

Seismic Walkdown Checklist (SWC)

Equipment ID No. 1AE205 Equip. Class¹² (19) Vertical Tanks or Heat Exchangers

Equipment Description Residual Heat Removal Heat Exchanger

Location: Bldg. Reactor Floor El. 177 Room, Area Room 102
Enclosure

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

Instructions for Completing Checklist

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

Anchorage

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

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

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

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

5. Is the anchorage configuration consistent with plant documentation?
 (Note: This question only applies if the item is one of the 50% for which an anchorage configuration verification is required.)
Matches Orig. # 331-7, Rev. 4 Y N U N/A

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

¹² Enter the equipment class name from Appendix B: Classes of Equipment.

Equipment ID No. 1AE205 Equip. Class¹² (19) Vertical Tanks or Heat Exchangers

Equipment Description Residual Heat Removal Heat Exchanger

Interaction Effects

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

• 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 N U N/A

• No overhead equipment or block walls in area

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

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

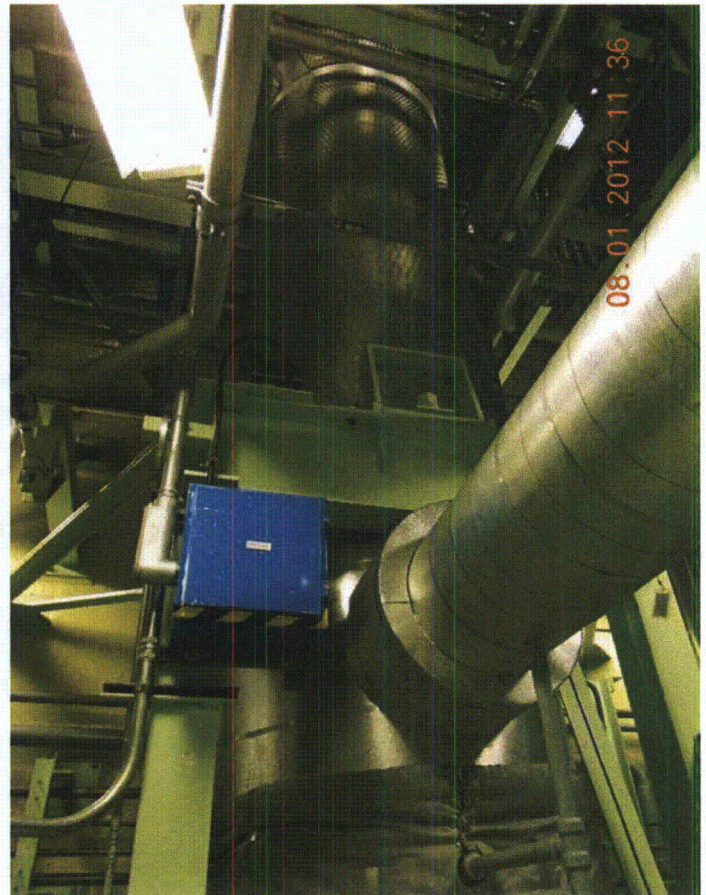
Other Adverse Conditions

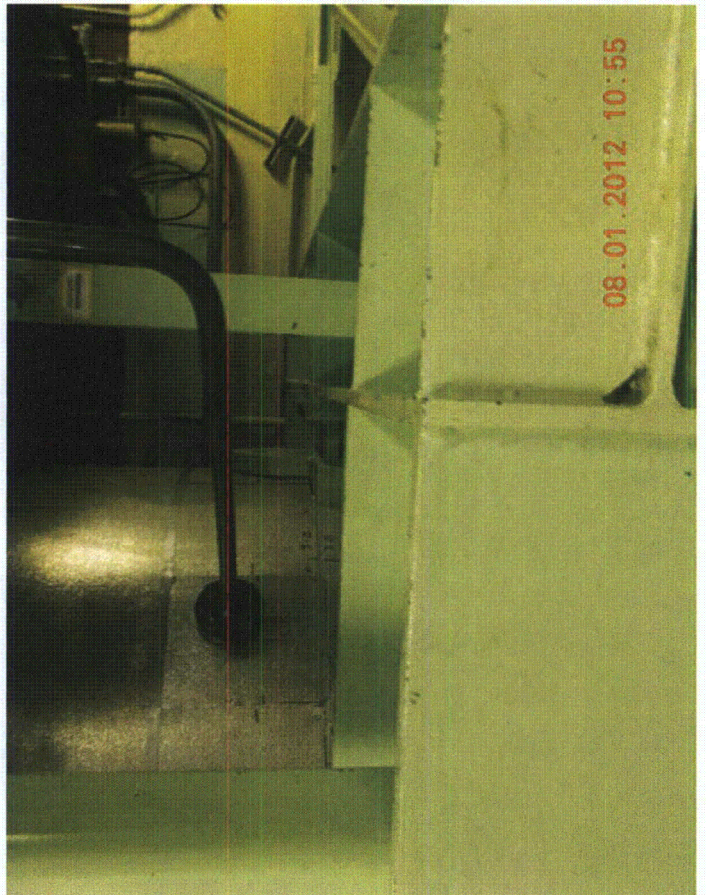
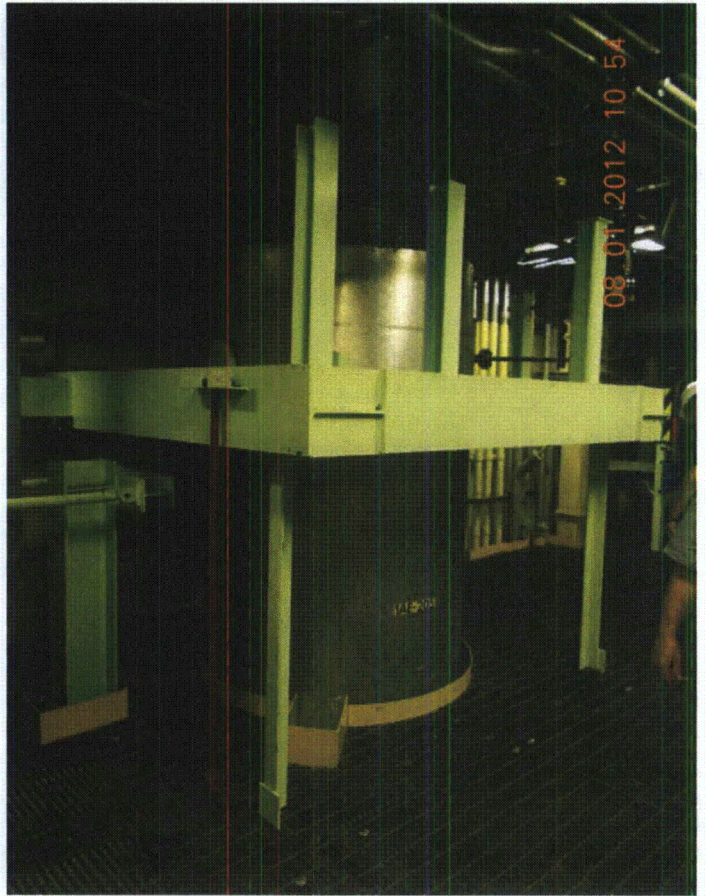
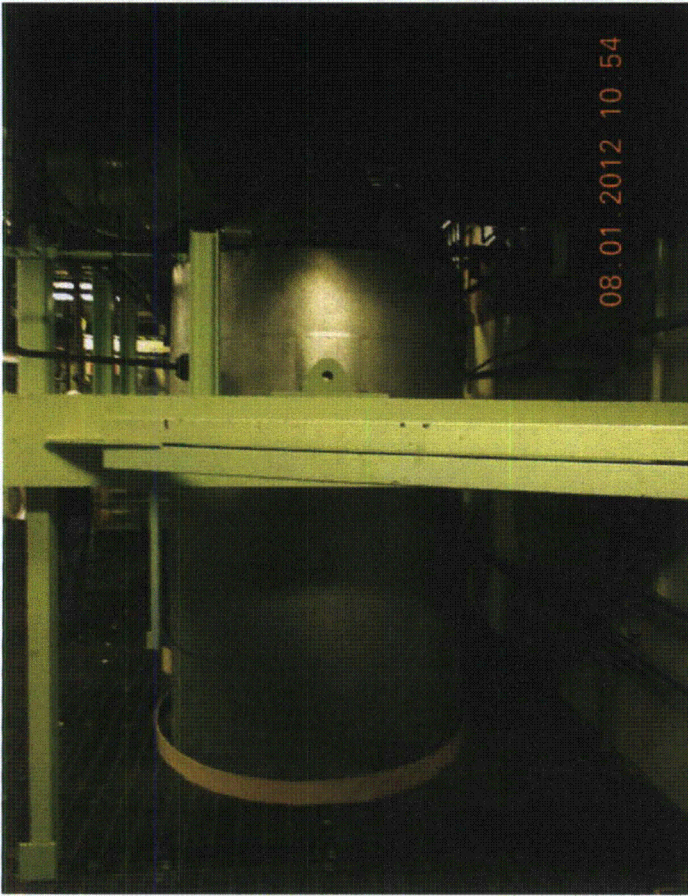
11. Have you looked for and found no other seismic conditions that could adversely affect the safety functions of the equipment? Y N U

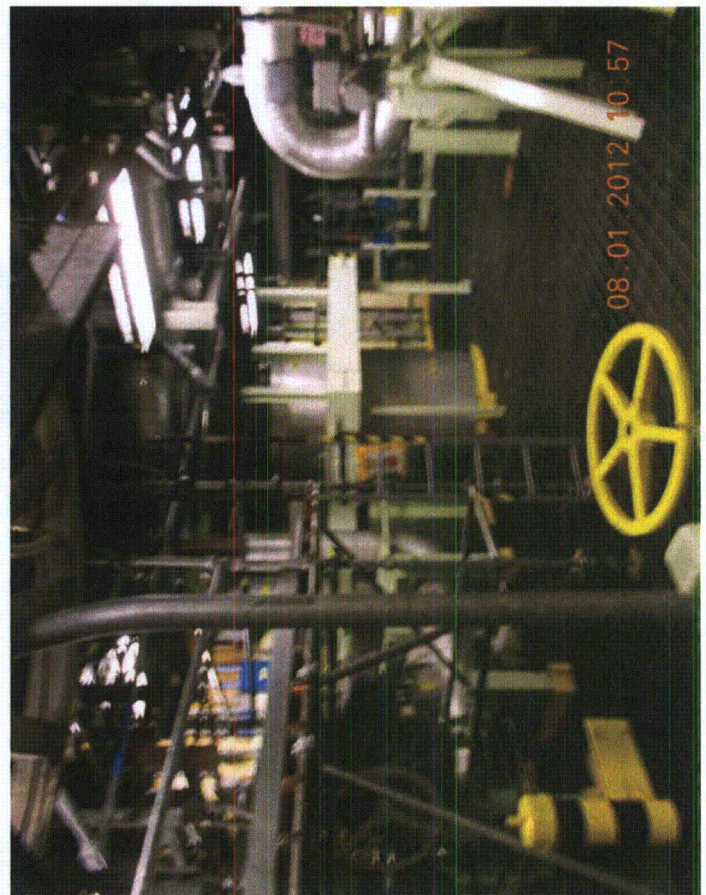
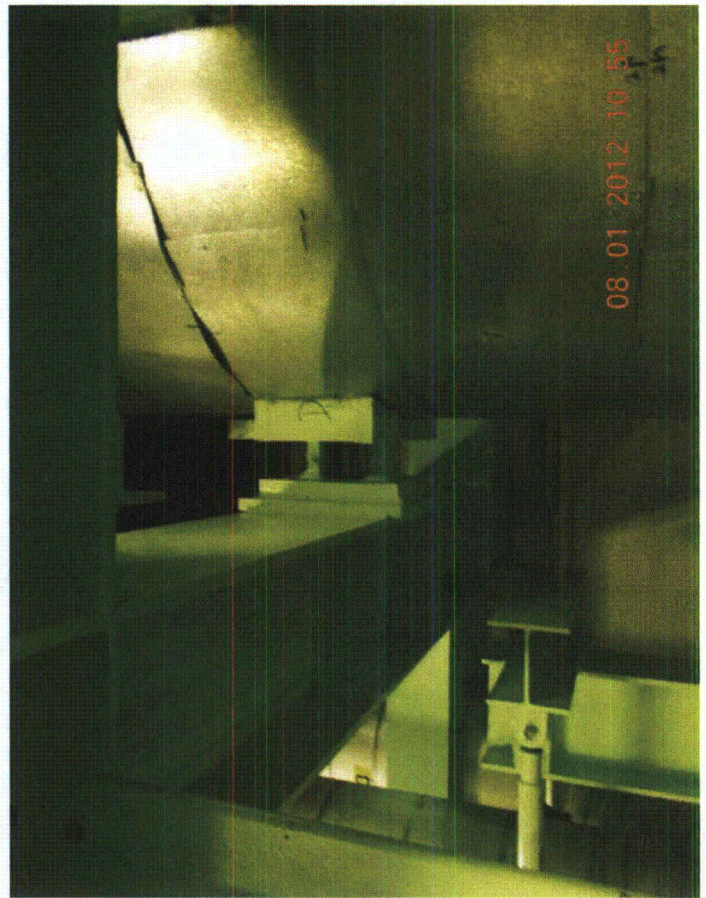
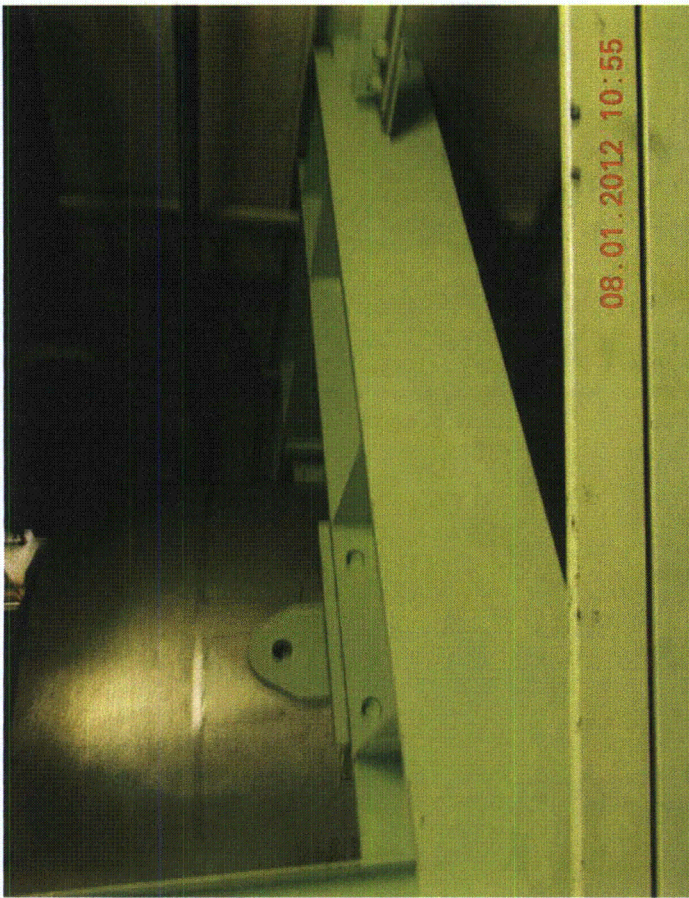
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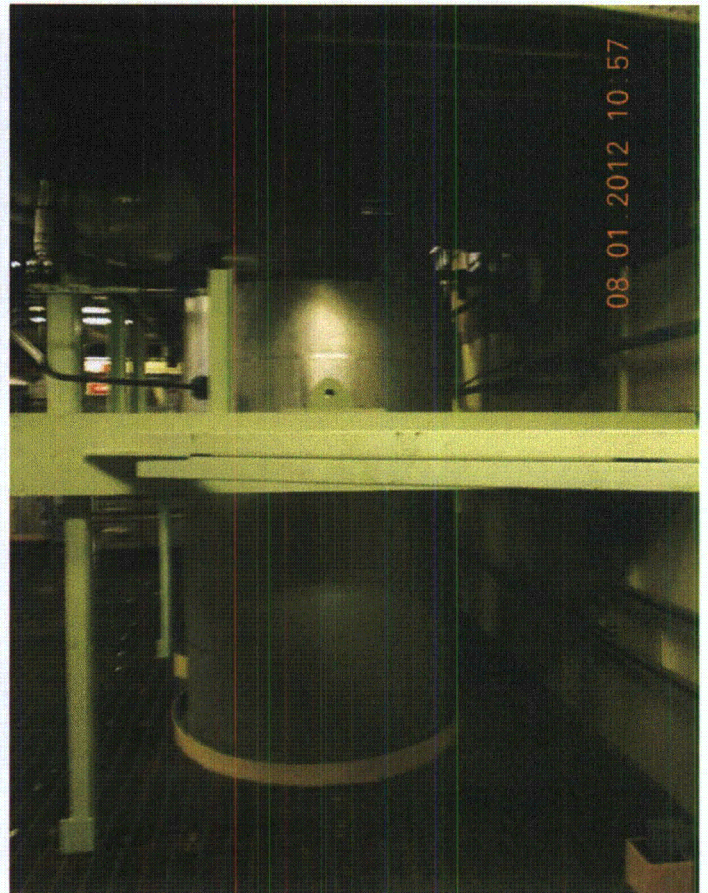
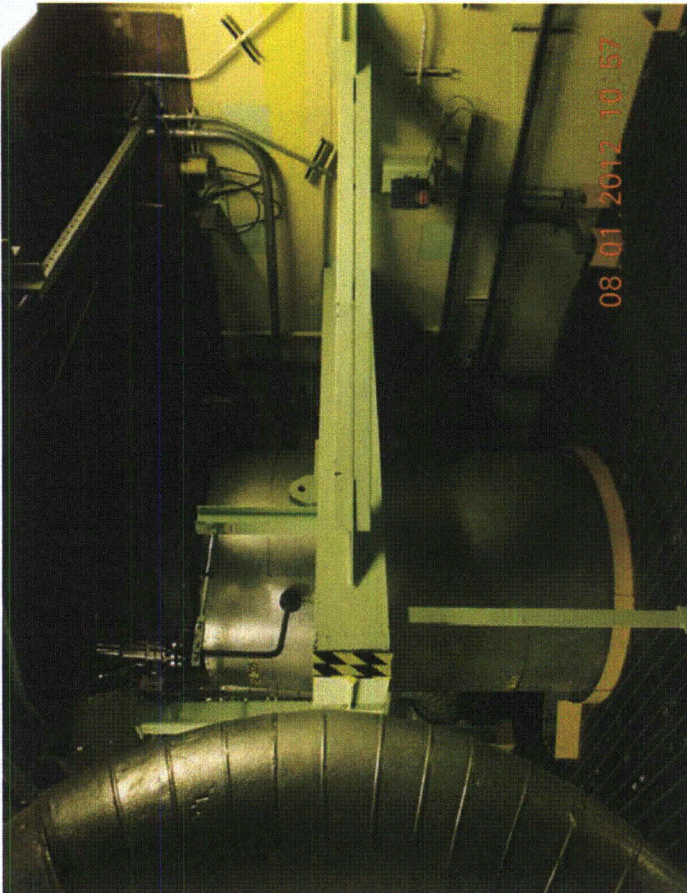
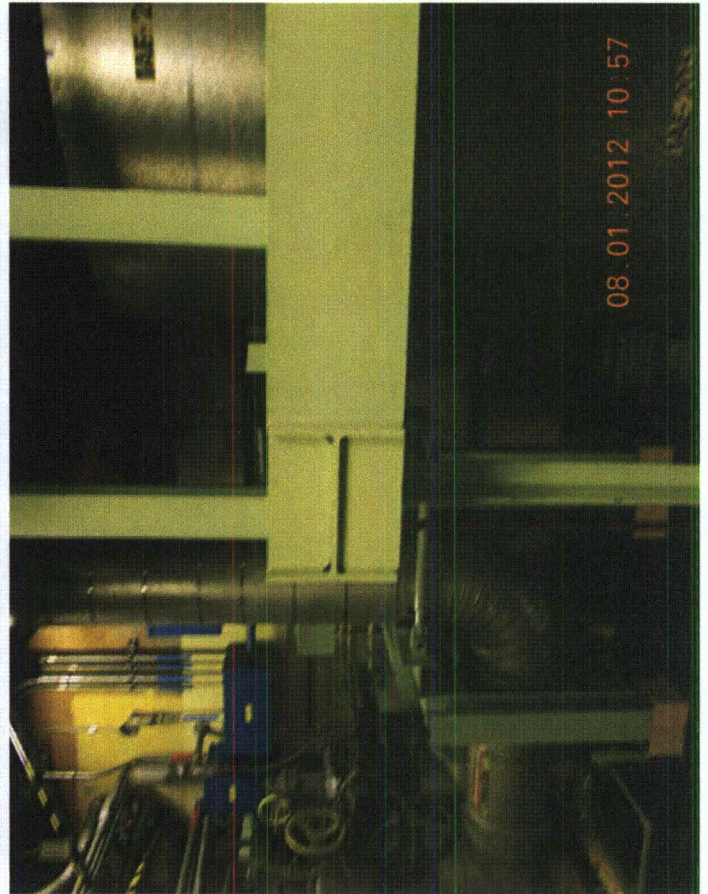
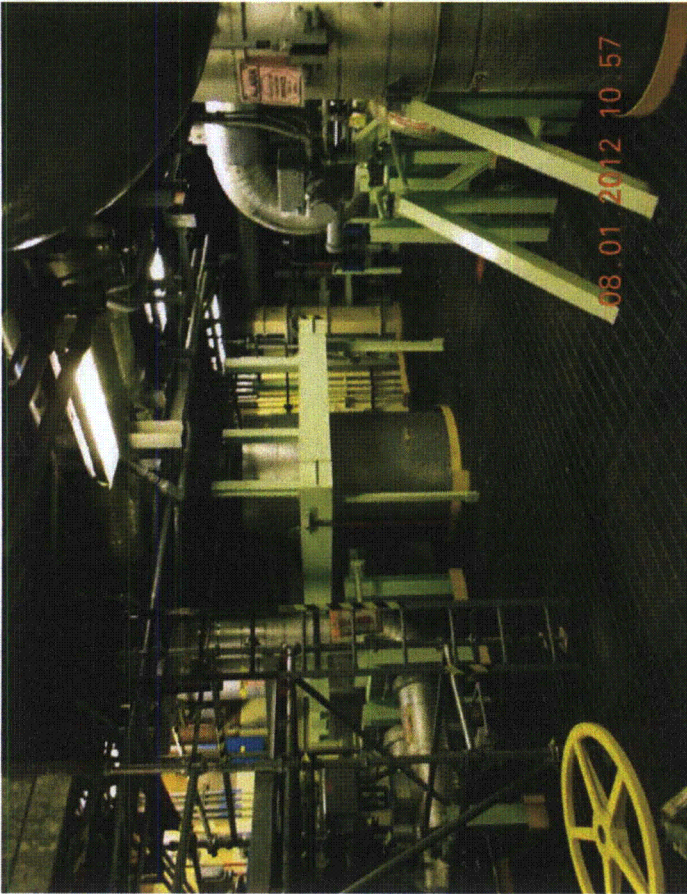
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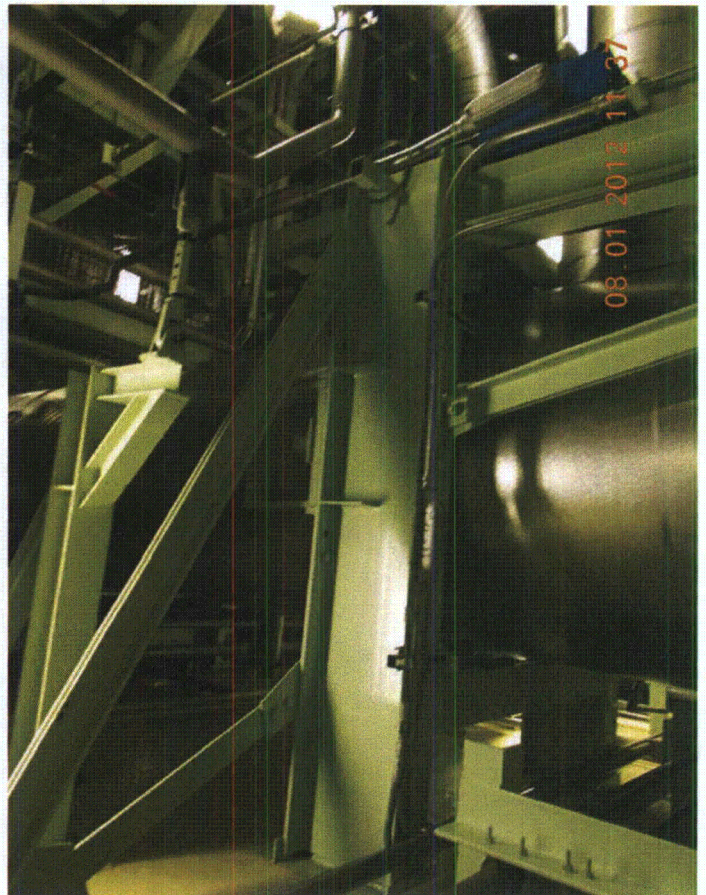
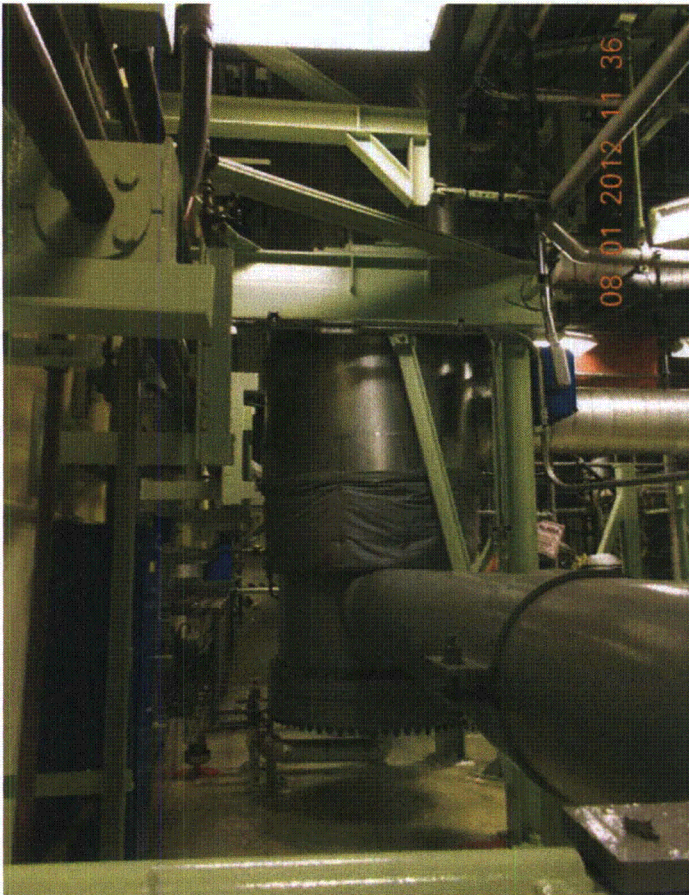
Evaluated by: James Wiggins Date: 8/3/2012
[Signature] 8/3/2012

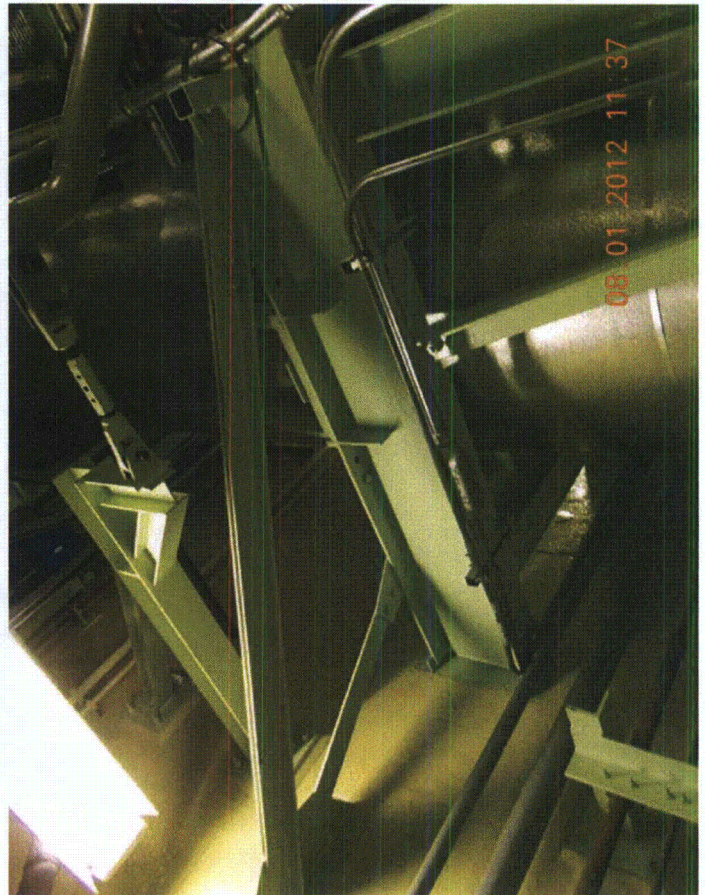
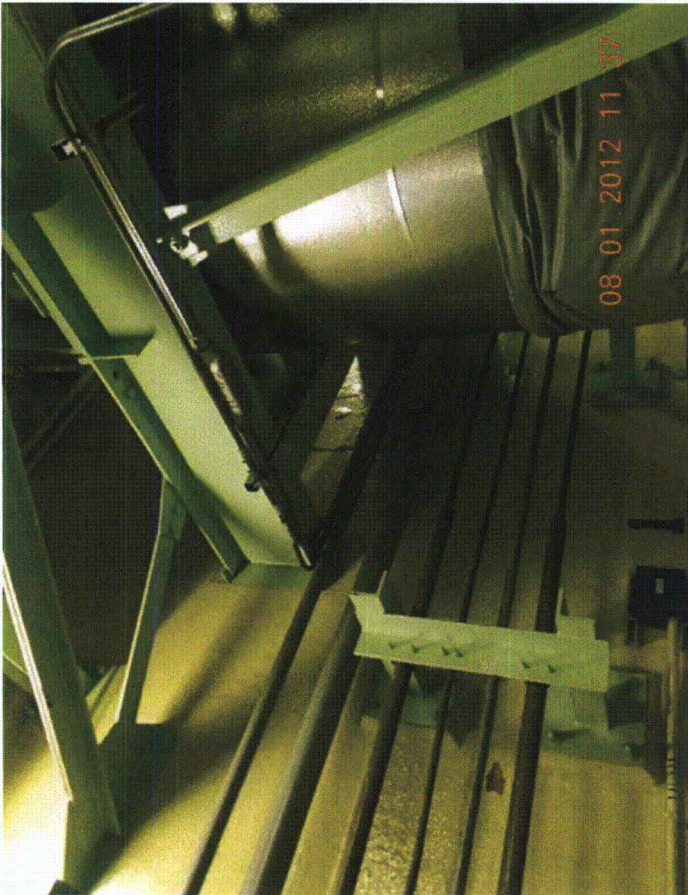
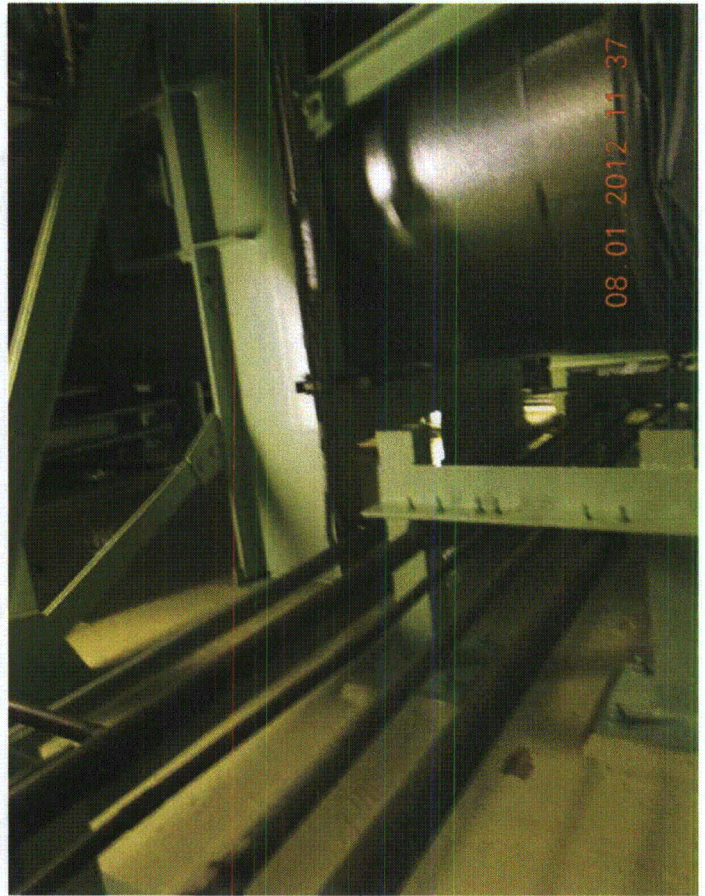












Seismic Walkdown Checklist (SWC)

Equipment ID No. 1AG501 Equip. Class¹² (15) Engine Generators

Equipment Description D11 Diesel Generator

Location: Bldg. Diesel Generator Building Floor El. 217 Room, Area Room 311A

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

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

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

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

5. Is the anchorage configuration consistent with plant documentation?
 (Note: This question only applies if the item is one of the 50% for which an anchorage configuration verification is required.)
See Collt Dwg. 11870830, Rev. 4. mo 9/7/12 Y N U N/A

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

¹² Enter the equipment class name from Appendix B: Classes of Equipment.

Equipment ID No. 1AG501 Equip. Class¹² (15) Engine Generators

Equipment Description D11 Diesel Generator

Interaction Effects

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

Overhead incandescent light bulbs could fall. No soft targets identified in path. Judged to be acceptable. Fixtures 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

See above for lighting. Confirm overhead crane is designed for II over I. Per Limerick calculation 042.002.003, Rev.: the EOG enclosure crane is designed for seismic loading.

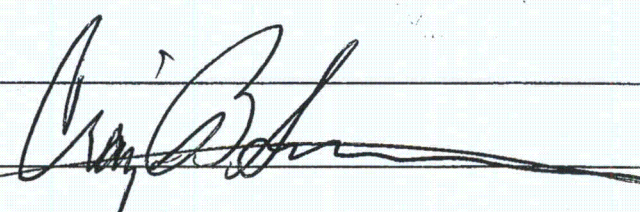
9. Do attached lines have adequate flexibility to avoid damage? Y N U N/A

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

Other Adverse Conditions

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

Comments (Additional pages may be added as necessary)

Evaluated by:  Date: 8/3/12
H. Ojibani 8/3/12

(SWC IAG-501)

Calculation: 042.002.003

Description: LGS Diesel Generator Building Crane Girder Design

Revision 3

PG # 2.3

Summary of results:

The existing diesel building crane/girders remain qualified to design seismic acceleration per spec G-14 and to the as built and latest crane information.

Design Input:

1. Limerick Spec G-14, rev. 7 (for seismic accelerations)
2. SDOC DWG. M-028-00068, Rev. 3 (for trolley and bridge weights and dimensions)

References:

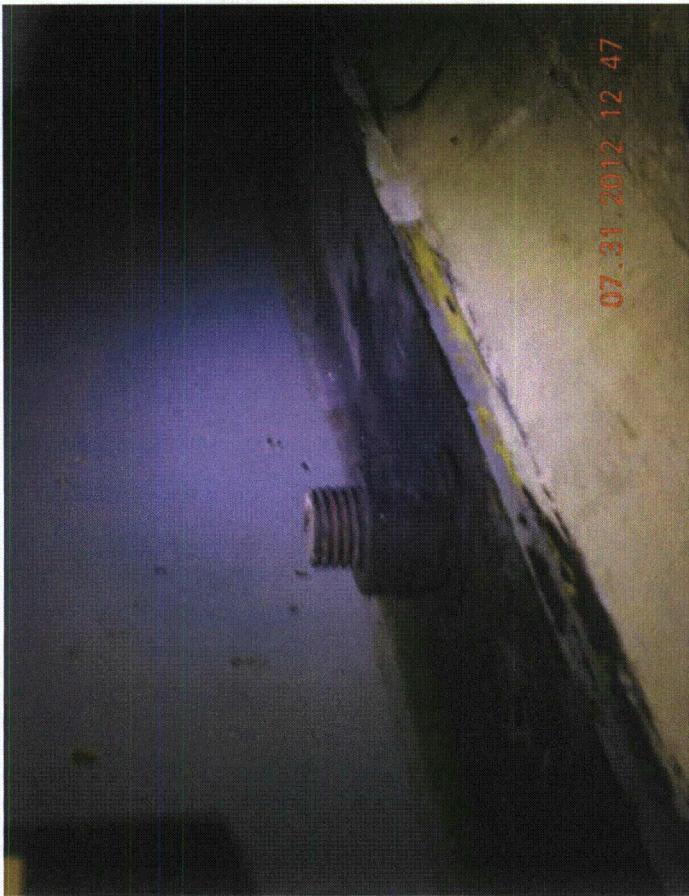
See pages 1e – 2.1

Assumptions:

None

Methodology/Approach:

Seismic accelerations from Limerick Spec G-14 will be used along with the latest crane information and the latest as-built information. The bridge crane/girders are re-analyzed to reflect the latest information as follows.



Seismic Walkdown Checklist (SWC)

Equipment ID No. 1AG502 Equip. Class¹² (18) Control Panels & Cabinets

Equipment Description D11 EDG Excitation System Cabinet

Location: Bldg. Diesel Floor El. 217 Room, Area Room 311A
Generator
Building

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

Instructions for Completing Checklist

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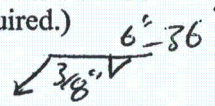
Anchorage

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

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

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

4. Is the anchorage free of visible cracks in the concrete near the anchors? Y N U N/A
 (NW) Front left corner has been repaired and appears to be free from any crack / defect. OK

5. Is the anchorage configuration consistent with plant documentation? Y N U N/A
 (Note: This question only applies if the item is one of the 50% for which an anchorage configuration verification is required.)
 Drawing shows anchor bolts. field should stick weld. Configuration is different. 

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

¹² Enter the equipment class name from Appendix B: Classes of Equipment.

Equipment ID No. 1AG502 Equip. Class¹² (18) Control Panels & Cabinets

Equipment Description D11 EDG Excitation System Cabinet

Interaction Effects

WSS
Revised

- 7. Are soft targets free from impact by nearby ^{adj} equipment or structures? Y N U N/A
there is an overhead light bulb in the high ceiling. if that falls, and falls the cabinet with soft instruments, there is a vent hood on the top of cabinet on the path to hit (see comments) that will give it a parabola path that will prevent it from hitting those 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
no masonry block walls. HVAC line is ~~not~~ solid. all the big wires come from the bottom. ^{adj} the above cable tray is less than 50% full. OK. Fittings appear ~~adequately~~ ^{adequately} attached
- 9. Do attached lines have adequate flexibility to avoid damage? Y N U N/A
- 10. Based on the above seismic interaction evaluations, is equipment free of potentially adverse seismic interaction effects? Y N U

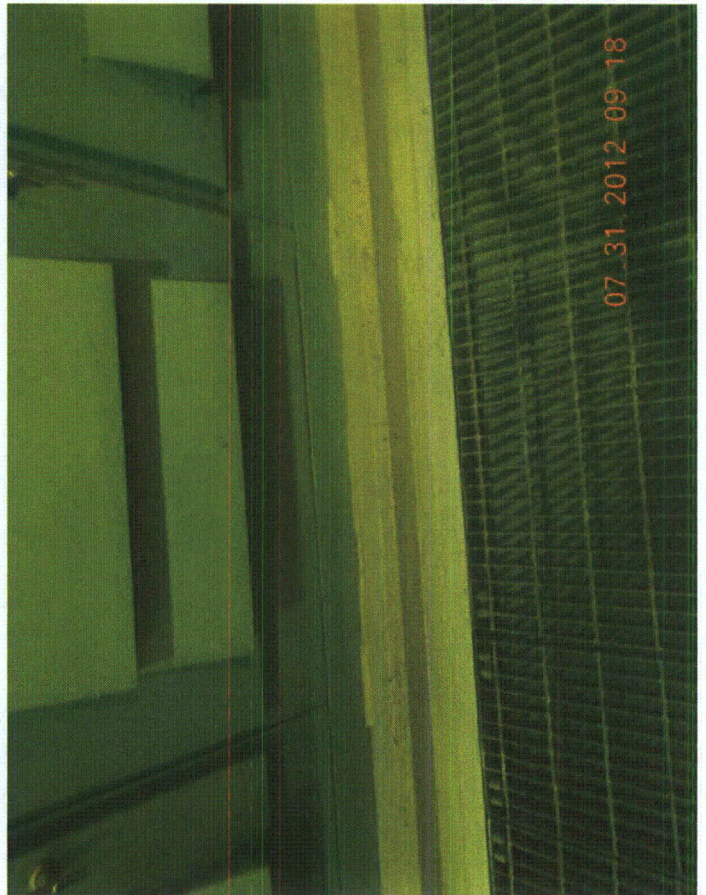
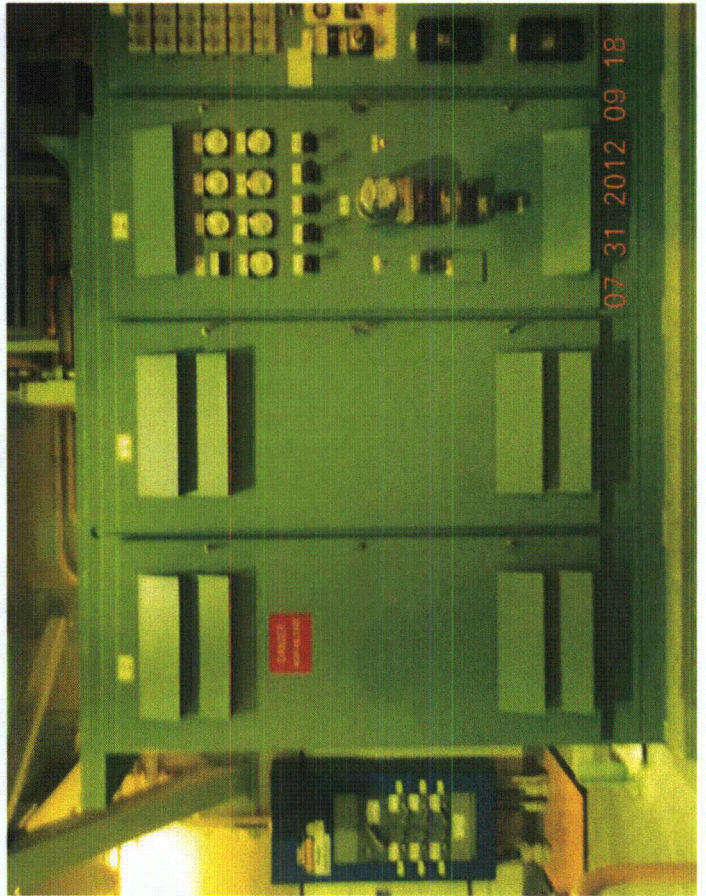
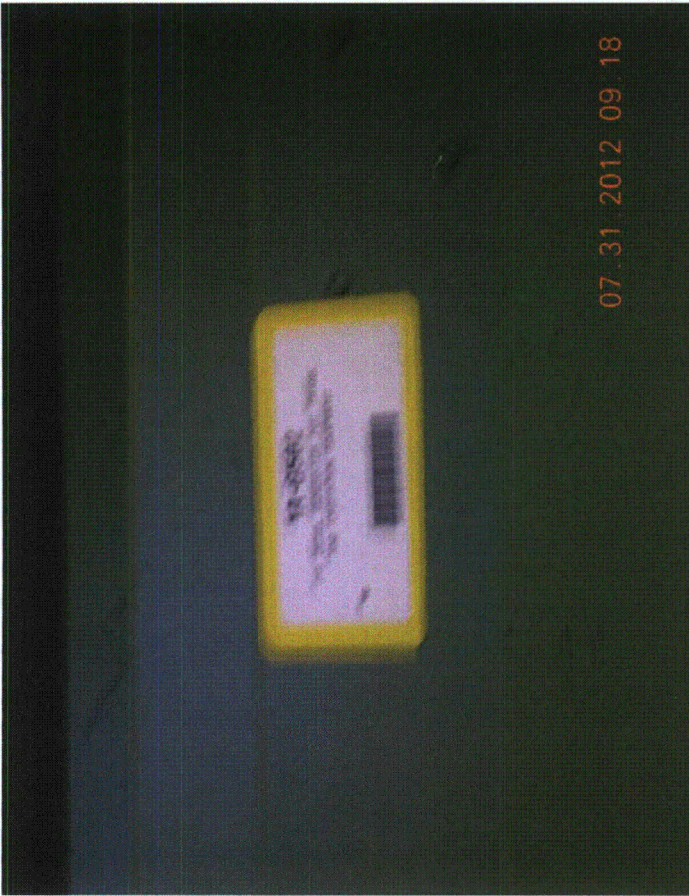
Other Adverse Conditions

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

Comments (Additional pages may be added as necessary)

Soft targets are not in potential falling path of fluorescent bulbs.

Evaluated by: *[Signature]* Date: 8/3/12
[Signature] 8/3/12





Seismic Walkdown Checklist (SWC)

Equipment ID No. 1AS860 1ATB124 Equip. Class¹² (18) Control Panels & Cabinets
 Equipment Description ESS DIV 1
 Location: Bldg. Diesel Oil Storage Tank Floor El. 206 Room, Area Yard
 Manufacturer, Model, Etc. (optional but recommended) Underground structure

Instructions for Completing Checklist

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Anchorage

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

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

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

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

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

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

¹² Enter the equipment class name from Appendix B: Classes of Equipment.

Equipment ID No. 1A5860 ~~1ATB124~~ Equip. Class¹² (18) Control Panels & Cabinets

Equipment Description ESS DIV 1

Interaction Effects

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

• 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 N U N/A

• No overhead equipment or block walls

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

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

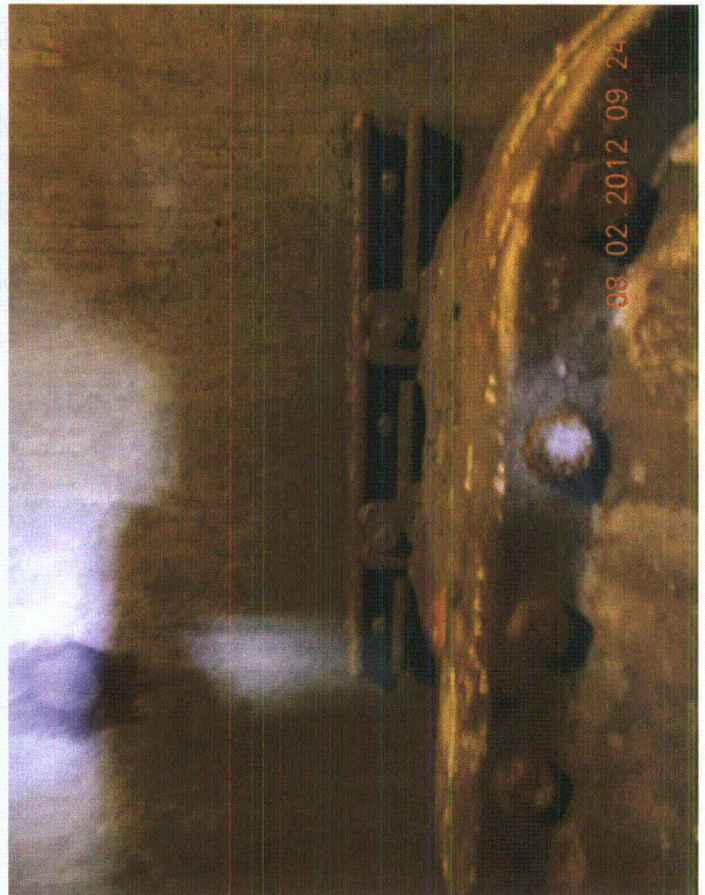
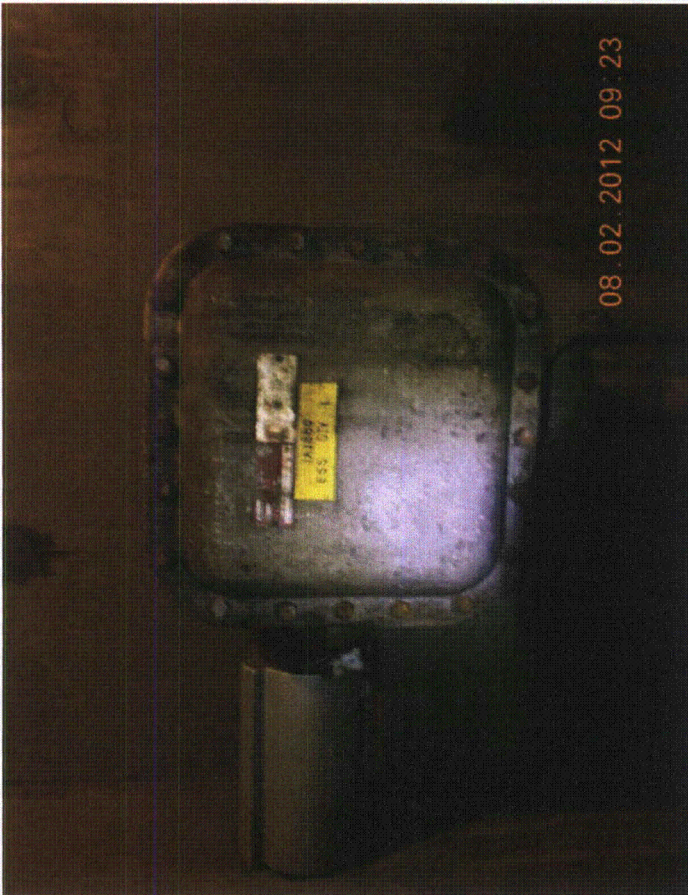
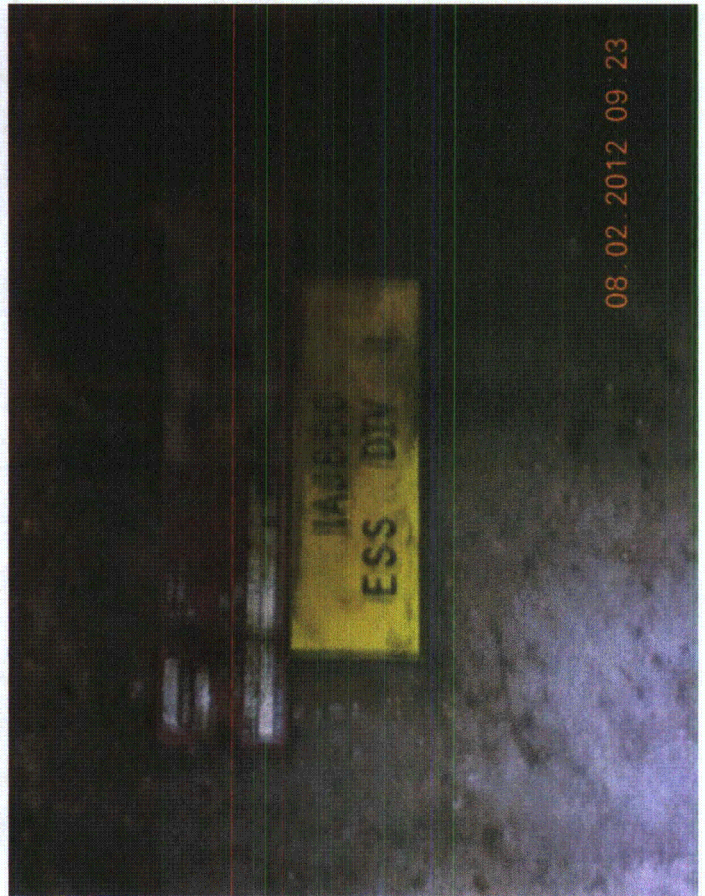
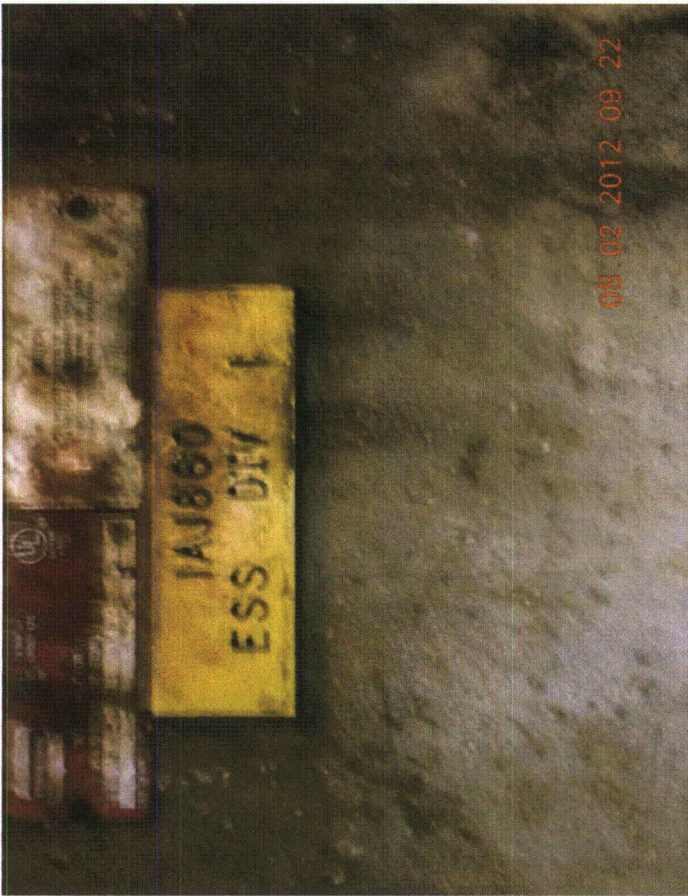
Other Adverse Conditions

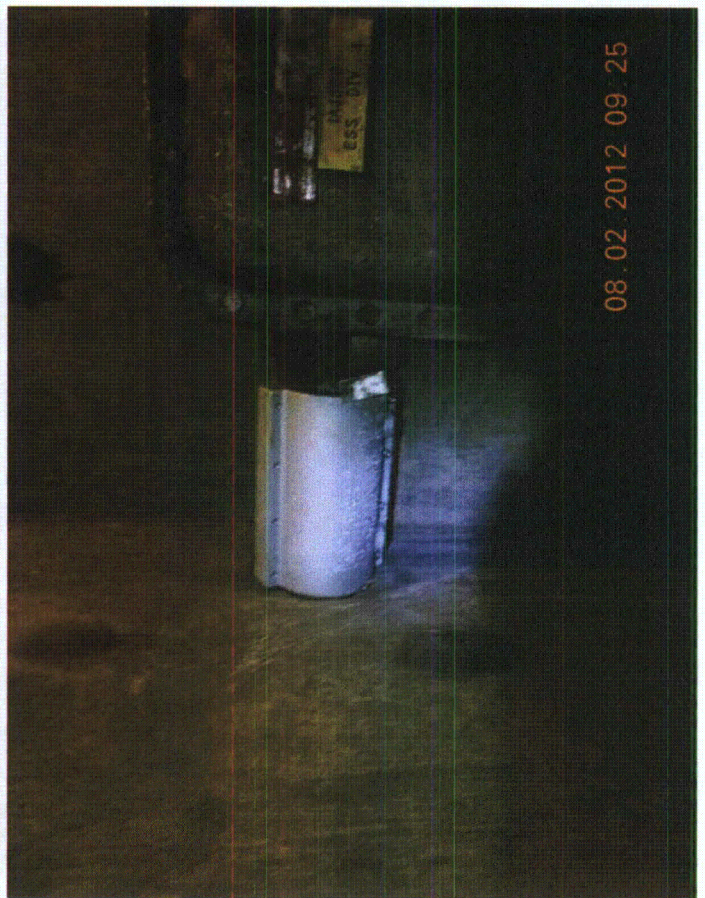
11. Have you looked for and found no other seismic conditions that could adversely affect the safety functions of the equipment? Y N U

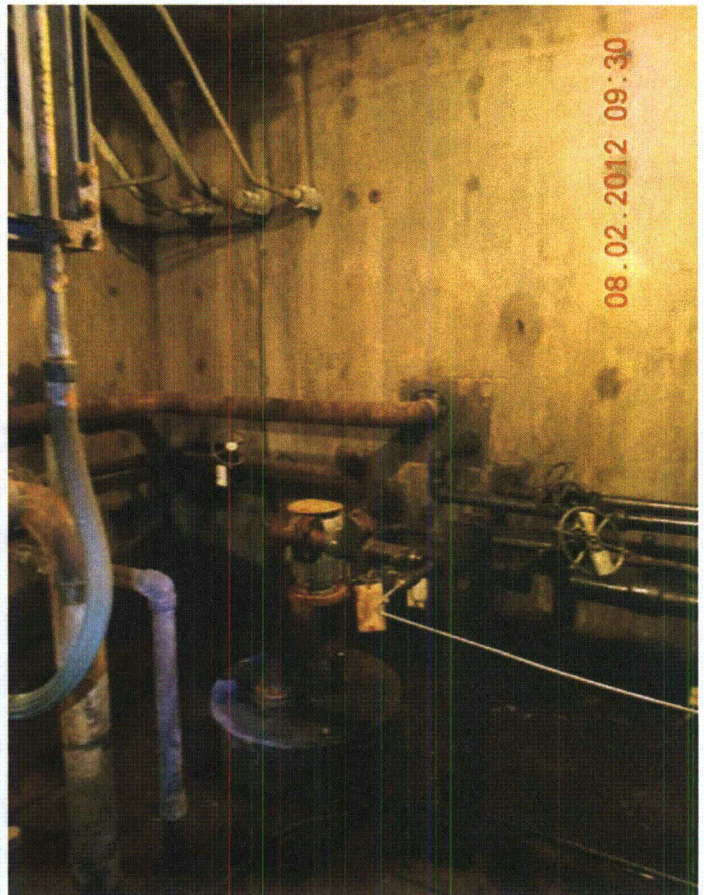
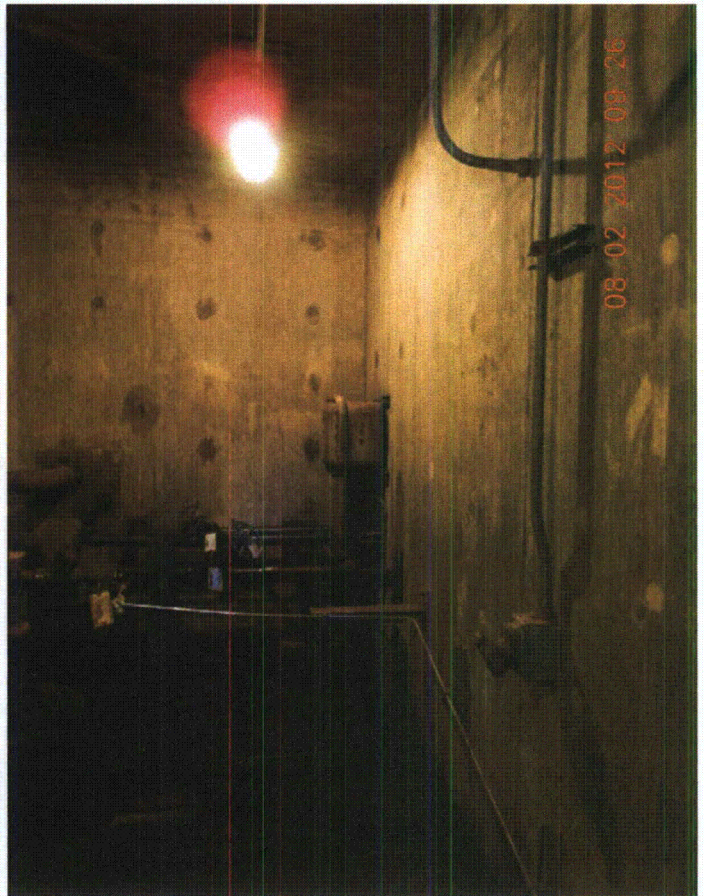
Comments (Additional pages may be added as necessary)

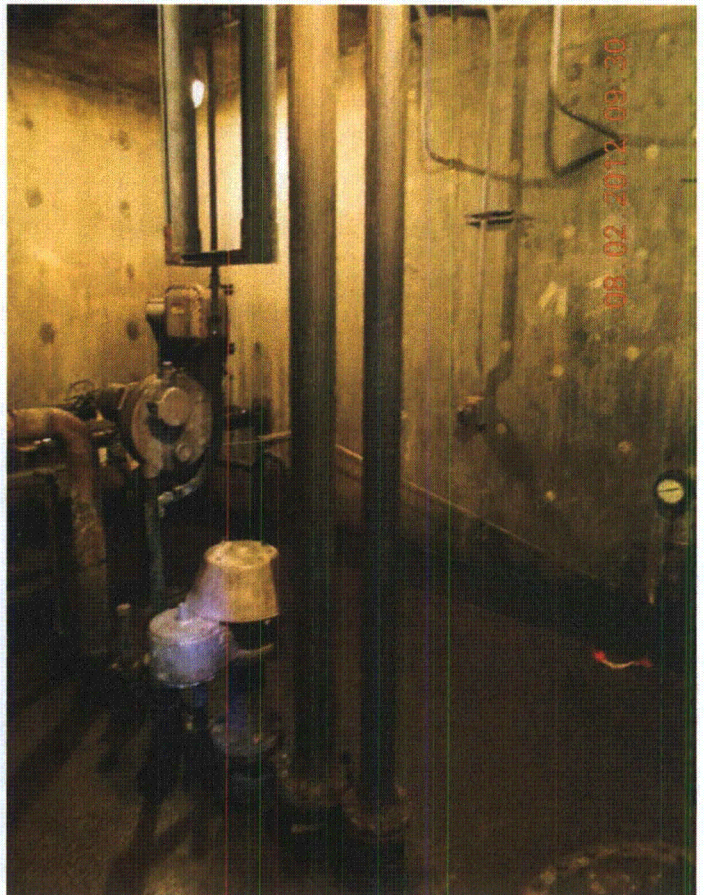
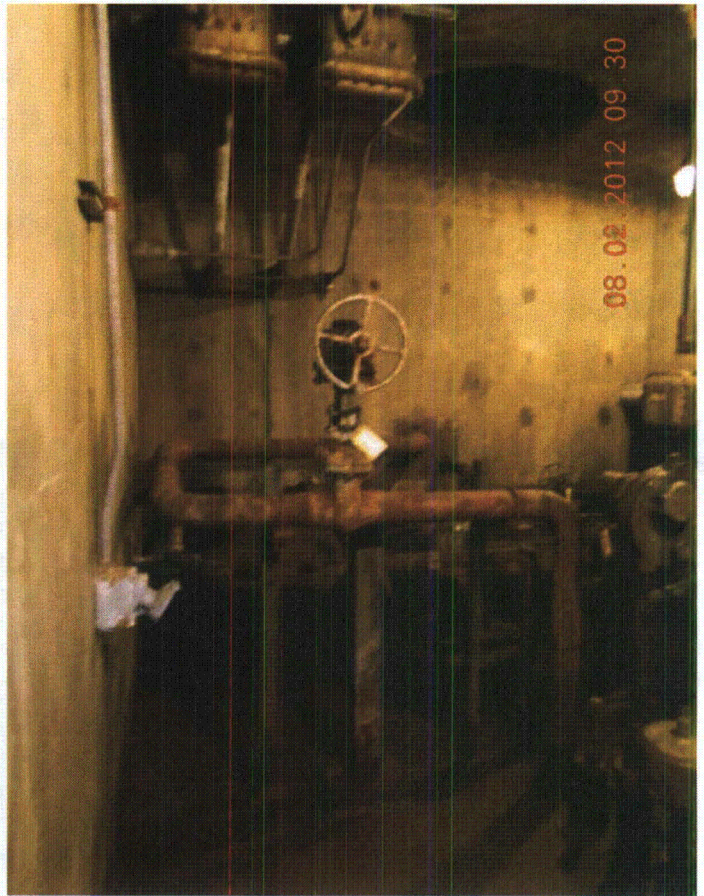
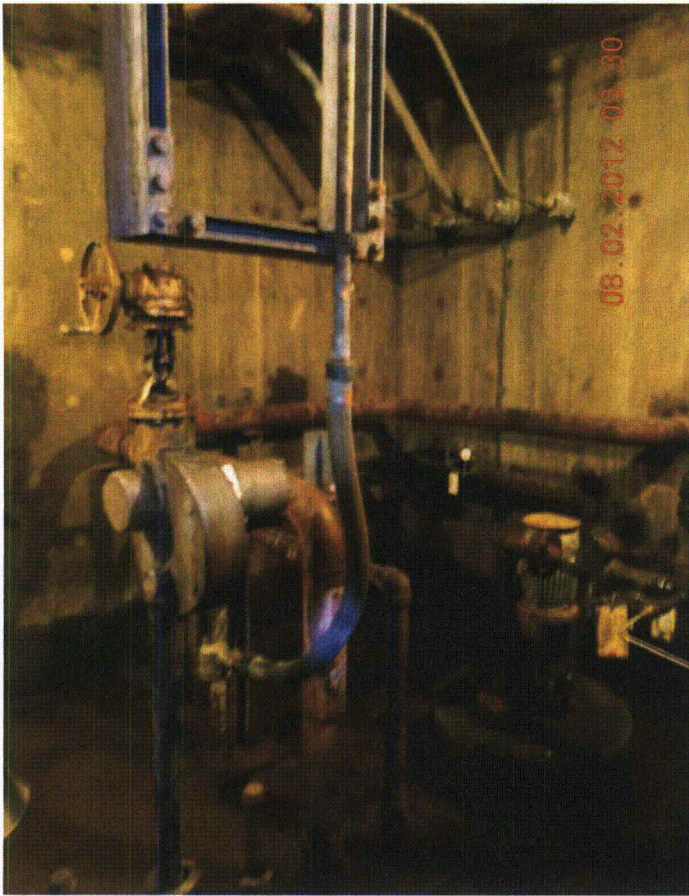
N/A

Evaluated by: *[Signature]* Date: 8/3/2012
James Wiggins 8/3/2012









Seismic Walkdown Checklist (SWC)

Equipment ID No. 1AP202 Equip. Class¹² (04) Vertical Pumps

Equipment Description RHR Pump

Location: Bldg. Reactor Floor El. 177 Room, Area Room 102
Enclosure

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

Instructions for Completing Checklist

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

Anchorage

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

2. Is the anchorage free of bent, broken, missing or loose hardware? Y N U N/A
 Anchors double-nutted with top nuts not fully engaged; top nut used as a lock washer, not for structural support

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

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

5. Is the anchorage configuration consistent with plant documentation? Y N U N/A
 (Note: This question only applies if the item is one of the 50% for which an anchorage configuration verification is required.)
 Matches Dwg. # 8031-M-1-E11-C002-C-5.4, Rev. 8

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

¹² Enter the equipment class name from Appendix B: Classes of Equipment.

Equipment ID No. 1AP202 Equip. Class¹² (04) Vertical Pumps

Equipment Description RHR Pump

Interaction Effects

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

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 N U N/A

No overhead equipment or block walls

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

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

Other Adverse Conditions

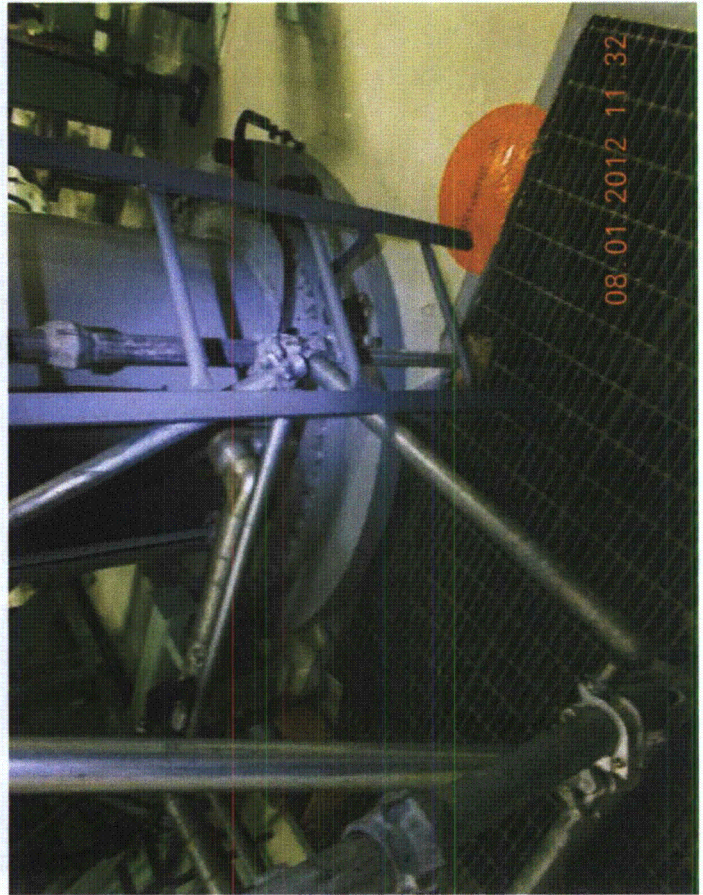
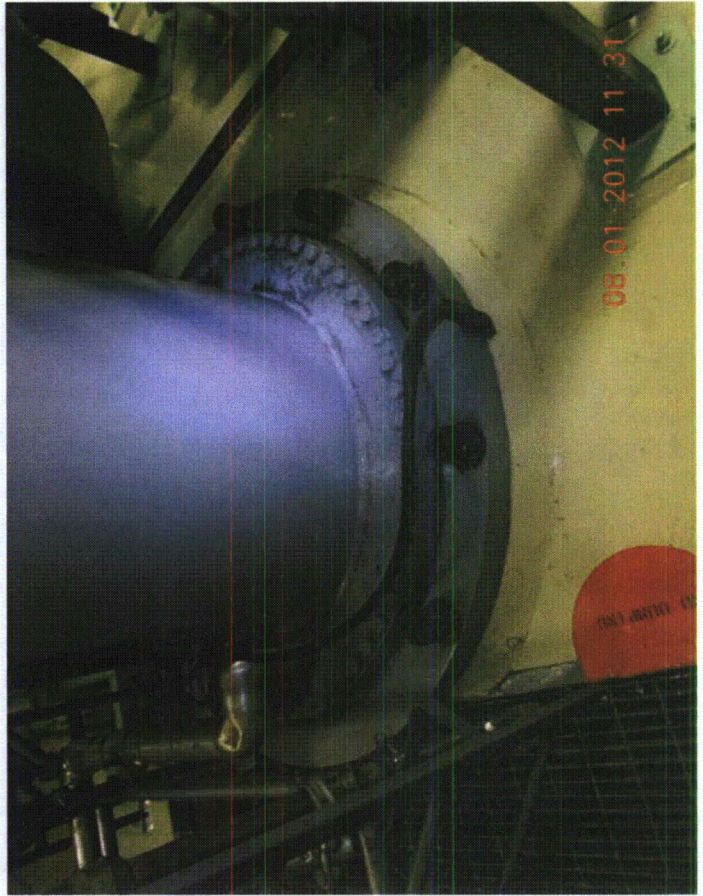
11. Have you looked for and found no other seismic conditions that could adversely affect the safety functions of the equipment? Y N U

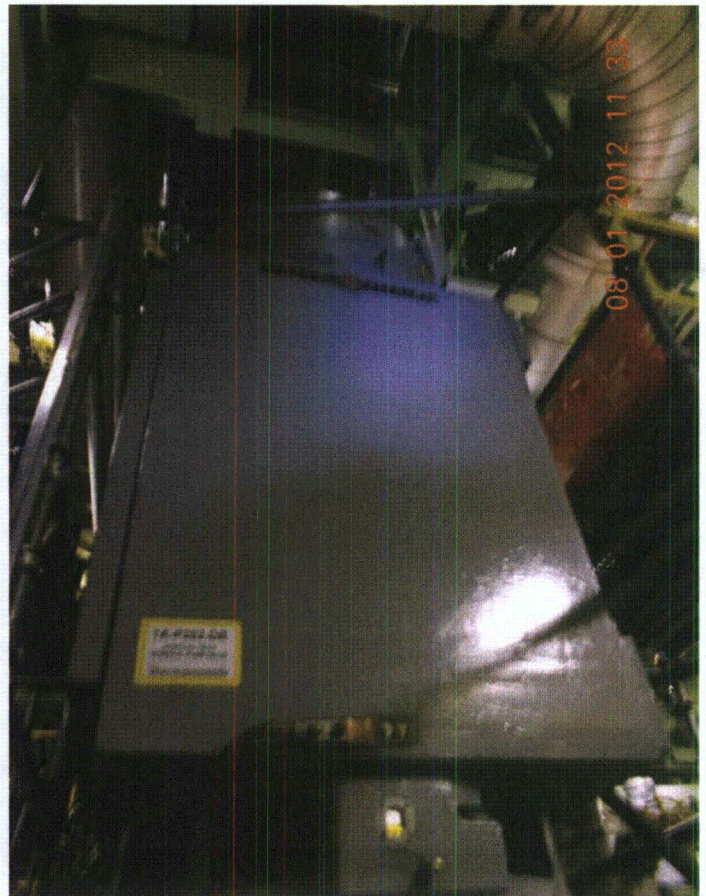
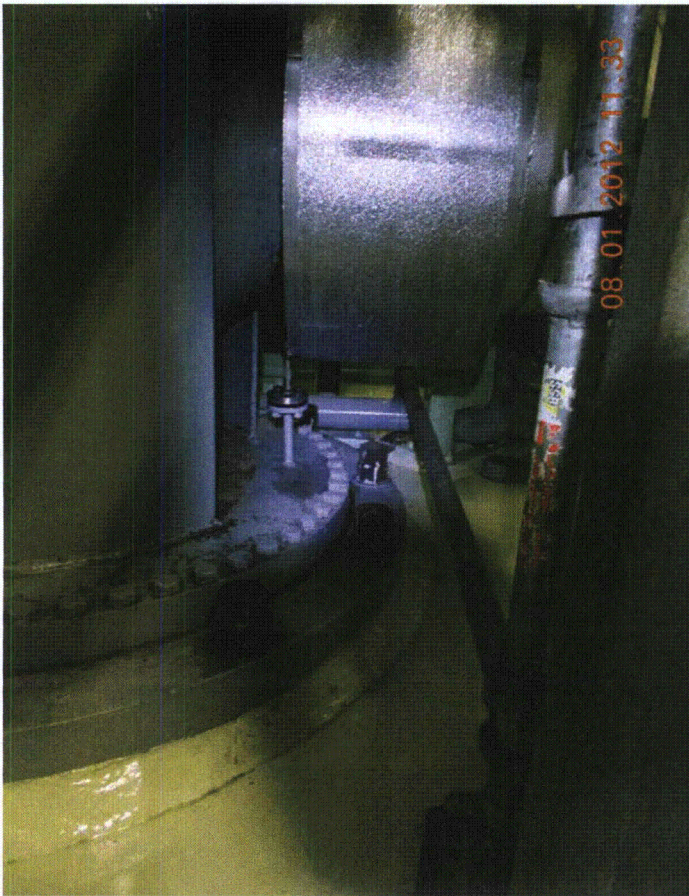
Comments (Additional pages may be added as necessary)

N/A

Evaluated by: *James Higgins* Date: *8/3/2012*

[Signature] *8/3/2012*





Seismic Walkdown Checklist (SWC)

Equipment ID No. 1AP206 Equip. Class¹² (04) Vertical Pumps

Equipment Description Core Spray Pump and Driver

Location: Bldg. Reactor Floor El. 177 Room, Area Room 110
Enclosure

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

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

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

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

5. Is the anchorage configuration consistent with plant documentation? Y N U N/A
 (Note: This question only applies if the item is one of the 50% for which an anchorage configuration verification is required.)
*Anchorage consistent w/ Dynamic Qualification report:
 PECO DR No. GE-127 (GE Report No. HHI-E21-C001, Rev. 2)
 Rev. 0*

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

¹² Enter the equipment class name from Appendix B: Classes of Equipment.

Equipment ID No. 1AP206 Equip. Class¹² (04) Vertical Pumps

Equipment Description Core Spray Pump and Driver

Interaction Effects

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

· 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 N U N/A

· No overhead equipment

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

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

Other Adverse Conditions

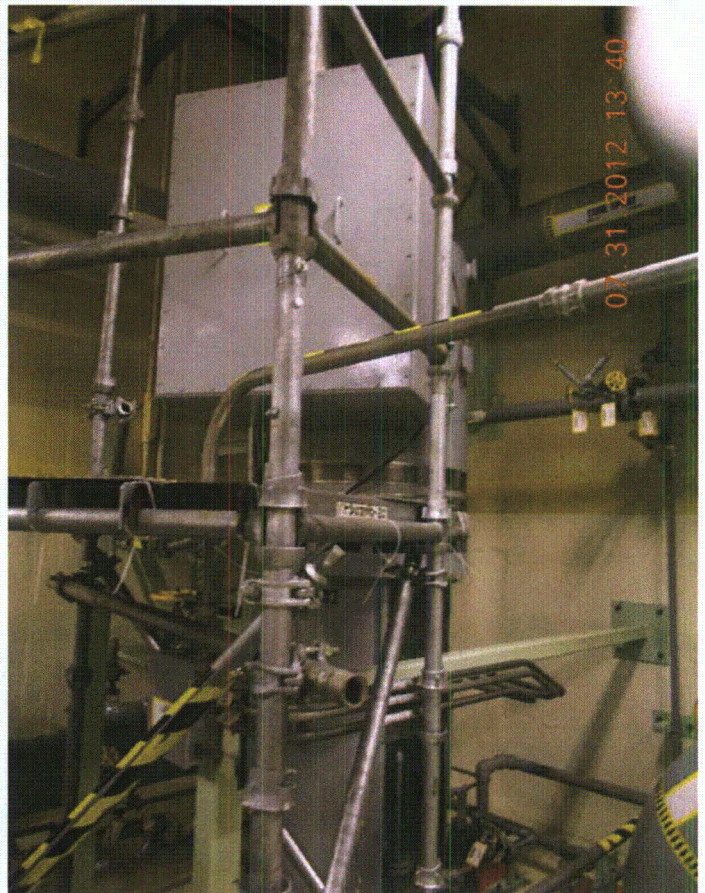
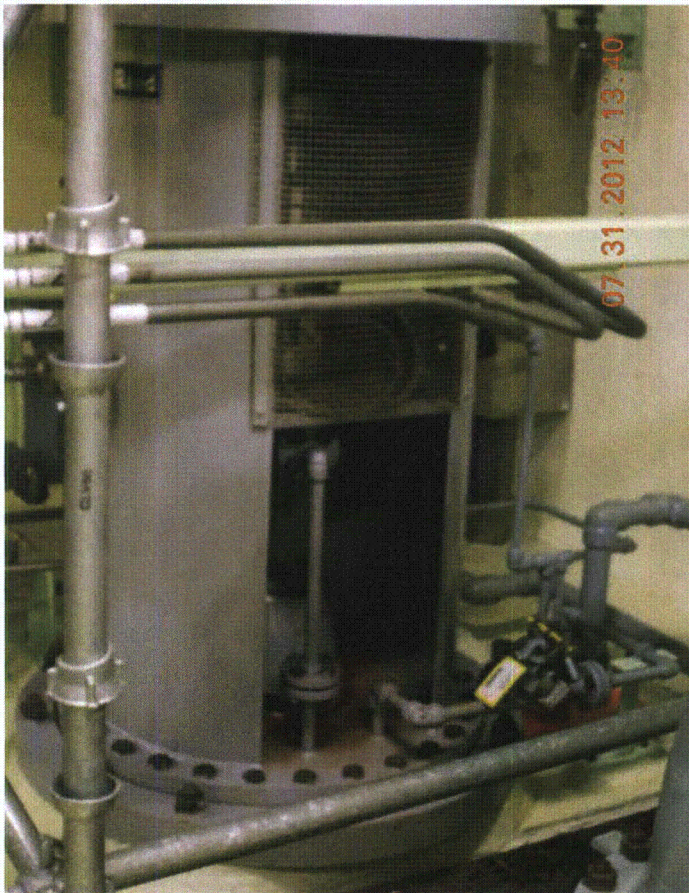
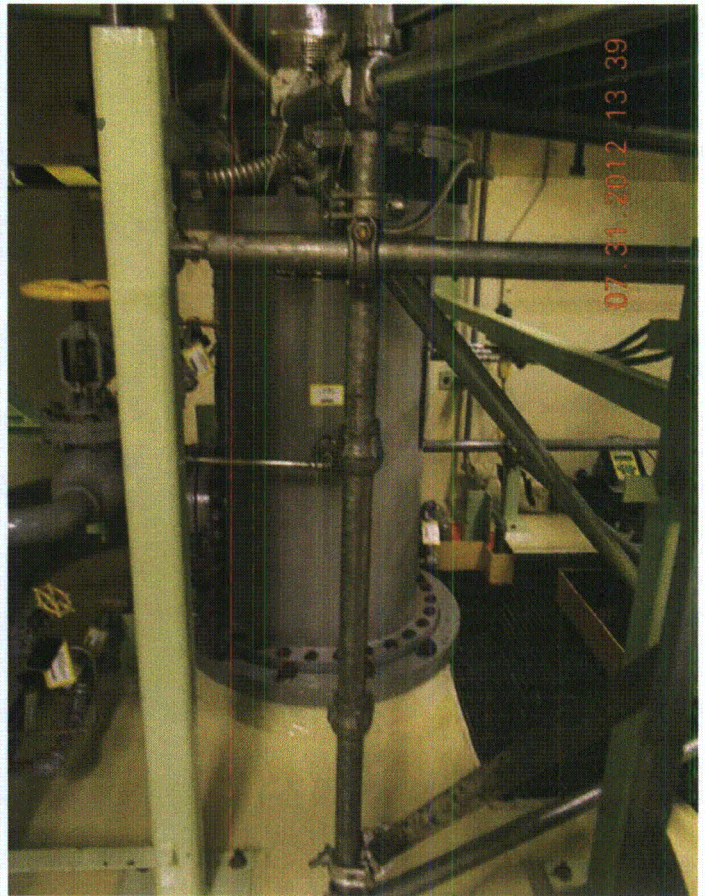
11. Have you looked for and found no other seismic conditions that could adversely affect the safety functions of the equipment? Y N U

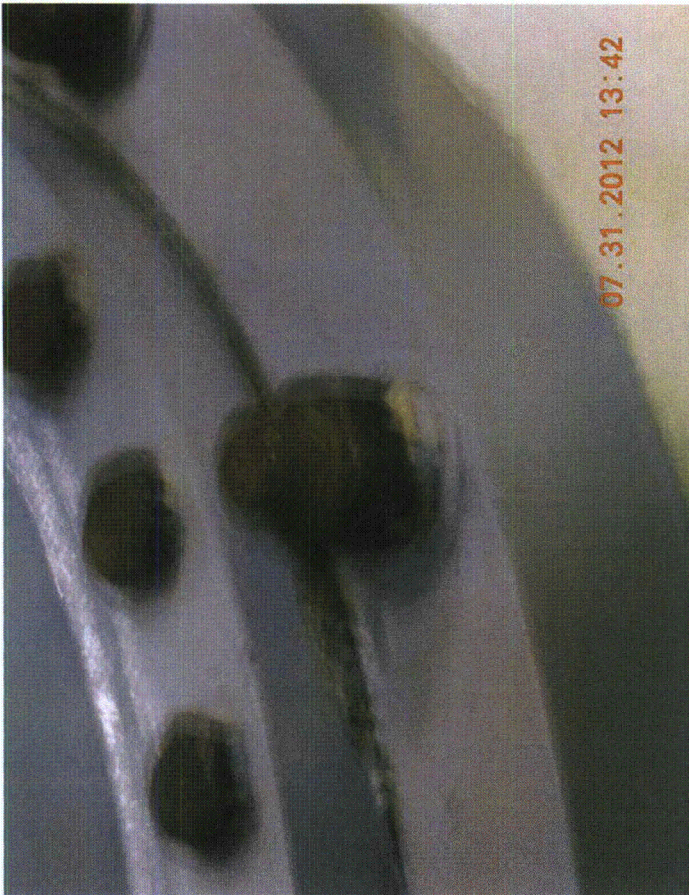
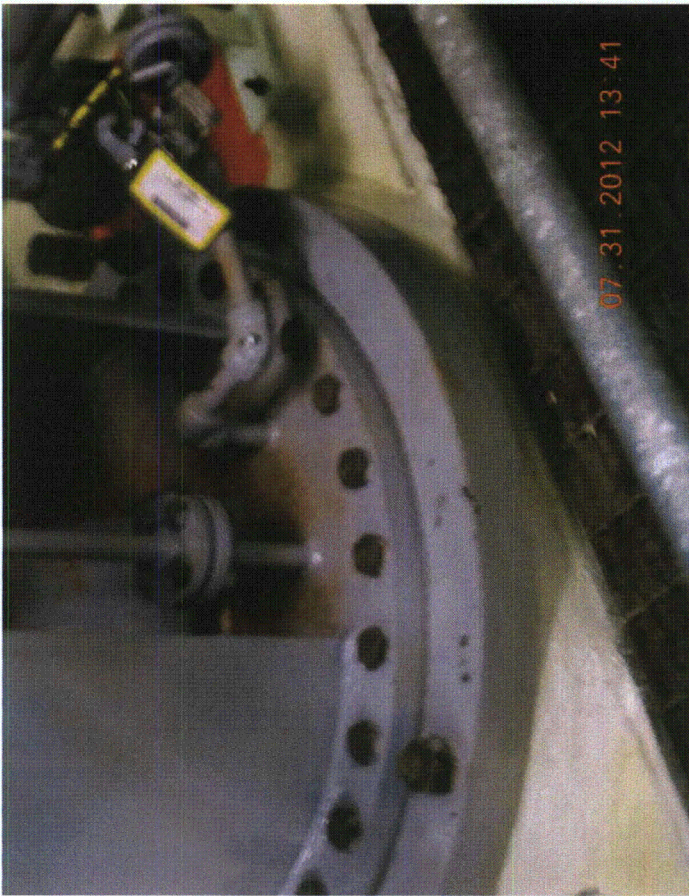
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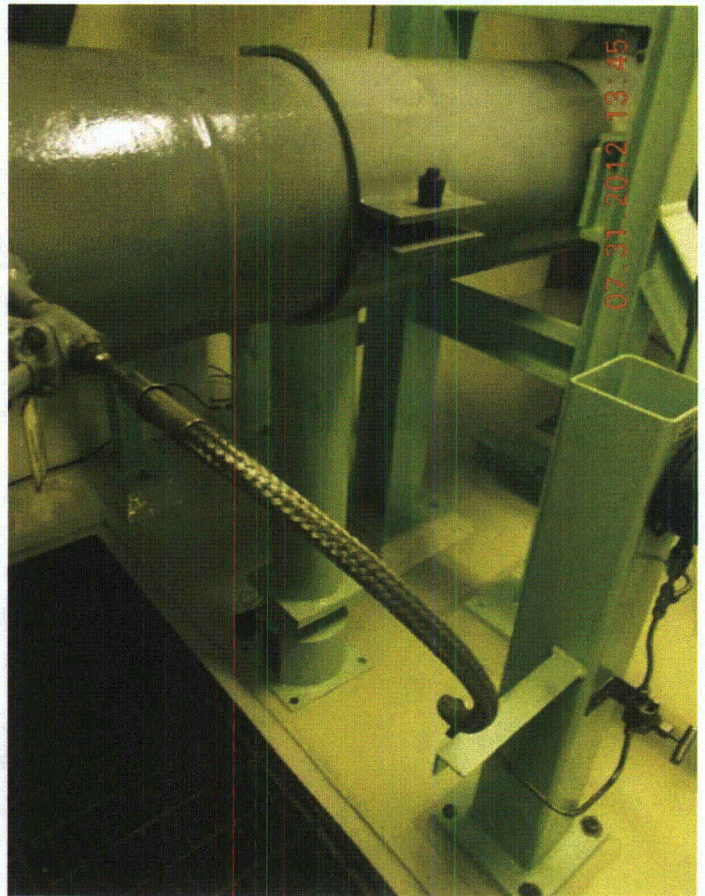
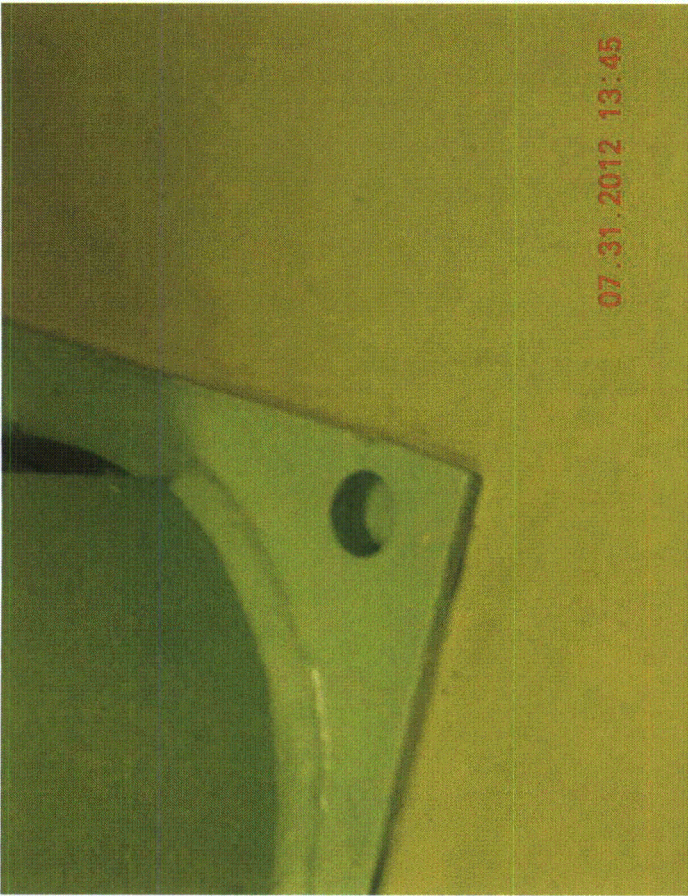
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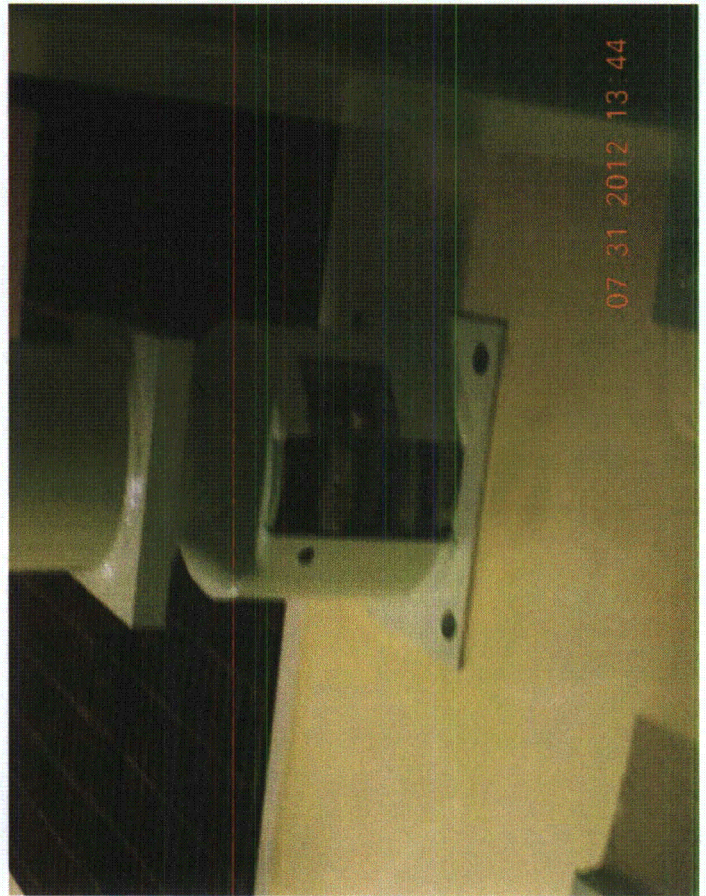
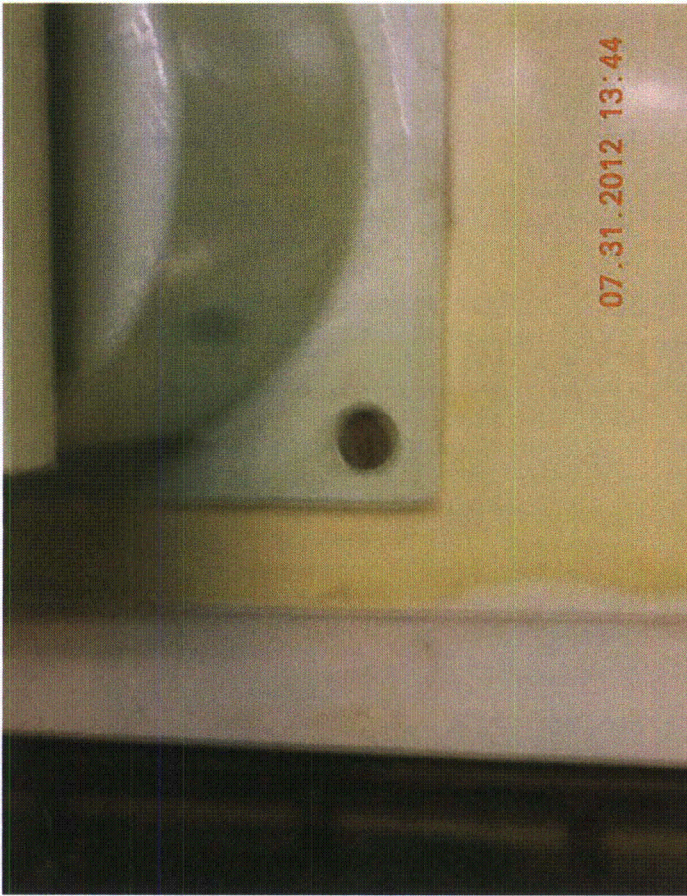
Evaluated by: James Higgins Date: 8/3/2012

[Signature] 8/3/2012









Seismic Walkdown Checklist (SWC)

Equipment ID No. A 10P514 Equip. Class¹² (04) Vertical Pumps

Equipment Description Diesel Generator Diesel Oil Pump

Location: Bldg. Diesel Oil Storage Tank Floor El. 206 Room, Area Yard
Underground Structure

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

Instructions for Completing Checklist

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

Anchorage

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

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

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

4. Is the anchorage free of visible cracks in the concrete near the anchors? Y N U N/A
Anchored to tank; tank encased in concrete free of cracks

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

¹² Enter the equipment class name from Appendix B: Classes of Equipment.

Equipment ID No. ^A 10P514 Equip. Class¹² (04) Vertical Pumps

Equipment Description Diesel Generator Diesel Oil Pump

Interaction Effects

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

.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 N U N/A

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

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

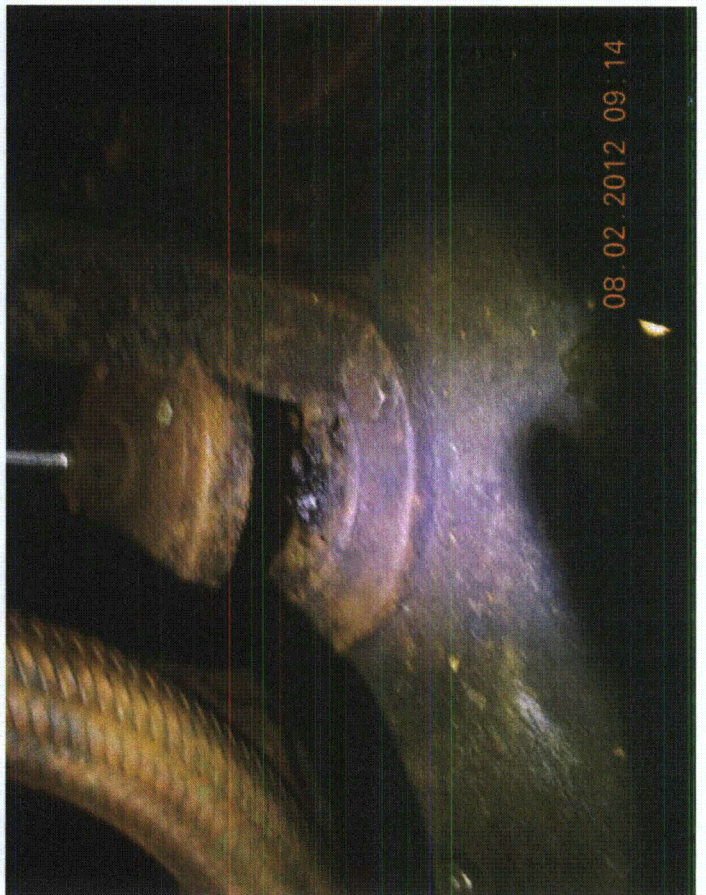
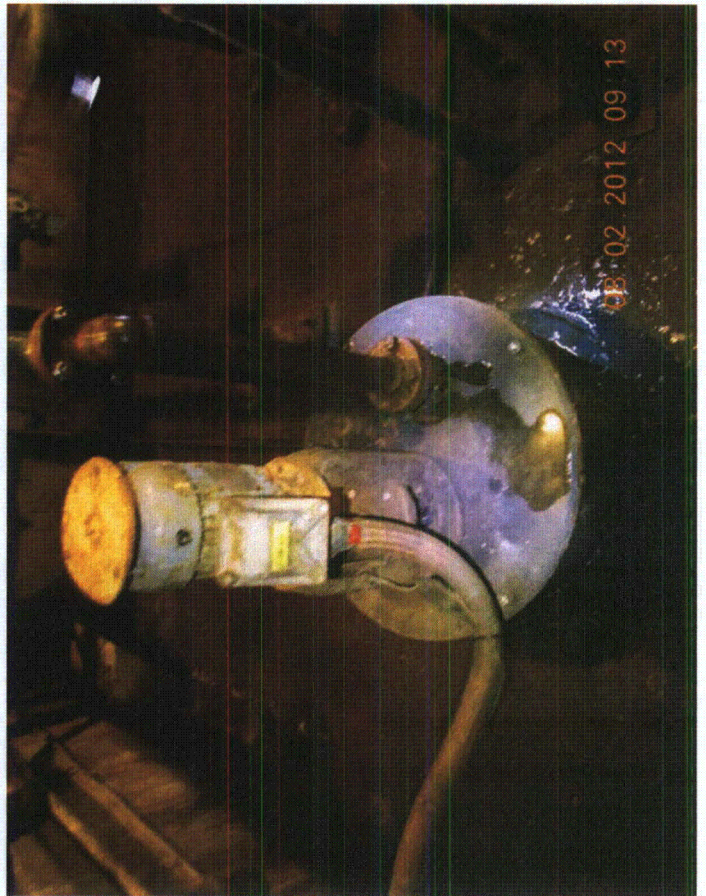
Other Adverse Conditions

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

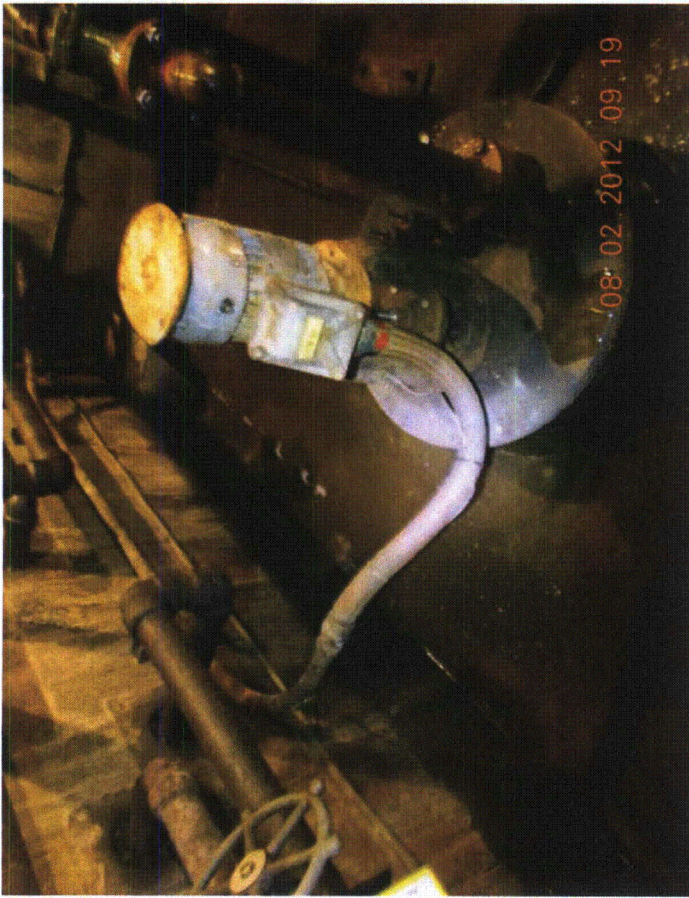
Comments (Additional pages may be added as necessary)

N/A

Evaluated by: [Signature] Date: 8/3/2012
James McQueen 8/3/2012







Seismic Walkdown Checklist (SWC)

Equipment ID No. 1AS575 Equip. Class¹² (20) Horizontal Tanks or Heat Exchangers

Equipment Description Diesel Generator Exhaust Silencer

Location: Bldg. Diesel Generator Building Floor El. 217 Room, Area Room 311A

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

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

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

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

Concrete for

Building steel anchors connecting silencer to wall is uncracked & in good condition

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

*Burgess Manning Desg 51-7008, Rev. 4. MO 9/7/12
~~8021 M-71-186, Rev. 8BR.~~*

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

¹² Enter the equipment class name from Appendix B: Classes of Equipment.

Equipment ID No. 1AS575 Equip. Class¹² (20) Horizontal Tanks or Heat Exchangers

Equipment Description Diesel Generator Exhaust Silencer

Interaction Effects

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

There are 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 N U N/A

Confirm overhead crane is designed for seismic II over I. Per ^{seismic calculation 042.002.003} ~~CT-AA-304-100~~, the diesel enclosure crane is ~~not~~ ^{seismically} qualified.

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

Attached spring cans to smaller lines ^{are} ~~do not~~ judged not to have a seismic interaction concern since they have adequate supports not including spring cans.

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

Other Adverse Conditions

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

Comments (Additional pages may be added as necessary)

Evaluated by: *Craig B. [Signature]* Date: *8/3/12*
M. Oghbaei *8/3/12*

(SWC 1AS-575)

Calculation: 042.002.003

Description: LGS Diesel Generator Building Crane Girder Design

Revision 3

PG # 2.3

Summary of results:

The existing diesel building crane/girders remain qualified to design seismic acceleration per spec G-14 and to the as built and latest crane information.

Design Input:

1. Limerick Spec G-14, rev. 7 (for seismic accelerations)
2. SDOC DWG. M-028-00068, Rev. 3 (for trolley and bridge weights and dimensions)

References:

See pages 1e – 2.1

Assumptions:

None

Methodology/Approach:

Seismic accelerations from Limerick Spec G-14 will be used along with the latest crane information and the latest as-built information. The bridge crane/girders are re-analyzed to reflect the latest information as follows.

