

**Southern Nuclear Operating Company**

**ND-19-1023**

**Enclosure 4**

**Vogtle Electric Generating Plant (VEGP) Units 3 and 4**

**Revised Request for License Amendment:  
Consolidation of Structural Building ITAAC  
(LAR-19-005R1)**

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(Enclosure 4 consists of 16 pages, including this cover page.)

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Revised Request for License Amendment: Consolidation of Structural Building ITAAC (LAR-19-005R1)

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Pursuant to 10 CFR 52.98(c) and in accordance with 10 CFR 50.90, Southern Nuclear Operating Company (SNC, or "Licensee") hereby requests an amendment to Combined License (COL) Nos. NPF-91 and NPF-92 for Vogtle Electric Generating Plant (VEGP) Units 3 and 4, respectively.

## **1. SUMMARY DESCRIPTION**

The requested amendment proposes changes to COL Appendix C information, with corresponding changes to plant-specific DCD Tier 1 information, as appropriate. The proposed changes include consolidating Inspections, Tests, Analyses, and Acceptance Criteria (ITAAC) for structural buildings and revising Acceptance Criteria to reflect evaluations of as-built deviations in wall and floor thicknesses will be provided as part of the reports described in ITAAC. This enclosure requests approval of a license amendment necessary to implement the COL Appendix C changes described below. Enclosure 2 requests the exemption necessary to implement the changes to the plant-specific DCD Tier 1 information.

## **2. DETAILED DESCRIPTION and TECHNICAL EVALUATION**

### **Detailed Description**

COL Appendix C, Section 3.3 provides design descriptions for AP1000 structural buildings. The buildings described in Section 3.3 include Nuclear Island (NI) structures as well as, the annex, turbine, and radwaste buildings. The NI includes containment internal structures, and the shield and auxiliary buildings. The NI structures are seismic Category I and are designed and constructed to withstand design basis loads without a loss of structural integrity and safety-related functions. The walls and floors of NI buildings are defined in COL Appendix C Table 3.3-1. COL Appendix C Section 3.3 does not provide the structural design functions for the annex, turbine, or radwaste buildings. However, wall and floor thicknesses for the annex building and wall thicknesses for the turbine building are defined in COL Appendix C Table 3.3-1, and wall thicknesses for the radwaste building are defined in ITAAC Index Number 782.

There are sixteen ITAAC for structural buildings. These ITAAC have two purposes, one is for verifying structural function and the other is for verifying the radiation shielding function. The ability of as-built structures to perform their structural functions is demonstrated through reconciliation reports and thickness reports. The ability of the as-built structures to perform their shielding function is demonstrated through thickness reports. The structural building ITAAC are summarized in the following Table, "Structural Building ITAAC."

It has been identified that some of the Acceptance Criteria for the building structures are duplicative. COL Appendix C (and plant-specific Tier 1) changes are proposed to consolidate ITAAC with duplicative Acceptance Criteria for building structures and clarify that evaluations of thickness deviations will be included in the reconciliation and thickness reports described in ITAAC Acceptance Criteria. The Table illustrates the duplication of building-related reports.

**Table: Structural Building ITAAC**

Building / Structure		Structural Function (ITAAC Index No.) ITAAC No.		Shielding Function (ITAAC Index No.) ITAAC No.
		Reconciliation Report	Thickness Report	Thickness Report
<b>Nuclear Island (NI)</b>	Containment Internal Structure	(760) 3.3.00.02a.i.a	(764) 3.3.00.02a.ii.a	(777) 3.3.00.03a
	Shield Building	(761) 3.3.00.02a.i.b	(765) 3.3.00.02a.ii.b	(778) 3.3.00.03b
	Auxiliary Building [Non-Radiological]	(762) 3.3.00.02a.i.c	(766) 3.3.00.02a.ii.c	(779) 3.3.00.03c
	Auxiliary Building [Radiological]	(763) 3.3.00.02a.i.d	(767) 3.3.00.02a.ii.d	(780) 3.3.00.03d
<b>Annex Building</b>		-	(768) 3.3.00.02a.ii.e	(781) 3.3.00.04a
<b>Turbine Building</b>		-	(769) 3.3.00.02a.ii.f	-
<b>Radwaste Bldg. — Waste Accumulation Room</b>		-	-	(782) 3.3.00.04b

Proposed Changes to Nuclear Island Structural Function ITAAC

As illustrated in the Table above, there are three ITAAC<sup>1</sup> for each of the NI buildings (i.e., containment internal structures, shield building, auxiliary building non-radiological, and auxiliary building radiological). The structural function Design Commitment for the NI building ITAAC is to withstand design basis loads without loss of structural integrity or safety related functions. The corresponding Acceptance Criteria are to produce reconciliation reports (ITAAC Index Numbers 760/761/762/763) and a structural thickness report (ITAAC Index Numbers 764/765/766/767) for each NI building to verify that the as-built structures meet the Design Commitment. The NI also has Design Commitments to provide shielding during normal operations. The corresponding ITAAC Acceptance Criteria require shielding thickness reports (ITAAC Index Numbers 777/778/779/780) be produced for each NI building

<sup>1</sup> Hereafter, ITAAC Index numbers are used for identification in lieu of the ITAAC number.

which demonstrates that the as-built structures meet the Design Commitment.

The NI as-built reconciliation reports reconcile design changes and site-specific non-conformances between as-built and as-designed structures. Since both the reconciliation reports and thickness reports will reconcile identified wall thickness deviations, the Acceptance Criteria for the thickness reports is duplicative and can be deleted. Accordingly, thickness reports associated with ITAAC Index Numbers 764, 765, 766, 767, 777, 778, 779 and 780 can be consolidated into the reconciliation reports for ITAAC Index Numbers 760, 761, 762, 763 for the NI buildings. Similarly, the shielding Design Commitment of NI building structures is combined with the structural Design Commitment, and the reconciliation report justifies deviations from both structural and shielding perspectives.

A note is proposed to be added to COL Appendix C Table 3.3-1 to clarify that construction thickness deviations in NI structures, from those thicknesses specified in the table, are reconciled in the reconciliation reports in accordance with the ITAAC requirements.

#### Proposed Changes to Nuclear Island Radiation Shielding ITAAC

To address duplicative radiation shielding Acceptance Criteria, it is proposed that ITAAC Index Numbers 760, 761, 762, 763 in COL Appendix C Table 3.3-6 be revised to add the shielding requirements currently specified in the thickness report Design Commitment of ITAAC Index Numbers 777, 778, 779 and 780, respectively. Specifically, ITAAC Index Numbers 760, 761, 762, 763 would be revised to require analysis of radiation shielding in the Inspections, Tests and Analyses, and to require the verification of no impact to compliance with the radiation protection licensing basis, such as GDC 19, established radiological zoning and equipment qualification. The proposed acceptance criteria will continue to demonstrate the radiation zones and equipment qualification requirements are met in accordance with VEGP 3 and 4 UFSAR Tier 2 design criteria including UFSAR Subsections 3.11.4 "Estimated Radiation and Chemical Environment," 3D.5.1.2 "Radiation Dose," and 12.3.2.1 "Shielding, Design Objectives".

To ensure the consolidated reconciliation reports comply with COL Appendix C Table 3.3-1, the consolidated reconciliation report Acceptance Criteria will be revised to clarify that NI structural deviations from the thicknesses described in COL Appendix C Table 3.3-1 will be resolved in the reconciliation reports in accordance with the ITAAC requirements.

#### Proposed Changes to the Annex Building and Turbine Building ITAAC

There are two ITAAC for the annex building structure. The first, ITAAC Index Number 768, requires a thickness report to demonstrate the structural function and the second, ITAAC Index Number 781, requires a thickness report to verify radiation shielding. Similarly, the turbine building structure has ITAAC Index Number 769 which requires a thickness report to verify the structural function. The information provided in the annex building thickness report required by ITAAC Index Number 781 is duplicative with the information in the thickness report required by ITAAC Index Number 768. Therefore, ITAAC Index Number 781 can be consolidated into ITAAC Index Number 768.

The Acceptance Criteria in ITAAC Index Numbers 768 and 769 are to produce thickness reports to demonstrate that the walls and, as applicable, floors in the annex and turbine

buildings are consistent with the thicknesses specified in Table 3.3-1. Annex and turbine building construction thickness deviations are evaluated and dispositioned in accordance with 10 CFR 50 Appendix B processes (i.e., Nonconformance & Disposition Reports (N&D Reports)), which ensure there are no unacceptable impacts to the annex and turbine structural functions or the annex building radiation shielding function. The inclusion of the thickness deviation evaluations in the thickness reports for the annex and turbine buildings continues to meet the design purposes of the ITAAC.

Therefore, ITAAC Index numbers 768 and 769 Acceptance Criteria can be clarified such that the thickness reports of the annex and turbine buildings also include evaluations of thickness deviations identified during construction and demonstrate there is no loss of the annex building structural integrity and no impact to compliance with the radiation protection licensing basis or turbine building structural function.

Notes will be added to Table 3.3-1 to clarify that annex and turbine building construction thickness deviations are evaluated in the thickness report in accordance with the ITAAC requirements. The proposed amendment will modify ITAAC Index number 768 for the annex building in Table 3.3-6 of COL Appendix C to add the shielding requirements to the "Design Commitment."

#### Proposed Changes to the Radwaste Building ITAAC

There is one ITAAC associated with the waste accumulation room in the radwaste building. The associated Design Commitment for the ITAAC specifies that the walls of the waste accumulation room provide shielding during normal operations. The corresponding Acceptance Criteria specifies that a report is produced that demonstrates that the shield walls of the waste accumulation room in the radwaste building are consistent with the concrete wall thickness specified in ITAAC Index Number 782.

Waste accumulation room wall and floor thicknesses that deviate from the values specified in COL Appendix C (and plant-specific Tier 1) Table 3.3-6 are evaluated and dispositioned in N&D Reports. This process demonstrates that there is no impact to compliance with the radiation protection licensing basis or corrective actions are taken to restore compliance. Therefore, the waste accumulation room thickness deviation evaluations demonstrate the as-built structure continues to meet the Design Commitment of ITAAC Index Number 782. It is proposed that ITAAC Index Number 782 Acceptance Criteria be clarified to specify that the waste accumulation room thickness report includes evaluations of thickness deviations identified during construction and demonstrates there is no impact to compliance with the radiation protection licensing basis.

#### Technical Evaluation

##### **Changes to Structural Building ITAAC**

The processes outlined in 10 CFR 52 Appendix D Section VIII, as supplemented by License Condition 2.D(13), and 10 CFR 50 Appendix B will continue to be followed.

### 10 CFR 52 Appendix D Section VIII Processes

The proposed changes do not involve changes to the design of the plant. The proposed changes do not affect any of the design functions of the structural buildings as described in the Updated Final Safety Analysis Report (UFSAR). Deviations that could potentially affect the design functions of structural buildings or alter compliance with applicable design codes or licensing basis requirements continue to be evaluated and dispositioned under the 10 CFR 52 Appendix D Section VIII process, as supplemented by License Condition 2.D(13).

The proposed amendment does not change the requirement for NI structures to comply with applicable concrete and structural codes as defined in the licensing basis. Specifically, the proposed changes do not alter the requirement that seismic Category I and II structures comply with applicable design codes, including ACI 349-01 and ANSI/AISC N690-94. In addition, supplemental requirements described in UFSAR Subsection 3.8.4.4.1, "Seismic Category I Structures," UFSAR Subsection 3.8.4.5, "Structural Criteria," and the guidance contained in NRC Regulatory Guides 1.69, 1.115, 1.142, and 1.143 as discussed in UFSAR Appendix 1A, "Conformance with Regulatory Guides," continue to be met.

The proposed amendment does not change the requirement for structures to comply with 10 CFR 50, Appendix A, GDC 19, Control Room. The proposed changes to the NI ITAAC do not involve a change to the design of the NI. The annex building provides the security-controlled access path to the main control room. The change to the annex building ITAAC does not involve a change to the design of the annex building, shielding for the annex building, or the normal operation or post-accident radiation zoning of the annex building. The proposed change to the annex building does not affect the radiation zone of the security-controlled access path to the main control room because the floor was not credited with radiation shielding in development of the predicted radiation zoning for the security entrance shown in UFSAR Figure 12.3-2. Therefore, the design continues to comply with GDC 19.

### Change Control Process

During construction and quality control inspection, deviations from the design are identified and documented in N&D Reports. The N&D procedure was developed and is maintained in accordance with 10 CFR 50 Appendix B. Each nonconformance is individually reviewed and given a disposition by site design engineering. The N&D process requires interdisciplinary reviewers to determine the level of the impact and provide justification for deviations. For example, if a section of wall is identified as being thinner than the Acceptance Criteria, the cognizant design engineering group is involved to determine if structural or radiation shielding functionality is impacted. The N&D process identifies the design document(s) that the deviation potentially affects and when completed the record is archived.

The possible dispositions in N&D Reports are: "meets requirements," "rework," "use-as-is," "repair," "return to vendor" or "scrap." Use-as-is and repair dispositions represent a deviation to the specified design requirements. This type of disposition is subject to the same design control measures as applied to the original design and are reviewed and approved by the organization that performed the original design. The design control measures are established in accordance with requirements in 10 CFR 50 Appendix B Criterion III. Repaired and reworked items are re-verified in accordance with original criteria or as specified in the disposition.

Technical justification is required for use-as-is and repair dispositions that include sufficient information to justify the adequacy of the nonconforming item for its intended use. The justification assures that the structural design continues to meet the AP1000 plant design criteria documents and hence assures the structural design and shielding design objectives continue to satisfy the design criteria of UFSAR Subsections 3.8 and 12.3.2.2. The technical justification would (as applicable) include:

- Reference to existing calculations or analyses upon which the design is based.
- A description of the basis for the acceptability determination of an impacted component supported by additional calculations or analysis as deemed appropriate.
- Reference to any affected structural, functional or performance requirements.

The N&D process evaluates the impact of the deviations on the existing calculations or analyses upon which the design is based and identifies the impacted documents. The N&D Reports are archived as plant records and are associated (linked) with the impacted documents so that future review of an impacted document includes a review of the N&D Report to allow for systematic reconciliation.

As part of the N&D process, a review of the VEGP 3&4 licensing basis requirements associated with the nonconforming condition is performed. If any change to VEGP 3 and 4 UFSAR Tier 1, Tier 2 or Tier 2\* information is required to address the nonconformance, the processes for changes and departures described in 10 CFR 52, Appendix D, Section VIII will be followed. For instance, construction deviations affecting radiation shielding functionality (e.g., occupational and public dose, environmental qualification, aggregate impacts) are evaluated to ensure the resultant change is consistent with the Tier 2 design criteria, including but not limited to, VEGP 3&4 UFSAR Subsections 3.11.4 "Estimated Radiation and Chemical Environment," 3D.5.1.2 "Radiation Dose," and 12.3.2.1 "Shielding, Design Objectives". The evaluation will ensure there is no impact to compliance with the radiation protection licensing basis.

A new note (18) is being added to Table 3.3-1 to clarify that nonconformances from the specified thicknesses and tolerances (i.e. out of tolerance conditions) are addressed under the 10 CFR Part 50, Appendix B process and are subsequently screened in accordance with the 10 CFR Part 52, Appendix D, Section VIII process, to ensure that the licensing basis is adequately maintained. Construction deviations will continue to be assessed against licensing basis requirements and will be addressed in accordance with licensee procedures and regulatory requirements and, if applicable, a license amendment will be obtained prior to implementation of the change.

### **Changes to Nuclear Island ITAAC**

The proposed changes revise ITAAC in COL Appendix C to consolidate duplicative ITAAC requirements and allow reconciliation of thickness deviations from COL Appendix C Table 3.3-1 in the reconciliation reports for NI buildings. The proposed changes do not eliminate any Design Commitment for the NI buildings. The proposed changes do not eliminate any requirement for verifying structural and radiation shielding functions of the NI structural buildings. For each proposed ITAAC consolidation, the associated UFSAR design



information is consistent with the current plant design, and no structure, system, or component (SSC), design function, or analysis, as described in the UFSAR, is affected by the proposed changes.

According to the Acceptance Criteria for ITAAC Index Numbers 760, 761, 762, and 763, the reconciliation reports (as-built building reports) are required for each NI building. The as-built building reports reconcile design changes and site specific nonconformances between the as-designed and as-built building structures. The NI construction deviations from the thicknesses and tolerances specified in COL Appendix C Table 3.3-1 are individually evaluated through the nonconformance processes and are included in the as-built building reports as part of the nonconformance reconciliation. The reconciliation reports include evaluations of the radiation shielding function of as-built thicknesses which deviate in a negative direction. Therefore, the information in the thickness report is covered by the reconciliation report. The removal of the thickness report Acceptance Criteria for NI does not reduce the scope or intent of the ITAAC.

### **Changes to Annex Building ITAAC**

The Acceptance Criteria of ITAAC Number 768 is to verify the structural function of the as-built annex building structure through the verification of wall thickness. Similarly, the Acceptance Criteria of ITAAC Number 781 is to verify the radiation shielding function of the as-built annex building structure through the verification of wall thickness. The information provided in the annex building thickness report required by ITAAC Index Number 781 is duplicative with the information in the thickness report required by ITAAC Index Number 768. Therefore, it is acceptable to consolidate ITAAC Index Number 781 into ITAAC Index Number 768.

The proposed change would revise ITAAC 768 Acceptance Criteria to clarify that the annex building thickness report will include evaluations of thickness deviations identified during construction and demonstrate that as-built structures will withstand design basis loads without loss of structural integrity and without impacting the radiation protection licensing basis.

The proposed change would add a note in COL Appendix C Table 3.3-1 to allow evaluation of thickness deviations in the annex building thickness report. Annex building thickness deviations are evaluated by the structural group to confirm that there is no impact to the structural function. Thickness deviations in the negative direction are also evaluated by the radiation shielding group to confirm that there is no impact to compliance with the radiation protection licensing basis, such as GDC 19, established radiological zoning and equipment qualification, in the annex building as-built walls and floors. The thickness reports for the annex building summarize N&D Reports related to thickness deviations which were dispositioned prior to the thickness report completion and demonstrate there is no cumulative impact on the structural or shielding functions.

The proposed changes revise COL Appendix C ITAAC to consolidate duplicative requirements and allow evaluations of thickness deviations from COL Appendix C Table 3.3-1 thickness requirements. The proposed changes do not eliminate any requirement for verifying structural or radiation shielding functions of the annex building. The proposed changes do not alter the existing design requirements for the annex building as described in

UFSAR Subsection 3.7.2.8.1.

### **Changes to Turbine Building ITAAC**

The Acceptance Criteria of ITAAC Number 769 is to verify the structural function of the as-built turbine building through the verification of wall thickness. The proposed change will revise the ITAAC Acceptance Criteria to clarify that the turbine building thickness report will include evaluations of thickness deviations identified during construction and demonstrate that the as-built structure will withstand the design basis loads without loss of structural integrity.

The amendment will add a note in COL Appendix C Table 3.3-1 to allow evaluation of thickness deviations in the turbine building thickness report. Turbine building thickness deviations are evaluated by the structural group to confirm that there is no impact to the structural function. The thickness reports for the turbine building summarize N&D Reports related to thickness deviations which were dispositioned prior to the thickness report completion and demonstrate there is no cumulative impact on the structural function.

The proposed changes revise COL Appendix C ITAAC to allow evaluations of thickness deviations from COL Appendix C Table 3.3-1 thickness requirements. The proposed changes do not eliminate any requirement for verifying the structural function of the turbine building. The proposed changes do not alter the existing design requirements for the turbine building as described in UFSAR subsection 3.7.2.8.3.

### **Changes to Radwaste Building ITAAC**

The proposed radwaste building ITAAC change clarifies that the thickness report also includes the evaluations of thickness deviations identified during construction and demonstrates there is no impact to compliance with the radiation protection licensing basis. The radwaste building is a non-seismic steel framed structure designed in accordance with the Uniform Building Code (UBC). The radwaste building contains facilities for the handling and storage of plant wastes. Shielding is provided as necessary for the waste storage areas in the radwaste building to meet the radiation zone and access requirements. As discussed in the technical justification for NI changes, construction deviations are evaluated in accordance with N&D process which applies to thickness deviations from ITAAC Index Number 782 in the radwaste building. The thickness deviation in the positive direction does not impact the radiation shielding. Any thickness deviation in the negative direction is dispositioned by the cognizant engineering group to confirm that there is no impact to compliance with the radiation protection licensing basis, such as GDC 19, established radiological zoning and equipment qualification in the as-built walls. The thickness report for the radwaste building summarizes N&D Reports that are related to thickness deviations in the waste accumulation room which were dispositioned prior to the thickness report and were demonstrated to have no impact on radiation shielding.

The proposed changes do not impact Design Commitments for the radwaste building, because they do not eliminate any requirement for verifying radiation shielding of the radwaste building accumulation room. The proposed change does not change the current plant design, or affect SSCs, design function, or analysis, as described in the UFSAR.

### **Summary**

The proposed changes to ITAAC continue to comply with the requirements of 10 CFR Part 52 Appendix D and the COL Appendix C (and plant-specific Tier 1) design descriptions, and 10 CFR 52.99 for ITAAC closure notification and completion. These ITAAC consolidations and clarifications do not make technical changes to the COL Appendix C (and plant-specific Tier 1) design descriptions, tables, and figures. No structure, system, or component (SSC) design function or analysis as described in the UFSAR is affected. No defense-in-depth safety function is affected. There are no technical changes to plant-specific ITAAC line items.

COL Appendix C (and plant-specific Tier 1) information is comprised of the design information and functions subject to verification by the ITAAC closure process. The proposed changes do not technically affect design criteria, design functions or involve a decrease in safety provided by the associated systems. COL Appendix C (and plant specific Tier 1) ITAAC information will continue to adequately validate the corresponding UFSAR (Tier 2) design commitments.

The proposed changes do not impact an SSC, function or feature used in the prevention or mitigation of accidents or their safety or design analyses. The changes do not affect any SSC accident initiator or initiating sequence of events or involve any safety-related SSC or function used to mitigate an accident.

The proposed changes do not involve a change to a fission product barrier. The changes do not result in a new failure mode, malfunction, or sequence of events that could affect safety. The changes would not allow for a new fission product release path, result in a new fission product barrier failure mode, or create a new sequence of events that would result in significant fuel cladding failures.

The proposed changes do not affect any safety-related equipment, design code limit, safety related function, safety-related design analysis, safety analysis input or result, or design or safety margin. No safety analysis or design basis acceptance limit or criterion would be challenged or exceeded.

In conclusion, the proposed changes do not involve a technical (design, analysis, function or qualification) change, (e.g., there is no change to an associated calculation, design parameter or design requirement). Therefore, the changes would not result in a decrease in plant safety.

The proposed changes associated with this license amendment request do not affect the containment, control, channeling, monitoring, processing or releasing of radioactive and non-radioactive materials. No effluent release path is impacted. Therefore, radioactive or non-radioactive material effluents should not be affected. Plant radiation zones (as described in UFSAR Section 12.3), controls under 10 CFR 20, and expected amounts and types of radioactive materials are not affected by the proposed changes. Therefore, individual and cumulative radiation exposures will not change.

### **3. TECHNICAL EVALUATION (SEE SECTION 2)**

### **4. REGULATORY EVALUATION**

#### 4.1 Applicable Regulatory Requirements/Criteria

10 CFR 52.80(a) requires, in the relevant part, that the application must contain the proposed inspections, tests, and analyses that the licensee shall perform, and the acceptance criteria that are necessary and sufficient to provide reasonable assurance that, if the ITAAC are performed and the acceptance criteria met, the facility has been constructed and will be operated in conformity with the combined license, the provisions of the Act, and the Commission's rules and regulations. The proposed changes to ITAAC continue to comply with the requirements of 10 CFR Part 52 Appendix D and the COL Appendix C (and plant-specific Tier 1) design descriptions, and 10 CFR 52.99 for ITAAC closure notification and completion. These ITAAC consolidations and clarifications do not make technical changes to the COL Appendix C (and plant-specific Tier 1) design descriptions, tables, and figures.

10 CFR 52.98(f) requires NRC approval for any modification to, addition to, or deletion from the terms and conditions of a COL. This amendment involves a departure from plant specific Tier 1 information, and corresponding changes to the COL Appendix C. Therefore, this amendment requires a proposed amendment to the COL. Accordingly, NRC approval is required prior to making the plant-specific changes in this license amendment request.

10 CFR Part 52, Appendix D, Section VIII.B.5.a allows an applicant or licensee who references this appendix to depart from Tier 2 information, without prior NRC approval, unless the proposed departure involves a change to or departure from Tier 1 information, Tier 2\* information, or the Technical Specifications, or requires a license amendment under paragraphs B.5.b or B.5.C of the section. Potential impacts to Tier 1, Tier 2, or Tier 2\* information are evaluated using this process. Since the proposed changes include changes to Tier 1 information, NRC approval is required. The proposed changes will continue to comply with the processes for changes and departures described in 10 CFR 52, Appendix D, Section VIII. All nonconformances will be reviewed and evaluated to determine if changes to Tier 1, Tier 2 or Tier 2\* information are required.

10 CFR 20, Subpart C, § 20.1201(a), Occupational dose limits for adults, requires the licensee control occupational dose to individual adults, except for planned special exposures under § 20.1206, to the more limiting of the annual limits prescribed therein. The proposed amendment does not involve an increase in plant radiation zones or a change in radiation shielding analysis methodology and will not adversely affect personnel occupational dose. The proposed amendment does not require a change in the design of any structure that provides radiation shielding. Therefore, engineered structures used to aid compliance with 10 CFR 20.1201(a) are not adversely affected.

10 CFR 50, Appendix A, General Design Criterion (GDC) 1, Quality standards and records, requires that structures, systems, and components important to safety be designed, fabricated, erected, and tested to quality standards commensurate with the importance of the safety functions to be performed. The NI and the seismic Category II portion of the annex building and turbine building first bay continue to meet the design codes committed to in the UFSAR Subsections 3.3.2.3 and 3.8. GDC 1 also requires

that appropriate records of the design, fabrication, erection, and testing of structures, systems, and components (SSCs) important to safety be maintained by or under the control of the nuclear power unit licensee throughout the life of the unit. The quality assurance requirements of Appendix B to 10 CFR Part 50 are applied to activities affecting the NI and the seismic Category II portion of the annex building and turbine building first bay. The proposed changes do not affect the quality assurance program and compliance with GDC 1 is maintained.

10 CFR 50, Appendix A, GDC 2, Design Bases for Protection Against Natural Phenomena, requires that SSCs important to safety shall be designed to withstand the effects of natural phenomena such as earthquakes, tornados, hurricanes, floods, tsunamis, and seiches without loss of capability to perform their safety functions. The proposed change to NI structure ITAAC does not require revision to any of the seismic analyses for the NI or the containment internal structures. The design of the NI structures continues to comply with the ACI 349-01 code. The proposed change to clarify the annex building ITAAC does not involve a change to the design of the annex building as described in the UFSAR. The proposed change does not require a revision to the seismic analyses for the seismic Category II area of the annex building. The proposed changes do not involve a reduction in the ability of any structure, system or component to withstand the effects of natural phenomena; and compliance with GDC 2 is maintained.

10 CFR 50, Appendix A, GDC 3, Fire Protection, requires that SSCs important to safety shall be designed and located to minimize, consistent with other safety requirements, the probability and effect of fires and explosions. The proposed change does not involve a design basis change or change to the fire areas or zones described in the UFSAR. The proposed ITAAC change does not adversely affect plant fire protection features protecting SSCs important to safety. Therefore, the requirements of GDC 3 continue to be met.

10 CFR 50, Appendix A, GDC 4, Environmental and Dynamic Effects Design Bases, requires SSCs important to safety be designed to accommodate the effects of and to be compatible with the environmental conditions associated with normal operation, maintenance, testing, and postulated accidents, including loss-of-coolant accidents. The changes to the NI ITAAC are consolidation changes only, and do not involve a change to the design of the NI. The changes to annex building ITAAC are also consolidations and do not involve a change to the design of the annex building. The annex building does not house SSCs important to safety. However, the annex building is designed such that the portion of the building adjacent to the auxiliary building maintains structural integrity during a safe shutdown earthquake. The proposed change to the annex building ITAAC does not impact the seismic analysis of the Seismic Category II portion of the annex building. Therefore, the design continues to comply with GDC 4.

10 CFR 50, Appendix A, GDC 19, Control Room, requires a control room be provided from which actions can be taken to operate the nuclear power unit safely under normal conditions and to maintain it in a safe condition under accident conditions, including loss-of-coolant accidents. GDC 19 also requires adequate radiation protection be provided to permit access and occupancy of the control room under accident conditions

without personnel receiving radiation exposures in excess of 5 rem whole body, or its equivalent to any part of the body, for the duration of the accident. The proposed changes to the NI ITAAC are consolidation changes only and do not involve a change to the design of the NI. The annex building provides the security-controlled access path to the main control room. The change to the annex building ITAAC does not involve a change to the design of the annex building, shielding for the annex building, or the normal operation or post-accident radiation zoning of the annex building. The proposed change to the annex building does not affect the radiation zone of the security-controlled access path to the main control room because the floor was not credited with radiation shielding in development of the predicted radiation zoning for the security entrance shown in UFSAR Figure 12.3-2. Therefore, the design continues to comply with GDC 19.

#### **4.2 Precedent**

None.

#### **4.3 No Significant Hazards Consideration Determination**

The proposed changes revise COL Appendix C (and plant-specific Tier 1 information) to consolidate duplicative ITAAC Acceptance Criteria for certain structures and clarify that evaluations of thickness deviations will be included in the reconciliation and thickness reports described in the ITAAC or COL Appendix C Table 3.3-1.

An evaluation to determine whether or not a significant hazards consideration is involved with the proposed amendment was completed by focusing on the three standards set forth in 10 CFR 50.92, "*Issuance of amendment*," as discussed below:

##### **4.3.1 Does the proposed amendment involve a significant increase in the probability or consequences of an accident previously evaluated?**

Response: No

The proposed changes do not affect the operation or reliability of any system, structure or component (SSC) required to maintain a normal power operating condition or to mitigate anticipated transients without safety-related systems. The changes to NI, annex building, turbine building and Waste Accumulation Room ITAAC involves no design changes or technical reanalysis. The changes consolidate duplicative ITAAC Acceptance Criteria and clarify the evaluations of thickness deviations.

Therefore, the requested amendment does not involve a significant increase in the probability or consequences of an accident previously evaluated.

##### **4.3.2 Does the proposed amendment create the possibility of a new or different kind of accident from any accident previously evaluated?**

Response: No

The proposed changes do not affect the operation of any safety-related SSC

relied upon to mitigate design basis accidents. The proposed changes to the NI, annex building, turbine building, and Waste Accumulation Room ITAAC do not involve a change to design or reanalysis. The proposed changes do not affect the structural integrity or seismic response of the NI and the seismic Category II portion of the annex building and turbine building first bay. The design of these structures continues to meet the requirements of 10 CFR 50 Appendix A General Design Criterion 2, Design Bases for Protection Against Natural Phenomena. Therefore, the proposed changes do not create the possibility of a new or different kind of accident from any previously evaluated.

#### **4.3.3 Does the proposed amendment involve a significant reduction in a margin of safety?**

Response: No

The proposed changes do not affect existing safety margins. The proposed changes to NI, annex building, turbine building, and Waste Accumulation Room ITAAC do not involve a change to the design or reanalysis of the structures. The proposed changes do not involve a reduction to the structural integrity of the seismic Category I or II portions of building structures. The NI and the seismic Category II portion of the annex building and turbine building first bay will continue to support their design functions. No margin to the specified acceptable fuel design limits is affected by the proposed changes.

#### **4.4 Conclusions**

Based on the considerations discussed above, (1) there is reasonable assurance that the health and safety of the public will not be endangered by operation in the proposed manner, (2) such activities will be conducted in compliance with the Commission's regulations, and (3) the issuance of the amendment will not be inimical to the common defense and security or to the health and safety of the public. Therefore, it is concluded that the requested amendment does not involve a significant hazards consideration under the standards set forth in 10 CFR 50.92(c), and, accordingly, a finding of "no significant hazards consideration" is justified.

### **5. ENVIRONMENTAL CONSIDERATIONS**

Section 2 of this License Amendment Request provides the details of the proposed changes.

The proposed changes affect the COL Appendix C and associated plant-specific Tier 1 information.

#### *(i) There is no significant hazards consideration.*

As described in Section 4.3, Significant Hazards Consideration Determination, an evaluation was completed to determine whether or not a significant hazards consideration is involved by focusing on the three standards set forth in 10 CFR 50.92, "Issuance of amendment." The Significant Hazards Consideration Determination concluded that: (1) the proposed amendment does not involve a significant increase in the probability or consequences of an accident previously evaluated; (2) the proposed amendment does not create the possibility of a new or different kind of accident from any

accident previously evaluated; and (3) the proposed amendment does not involve a significant reduction in a margin of safety. Therefore, it is concluded that the proposed amendment does not involve a significant hazards consideration under the standards set forth in 10 CFR 50.92(c), and accordingly, a finding of "no significant hazards consideration" is justified.

- (ii) *There is no significant change in the types or significant increase in the amounts of any effluents that may be released offsite.*

The proposed changes do not affect any aspect of plant construction or operation that introduces a change to any effluent types (for example effluents containing chemicals or biocides, sanitary system effluents, and other effluents), and does not affect any plant radiological or non-radiological effluent release quantities. The proposed changes do not affect the structure or functionality of any design feature or operational arrangements credited with controlling the release of effluents during plant operation. The proposed changes to NI, annex building, turbine building, and Waste Accumulation Room ITAAC do not involve a change to the design of the associated structures. The proposed changes to the ITAAC do not involve a change to any system associated with containing, controlling, channeling, monitoring, or processing radioactive or non-radioactive materials. The proposed change to the NI, annex building, turbine building, and Waste Accumulation Room ITAAC do not involve a change to any systems or structures associated with containing, controlling, channeling, monitoring, or processing radioactive or non-radioactive materials that may be released offsite.

Therefore, there is no significant change in the types or significant increase in the amounts of any radioactive or non-radioactive effluents that may be released offsite.

- (iii) *There is no significant increase in individual or cumulative occupational radiation exposure.*

Company and station policies keep radiation exposure of personnel within limits defined by 10 CFR 20, "Standards for Protection Against Radiation." Administrative procedures and practices are implemented to maintain radiation exposure of personnel as low as is reasonably achievable.

The proposed changes to the NI, annex building, turbine building, and Waste Accumulation Room ITAAC revises COL Appendix C (and plant-specific Tier 1 information) to consolidate duplicative ITAAC Acceptance Criteria for certain structures and clarify that evaluations of thickness deviations are included in the reconciliation and thickness reports described in the ITAAC. This change does not involve an increase in individual or cumulative occupational radiation exposure because the proposed change does not adversely affect radiation shielding analyses. There are no systems in the control support area or the surrounding rooms that normally contain radioactive material, and adequate shielding from normal radiation sources is provided by the shield building and shield walls between the radiologically controlled and non-radiologically controlled areas of the auxiliary building. Therefore, the requested amendment does not involve a significant increase in individual or cumulative occupational radiation exposure.

## 6. REFERENCES

None.