ATTACHMENT 9.7 **AREA WALK-BY CHECKLIST**

Sheet 1 of 8 **IP2**

Status: Y☒ N☐ U☐

Area Walk-By Checklist (AWC) AWC-013

Location: Bldg. *SWSTR PIT* Floor El. *5'-9"* Room, Area[1] *Zem Strainer Pit*

SWEL Components: SWEL1-001, 002 & 088

Instructions for Completing Checklist

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

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

   Heater and speaker in corner judged to be adequately supported. No other seismic anchorage issues.

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

   Mild surface corrosion observed. Judged acceptable.

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

   Yes based on a visual inspection from the floor, the cable/conduit raceways and HVAC ducting appear to be free of potentially adverse seismic conditions.

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

ATTACHMENT 9.7 **AREA WALK-BY CHECKLIST**

Sheet 2 of 8 **IP2**

Status: Y☒ N☐ U☐

Area Walk-By Checklist (AWC) AWC-013

Location: Bldg. *SWSTR PIT* Floor El. *5'-9"* Room, Area[1] *Zem Strainer Pit*

SWEL Components: SWEL1-001, 002 & 088

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

   Yes it appears that the area is free of potentially adverse seismic spatial interactions with other equipment in the area.

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

   Numerous service water pipes, valves, strainers, etc. are in the area. They are connected with a mix of welding and bolted flanges. They are all judged to be adequately supported to preclude seismic induced flooding and/or spray in the area.

   There is one threaded pipe on the north wall for the 26 sump pump discharge. This threaded pipe is judged adequately supported to preclude leakage and/or spray caused by a seismic event.

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

   Yes it does appear that the area is free of potentially adverse seismic interactions that could cause a fire in the area.

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

   Tools, gloves, wire ties, and a loose lock is left scattered around the room. These are not seismic concerns given location of items.
   CR IP2-2012-06644 issued to resolve.

ATTACHMENT 9.7 **AREA WALK-BY CHECKLIST**

Sheet 3 of 8 **IP2**

Status: Y☒ N☐ U☐

Area Walk-By Checklist (AWC) **AWC-013**

Location: Bldg. *SWSTR PIT* Floor El. *5'-9"* Room, Area[1] *Zern Strainer Pit*

SWEL Components: **SWEL1-001, 002 & 088**

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

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

Comments (Additional pages may be added as necessary)

SWN-625-X3 22SWP Equalizing valve DPI-5001-S shows white salt crystals (see photo below). CR IP2-2012-06647 issued to track resolution.

References:
CR IP2-2012-06644
CR IP2-2012-06647

Evaluated by: *Nick Crispell* Nick Crispell Date: *10-17-2012*

Dan Nuta Dragos D. Nuta *10-17-2012*

ATTACHMENT 9.7 **AREA WALK-BY CHECKLIST**

Sheet 4 of 8

IP2

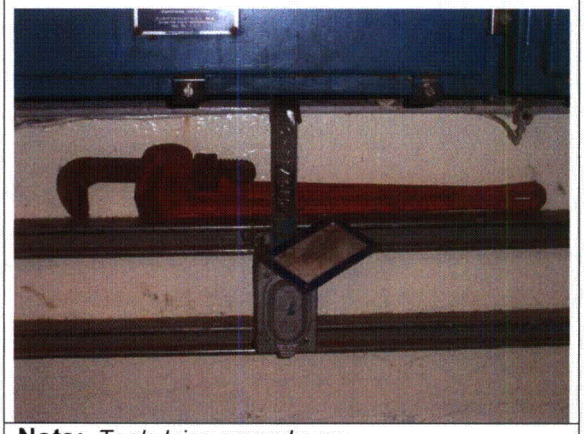
Status: Y☒ N☐ U☐

Area Walk-By Checklist (AWC) AWC-013

Location: Bldg. *SWSTR PIT* Floor El. *5'-9"* Room, Area[1] *Zern Strainer Pit*

SWEL Components: SWEL1-001, 002 & 088

Photographs



Note: *Tools lying around area.*

Note: *Gloves lying in area.*

ATTACHMENT 9.7 **AREA WALK-BY CHECKLIST**

Sheet 5 of 8

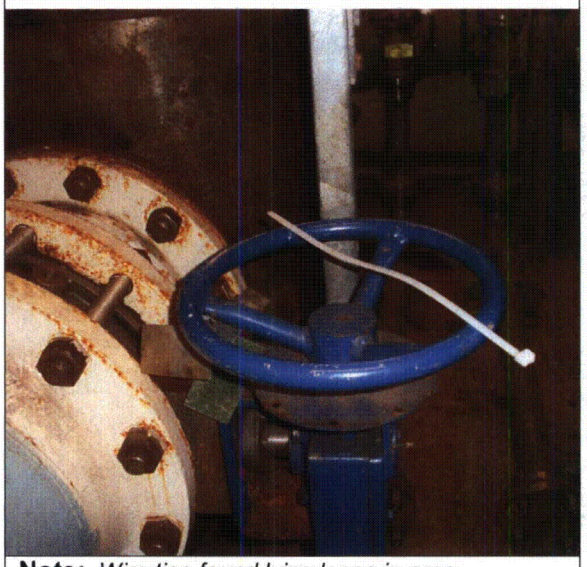
IP2

Status: Y☒ N☐ U☐

Area Walk-By Checklist (AWC) AWC-013

Location: Bldg. *SWSTR PIT* Floor El. *5'-9"* Room, Area[1] *Zern Strainer Pit*

SWEL Components: SWEL1-001, 002 & 088



Note: *Wire ties found lying loose in area.*

Note: *Wire ties found lying loose in area.*

ATTACHMENT 9.7 **AREA WALK-BY CHECKLIST**

Sheet 6 of 8

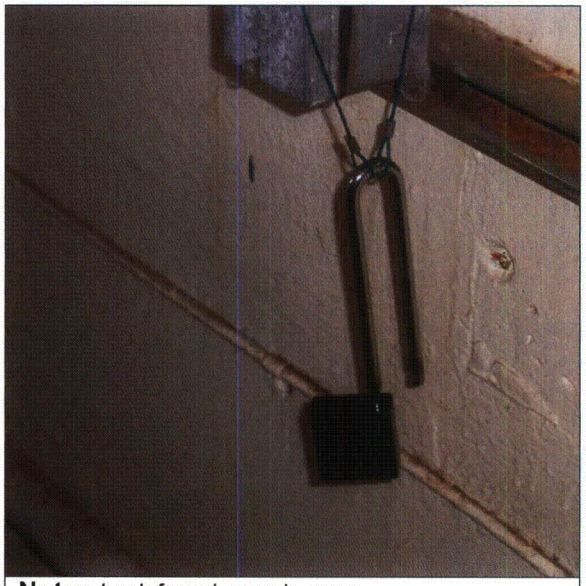
IP2

Status: Y☒ N☐ U☐

Area Walk-By Checklist (AWC) AWC-013

Location: Bldg. *SWSTR PIT* Floor El. *5'-9"* Room, Area[1] *Zern Strainer Pit*

SWEL Components: SWEL1-001, 002 & 088



Note: *Lock found open in area.*

Note: *Example of the mild corrosion found.*

ATTACHMENT 9.7 **AREA WALK-BY CHECKLIST**

Sheet 7 of 8

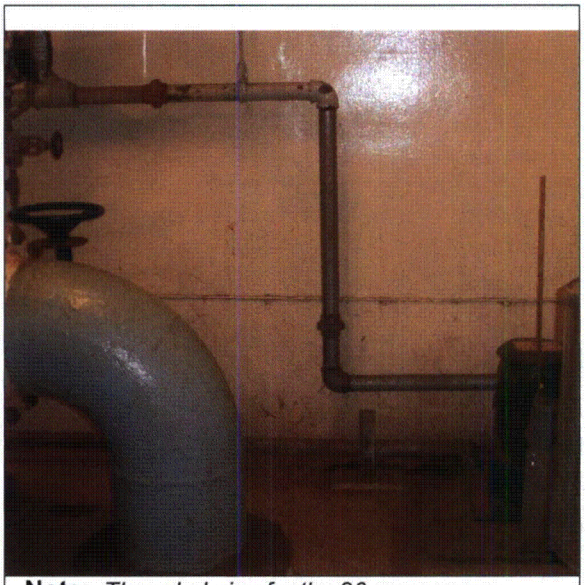
IP2

Status: Y☒ N☐ U☐

Area Walk-By Checklist (AWC) AWC-013

Location: Bldg. *SWSTR PIT* Floor El. *5'-9"* Room, Area[1] *Zern Strainer Pit*

SWEL Components: SWEL1-001, 002 & 088



Note: *Threaded pipe for the 26 sump pump discharge.*

Note: *Threaded pipe for the 26 sump pump discharge.*

ATTACHMENT 9.7 **AREA WALK-BY CHECKLIST**

Sheet 8 of 8

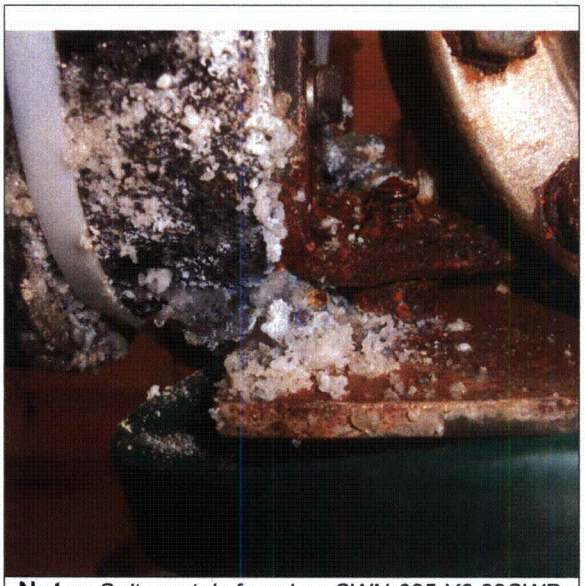
IP2

Status: Y☒ N☐ U☐

Area Walk-By Checklist (AWC) AWC-013

Location: Bldg. *SWSTR PIT* Floor El. *5'-9"* Room, Area[1] *Zern Strainer Pit*

SWEL Components: SWEL1-001, 002 & 088



Note: *Salt crystals found on SWN-625-X3 22SWP Equalizing valve DPI-5001-S.*

Note:

ATTACHMENT 9.7 **AREA WALK-BY CHECKLIST**

Sheet 1 of 5 **IP2**

Status: Y☒ N☐ U☐

Area Walk-By Checklist (AWC) AWC-014

Location: Bldg. *INTAKE* Floor El. *15'-0"* Room, Area[1] _____

SWEL Components: SWEL1-030 & 031

Instructions for Completing Checklist

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

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

   Yes anchorage of equipment in the area appears to be free of potentially adverse seismic conditions.

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

   Mild surface corrosion observed. Judged acceptable.

   Floor is epoxy coated 2" thick in some places to slope area for drainage so condition of concrete below cannot be accessed. No significant cracks where noted in the epoxy that would suggest significant cracks in the concrete. The epoxy did show general chipping and flaking. Judged acceptable.

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

   Yes based on a visual inspection from the floor, the cable/conduit raceways and HVAC ducting appear to be free of potentially adverse seismic conditions.

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

ATTACHMENT 9.7 **AREA WALK-BY CHECKLIST**

Sheet 2 of 5 **IP2**

Status: Y☒ N☐ U☐

Area Walk-By Checklist (AWC) AWC-014

Location: Bldg. *INTAKE* Floor El. *15'-0"* Room, Area[1] _____

SWEL Components: SWEL1-030 & 031

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

   Yes the area is free of potentially adverse seismic spatial interactions with other equipment in the area.

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

   The area is an outdoor environment. As such SSCs are designed to be rained and snowed on so they would not be affected by getting wet.

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

   Yes the area is free of potentially adverse seismic interactions that could cause a fire in the area.

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

   A bag of trash was left against the fence, and other scattered trash was found as well as a loose bolt not attached to anything. See photos below. CR IP2-2012-06649 issued to track resolution.

ATTACHMENT 9.7 **AREA WALK-BY CHECKLIST**

Sheet 3 of 5 **IP2**

Status: Y☒ N☐ U☐

Area Walk-By Checklist (AWC) AWC-014

Location: Bldg. *INTAKE* Floor El. *15'-0"* Room, Area[1] _____

SWEL Components: SWEL1-030 & 031

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

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

Comments (Additional pages may be added as necessary)

Service water pump 24 has an FME cover left in place on a pipe, and the heat tracing wires appear to be disconnected and not on the pipe. Other service water pumps have this pipe surrounded by heat tracing, insulation, and flashing. CR IP2-2012-06652 issued to track resolution.

References
CR IP2-2012-06649
CR IP2-2012-06652

Evaluated by: *Nick Crispell* Nick Crispell Date: *10-17-2012*

Dan Nuta Dragos D. Nuta *10-17-2012*

ATTACHMENT 9.7 **AREA WALK-BY CHECKLIST**

Sheet 4 of 5

IP2

Status: Y☒ N☐ U☐

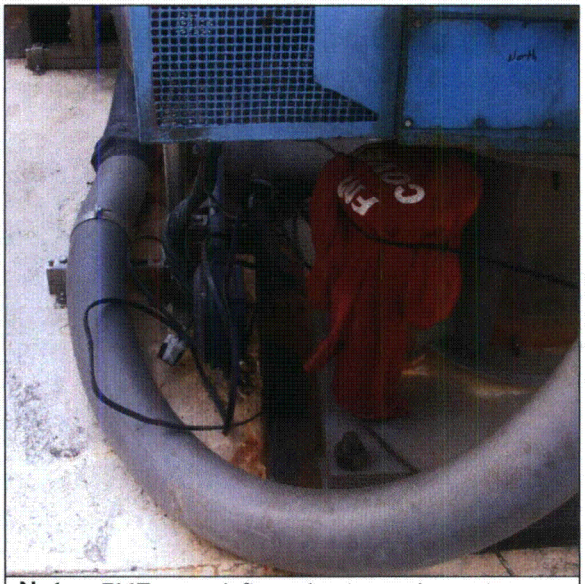
Area Walk-By Checklist (AWC) AWC-014

Location: Bldg. *INTAKE* Floor El. *15'-0"* Room, Area[1] _____

SWEL Components: SWEL1-030 & 031

Photographs

Note: *Trash bag left in area with a loose bolt lying on top.*



Note: *FME cover left on pipe to service water pump 24.*

ATTACHMENT 9.7 **AREA WALK-BY CHECKLIST**

Sheet 5 of 5

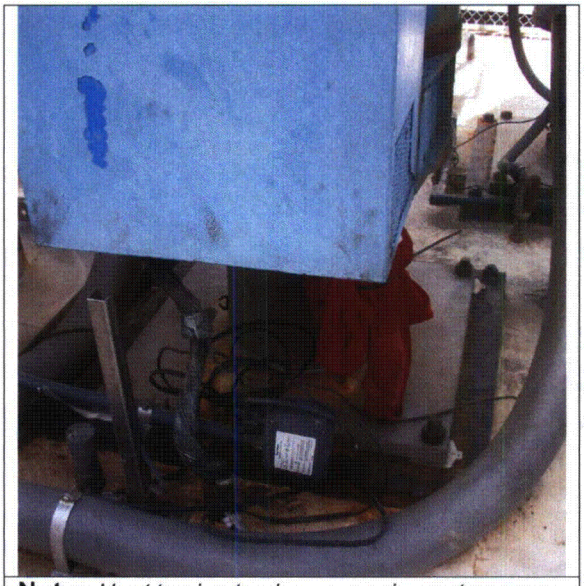
IP2

Status: Y☒ N☐ U☐

Area Walk-By Checklist (AWC) AWC-014

Location: Bldg. *INTAKE* Floor El. *15'-0"* Room, Area[1] _____

SWEL Components: SWEL1-030 & 031



Note: *Heat tracing to pipe on service water pump 24 does not look to be hooked up.*

Note: *Example of the same pipe connected to identical service water pumps in the area. They are heat traced, insulated, and flashed.*

ATTACHMENT 9.7 **AREA WALK-BY CHECKLIST**

Sheet 1 of 6

IP2

Status: Y☒ N☐ U☐

Area Walk-By Checklist (AWC) AWC-015

Location: Bldg. *CB* Floor El. *33'-0"* Room, Area[1] *BATTERY ROOM 23*

SWEL Components: SWEL1-070

Instructions for Completing Checklist

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

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

   Yes anchorage of equipment in the area appears to be free of potentially adverse seismic conditions.

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

   Yes anchorage of equipment in the area appears to be free of significant degraded conditions.

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

   Yes based on a visual inspection from the floor, the cable/conduit raceways and HVAC ducting appears to be free of potentially adverse seismic conditions.

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

ATTACHMENT 9.7 **AREA WALK-BY CHECKLIST**

Sheet 2 of 6 **IP2**

Status: Y☒ N☐ U☐

Area Walk-By Checklist (AWC) AWC-015

Location: Bldg. *CB* Floor El. *33'-0"* Room, Area[1] *BATTERY ROOM 23*

SWEL Components: SWEL1-070

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

   Yes it appears that the area is free of potentially adverse seismic spatial interactions with other equipment in the area.

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

   Yes it appears that the area is free of potentially adverse seismic interactions that could cause flooding or spray in the area.

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

   Yes it appears that the area is free of potentially adverse seismic interactions that could cause a fire in the area.

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

   Yes it appears that the area is free of potentially adverse seismic interactions associated with housekeeping practices, storage of portable equipment, and temporary installations.

ATTACHMENT 9.7 **AREA WALK-BY CHECKLIST**

Sheet 3 of 6 **IP2**

Status: Y☒ N☐ U☐

Area Walk-By Checklist (AWC) AWC-015

Location: Bldg. *CB* Floor El. *33'-0"* Room, Area[1] *BATTERY ROOM 23*

SWEL Components: SWEL1-070

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

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

Comments (Additional pages may be added as necessary)

Coating on floor cracked and scratched. Does not pose a seismic issue.

One light bulb overhead is out. CR IP2-2012-06510 issued to track resolution.

Evaluated by: *Nick Crispell* Nick Crispell Date: *10-17-2012*

Dan Nuta Dragos D. Nuta *10-17-2012*

ATTACHMENT 9.7 **AREA WALK-BY CHECKLIST**

Sheet 4 of 6

IP2

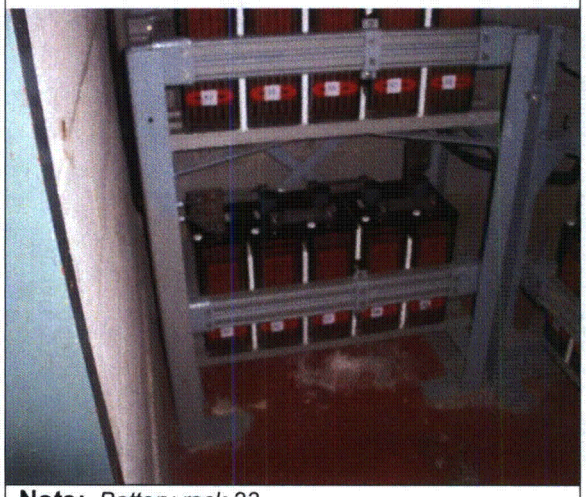
Status: Y☒ N☐ U☐

Area Walk-By Checklist (AWC) AWC-015

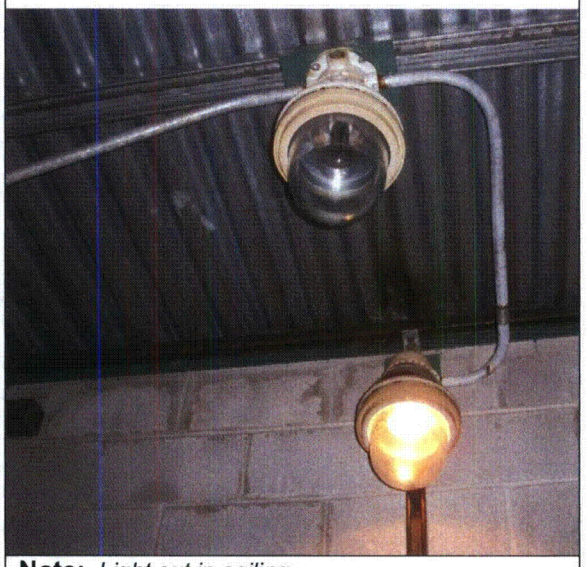
Location: Bldg. *CB* Floor El. *33'-0"* Room, Area[1] *BATTERY ROOM 23*

SWEL Components: **SWEL1-070**

Photographs



Note: *Battery rack 23.*



Note: *Light out in ceiling.*

ATTACHMENT 9.7 **AREA WALK-BY CHECKLIST**

Sheet 5 of 6

IP2

Status: Y☒ N☐ U☐

Area Walk-By Checklist (AWC) AWC-015

Location: Bldg. *CB* Floor El. *33'-0"* Room, Area[1] *BATTERY ROOM 23*

SWEL Components: SWEL1-070

Note: *Cable holder in ceiling of battery room 23.*

Note: *Battery rack 23.*

ATTACHMENT 9.7 **AREA WALK-BY CHECKLIST**

Sheet 6 of 6

IP2

Status: Y☒ N☐ U☐

Area Walk-By Checklist (AWC) AWC-015

Location: Bldg. *CB* Floor El. *33'-0"* Room, Area[1] *BATTERY ROOM 23*

SWEL Components: **SWEL1-070**

Note: *Batter rack 23.*

Note:

ATTACHMENT 9.7 **AREA WALK-BY CHECKLIST**

Sheet 1 of 4 **IP2**

Status: Y☒ N☐ U☐

Area Walk-By Checklist (AWC) AWC-016

Location: Bldg. *CB* Floor El. *33'-0"* Room, Area[1] *24 Battery Room*

SWEL Components: ***SWEL1-071***

Instructions for Completing Checklist

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

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

   Yes anchorage of equipment in the area appears to be free of potentially adverse seismic conditions.

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

   Yes anchorage of equipment in the area appears to be free of significant degraded conditions.

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

   Yes based on a visual inspection from the floor, the cable/conduit raceways and HVAC ducting appears to be free of potentially adverse seismic conditions.

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

ATTACHMENT 9.7 **AREA WALK-BY CHECKLIST**

Sheet 2 of 4 **IP2**

Status: Y☒ N☐ U☐

Area Walk-By Checklist (AWC) AWC-016

Location: Bldg. *CB* Floor El. *33'-0"* Room, Area[1] *24 Battery Room*

SWEL Components: ***SWEL1-071***

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

   Two light fixtures are in room both have screw in bulbs and glass screw in domes around the bulb. One has a cage around the glass dome and one does not. The cage is not required since the glass dome is screwed in and judged not to fall during a seismic event.
   No seismic concern.

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

   Yes it appears that the area is free of potentially adverse seismic interactions that could cause flooding or spray in the area.

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

   Yes it appears that the area is free of potentially adverse seismic interactions that could cause a fire in the area.

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

   Yes it appears that the area is free of potentially adverse seismic interactions associated with housekeeping practices, storage of portable equipment, and temporary installations.

ATTACHMENT 9.7 **AREA WALK-BY CHECKLIST**

Sheet 3 of 4 **IP2**

Status: Y☒ N☐ U☐

Area Walk-By Checklist (AWC) AWC-016

Location: Bldg. *CB* Floor El. *33'-0"* Room, Area[1] *24 Battery Room*

SWEL Components: ***SWEL1-071***

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

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

Comments (Additional pages may be added as necessary)

No comments on seismic issues

Evaluated by: *Nick Crispell* Date: *10/10/2012*

Stephen Yuan *10/10/2012*

Dan Nuta *10/10/2012*

ATTACHMENT 9.7 **AREA WALK-BY CHECKLIST**

Sheet 4 of 4

IP2

Status: Y☒ N☐ U☐

Area Walk-By Checklist (AWC) AWC-016

Location: Bldg. *CB* Floor El. *33'-0"* Room, Area[1] *24 Battery Room*

SWEL Components: ***SWEL1-071***

Photographs

Note: *Pictures could not be taken while meeting the procedural camera standoff requirements.*	**Note:**

ATTACHMENT 9.7 **AREA WALK-BY CHECKLIST**

Sheet 1 of 6 **IP2**

Status: Y☒ N☐ U☐

Area Walk-By Checklist (AWC) AWC-017

Location: Bldg. *PAB* Floor El. *59'-0"* Room, Area[1] *Safety Injection Pump Room*

SWEL Components: SWEL1-020, 090

Instructions for Completing Checklist

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

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

   Support stanchion for the overhead trolley has a four hole base plate but only three bolts are installed. All other similar stanchions have four bolts installed in the base plates. Per signage on stanchion the anchor is abandoned in accordance with FEI-840679. Also refer to LB-05.

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

   Yes anchorage of equipment in the area appears to be free of significant degraded conditions.

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

   HVAC ductwork adjacent to the stairs does not have any lateral support from the base to beyond the first elbow at the top. The span appears to be excessive. LB-14 has been issued to resolve.

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

ATTACHMENT 9.7 **AREA WALK-BY CHECKLIST**

Sheet 2 of 6 **IP2**

Status: Y☒ N☐ U☐

Area Walk-By Checklist (AWC) AWC-017

Location: Bldg. *PAB* Floor El. *59'-0"* Room, Area[1] *Safety Injection Pump Room*

SWEL Components: SWEL1-020, 090

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

   Yes, it appears that the area is free of potentially adverse seismic spatial interactions with other equipment in the area.

   Valve CCW 749C (SI Pump 21 Circ Pump Sup Stop) hand wheel rubs insulation along west wall of room near end of 21 SI pump. The insulation is starting to show signs of damage due to the rubbing. Judged not to be a seismic issue given softness of insulation. CR IP2-2012-06576 issued to track resolution.

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

   Yes, it appears that the area is free of potentially adverse seismic interactions that could cause flooding or spray in the area.

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

   Yes, it appears that the area is free of potentially adverse seismic interactions that could cause a fire in the area.

ATTACHMENT 9.7 **AREA WALK-BY CHECKLIST**

Sheet 3 of 6 **IP2**

Status: Y☒ N☐ U☐

Area Walk-By Checklist (AWC) AWC-017

Location: Bldg. *PAB* Floor El. *59'-0"* Room, Area[1] *Safety Injection Pump Room*

SWEL Components: SWEL1-020, 090

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

   Ladders stored near the stair are secured by chains. However, the ladders are tall and the chain is relatively low on the ladders making it likely that the ladders could tip and impact equipment during a seismic event. See photo. CR IP2-2012-6581 is written to evaluate this condition.

   Revisited the area on 10/23/2012 and found 2 Trash bags are loose in the area near the corner, south of pump 21 and one light bulb blown out over the safety injection pump no. 21. CR IP2-2012-06581 is written to remove trash bags.

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

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

Comments (Additional pages may be added as necessary)

References:
CR IP2-2012-06581

Evaluated by: *Nick Crispell* Date: *10/19 & 10/23/2012*

Kirit Parikh *10/23/2012*

Paul Huebsch *10/19/2012*

ATTACHMENT 9.7 **AREA WALK-BY CHECKLIST**

Sheet 4 of 6

IP2

Status: Y☒ N☐ U☐

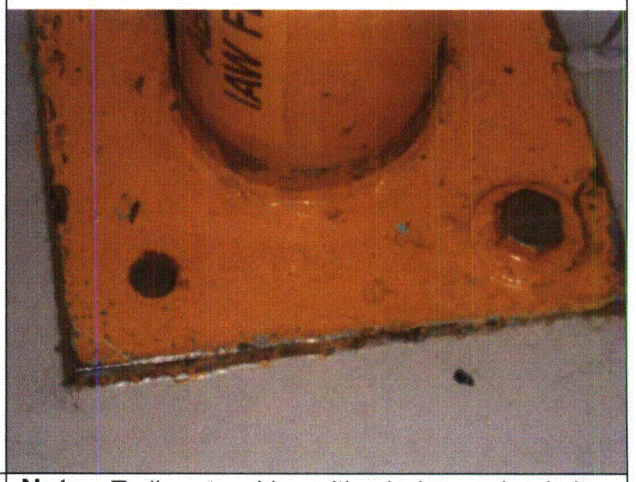
Area Walk-By Checklist (AWC) AWC-017

Location: Bldg. *PAB* Floor El. *59'-0"* Room, Area[1] *Safety Injection Pump Room*

SWEL Components: SWEL1-020, 090

Photographs

Note: *Trolley stanchion with missing anchor bolt.*



Note: *Trolley stanchion with missing anchor bolt.*

ATTACHMENT 9.7 **AREA WALK-BY CHECKLIST**

Sheet 5 of 6

IP2

Status: Y☒ N☐ U☐

Area Walk-By Checklist (AWC) AWC-017

Location: Bldg. *PAB* Floor El. *59'-0"* Room, Area[1] *Safety Injection Pump Room*

SWEL Components: SWEL1-020, 090

Note: *Duct work with excessive span between supports.*

Note: *Duct work with excessive span between supports.*

ATTACHMENT 9.7 **AREA WALK-BY CHECKLIST**

Sheet 6 of 6

IP2

Status: Y☒ N☐ U☐

Area Walk-By Checklist (AWC) AWC-017

Location: Bldg. *PAB* Floor El. *59'-0"* Room, Area[1] *Safety Injection Pump Room*

SWEL Components: SWEL1-020, 090

Note: *Ladders supported below their center of gravity.*

Note: *Valve 749C SI Pump 21 Circ Pump Sup Stop rubbing and damaging pipe insulation.*

ATTACHMENT 9.7 **AREA WALK-BY CHECKLIST**

Sheet 1 of 6 **IP2**

Status: Y☒ N☐ U☐

Area Walk-By Checklist (AWC) AWC-018

Location: Bldg. *PAB* Floor El. *68'-0"* Room, Area[1] *CCW Pump Room*

SWEL Components: SWEL1-023

Instructions for Completing Checklist

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

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

   Anchor for CCW pipe support missing 2 of 4 anchor bolts. Missing anchor bolts are tagged with an old work order WRT IP2-05-0522 from 2005. The pipe support with missing anchor bolts is analyzed in LB-04.

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

   Yes anchorage of equipment in the area appears to be free of significant degraded conditions.

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

   Yes based on a visual inspection from the floor, the cable/conduit raceways and HVAC ducting appears to be free of potentially adverse seismic conditions.

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

ATTACHMENT 9.7 **AREA WALK-BY CHECKLIST**

Sheet 2 of 6 **IP2**

Status: Y☒ N☐ U☐

Area Walk-By Checklist (AWC) AWC-018

Location: Bldg. *PAB* Floor El. *68'-0"* Room, Area[1] *CCW Pump Room*

SWEL Components: SWEL1-023

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

   Fluorescent bulbs need restraint wires to secure them to the light fixture. CR IP2-2012-06614 issued to track resolution.

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

   Yes it appears that the area is free of potentially adverse seismic interactions that could cause flooding or spray in the area.

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

   Yes it appears that the area is free of potentially adverse seismic interactions that could cause a fire in the area.

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

   Oil catch bucket on 22 CCW Pump not secured. Not a seismic concern. CR IP2-2012-06617 issued to secure bucket to prevent an oil spill.

ATTACHMENT 9.7 **AREA WALK-BY CHECKLIST**

Sheet 3 of 6 **IP2**

Status: Y☒ N☐ U☐

Area Walk-By Checklist (AWC) AWC-018

Location: Bldg. *PAB* Floor El. *68'-0"* Room, Area[1] *CCW Pump Room*

SWEL Components: SWEL1-023

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

23 Sump pump missing all bolts on float rod guide. CR IP2-2012-06616 issued to track resolution. Lack of bolts could jam the float and cause the sump pump to malfunction.

Comments (Additional pages may be added as necessary)

Oil is leaking onto the floor near 23 CCW Pump bed drain. CR IP2-2012-06615 issued to track resolution.

Conduit overhead to 23 CCW pump appears to be missing Appendix R fire proofing wrap in three places. Consultation with the Fire Protection Engineer determined that the intermittent insulation on the subject conduit is actually fire protection insulation for the support for another fire protected line. Therefore, there is no missing insulation.

References:
CR IP2-2012-06615
CR IP2-2012-06616
CR IP2-2012-06617

Evaluated by: *Nick Crispell* Nick Crispell Date: *10-19-2012*

Paul Huebsch Paul Huebsch *10-19-2012*

ATTACHMENT 9.7 **AREA WALK-BY CHECKLIST**

Sheet 4 of 6

IP2

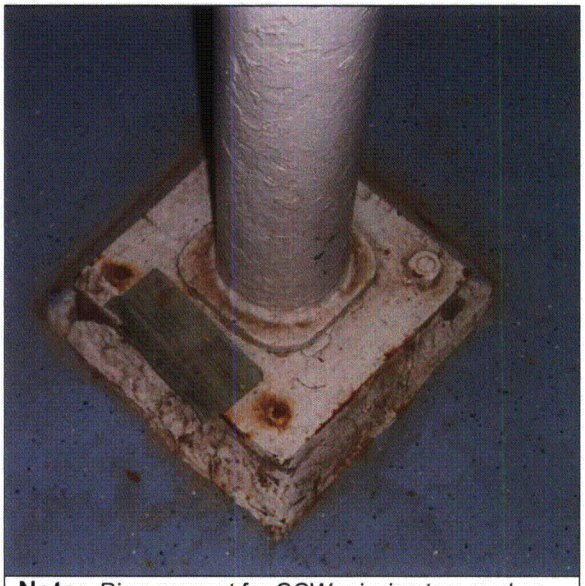
Status: Y☒ N☐ U☐

Area Walk-By Checklist (AWC) AWC-018

Location: Bldg. *PAB* Floor El. *68'-0"* Room, Area[1] *CCW Pump Room*

SWEL Components: SWEL1-023

Photographs



Note: *Pipe support for CCW missing two anchor bolts. Existing work order tag is WRT IP2-05-0522.*

Note: *Pump 23 CCW pump is leaking oil onto the floor.*

ATTACHMENT 9.7 **AREA WALK-BY CHECKLIST**

Sheet 5 of 6

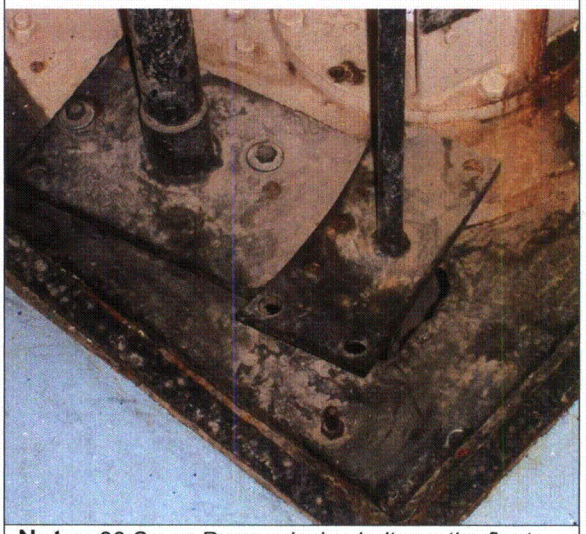
IP2

Status: Y☒ N☐ U☐

Area Walk-By Checklist (AWC) AWC-018

Location: Bldg. *PAB* Floor El. *68'-0"* Room, Area[1] *CCW Pump Room*

SWEL Components: SWEL1-023



Note: *23 Sump Pump missing bolts on the float rod guide.*

Note: *23 Sump Pump missing bolts on the float rod guide.*

ATTACHMENT 9.7 **AREA WALK-BY CHECKLIST**

Sheet 6 of 6

IP2

Status: Y☒ N☐ U☐

Area Walk-By Checklist (AWC) AWC-018

Location: Bldg. *PAB* Floor El. *68'-0"* Room, Area[1] *CCW Pump Room*

SWEL Components: SWEL1-023

Note: *Oil catch bucket on 22 CCW Pump is not secured to anything. Can slide and tip over in a seismic event.*

Note:

ATTACHMENT 9.7 **AREA WALK-BY CHECKLIST**

Sheet 1 of 6 **IP2**

Status: Y☒ N☐ U☐

Area Walk-By Checklist (AWC) AWC-019

Location: Bldg. *PAB* Floor El. *68'* Room, Area[1] *Primary Water Make-up Pump Room*

SWEL Components: SWEL2-001 & SWEL1-027

Instructions for Completing Checklist

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

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

   Yes anchorage of equipment in the area appears to be free of potentially adverse seismic conditions.

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

   Yes anchorage of equipment in the area appears to be free of significant degraded conditions.

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

   Yes based on a visual inspection from the floor, the cable/conduit raceways and HVAC ducting appears to be free of potentially adverse seismic conditions.

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

ATTACHMENT 9.7 **AREA WALK-BY CHECKLIST**

Sheet 2 of 6 **IP2**

Status: Y☒ N☐ U☐

Area Walk-By Checklist (AWC) AWC-019

Location: Bldg. *PAB* Floor El. *68'* Room, Area[1] *Primary Water Make-up Pump Room*

SWEL Components: SWEL2-001 & SWEL1-027

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

   Yes, it appears that the area is free of potentially adverse seismic spatial interactions with other equipment in the area.

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

   Yes, it appears that the area is free of potentially adverse seismic interactions that could cause flooding or spray in the area.

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

   Yes it appears that the area is free of potentially adverse seismic interactions that could cause a fire in the area.

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

   Scaffold with a red "unsafe" tag spans over the 21 Containment Spray Pump. Scaffold is missing a brace in the east/west direction.
   CR IP2-2012-06578 issued to resolve.

ATTACHMENT 9.7 **AREA WALK-BY CHECKLIST**

Sheet 3 of 6 **IP2**

Status: Y☒ N☐ U☐

Area Walk-By Checklist (AWC) AWC-019

Location: Bldg. *PAB* Floor El. *68'* Room, Area[1] *Primary Water Make-up Pump Room*

SWEL Components: SWEL2-001 & SWEL1-027

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

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

Comments (Additional pages may be added as necessary)

References:
CR IP2-2012-06578

Evaluated by: *Nick Crispell* Date: *10/19/2012*

Paul Huebsch *10/19/2012*

ATTACHMENT 9.7 **AREA WALK-BY CHECKLIST**

Sheet 4 of 6

IP2

Status: Y☒ N☐ U☐

Area Walk-By Checklist (AWC) AWC-019

Location: Bldg. *PAB* Floor El. *68'* Room, Area[1] *Primary Water Make-up Pump Room*

SWEL Components: **SWEL2-001 & SWEL1-027**

Photographs

Note: *View of pump*

Note: *View of pump*

ATTACHMENT 9.7 **AREA WALK-BY CHECKLIST**

Sheet 5 of 6

IP2

Status: Y☒ N☐ U☐

Area Walk-By Checklist (AWC) AWC-019

Location: Bldg. *PAB* Floor El. *68'* Room, Area[1] *Primary Water Make-up Pump Room*

SWEL Components: SWEL2-001 & SWEL1-027

Note: *Scaffold tag*

Note: *View of pump*

ATTACHMENT 9.7 **AREA WALK-BY CHECKLIST**

Sheet 6 of 6

IP2

Status: Y☒ N☐ U☐

Area Walk-By Checklist (AWC) AWC-019

Location: Bldg. *PAB* Floor El. *68'* Room, Area[1] *Primary Water Make-up Pump Room*

SWEL Components: SWEL2-001 & SWEL1-027

Note: *Anchor bolt*

Note: *View of pump*

ATTACHMENT 9.7 **AREA WALK-BY CHECKLIST**

Sheet 1 of 6 **IP2**

Status: Y☒ N☐ U☐

Area Walk-By Checklist (AWC) AWC-020

Location: Bldg. *FSB* Floor El. *95'-0"* Room, Area[1]

SWEL Components: SWEL2-005, 006 & 007

Instructions for Completing Checklist

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

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

   Yes anchorage of equipment in the area appears to be free of potentially adverse seismic conditions.

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

   Yes anchorage of equipment in the area appears to be free of significant degraded conditions.

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

   HVAC duct on north end of building not fixed at bottom. Total riser height is approximately 20' and only lateral support is at top. Shorter ducts nearby are braced. This HVAC duct falling would not be a seismic concern as it is too light to cause damage to the spent fuel pool that could cause rapid drain down. CR IP2-2012-06661 issued to track resolution.

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

ATTACHMENT 9.7 **AREA WALK-BY CHECKLIST**

Sheet 2 of 6 **IP2**

Status: Y☒ N☐ U☐

Area Walk-By Checklist (AWC) AWC-020

Location: Bldg. *FSB* Floor El. *95'-0"* Room, Area[1] _____

SWEL Components: SWEL2-005, 006 & 007

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

   Yes it appears that the area is free of potentially adverse seismic spatial interactions with other equipment in the area.

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

   Yes it appears that the area is free of potentially adverse seismic interactions that could cause flooding or spray in the area.

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

   Yes it appears that the area is free of potentially adverse seismic interactions that could cause a fire in the area.

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

   Roll of tape loose on girt, white board attached with tape, 2nd white board not attached, chair left loose, rolls of plastic left standing on end. Area needs a good housekeeping go through. These and other housekeeping issues found are not seismic concerns.
   CR IP2-2012-06662 issued to track resolution.

ATTACHMENT 9.7 **AREA WALK-BY CHECKLIST**

Sheet 3 of 6 **IP2**

Status: Y☒ N☐ U☐

Area Walk-By Checklist (AWC) AWC-020

Location: Bldg. *FSB* Floor El. *95'-0"* Room, Area[1]

SWEL Components: SWEL2-005, 006 & 007

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

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

Comments (Additional pages may be added as necessary)

References:
CR IP2-2012-06661
CR IP2-2012-06662

Evaluated by: *Paul Huebsch* Date: *10-19-2012*

Nick Crispell *10-19-2012*

ATTACHMENT 9.7 **AREA WALK-BY CHECKLIST**

Sheet 4 of 6

IP2

Status: Y☒ N☐ U☐

Area Walk-By Checklist (AWC) AWC-020

Location: Bldg. *FSB* Floor El. *95'-0"* Room, Area[1] _____

SWEL Components: SWEL2-005, 006 & 007

Photographs

Note: *HVAC duct on north wall of FSB is supported at top only. The shorter HVAC duct to the left is supported at top and bottom.*

Note: *Tape left loose around.*

ATTACHMENT 9.7 **AREA WALK-BY CHECKLIST**

Sheet 5 of 6

IP2

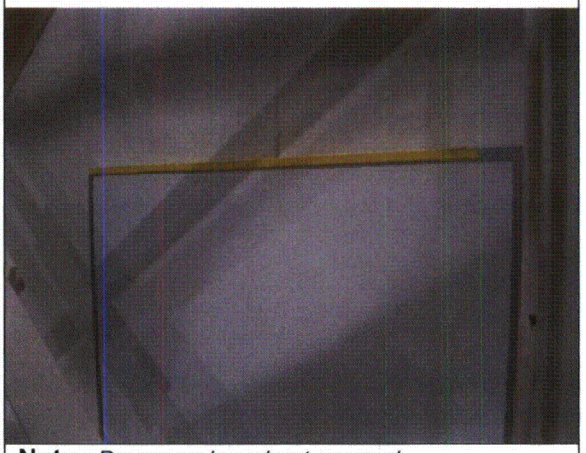
Status: Y☒ N☐ U☐

Area Walk-By Checklist (AWC) AWC-020

Location: Bldg. *FSB* Floor El. *95'-0"* Room, Area[1] _____

SWEL Components: SWEL2-005, 006 & 007

Note: *Dry erase board left taped up.*



Note: *Dry erase board not secured.*

ATTACHMENT 9.7 **AREA WALK-BY CHECKLIST**

Sheet 6 of 6

IP2

Status: Y☒ N☐ U☐

Area Walk-By Checklist (AWC) AWC-020

Location: Bldg. *FSB* Floor El. *95'-0"* Room, Area[1] _____

SWEL Components: SWEL2-005, 006 & 007

Note: *Items left loose in corner, chair and plastic rolls standing up.*

Note:

ATTACHMENT 9.7 **AREA WALK-BY CHECKLIST**

Sheet 1 of 6 **IP2**

Status: Y☒ N☐ U☐

Area Walk-By Checklist (AWC) AWC-021

Location: Bldg. *PAB* Floor El. *80'-0"* Room, Area[1] *23 Charging Pump*

SWEL Components: SWEL1-026

Instructions for Completing Checklist

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

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

   Yes anchorage of equipment in the area appears to be free of potentially adverse seismic conditions.

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

   Yes anchorage of equipment in the area appears to be free of significant degraded conditions.

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

   Yes based on a visual inspection from the floor, the cable/conduit raceways and HVAC ducting appears to be free of potentially adverse seismic conditions.

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

ATTACHMENT 9.7 **AREA WALK-BY CHECKLIST**

Sheet 2 of 6 **IP2**

Status: Y☒ N☐ U☐

Area Walk-By Checklist (AWC) AWC-021

Location: Bldg. *PAB* Floor El. *80'-0"* Room, Area[1] *23 Charging Pump*

SWEL Components: SWEL1-026

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

   Yes it appears that the area is free of potentially adverse seismic spatial interactions with other equipment in the area.

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

   Yes it appears that the area is free of potentially adverse seismic interactions that could cause flooding or spray in the area.

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

   Yes it appears that the area is free of potentially adverse seismic interactions that could cause a fire in the area.

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

   Yes it appears that the area is free of potentially adverse seismic interactions associated with housekeeping practices, storage of portable equipment, and temporary installations.

ATTACHMENT 9.7 **AREA WALK-BY CHECKLIST**

Sheet 3 of 6 **IP2**

Status: Y☒ N☐ U☐

Area Walk-By Checklist (AWC) **AWC-021**

Location: Bldg. *PAB* Floor El. *80'-0"* Room, Area[1] *23 Charging Pump*

SWEL Components: **SWEL1-026**

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

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

Comments (Additional pages may be added as necessary)

No more seismic concerns.

Evaluated by: *Paul Huebsch* Date: *10-19-2012*

Nick Crispell *10-19-2012*

ATTACHMENT 9.7 **AREA WALK-BY CHECKLIST**

Sheet 4 of 6

IP2

Status: Y☒ N☐ U☐

Area Walk-By Checklist (AWC) AWC-021

Location: Bldg. *PAB* Floor El. *80'-0"* Room, Area[1] *23 Charging Pump*

SWEL Components: SWEL1-026

Photographs

Note: *23 Charging pump room looking north.*

Note: *23 Charging pump room looking south.*

ATTACHMENT 9.7 **AREA WALK-BY CHECKLIST**

Sheet 5 of 6

IP2

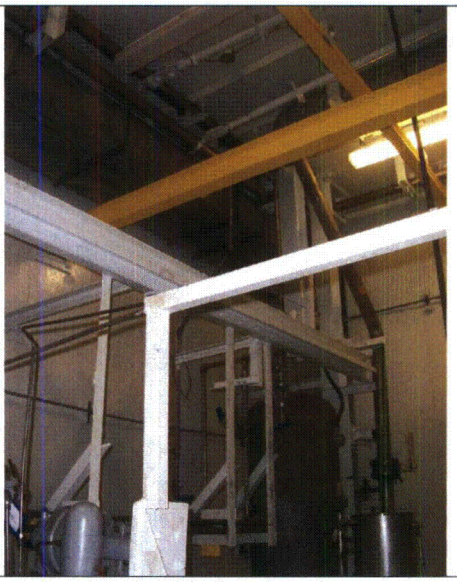
Status: Y☒ N☐ U☐

Area Walk-By Checklist (AWC) AWC-021

Location: Bldg. *PAB* Floor El. *80'-0"* Room, Area[1] *23 Charging Pump*

SWEL Components: **SWEL1-026**

Note: *23 Charging pump room looking north when you first walk inside the door.*



Note: *Overhead of 23 charging pump room looking south-east.*

ATTACHMENT 9.7 **AREA WALK-BY CHECKLIST**

Sheet 6 of 6

IP2

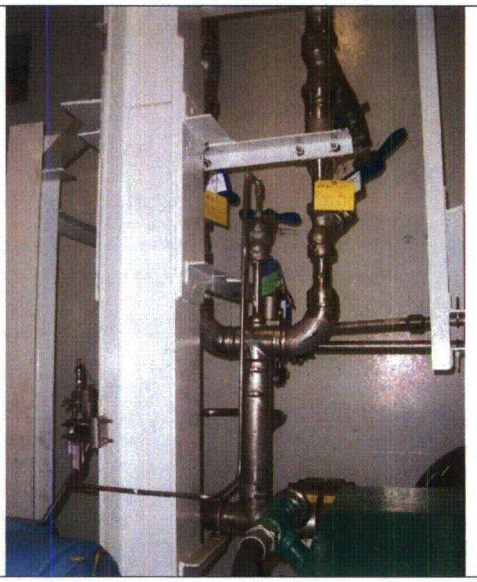
Status: Y☒ N☐ U☐

Area Walk-By Checklist (AWC) AWC-021

Location: Bldg. *PAB* Floor El. *80'-0"* Room, Area[1] *23 Charging Pump*

SWEL Components: SWEL1-026

Note: *Overhead of 23 charging pump room looking east.*



Note: *Pipes coming off of the 23 charging pump.*

ATTACHMENT 9.7 **AREA WALK-BY CHECKLIST**

Sheet 1 of 6 **IP2**

Status: Y☒ N☐ U☐

Area Walk-By Checklist (AWC) AWC-022

Location: Bldg. *PAB* Floor El. *80'* Room, Area[1] *Main Hallway & Common Area (east side)*

SWEL Components: SWEL1-025

Instructions for Completing Checklist

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

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

   Yes anchorage of equipment in the area appears to be free of potentially adverse seismic conditions.

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

   Yes anchorage of equipment in the area appears to be free of significant degraded conditions.

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

   Yes based on a visual inspection from the floor, the cable/conduit raceways and HVAC ducting appears to be free of potentially adverse seismic conditions.

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

ATTACHMENT 9.7 **AREA WALK-BY CHECKLIST**

Sheet 2 of 6 **IP2**

Status: Y☒ N☐ U☐

Area Walk-By Checklist (AWC) AWC-022

Location: Bldg. *PAB* Floor El. *80'* Room, Area[1] *Main Hallway & Common Area (east side)*

SWEL Components: SWEL1-025

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

   Fluorescent light tubes need to be restrained. CR IP2-2012-06663 has been issued to remedy this condition.

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

   Unit heater 232 hot water piping appear not seismically supported. LB-06 was performed to analyze this condition.

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

   Yes, it appears that the area is free of potentially adverse seismic interactions that could cause a fire in the area.

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

   Tool cart is tied off but all tools are loose on top of cart and could be displaced in a seismic event. There was an unsecured ladder, various equipment and miscellaneous items loose on a grating which was tagged "seismically sensitive area". CR IP2-2012-06664 issued to track resolution.

ATTACHMENT 9.7 **AREA WALK-BY CHECKLIST**

Sheet 3 of 6 **IP2**

Status: Y☒ N☐ U☐

Area Walk-By Checklist (AWC) AWC-022

Location: Bldg. *PAB* Floor El. *80'* Room, Area[1] *Main Hallway & Common Area (east side)*

SWEL Components: SWEL1-025

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

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

Comments (Additional pages may be added as necessary)

References:
CR IP2-2012-06663
CR IP2-2012-06664

Evaluated by: *Nick Crispell* Date: *10/19/2012*

Paul Huebsch *10/19/2012*

ATTACHMENT 9.7 **AREA WALK-BY CHECKLIST**

Sheet 4 of 6

IP2

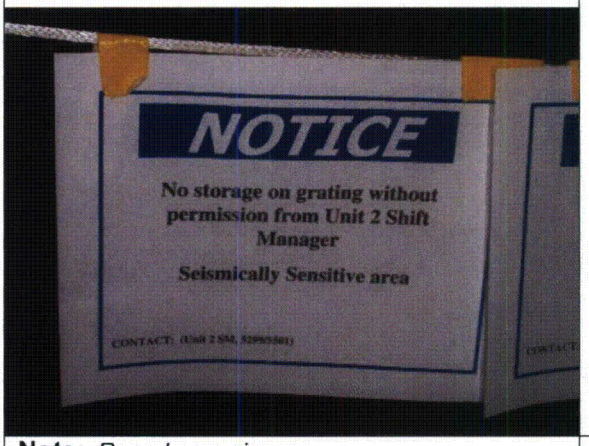
Status: Y☒ N☐ U☐

Area Walk-By Checklist (AWC) AWC-022

Location: Bldg. *PAB* Floor El. *80'* Room, Area[1] *Main Hallway & Common Area (east side)*

SWEL Components: SWEL1-025

Photographs



Note: *Roped area signage*

Note: *Within roped area*

ATTACHMENT 9.7 **AREA WALK-BY CHECKLIST**

Sheet 5 of 6

IP2

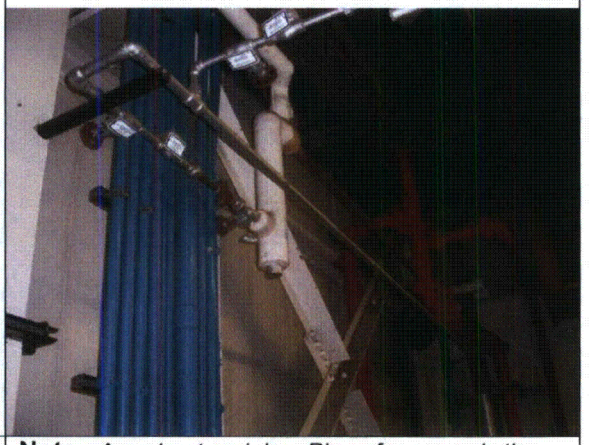
Status: Y☒ N☐ U☐

Area Walk-By Checklist (AWC) AWC-022

Location: Bldg. *PAB* Floor El. *80'* Room, Area[1] *Main Hallway & Common Area (east side)*

SWEL Components: SWEL1-025

Note: *Within roped area*



Note: *Area heater piping. Pipe of concern is the galvanized pipe that parallels the building cross bracing plane.*

ATTACHMENT 9.7 **AREA WALK-BY CHECKLIST**

Sheet 6 of 6

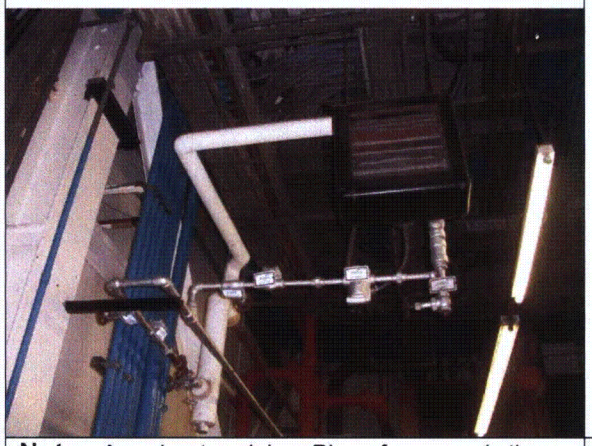
IP2

Status: Y☒ N☐ U☐

Area Walk-By Checklist (AWC) AWC-022

Location: Bldg. *PAB* Floor El. *80'* Room, Area[1] *Main Hallway & Common Area (east side)*

SWEL Components: SWEL1-025



Note: *Area heater piping. Pipe of concern is the galvanized pipe that parallels the wall. Left side of this photo.*

Note:

ATTACHMENT 9.7 **AREA WALK-BY CHECKLIST**

Sheet 1 of 7 **IP2**

Status: Y☒ N☐ U☐

Area Walk-By Checklist (AWC) AWC-023

Location: Bldg. *PAB* Floor El. *98'-0"* Room, Area[1] *Main Hallway*

SWEL Components: SWEL1-006, 008, 010, 092, 093, 098,

Instructions for Completing Checklist

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

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

   Yes anchorage of equipment in the area appears to be free of potentially adverse seismic conditions.

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

   Minor surface rusting on some components. Judged acceptable.

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

   Yes based on a visual inspection from the floor, the cable/conduit raceways and HVAC ducting appears to be free of potentially adverse seismic conditions.

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

ATTACHMENT 9.7 **AREA WALK-BY CHECKLIST**

Sheet 2 of 7 **IP2**

Status: Y☒ N☐ U☐

Area Walk-By Checklist (AWC) AWC-023

Location: Bldg. *PAB* Floor El. *98'-0"* Room, Area[1] *Main Hallway*

SWEL Components: SWEL1-006, 008, 010, 092, 093, 098,

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

   Fluorescent bulb need to be wire tied to light fixture. Some fluorescent bulbs are over top of the MCC Cabinets and are not in accordance with good seismic practices. CR IP2-2012-06354 issued to track resolution. Not considered a seismic concern since targets are not soft.

   No more seismic or other issue.

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

   Yes it appears that the area is free of potentially adverse seismic interactions that could cause flooding or spray in the area.

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

   Yes it appears that the area is free of potentially adverse seismic interactions that could cause a fire in the area.

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

   Ladder not secured and batching tools left loose on boric acid batching tank platform. A load (barrel lifting apparatus) is left hanging on hook of the overhead trolley. Items could fall over or swing affecting components in the area. CR IP2-2012-06354 issued to resolve.

   Scaffolding in area is seismically installed and inspected per scaffolding tag.

ATTACHMENT 9.7 **AREA WALK-BY CHECKLIST**

Sheet 3 of 7 **IP2**

Status: Y☒ N☐ U☐

Area Walk-By Checklist (AWC) AWC-023

Location: Bldg. *PAB* Floor El. *98'-0"* Room, Area[1] *Main Hallway*

SWEL Components: SWEL1-006, 008, 010, 092, 093, 098,

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

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

Comments (Additional pages may be added as necessary)

Ladder safety chain left unattached on Component Cooling Surge Tank platform ladder. This is not a seismic issue. CR IP2-2012-06354 issued for tracking.

Evaluated by: *Nick Crispell* Nick Crispell Date: *10-22-2012*

Dan Nuta Dragos D. Nuta *10-22-2012*

ATTACHMENT 9.7 **AREA WALK-BY CHECKLIST**

Sheet 4 of 7

IP2

Status: Y☒ N☐ U☐

Area Walk-By Checklist (AWC) AWC-023

Location: Bldg. *PAB* Floor El. *98'-0"* Room, Area[1] *Main Hallway*

SWEL Components: SWEL1-006, 008, 010, 092, 093, 098,

Photographs

Note: *Tools left loose near confined space rescue gear area. CR IP2-2012-06359 issued to track resolution.*

Note: *Ladder safety chain kept unattached on Component Cooling Surge Tank platform ladder. CR IP2-2012-06354 issued to track resolution.*

ATTACHMENT 9.7 **AREA WALK-BY CHECKLIST**

Sheet 5 of 7

IP2

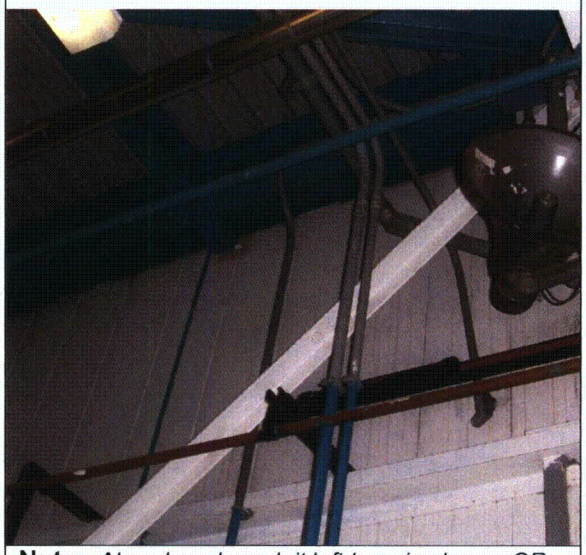
Status: Y☒ N☐ U☐

Area Walk-By Checklist (AWC) AWC-023

Location: Bldg. *PAB* Floor El. *98'-0"* Room, Area[1] *Main Hallway*

SWEL Components: SWEL1-006, 008, 010, 092, 093, 098,

Note: *Wire left hanging loose on a overhead conduit located in the north east corner of the room (Wall west of 22 Boric Acid Tank). CR IP2-2012-06354 issued to track resolution.*



Note: *Abandoned conduit left hanging loose. CR IP2-2012-06354 issued to track resolution.*

ATTACHMENT 9.7 **AREA WALK-BY CHECKLIST**

Sheet 6 of 7

IP2

Status: Y☒ N☐ U☐

Area Walk-By Checklist (AWC) AWC-023

Location: Bldg. *PAB* Floor El. *98'-0"* Room, Area[1] *Main Hallway*

SWEL Components: **SWEL1-006, 008, 010, 092, 093, 098,**

Note: *Tools left leading in corner of Boric Acid Batching platform. CR IP2-2012-06354 issued to track resolution.*

Note: *Ladder left unsecured on Boric Acid Batching platform. CR IP2-2012-06354 issued to track resolution.*

ATTACHMENT 9.7 **AREA WALK-BY CHECKLIST**

Sheet 7 of 7

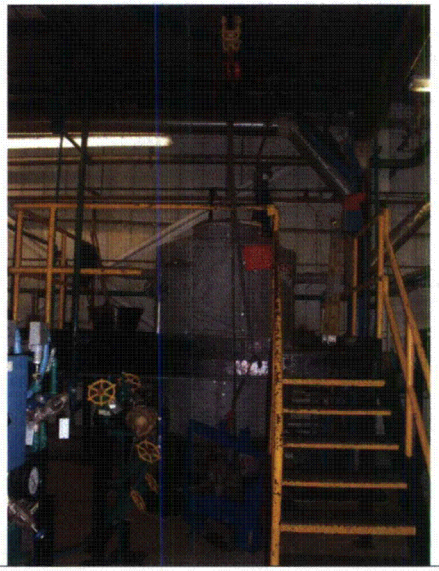
IP2

Status: Y☒ N☐ U☐

Area Walk-By Checklist (AWC) AWC-023

Location: Bldg. *PAB* Floor El. *98'-0"* Room, Area[1] *Main Hallway*

SWEL Components: SWEL1-006, 008, 010, 092, 093, 098,



Note: *Barrel handling apparatus left hanging on the overhead trolley. CR IP2-2012-06354 issued to track resolution.*

Note: *Ladder and other items left unsecured to a ladder rack that is not secured to the floor. CR IP2-2012-06354 issued to track resolution.*

ATTACHMENT 9.7 **AREA WALK-BY CHECKLIST**

Sheet 1 of 4 **IP2**

Status: Y☒ N☐ U☐

Area Walk-By Checklist (AWC) AWC-024

Location: Bldg. *PAB* Floor El. *98'-0"* Room, Area[1] *MCC Room*

SWEL Components: SWEL1-007 & 009

Instructions for Completing Checklist

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

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

   Yes anchorage of equipment in the area appears to be free of potentially adverse seismic conditions.

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

   Yes anchorage of equipment in the area appears to be free of significant degraded conditions.

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

   Yes based on a visual inspection from the floor, the cable/conduit raceways and HVAC ducting appears to be free of potentially adverse seismic conditions.

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

ATTACHMENT 9.7 **AREA WALK-BY CHECKLIST**

Sheet 2 of 4 **IP2**

Status: Y☒ N☐ U☐

Area Walk-By Checklist (AWC) AWC-024

Location: Bldg. *PAB* Floor El. *98'-0"* Room, Area[1] *MCC Room*

SWEL Components: SWEL1-007 & 009

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

   Florescent bulbs need wire securing them to the light fixture. Florescent lights with no safety wires are contrary to good seismic practice and must be secured to the fixture. Some bulbs are over top of the MCC Cabinets and could affect the MCC's functionality if they fall during a seismic event. CR IP2-2012-06354 issued to track resolution.

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

   Yes it appears that the area is free of potentially adverse seismic interactions that could cause flooding or spray in the area.

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

   Yes it appears that the area is free of potentially adverse seismic interactions that could cause a fire in the area.

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

   8' Ladder left unsecured behind west side of MCC 26BB. CR IP2-2012-06354 issued to track resolution.

   Tool box on wheels left on secured on east side of MCC 26BB. CR IP2-2012-06354 issued to track resolution.

   Pliers left on top of the 120 Volt Distribution Panel #2. CR IP2-2012-06354 issued to track resolution.

ATTACHMENT 9.7 **AREA WALK-BY CHECKLIST**

Sheet 3 of 4 **IP2**

Status: Y☒ N☐ U☐

Area Walk-By Checklist (AWC) AWC-024

Location: Bldg. *PAB* Floor El. *98'-0"* Room, Area[1] *MCC Room*

SWEL Components: SWEL1-007 & 009

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

   All cover screws (2 of 2) on south side of EPF9, EPG1, EPF7, & EPF8 are either not tightly secured or completely missing. One of these has the latch handle turned differently than the others meaning one panel door is free to swing open. CR IP2-2012-06355 issued to track resolution.

Comments (Additional pages may be added as necessary)

No more seismic concerns.

Evaluated by: *Nick Crispell* Date: *10-22-2012*

Dan Nuta *10-22-2012*

ATTACHMENT 9.7 **AREA WALK-BY CHECKLIST**

Sheet 4 of 4

IP2

Status: Y☒ N☐ U☐

Area Walk-By Checklist (AWC) AWC-024

Location: Bldg. *PAB* Floor El. *98'-0"* Room, Area[1] *MCC Room*

SWEL Components: SWEL1-007 & 009

Photographs

Note: *Picture of one MCC in the room. Other pictures could not be taken in room due to procedural requirement for camera standoff.*

Note:

ATTACHMENT 9.7 **AREA WALK-BY CHECKLIST**

Sheet 1 of 5

IP2

Status: Y☒ N☐ U☐

Area Walk-By Checklist (AWC) AWC-025

Location: Bldg. *PAB* Floor El. *98'-0"* Room, Area[1] *Non-Regenerative HX Cubical*

SWEL Components: SWEL1-085, 097

Instructions for Completing Checklist

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

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

   Yes anchorage of equipment in the area appears to be free of potentially adverse seismic conditions.

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

   Yes anchorage of equipment in the area appears to be free of significant degraded conditions.

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

   Yes based on a visual inspection from the floor, the cable/conduit raceways and HVAC ducting appears to be free of potentially adverse seismic conditions.

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

ATTACHMENT 9.7 **AREA WALK-BY CHECKLIST**

Sheet 2 of 5 **IP2**

Status: Y☒ N☐ U☐

Area Walk-By Checklist (AWC) AWC-025

Location: Bldg. *PAB* Floor El. *98'-0"* Room, Area[1] *Non-Regenerative HX Cubical*

SWEL Components: SWEL1-085, 097

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

   Yes it appears that the area is free of potentially adverse seismic spatial interactions with other equipment in the area.

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

   Yes it appears that the area is free of potentially adverse seismic interactions that could cause flooding or spray in the area.

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

   Yes it appears that the area is free of potentially adverse seismic interactions that could cause a fire in the area.

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

   At the north end of the room, a power cord is plugged in, rolled up on the floor, and then draped over components as it powers a device near the non-regenerative heat exchanger. This is not a seismic concern. CR IP2-2012-06778 issued to track resolution.

ATTACHMENT 9.7 **AREA WALK-BY CHECKLIST**

Sheet 3 of 5 **IP2**

Status: Y☒ N☐ U☐

Area Walk-By Checklist (AWC) **AWC-025**

Location: Bldg. *PAB* Floor El. *98'-0"* Room, Area[1] *Non-Regenerative HX Cubical*

SWEL Components: **SWEL1-085, 097**

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

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

Comments (Additional pages may be added as necessary)

References:
CR IP2-2012-06778

Evaluated by: *Nick Crispell* Nick Crispell Date: *10-22-2012*

Dan Nuta Dragos D. Nuta *10-22-2012*

ATTACHMENT 9.7 **AREA WALK-BY CHECKLIST**

Sheet 4 of 5

IP2

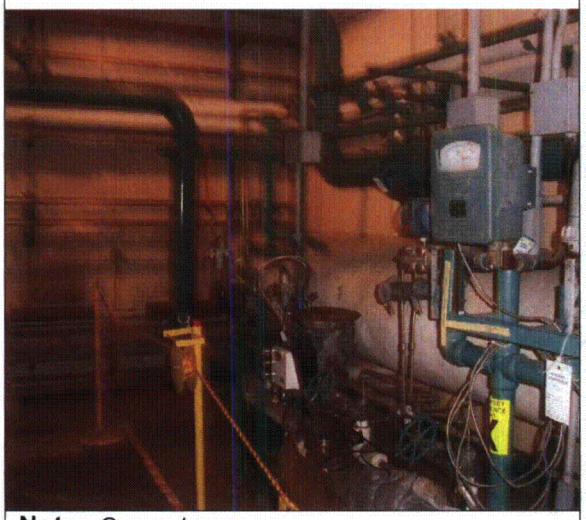
Status: Y☒ N☐ U☐

Area Walk-By Checklist (AWC) AWC-025

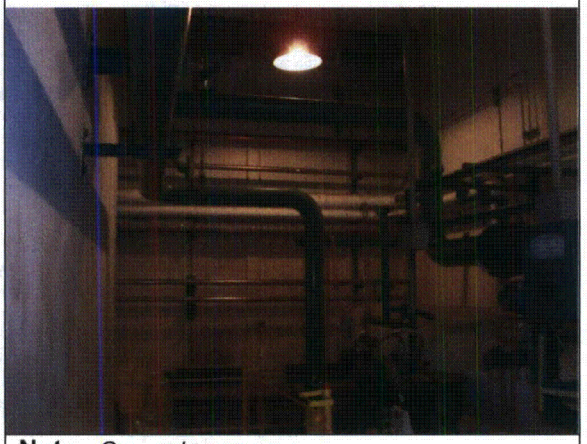
Location: Bldg. *PAB* Floor El. *98'-0"* Room, Area[1] *Non-Regenerative HX Cubical*

SWEL Components: SWEL1-085, 097

Photographs



Note: *General room area.*



Note: *General room area.*

ATTACHMENT 9.7 **AREA WALK-BY CHECKLIST**

Sheet 5 of 5

IP2

Status: Y☒ N☐ U☐

Area Walk-By Checklist (AWC) AWC-025

Location: Bldg. *PAB* Floor El. *98'-0"* Room, Area[1] *Non-Regenerative HX Cubical*

SWEL Components: SWEL1-085, 097

Note: *General view of Non-regenerative heat exchanger.*

Note:

ATTACHMENT 9.7 **AREA WALK-BY CHECKLIST**

Sheet 1 of 5 **IP2**

Status: Y☒ N☐ U☐

Area Walk-By Checklist (AWC) AWC-026

Location: Bldg. *PAB* Floor El. *15'* Room, Area[1] *RHR CELL 21*

SWEL Components: SWEL1-028

Instructions for Completing Checklist

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

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

   Yes anchorage of equipment in the area appears to be free of potentially adverse seismic conditions.

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

   Yes anchorage of equipment in the area appears to be free of significant degraded conditions.

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

   Yes based on a visual inspection from the floor, the cable/conduit raceways and HVAC ducting appears to be free of potentially adverse seismic conditions.

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

ATTACHMENT 9.7 **AREA WALK-BY CHECKLIST**

Sheet 2 of 5 **IP2**

Status: Y☒ N☐ U☐

Area Walk-By Checklist (AWC) AWC-026

Location: Bldg. *PAB* Floor El. *15'* Room, Area[1] *RHR CELL 21*

SWEL Components: SWEL1-028

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

   Yes it appears that the area is free of potentially adverse seismic spatial interactions with other equipment in the area.

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

   Yes it appears that the area is free of potentially adverse seismic interactions that could cause flooding or spray in the area.

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

   Yes it appears that the area is free of potentially adverse seismic interactions that could cause a fire in the area.

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

   Yes it appears that the area is free of potentially adverse seismic interactions associated with housekeeping practices, storage of portable equipment, and temporary installations.

   One light bulb is blown out over the RHR pump. Called lights out hotline ext 7600. Not a seismic issue.

ATTACHMENT 9.7 **AREA WALK-BY CHECKLIST**

Sheet 3 of 5 **IP2**

Status: Y☒ N☐ U☐

Area Walk-By Checklist (AWC) AWC-026

Location: Bldg. *PAB* Floor El. *15'* Room, Area[1] *RHR CELL 21*

SWEL Components: SWEL1-028

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

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

Comments (Additional pages may be added as necessary)

Evaluated by: *Kirit Parikh* Date: *10/23/2012*

Nick Crispell *10/23/2012*

ATTACHMENT 9.7 **AREA WALK-BY CHECKLIST**

Sheet 4 of 5

IP2

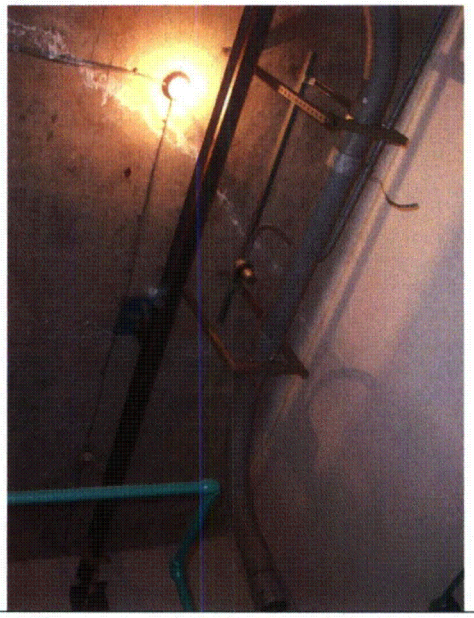
Status: Y☒ N☐ U☐

Area Walk-By Checklist (AWC) AWC-026

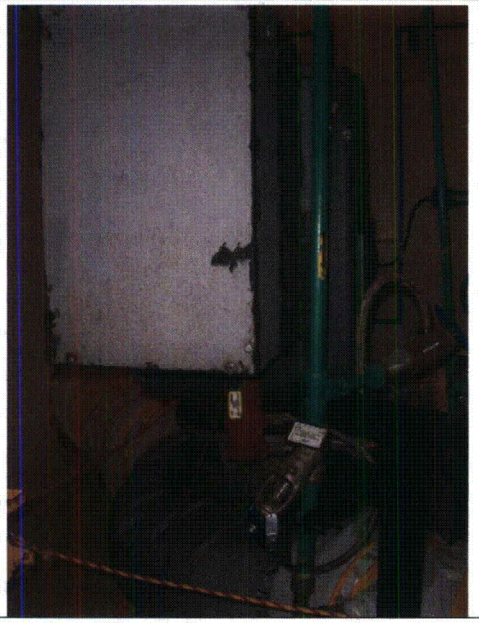
Location: Bldg. *PAB* Floor El. *15'* Room, Area[1] *RHR CELL 21*

SWEL Components: SWEL1-028

Photographs



Note: *Clean area and well secured entities around*



Note: *Other piping and insulated pipes around the area*

ATTACHMENT 9.7 **AREA WALK-BY CHECKLIST**

Sheet 5 of 5

IP2

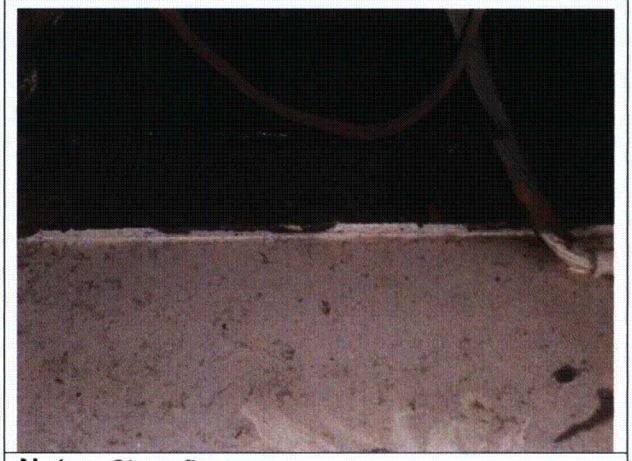
Status: Y☒ N☐ U☐

Area Walk-By Checklist (AWC) AWC-026

Location: Bldg. *PAB* Floor El. *15'* Room, Area[1] *RHR CELL 21*

SWEL Components: SWEL1-028

Note: *HVAC duct on the wall well secured.*



Note: *Clean floor area*

ATTACHMENT 9.7 **AREA WALK-BY CHECKLIST**

Sheet 1 of 4

IP2

Status: Y☒ N☐ U☐

Area Walk-By Checklist (AWC) AWC-027

Location: Bldg. *PAB* Floor El. *15'* Room, Area[1] *RHR CELL 22*

SWEL Components: SWEL1-029

Instructions for Completing Checklist

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

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

   Yes anchorage of equipment in the area appears to be free of potentially adverse seismic conditions.

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

   Yes anchorage of equipment in the area appears to be free of significant degraded conditions.

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

   Yes based on a visual inspection from the floor, the cable/conduit raceways and HVAC ducting appears to be free of potentially adverse seismic conditions.

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

ATTACHMENT 9.7 **AREA WALK-BY CHECKLIST**

Sheet 2 of 4 **IP2**

Status: Y☒ N☐ U☐

Area Walk-By Checklist (AWC) AWC-027

Location: Bldg. *PAB* Floor El. *15'* Room, Area[1] *RHR CELL 22*

SWEL Components: SWEL1-029

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

   Yes it appears that the area is free of potentially adverse seismic spatial interactions with other equipment in the area.

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

   Yes it appears that the area is free of potentially adverse seismic interactions that could cause flooding or spray in the area.

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

   Yes it appears that the area is free of potentially adverse seismic interactions that could cause a fire in the area.

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

   A loose plastic bag and a plastic funnel are lying on the floor. Not a seismic issue. CR IP2-2012-06747 has been written to resolve this condition.

ATTACHMENT 9.7 **AREA WALK-BY CHECKLIST**

Sheet 3 of 4 **IP2**

Status: Y☒ N☐ U☐

Area Walk-By Checklist (AWC) AWC-027

Location: Bldg. *PAB* Floor El. *15'* Room, Area[1] *RHR CELL 22*

SWEL Components: SWEL1-029

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

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

Comments (Additional pages may be added as necessary)

References:
CR IP2-2012-06747

Evaluated by: *Kirit Parikh* Date: *10/23/2012*

Nick Crispell *10/23/2012*

ATTACHMENT 9.7 **AREA WALK-BY CHECKLIST**

Sheet 4 of 4

IP2

Status: Y☒ N☐ U☐

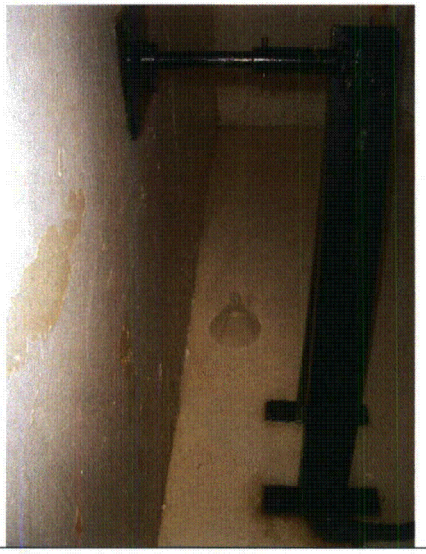
Area Walk-By Checklist (AWC) AWC-027

Location: Bldg. *PAB* Floor El. *15'* Room, Area[1] *RHR CELL 22*

SWEL Components: SWEL1-029

Photographs

Note: *Plastic bag on the floor*



Note: *Plastic funnel on the floor*

ATTACHMENT 9.7 **AREA WALK-BY CHECKLIST**

Sheet 1 of 5 **IP2**

Status: Y☒ N☐ U☐

Area Walk-By Checklist (AWC) AWC-028

Location: Bldg. *PPEN* Floor El. *67'-6"* Room, Area[1] _____

SWEL Components: SWEL1-038 & 039

Instructions for Completing Checklist

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

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

   Yes anchorage of equipment in the area appears to be free of potentially adverse seismic conditions.

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

   Yes anchorage of equipment in the area appears to be free of significant degraded conditions.

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

   Yes based on a visual inspection from the floor, the cable/conduit raceways and HVAC ducting appears to be free of potentially adverse seismic conditions.

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

ATTACHMENT 9.7 **AREA WALK-BY CHECKLIST**

Sheet 2 of 5 **IP2**

Status: Y☒ N☐ U☐

Area Walk-By Checklist (AWC) AWC-028

Location: Bldg. *PPEN* Floor El. *67'-6"* Room, Area[1] _____

SWEL Components: SWEL1-038 & 039

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

   Yes it appears that the area is free of potentially adverse seismic spatial interactions with other equipment in the area.

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

   Yes it appears that the area is free of potentially adverse seismic interactions that could cause flooding or spray in the area.

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

   Yes it appears that the area is free of potentially adverse seismic interactions that could cause a fire in the area.

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

   Yes it appears that the area is free of potentially adverse seismic interactions associated with housekeeping practices, storage of portable equipment, and temporary installations.

ATTACHMENT 9.7 **AREA WALK-BY CHECKLIST**

Sheet 3 of 5

IP2

Status: Y☒ N☐ U☐

Area Walk-By Checklist (AWC) AWC-028

Location: Bldg. *PPEN* Floor El. *67'-6"* Room, Area[1]

SWEL Components: SWEL1-038 & 039

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

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

Comments (Additional pages may be added as necessary)

Florescent lights in the area need to be tied to the light fixtures with wire ties. Not a seismic issue. CR IP2-2012-06741 issued for tracking.

References:
CR IP2-2012-06741

Evaluated by: *Nick Crispell* Date: *10-24-2012*

Kirit Parikh *10-24-2012*

ATTACHMENT 9.7 **AREA WALK-BY CHECKLIST**

Sheet 4 of 5

IP2

Status: Y☒ N☐ U☐

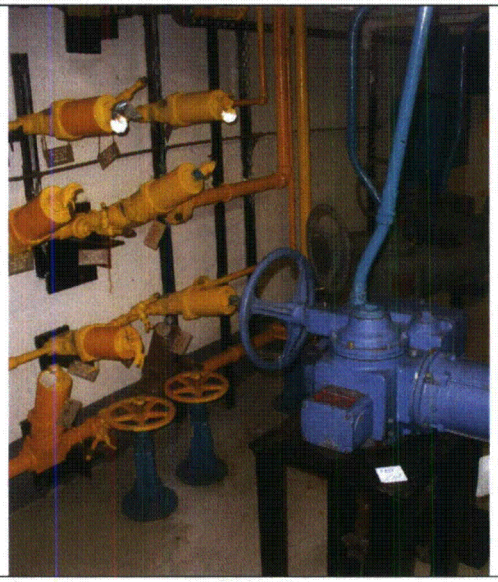
Area Walk-By Checklist (AWC) AWC-028

Location: Bldg. *PPEN* Floor El. *67'-6"* Room, Area[1] _____

SWEL Components: SWEL1-038 & 039

Photographs

Note: *Motor operator for 21RCP Seal Injection Line Isolation valve 250A (SWEL1-038). Valve 250A is located below on EL. 51' connected by reach rod to this motor operator.*



Note: *Area around MOV 250A.*

ATTACHMENT 9.7 **AREA WALK-BY CHECKLIST**

Sheet 5 of 5

IP2

Status: Y☒ N☐ U☐

Area Walk-By Checklist (AWC) AWC-028

Location: Bldg. *PPEN* Floor El. *67'-6"* Room, Area[1]

SWEL Components: SWEL1-038 & 039

Note: *Valve SWN-51-1A (SWEL1-039).*

Note:

ATTACHMENT 9.7 **AREA WALK-BY CHECKLIST**

Sheet 1 of 4 **IP2**

Status: Y☒ N☐ U☐

Area Walk-By Checklist (AWC) AWC-029

Location: Bldg. *PPEN* Floor El. *51'-0"* Room, Area[1]

SWEL Components: SWEL1-038, 040, 041 & 042

Instructions for Completing Checklist

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

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

   Yes anchorage of equipment in the area appears to be free of potentially adverse seismic conditions.

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

   Yes anchorage of equipment in the area appears to be free of significant degraded conditions.

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

   Yes based on a visual inspection from the floor, the cable/conduit raceways and HVAC ducting appears to be free of potentially adverse seismic conditions.

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

ATTACHMENT 9.7 **AREA WALK-BY CHECKLIST**

Sheet 2 of 4 **IP2**

Status: Y☒ N☐ U☐

Area Walk-By Checklist (AWC) AWC-029

Location: Bldg. *PPEN* Floor El. *51'-0"* Room, Area[1]

SWEL Components: SWEL1-038, 040, 041 & 042

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

   Yes it appears that the area is free of potentially adverse seismic spatial interactions with other equipment in the area.

   There are numerous places with small separations between items as area is very congested. All occurrences were judged acceptable for seismic issues.

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

   Yes it appears that the area is free of potentially adverse seismic interactions that could cause flooding or spray in the area.

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

   Yes it appears that the area is free of potentially adverse seismic interactions that could cause a fire in the area.

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

   Multiple long term scaffolds are present in the area. They are tagged as engineering approved and are judged seismically acceptable.

   Pliers and other items are left lying in area. All are judged acceptable given location.

   Lead shielding in the area is judged acceptable.

ATTACHMENT 9.7 **AREA WALK-BY CHECKLIST**

Sheet 3 of 4 **IP2**

Status: Y☒ N☐ U☐

Area Walk-By Checklist (AWC) AWC-029

Location: Bldg. *PPEN* Floor El. *51'-0"* Room, Area[1]

SWEL Components: SWEL1-038, 040, 041 & 042

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

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

Comments (Additional pages may be added as necessary)

Evaluated by: *Nick Crispell* Date: *10-24-2012*

Kirit Parikh *10-24-2012*

ATTACHMENT 9.7 **AREA WALK-BY CHECKLIST**

Sheet 4 of 4

IP2

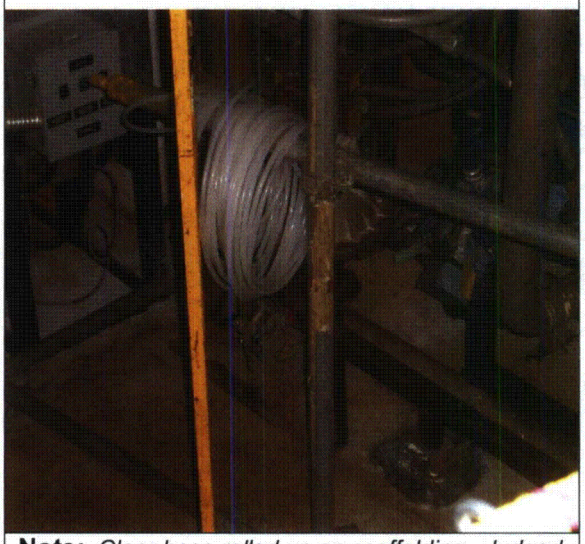
Status: Y☒ N☐ U☐

Area Walk-By Checklist (AWC) AWC-029

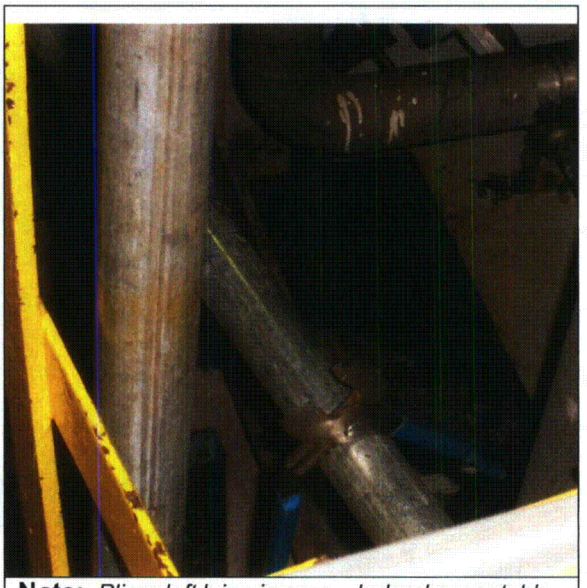
Location: Bldg. *PPEN* Floor El. *51'-0"* Room, Area[1]

SWEL Components: SWEL1-038, 040, 041 & 042

Photographs



Note: *Clear hose rolled up on scaffolding. Judged acceptable given soft hose and targets in the area.*



Note: *Pliers left lying in area. Judged acceptable given location.*

ATTACHMENT 9.7 **AREA WALK-BY CHECKLIST**

Sheet 1 of 5 **IP2**

Status: Y☒ N☐ U☐

Area Walk-By Checklist (AWC) AWC-030

Location: Bldg. *FAN HOUSE* Floor El. *80'-0"* Room, Area[1]

SWEL Components: SWEL1-091

Instructions for Completing Checklist

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

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

   Yes anchorage of equipment in the area appears to be free of potentially adverse seismic conditions.

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

   Yes anchorage of equipment in the area appears to be free of significant degraded conditions.

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

   Yes based on a visual inspection from the floor, the cable/conduit raceways and HVAC ducting appears to be free of potentially adverse seismic conditions.

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

ATTACHMENT 9.7 **AREA WALK-BY CHECKLIST**

Sheet 2 of 5 **IP2**

Status: Y☒ N☐ U☐

Area Walk-By Checklist (AWC) AWC-030

Location: Bldg. *FAN HOUSE* Floor El. *80'-0"* Room, Area[1]

SWEL Components: SWEL1-091

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

   Florescent bulbs need wire ties securing bulbs to fixtures in area. This is seismically acceptable as location of unsecured bulbs will not render equipment inoperable. CR IP2-2012-06741 issued to track resolution.

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

   Yes it appears that the area is free of potentially adverse seismic interactions that could cause flooding or spray in the area.

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

   Yes it appears that the area is free of potentially adverse seismic interactions that could cause a fire in the area.

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

   Fire extinguisher is on a bracket with a very small pin keeping fire extinguisher on bracket. Judged acceptable as vertical g is less than 1 in the area.

ATTACHMENT 9.7 **AREA WALK-BY CHECKLIST**

Sheet 3 of 5 **IP2**

Status: Y☒ N☐ U☐

Area Walk-By Checklist (AWC) **AWC-030**

Location: Bldg. *FAN HOUSE* Floor El. *80'-0"* Room, Area[1]

SWEL Components: **SWEL1-091**

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

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

Comments (Additional pages may be added as necessary)

Two lights are burnt out in the area. Called lights out hotline at ext 7600.

References:
CR IP2-2012-06741

Evaluated by: *Nick Crispell* Date: *10-24-2012*

Kirit Parikh *10-24-2012*

ATTACHMENT 9.7 **AREA WALK-BY CHECKLIST**

Sheet 4 of 5 **IP2**

Status: Y☒ N☐ U☐

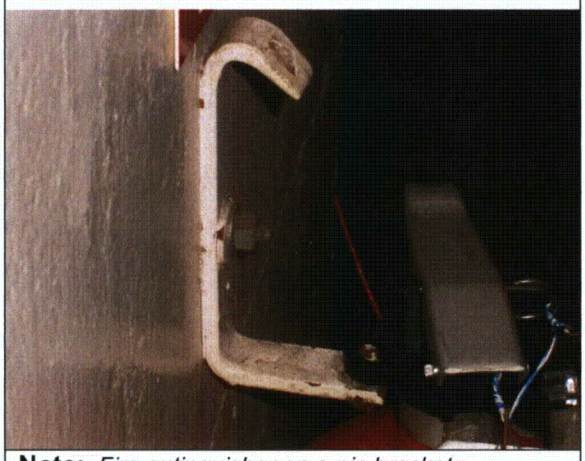
Area Walk-By Checklist (AWC) AWC-030

Location: Bldg. *FAN HOUSE* Floor El. *80'-0"* Room, Area[1]

SWEL Components: SWEL1-091

Photographs

Note: *General area of walk down.*



Note: *Fire extinguisher on a pin bracket.*

ATTACHMENT 9.7 **AREA WALK-BY CHECKLIST**

Sheet 5 of 5

IP2

Status: Y☒ N☐ U☐

Area Walk-By Checklist (AWC) AWC-030

Location: Bldg. *FAN HOUSE* Floor El. *80'-0"* Room, Area[1]

SWEL Components: SWEL1-091

Note: *The two lights that are out in the area.*

Note:

ATTACHMENT 9.7 **AREA WALK-BY CHECKLIST**

Sheet 1 of 5 **IP2**

Status: Y☒ N☐ U☐

Area Walk-By Checklist (AWC) AWC-031

Location: Bldg. *FAN HOUSE* Floor El. *72'-0"* Room, Area[1] *PLENUM*

SWEL Components: SWEL1-048 & 049

Instructions for Completing Checklist

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

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

   Yes anchorage of equipment in the area appears to be free of potentially adverse seismic conditions.

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

   Minimal surface corrosion acceptable.

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

   Yes based on a visual inspection from the floor, the cable/conduit raceways and HVAC ducting appears to be free of potentially adverse seismic conditions.

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

ATTACHMENT 9.7 **AREA WALK-BY CHECKLIST**

Sheet 2 of 5 **IP2**

Status: Y☒ N☐ U☐

Area Walk-By Checklist (AWC) AWC-031

Location: Bldg. *FAN HOUSE* Floor El. *72'-0"* Room, Area[1] *PLENUM*

SWEL Components: SWEL1-048 & 049

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

   Yes it appears that the area is free of potentially adverse seismic spatial interactions with other equipment in the area.

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

   Yes it appears that the area is free of potentially adverse seismic interactions that could cause flooding or spray in the area.

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

   Yes it appears that the area is free of potentially adverse seismic interactions that could cause a fire in the area.

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

   Pulley & Pulley Cover laying on floor from 21 Fan which is disassembled for repairs. This is not a seismic concern given location of items.

ATTACHMENT 9.7 **AREA WALK-BY CHECKLIST**

Sheet 3 of 5 **IP2**

Status: Y☒ N☐ U☐

Area Walk-By Checklist (AWC) AWC-031

Location: Bldg. *FAN HOUSE* Floor El. *72'-0"* Room, Area[1] *PLENUM*

SWEL Components: SWEL1-048 & 049

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

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

Comments (Additional pages may be added as necessary)

No more concerns on seismic or other issues

Evaluated by: *Nick Crispell* Date: *10-24-2012*

Kirit Parikh *10-24-2012*

ATTACHMENT 9.7 **AREA WALK-BY CHECKLIST**

Sheet 4 of 5

IP2

Status: Y☒ N☐ U☐

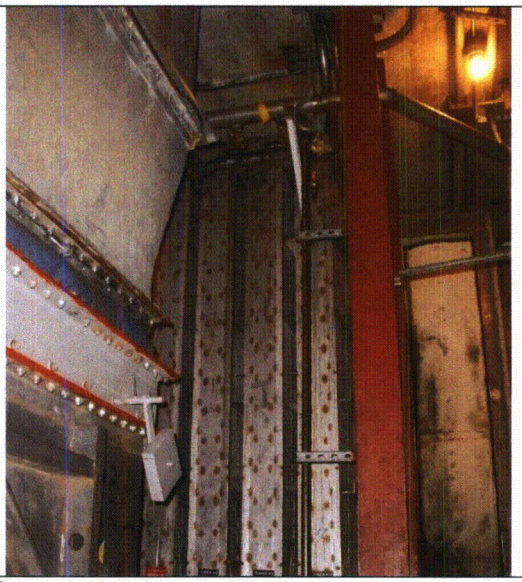
Area Walk-By Checklist (AWC) AWC-031

Location: Bldg. *FAN HOUSE* Floor El. *72'-0"* Room, Area[1] *PLENUM*

SWEL Components: SWEL1-048 & 049

Photographs

Note: *Fan 21.*



Note: *HEPA filters behind fan 22.*

ATTACHMENT 9.7 **AREA WALK-BY CHECKLIST**

Sheet 5 of 5

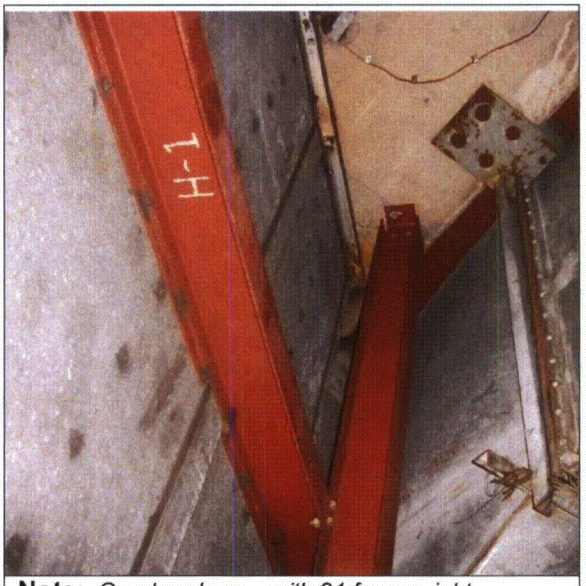
IP2

Status: Y☒ N☐ U☐

Area Walk-By Checklist (AWC) AWC-031

Location: Bldg. *FAN HOUSE* Floor El. *72'-0"* Room, Area[1] *PLENUM*

SWEL Components: SWEL1-048 & 049



Note: *Overhead area with 21 fan on right.*

Note: *Overhead area with 22 fan on left.*

ATTACHMENT 9.7 **AREA WALK-BY CHECKLIST**

Sheet 1 of 7 **IP2**

Status: Y☒ N☐ U☐

Area Walk-By Checklist (AWC) AWC-032

Location: Bldg. *NTF* Floor El. *82'-0"* Room, Area[1] *TANK FARM*

SWEL Components: SWEL1-094

Instructions for Completing Checklist

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

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

   Platform between Refueling Water Storage Tank and Primary Water Storage Tank has two cross braces (bracing platform in EW direction) at RWST bolt 29 that are cut for a RWST pipe to pass through. Need to verify that a platform seismic analysis of the "as-is" platform was performed. LB-07 was performed to evaluate the condition.

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

   Yes anchorage of equipment in the area appears to be free of significant degraded conditions. Minor surface corrosion was observed but is acceptable.

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

   Yes based on a visual inspection from the floor, the cable/conduit raceways and HVAC ducting appears to be free of potentially adverse seismic conditions.

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

ATTACHMENT 9.7 **AREA WALK-BY CHECKLIST**

Sheet 2 of 7 **IP2**

Status: Y☒ N☐ U☐

Area Walk-By Checklist (AWC) AWC-032

Location: Bldg. *NTF* Floor El. *82'-0"* Room, Area[1] *TANK FARM*

SWEL Components: SWEL1-094

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

   Platform between 21RWST and Primary Water Storage Tank is very close to touching both tanks. Approximately 1/8" gap between tanks and platform. LB-07 was performed to evaluate the gap.

   Roof cover on cabinet EPA-20 is close to RWST. Gap judged acceptable given components involved.

   Transmission tower is nearby & wihin fall arc of tank. Tower and tower anchorage judged acceptable seismically.

   Transmission lines are over top of the tank are typically designed to withstand wind, snow, and ice loads. Judged to be adequate for seismic loading compared to typical design loads.

   The RWST tank valve on North side is almost touching to the platform leg. Gap is very narrow almost 1/8". LB-07 was performed to evaluate the gap.

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

   Yes it appears that the area is free of potentially adverse seismic interactions that could cause flooding or spray in the area. Area is outdoors and gets rained/snowed on regularly. Therefore spray will not affect the items. The area is elevated above adjacent grade allowing ample runoff from area to prevent flooding in the area.

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

   Yes it appears that the area is free of potentially adverse seismic interactions that could cause a fire in the area.

ATTACHMENT 9.7 **AREA WALK-BY CHECKLIST**

Sheet 3 of 7

IP2

Status: Y☒ N☐ U☐

Area Walk-By Checklist (AWC) AWC-032

Location: Bldg. *NTF* Floor El. *82'-0"* Room, Area[1] *TANK FARM*

SWEL Components: SWEL1-094

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

   Yes it appears that the area is free of potentially adverse seismic interactions associated with housekeeping practices, storage of portable equipment, and temporary installations.

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

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

Comments (Additional pages may be added as necessary)

Insulation on EWD70 RWST Instrument Panel needs repair. CR IP2-2012-06516 issued for tracking.

Piping insulation & insulation flashing damaged in multiple places. CR IP2-2012-06516 issued for tracking.

None of the above are adverse seismic conditions.

References:
CR IP2-2012-06516

Evaluated by: *Nick Crispell* Date: *10-25-2012*

Kirit Parikh *10-25-2012*

ATTACHMENT 9.7 **AREA WALK-BY CHECKLIST**

Sheet 4 of 7

IP2

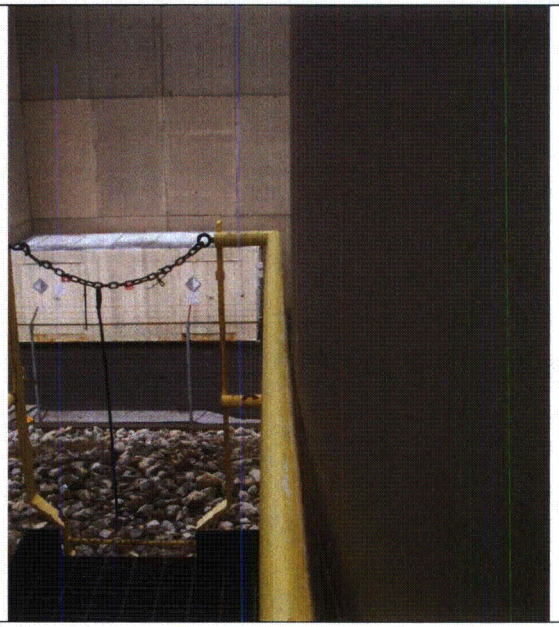
Status: Y☒ N☐ U☐

Area Walk-By Checklist (AWC) AWC-032

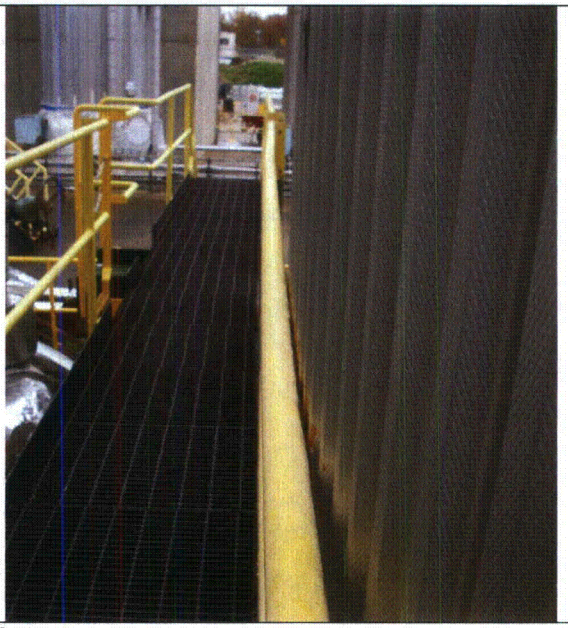
Location: Bldg. *NTF* Floor El. *82'-0"* Room, Area[1] *TANK FARM*

SWEL Components: SWEL1-094

Photographs



Note: *Very small gap between platform and RWST.*



Note: *Very small gap between platform and Primary Water Storage Tank.*

ATTACHMENT 9.7 **AREA WALK-BY CHECKLIST**

Sheet 5 of 7

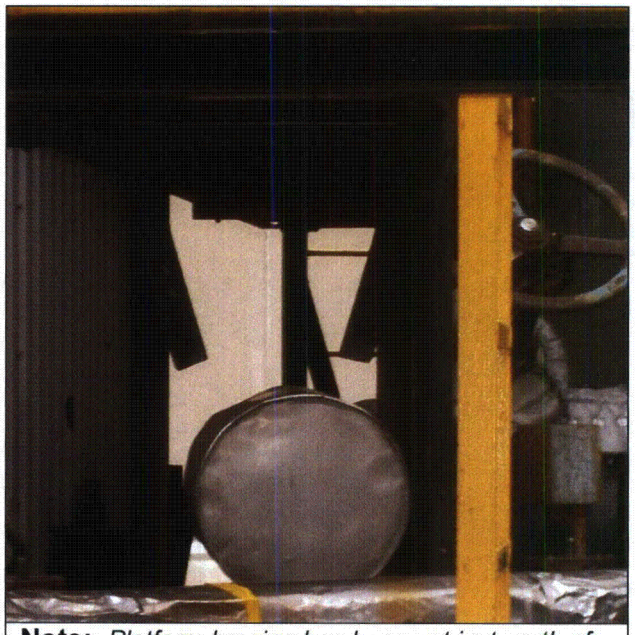
IP2

Status: Y☒ N☐ U☐

Area Walk-By Checklist (AWC) AWC-032

Location: Bldg. *NTF* Floor El. *82'-0"* Room, Area[1] *TANK FARM*

SWEL Components: SWEL1-094



Note: *Platform bracing has been cut just north of RWST bolt 29 for the RWST pipe end to pass.*

Note: *Bracing on normal platform frames.*

ATTACHMENT 9.7 **AREA WALK-BY CHECKLIST**

Sheet 6 of 7

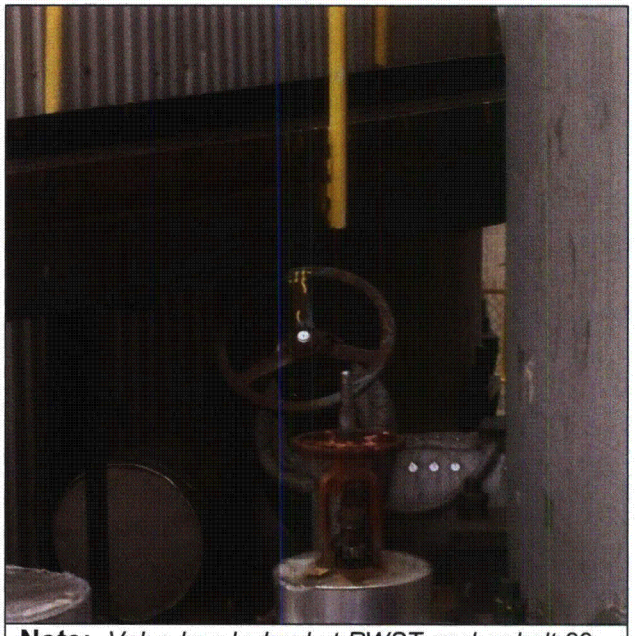
IP2

Status: Y☒ N☐ U☐

Area Walk-By Checklist (AWC) AWC-032

Location: Bldg. *NTF* Floor El. *82'-0"* Room, Area[1] *TANK FARM*

SWEL Components: SWEL1-094



Note: *Valve hand wheel at RWST anchor bolt 29 is very close to touching the platform at frame with cut bracing. Gap is very narrow, almost 1/8". Platform could potentially hit valve handle.*

Note: *Piping insulation & insulation flashing damaged in multiple places.*

ATTACHMENT 9.7 **AREA WALK-BY CHECKLIST**

Sheet 7 of 7

IP2

Status: Y☒ N☐ U☐

Area Walk-By Checklist (AWC) AWC-032

Location: Bldg. *NTF* Floor El. *82'-0"* Room, Area[1] *TANK FARM*

SWEL Components: SWEL1-094

Note: *Insulation on EWD70 RWST Instrument Panel needs repair.*

Note: *Roof cover on cabinet EPA-20 is close to RWST. Gap judged acceptable given components involved.*

ATTACHMENT 9.7 **AREA WALK-BY CHECKLIST**

Sheet 1 of 5

IP2

Status: Y☒ N☐ U☐

Area Walk-By Checklist (AWC) AWC-033

Location: Bldg. *ELE Tunnel Roof* Floor El. *73'-7"* Room, Area[1] *Behind EDG Building*

SWEL Components: SWEL1-050

Instructions for Completing Checklist

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

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

   Yes anchorage of equipment in the area appears to be free of potentially adverse seismic conditions.

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

   Minimal surface corrosion acceptable.

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

   Yes based on a visual inspection from the floor, the cable/conduit raceways and HVAC ducting appears to be free of potentially adverse seismic conditions.

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

ATTACHMENT 9.7 **AREA WALK-BY CHECKLIST**

Sheet 2 of 5 **IP2**

Status: Y☒ N☐ U☐

Area Walk-By Checklist (AWC) AWC-033

Location: Bldg. *ELE Tunnel Roof* Floor El. *73'-7"* Room, Area[1] *Behind EDG Building*

SWEL Components: SWEL1-050

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

   Yes it appears that the area is free of potentially adverse seismic spatial interactions with other equipment in the area.

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

   Area is out doors so items gets rained on and snowed on regularly. Component is on an elevated area and flooding would flow off area to lower ground.

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

   Yes it appears that the area is free of potentially adverse seismic interactions that could cause a fire in the area.

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

   Yes it appears that the area is free of potentially adverse seismic interactions associated with housekeeping practices, storage of portable equipment, and temporary installations.

ATTACHMENT 9.7 **AREA WALK-BY CHECKLIST**

Sheet 3 of 5

IP2

Status: Y☒ N☐ U☐

Area Walk-By Checklist (AWC) AWC-033

Location: Bldg. *ELE Tunnel Roof* Floor El. *73'-7"* Room, Area[1] *Behind EDG Building*

SWEL Components: SWEL1-050

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

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

Comments (Additional pages may be added as necessary)

Handrail has corroded off in area. CR IP2-2012-06377 issued to track resolution.

Evaluated by: *Nick Crispell* Nick Crispell Date: *10-25-2012*

Kirit Parikh K Parikh *10-25-2012*

ATTACHMENT 9.7 **AREA WALK-BY CHECKLIST**

Sheet 4 of 5

IP2

Status: Y☒ N☐ U☐

Area Walk-By Checklist (AWC) AWC-033

Location: Bldg. *ELE Tunnel Roof* Floor El. *73'-7"* Room, Area[1] *Behind EDG Building*

SWEL Components: SWEL1-050

Photographs

Note: *21 Electrical Tunnel Exhaust Fan*

Note: *Framing located west of 21 Exhaust Fan.*

ATTACHMENT 9.7 **AREA WALK-BY CHECKLIST**

Sheet 5 of 5

IP2

Status: Y☒ N☐ U☐

Area Walk-By Checklist (AWC) AWC-033

Location: Bldg. *ELE Tunnel Roof* Floor El. *73'-7"* Room, Area[1] *Behind EDG Building*

SWEL Components: SWEL1-050

Note: *Handrail has corroded off in area. CR IP2-2012-06377 issued to track resolution.*

Note: *Overhead at Electrical Tunnel Exhaust Fans.*

ATTACHMENT 9.7 **AREA WALK-BY CHECKLIST**

Sheet 1 of 7

IP2

Status: Y☒ N☐ U☐

Area Walk-By Checklist (AWC) AWC-034

Location: Bldg. *CWST* Floor El. *80'-0"* Room, Area[1] *CST*

SWEL Components: SWEL1-095

Instructions for Completing Checklist

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

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

   Yes anchorage of equipment in the area appears to be free of potentially adverse seismic conditions.

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

   Minimal surface corrosion acceptable.

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

   Yes based on a visual inspection from the floor, the cable/conduit raceways and HVAC ducting appears to be free of potentially adverse seismic conditions.

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

ATTACHMENT 9.7 **AREA WALK-BY CHECKLIST**

Sheet 2 of 7 **IP2**

Status: Y☒ N☐ U☐

Area Walk-By Checklist (AWC) AWC-034

Location: Bldg. *CWST* Floor El. *80'-0"* Room, Area[1] *CST*

SWEL Components: SWEL1-095

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

   Yes it appears that the area is free of potentially adverse seismic spatial interactions with other equipment in the area.

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

   Area is out doors so items gets rained on and snowed on regularly. Component is on an elevated area and flooding would flow off area to lower ground.

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

   Yes it appears that the area is free of potentially adverse seismic interactions that could cause a fire in the area.

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

   Yes it appears that the area is free of potentially adverse seismic interactions associated with housekeeping practices, storage of portable equipment, and temporary installations.

ATTACHMENT 9.7 **AREA WALK-BY CHECKLIST**

Sheet 3 of 7 **IP2**

Status: Y☒ N☐ U☐

Area Walk-By Checklist (AWC) **AWC-034**

Location: Bldg. *CWST* Floor El. *80'-0"* Room, Area[1] *CST*

SWEL Components: **SWEL1-095**

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

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

Comments (Additional pages may be added as necessary)

Gravel & stones around tank free to roll during seismic event. Judged acceptable.

Chair inside fence gate is unsecured. Judged acceptable given location of chair.

Evaluated by: *Nick Crispell* Date: *10-25-2012*

Kirit Parikh *10-25-2012*

ATTACHMENT 9.7 **AREA WALK-BY CHECKLIST**

Sheet 4 of 7

IP2

Status: Y☒ N☐ U☐

Area Walk-By Checklist (AWC) AWC-034

Location: Bldg. *CWST* Floor El. *80'-0"* Room, Area[1] *CST*

SWEL Components: SWEL1-095

Photographs

Note: *General area west of CST.*

Note: *Items around tank.*

ATTACHMENT 9.7 **AREA WALK-BY CHECKLIST**

Sheet 5 of 7

IP2

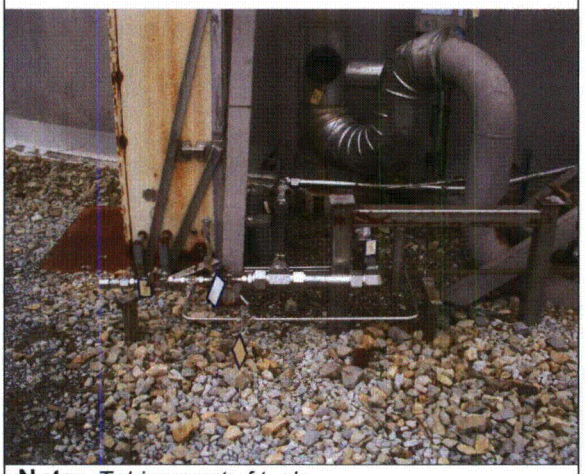
Status: Y☒ N☐ U☐

Area Walk-By Checklist (AWC) AWC-034

Location: Bldg. *CWST* Floor El. *80'-0"* Room, Area[1] *CST*

SWEL Components: SWEL1-095

Note: *Items around tank.*



Note: *Tubing west of tank.*

ATTACHMENT 9.7 **AREA WALK-BY CHECKLIST**

Sheet 6 of 7

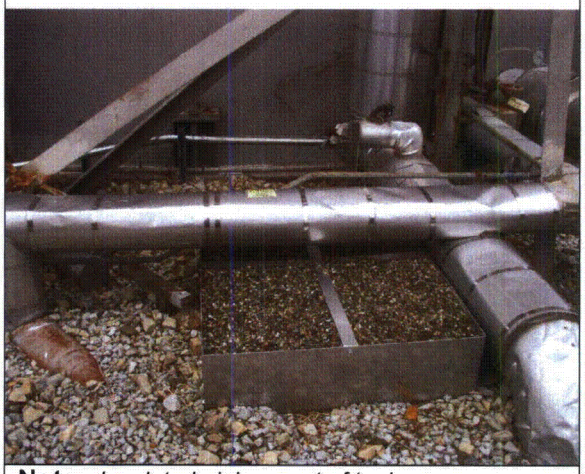
IP2

Status: Y☒ N☐ U☐

Area Walk-By Checklist (AWC) AWC-034

Location: Bldg. *CWST* Floor El. *80'-0"* Room, Area[1] *CST*

SWEL Components: SWEL1-095



Note: *Insulated piping west of tank.*

Note: *Area wet of tank.*

ATTACHMENT 9.7 **AREA WALK-BY CHECKLIST**

Sheet 7 of 7

IP2

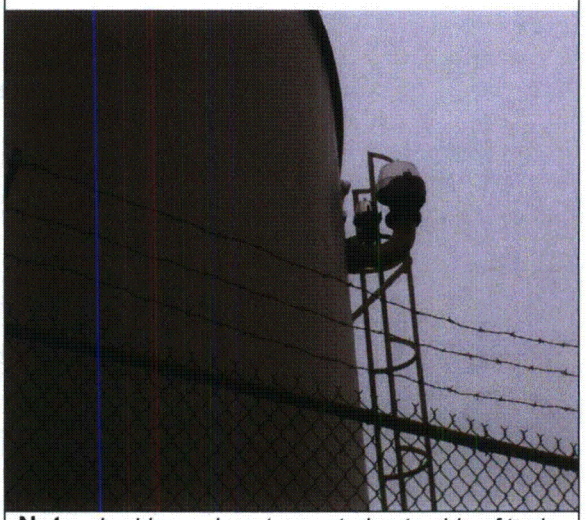
Status: Y☒ N☐ U☐

Area Walk-By Checklist (AWC) AWC-034

Location: Bldg. *CWST* Floor El. *80'-0"* Room, Area[1] *CST*

SWEL Components: SWEL1-095

Note: *Panel rack nearby.*



Note: *Ladder and vent mounted onto side of tank.*

ATTACHMENT 9.7 **AREA WALK-BY CHECKLIST**

Sheet 1 of 9 **IP2**

Status: Y☒ N☐ U☐

Area Walk-By Checklist (AWC) AWC-035

Location: Bldg. *AFB* Floor El. *18'-6"* Room, Area[1]

SWEL Components: SWEL1-005, 021, 022

Instructions for Completing Checklist

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

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

   There is a 2¾" outside diameter pipe connecting to PCV-1284 which appears to have excessive unsupported length. See photos. From the first support, the pipe has a 2½ ' horizontal run, a 3' vertical run and a 2½ ' horizontal run at which point it connects to a heavy valve and two large diameter flanges. After that, there is a 6" vertical run of 7/8" OD tubing followed by a 2½' run of 7/8" OD tubing to the next support. LB-12 issued to resolve.

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

   5/8"± diameter anchor bolts of F1-5004 support column are not fully engaged. (top of bolt is approximately ¼" below the top of the nut). See picture. LB-10 issued to resolve.

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

   Yes based on a visual inspection from the floor, the cable/conduit raceways and HVAC ducting appears to be free of potentially adverse seismic conditions.

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

ATTACHMENT 9.7 **AREA WALK-BY CHECKLIST**

Sheet 2 of 9 **IP2**

Status: Y☒ N☐ U☐

Area Walk-By Checklist (AWC) AWC-035

Location: Bldg. *AFB* Floor El. *18'-6"* Room, Area[1]

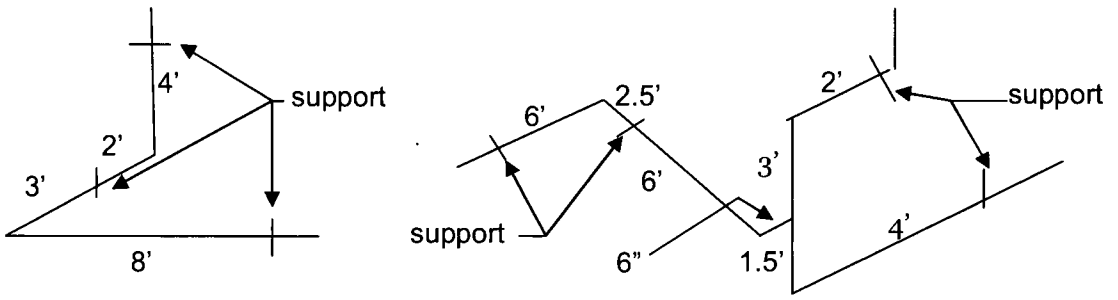
SWEL Components: SWEL1-005, 021, 022

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

Fluorescent lights are too close to the cable tray and hanger. (total two locations for hanger proximity and one location for cable tray proximity. The interference with the cable tray occurs below the top of the rail on the tray and would not result in impact of the light fixture on the cables. The interference with the hangers occurs at approximately midspan of the vertical hanger rod. (See pictures). It is estimated that the seismic response of the light fixture impacting the hanger rod would have no affect on the integrity of the hanger rod.

Long span 5/8" OD" tubing has little separation and typical span length of eight feet .The tubes will interact with each other during seismic event. (See photo) There are also 3/8" OD tubes also in close proximity to each other which have similar unsupported spans. LB-13 issued to resolve.

At the entry to the room there is 5/8" OD tubing which has relatively long unsupported spans as noted in the isometrics below.



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

Yes it appears that the area is free of potentially adverse seismic interactions that could cause flooding or spray in the area.

ATTACHMENT 9.7 **AREA WALK-BY CHECKLIST**

Sheet 3 of 9 **IP2**

Status: Y☒ N☐ U☐

Area Walk-By Checklist (AWC) AWC-035

Location: Bldg. *AFB* Floor El. *18'-6"* Room, Area[1]

SWEL Components: SWEL1-005, 021, 022

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

   Yes it appears that the area is free of potentially adverse seismic interactions that could cause a fire in the area.

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

   1. *The fluorescent light tubes need to be restrained. CR IP2-2012-06483 has been issued to track resolution.*
   2. *Used glove is found in the area. Upon revisit to the area on 11/19/2012, the glove has been removed.*
   3. *Loose tool is found in the area. CR IP2-2012-06483 has been issued to track resolution.*
   4. *Leftover scaffold part is found in the area. Upon revisit to the area on 11/19/2012, the scaffold part has been removed.*
   5. *Several florescent lights are out and need to be replaced. CR IP2-2012-06483 has been issued to track resolution.*
   6. *A scaffold is erected next to the AUX FEED PUMP NO. 22. The scaffold has lateral supports in all directions. The lateral supports are at floor level and braced to the base plate of protected pump 22, the adjacent nitrogen bottle rack and Rack 5. The scaffold was under construction at the time of inspection and the scaffolding inspector had not done his inspection. Upon follow up call later that day with the scaffolding inspector he informed us he had independently found and had construction fix the scaffold problems. Follow up inspection later that day confirmed no seismic issues with the certified and construction completed scaffold.*

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

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

ATTACHMENT 9.7 **AREA WALK-BY CHECKLIST**

Sheet 4 of 9 **IP2**

Status: Y☒ N☐ U☐

Area Walk-By Checklist (AWC) AWC-035

Location: Bldg. *AFB* Floor El. *18'-6"* Room, Area[1]

SWEL Components: SWEL1-005, 021, 022

Comments (Additional pages may be added as necessary)

References:
CR IP2-2012-06483

Evaluated by: *Stephen Yuan* Date: *10-25-2012*

Paul Huebsch Date: *10-25-2012*

ATTACHMENT 9.7 **AREA WALK-BY CHECKLIST**

Sheet 5 of 9

IP2

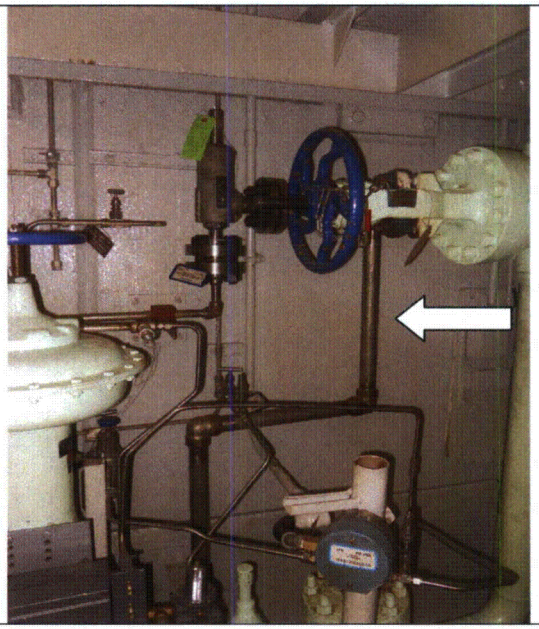
Status: Y☒ N☐ U☐

Area Walk-By Checklist (AWC) AWC-035

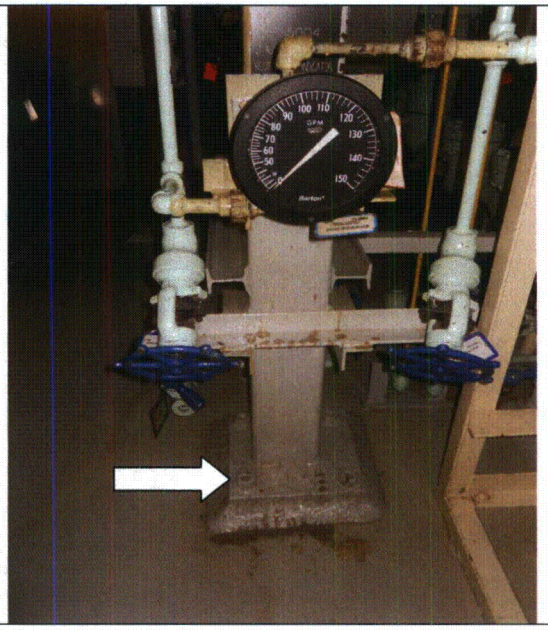
Location: Bldg. *AFB* Floor El. *18'-6"* Room, Area[1]

SWEL Components: SWEL1-005, 021, 022

Photographs



Note: *2"± diameter pipe connecting to PCV-1284 has excessive unsupported length.*



Note: *5/8"± diameter anchor bolts of F1-5004 support column are not fully engaged. (Missing about ¼").*

ATTACHMENT 9.7 **AREA WALK-BY CHECKLIST**

Sheet 6 of 9

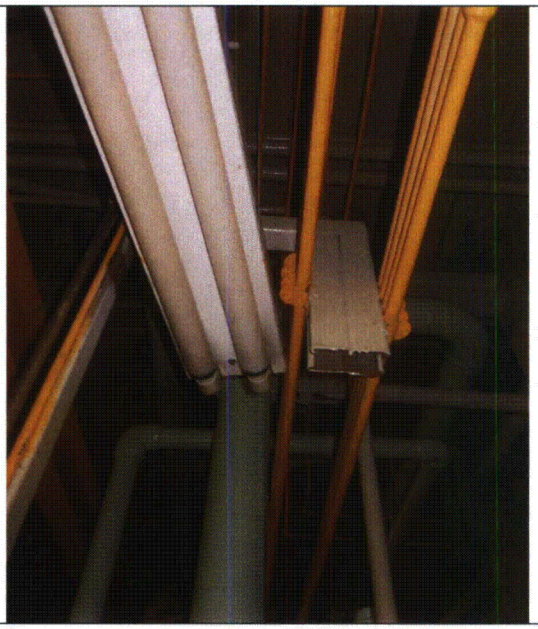
IP2

Status: Y☒ N☐ U☐

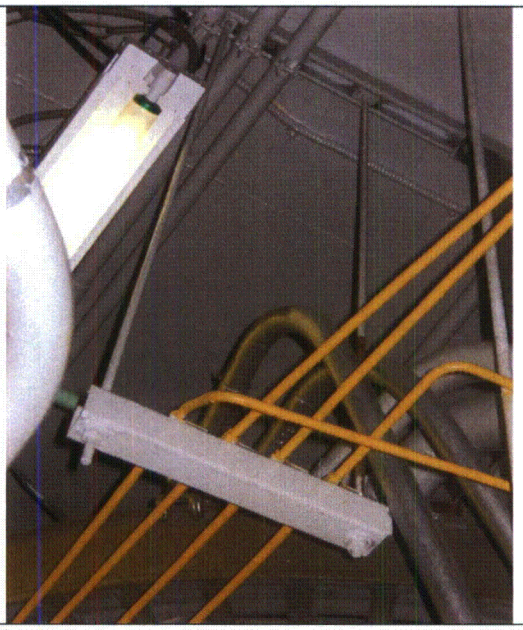
Area Walk-By Checklist (AWC) AWC-035

Location: Bldg. *AFB* Floor El. *18'-6"* Room, Area[1]

SWEL Components: SWEL1-005, 021, 022



Note: *Fluorescent light is too close to the tubing.*



Note: *Fluorescent light is too close to the cable tray (other end of the same light) and support hanger.*

ATTACHMENT 9.7 **AREA WALK-BY CHECKLIST**

Sheet 7 of 9

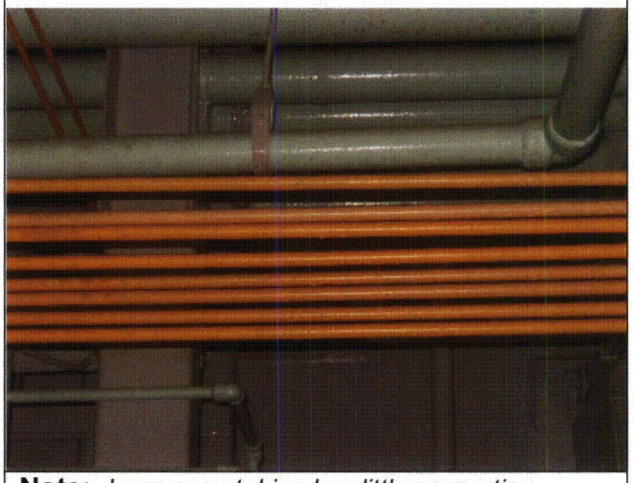
IP2

Status: Y☒ N☐ U☐

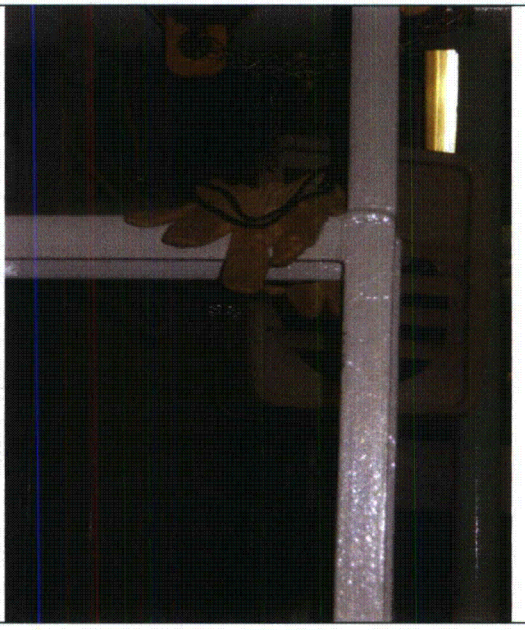
Area Walk-By Checklist (AWC) AWC-035

Location: Bldg. *AFB* Floor El. *18'-6"* Room, Area[1]

SWEL Components: SWEL1-005, 021, 022



Note: *Long span tubing has little separation (<1/2") .They will be interactive each other during seismic event.*



Note: *Used glove is found in the area.*

ATTACHMENT 9.7 **AREA WALK-BY CHECKLIST**

Sheet 8 of 9

IP2

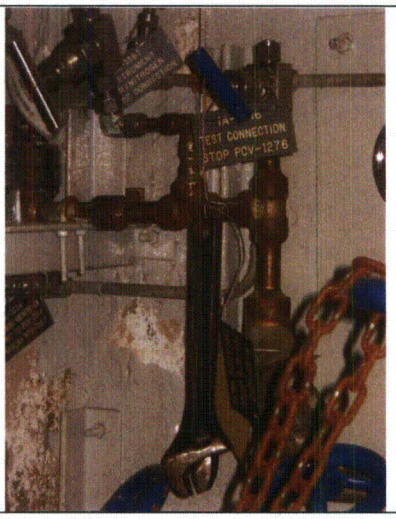
Status: Y☒ N☐ U☐

Area Walk-By Checklist (AWC) AWC-035

Location: Bldg. *AFB* Floor El. *18'-6"* Room, Area[1]

SWEL Components: SWEL1-005, 021, 022

Note: *Leftover scaffold part is found in the area.*



Note: *Wrench hung by a wire in front of the instrument panel.*

ATTACHMENT 9.7 **AREA WALK-BY CHECKLIST**

Sheet 9 of 9

IP2

Status: Y☒ N☐ U☐

Area Walk-By Checklist (AWC) AWC-035

Location: Bldg. *AFB* Floor El. *18'-6"* Room, Area[1]

SWEL Components: SWEL1-005, 021, 022

Note: *Tubing with excessive distance between supports at entry to room.*

Note:

ATTACHMENT 9.7 **AREA WALK-BY CHECKLIST**

Sheet 1 of 4 **IP2**

Status: Y☒ N☐ U☐

Area Walk-By Checklist (AWC) AWC-036

Location: Bldg. *AFB* Floor El. *77'-4"* Room, Area[1]

SWEL Components: SWEL1-043, 044, 045, 046

Instructions for Completing Checklist

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

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

   Yes anchorage of equipment in the area appears to be free of potentially adverse seismic conditions.

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

   Yes anchorage of equipment in the area appears to be free of significant degraded conditions. Surface corrosion on components in area judged acceptable.

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

   Yes based on a visual inspection from the floor, the cable/conduit raceways and HVAC ducting appears to be free of potentially adverse seismic conditions.

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

ATTACHMENT 9.7 **AREA WALK-BY CHECKLIST**

Sheet 2 of 4 **IP2**

Status: Y☒ N☐ U☐

Area Walk-By Checklist (AWC) AWC-036

Location: Bldg. *AFB* Floor El. *77'-4"* Room, Area[1]

SWEL Components: SWEL1-043, 044, 045, 046

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

   Yes, it appears that the area is free of potentially adverse seismic spatial interactions with other equipment in the area.

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

   Yes it appears that the area is free of potentially adverse seismic interactions that could cause flooding or spray in the area.

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

   Yes it appears that the area is free of potentially adverse seismic interactions that could cause a fire in the area.

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

   1. *Fluorescent light tubes need to be secured with wires. CR IP2-2012-06741 has been issued to track resolution.*
   2. *One light bulb is out and needs to be replaced. Called lights out hotline at ext 7600.*
   3. *Large piece of grating was noted to be stored on a concrete ledge. The grating was adequately secured by scaffold poles and is not a seismic risk. Loose grating clips are on the concrete ledge adjacent to the stored grating. Upon a second visit on 11/19/2012 it was noted that the grating clips had been removed.*

ATTACHMENT 9.7 **AREA WALK-BY CHECKLIST**

Sheet 3 of 4

IP2

Status: Y☒ N☐ U☐

Area Walk-By Checklist (AWC) AWC-036

Location: Bldg. *AFB* Floor El. *77'-4"* Room, Area[1]

SWEL Components: SWEL1-043, 044, 045, 046

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

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

Comments (Additional pages may be added as necessary)

A piece of grating was observed stored on a concrete ledge. The grating was adequately secured by scaffold poles and is not a seismic risk.

References:
CR IP2-2012-06741

Evaluated by: *Stephen Yuan* Date: *10-25-2012*

Paul Huebsch *10-25-2012*

ATTACHMENT 9.7 **AREA WALK-BY CHECKLIST**

Sheet 4 of 4

IP2

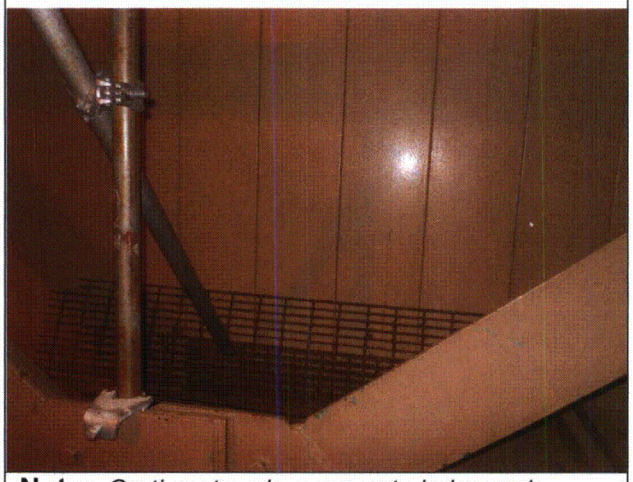
Status: Y☒ N☐ U☐

Area Walk-By Checklist (AWC) AWC-036

Location: Bldg. *AFB* Floor El. *77'-4"* Room, Area[1]

SWEL Components: SWEL1-043, 044, 045, 046

Photographs



Note: *Grating stored on concrete ledge and adequately restrained using scaffold poles.*

Note:

ATTACHMENT E – POTENTIALLY ADVERSE SEISMIC CONDITIONS

LBC	SWC/AWC	IDENTIFIED CONDITION	LICENSING BASIS EVALUATION CONCLUSION	RESOLUTION	STATUS
N/A	AWC-004	• 23DC Power Panel door not closed. Latch is broken and latch is missing parts. • 24DC Power PNL has latches in the open position. Door is shut and multiple other latches on door are in closed position.	CONDITION ENTERED DIRECTLY INTO CAP	**Initial Action:** CR GENERATED - SEE STATUS COLUMN **CR Operability Review:** No degraded or nonconforming condition exists per EN-OP-104 Revision 6 Attachment 9.1 Table 1. The DC Panel doors ability to latch does not impact the breaker operation within the panel. No DC circuits are impacted by this condition. There is no immediate reportability per EN-SMM-LI-108. Operability re-opened per CRG to add more information on the seismic impact Engineering was contacted and reported that - The cabinet contains molded circuit breakers only, which are not sensitive to vibration and therefore this is not an seismic operability issue. Furthermore, if the door opened - nothing of consequence would be damaged. No degraded or nonconforming condition exists per EN-OP-104 Revision 6 Attachment 9.1 Table 1. There is no immediate reportability per EN-SMM-LI-108. **CR Action:** WRN 286977 generated	CR-IP2-2012-06117 CLOSED
N/A	AWC-004	Lighting panel 219 door slightly ajar (not closed/latched). Operations personnel shut panel in our presence.	CONDITION ENTERED DIRECTLY INTO CAP	**Initial Action:** CR GENERATED - SEE STATUS COLUMN **CR Operability Review:** The Lighting Panel door unlatched does not impact the breaker operation within the panel. The breakers inside lighting panel 219 are not vibration sensitive and therefore would not be affected during a seismic event. The issue addressed in this CR describes a good practice and not a functionality issue. Lighting Panel 219 remains functional. There is no immediate reportability per EN-SMM-LI-108. **CR Action:** close to track and trending and coaching	CR-IP2-2012-06119 CLOSED
N/A	AWC-004 SWEL1-059 SWEL1-069	Overhead fluorescent bulb doesn't have wire securing bulb to fixture.	CONDITION ENTERED DIRECTLY INTO CAP	**Initial Action:** CR GENERATED - SEE STATUS COLUMN **CR Operability Review:** This CR describes unsecured fluorescent bulbs on the 15' and 33' of the control building. This is not a seismic good practice and needs to be corrected. However, no equipment is currently being impacted. In the event of a seismic event, if the bulbs fell out, they would break before damaging vital equipment such as static inverters and the 480V switchgear. It would cause a housekeeping concern, but they would not render required safety related SSC's inoperable. Not reportable per SMM-LI-108. **CR Action:** use ty-wraps or wire to secure the bulbs to the fixture. WRN 286982.	CR-IP2-2012-06120 CLOSED

LB #	SWC/AWC #	IDENTIFIED CONDITION	LICENSING BASIS EVALUATION CONCLUSION	RESOLUTION	STATUS
N/A	AWC-003	The engine hoist tool located on the north wall needs to be tied more securely to the fixed post. Hoist can roll side to side along wall and impact the nearby instrument rack.	CONDITION ENTERED DIRECTLY INTO CAP	**Initial Action:** CR GENERATED - SEE STATUS COLUMN **CR Operability Review:** The described lifting hoist and anchoring chain was found to allow for approximately 12 inches of hoist movement. This movement would not have allowed for any contact with any safety related SSC. No degraded or nonconforming condition exists per EN-OP-104 Revision 6 Attachment 9.1 Table 1. This arrangement has since been securely tightened. SMM-LI-108 reporting is not required. **CR Action:** needs to be chained around several perpendicular members to prevent movement or better yet remove from the room.	CR-IP2-2012-06135 CLOSED
N/A	AWC-024 AWC-023 SWEL1-008	• Fluorescent bulbs need wire restraints securing bulb to fixture. • 8' ladder left unsecured behind west side of mcc 26BB. • Tool box on wheels left on secured on east side of MCC26BB. • Pliers left on top of the 120 volt distribution panel #2. • A ladder not secured and batching tools left loose on boric acid batching tank platform. A load (barrel lifting apparatus) is left hanging on hook of the overhead trolley. Items could fall over or swing affecting components in the area.	CONDITION ENTERED DIRECTLY INTO CAP	**Initial Action:** CR GENERATED - SEE STATUS COLUMN **CR Operability Review:** All housekeeping concerns identified in CR were corrected. The condition described in this CR does not affect a required safety related system, structure or component as defined in EN-OP-104. All seismic concerns raised in this CR have been addressed and no longer pose any potential hazard. Therefore, no functionality or operability determination is required. There is no IP-SMM-LI-108 immediate reportability associated with this condition **CR Action:** Need to remove the items from the area	CR-IP2-2012-06354 CLOSED
	AWC-024	All cover screws (2 of 2) on south side of EPF9, EPG1, EPF7, & EPF8 are either not tightly secured or completely missing. One of these has the latch handle turned differently than the others meaning one panel door is free to swing open. CR IP2-2012-06355 issued to track resolution.	CONDITION ENTERED DIRECTLY INTO CAP	**Initial Action:** CR GENERATED - SEE STATUS COLUMN **CR Operability Review:** All housekeeping concerns identified in CR were corrected. The condition described in this CR does not affect a required safety related system, structure or component as defined in EN-OP-104. Therefore, no functionality or operability determination is required. There is no IP-SMM-LI-108 immediate reportability associated with this condition **CR Action:** Re-install the screws properly.	CR-IP2-2012-06355 CLOSED

LBI #	SWC/AWC #	IDENTIFIED CONDITION	LICENSING BASIS EVALUATION CONCLUSION	RESOLUTION	STATUS
N/A	AWC-035 SWEL1-005 SWEL1-079	• Loose tool is found in the area and needs to be removed. During a seismic event the tool will swing and strike nearby valves/equipment. • The fluorescent light bulbs need wires securing them to the fixture to prevent them from falling in a seismic event.	CONDITION ENTERED DIRECTLY INTO CAP	**Initial Action:** CR GENERATED - SEE STATUS COLUMN **CR Operability Review:** No Degraded or Nonconforming Condition exists per EN-OP-104 rev 6 Attachment 9.1 Table 1. Per discussion with civil engineering, the described conditions do not pose a threat of damage to the aux feed water pumps or associated support equipment even in a seismic event based on their location and mass and the energy they would be capable of imparting on the safety-related equipment. The described conditions are housekeeping concerns; therefore, the Aux Feedwater system remains operable. No immediate reportability required per IP-SMM-LI-108. **CR Action:** WRN 290243 Secure loose tool, use wires to secure the fluorescent light to the fixtures (towards the two ends) and replace the lights that are out. Tool should not be removed since it is staged for ASSD, it should be secured or placed in a proper container.	CR-IP2-2012-06483 CLOSED
N/A	AWC-009	Some florescent bulbs need wires securing the bulb to the fixture	CONDITION ENTERED DIRECTLY INTO CAP	**Initial Action:** CR GENERATED - SEE STATUS COLUMN **CR Operability Review:** No Degraded or Nonconforming Condition exists per EN-OP-104 rev 6 Attachment 9.1 Table 1. Per discussion with civil engineering, the described conditions do not pose a threat of damage to the steam supply line for 22 aux feed water pump or any associated support equipment even in a seismic event based on their location and mass and the energy they would be capable of imparting on the safety-related equipment. The described conditions are housekeeping concerns; therefore, the Aux Feedwater system remains operable. No immediate reportability required per IP-SMM-LI-108. **CR Action:** WRN 290243 Use wires to secure the fluorescent light to the fixtures (towards the two ends)	CR-IP2-2012-06485 CLOSED
N/A	AWC-019 SWEL1-027	Scaffold tag 866B with a red "unsafe" sign spans over the 21 containment spray pump. the scaffold is not braced well in the east/west direction and would impact valve if it collapses or sways during a seismic event.	CONDITION ENTERED DIRECTLY INTO CAP	**Initial Action:** CR GENERATED - SEE STATUS COLUMN **CR Operability Review:** 21 containment spray pump is operable. **CR Action:** The scaffold was removed.	CR-IP2-2012-06578

LB #	SWC/AWC #	IDENTIFIED CONDITION	LICENSING BASIS EVALUATION CONCLUSION	RESOLUTION	STATUS?
N/A	AWC-018	Fluorescent bulbs need restraint wires to secure them to the light fixture.	CONDITION ENTERED DIRECTLY INTO CAP	**Initial Action:** CR GENERATED - SEE STATUS COLUMN **CR Operability Review:** No degraded or nonconforming condition exists per EN-OP-104 Revision 6 Attachment 9.1 Table 1. This condition was discussed with the originator and there is no operability concern with the CCW pumps or any other safety related equipment in the area. There is a safety concern in the event the bulbs were to fall and shatter during a seismic event. CCW pumps remain operable. There is no IP-SMM-LI-108 immediate reportability associated with this condition. **CR Action:** Restraint wires should be installed to secure the light bulbs to the fixture. The Work Order(s) written in conjunction with CR-IP2-2012-06354 for the same purpose should be revised to incorporate tasks covering this PAB location.	CR-IP2-2012-06614
N/A	AWC-018	23 Sump pump missing all bolts on float rod guide.	CONDITION ENTERED DIRECTLY INTO CAP	**Initial Action:** CR GENERATED - SEE STATUS COLUMN **CR Operability Review:** Discussed condition with the author and the 23 sump pump float guide in the unsupported configuration does not cause any operability concerns with the CCW pumps or safety related equipment in the area. The CCW pumps and associated equipment remains operable. The sump pump is currently working in the degraded condition. In the event that the float were to not function properly an alarm would actuate on high level in the sump notifying the operator that an abnormal condition exists and it would be addressed. The level alarm switch is a separate device and remains functional. There is no IP-SMM-LI-108 immediate reportability associated with this condition. **CR Action:** Properly secure the float rod guide	CR-IP2-2012-06616
N/A	AWC-022	Fluorescent light tubes need to be restrained.	CONDITION ENTERED DIRECTLY INTO CAP	**Initial Action**: CR GENERATED - SEE STATUS COLUMN **CR Operability Review:** No degraded or nonconforming condition exists per EN-OP-104 Revision 6 Attachment 9.1 Table 1. This condition was discussed with the originator and there is no operability concern with the safety related equipment in the area. There is a safety concern in the event the bulbs were to fall and shatter during a seismic event. Equipment in the PAB remains operable. There is no IP-SMM-LI-108 immediate reportability associated with this condition. **CR Action:** Restrain the fluorescent light bulbs to the fixture with wires and all safety related areas of the PAB	CR-IP2-2012-06663

IBD	SWC/AWC#	IDENTIFIED CONDITION	LICENSING BASIS EVALUATION CONCLUSION	RESOLUTION	STATUS
N/A	AWC-022	• Tool cart is tied off but all tools are loose on top of cart and could be displaced in a seismic event. • There was an unsecured ladder • Various equipment and miscellaneous items loose on a grating which was tagged "seismically sensitive area".	CONDITION ENTERED DIRECTLY INTO CAP	**Initial Action:** CR GENERATED - SEE STATUS COLUMN **CR Operability Review:** No degraded or nonconforming condition exists per EN-OP-104 Revision 6 Attachment 9.1 Table 1. The housekeeping issues were resolved. The walkdown engineer states that there is no seismic issue with the stated condition and therefore there is no operability impact to the safety related equipment in the area. There is no IP-SMM-LI-108 immediate reportability associated with this condition. **CR Action:** Assure all loose items are properly stored and the ladder is properly restrained.	CR-IP2-2012-06664
N/A	AWC-036	Fluorescent light tubes need to be secured with wires.	CONDITION ENTERED DIRECTLY INTO CAP	**Initial Action:** CR GENERATED - SEE STATUS COLUMN **CR Operability Review:** No degraded or nonconforming condition exists per EN-OP-104 Revision 6 Attachment 9.1 Table 1. This condition was discussed with the originator and there is no operability concern with the AFW pumps, Pipe Pen or any other safety related equipment in the area. There is a safety concern in the event the bulbs were to fall and shatter during a seismic event. Affect area Safety related equipment remains operable. There is no IP-SMM-LI-108 immediate reportability associated with this condition. **CR Action:** Implement a plan to secure the fluorescent light bulbs to the fixtures in all areas where safety related systems or components are present.	CR-IP2-2012-06741
N/A	AWC-008	Tubing running to the SFP heat exchanger is vibrating significantly. Long span of approximately 6' for a ¼" tubing appears to be excessive.	CONDITION ENTERED DIRECTLY INTO CAP	**Initial Action:** CR GENERATED - SEE STATUS COLUMN **CR Operability Review:** No Degraded or Nonconforming Condition exists per EN-OP-104 rev 6 Attachment 9.1 Table 1. Per discussion with Civil Engineering, the described condition does not seismically impact the operability of the CCW system or the spent fuel pool cooling system. The tubing in question is only for local indication of the CCW return flow and is located on the top of the heat exchanger. Even if the tubing were to break, it would not drain the CCW out of the heat exchanger and any leakage that could occur would be within the capacity of the sump pumps in the building. Presently the flow indication is reading appropriately and no damage was evident to the tubing which continues capable of performing its function. Therefore, the CCW system and the SFPC system remain operable. No immediate reportability required per IP-SMM-LI-108. **CR Action:** Investigate reason for vibration and assess the tubing span.	CR-IP2-2012-06753

IBD #	SWC/AWC #	IDENTIFIED CONDITION	LICENSING BASIS EVALUATION CONCLUSION	RESOLUTION	STATUS
N/A	AWC-008	• Magnetic camera mounting appears to be inadequate for seismic loading. • tool box not secured • miscellaneous tools not secured	CONDITION ENTERED DIRECTLY INTO CAP	**Initial Action:** CR GENERATED - SEE STATUS COLUMN **CR Operability Review:** No Degraded or Nonconforming Condition exists per EN-OP-104 rev 6 Attachment 9.1 Table 1. The described condition of the camera does not impact the performance of safety related equipment The Gas bottle has been removed from this area and the identified equipment has either been removed or securely staged. No immediate reportability required per IP-SMM-LI-108. **CR Action:** In addition to addressing the housekeeping type deficiencies, establish the need for the camera after a seismic event and evaluate its anchorage.	CR-IP2-2012-06774

LB#	SWC/AWC#	IDENTIFIED CONDITION	LICENSING BASIS EVALUATION CONCLUSION	RESOLUTION	STATUS
LB-01	SWEL1-062	The seismic walkdown team observed that a conduit appeared to be too close to a cable tray support frame over the 22 MG Set (possible spatial interaction) and questioned if the cable tray support frame is seismically designed.	The evaluation concluded that: (1) the cable tray support was analyzed for seismic loads and (2) the approximately 3/4" gap between the conduit and cable tray support frame is acceptable. Thus, the observed conditions are consistent with our licensing basis.	N/A	N/A
LB-02	SWEL1-032	The overhead pipe near the roof line of the EDG building eastern side is supported on three wide flange columns. These columns are supported on baseplates bolted to a concrete pier. Some of the nuts are not fully engaged (bolt does not project past the nut). Bolt recess within the nut is 1/4 inch or less.	The unengaged threads, or recess, cover a distance of 1/4 inch or less. Based on Calculation IP3-CALC-MULT-00734, a recess 0f 0.27 inches for a 1 inch diameter bolt does not reduce the bolt capacity. Thus, a recess of 1/4" (0.25") or less is consistent with our licensing basis.	N/A	N/A
LB-03	SWEL1-094	The seismic walkdown team observed small cracks near bolt nos. 30, 24 & 25, which were not a seismic concern, and significant concrete spalling and numerous cracks near bolt nos. 16,17,18,19. The concrete spalling and cracks bring into question the RWST anchorage adequacy. In addition to this LBE, CR IP2-2012-06547 was issued to track resolution.	The spalled concrete and cracks are associated with a concrete mat protective layer. This spalling and cracking of this protective layer does not affect the anchorage of the RWST. and the observed condition is consistent with our licensing basis.	N/A	N/A
LB-04	AWC-018	The seismic walkdown team observed that the anchor for the CCW pipe support is missing 2 of 4 anchor bolts. It was also noted that the missing anchor bolts are tagged with an old Work Order IP2-05-0522 written in 2005.	Work performed in conjunction with Work Order IP2-05-0522 and ER No. 05-26433 indicates that at Support ACH-60, there is a vetical load of 1700 pounds and very small vertical seismic load. With no tension acting on the bolts, the existing configuration is consistent with our licensing basis.	N/A	N/A
LB-05	AWC-017	The seismic walkdown team observed that the support stanchion for the overhead crane in the Safety Injection Pump Room area in the PAB Elev. 59'-0" has a four hole base plate and only three bolts are installed. It is noted that all other similar stanchions have four bolts installed in the base plate and that per signage on the stanchion the anchor is abandoned per FEI-840679.	CR IP2-1998-04788 indicates that " This condition has been previously evaluated and found acceptable. Calculation FFX-00088-02 covers the design of the monorail with the missing anchor bolt.. The CR also indicates that the Design Drawing indicates this base plate as having only 3 bolts. Thus, the observed condition is consistent with our licensing basis.	N/A	N/A
LB-06	AWC-022	The seismic walkdown team question if the Unit heater 232 hot water piping is seismically designed/supported.	The existing configuration was conservatively modeled and seismically analyzed. The piping configuration was found to satisfy B31.1 requirements. Thus, the condition is consistent with the licensing basis.	N/A	N/A

LB #	SWC/AWC #	IDENTIFIED CONDITION	LICENSING BASIS EVALUATION CONCLUSION	RESOLUTION	STATUS
LB-07	AWC-32 & SWEL1-094	The seismic walkdown team noted that: "Platform between Refueling Water Storage Tank and Primary Water Storage Tank has two cross braces (bracing platform in EW direction) at RWST bolt 29 that are cut for a RWST pipe to pass through. Need to verify that a platform seismic analysis of the "as-is" platform was performed." The team also noted that: "Platform between 21RWST and Primary Water Storage Tank is very close to touching both tanks. Approximately 1/8" gap between tanks and platform. LBE needed to determine if gap is acceptable for both tanks 21RWST and Primary Water Storage Tank" and " Valve hand wheel at RWST anchor bolt 29 is very close to touching the platform at frame with cut bracing. Gap is very narrow, almost 1/8". Platform could potentially hit valve handle."	The evaluation concluded that: (1) the existing platform, including the missing brace, was seismically analyzed (Calculation FCX-0098-01), (2) the sum of the maximum horizontal displacements of the tanks and platform, i.e., 0.07315", is less than the 1/8" (0.125") gap, and that (3) the sum of the vertical displacements of the tank(s) and platform is less than the horizontal displacement (and thus less than the gap between the valve mounted on the tank and the platform. Thus, the observed conditions are consistent with the licensing basis.	N/A	N/A
LB-08	SWEL1-072	The Seismic Walkdown Team noted that the gap between Battery Charger 21 and the adjacent instrument rack west of the cabinet is 1/2" and questioned if this gap is sufficient to preclude seismic interaction.	The evaluation concluded that the sum of the maximum displacement of Battery Charger 21 and the adjacent Instrument Rack is 0.14 inches. It is thus concluded that the 1/2" gap between the Battery Charger 21 and the adjacent Instrument Rack is sufficient to preclude spatial interactions and the condition satisfies the licensing basis.	N/A	N/A
LB-09	AWC-12	The Seismic Walkdown Team noted that one pipe is supported from another pipe.. This is a non typical pipe support. Design drawings for this support were not available at time of walk down. One pipe (insulated pipe) runs to the Emergency Domestic truck fill stop valve and the other orange pipes from the EDG building to near 23FOTP	Technical Report No. 91177-TR-01, "Diesel Generator Fuel Oil System, Seismic Verification Summary Report," September 1991 analyzed the observed configuration and confirmed the pipes and supports are adequate under all postulated loads and load combinations, including OBE and DBE loads. Thus, the observed condition is consistent with the licensing basis.	N/A	N/A
LB-10	AWC-035	The Seismic Walkdown Team noted that the 5/8"± diameter anchor bolts of the F1-5004 support column are not fully engaged. (top of bolt is approximately ¼" below the top of the nut).	The tension loading of the bolts anchoring the base plate for Instrument F1-5004 is very small, as discussed in the attached evaluation. As such, given that a recess of 0.172" for a 5/8" diameter bolt does not reduce the bolt tension capacity, the 8/100" larger recess observed is acceptable and we conclude that the observed condition is consistent with the licensing basis.	N/A	N/A
LB-11	SWEL1-77	The Seismic Walkdown Team noted that the EDG exhaust pipe is supported on a post frame that also supports fuse panel for 22 Pre Lube Pump, 22 Lube oil HTR, and 22 Jacket Water HTR. This support has damaged & missing grout under the eastern post base plate.	Based on calculation GCC-00025-00, the load acting on the base plate and grout is minimal Furthermore, considering the 5000 psi compressive strength of the grout, and the more that 75% of the base plate area supported on grout, the compression capacity of the grout is more than sufficient to withstand the acting loads. Thus, the condition is in accordance with the IP2 licensing basis.	N/A	N/A

LB #	SWC/AWC #	IDENTIFIED CONDITION	LICENSING BASIS EVALUATION CONCLUSION	RESOLUTION	STATUS
LB-12	AWC-35	The Seismic Walkdown Team noted at Elev. 18'-6" of the AFB that There is a 2¾" outside diameter pipe connecting to PCV-1284 which appears to have excessive unsupported length.. From the first support, the pipe has a 2½ ' horizontal run, a 3' vertical run and a 2½ ' horizontal run at which point it connects to a heavy valve and two large diameter flanges. After that, there is a 6" vertical run of 7/8" OD tubing followed by a 2½' run of 7/8" OD tubing to the next support.	A subsequent walkdown of the pipe location by members of the IPEC Design Engineering Department certified for performance of the Seismic Walkdowns, assessed the configuration and found that: (1) spans are not excessive for the 2 3/4" diameter pipe, for which a span of 8'-0" would not be questionable, (2) the in-line loads are not excessive, and (3) the configuration is acceptable. As the piping under consideration does not have excessive unsupported lengths, we find the configuration acceptable and within the IP2 licensing basis.	N/A	N/A
LB-13	AWC-35	The Seismic Walkdown Team noted that Long span 5/8" OD" tubing has little separation and typical span length of eight feet .The tubes will interact with each other during seismic event. There are also 3/8" OD tubes also in close proximity to each other which have similar unsupported spans.	A subsequent walkdown of the tubing locations by members of the IPEC Design Engineering Department certified for performance of the Seismic Walkdowns, assessed the configurations and found that: (1) The tubing spans are not excessive, (2) all tubes in close proximity have common supports and spans, and (3) the separation is such that any impact of adjacent tubes under a seismic event will be associated with extremely small impact forces while eliminating any possible resonance and enhancing the system damping. As such, the configurations were found to be acceptable and within the IP2 licensing basis.	N/A	N/A
LB-14	AWC-17	While performing an area walkby of Elevation 59"-0" of the PAB, the Seismic Walkdown Team noted that the HVAC ductwork adjacent to the stairs does not have any lateral support from the base to beyond the first elbow at the top. The span appears to be excessive.	The evaluation established that the vertical span is not excessive and, under a postulated seismic occurrence, the stresses in the duct are very low. As such, the configuration was found to be acceptable and within the IP2 licensing basis.	N/A	N/A

Prepared by: Dragos Nuta Dragos A. Nuta Date: 11/20/2012

Reviewed by: Richard Drake Richard A. Drake Date: 11/20/12

Peer Review Team Member

ATTACHMENT F – LICENSING BASIS EVALUATION FORMS

ATTACHMENT 9.9 **LICENSING BASIS EVALUATION FORMS AND INSTRUCTIONS**

Sheet 1 of 3

Licensing Basis (LB) Evaluation Form

LB Evaluation No. LB-01 Originating SWC/AWC SWEL1-062

Equipment ID No. 22MGS Equip. Class 13

Equipment Description 22 Machine Generator Set

Location: Bldg. CB Floor El. 33'-0 Room, Area Cable Spreading Room

Condition

"Cable tray support frame (over top of 22 MG SET) appears too close to the conduit west of the frame but is adequately separated from the 22 MG SET. The frame might interact with the conduit. Additionally the cable tray support frame does not appear to be seismically designed."

Documents Reviewed

Drawings 320933, 320997
Calculation No. GCC-00154-02, FCX-00336-00, FCX-00337-00

Licensing Basis

(1) SSCs located nearby safety-related SSCs must be seismically designed to assure the safety related functions are not affected.
(2) Spatial interactions shall not affect the functionality of safety related SSCs.

Evaluation

As indicated hereafter, the evaluation established that the cable tray support frame was seismically analyzed and the gap between the cable tray support frame and adjacent conduit is acceptable.

Conclusion Condition Meets the Licensing Basis: ☒ Yes ☐ No

Prepared by: Dragos Nuta Date 10/25/12

Licensing Basis Reviewer

Reviewed by: Richard Drake Date 10/26/12

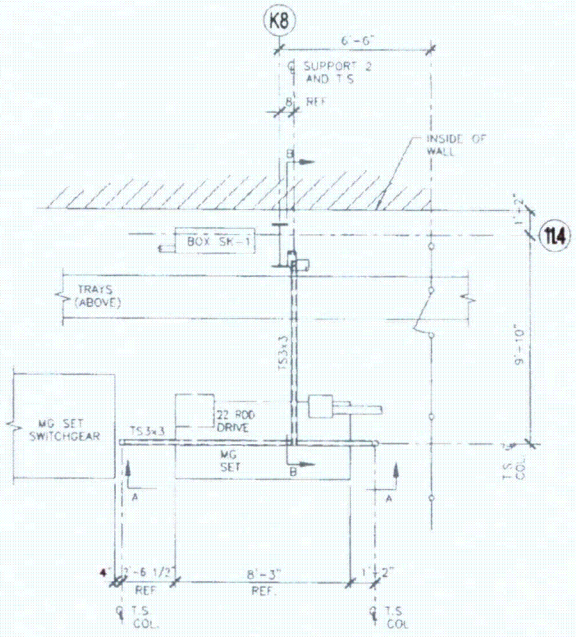
SWEL1-062 - Recorded Interaction Effects

During the walkdown, we noted/questioned the following:

"Cable tray support frame (over top of 22 MG SET) appears too close to the conduit west of the frame but is adequately separated from the 22 MG SET. The frame might interact with the conduit. Additionally the cable tray support frame does not appear to be seismically designed."

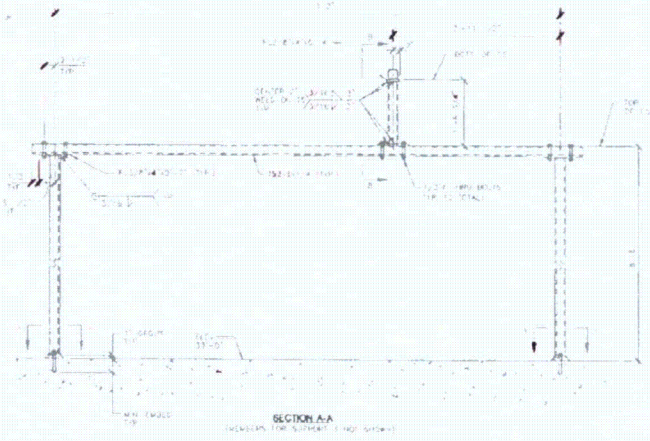
Licensing Basis Assessment - Seismic Design of Steel Frame (Support 320933)

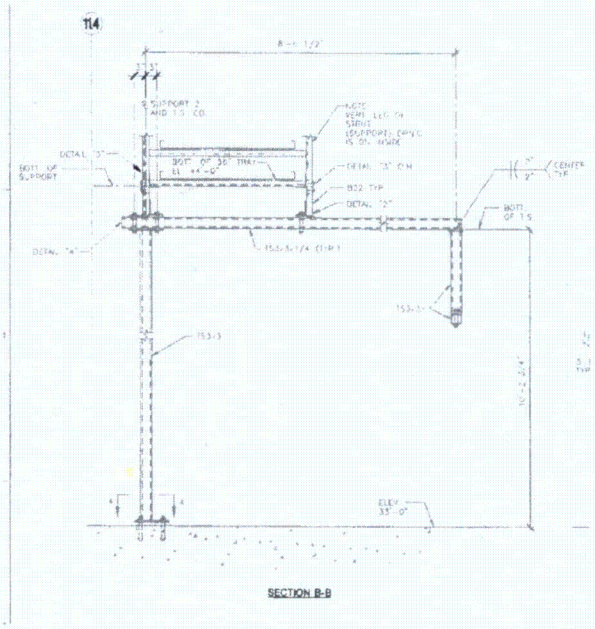
Drawing No. 320933, "Cable Spreading Room, Cable Tray Plans and Sections," deals with the precise support mentioned in our SWEL notes. The frame is located at Column Line K-8 of the Elev. 33'-0 Cable Spreading Room (Excerpt from Dwg. 320933):



PARTIAL PLAN AT SUPPORT 2

Sections A - A and B - B shown on the plan above are as follows:

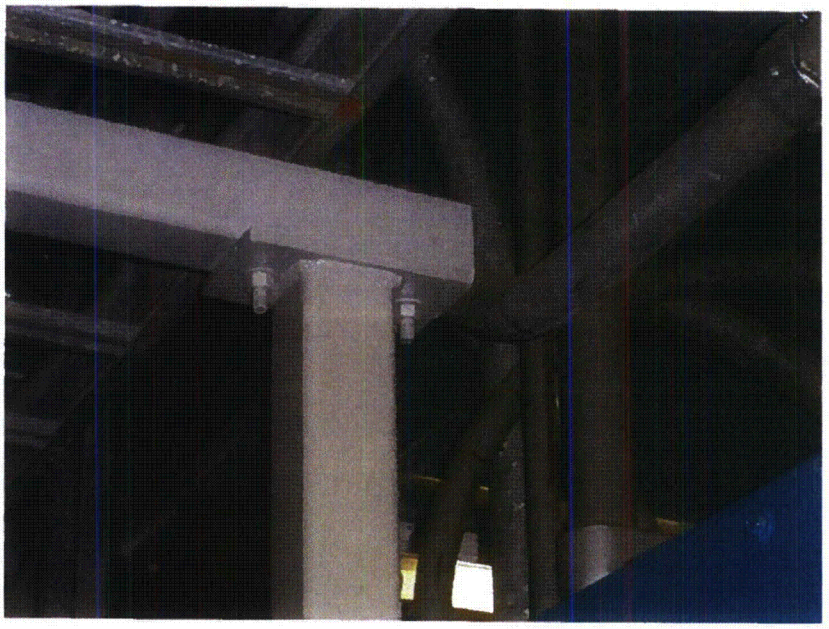


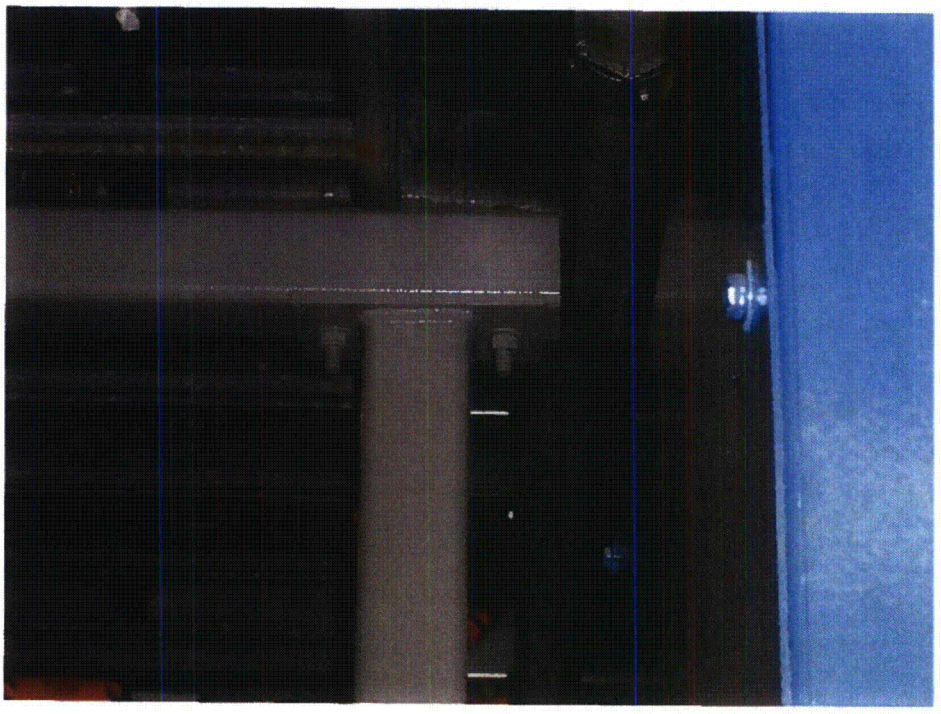


Pictures taken during the Seismic Walkdown of Support 320933 framing that spans the 22 MG Set are as follows:

In the picture above, 22 MG Set is below the frame and the northern end of the MG Set Switchgear is shown on the right side.

Two views of the conduit found to be approximately 3/4 inches away from the western end of the frame are shown below:





The Licensing Basis Evaluation concluded the following:

1. Regarding the seismic design of Support Frame 320933, Dwg. 320933 refers to "Seismic Calculations No. FCX-00336-00 and FCX-00337-00" and indicates the cable tray supports are seismically qualified. Both calculations include seismic cable tray analyses performed by EQE. Thus, the support was seismically qualified.

2. Regarding the possible spatial interface between the support frame and the conduit located west of the frame, as shown in the pictures above, assuming the relative movements of the frame and conduit exceed the approximately 3/4 inch gap, it is our judgment that the conduit has sufficient flexibility to accommodate a displacement that includes a slight impingement and its structural integrity will not be challenged.

ATTACHMENT 9.9 LICENSING BASIS EVALUATION FORMS AND INSTRUCTIONS

Sheet 1 of 4

Licensing Basis (LB) Evaluation Form

LB Evaluation No. LB-02 Originating SWC/AWC SWEL1-032

Equipment ID No. 0032FOTP Equip. Class 6

Equipment Description Fuel Oil Trasnfer Pump D.G. 23

Location: Bldg. FOST Floor El. 77'-6" Room, Area

Condition

The overhead pipe near the roof line of the EDG building is supported on three wide flange columns. These columns are supported on baseplates with some nuts not fully engaged. The bolt recess within the nut is 1/4 inch or less. Typical of all three baseplates.

Documents Reviewed

- IP3-CALC-MULT-00734
- EPRI Document NP-5057, Volume I
- AISC, "Manual of Steel Construction," 8th and 9th Editions.

Licensing Basis

Anchorages must have sufficient capacity so that all safety-related SSCs maintain structural integrity and perform their safety related function under all applicable loads and load combinations, including those associate with postulated seismic events.

Evaluation

The unengaged threads, or recess, cover a distance of 1/4 inch or less. Based on Calculation IP3-CALC-MULT-00734, a recess 0f 0.27 inches for a 1 inch diameter bolt does not reduce the bolt capacity. Refer to the attached evaluation. Thus, a recess of 1/4" (0.25") or less is consistent with our licensing basis.

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

Prepared by: Dragos A. Nuta Date 11/9/2012
Licensing Basis Reviewer

Reviewed by: Kai Lo Date 11-9-2012
Peer Reviewer

EVALUATION

In SWEL1-032, the walkdown team noted that the overhead pipe near the roof line of the EDG building (east side of the building, above the slab over the Fuel Oil Storage Tanks) is supported on three wide flange columns. These columns are supported on baseplates with some nuts not fully engaged. The bolt recess within the nut for the 1-inch diameter bolts is 1/4 inch or less. Typical of all three baseplates.

Based on Calculation IP3-CALC-MULT-00734, a bolt recess of 0.27 inches or less for a 1-inch diameter bolt does not reduce the bolt capacity. Given that the bolt recess on one of the four anchor bolts for each of the three column support base plates was 0.25" or less, the bolts have full capacity.

Excerpts from Calculation IP3-CALC-MULT-00734 are provided hereafter.

NewYorkPower Authority

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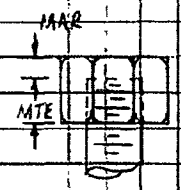
Calculation No. IP3-CALC-MULT-00734 Revision 0

Project IP3 Page 6 of 8

Subject MIN. THREAD ENGAGEMENT FOR BOLTED CONNECTIONS Computed by [illegible] Date 5-1-93

Checked by VAM Date 5-1-93

TABLE (A)



BOLT SIZE (DIA. IN.)	MAX. ALLOW. RECESS (MAR) (in.) HEAVY HEX NUT (NUT THICKNESS IN PARENTHESES)	STAND. HEX NUT (NUT THICKNESS IN PARENTHESES)
1/4	0.076 (0.25)	0.076 (0.25)
3/8	0.105 (0.375)	0.042 (0.3125)
1/2	0.136 (0.500)	0.073 (0.4375)
5/8	0.172 (0.625)	0.109 (0.5625)
3/4	0.198 (0.75)	0.073 (0.625)
7/8	0.225 (0.875)	0.100 (0.750)
1	0.270 (1.000)	0.145 (0.875)
1 1/8	0.315 (1.125)	0.190 (1.00)
1 1/4	0.330 (1.250)	0.1475 (1.0625)
1 3/8	0.375 (1.375)	0.1875 (1.1875)
1 1/2	0.406 (1.5)	0.2125 (1.3125)
1 3/4	0.490 (1.75)	—
2	0.560 (2.00)	—
2 1/4	0.533 (2.1875)	—
2 1/2	0.611 (2.4375)	—

TABLE 12

BOLT SIZE (in) (NOT THICKNESS IN PARENTHESES)	A_{TS} (in²)	A_s (in²)	0.5 F_t MAX. MIN ALLOWABLE THREAD ENGMT (in)	0.5 F_t MAX. MAX ALLOWABLE RECESS (in)
1/4 (0.25)	.692	.032*	.174	.976
3/8 (0.375)	.216	.078*	.270	.105
1/2 (0.50)	.390	.142	.364	.136
5/8 (0.625)	.624	.226	.453	.172
3/4 (0.75)	.908	.334	.552	.198
7/8 (0.875)	1.250	.462	.650	.225
1 (1.00)	1.660	.606	.730	.270
1 1/8 (1.125)	2.130	.763*	.810	.315
1 1/4 (1.25)	2.650	.969	.920	.330
1 3/8 (1.375)	3.220	1.160*	1.000	.375
1 1/2 (1.50)	3.860	1.410*	1.100	.400
1 3/4 (1.75)	5.300	1.900*	1.260	.490
2 (2.00)	6.960	2.500	1.440	.560
2 1/4 (2.1875)	8.840	3.250*	1.654	.533
2 1/2 (2.4375)	10.950	4.000*	1.826	.611

ATTACHMENT 9.9 **LICENSING BASIS EVALUATION FORMS AND INSTRUCTIONS**

Sheet 1 of

Licensing Basis (LB) Evaluation Form

LB Evaluation No. LB-03 Originating SWC/AWC SWEL1-094

Equipment ID No. 0021RWST Equip. Class 21

Equipment Description 21 Refueling Water Storage Tank

Location: Bldg. NTF Floor El. 82'-0" Room, Area

Condition

The seismic walkdown team observed small cracks near bolt nos. 30, 24 & 25, which were not a seismic concern, and significant concrete spalling and numerous cracks near bolt nos. 16,17,18,19. The concrete spalling and cracks bring into question the RWST anchorage adequacy. In addition to this LBE, CR IP2-2012-06547 was issued to track resolution.

Documents Reviewed

- Dwg. 9321-F-2250
- Structural Assessment of the RWST and PWST Foundations, Inspection Report dated April 10, 2001

Licensing Basis

The RWST foundation and anchorage must be capable of maintaining structural integrity under all applicable loads and load combinations, including the postulated occurrence of seismic events.

Evaluation

The spalled concrete and cracks are associated with a concrete mat protective layer. This spalling and cracking of this protective layer does not affect the anchorage of the RWST. and the observed condition is consistent with our licensing basis.

Conclusion Condition Meets the Licensing Basis: ☒ Yes ☐ No

Prepared by: Dragos A. Nuta Date 11/06/2012
Licensing Basis Reviewer

Reviewed by: Richard Drake Date 11/6/12
Peer Reviewer

EVALUATION

The CR noted that: "During the Fukushima Seismic Walkdowns of the 21 Refueling Water Storage Tank, is was noted that small cracks of the concrete exist near bolt nos. 30, 24 & 25. These are acceptable and not a seismic concern. The walkdown team also noted significant concrete spalling and numerous cracks near bolt nos. 16,17,18,19. A picture depicting these type of cracks is provided below.

Significant Spalling and cracks near bolts 16 and 17" (Note the spall/cracks shape appears to be at the same location as the plastered area note in 2001 and shown below on Page 7)

The attached documents developed in 2001 indicate that the concrete foundation was protected by a 1/2 inch thick plaster type layer that developed significant cracks (A picture of the delaminated protective layer is shown on Page 5, below). While the plaster was repaired in approximately 2002, the repair was not effective at all locations. Nevertheless, the observed cracks in the protective layer does not have an adverse effect on the pullout capacity of the RWST anchor bolts.

Due rather ineffective repair actions, new remediation actions need to be considered.

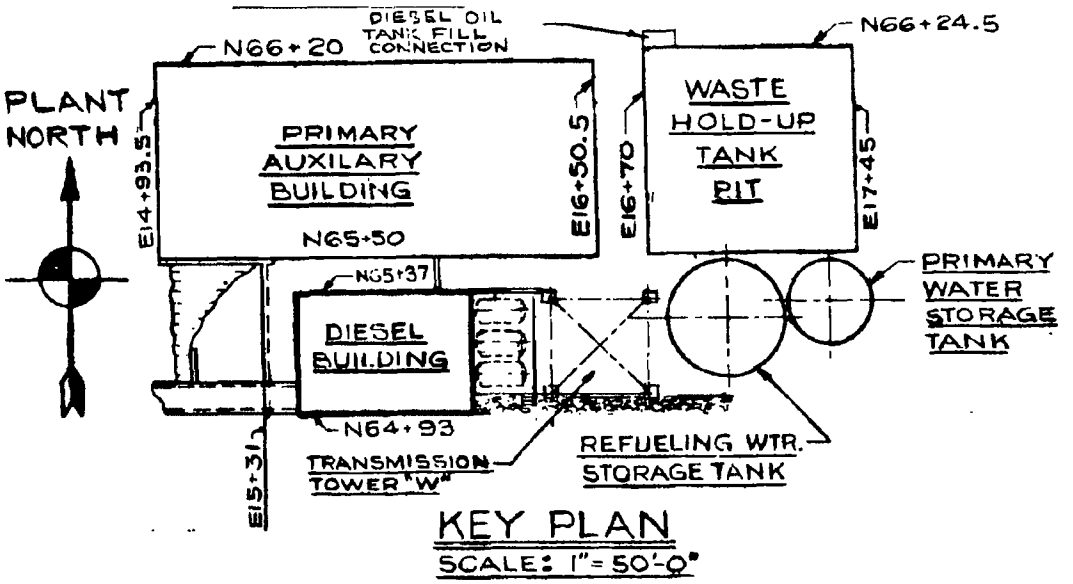
The 2001 assessment of the RWST AND pwst foundationS is attached below:

STRUCTURAL ASSESSMENT OF CIVIL STRUCTURES

Foundations for RWST and PWST

In support of a structural assessment of civil structures, a walkdown was performed on April 10, 2001 by Rebecca Hurt and Dan Nuta of the Design Engineering, Civil Projects and Programs.

A key plan showing the two tanks with respect to the surrounding structures is presented on Drawing 9321-F-2250, and is duplicated below.



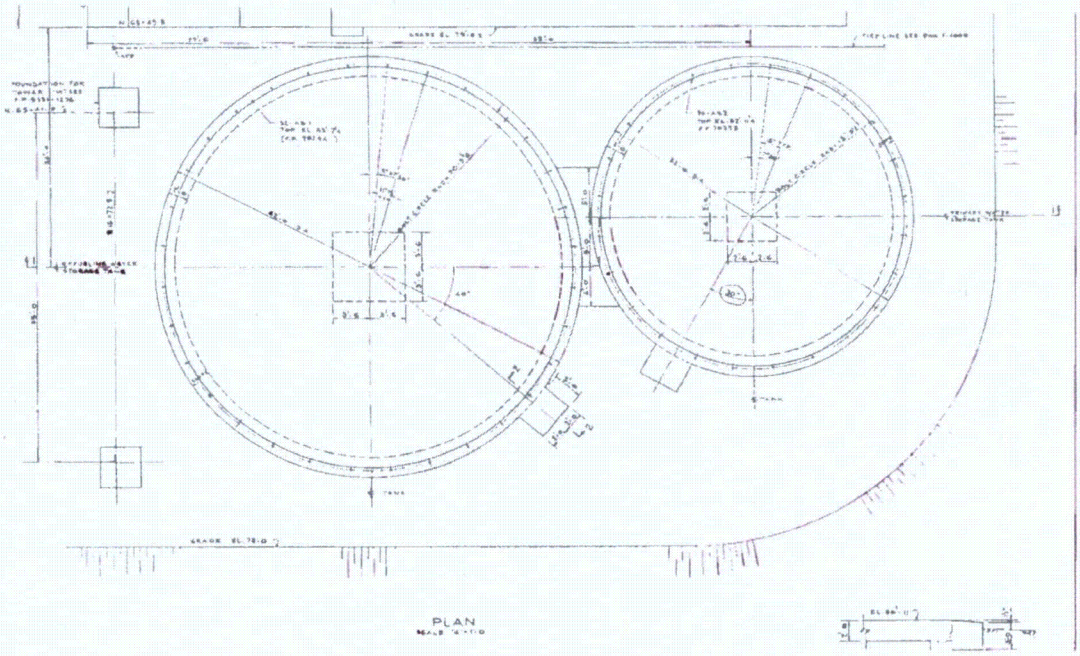
A summary of the findings is as follows: The Primary and Refueling Water Tank foundations, are structurally sound. The concrete foundation appears to be protected by a plaster like layer approximately one-half inch thick. It has spalled at a couple locations and is cracked at numerous locations.

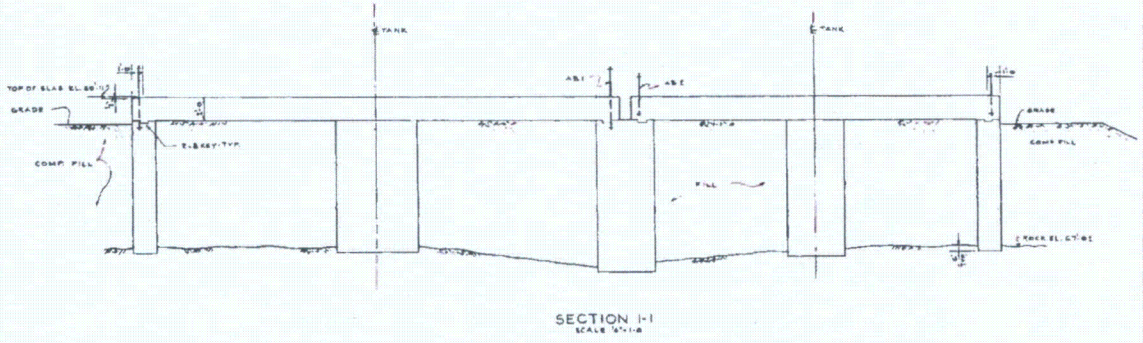
A more detailed description and assessment of the structural elements, which correlates with information shown on pertinent drawings and photographs taken during the walkdown is presented below.

Primary and Refueling Water Tank foundations

The Primary and Refueling Water Tank foundations consist of 2-feet thick reinforced concrete circular slabs of 32' and 42' diameters, respectively, supported on 2-feet thick reinforced concrete ring walls founded on rock. At the center of each foundation, the center of the Primary and Refueling Water Tank slabs is supported by square concrete piers, supported on rock, with the sides of the pier being 5' and 7', respectively. The space between the rock and underside of the slab is filled with "fill." Compacted fill is specified around the outside perimeter of the ring walls.

A plan and cross section through the tank foundations is shown below.





The inspection of the tank foundations found no problems in the immediate vicinity of the anchor bolt chairs and, from an "anchorage to concrete" perspective, the anchorage of the tanks is sound.

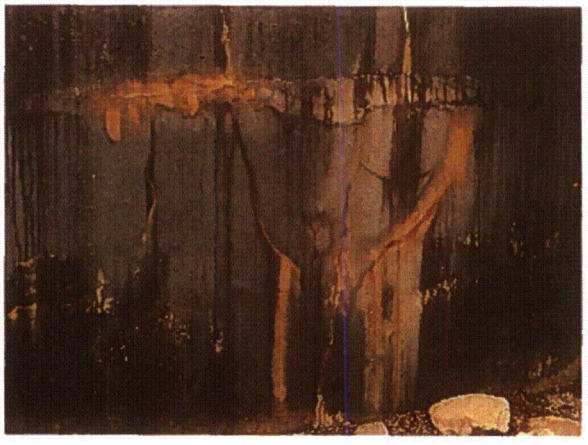
As mentioned above, the outside surface of the concrete ring walls, including the horizontal portion extending beyond the edge of the tank appears to have an approximately ½" plaster like protective layer. As shown in the following photographs, the layer has spalled at a couple locations, delaminations are present, and cracks and bulges are prevalent.

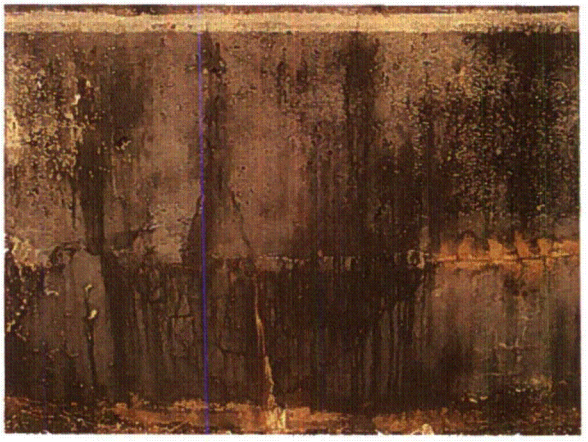
Shown in the photograph to the left, the largest spall exists on the southern side of the Primary Water Storage Tank ring wall.

A Tag indicating a deficiency is placed in the area indicating that pieces are broken off the foundation.

A close-up picture of the area shows the spalled concrete protective cover pieces that fell, and the "curling of the remaining pieces at the edges where the delamination of the protective cover is visible.

Cracking and bulging of the protective cover on the Primary Water Storage Tank ring wall is apparent at numerous locations. Some of the typical cases are pictured below.



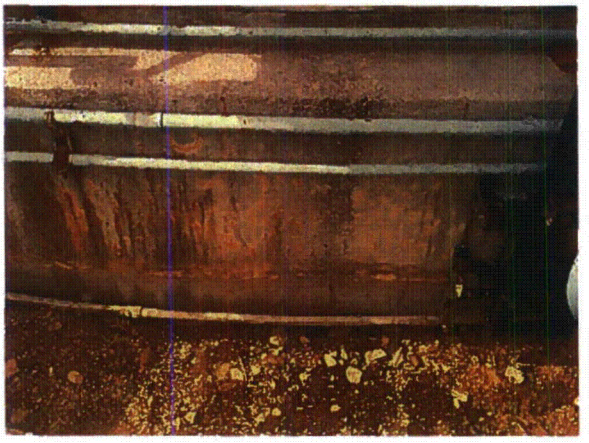


Also for the Primary Water Storage Tank ring wall, the pictures below depict the horizontal crack that seems to have developed between the upper protection cover and the lower portion

The pictures above cover the eastern portion of the Primary Water Storage Tank ring wall. In the adjacent picture we show a similar area in the northern portion of the ring wall where pipes penetrate the tank.

The mid-height area along the horizontal crack appears to have been previously grouted immediately below the pipe.

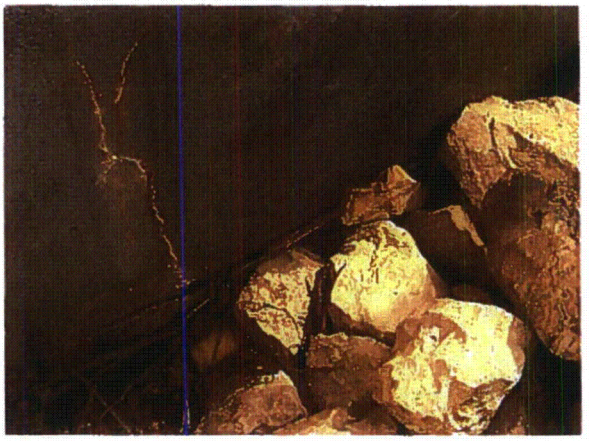
While the Refueling Water Storage Tank ring wall support has smaller spall areas, it displays the same horizontal crack between the two protective layer "courses," vertical cracks, and small



delaminated areas, as depicted in the pictures that follow.

The adjacent picture of the Refueling Water Storage Tank ring wall shows a large spall area that was previously repaired. The location is along the southern portion of the ring wall.

The adjacent picture shows vertical cracks in the protective layer. At the bottom of the crack, along the separation between the upper and lower protective layer courses (which, at this western location is close to grade), a separation of the lower protective course is apparent, as well as delaminations of the protective layer away from the crack zone.



While for both tanks the protective layer appears to be in rather poor condition, and would be expected to separate from the ring wall, the concrete behind the protective layer appears to be in excellent shape. There are no reinforcing bars exposed at any of the spall locations, confirming that the layer that is spalling is a protective layer.

The remediation of this condition will require removal of the loose protective layer followed by the application of an epoxy coating affording protection for the ring wall concrete.

ATTACHMENT 9.9 **LICENSING BASIS EVALUATION FORMS AND INSTRUCTIONS**
Sheet 1 of 2

Licensing Basis (LB) Evaluation Form

LB Evaluation No. LB-04 Originating SWC/AWC AWC-018

Equipment ID No. 0023CCP Equip. Class 5

Equipment Description CCW Pump 23

Location: Bldg. PAB Floor El. 68'-0" Room, Area CCW Pump Room

Condition

Anchor for CCW pipe support missing 2 of 4 anchor bolts. Missing anchor bolts are tagged with an old work order WRT IP2-05-0522 from 2005.

Documents Reviewed

- Work Order IP2-05-00522
- ER IP2-05-26433

Licensing Basis

Systems and components must be adequately supported so that they maintain structural integrity under all applicable loads and load combinations and do not affect other safety related SSCs.

Evaluation

Work performed in conjunction with Work Order IP2-05-0522 and ER No. 05-26433 indicates that at Support ACH-60, there is a vetical load of 1700 pounds and very small vertical seismic load. With no tension acting on the bolts, the existing configuration is consistent with our licensing basis.

Conclusion Condition Meets the Licensing Basis: ☒ Yes ☐ No

Prepared by: Dragos A. Nuta Date 11/06/2012
Licensing Basis Reviewer

Reviewed by: Richard Drake Date 11/20/12
Peer Reviewer

EVALUATION DESCRIPTION

Based on ER IP2-05-26433:

"The location was walked down by engineering and found that the size of another two fastners on the base support of ACH-60 is 1/2" dia. The length of the anchor bolts are unknown. The other five base supports installed on suction and discharge elbows are also of the same 1/2" dia size. As there is a operating load of 1700 lbs acting downward per design drawing ACH-60, and there is no uplift due to the fact that the vertical seismic load is much less than the dead load acting downwards, the 1/2" dia, 3 3/4" long HILTI Kwik II expansion anchor bolts are sufficient to carry the loading."

(Nevertheless, the ER response also recommended to install the missing fasteners with 1/2" dia, 3 3/4" long HILTI Kwik II expansion anchor bolts with minimum embedment of 2 1/4" and, if needed, to enlarge the bolt hole diameter to suit.)

ATTACHMENT 9.9 **LICENSING BASIS EVALUATION FORMS AND INSTRUCTIONS**

Sheet 1 of 3

Licensing Basis (LB) Evaluation Form

LB Evaluation No. LB-05 Originating SWC/AWC AWC-017

Equipment ID No. 0021 SIP Equip. Class 5

Equipment Description 21 Safety Injection Pump

Location: Bldg. PAB Floor El. 59'-0" Room, Area Safety Injection Pump Room

Condition

Support stanchion for the overhead trolley has a four hole base plate but only three bolts are installed. All other similar stanchions have four bolts installed in the base plates. Per signage on stanchion the anchor is abandoned in accordance with FEI-840679.

Documents Reviewed

- Condition Report CR-IP2-1998-04788
- Work Order No. IP2-98-01397
- Calculation FFX-00088-02

Licensing Basis

Systems and components must be adequately supported so that they maintain structural integrity under all applicable loads and load combinations and do not affect other safety related SSCs.

Evaluation

The evaluation found that, based on statements in CR-IP2-1998-04788, that the design drawing shows only three bolts for the stanchion support. Calculation FFX-00088-02 establishes the seismic design adequacy of the support.

Conclusion Condition Meets the Licensing Basis: ☒ Yes ☐ No

Prepared by: Dragos A. Nuta Date 11/06/2012
Licensing Basis Reviewer

Reviewed by: Richard Drake Date 11/6/12
Peer Reviewer

EVALUATION DETAILS

Material extracted from CR-IP2-1998-04788 supporting the adequacy of the three bolt configuration is duplicated below:

AWC-017 notes that: " *Support stanchion for the overhead trolley has a four hole base plate but only three bolts are installed. All other similar stanchions have four bolts installed in the base plates. Per signage on stanchion the anchor is abandoned in accordance with FEI-840679."*

CR-IP2-1998-04788 indicates that:

This is a repeat finding. This condition has been previously evaluated and found acceptable. Calculation FFX-00088-02 covers the design of the monorail with the missing anchor bolt.

and

Forward to R. Altadonna, review of this missing bolt was analyzed prior to the 97 outage and as part of the extension of the SI trolley beams.

and

Field condition was NOT compared to the design document prior to the writing of the CITRS Event. Design drawing indicates that this base plate has only 3 anchor bolts.

Licensing Basis (LB) Evaluation Form

LB Evaluation No. LB-06 Originating SWC/AWC AWC-022

Equipment ID No. SWEL1-025 Equip. Class 6

Equipment Description Boric Acid Transfer Pump 21

Location: Bldg. PAB Floor El. 80'-0 Room, Area

Condition

A 1.5" (1.9" O.D.) , threaded hot water pipe from area heater 232 has a long 15 feet span adjacent to the wall and its seismic design/support adequacy was questioned.

Documents Reviewed

No previous seismic calculation for this condition was found.

Licensing Basis

Safety-related function of nearby equipment must not be impaired by non-safety related equipment such as the hot water heater piping.

Evaluation

The pipe stress is well below the B31.1 code limit. The piping will not have any adverse II over I interaction during a design basis seismic event.
The new evaluation is performed on the next page.

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

Prepared by: Dragos Nuta Date 11-8-2012
Licensing Basis Reviewer

Reviewed by: Kai Lo Date 11-8-2012
Peer Reviewer

AWC- 22

Hot water heater pipe (1.9" OD) with 15 feet pipe span along the wall

D = pipe outside diameter =	1.9	inch
t = wall thickness for sch 40 pipe =	0.145	inch
S = section modulus of 4" Sch 40 pipe =	0.326	in^3
w = uniform weight of pipe and water =	3.60	plf
P = design pressure =	150	psi, cons.
i =SIF of threaded pipe =	2.3	
L = span length of pipe =	15	ft
For PAB EL. 72', 0.5% damping response spectra		
Gh = peak horizontal seismic acceleration =	0.75	
MRM = multi-modal response multiplier =	2.0	
Gv = (2/3)Gh =	0.5	
Base on fixed-fixed end condition:		

For dead weight normal loading

Treat the beam AB as fixed-fixed with length of L in the Y & Z direction

L =	15	ft
At point A, Mmax = $wL^2/12$ =	810	in-lb
M_a = Mmax =	810	in-lb
PD/(4t) + 0.75i(Ma/S) =	4777	psi , 0.75i = 1.725
Sh = allow pipe stress for A53 Gr B, CS material =	15000	psi , o.k.
For seismic loading		
Gr = SRSS of vertical and horizontal seismic acceleration =	0.9014	
MRM(Gr) =	1.803	
At point A, M_b = MRM(Gv)Mmax =	1460.2	in-lb
Combining DW + seismic DBE		
Ma + Mb =	2270.2	in-lb
PD/(4t) + 0.75i(M_a+M_b)/S =	12504	psi
1.8Sh =	27000	psi, o.k.

Pipe is structurally adequate per B31.1 code requirement.

ATTACHMENT 9.9 **LICENSING BASIS EVALUATION FORMS AND INSTRUCTIONS**

Sheet 1 of 7

Licensing Basis (LB) Evaluation Form

LB Evaluation No. LB-07 Originating SWC/AWC AWC-032 & SWEL1-094

Equipment ID No. (3) Equip. Class _____

Equipment Description _____

Location: Bldg. _____ Floor El. _____ Room, Area _____

Condition

The seismic walkdown team noted that: "Platform between Refueling Water Storage Tank and Primary Water Storage Tank has two cross braces (bracing platform in EW direction) at RWST bolt 29 that are cut for a RWST pipe to pass through. Need to verify that a platform seismic analysis of the "as-is" platform was performed." The team also noted that: "Platform between 21RWST and Primary Water Storage Tank is very close to touching both tanks. Approximately 1/8" gap between tanks and platform. LBE needed to determine if gap is acceptable for both tanks 21RWST and Primary Water Storage Tank" and " Valve hand wheel at RWST anchor bolt 29 is very close to touching the platform at frame with cut bracing. Gap is very narrow, almost 1/8". Platform could potentially hit valve handle."

Documents Reviewed

- EQE Calculation 42100-C-002
- Calculation FCX-0098-01

Licensing Basis

Structures, Systems, and Components (SSCs) must be designed such that spatial interactions, including relative displacements, under all postulated loads and load combinations, including seismic loads, do not prevent safety related SSCs from performing their intended safety function. Applied to this particular case, the licensing basis requires that the sum of the displacements of the tank and platform be less than the separation (gap) provided.

Evaluation

The evaluation concluded that: (1) the existing platform, including the missing brace, was seismically analyzed (Calculation FCX-0098-01), (2) the sum of the maximum horizontal displacements of the tanks and platform, i.e., 0.07315", is less than the 1/8" (0.125") gap, and that (3) the sum of the vertical displacements of the tank(s) and platform is less than the horizontal displacement (and thus less than the gap between the valve mounted on the tank and the platform. Thus, the observed conditions are consistent with the licensing basis.

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

Prepared by: Dragos A. Nuta Date 11/15/12
Licensing Basis Reviewer

Reviewed by: Richard Drake Date 11/15/12
Peer Reviewer

Evaluation

The evaluation consisted of the following actions:

1. Locate seismic analysis of the RWST/PWST platform, confirm the cut bracing was correctly represented in the analysis, and extract maximum (seismic + dead load) displacements.
2. Locate the RWST SQUG assessment, establish the impulsive mode frequency and the associated spectral acceleration corresponding to the frequency developed as part of the SQUG assessment.
3. Calculate the maximum RWST displacement at the platform location.
4. Calculate the sum of the RWST displacement and platfrm displacement and show it is less than 1/8 inches.
5. Extrapolate the finding to the vertical direction and the 1/8" gap between the RWST valve and platform member.

1. Locate seismic analysis of the RWST/PWST platform, confirm the cut bracing was correctly represented in the analysis, and extract maximum (seismic + dead load) displacements.

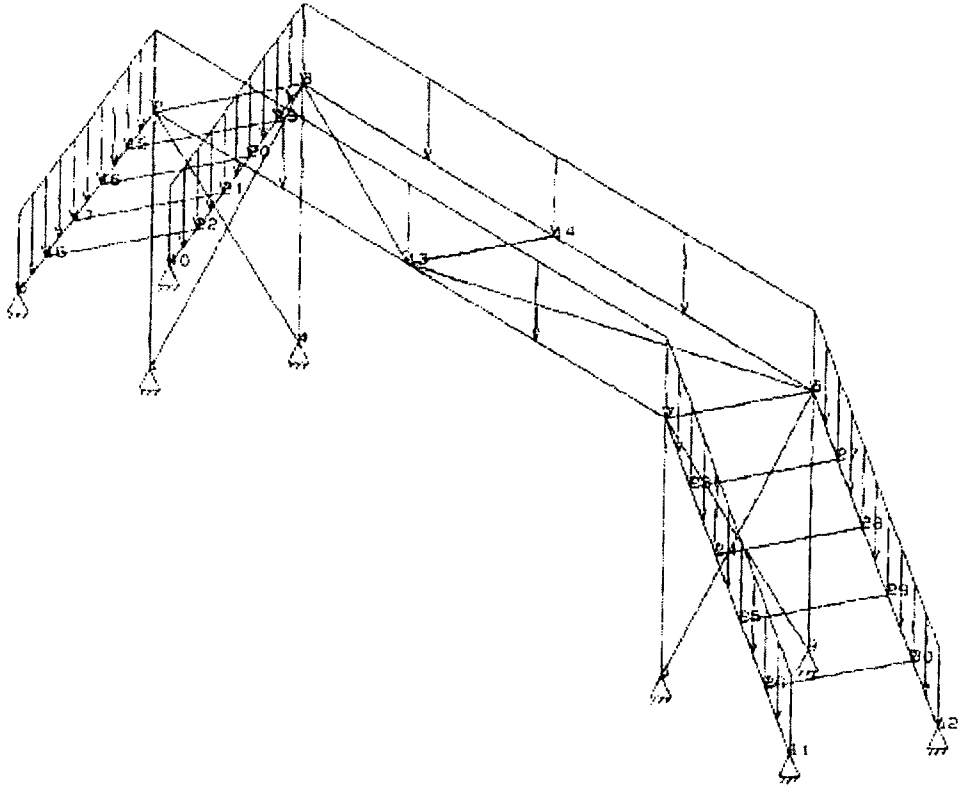
Calculation FCX-0098-01 performed a seismic analysis of the platform. Platform member sizes were confirmed via a walkdown. As shown in the attached excerpts from the calculation, the cut brace was so noted and the model did not include X bracing at RWST bolt No. 29.

In the model, the X-axis is perpendicular to the platform long axis, the Y-axis is in the vertical direction, and the Z-axis is along the length of the platform.

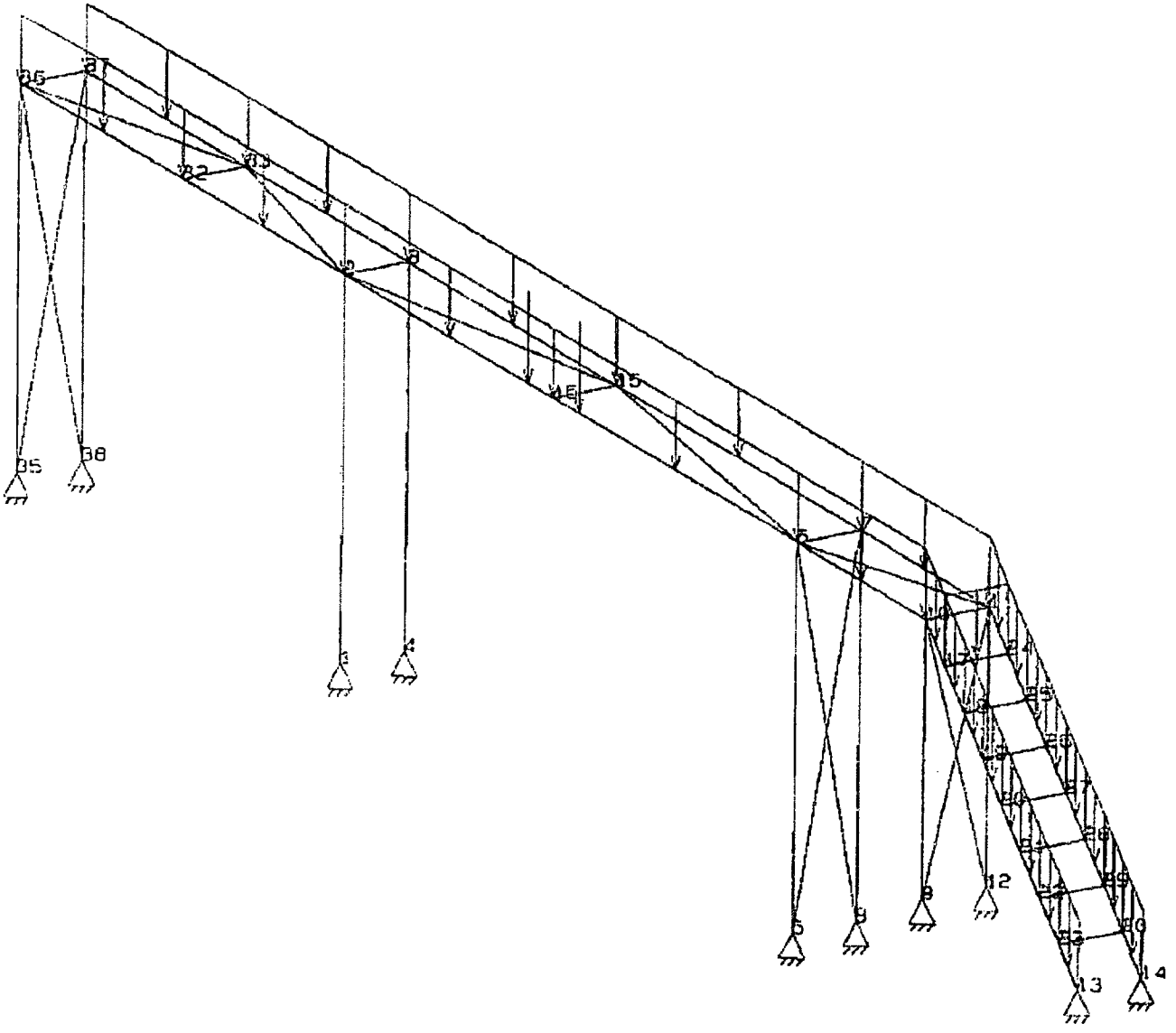
The maximum horizontal displacement is 0.06115" at Joint 15.

The maximum vertical displacement is 0.03252" at Joint 15.

Excerpts from the analysis, including the finite element model, joint numbering, and maximum displacements are provided on the following three pages:



Y axis is vertical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CALC.# FCX-00098-~~00~~ 01 P.N.69982-CM-XC -- PAGE NO. 13 of ~~7~~ 43
*WALKWAY PLATFORM BETWEEN RWST AND PWST ID: CON EDISON

JOINT DISPLACEMENT (INCH RADIANS) STRUCTURE TYPE = SPACE

JOINT	LOAD	X-TRANS	Y-TRANS	Z-TRANS	X-ROTAN	Y-ROTAN	Z-ROTAN
15	5	0.06115	-0.01959	0.00013	0.00003	-0.00011	0.00019
	6	0.06098	-0.03252	0.00011	0.00006	-0.00011	0.00037
	7	0.00122	-0.02072	0.00170	0.00005	0.00000	0.00028
	8	0.06098	-0.03252	0.00011	0.00006	-0.00011	0.00037
16	5	0.06111	-0.01616	0.00118	0.00005	-0.00015	0.00019
	6	0.06095	-0.02592	0.00116	0.00008	-0.00015	0.00037
	7	0.00122	-0.01562	0.00166	0.00004	0.00001	0.00028
	8	0.06095	-0.02592	0.00116	0.00008	-0.00015	0.00037
32	5	0.04568	-0.00105	0.00222	-0.00003	0.00027	-0.00020
	6	0.04564	-0.00230	0.00220	-0.00005	0.00027	-0.00026
	7	0.00034	-0.00180	0.00200	-0.00004	0.00000	-0.00009
	8	0.04564	-0.00230	0.00220	-0.00005	0.00027	-0.00026
33	5	0.04566	-0.00463	-0.00142	-0.00004	0.00029	-0.00020
	6	0.04563	-0.00694	-0.00143	-0.00006	0.00029	-0.00026
	7	0.00034	-0.00349	0.00196	-0.00003	0.00000	-0.00009
	8	0.04563	-0.00694	-0.00143	-0.00006	0.00029	-0.00026

********** END OF LATEST ANALYSIS RESULT **********

98. PRINT SUPPORT REACTIONS

2. The seismic analysis of the RWST, including the assessment of its anchorage is contained in Calculation 42100-C-002. On Page 30-9 of the calculation, the impulsive mode frequency is shown to be 6.48 Hz:

STEP 3: Determine the fluid-structure modal frequency for vertical carbon steel tanks containing water:

R = 240 t eff / R = 0.0010 ,and H / R = 1.8625

From Table 7-3, find (F I) = 6.48 Hz.

NOTE: If the tank material is not carbon steel (Es not equal to 29,000 ksi) or fluid is not water (GAMMA not equal to 62.4 lbs/ft3) the frequency must be adjusted in accordance with the GIP STEP 3.

3 OF 10

The spectral acceleration corresponding to this frequency is conservatively found to be S_a = 0.21g (within 20% plus or minus of the natural frequency:

STEP 4: Determine the spectral acceleration (Saf) for the fluid-structure modal frequency.

Enter the 4% damped horizontal ground or floor response spectrum for the surface on which the tank is mounted, with the fluid-structure modal frequency determined in STEP 3, and determine the maximum spectral acceleration (Saf) over the following frequency range:

.8 * Ff < F < 1.2 * Ff = 5.18 Hz < F < 7.78 Hz

Appropriate Spectral Acceleration (Saf) = 0.21 g

3. The maximum displacement of the RWST at the platform location is calculated as follows:

- Maximum horizontal displacement of a single degree of freedom having a frequency of 6.48 Hz is:
  - Max $\Delta = [S_a \times 386.4 \text{ in/sec}^2]/(2 \times \pi \times f)^2$
  - Max $\Delta = [0.21g \times 386.4 \text{ in/sec}^2]/(2 \times \pi \times 6.48)^2 = 0.04895$ inches
- Taking the location of the maximum displacement at 2/3 of the tank height, which is 495 inches, the displacement at the platform location (7' x 12" = 84 inches) is calculated conservatively assuming a straight line displaced shape:
  - 2/3 x 495 = 330"
  - 0.04895" x 84"/330" = 0.012 inches

4. Calculate the sum of the RWST displacement and platfrm displacement and show it is less than 1/8 inches.

- Maximum displacement in the horizontal (X) direction of the platform was shown to be 0.061" under 1. above.
- Maximum horizontal displacement of the tank at the 84" above the base platform elevation was calculated above as 0.012"
- The sum of the two displacements, i.e., 0.06115" + 0.012" = 0.07315" < 0.12 inches.
- Note: The total displacement above is conservatively calculated as the maximum platform displacement is at a point away from where the platform is close to the tank and the tank displacement was assumed to be linear rather than parabolic.

5. Extrapolate the finding to the vertical direction and the 1/8" gap between the RWST valve and platform member.

- The RWST frequency in the vertical direction is > 6.48 Hz. Thus, the maximum displacement would be less that the 0.012" horizontal displacement.
- The maximum vertical displacement (Y-Axis) of the platform from 1. above 0.03252", much less than the 0.06115" horizontal displacement.
- Thus, the 1/8" (0.125") gap between the valve hand wheel (mounted on the tank) and platform is larger than the sum of the vertical displacements of the tank and valve and platform which we rationalized to be much less that the 0.07315" horizontal displacement.

Thus, there will be no spatial interactions between the RWST/PWST tanks and the platform located between the tanks during a postulated seismic event.

ATTACHMENT 9.9 LICENSING BASIS EVALUATION FORMS AND INSTRUCTIONS
Sheet 1 of 3

Licensing Basis (LB) Evaluation Form

LB Evaluation No. LB-08 Originating SWC/AWC SWEL1-072

Equipment ID No. (3) Equip. Class 16

Equipment Description Battery Charger 21

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

Condition

The Seismic Walkdown Team noted that the gap between Battery Charger 21 and the adjacent instrument rack west of the cabinet is 1/2" and questioned if this gap is sufficient to preclude seismic interaction.

Documents Reviewed

Calculation GCC-00095-00
Original and Revised SEWS for Battery Charger 21

Licensing Basis

Structures, Systems, and Components (SSCs) must be designed such that spatial interactions, including relative displacements, under all postulated loads and load combinations, including seismic loads, do not prevent safety related SSCs from performing their intended safety function. Applied to this particular case, the licensing basis requires that the sum of the displacements of the Battery Charger 21 and the adjacent Instrument Rack be less than the separation (gap) provided.

Evaluation

The evaluation concluded that the sum of the maximum displacement of Battery Charger 21 and the adjacent Instrument Rack is 0.14 inches. It is thus concluded that the 1/2" gap between the Battery Charger 21 and the adjacent Instrument Rack is sufficient to preclude spatial interactions and the condition satisfies the licensing basis.

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

Prepared by: Dragos A. Nuta Date 11/15/2012
Licensing Basis Reviewer

Reviewed by: Richard DRAKE Date 11/15/12
Peer Reviewer

EVALUATION

The Seismic Walkdown Team noted that the gap between Battery Charger 21 and the adjacent instrument rack west of the cabinet is 1/2" and questioned if this gap is sufficient to preclude seismic interaction.

Below, we calculate maximum displacements of the cabinet and rack and compare their sum to the existing gap.

Battery Charger 21, shown below, was replaced in 1992 with a solid state model:

In Calculation GCC-00095-00, the frequesncy of the previous Westinghouse Battery Charger 21 was calculated to be 9.7 Hz.

In a letter dated April 15, 1992, attached, Nick Yarnell of SCI indicated that the new Battery Charger 21 has a frequency of 10 Hz and, based on the applicable floor response seismic spectrum, the applicable seismic acceleration is 0.71g.

Based on this information, we can calculate the maximum horizontal seismic displacement as:

- Max $\Delta = [S_a \times 386.4\ in/sec^2]/(2 \times \pi \times f)^2$
- Max $\Delta = [0.71g \times 386.4\ in/sec^2]/(2 \times \pi \times 10)^2 = 0.0695$ inches

Per information obtained from Systems Electrical Engineering (Refer to the attached e-mail) the instrument rack adjacent to the Battery Charger 21 has Transfer Switches weighing 100 lbs or less, and mounted in the lower third of the Instrument Rack, and Junction Boxes mounted high on the Instrument Rack and weighing about 24 lbs or less. There are four (4) Transfer Switch enclosures and we consider six (6) Junction Boxes. Based on the 544lbs weight, the strong structural members, and diagonal (K) bracing on all four sides, the Instrument Panel is judged to be equal in frequency (or higher) to the Battery Charger 21 cabinet. Thus, doubling the displacement calculated above, the total displacement becomes 0.14 inches, indicating that the 1/2" (0.5") gap provided is sufficient to preclude any spatial interaction.

Concluding, the 1/2" gap between the Battery Charger 21 and the adjacent Instrument Rack is sufficient to preclude spatial interactions and the condition satisfies the licensing basis.

Referenced documents are provided below.

----------(Forwarded letter follows)----------

Date: Monday, 13 April 1992 2:05pm ET
To: NUZZI.M
Cc: SMITH.L
From: GHOSH.D
Subject: Natural freq. of SCI Cabinets

Per Nick Yarnell of SCI, the Natural (or Resonant) Frequency of SCI Battery Charger or Inverter Cabinet is approximately 10HZ.

Date: Wednesday, 15 April 1992 9:46am ET
To: SMITH.LAW, *, GHOSH.D
From: NUZZI.M
Subject: Revised "g" value for bat. chgr.

Based on a frequency of 10 hz (as per D. Ghosh, Electrical Engineer), please use the following acceleration for the mounting of the battery charger to the floor:
g = .473 x 1.5 = .71
Ref. Westinghouse Analysis, elevation 33'-0, SSE condition, horizontal direction, 2% critical damping for bolted steel assemblies. 1.5 represents a modal participation factor.
I requested that D. Ghosh provide us with documentation from the manufacturer attesting to the charger natural frequency so that it can be included in the calculation.

1. a. Part/subcomponent description

   Solid State Controls (SCI) 460 VAC @ 60HZ 250A transformer (Model 80-215758-90) for battery charger.

   b. Host equipment description:

   Solid State Controls (SCI) battery charger 250A Tag number BATTCHG21.

E-Mail from Robin Daley to D. Nuta, dated November 14,2012

This took a little more digging than I expected. I found an older Con Edison PO for those switches but the issue is that they were assembled for us from parts and there is no specific weight mentioned for the assembled components. From what I can find the internal circuit breaker is ~3lbs, and it's likely the external switch handle assembly is around 3lbs but these items are obsolete and are not in Merlin nor has google returned any useful results. The external housing is a steel NEMA 12 rated box, but no weights are listed.

What may help is that they were seismically tested to IEEE 344-1975, but the results are not included in the PO package I found (obviously it had to pass but I would think there would be more information).

There is no available information on the junction boxes above them either. The tag numbers on the boxes are not in Merlin and are likely just ECRIS nodes, which wouldn't necessarily tell you about the box, just the cables. There is no manufacturer or discernable information to say what they're made of either.

My best guesses would be that the switch and its internals would weigh around ~100lbs. This is based on the following:

1. The box is a steel NEMA 12 box sized at 36x11x10. I was unable to find a match online but a 36x24x10 enclosure is 79lbs per my search. This leaves us with an overly conservative weight.
2. The GE type TED136YT150 breaker has a listed package weight of 3lbs.
3. The GE type TDA-2 handle/mechanism is obsolete but based on the size and material it would appear to be around 3lbs as well.
4. The extra terminal blocks, fuses, cable and barrier boards likely add up to ~10lbs.

Assuming the upper junction boxes are also NEMA12, they're around 16x12x8 so around 24lbs each. I based my weights of the enclosures on the following information:

http://www.deltafab.com/ProductsandServices/StandardEnclosures/NemaType12SingleDoorEnclosures/tabid/396/Default.aspx

As always I would encourage you to second guess my estimate for thoroughness. I have attached the original Con Edison PO to this email. The listed dimensions and materials are on page 15.

Rob Daley| Systems Engineering

Indian Point Energy Center

450 Broadway, Buchanan, NY 10511
Office: (914) 254-6817| Email: rdaley1@entergy.com

ATTACHMENT 9.9 **LICENSING BASIS EVALUATION FORMS AND INSTRUCTIONS**

Sheet 1 of 2

Licensing Basis (LB) Evaluation Form

LB Evaluation No. LB-09 Originating SWC/AWC AWC-12

Equipment ID No. SWEL1-032 Equip. Class 6

Equipment Description Fuel Oil Transfer Pump D.G. 23

Location: Bldg. FOST Floor El. 77'-6" Room, Area

Condition

The Seismic Walkdown Team noted that One pipe is supported from another pipe. This is a non typical pipe support. Design drawings for this support were not available at time of walk down. One pipe (insulated pipe) runs to the Emergency Domestic truck fill stop valve and the other orange pipes from the EDG building to near 23FOTP.

Documents Reviewed

- Dwg. 9321-F-2258
- Dwg. 9321-F-2259
- Dwg. 9321-F-2260
- Technical Report No. 91177-TR-01, "Diesel Generator Fuel Oil System, Seismic Verification Summary Report," September 1991.

Licensing Basis

All safety related systems and components, including piping systems, must be analyzed to show that the they will perform their safety related function under all applicable loads and load combinations, included the postulated occurrences of seismic events. In this particular case, a seismic analysis of the observed configuration would be required to document the pipe and support adequacy.

Evaluation

Technical Report No. 91177-TR-01, "Diesel Generator Fuel Oil System, Seismic Verification Summary Report," September 1991 analyzed the observed configuration and confirmed the pipes and supports are adequate under all postulated loads and load combinations, including OBE and DBE loads. Thus, the observed conditions are consistent with the licensing basis.

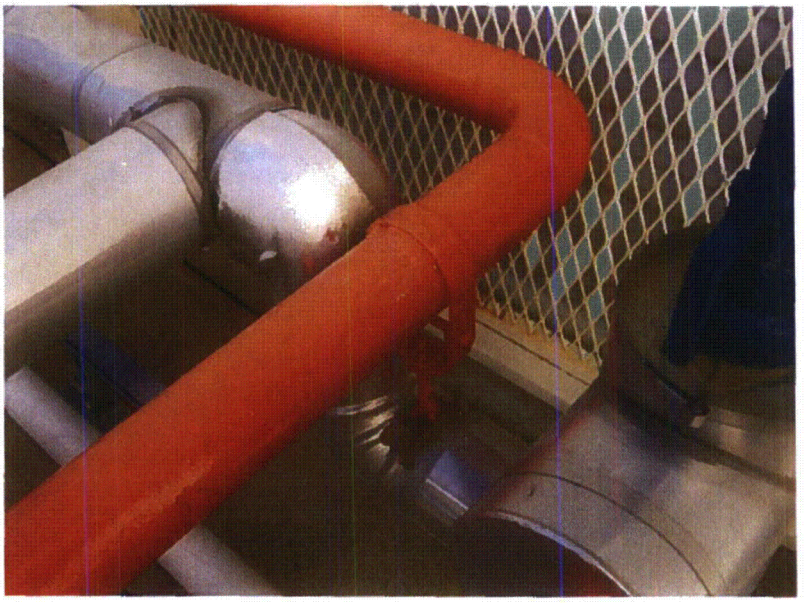
Conclusion (8) Condition Meets the Licensing Basis: ☒ Yes ☐ No

Prepared by: Dragos A. Nuta Date 11/19/2012
Licensing Basis Reviewer

Reviewed by: Richard Drake Date 11/19/12
Peer Reviewer

EVALUATION

A picture of the observed pipe configuration is shown below:



One pipe is supported from another pipe. This is a none typical pipe support. One pipe (insulated pipe) runs to the Emergency Domestic truck fill stop valve and the other orange pipe from the EDG building into ground near 23FOTP.

As mentioned above, we established that Technical Report No. 91177-TR-01, "Diesel Generator Fuel Oil System, Seismic Verification Summary Report," September 1991 reports on analyses that reflected the field configuration. A section of the report covers analyses of the 1 1/2" and 1" Diesel FO Normal and Emergency Fill Lines. The analyses confirmed that the pipes and their supports are adequate under all postulated loads and load combinations, including OBE and DBE loads.

Thus, the observed condition is consistent with the licensing basis.

Licensing Basis (LB) Evaluation Form

LB Evaluation No. LB-10 Originating SWC/AWC AWC-35

Equipment ID No. SWEL1-005,021,022 Equip. Class 0 and 5

Equipment Description N2 Backup Control Valves, Aux Feed Pumps 21 & 22

Location: Bldg. AFB Floor El. 17'-6" Room, Area

Condition

The Seismic Walkdown Team noted that the 5/8"± diameter anchor bolts of the F1-5004 support column are not fully engaged. (top of bolt is approximately ¼" below the top of the nut).

Documents Reviewed

- Calculation IP3-CALC-MULT-00734
- EPRI Document NP-5057, Volume I
- AISC, "Manual of Steel Construction," 8th and 9th Editions.

Licensing Basis

All safety related systems and components must be designed such that they will maintain structural integrity and perform their safety intended function under all applicable loads and load combinations, including postulated seismic event occurrences. In this particular case, the bolt engagement should be sufficient to provide the tension capacity developed under a postulated seismic event.

Evaluation

The tension loading of the bolts anchoring the base plate for Instrument F1-5004 is very small, as discussed in the attached evaluation. As such, given that a recess of 0.172" for a 5/8" diameter bolt does not reduce the bolt tension capacity, the 8/100" larger recess observed is acceptable and we conclude that the observed condition is consistent with the licensing basis.

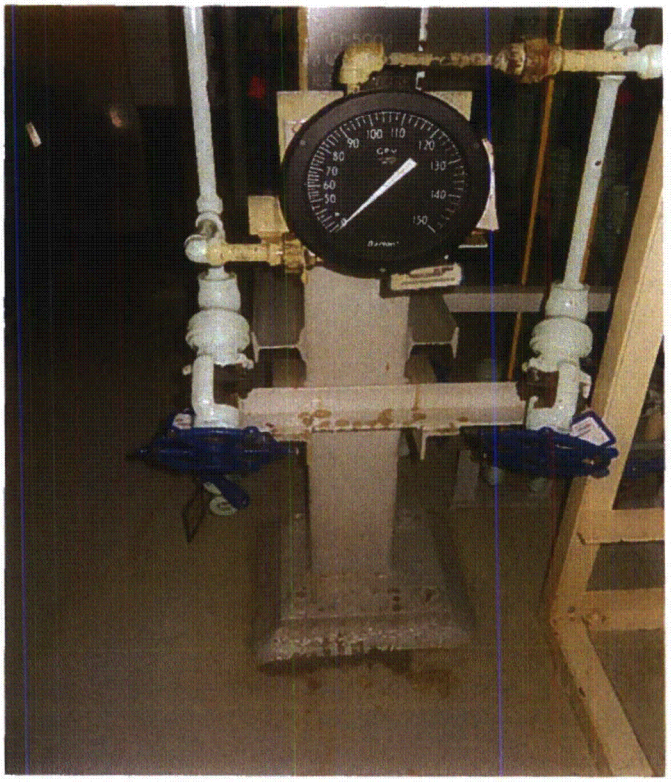
Conclusion (8) Condition Meets the Licensing Basis: ☒ Yes ☐ No

Prepared by: Dragos A. Nuta Date 11/19/2012
Licensing Basis Reviewer

Reviewed by: Richard Drake Date 11/19/12
Peer Reviewer

EVALUATION

The Seismic Walkdown Team noted that the 5/8"± diameter anchor bolts of F1-5004 support column are not fully engaged. (top of bolt is approximately ¼" below the top of the nut).



5/8"± diameter anchor bolts of F1-5004 support column are not fully engaged. (Missing about ¼").

In accordance with Calculation IP3-CALC-MULT-00734 Page 7 of 8, a recess of 0.172 inches does not affect the 5/8" diameter bolt tension capacity.

Furthermore, as seen from the picture above, due to limited supported weights, the base plate loads and induced tension in the bolts during a postulated seismic event are minimal. Therefore, exceeding the maximum recess for which the bolt tension capacity is not reduced by approximately 8/100 of an inch (0.25" - 0.172" ≈ 0.08") is acceptable.

IP3-CALC-MULT-00734 Page 7 of 8 is attached hereafter.

NewYorkPower Authority

Calculation No. IP3-CALC-MULT-00734 Revision 0

Project IP3 Page 7 of 8

Subject MIN THREAD ENGAGEMENT FOR BOLTED CONNECTIONS

Computed by VAH Date 5/4/93

Checked by EW Date 5/4/93

TABLE (1)

BOLT SIZE (in.) (NOT THICKNESS OF MATERIAL)	A_{TS} (in)	A_S (in)	0.5 F_{tu} MAX. MIN ALLOWABLE THREAD ENGMT (in)	MAX ALLOWABLE RECESS (in)
1/4 (0.25)	.892	.032*	.174	.976
3/8 (0.375)	.216	.078*	.270	.105
1/2 (0.50)	.390	.142	.364	.136
5/8 (0.625)	.624	.226	.453	.172
3/4 (0.75)	.908	.334	.552	.198
7/8 (0.875)	1.250	.462	.650	.225
1 (1.00)	1.660	.606	.730	.270
1 1/8 (1.125)	2.130	.763*	.810	.315
1 1/4 (1.25)	2.650	.969	.920	.330
1 3/8 (1.375)	3.220	1.160*	1.000	.345
1 1/2 (1.50)	3.869	1.410*	1.100	.490
1 3/4 (1.75)	5.300	1.900*	1.260	.490
2 (2.00)	6.969	2.500	1.440	.560
2 1/4 (2.1875)	8.840	3.250*	1.654	.583
2 1/2 (2.4375)	10.950	4.000*	1.826	.641

ATTACHMENT 9.9 LICENSING BASIS EVALUATION FORMS AND INSTRUCTIONS
Sheet 1 of 2

Licensing Basis (LB) Evaluation Form

LB Evaluation No. LB-11 Originating SWC/AWC SWEL1-077

Equipment ID No. 0022EDG Equip. Class 17

Equipment Description Diesel Generator No. 22

Location: Bldg. EDG Floor El. 72'-0" Room, Area

Condition

The Seismic Walkdown Team noted that the EDG exhaust pipe is supported on a post frame that also supports fuse panel for 22 Pre Lube Pump, 22 Lube oil HTR, and 22 Jacket Water HTR. This support has damaged & missing grout under the eastern post base plate.

Documents Reviewed

- Calculation GCC-00125-00
- Calculation GCC-00176-00
- Calculation GCC-00025-00, "Support for Diesel Generator Main Exhaust Pipe."
- Dwg. 3627-6A
- Dwg. A250500-00

Licensing Basis

All safety related systems and components must be designed such that they will maintain structural integrity and perform their safety intended function under all applicable loads and load combinations, including postulated seismic event occurrences. In this particular case, the grout pad must have the required compression capacity and stability to withstand compression forces developed under a postulated seismic event.

Evaluation

Based on calculation GCC-00025-00, the load acting on the base plate and grout is minimal Furthermore, considering the 5000 psi compressive strength of the grout, and the more that 75% of the base plate area supported on grout, the compression capacity of the grout is more than sufficient to withstand the acting loads. Thus, the condition is in accordance with the IP2 licensing basis.

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

Prepared by: Dragos A. Nuta Date 11/19/2012
Licensing Basis Reviewer

Reviewed by: Richard Drake Date 11/19/12
Peer Reviewer

EVALUATION

Based on calculation GCC-00025-00, the load acting upon the 6 x 6 x 1/4 TS that distributes the load to the two support columns is 1100 lbs vertical and 570 lbs horizontal with an interaction ratio of 0.07 vs the 1.0 allowable. Distributed to the two support columns, the loading per column is 550 lbs vertical and 285 lbs horizontal.

In addition to the minimal loading on the grout, considering the 5000 psi compressive strength of the grout, the more that 75% of the base plate area supported on grout provides more than sufficient support for the acting loads, as only 3 inches squares of grout provide a compressive capacity of 15,000 pounds. Thus, the condition is in accordance with the IP2 licensing basis.

Licensing Basis (LB) Evaluation Form

LB Evaluation No. LB-12 Originating SWC/AWC AWC-35

Equipment ID No. SWEL1-005,021,022 Equip. Class 0 and 5

Equipment Description N2 Backup Control Valves, Aux Feed Pumps 21 & 22

Location: Bldg. AFB Floor El. 17'-6" Room, Area

Condition

The Seismic Walkdown Team noted at Elev. 18'-6" of the AFB that There is a 2¾" outside diameter pipe connecting to PCV-1284 which appears to have excessive unsupported length.. From the first support, the pipe has a 2½ ' horizontal run, a 3' vertical run and a 2½ ' horizontal run at which point it connects to a heavy valve and two large diameter flanges. After that, there is a 6" vertical run of 7/8" OD tubing followed by a 2½' run of 7/8" OD tubing to the next support.

Documents Reviewed

Since the observation related to non-threaded piping, which is not within the scope of the seismic walkdowns, a separate walkdown of the area was performed.

Licensing Basis

All safety related systems and components must be designed such that they will maintain structural integrity and perform their safety intended function under all applicable loads and load combinations, including postulated seismic event occurrences. In this particular case, the piping spans must be such that pipe stresses are within code allowables.

Evaluation

A subsequent walkdown of the pipe location by members of the IPEC Design Engineering Department certified for performance of the Seismic Walkdowns, assessed the configuration and found that: (1) spans are not excessive for the 2 3/4" diameter pipe, for which a span of 8'-0" would not be questionable, (2) the in-line loads are not excessive, and (3) the configuration is acceptable. As the piping under consideration does not have excessive unsupported lengths, we find the configuration acceptable and within the IP2 licensing basis.

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

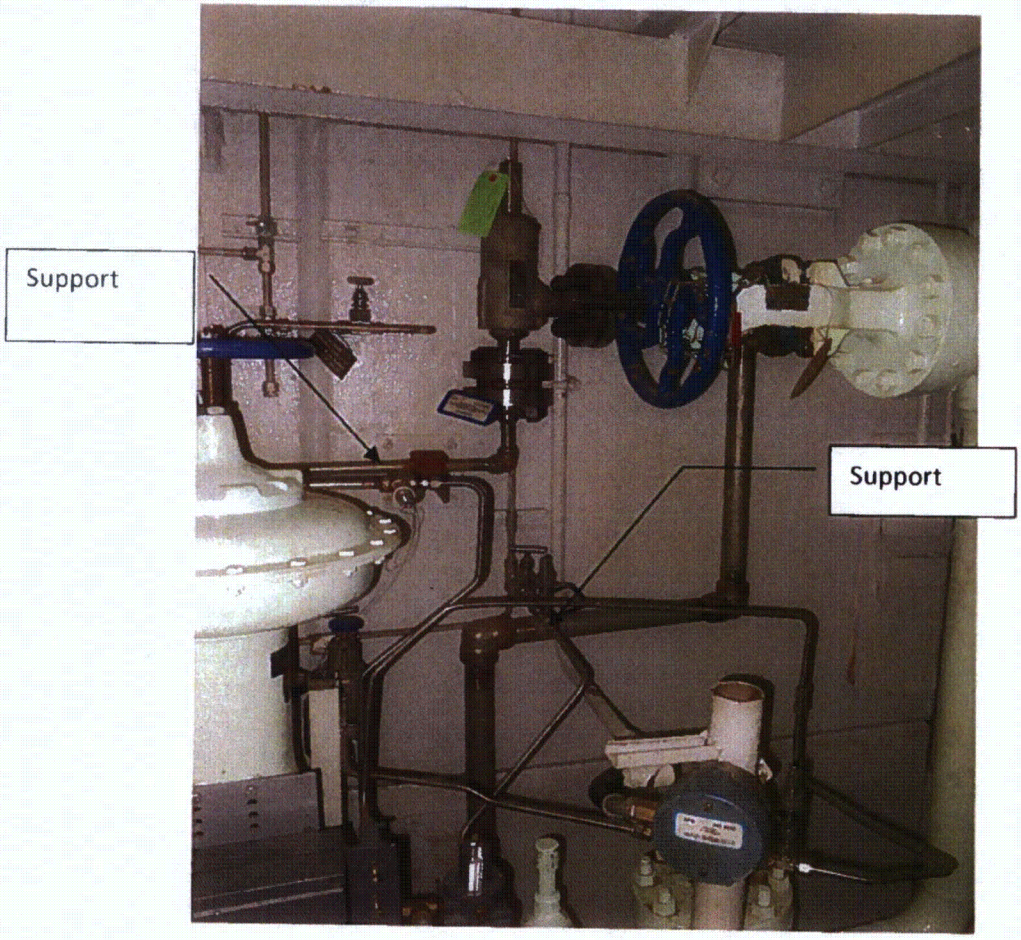
Prepared by: Dragos A. Nuta Date 11/19/2012
Licensing Basis Reviewer

Reviewed by: Richard Drake Date 11/19/12
Peer Reviewer

EVALUATION

The Seismic Walkdown Team noted at Elev. 18'-6" of the AFB that There is a 2¾" outside diameter pipe connecting to PCV-1284 which appears to have excessive unsupported length.. From the first support, the pipe has a 2½ ' horizontal run, a 3' vertical run and a 2½ ' horizontal run at which point it connects to a heavy valve and two large diameter flanges. After that, there is a 6" vertical run of 7/8" OD tubing followed by a 2½' run of 7/8" OD tubing to the next support.

A picture of the piping, located at the southern end of the AFB Elev. 18'-6", is provided below:



A subsequent walkdown of the pipe location by members of the IPEC Design Engineering Department certified for performance of the Seismic Walkdowns, assessed the configuration and found that: (1) spans are not excessive for the 2 3/4" diameter pipe, for which a span of 8'-0" would not be questionable, (2) the in-line loads are not excessive, and (3) the configuration is acceptable.

As the piping under consideration does not have excessive unsupported lengths, we find the configuration acceptable and within the IP2 licensing basis.

ATTACHMENT 9.9 **LICENSING BASIS EVALUATION FORMS AND INSTRUCTIONS**

Sheet 1 of 3

Licensing Basis (LB) Evaluation Form

LB Evaluation No. LB-13 Originating SWC/AWC AWC-35

Equipment ID No. SWEL1-005,021,022 Equip. Class 0 and 5

Equipment Description N2 Backup Control Valves, Aux Feed Pumps 21 & 22

Location: Bldg. AFB Floor El. 17'-6" Room, Area

Condition

The Seismic Walkdown Team noted that Long span 5/8" OD" tubing has little separation and typical span length of eight feet .The tubes will interact with each other during seismic event. There are also 3/8" OD tubes also in close proximity to each other which have similar unsupported spans.

Documents Reviewed

A separate walkdown was performed by a team of engineers qualified to perform seismic walkdowns.

Licensing Basis

All safety related systems and components must be designed such that they will maintain structural integrity and perform their safety intended function under all applicable loads and load combinations, including postulated seismic event occurrences. In this particular case, the tubing spans between supports must be such that tubing maintains structural integrity.

Evaluation

A subsequent walkdown of the tubing locations by members of the IPEC Design Engineering Department certified for performance of the Seismic Walkdowns, assessed the configurations and found that: (1) The tubing spans are not excessive, (2) all tubes in close proximity have common supports and spans, and (3) the separation is such that any impact of adjacent tubes under a seismic event will be associated with extremely small impact forces while eliminating any possible resonance and enhancing the system damping. As such, the configurations were found to be configuration acceptable and within the IP2 licensing basis.

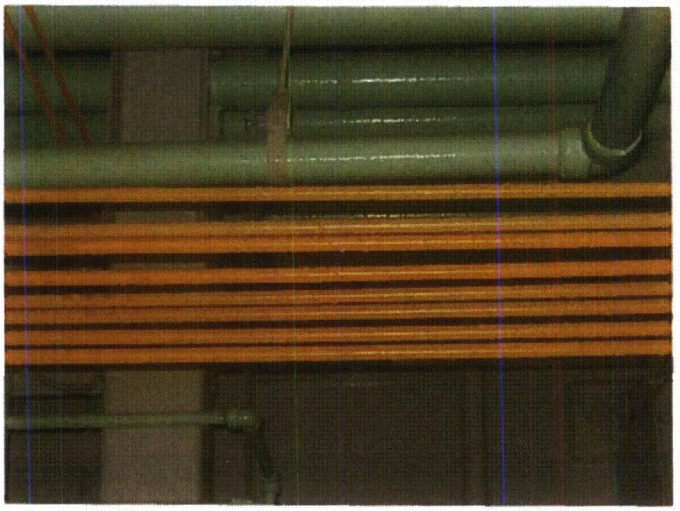
Conclusion (8) Condition Meets the Licensing Basis: ☒ Yes ☐ No

Prepared by: Dragos A. Nuta Date 11/20/2012
Licensing Basis Reviewer

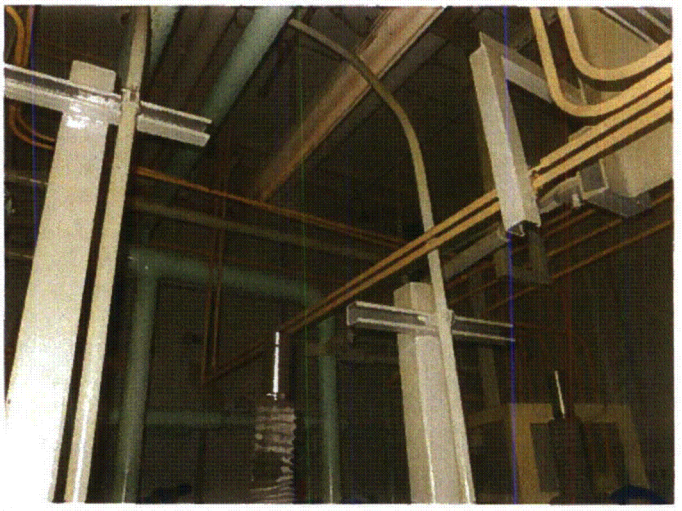
Reviewed by: Richard S. Drake Date 11/20/2012
Peer Reviewer

EVALUATION

The Seismic Walkdown Team noted that Long span 5/8" OD" tubing has little separation and typical span length of eight feet .The tubes will interact with each other during seismic event. There are also 3/8" OD tubes also in close proximity to each other which have similar unsupported spans. Photographs of the tubing configurations, contained in AWC-35 are provided below:



Long span tubing has little separation (<1/2") .They will be interacting with each other during a seismic event.



Tubing with excessive distance between supports at entry to room.

A subsequent walkdown of the tubing locations by members of the IPEC Design Engineering Department certified for performance of the Seismic Walkdowns, was performed. Approximations of the tubing spans made by the original walkdown team that prepared AWC-35 were reviewed against the tubing layouts. The new inspections established that:

- In general, the tubing is supported at 6 ft to 8 ft intervals or less
- no excessive lengths were identified.
- spans satisfy guidance as to spans for seismic supports in CES-8 standard covering tubing design and installation, including the 10 ft or less horizontal and 13 ft or less vertically for 3/8" tubing, and 13 ft or less horizontally and 16 ft or less vertically for 5/8" tubing.:

As mentioned above, the assessment of the configurations found that:

1) The tubing spans are not excessive,
(2) all tubes in close proximity have common supports and spans, and
3) the separation is such that any impact of adjacent tubes against each other under a postulated seismic event will be associated with extremely small impact forces while eliminating any possible resonance and enhancing the system damping.

As such, the configurations were found to be acceptable and within the IP2 licensing basis.

ATTACHMENT 9.9 LICENSING BASIS EVALUATION FORMS AND INSTRUCTIONS
Sheet 1 of 3

Licensing Basis (LB) Evaluation Form

LB Evaluation No. LB-14 Originating SWC/AWC AWC-017

Equipment ID No. SWEL1-020, 090 Equip. Class 5, 20

Equipment Description 21 & 22 Safety Injection Pumps

Location: Bldg. PAB Floor El. 59'-0" Room, Area Safety Injection Pump Room

Condition

While performing an area walkby of Elevation 59"-0" of the PAB, the Seismic Walkdown Team noted that the HVAC ductwork adjacent to the stairs does not have any lateral support from the base to beyond the first elbow at the top. The span appears to be excessive.

Documents Reviewed

- Dwg. 9321-F-4036
- Dwg. 9321-F-4037
- Dwg. 9321-F-4038
- Dwg. 9321-F-4039
- AISC Steel Book
- Technical Report No. 92128-TR-01, "Indian Point Unit 2, Licensing Basis In-Structure Response Spectra."

Licensing Basis

All safety related systems and components must be designed such that they will maintain structural integrity and perform their safety intended function under all applicable loads and load combinations, including postulated seismic event occurrences. In this particular case, the duct span between supports must be such that duct maintains structural integrity.

Evaluation

The evaluation established that the vertical span is not excessive and, under a postulated seismic occurrence, the stresses in the duct are very low. As such, the configuration was found to be acceptable and within the IP2 licensing basis.

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

Prepared by: Dragos A. Nuta Date 11/20/2012
Licensing Basis Reviewer

Reviewed by: Richard S. Drake Date 11/20/2012
Peer Reviewer

EVALUATION

While performing an area walkby of Elevation 59"-0" of the PAB, the Seismic Walkdown Team noted that the HVAC ductwork adjacent to the stairs does not have any lateral support from the base to beyond the first elbow at the top. The span appears to be excessive.

Picture taken by the walkdown team, as contained in AWC-17 are shown below:

Based on Section D-D of Dwag. 9321-F-4039, the duct is anchored at the 59'-0" floor with the top of duct at Elev. 60'-4" and the bottom of the top duct extending from the support shown in the picture above is at Elevation 74'-11" - 10" ≈ 74'.

Thus, the vertical span extends from Elev 74' toElev. 60'-4" .The unsupported vertical span is approximately 13'-8". Based on Section C 7.5. 5 of ASCE 4 2012(Standard covering the Seismic Design and Analysis of Nuclear Facilities), SMACNA covers duct support spacing of 10 ft, 12 ft, 15 ft, 20 ft, and 25 ft. Thus, a span of 13 ft is within the range of duct spans covered by SMACNA:

7.5 DISTRIBUTION SYSTEMS

7.5.1 Introduction

The scope of this section considers portions of mechanical and electrical distribution systems requiring seismic analysis and design, and is limited to piping, tubing, ductwork, and raceways and their supports. For seismic design and analysis purposes, these distribution systems shall be divided into five categories, SDC-5 through SDC-1, consistent with *ASCE/SEI Standard 43-05*. As described in this section, appropriate analytical procedures shall be used to determine the forces and moments at various limiting locations in distribution systems as well as at and on their supports. Not included in this scope of the Section are mechanical, electrical and instrumentation and control components or devices not otherwise identified in the scope.

C7.5.5 Ductwork

The design of nuclear safety-related duct is usually governed by one of two codes - *SMACNA* (C7.5–12) or *ASME AG-1* (C7.5–13). A subsection of the 1980 *SMACNA* code for rectangular ducts (C7.5–14) provides guidance as to the resultant deadweight load as a function of rectangular duct dimension for support spacing of 10, 12, 15, 20, 25, and 30 feet. A similar standard is available for round duct (C7.5-15). Transverse and longitudinal horizontal support spacing as a function of one of three seismic hazard levels is defined in the *SMACNA* code (C7.5-16). As an alternative to this code for round duct design, the *ASME B31.3* piping code is sometimes used. When using the piping code, care must be taken concerning the elastic stability of thin wall pipe when D/t ratios are greater than 50.

The *ASME AG-1* standard provides (1) an alternative ASME-developed procedure for the construction of duct in the form of allowable stresses in the duct for design by analysis; (2) duct system finite-element modeling procedure recommendations; and (3) testing procedures for design by testing. However, this standard does not provide specific guidance on seismic support spacing – either vertical, transverse, or

15

In order to ascertain that the duct will maintain structural integrity under a postulated seismic event, we obtained structural parameters from HVAC personnel as follows:

The duct is 18 gage construction with 1 1/2" x 1/8" corner angles. The wide side has diagonal creases to enhance integrity.

Based on this information, we considered seismic loads consisting of a horizontal response spectrum peak for 1% damping of 1.0g (conservative for Elev. 59' of the PAB) and a verical seismic acceleration of 2/3 (1.0g) = 0.66g vertical acceleration.

Parameters for the duct are as follows:

- 18gage steel
  - thickness = 0.0478 inch
  - weight per square foot = 2 #/ft^2
- The 1 1/2" x 1/8" corner angles:
  - weight per foot = 1.23 #/ft
  - Ix = Iy = 0.078 in^4
  - Area, A = 0.359 in^2
- Perimeter of the duct is 64" = 5.33 ft
- Height = 13'-8" = 13.667 ft
- Weight of vertical duct = 13.667' x 5.33' x 2 #/ft^2 = 146 lbs.
- Weight of the corner angles:
  - 4 x 13.67 ft x 1.23 #/ft = 67 lbs
- Total weight of the duct = 146 lbs + 67 lbs = 213 lbs
- Considering a horizontal earthquake with 1.0g horizontal acceleration and a vertical earthquake with a vertical acceleration of 2/3 (1.0g), we calculate the section properties for the duct, the maximum bending moment and axial compression and then assess the resulting stresses in the duct:
  - Considering only the corner angles, the moment of inertia about the weak axis (10" depth) is:
  - 4 (I_o) + 4 (A_o x d^2) = 4(0.078) + 4(0.359 x 5^2) = 0.312 + 35.9 = 36.2 in ^{4}
  - Section Modulus S = I/d = 36.2 / 5 = 7.24 in^3
  - Cross-sectional area is A plate + Area angles
    - 64 x 0.0478 + 4 x 0.359 = 3 + 1.47 = 4.5 in^2
- We now establish the axial load under Dead Load + Vertical Seismic load and the bending moment under a horizontal 1.0g seismic acceleration:
  - Under a horizontal uniform load of 213 lbs/13.67 ft = 16#/ft = 1.31 #/inch, the bending moment considering simply supported span (conservative assumption) is w l^2/8 = 1.31 x 164^2 /8 = 4404 # inch.
  - Thus, M_{max} = 4404 # x inch
  - Compressive (axial) stresses under DL + vertical earthquake acceleration:
    - Axial load = 2/3(1.0g) x 213 # + 213# = 356 lbs
    - Compressive stress, σ_a , given the 4.5 in^2 area is 356/4.5 = 79 psi
  - Compressive stress from bending is σ_b = M_{max}/S = 4404/7.24 = 608 psi
- Total compressive stress under axial load and bending is:
  - σ tot = σ_a + σ_b = 608 psi + 79 psi = 687 psi

A compressive stress of 687 psi on the corner angles is very low and acceptable.

Thus, we confirm the 13'-8" span is acceptable and the configuration satisfies the IP 2 licensing basis.

ATTACHMENT G – PEER REVIEW CHECKLIST FOR SWEL

ATTACHMENT 9.10 **PEER REVIEW CHECKLIST FOR SWEL FORM**

Sheet 1 of 4

Peer Review Checklist for SWEL

Instructions for Completing Checklist

This peer review checklist may be used to document the review of the Seismic Walkdown Equipment List (SWEL) in accordance with EPRI 1025286, Section 6: Peer Review. The space below each question in this checklist should be used to describe any findings identified during the peer review process and how the SWEL may have changed to address those findings. Additional space is provided at the end of this checklist for documenting other comments.

1. Were the five safety functions adequately represented in the SWEL 1 selection? Y☒ N☐
   All five safety functions were adequately represented in SWEL-1

2. Does SWEL 1 include an appropriate representation of items having the following sample selection attributes:

   a. Various types of systems? Y☒ N☐
      Various types of systems such as mechanical, electrical, control units etc. were considered

   b. Major new and replacement equipment? Y☒ N☐
      New/replacement equipment were represented (ex EDG thermostat, solenoid valve etc. see Base List 1)

   c. Various types of equipment? Y☒ N☐
      Various types of equipment were represented on the SWEL-1, such as fuel oil transfer pump, water pump, boric acid blender, solenoid valve, fan, circuit breaker, relay cabinet, MCC, switchgear, etc.

ATTACHMENT 9.10 **PEER REVIEW CHECKLIST FOR SWEL FORM**

Sheet 2 of 4

Peer Review Checklist for SWEL

d. Various environments? Y☒ N☐
Various environments were considered.

e. Equipment enhanced based on the findings of the IPEEE (or equivalent) program? Y☐ N☒
There were no findings from IPEEE for Unit 2

f. Were risk insights considered in the development of SWEL 1? Y☒ N☐
Yes, risk insights were considered in the development of SWEL-1

3. For SWEL 2:

a. Were spent fuel pool related items considered, and if applicable included in SWEL 2? Y☒ N☐

b. Was an appropriate justification documented for spent fuel pool related items not included in SWEL 2? Y☒ N☐
Yes, as shown in Table 4, Attachment B

ATTACHMENT 9.10 **PEER REVIEW CHECKLIST FOR SWEL FORM**

Sheet 3 of 4

Peer Review Checklist for SWEL

4. Provide any other comments (Attachment 9.11) related to the peer review of the SWELs.

   The development of SWEL-1 and SWEL-2 was conducted in satisfaction of the EPRI guidance.

5. Have all peer review comments been adequately addressed in the final SWEL? Y☒ N☐

Peer Reviewer #1: *Tom Panayotidi* _____ Date: *11/07/2012*

Peer Reviewer #2: *Kenneth Whitmore* _____ for Kenneth Whitmore Date: *11/07/2012*

Peer Review Checklist for SWEL Instructions

The following instructions are meant to aid in completing the form and a guideline pertaining to the type and amount of information that is to be placed in each section of the checklist.

For all items in the checklist, identify whether the action has been completed and provide comments and/or discussions with the Seismic Walkdown Team that can be considered applicable to answer the item in the checklist.

NOTE
Add additional SWEL Peer Reviewers to the Peer Review Checklist form as required

Peer Reviewer #1: -The SWEL Peer Reviewer shall print and sign their name and include the date that the review was complete.

Peer Reviewer #2: -The SWEL Peer Reviewer shall print and sign their name and include the date that the review was complete.

ATTACHMENT H – REVIEW COMMENTS AND RESOLUTION FORM

ATTACHMENT 9.11 **PEER REVIEW COMMENT FORM**

Sheet 1 of 1

Entergy

Seismic Walkdown Submittal Report
Review Comments and Resolutions Form

Engineering Report Number	IP-RPT-12-00037	Rev. 0	Title: Indian Point Energy Center, Unit 2 Seismic Walkdown Report for Resolution of Fukushima Near-Term Task Force Recommendation 2.3: Seismic
Quality Related: ☐ Yes ☒ No		**Special Notes or Instructions:** N/A	

Comment Number	Section/Page No.	Review Comment	Response/Resolution	Reviewer's Accept Initials
1	SWEL1-013	Q. 3, Q.4: provide a statement on the condition of the anchorage. Provide the name of the SWE's on pg. 3	Statement on the condition of the anchorage has been added. SWEs are noted on page 3.	P.P.
2	SWEL1-014	Q. 3, Q.4: provide a statement on the condition of the anchorage. Provide the name of the SWE's on pg. 3	Statement on the condition of the anchorage has been added. SWEs are noted on page 3.	P.P.
3	SWEL1-015	Q.4: provide a statement on the condition of the anchorage. Provide the name of the SWE's on pg. 3	Statement on the condition of the anchorage has been added. SWEs are noted on page 3.	P.P.
4	SWEL1-016	Provide the name of the SWE's on pg. 3	SWEs are noted on page 3.	P.P.
5	SWEL1-017	Q.2, Q.3: provide a statement on the condition of the anchorage. Provide the name of the SWE's on pg. 3	Statement on the condition of the anchorage has been added. SWEs are noted on page 3.	P.P.
6	SWEL1-018	Q.2, Q.3: provide a statement on the condition of the anchorage.	Statement on the condition of the anchorage has been added.	P.P.
7	SWEL1-019	Q.2, Q.4: provide a statement on the condition of the anchorage. Provide the name of the SWE's on pg. 3	Statement on the condition of the anchorage has been added. SWEs are noted on page 3.	P.P.
8	SWEL1-032	Q.2: provide a statement on the condition of the anchorage. Provide the name of the SWE's on pg. 3	Statement on the condition of the anchorage has been added. SWEs are noted on page 3.	P.P.

Entergy

Seismic Walkdown Submittal Report
Review Comments and Resolutions Form

Engineering Report Number	IP-RPT-12-00037	Rev. 0	Title: Indian Point Energy Center, Unit 2 Seismic Walkdown Report for Resolution of Fukushima Near-Term Task Force Recommendation 2.3: Seismic
Quality Related: ☐ Yes ☒ No		**Special Notes or Instructions:** N/A	

Comment Number	Section/Page No.	Review Comment	Response/Resolution	Reviewer's Accept Initials
9	SWEL 1-035, SWEL 1-036, SWEL 1-047, SWEL 1-051, SWEL 1-059, SWEL 1-060, SWEL 1-061, SWEL 1-065, SWEL 1-066, SWEL 1-068, SWEL 1-084, SWEL 1-089, SWEL 1-099, and SWEL 1-100.	*Q.2 Q.3 and Q4:* provide a statement on the condition of the anchorage. Provide the name of the SWE's on pg. 3	Statement on the condition of the anchorage has been added. SWEs are noted on page 3.	P.P.
10	AWC-06	Q.4 e indicate "not an adverse seismic condition"	Statement added "This is not a seismic concern ..."	P.P.

Reviewed By:	Pouria Pourghobadi	Date	11/14/2012	Resolved By:	Paul Huebsch
Site/Department:	IPEC/ENERCON	Ph.		Date: 11/14/2012	

ATTACHMENT I - SEISMIC WALKDOWN ENGINEER TRAINING CERTIFICATES

ENERCON

Excellence—Every project. Every day.

Certificate of Completion

is hereby granted to

Steve Yuan

for successful completion of

TRAINING ON NEAR TERM TASK FORCE
RECOMMENDATION 2.3
PLANT SEISMIC WALKDOWNS

Awarded: 7/26/2012 in Mt. Arlington, NJ

Kenneth Whitmore
Certified Seismic Walkdown Engineer
Alexandria, VA – 6/20/2012

ENERCON

Excellence—Every project. Every day.

Certificate of Completion

is hereby granted to

Tom Panayotidi

for successful completion of

TRAINING ON NEAR TERM TASK FORCE RECOMMENDATION 2.3

PLANT SEISMIC WALKDOWNS

Awarded: 9/13/2012 in Mt. Arlington, NJ

Kevin Bessell
Certified Seismic Walkdown Engineer
Palo Alto, CA – 6/13/2012

Alex Smerch
Certified Seismic Walkdown Engineer
Palo Alto, CA – 6/13/2012

ENERCON

Excellence—Every project. Every day.

Certificate of Completion

is hereby granted to

Nicholas Crispell

for successful completion of

TRAINING ON NEAR TERM TASK FORCE RECOMMENDATION 2.3

PLANT SEISMIC WALKDOWNS

Awarded: 9/13/2012 in Mt. Arlington, NJ

Kevin Bessell
Certified Seismic Walkdown Engineer
Palo Alto, CA – 6/13/2012

Alex Smerch
Certified Seismic Walkdown Engineer
Palo Alto, CA – 6/13/2012

ENERCON

Excellence—Every project. Every day.

Certificate of Completion

is hereby granted to

Paul Huebsch

for successful completion of

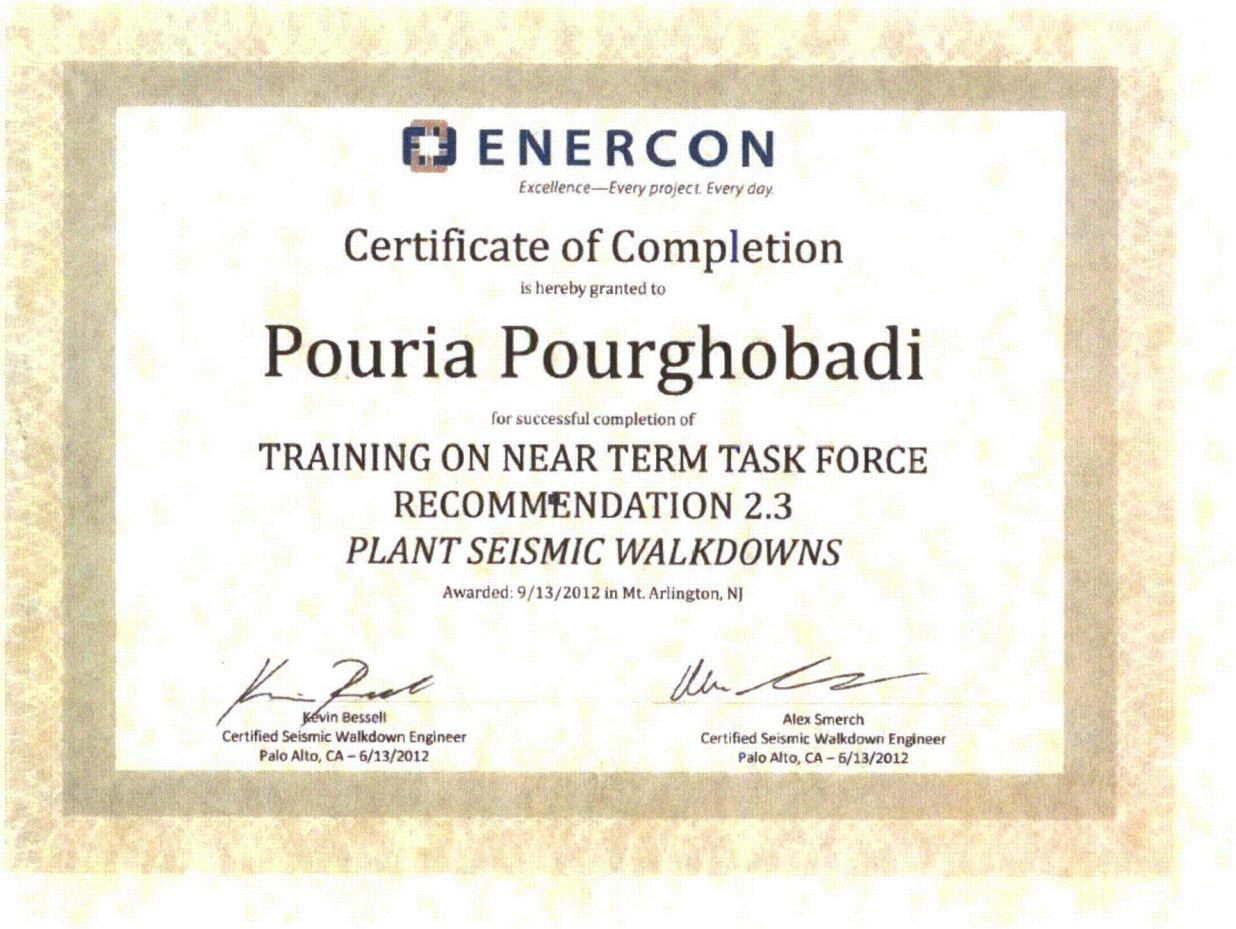
TRAINING ON NEAR TERM TASK FORCE RECOMMENDATION 2.3

PLANT SEISMIC WALKDOWNS

Awarded: 9/13/2012 in Mt. Arlington, NJ

Kevin Bessell
Certified Seismic Walkdown Engineer
Palo Alto, CA – 6/13/2012

Alex Smerch
Certified Seismic Walkdown Engineer
Palo Alto, CA – 6/13/2012



ENERCON

Excellence—Every project. Every day.

Certificate of Completion

is hereby granted to

Pouria Pourghobadi

for successful completion of

TRAINING ON NEAR TERM TASK FORCE RECOMMENDATION 2.3

PLANT SEISMIC WALKDOWNS

Awarded: 9/13/2012 in Mt. Arlington, NJ

Kevin Bessell
Certified Seismic Walkdown Engineer
Palo Alto, CA – 6/13/2012

Alex Smerch
Certified Seismic Walkdown Engineer
Palo Alto, CA – 6/13/2012

EPRI

Certificate of Completion

Kenneth Whitmore

Training on Near Term Task Force Recommendation 2.3 - Plant Seismic Walkdowns

June 21, 2012
Date

R.P. Kassawara
Robert K. Kassawara
EPRI Manager,
Structural Reliability & Integrity

ENERCON

Excellence—Every project Every day

Certificate of Completion

is hereby granted to

Kirit Parikh

for successful completion of

TRAINING ON NEAR TERM TASK FORCE RECOMMENDATION 2.3 *PLANT SEISMIC WALKDOWNS*

Awarded: 9/28/2012 in Naperville, IL

Kevin Bessell
Certified Seismic Walkdown Engineer
Palo Alto, CA – 6/13/2012

Alex Smerch
Certified Seismic Walkdown Engineer
Palo Alto, CA – 6/13/2012

SQUG

CERTIFICATE OF ACHIEVEMENT

THIS IS TO CERTIFY THAT

Dragos A. Nuta

HAS COMPLETED THE SQUG WALKDOWN SCREENING AND SEISMIC EVALUATION TRAINING COURSE
AUGUST 16, 2001

Paul D. Baughman, EQE International
SQUG Instructor

John M. Richards, Duke Energy
SQUG Chairman

Richard G. Starck, MPR Associates
SQUG Training Coordinator

Robert P. Kassawara, EPRI
SQUG Program Manager

EPRI | ELECTRIC POWER RESEARCH INSTITUTE

Certificate of Completion

Richard Drake

Training on Near Term Task Force Recommendation 2.3 - Plant Seismic Walkdowns

July 19, 2012
Date

R.P. Kassawara
Robert K. Kassawara
EPRI Manager,
Structural Reliability & Integrity

ATTACHMENT TO NL-12-167

LIST OF REGULATORY COMMITMENTS

ENTERGY NUCLEAR OPERATIONS, INC.
INDIAN POINT NUCLEAR GENERATING UNIT NO. 2
DOCKET NO. 50-247

List of Regulatory Commitments

The following table identifies those actions committed to by Entergy in this document. Any other statements in this submittal are provided for information purposes and are not considered to be regulatory commitments.

COMMITMENT	TYPE (Check One)		SCHEDULED COMPLETION DATE (If Required)
	ONE-TIME ACTION	CONTINUING COMPLIANCE	
Entergy will perform walkdowns for equipment that could not be inspected as identified in Section 6.3 of the Seismic Walkdown Report.	✓		On a schedule specified in Section 6.3 of the Seismic Walkdown Report
Entergy will submit an updated Seismic Walkdown Report.	✓		On a schedule specified in Section 6.3 of the Seismic Walkdown Report
Entergy will resolve the potentially adverse seismic conditions (i.e., condition reports that identified a potentially adverse seismic condition) as identified in Section 8.2 of the Seismic Walkdown Report. These are identified in CR-IP2-2012-6117 and 6616.	✓		Six months after the next refuel outage