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October 30, 1979

Mr. Boyce H. Grier, Director
U.S. Nuclear Regulatory Commission
Office of Inspection and Enforcement
Region I
631 Park Avenue
King of Prussia, PA 19406

Subject: IE Bulletin No. 79-14
Seismic Analyses for As-Built Safety Related Piping Systems
R. E. Ginna Nuclear Power Plant, Unit No. 1
Docket No. 50-244

Dear Mr. Grier:

Enclosed is a copy of our 120 day response to the subject IE Bulletin.

Very truly yours,

L. D. White, Jr.

Enclosure

xc: U.S. Nuclear Regulatory Commission
Office of Inspection and Enforcement
Division of Reactor Operations Inspection
Washington, DC 20555

U.S. Nuclear Regulatory Commission
Office of Nuclear Reactor Regulation
Division of Operating Reactors
Washington, DC 20555

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120 Day Response to IE Bulletin No. 79-14
Seismic Analysis for As-Built Safety Related Piping Systems
R. E. Ginna Nuclear Power Plant, Unit No. 1
Docket 50-244

1. Introduction

- (a) Our 30 Day Response to IE Bulletin No. 79-14 submitted on July 31, 1979 included background information on the seismic qualification methods used at Ginna Station, and a description of the 79-14 inspection and evaluation program scope and schedule.
- (b) Our 60 Day Response submitted on August 31, 1979 included the results of the inspection and evaluation program for Seismic Category I piping systems inside containment, a revised listing of drawings used to establish design requirements, a description of the inspection and evaluation methods used, and our schedule for completing the program.
- (c) The inspection and evaluation program for Seismic Category I piping systems outside containment has been completed except as noted below. The results of these evaluations are summarized in this report. Where the evaluation was to repair or install the work has been completed. The methods used for inspection, evaluation, and nonconformance control for these systems were the same as described in Attachment 2 to our 60 Day Response. The schedule for preparation and revision of drawings remains as described in our 60 Day Response.
- (d) In a few cases, it has not been possible to physically verify all the inspection elements indicated in Attachment 2 to our 60 Day Response. This involves approximately 40 pipe supports where we have been unable to determine some weld and lug sizes or spring rates. Missing nameplates or physical obstructions such as sleeves, insulation, concrete, or shielding have prevented obtaining all the information necessary. Additional attempts will be made to obtain the information as soon as possible but no later than the Spring 1980 refueling outage.
- (e) Two sections of Seismic Category I piping outside containment have not been inspected at this time due to high radiation levels. Both sections of piping are part of the Chemical and Volume Control System and are located in the spent resin storage tank vault. One section is the letdown piping between relief valve 209 and the volume control tank; and the other is the charging pump suction between the volume control tank and check valve 266. Approximately 60 feet of piping and 10 supports are involved.

- (f) Based on surveys of the spent resin storage tank vault, it is estimated that 10 to 40 man-rem of exposure would be experienced inspecting this piping. Therefore, we have decided to defer these inspections until the resins can be removed. We plan to remove the resins and perform the inspections as soon as a resin cask is available but no later than the Spring 1980 refueling outage.
- (g) It is our determination that deferral of the inspections on these 2 sections of piping does not present any concern for safety. Neither of these sections of piping is included in our Systematic Evaluation Program safe shutdown systems. These systems include those necessary for reactor coolant system integrity, achieving a safe shutdown condition following a seismic event, and to mitigate the consequences of a design basis loss of coolant accident. These systems have been presented to the NRC seismic review team.

2. Seismic Category I Piping 2 1/2 Inch Nominal Pipe Size and
Larger Seismically Qualified Using Equivalent Static Analyses

(a) The results presented here are based on the inspection and evaluation methods discussed in Attachment 2 of the 60 day response. Nonconformances and their dispositions are identified for those deviations which were outside the established acceptance criteria. All lines listed below were evaluated and found acceptable in the as-built condition or repairs made. Formal evaluations have been performed for each nonconformance listed and justification for each disposition is a part of each NCR.

(b) Main Steam System

1. From Steam Generator 1A to MSIV.

No Nonconformances.

2. From Steam Generator 1B to MSIV.

No Nonconformances.

3. To Turbine Driven Auxiliary Feedwater Pump

Support MS-136 location not per design drawing

Evaluation: Use as is.

(c) Main Feedwater

1. From Main Header to Steam Generator 1A

No Nonconformances.

2. From Main Header to Steam Generator 1B

No Nonconformances.

(d) Safety Injection

1. Safety Injection System A Train

Support SIH-34 has no anchor bolts in base plate.

Evaluation: Use as is.

Support SIH-14 does not exist.

Evaluation: Use as is.

Support SIH-75 location not per design drawing.

Evaluation: Use as is.

2. Safety Injection System B Train

Support SIH-36 has no anchor bolts in base plate.

Evaluation: Use as is.

Support SIH-21 does not exist

Evaluation: Use as is.

Support SIH-23 does not exist

Evaluation: Use as is.

Support SIH-76 member size not per design drawing.

Evaluation: Use as is.

3. Safety Injection System C Train

Support SIH-37 has no anchor bolts in base plate.

Evaluation: Use as is.

Support SIH-3 does not exist.

Evaluation: Use as is.

Support SIH-5 does not exist.

Evaluation: Use as is.

Support SIH-74 location not per design drawing.

Evaluation: Use as is.

Support SIH-100 member size not per design drawing.

Evaluation: Use as is.

4. Safety Injection System to Loop A

No Nonconformances.

5. Safety Injection System to Loop B

No Nonconformances.

6. Safety Injection System from Refueling Water Storage Tank

Support SIH-39 member size not per design drawing.

Evaluation: Use as is.

Support SIH-27, have no anchor bolts in base plate.
31, 32, 33, 39,
40

Evaluation: Use as is.

7. Safety Injection System from Residual Heat Removal System

Support SIH-94 configuration not per design drawing.

Evaluation: Use as is.

Support SIH-95 does not exist.

Evaluation: Use as is.

Support SIH-96 does not exist.

Evaluation: Install support.

8. Suction Lines from Boric Acid Tanks to Safety Injection System

No Nonconformances.

9. Safety Injection System to Reactor Coolant Drain Tank Pumps

No Nonconformances.

(e) Residual Heat Removal

1. Residual Heat Removal A Train

Support ACH-52 does not exist.

Evaluation: Use as is.

Support ACH-59 does not exist.

Evaluation: Install support.

Support ACH-126A configuration not per design drawing.

Evaluation: Use as is.

Support ACH-127 configuration not per design drawing.

Evaluation: Use as is.

Support ACH-135 does not exist.

Evaluation: Use as is.

2. Residual Heat Removal B Train

Support ACH-45 rod size not per design drawing.

Evaluation: Use as is.

Support ACH-38 lug size not per design drawing.

Evaluation: Use as is.

Support ACH-137 does not exist.

Evaluation: Use as is.

3. Residual Heat Removal from Refueling Water Storage Tank

No nonconformances.

4. Residual Heat Removal from Penetration #140

Non nonconformances.

5. Residual Heat Removal from Penetration #111

No nonconformances.

(f) Containment Spray

1. Containment Spray A Train

Supports SIH-28, have no anchor bolts in base plates.
29, 53, 54, 55,
56, 57, 58

Evaluation: Use as is.

2. Containment Spray B Train

Supports SIH-30, have no anchor bolts in base plate.
63, 64, 66, 67

Evaluation: Use as is.

Support SIH-59 member size not per design drawing.

Evaluation: Use as is.

Support SIH-62 location not per design drawing.

Evaluation: Use as is.

Valve 868B orientation not per design drawing.

Evaluation: Use as is.

(g) Chemical and Volume Control

1. A Charging Line

No nonconformances.

2. B Charging Line

Support SWCH-32 wrong spring can size.

Evaluation: Repair

3. C Charging Line

Support SWCH-31 wrong spring can size.

Evaluation: Repair

4. Suction from Refueling Water Storage Tank

Support SWCH-72 location and member size not
per design drawing.

Evaluation: Use as is.

Support SWCH-42 location not per design drawing.

Evaluation: Use as is.

Support SWCH-44 configuration not per design
drawing.

Evaluation: Use as is.

5. Suction from Volume Control Tank

No nonconformances.

Supports SWCH- 38, 39, 40, 76, and 77 could not be verified due to high
radiation.

6. Discharge to Pump Seals

Support SWCH-19 configuration not per design drawing.

Evaluation: Repair

Support SWCH-25 configuration not per design drawing.

Evaluation: Repair

Support SWCH-58 configuration not per design drawing.

Evaluation: Repair

7. Seal Return Line

Support SWCH-6 configuration not per design drawing.

Evaluation: Repair

Support SWCH-62 location and member size not per design drawing.

Evaluation: Use as is.

Support SWCH-63 member size not per design drawing.

Evaluation: Use as is.

Support SWCH-66 material size not per design drawing.

Evaluation: Repair

Support SWCH-65 location and configuration not per design drawing.

Evaluation: Use as is.

Supports SWCH-67, 16, 68, and 17 could not be verified due to high radiation.

Support SWCH-64 location and configuration not per design drawing.

Evaluation: Use as is.

8. Letdown Relief to Volume Control Tank

No nonconformances.

(h) Component Cooling

1. For Reactor Coolant Pump 1A

Valve 749A orientation not per design drawing.

Evaluation: Use as is.

Valve 759A orientation not per design drawing.

Evaluation: Use as is.

2. For Reactor Coolant Pump 1B

Valve 749B orientation not per design drawing.

Evaluation: Use as is.

Valve 759B orientation not per design drawing.

Evaluation: Use as is.

3. For Reactor Support Cooling

Valve 813 orientation not per design drawing.

Evaluation: Use as is.

Valve 814 orientation not per design drawing.

Evaluation: Use as is.

4. For Containment Spray and Safety Injection Pumps,
Non-Regenerative Heat Exchanger and Seal Water
Heat Exchanger

Support ACH-25 configuration not per design drawing.

Evaluation: Use as is.

Support ACH-24 configuration not per design drawing.

Evaluation: Use as is.

Support ACH-20 member size not per design drawing.

Evaluation: Use as is.

Support ACH-150 configuration not per design drawing.

Evaluation: Use as is.

Support ACH-76 location and member size not per design drawing.

Evaluation: Use as is.

Support ACH-74 location not per design drawing.

Evaluation: Use as is.

Support ACH-73 location not per design drawing.

Evaluation: Use as is.

Support ACH-75 does not exist.

Evaluation: Install support.

Support ACH-77 configuration not per design drawing.

Evaluation: Use as is.

Support ACH-78 configuration not per design drawing.

Evaluation: Use as is.

Support ACH-79 configuration not per design drawing.

Evaluation: Use as is.

Support ACH-110 110 does not exist.

Evaluation: Use as is.

Pipe routing to and from the Non-Regenerative Heat Exchanger not per design drawing.

Evaluation: Use as is.

5. Component Cooling Surge Tank Line

No nonconformances.

6. Main Headers

Support ACH-105 location not per design drawing.

Evaluation: Use as is.

Support ACH-34 location not per design drawing.

Evaluation: Use as is.

Support ACH-115 supports an additional pipe.

Evaluation: Use as is.

7. For Component Cooling Pump 1A
No nonconformances.
8. For Component Cooling Pump 1B
No nonconformances.
9. For Component Cooling Heat Exchanger 1A
No nonconformances.
10. For Component Cooling Heat Exchanger 1B
Pipe routing not per design drawing.
Evaluation: Use as is.
11. For RHR Pump 1A and RHR Heat Exchanger 1A
Valve 741A orientation not per design drawing.
Evaluation: Use as is.
Support ACH-103 has one lug missing
Evaluation: Repair
Support ACH-120 clearances not per design drawing.
Evaluation: Repair
12. For RHR Pump and Heat Exchanger 1B
Valve 741B orientation not per design drawing.
Evaluation: Use as is.
Support ACH-102 has one lug missing.
Evaluation: Repair
Support ACH-82 location and configuration not per design drawing.
Evaluation: Use as is.
Support ACH-119 clearances not per design drawing.
Evaluation: Repair

13. For Sample Coolers

Support CWH-4 configuration not per design drawing.

Evaluation: Use as is.

Support CWH-6 configuration not per design drawing.

Evaluation: Use as is.

Support CWH-8 configuration not per design drawing.

Evaluation: Use as is.

Support CWH-10 location and configuration not
per design drawing.

Evaluation: Use as is.

Support CWH-23 configuration not per design drawing.

Evaluation: Use as is.

Support CWH-25 configuration not per design drawing.

Evaluation: Use as is.

Support CWH-27 configuration not per design drawing.

Evaluation: Use as is.

Support CWH-13 configuration not per design drawing.

Evaluation: Use as is.

Support CWH-29 location and configuration not
per design drawing.

Evaluation: Use as is.

Support CWH-14 configuration not per design drawing.

Evaluation: Use as is.

Support CWH-15 configuration not per design drawing.

Evaluation: Repair

Support CWH-16 configuration not per design drawing.

Evaluation: Repair

Support CWH-17 configuration not per design drawing.

Evaluation: Repair

Support CWH-18 configuration not per design drawing.

Evaluation: Repair

Support CWH-19 configuration not per design drawing.

Evaluation: Repair

Support CWH-2A member size not per design drawing.

Evaluation: Use as is.

Support CWH-21 does not exist.

Evaluation: Install

Support CWH-11 does not exist.

Evaluation: Install

Support CWH-30 does not exist.

Evaluation: Install

Support CWH-31 location and spring can size not
per design drawing.

Evaluation: Repair

14. For Waste Gas Compressor, Evaporator and Boric Acid
Evaporator

Support ACH-91 configuration not per design drawing.

Evaluation: Use as is.

Support ACH-100 configuraiton not per design drawing.

Evaluation: Use as is.

(i) Service Water

1. For Component Cooling Heat Exchanger 1A

Supports SWAH- support additional small lines.
33, 42

Evaluation: Use as is.

Support SWAH-39 does not exist.

Evaluation: Use as is.

Support SWAH-45 location not per design drawing.

Evaluation: Use as is.

Support SWAH-35 rod size not per design drawing.

Evaluation: Use as is.

Support SWAH-36 rod size not per design drawing.

Evaluation: Use as is.

2. For Component Cooling Heat Exchanger 1B

Support SWAH-34 rod size not per design drawing.

Evaluation: Repair

Support SWAH-32 rod size not per design drawing.

Evaluation: Use as is.

Support SWAH-40 does not exist.

Evaluation: Use as is.

3. For the Auxiliary Coolers

Support SW-59 material size not per design drawing.

Evaluation: Use as is.

4. Main Auxiliary Building Headers

Support SWAH-17 material size not per design drawing.

Evaluation: Repair

Support SWAH-38A quantity of anchor bolts not per design drawing.

Evaluation: Use as is.

Support SWAH-41 does not exist.

Evaluation: Use as is.

Support SWAH-29 material size not per design drawing.

Evaluation: Use as is.

Support SWAH-46 configuration not per design drawing.

Evaluation: Use as is.

Three ACH supports hung from the Service Water Header

Evaluation: Use as is.

5. For Spent Fuel Heat Exchanger

Support SWAH-27 supports an extra pipe.

Evaluation: Use as is.

Support SWAH-5 configuration not per design drawing.

Evaluation: Use as is.

Support SWAH-26 structural attachment not per design drawing.

Evaluation: Use as is.

Support SWAH-7 supports an extra pipe.

Evaluation: Use as is.

Support SWAH-8 does not exist.

Evaluation: Use as is.

6. For Containment Cooler 1A

No nonconformances.

7. For Containment Cooler 1B

No nonconformances.

8. For Containment Cooler 1C

Support SWH-14 location not per design drawing.

Evaluation: Use as is.

Support SWH-51 member size not per design drawing.

Evaluation: Use as is.

9. For Containment Cooler 1D
No nonconformances.
10. For 1A Water Chiller and Reactor Containment Coolers
Support SWH-19 location not per design drawing.
Evaluation: Use as is.
Support SWH-20 location not per design drawing.
Evaluation: Use as is.
Support SWH-53 does not exist.
Evaluation: Use as is.
Support SWH-17 supports an additional line.
Evaluation: Use as is.
Support SWH-72 member size not per design drawing;
also supports an additional pipe.
Evaluation: Use as is.
Support SWH-18 location and configuration not per
design drawing.
Evaluation: Repair
Support SWH-19 location not per design drawing.
Evaluation: Use as is.
Support SWH-20 location not per design drawing.
Evaluation: Use as is.
Valve 4624 location not per design drawing.
Evaluation: Use as is.
11. For 1B Water Chiller
Support SWH-38 has a broken weld
Evaluation: Repair

12. Main Intermediate Building Headers

One inch line hung from six inch return line from
Water Chillers

Evaluation: Use as is.

Support SWH-56 clearances not per design drawing.

Evaluation: Repair

Supports SWH-10 location not per design drawing.

Evaluation: Use as is.

Support SWH-32 configuration not per design drawing.

Evaluation: Use as is.

Support SWH-5 location not per design drawing.

Evaluation: Use as is.

13. For Motor Driven Auxiliary Feedwater Pumps.

No nonconformances.

14. For A Diesel

Non nonconformances.

15. For B Diesel

No nonconformances.

16. 1A Pump Discharge

Support N737 support component missing.

Evaluation: Repair

17. 1B Pump Discharge

No nonconformances.

18. 1C Pump Discharge

Support N740 clearance not per design drawing.

Evaluation: Repair

19. 1D Pump Discharge

No nonconformances.

20. Header for 1A and 1B Pumps

No nonconformances.

21. Header for 1C and 1D Pumps

Support N731 has a loose bolt.

Evaluation: Repair

22. 8" Screenwash Line

Support N747 support component missing.

Evaluation: Repair

(j) Steam Generator Blowdown

No nonconformances.

(k) Auxiliary Feedwater

1. From the Turbine Driven Auxiliary Feedwater Pump.

Support FWH-52 clearances not per design drawing.

Evaluation: Repair

Support FWH-9 location not per design drawing.

Evaluation: Use as is.

Support FWH-8 configuration not per design drawing.

Evaluation: Repair

(l) Boric Acid

1. From Boric Acid Tanks to Safety Injection System

No nonconformances.

3. Piping Systems, or Portions of Systems, Seismically Qualified by Dynamic Analyses

(a) The results presented here are based on the inspection and evaluation methods discussed in Attachment 2 of the 60 day response. Nonconformances and their dispositions are identified for those deviations which were outside the established acceptance criteria. All lines listed below were evaluated and found acceptable in the as-built condition or repairs made. Formal evaluations for each nonconformance and the justification for each disposition accompanies each NCR.

(b) Standby Auxiliary Feedwater System

1. AFW From Pump to Pen. #119

Valve 9702A weight omitted from analysis.

Evaluation: Use as is.

Support AFW-88 material size not per design drawing.

Evaluation: Use as is.

Support AFW-88 clearance not per design drawing

Evaluation: Repair

Incorrect weight for valve 9710A used in analysis

Evaluation: Use as is..

2. AFW From Pump to Pen #123

Incorrect valve weight for valve 9710B used in analysis

Evaluation: Use as is.

Support AFW-106 clearance not per design drawing.

Evaluation: Repair

Support AFW-103 clearance not per design drawing.

Evaluation: Repair

3. S.W. to Pump C

Support SW-111 material size not per design drawing.

Evaluation: Use as is.

4. S.W. to Pump D

Support SW-90 configuration not per design drawing.

Evaluation: Use as is.

Support SW-139 material size not per design drawing.

Evaluation: Use as is.

5. S.W. for AHU 1A

Support SW-15 configuration not per design drawing.

Evaluation: Use as is.

6. S.W. for AHU 1B

No nonconformances.

7. Condensate Supply to SAFW Pumps

No nonconformances.

(c) Service Water

1. Discharge From the Component Cooling Heat Exchangers,
Spent Fuel Heat Exchanger, and Auxiliary Coolers

Support SW-50 member size not per design drawing.

Evaluation: Repair

Support SW-58 configuration not per design drawing.

Evaluation: Use as is.

Support SW-63 configuration not per design drawing.

Evaluation: Use as is.

Support SW-76 member size not per design drawing.

Evaluation: Repair

Support SW-72 anchor bolts not per design drawing.

Evaluation: Repair

(d) Steam Generator Blowdown

No nonconformances.

(e) Auxiliary Feedwater

1. From Auxiliary Feedwater Pump 1A

Support AFW-47 configuration not per design drawing.

Evaluation: Use as is.

Support FWH-3 configuration not per design drawing.

Evaluation: Repair

Incorrect valve weights used in analysis for valves 4000C and 4011.

Evaluation: Use as is.

2. From Auxiliary Feedwater Pump 1B

Support FWH-48 supports an additional line.

Evaluation: Use as is.

Support AFW-34 type not per design drawing.

Evaluation: Use as is.

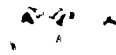
Incorrect valve weights used in analysis for valves 4000C and 4012.

Evaluation: Use as is.

(f) Boric Acid

1. From Boric Acid Tanks to Safety Injection System

No nonconformances.



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