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GNRO-2012/00056

June 5, 2012

U.S. Nuclear Regulatory Commission
Attn: Document Control Desk
Washington, DC 20555

SUBJECT: Response to Request for Additional Information (RAI) Set 13 dated May 9, 2012
Grand Gulf Nuclear Station, Unit 1
Docket No. 50-416
License No. NPF-29

REFERENCE: NRC Letter, "Request for Additional Information for the Review of the Grand Gulf Nuclear Station, License Renewal Application," dated May 9, 2012 (GNRI-2012/00111)

Dear Sir or Madam:

Entergy Nuclear Operations, Inc is providing, in the Attachment, the response to the referenced Request for Additional Information (RAI).

This letter contains no new commitments. If you have any questions or require additional information, please contact Christina L. Perino at 601-437-6299.

I declare under penalty of perjury that the foregoing is true and correct. Executed on the 5th day of June, 2012.

Sincerely,
 *Jeremy Browning* GMFO GGNS Acting VP for Mike Perito
Jeremy Browning

MP/JAS

Attachment: Response to Request for Additional Information (RAI)

cc: (see next page)

cc: with Attachment

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**Attachment to
GNRO-2012/56
Response to Request for Additional Information (RAI)**

The format for the License Renewal Application (LRA) Request for Additional Information (RAI) responses below is as follows. The RAI is listed in its entirety as received from the Nuclear Regulatory Commission (NRC) with a background, issue and request subparts. This is followed by the Grand Gulf Nuclear Station (GGNS) RAI response to the individual question.

RAI 2.2-1

License renewal application (LRA) Section 2.2, Tables 2.2-1-A, 2.2-1-B, 2.2-2, 2.2-3, and 2.2-4 provide the results of applying the license renewal scoping criteria to the systems, structures, and commodities. The license renewal scoping criteria is described in Section 2.1. The following updated final safety analysis report (UFSAR) systems are not located in LRA Tables 2.2-1-A, 2.2-1-B, 2.2-2, 2.2-3, or 2.2-4.

UFSAR Section	System
7.5.1.2.18. Post-Accident Sampling	Post-accident sampling system
18.1.7. Plant Safety Parameter Display 18.2.2 Safety Parameter Display System	Safety related display instrumentation system
11.3 Gaseous Radwaste System	Gaseous waste management systems
7.6.2.11 Auxiliary Building Isolation System	Auxiliary Building Isolation System

Provide additional information to clarify the exclusion of the above systems from Table 2.2-1.

RAI 2.2-1 RESPONSE

The UFSAR identifies these systems using system names that explain their function within the plant. However, components of these UFSAR systems are part of a system code with a different name. In each case, these systems have been included in the LRA. As shown on LRA Drawing LRA-M-1069D, the post-accident sampling system is a subsystem of the process sampling system (system code P33), which is described in LRA Section 2.3.3.19. The safety parameter display system uses components of the emergency response facilities (system code C93). This system is identified in Table 2.2-1-B of the LRA. Gaseous radwaste management is accomplished with various plant systems. As stated in UFSAR Section 11.3, these include "...vent systems of normally and potentially radioactive components, building ventilation systems, the offgas system and the mechanical vacuum pump system." Building ventilation systems are described in LRA Section 2.3.3.18. The primary gaseous radwaste management system, as described in UFSAR Section 11.3.2, is the main condenser steam jet air ejector low-temperature system, or offgas system. The low-temperature offgas system (system codes N64 and N65) is described in LRA Section 2.3.4.2. The auxiliary building isolation system is a subsystem of the containment and drywell instrumentation and control system (system code M71). The containment and drywell instrumentation and control system includes a small number of mechanical components as described in LRA Section 2.3.2.7. The electrical components of the system, including those supporting the auxiliary building isolation function, are within the scope of license renewal by default (see LRA Section 2.1.1) but are not otherwise described in the LRA.

RAI 2.3.3-1

LRA Section 2.1 describes the applicant's scoping methodology, which specifies how systems or components were determined to be included in scope of license renewal. The staff confirms the inclusion of all components subject to an aging management review (AMR) by reviewing the results of the screening of components within the license renewal boundary. For the drawing locations identified in the table below, the continuation of piping in scope for license renewal could not be located.

Drawing Number & Location	Continuation Issue
2.3.3.5 Combustible Gas Control	
LRA-M-1091, location B-2	3"-HBD-924. A continuation was not provided.
2.3.3.7, Standby Service Water	
LRA-M-1061A, location A-4	4"-HBC-176 line from Unit 2 Pump "B" discharge. Drawing LRA-M-2061A was not provided.
LRA-M-1061A, location A-7	20"-HBC-172 line from Unit 2 Pump "B" discharge. Drawing LRA-M-2061A was not provided.
Section 2.3.3.19, Miscellaneous Auxiliary Systems in Scope for 10 CFR 54.4(a)(2)	
LRA-M-0033B, location G-2	2"-JCD-60 is continued to drawing LRA-M-1061H, location C-3. Drawing LRA-M-1061H was not provided.
LRA-M-0036C, location E-8	2"-GBD-1114 I-"E" continued to drawing LRA-M-1053C location A-7. The continuation of this line on drawing LRA-M-1053C could not be located.
LRA-M-0046, locations E-6, E-8	Nine lines into the Control Building Sanitary Sump and one line into the Acid Neutralization Sump. Continuations were not provided. These lines are associated with Note 5 on drawing LRA-M-0046.
LRA-M-1080A, location H-8	1"-JBD-8 continuing from drawing LRA-M-1068A, location B5 (from service air system) could not be located.
LRA-M-1069D, location H-3	Demineralized water in LRA-M-0033B location F-4. The origin of this line on drawing LRA-M-0033B could not be located.

Provide sufficient information to locate the license renewal boundary. If the continuation cannot be shown on license renewal boundary drawings, then provide additional information describing the extent of the scoping boundary and verify whether or not there are additional AMR component types between the continuation and the termination of the scoping boundary. If the scoping classification of a section of the piping changes over the continuation, provide additional information to clarify the change in scoping classification.

RAI 2.3.3-1 RESPONSE

2.3.3.5, Combustible Gas Control

LRA-M-1091, location B-2 3"-HBD-924. A continuation was not provided.

Line 3"-HBD-924 on LRA-M-1091, "Combustible Gas Control Systems," is the outlet of the containment purge compressors. The line discharges into containment as represented by the arrow at the end of the line. There is no drawing continuation for this line.

2.3.3.7, Standby Service Water

LRA-M-1061A, location A-4 4"-HBC-176 line from Unit 2 Pump "B" discharge. Drawing LRA-M-2061A was not provided.

The GGNS Unit 2 P&IDs are no longer maintained, and consequently, M-2061A was not provided as an LRA drawing. Normally closed valve Q2P41-F0078-B is the isolation boundary for the GGNS Unit 1 standby service water system. Nonsafety-related piping within the discharge basin, including Unit 2 piping beyond valve Q2P41-F0078-B, is included in scope for 10 CFR 54.4(a)(2) and is subject to aging management review. All relevant component types have been identified in the LRA.

LRA-M-1061A, location A-7 20"-HBC-172 line from Unit 2 Pump "B" discharge. Drawing LRA-M-2061A was not provided.

The GGNS Unit 2 P&IDs are no longer maintained, and consequently, M-2061A was not provided as an LRA drawing. The blind flange shown on line 20"-HBC-172 is the isolation boundary for the GGNS Unit 1 standby service water system. Nonsafety-related piping within the discharge basin, including Unit 2 piping beyond the blind flange, is included in scope for 10 CFR 54.4(a)(2) and is subject to aging management review. All relevant component types have been identified in the LRA.

2.3.3.19, Miscellaneous Auxiliary Systems in Scope for 10 CFR 54.4(a)(2)

LRA-M-0033B, location G-2 2"-JCD-60 is continued to drawing LRA-M-1061H, location C-3. Drawing LRA-M-1061H was not provided.

The continuation flag on drawing LRA-M-0033B is difficult to read. Rather than LRA-M-1061H, the flag points to LRA-M-1064H. LRA-M-1064H was provided as an LRA drawing and shows the corresponding flag at coordinates C-3.

LRA-M-0036C, location E-8 2"-GBD-1114 I-"E" continued to drawing LRA-M-1053C location A-7. The continuation of this line on drawing LRA-M-1053C could not be located.

The continuation flag on LRA-M-0036C (E-8) is incorrect. The pipe has been capped at this location and there is no continuation to drawing LRA-M-1053C. This discrepancy has been entered into the site's corrective action program for resolution. All relevant component types have been identified in the LRA.

LRA-M-0046, locations E-6, E-8 Nine lines into the Control Building Sanitary Sump and one line into the Acid Neutralization Sump. Continuations were not provided. These lines are associated with Note 5 on drawing LRA-M-0046.

No drawing continuation is intended for these lines. These lines are representative of drainage piping shown on piping plan drawings, most of which is encased in the concrete floor. The exposed nonsafety-related drainage piping in the control building is within the scope of license renewal for 10 CFR 4.4(a)(2) and included in the aging management review.

P&IDs do not depict every component. Locations for components in this system were identified from the component database, and component types located in this space are included in the aging management review.

LRA-M-1080A, location H-8 1"-JBD-8 continuing from drawing LRA-M-1068A, location B5 (from service air system) could not be located.

The continuation arrow on drawing LRA-M-1080A (H-8) for line 1"-JBD-8, should be from LRA-M-1068A, location F-2, rather than B-5. This discrepancy has been entered into the site's corrective action program for resolution.

There are no components included within the scope of license renewal for the continuation of line 1"-JBD-8 on drawing LRA-M-1068A. The boundary for components of line 1"-JBD-8 included in scope for 10 CFR 54.4 (a)(2), is at check valve F134 on drawing LRA-M-1080A (H-8). Valve F134 and components downstream are included within the scope of license renewal and are subject to aging management review. The piping upstream of valve F134, including the continuation flag, should not be highlighted.

LRA-M-1069D, location H-3 Demineralized water in LRA-M-0033B location F-4. The origin of this line on drawing LRA-M-0033B could not be located.

The continuation arrow on LRA-M-1069D is at location F-3, not H-3 as stated in the RAI.

The continuation point on LRA-M-0033B is at location E-4 rather than F-4. The continuation point on LRA-M-0033B at location E-4 is represented by panel 1P33P001. This panel is represented on drawing LRA-M-1069D by the label P001 at location B-2 and encompasses the equipment within the corresponding dashed line which covers most of the lower half of the drawing.

RAI 2.3.3-2

LRA Section 2.1.2.1.3, "Mechanical System Drawings", describes the applicant's development of license renewal drawings. This section of the LRA does not describe the use of a solid red line in several license renewal drawings to denote the end of the license renewal scoping boundary. Examples of this notation can be found on Drawings LRA-M-1061A, LRA-M-1094C, and LRA-M-1109F, but not necessarily limited to only these drawings.

Provide additional information to describe the use of the solid red line on license renewal drawings. For all cases where the red line is used, clarify if the piping in question leaves a space that contains components within the scope of license renewal for 10 CFR 54.4(a)(1), at the point of the red line. Additionally, for all cases where the red line is used, clarify if the license renewal boundary includes a seismic anchor or equivalent support between the safety-related/nonsafety-related interface and the end of the 10 CFR 54.4(a)(2) scoping boundary.

RAI 2.3.3-2 RESPONSE

LRA-M-1061A

Solid red lines on this drawing signify transitions from a unit 1 drawing to a unit 2 drawing. In the case where a red line is used at the boundary of piping that is subject to aging management review (AMR) due to 10 CFR 54.4(a)(1), then it also depicts the transition to piping that is subject to AMR due to 10 CFR 54.4(a)(2) in the area of the standby service water basin. The piping in question does not leave a plant space that contains components within the scope of license renewal for 54.4(a)(1) at the point of the red line. However, all fluid-filled components that are nonsafety-related in the area of the standby service water basin are in scope for 10 CFR 54.4(a)(2) and subject to aging management review.

When a red line is used at the boundary of piping that is subject to aging management review (AMR) due to 10 CFR 54.4(a)(2), this simply depicts a transition from a unit 1 drawing to a unit 2 drawing.

Unit 2 drawings are not maintained and as such are not provided as LRA drawings. However, all fluid-filled components that are nonsafety-related in the area of the standby service water basin are in scope for 10 CFR 54.4(a)(2) and subject to aging management review. Thus, all required anchors and supports are included. This provides assurance that license renewal scoping encompasses the components that are credited in the design basis seismic analysis.

LRA-M-1094C

Solid red lines on this drawing signify transitions through walls that separate the turbine building from the radwaste building or underground components. Thus, the piping in question at the point of the red line does leave a plant space that contains components within the scope of license renewal for 10 CFR 54.4(a)(1).

As stated in LRA section 2.4.3, the radwaste building does not contain safety-related components and therefore components in the radwaste building are not subject to AMR for 10 CFR 54.4(a)(2). In addition, since the piping and piping components associated with these red lines are nonsafety-related, then seismic supports are not needed.

LRA-M-1109F

Coordinates (B-2) and (C-3)

Solid red lines in these sections of this drawing signify the wall that separates the unit 1 and unit 2 turbine buildings. Thus, they depict the limit of the potential spatial interaction in this area. The piping in question at the point of the red line in these areas of this drawing does leave a plant space that contains components within the scope of license renewal for 10 CFR 54.4(a)(1).

A review of applicable isometric drawings identified seismic anchors are included between the safety-related/nonsafety-related interface and the end of the 10 CFR 54.4(a)(2) scoping boundary.

Coordinates: (C-1) and (C-2)

Solid red lines in these sections signify the wall that separates the turbine building from the radwaste building. Thus, they depict the limit of the potential spatial interaction in this area. As stated in LRA section 2.4.3, the radwaste building does not contain safety-related components and therefore components in the radwaste building are not subject to AMR for 10 CFR 54.4(a)(2). Thus, the piping in question at the point of the red line in these areas of this drawing does leave a plant space that contains components within the scope of license renewal for 10 CFR 54.4(a)(1).

A review of applicable isometric drawings identified seismic anchors are included between the safety-related/nonsafety-related interface and the end of the 10 CFR 54.4(a)(2) scoping boundary.

Use of the solid red line on license renewal drawings in general

Solid red lines signify one of these two cases.

- (1) a transition from a drawing that is maintained to a drawing that is not maintained and as such is not provided as an LRA drawing, or
- (2) a transition through a wall that separates a plant space containing components within the scope of license renewal for 10 CFR 54.4(a)(1) from another space, thus depicting the limit of the potential spatial interaction in this area.

In both cases, all nonsafety-related fluid-filled components whose failure could affect safety-related components due to their physical proximity are in scope for 10 CFR 54.4(a)(2) and subject to aging management review. In addition for both cases, seismic anchors or equivalent supports are included as necessary between the safety-related/nonsafety-related interface and the end of the 10 CFR 54.4(a)(2) scoping boundary.

RAI 2.3.3.3-1

LRA Table 2.3.3.-3 appears to be incorrectly labeled "Suppression Pool Cleanup System Component Subject to Aging Management Review" when it is associated with the Suppression Pool Makeup System, LRA Section 2.3.3.3.

Clarify the title of LRA Table 2.3.3-3 and verify that all components associated with the Suppression Pool Makeup System that are subject to an AMR have been identified.

RAI 2.3.3.3-1 RESPONSE

The title of LRA Table 2.3.3-3 is revised to "Suppression Pool Makeup System." Components associated with the Suppression Pool Makeup System that are subject to aging management review (AMR) have been identified and the component types are listed in the table. Additions are shown with underline and deletions with strikethrough.

Table 2.3.3-3 Suppression Pool Cleanup Makeup System Components Subject to Aging Management Review

RAI 2.3.3.7-1

LRA Section 2.1.1.2.2(1) states that nonsafety-related structure, system, and components (SSCs) attached to safety-related SSCs are in scope of license renewal for 10 CFR 54.4(a)(2) up to the first seismic anchor past the safety-related/nonsafety-related interface. On the following drawings the staff could not locate seismic anchors on the 10 CFR 54.4(a)(2) nonsafety-related lines connected to safety-related lines:

License Renewal Application Drawing Number & Location	10 CFR 54.4(a)(2) Pipe Line(s) or Identifier
LRA-M-1061C, location D-6	At valve F119A-A (anchor could not be located on (a)(2) branch line 1"-JCD-5 continuing from drawing LRA-M-0033B, G-1)
LRA-M-1061D, location G-2	Interface on line 3"-HBC-311 past valve QSP41F155A. Anchor is shown on safety related pipe section versus a nonsafety-related section.
LRA-M-1061D, location H-3	Interface on line 3"-HBC-310 past valve QSP41F154B. Anchor is shown on safety-related pipe section versus a nonsafety-related section.

Provide additional information to locate the seismic anchors or anchored components between the safety-related/nonsafety-related interface and the end of the 10 CFR 54.4(a)(2) scoping boundary.

RAI 2.3.3.7-1 RESPONSE

License Renewal Application Drawing Number & Location	10 CFR 54.4(a)(2) Pipe Line(s) or Identifier
LRA-M-1061C, location D-6	At valve F119A-A (anchor could not be located on (a)(2) branch line 1"-JCD-5 continuing from drawing LRA-M-0033B, H-2)

Note: Actual coordinate for LRA-M-0033B line continuation is H-2 not G-1 as specified in the RAI.

A review of applicable isometric drawings verified that nonsafety-related piping attached to safety-related piping was included within the scope of license renewal up to and including a seismic anchor, equivalent anchor (restraints or supports), or bounding condition (base-mounted component, flexible connection, or the end of a piping run). The review identified that seismic anchor(s) are located on line 4"-JCD-29 shown on LRA-M-0033B (G-2) upstream of the nonsafety-related to safety-related interface and upstream of the 1"-JCD-5 intersection to 4"-JCD-30. A seismic anchor is also located on line 4"-JCD-40 downstream of the 1"-JCD-5 intersection to 4"-JCD-30 beyond the 3"-JCD-13 intersection to 4"-JCD-40. A seismic anchor is also located on line 3"-JCD-13 shown on LRA-M-0033B (G-1). The piping to which the seismic anchors are attached is subject to aging management review per the criterion of 10 CFR 54.4(a)(2).

License Renewal Application Drawing Number & Location	10 CFR 54.4(a)(2) Pipe Line(s) or Identifier
LRA-M-1061D, location G-2	Interface on line 3"-HBC-311 past valve QSP41F155A. Anchor is shown on safety related pipe section versus a nonsafety-related section.
LRA-M-1061D, location H-3	Interface on line 3"-HBC-310 past valve QSP41F154B. Anchor is shown on safety-related pipe section versus a nonsafety-related section.

The pipes in these two locations (turbine building cooling water system) are welded to a pipe sleeve embedded in three feet of concrete (auxiliary building wall) before exiting into the ground. Therefore, no seismic anchors were provided in these two locations beyond the embedded pipe sleeve.

RAI 2.3.3.9-1

LRA Section 2.1.1.2.2(1) states that nonsafety-related SSCs attached to safety-related SSCs are in scope of license renewal for 10 CFR 54.4(a)(2) up to the first seismic anchor past the safety-related/nonsafety-related interface. On license renewal boundary drawing LRA-M-1072A, location B-5, the staff could not locate a seismic anchor at safety-related valve Q1P44F116 (anchor could not be located on (a)(2) branch line 24"-JBD-77 continuing to line 30"-JBD-77 continuing to drawing LRA-M-1059A, A-8).

Provide additional information to locate the seismic anchors or anchored components between the safety-related/nonsafety-related interface and the end of the 10 CFR 54.4(a)(2) scoping boundary.

RAI 2.3.3.9-1 RESPONSE

A review of applicable isometric drawings verified that nonsafety-related piping attached to safety-related piping was included within the scope of license renewal up to and including a seismic anchor, equivalent anchor (restraints or supports), or bounding condition (base-mounted component, flexible connection, or the end of a piping run). The review identified that a seismic anchor is located upstream of valve Q1P44F116 (LRA-M-1072A, location B-5) beyond the nonsafety-related to safety-related interface on the nonsafety-related piping 24"-JBD-77. The piping to which the seismic anchors are attached is subject to aging management review per the criterion of 10 CFR 54.4(a)(2).

RAI 2.3.3.10-1

LRA Section 2.1.1.2.2(1) states that nonsafety-related SSCs attached to safety-related SSCs are within the scope of license renewal for 10 CFR 54.4(a)(2) up to the first seismic anchor past the safety-related/nonsafety-related interface. On the following drawings the staff could not locate a seismic anchor on the 10 CFR 54.4(a)(2) nonsafety-related lines connected to the safety-related line.

License Renewal Application Drawing Number & Location	10 CFR 54.4(a)(2) Pipe Line(s) or Identifier
LRA-M-1094A, location D-5	NSR line 4"-HBD-753 attached to SR line 3" HBB-95.
LRA-M-1094A, location D-6	NSR line 4"-HBD-751 attached to SR line 3" HBB-95.
LRA-M-1094A, location H-5	NSR line 4"-HBD-757 attached to SR line 3" HBB-96.
LRA-M-1094A, location H-6	NSR line 3"-HBD-756 attached to SR line 3" HBB-96.
LRA-M-1094B, location D-3	NSR line 6"-HBD-763 attached to SR line 6" HBB-101.
LRA-M-1094B, location F-3	NSR line 6"-HBD-753 attached to SR line 6" HBB-102.
LRA-M-1094C, location D-6	NSR line 3"-HCD-51 attached to SR line 3" HCC-32.
LRA-M-1094E, location G-2	NSR line 3"-HCD-31 attached to SR line 3" HCB-19.
LRA-M-1094E, location H-5	NSR line 2"-HCD-34 attached to SR line 1-1/2" HCB-20.
LRA-M-1094E, location H-6	NSR line 2"-HCD-33 attached to SR line 1-1/2" HCB-20.

Provide additional information to locate the seismic anchors or anchored components between the safety-related/nonsafety-related interface and the end of the 10 CFR 54.4(a)(2) scoping boundary.

RAI 2.3.3.10-1 RESPONSE

License Renewal Application Drawing Number & Location	10 CFR 54.4(a)(2) Pipe Line(s) or Identifier
A. LRA-M-1094A, location D-5	NSR line 4"-HBD-753 attached to SR line 3" HBB-95.
B. LRA-M-1094A, location D-6	NSR line 4"-HBD-751 attached to SR line 3" HBB-95.
C. LRA-M-1094A, location H-5	NSR line 4"-HBD-757 attached to SR line 3" HBB-96.
D. LRA-M-1094A, location H-6	NSR line 3"-HBD-756 attached to SR line 3" HBB-96.
E. LRA-M-1094B, location D-3	NSR line 6"-HBD-763 attached to SR line 6" HBB-101.
F. LRA-M-1094B, location F-3	NSR line 6"-HBD-753 attached to SR line 6"

	HBB-102.
G. LRA-M-1094C, location D-6	NSR line 3"-HCD-51 attached to SR line 3" HCC-32.
H. LRA-M-1094E, location G-2	NSR line 3"-HCD-31 attached to SR line 3" HCB-19.
I. LRA-M-1094E, location H-5	NSR line 2"-HCD-34 attached to SR line 1-1/2" HCB-20.
J. LRA-M-1094E, location H-6	NSR line 2"-HCD-33 attached to SR line 1-1/2" HCB-20.

A review of applicable isometric drawings verified that nonsafety-related piping attached to safety-related piping was included within the scope of license renewal up to and including a seismic anchor, equivalent anchor (restraints or supports), or bounding condition (base-mounted component, flexible connection, or the end of a piping run). The review identified that equivalent anchors (restraints or supports) are located at locations along this nonsafety-related piping beyond the nonsafety-related to safety-related interface. This piping and the associated restraints or supports are subject to aging management review per the criterion of 10 CFR 54.4(a)(2).

- A. The review of this location identified equivalent seismic supports on 3"-HBD-753 downstream of valve F010 on LRA-M-1094A, location D-5 and on 4"-HBD-766 before branch 2"-HBD-13 on LRA-M-1094B, location F-3, on the upstream line and valve F067 on LRA-M-1094B, location F-3 on the downstream line.
- B. The review of this location identified equivalent seismic supports on 4"-HBD-751 upstream of valve F009 on LRA-M-1094A, location D-6, the flange downstream of F005B on LRA-M-1094A, location C-6, the flange downstream of F005A on LRA-M-1094A, location C-7, and the base mounted drywell equipment drain sump cooler B001 on LRA-M-1094A, location E-8.
- C. The review of this location identified equivalent seismic supports on 4"-HBD-757 downstream of valve F004 on LRA-M-1094A, location H-5 and the reducer below where the line branches out as 6"-HBD-763 near F245 on LRA-M-1094B, location D-3.
- D. The review of this location identified equivalent seismic supports on 4"-HBD-756 upstream of valve F003 on LRA-M-1094A, location H-6 and before the line first branches at 3"-HBD-755 on LRA-M-1094A, location H-7.
- E. The review of this location identified equivalent seismic supports on 6"-HBD-763 upstream of valve F061 on LRA-M-1094B, location D-3, the reducer on 4"-HBD-757 downstream of F004 on LRA-M-1094A, location H-5, and before the upstream branch line 2"-HBD-14 on LRA-M-1094B, location D-4.
- F. The review of this location identified equivalent seismic supports on 6"-HBD-753 upstream of valve F067 on LRA-M-1094B, location F-3, F010 on LRA-M-1094A, location D-4, and line 4"-HBD-766 before branch 2"-HBD-13 on LRA-M-1094B, location F-3.

- G. The review of this location identified a seismic anchor on 3"-HCD-51 upstream of valve F163 on LRA-M-1094C, location D-6, and downstream of branch line 2"-HCD-50 on LRA-M-1094C, location D-7.
- H. The review of this location identified equivalent seismic supports on 3"-HCD-31 upstream of valve F098 on LRA-M-1094E, location G-2, and downstream of branch line 1"-HCD-300 on LRA-M-1094E, location G-3.
- I. The review of this location identified equivalent seismic supports on 2"-HCD-34 and 3"-HCD-31 downstream of valve F097-B on LRA-M-1094E, location H-6, and before the branch line 1"-HCD-300 on LRA-M-1094E, location G-3, and valve F-243 on LRA-M-1094E, location G-3.
- J. The review of this location identified equivalent seismic supports on 2"-HCD-33 upstream of valve F096-A on LRA-M-1094E, location H-6, and before the lines enter the drywell chemical waste sump on LRA-M-1094E, location F-7.

RAI 2.3.3.11-1

License renewal boundary drawing LRA-M-1077A, locations C-6 and H-6, and LRA-M-1077D, locations D-6 and G-6, show the 1"-JDD-19 lines to be in scope for 10 CFR 54.4(a)(1) with continuations from drawing LRA-M-1067A. However the continuations of these lines on license renewal boundary drawing LRA-M-1067A are shown as not in scope.

Provide additional information to clarify the scoping classification of these pipe sections.

RAI 2.3.3.11-1 RESPONSE

The 1"-JDD-19 lines upstream of check valves F024A (LRA-M-1077A, locations H-6), including 1"-JCD-106 and ½"-JDD-108, and F024B (LRA-M-1077A, locations C-6), including 1"-JCD-106 and ½"-JDD-108, back to the continuation to LRA M-1067A (D-3) were inadvertently highlighted. Further review has identified that the corresponding lines on drawing LRA-M-1077D at D-6 upstream of F024D and G-6 upstream of F024C were also inadvertently highlighted. This piping is not subject to aging management review.

RAI 2.3.3.11-2

LRA Section 2.1.1.2.2(1) states that nonsafety-related SSCs attached to safety-related SSCs are in scope of license renewal for 10 CFR 54.4(a)(2) up to the first seismic anchor past the safety-related/nonsafety-related interface. On the following drawings the staff could not locate seismic anchors on the 10 CFR 54.4(a)(2) nonsafety-related lines connected to safety-related lines:

License Renewal Application Drawing Number & Location	10 CFR 54.4(a)(2) Pipe Line(s) or Identifier
LRA-M-1067A, location B-3	2"-HCD-533 10 CFR 54.4(a)(2) line connected to line 2"-HCB-51
LRA-M-1068C, location B-3	4"-JBD-26 10 CFR 54.4(a)(2) line connected to line 4" HBC-189 (a single support is shown)

LRA-M-1068C, location D-5	4"-JBD-26 10 CFR 54.4(a)(2) line connected to line 4"-HBC-189 (a single support is shown)
LRA-M-1101, location H-5	10 CFR 54.4(a)(2) lines connected to either side of line ¾"-HBB-231

Provide additional information to locate the seismic anchors or anchored components between the safety-related/nonsafety-related interface and the end of the 10 CFR 54.4(a)(2) scoping boundary.

RAI 2.3.3.11-2 RESPONSE

License Renewal Application Drawing Number & Location	10 CFR 54.4(a)(2) Pipe Line(s) or Identifier
LRA-M-1067A, location B-3	2"-HCD-533 10 CFR 54.4(a)(2) line connected to line 2"-HCB-51

A review of applicable isometric drawings verified that nonsafety-related piping attached to safety-related piping was included within the scope of license renewal up to and including a seismic anchor, equivalent anchor (restraints or supports), or bounding condition (base-mounted component, flexible connection, or the end of a piping run).

The review identified seismic anchors on lines 2"-JDD-21 and 2"-JDD-20 downstream of line 2"-HCD-533 and valve F039 coordinates (B-3). The piping to which the seismic anchors are attached is subject to aging management review per the criterion of 10 CFR 54.4(a)(2).

License Renewal Application Drawing Number & Location	10 CFR 54.4(a)(2) Pipe Line(s) or Identifier
LRA-M-1068C, location B-3	4"-JBD-26 10 CFR 54.4(a)(2) line connected to line 4" HBC-189 (a single support is shown)

A review of applicable isometric drawings verified that nonsafety-related piping attached to safety-related piping was included within the scope of license renewal up to and including a seismic anchor, equivalent anchor (restraints or supports), or bounding condition (base mounted component, flexible connection, or the end of a piping run).

The review identified that a seismic anchor is located on line 4"-JBD-26 at valve Q1P52F221B. The piping to which the seismic anchors are attached is subject to aging management review per the criterion of 10 CFR 54.4(a)(2).

License Renewal Application Drawing Number & Location	10 CFR 54.4(a)(2) Pipe Line(s) or Identifier
LRA-M-1068C, location D-5	4"-JBD-26 10 CFR 54.4(a)(2) line connected to line 4"-HBC-189 (a single support is shown)

A review of applicable isometric drawings verified that nonsafety-related piping attached to safety-related piping was included within the scope of license renewal up to and including a seismic anchor, equivalent anchor (restraints or supports), or bounding condition (base-mounted component, flexible connection, or the end of a piping run).

The review identified that a seismic anchor is located on line 4"-JBD-26 at valve Q1P52F160B. The piping to which the seismic anchors are attached is subject to aging management review per the criterion of 10 CFR 54.4(a)(2).

License Renewal Application Drawing Number & Location	10 CFR 54.4(a)(2) Pipe Line(s) or Identifier
LRA-M-1101, location H-5	10 CFR 54.4(a)(2) lines connected to either side of line ¾"-HBB-231

A review of applicable isometric drawings verified that nonsafety-related piping attached to safety-related piping was included within the scope of license renewal using the bounding approach described in LRA section 2.1.2.1.2 up to and including instrument racks in the containment building that are subject to aging management review per the criterion of 10 CFR 54.4(a)(2) and described in LRA Tables 2.4-4 and 3.5.2-4. This provides assurance that the license renewal scoping encompasses the design basis seismic analysis.

RAI 2.3.3.16-1

License renewal boundary drawings LRA-M-1093B and LRA-M-1093C, location E-3 and E-7, respectively, show fuel injector casings as not within scope for 10 CFR 54.4 (a)(1) and are not listed in Table 2.3.3-16 as a component type subject to an AMR. However, the piping attached to the fuel injector casings is within the scope of license renewal for 10 CFR 54.4.(a)(1).

Justify not including the fuel injector casings within the scope of license renewal under 10 CFR 54.4(a)(1) and why the injector casing component type was excluded from LRA Table 2.3.3-16.

RAI 2.3.3.16-1 RESPONSE

The fuel injector casings, as shown on drawings LRA-M-1093B and LRA-M-1093C, locations E-3 and E-7, respectively, are subcomponents and integral parts of the high pressure core spray diesel generators. Therefore, these components are not subject to aging management review and were excluded from Table 2.3.3-16 as part of a complex assembly in accordance with the guidance in NEI 95-10 Rev. 6 Appendix B item 56.

RAI 2.3.3.16-2

License renewal boundary drawing LRA-M-1093A shows fuel pipeline continuations between the diesel generator fuel oil day tank and both Engine A on drawing LRA-M-1093B and Engine B on drawing LRA-M-1093C. The drawings show there is only a single diesel generator fuel oil day tank and single diesel generator fuel oil storage tank for the high-pressure core spray (HPCS) Diesel Generator. The LRA Section 2.3.3.16 description of the HPCS Diesel Generator, Fuel Oil section, states, "[t]he HPCS diesel generator fuel oil system consists of storage tanks, transfer pumps, fuel oil day tanks..." This implies there are multiple storage tanks and day tanks in the system.

The staff requests that the applicant provide additional information to clarify whether there is one or multiple diesel generator fuel oil day tank(s) and diesel generator fuel oil storage tank(s) for the HPCS Diesel Generator.

RAI 2.3.3.16-2 RESPONSE

As stated in section 9.5.4.2 of the GGNS UFSAR, there is only one fuel oil storage tank and only one fuel oil day tank for the HPCS diesel generator. LRA Section 2.3.3.16 is revised to clarify accordingly. Additions are shown with underline and deletions with strikethrough.

LRA section 2.3.3.16:

Fuel Oil

The HPCS diesel generator fuel oil system consists of a storage tanks, transfer pumps, fuel oil day tanks, fuel oil pumps, and the associated piping, valves, strainers, filters, and controls. The storage tank is a horizontal buried tank with a storage capacity sufficient to operate the diesel generator for seven days while supplying post-LOCA maximum load demands. A transfer pump is located inside the fuel storage tank and transfers fuel from the storage tank to the day tank. The capacity of the day tank is equivalent to greater than one hour of engine operation while supplying post-LOCA maximum load demands.