

**Seismic Walkdown Checklist (SWC)**

Equipment ID No. C4104F004A Equip. Class<sup>1</sup> 8-Motor Operated and Solenoid Operated Valves

Equipment Description SLC Explosive (SQUIB) Valve

Location: Bldg. RB Floor El. 613'-6" Room, Area A-17, Col C-11

Manufacturer, Model, Etc. (optional but recommended) P/N 7048-17000-01

**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  
*All visible anchorage associated with this asset is in good condition and intact, see picture 1.*
  
3. Is the anchorage free of corrosion that is more than mild surface oxidation?  Y  N  U  N/A  
*There is no anchorage with corrosion or surface oxidation. (See picture 1.)*
  
4. Is the anchorage free of visible cracks in the concrete near the anchors?  Y  N  U  N/A  
*There are no visible cracks in the concrete near the pipe hanger anchorage.*
  
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

MPS 10/3/12

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

**Seismic Walkdown Checklist (SWC)**

Equipment ID No. C4104F004A Equip. Class<sup>1</sup> 8-Motor Operated and Solenoid Operated Valves

Equipment Description SLC Explosive (SQUIB) Valve

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**Interaction Effects**

7. Are soft targets free from impact by nearby equipment or structures?  Y  N  U  N/A  
*The asset does not have any soft targets. (See picture 1.)*
8. Are overhead equipment, distribution systems, ceiling tiles and lighting, and masonry block walls not likely to collapse onto the equipment?  Y  N  U  N/A  
*The asset is protected overhead by the concrete slab. (See picture 2.)*
9. Do attached lines have adequate flexibility to avoid damage?  Y  N  U  N/A  
*The attached lines have adequate flexibility. (See picture 3.)*
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  
*No other adverse seismic conditions were identified.*

mps 10/3/12

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Sheet 3 of 3  
Status: (Y) N U

**Seismic Walkdown Checklist (SWC)**

Equipment ID No. C4104F004A Equip. Class' 8, Motor Operated and Solenoid Operated  
Equipment Description SLC Explosive (SQUIB) Vlv.

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

*Seismic Engineer Walkdown PSE-53 Qualified*

Evaluator #1 : Michael P. Dasso Date: 8/8/2012

*Seismic Engineer Walkdown PSE-53 Qualified*

Evaluator #2 : Scott Bauer Date: 8/8/2012

**Seismic Walkdown Pictures**

Equipment ID No. C4104F004A Equipment Class: 8, Motor/Solenoid-Operated Valves

Equipment Description SLC Explosive (SQUIB) Valve

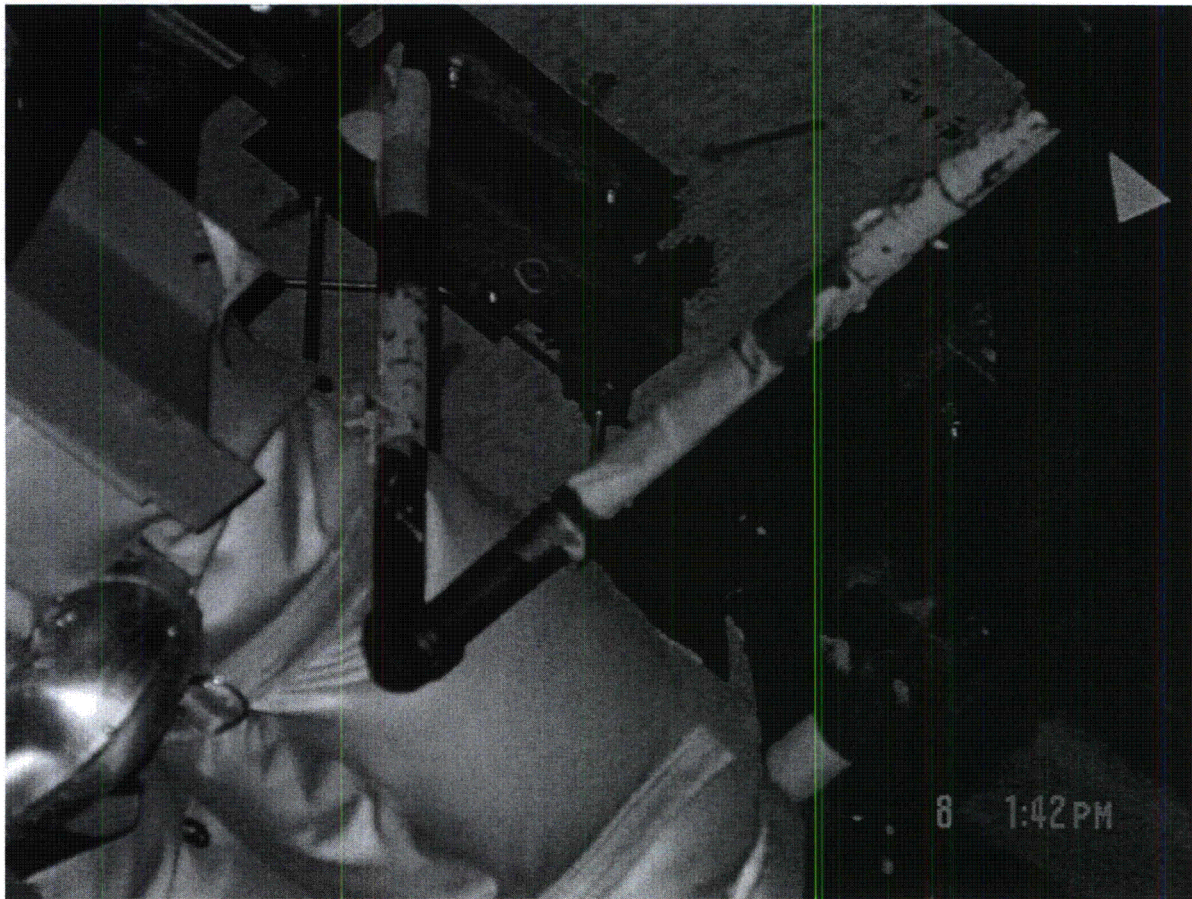


(Picture 1)

**Seismic Walkdown Pictures**

Equipment ID No. C4104F004A Equipment Class: 8, Motor/Solenoid-Operated Valves

Equipment Description SLC Explosive (SQUIB) Valve

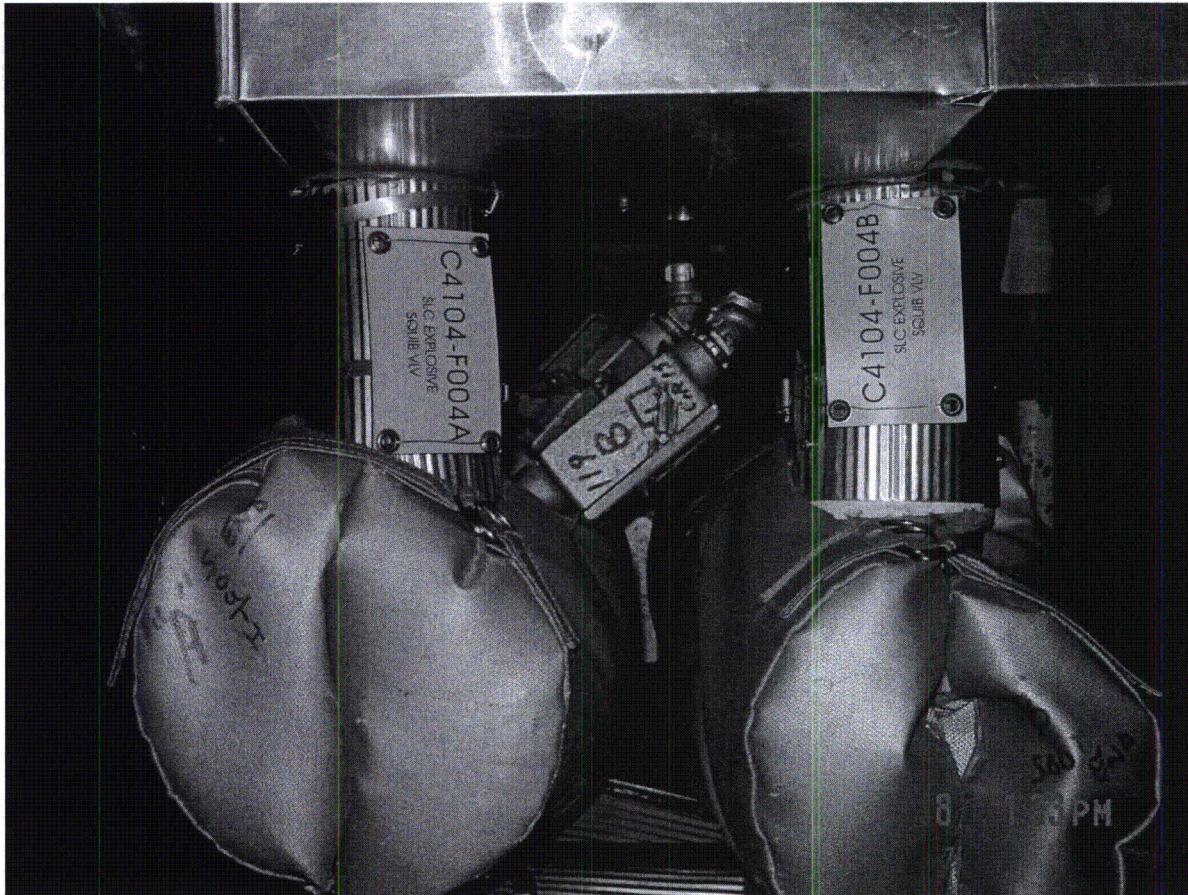


(Picture 2)

**Seismic Walkdown Pictures**

Equipment ID No. C4104F004A Equipment Class: 8, Motor/Solenoid-Operated Valves

Equipment Description SLC Explosive (SQUIB) Valve



(Picture 3)

**Seismic Walkdown Checklist (SWC)**

Equipment ID No. E1150F004C Equip. Class<sup>1</sup> 8, Motor/Solenoid-Operated Valves

Equipment Description RHR Div. I Pump C Suppression Pool Suction Isolation MOV

Location: Bldg. RB Floor El. 540'-0" Room, Area A-01, Col. C-13

Manufacturer, Model, Etc. (optional but recommended) Powell valve, 3023 WE/Limitorque Operator, SMB-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)?  Y  N

*of the 50% of SWEL items requiring such verification)?*

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

*Anchorage and hardware is in good condition. See pictures 1 & 3.*

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

*There is no observed corrosion or surface oxidation. See picture 1 & 3.*

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

*The assets anchorage is not mounted on/in concrete.*

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.)

*Line mounted equipment is not required to be evaluated for anchorage adequacy and should not be counted in establishing the 50% sample size.*

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. E1150F004C Equip. Class<sup>1</sup> 8, Motor/Solenoid-Operated Valves

Equipment Description RHR Div. I Pump C Suppression Pool Suction Isolation MOV

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**Interaction Effects**

7. Are soft targets free from impact by nearby equipment or structures?  Y  N  U  N/A  
*There are no observed impact sources.*
8. Are overhead equipment, distribution systems, ceiling tiles and lighting, and masonry block walls not likely to collapse onto the equipment?  Y  N  U  N/A  
*The catwalk structure above has adequate structural design. See picture 9. No ceiling tiles or masonry walls in the area.*
9. Do attached lines have adequate flexibility to avoid damage?  Y  N  U  N/A  
*Attached lines to motor operator have adequate flexibility. See flex conduit in picture 1.*
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  
*No other seismic conditions found that could adversely affect the safety functions of the equipment.*



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Seismic Walkdown Checklist

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Status: Y N U

**Seismic Walkdown Checklist (SWC)**

Equipment ID No. E1150F004C Equip. Class<sup>1</sup> 8, MOTOR-OPERATED AND SOLENOID-OPERATED VALVES.

Equipment Description RHR DIV I PUMP C SUPR POOL SUCT ISO MOV

Comments (Additional pages may be added as necessary)

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*Seismic Engineer Walkdown PSE-53 Qualified*

Evaluator #1 : Michael P. Sasso Date: 8/21/12

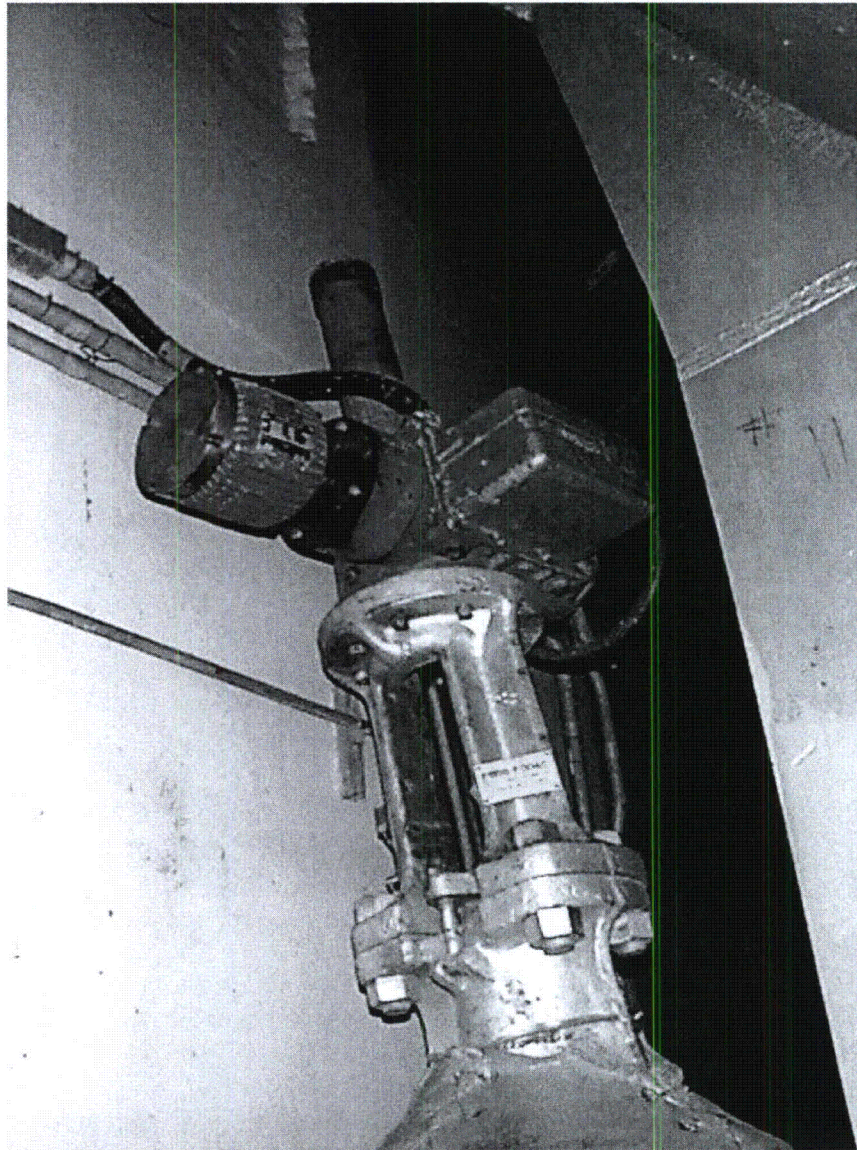
*Seismic Engineer Walkdown PSE-53 Qualified*

Evaluator #2 : Rymalany Date: Aug. 21, '12

**Seismic Walkdown Pictures**

Equipment ID No. E1150F004C Equipment Class: 8, Motor/Solenoid-Operated Valves

Equipment Description RHR Div. I Pump C Suppression Pool Suction Isolation Valve



(Picture 1)

**Seismic Walkdown Pictures**

Equipment ID No. E1150F004C Equipment Class: 8, Motor/Solenoid-Operated Valves

Equipment Description RHR Div. I Pump C Suppression Pool Suction Isolation Valve



(Picture 3)

**Seismic Walkdown Pictures**

Equipment ID No. E1150F004C Equipment Class: 8, Motor/Solenoid-Operated Valves

Equipment Description RHR Div. I Pump C Suppression Pool Suction Isolation Valve



(Picture 9)

**Seismic Walkdown Checklist (SWC)**

Equipment ID No. E1150F016A Equip. Class<sup>1</sup> 8-Motor and Solenoid-Operated Valves

Equipment Description Div. I RHR DW Spray OTBD Isolation Valve

Location: Bldg. RB Floor El. 583'-6" Room, Area A-12, Col. B-13

Manufacturer, Model, Etc. (optional but recommended) Limitorque SMB-3, Powell 3051WE

**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 assets anchorage connections are not attached to a civil structure. The asset is a valve attached to its own piping system with hardware that is in good condition. (See Picture 1.)*
  
3. Is the anchorage free of corrosion that is more than mild surface oxidation?  Y  N  U  N/A  
*There is no anchorage.*
  
4. Is the anchorage free of visible cracks in the concrete near the anchors?  Y  N  U  N/A  
*The asset is not anchored to concrete.*
  
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 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

*mjs 10/4/12*

**Seismic Walkdown Checklist (SWC)**

Equipment ID No. E1150F016A Equip. Class<sup>1</sup> 8-Motor and Solenoid-Operated Valves

Equipment Description Div. I RHR DW Spray OTBD Isolation Valve

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**Interaction Effects**

7. Are soft targets free from impact by nearby equipment or structures?  
*There are no observed impact sources within striking distance?*      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?  
*There are no observed overhead hazards. (See picture 5 and 6.)*      Y N U N/A

9. Do attached lines have adequate flexibility to avoid damage?  
*Attached lines are made of flexible material. (See picture 4.)*      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

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**Other Adverse Conditions**

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

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**Seismic Walkdown Checklist (SWC)**

Equipment ID No. E1150F016A Equip. Class' 8-MOV and SOV  
Equipment Description Div. 1 RHR DW Spray OTBD Iso Valve

Comments (Additional pages may be added as necessary)

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*Seismic Engineer Walkdown PSE-53 Qualified*

Evaluator #1: Michel P. Dasso Date: 8/15/12

*Seismic Engineer Walkdown PSE-53 Qualified*

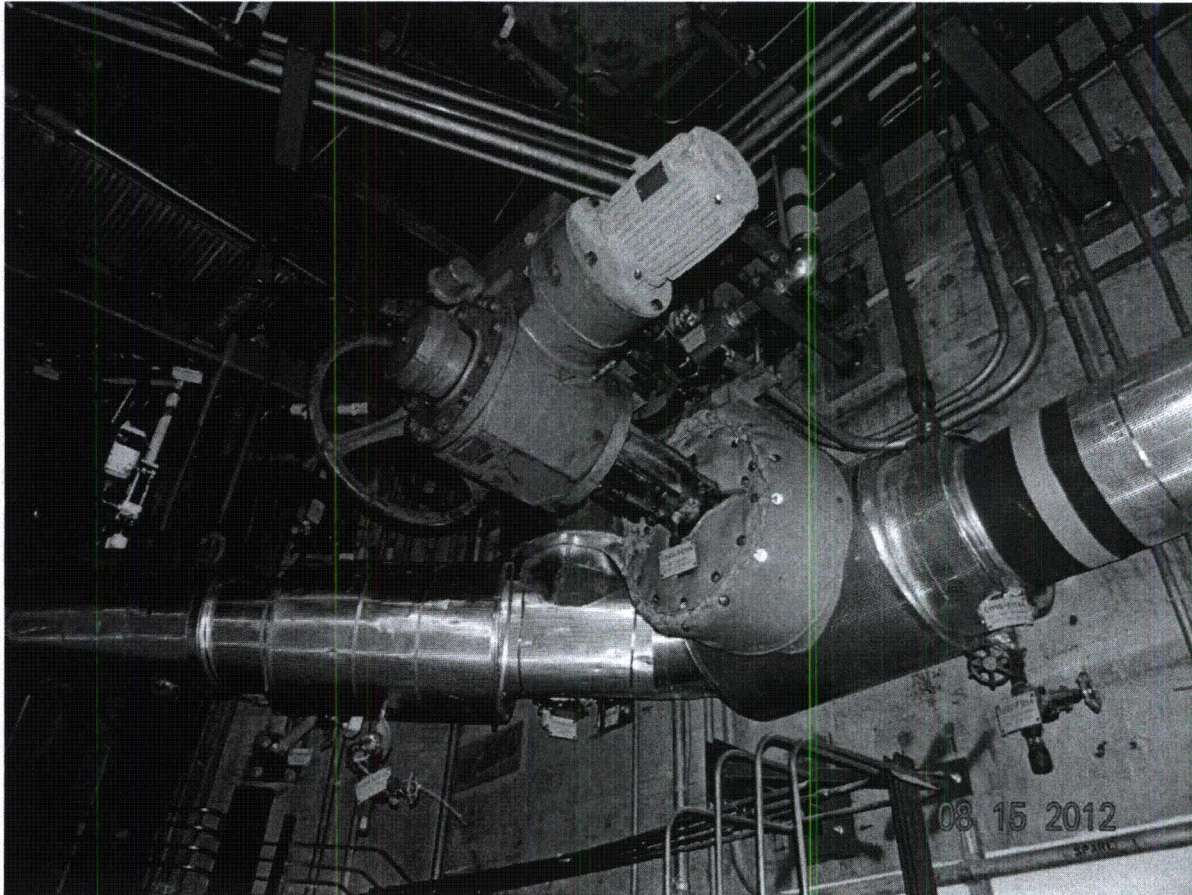
Evaluator #2: Scott Bauer Date: 8/15/12

**Seismic Walkdown Pictures**

Equipment ID No. E1150F016A Equipment Class: 8, Motor & Solenoid Operated Valves

Equipment Description Div. I RHR DW Spray OTBD Isolation Valve

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(Picture 1)

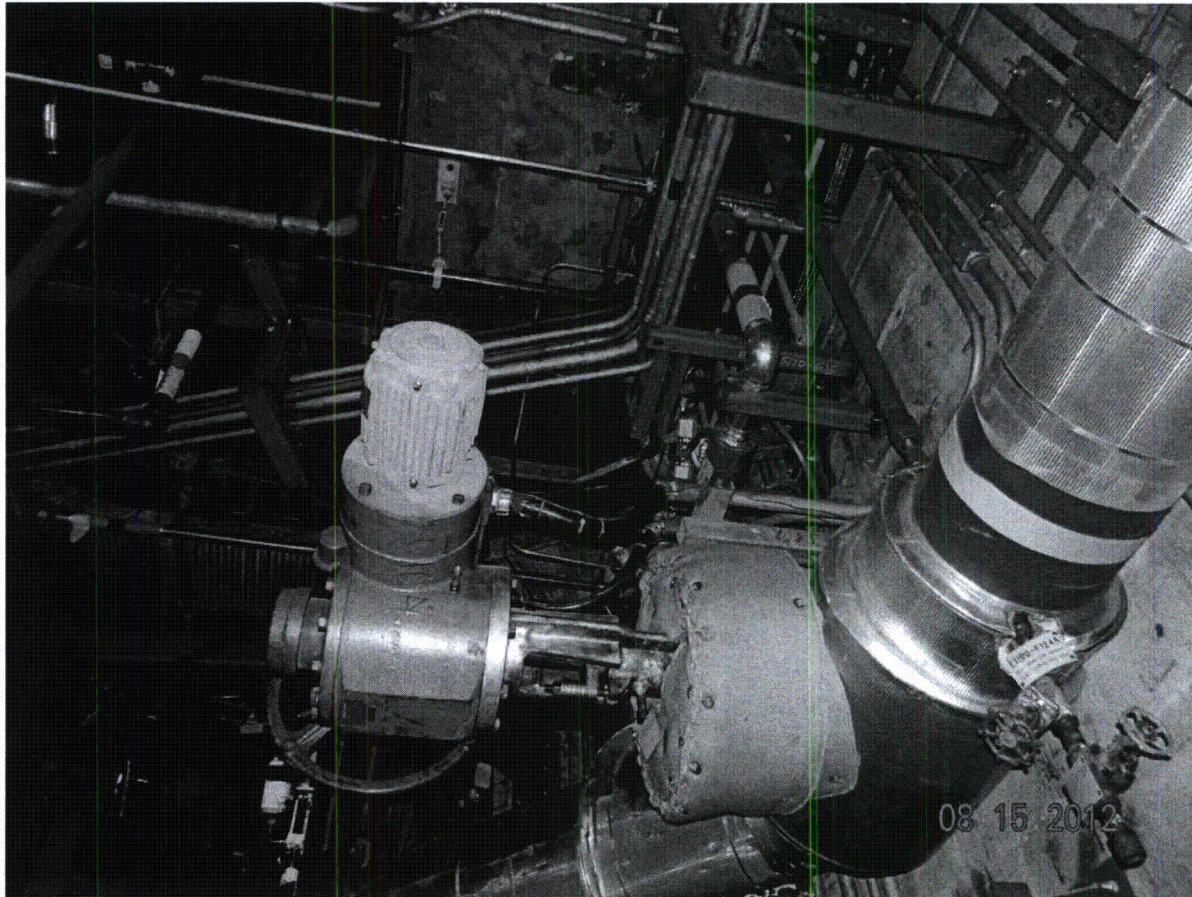


**Seismic Walkdown Pictures**

Equipment ID No. E1150F016A Equipment Class: 8, Motor & Solenoid Operated Valves

Equipment Description Div. I RHR DW Spray OTBD Isolation Valve

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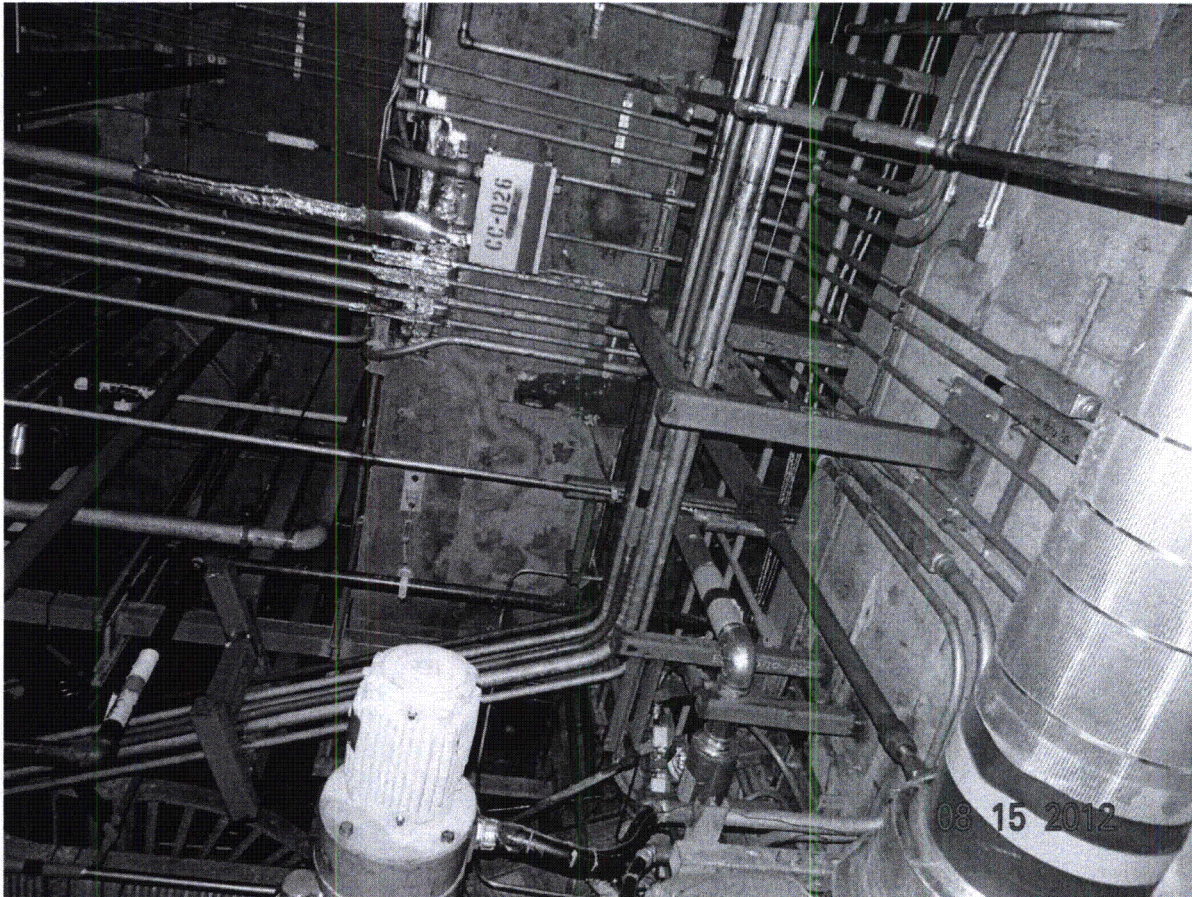
(Picture 4)

**Seismic Walkdown Pictures**

Equipment ID No. E1150F016A Equipment Class: 8, Motor & Solenoid Operated Valves

Equipment Description Div. I RHR DW Spray OTBD Isolation Valve

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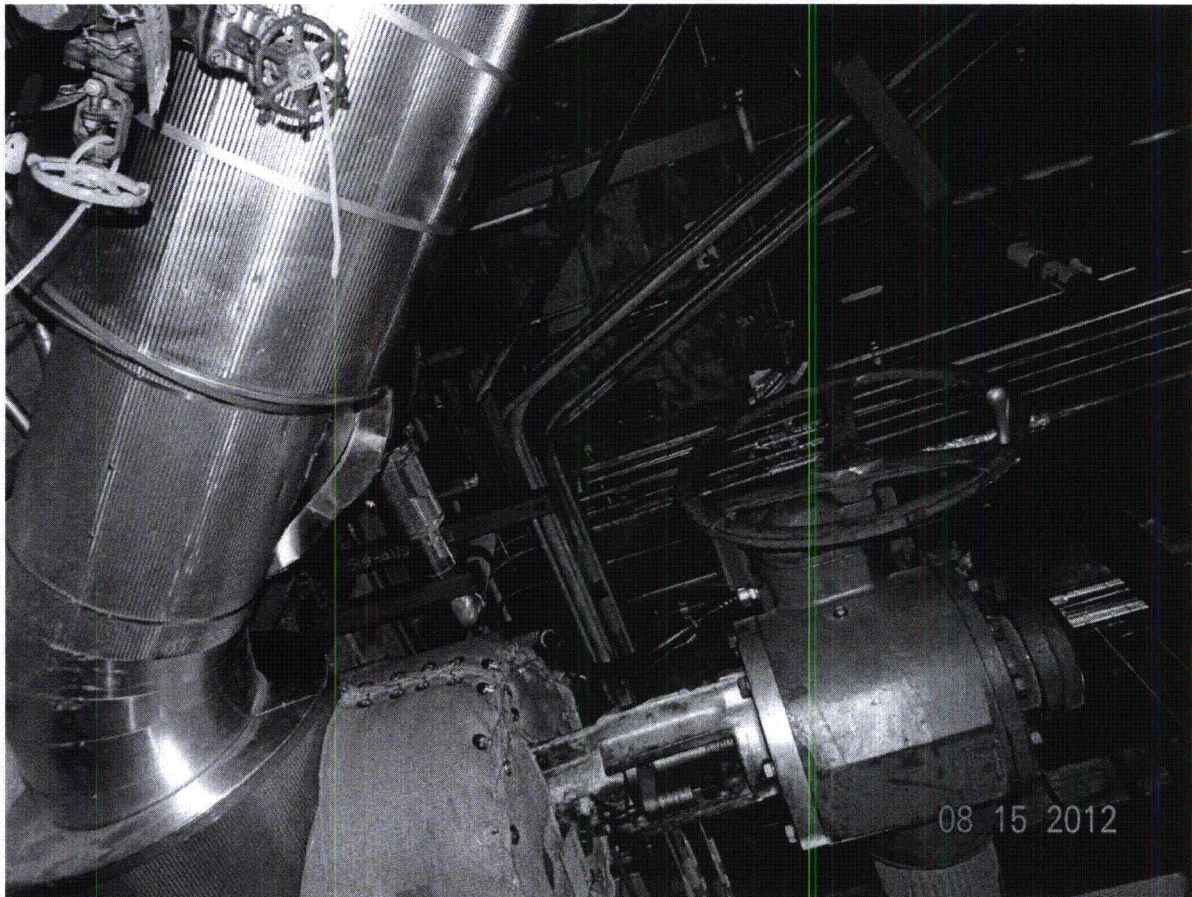
(Picture 5)

## Seismic Walkdown Pictures

Equipment ID No. E1150F016A Equipment Class: 8, Motor & Solenoid Operated Valves

Equipment Description Div. I RHR DW Spray OTBD Isolation Valve

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(Picture 6)

**Seismic Walkdown Checklist (SWC)**

Equipment ID No. E1150F068A Equip. Class<sup>1</sup> 8-Motor-and Solenoid-Operated Valves

Equipment Description Div. I RHR HX Service Water Outlet FCV

Location: Bldg. RB Floor El. 613'-6" Room, Area A-22N, Col. C-17

Manufacturer, Model, Etc. (optional but recommended) Powell 1551WE

**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 asset is not anchored to concrete. It is attached to its piping system via a flanged connection. (See picture 6.)*
  
3. Is the anchorage free of corrosion that is more than mild surface oxidation? Y  N  U  N/A   
*See comment for question 2.*
  
4. Is the anchorage free of visible cracks in the concrete near the anchors? Y  N  U  N/A   
*Not anchored to concrete.*
  
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 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

MPS 10/4/12

**Seismic Walkdown Checklist (SWC)**

Equipment ID No. E1150F068A Equip. Class<sup>1</sup> 8-Motor-and Solenoid-Operated Valves

Equipment Description Div. I RHR HX Service Water Outlet FCV

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**Interaction Effects**

7. Are soft targets free from impact by nearby equipment or structures?  Y  N  U  N/A  
*There is no observed seismic proximity interaction or danger of falling overhead hazards onto soft targets.*
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  
*There are no observed overhead hazards. (See picture 10 and 11.)*
9. Do attached lines have adequate flexibility to avoid damage?  Y  N  U  N/A  
*Attached lines are flex conduit, which has adequate flexibility. (See picture 12.)*
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  
*No other adverse seismic conditions were identified.*

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Seismic Walkdown Checklist

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Sheet 3 of 3  
Status: (Y) N U

**Seismic Walkdown Checklist (SWC)**

Equipment ID No. E1150F068A Equip. Class' 8 - MOV and SOV

Equipment Description Div. 2 RHR HX Service Water Outlet FCV

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

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*Seismic Engineer Walkdown PSE-53 Qualified*

Evaluator #1 : M. P. Dasso Date: 8/16/12

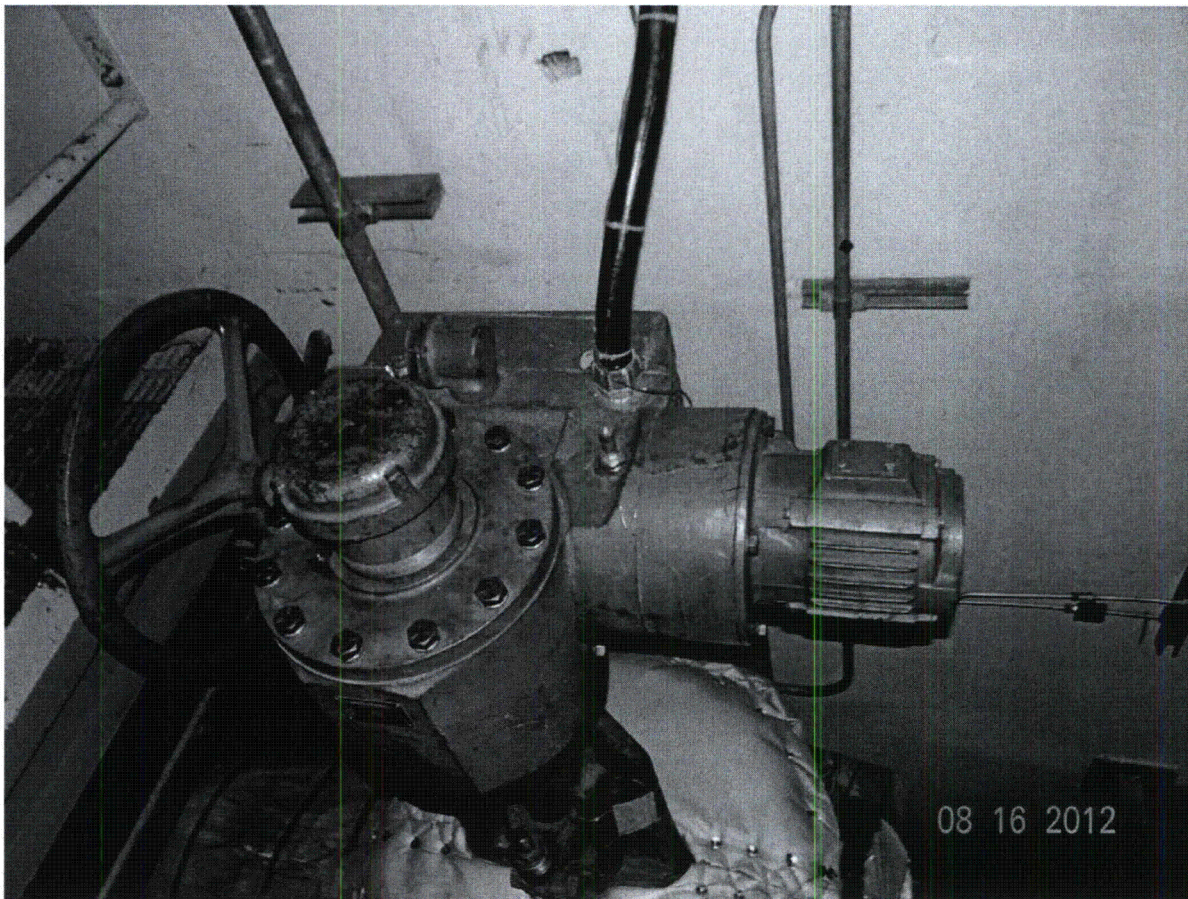
*Seismic Engineer Walkdown PSE-53 Qualified*

Evaluator #2 : Scott Banen Date: 8/16/12

**Seismic Walkdown Pictures**

Equipment ID No. E1150F068A Equipment Class: 8, Motor & Solenoid Operated Valves

Equipment Description DIV 1 RHR Hx Service Water Outlet FCV

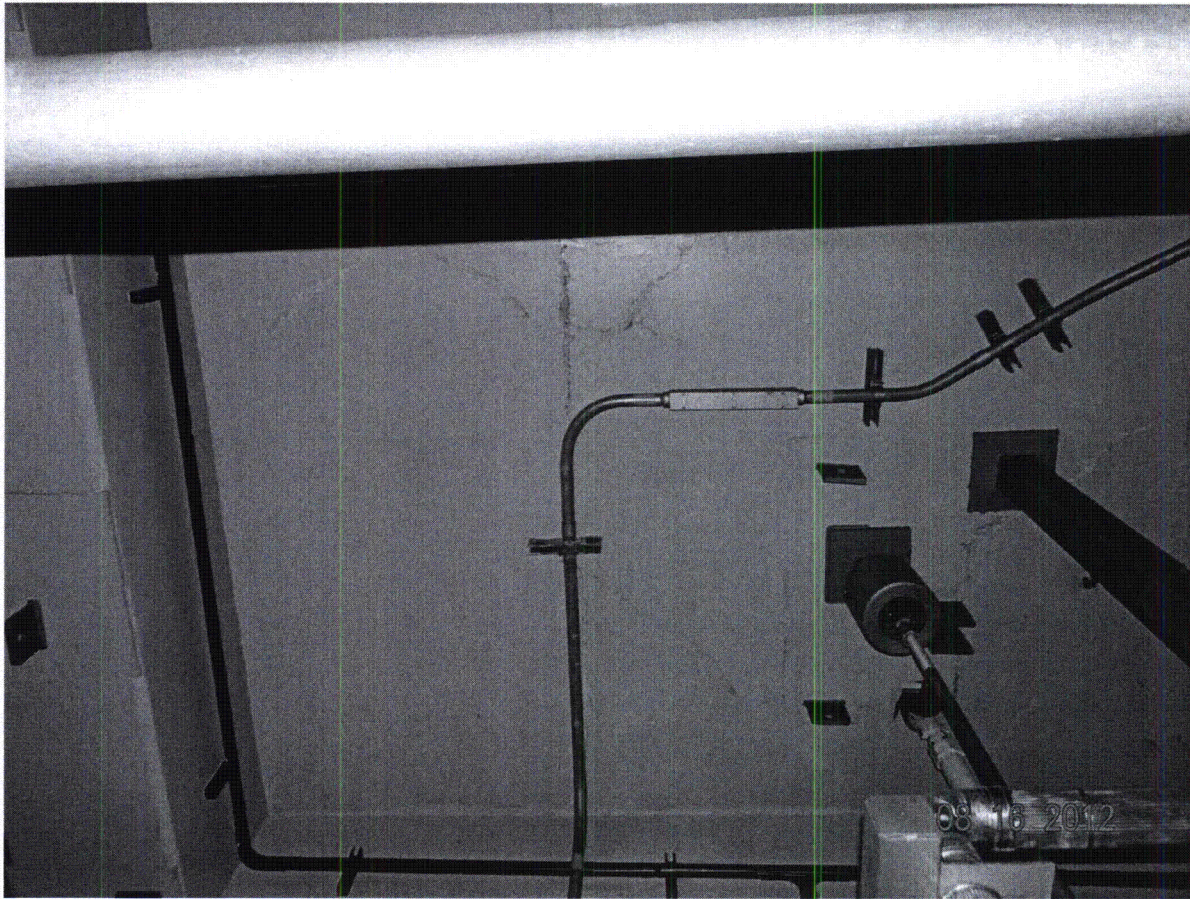


(Picture 6)

**Seismic Walkdown Pictures**

Equipment ID No. E1150F068A Equipment Class: 8, Motor & Solenoid Operated Valves

Equipment Description DIV 1 RHR Hx Service Water Outlet FCV



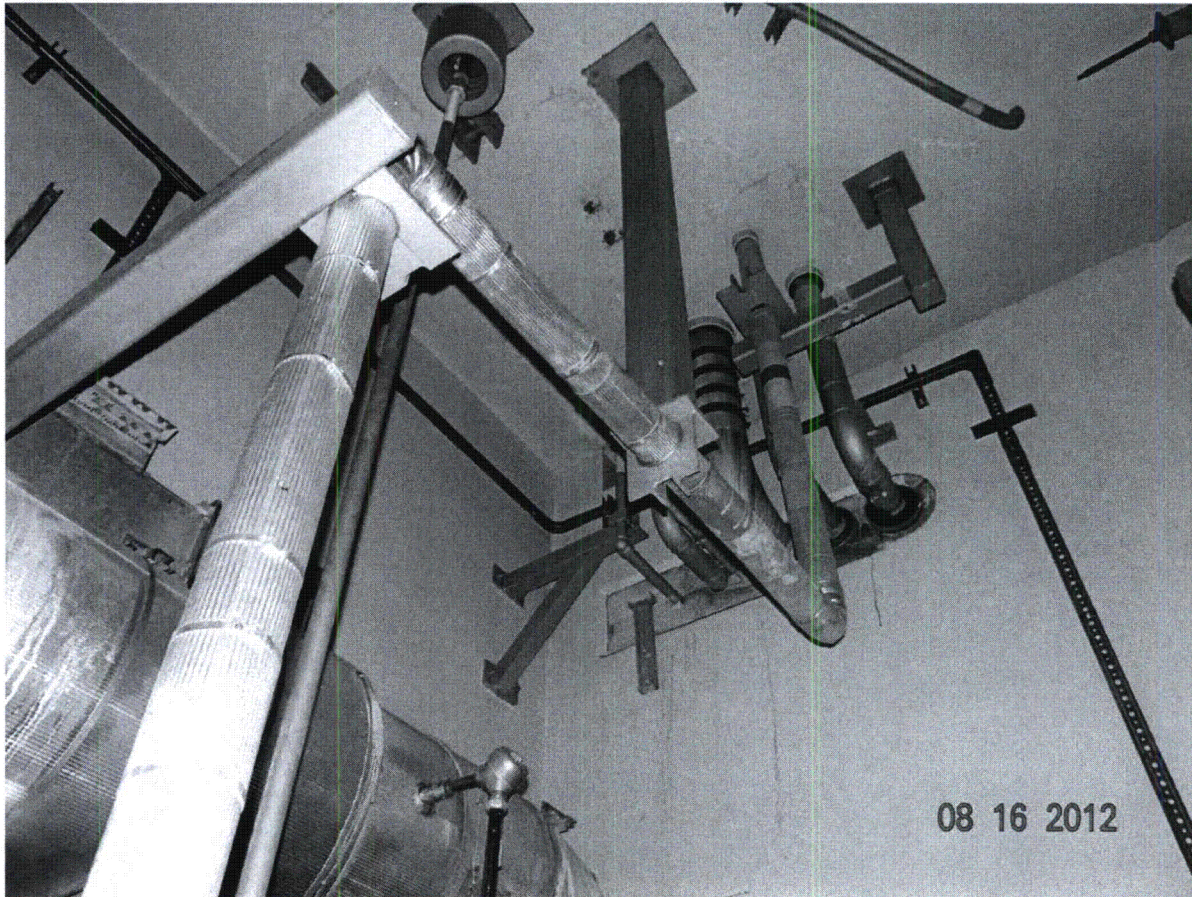
(Picture 10)



**Seismic Walkdown Pictures**

Equipment ID No. E1150F068A Equipment Class: 8, Motor & Solenoid Operated Valves

Equipment Description DIV 1 RHR Hx Service Water Outlet FCV

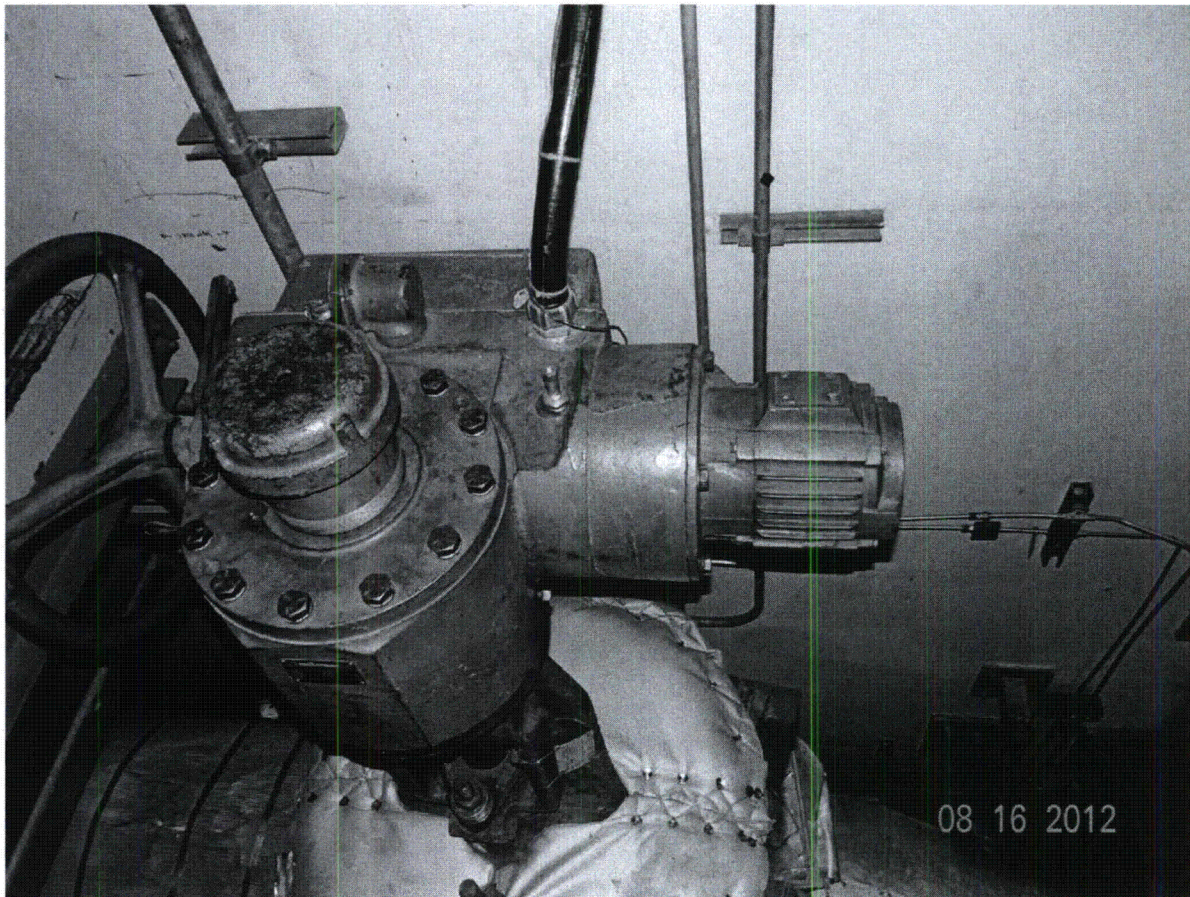


(Picture 11)

**Seismic Walkdown Pictures**

Equipment ID No. E1150F068A Equipment Class: 8, Motor & Solenoid Operated Valves

Equipment Description DIV 1 RHR Hx Service Water Outlet FCV



(Picture 12)

**Seismic Walkdown Checklist (SWC)**

Equipment ID No. E1151C001C Equip. Class<sup>1</sup> 6, Vertical Pumps

Equipment Description South Service Water "C" Pump

Location: Bldg. RHR Floor El. 590'-0" Room, Area. SRHRPR, Col. E-2

Manufacturer, Model, Etc. (optional but recommended) Gould Pumps Inc., VIT 12x18 HMC

**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  U
  
2. Is the anchorage free of bent, broken, missing or loose hardware?  Y  N  U  N/A  
*All anchors are in good condition.*
  
3. Is the anchorage free of corrosion that is more than mild surface oxidation?  Y  N  U  N/A  
*Bolts are painted (see photo DSC 01355).*
  
4. Is the anchorage free of visible cracks in the concrete near the anchors?  Y  N  U  N/A  
*No visible cracks on concrete pier or floor.*
  
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.)  
*Anchor configuration is consistent with Dwg. M-N-2090-5, Rev Q (No postings); DSN: MD 21146, Rev N (No applicable postings) and Dwg. M-N-2090-4, Rev P (No applicable Postings). (see photo DSC 01354)*
  
6. Based on the above anchorage evaluations, is the anchorage free of potentially adverse seismic conditions?  Y  N  U  
*Free of potentially adverse seismic conditions, no concerns identified.*

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

**Seismic Walkdown Checklist (SWC)**

Equipment ID No. E1151C001C Equip. Class<sup>1</sup> 6, Vertical Pumps

Equipment Description South Service Water "C" Pump

**Interaction Effects**

7. Are soft targets free from impact by nearby equipment or structures?  Y  N  U  N/A  
*No nearby equipment, cable trays or piping to impact the pump. (See photo DSC 01357).*
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  
*No equipment, ceiling tiles, lighting, and masonry block walls. Conduits/cables are adequately supported.*
9. Do attached lines have adequate flexibility to avoid damage?  Y  N  U  N/A  
*Lines have adequate flexibility. (See photo DSC 01351).*
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  
*None identified.*

**Seismic Walkdown Checklist (SWC)**

Equipment ID No. E1151C001C Equip. Class<sup>1</sup> 6, Vertical Pumps

Equipment Description South Service Water "C" Pump

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

*None*

*Seismic Engineer Walkdown PSE-53 Qualified*

Evaluator #1 : *R. Rosadbery* Date: 8/14/12

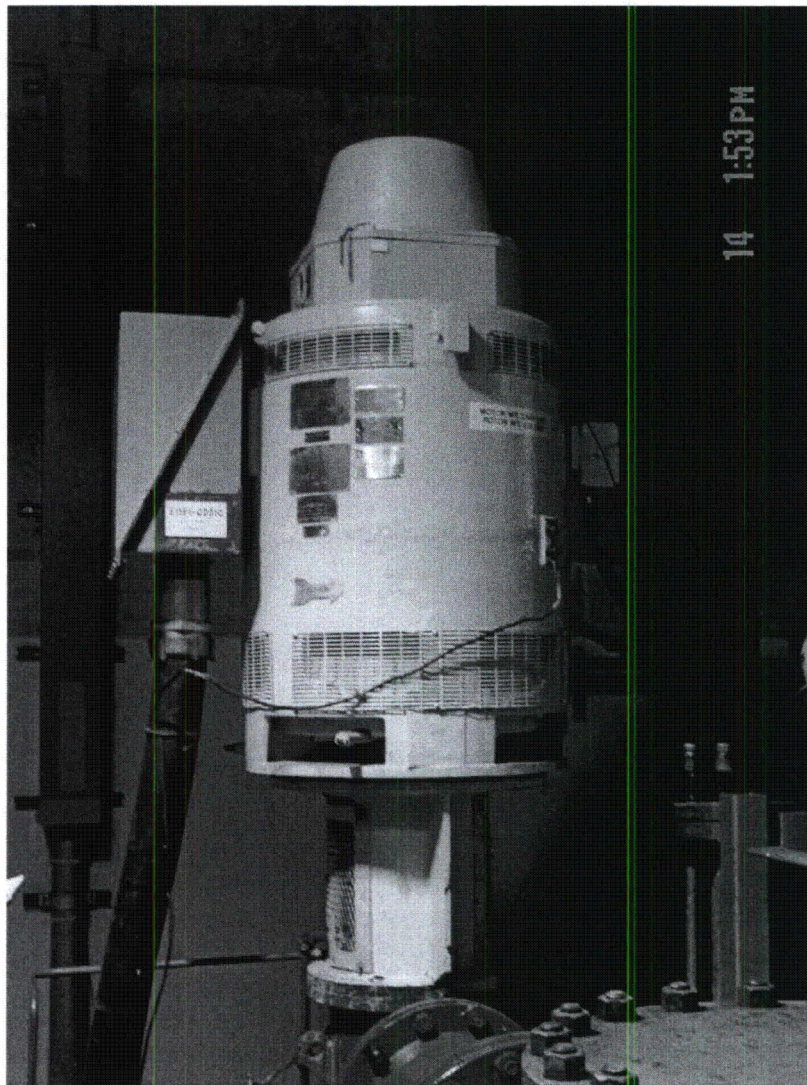
*Seismic Engineer Walkdown PSE-53 Qualified*

Evaluator #2 : *[Signature]* Date: 08/14/12

**Seismic Walkdown Pictures**

Equipment ID No. E1151C001C Equipment Class: 6, Vertical Pumps

Equipment Description South Service Water "C" Pump

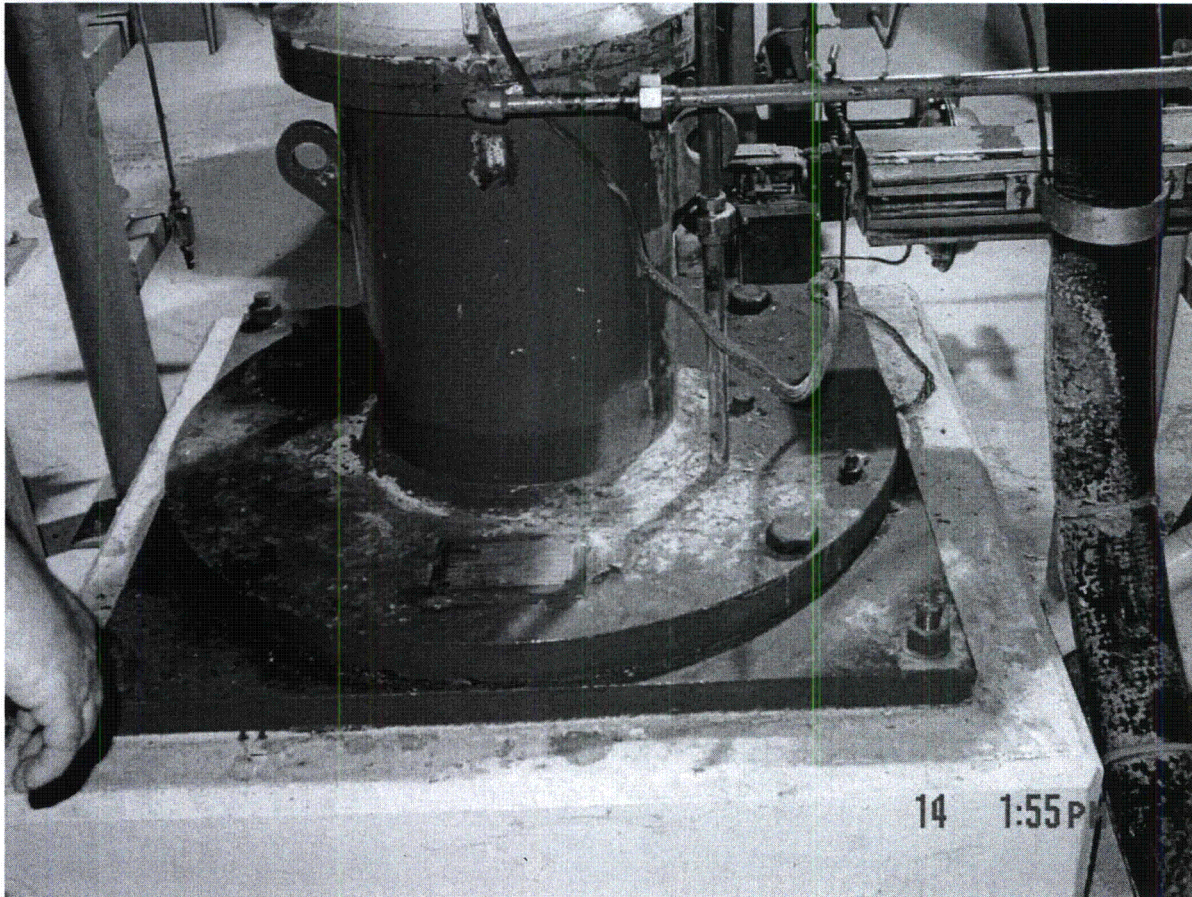


(DSC 01351)

**Seismic Walkdown Pictures**

Equipment ID No. E1151C001C Equipment Class: 6, Vertical Pumps

Equipment Description South Service Water "C" Pump

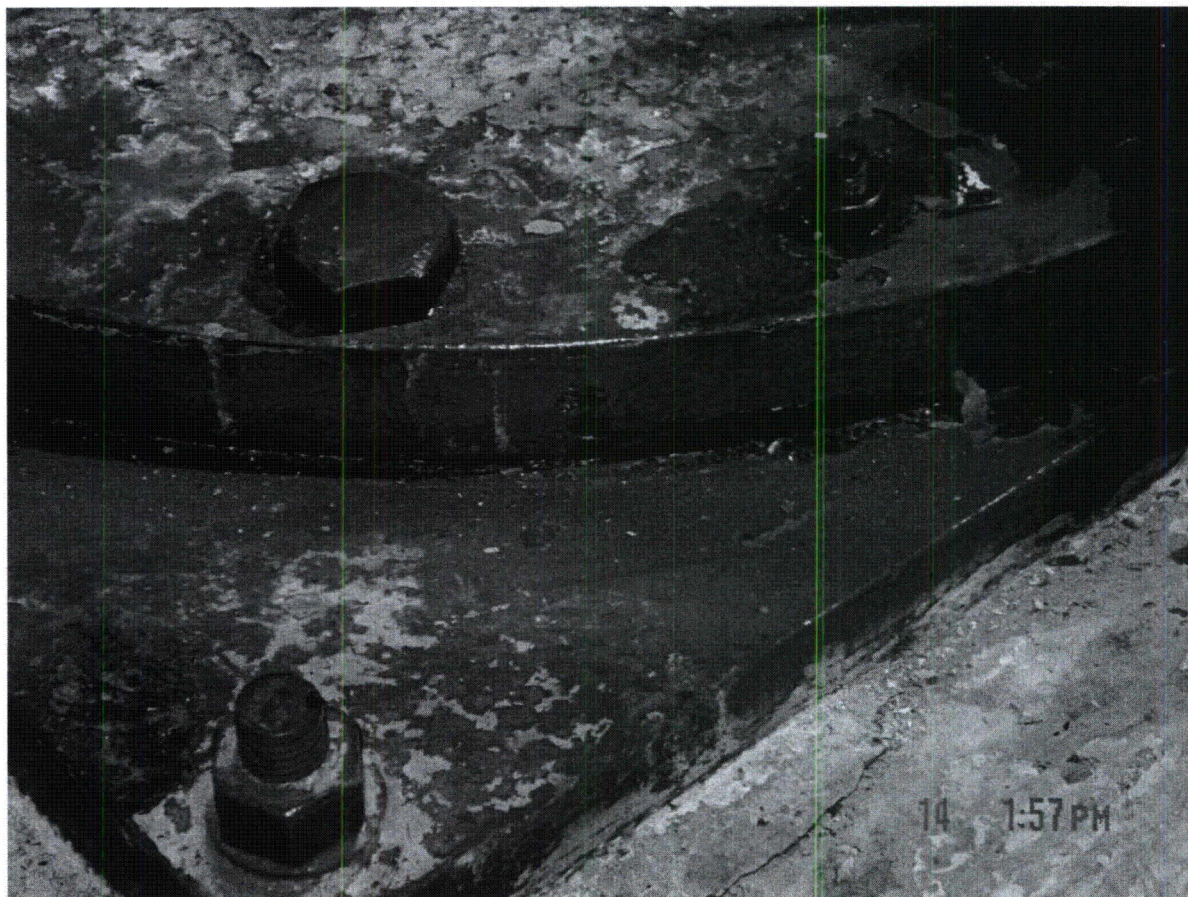


(DSC 01354)

**Seismic Walkdown Pictures**

Equipment ID No. E1151C001C Equipment Class: 6, Vertical Pumps

Equipment Description South Service Water "C" Pump



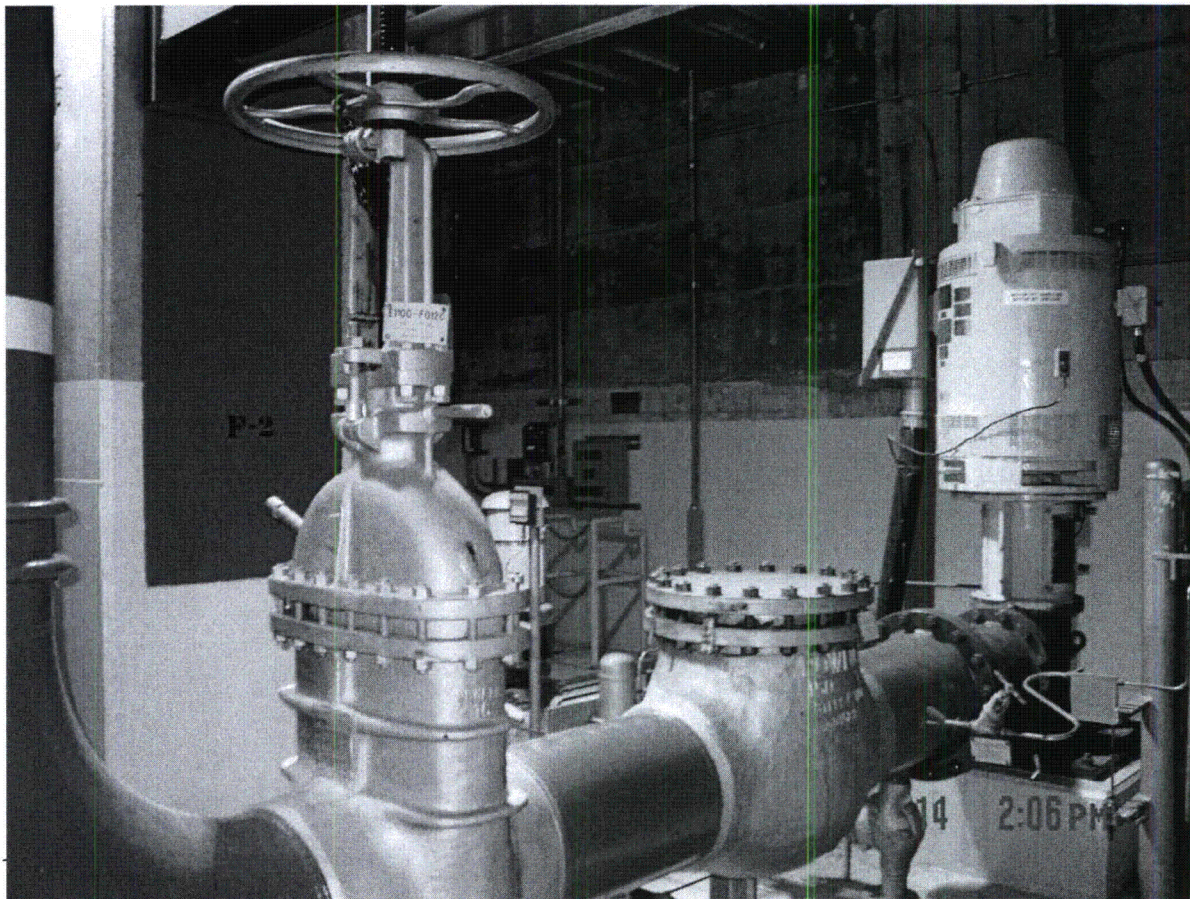
(DSC 01355)



## Seismic Walkdown Pictures

Equipment ID No. E1151C001C Equipment Class: 6, Vertical Pumps

Equipment Description South Service Water "C" Pump



(DSC 01357)

**Seismic Walkdown Checklist (SWC)**

Equipment ID No. E1156C001C Equip. Class<sup>1</sup> Fans

Equipment Description RHR SW MDCT Fan

Location: Bldg. RHR Floor El. 617'-0" Room, Area SRHRCT, Col. B-3

Manufacturer, Model, Etc. (optional but recommended) Marley Cooling Tower Co 240" DIA HP4-8

**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   
*All bolts verified.*
  
2. Is the anchorage free of bent, broken, missing or loose hardware?  Y  N  U  N/A   
*Anchors in good condition. See photos DSCN 0414 & 0420.*
  
3. Is the anchorage free of corrosion that is more than mild surface oxidation?  Y  N  U  N/A   
*No corrosion or mild surface oxidation. See photos DSCN 0414 & 0420.*
  
4. Is the anchorage free of visible cracks in the concrete near the anchors?  Y  N  U  N/A   
*No visible cracks in concrete floor/pad.*
  
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.)  
*Anchor configuration is consistent with the following drawings: M-N-2090-4 Rev. P (Anchor bolt schedule), M-N-2090-5 Rev. Q, DDVEND 2858C77 Rev 1 & 222C602 PT 1/22/1980.*  
*ALL REFERENCED DOCUMENTS WERE REVIEWED DJK 10/12/12 AND NO APPLICABLE POSTINGS WERE FOUND.*
  
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. E1156C001C Equip. Class<sup>1</sup> 9, Fans

Equipment Description RHR SW MDCT Fan

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**Interaction Effects**

7. Are soft targets free from impact by nearby equipment or structures?  Y  N  U  N/A  
*Existing cylinders nearby are securely fastened. Junction boxes are also adequately supported. No potential impact on the fan (see photo DSCN 0418).*
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  
*Area has no observed equipment, ceiling tiles or lighting.*
9. Do attached lines have adequate flexibility to avoid damage?  Y  N  U  N/A  
*Attached lines have flex conduit or loops. Attached lines attached to cylinders.*
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  
*None identified.*

Fermi 2 Seismic Walkdown Guidance Document  
Seismic Walkdown Checklist

NJPR-12-0043

Sheet 3 of 3  
Status:  N U

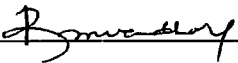
**Seismic Walkdown Checklist (SWC)**

Equipment ID No. E1156C001C Equip. Class<sup>1</sup> 9, Fans


Equipment Description RHR SW MDCT Fan

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

*Seismic Engineer Walkdown PSE-53 Qualified*

Evaluator #1 :  Date: 8/15/12

*Seismic Engineer Walkdown PSE-53 Qualified*

Evaluator #2 :  Date: 08/15/12

**Seismic Walkdown Pictures**

Equipment ID No. E1156C001C Equipment Class: 9, Fans

Equipment Description RHR SW MDCT Fan



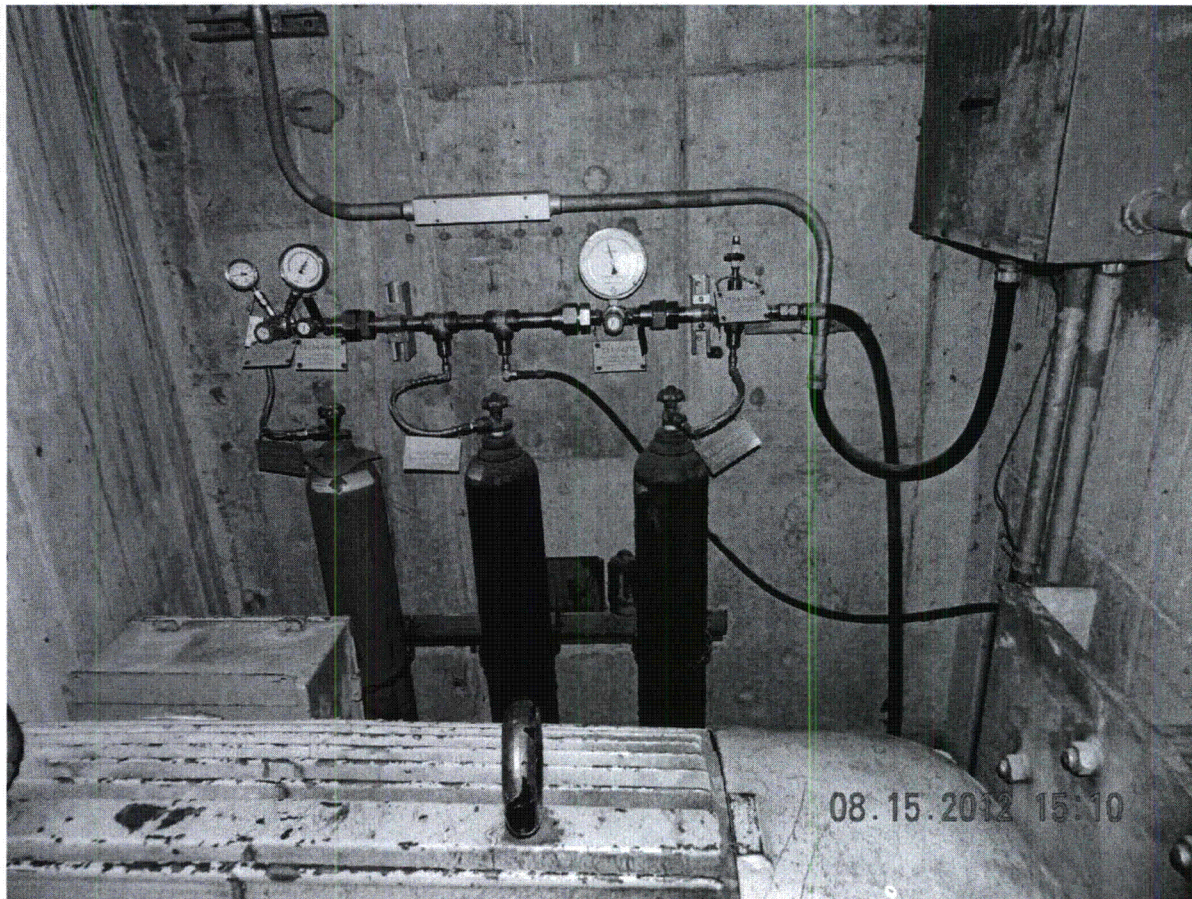
(DSCN 0414)

Bolt Configuration (Back)

**Seismic Walkdown Pictures**

Equipment ID No. E1156C001C Equipment Class: 9, Fans

Equipment Description RHR SW MDCT Fan



(DSCN 0418)

## Seismic Walkdown Pictures

Equipment ID No. E1156C001C Equipment Class: 9, Fans

Equipment Description RHR SW MDCT Fan



(DSCN 0420)

Bolt Configuration (Front)

**Seismic Walkdown Checklist (SWC)**

Equipment ID No. E2101C001C Equip. Class<sup>1</sup> 7-Pneumatic-Operated Valve

Equipment Description CS DIV 1 "C" Pump

Location: Bldg. RB Floor El. 540'-0" Room, Area A-05, Col. G-15

Manufacturer, Model, Etc. (optional but recommended) Borg-Warner Corp. JW-4106-DJ

**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?  
*All anchors present and secure.*  Y  N  U  N/A
  
3. Is the anchorage free of corrosion that is more than mild surface oxidation?  
*No corrosion observed.*  Y  N  U  N/A
  
4. Is the anchorage free of visible cracks in the concrete near the anchors?  
*No concrete cracks observed.*  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.)  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

MPS 10/3/12



**Seismic Walkdown Checklist (SWC)**

Equipment ID No. E2101C001C Equip. Class<sup>1</sup> 7-Pneumatic-Operated Valve

Equipment Description CS DIV 1 "C" Pump

**Interaction Effects**

7. Are soft targets free from impact by nearby equipment or structures?  Y  N  U  N/A   
*There are no impact sources observed nearby.*
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   
*Lights above are swivel mounts that will not affect the asset. Overhead pipes/conduit are appropriately supported.*
9. Do attached lines have adequate flexibility to avoid damage?  Y  N  U  N/A   
*Attached lines are made of a flexible material or are looped to provide adequate flexibility. (See Picture 18.)*
10. Based on the above seismic interaction evaluations, is equipment free of potentially adverse seismic interaction effects?  Y  N  U   
*The asset and a local support brace have a minimum clearance of approximately 1½". These items are quite rigid and robust, therefore they do not pose an adverse seismic interaction per engineering judgment.*

**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   
*No adverse conditions were identified.*

**Seismic Walkdown Checklist (SWC)**

Equipment ID No. E2101C001C Equip. Class' 5, Horizontal Pumps

Equipment Description CS DIV 1 "C" PUMP.

Comments (Additional pages may be added as necessary)

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*Seismic Engineer Walkdown PSE-53 Qualified*

Evaluator #1: Michael P. Dasso Date: 8/21/12

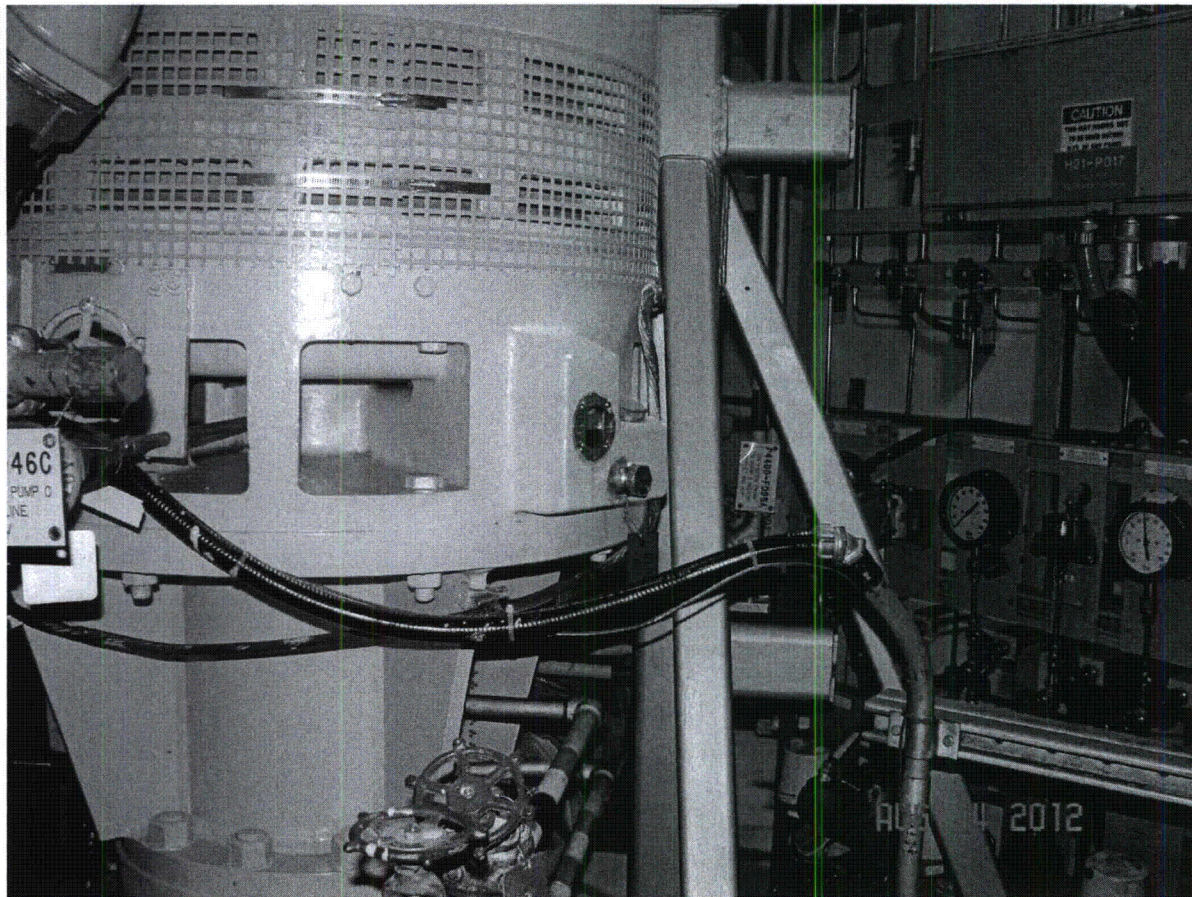
*Seismic Engineer Walkdown PSE-53 Qualified*

Evaluator #2: Scott Bauen Date: 8/21/12

## Seismic Walkdown Pictures

Equipment ID No. E2101C001C Equipment Class: 5, Horizontal Pumps

Equipment Description CS DIV 1 "C" Pump



(Picture 18)

**Seismic Walkdown Checklist (SWC)**

Equipment ID No. E2150F031A Equip. Class<sup>1</sup> 8, Motor-Operated and Solenoid-Operated Valves

Equipment Description Div. I CS Pumps Min. Flow Valve

Location: Bldg. RB Floor El. 568'-0" Room, Area A-08 / Col. G-15

Manufacturer, Model, Etc. (optional but recommended) Limitorque SMB-000

**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   
*Asset is attached to piping system via a flange with 10 - ( 1/2" or 5/8" ) diameter bolts on an 8" diameter bolt circle. (See pictures 1 and 2.)*
  
3. Is the anchorage free of corrosion that is more than mild surface oxidation? Y  N  U  N/A   
*Bolts have no corrosion.*
  
4. Is the anchorage free of visible cracks in the concrete near the anchors? Y  N  U  N/A   
*No anchorage to concrete.*
  
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 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

MPS 10/4/12

**Seismic Walkdown Checklist (SWC)**

Equipment ID No. E2150F031A Equip. Class<sup>1</sup> 8, Motor-Operated and Solenoid-Operated Valves

Equipment Description Div. I CS Pumps Min. Flow Valve

---

**Interaction Effects**

7. Are soft targets free from impact by nearby equipment or structures?  Y  N  U  N/A  
*The only nearby equipment is a pipe which is 5" away that is fully restrained from impact because it is well-supported in the direction of the asset. (See picture 1.)*
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  
*All overhead equipment is properly restrained.*
9. Do attached lines have adequate flexibility to avoid damage?  Y  N  U  N/A  
*Attached line has adequate flexibility. (See picture 2.)*
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  
*A pipe support above the asset is only 1" away from another pipe, however, the pipe has insulation around it so actual distance is acceptable. Nut and bolts fasteners were used in two locations and Allen bolts were used elsewhere on the asset's operator panel. This condition is not considered adverse per engineering judgment. In addition, the case is free of leaks at the seal that is secured by the fasteners. (See picture 6.)*

MPS 10/4/12

**Seismic Walkdown Checklist (SWC)**

Equipment ID No. E2150F031A Equip. Class' 8 - Motor- and Solenoid-Operated Valves  
Equipment Description Div. 1 CS PMPS Min. Flow Valve

Comments (Additional pages may be added as necessary)

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*Seismic Engineer Walkdown PSE-53 Qualified*

Evaluator #1: Mil P. Sasso Date: 8/24/12

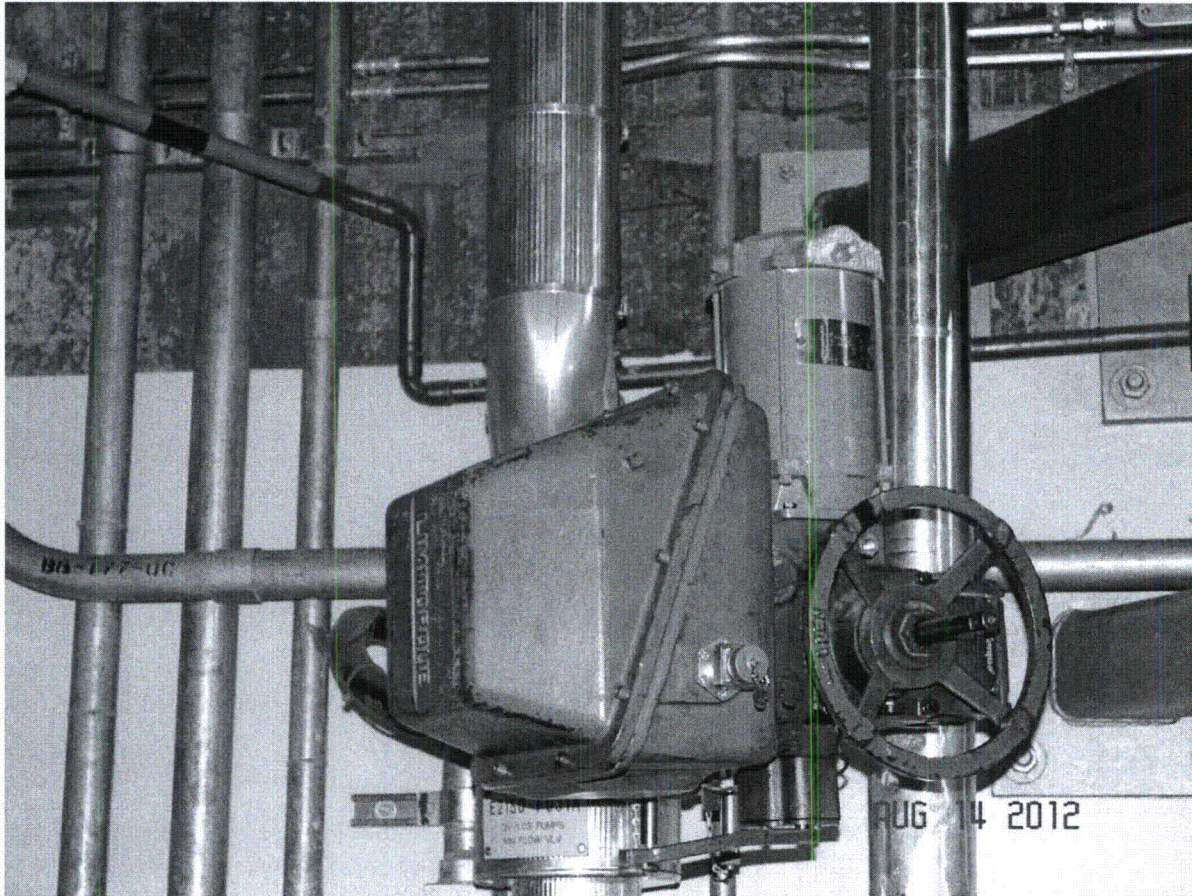
*Seismic Engineer Walkdown PSE-53 Qualified*

Evaluator #2: Scott Bauer Date: 8/24/12

**Seismic Walkdown Pictures**

Equipment ID No. E2150F031A Equipment Class: 8, Motor/Solenoid-Operated Valves

Equipment Description Div. I CS Pumps Min. Flow Valve

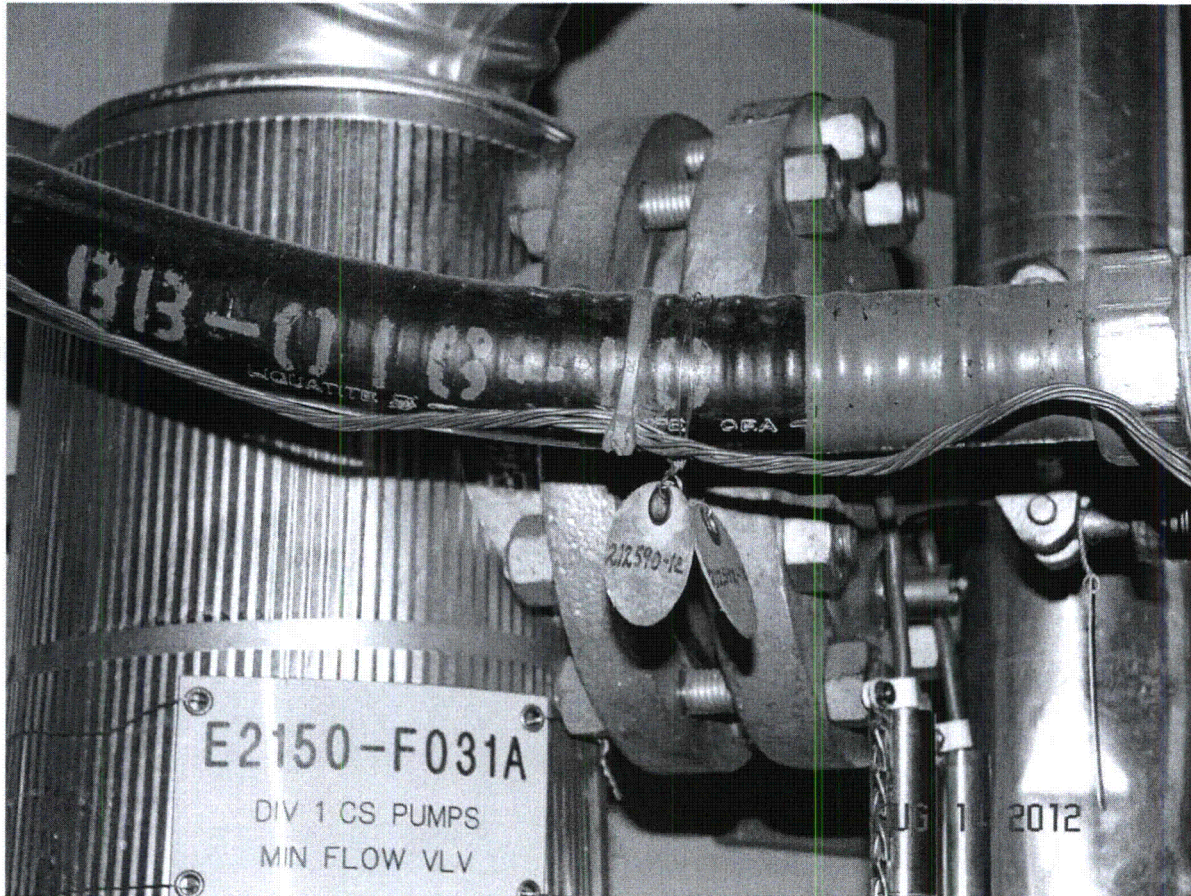


PICTURE #1

**Seismic Walkdown Pictures**

Equipment ID No. E2150F031A Equipment Class: 8, Motor/Solenoid-Operated Valves

Equipment Description Div. I CS Pumps Min. Flow Valve



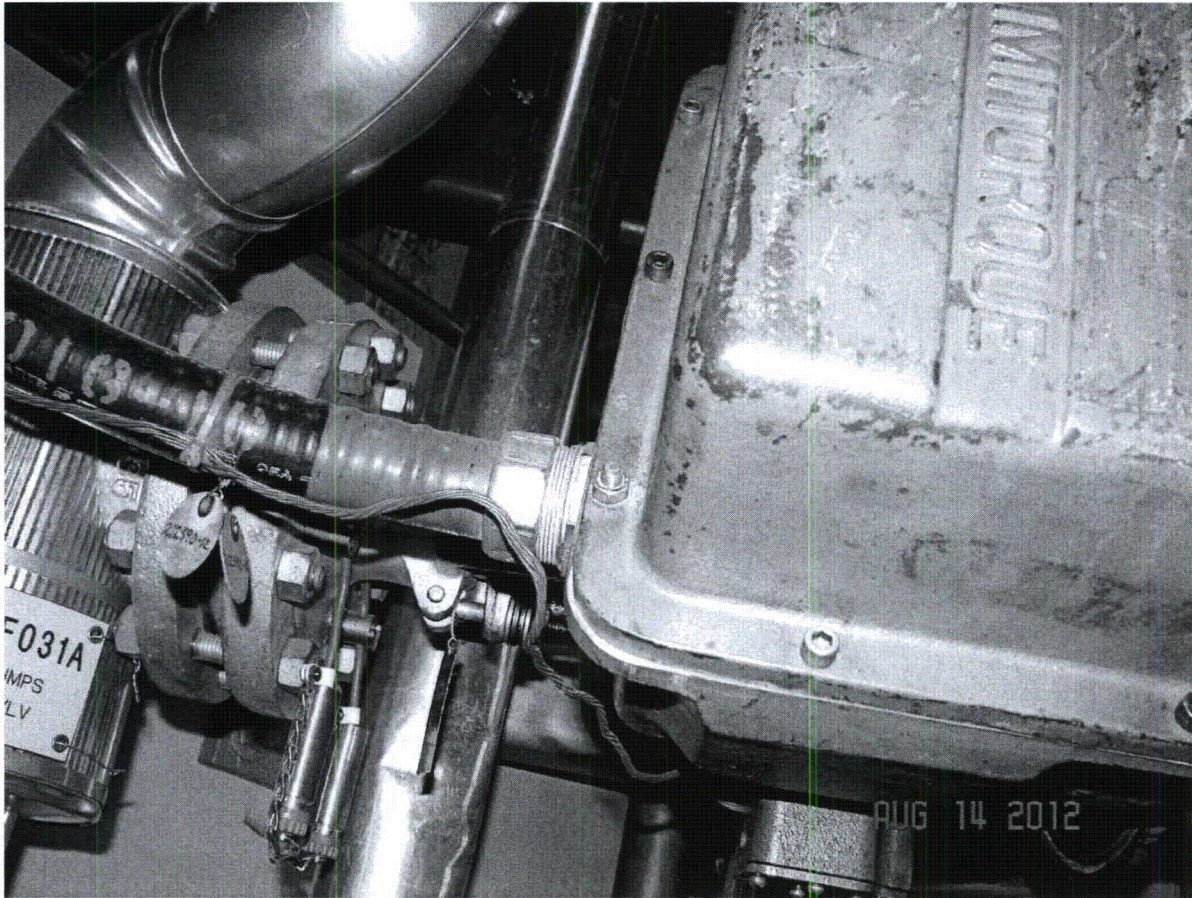
PICTURE #2



**Seismic Walkdown Pictures**

Equipment ID No. E2150F031A Equipment Class: 8, Motor/Solenoid-Operated Valves

Equipment Description Div. I CS Pumps Min. Flow Valve



PICTURE #6

**Seismic Walkdown Checklist (SWC)**

Equipment ID No. E4101C001C Equip. Class<sup>1</sup> 5, Horizontal Pump

Equipment Description HPCI Turbine Driven Oil Pump

Location: Bldg. RB Floor El. 540'-0" Room, Area B-01, Col. H-9

Manufacturer, Model, Etc. (optional but recommended) Delaval Turbine Co. Model A3DBCX187, IMO

**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  
*Anchorage is between flanges. All bolts are present and securely tightened. See pictures 11, 14 & 17.*
3. Is the anchorage free of corrosion that is more than mild surface oxidation?  Y  N  U  N/A  
*Bolts do not exhibit corrosion. See pictures 11, 14 & 17.*
  
4. Is the anchorage free of visible cracks in the concrete near the anchors?  Y  N  U  N/A  
*Bolts are not anchored to concrete.*
  
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

MPS 10/9/12

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

**Seismic Walkdown Checklist (SWC)**

Equipment ID No. E4101C001C Equip. Class<sup>1</sup> 5, Horizontal Pump

Equipment Description HPCI Turbine Driven Oil Pump

**Interaction Effects**

7. Are soft targets free from impact by nearby equipment or structures?  Y  N  U  N/A   
*No potential impact sources were observed.*

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   
*No overhead equipment. Area above is open for the purposes of using a local hoist.*

9. Do attached lines have adequate flexibility to avoid damage?  Y  N  U  N/A   
*Attached lines have adequate flexibility. The existing condition is found to be acceptable based on the following:*

*The pump is securely bolted to the HPCI Turbine outer Casting with one set of feet supported vertically by two springs. See pictures 11, 14, 17 & 19. These springs are referred to as Resilient mounts per the "HPCI Turbine Main Oil Pump Disassembly and Reassembly Procedure 35.202.006" (pages 4 and 11).*

*Per calculation DC-3283 Vol IA Rev. A, All HPCI Oil piping system weight support and seismic restraint locations were found adequate for design loading and guarantee flexibility for thermal expansion.*

*The relatively small pump is light weight.*

*Short cantilever distance of the turbine casing.*

*Rigid mounting to the casing with additional spring supports.*

*Low seismic loads (ZPA) in the Auxiliary Building Sub-Basement.*

*The Pump was previously evaluated in an IPEEE Walkdown SEWS of good seismic design.*

*The pump was considered to be of good seismic design based on the GE Component Seismic Evaluation Report TR102-00058 (1996).*

*ALL REFERENCED DOCUMENTS WERE REVIEWED AND NONAPPLICABLE POSTINGS WERE FOUND. ~ DJK 10/12/12*

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

*MPS 10/10/12*

**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

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Seismic Walkdown Checklist

NJPR-12-0043

Sheet 3 of 3  
Status:  Y  N  U

**Seismic Walkdown Checklist (SWC)**

Equipment ID No. E410/C00/C Equip. Class' 5-Horizontal Pumps  
Equipment Description HPCI Turbine Driven Oil Pump

Comments (Additional pages may be added as necessary)

This asset was not identified by an equipment ID tag in the field. We could determine its location and identify it by referring to drawing M-5708-2 and the general sketch of the part made by the manufacturer. CARD 12-26642 was issued for missing tag.  
M-5708-2, REV. L HAS NO POSTINGS / DSK 10/21/12

Seismic Engineer Walkdown PSE-53 Qualified

Evaluator #1: Michael P. Lasso Date: 8/7/12

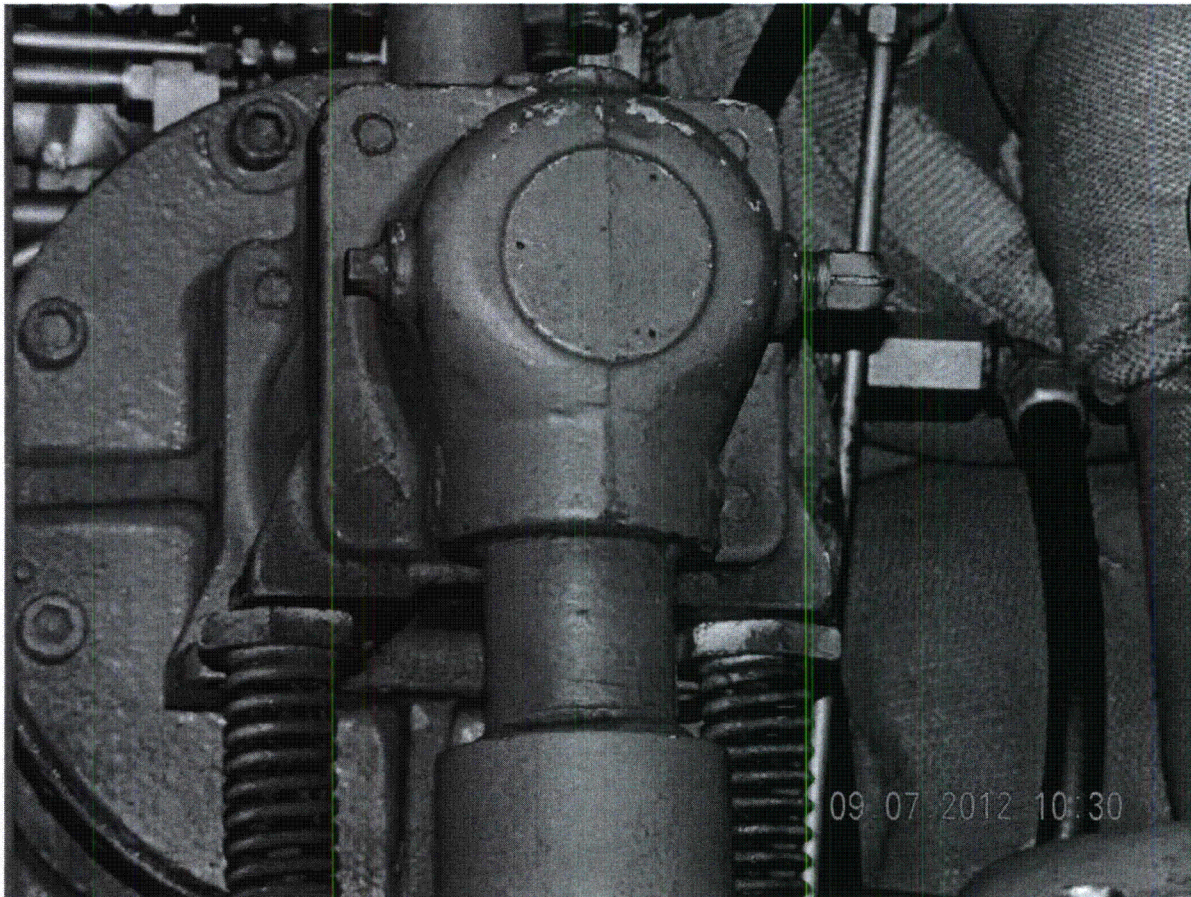
Seismic Engineer Walkdown PSE-53 Qualified

Evaluator #2: Scott Bauer Date: 8/7/12

**Seismic Walkdown Pictures**

Equipment ID No. E4101C001C Equipment Class: 5 – Horizontal Pumps

Equipment Description HPCI Turbine Driven Oil Pump

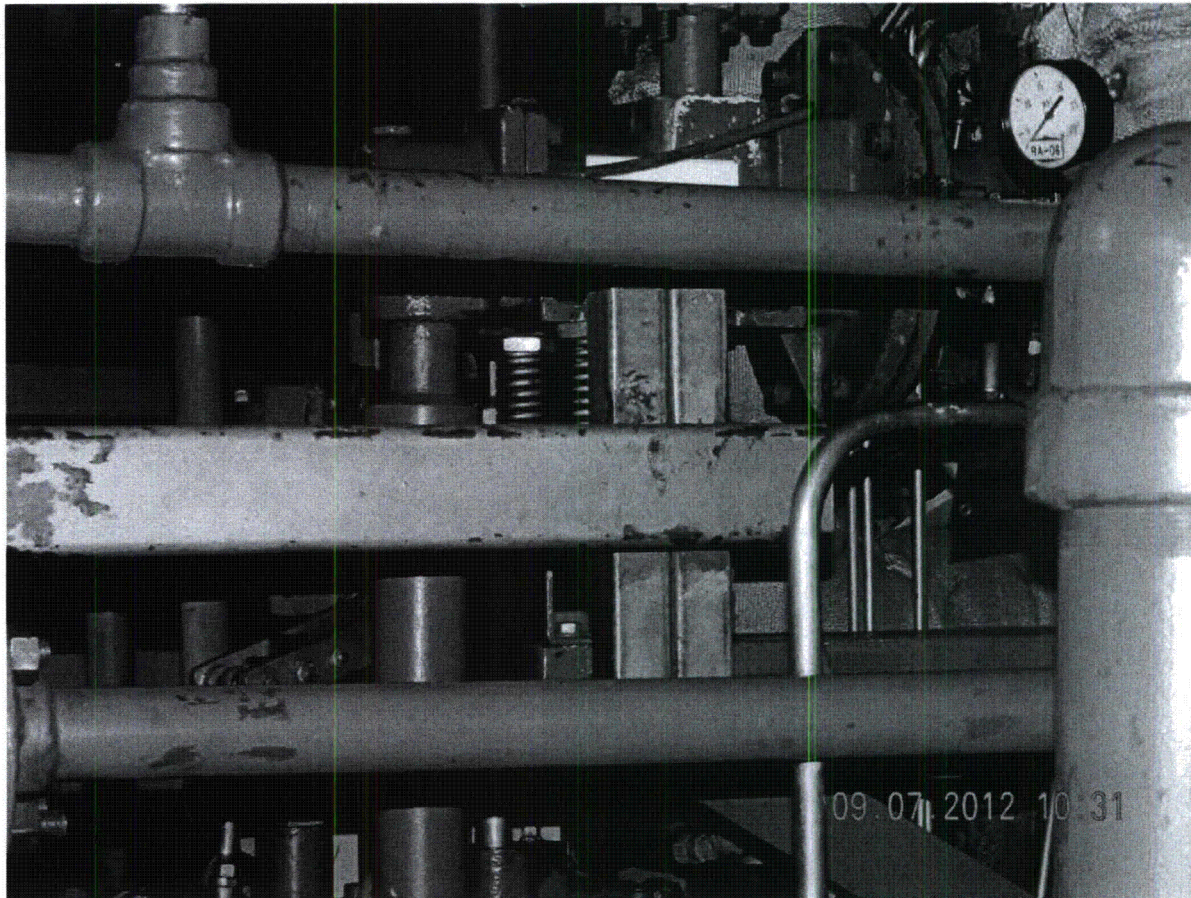


Bolting Configuration for HPCI Turbine Driven Oil Pump  
(Picture 11)

**Seismic Walkdown Pictures**

Equipment ID No. E4101C001C Equipment Class: 5 – Horizontal Pumps

Equipment Description HPCI Turbine Driven Oil Pump

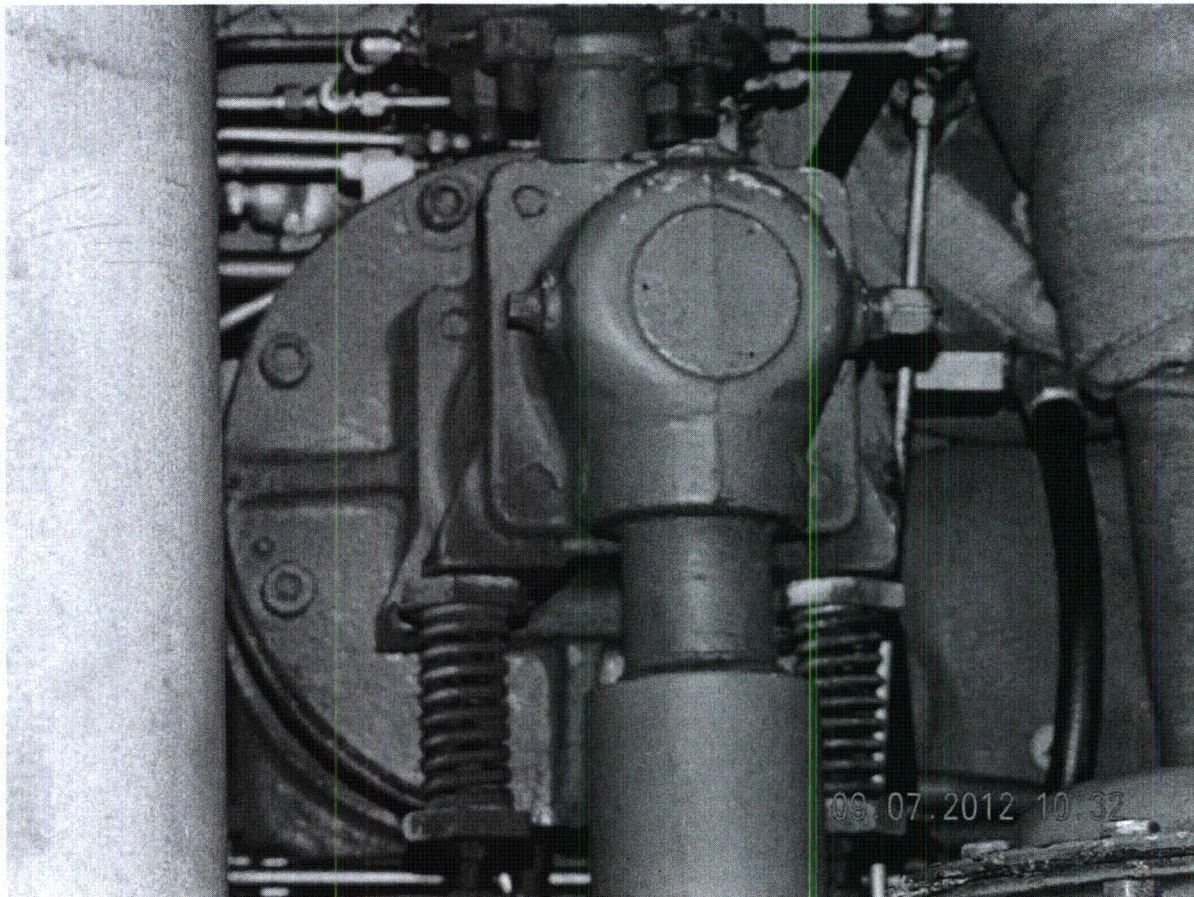


Side View of HPCI Turbine Driven Oil Pump  
(Picture 14)

**Seismic Walkdown Pictures**

Equipment ID No. E4101C001C Equipment Class: 5 – Horizontal Pumps

Equipment Description HPCI Turbine Driven Oil Pump

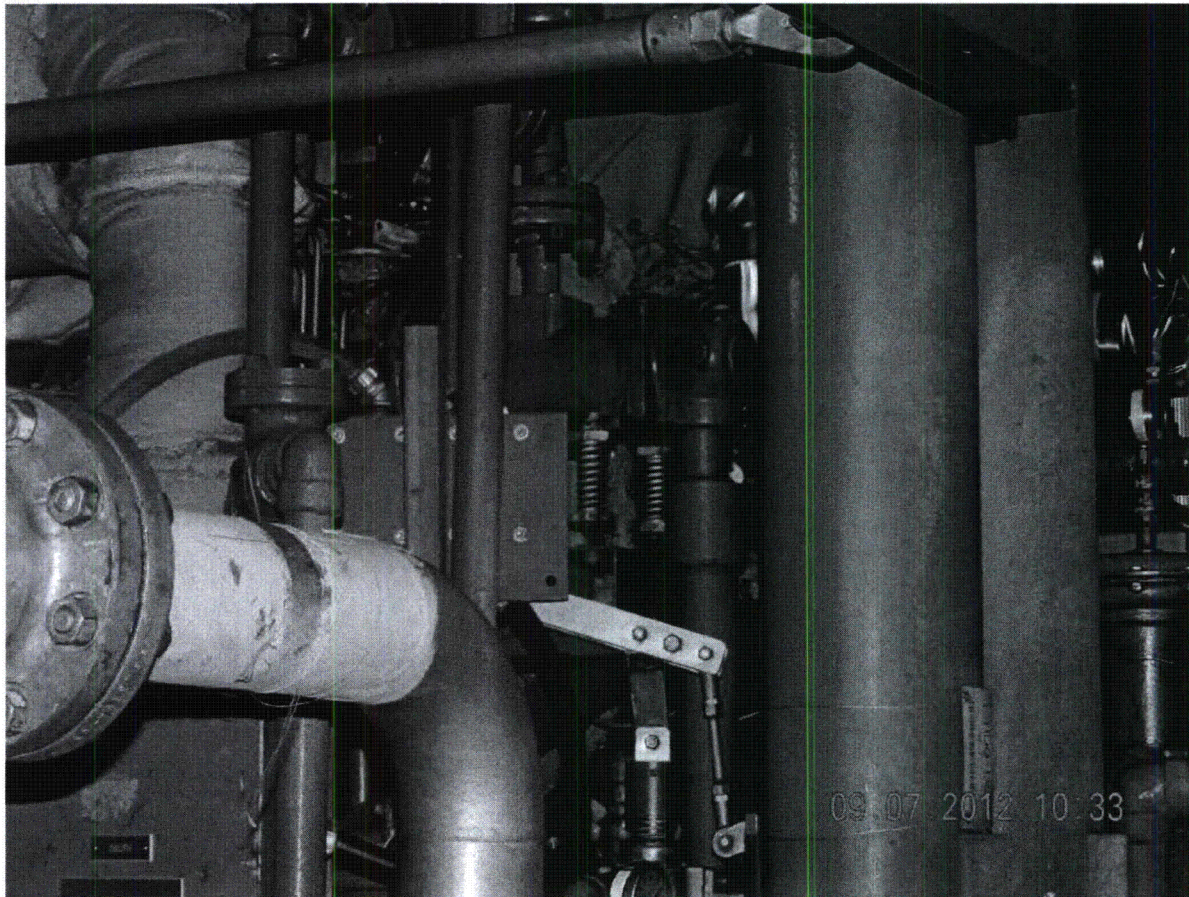


Bolting Configuration for HPCI Turbine Driven Oil Pump  
(Picture 17)

**Seismic Walkdown Pictures**

Equipment ID No. E4101C001C Equipment Class: 5 – Horizontal Pumps

Equipment Description HPCI Turbine Driven Oil Pump



Side View of HPCI Turbine Driven Oil Pump  
(Picture 19)



**Seismic Walkdown Checklist (SWC)**

Equipment ID No. E4150F001 Equip. Class<sup>1</sup> 8, Motor-Operated Valve

Equipment Description HPCI Turbine Steam Supply Isolation MOV

Location: Bldg. RB Floor El. 540'-0" Room, Area B-01, Col. H-10

Manufacturer, Model, Etc. (optional but recommended) Limitorque Model SMB-1

**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 asset is attached to the HPCI Turbine steam piping system.*
  
3. Is the anchorage free of corrosion that is more than mild surface oxidation?  Y  N  U  N/A  
*No corrosion present.*
  
4. Is the anchorage free of visible cracks in the concrete near the anchors?  Y  N  U  N/A  
*No visible cracks in concrete for the local pipe hangers. The asset is not anchored to concrete.*
  
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

MPS 10/3/12

**Seismic Walkdown Checklist (SWC)**

Equipment ID No. E4150F001 Equip. Class<sup>1</sup> 8, Motor-Operated Valve

Equipment Description HPCI Turbine Steam Supply Isolation MOV

**Interaction Effects**

7. Are soft targets free from impact by nearby equipment or structures?  Y  N  U  N/A  
*No potential impact sources were observed. (See pictures 1, 4 & 5.)*
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  
*No overhead equipment. Area above is open for the purposes of using a local hoist. (See Picture 4.)*
9. Do attached lines have adequate flexibility to avoid damage?  Y  N  U  N/A  
*Attached lines have adequate flexibility. (See Picture 5.)*
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

Fermi 2 Seismic Walkdown Guidance Document  
Seismic Walkdown Checklist

NJPR-12-0043

Sheet 3 of 3  
Status: (Y) N U

**Seismic Walkdown Checklist (SWC)**

Equipment ID No. E4150F00L Equip. Class' 8 - motor-operated and Solenoid operated Valves  
Equipment Description HPCI Turb Stm Sply Iso MOV

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

-N/A-

JAM  
10/10/12

*Seismic Engineer Walkdown PSE-53 Qualified*

Evaluator #1: Michael P. Sasso Date: 8/7/12

*Seismic Engineer Walkdown PSE-53 Qualified*

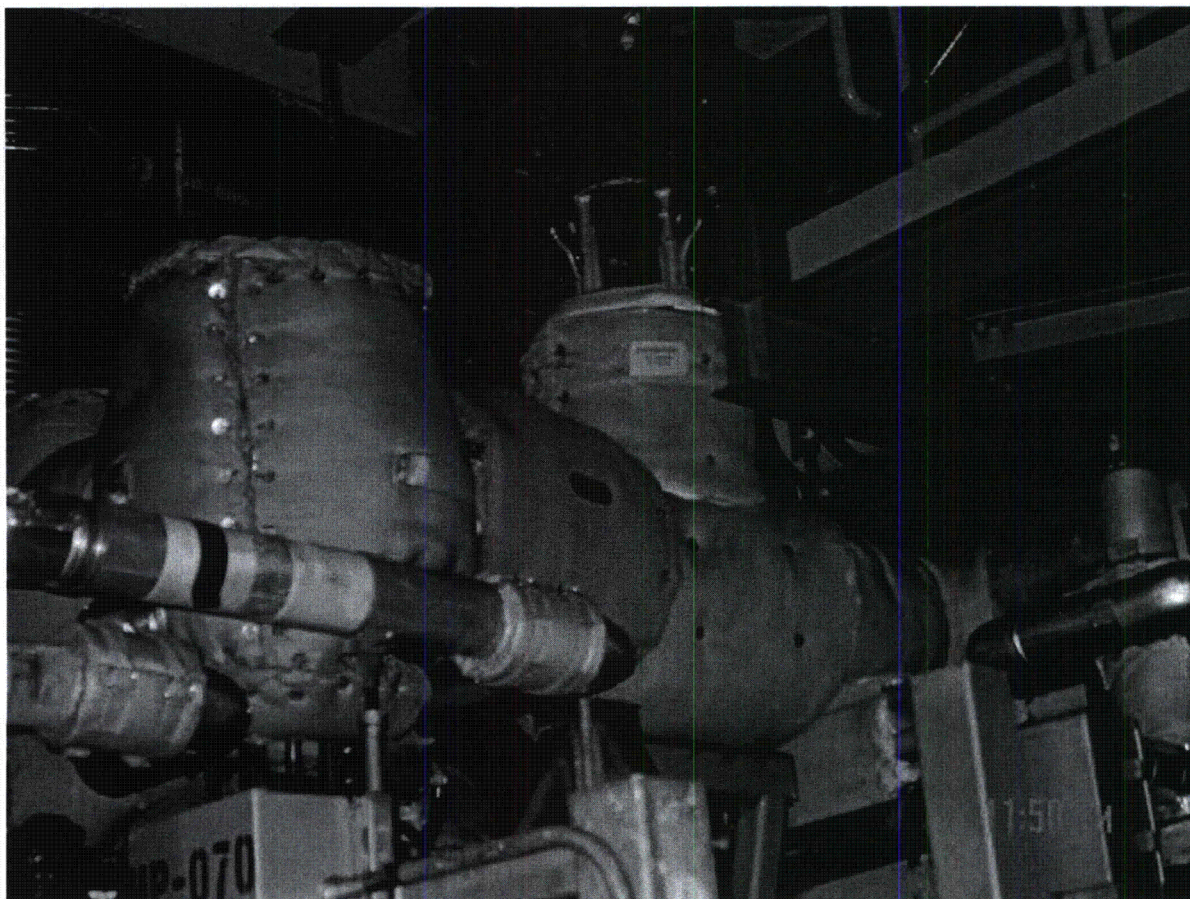
Evaluator #2: Scott Bauen Date: 8/7/12

**Seismic Walkdown Pictures**

Equipment ID No. E4150F001 Equipment Class: 8 – Motor Operated and Solenoid Operated Valves

Equipment Description HPCI Turbine Steam Supply Isolation MOV

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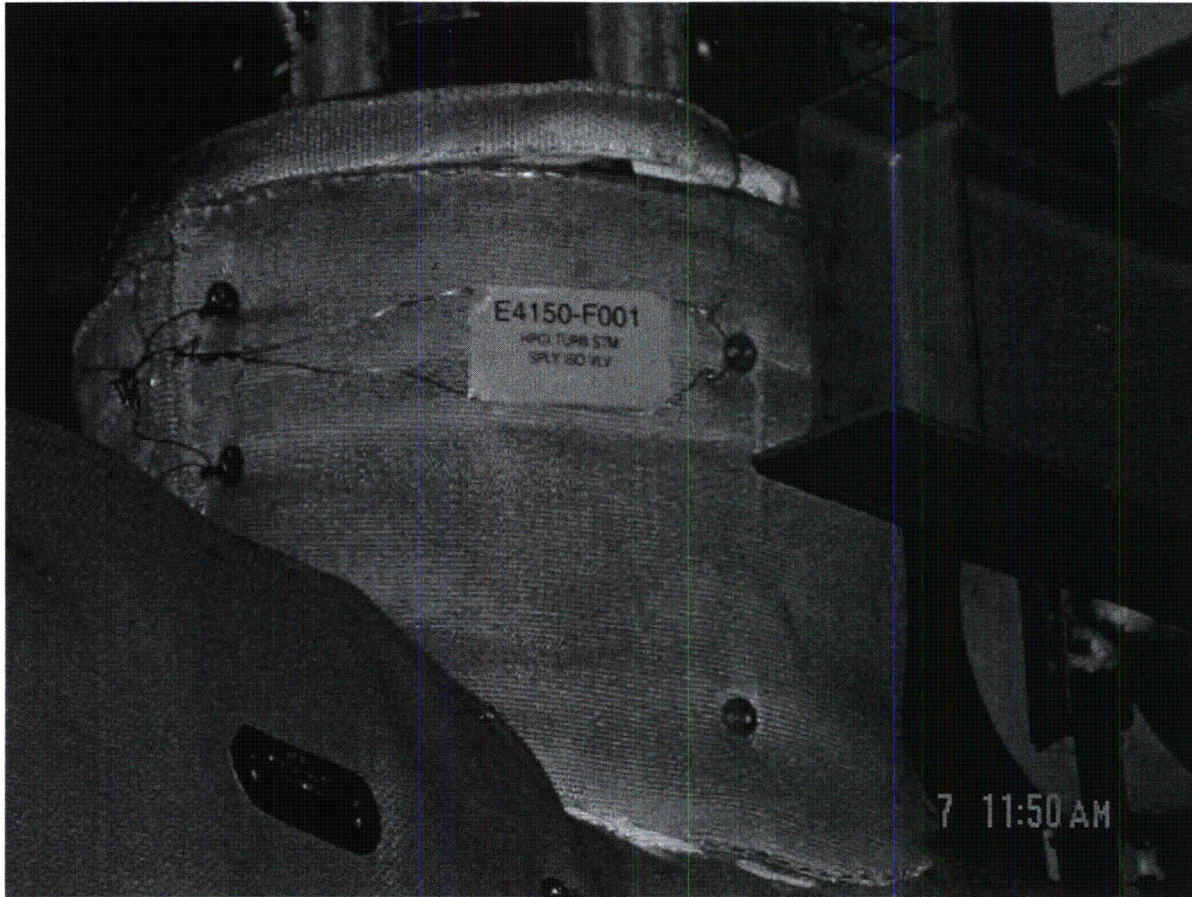
General View of Valve Configuration  
(Picture 1)

**Seismic Walkdown Pictures**

Equipment ID No. E4150F001 Equipment Class: 8 – Motor Operated and Solenoid Operated Valves

Equipment Description HPCI Turbine Steam Supply Isolation MOV

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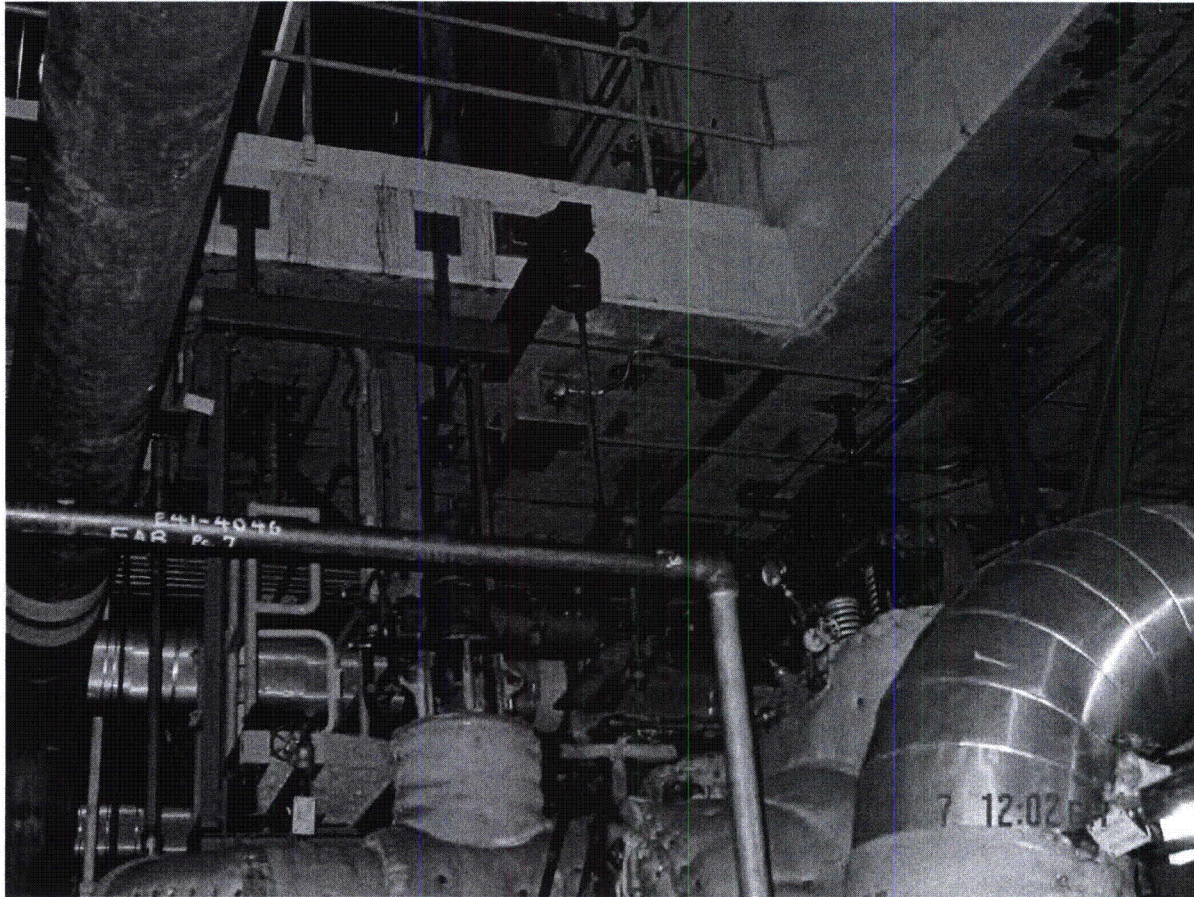
General View of Valve  
(Picture 3)

**Seismic Walkdown Pictures**

Equipment ID No. E4150F001 Equipment Class: 8 – Motor Operated and Solenoid Operated Valves

Equipment Description HPCI Turbine Steam Supply Isolation MOV

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Piping and Supports Overhead the Valve  
(Picture 4)

**Seismic Walkdown Pictures**

Equipment ID No. E4150F001 Equipment Class: 8 – Motor Operated and Solenoid Operated Valves

Equipment Description HPCI Turbine Steam Supply Isolation MOV

---



Flexible Conduit Lines to Motor Operator  
(Picture 5)

**Seismic Walkdown Checklist (SWC)**

Equipment ID No. E4150F004 Equip. Class<sup>1</sup> 8, Motor-Operated Valve

Equipment Description HPCI Booster Pump Suction from CST Isolation MOV

Location: Bldg. RB Floor El. 540'-0" Room, Area B-01, Col. G-11

Manufacturer, Model, Etc. (optional but recommended) Limitorque Model SB-0

**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 anchorage is present and secure. (See pictures 1,2,3,4 and 8.)*
  
3. Is the anchorage free of corrosion that is more than mild surface oxidation? Y  N  U  N/A   
*Little to no corrosion observed. (See pictures 1,2,3,4 and 8.)*
  
4. Is the anchorage free of visible cracks in the concrete near the anchors? Y  N  U  N/A   
*There are no cracks in concrete or steel members near the asset. The asset not directly anchored to concrete.*
  
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

MPS 10/9/12



**Seismic Walkdown Checklist (SWC)**

Equipment ID No. E4150F004 Equip. Class<sup>1</sup> 8, Motor-Operated Valve

Equipment Description HPCI Booster Pump Suction from CST Isolation MOV

**Interaction Effects**

7. Are soft targets free from impact by nearby equipment or structures?  Y  N  U  N/A  
*There were no potential impact sources observed. (See Pictures 4 and 5.)*
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  
*All overhead equipment/piping was observed to be adequately anchored and restrained. (See pictures 5 and 6.)*
9. Do attached lines have adequate flexibility to avoid damage?  Y  N  U  N/A  
*The attached lines have adequate flexibility. Note the flex conduits in Picture 3.*
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

Fermi 2 Seismic Walkdown Guidance Document  
Seismic Walkdown Checklist

NJPR-12-0043

Sheet 3 of 3  
Status: Y N U

**Seismic Walkdown Checklist (SWC)**

Equipment ID No. E4150F004 Equip. Class' 8- motor operated & Solenoid operated valves.  
Equipment Description HPCI Booster Pump Suct from CST ISO MOV

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

-N/A-

JAM  
10/10/12

*Seismic Engineer Walkdown PSE-53 Qualified*

Evaluator #1: Michael P. Lasso Date: 8/7/12

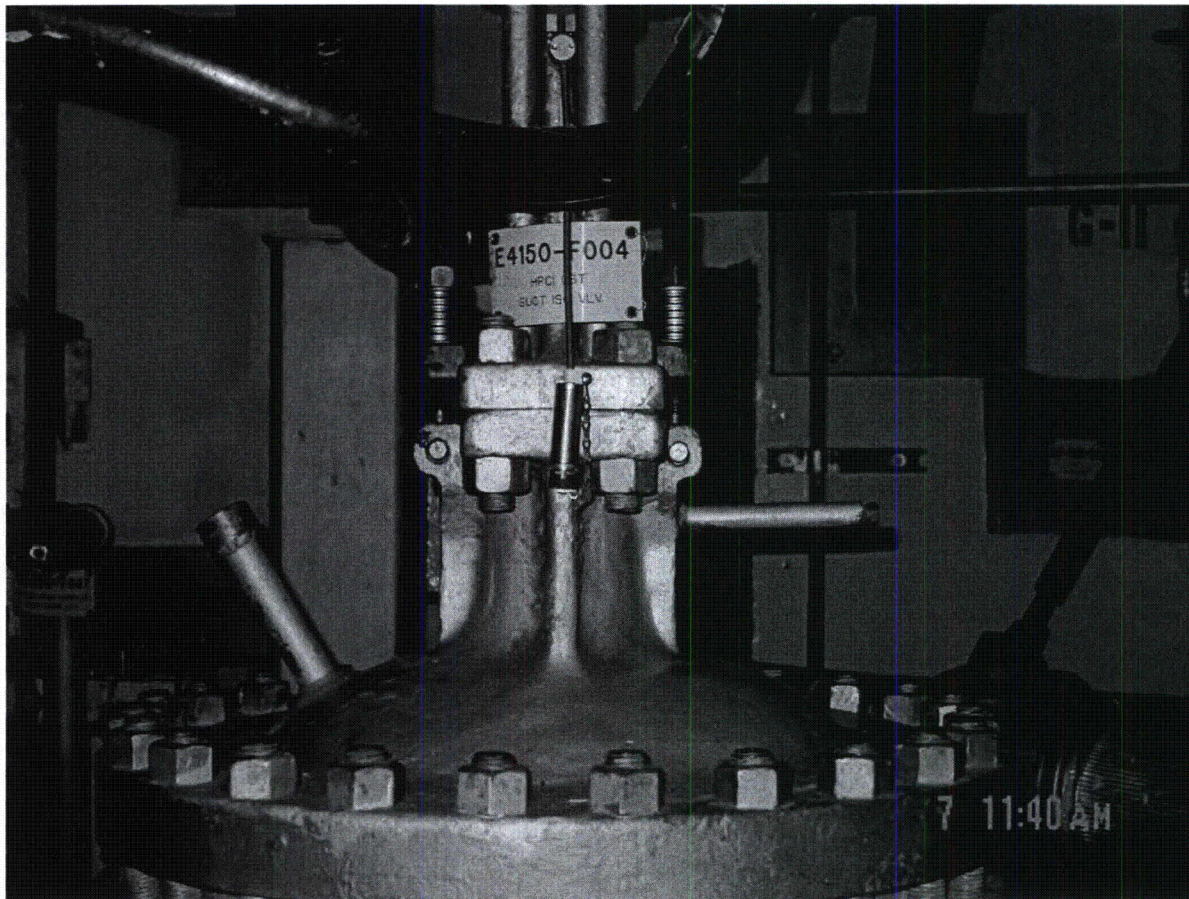
*Seismic Engineer Walkdown PSE-53 Qualified*

Evaluator #2: Scott Banen Date: 8/7/12

**Seismic Walkdown Pictures**

Equipment ID No. E4150F004 Equipment Class: 8 – Motor Operated and Solenoid Operated Valves

Equipment Description HPCI Booster Pump Suction Head form CSI ISO MOV

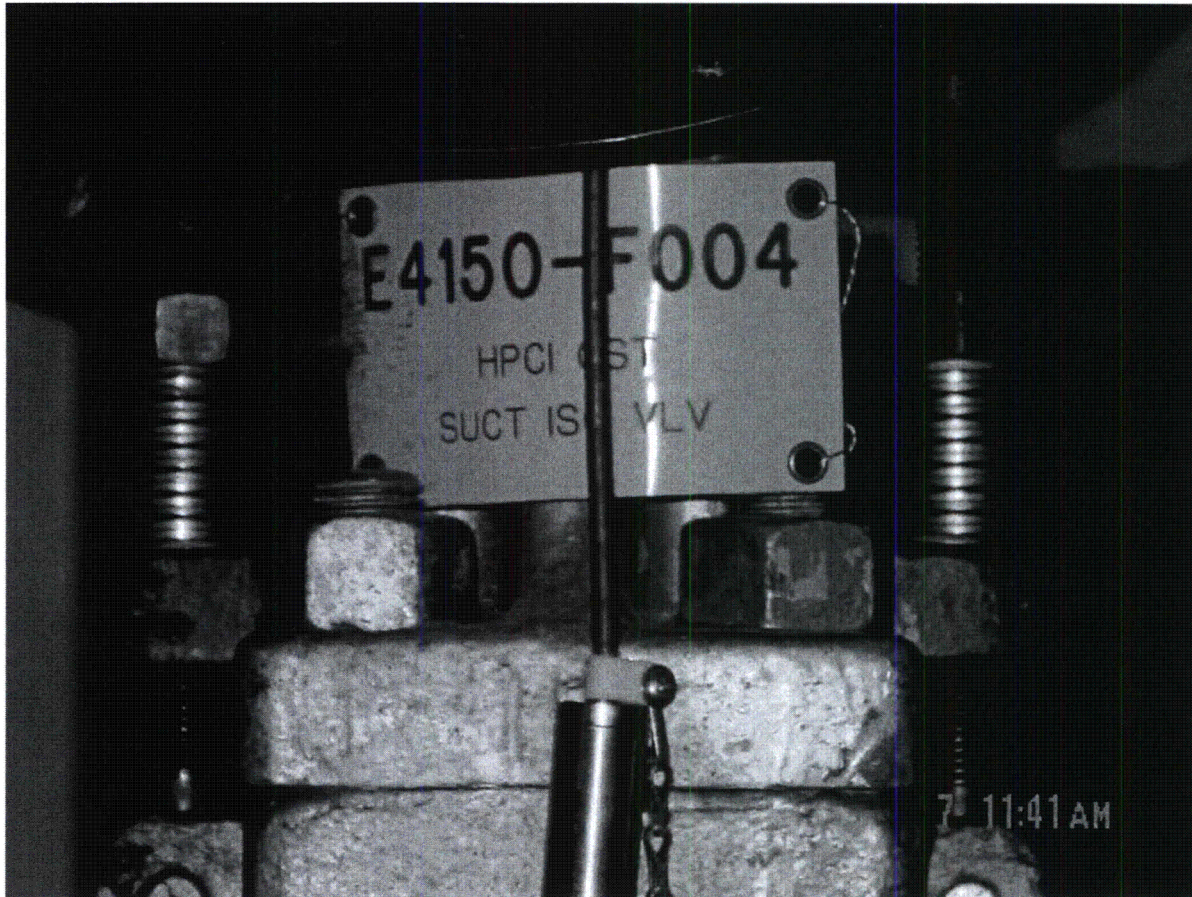


Bonnet and Gland Bolting (Front View)  
(Picture 1)

**Seismic Walkdown Pictures**

Equipment ID No. E4150F004 Equipment Class: 8 – Motor Operated and Solenoid Operated Valves

Equipment Description HPCI Booster Pump Suction Head form CSI ISO MOV



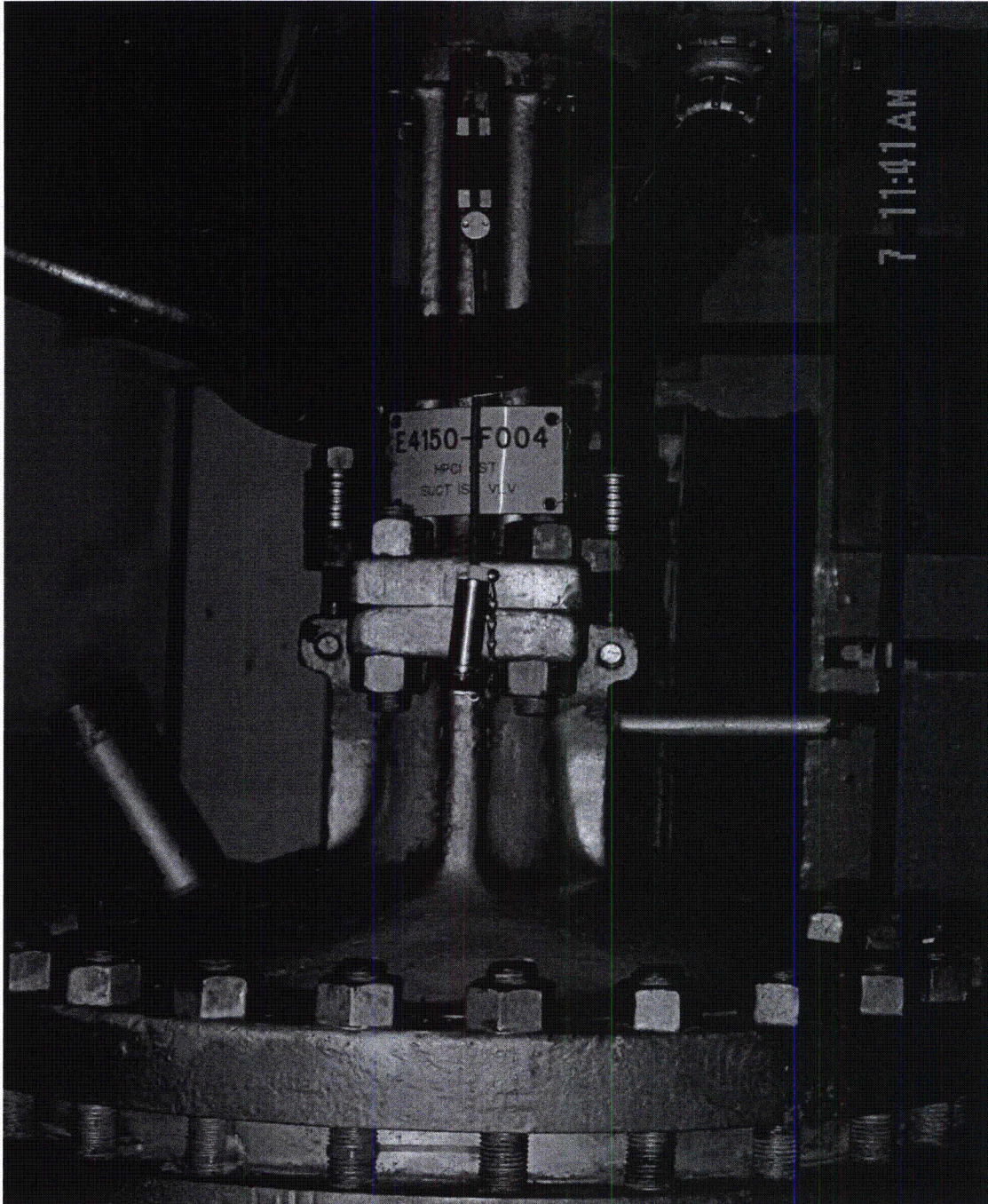
Valve Gland Bolting Configuration (Front View)  
(Picture 2)

**Seismic Walkdown Pictures**

Equipment ID No. E4150F004 Equipment Class: 8 – Motor Operated and Solenoid Operated Valves

Equipment Description HPCI Booster Pump Suction Head form CSI ISO MOV

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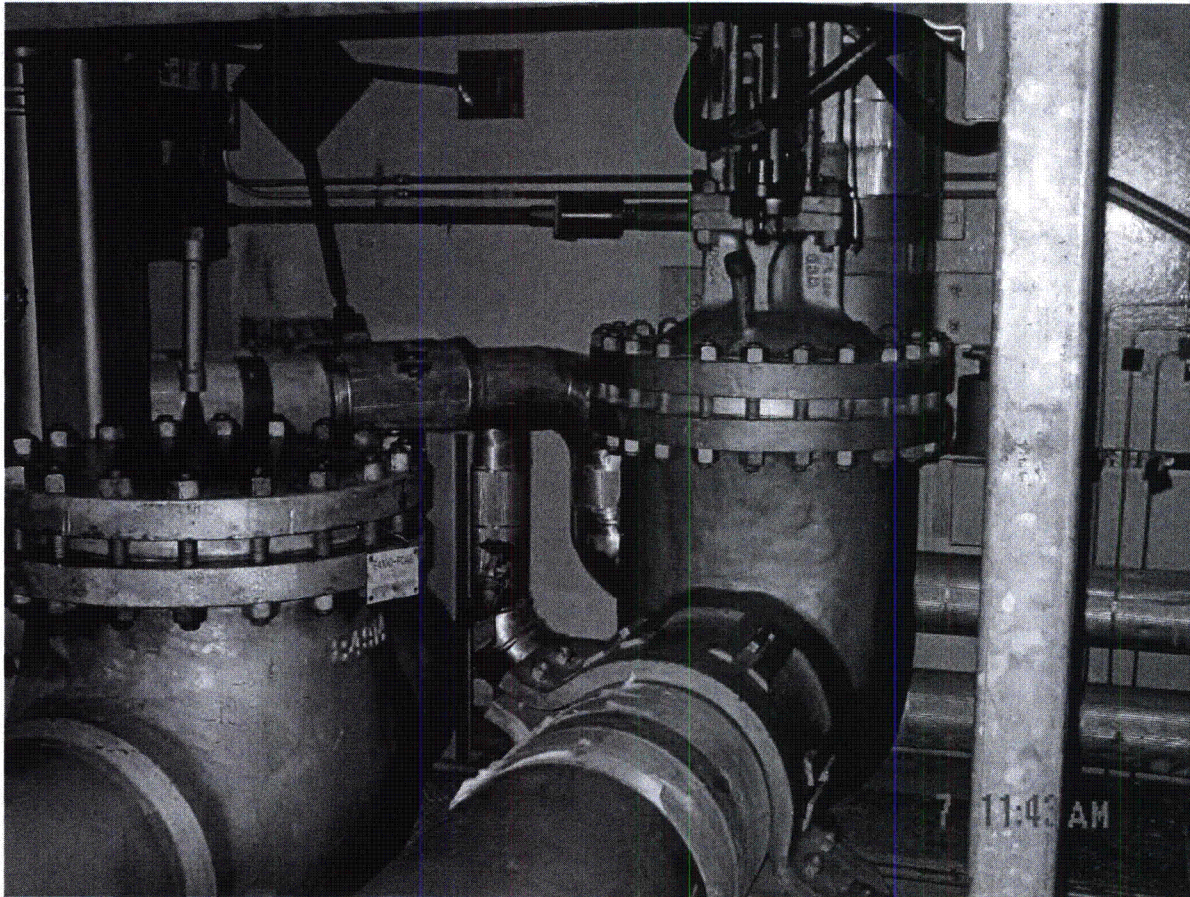
Bonnet and Gland Bolting with Flexible Conduit to Motor Operator  
(Picture 3)

**Seismic Walkdown Pictures**

Equipment ID No. E4150F004 Equipment Class: 8 – Motor Operated and Solenoid Operated Valves

Equipment Description HPCI Booster Pump Suction Head form CSI ISO MOV

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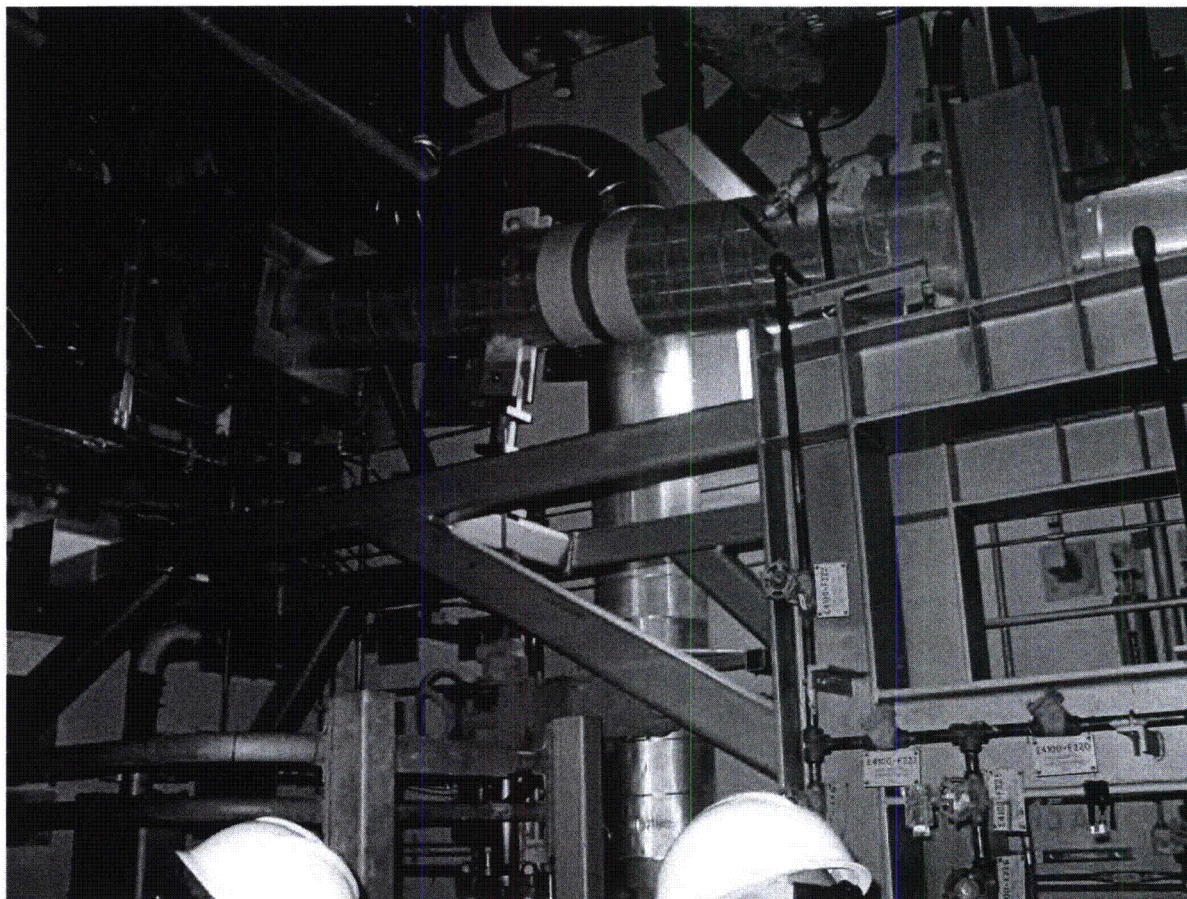
General View of Valve Configuration  
(Picture 4)

## Seismic Walkdown Pictures

Equipment ID No. E4150F004 Equipment Class: 8 – Motor Operated and Solenoid Operated Valves

Equipment Description HPCI Booster Pump Suction Head form CSI ISO MOV

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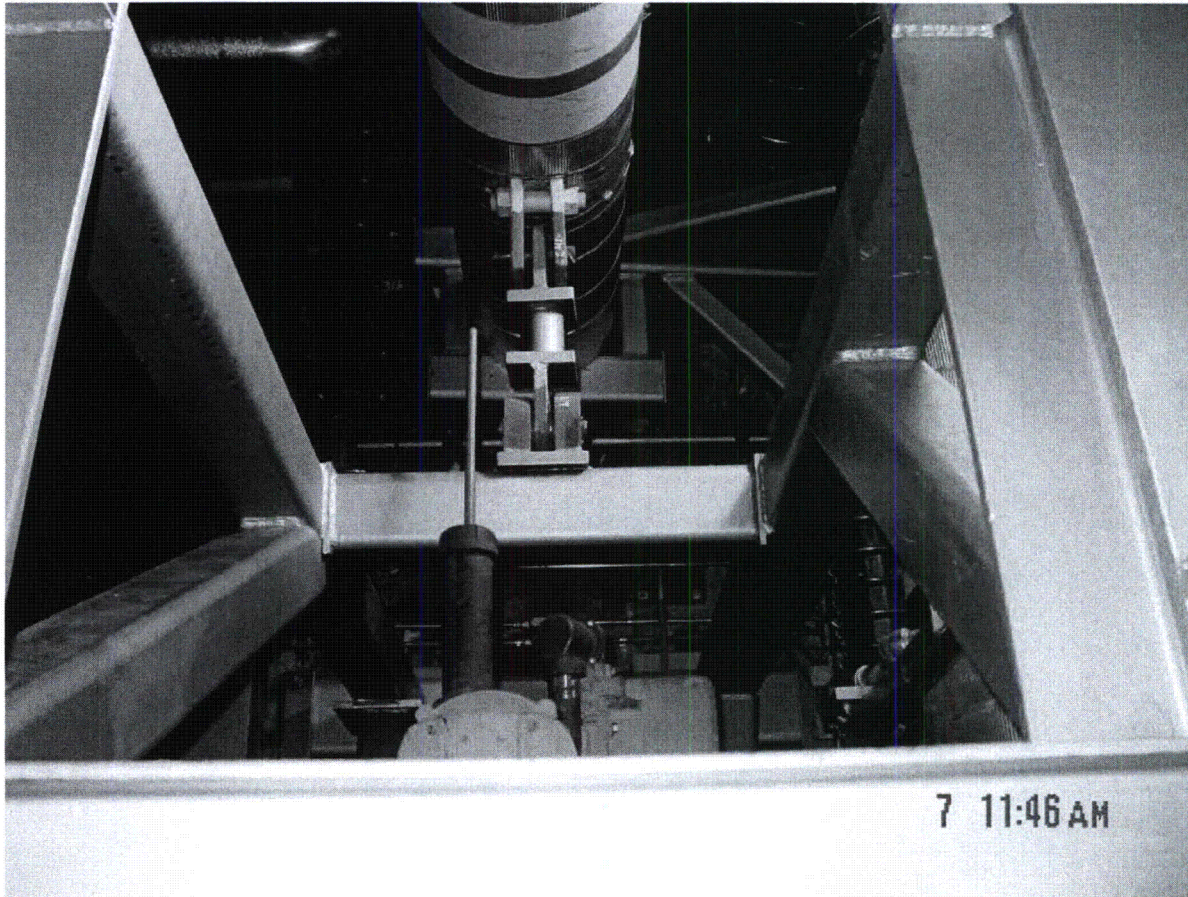


Piping and Supports Overhead the Valve  
(Picture 5)

**Seismic Walkdown Pictures**

Equipment ID No. E4150F004 Equipment Class: 8 – Motor Operated and Solenoid Operated Valves

Equipment Description HPCI Booster Pump Suction Head form CSI ISO MOV



Piping and Supports Overhead the Valve  
(Picture 6)

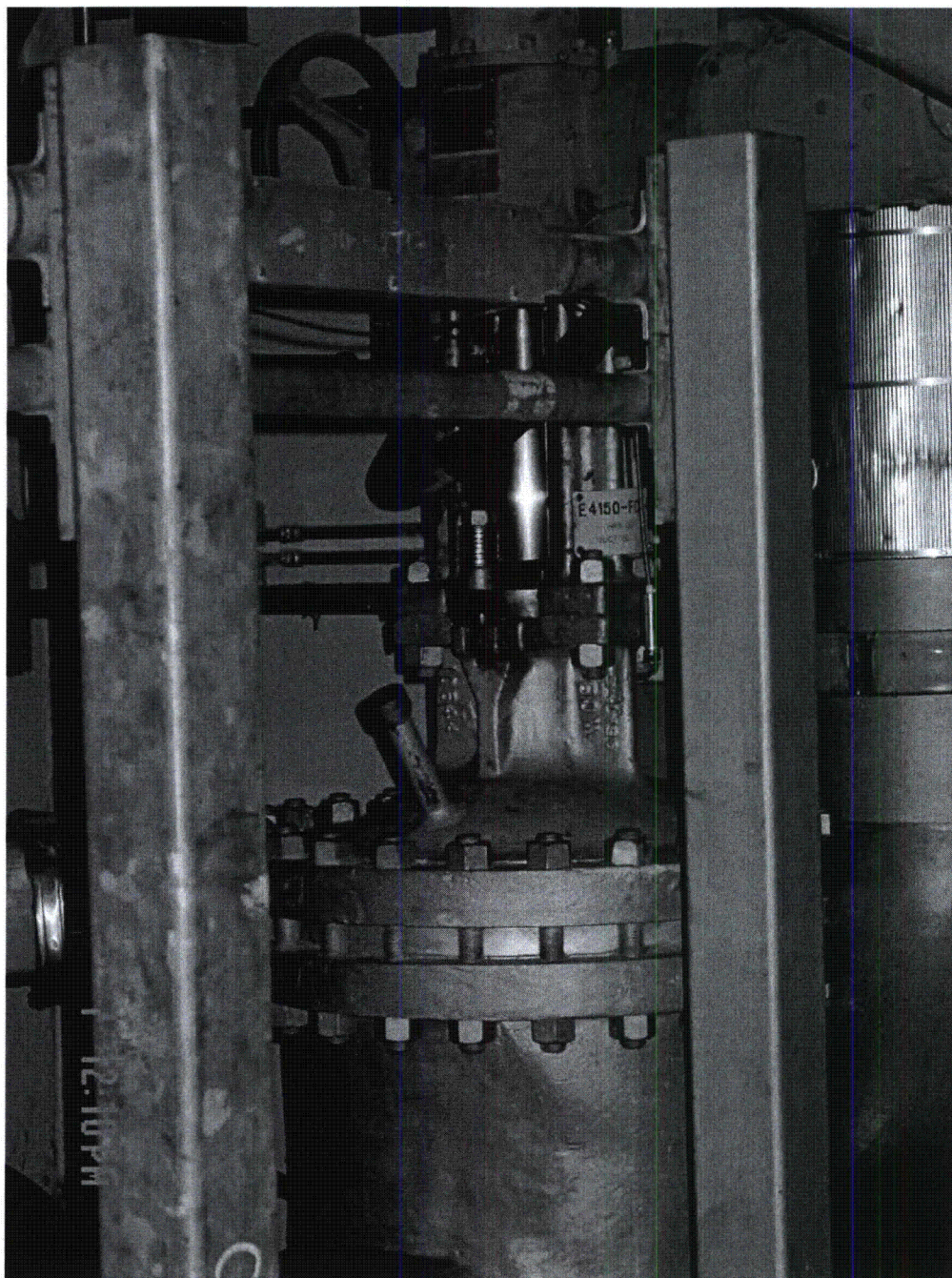


## Seismic Walkdown Pictures

Equipment ID No. E4150F004 Equipment Class: 8 – Motor Operated and Solenoid Operated Valves

Equipment Description HPCI Booster Pump Suction Head form CSI ISO MOV

---



Valve Configuration with Overhead Framing Supports (Side View)  
(Picture 8)

**Seismic Walkdown Checklist (SWC)**

Equipment ID No. E41K805 Equip. Class<sup>1</sup> 0, Other

Equipment Description HPCI Flow Rate Modulator

Location: Bldg. AB Floor El. 613'-6" Room, Area B-15, Col. F-14

Manufacturer, Model, Etc. (optional but recommended) Validyne Model CM-249-Q2

**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  
*Attached to plate inside cabinet H11P612.  
(SEE PICTURE DSCN0077) ~ DSK 10/11/12*
2. Is the anchorage free of bent, broken, missing or loose hardware?  Y  N  U  N/A  
*Mounting of component to bracket confirmed.*
3. Is the anchorage free of corrosion that is more than mild surface oxidation?  Y  N  U  N/A  
*Bolts and screws are free of corrosion.*
4. Is the anchorage free of visible cracks in the concrete near the anchors?  Y  N  U  N/A  
*Not mounted to concrete.*
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 anchorage configuration verification is required.)  
*Mounting configuration is consistent with plant documentation.  
(Ref. drawing I-2040-08A/REV. G, NO POSTINGS) DSK 10/12/12*
6. Based on the above anchorage evaluations, is the anchorage free of potentially adverse seismic conditions?  Y  N  U

JML

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

**Seismic Walkdown Checklist (SWC)**

Equipment ID No. E41K805 Equip. Class<sup>1</sup> 0, Other

Equipment Description HPCI Flow Rate Modulator

**Interaction Effects**

7. Are soft targets free from impact by nearby equipment or structures?  Y  N  U  N/A  
*Inside cabinet H11P612. None observed.*

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  
*Lights supported on chains with redundant wire cable.*

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

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  
*No other seismic conditions identified.*

JML

Fermi 2 Seismic Walkdown Guidance Document  
Seismic Walkdown Checklist

NJPR-12-0043

Sheet 3 of 3  
Status: Y N U

**Seismic Walkdown Checklist (SWC)**

Equipment ID No. E4KB06 Equip. Class<sup>1</sup> <sup>DB 8/7/2012</sup> ~~20~~ O-OTHER  
Equipment Description HPCI PUMP FLOW RATE MODULATOR

Comments (Additional pages may be added as necessary)

COMPONENT IS INSIDE PANEL H11-P612..  
H11-P612 INSPECTED AS AN INDIVIDUAL COMPONENT

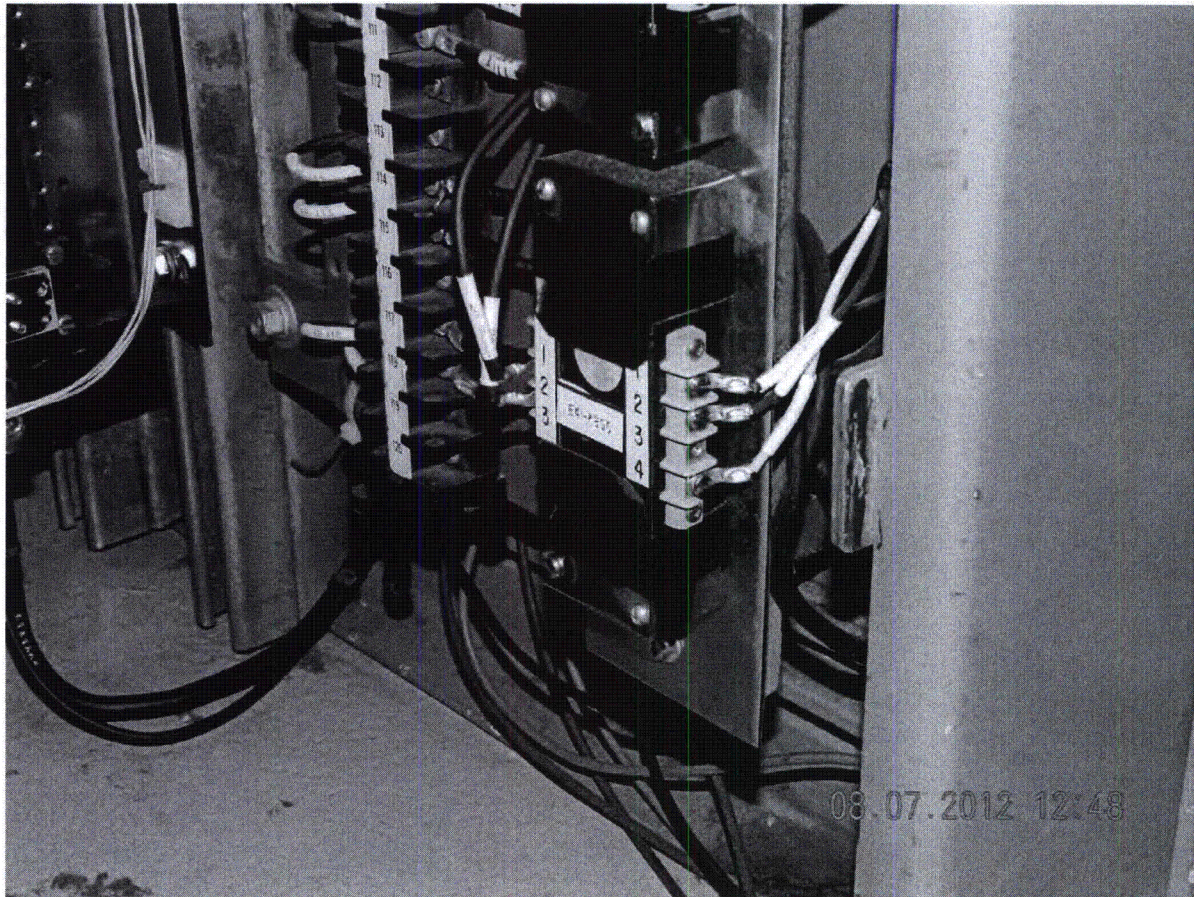
Seismic Engineer Walkdown PSE-53 Qualified  
Evaluator #1: David G. Wickert Date: 8/7/2012

Seismic Engineer Walkdown PSE-53 Qualified  
Evaluator #2: Joseph McFadden Date: 08/07/2012

**Seismic Walkdown Pictures**

Equipment ID No. E41K805 Equipment Class: 0, Other

Equipment Description HPCI Pump Flow Rate Modulator



(DSCN0077)

**Seismic Walkdown Checklist (SWC)**

Equipment ID No. E5150F045 Equip. Class<sup>1</sup> 8-Motor Operated & Solenoid Operated Valves

Equipment Description RCIC Turbine Steam Inlet Isolation MOV

Location: Bldg. RB Floor El. 544'-0" Room, Area A-05, Col. F-17

Manufacturer, Model, Etc. (optional but recommended) Powell Model 19023 WE

**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   
*All anchors are present and securely tightened. (See picture 6.)*
  
3. Is the anchorage free of corrosion that is more than mild surface oxidation? Y  N  U  N/A   
*No corrosion other than mild surface corrosion was observed.*
  
4. Is the anchorage free of visible cracks in the concrete near the anchors? Y  N  U  N/A   
*Not anchored to concrete. (See picture 6.)*
  
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 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

mps 10/3/12

**Seismic Walkdown Checklist (SWC)**

Equipment ID No. E5150F045 Equip. Class<sup>1</sup> 8-Motor Operated & Solenoid Operated Valves

Equipment Description RCIC Turbine Steam Inlet Isolation MOV

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**Interaction Effects**

7. Are soft targets free from impact by nearby equipment or structures?  Y  N  U  N/A   
*There are no proximity concerns for soft targets. Asset is protected from above by platform grating and from the north by the concrete wall.*
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   
*Asset is protected from above by platform. (See picture 15.) Equipment above is well-supported.*
9. Do attached lines have adequate flexibility to avoid damage?  Y  N  U  N/A   
*Attached lines are made of a flexible material. (See picture 4.) Attached lines have adequate flexibility.*
10. Based on the above seismic interaction evaluations, is equipment free of potentially adverse seismic interaction effects?  Y  N  U   
*There are no items nearby that are close enough to cause interaction effects. (See picture 16.)*
- 

**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

MPS 10/3/12

Fermi 2 Seismic Walkdown Guidance Document  
Seismic Walkdown Checklist

NJPR-12-0043

Sheet 3 of 3  
Status:  Y  N  U

**Seismic Walkdown Checklist (SWC)**

Equipment ID No. E5150F045 Equip. Class<sup>1</sup> 8 - Motor-Operated & Solenoid-Operated Valves  
Equipment Description RCIC TURB STM INLET ISO MOV

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

*Seismic Engineer Walkdown PSE-53 Qualified*

Evaluator #1: Phil P. Sasso Date: 8/21/12

*Seismic Engineer Walkdown PSE-53 Qualified*

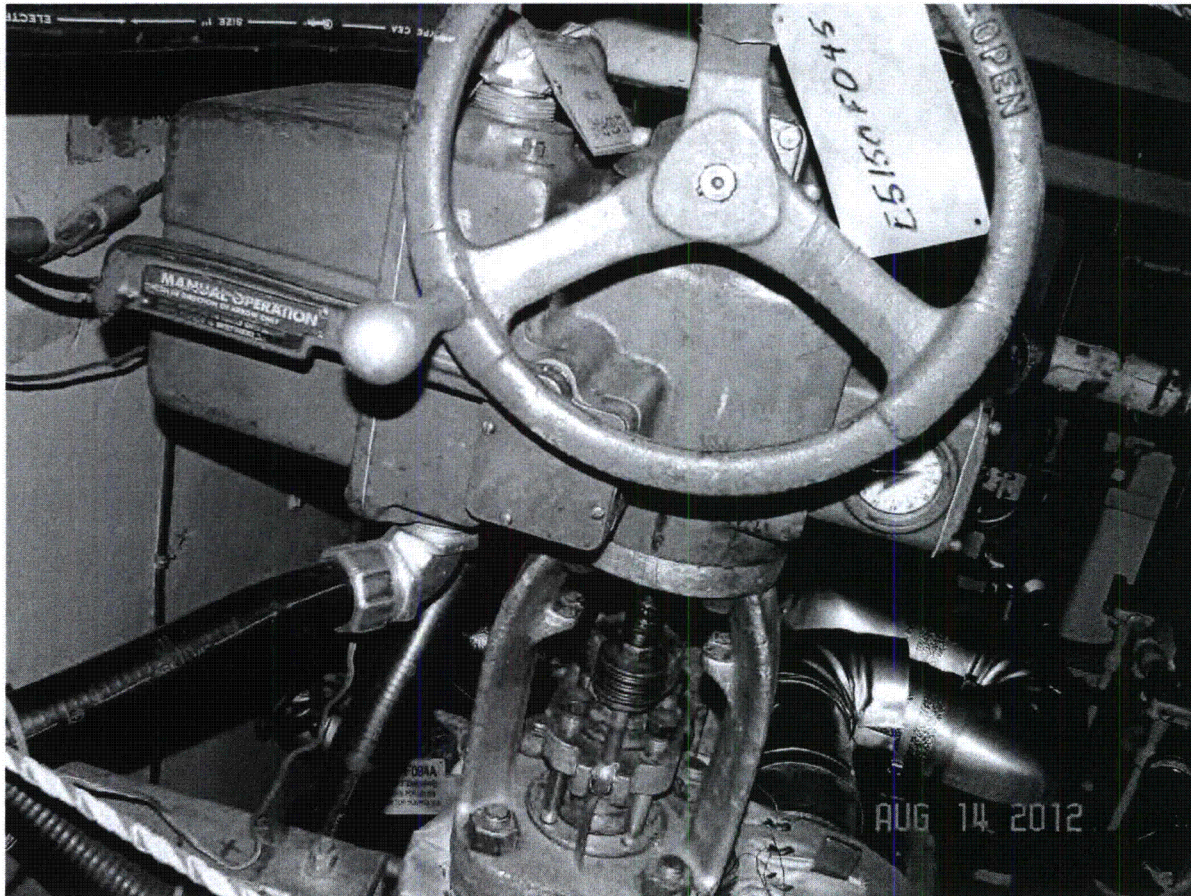
Evaluator #2: Scott Bauer Date: 8/21/12



**Seismic Walkdown Pictures**

Equipment ID No. E5150F045 Equipment Class: 8, Motor/Solenoid-Operated Valves

Equipment Description RCIC Turbine Steam Inlet Isolation MOV

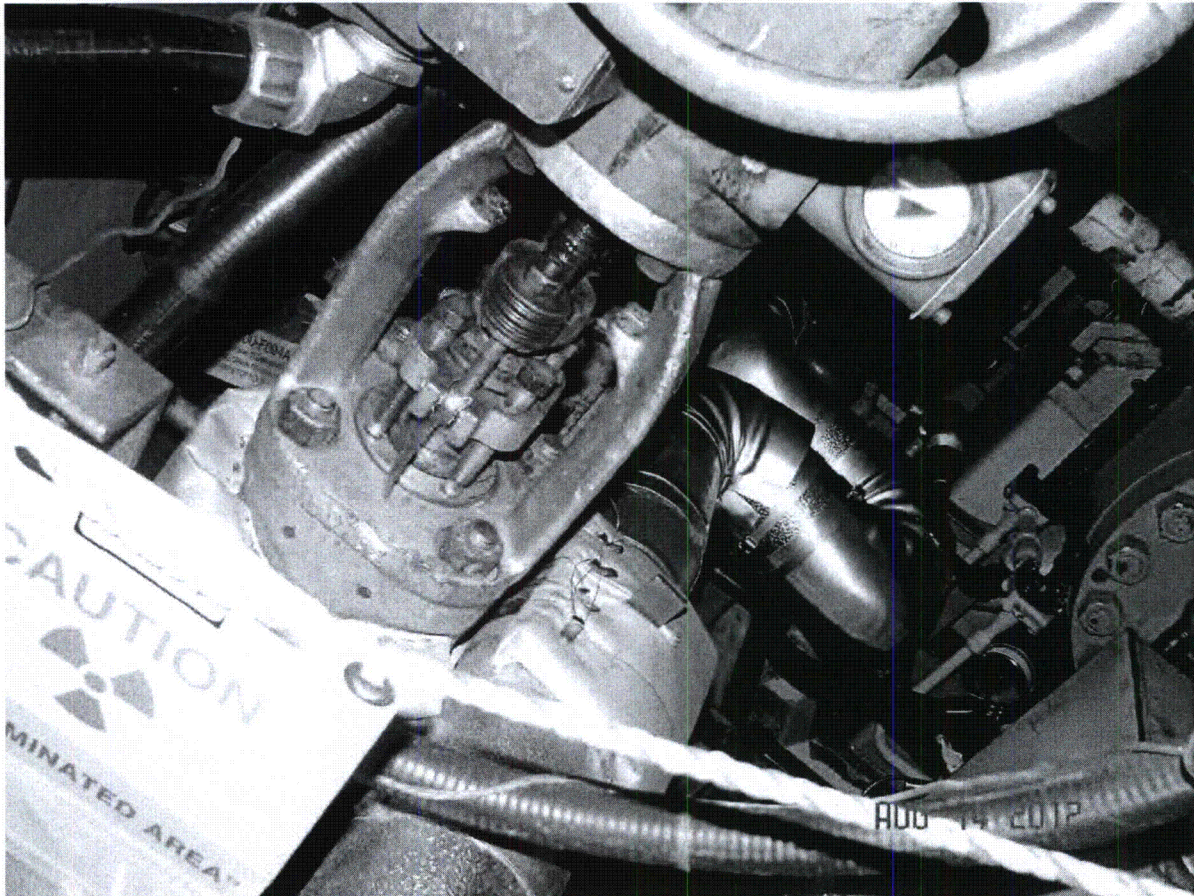


PICTURE #4

**Seismic Walkdown Pictures**

Equipment ID No. E5150F045 Equipment Class: 8, Motor/Solenoid-Operated Valves

Equipment Description RCIC Turbine Steam Inlet Isolation MOV

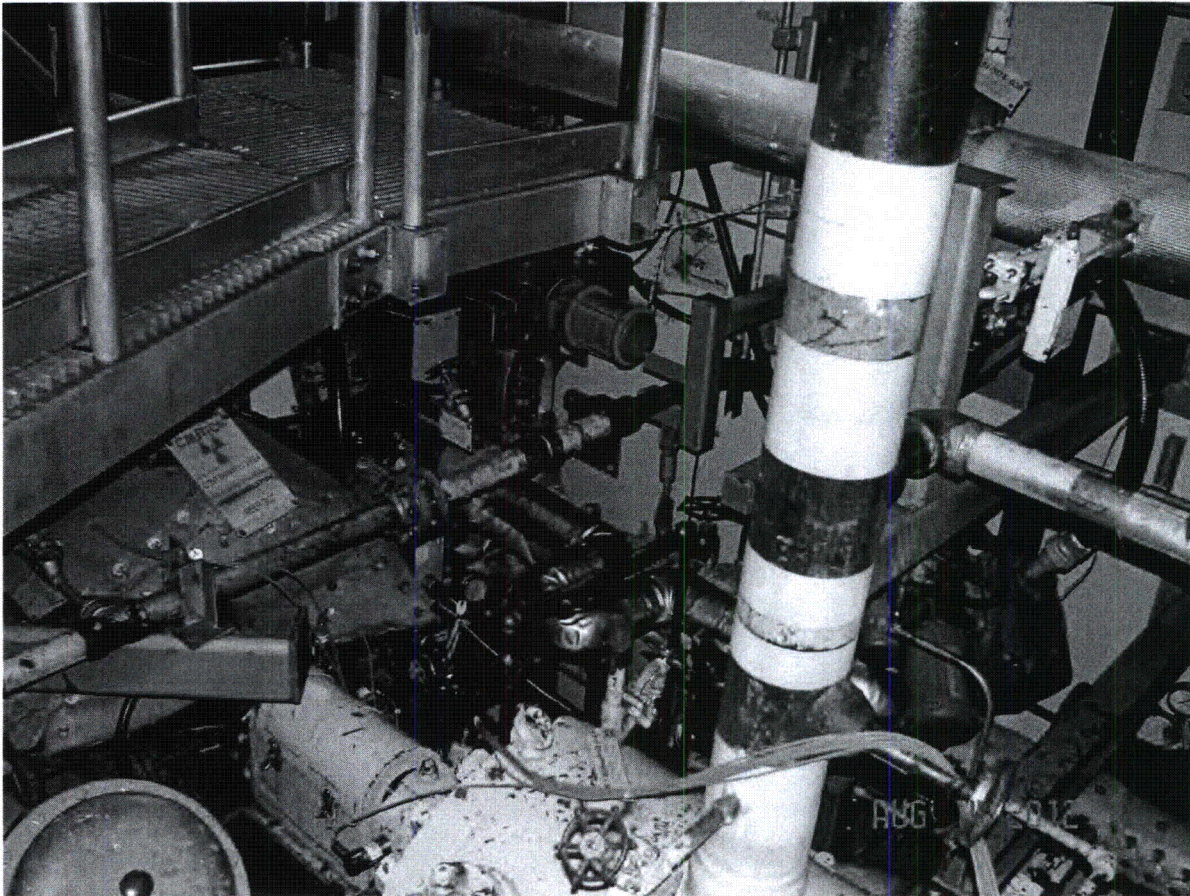


PICTURE #6

**Seismic Walkdown Pictures**

Equipment ID No. E5150F045 Equipment Class: 8, Motor/Solenoid-Operated Valves

Equipment Description RCIC Turbine Steam Inlet Isolation MOV

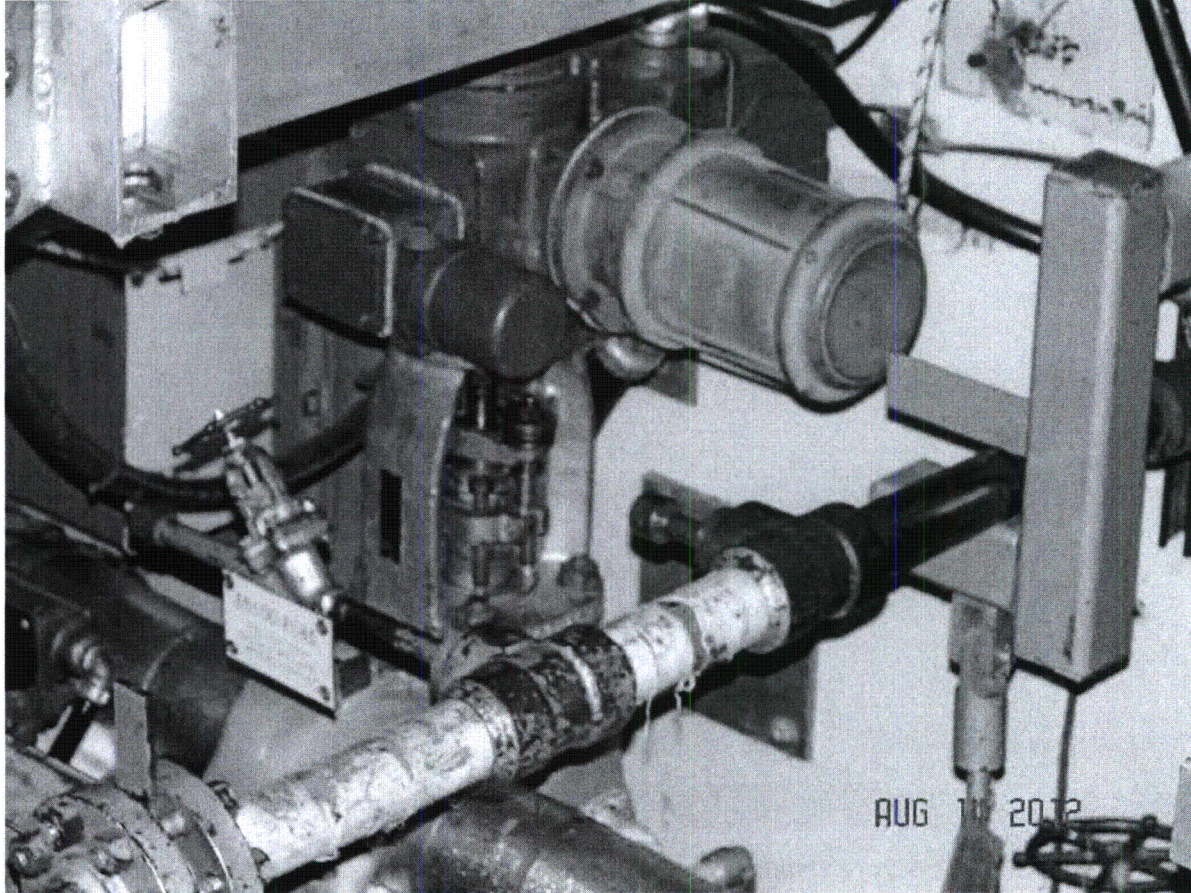


PICTURE #15

**Seismic Walkdown Pictures**

Equipment ID No. E5150F045 Equipment Class: 8, Motor/Solenoid-Operated Valves

Equipment Description RCIC Turbine Steam Inlet Isolation MOV



PICTURE #16

**Seismic Walkdown Checklist (SWC)**

Equipment ID No. G4100F016 Equip. Class<sup>1</sup> 0 - Other

Equipment Description FPCC Skimmer surge TNK to RHR ISO Valve

Location: Bldg. RB Floor El. 583'-6" Room, Area A-12, Col. A-12

Manufacturer, Model, Etc. (optional but recommended) Wm Powell 8"-300lb OSY Gate Valve

**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 asset is attached to its piping system via bolts. These bolts are in good condition and securely tightened. (See Pictures 28 & 29)*
  
3. Is the anchorage free of corrosion that is more than mild surface oxidation?  Y  N  U  N/A  
*No corrosion was observed.*
  
4. Is the anchorage free of visible cracks in the concrete near the anchors?  Y  N  U  N/A  
*No anchorage to concrete.*
  
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

MPS 10/4/12

**Seismic Walkdown Checklist (SWC)**

Equipment ID No. G4100F016 Equip. Class<sup>1</sup> 0 - Other

Equipment Description FPCC Skimmer surge TNK to RHR ISO Valve

**Interaction Effects**

7. Are soft targets free from impact by nearby equipment or structures?  Y  N  U  N/A  
*There were no observed items in the area capable of impacting the asset during a seismic event because all items are adequately restrained.*
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  
*All overhead items were observed to be appropriately supported and restrained. (See Pictures 34 and 45)*
9. Do attached lines have adequate flexibility to avoid damage?  Y  N  U  N/A  
*Attached lines have adequate flexibility.*
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  
*No adverse conditions were identified.*

mps 10/4/12

**Seismic Walkdown Checklist (SWC)**

Equipment ID No. G4100 F016 Equip. Class' O-Other

Equipment Description FPC SKimmer Surge TNK to RHR ISO Valve.

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

*NONE*

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*Seismic Engineer Walkdown PSE-53 Qualified*

Evaluator #1: Michael P. Sasso Date: 8/24/12

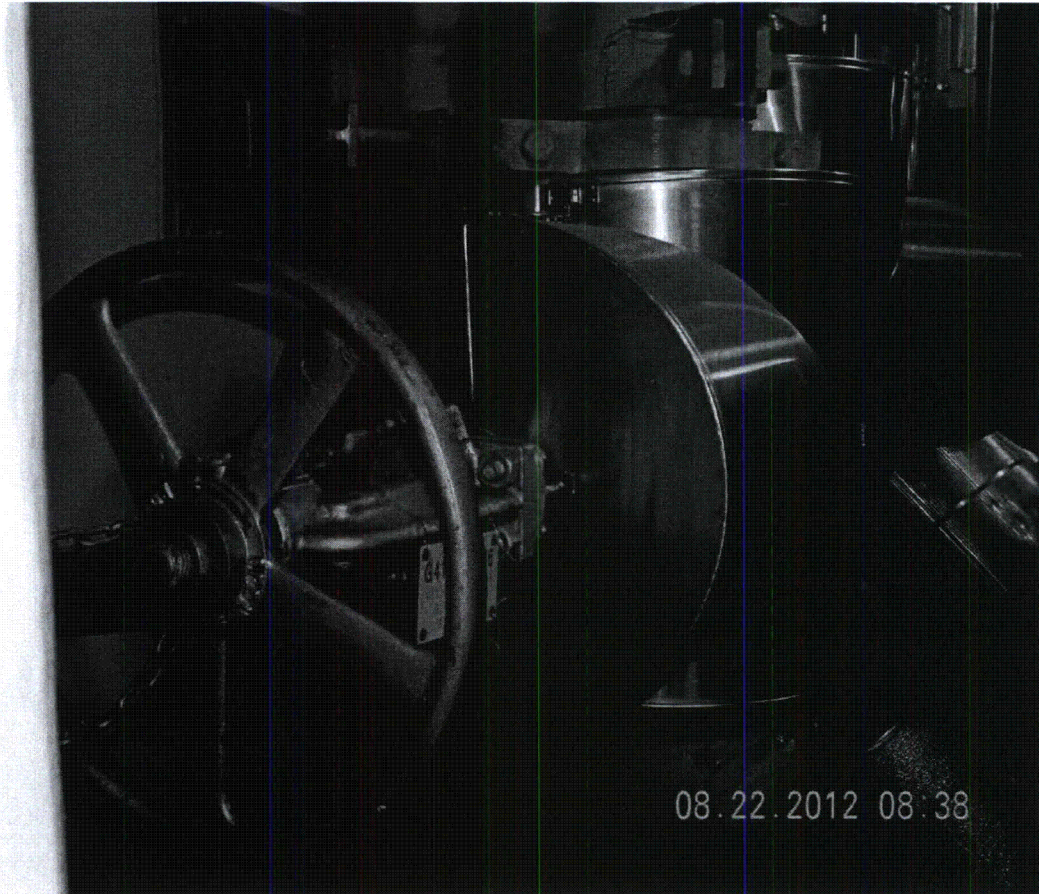
*Seismic Engineer Walkdown PSE-53 Qualified*

Evaluator #2: Scott Bauer Date: 8/24/12

**Seismic Walkdown Pictures**

Equipment ID No. G4100F016 Equipment Class: 0, Other

Equipment Description FPCC Skimmer Surge Tank to RHR Iso Valve



(Picture 28)



**Seismic Walkdown Pictures**

Equipment ID No. G4100F016 Equipment Class: 0, Other

Equipment Description FPCC Skimmer Surge Tank to RHR Iso Valve

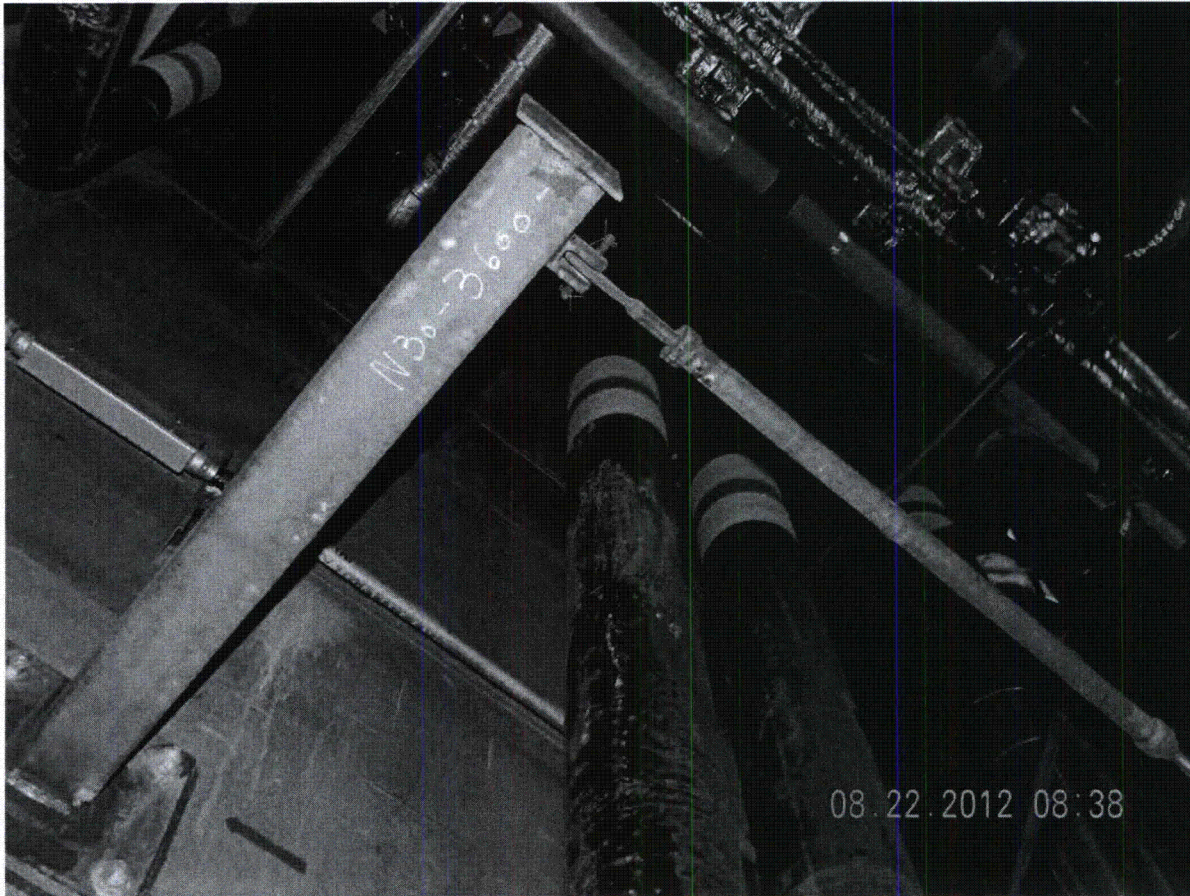


(Picture 29)

**Seismic Walkdown Pictures**

Equipment ID No. G4100F016 Equipment Class: 0, Other

Equipment Description FPCC Skimmer Surge Tank to RHR Iso Valve

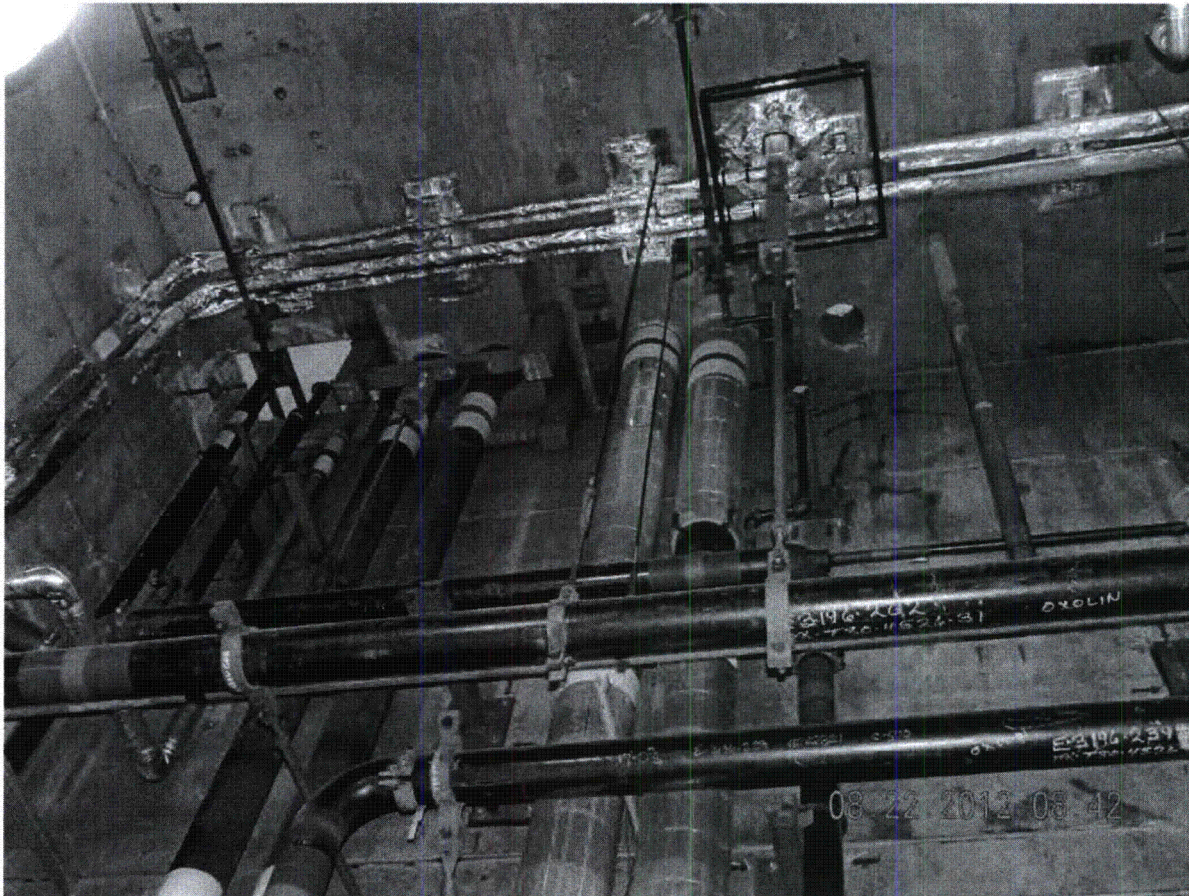


(Picture 34)

**Seismic Walkdown Pictures**

Equipment ID No. G4100F016 Equipment Class: 0, Other

Equipment Description FPCC Skimmer Surge Tank to RHR Iso Valve



(Picture 45)

**Seismic Walkdown Checklist (SWC)**

Equipment ID No. G4100F045A Equip. Class<sup>1</sup> 0 - Other

Equipment Description Fuel Storage Diffuser "A" Return Isolation Valve

Location: Bldg. RB Floor El. 682'-6" Room, Area A-43, Col E-17

Manufacturer, Model, Etc. (optional but recommended) XMOX-XOMOX Corp

**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   
*Valve is not attached to a civil structure. Aside from some minor surface corrosion, bolts that secure the valve to piping appear to be in good condition. See Picture 1.*
  
3. Is the anchorage free of corrosion that is more than mild surface oxidation? Y  N  U  N/A   
*See response to Question 2 above.*
  
4. Is the anchorage free of visible cracks in the concrete near the anchors? Y  N  U  N/A   
*Valve is not anchored to concrete*
  
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. G4100F045A Equip. Class<sup>1</sup> 0 - Other

Equipment Description Fuel Storage Diffuser "A" Return Isolation Valve

**Interaction Effects**

7. Are soft targets free from impact by nearby equipment or structures?  Y  N  U  N/A  
*Valve is in a pit and shielded from impact by a checkered cover plate. There are no impact sources. (See Pictures 2 & 3)*

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  
*There are no realistic hazards overhead. The lights on this floor are not mounted directly over the valve.*

9. Do attached lines have adequate flexibility to avoid damage?  Y  N  U  N/A  
*There are no conduit or tubing lines on the valve. (See Picture 4)*

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  
*None were identified.*

Fermi 2 Seismic Walkdown Guidance Document  
Seismic Walkdown Checklist

NJPR-12-0043

Sheet 3 of 3  
Status: Y N U

**Seismic Walkdown Checklist (SWC)**

Equipment ID No. G4100F045A Equip. Class<sup>1</sup> 0 - Other

Equipment Description Fuel Storage Diffuser "A" Return Isolation Valve

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

*None*

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*Seismic Engineer Walkdown PSE-53 Qualified*

Evaluator #1 : Michael P Sasso *Michael P. Sasso* Date: 08/22/12

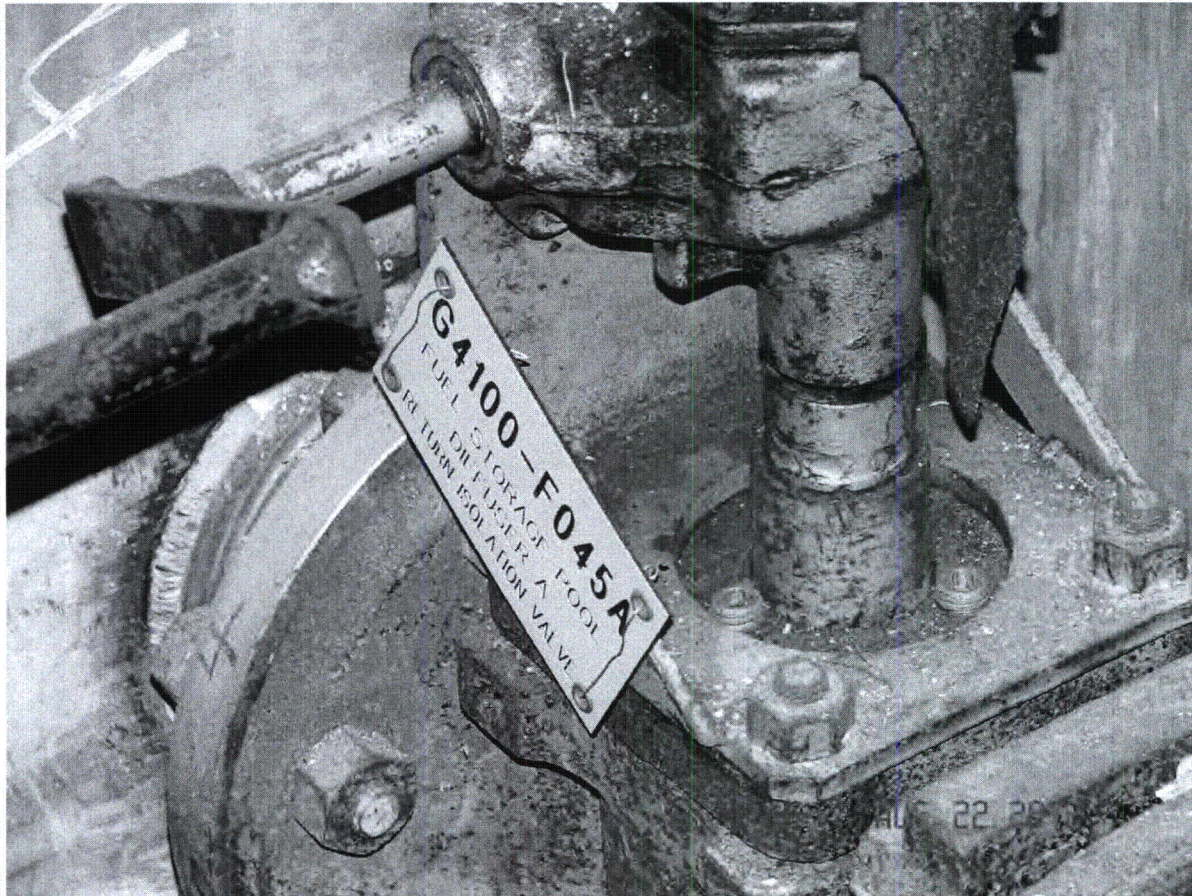
*Seismic Engineer Walkdown PSE-53 Qualified*

Evaluator #2 : Marc Meyer *Marc Meyer* Date: 08/22/12

**Seismic Walkdown Pictures**

Equipment ID No. G4100F045A Equipment Class: 0, Other

Equipment Description Fuel Storage Diffuser "A" Return Isolation Valve



(Picture 1)

**Seismic Walkdown Pictures**

Equipment ID No. G4100F045A Equipment Class: 0, Other

Equipment Description Fuel Storage Diffuser "A" Return Isolation Valve



(Picture 2)



**Seismic Walkdown Pictures**

Equipment ID No. G4100F045A Equipment Class: 0, Other

Equipment Description Fuel Storage Diffuser "A" Return Isolation Valve



(Picture 3)

**Seismic Walkdown Pictures**

Equipment ID No. G4100F045A Equipment Class: 0, Other

Equipment Description Fuel Storage Diffuser "A" Return Isolation Valve



(Picture 4)

NJPR-12-0043

**Seismic Walkdown Checklist (SWC)**

Equipment ID No. H11P612 Equip. Class<sup>1</sup> 20, Instrumentation and Control Panels

Equipment Description F.W. & Recirc. Instrument Cab. - Div. II

Location: Bldg. AB Floor El. 613'-6" Room, Area B-15, Col. F-14

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  U  
*All welds visible. Seismic bracing added per EDP 27108.007.*
  
2. Is the anchorage free of bent, broken, missing or loose hardware?  Y  N  U  N/A  
*Front: In Bays 1 & 3, plug weld missing weld 3" at 10" to embedment.  
Back: Welded to embedment. Drawings I-2002-16 & I-2002-17 used to confirm no required plug welds & proper anchorage. Identified front condition verified as acceptable. (SEE PICTURES DSCN0059, DSCN0060) ~ DJK 10/11/12*
  
3. Is the anchorage free of corrosion that is more than mild surface oxidation?  Y  N  U  N/A  
*Connection plates & welds were painted, therefore did not exhibit corrosion. (SEE PICTURES DSCN0059, DSCN0060) ~ DJK 10/11/12*
  
4. Is the anchorage free of visible cracks in the concrete near the anchors?  Y  N  U  N/A  
*Concrete at the base is intact and not cracked.  
(SEE PICTURES DSCN0059, DSCN0060) ~ DJK 10/11/12*
  
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.)  
Weld configuration is consistent with documentation (Ref. drawings I-2002-16 & I-2002-17). Bracing configuration is consistent with documentation (Ref. EDP 27108.007) SEE COMMENT SECTION. ~ DJK 10/12/12  
(SEE PICTURES DSCN0059, DSCN0060) ~ DJK 10/11/12*
  
6. Based on the above anchorage evaluations, is the anchorage free of potentially adverse seismic conditions?  Y  N  U

*JML*

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

**Seismic Walkdown Checklist (SWC)**

Equipment ID No. H11P612 Equip. Class<sup>1</sup> 20, Instrumentation and Control Panels

Equipment Description F.W. & Recirc. Instrument Cab. - Div. II

---

**Interaction Effects**

7. Are soft targets free from impact by nearby equipment or structures?  Y  N  U  N/A  
*Soft targets are enclosed by the cabinet & door, therefore any soft targets are protected.*
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  
*Lights have chain & cable.*  
*(SEE PICTURE DSCN0062) ~ DSK 10/11/12*
9. Do attached lines have adequate flexibility to avoid damage?  Y  N  U  N/A  
*All attached lines have adequate flexibility.*  
*(SEE PICTURE DSCN0061) ~ DSK 10/11/12*
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  
*Note: Bracing per EDP 27108 has been installed properly, per plan, and bolting has been verified.*  
*(SEE PICTURES DSCN0075, DSCN0076) ~ DSK 10/11/12*

JML

Fermi 2 Seismic Walkdown Guidance Document  
Seismic Walkdown Checklist

NJPR-12-0043

Sheet 3 of 3  
Status: (Y) N U

Seismic Walkdown Checklist (SWC)

Equipment ID No. HILP612 Equip. Class<sup>1</sup> 20 - INSTRUMENTATION & CONTROL PANEL  
Equipment Description F.W. & RECIRC. INSTRUMENT CAB. - DIV. II

Comments (Additional pages may be added as necessary)

DRAWINGS I-2002-16, REV. C AND I-2002-17, REV. H WERE REVIEWED AND NO APPLICABLE POSTINGS WERE FOUND. } DSK 10/12/12

Seismic Engineer Walkdown PSE-53 Qualified

Evaluator #1: David C. Dieben Date: 08/06/2012

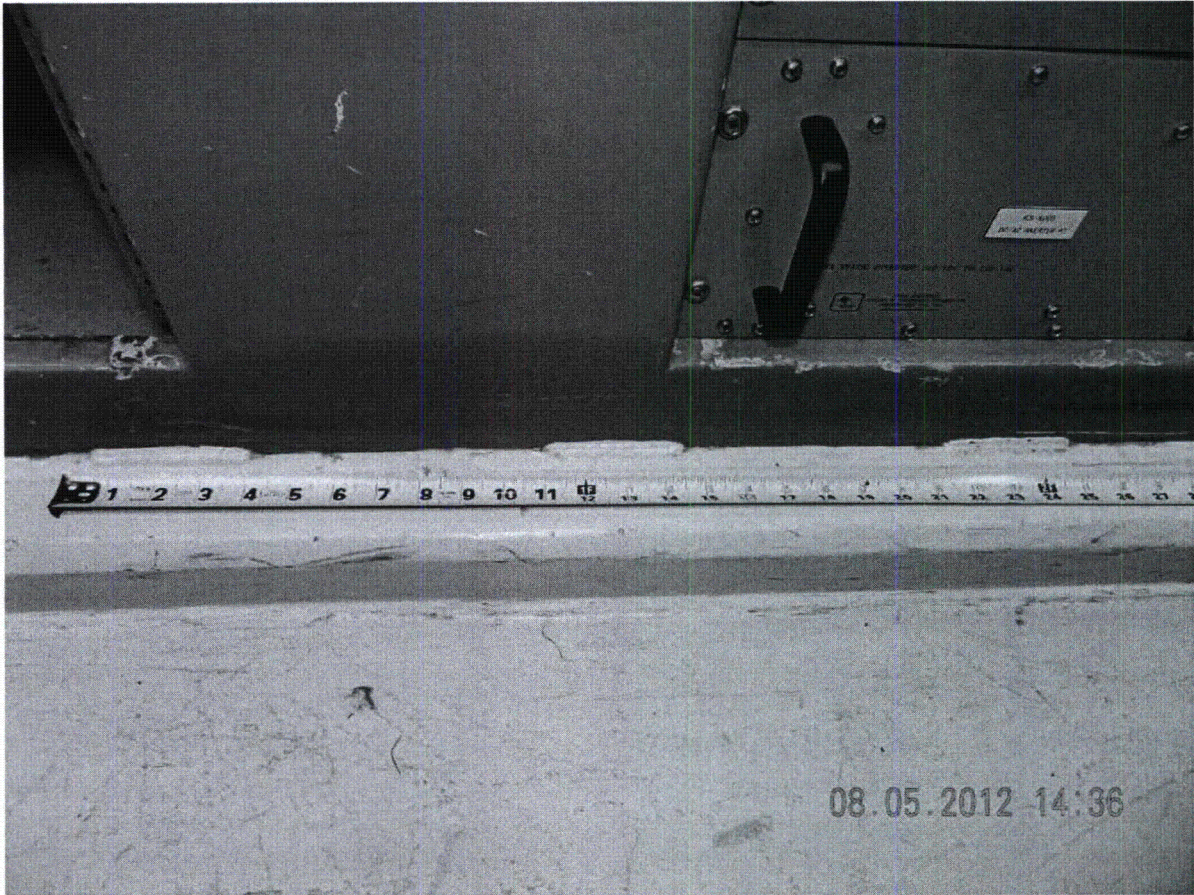
Seismic Engineer Walkdown PSE-53 Qualified

Evaluator #2: Joseph M. Fallon Date: 08.06.2012

**Seismic Walkdown Pictures**

Equipment ID No. H11P612 Equipment Class: 20, Instrumentation and Control Panels

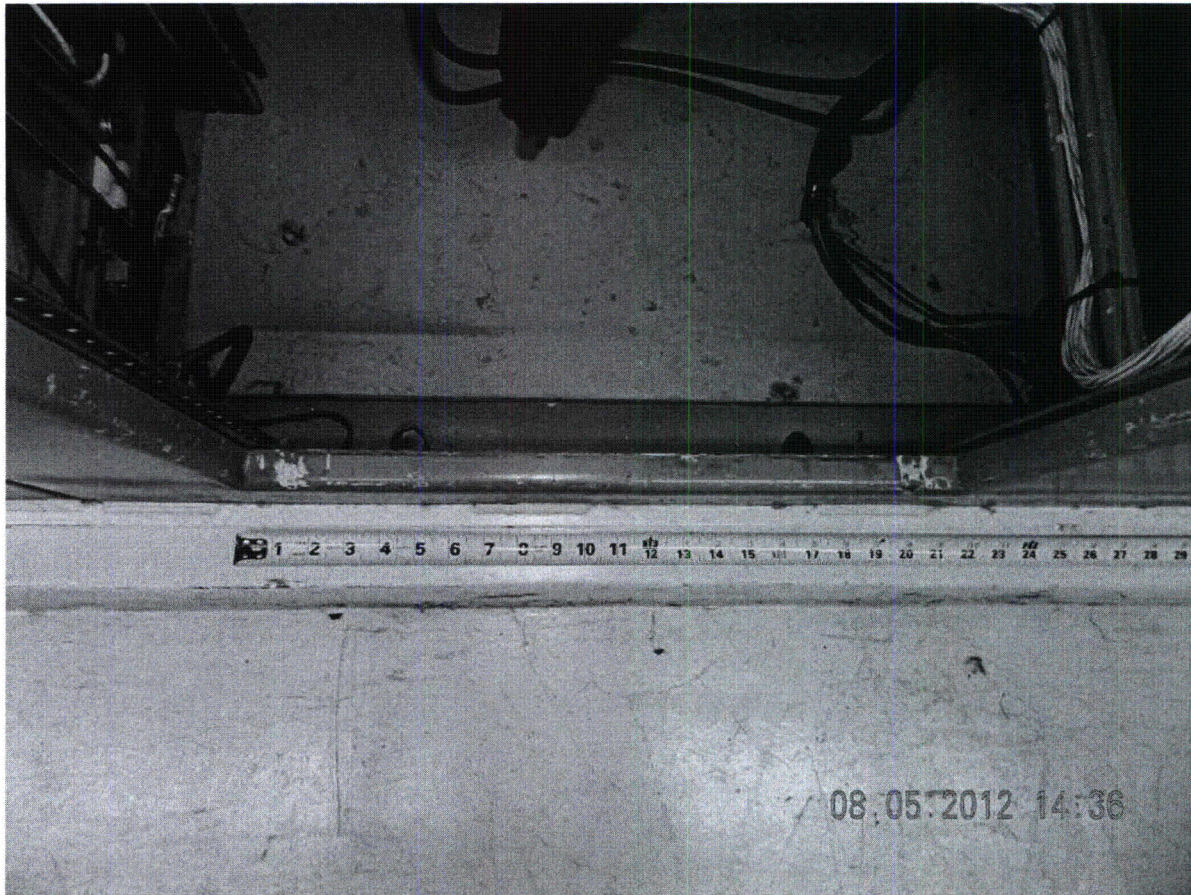
Equipment Description F.W. & Recirc. Instrumentation Cab. – Div. II



**Seismic Walkdown Pictures**

Equipment ID No. H11P612 Equipment Class: 20, Instrumentation and Control Panels

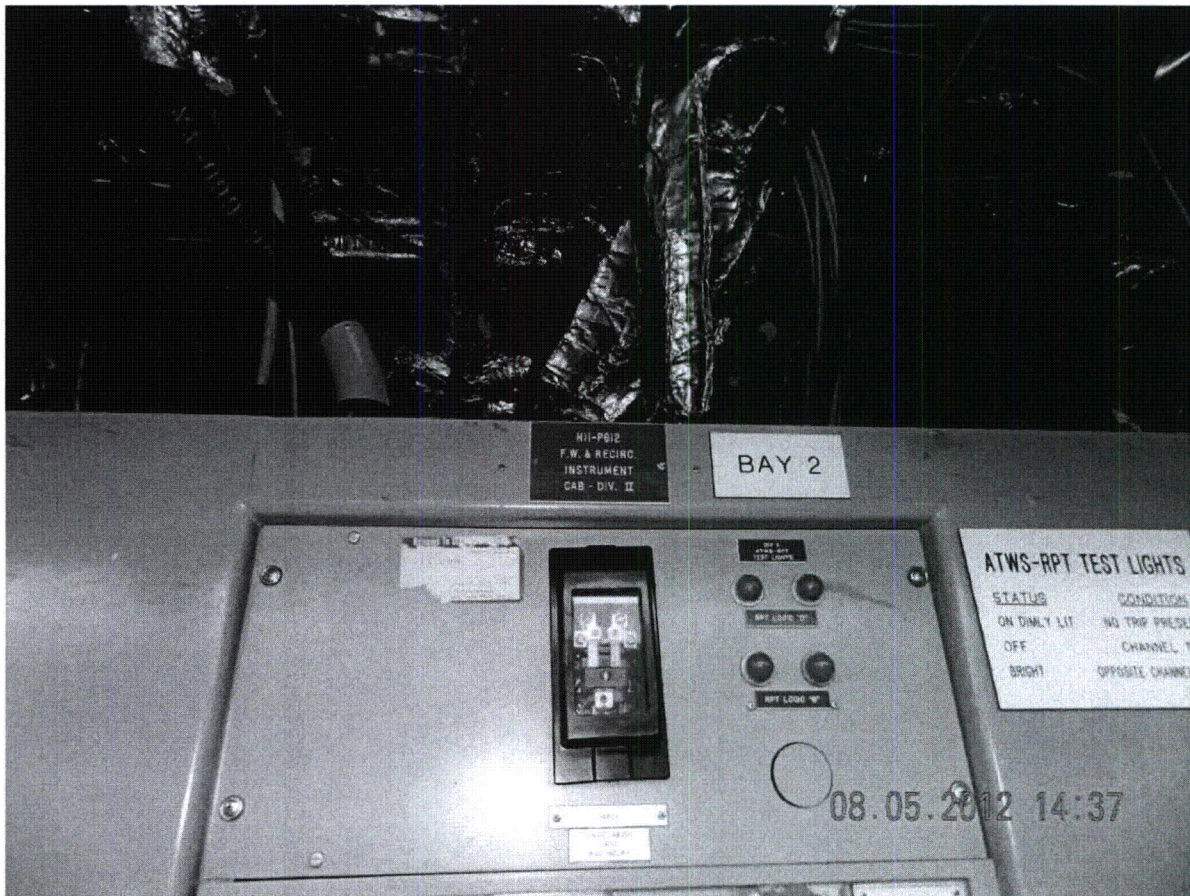
Equipment Description F.W. & Recirc. Instrumentation Cab. – Div. II



**Seismic Walkdown Pictures**

Equipment ID No. H11P612 Equipment Class: 20, Instrumentation and Control Panels

Equipment Description F.W. & Recirc. Instrumentation Cab. – Div. II

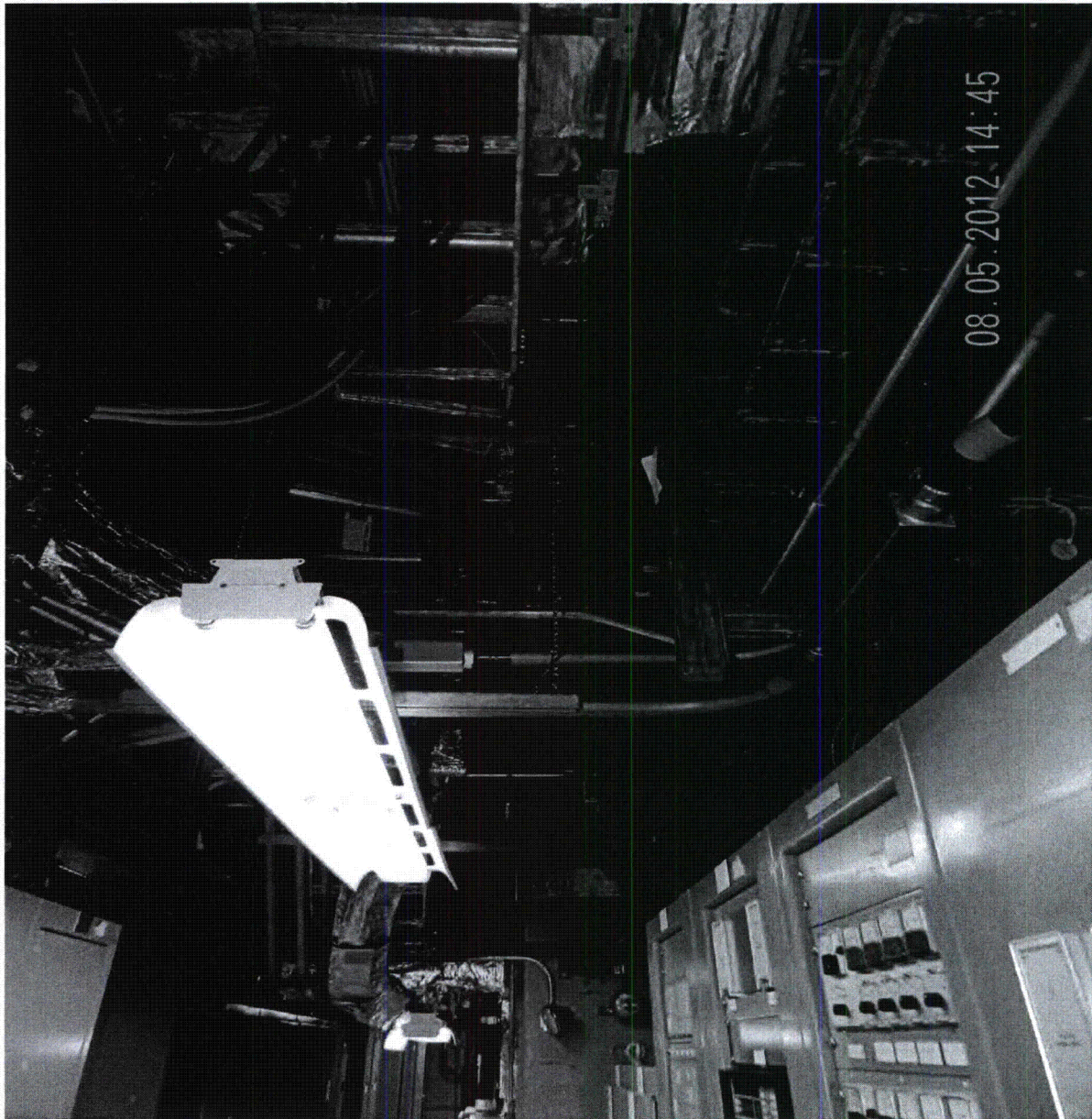




**Seismic Walkdown Pictures**

Equipment ID No. H11P612 Equipment Class: 20, Instrumentation and Control Panels

Equipment Description F.W. & Recirc. Instrumentation Cab. – Div. II



**Seismic Walkdown Pictures**

Equipment ID No. H11P612 Equipment Class: 20, Instrumentation and Control Panels

Equipment Description F.W. & Recirc. Instrumentation Cab. – Div. II



**Seismic Walkdown Pictures**

Equipment ID No. H11P612 Equipment Class: 20, Instrumentation and Control Panels

Equipment Description F.W. & Recirc. Instrumentation Cab. – Div. II

