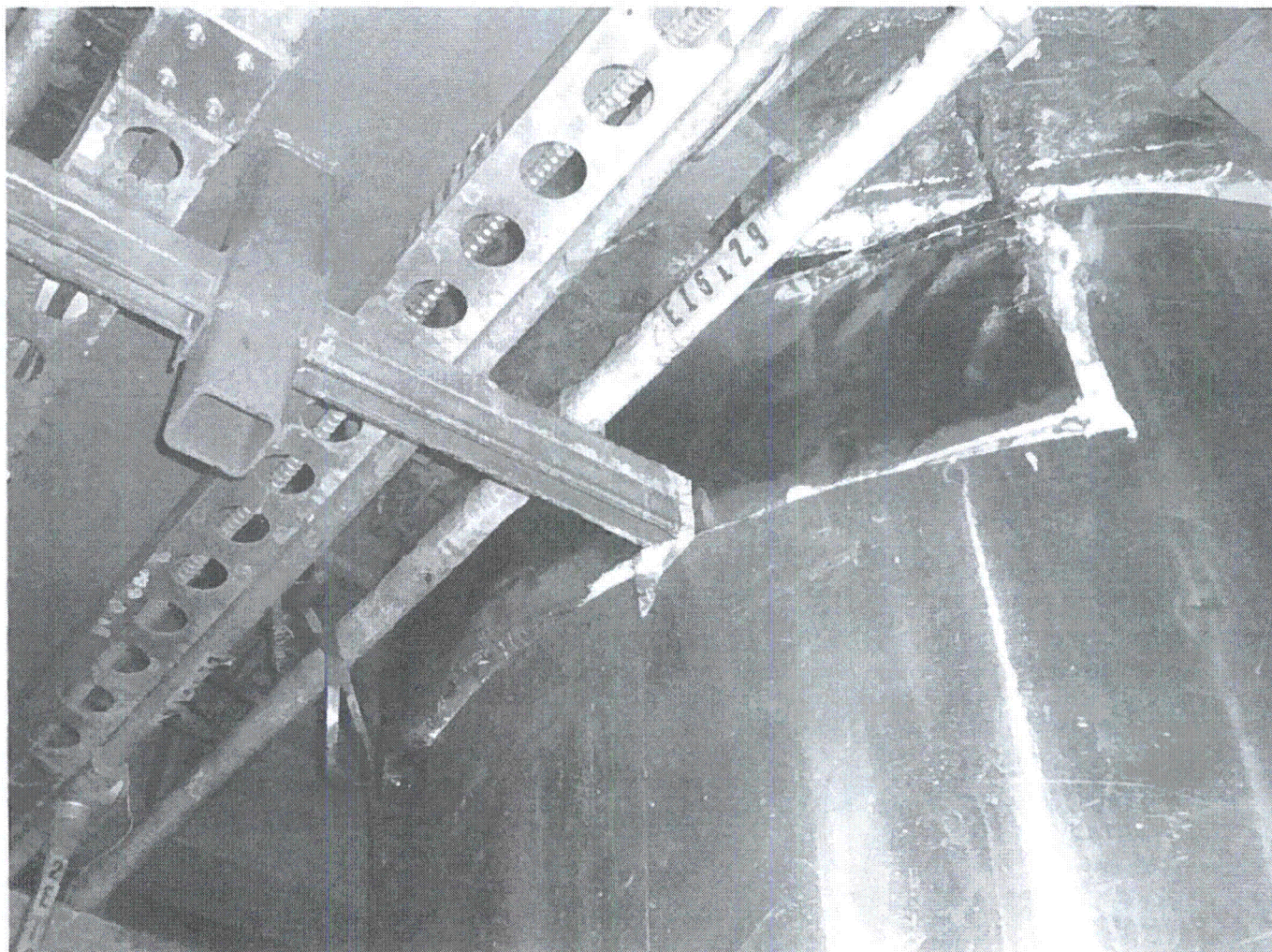


Figure 5 – Cable Raceway near Heat Exchanger (2E11-B001A)

**Seismic Walkdown Checklist (SWC)**Equipment ID No. 2E11-B001B Equip. Class<sup>1</sup> 21Equipment Description RHR Heat Exchanger BLocation: Bldg. REACTOR Floor El. 108 Room, Area SE Diagonal Unit 2

Manufacturer, Model, Etc. (optional but recommended) \_\_\_\_\_

**Instructions for Completing Checklist**

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**Anchorage**

1. Is the anchorage configuration verification required (i.e., is the item one of the 50% of SWEL items requiring such verification)? Y  N
  
2. Is the anchorage free of bent, broken, missing or loose hardware? Y  N  U  N/A   
*There are eight anchor connections to the steel frame in four mounting chairs. Two of the bolts have full thread engagement but do not have the required minimum of two threads above the nut (CR 516595). The bolts are welded to the steel frame, providing additional support for the connection. Also, each of the HX anchoring chairs have two additional holes drilled in them. These bolt holes appear to be the original holes for the installation of the RHR HX. Bolts installed in these holes would not be able to reach the structural steel flanges in the existing building structure. Therefore, new mounting holes have been provided for installing the RHR HX on the existing building structure. The current bolts used for the anchorage of this component are judged by the SWE's to be the same size and strength as the original connections for the holes on the bolting chairs for this component.*  
*In addition, the heat exchanger is also supported by four sway struts below the roof above to prevent overturning of the equipment. The shear strength is not impacted, overturning is restrained, and the center of gravity of the equipment is below the bolts and the vertical seismic acceleration at that level will not exceed 1.0, so the largest tension load the bolts will see is the preload, which is already applied. Therefore, the bolts are judged to be acceptable and do not create a potentially adverse seismic condition.*
  
3. Is the anchorage free of corrosion that is more than mild surface oxidation? Y  N  U  N/A   
*The bolt paint chipped off in several places, resulting in mild surface oxidation. Since oxidation is only on the surface, the anchors are not degraded. Therefore, the anchors are judged not be a seismic concern.*
  
4. Is the anchorage free of visible cracks in the concrete near the anchors? Y  N  U  N/A   
*Equipment is bolted to steel structure, so there is no concrete.*

<sup>1</sup> Enter the equipment class name from Appendix B: Classes of Equipment.

**Seismic Walkdown Checklist (SWC)**Equipment ID No. 2E11-B001B Equip. Class<sup>1</sup> 21Equipment Description RHR Heat Exchanger B

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   
*The cable raceway support impinges on the RHR Heat Exchanger insulation, and the insulation has been cut away from the member. The raceway support only impacts the insulation, but is at least one inch from the body of the heat exchanger, so there will be no impact between the two components. Therefore, it is judged that there is no potentially adverse seismic condition.*

**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)**


Equipment ID No. 2E11-B001B Equip. Class<sup>1</sup> 21

Equipment Description RHR Heat Exchanger B

**Comments** (Additional pages may be added as necessary)

*There is no identification tag or number on the 2E11-B001B RHR Heat Exchanger B.*

Evaluated by: John McFarland  Date: 09/12/2012

Jeff Horton  09/12/2012

Status: Y  N  U

**Seismic Walkdown Checklist (SWC)**

Equipment ID No. 2E11-B001B Equip. Class<sup>t</sup> 21

Equipment Description RHR Heat Exchanger B

**Photographs**

*There is no identification tag on the equipment, so this picture does not exist.*

Figure 1 – Equipment ID No (2E11-B001B)

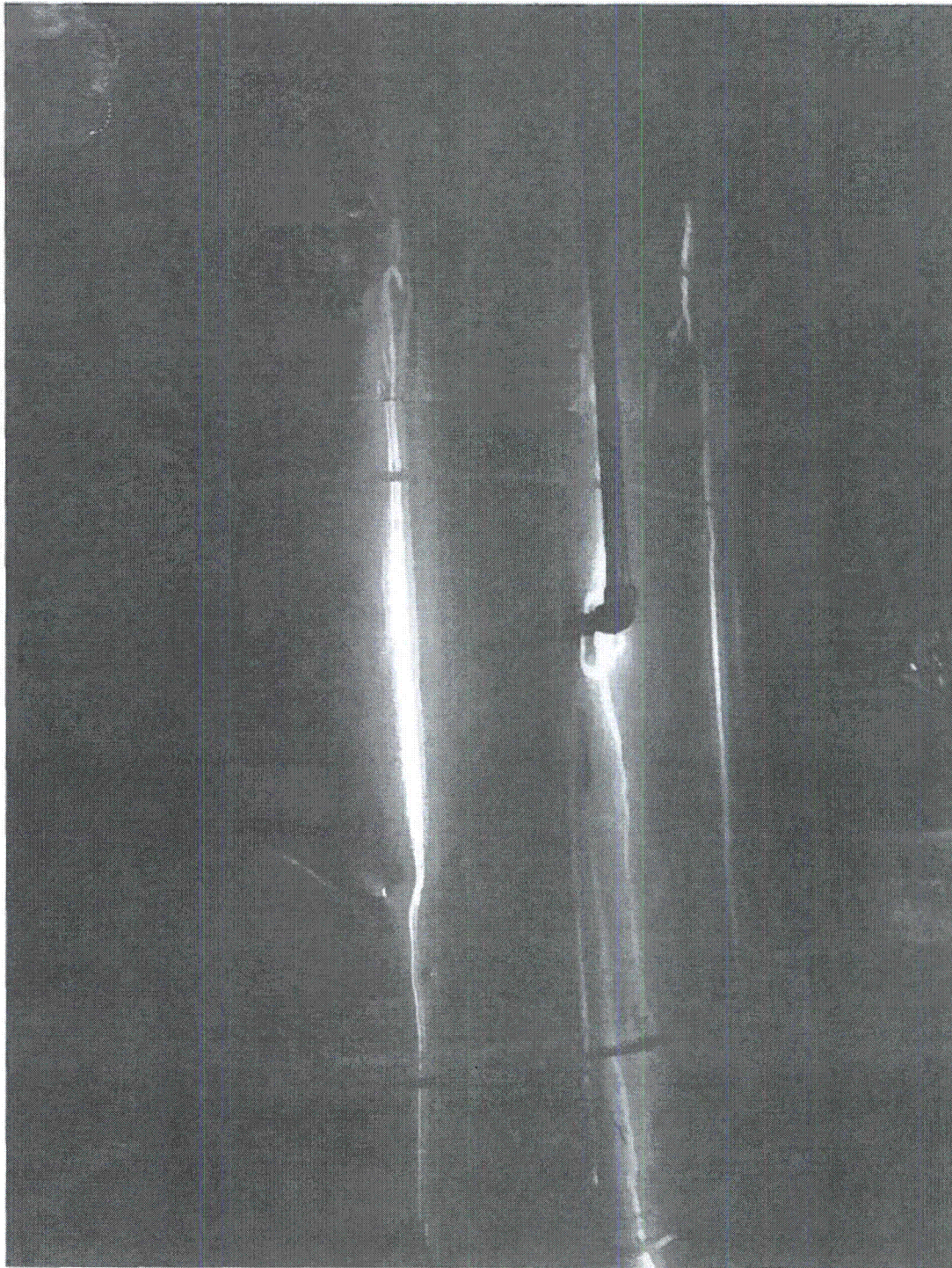


Figure 2 – Equipment Elevation (2E11-B001B)





Figure 3 – Bolt Threads Flush with Nut (2E11-B001B)

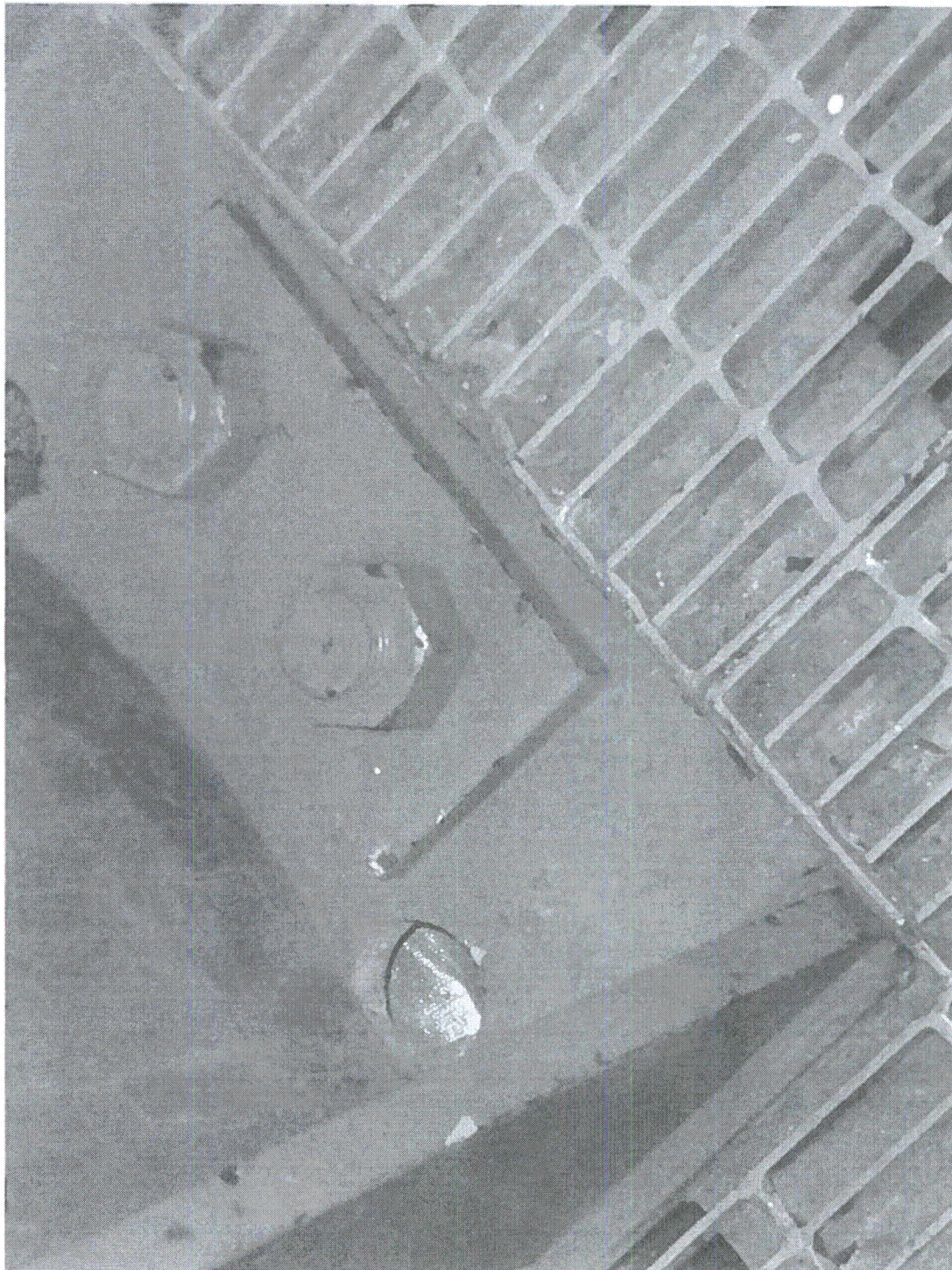


Figure 4 – Chipped Bolt Paint (2E11-B001B)

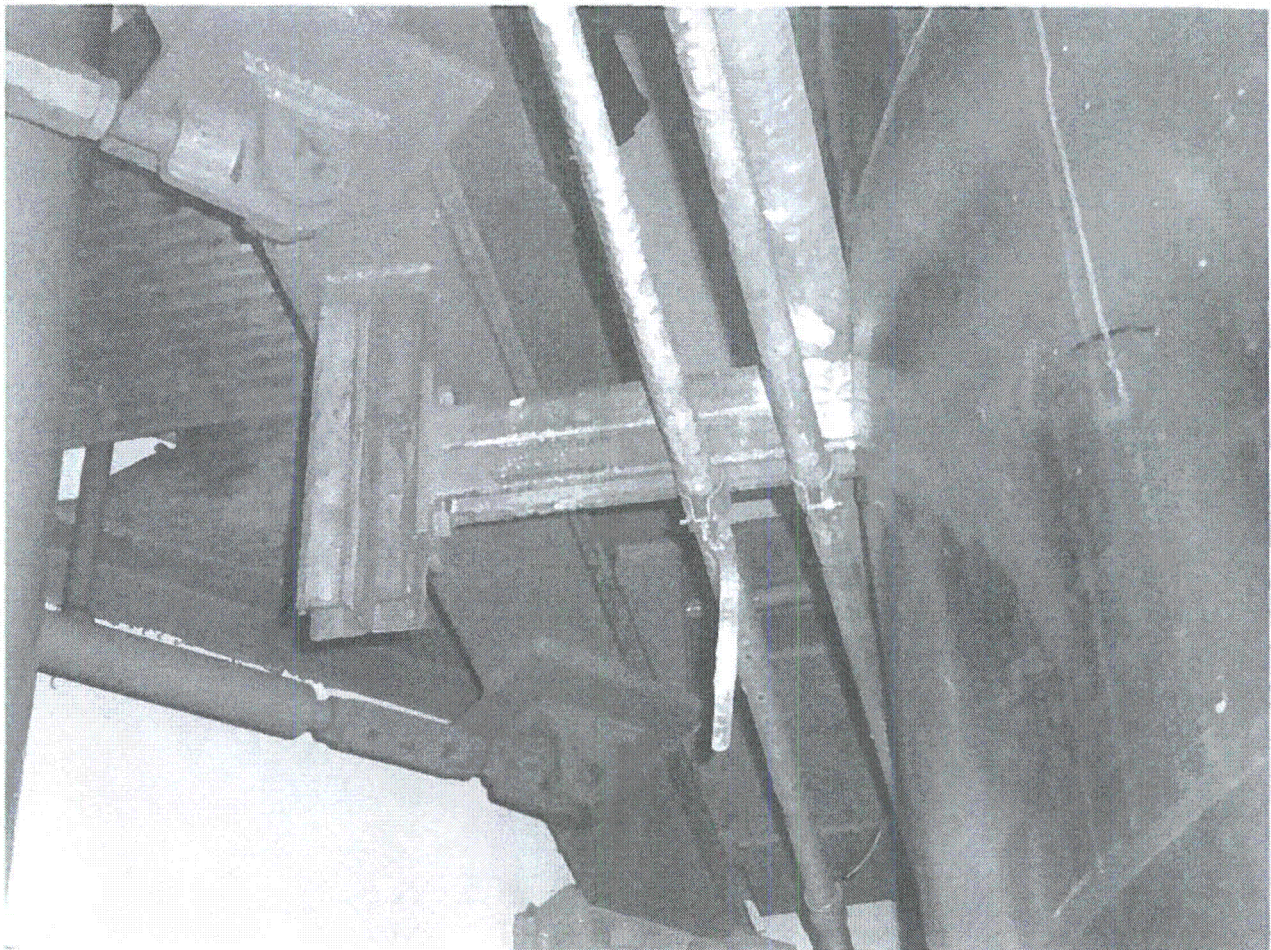


Figure 5 – Conduit Support near Heat Exchanger (2E11-B001B)

**Seismic Walkdown Checklist (SWC)**

Equipment ID No. 2T48-A001 Equip. Class<sup>1</sup> 21

Equipment Description UNIT 2 LIQUID NITROGEN STORAGE TANK

Location: Bldg. YARD Floor El. 130 Room, Area Unit 2 Nitrogen Storage Tank Room

Manufacturer, Model, Etc. (optional but recommended) \_\_\_\_\_

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**Anchorage**

1. Is the anchorage configuration verification required (i.e., is the item one of the 50% of SWEL items requiring such verification)? Y  N
  
2. Is the anchorage free of bent, broken, missing or loose hardware? Y  N  U  N/A
  
3. Is the anchorage free of corrosion that is more than mild surface oxidation? Y  N  U  N/A   
*Mild surface corrosion was observed at the anchorage. This was judged not to be a seismic concern since it is only at the surface.*
  
4. Is the anchorage free of visible cracks in the concrete near the anchors? Y  N  U  N/A
  
5. Is the anchorage configuration consistent with plant documentation? Y  N  U  N/A   
 (Note: This question only applies if the item is one of the 50% for which an anchorage configuration verification is required.)  
*The anchorage was checked against the SQUG package dated 2/15/94 and Drawing H-25193 Rev. 2.*
  
6. Based on the above anchorage evaluations, is the anchorage free of potentially adverse seismic conditions? Y  N  U

<sup>1</sup> Enter the equipment class name from Appendix B: Classes of Equipment.

Status: Y  N  U

**Seismic Walkdown Checklist (SWC)**

Equipment ID No. 2T48-A001 Equip. Class<sup>1</sup> 21

Equipment Description UNIT 2 LIQUID NITROGEN STORAGE TANK

**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

*SQUG package noted a possible interaction with the then timber roof on the top of the room and suggested modification. The roof was replaced later and currently it is steel frame supported corrugated metal decking. This steel frame decking system is seismically adequate by inspection.*

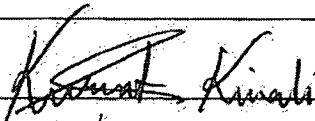
**Other Adverse Conditions**

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)

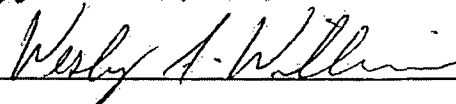
*None.*

Evaluated by: KURSAT KINALI



Date: 9/26/2012

WESLEY WILLIAMS



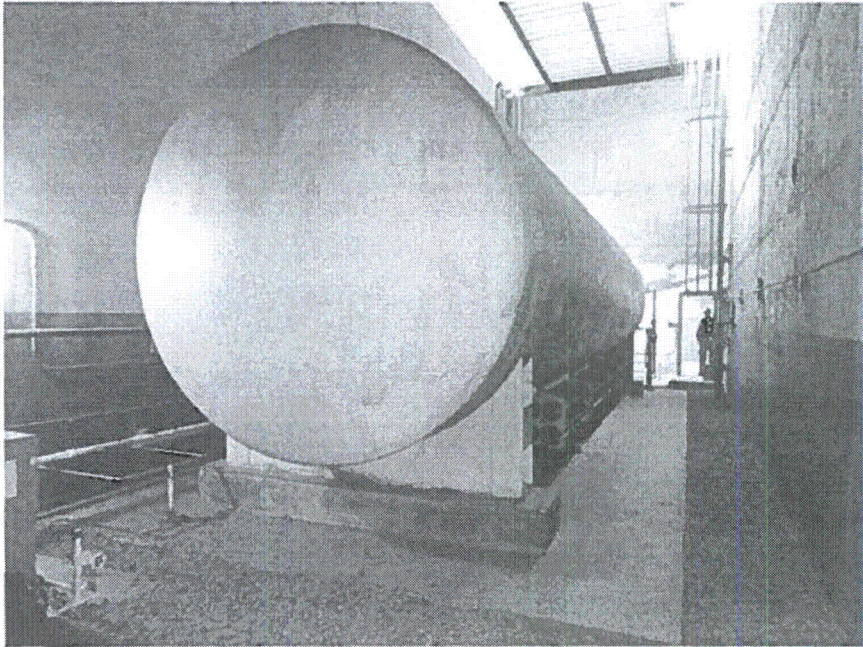
9/26/2012

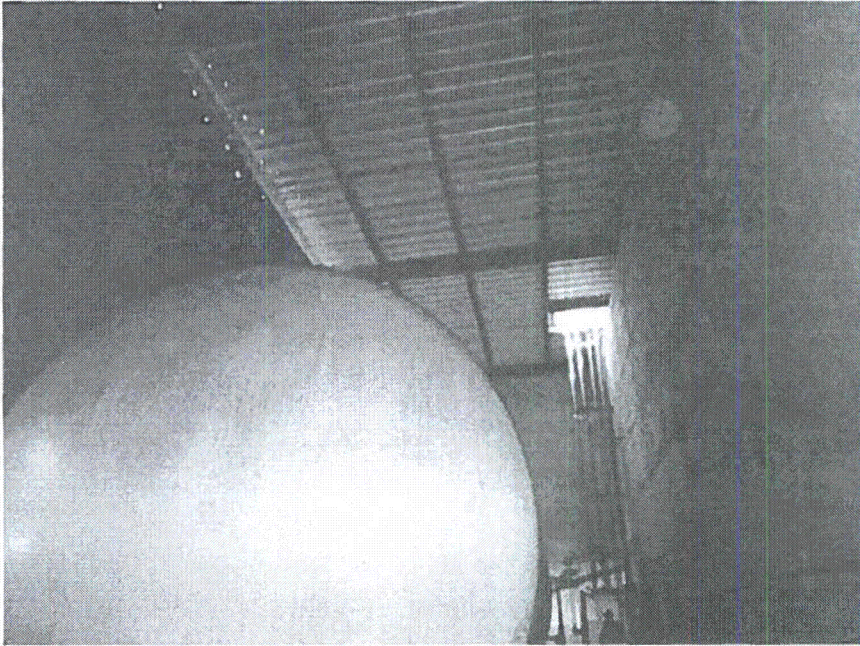
**Seismic Walkdown Checklist (SWC)**

Equipment ID No. 2T48-A001 Equip. Class<sup>1</sup> 21

Equipment Description UNIT 2 LIQUID NITROGEN STORAGE TANK

**Photographs**





**Seismic Walkdown Checklist (SWC)**Equipment ID No. 2Y52-A101C Equip. Class<sup>1</sup> 21Equipment Description FUEL DAY TANK 1CLocation: Bldg. DIESEL Floor El. 130 Room, Area Day Tank Room

Manufacturer, Model, Etc. (optional but recommended) \_\_\_\_\_

**Instructions for Completing Checklist**

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**Anchorage**

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

<sup>1</sup> Enter the equipment class name from Appendix B: Classes of Equipment.



Status: Y N U

**Seismic Walkdown Checklist (SWC)**

Equipment ID No. 2Y52-A101C Equip. Class: 21

Equipment Description FUEL DAY TANK 1C

**Interaction Effects**

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

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

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

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

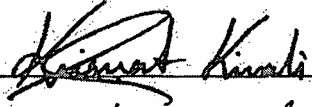
**Other Adverse Conditions**

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

**Comments** (Additional pages may be added as necessary)

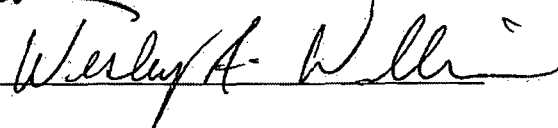
*None.*

Evaluated by: KURSAT KINALI



Date: 9/12/2012

WESLEY WILLIAMS



9/12/2012

**Seismic Walkdown Checklist (SWC)**

Equipment ID No. 2Y52-A101C Equip. Class<sup>1</sup> 21

Equipment Description FUEL DAY TANK 1C

**Photographs**



**Seismic Walkdown Checklist (SWC)**Equipment ID No. 2C41-A001 Equip. Class<sup>1</sup> 21Equipment Description SBLC BORON SOLUTION TANKLocation: Bldg. RB Floor El. 203 Room, Area 2R414

Manufacturer, Model, Etc. (optional but recommended) \_\_\_\_\_

**Instructions for Completing Checklist**

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**Anchorage**

1. Is the anchorage configuration verification required (i.e., is the item one of the 50% of SWEL items requiring such verification)? Y  N
  
2. Is the anchorage free of bent, broken, missing or loose hardware? Y  N  U  N/A
  
3. Is the anchorage free of corrosion that is more than mild surface oxidation? Y  N  U  N/A
  
4. Is the anchorage free of visible cracks in the concrete near the anchors? Y  N  U  N/A
  
5. Is the anchorage configuration consistent with plant documentation?  
(Note: This question only applies if the item is one of the 50% for which an anchorage configuration verification is required.)  
*Anchorage configuration was checked against Drawing S-25399, Ver. 1.0. Number of bolts and presence of stitch welding were confirmed.* Y  N  U  N/A
  
6. Based on the above anchorage evaluations, is the anchorage free of potentially adverse seismic conditions? Y  N  U

<sup>1</sup> Enter the equipment class name from Appendix B: Classes of Equipment.

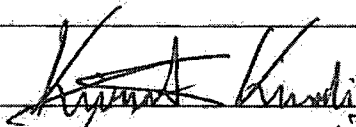
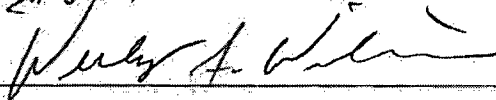
Sheet 2 of 3

Status: Y  N  U **Seismic Walkdown Checklist (SWC)**Equipment ID No. 2C41-A001 Equip. Class<sup>t</sup> 21Equipment Description SBLC BORON SOLUTION TANK**Interaction Effects**

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

**Other Adverse Conditions**

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

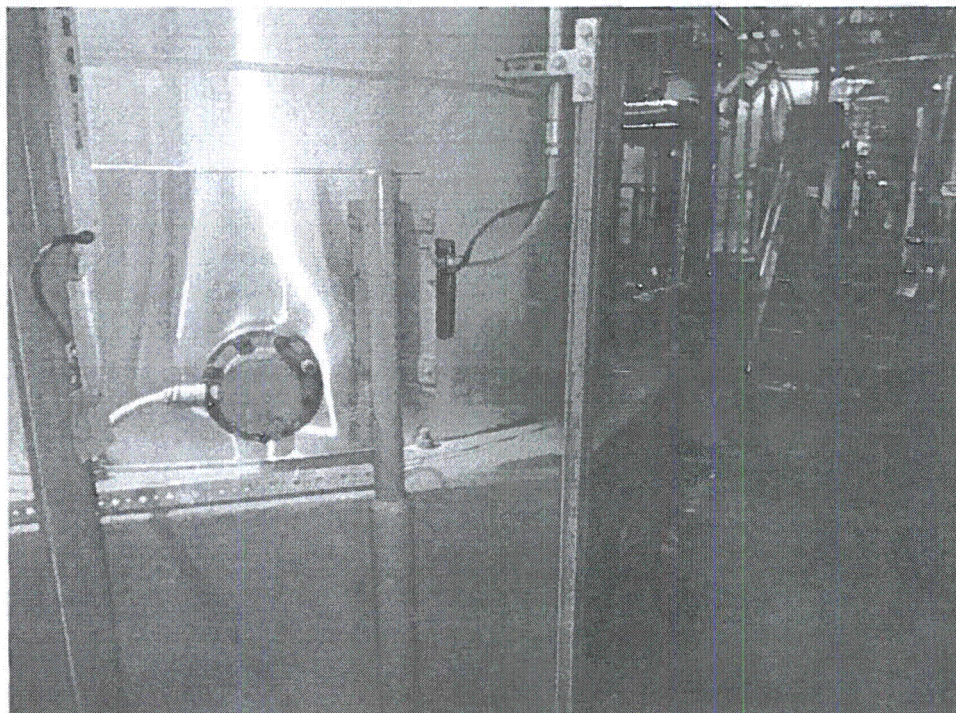
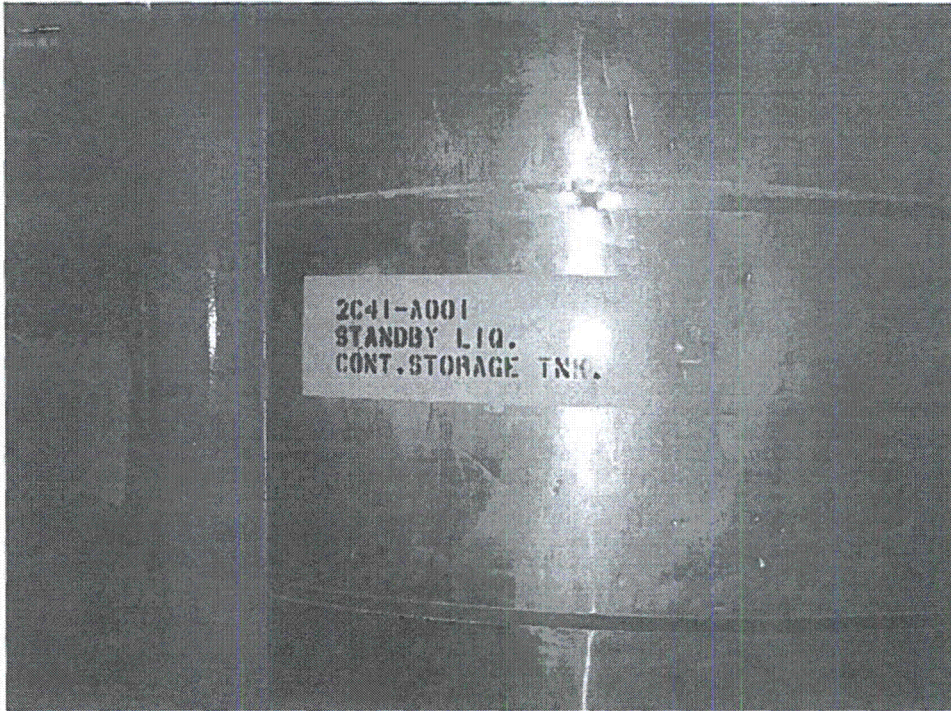
**Comments** (Additional pages may be added as necessary)*None*Evaluated by: Kursat KinaliDate: 9/6/2012Wesley Williams9/6/2012

**Seismic Walkdown Checklist (SWC)**

Equipment ID No. 2C41-A001 Equip. Class<sup>1</sup> 21

Equipment Description SBLC BORON SOLUTION TANK

**Photographs**



Sheet 1 of 4

Status: Y  N  U **Seismic Walkdown Checklist (SWC)**Equipment ID No. 2R43-A005A Equip. Class<sup>1</sup> 21Equipment Description DG 2A STARTING AIR RECEIVERLocation: Bldg. DIESEL Floor El. 130 Room, Area DIESEL GENERATOR ROOM 2A

Manufacturer, Model, Etc. (optional but recommended) \_\_\_\_\_

**Instructions for Completing Checklist**

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**Anchorage**

1. Is the anchorage configuration verification required (i.e., is the item one of the 50% of SWEL items requiring such verification)? Y  N
  
2. Is the anchorage free of bent, broken, missing or loose hardware? Y  N  U  N/A
  
3. Is the anchorage free of corrosion that is more than mild surface oxidation? Y  N  U  N/A
  
4. Is the anchorage free of visible cracks in the concrete near the anchors? Y  N  U  N/A
  
5. Is the anchorage configuration consistent with plant documentation?  
(Note: This question only applies if the item is one of the 50% for which an anchorage configuration verification is required.)  
*Anchorage is consistent with that outlined in calculation C-117.0, Rev. 2.* Y  N  U  N/A
  
6. Based on the above anchorage evaluations, is the anchorage free of potentially adverse seismic conditions? Y  N  U

<sup>1</sup> Enter the equipment class name from Appendix B: Classes of Equipment.

**Seismic Walkdown Checklist (SWC)**Equipment ID No. 2R43-A005A Equip. Class<sup>1</sup> 21Equipment Description DG 2A STARTING AIR RECEIVER**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?  
*Tubing flexibility at the top is adequate as noted in calculation C-117.0, Rev. 2.* 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)*See 2R43-S001A for AWC information.*Evaluated by: Juan VizcayaDate: 09/26/2012Patrick Kelly09/26/2012

**Seismic Walkdown Checklist (SWC)**

Equipment ID No. 2R43-A005A Equip. Class<sup>1</sup> 21

Equipment Description DG 2A STARTING AIR RECEIVER

**Photographs**



1: Equipment MPL # (2R43-A005A)





**Seismic Walkdown Checklist (SWC)**

Equipment ID No. 2P70-A002B Equip. Class<sup>1</sup> 0

Equipment Description EMER N2 BOTTLE

Location: Bldg. REACTOR Floor El. 130 Room, Area R107A

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
  
2. Is the anchorage free of bent, broken, missing or loose hardware? Y  N  U  N/A   
*Loose bolt from other component or connection is stuck in the anchor bolt recessed tube area for the anchor. The SWE's have determined that this loose bolt will not damage the rack anchor during a seismic event nor is it likely that the bolt will exit the recessed tube area during a seismic event and damage other equipment. Therefore, the loose bolt at this location is seismically acceptable.*
  
3. Is the anchorage free of corrosion that is more than mild surface oxidation? Y  N  U  N/A
  
4. Is the anchorage free of visible cracks in the concrete near the anchors? Y  N  U  N/A
  
5. Is the anchorage configuration consistent with plant documentation? Y  N  U  N/A   
 (Note: This question only applies if the item is one of the 50% for which an anchorage configuration verification is required.)  
*Drawing H-51524, Rev. 0*

<sup>1</sup> Enter the equipment class name from Appendix B: Classes of Equipment.

**Seismic Walkdown Checklist (SWC)**Equipment ID No. 2P70-A002B Equip. Class<sup>1</sup> 0Equipment Description EMER N2 BOTTLE

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

**Comments** (Additional pages may be added as necessary)

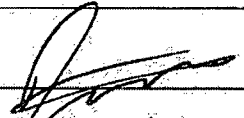
*The rack itself has no MPL number to indicate this is the correct component (See CR 518755). Also, there is a Squeeze Bottle, Wrench and paper stuffed inside the top structural tubes of the rack (see CR 518755)*

Status: Y  N  U

**Seismic Walkdown Checklist (SWC)**

Equipment ID No. 2P70-A002B Equip. Class<sup>1</sup> 0

Equipment Description EMER N2 BOTTLE

Evaluated by: John McFarland  Date: 09/17/2012

Jeff Horton  09/17/2012

**Seismic Walkdown Checklist (SWC)**

Equipment ID No. 2P70-A002B Equip. Class<sup>1</sup> 0

Equipment Description EMER N2 BOTTLE

**Photographs**

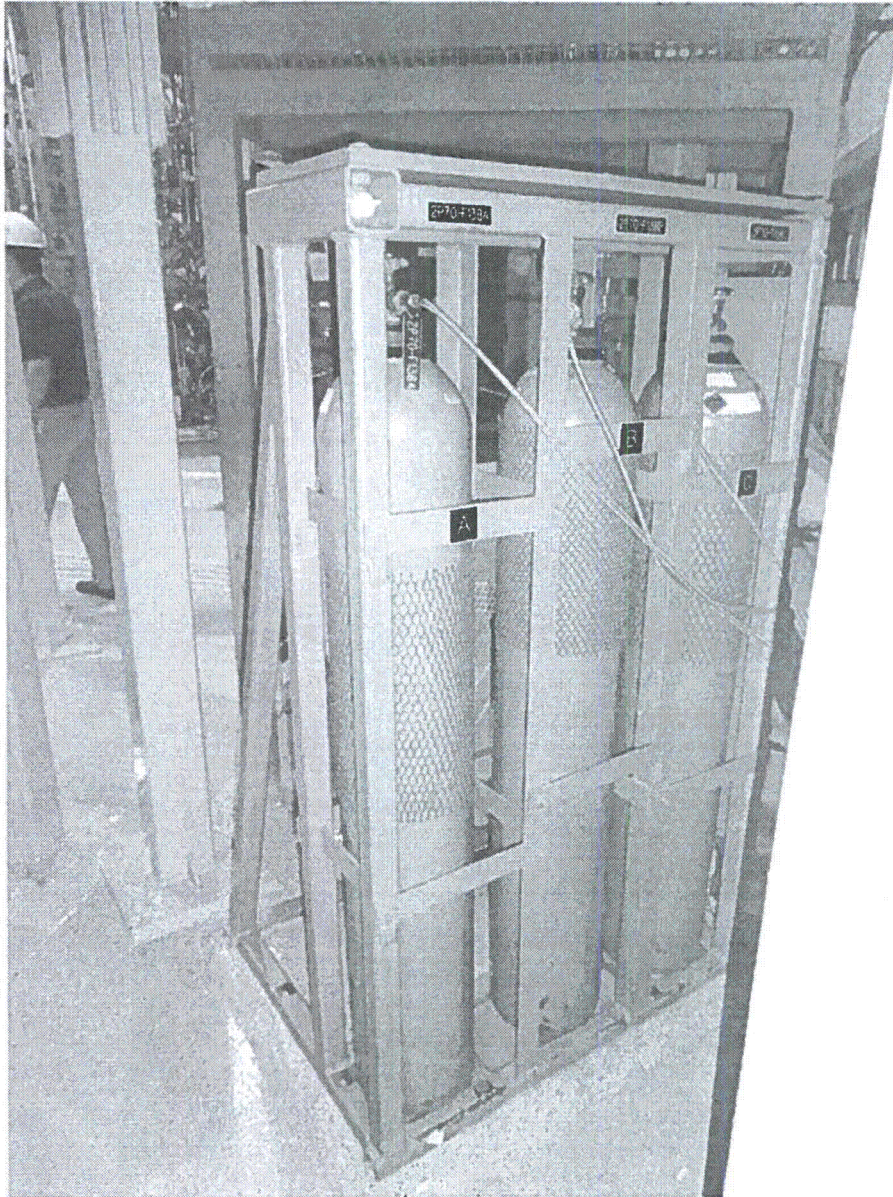


Figure 1 Equipment ID (2P70-A002B) No Equipment ID Tag

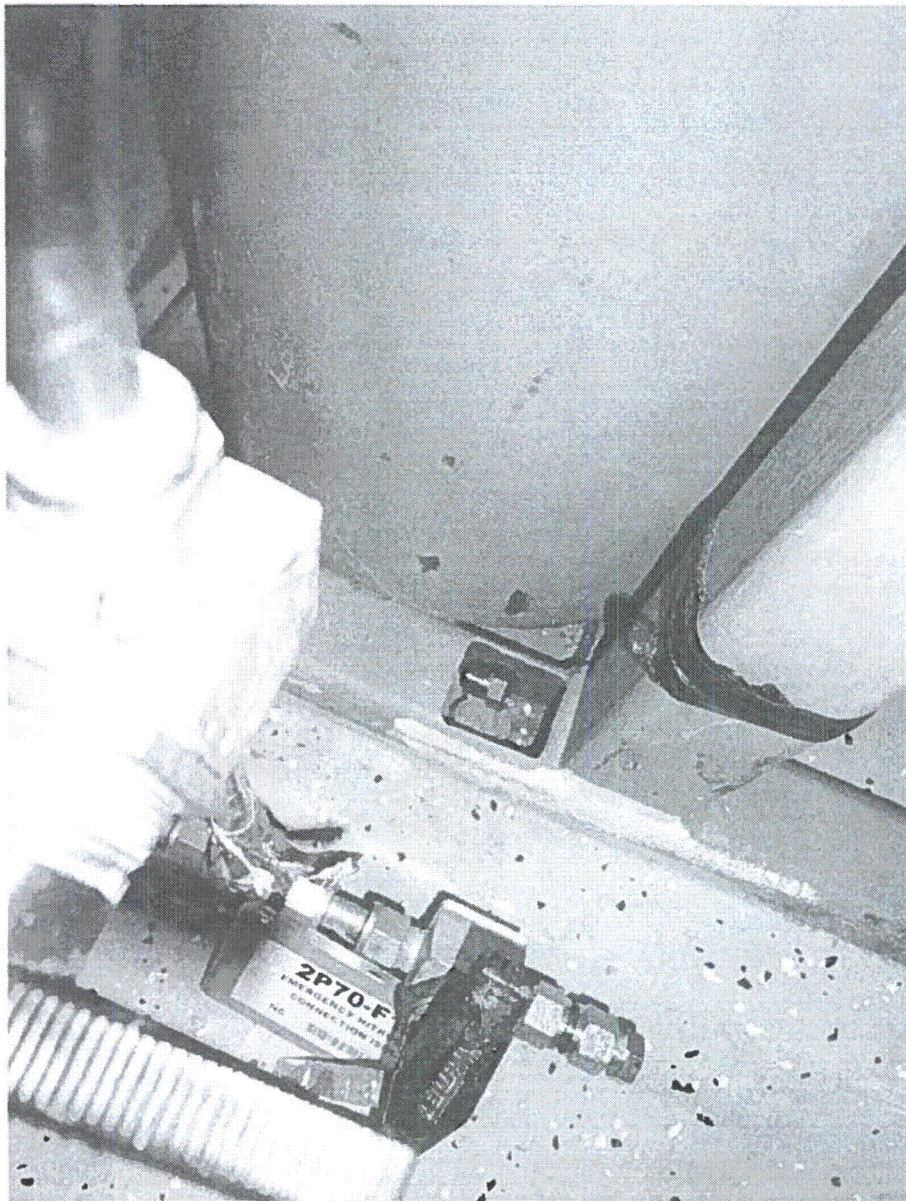


Figure 2 Threaded Fastener Located in Anchor Bolt Recess of Rack

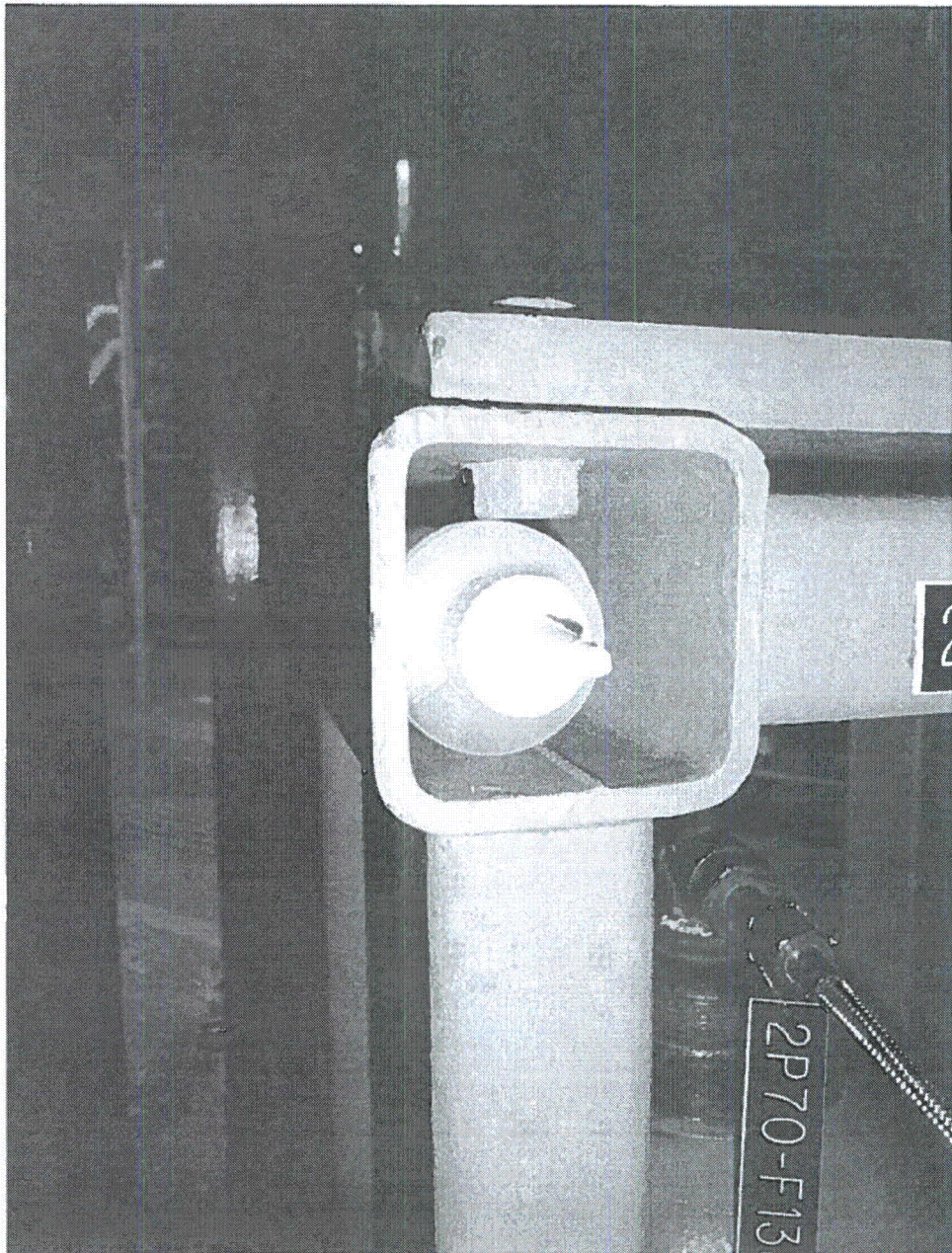


Figure 3 Squeeze Bottle in Top Structural Tube of Frame

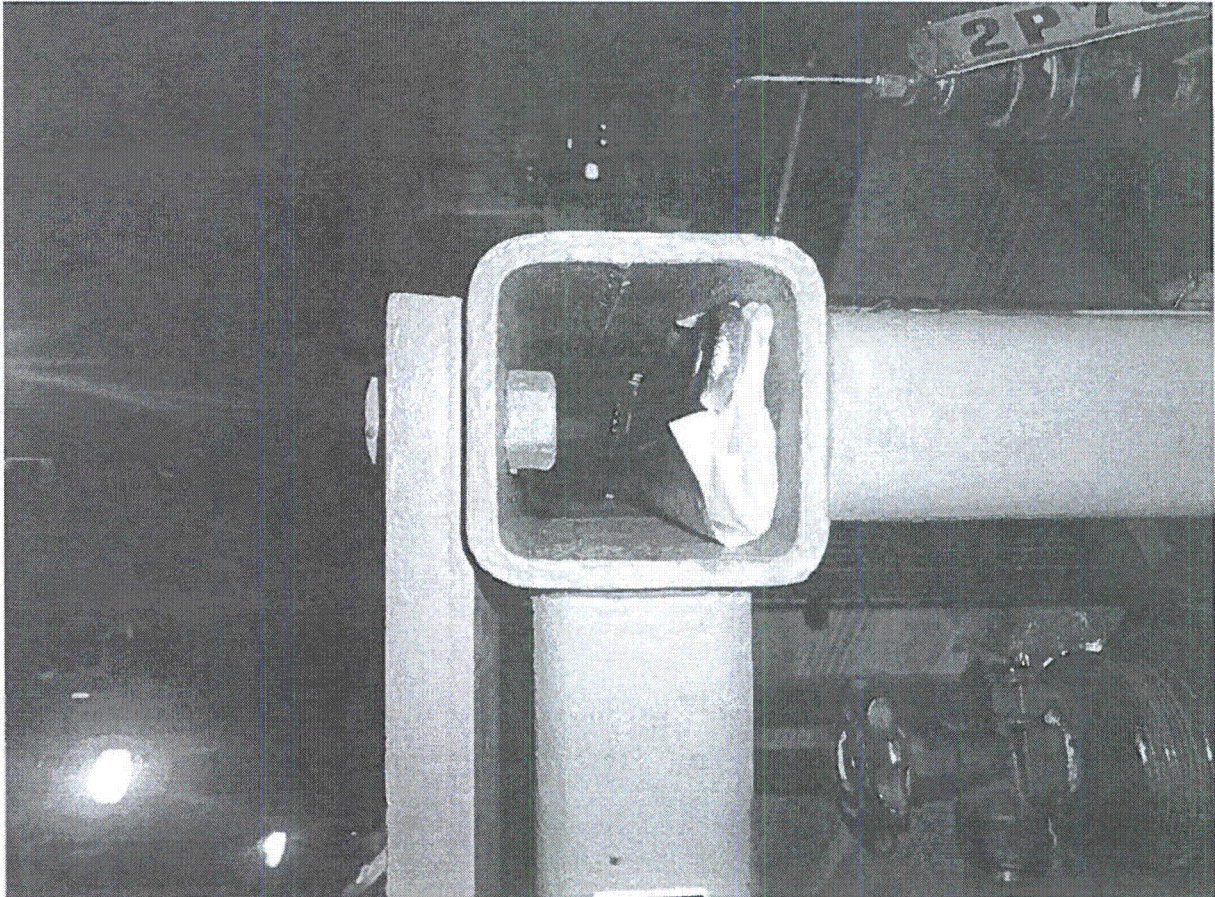


Figure 4 Wrench inside Top Structural Steel Tube of N2 Rack



**Seismic Walkdown Checklist (SWC)**Equipment ID No. 2R42-S032B Equip. Class<sup>1</sup> 16Equipment Description 125V BATTERY CHARGER 2HLocation: Bldg. DIESEL Floor El. 130 Room, Area Battery Charger 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
2. Is the anchorage free of bent, broken, missing or loose hardware? Y  N  U  N/A
3. Is the anchorage free of corrosion that is more than mild surface oxidation? Y  N  U  N/A
4. Is the anchorage free of visible cracks in the concrete near the anchors? Y  N  U  N/A
5. Is the anchorage configuration consistent with plant documentation?  
(Note: This question only applies if the item is one of the 50% for which an anchorage configuration verification is required.) Y  N  U  N/A
6. Based on the above anchorage evaluations, is the anchorage free of potentially adverse seismic conditions? Y  N  U

<sup>1</sup> Enter the equipment class name from Appendix B: Classes of Equipment.

Status: Y N U

**Seismic Walkdown Checklist (SWC)**

Equipment ID No: 2R42-S032B Equip. Class: 16

Equipment Description 125V BATTERY CHARGER 2H

**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

*Components inside the panel were inspected visually in accordance with the direction provided in the FAQ related to opening panels. The panel was opened under WO# SNC436331. No potentially adverse seismic conditions were found.*

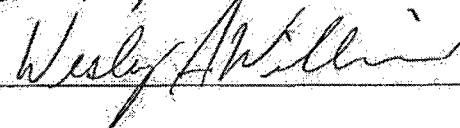
**Comments** (Additional pages may be added as necessary)

Evaluated by: KURSAT KINALI



Date: 9/27/2012

WESLEY WILLIAMS



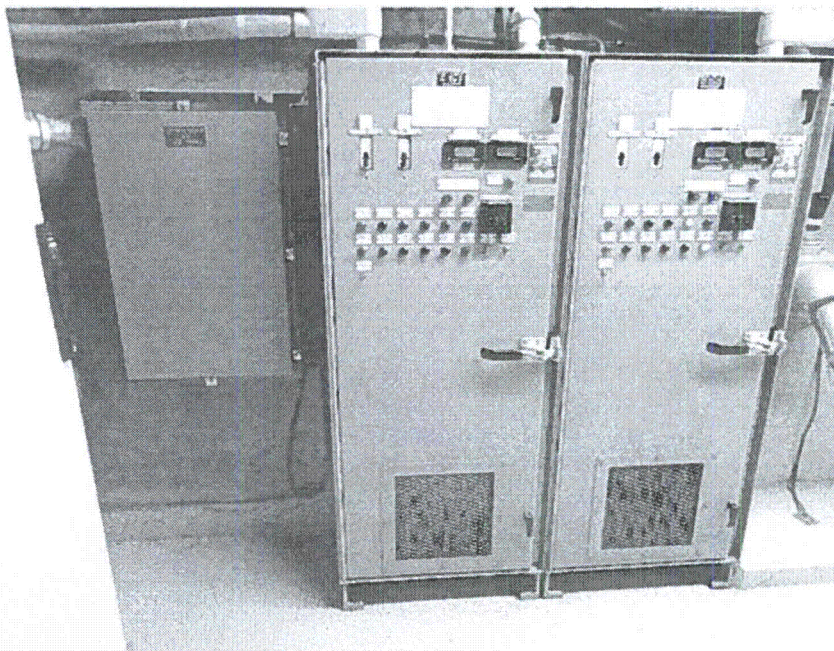
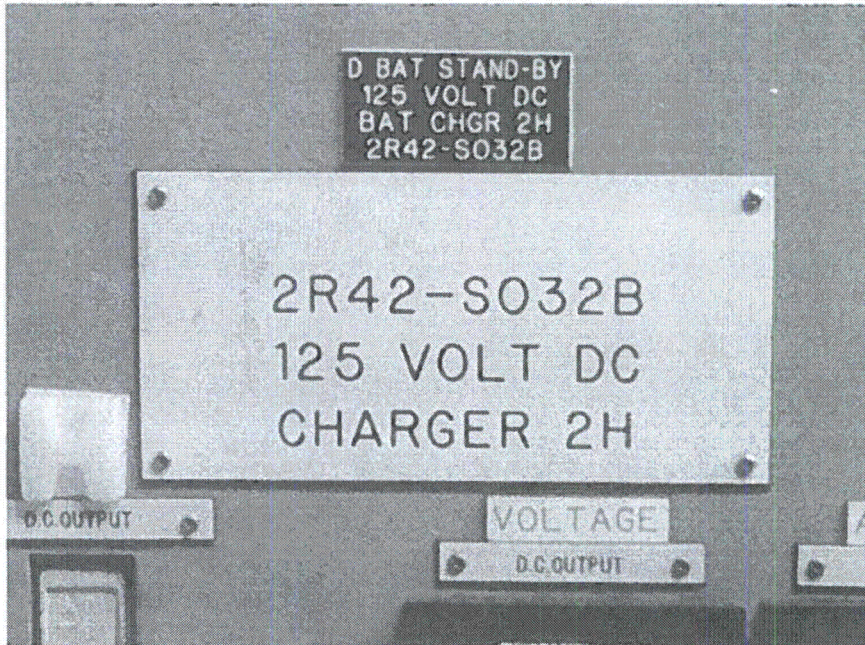
9/27/2012

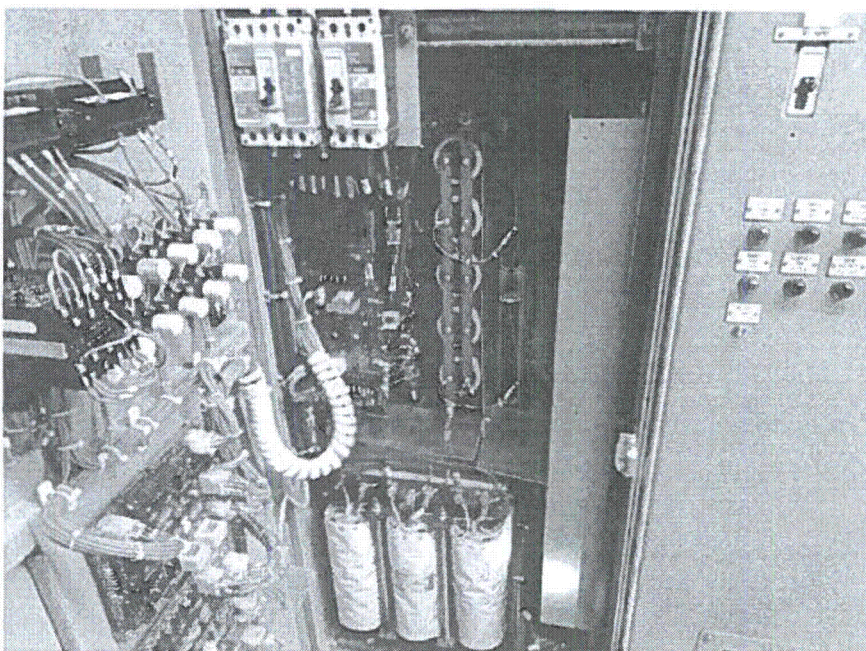
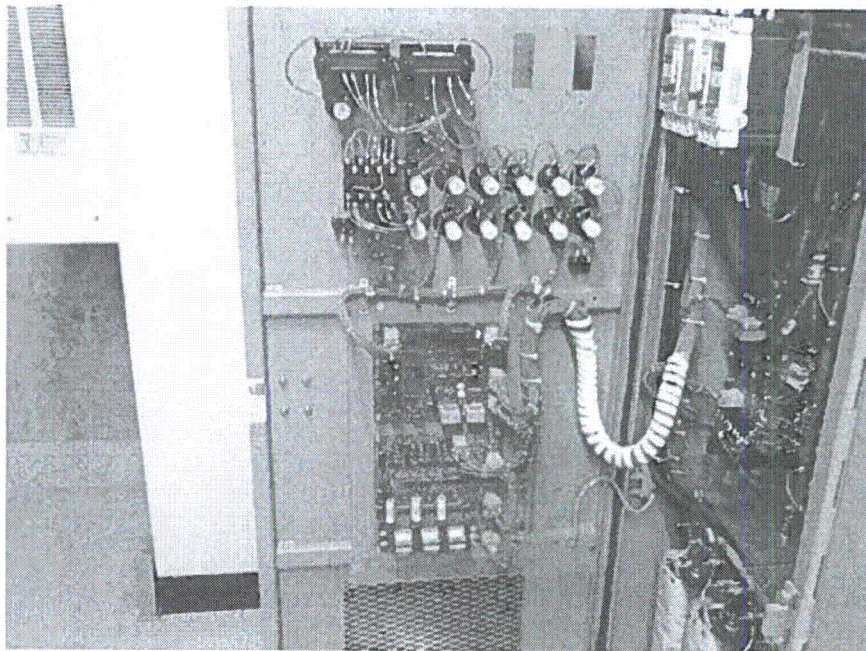
**Seismic Walkdown Checklist (SWC)**

Equipment ID No. 2R42-S032B Equip. Class<sup>1</sup> 16

Equipment Description 125V BATTERY CHARGER 2H

**Photographs**





**Seismic Walkdown Checklist (SWC)**Equipment ID No. 2H11-P602 Equip. Class<sup>1</sup> 20Equipment Description Reactor/Containment Cooling & Isolation PanelLocation: Bldg. CONTROL Floor El. 164 Room, Area Unit 2 Control 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
  
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.)  
*Anchorage configuration is consistent with SEWS package (Dated 02/19/1994). All anchors were determined to be installed and free of adverse seismic conditions.* Y  N  U  N/A
  
6. Based on the above anchorage evaluations, is the anchorage free of potentially adverse seismic conditions? Y  N  U

<sup>1</sup> Enter the equipment class name from Appendix B: Classes of Equipment.

**Seismic Walkdown Checklist (SWC)**Equipment ID No. 2H11-P602 Equip. Class<sup>1</sup> 20Equipment Description Reactor/Containment Cooling & Isolation Panel**Interaction Effects**

7. Are soft targets free from impact by nearby equipment or structures?  Y  N  U  N/A   
*Components installed inside the panel are adequately spaced and supported.*
8. Are overhead equipment, distribution systems, ceiling tiles and lighting, and masonry block walls not likely to collapse onto the equipment?  Y  N  U  N/A   
*Unlatched lighting covers (diffusers) were observed at three locations at the rear of the panels. The latches for the three covers were not properly engaged at one corner. The cover design was common for the overhead lights at the rear of the panels and the square ones in the front. The diffusers are very light weight and are located sufficiently far from the panels to prevent the diffusers from impacting sensitive equipment even if they were to fall. The scenario of the light covers becoming fully disengaged and then entering into the backs of the open panels or hitting the front of the panels were not credible. Therefore, this not a seismic concern.*  
  
*The frames for the ceiling tiles are judged to be adequate to prevent the tiles from falling during a seismic event. The overhead equipment, distribution systems, and lighting were installed with rigid restraints or rod hung with multiple tie wires to limit horizontal movement.*
9. Do attached lines have adequate flexibility to avoid damage?  Y  N  U  N/A   
*Rigid conduits attached to the top of the panels were judged to be seismically acceptable. The rigid conduits are attached to metal wire chase which is also rigidly attached to the panels. Therefore, the differential motion between the wire chase and panels is minimized.*
10. Based on the above seismic interaction evaluations, is equipment free of potentially adverse seismic interaction effects?  Y  N  U   
*The connection of Panel 2-H11-602 to Panel 2-H11-603 consisted of 7 bolts instead of 8 bolts. One bolt located in the upper front corner was not installed (see picture). Details of this connection were not specified in the design documents or SEWS package. However, the configuration and capacity of the 7 installed bolts are adequate to connect the two cabinets such that there is no differential movement between the two cabinets. Per review of the SEWS package, the panel weight is conservatively approximated to be 8300lbs/6ft section. The maximum horizontal acceleration of the panel is 0.65g. The anchorage to the floor was determined to have sufficient capacity to resist 0.75g. Therefore, the seismic interaction of the two cabinets was judged to be acceptable. Considering the capacity of the existing bolts (5/8" diameter) the loads associated with differential movement of the cabinets will be adequately restrained, and the other bolt does not need to be installed.*

Status: Y  N  U

**Seismic Walkdown Checklist (SWC)**

Equipment ID No. 2H11-P602 Equip. Class: 20

Equipment Description Reactor/Containment Cooling & Isolation 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

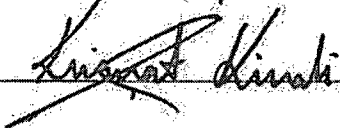
*Components inside the panel were inspected visually in accordance with the direction provided in the FAQ related to opening panels.*

**Comments** (Additional pages may be added as necessary)

*The resolutions to IPEEE outliers were verified. The HVAC diffuser in the ceiling was adequately restrained, and there was no nearby furniture which could potentially interact with the equipment.*

Evaluated by: Winston Stewart 

Date: 09/18/2012

Kursat Kinali 

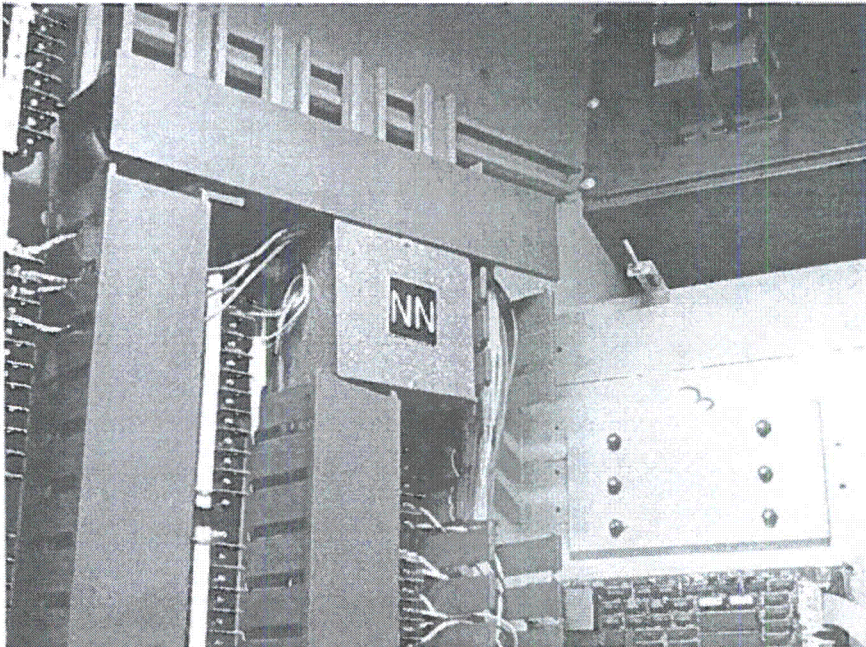
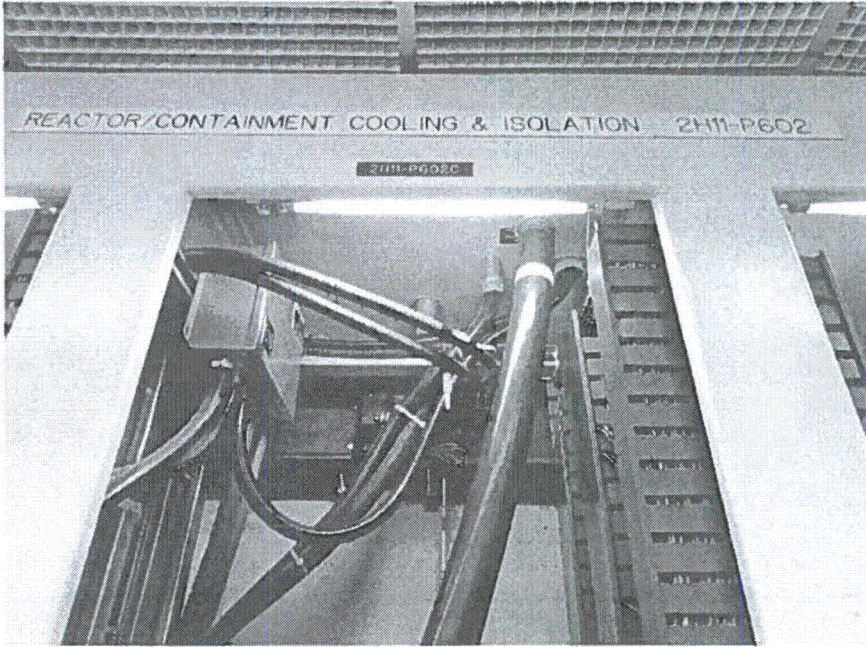
09/18/2012

**Seismic Walkdown Checklist (SWC)**

Equipment ID No. 2H11-P602 Equip. Class<sup>1</sup> 20

Equipment Description Reactor/Containment Cooling & Isolation Panel

**Photographs**







**Seismic Walkdown Checklist (SWC)**Equipment ID No. 2G41-F054 Equip. Class<sup>1</sup> 7Equipment Description CST Make-Up Supply Iso AOVLocation: Bldg. REACTOR Floor El. 203 Room, Area RH-R18

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
2. Is the anchorage free of bent, broken, missing or loose hardware? Y  N  U  N/A   
*The equipment is an inline component, so there is no anchorage.*
3. Is the anchorage free of corrosion that is more than mild surface oxidation? Y  N  U  N/A
4. Is the anchorage free of visible cracks in the concrete near the anchors? Y  N  U  N/A
5. Is the anchorage configuration consistent with plant documentation? Y  N  U  N/A   
(Note: This question only applies if the item is one of the 50% for which an anchorage configuration verification is required.)
6. Based on the above anchorage evaluations, is the anchorage free of potentially adverse seismic conditions? Y  N  U

<sup>1</sup> Enter the equipment class name from Appendix B: Classes of Equipment.

**Seismic Walkdown Checklist (SWC)**

Equipment ID No. 2G41-F054 Equip. Class<sup>1</sup> 7

Equipment Description CST Make-Up Supply Iso AOV

**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

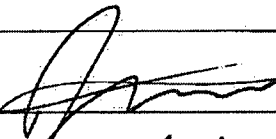
**Other Adverse Conditions**


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

*There is mild surface oxidation on the valve bonnet to body flange bolts. Since oxidation is only on the surface, the flange bolts are not degraded. Therefore, the bolts are judged not be a seismic concern.*

**Comments** (Additional pages may be added as necessary)

None

Evaluated by: John McFarland  Date: 09/12/2012

Jeff Horton  09/12/2012

**Seismic Walkdown Checklist (SWC)**

Equipment ID No. 2G41-F054 Equip. Class<sup>1</sup> 7

Equipment Description CST Make-Up Supply Iso AOV

**Photographs**

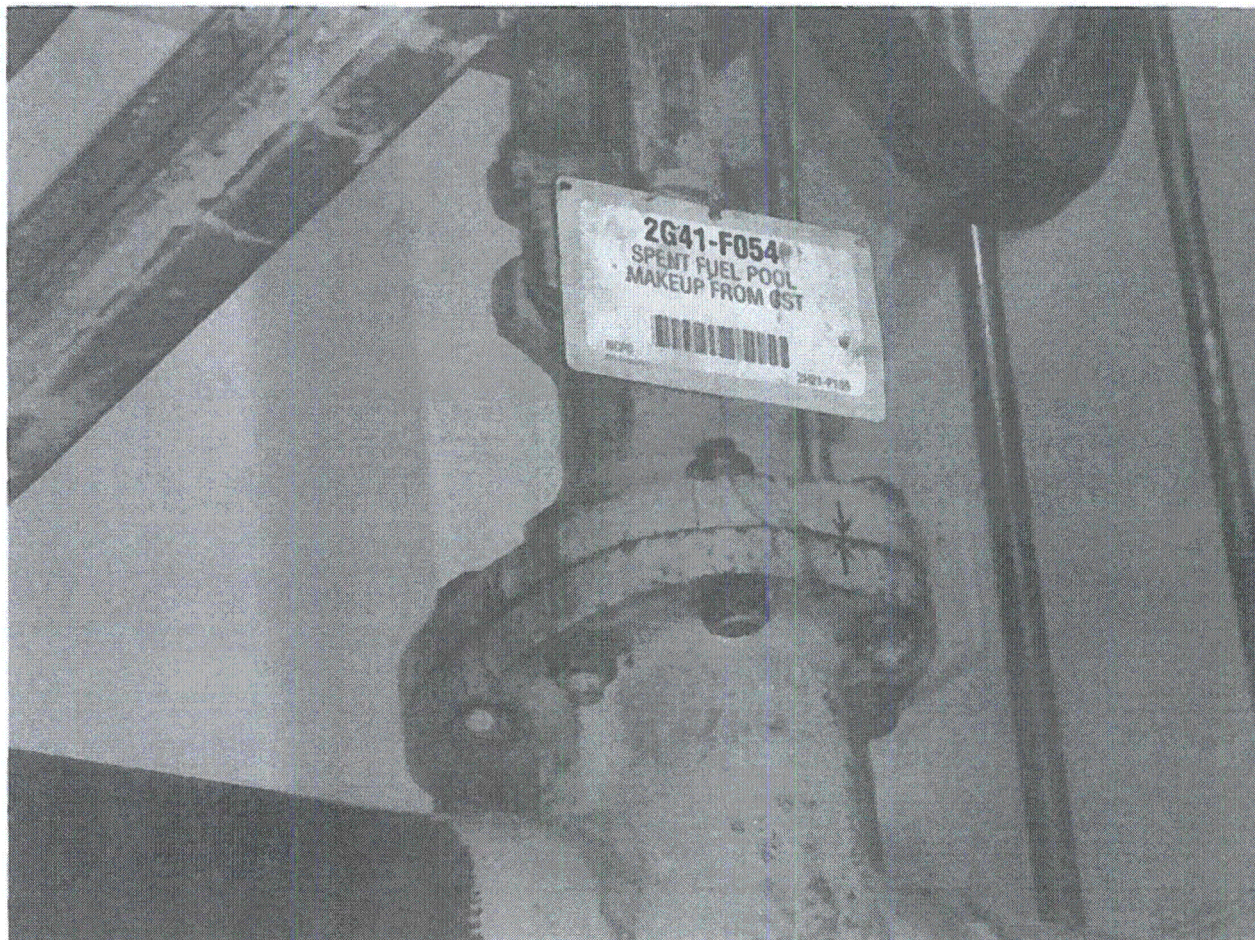


Figure 1 – Equipment ID No (2G41-F054)

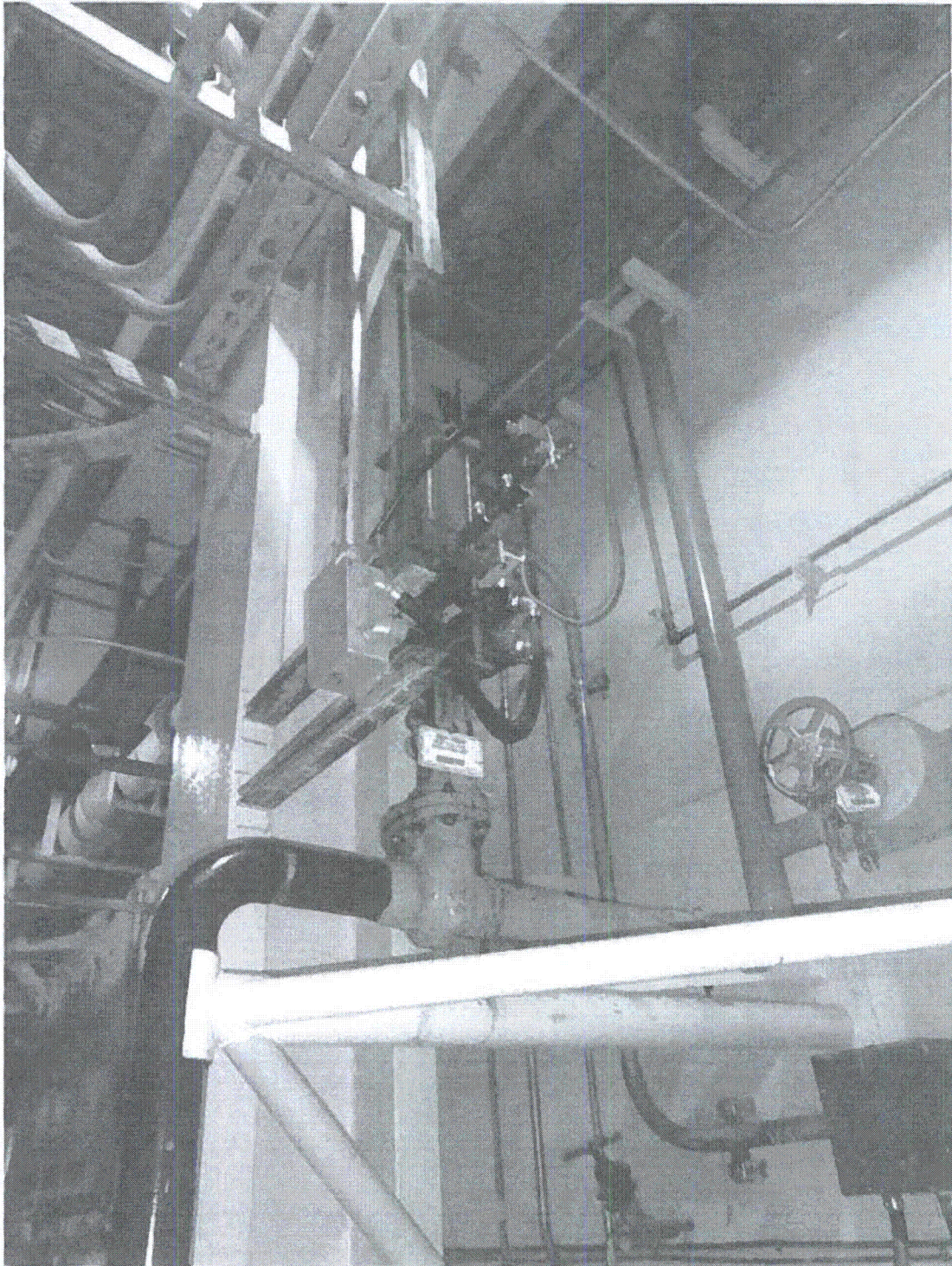


Figure 2 – Equipment Elevation (2G41-F054)

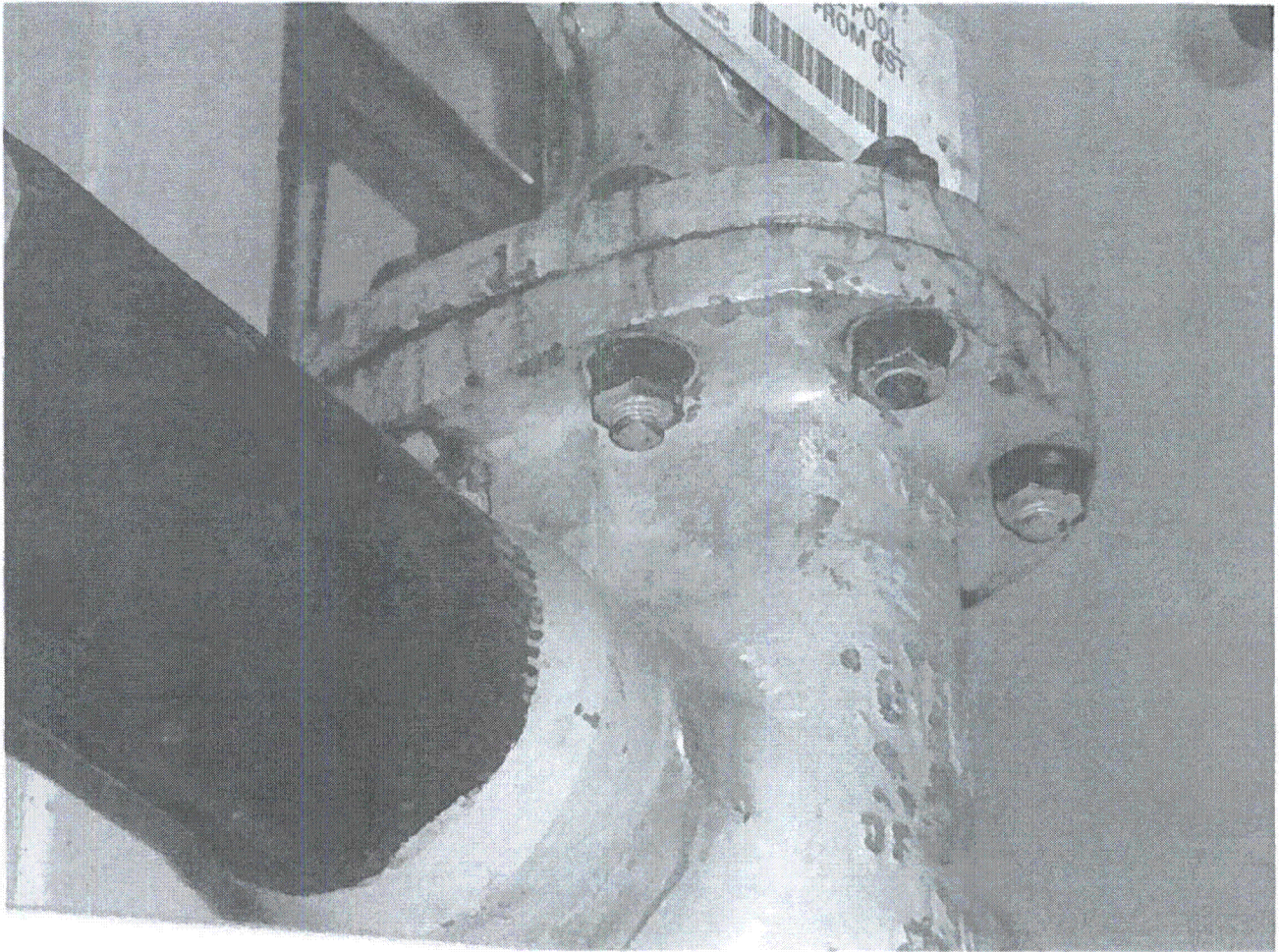


Figure 3 – Mild Surface Oxidation on Flange Bolts (2G41-F054)

**Seismic Walkdown Checklist (SWC)**Equipment ID No. 2P52-A001 Equip. Class<sup>1</sup> 21Equipment Description ESS AIR ECCLocation: Bldg. Reactor Floor El. 130' Room, Area Torus Room, Bay 10

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
2. Is the anchorage free of bent, broken, missing or loose hardware? Y  N  U  N/A
3. Is the anchorage free of corrosion that is more than mild surface oxidation? Y  N  U  N/A
4. Is the anchorage free of visible cracks in the concrete near the anchors? Y  N  U  N/A
5. Is the anchorage configuration consistent with plant documentation? Y  N  U  N/A   
(Note: This question only applies if the item is one of the 50% for which an anchorage configuration verification is required.)

<sup>1</sup> Enter the equipment class name from Appendix B: Classes of Equipment.

**Seismic Walkdown Checklist (SWC)**Equipment ID No. 2P52-A001 Equip. Class<sup>1</sup> 21Equipment Description ESS AIR ECC

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

*The component support base-plate anchors are closely spaced to pipe support anchors (See Figure 4 for details). The SWE's have determined that the anchorage is still seismically acceptable with these closely spaced anchors. The component support contains four base-plates with four anchors each. The condition only affects one anchor on one of these plates.*

**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

*There is a ladder in close proximity to 2P52-A001 that is not tied off to prevent movement (See CR 518746). The SWE's have determined that any movement of the ladder during a seismic event would not damage 2P52-A001 or its attached piping. Due to the light weight of the ladder and the ruggedness of the component and the fact there are no sensitive components in proximity to the ladder that could be impacted. Therefore, the ladder will not adversely affect the safety function of the component.*



Status: Y  N  U

**Seismic Walkdown Checklist (SWC)**

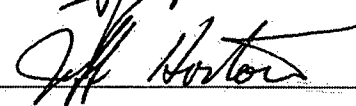
Equipment ID No. 2P52-A001 Equip. Class<sup>1</sup> 21

Equipment Description ESS AIR ECC

**Comments** (Additional pages may be added as necessary)

*None*

Evaluated by: John McFarland  Date: 09/17/2012

Jeff Horton  09/17/2012

**Seismic Walkdown Checklist (SWC)**

Equipment ID No. 2P52-A001 Equip. Class<sup>1</sup> 21

Equipment Description ESS AIR ECC

**Photographs**

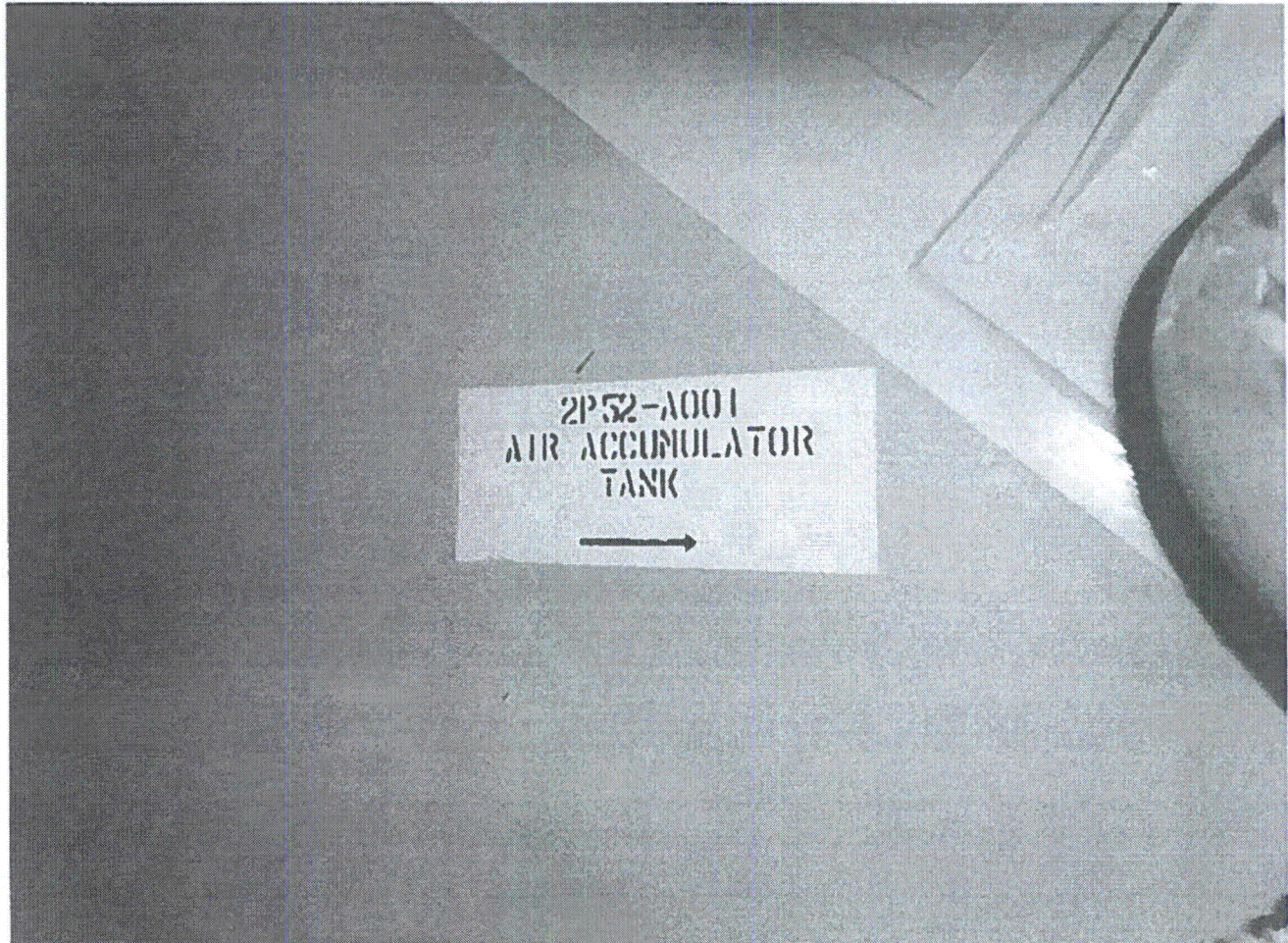


Figure 1 Equipment ID (2P52-A001)



Figure 2 Actual Component

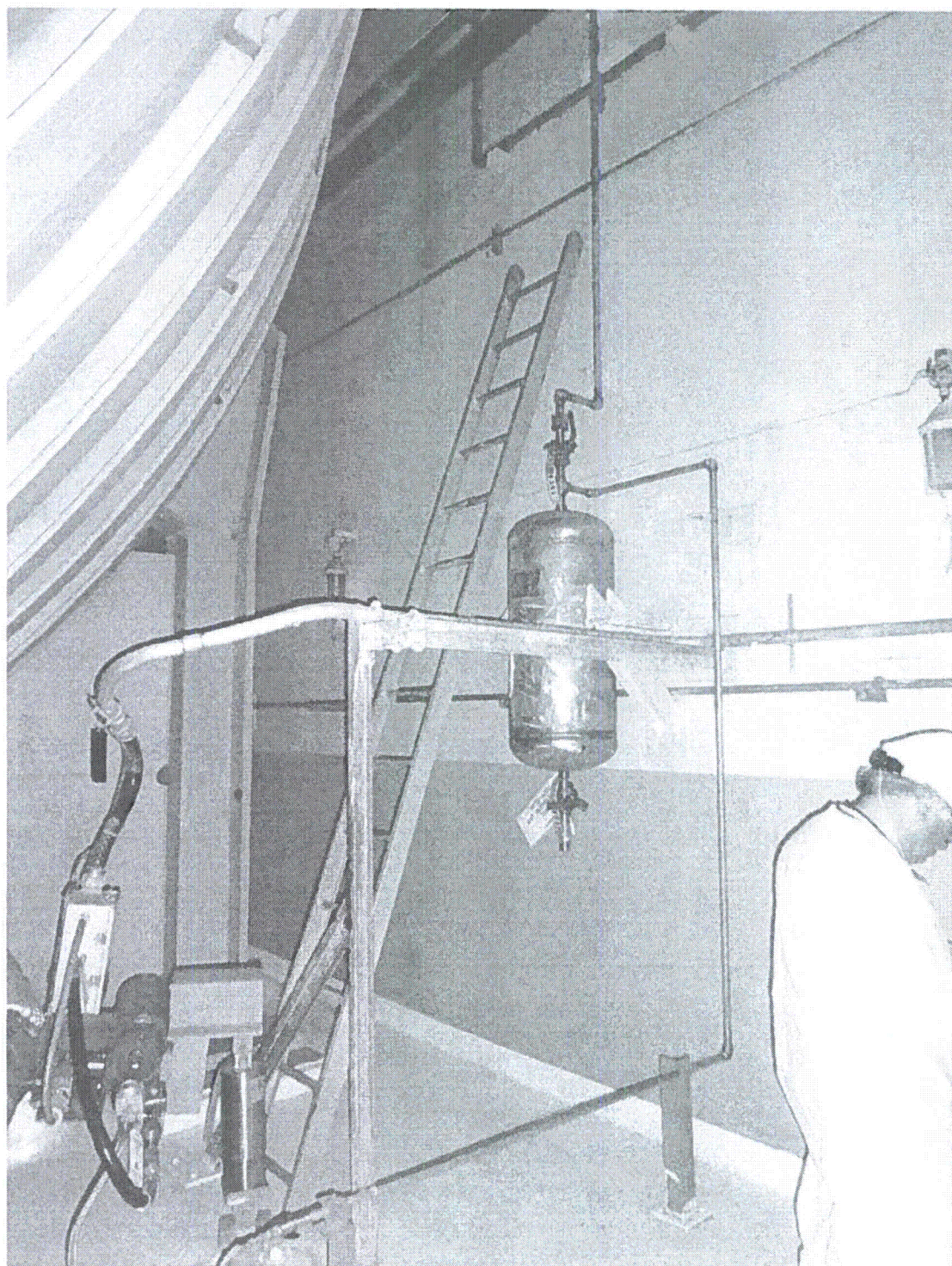


Figure 3 Untied Ladder in Proximity to the Component

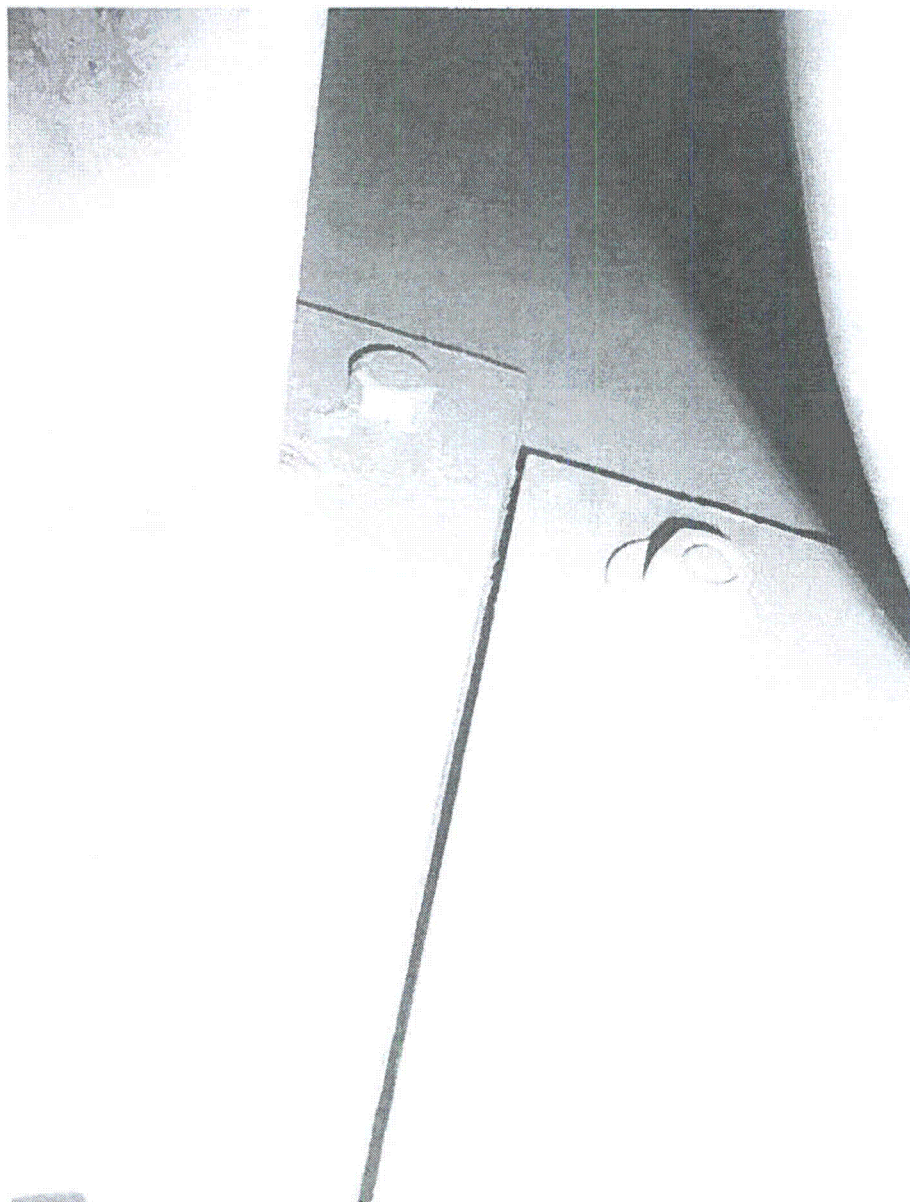


Figure 4 Closely spaced Anchor Bolts

**ATTACHMENT 4**

**UNIT 2 – AREA WALK-BY CHECKLISTS (AWCs)**

**NO. SNCH082-RPT-02**

A total of 45 Area Walk-bys have been completed.  
The Checklists are provided within this Attachment.

Status: Y  N  U **Area Walk-By Checklist (AWC)**Location: Bldg. REACTOR Floor El. 130 Room, Area<sup>1</sup> 107A**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

<sup>1</sup> 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)**

Location: Bldg. REACTOR Floor El. 130 Room, Area<sup>1</sup> 107A

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)

*None.*

Evaluated by: Juan Vizcaya

Date: 09/07/2012

Patrick Kelly

09/07/2012



Status: Y  N  U

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

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Location: Bldg. REACTOR Floor El. 130 Room, Area<sup>1</sup> 107A

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**Photographs**

None.

Status: Y  N  U **Area Walk-By Checklist (AWC)**Location: Bldg. DIESEL Floor El. 130 Room, Area<sup>1</sup> SWITCHGEAR ROOM 2E**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

<sup>1</sup> 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)**

Location: Bldg. DIESEL Floor El. 130 Room, Area<sup>1</sup> SWITCHGEAR ROOM 2E

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

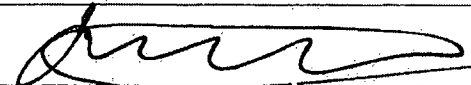
6. Does it appear that the area is free of potentially adverse seismic interactions that could cause a fire in the area? Y  N  U  N/A

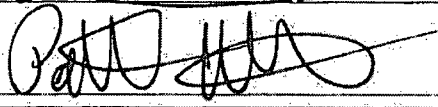
7. Does it appear that the area is free of potentially adverse seismic interactions associated with housekeeping practices, storage of portable equipment, and temporary installations (e.g., scaffolding, lead shielding)? Y  N  U  N/A

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)

*None.*

Evaluated by: Juan Vizcaya  Date: 09/07/2012

Patrick Kelly  09/07/2012

Status: Y  N  U **Area Walk-By Checklist (AWC)**Location: Bldg. CONTROL Floor El. 130 Room, Area<sup>1</sup> 2L48-C34**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

<sup>1</sup> 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)**

Location: Bldg. CONTROL Floor El. 130 Room, Area<sup>1</sup> 2L48-C34

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

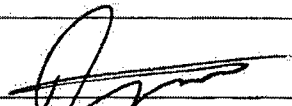
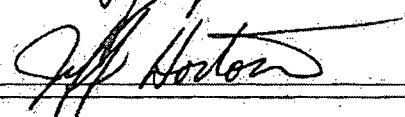
7. Does it appear that the area is free of potentially adverse seismic interactions associated with housekeeping practices, storage of portable equipment, and temporary installations (e.g., scaffolding, lead shielding)? Y  N  U  N/A

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

*There are eight screws missing (six on the top and two on the bottom) on the front panel cover adjacent to Penetration 2Z43-H1002D (CR 519565). The remaining screws are judged sufficient to restrain the panel cover in the case of a seismic event. Therefore, there is no potentially adverse seismic condition.*

**Comments** (Additional pages may be added as necessary)

None

Evaluated by: John McFarland  Date: 09/18/2012  
Jeff Horton  09/18/2012

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

Location: Bldg. CONTROL Floor El. 130 Room, Area 2L48-C34

**Photographs**

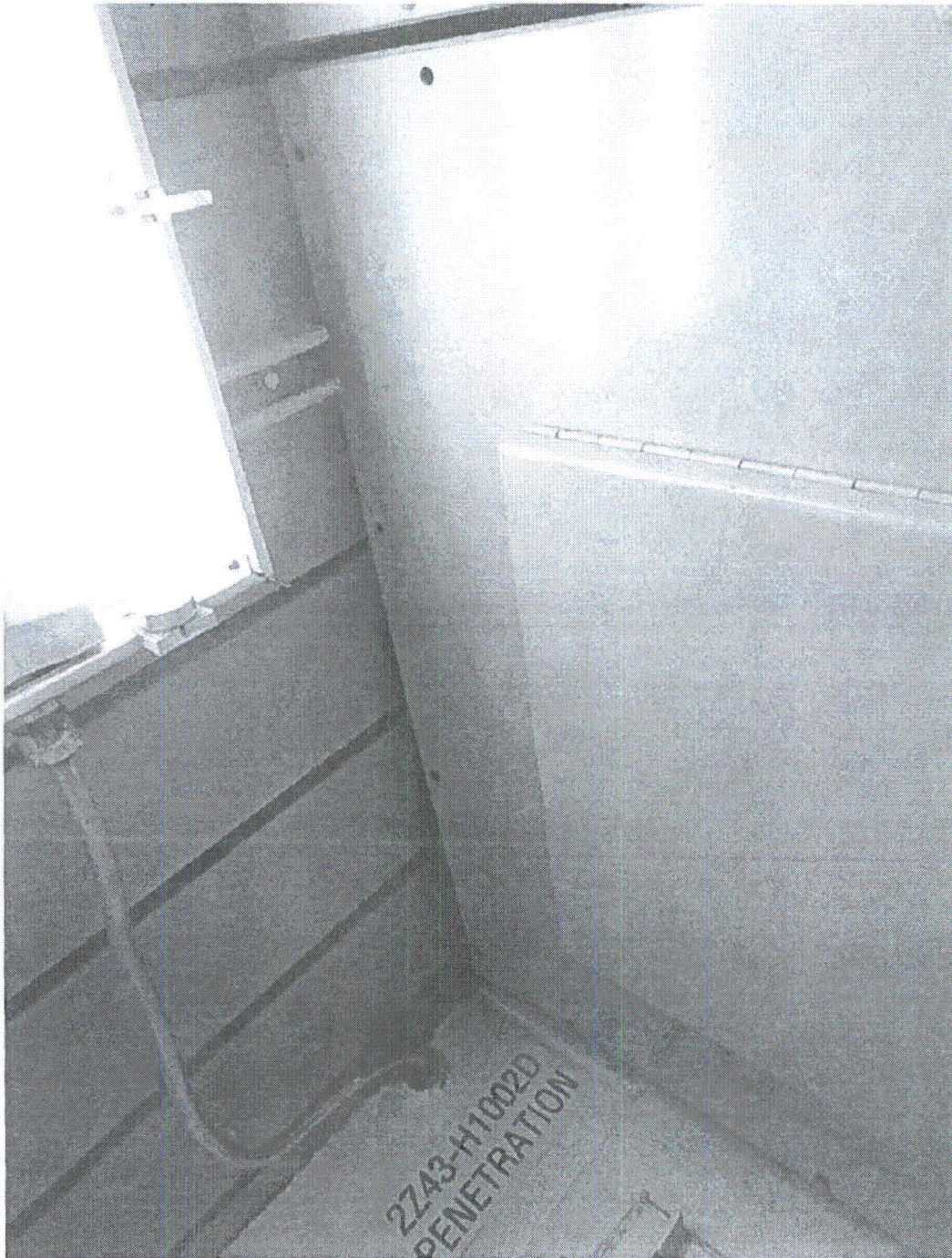


Figure 1 – Missing Screws at Top of Panel (2L48-C34)

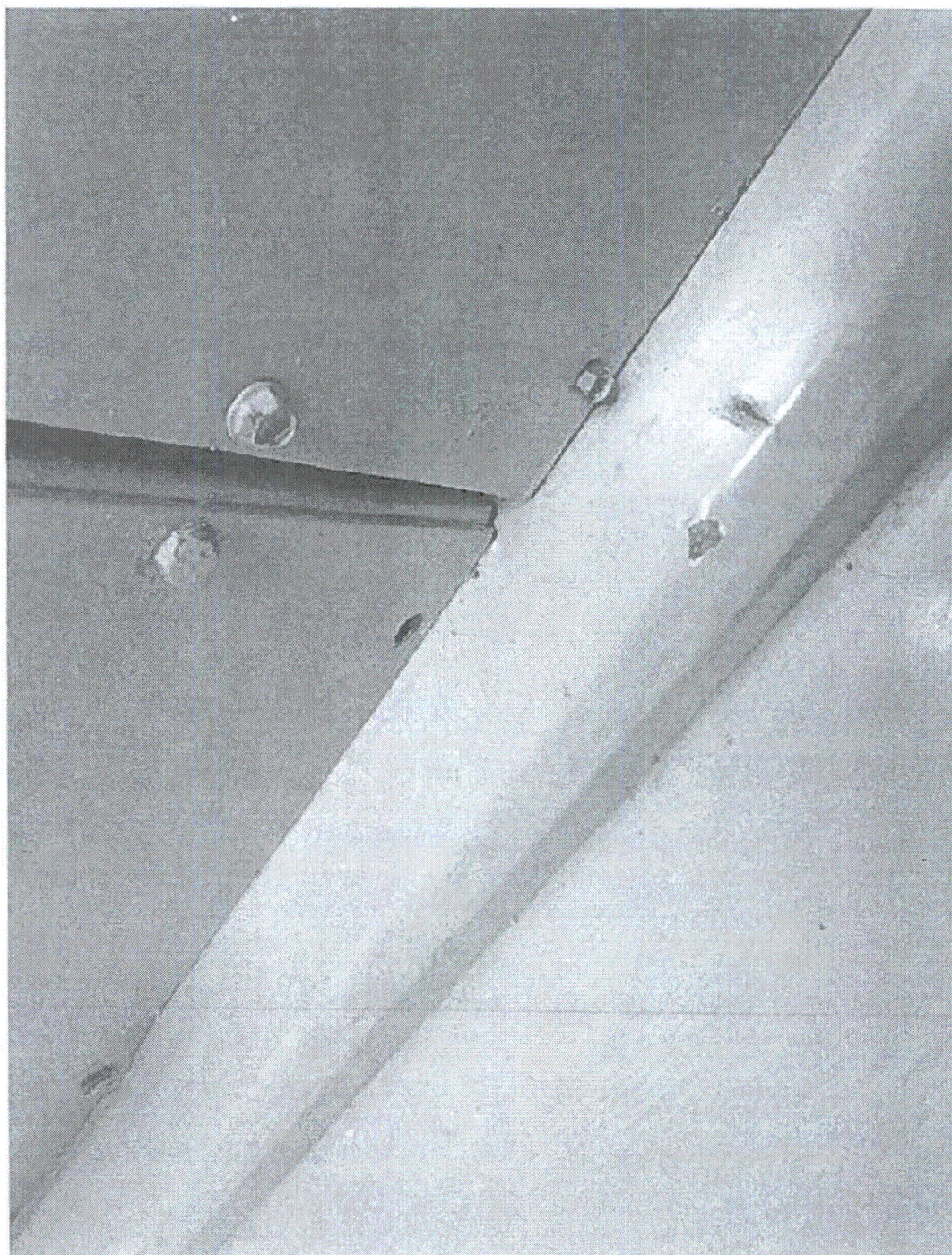


Figure 2 -- Missing Screws at Bottom of Panel (2L48-C34)