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10 CFR 50  
10 CFR 54

5928-08-20179  
September 08, 2008

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

Three Mile Island Nuclear Station, Unit 1.  
Facility Operating License No. DPR-50  
NRC Docket No.50-289

**Subject:** Response to NRC Request for Additional Information related to Three Mile Island Nuclear Station, Unit 1, License Renewal Application

**Reference:** Letter from Mr. Jay Robinson (USNRC), to Mr. Michael P. Gallagher (AmerGen) "Request for additional information for section 2.1.5.2 of the Three Mile Island Nuclear Station, Unit 1, License Renewal Application", dated August 22<sup>nd</sup>, 2008. (TAC No. MD7701)

In the referenced letter, the NRC requested additional information related to section 2.1.5.2 of the Three Mile Island Nuclear Station, Unit 1, License Renewal Application (LRA). Enclosed are the responses to this request for additional information.

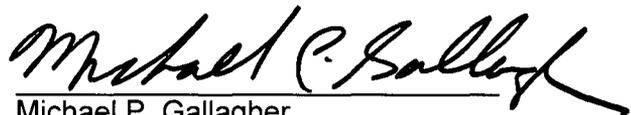
This letter and its enclosure contain no commitments.

If you have any questions, please contact Fred Polaski, Manager License Renewal, at 610-765-5935.

I declare under penalty of perjury that the foregoing is true and correct.

Respectfully,

Executed on 09-08-2008

  
Michael P. Gallagher  
Vice President, License Renewal  
AmerGen Energy Company, LLC

A131  
NRR

September 8, 2008

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Enclosure A: Response to Request for Additional Information for Section 2.1.5.2 of the Three Mile Island Nuclear Station, Unit 1, License Renewal Application.

cc: Regional Administrator, USNRC Region I, w/Enclosure  
USNRC Project Manager, NRR - License Renewal, Safety, w/Enclosure  
USNRC Project Manager, NRR - License Renewal, Environmental, w/o Enclosure  
USNRC Project Manager, NRR - TMIGS, w/o Enclosure  
USNRC Senior Resident Inspector, TMIGS, w/o Enclosure

File No. 08001

## Enclosure – A

Response to Request for Additional Information for Section 2.1.5.2 of the Three Mile Island Nuclear Station, Unit 1, License Renewal Application.

Note: As a standard convention for AmerGen RAI License Renewal Application responses, added text will be shown as ***bolded italics*** whereas deleted text will be shown as ~~strikethrough~~.

**RAI 2.1.5.2-1**

**Question**

License Renewal Application (LRA) Section 2.1.5.2 states on page 2.1-19, "for a nonsafety-related piping system connected to a safety-related piping system, the nonsafety-related system was assumed to provide structural support to the safety-related system, unless otherwise confirmed by a review of the installation details. The entire nonsafety-related system was included in scope for 10 CFR 54.4(a)(2), up to one of the following:" and then lists the bounding criteria contained in NEI 95-10 "Industry Guideline on Implementing the Requirements of 10 CFR Part 54, The License Renewal Rule", (seismic anchor, base-mounted component, flexible connection, free end of non-safety related piping, buried end of piping, and nonsafety-related piping runs connected to safety-related piping on both ends). In addition, LRA Section 2.1.5.2 also states on page 2.1-19, "these scoping boundaries are determined from the physical installation details, and confirmed in cases by review of design drawings or visual inspection by plant walk-downs where necessary."

During the scoping and screening methodology audit, the staff reviewed the scoping results for the abandoned hydrogen purge system and was not able to determine that the applicant had applied the methods described in LRA Section 2.1.5.2 to determine the portion of the nonsafety-related piping, attached to safety-related SSCs, to be included within the scope of license renewal. The staff requests that the applicant describe the methods used and the basis for conclusions, in determining the portion of nonsafety-related abandoned system piping, attached to safety-related SSCs, to be included within the scope of license renewal.

**AmerGen Response**

The scoping boundary for the Containment Isolation System, which includes the Hydrogen Purge Discharge System, was incorrectly depicted on drawing LR-302-721, Hydrogen Purge. The boundary has been modified such that the piping from HP-V-6 up to S-1 Pipe/S-II Ducting interface is in scope for structural support. Additionally, it was determined that the flow devices and valves associated with the piping perform a structural support function and should have been included in Table 2.3.3-5 and Table 3.3.2-5. The nonsafety-related ducting is not required for structural support, because it acts as a flexible connection.

An extent of condition review was performed for nonsafety-related abandoned systems, structures, and components (SSCs) attached to safety-related SSCs with the potential to affect safety-related SSCs. All liquid, air, and gas filled nonsafety-related mechanical systems connected to safety-related mechanical systems were reviewed to ensure that the nonsafety-related system had been included within the scope of License Renewal up to and including an acceptable anchor point past the safety-nonsafety interface. The only other example of nonsafety-related abandoned SSCs attached to safety-related SSCs with the potential to affect safety-related SSCs occurs in the Chemical Cleaning piping, which is a part of the Containment Isolation System and is shown on drawing LR-302-196, OTSG Chemical Cleaning. The boundary has been modified such that the piping from containment penetration # 105, which is safety-related, to the blind flange free end associated with the steam generators has been included in the scope for structural support.

Refer to the response to RAI 2.1.5.2-2 for the changes to Table 2.3.3-5, Containment Isolation System Components Subject to Aging Management Review; Section 3.3.2.1.5, Containment Isolation System; and Table 3.3.2-5, Containment Isolation System, Summary of Aging Management Evaluation.

## **RAI 2.1.5.2-2**

### **Question**

During the scoping and screening methodology audit, the applicant stated that for certain systems, the portion of nonsafety-related piping, attached to safety-related SSCs, to be included within the scope of license renewal, had not been completely determined. The staff reviewed the scoping results for the make-up and purification system and determined that the scoping endpoints for attached piping had not been clearly defined in three instances due to a portion of the nonsafety-related piping being inaccessible to personnel while the plant was at power. The staff requests that the applicant describe the methods used and the basis for conclusions, in determining the portion of nonsafety-related inaccessible piping, attached to safety-related SSCs, to be included within the scope of license renewal.

### **AmerGen Response**

The three subject instances of makeup and purification system piping address nonsafety-related gas supply and sample lines serving the make-up tank. Safety-related valves isolate these lines from the tank, and the nonsafety-related gas piping attached to the valves was considered to be in-scope as required to assure adequate support for the valves. However, physical inaccessibility while at power prevented walkdown of these lines to determine the exact scoping endpoints. Subsequently, following a detailed review of plant piping physical drawings, scoping endpoints have been determined for these instances as follows:

1. Drawing LR-302-661 Sheet 1 of 1 (B-8), gas sample point CE-117 downstream of MU-V-111: This gas sample point is located at the outlet of valve MU-V-111 with no attached piping. The scoping endpoint has therefore been determined to be the free end of the gas sample point.
2. Drawing LR-302-661 Sheet 1 of 1 (C-7), hydrogen supply piping upstream of MU-V-41: This 3/4 inch piping upstream of valve MU-V-41 is routed approximately 10 feet before entering the concrete slab of the floor above. The piping embedded in the concrete floor slab has directional changes that comprise an equivalent anchor. The scoping endpoint of this piping has therefore been determined to be at the directional change of the embedded piping within the overhead floor slab.
3. Drawing LR-302-661 Sheet 1 of 1 (D-7), nitrogen supply piping upstream of MU-V-27: This 3/4 inch piping upstream of valve MU-V-27 is supported using the spacing criteria from the ANSI B31.1-1967 piping code and TMI-1 piping support specifications. Table 121.1.4 of the ANSI code lists a suggested maximum spacing for 1 inch nominal pipe size horizontal gas service piping of 9 feet. Support spacing for piping smaller than 1 inch is extrapolated from the table, which would result in closer support spacing. In accordance with TMI-1 piping support specifications, piping of this size is also supported at directional changes. This piping is physically routed approximately 60 feet with six 90-degree direction changes prior to reaching valve NI-V-22, a not-in-scope valve in the nitrogen supply system. The scoping endpoint of this piping has therefore been determined to include the piping upstream of valve MU-V-27 extending to the not-in-scope valve NI-V-22, as this length of piping run is assured to contain at least two supports in each of the three orthogonal directions, considering the directional change and pipe length support spacing criteria.

A fourth instance in the make-up and purification system was subsequently self-identified.

4. Drawing LR-302-670 Sheet 1 of 1 (C-4), resin fill piping upstream of demineralizer tank isolation valves CA-V-129A/B: These normally empty 2-inch piping lines combine into one line just upstream of the safety-related isolation valves, and the single line is routed approximately 8 feet until it becomes embedded in the concrete wall and changes direction, comprising an equivalent anchor. The scoping endpoint of this piping has therefore been determined to be at the directional change of the embedded piping in the concrete wall.

The aforementioned determinations of scoping endpoints do not affect LRA Section 2.3.2.3 Makeup and Purification System (High Pressure Injection), Table 2.3.2-3 Makeup and Purification System (High Pressure Injection) Components Subject to Aging Management Review, Section 3.2.2.1.3 Makeup and Purification System (High Pressure Injection), or Table 3.2.2-3 Makeup and Purification System (High Pressure Injection) Summary of Aging Management Evaluation.

Extent of Condition:

An extent of condition review was performed to verify that the methodology for the determination of nonsafety-related inaccessible and accessible systems, structures, and components (SSCs), attached to safety-related SSCs, to be included within the scope of license renewal was applied consistently and in accordance with the (a)(2) structural support methodology described in TMI-1 LRA Section 2.1.5.2. All liquid, air, and gas filled nonsafety-related mechanical systems connected to safety-related mechanical systems were reviewed to ensure that the nonsafety-related system had been included within the scope of License Renewal up to and including an acceptable anchor point past the safety-nonsafety interface.

The methodology for the determination of nonsafety-related SSCs, attached to safety-related SSCs, to be included within the scope of license renewal was applied consistently and in accordance with the (a)(2) structural support methodology described in TMI-1 LRA Section 2.1.5.2 with the exception of the Containment Isolation System, Control Building Ventilation System, and Instrument and Control Air Systems. These systems were determined to not fully comply with the (a)(2) structural support methodology described in TMI-1 LRA Section 2.1.5.2 and are discussed as follows:

Containment Isolation System:

1. LR-302-196 Sheet 1 of 1 (B-7): The nonsafety-related chemical cleaning piping and components are required for structural support of containment penetration #105 safety-related piping. The entire run of nonsafety-related piping and components, up to and including the blind flanges and capped free ends, has been brought into scope for structural support. This item is also discussed in the response to RAI 2.1.5.2-1.
2. LR-302-706 Sheet 1 of 1 (G-9 and G-6): The nonsafety-related purge piping and components are required for structural support of safety-related piping. The nonsafety-related piping and components, up to and including the base mounted Purge Interspace Pressurization Tanks, have been brought into scope for structural support.
3. LR-302-711 Sheet 1 of 1 (F-2): The nonsafety-related nitrogen supply piping to the Core Flooding Tanks is required for structural support of safety-related piping. The entire run of

nonsafety-related piping attached to the safety-related piping shown on this drawing has been brought into scope for structural support. The continuation of this piping shown on LR-302-720 Sheet 1 of 1 (C-9) has also been brought into scope for structural support.

4. LR-302-720 Sheet 1 of 1 (D-9): The nonsafety-related nitrogen supply piping and components are required for structural support of containment penetration #307 safety-related piping. The run of nonsafety-related piping from safety-related containment isolation valve NI-V-26 up to but not including nonsafety-related valve NI-V-41 has been brought into scope for structural support. This run of nonsafety-related piping contains at least two supports in each of the three orthogonal directions.
5. LR-302-721 Sheet 1 of 1 (A/B/C-6): The nonsafety-related hydrogen purge discharge system flow indicators, piping, and valves are required for structural support of containment penetration P-240 safety-related piping. These items have been brought into scope for structural support up to but not including the flexible/non-load transmitting purge exhaust ducting. This item is also discussed in the response to RAI 2.1.5.2-1.
6. LR-302-722 Sheet 1 of 1 (Various): The nonsafety-related hydrogen recombiner piping and components are required for structural support of containment penetration #415 and #416 safety-related piping. The scope of nonsafety-related piping associated with safety-related containment penetrations #415 and #416 has been expanded to include:
  - a. Drawing Coordinate B/C/D-8: Nonsafety-related piping up to but not including the flexible/non-load transmitting Reactor Building vent exhaust riser,
  - b. Drawing Coordinate B/C-5: Nonsafety-related piping up to and including the blind flanged free ends,
  - c. Drawing Coordinate E/F-4/5: Nonsafety-related piping up to but not including the tee. The extent of piping brought into scope includes at least two supports in each of the three orthogonal directions.
7. LR-302-831 Sheet 1 of 1 (F/G-6 and B/C-6): The nonsafety-related ductwork associated with the safety-related Reactor Building purge supply and exhaust valves has been removed from the scope of license renewal, because ductwork is flexible/non-load transmitting and cannot perform the intended function of structural support.

The aforementioned determinations of scoping endpoints require the following changes for the Containment Isolation System:

LRA Section 2.3.3.5:

**2.3.3.5 Containment Isolation System**

System Boundary

The CI System boundary includes piping, ductwork, isolation valves, and capped pipe, **and tanks** associated with Penetration Pressurization System, Reactor Building Isolation System, Containment Leak Rate Testing, Steam Generator Chemical Cleaning System, Reactor Building Purge & Kidney System, Nuclear Plant Nitrogen Supply, Post LOCA Hydrogen Recombiner System, and Hydrogen Purge Discharge System.

LRA Table 2.3.3-5:

**Table 2.3.3-5            Containment Isolation System**  
**Components Subject to Aging Management Review**

Component Type	Intended Function
Ducting and Components	Pressure Boundary
<i>Flow Device</i>	<i>Structural Support</i>
<i>Tanks (Purge Interspace Pressurization)</i>	<i>Structural Support</i>
Valve Body	Pressure Boundary <i>Structural Support</i>

LRA Section 3.3.2.1.5:

**3.3.2.1.5            Containment Isolation System**

**Materials**

- Galvanized Steel
- ***Glass***

LRA Table 3.3.2-5:

**Table 3.3.2-5 Containment Isolation System Summary of Aging Management Evaluation**

<b>Component Type</b>	<b>Intended Function</b>	<b>Material</b>	<b>Environment</b>	<b>Aging Effect Requiring Management</b>	<b>Aging Management Programs</b>	<b>NUREG-1801 Vol. 2 Item</b>	<b>Table 1 Item</b>	<b>Notes</b>
Ducting and Components	Pressure Boundary	Galvanized Steel	Air - Indoor (External)	None	None	V.F-1	3.2.1-54	A
Ducting and Components	Pressure Boundary	Galvanized Steel	Air with Borated Water Leakage (External)	Loss of Material/Boric Acid Corrosion	Boric Acid Corrosion (B.2.1.4)	V.E-9	3.2.1-45	A
Ducting and Components	Pressure Boundary	Galvanized Steel	Air with Borated Water Leakage (External)	Loss of Material/General, Pitting and Crevice Corrosion	External Surfaces Monitoring (B.2.1.21)	V.E-4	3.2.1-23	E, 1
Ducting and Components	Pressure Boundary	Galvanized Steel	Air/Gas - Wetted (Internal)	Loss of Material/General, Pitting and Crevice Corrosion	Inspection of Internal Surfaces in Miscellaneous Piping and Ducting Components (B.2.1.22)	VII.F3-3	3.3.1-72	B
Flow Device	Structural Support	Carbon Steel	Air - Indoor (External)	Loss of Material/General Corrosion	External Surfaces Monitoring (B.2.1.21)	V.E-7	3.2.1-31	B
Flow Device	Structural Support	Carbon Steel	Air/Gas - Wetted (Internal)	Loss of Material/General, Pitting, and Crevice Corrosion	Inspection of Internal Surfaces in Miscellaneous Piping and Ducting Components (B.2.1.22)	V.D2-17	3.2.1-34	B
Flow Device	Structural Support	Glass	Air - Indoor (External)	None	None	V.F-6	3.2.1-52	A
Flow Device	Structural Support	Glass	Air/Gas - Wetted (Internal)	None	None			G, 4

**Table 3.3.2-5 Containment Isolation System Summary of Aging Management Evaluation**

Component Type	Intended Function	Material	Environment	Aging Effect Requiring Management	Aging Management Programs	NUREG-1801 Vol. 2 Item	Table 1 Item	Notes
<i>Piping and fittings</i>	<i>Structural Support</i>	<i>Stainless Steel</i>	<i>Air/Gas - Dry (Internal)</i>	<i>None</i>	<i>None</i>	<i>V.F-15</i>	<i>3.2.1-56</i>	<i>A</i>
<i>Tanks (Purge Interspace Pressurization)</i>	<i>Structural Support</i>	<i>Carbon Steel</i>	<i>Air - Indoor (External)</i>	<i>Loss of Material/General Corrosion</i>	<i>External Surfaces Monitoring (B.2.1.21)</i>	<i>V.E-7</i>	<i>3.2.1-31</i>	<i>B</i>
<i>Tanks (Purge Interspace Pressurization)</i>	<i>Structural Support</i>	<i>Carbon Steel</i>	<i>Air with Borated Water Leakage (External)</i>	<i>Loss of Material/Boric Acid Corrosion</i>	<i>Boric Acid Corrosion (B.2.1.4)</i>	<i>V.E-9</i>	<i>3.2.1-45</i>	<i>A</i>
<i>Tanks (Purge Interspace Pressurization)</i>	<i>Structural Support</i>	<i>Carbon Steel</i>	<i>Air with Borated Water Leakage (External)</i>	<i>Loss of Material/General, Pitting and Crevice Corrosion</i>	<i>External Surfaces Monitoring (B.2.1.21)</i>	<i>V.E-4</i>	<i>3.2.1-23</i>	<i>E, 1</i>
<i>Tanks (Purge Interspace Pressurization)</i>	<i>Structural Support</i>	<i>Carbon Steel</i>	<i>Air/Gas - Dry (Internal)</i>	<i>None</i>	<i>None</i>	<i>V.F-18</i>	<i>3.2.1-56</i>	<i>C</i>
<i>Valve Body</i>	<i>Structural Support</i>	<i>Carbon Steel</i>	<i>Air - Indoor (External)</i>	<i>Loss of Material/General Corrosion</i>	<i>External Surfaces Monitoring (B.2.1.21)</i>	<i>V.E-7</i>	<i>3.2.1-31</i>	<i>B</i>
<i>Valve Body</i>	<i>Structural Support</i>	<i>Carbon Steel</i>	<i>Air with Borated Water Leakage (External)</i>	<i>Loss of Material/Boric Acid Corrosion</i>	<i>Boric Acid Corrosion (B.2.1.4)</i>	<i>V.E-9</i>	<i>3.2.1-45</i>	<i>A</i>
<i>Valve Body</i>	<i>Structural Support</i>	<i>Carbon Steel</i>	<i>Air with Borated Water Leakage (External)</i>	<i>Loss of Material/General, Pitting, and Crevice Corrosion</i>	<i>External Surfaces Monitoring (B.2.1.21)</i>	<i>V.E-4</i>	<i>3.2.1-23</i>	<i>E, 1</i>

**Table 3.3.2-5 Containment Isolation System Summary of Aging Management Evaluation**

Component Type	Intended Function	Material	Environment	Aging Effect Requiring Management	Aging Management Programs	NUREG-1801 Vol. 2 Item	Table 1 Item	Notes
Valve Body	Structural Support	Carbon Steel	Air/Gas - Wetted (Internal)	Loss of Material/General, Pitting and Crevice Corrosion	Inspection of Internal Surfaces in Miscellaneous Piping and Ducting Components (B.2.1.22)	V.D2-17	3.2.1-34	B
Valve Body	Structural Support	Copper Alloy with 15% Zinc or More	Air - Indoor (External)	None	None	V.F-3	3.2.1-53	A
Valve Body	Structural Support	Copper Alloy with 15% Zinc or More	Air/Gas - Wetted (Internal)	Loss of Material/Pitting and Crevice Corrosion	One-Time Inspection (B.2.1.18)	VII.G-9	3.3.1-28	E, 2
Valve Body	Structural Support	Stainless Steel	Air - Indoor (External)	None	None	V.F-12	3.2.1-53	A
Valve Body	Structural Support	Stainless Steel	Air with Borated Water Leakage (External)	None	None	V.F-13	3.2.1-57	A
Valve Body	Structural Support	Stainless Steel	Air/Gas - Wetted (Internal)	Loss of Material/Pitting and Crevice Corrosion	One-Time Inspection (B.2.1.18)	V.D1-29	3.2.1-8	E, 3
Valve Body	Structural Support	Stainless Steel	Air/Gas - Dry (Internal)	None	None	V.F-15	3.2.1-56	A

Note 4: There are no aging effects for glass in an air/gas-wetted environment

Control Building Ventilation System:

1. Drawing LR-302-842 Sheet 2 of 3 (G-1), damper AH-D-28: An anchor directly supports safety-related damper AH-D-28 and the downstream duct is considered flexible and unable to transmit load; therefore, the duct cannot provide structural support. The duct downstream of damper AH-D-28 has been removed from scope.
2. Drawing LR-302-842 Sheet 3 of 3 (F-7), damper AH-D-443: Safety-related damper AH-D-443 is located within, and supported by, the safety-related AH-E-205 fan housing. The downstream duct is considered flexible and unable to transmit load; therefore, the duct cannot provide structural support. The duct downstream of damper AH-D-443 has been removed from scope.

The aforementioned determinations of scoping endpoints do not affect LRA Section 2.3.3.6 Control Building Ventilation System, Table 2.3.3-6 Control Building Ventilation System Components Subject to Aging Management Review, Section 3.3.2.1.6 Control Building Ventilation System, or Table 3.3.2-6 Control Building Ventilation System Summary of Aging Management Evaluation.

Instrument and Control Air System:

1. Drawing LR-302-271 Sheet 1 of 1 (F-1): All Instrument and Control Air System air piping shown downstream of Reactor Building penetration #109 has been brought into scope to provide structural support for the safety-related containment isolation components.

The aforementioned determination of scoping endpoints does not affect LRA Section 2.3.3.14 Instrument and Control Air System, Table 2.3.3-14 Instrument and Control Air System Components Subject to Aging Management Review, Section 3.3.2.1.14 Instrument and Control Air System, or Table 3.3.2-14 Instrument and Control Air System Summary of Aging Management Evaluation.

### **RAI 2.1.5.2-3**

#### **Question**

LRA Section 2.1.5.2 states on page 2.1-20, "the preventive option as implemented at TMI-1 is based on a "spaces" approach for scoping of nonsafety-related systems with potential spatial interaction with safety-related SSCs. Potential spatial interaction is assumed in any structure that contains active or passive safety-related SSCs. ... For structures that contain safety-related SSCs, there may be selected rooms within the structure that do not contain any safety-related SSCs. Current Licensing Basis (CLB) document reviews and plant walk-downs were utilized as appropriate to confirm that these rooms did not contain safety-related SSCs, thereby eliminating spatial interaction concerns within these rooms."

During the scoping and screening methodology audit, the staff performed a walk-down of the turbine building. The staff determined that a portion of the turbine building contained fluid-filled, nonsafety-related systems which were not included within the scope of license renewal (referred to by the applicant as an "excluded area"). However, since the turbine building is generally an open space, the excluded area was located in the same room as safety-related containment isolation valves (CA-V-5A and CA-V-5B). The staff determined that the nonsafety-related, fluid-filled SSCs were not separated from safety-related SSCs by a room as described in LRA Section 2.1.5.2 (see above). The staff requests that the applicant describe the methods used and the basis for conclusions, in determining to not include nonsafety-related, fluid-filled SSCs within the scope of license renewal when located in the same room as safety-related SSCs.

As part of your response for RAIs 2.1.5.2-1 through 2.1.5.2-3, please address the extent of condition and additional scoping reviews performed for nonsafety-related abandoned SSCs, nonsafety-related inaccessible SSCs, and nonsafety-related SSCs located within the same room as safety-related SSCs, with the potential to affect safety-related SSCs. List any additional SSCs included within the scope of license renewal as a result of the review, and list those structures and components for which aging management reviews were conducted. For each structure and component, describe the aging management programs, as applicable, to be credited for managing the identified aging effects.

#### **AmerGen Response**

The "spaces" approach for the scoping of nonsafety-related systems with potential spatial interaction with safety-related SSCs was implemented as described in LRA Section 2.1.5.2. However, the scoping of nonsafety-related secondary services system components in the Turbine Building should have been identified as an exception to this methodology. Because of the configuration of the secondary services system components, and the relationship of this area of the Turbine Building to adjacent structures containing safety-related SSCs, the secondary services system components have been determined to not have the potential for spatial interaction with safety-related SSCs.

The nonsafety-related secondary services system components are located on the east side of the Turbine Building on the 305' elevation. The nearest safety-related components are containment isolation components located in the Class 3 portion of the Intermediate Building on the exterior Reactor Building wall. The Class 3 portion of the Intermediate Building is located to the west of the Turbine Building. In this area there is no boundary wall between the Turbine

Building and the Intermediate Building. Although there is no defining boundary wall between the secondary services system components and the containment isolation components located on the Reactor Building exterior wall, the components are separated by an effective barrier consisting of multiple concrete columns supporting the turbine, and the condenser water box. Separation of the two locations is caused by a lack of line of sight and a considerable distance. To get to the Reactor Building wall from the secondary services system components, fluid leakage or spray would have to travel approximately 200 feet and make a 45 degree change in direction. This is not considered to be credible.

The above rationale that there would be no spatial interaction between secondary services system components and the Reactor Building wall considers only the presence of the concrete turbine supports and the condenser water box. If mechanical components would be considered, the path between the two locations would be even more tortuous and spatial interaction even more unlikely. The distance of an interaction path would increase and would contain at least one additional change in direction.

#### Extent of Condition:

An extent of condition review was performed to verify compliance with the above-described approach for the scoping of nonsafety-related systems with potential spatial interaction with safety-related SSCs. All liquid filled nonsafety-related mechanical systems which are not connected to safety-related piping or components, or are connected beyond the first anchor point past the safety-nonsafety interface, and have a spatial relationship such that their failure could adversely impact the performance of a safety-related SSC intended function, were reviewed to ensure that these systems had been included within the scope of License Renewal.

The above described approach for the scoping of nonsafety-related systems with potential spatial interaction with safety-related SSCs was verified to be properly applied with the exceptions of the Emergency Diesel Generator and Auxiliary Systems, Instrument and Control Air Systems, and Water Treatment & Distribution System.

#### Emergency Diesel Generator and Auxiliary Systems:

Drawing LR-302-351 Sheet 1 of 1 (B/C-1/2 and B/C-7/8): The Emergency Diesel Generator air start system includes a standby diesel engine to drive air compressor EG-P-1A/B in the event of failure of the electric motor, which is the compressor's primary driver. The standby diesel engine driver was not included in the scope of License Renewal for spatial interaction. The standby diesel engine driver contains a small fuel oil tank and is located in the Diesel Generator Building, which contains safety-related equipment. The fluid filled portions of the diesel engine driver should have been included in the scope of License Renewal for spatial interaction. The specific details are included in the response to RAI 2.3.3.9-1 (under separate cover).

Instrument and Control Air Systems:

The Instrument and Control Air System includes a two-hour backup instrument air charging compressor (IA-P-3). The charging compressor was not included in the scope of License Renewal for spatial interaction. The charging compressor has external lube oil tubing and is located in the Diesel Generator Building, which contains safety-related equipment. The fluid filled portions of the two-hour backup instrument air charging compressor should have been included in the scope of License Renewal for spatial interaction. The specific details are included in the response to RAI 2.3.3.14-1 (under separate cover).

Water Treatment & Distribution System:

1. Drawing LR-302-158 Sheet 3 of 4 (D/E-2/3): Domestic water heaters DO-C-8 and DO-C-11 were not included in the scope of License Renewal for spatial interaction because these components are located within the I & C Shops on elevations 355' and 365' of the Control Building. There are no safety-related components located in the I & C shop areas. However, the floors in the I&C Shops are not watertight, therefore, failure of these nonsafety-related components could potentially affect safety-related components located at lower elevations of the Control Building. These water heaters and their respective piping and valves should have been included in the scope of License Renewal for spatial interaction. The addition of Domestic water heaters DO-C-8 and DO-C-11 and their respective piping and valves to the scope of License Renewal for spatial interaction does not add any additional component types, materials, environments, or aging effects beyond those already identified for the Water Treatment & Distribution System.
2. Drawing LR-302-162 Sheet 1 of 1 (G/H-6/7): The "A" Carbon Filter backwash flow line was not included in the scope of License Renewal for spatial interaction. The "A" Carbon Filter backwash flow line has the potential to be water filled and therefore has the potential for spatial interaction. This line and its components should have been included in the scope of License Renewal for spatial interaction. "Glass" should have been included in the LRA Section 3.3.2.1.25 list of materials of construction for the Water Treatment and Distribution System.

The component type of "Flow Device" should have been included in LRA Table 2.3.3-25.

**Table 2.3.3-25    Water Treatment & Distribution System  
 Components Subject to Aging Management Review**

Component Type	Intended Function
<i>Flow Device</i>	<i>Leakage Boundary</i>

The component type of "Flow Device" should have been included in LRA Table 3.3.2-25:

**Table 3.3.2-25**

**Water Treatment & Distribution System**  
**Summary of Aging Management Evaluation**

**Table 3.3.2-25 Water Treatment & Distribution System**

<b>Component Type</b>	<b>Intended Function</b>	<b>Material</b>	<b>Environment</b>	<b>Aging Effect Requiring Management</b>	<b>Aging Management Programs</b>	<b>NUREG-1801 Vol. 2 Item</b>	<b>Table 1 Item</b>	<b>Notes</b>
<i>Flow Device</i>	<i>Leakage Boundary</i>	<i>Carbon Steel</i>	<i>Air – Indoor (External)</i>	<i>Loss of Material/General Corrosion</i>	<i>External Surfaces Monitoring (B.2.1.21)</i>	<i>VII.D-3</i>	<i>3.3.1-57</i>	<i>B</i>
<i>Flow Device</i>	<i>Leakage Boundary</i>	<i>Carbon Steel</i>	<i>Raw Water (Internal)</i>	<i>Loss of Material/General, Pitting, Crevice, and Microbiologically Influenced Corrosion, and Fouling</i>	<i>Inspection of Internal Surfaces in Miscellaneous Piping and Ducting Components (B.2.1.22)</i>	<i>VII.C1-19</i>	<i>3.3.1-76</i>	<i>E, 1</i>
<i>Flow Device</i>	<i>Leakage Boundary</i>	<i>Glass</i>	<i>Air – Indoor (External)</i>	<i>None</i>	<i>None</i>	<i>VII.J-8</i>	<i>3.3.1-93</i>	<i>A</i>
<i>Flow Device</i>	<i>Leakage Boundary</i>	<i>Glass</i>	<i>Raw Water (Internal)</i>	<i>None</i>	<i>None</i>	<i>VII.J-11</i>	<i>3.3.1-93</i>	<i>A</i>