NJPR-12-0043

Seismic Walkdown Checklist (SWC)

Equipment ID No. <u>H11P613</u> Equip. Class¹ 20, Instrumentation & Control Panels

Equipment Description Process Instrument Cabinet Div I

Location: Bldg. <u>AB</u> Floor El. <u>613'-6"</u> Room, Area <u>Relay Room (B-15), Col. F-16</u>

Manufacturer, Model, Etc. (optional but recommended) <u>N/A</u>

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

| Is the anchorage configuration verification required (i.e., is the item one of the 50% of SWEL items requiring such verification)? All welds visible. Seismic bracing added per EDP 27108.007. (SEE PICTURES PSC @ICC, DSC @ICC) ~ DSK 10/11/12 | Y¥Í N□ |
|---|----------------|
| 2. Is the anchorage free of bent, broken, missing or loose hardware? Anchorage is complete. | YKC N□ U□ N/A□ |
| 3. Is the anchorage free of corrosion that is more than mild surface oxidation? Anchorage and welds are clean. (SEE PICTURE DSC 40/00) ~ DOF 10/11/12 | Y⊠ N⊡ U⊡ N/A⊡ |
| 4. Is the anchorage free of visible cracks in the concrete near the anchors? Concrete at the base is intact and not cracked. (SEE PICTURES DSCOOLON, DSCOOLOS) ~ DJK 10/11/12 | YKIND UD N/AD |
| 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.) Verified base welds as 4"@12" front and 4"@11" rear. (ref. dwg. I-2002-16) Verified seismic bracing per EDP 27108.007. One bolt to adjacent cabinet (H11P617) does not have full thread engagement. Reviewed calculation DC-5734 Vol. I for additional seismic bracing per EDP 27108.007, in which no credit is taken for these bolts. The condition is therefore acceptable. (SEE PLETARES DSC 00100, DSC 00100) | Y⊠ N□ U□ N/A□ |
| ALL DOCUMENTS REFERENCED (LATEST REVISION) WERE REVIEWED AND NO APPLICABLE DOSTINGS WERE FOUND. 6. Based on the above anchorage evaluations, is the anchorage free of potentially adverse seismic conditions? No adverse seismic conditions were observed. | |

ivo aaverse seismic conditions were observe

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¹ Enter the equipment class name from Appendix B: Classes of Equipment

| Fermi 2 Seismic Walkdown Guidance Document |
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| Seismic Walkdown Checklist |

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Sheet 2 of 3 Status: 🖉 N U

Seismic Walkdown Checklist (SWC)

| Equipment ID No. <u>H11P613</u> Equip. Class ¹ 20, Instrumentation & Control Panels | | | |
|--|----------------|--|--|
| Equipment Description Process Instrument Cabinet Div I | | | |
| Interaction Effects | | | |
| 7. Are soft targets free from impact by nearby equipment or structures? Soft targets are enclosed by the cabinet & door, therefore any soft targets are protected. | YK(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? Lights on chains and cables. HVAC ducts, cable trays and conduit are robustly and seismically supported. | Y⊠ N⊡ U⊡ N/A⊡ | | |
| 9. Do attached lines have adequate flexibility to avoid damage? All attached lines have adequate flexibility. | YDN UN 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 YX N□ U□ adversely affect the safety functions of the equipment?
 Door, internal component mounting & other attachments are all free of adverse seismic conditions. Door at back of cabinet opened.

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NJPR-12-0043

Sheet 3 of 3 Status: N U

Seismic Walkdown Checklist (SWC)

Equipment ID No. <u>HII-PGI3</u> Equip. Class¹ 20-1 NSTRUMENTATION & CONTROL PANEL Equipment Description <u>PROCESS INSTRUMENT</u> CABINET - DIV. I

<u>Comments</u> (Additional pages may be added as necessary)

AT THE CABLE CUT OUT IN THE ROOP OF THE CABINET THE OPEN ING HAS DUCT TAPE TO RETAIN THE EDGE PROTECTION. AS THE DUCT TAPE AGES AND DRIESOUT IT COULD FALL INTO THE CABINET AND MAY INTERFERE WITH RELAYS AND EQUIPMENT INSIDE THE CABINET. THIS CONLEAN HAS BEEN NOTED IN THE WORK PACKAGE, AND ADDED TO THE OPEN ITEMS LIST AS A HOUSE KEEPING ISSUE 35. CON. 013 NOTE: SEE ELECTRICAL BEEN SOTITITIES THE CABINET AT FOR ACCEPTANCE OF TAPEAS A BUFFER MATERIAL AT THIS LOCATEDN. JML 09.17.2012

Seismic Engineer Walkdown PSE-53Qualified Evaluator #1 : David G Dickenson

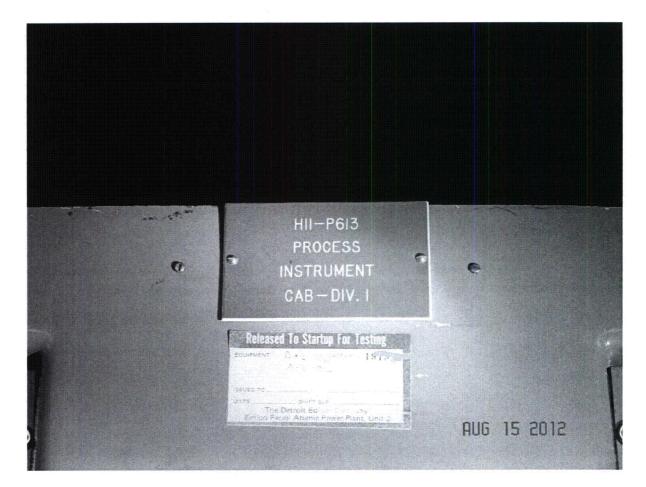
Date: 15th Accyclest 2012

Seismic Engineer Walkdown PSE-53Qualified Evaluator #2 :_____ Godeph Mp Vere

Date: 08/15/2012

Equipment ID No. <u>H11P613</u> Equipment Class: <u>20, Instrumentation & Control Panel</u>

Equipment Description _ PROCESS INSTRUMENT CABINET - DIV 1



(DSC00099)

Equipment ID No. <u>H11P613</u> Equipment Class: <u>20, Instrumentation & Control Panel</u>

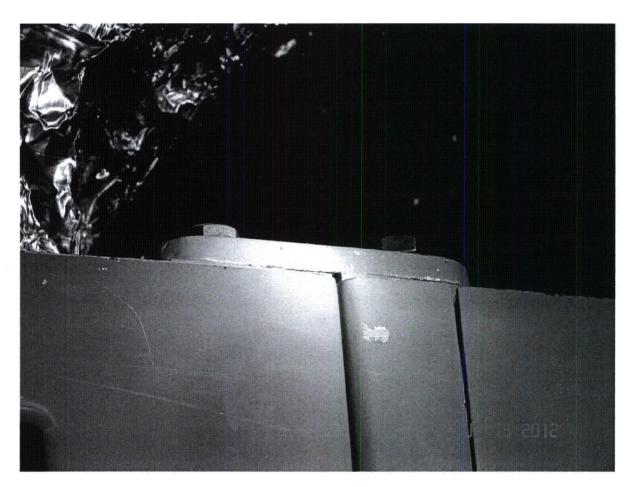
Equipment Description <u>PROCESS INSTRUMENT CABINET – DIV 1</u>



(DSC00100)

Equipment ID No. <u>H11P613</u> Equipment Class: <u>20, Instrumentation & Control Panel</u>

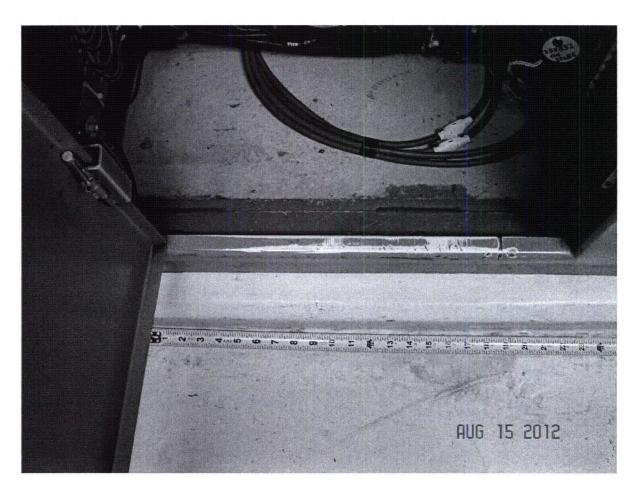
Equipment Description <u>PROCESS INSTRUMENT CABINET - DIV 1</u>



(DSC00102)

Equipment ID No. H11P613 Equipment Class: 20, Instrumentation & Control Panel

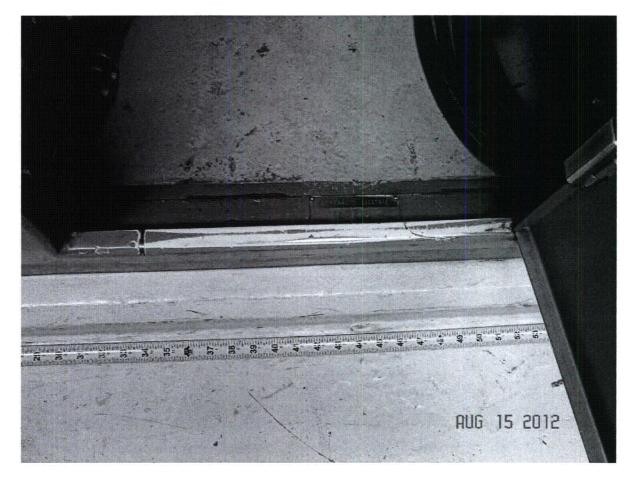
Equipment Description <u>PROCESS INSTRUMENT CABINET – DIV 1</u>



(DSC00104)

Equipment ID No. <u>H11P613</u> Equipment Class: <u>20, Instrumentation & Control Panel</u>

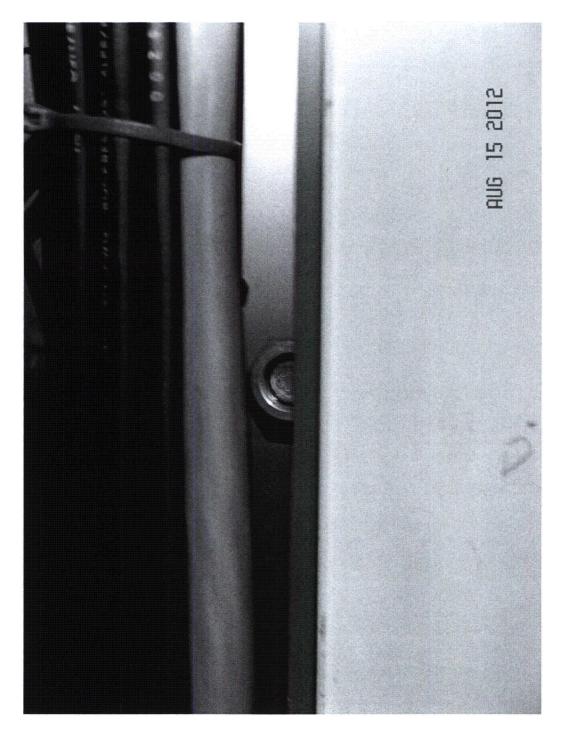
Equipment Description <u>PROCESS INSTRUMENT CABINET – DIV 1</u>



(DSC00105)

Equipment ID No. <u>H11P613</u> Equipment Class: <u>20, Instrumentation & Control Panel</u>

Equipment Description <u>PROCESS INSTRUMENT CABINET – DIV 1</u>



(DSC00110)

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|---------|---------|-----------|---------|-----------|-----|
| | Seismi | c Walkdow | n Checl | klist | |

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Sheet 1 of 3 Status: $(Y) \ge V$

Seismic Walkdown Checklist (SWC)

Equipment ID No. <u>H11P628</u> Equip. Class¹ 20, Instrumentation & Control Panel

Equipment Description Auto Depress Relay Cab. Div I

Location: Bldg. <u>AB</u> Floor El. <u>613'-6"</u> Room, Area <u>Relay Room (B-15), Col. G-16</u>

Manufacturer, Model, Etc. (optional but recommended) <u>N/A</u>

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)? Welds are visible on the inside of the rear of cabinet and on the outside at the front. Seismic brace per EDP 27108.007. Cabinet to cabinet bolting is visible. (SEE FICTURE DSCOOGI) ~ DTK 10/11/2 | YØ | N | | |
|----|--|------------------|------------------------|------------------|---------|
| 2. | Is the anchorage free of bent, broken, missing or loose hardware? Anchorage is free of bent, broken, missing or loose hardware. | Υ | N⊟ U | D N/AD | |
| 3. | Is the anchorage free of corrosion that is more than mild surface oxidation? Anchorage is free of corrosion. | Y₽ | ט ⊡מ | ⊡ N/A□ | |
| 4. | Is the anchorage free of visible cracks in the concrete near the anchors? Concrete at base of Cabinet is free of visible cracks. (SEE PICTURES DSC 00088, DSC 00092) \sim D3R 10/11/2 | ΥK | N U | □ N/A□ | |
| | Is the anchorage configuration consistent with plant documentation? (Note: This question only applies if the item is one of the 50% for which anchorage configuration verification is required.) Front Welds are 4"@11" and Rear Welds are 5"@12" (ref. dwg. I-2002-16 & EDP 27108.007). Seismic bracing and shims verified. | | | D N/A | |
| 6. | (SEE PICTURES DEC 00086 DSC 00092, DSC 00096, DSC 00098) ~ NO APPLICABLE POSTINGS FOUND AGAINST LATEST REWISIN OF REF. Based on the above anchorage evaluations, is the anchorage free of | DJK Doc YX | 10/11 10/11 NO U | 12 TS - DOK (| 0/12/12 |

potentially adverse seismic conditions?

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¹ Enter the equipment class name from Appendix B: Classes of Equipment

| Fermi 2 Seismic Walkdown Guidance Document |
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| Seismic Walkdown Checklist |

NJPR-12-0043

Sheet 2 of 3 Status: $(Y) \ge U$

Seismic Walkdown Checklist (SWC)

 Equipment ID No.
 H11P628
 Equip. Class¹ 20, Instrumentation & Control Panel

 Equipment Description Auto Depress Relay Cab. Div I

 Interaction Effects

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

 Cabinet with door, therefore no soft targets.

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

 Lights on chains and cables. No block walls close by. Conduit and
 Y Impact No

Cable trays are on robust seismic supports.

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

 All cabinets have adequate loops.
 Y
- 10. Based on the above seismic interaction evaluations, is equipment free YX N□ U□ of potentially adverse seismic interaction effects?

Other Adverse Conditions

| 11. | Have you looked for and found no other seismic conditions that could | Y🔯 N🗆 U🗖 |
|-----|--|------------|
| | adversely affect the safety functions of the equipment? | . i |
| | Door at back or cabinet opened. Internal component mounting, door, & other attachments free of adverse seismic conditions. | |

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Sheet 3 of 3 Status: 🕐 N U

Seismic Walkdown Checklist (SWC)

Equipment ID No. <u>HIIP628</u> Equip. Class¹ 20- INSTRUMENTATION & CONTROL PANELS Equipment Description <u>AUTO DEPRESS RELAY CABINET - DIV. I</u>

<u>Comments</u> (Additional pages may be added as necessary)

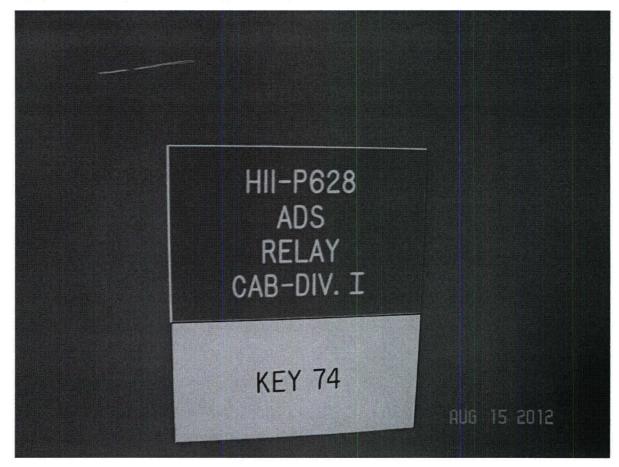
AT THE CABLE CUT OUT IN THE ROOF OF THE CABINET THE OPENING HAS DUCT TAPE TO RETAIN THE EDGE PROTECTION. AS THE PUCT TAPE AGES IT AND DRIES OUT IT COULD FALL INTO THE CABINET, AND MAY INTERFERE WITH RELAYS AND EQUIPMENT INSIDE THE CABINET. THIS ISSUE HASBEEN ADDED TO THE HOUSEKEEPING OPEN ITEMS LIST, ITEM #29. Mainten exceptione 35.00N.013 NOTE: SEE ELECTRICAL SPEC. 3071-128 JAN 09.17.2 FOR ACCEPTANCE OF TAPE AS BUFFER MATERIAL AT THIS LOCATION. JML 09.17.2012

Seismic Engineer Walkdown PSE-53Qualified Evaluator #1 : David & Dirkin Date: 15th August 2012

Seismic Engineer Walkdown PSE-53Qualified Joseph Malere ____ Date: 08/15/2012 Evaluator #2:

 Equipment ID No. <u>H11P628</u>
 Equipment Class: <u>20, Instrument & Control Panel</u>

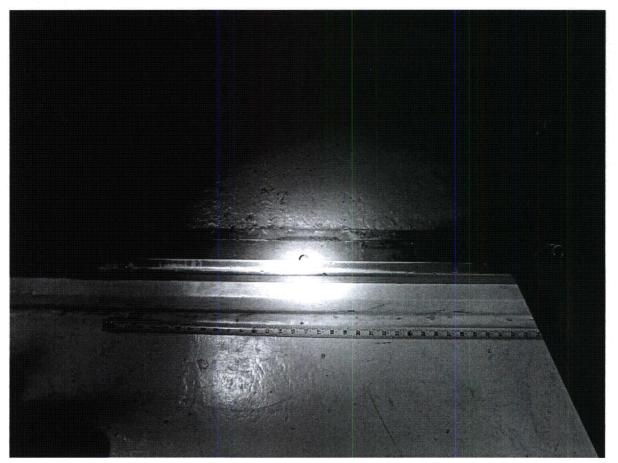
 Equipment Description
 <u>Auto Depress Relay Cab – DIV I</u>



(DSC00087)

 Equipment ID No. <u>H11P628</u>
 Equipment Class: <u>20, Instrument & Control Panel</u>

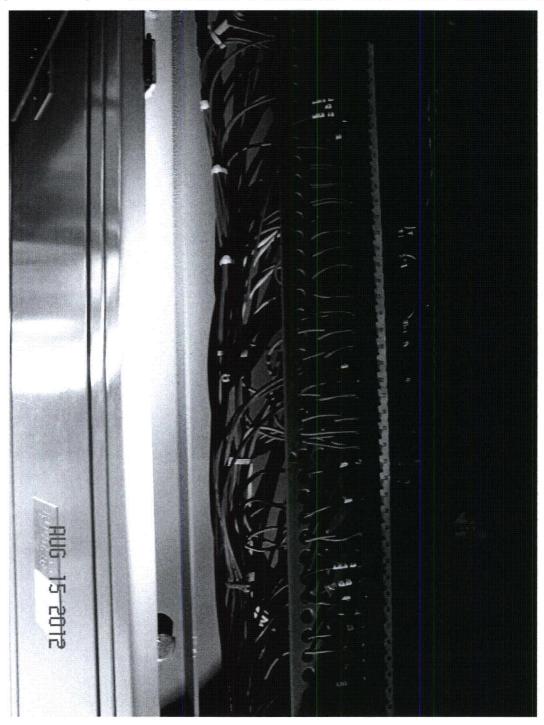
 Equipment Description
 <u>Auto Depress Relay Cab – DIV I</u>



(DSC00088)

 Equipment ID No. <u>H11P628</u>
 Equipment Class: <u>20, Instrument & Control Panel</u>

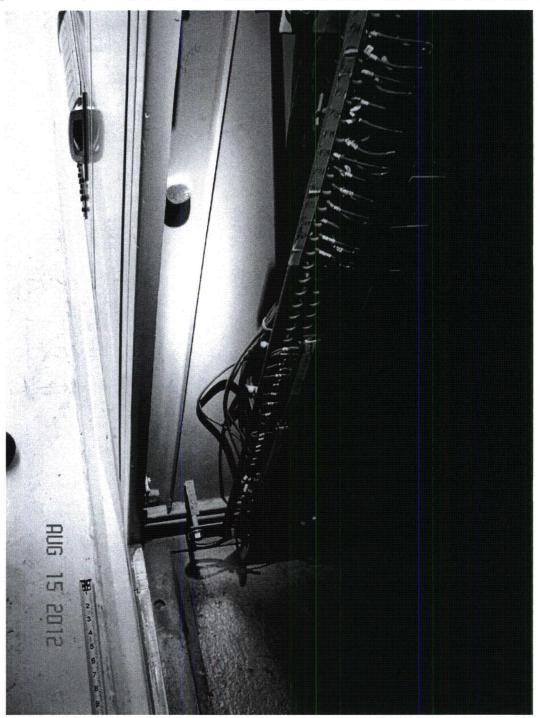
 Equipment Description <u>Auto Depress Relay Cab – DIV I</u>



(DSC00091)

 Equipment ID No. <u>H11P628</u>
 Equipment Class: <u>20, Instrument & Control Panel</u>

 Equipment Description <u>Auto Depress Relay Cab – DIV I</u>



(DSC00092)

 Equipment ID No. <u>H11P628</u>
 Equipment Class: <u>20, Instrument & Control Panel</u>

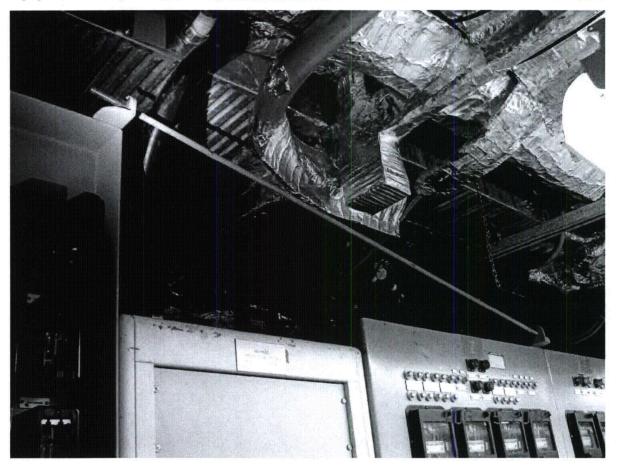
 Equipment Description
 <u>Auto Depress Relay Cab – DIV I</u>



(DSC00096)

 Equipment ID No. <u>H11P628</u>
 Equipment Class: <u>20, Instrument & Control Panel</u>

 Equipment Description
 <u>Auto Depress Relay Cab – DIV I</u>



(DSC00098)

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Sheet 1 of 3 Status: (Y) N U

Seismic Walkdown Checklist (SWC)

Equipment ID No. H11P857 Equip. Class¹ 20, Instrumentation & Control Panels

Equipment Description Misc DC Relay Div I Inst Rack

Location: Bldg. <u>AB</u> Floor El. <u>613'-6"</u> Room, Area <u>Relay Room (B-15), Col. G-16</u>

Manufacturer, Model, Etc. (optional but recommended) <u>N/A</u>

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)? All welds visible. Seismic bracing visible. (SEE PKTURES DSCN0679, DSCN0682, DSCN0683)~ DJK 100 | |
|----|---|------------------------|
| 2. | Is the anchorage free of bent, broken, missing or loose hardware? All complete. | Y JA NO UO N/AO |
| 3. | Is the anchorage free of corrosion that is more than mild surface oxidation? Welds are clean. (SEE PICTURE DSC NOG79)~DJK 10/11/12 | YØ N□ U□ N/A□ |
| 4. | Is the anchorage free of visible cracks in the concrete near the anchors? Concrete at the base is intact and not cracked. | YØ 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 as shown on drawings I-2002-16 and EDP 27108.007. Seismic restraint complete. Adjacent cabinets in contact and restrained by seismic restraints. No APPLICABLE POTINGS FOUND AGAINST LATES (OF REFERENCED DOCUMENTS. (SEE PICTURE DICHOGTS) | YA NO UO N/AO |
| 6. | Based on the above anchorage evaluations, is the anchorage free of potentially adverse seismic conditions? No adverse seismic conditions were observed. | בט בא נקץ |

¹ Enter the equipment class name from Appendix B: Classes of Equipment

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Sheet 2 of 3 Status: $(\widehat{Y}) \ge U$

Seismic Walkdown Checklist (SWC)

 Equipment ID No. <u>H11P857</u>
 Equip. Class¹ <u>20</u>, Instrumentation & Control Panels

 Equipment Description <u>Misc DC Relay Div I Inst Rack</u>

Interaction Effects

NJPR-12-0043

- 7. Are soft targets free from impact by nearby equipment or structures? YX N□ U□ N/A□ Adjacent cabinets seismically braced per EDP 27108.007. (SEE PICTURE DSCN0622) ~ DJK 10[11]2
- 8. Are overhead equipment, distribution systems, ceiling tiles and lighting, YX N□ U□ N/A□ and masonry block walls not likely to collapse onto the equipment?
 Lights hung on chains with redundant cables. Block wall is remote and seismically restrained. Conduit and cable trays are robustly supported.
 (SEE PICTURE DECNOGSE) ~ DTRIOIULE
- 9. Do attached lines have adequate flexibility to avoid damage? Y⊠ N□ U□ N/A□ All cables have flexible loops. (SEE PICTURES DSCHOGEL DSCHOGES)~DJK 10/11/12
- 10. Based on the above seismic interaction evaluations, is equipment free YX N□ U□ of potentially adverse seismic interaction effects?

Other Adverse Conditions

Have you looked for and found no other seismic conditions that could YX N□ U□ adversely affect the safety functions of the equipment? None observed.

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NJPR-12-0043

Sheet 3 of 3 Status: N U

Seismic Walkdown Checklist (SWC)

Equipment ID No. <u>HIP857</u> Equip. Class¹ <u>20 - INSTRUMENTE CONTROL PANELS</u> Equipment Description <u>MISC DC RELAY DIV 1 INST. RACK</u>

<u>Comments</u> (Additional pages may be added as necessary)

DUCT TAPE HROUND CUT OUT IN THE TOP OF CABINET AT GABLE ENTRY MAY AGE AND DRY OUT, THEN FALL INSIDE OF THE CABINET. THIS IS NOT A SEISMIC CONCERN, BUT MAY AFFECT EQUIPMENT OPERATION. NOTE: SEE ELECTRICAL Maintenance Procedure 35.CON.013 FOR ACCEPTANCE OF TAPE AS A BUFFER MATERIAL AT THIS LOCATION. JAL 09.17.2012 (SEE PILTURE DSCN 0690) NDSK 10/11/12

Seismic Engineer Walkdown PSE-53Qualified Evaluator #1: David C Dickenin Date: <u>8/22/2012</u>

Seismic Engineer Walkdown PSE-53Qualified Evaluator #2: Gosph Mallere Date: 08,22.2012

Equipment ID No. <u>H11P857</u> Equipment Class: <u>20, Instrumentation & Control Panel</u>

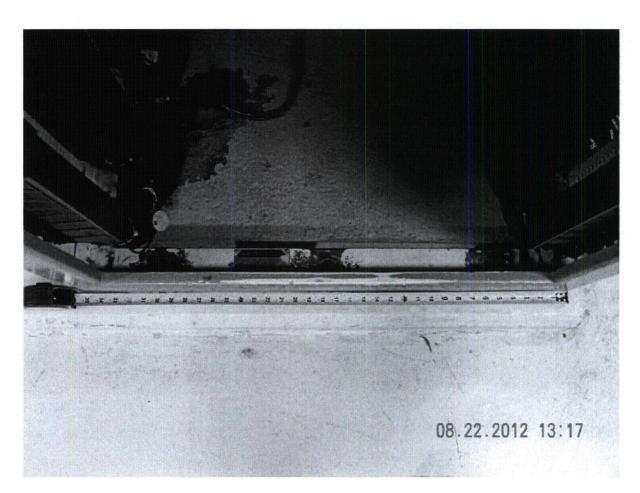
Equipment Description <u>MISC DC RELAY DIV 1 INSTRUMENT RACK</u>



(DSCN0678)

Equipment ID No. <u>H11P857</u> Equipment Class: <u>20, Instrumentation & Control Panel</u>

Equipment Description <u>MISC DC RELAY DIV 1 INSTRUMENT RACK</u>



(DSCN0679)

Equipment ID No. <u>H11P857</u> Equipment Class: <u>20, Instrumentation & Control Panel</u>

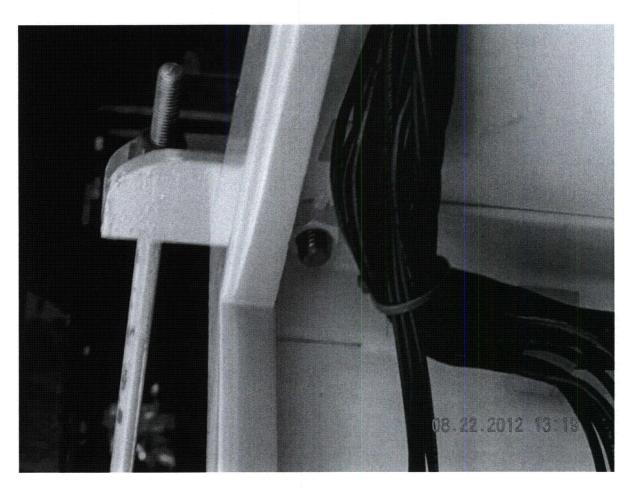
Equipment Description <u>MISC DC RELAY DIV 1 INSTRUMENT RACK</u>



(DSCN0682)

Equipment ID No. <u>H11P857</u> Equipment Class: <u>20, Instrumentation & Control Panel</u>

Equipment Description <u>MISC DC RELAY DIV 1 INSTRUMENT RACK</u>



(DSCN0683)

Equipment ID No. <u>H11P857</u> Equipment Class: <u>20, Instrumentation & Control Panel</u>

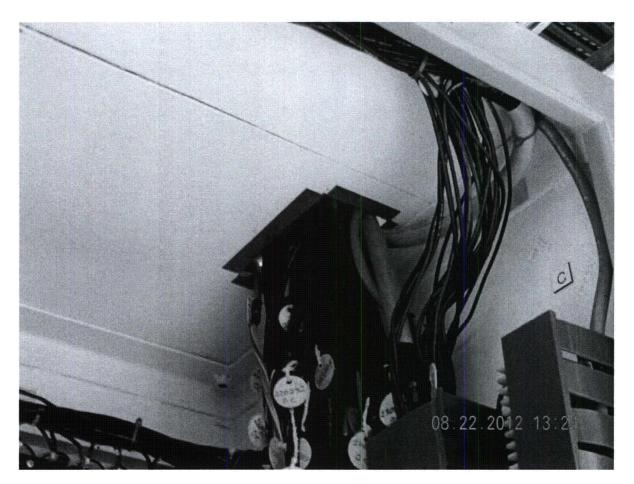
Equipment Description <u>MISC DC RELAY DIV 1 INSTRUMENT RACK</u>



(DSCN0688)

Equipment ID No. <u>H11P857</u> Equipment Class: <u>20, Instrumentation & Control Panel</u>

Equipment Description <u>MISC DC RELAY DIV 1 INSTRUMENT RACK</u>



(DSCN0690)

| Fermi 2 | Seismic | Walkdown | Guidance | Document |
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| | Seismi | e Walkdown | n Checklis | t |

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| Sheet | | 3 |
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| Status: | ΝŢ | J |

Seismic Walkdown Checklist (SWC)

Equipment ID No. <u>H11P870</u> Equip. Class¹_20, Instrumentation & Control Panel_____

Equipment Description Div. 2 Misc. DC Relay Panel

Location: Bldg. <u>AB</u> Floor El. <u>613'-6"</u> Room, Area <u>Relay Room (B-15), Col. G-14</u>

Manufacturer, Model, Etc. (optional but recommended) <u>N/A</u>

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

· 23

| 1. | Is the anchorage configuration verification required (i.e., is the item one of the 50% of SWEL items requiring such verification)? Frame is welded to embedded plates and angle braces are bolted. (See Photos DSCN0080,0081,0082 and 0084) JAM 10/8/ | 7- | N |
|----|---|-----|---------------|
| 2. | Is the anchorage free of bent, broken, missing or loose hardware? Anchorage consists of welds and braces which are installed properly. | YØ | N UNA |
| 3. | Is the anchorage free of corrosion that is more than mild surface oxidation? Welds are painted and bolted bracing is free of corrosion and oxidation. | YД | ND UD NAD |
| 4. | Is the anchorage free of visible cracks in the concrete near the anchors? Concrete pad around the asset has no visible cracks. | YД | |
| 5. | Is the anchorage configuration consistent with plant documentation? (Note: This question only applies if the item is one of the 50% for which anchorage configuration verification is required.) Frame is plug welded to embedded plate @ 12" c-c 'S. Cabinet seismic retrofit bracing in accordance with ECR-27108-2 page 3 of 4. Top of cabinet braced with 1/2"Ø rods. Attached with angles with 5/8" Ø bolts as shown in ECR 27108-2 page 3 of 4. (See Photos DSCN0082,0083 and 0084) JAM 10/8/12 | УĴЯ | N[] U[] N/A[] |
| 6. | Based on the above anchorage evaluations, is the anchorage free of potentially adverse seismic conditions? | ΥØ | N U |

¹ Enter the equipment class name from Appendix B: Classes of Equipment

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| Fermi 2 Seismic Walkdown Guidance Document |
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| Seismic Walkdown Checklist |

NJPR-12-0043

Sheet 2 of 3 Status: (Y) N U

Seismic Walkdown Checklist (SWC)

Equipment ID No. <u>H11P870</u> Equip. Class¹ 20, Instrumentation & Control Panel

Equipment Description Div. 2 Misc. DC Relay Panel

Interaction Effects

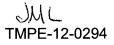
- 7. Are soft targets free from impact by nearby equipment or structures? YKI N□ U□ N/A□ Cabinet with door, therefore no soft targets.
- 8. Are overhead equipment, distribution systems, ceiling tiles and lighting, Y∑ N□ U□ N/A□ and masonry block walls not likely to collapse onto the equipment?
 HVAC, cable trays and lighting are adequately supported. No ceilings tiles or block walls.
- 9. Do attached lines have adequate flexibility to avoid damage?
 Y⊠ N□ U□ N/A□

 Lines have sufficient flexibility.
 JAM

 (See Photos DS<N0082 and 0084)</td>
 10/8/12
- 10. Based on the above seismic interaction evaluations, is equipment free YX N□ U□ 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?
 Door, internal component mounting & other attachments are all free of adverse seismic conditions. Door at front of cabinet opened for visual/physical inspection.



| NJPR-12-0043 | Fermi 2 Seismic Walkdown Guidance Document Seismic Walkdown Checklist | | | | Sheet 3 of 3 Status: 💓 N U | |
|---|--|--------------|---|--|-------------------------------|------|
| Seismic Walkdown Checklist (SWC) | | | | | | |
| Equipment ID NoH Equipment Description | · · · · · · · · · · · · · · · · · · · | Equip. Class | | | entation and Control F | anel |
| <u>Comments</u> (Additional pages may be added as necessary) -N/A - JAM 10/8/12 | | | | | | |
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| | Engineer Walkd JGDiele | | | | Date: <u>8/7/2012</u> | |
| | Engineer Walkd | | - | | Date: <u>08/07/2012</u> | |
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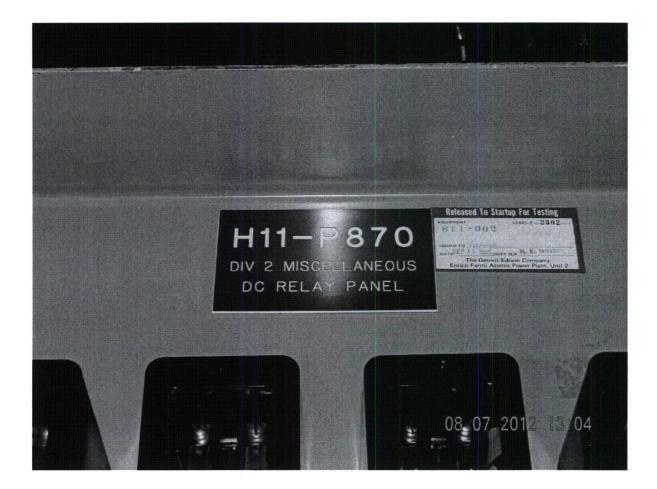
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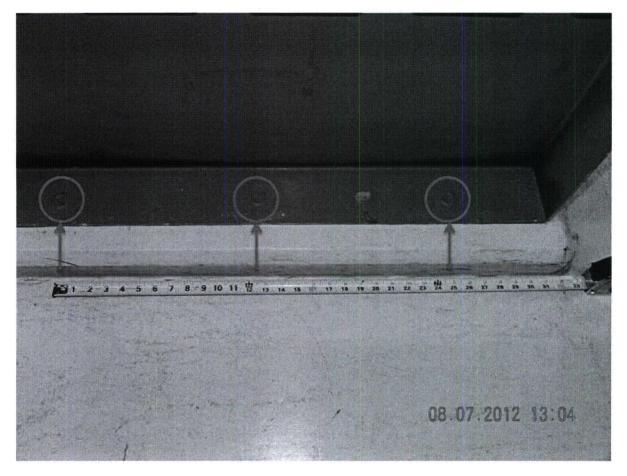
 Equipment ID No. <u>H11P870</u>
 Equipment Class: <u>20, Instrumentation & Control Panel</u>

 Equipment Description
 <u>Div. 2 Misc. DC Relay Panel</u>



 Equipment ID No. <u>H11P870</u>
 Equipment Class: <u>20, Instrumentation & Control Panel</u>

 Equipment Description <u>Div. 2 Misc. DC Relay Panel</u>

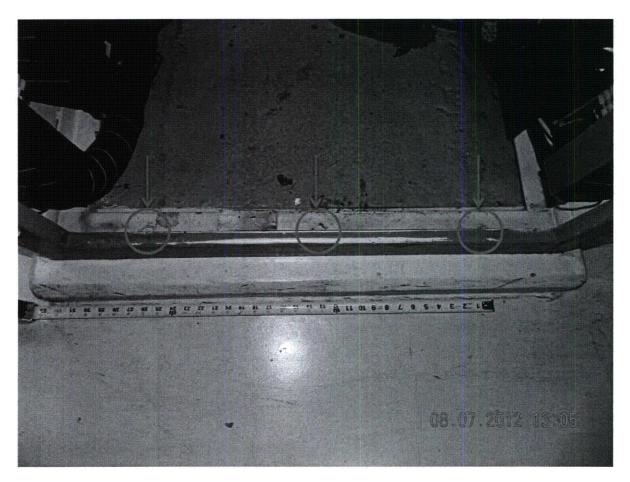


Frame Plug Welds to Embedment (Rear of Cabinet)

(DSCN0080)

 Equipment ID No. <u>H11P870</u>
 Equipment Class: <u>20, Instrumentation & Control Panel</u>

 Equipment Description
 <u>Div. 2 Misc. DC Relay Panel</u>

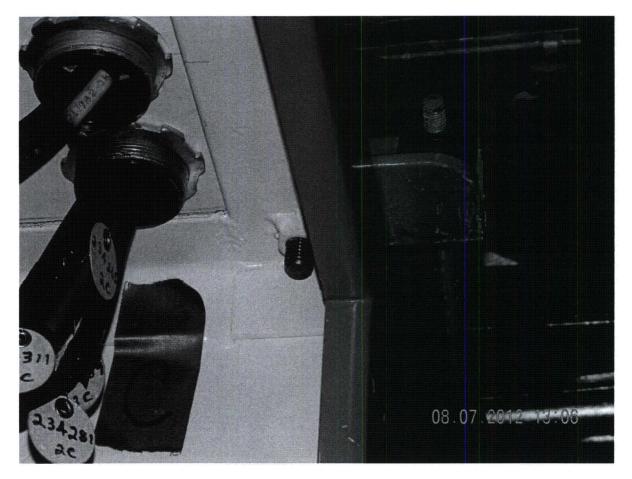


Frame Plug Welds to Embedment (Front of Cabinet)

(DSCN0081)

 Equipment ID No. <u>H11P870</u>
 Equipment Class: <u>20, Instrumentation & Control Panel</u>

 Equipment Description <u>Div. 2 Misc. DC Relay Panel</u>

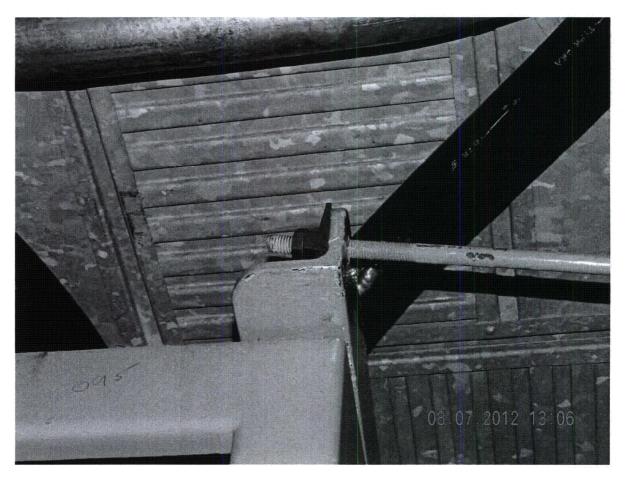


Seismic Bracing Configuration (Front of Cabinet)

(DSCN0082)

 Equipment ID No. <u>H11P870</u>
 Equipment Class: <u>20, Instrumentation & Control Panel</u>

 Equipment Description <u>Div. 2 Misc. DC Relay Panel</u>

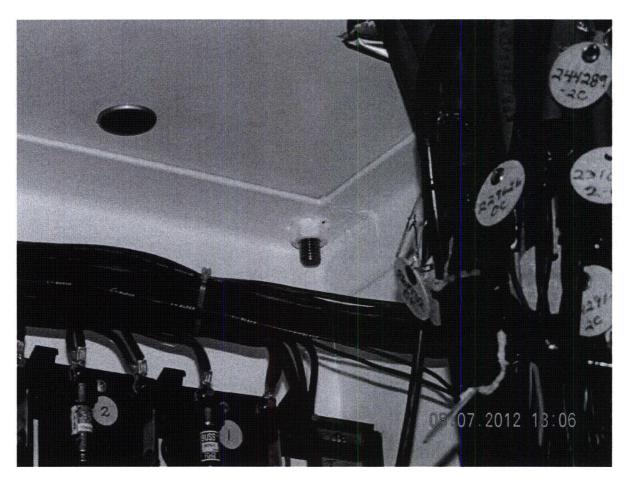


Seismic Bracing Bolt (Top Front of Cabinet)

(DSCN0083)

 Equipment ID No. <u>H11P870</u>
 Equipment Class: <u>20, Instrumentation & Control Panel</u>

 Equipment Description
 <u>Div. 2 Misc. DC Relay Panel</u>



Internal Cables/Conduits and Seismic Bracing Bolt/Nut

(DSCN0084)

| Fermi 2 | Seismic | Walkdown | Guidance | Document |
|---------|---------|-----------|------------|----------|
| | Seismi | c Walkdow | n Checklis | t |

Sheet 1 of 3 Status: N U

Seismic Walkdown Checklist (SWC)

Equipment ID No. <u>H11P898A</u> Equip. Class¹ 20-Instrumentation & Control Panel

Equipment Description Auto Load Sequencing CAB-DIV 1

Location: Bldg. <u>AB</u> Floor El. <u>613'-6"</u> Room, Area <u>B-15, Col. G-16</u>

Manufacturer, Model, Etc. (optional but recommended) <u>N/A</u>

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)? <i>Base welds visible.</i> | YŻN N□ |
|---|---------------|
| Seismic brace between H11609 and H11P886. (SEE PICTURES PSCOCED, DSCOCOB, DSCODOBY, DSCOORS)~ | -DJK 10/11/12 |
| 2. Is the anchorage free of bent, broken, missing or loose hardware? Welded anchorage. No bent, missing or loose hardware. | YØ N□ U□ N/A□ |
| (SEE PICTURES DSLOCOBO, DSCOODED) ~ DJK 10/11/12 | |
| 3. Is the anchorage free of corrosion that is more than mild surface oxidation? | |
| Welds painted and free of oxidation. | |
| (SEE PICTURES DSLOODED, DSCCOOSI)~DJK IO/11/2 | |
| 4. Is the anchorage free of visible cracks in the concrete near the anchors? | Y⊠ N⊡ U⊡ N/A⊡ |
| Concrete pad around embedded anchorage not cracked. | |
| (SEE PICTURE DSCO0080)~DJK 10/11/12 | |
| 5. Is the anchorage configuration consistent with plant documentation? (Note: This question only applies if the item is one of the 50% for which anchorage configuration verification is required.) | |
| Verified weld of corner to embedded plate -2"FW - DWG. I-2002-16. | |
| Cabinet to cabinet shim/tie rods verified per EDP 27108.007. | |
| NO APPLICABLE POSTINGS AGAINST I-2002-16, REV. C - DJK 10/17 | 2/12 |
| 6. Based on the above anchorage evaluations, is the anchorage free of potentially adverse seismic conditions? | YXX NO UO |
| | |
| | |

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¹ Enter the equipment class name from Appendix B: Classes of Equipment

NJPR-12-0043

Sheet 2 of 3 Status: $(\widehat{\mathbf{Y}}) \mathbb{N}$ U

Seismic Walkdown Checklist (SWC)

Equipment ID No. <u>H11P898A</u> Equip. Class¹ 20-Instrumentation & Control Panel

Equipment Description Auto Load Sequencing CAB-DIV 1

Interaction Effects

- 7. Are soft targets free from impact by nearby equipment or structures? Y☑ N□ U□ N/A□ Cabinet with door, therefore no soft targets.
- Are overhead equipment, distribution systems, ceiling tiles and lighting, Y N □ U □ N/A □ and masonry block walls not likely to collapse onto the equipment? Lights hung by chain and cable. Cable trays and HVAC are robust and seismically supported.
- 9. Do attached lines have adequate flexibility to avoid damage?
 Y⊠ N□ U□ N/A□

 Top entry cables have adequate flexibility.
 Y⊠ N□ U□ N/A□
- 10. Based on the above seismic interaction evaluations, is equipment free YX NU U

Other Adverse Conditions

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

| Fermi 2 Seismic Walkdown Guidance Document |
|--|
| Seismic Walkdown Checklist |

Sheet 3 of 3 Status: (Y) N U

Seismic Walkdown Checklist (SWC)

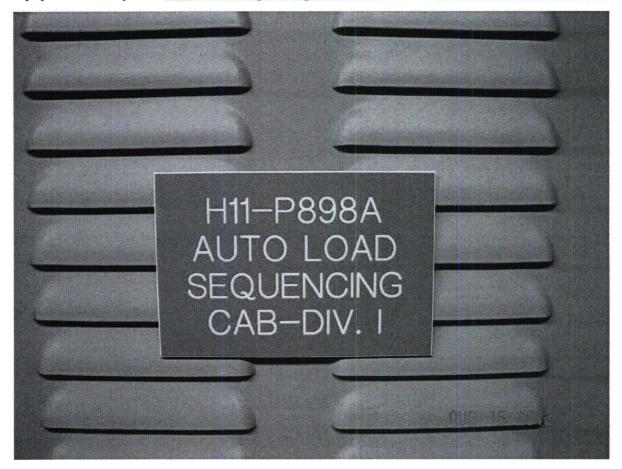
Equipment ID No. <u>HII-PB98A</u> Equip. Class¹ <u>20-INSTRUMENTATION & CONTROL PANEL</u> Equipment Description <u>AUTO LOAD SEQUENCING CAB - DIVI</u>

<u>Comments</u> (Additional pages may be added as necessary)

Evaluator #1: Deriel G Diekene Date: 8/15/2012

Seismic Engineer Walkdown PSE-53Qualified ______ Designer Mallou Date: 08/15/2012 Evaluator #2 :_____

Equipment ID No. <u>H11P898A</u> Equipment Class: <u>20, Instrumentation & Control Panel</u> Equipment Description <u>Auto Load Sequencing Cab – Div. I</u>



(DSC00079)

 Equipment ID No. <u>H11P898A</u>
 Equipment Class: <u>20, Instrumentation & Control Panel</u>

 Equipment Description <u>Auto Load Sequencing Cab – Div. I</u>



(DSC00080)

 Equipment ID No. <u>H11P898A</u>
 Equipment Class: <u>20, Instrumentation & Control Panel</u>

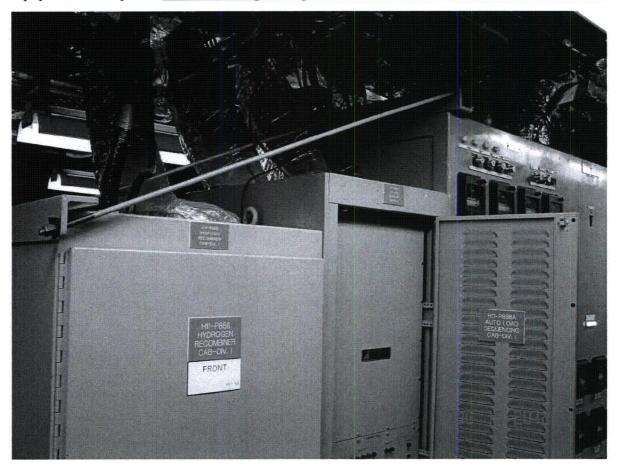
 Equipment Description
 <u>Auto Load Sequencing Cab – Div. I</u>



(DSC00081)

 Equipment ID No. <u>H11P898A</u>
 Equipment Class: <u>20, Instrumentation & Control Panel</u>

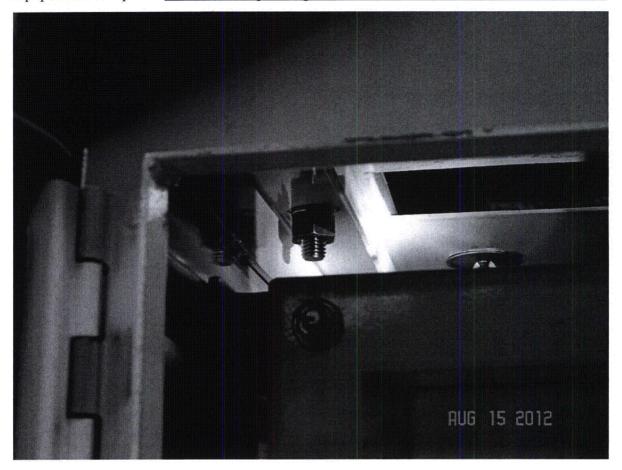
 Equipment Description
 <u>Auto Load Sequencing Cab – Div. I</u>



(DSC00084)

 Equipment ID No. <u>H11P898A</u>
 Equipment Class: <u>20, Instrumentation & Control Panel</u>

 Equipment Description
 <u>Auto Load Sequencing Cab – Div. I</u>



(DSC00085)

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Sheet 1 of 3 Status: (Y) N U

Seismic Walkdown Checklist (SWC)

| Equipment ID No. <u>H11P8</u> | 28B Equip. Class ¹ 20, Instrumentation & Control Panel | | |
|---|---|--|--|
| Equipment Description Div 2 EDG Auto Load Sequencing Cabinet | | | |
| Location: Bldg. <u>AB</u> | Floor El. <u>613'-6"</u> Room, Area <u>B-15, Col. GG-14</u> | | |
| Manufacturer, Model, Etc. (optional but recommended) <u>N/A</u> | | | |

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.

<u>Anchorage</u>

| Corner weius to embedded unchordge verified. | Y⊠ N□ 8/12 |
|---|------------------------------------|
| 2. Is the anchorage free of bent, broken, missing or loose hardware? Welded anchorage. No bent, missing or loose hardware. | Y 🛛 N 🗆 U 🗖 N/A 🗖 |
| Is the anchorage free of corrosion that is more than mild surface oxidation? Welds painted and free of oxidation. | YØ N□ U□ N/A□ |
| 4. Is the anchorage free of visible cracks in the concrete near the anchors? <i>Concrete housekeeping pad around embedded anchorage not cracked.</i> | YØ 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 anchorage configuration verification is required.) Yes, anchorage to H11P915 verified (seismic bracing detail). Base diag. frame welded to embedded anchorage. (See Photos DSCN0107 and 0187 for Seismic Bracin.) | Y⊠ N□ U□ N/A□ JAM 4) 10/8/13 |
| 6. Based on the above anchorage evaluations, is the anchorage free of | |
| potentially adverse seismic conditions? | |

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¹ Enter the equipment class name from Appendix B: Classes of Equipment

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Sheet 2 of 3 Status: (Y) N U

Seismic Walkdown Checklist (SWC)

| Equipment ID No. <u>H11P898B</u> Equip. Class ¹ 20, Instrumentation 8 | c Control Panel | | |
|---|--------------------|--|--|
| Equipment Description Div 2 EDG Auto Load Sequencing Cabinet | | | |
| Interaction Effects | | | |
| 7. Are soft targets free from impact by nearby equipment or structures? Cabinet with door, therefore no soft targets. (See Photo DSCNO187) 10/8/1 | | | |
| 8. Are overhead equipment, distribution systems, ceiling tiles and lighting, and masonry block walls not likely to collapse onto the equipment? No ceiling tiles. Lights & block walls in area seismically supported. | Y[X] N□ U□ N/A□ | | |
| 9. Do attached lines have adequate flexibility to avoid damage? Top-fed cabinet, lines have sufficient flexibility. (See Photo DSCN0189) | Y⊠ N□ U□ N/A□ 2 | | |
| 10. Based on the above seismic interaction evaluations, is equipment free of potentially adverse seismic interaction effects? | בט בא נקצ | | |
| | ····· | | |

Other Adverse Conditions

11. Have you looked for and found no other seismic conditions that could YX N□ U□ adversely affect the safety functions of the equipment?
 Surrounding conditions & attached components by visual inspection do not display any adverse conditions.

JUL TMPE-12-0294

NJPR-12-0043

Sheet 3 of 3 Status: (Y) N U

Seismic Walkdown Checklist (SWC)

| Equipment ID No. | <u>HII P898B</u> | Equip. Class ¹ | 20, Instrumentation and Control Panel |
|-----------------------|------------------|---------------------------|---------------------------------------|
| Equipment Description | DIVZE | DG AUTO LOAD | SEQUENCING CABINET |

<u>Comments</u> (Additional pages may be added as necessary) MAC - N/A-10/8/12

Seismic Engineer Walkdown PSE-53Qualified Evaluator #1 : David & Die Sei

Evaluator #2: _______ Delta Malkdown PSE-53Qualified ______ Date: 08/07/2012

_____ Date: <u>8/7/2012</u>

 Equipment ID No. <u>H11P898B</u>
 Equipment Class: <u>20, Instrumentation & Control Panel</u>

 Equipment Description
 Div. 2 EDG Auto Load Sequencing Cabinet



 Equipment ID No. <u>H11P898B</u>
 Equipment Class: <u>20, Instrumentation & Control Panel</u>

 Equipment Description
 <u>Div. 2 EDG Auto Load Sequencing Cabinet</u>



Seismic Bracing Bolt Configuration (Left Rear of Cabinet)

(DSCN0107)

 Equipment ID No. <u>H11P898B</u>
 Equipment Class: <u>20, Instrumentation & Control Panel</u>

 Equipment Description <u>Div. 2 EDG Auto Load Sequencing Cabinet</u>



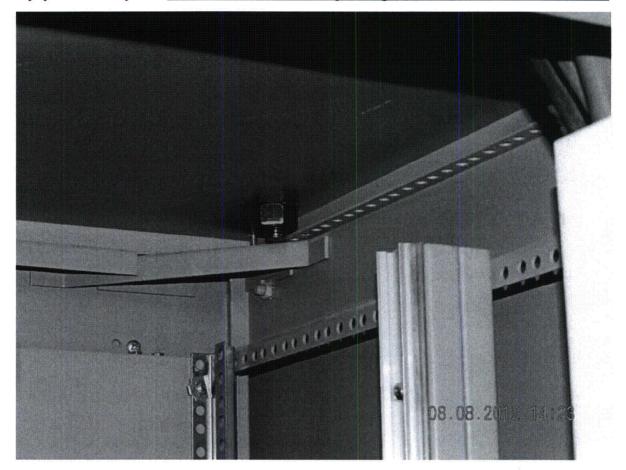
Seismic Bracing Bolt Configuration (Right Rear of Cabinet)

"Door"

(DSCN0187)

 Equipment ID No. <u>H11P898B</u>
 Equipment Class: <u>20, Instrumentation & Control Panel</u>

 Equipment Description <u>Div. 2 EDG Auto Load Sequencing Cabinet</u>



Internal Cabinet Bracing and Mounting

(DSCN0188)

 Equipment ID No. <u>H11P898B</u>
 Equipment Class: <u>20, Instrumentation & Control Panel</u>

 Equipment Description
 <u>Div. 2 EDG Auto Load Sequencing Cabinet</u>

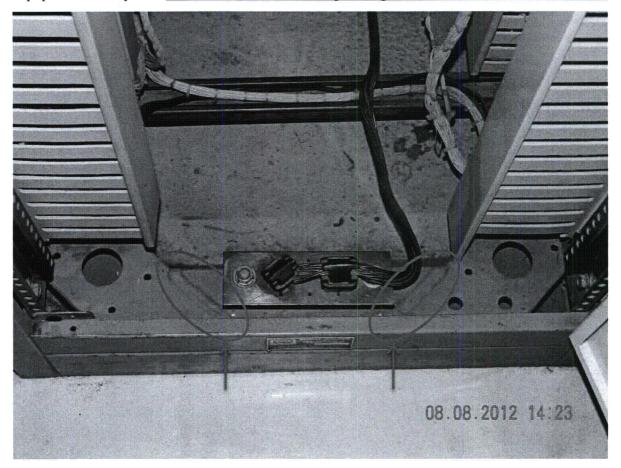


Internal Conduit Wiring Duct

(DSCN0189)

 Equipment ID No. <u>H11P898B</u>
 Equipment Class: <u>20, Instrumentation & Control Panel</u>

 Equipment Description <u>Div. 2 EDG Auto Load Sequencing Cabinet</u>

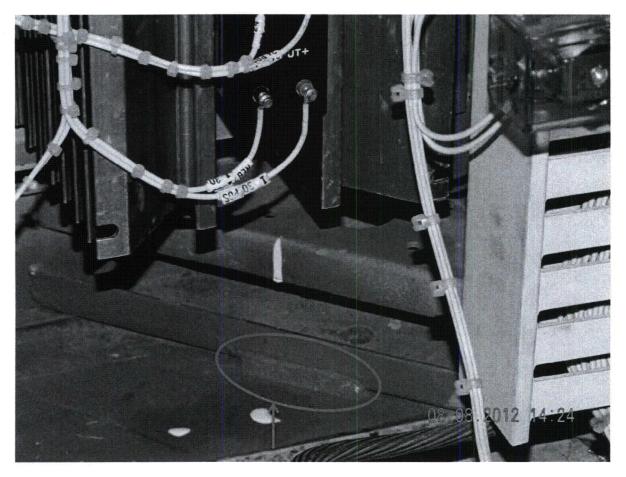


Diagonal Frame Welds to Embedded Anchorage (Rear of Cabinet)

(DSCN0190)

 Equipment ID No. <u>H11P898B</u>
 Equipment Class: <u>20, Instrumentation & Control Panel</u>

 Equipment Description <u>Div. 2 EDG Auto Load Sequencing Cabinet</u>



Diagonal Frame Weld to Embedded Anchorage (Front of Cabinet)

(DSCN0192)

Sheet 1 of 3 Status: Y N U

Seismic Walkdown Checklist (SWC)

| Equipment ID No. <u>H11P903</u> Equip. Class ¹ 14, Distribution Panels & Automatic Transfer Switch | | | |
|---|--|--|--|
| Equipment Description 120 VAC Dist. Panel - Div 2 Inst Rack | | | |
| Location: Bldg. <u>AB</u> Floor El. <u>613'-6"</u> Room, Area <u>Relay Room (F-13), Col. B-15</u> | | | |
| Manufacturer, Model, Etc. (optional but recommended) Square "D", OMB-12-60795-2 | | | |

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)? | עא אַץ |
|----|--|---------------------|
| 2. | Is the anchorage free of bent, broken, missing or loose hardware? Anchorage is in good condition | Y⊠ N⊡ U⊡ N/A⊡ |
| 3. | Is the anchorage free of corrosion that is more than mild surface oxidation? | םא/א םט םא ⊠ץ |
| | No corrosion is evident | |
| 4. | Is the anchorage free of visible cracks in the concrete near the anchors? No visible cracks in the concrete wall near the anchors | YX 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 compared to Fermi Spec. 3071-128-ED, Standard STD-ED-S7-2, Rev AO (two posting, none relevant to this asset), and Calc. DC-5634, Rev 0, pg. E.9 (two postings, none relevant to this asset) specify ½"Ø bolts. Upper two bolts have "I" markings meaning bolt size is ½"x5½" and acceptable (see Photo 068). Lower two bolts have "F" markings meaning bolt size is ¼"x4½" and umacceptable (see Photo 070A). | עמיא בע אנא בע |
| 6. | Based on the above anchorage evaluations, is the anchorage free of potentially adverse seismic conditions? Per Standard STD-ED-S7-2, $\frac{1}{2}$ "\$\overline{O}\$ bolts are required. Since the lower bolts are $\frac{1}{4}$ "x4 $\frac{1}{2}$ " long, CARD 12-27504 was initiated to investigate and resolve this matter. | עם א צו א םצ |

¹ Enter the equipment class name from Appendix B: Classes of Equipment

| Fermi 2 Seismic Walkdown Guidance Document |
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| Seismic Walkdown Checklist |

Seismic Walkdown Checklist (SWC)

| Equipment ID No. <u>H11P903</u> | Equip. Class ¹ 14, Distribution Panels & Automatic Transfer Switch |
|--|---|
| Equipment Description <u>120 VAC Dist. Pan</u> | el – Div 2 Inst Rack |

Interaction Effects

| 7. | Are soft targets free from impact by nearby equipment or structures? Equipment nearby is adequately supported no impact to the panel is possible. See Photo 064 | 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? <i>HVAC duct, cable trays and lighting are adequately supported. No ceiling tiles or block walls in the area, see Photo 073</i> | Y⊠ N□ U□ N/A□ |
| 9. | Do attached lines have adequate flexibility to avoid damage? Attached electrical cables have adequate flexibility | עא םט חאאם אנא |
| 10. | Based on the above seismic interaction evaluations, is equipment free of potentially adverse seismic interaction effects? | |

Other Adverse Conditions

| 11. | Have you looked for and found no other seismic conditions that could | YX ND UD |
|-----|--|----------|
| | adversely affect the safety functions of the equipment? | / |
| | No other adverse seismic conditions were identified. | |

| Fermi 2 Seismic Walkdown Guidance Document |
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| Seismic Walkdown Checklist |

Sheet 3 of 3 Status: Y N U

Seismic Walkdown Checklist (SWC)

| Equipment ID No. | <u>H11P903</u> | Equip. Class ¹ <u>1</u> | 4, Distribution | Panels & Automatic | Transfer Switch |
|--------------------|-------------------------------|------------------------------------|-----------------|--------------------|-----------------|
| Equipment Descript | tion <u>120 VAC Dist. Pan</u> | el – Div 2 Inst I | Rack | | |

<u>Comments</u> (Additional pages may be added as necessary)

None.

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| Seismic Engineer Walkdown PSE-53 Qualified | | |
|--|-------|----------|
| Evaluator #1 : | Date: | 8-31-12 |
| | | |
| A Seismic Engineer Walkdown PSE-53 Qualified | | |
| Evaluator #2 : | Date: | 08/31/12 |

 Equipment ID No. <u>H11P903</u>
 Equipment Class: <u>14, Distribution Panels & Automatic Transfer Switch</u>

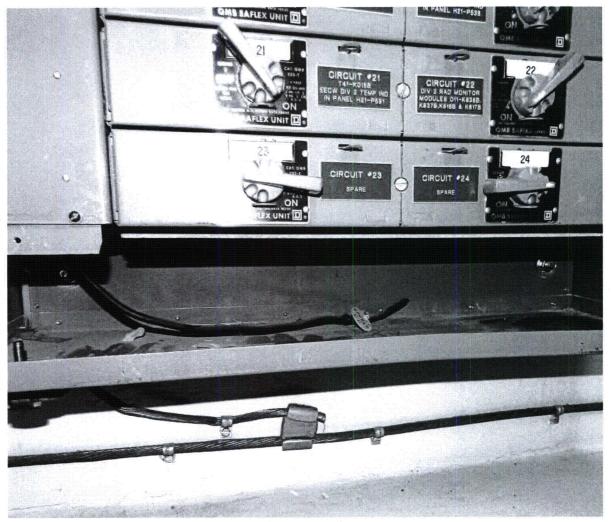
 Equipment Description
 <u>120 VAC DIST Panel – DIV 2 Inst. Rack</u>



(Photo 064) "Equipment adjacent to Panel H11P903"

 Equipment ID No. <u>H11P903</u>
 Equipment Class: <u>14, Distribution Panels & Automatic Transfer Switch</u>

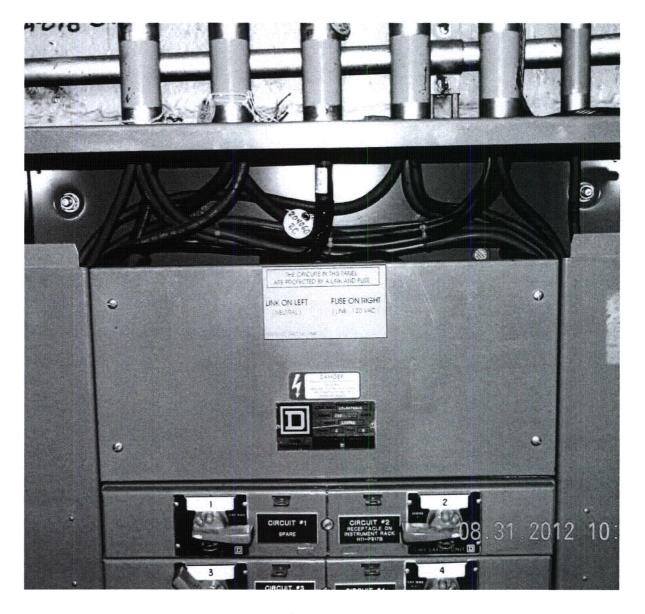
 Equipment Description
 <u>120 VAC DIST Panel – DIV 2 Inst. Rack</u>



(Photo 070A) "Anchor Bolts on bottom edge of panel"

 Equipment ID No. <u>H11P903</u>
 Equipment Class: <u>14, Distribution Panels & Automatic Transfer Switch</u>

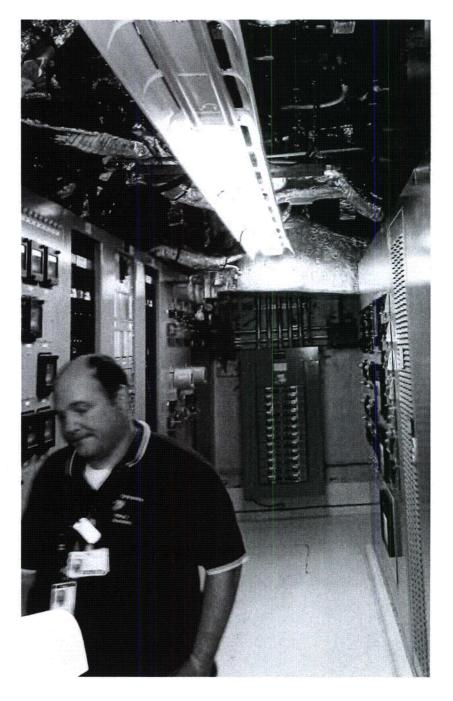
 Equipment Description <u>120 VAC DIST Panel – DIV 2 Inst. Rack</u>



(Photo 068) "Anchor bolts on top edge of panel"

 Equipment ID No. <u>H11P903</u>
 Equipment Class: <u>14, Distribution Panels & Automatic Transfer Switch</u>

 Equipment Description
 <u>120 VAC DIST Panel – DIV 2 Inst. Rack</u>



(Photo 073) "Overhead equipment near Panel H11P903"

| Fermi 2 Seismic | Walkdown (| Guidance I | Document |
|-----------------|------------|-------------|----------|
| Seismic | Walkdown | ı Checklist | |

Sheet 1 of 3 Status: (Y) N U

Seismic Walkdown Checklist (SWC)

| Equipment ID No. | H11P915 | Equip. Cla | s ¹ 20-Instrumentation & Control Panel |
|------------------|---------|------------|---|
| 1 1 | | • • | |

Equipment Description <u>PCMS and Misc. Relay Cab - Div II</u>

Location: Bldg. <u>AB</u> Floor El. <u>613'-6"</u> Room, Area <u>B-15, Col. G-14</u>

Manufacturer, Model, Etc. (optional but recommended) <u>N/A</u>

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

· 21

| 1. Is the anchorage configuration verification required (i.e., is the item one of the 50% of SWEL items requiring such verification)? | YD) N |
|---|---------------|
| Frame plug welded to embedment in four places. JA (See Photos DSCN0109 and 019b) 10/8 | M 3/12 |
| 2. Is the anchorage free of bent, broken, missing or loose hardware? Welded anchorage. No bent, broken, missing or loose hardware. | YØ NO UO N/AO |
| 3. Is the anchorage free of corrosion that is more than mild surface oxidation? | Y∰ N□ U□ N/A□ |
| Welds painted and free of oxidation. | |
| 4. Is the anchorage free of visible cracks in the concrete near the anchors? <i>Concrete pad around anchorage not cracked.</i> | 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 anchorage configuration verification is required.) | YX NO UO N/AO |
| Anchorage configuration is consistent with plant documentation. Seismic brace to H11P863. (See Photos DSC NO110 and 0198) 10/8 | |
| 6. Based on the above anchorage evaluations, is the anchorage free of potentially adverse seismic conditions? | YØ NO UO |

¹ Enter the equipment class name from Appendix B: Classes of Equipment

NJPR-12-0043

Sheet 2 of 3 Status: (Y) N U

Seismic Walkdown Checklist (SWC)

 Equipment ID No. <u>H11P915</u>
 Equip. Class¹ 20-Instrumentation & Control Panel

 Equipment Description <u>PCMS and Misc. Relay Cab – Div II</u>

Interaction Effects

- 21

- 7. Are soft targets free from impact by nearby equipment or structures? Y N U N/A Cabinet with door, therefore no soft targets. (See Photo DSCN019b)
- 8. Are overhead equipment, distribution systems, ceiling tiles and lighting, YN N. U. N/A. and masonry block walls not likely to collapse onto the equipment?
 HVAC, cable trays and lighting are adequately supported. No ceiling tiles or block walls.
- 9. Do attached lines have adequate flexibility to avoid damage? YX N□ U□ N/A□ Top-fed cabinet. Lines have sufficient flexibility. (See Pho+o DSCNOIIO)
 10. Based on the above seismic interaction evaluations, is equipment free of potentially adverse seismic interaction effects?

Other Adverse Conditions

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

Door, internal component mounting & other attachments are all free of adverse seismic conditions. Door at front of cabinet opened for visual/physical inspection.

| Fermi 2 Seismic Walkdown Guidance Document | |
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| Seismic Walkdown Checklist | |
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Sheet 3 of 3 Status: 🕅 N U F

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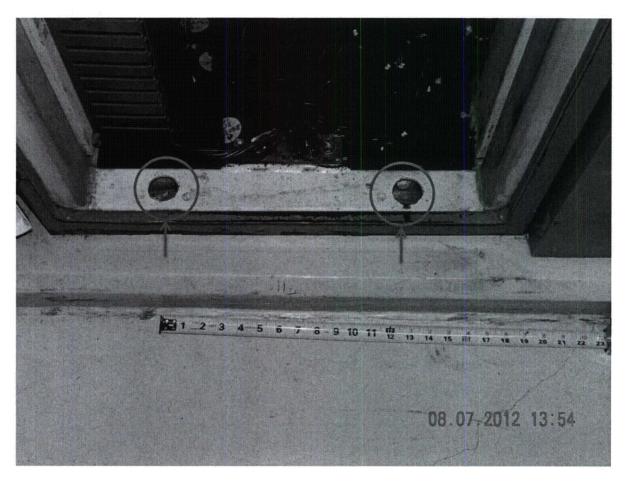
| Seismic Walkdown Checklist (SWC) |
|---|
| Equipment ID NoH11P915 Equip. Class 20, Instrumentation and Control Panel |
| Equipment Description PCMS AND MISC RELAY CAB DIV. 11 |
| <u>Comments (Additional pages may be added as necessary)</u> - N/A- 10/8/12 |
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| |
| 🔀 Seismic Engineer Walkdown PSE-53Qualified |
| Evaluator #1: David G Dickins Date: 8/7/2012 |
| |
| 🔀 Seismic Engineer Walkdown PSE-53Qualified |
| Evaluator #2: Ough M haller Date: _08/07/2012 |
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Equipment ID No. <u>H11P915</u> Equipment Class: <u>20, Instrumentation & Control Panel</u> Equipment Description <u>PCMS And Misc. Relay Cab – Div. II</u>



Equipment ID No. <u>H11P915</u> Equipment Class: <u>20, Instrumentation & Control Panel</u> Equipment Description <u>PCMS And Misc. Relay Cab – Div. II</u>

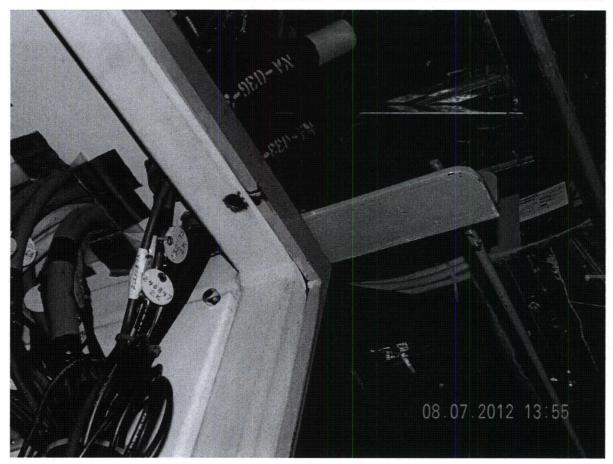


Frame Plug Welds to Embedment (Rear of Cabinet)

(DSCN0109)

 Equipment ID No. <u>H11P915</u>
 Equipment Class: <u>20, Instrumentation & Control Panel</u>

 Equipment Description
 <u>PCMS And Misc. Relay Cab – Div. II</u>



Top-fed Cables Entering Cabinet (Top Rear of Cabinet)

(DSCN0110)

 Equipment ID No. <u>H11P915</u>
 Equipment Class: <u>20, Instrumentation & Control Panel</u>

 Equipment Description
 <u>PCMS And Misc. Relay Cab – Div. II</u>



Frame Plug Welds to Embedment (Door Opened on Front of Cabinet)

"Door"

(DSCN0196)

Equipment ID No. <u>H11P915</u> Equipment Class: <u>20, Instrumentation & Control Panel</u> Equipment Description <u>PCMS And Misc. Relay Cab – Div. II</u>



Overhead Conduit/Cable Trays and Seismic Brace to Cabinet H11P869

(DSCN0198)

NJPR-12-0043

Sheet 1 of 3 Status: (Y) N U

Seismic Walkdown Checklist (SWC)

Equipment ID No. <u>H11P923</u> Equip. Class¹ 20, Instrumentation & Control Panels

Equipment Description RCIC Turbine Control Panel Instrument Rack

Location: Bldg. <u>AB</u> Floor El. <u>613'-6"</u> Room, Area <u>B-15, Col. F-17</u>

Manufacturer, Model, Etc. (optional but recommended) Hoffman Model A-302408LP

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)? | YKI N□ |
|----|--|----------------------------|
| | All anchors are visible. Four bolts on spring nuts and six wedge anchors confirmed by mirror and flashlight. | |
| | (SEE PICTURES DSCNO692 THRU DSCNO695)~ DSK ICH | 1/12- |
| 2. | Is the anchorage free of bent, broken, missing or loose hardware? Anchors all in good condition. | |
| | (SEE PICTURES DSCNOG92 THRM DSCNOG95)~ DOKI | oluliz |
| 3. | Is the anchorage free of corrosion that is more than mild surface oxidation? | YKZIN⊟ U⊟ N/A⊟ |
| | No corrosion observed. (SEE PILTURES DSCNO692 THRU DSCNO695) - DT | 12 10/11/12 |
| 4. | Is the anchorage free of visible cracks in the concrete near the anchors? Concrete is on good condition – no significant cracks. Acceptable as-is | |
| 5. | Is the anchorage configuration consistent with plant documentation? (Note: This question only applies if the item is one of the 50% for which anchorage configuration verification is required.) | |
| | Installation conforms to DCR 6450 and Calc. DC-5634, vol 1, REV. 0 (wo | APPLICABLE POSTINGS) / DOM |
| 6. | Based on the above anchorage evaluations, is the anchorage free of potentially adverse seismic conditions? | םט מא אָץ |
| | No adverse seismic conditions observed. | |
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¹ Enter the equipment class name from Appendix B: Classes of Equipment

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Sheet 2 of 3 Status: ②, N U

Seismic Walkdown Checklist (SWC)

| Equipment ID No. <u>H11P923</u> Equip. Class ¹ 20, Instrumentation & | c Control Panels | | | |
|---|------------------|--|--|--|
| Equipment Description <u>RCIC Turbine Control Panel Instrument Rack</u> | | | | |
| Interaction Effects | | | | |
| 7. Are soft targets free from impact by nearby equipment or structures? Soft targets are free from impact by nearby equipment. Lights and other miscellaneous equipment are restraining and will not impact the panel. | YØ 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? Lights are hung by chains with redundant wire cable. Block walls are remote, and seismically reinforced. Overhead cable tray, conduit, and HVAC ducts are robustly supported and appear to meet seismic requirements | Y⊠,N⊡ U⊡ N/A⊡ | | | |
| 9. Do attached lines have adequate flexibility to avoid damage? Lines have flexible cables, and conduit is attached to the same wall, eliminating differential movement. | YØN□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

 Have you looked for and found no other seismic conditions that could Y N□ U□ adversely affect the safety functions of the equipment? None observed.

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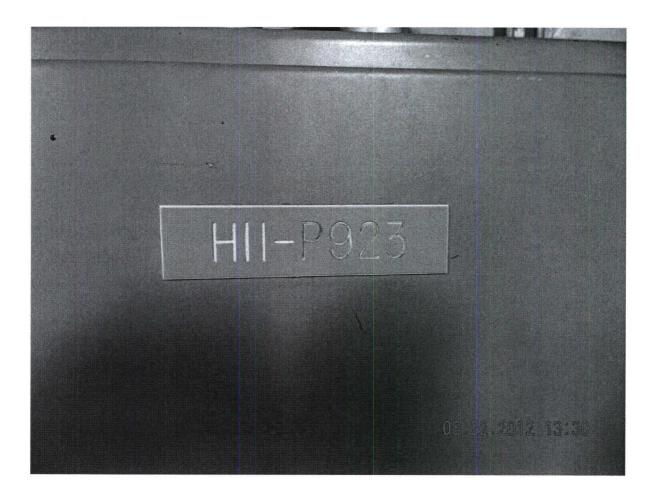
.Sheet 3 of 3 Status: 🕅 N U

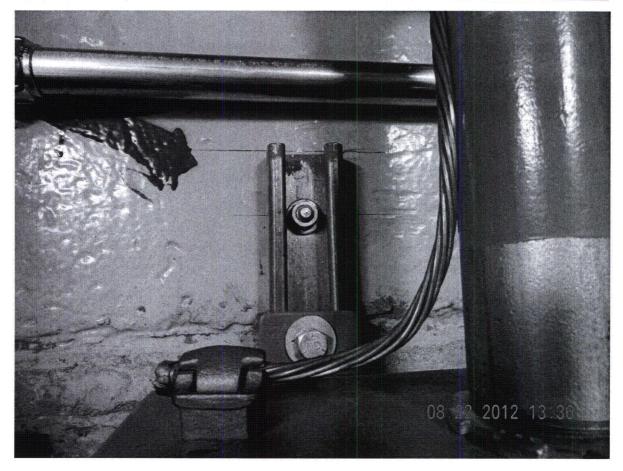
Seismic Walkdown Checklist (SWC)

| Equipment ID No. | H117923 | Equip. Class | 20 INSTRUM | ENTATION_ | AND CONTROL PANE | <u>: L</u> |
|--------------------|-----------------|--------------|------------|-----------|------------------|------------|
| Equipment Descript | ion <u>RCIC</u> | TURB. CT | RL. PANEL | INST. | RACK | |

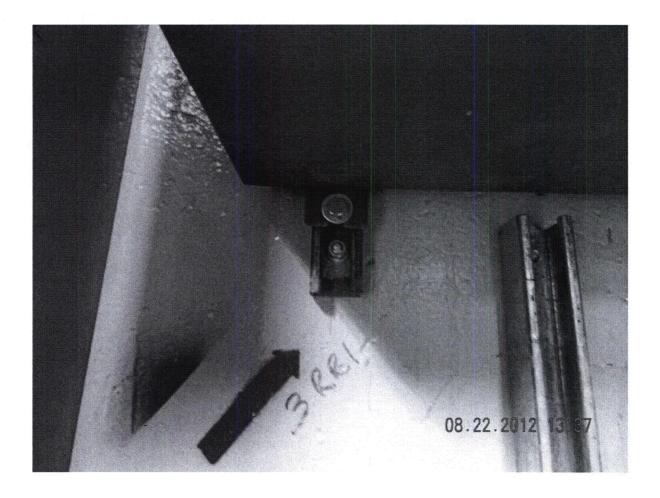
<u>Comments</u> (Additional pages may be added as necessary)

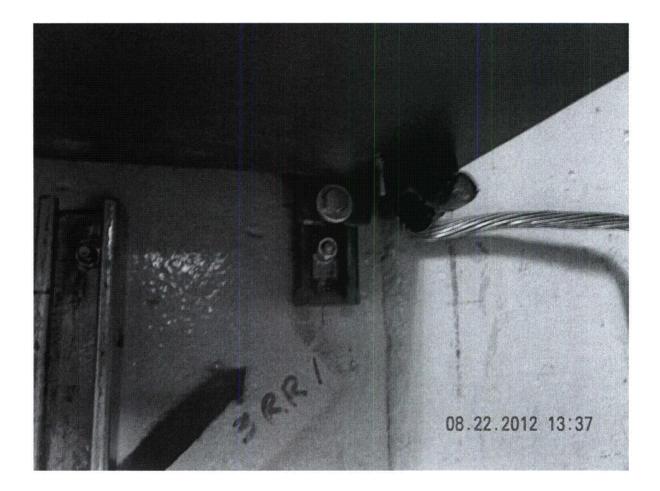
| Seismic Engineer Walkdown PSE-53Qualified Evaluator #1 : David & Dickinsm | Date: | 8/22/2012 |
|--|-------|------------|
| Seismic Engineer Walkdown PSE-53Qualified Evaluator #2 : | Date: | 08/22/2012 |











| Fermi 2 Seismic Walkdown Guidance Document |
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| Seismic Walkdown Checklist |

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| Sh Status | (Y) | N | 1 | U |

Seismic Walkdown Checklist (SWC)

| Equipment ID No. <u>H21P010</u> Equip. Class ¹ <u>18</u> , Instrument Racks | ****** | | | | |
|--|---|--|--|--|--|
| Equipment Description Instrument Rack – Jet Pump Rack B | | | | | |
| Location: Bldg. <u>RB</u> Floor El. <u>583'-6''</u> Room, Area <u>Rm A-12, Co</u> | l. D-10 | | | | |
| Manufacturer, Model, Etc. (optional but recommended) DECO, Field Fabrican | ed | | | | |
| 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)? | ч <mark>р</mark> а ип | | | | |
| 2. Is the anchorage free of bent, broken, missing or loose hardware? Yes, No bend, broken or missing welds (see Photo DSC00184) | Y¥ N□ U□ N/A□ | | | | |
| 3. Is the anchorage free of corrosion that is more than mild surface oxidation? | Y⊠ N□ U□ N/A□ | | | | |
| No corrosion is evident | | | | | |
| 4. Is the anchorage free of visible cracks in the concrete near the anchors? No concrete cracks found (see Photos, DSC00179 & 180) | Y ¦∕A , N⊡ U⊡ N/A⊡ | | | | |
| 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 conforms to Dwg. I-2281-40, Rev B, Detail A. (a) | YX N UN N/A NO POSTINGS)~ D3K 10/12/12 | | | | |
| Based on the above anchorage evaluations, is the anchorage free of potentially adverse seismic conditions? No adverse conditions were identified. | YX NO UO | | | | |

¹ Enter the equipment class name from Appendix B: Classes of Equipment

| Fermi 2 Seismic Walkdown Guidance Document Seismic Walkdown Checklist | Sheet 2 of 3 | |
|---|------------------|--|
| NJPR-12-0043 | Status: N U | |
| Seismic Walkdown Checklist (SWC) | | |
| Equipment ID No. <u>H21P010</u> Equip. Class ¹ <u>18</u> , Instrument Racks | | |
| Equipment Description Instrument Rack – Jet Pump Rack B | | |
| Interaction Effects | | |
| 7. Are soft targets free from impact by nearby equipment or structures? No nearby equipment or structures. | YX NII UII N/AII | |
| 8. Are overhead equipment, distribution systems, ceiling tiles and lighting, and masonry block walls not likely to collapse onto the equipment? No ceiling tiles, overhead or nearby block walls. Lighting is well- supported. | YX N□ U□ N/A□ | |
| 9. Do attached lines have adequate flexibility to avoid damage? Lines have sufficient flexibility (see Photo DSC00184) | YX NO UO N/AO | |
| Based on the above seismic interaction evaluations, is equipment free of potentially adverse seismic interaction effects? No potentially adverse effects. | YX 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? | םט םא איץ | |
| No other potentially adverse conditions were identified. | | |

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Sheet 3 of 3 Status: N U

Seismic Walkdown Checklist (SWC)

Equipment ID No. <u>H21P010</u> Equip. Class¹ 18, Instrument Racks

Equipment Description Instrument Rack -Jet Pump Rack B

<u>Comments</u> (Additional pages may be added as necessary)

None.

Seismic Engineer Walkdown PSE-53 Qualified Date: 08/06/12 Evaluator #1 Seismic Engineer Walkdown PSE-53 Qualified :_______ Date: ______ Date: ______ Evaluator #2 :

 Equipment ID No. <u>H21P010</u>
 Equipment Class: <u>18, Instrument Rack</u>

 Equipment Description
 <u>Instrument Rack – Jet Pump Rack B</u>



(DSC00179)

 Equipment ID No. <u>H21P010</u>
 Equipment Class: <u>18, Instrument Rack</u>

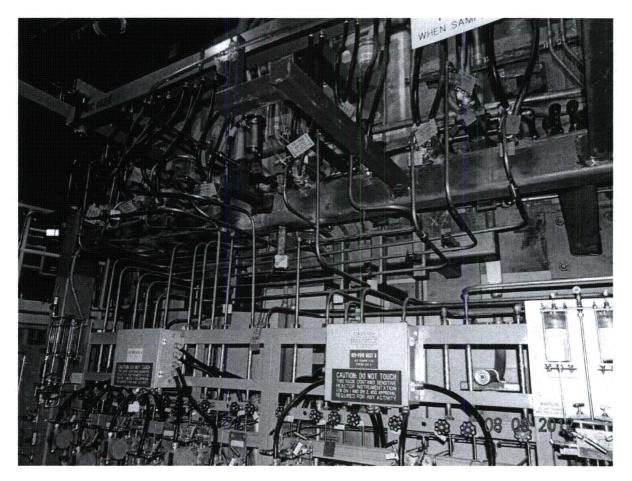
 Equipment Description <u>Instrument Rack – Jet Pump Rack B</u>



(DSC00180)

Equipment ID No. <u>H21P010</u> Equipment Class: <u>18, Instrument Rack</u>

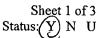
Equipment Description <u>Instrument Rack – Jet Pump Rack B</u>



(DSC00184)

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Seismic Walkdown Checklist (SWC)

Equipment ID No. <u>H21P080</u> Equip. Class¹ <u>20-Implementation & Control Panel</u>

Equipment Description ECCS Trip Unit CAB Div 1 Inst Rack

Location: Bldg. <u>AB</u> Floor El. <u>659'-6"</u> Room, Area <u>Ventilation Equip. Area (B-24), Col. F-12</u>

Manufacturer, Model, Etc. (optional but recommended) <u>N/A</u>

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)? All bolts visible at base and cabinet to cabinet. (SEE PICTARES DSCN0451 THRU DSCN0456) NDTK 10/11/12 | |
|---|--------------------|
| 2. Is the anchorage free of bent, broken, missing or loose hardware? Anchorage is in good condition and is free of bent, broken, missing or loose hardware (SEE PICTURES DSCN 045(THIM DSCN 045G) ~ D3L 10/11/12 | Y⊠ N□ U□ N/A□ 2 |
| 3. Is the anchorage free of corrosion that is more than mild surface oxidation? Bolts are shiny and clean. (SEE PIETURES DSCHONS! THRN DSCHONSE) ~ DSF 10/11/1 | |
| 4. Is the anchorage free of visible cracks in the concrete near the anchors? No visible cracks in concrete at base of cabinet. (SEE PICTURE: DSCNO451 THRU DSCNO456) ~ DSK 10/11 | 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 anchorage configuration verification is required.) Dwg. I-2525-25 verified. Cabinet to cabinet bolts verified to H21P082. S (SEE PICTURES DSCHCHST, DSCHCHSC, THRM DSCHCHGA) | |

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

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¹ Enter the equipment class name from Appendix B: Classes of Equipment

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| Fermi 2 Seismic Walkdown Guidance Document |
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| Seismic Walkdown Checklist |

Sheet 2 of 3 Status: (X) N U

Seismic Walkdown Checklist (SWC)

 Equipment ID No. <u>H21P080</u>
 Equip. Class¹ <u>20-Implementation & Control Panel</u>

 Equipment Description <u>ECCS Trip Unit CAB Div 1 Inst Rack</u>

 Interaction Effects

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

 Soft targets are free from impact by nearby equipment.

| 8. Are overhead equipment, distribution systems, ceiling tiles and lighting, | |
|--|---|
| and masonry block walls not likely to collapse onto the equipment? | , |
| Adjacent block wall is seismic. Steal angles, columns and through bolts | |
| observed. | |
| | |

- 9. Do attached lines have adequate flexibility to avoid damage? Y∑ N□ U□ N/A□ Top entry cables have large loops.
- 10. Based on the above seismic interaction evaluations, is equipment free Y ↓ N□ U□ of potentially adverse seismic interaction effects?

Other Adverse Conditions

11. Have you looked for and found no other seismic conditions that could Y[2] N[] U[] adversely affect the safety functions of the equipment? No other seismic conditions identified.

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Sheet 3 of 3 Status: VN U

Seismic Walkdown Checklist (SWC)

Equipment ID No. H21-PO80 Equip. Class 20-1NSTRUHENTATION & CONTROLPANEL Equipment Description <u>FCCS TRIP UNIT CAB - DIV / INST RACK</u>

<u>Comments</u> (Additional pages may be added as necessary)

Dwg. I-2525-25, REV. E HAS NO POSTINGS. - DJK Iolizliz

Seismic Engineer Walkdown PSE-53Qualified _____ Date: 16th August 2012 Evaluator #1: David GD ickin X Seismic Engineer Walkdown PSE-53Qualified Joseph Maler _____ Date: _______D3/110/2012.___

Evaluator #2 :__

Equipment ID No. <u>H21P080</u> Equipment Class: <u>20, Instrumentation and Control Panel</u>

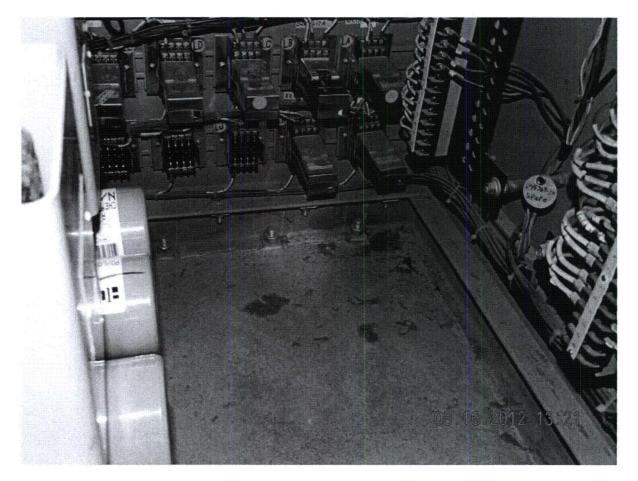
Equipment Description <u>ECCS Trip Unit Cabinet Div 1 Inst. Rack</u>



(DSCN0450)

Equipment ID No. <u>H21P080</u> Equipment Class: <u>20, Instrumentation and Control Panel</u>

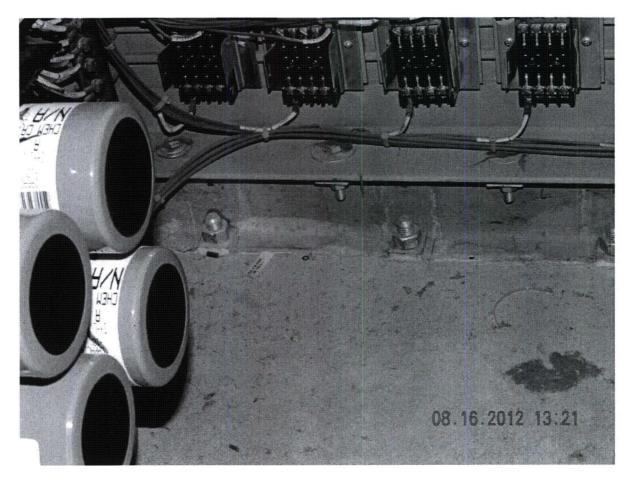
Equipment Description <u>ECCS Trip Unit Cabinet Div 1 Inst. Rack</u>



(DSCN0451)

Equipment ID No. <u>H21P080</u> Equipment Class: <u>20, Instrumentation and Control Panel</u>

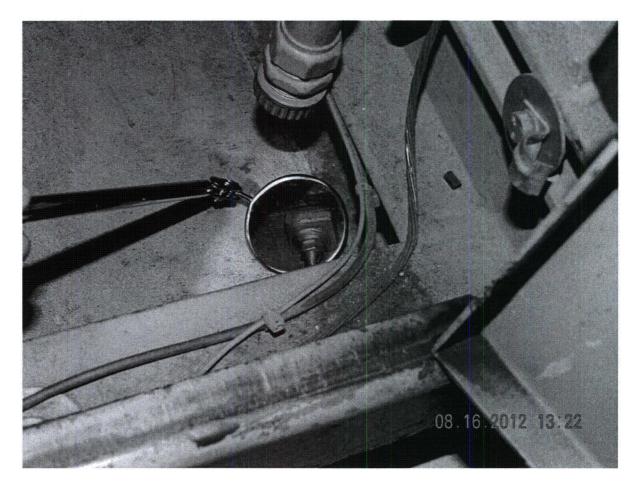
Equipment Description <u>ECCS Trip Unit Cabinet Div 1 Inst. Rack</u>



(DSCN0452)

Equipment ID No. <u>H21P080</u> Equipment Class: <u>20, Instrumentation and Control Panel</u>

Equipment Description <u>ECCS Trip Unit Cabinet Div 1 Inst. Rack</u>



(DSCN0453)

Equipment ID No. <u>H21P080</u> Equipment Class: <u>20, Instrumentation and Control Panel</u>

Equipment Description <u>ECCS Trip Unit Cabinet Div 1 Inst. Rack</u>



(DSCN0454)

Equipment ID No. <u>H21P080</u> Equipment Class: <u>20, Instrumentation and Control Panel</u>

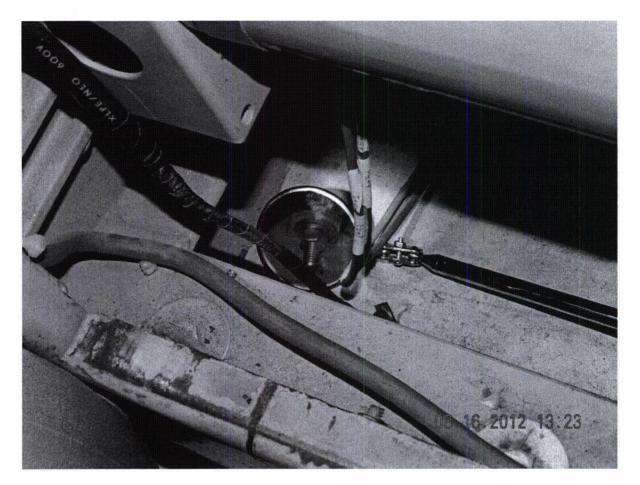
Equipment Description <u>ECCS Trip Unit Cabinet Div 1 Inst. Rack</u>



(DSCN0455)

Equipment ID No. <u>H21P080</u> Equipment Class: <u>20, Instrumentation and Control Panel</u>

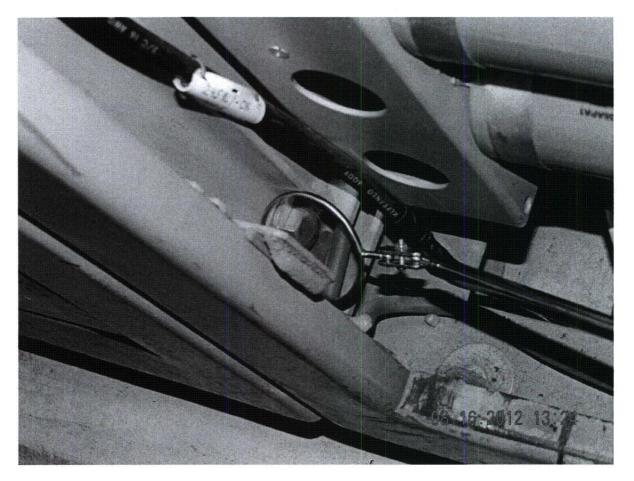
Equipment Description <u>ECCS Trip Unit Cabinet Div 1 Inst. Rack</u>



(DSCN0456)

Equipment ID No. <u>H21P080</u> Equipment Class: <u>20, Instrumentation and Control Panel</u>

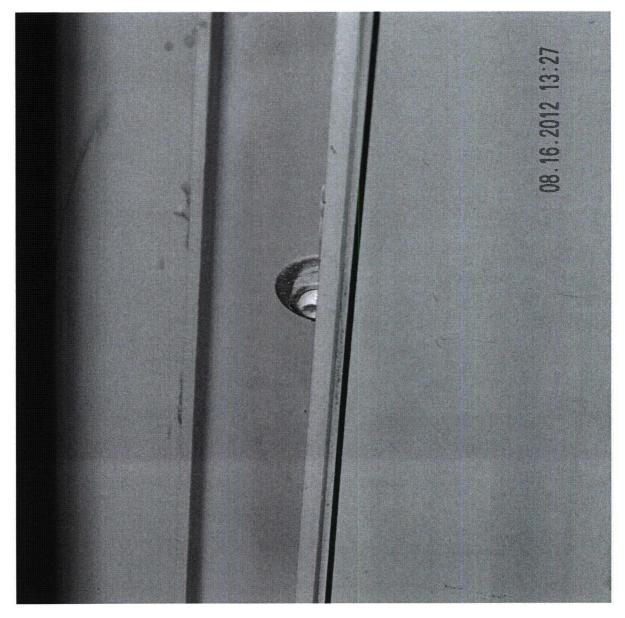
Equipment Description <u>ECCS Trip Unit Cabinet Div 1 Inst. Rack</u>



(DSCN0457)

Equipment ID No. <u>H21P080</u> Equipment Class: <u>20, Instrumentation and Control Panel</u>

Equipment Description <u>ECCS Trip Unit Cabinet Div 1 Inst. Rack</u>



(DSCN0462)

Equipment ID No. <u>H21P080</u> Equipment Class: <u>20, Instrumentation and Control Panel</u>

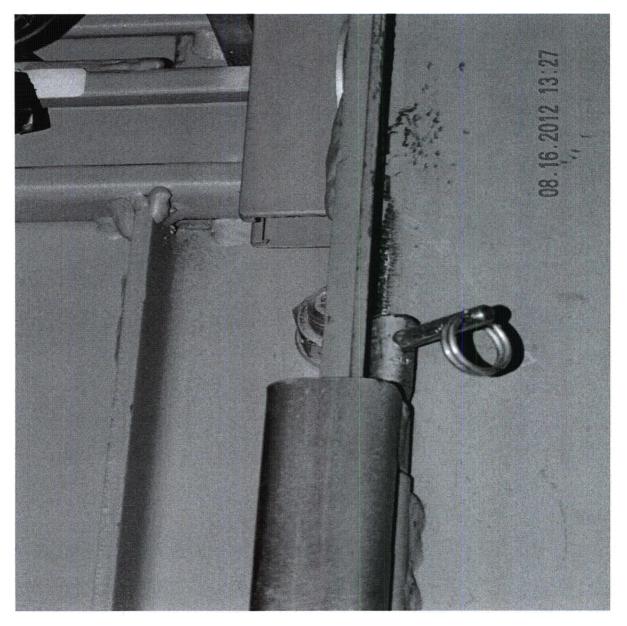
Equipment Description <u>ECCS Trip Unit Cabinet Div 1 Inst. Rack</u>



(DSCN0463)

Equipment ID No. <u>H21P080</u> Equipment Class: <u>20, Instrumentation and Control Panel</u>

Equipment Description <u>ECCS Trip Unit Cabinet Div 1 Inst. Rack</u>



(DSCN0464)