ENCLOSURE 1

License Amendment Request:
Remove Tier 1 and Tier 2* Requirements

1. SUMMARY DESCRIPTION

Southern Nuclear Operating Company (SNC) requests an amendment to the combined license (COL) for Vogtle Electric Generating Plant (VEGP) Units 3 and 4 (License Numbers NPF-91 and NPF-92). The proposed change would remove the Tier 1 document from the licensing basis documents for Units 3 and 4, revert the Tier 2* information to Tier 2 for Units 3 and 4, and revise the Updated Final Safety Analysis Report (UFSAR) accordingly.

2. DETAILED DESCRIPTION

2.1 System Design and Operation

System design and operation information is provided in the UFSAR (which includes the Tier 2 and Tier 2* information) and much of the UFSAR high-level information, and considerable detail, is repeated in the required and maintained plant-specific Tier 1 document.

2.2 Current Requirements

10 CFR Part 52, Appendix D, Section II, defines *Tier 1* as the portion of the design-related information contained in the generic design control document (DCD) that is approved and certified by Appendix D and identifies that the Tier 1 information includes:

1. Definitions and general provisions;
2. Design descriptions;
3. Inspections, tests, analyses, and acceptance criteria (ITAAC);
4. Significant site parameters; and
5. Significant interface requirements.

The definition of Tier 1 also indicates that the design descriptions, interface requirements, and site parameters are derived from Tier 2 information.

10 CFR Part 52, Appendix D, Section X.A.2 requires that the licensee maintain a Tier 1 document that reflects generic and plant-specific changes made to the Tier 1 information.

Currently, SNC maintains a separate plant-specific Tier 1 information document for both Unit 3 and Unit 4 that includes the generic and plant-specific departures. This Tier 1 document is updated and changes to the document are reported in accordance with 10 CFR Part 52, Appendix D, Section X.B. Compliance with this document is required as identified 10 CFR Part 52, Appendix D, Section III.B where it states in part “An applicant or licensee referencing this appendix… **shall incorporate by reference and comply with the requirements of this appendix, including Tier 1…**.”

10 CFR Part 52, Appendix D, Section II, defines *Tier 2** as the portion of the Tier 2 information, designated as such in the generic DCD, which is subject to the change process in Section VIII.B.6. Section VIII.B.6 identifies the specifics of the twenty-four matters that were specifically designated as Tier 2*. Eight items are identified as permanent Tier 2* matters. These are:

(1) Maximum fuel rod average burn-up.
(2) Fuel principal design requirements.
(3) Fuel criteria evaluation process.
(4) Fire areas. [[This matter removed by Amendment No. 44.]]
(5) Reactor coolant pump type.
(6) Small-break loss-of-coolant accident (LOCA) analysis methodology.
(7) Screen design criteria.
(8) Heat sink data for containment pressure analysis.

The remaining sixteen Tier 2* items are identified as matters that revert to Tier 2 information once the unit first achieves full power operation following the finding required by 10 CFR 52.103(g). These are:

(1) Nuclear Island structural dimensions.
(2) American Society of Mechanical Engineers Boiler & Pressure Vessel Code ASME Code) piping design and welding restrictions, and ASME Code Cases.
(3) Design Summary of Critical Sections.
(4) American Concrete Institute (ACI) 318, ACI 349, American National Standards Institute/American Institute of Steel Construction (ANSI/AISC) N-690, and American Iron and Steel Institute (AISI), "Specification for the Design of Cold Formed Steel Structural Members, Part 1 and 2," 1996 Edition and 2000 Supplement.
(5) Definition of critical locations and thicknesses.
(6) Seismic qualification methods and standards.
(7) Nuclear design of fuel and reactivity control system, except burn-up limit.
(8) Motor-operated and power-operated valves.
(9) Instrumentation and control system design processes, methods, and standards.
(10) Passive residual heat removal (PRHR) natural circulation test (first plant only).
(11) Automatic depressurization system (ADS) and core make-up tank (CMT) verification tests (first three plants only).
(12) Polar crane parked orientation.
(13) Piping design acceptance criteria.
(14) Containment vessel design parameters, including ASME Code, Section III, Subsection NE.
(15) Human factors engineering.
(16) Steel composite structural module details.

The UFSAR incorporates the plant-specific DCD, which includes some information designated as Tier 2*. Amendment No. 44 to the VEGP Unit 3 and Unit 4 COLs reclassified the above Tier 2* fire area matter as Tier 2 information. The remaining Tier 2* matters are subject to the change process in Section VIII.B.6 of 10 CFR Part 52, Appendix D, as modified by the criteria-based departure process approved by the NRC in License Amendment Nos. 142 and 141 for VEGP Unit 3 and Unit 4, respectively. This Appendix D change process requires that the licensee not depart from information included in the Tier 2* material without prior NRC approval, and the modified process in Amendments 142 and 141 allows the application of the Tier 2 change process in 10 CFR Part 52, Appendix D, paragraph VIII.B.5, provided the specific criteria in License Condition 2.D.(13) are not present.

Thus, potential Tier 1 information impact and potential Tier 2* information impact are considered when any design change is proposed.

2.3 Reason for Proposed Change

VEGP Units 3 and 4 have completed the requirements in the tables that provide the specific ITAAC identified in both Tier 1 and in the COL Appendix C and thus, as identified in 10 CFR Part 52, Appendix D, Section IX.B.3, the ITAAC tables "no longer constitute regulatory requirements, either for licensees or for renewal of the license; except for specific ITAAC, which are the subject of a §52.103(a) hearing, their expiration will occur upon final Commission action in such a proceeding." No specific ITAAC are the subject of a §52.103(a) hearing. Thus, the specific tables of ITAAC in the Tier 1 document may be removed. Since the Tier 1 document ITAAC tables no longer reflect requirements for VEGP Units 3 and 4, this portion of the requested amendment is an administrative change.

The rest of the Tier 1 document (beyond the specific ITAAC tables) is required to be maintained, as discussed above, and required to be considered for design changes. As indicated above, the Tier 1 design descriptions, interface requirements, and site parameters are derived from Tier 2 information. As explained below in the Technical Evaluation, SNC believes that the Tier 1 information and the Tier 2* designations have fulfilled their purpose and the additional considerations for proposed changes are no longer warranted.

Note that Enclosure 2 requests the required exemption from the Tier 1 information document requirements and references the Significant Hazards Consideration provided in Section 4.3 below.

2.4 Description of Proposed Change

The proposed change would remove the Tier 1 document from the VEGP Unit 3 and Unit 4 licensing basis, modify the COLs to include permanent exemptions from the Tier 1 and Tier 2* requirements, revert the remaining Tier 2* information to Tier 2 information, and remove the existing exemption in the COL Section 2.D.(13) related to departures from plant-specific DCD Tier 2* information.

Markups showing these changes are provided in Attachment 1. Attachment 1 also includes associated UFSAR changes to be implemented along with the amendment/exemption. These associated UFSAR changes are shown for information.

3. TECHNICAL EVALUATION

The proposed change would remove the Tier 1 document from the VEGP Unit 3 and Unit 4 licensing basis, modify the COLs to include permanent exemptions from the Tier 1 and Tier 2* requirements, revert the remaining Tier 2* information to Tier 2 information, and remove the existing exemption in COL Section 2.D.(13) related to departures from plant-specific DCD Tier 2* information.

Tier 1 requirements are defined by 10 CFR Part 52, Appendix D, Section II.D, as:

> "…the portion of the design-related information contained in the generic DCD that is approved and certified by this appendix (Tier 1 information). The design descriptions, interface requirements, and site parameters are derived from Tier 2 information. Tier 1 information includes:
>
> 1. Definitions and general provisions;
> 2. Design descriptions;
> 3. Inspections, tests, analyses, and acceptance criteria (ITAAC);
> 4. Significant site parameters; and
> 5. Significant interface requirements."

On August 3, 2022, the NRC issued the 10 CFR 52.103(g) letter to VEGP Unit 3, recognizing that the ITAAC had been satisfied [ADAMS Accession No. ML20290A284]. On Month #, 2023, the NRC issued the 10 CFR 52.103(g) letter to VEGP Unit 4, recognizing that the ITAAC had been satisfied [ADAMS Accession No. ML#####A###].

As identified in 10 CFR Part 52, Appendix D, Section IX.B.3, "After the Commission has made the finding required by 10 CFR 52.103(g), the ITAAC do not, by virtue of their inclusion within the DCD, constitute regulatory requirements either for licensees or for renewal of the license; except for specific ITAAC, which are the subject of a §52.103(a) hearing, their expiration will occur upon final Commission action in such a proceeding." No specific ITAAC are the subject of a §52.103(a) hearing. Thus, the specific tables identified in the plant-specific Tier 1 information as ITAAC are no longer requirements for VEGP Unit 3 or Unit 4.

The remaining portion of the plant-specific Tier 1 information required to be maintained by the regulations in 10 CFR Part 52, Appendix D, Section X.A.1 and Section X.A.2, includes design descriptions (including descriptive information provided in non-ITAAC tables and figures), significant site parameters, significant interface requirements, and the associated definitions and general provisions. However, as noted in the Tier 1 information definition above, this Tier 1 information

is “derived from Tier 2 information.” It follows from the regulations that removal of the Tier 1 requirements would not change the design, nor remove any design information from the licensing basis. The only impact would be to the criteria used for evaluation of changes to determine if prior NRC approval is required.

During the construction of VEGP Unit 3, it was recognized that some changes required prior NRC approval only because the information was designated as Tier 1, i.e., some of the changes required to be reviewed and approved by the NRC had no impact to the health and safety of the public, and the change would not have met the Tier 2 change evaluation criteria that would have otherwise led to prior NRC review and approval. Some of these were simply editorial changes or changes to correct mislabeled equipment identification, or other similar changes that do not change the meaning or substance of the safety information presented. The purpose of the Tier 1 regulations is not served by requiring prior NRC approval of an exemption for this type of change.

The above concern is supported by Commission expectations as provided in the Statements of Consideration for the initial issuance of Part 52 (54FR15372) which states:

> How much flexibility § 50.12 will provide depends in large part on how much detail is present in a design certification, and just how much is present will be an issue which will have to be resolved in each certification rulemaking. The Commission does expect, however, that there will be less detail in a certification than in an application for certification, and that a rule certifying a design is likely to encompass roughly the same design features that § 50.59 prohibits changing without prior NRC approval. Moreover, the level of design detail in certifications should afford licensees an opportunity to take advantage of improvements in equipment.

The latter portion of the highlighted expectation is not consistent with the level of detail included in the AP1000 Tier 1 requirements. Further, if the expectation and intent was that the certified information would “encompass roughly the same design features that § 50.59 prohibits changing without prior NRC approval,” then the Tier 1 change criteria should be adequately addressed by the change criteria of § 50.59, and thus, additional Tier 1 change criteria is unnecessary. The level of detail included in the AP1000 Tier 1 requirements, however, goes well beyond the level of detail of design features that § 50.59 prohibits changing without prior NRC approval, adding significant regulatory burden to the licensee and to the NRC Staff.

Even without the Tier 1 requirements, every change would continue to be evaluated for potential impact in accordance with § 50.59, the Tier 2 change criteria in 10 CFR Part 52 Appendix D, and for continued compliance with the applicable regulations. Thus, changes would continue to be submitted for NRC review and approval prior to implementation consistent with the change processes allowed for the Part 50 licensees, as modified by the 10 CFR Part 52, Appendix D, paragraph VIII.B.5 change criteria.

The statements of consideration discussion of the AP1000 Design Certification Final Rule (71FR04464) included the following similar information pertinent to the appropriate change processes.

- In an earlier rulemaking (64 FR 53582; October 4, 1999), the Commission revised 10 CFR § 50.59 to incorporate new thresholds for permitting changes to a plant as described in the FSAR without NRC approval. For consistency and clarity, the Commission proposes to use these new thresholds in the proposed AP1000 DCR. Inasmuch as § 50.59 is the primary change mechanism for operating nuclear plants, the Commission believes that future plants referencing the AP1000 DCR should utilize thresholds as close to § 50.59 as is practicable and appropriate.

SNC agrees with the Commission belief "that future plants referencing the AP1000 DCR should utilize thresholds as close to § 50.59 as is practicable and appropriate," and this is precisely the criteria that SNC requests be applied to future VEGP changes; i.e., those identified in 10 CFR 52 Appendix D Section VIII.B subsections 1 through 5 for Tier 2 information and § 50.59 for plant-specific final safety analysis report information.

As noted in the statements of consideration for the 1999 revisions to 10 CFR 50.59 (64FR53582), "The intent of the § 50.59 process is to permit licensees to make changes to the facility, provided the changes maintain acceptable levels of safety as documented in the SAR. The process was thus structured around the licensing approach of design basis events (anticipated operational occurrences and accidents), safety-related mitigation systems, and consequence calculations for the design basis accidents." However, the design certification rulemakings have gone beyond this process to "maintain acceptable levels of safety as documented in the SAR" without any apparent significant benefits. On the contrary, as noted above, the additional requirements have, on several occasions, led to expenditure of licensee and NRC Staff resources with little or no impact on the safety of the plant or the public. Further, the additional requirements have, on several occasions, led to expenditure of licensee and NRC Staff resources when the change could have been sufficiently addressed by considering the impact in accordance with the "50.59-like" process included in Appendix D to 10 CFR Part 52, again with little or no impact on the safety of the plant or the public. The continued expenditure of these significant additional resources without a corresponding significant increase in safety are not warranted and should be eliminated as identified in this exemption request.

The statements of consideration discussion of the AP1000 Design Certification Final Rule (at 70FR20062) included the following information pertinent to the Tier 1 designation.

- The Tier 1 design descriptions serve as design commitments for the lifetime of a facility referencing the design certification.
- [S]ubsequent modifications to the facility must comply with the design descriptions in the plant-specific DCD unless changes are made in accordance with the change process in Section VIII of this appendix.

- The Tier 1 interface requirements are the most significant of the interface requirements for systems that are wholly or partially outside the scope of the standard design, which were submitted in response to 10 CFR 52.47(a)(1)(vii) and must be met by the site-specific design features of a facility that references this appendix.
- The Tier 1 site parameters are the most significant site parameters, which were submitted in response to 10 CFR 52.47(a)(1)(iii). An application that references this appendix must demonstrate that the site parameters (both Tier 1 and Tier 2) are met at the proposed site (refer to III.D of this SOC).

Each of these points is considered below.

- The Tier 1 design descriptions serve as design commitments for the lifetime of a facility referencing the design certification.

  The Tier 1 design descriptions are based on the more detailed Tier 2 design descriptions which also serve as design commitments for the lifetime of a facility. Thus, these design commitments are not removed by the proposed exemption from the Tier 1 requirements.

- [S]ubsequent modifications to the facility must comply with the design descriptions in the plant-specific DCD unless changes are made in accordance with the change process in Section VIII of this appendix.

  Subsequent modifications to the facility must still comply with the design descriptions in the plant-specific DCD unless changes are made in accordance with the change process in Section VIII applicable for the more detailed Tier 2 design descriptions. Similarly, plant-specific final safety analysis report design descriptions changes are made in accordance with the change process in § 50.59. Thus, the review requirements for subsequent modifications are not removed by the proposed exemption from the Tier 1 requirements.

  With regard to standardization, there are several pertinent points provided in the Statements of Consideration for the initial issuance of Part 52 (54FR15372) many of which indicate an intent of “early resolution” of issues:

  > In the Two General Responses to Comments discussion, “However, the Commission has stuck to the simple aim in this rulemaking of providing procedures for the standardization of nuclear power plants and more generally for the early resolution of safety and environmental issues in licensing proceedings.”
  >
  > Under the Applicability of Existing Standards discussion, “Application of Parts 20, 50, 73, and 100 to the certification of new designs, as reflected in § 52.48, should go a long way toward establishing the regulatory standard that new designs must meet, and thereby provide the regulatory stability that is an essential prerequisite to realizing the benefits of standardization.”
  >
  > More particularly, under the Finality discussion, “Standardization has the double aim of enhancing safety and making it possible to resolve design issues before construction. Of these two aims, enhanced safety is the chief, because pre-construction resolution of design issues could be achieved simply through combined construction permits and operating licenses with

> conditions. Achievement of the enhanced safety which standardization makes possible will be frustrated if too frequent changes to either a certified design or the plants referencing it are permitted.

The rule put forward principally three means of preventing a continual regression from standardization. First, the rule required that any amendment proffered by the "holder" of a certification be considered in a notice and comment rulemaking and granted if the amendment complied with the Atomic Energy Act and the Commission's regulations. Second, the rule prohibited the licensee of a plant built according to a certified design from making any change to any part of the plant which was described in the certification unless the licensee had been granted an exemption under 10 CFR 50.12 from the rule certifying the design. Third, the rule stated that the Commission would not backfit a certified design or the plants built according to it unless a backfit were necessary to assure compliance with the applicable regulations or to assure adequate protection of public health and safety. See § 52.63 of the proposed rule, 53 FR 32074, col. 3, to 32075, col. 2."

The first of these "three means of preventing a continual regression from standardization" is not applicable to combined license holders. The second and third "means" are pertinent to the exemption request.

To-date, approvals have been granted for more than one hundred Tier 1 exemptions, more than fifty Tier 2* changes, and more than 40 changes to the Technical Specifications. For completeness, there have also been 14 changes that affected only the COL three changes for approval based on a change to a method of evaluation, and a few other changes related to emergency planning and security topics.

Of note is that for the over one hundred Tier 1 exemption approvals and the over fifty Tier 2* departure approvals, the NRC Staff has not taken any action related to imposing the change via rulemaking pursuant to § 52.63 for either the certified design or to the other combined license holders. For each exemption approved, the 52.63(a)(4)(ii) "special circumstances" were justified to "outweigh any decrease in safety from the reduction in standardization." As such, the divergence from standardization was not deemed to be a significant reduction in safety.

To the extent that "increased standardization of the certification information" is desired, the Commission can still implement the modification on the design certification rule under 52.63(a)(1) and apply the modification to all plants referencing the certified design per 52.63(a)(3).

To envision the utilization of the 52.63(a)(4)(ii) "special circumstances" hurdle to enforce greater standardization (where reduction in safety is not present) inappropriately delegates the responsibility for achieving the standardization goal to the combined license holder. The exemption should not be withheld on this basis.

Should this requested exemption be approved, the maintenance of standardization would continue to be advantageous to the future combined license holders (as it was deemed to be for VEGP Units 3 and 4) and the vast majority of these changes would be expected to be requested and approved by

the combined license holders. Similarly, there are often other Tier 2 or other licensing basis document changes that are associated with the amendments, and numerous other changes to licensing basis documents (~1400 non-LAR changes made for VEGP Units 3 and 4 to date), that will also be advantageous to be implemented by the combined license holders in order to maintain standardization.

Finally, approval of the exemption may actually promote standardization by reducing the cost and delay of implementation by each of the combined license holders through simplification of the process for evaluation and acceptance of many of the changes. Non-trivial cost and burden for non-safety significant license amendment and exemptions may actually deter from standardization in that licensees may attempt to avoid subjecting themselves to the license amendment and exemption processes. Thus, simpler internal process under Part 52 Appendix D, Section VIII 50.59-like criteria could actually improve maintenance of standardization.

SNC also notes that in SECY-22-0052, which proposes Part 52 revisions, the NRC is proposing to remove the Part 52 requirement to consider standardization as a criterion for justification for making changes in a combined license. Accordingly, based on actions to-date, standardization maintenance may be best addressed by the NRC Staff as a § 52.63 modification of the certification information through a determination for each previously approved change that the change "contributes to increased standardization of the certification information."

- The Tier 1 interface requirements are the most significant of the interface requirements for systems that are wholly or partially outside the scope of the standard design, which were submitted in response to 10 CFR 52.47(a)(1)(vii) and must be met by the site-specific design features of a facility that references this appendix.

  The Tier 1 interface requirements were addressed during the COL application review and shown to be met by the site-specific design features of the facility in the safety analysis report which incorporates the plant-specific and more detailed Tier 2 design descriptions. Thus, the interface requirements and their relationship to the site-specific design features of the facility are not removed by the proposed exemption from the Tier 1 requirements.

- The Tier 1 site parameters are the most significant site parameters, which were submitted in response to 10 CFR 52.47(a)(1)(iii). An application that references this appendix must demonstrate that the site parameters (both Tier 1 and Tier 2) are met at the proposed site (refer to III.D of this SOC).

  The Tier 1 site parameters were addressed during the COL application review and shown to be met by the facility site in the safety analysis report which incorporates the plant-specific and more detailed Tier 2 design descriptions. Thus, the site parameters and their relationship to the facility site are not removed by the proposed exemption from the Tier 1 requirements.

Because the NRC has also identified in Appendix D to 10 CFR Part 52 that some Tier 2 information (designated as Tier 2*) must also be reviewed by NRC prior to implementing changes to that information, the above discussions regarding prior

approval of Tier 1 information would also be generally applicable to Tier 2* information.

Similar to the above Tier 1 discussion, the statements of consideration discussion of the AP1000 Design Certification Final Rule included the following information pertinent to the Tier 2* designation.

- Certain Tier 2 information has been designated in the generic DCD with brackets and italicized text as ‘‘Tier 2*’’ information and, as discussed in greater detail in the section-by-section explanation for paragraph VIII.B, a plant-specific departure from Tier 2* information requires prior NRC approval.

  The Tier 2* design description information also continues to serve as design commitments for the lifetime of a facility. Thus, the Tier 2* design commitments are not removed by the proposed exemption from the Tier 2* requirements but would continue to be treated as Tier 2 design commitments.

Thus, as noted above, approval of the proposed exemptions from the Tier 1 and Tier 2* requirements would not remove design information from the licensing basis, and subsequent changes to the facility design would continue to maintain acceptable levels of safety through evaluations in accordance with the “50.59-like” criteria provided in Section VIII of Appendix D to 10 CFR Part 52.

SNC previously requested via LAR 17-037 (and was granted) a site-specific permanent exemption and license amendment that allows use of new criteria to determine whether a proposed Tier 2* departure can be treated as a departure from Tier 2 information under 10 CFR Part 52, Appendix D, paragraph VIII.B.5, or whether the departure requires prior NRC approval under Appendix D, paragraph VIII.B.6.1. In addition, the amendment applied the same license condition criteria to departures from Tier 2 information that involve changes to or departures from certain Tier 2* information. The safety evaluation for the amendment states “The staff focused on whether the proposed exemption and new license condition would assure that departures from Tier 2* information would be governed by regulatory controls commensurate with the safety significance of the information.” As noted above, SNC agrees with “The intent of the § 50.59 process is to permit licensees to make changes to the facility, provided the changes maintain acceptable levels of safety as documented in the SAR.” Thus, it is reasonable to deduce that if the § 50.59 process maintains acceptable levels of safety for Part 50 plants, that the § 50.59 process would also be appropriate “regulatory controls commensurate with the safety significance of the information” and that the additional Tier 2* designations and change controls are, therefore, unnecessary.

SNC is aware of the proposal in SECY-22-0052 to change Commission regulations to add a definition that contains two general principles for Tier 1 information content: (1) Tier 1 information should be described at a qualitative and functional level of detail, and (2) Tier 1 information should not include detail that could necessitate NRC approval for departures from the certified design that have minimal safety significance, and that the NRC is proposing the same refinements to the definition of Tier 2* information. However, the proposed rule changes would provide no relief from the burdens imposed by the current 10 CFR Part 52 Appendix D requirements applicable to combined license holders who reference the AP1000 certified design.

Accordingly, Southern Nuclear Operating Company (SNC or the Licensee) is requesting a permanent exemption from the provisions of 10 CFR 52, Appendix D, to maintain, and to evaluate and document departures and further exemptions from, the plant-specific Tier 1 and Tier 2* information applicable to the VEGP Unit 3 and Unit 4 COLs. With approval of the requested exemption, SNC would no longer maintain or consider any Tier 1 information, and all Tier 2* information would revert to Tier 2 information for future considerations.

10 CFR 52.98(c) requires NRC approval for any modification to, addition to, or deletion from the terms and conditions of a COL. This request involves changes to a license condition related to exemptions. Therefore, this activity requires NRC approval of the proposed amendment to the COL.

4 REGULATORY EVALUATION

4.1 Applicable Regulatory Requirements/Criteria

The AP1000 Design Control Document (DCD) Tier 1 information is defined, considered, and controlled in accordance with 10 CFR Part 52, Appendix D, as regulation. The DCD Tier 2* information is also considered and controlled as incorporated into the VEGP Updated Final Safety Analysis Report (UFSAR).

4.2 Precedent

None.

4.3 Significant Hazards Consideration

Southern Nuclear Operating Company (SNC) is requesting an amendment to Combined License (COL) Nos. NPF-91 and NPF-92 for Vogtle Electric Generating Plant (VEGP) Unit 3 and Unit 4. The license amendment request (LAR) proposes to revise the VEGP Unit 3 and Unit 4 combined licenses (COLs) to include a permanent exemption from the provisions of 10 CFR 52, Appendix D, to maintain, and to evaluate and document departures and further exemptions from, the plant-specific Tier 1 and Tier 2* information applicable to the VEGP Unit 3 and Unit 4 COLs. With approval of the requested exemption, SNC would no longer maintain or consider any Tier 1 information, and all Tier 2* information would revert to Tier 2 information for future considerations.

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(c), “Issuance of amendment,” as discussed below.

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 accident evaluations since there are no changes to the plant, no changes to analysis of the plant, and no changes to testing of the plant. The proposed changes do not adversely affect the design or operation of any structures, systems, or components (SSCs) associated with an accident initiator or initiating sequence of events. The proposed changes continue to maintain the initial conditions and operating limits assumed during normal operation, assumed by the accident analysis, and assumed in anticipated operational occurrences. Therefore, the proposed changes do not result in any increase in probability of an analyzed accident occurring.

   The proposed changes do not involve a change to any mitigation sequence or the predicted radiological releases due to postulated accident conditions. Thus, the consequences of the accidents previously evaluated are not adversely affected.

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

2. Does the proposed change create the possibility of a new or different kind of accident from any accident previously evaluated?

   Response: No

   The proposed changes have been found to continue to provide the required functional capability of the safety systems for previously evaluated accidents and anticipated operational occurrences. The proposed revisions do not change the function of the related systems, and thus, the changes do not introduce a new failure mode, malfunction or sequence of events that could adversely affect safety or safety-related equipment.

   Therefore, the proposed change will not create the possibility of a new or different kind of accident from any accident previously evaluated.

3. Does the proposed change involve a significant reduction in a margin of safety?

   Response: No.

   The proposed changes continue to provide the required functional capability of the safety systems for previously evaluated accidents and anticipated operational occurrences. The proposed changes do not change the function of the related systems nor significantly affect the margins provided by the systems. No safety analysis or design basis acceptance limit/criterion is challenged or exceeded by the requested changes.

Therefore, the proposed change does not involve a significant reduction in a margin of safety.

Based on the above, 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.

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 CONSIDERATION

A review has determined that the proposed changes require an amendment to the COL. A review of the anticipated construction and operational effects of the requested amendment has determined that the requested amendment meets the eligibility criteria for categorical exclusion set forth in 10 CFR 51.22(c)(9), in that:

(i) There is no significant hazards consideration.

As documented in Section 4.3, Significant Hazards Consideration, of this license amendment request, 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 evaluation determined 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 are unrelated to any aspect of plant construction or operation that would introduce any change to effluent types (e.g., effluents

containing chemicals or biocides, sanitary system effluents, and other effluents) or affect any plant radiological or non-radiological effluent release quantities. Furthermore, the proposed changes do not affect any effluent release path or diminish the functionality of any design or operational features that are credited with controlling the release of effluents during plant operation. Therefore, it is concluded that the proposed amendment does not involve a significant change in the types or a significant increase in the amounts of any effluents that may be released offsite.

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

The proposed change in the requested amendment does not affect the shielding capability of, or alter any walls, floors, or other structures that provide shielding. Plant radiation zones and controls under 10 CFR 20 preclude a significant increase in occupational radiation exposure. Therefore, the proposed amendment does not involve a significant increase in individual or cumulative occupational radiation exposure.

Based on the above review of the proposed amendment, it has been determined that anticipated construction and operational effects of the proposed amendment does not involve (i) a significant hazards consideration, (ii) a significant change in the types or significant increase in the amounts of any effluents that may be released offsite, or (iii) a significant increase in the individual or cumulative occupational radiation exposure. Accordingly, the proposed amendment meets the eligibility criteria for categorical exclusion set forth in 10 CFR 51.22(c)(9). Therefore, pursuant to 10 CFR 51.22(b), no environmental impact statement or environmental assessment need be prepared in connection with the proposed amendment.

ENCLOSURE 2

Exemption Request:
Exemption from Tier 1 and Tier 2* Requirements

1.0 PURPOSE

2.0 BACKGROUND

3.0 TECHNICAL JUSTIFICATION OF ACCEPTABILITY

4.0 JUSTIFICATION OF EXEMPTION

5.0 RISK ASSESSMENT

6.0 PRECEDENT EXEMPTIONS

7.0 ENVIRONMENTAL CONSIDERATION

8.0 CONCLUSION

ATTACHMENT:

Licensing Basis Document Mark-ups

1.0 Purpose

Southern Nuclear Operating Company (SNC or the Licensee) requests a permanent exemption from the provisions of 10 CFR 52, Appendix D, to maintain, and to evaluate and document departures and further exemptions from, the plant-specific Tier 1 and Tier 2* information applicable to the Vogtle Electric Generating Plant (VEGP) Unit 3 and Unit 4 combined licenses (COLs). With approval of the requested exemption, SNC would no longer maintain or consider any Tier 1 information, and all Tier 2* information would revert to Tier 2 information for future considerations.

With construction and ITAAC complete and confirmed to comply with the certified design (as amended and exempted), SNC believes the applicable controls for Tier 2 and plant-specific final safety analysis report information are sufficient to evaluate changes to the design that should be submitted to the NRC for prior review and approval.

This request for exemption provides the technical and regulatory basis to demonstrate that 10 CFR 52.63, §52.7, and §50.12 requirements are met and applies the requirements of 10 CFR 52, Appendix D, Section VIII.A.4 to allow departures from generic Tier 1 Inspections, Tests, Analyses, and Acceptance Criteria (ITAAC) information and the requirements of 10 CFR 52, Appendix D, Section VIII.B.6 to allow departures from Tier 2* information for Vogtle Electric Generating Plant (VEGP) Unit 3 and Unit 4.

2.0 Background

The Licensee is the holder of Combined License Nos. NPF-91 and NPF-92, which authorizes construction and operation of a Westinghouse Electric Company AP1000 nuclear plants named VEGP Unit 3 and Unit 4.

Southern Nuclear Operating Company (SNC) notified the NRC on July 29, 2022, that all the Unit 3 acceptance criteria for the inspections, tests, and analyses, and acceptance criteria (ITAAC) are met [ADAMS Accession No. ML22210A090]. On August 3, 2022, the NRC issued their 10 CFR 52.103(g) finding that the acceptance criteria in the ITAAC are met [ADAMS Accession No. ML20290A284].

Similarly, SNC notified the NRC on July ##, 2023, that all the Unit 4 acceptance criteria for the ITAAC are met [ADAMS Accession No. ML##########]. On August ##, 2023, the NRC issued their 10 CFR 52.103(g) finding that the acceptance criteria in the ITAAC are met [ADAMS Accession No. ML##########].

As noted in SECY-22-0052 providing proposed rule revisions based on reviews of lessons learned from new reactor licensing, “requiring licensees subject to the DC change process to obtain NRC approval before making certain physical changes, while allowing part 50 licensees to proceed with the physical changes before asking for NRC approval may impose an unnecessary burden on those licensees subject to the DC change process.”

3.0 Technical Justification of Acceptability

The proposed change would remove the Tier 1 document from the VEGP Unit 3 and Unit 4 licensing basis, modify the COLs to include permanent exemptions from the Tier 1 and Tier 2* requirements, revert the remaining Tier 2* information to Tier 2 information, and remove the existing exemption in COL Section 2.D.(13) related to departures from plant-specific DCD Tier 2* information.

Tier 1 requirements are defined by 10 CFR Part 52, Appendix D, Section II.D, as:

> "…the portion of the design-related information contained in the generic DCD that is approved and certified by this appendix (Tier 1 information). The design descriptions, interface requirements, and site parameters are derived from Tier 2 information. Tier 1 information includes:
>
> 1. Definitions and general provisions;
> 2. Design descriptions;
> 3. Inspections, tests, analyses, and acceptance criteria (ITAAC);
> 4. Significant site parameters; and
> 5. Significant interface requirements."

On August 3, 2022, the NRC issued the 10 CFR 52.103(g) letter to VEGP Unit 3, recognizing that the ITAAC had been satisfied [ADAMS Accession No. ML20290A284]. On August #, 2022, the NRC issued the 10 CFR 52.103(g) letter to VEGP Unit 4, recognizing that the ITAAC had been satisfied [ADAMS Accession No. ML##########].

As identified in 10 CFR Part 52, Appendix D, Section IX.B.3, "After the Commission has made the finding required by 10 CFR 52.103(g), the ITAAC do not, by virtue of their inclusion within the DCD, constitute regulatory requirements either for licensees or for renewal of the license; except for specific ITAAC, which are the subject of a §52.103(a) hearing, their expiration will occur upon final Commission action in such a proceeding." No specific ITAAC are the subject of a §52.103(a) hearing. Thus, the specific tables identified in the plant-specific Tier 1 information as ITAAC are no longer requirements for VEGP Unit 3 or Unit 4.

The remaining portion of the plant-specific Tier 1 information required to be maintained by the regulations in 10 CFR Part 52, Appendix D, Section X.A.1 and Section X.A.2, includes design descriptions (including descriptive information provided in non-ITAAC tables and figures), significant site parameters, significant interface requirements, and the associated definitions and general provisions. However, as noted in the Tier 1 information definition above, this Tier 1 information is "derived from Tier 2 information." It follows from the regulations that removal of the Tier 1 requirements would not change the design, nor remove any design information from the licensing basis. The only impact would be to the criteria used for evaluation of changes to determine if prior NRC approval is required.

During the construction of VEGP Units 3 and 4, it was recognized that some changes required prior NRC approval only because the information was designated as Tier 1; i.e., some of the changes required to be reviewed and approved by the NRC had no impact to the health and safety of the public, and the change would not have met the Tier 2 change evaluation criteria that would have led to prior NRC review and approval. Some of these were simply editorial changes or changes to correct mislabeled equipment identification, or other similar changes that do not change the meaning or substance of the safety information presented. The purpose of the Tier 1 regulations is not served by requiring prior NRC approval of an exemption for this type of change.

The above concern is supported by Commission expectations as provided in the Statements of Consideration for the initial issuance of Part 52 (54FR15372), which states:

> How much flexibility § 50.12 will provide depends in large part on how much detail is present in a design certification, and just how much is present will be an issue which will have to be resolved in each certification rulemaking. The Commission does expect, however, that there will be less detail in a certification than in an application for certification, and that a rule certifying a design is likely to encompass roughly the same design features that § 50.59 prohibits changing without prior NRC approval. Moreover, the level of design detail in certifications should afford licensees an opportunity to take advantage of improvements in equipment.

The latter portion of the highlighted expectation is not consistent with the level of detail included in the AP1000 Tier 1 requirements. Further, if the expectation and intent was that the certified information would "encompass roughly the same design features that § 50.59 prohibits changing without prior NRC approval," then the Tier 1 change criteria should be adequately addressed by the change criteria of § 50.59, and thus, additional Tier 1 change criteria is unnecessary. The level of detail included in the AP1000 Tier 1 requirements, however, goes well beyond the level of detail of design features that § 50.59 prohibits changing without prior NRC approval, adding significant regulatory burden to the licensee and to the NRC Staff.

Even without the Tier 1 requirements, every change would continue to be evaluated for potential impact in accordance with § 50.59, the Tier 2 change criteria in 10 CFR Part 52 Appendix D, and for continued compliance with the applicable regulations. Thus, changes would continue to be submitted for NRC review and approval prior to implementation consistent with the change processes allowed for the Part 50 licensees, as modified by the 10 CFR Part 52, Appendix D, paragraph VIII.B.5 change criteria.

The statements of consideration discussion of the AP1000 Design Certification Final Rule (71FR04464) included the following similar information pertinent to the appropriate change processes.

- In an earlier rulemaking (64 FR 53582; October 4, 1999), the Commission revised 10 CFR § 50.59 to incorporate new thresholds for permitting changes to a plant as described in the FSAR without NRC approval. For consistency and

> clarity, the Commission proposes to use these new thresholds in the proposed AP1000 DCR. Inasmuch as § 50.59 is the primary change mechanism for operating nuclear plants, the Commission believes that future plants referencing the AP1000 DCR should utilize thresholds as close to § 50.59 as is practicable and appropriate.

SNC agrees with the Commission belief "that future plants referencing the AP1000 DCR should utilize thresholds as close to § 50.59 as is practicable and appropriate," and this is precisely the criteria that SNC requests be applied to future VEGP changes; i.e., those identified in 10 CFR 52 Appendix D Section VIII.B subsection 1 through 5 for Tier 2 information and §50.59 for plant-specific final safety analysis report information.

As noted in the statements of consideration for the 1999 revisions to 10 CFR 50.59 (64FR53582), "The intent of the § 50.59 process is to permit licensees to make changes to the facility, provided the changes maintain acceptable levels of safety as documented in the SAR. The process was thus structured around the licensing approach of design basis events (anticipated operational occurrences and accidents), safety-related mitigation systems, and consequence calculations for the design basis accidents." However, the design certification rulemakings have gone beyond this process to "maintain acceptable levels of safety as documented in the SAR" without any apparent significant benefits. On the contrary, as noted above, the additional requirements have, on several occasions, led to expenditure of licensee and NRC Staff resources with little or no impact on the safety of the plant or the public. Further, the additional requirements have, on several occasions, led to expenditure of licensee and NRC Staff resources when the change could have been sufficiently addressed by considering the impact in accordance with the "50.59-like" process included in Appendix D to 10 CFR Part 52, again with little or no impact on the safety of the plant or the public. The continued expenditure of these significant additional resources without a corresponding significant increase in safety are not warranted and should be eliminated as identified in this exemption request.

The statements of consideration discussion of the AP1000 Design Certification Final Rule (at 70FR20062) included the following information pertinent to the Tier 1 designation.

- The Tier 1 design descriptions serve as design commitments for the lifetime of a facility referencing the design certification.
- [S]ubsequent modifications to the facility must comply with the design descriptions in the plant-specific DCD unless changes are made in accordance with the change process in Section VIII of this appendix.
- The Tier 1 interface requirements are the most significant of the interface requirements for systems that are wholly or partially outside the scope of the standard design, which were submitted in response to 10 CFR 52.47(a)(1)(vii) and must be met by the site-specific design features of a facility that references this appendix.
- The Tier 1 site parameters are the most significant site parameters, which were submitted in response to 10 CFR 52.47(a)(1)(iii). An application that references

this appendix must demonstrate that the site parameters (both Tier 1 and Tier 2) are met at the proposed site (refer to III.D of this SOC).

Each of these points is considered below.

- The Tier 1 design descriptions serve as design commitments for the lifetime of a facility referencing the design certification.

  The Tier 1 design descriptions are based on the more detailed Tier 2 design descriptions which also serve as design commitments for the lifetime of a facility. Thus, these design commitments are not removed by the proposed exemption from the Tier 1 requirements.

- [S]ubsequent modifications to the facility must comply with the design descriptions in the plant-specific DCD unless changes are made in accordance with the change process in Section VIII of this appendix.

  Subsequent modifications to the facility must still comply with the design descriptions in the plant-specific DCD unless changes are made in accordance with the change process in Section VIII applicable for the more detailed Tier 2 design descriptions. Similarly, plant-specific final safety analysis report design descriptions changes are made in accordance with the change process in § 50.59. Thus, the review requirements for subsequent modifications are not removed by the proposed exemption from the Tier 1 requirements.

  With regard to standardization, there are several pertinent points provided in the Statements of Consideration for the initial issuance of Part 52 (54FR15372) many of which indicate an intent of "early resolution" of issues:

  > In the Two General Responses to Comments discussion, "However, the Commission has stuck to the simple aim in this rulemaking of providing procedures for the standardization of nuclear power plants and more generally for the early resolution of safety and environmental issues in licensing proceedings."
  >
  > Under the Applicability of Existing Standards discussion, "Application of Parts 20, 50, 73, and 100 to the certification of new designs, as reflected in § 52.48, should go a long way toward establishing the regulatory standard that new designs must meet, and thereby provide the regulatory stability that is an essential prerequisite to realizing the benefits of standardization."
  >
  > More particularly, under the Finality discussion, "Standardization has the double aim of enhancing safety and making it possible to resolve design issues before construction. Of these two aims, enhanced safety is the chief, because pre-construction resolution of design issues could be achieved simply through combined construction permits and operating licenses with conditions. Achievement of the enhanced safety which standardization makes possible will be frustrated if too frequent changes to either a certified design or the plants referencing it are permitted.

  The rule put forward principally three means of preventing a continual regression from standardization. First, the rule required that any amendment proffered by the "holder" of a certification be considered in a notice and comment rulemaking and granted if the amendment complied with the Atomic Energy Act and the

Commission's regulations. Second, the rule prohibited the licensee of a plant built according to a certified design from making any change to any part of the plant which was described in the certification unless the licensee had been granted an exemption under 10 CFR 50.12 from the rule certifying the design. Third, the rule stated that the Commission would not backfit a certified design or the plants built according to it unless a backfit were necessary to assure compliance with the applicable regulations or to assure adequate protection of public health and safety. See § 52.63 of the proposed rule, 53 FR 32074, col. 3, to 32075, col. 2."

The first of these "three means of preventing a continual regression from standardization" is not applicable to combined license holders. The second and third "means" are pertinent to the exemption request.

To-date, approvals have been granted for more than one hundred Tier 1 exemptions, more than fifty Tier 2* changes, and more than 40 changes to the Technical Specifications. For completeness, there have also been 14 changes that affected only the COL, three changes for approval based on a change to a method of evaluation, and a few other changes related to emergency planning and security topics.

Of note is that for the more than one hundred Tier 1 exemption approvals and the more than fifty Tier 2* departure approvals, the NRC Staff has not taken any action related to imposing the change via rulemaking pursuant to § 52.63 for either the certified design or to the other combined license holders. For each exemption approved, the 52.63(a)(4)(ii) "special circumstances" were justified to "outweigh any decrease in safety from the reduction in standardization." As such, the divergence from standardization was not deemed to be a significant reduction in safety.

To the extent that "increased standardization of the certification information" is desired, the Commission can still implement the modification on the design certification rule under 52.63(a)(1) and apply the modification to all plants referencing the certified design per 52.63(a)(3).

To envision the utilization of the 52.63(a)(4)(ii) "special circumstances" hurdle to enforce greater standardization (where reduction in safety is not present) inappropriately delegates the responsibility for achieving the standardization goal to the combined license holder. The exemption should not be withheld on this basis.

Should this requested exemption be approved, the maintenance of standardization would continue to be advantageous to the future combined license holders (as it was deemed to be for VEGP Unit 3 and Unit 4) and the vast majority of these changes would be expected to be requested and approved by the combined license holders. Similarly, there are often other Tier 2 or other licensing basis document changes that are associated with the amendments, and numerous other changes to licensing basis documents (~1400 non-LAR changes made for VEGP Units 3 and 4 to-date), that will also be advantageous to be implemented by other combined license holders in order to maintain standardization.

Finally, approval of the exemption may actually promote standardization by reducing the cost and delay of implementation by each of the combined license holders through simplification of the process for evaluation and acceptance of changes throughout the life of the operating plants. Non-trivial cost and burden for non-safety significant license amendment and exemptions may actually deter from standardization in that licensees may attempt to avoid subjecting themselves to the license amendment and exemption processes. Thus, simpler internal process under Part 52 Appendix D, Section VIII 50.59-like criteria could actually improve maintenance of standardization over the operating life of the plants.

SNC also notes that in SECY-22-0052 which proposes Part 52 revisions, the NRC is proposing to remove the Part 52 requirement to consider standardization as a criterion for justification for making changes in a combined license. Accordingly, based on actions to-date, standardization maintenance may be best addressed by the NRC Staff as a § 52.63 modification of the certification information through a determination for each previously approved change that the change "contributes to increased standardization of the certification information."

- The Tier 1 interface requirements are the most significant of the interface requirements for systems that are wholly or partially outside the scope of the standard design, which were submitted in response to 10 CFR 52.47(a)(1)(vii) and must be met by the site-specific design features of a facility that references this appendix.

  The Tier 1 interface requirements were addressed during the COL application review and shown to be met by the site-specific design features of the facility in the safety analysis report which incorporates the plant-specific and more detailed Tier 2 design descriptions. Thus, the interface requirements and their relationship to the site-specific design features of the facility are not removed by the proposed exemption from the Tier 1 requirements.

- The Tier 1 site parameters are the most significant site parameters, which were submitted in response to 10 CFR 52.47(a)(1)(iii). An application that references this appendix must demonstrate that the site parameters (both Tier 1 and Tier 2) are met at the proposed site (refer to III.D of this SOC).

  The Tier 1 site parameters were addressed during the COL application review and shown to be met by the facility site in the safety analysis report, which incorporates the plant-specific and more detailed Tier 2 design descriptions. Thus, the site parameters and their relationship to the facility site are not removed by the proposed exemption from the Tier 1 requirements.

Because the NRC has also identified in Appendix D to 10 CFR Part 52 that some Tier 2 information (designated as Tier 2*) must also be reviewed by NRC prior to implementing changes to that information, the above discussions regarding prior approval of Tier 1 information would also be generally applicable to Tier 2* information.

Similar to the above Tier 1 discussion, the statements of consideration discussion of the AP1000 Design Certification Final Rule included the following information pertinent to the Tier 2* designation.

- Certain Tier 2 information has been designated in the generic DCD with brackets and italicized text as ‘‘Tier 2*’’ information and, as discussed in greater detail in the section-by-section explanation for paragraph VIII.B, a plant-specific departure from Tier 2* information requires prior NRC approval.

  The Tier 2* design description information also continue to serve as design commitments for the lifetime of a facility. Thus, the Tier 2* design commitments are not removed by the proposed exemption from the Tier 2* requirements but would continue to be treated as Tier 2 design commitments.

Thus, as noted above, approval of the proposed exemptions from the Tier 1 and Tier 2* requirements would not remove design information from the licensing basis, and subsequent changes to the facility design would continue to maintain acceptable levels of safety through evaluations in accordance with the “50.59-like” criteria provided in Section VIII of Appendix D to 10 CFR Part 52.

SNC previously requested via LAR 17-037 (and was granted) a site-specific permanent exemption and license amendment that allows use of new criteria to determine whether a proposed Tier 2* departure can be treated as a departure from Tier 2 information under 10 CFR Part 52, Appendix D, paragraph VIII.B.5, or whether the departure requires prior NRC approval under Appendix D, paragraph VIII.B.6.1. In addition, the amendment applied the same license condition criteria to departures from Tier 2 information that involve changes to or departures from certain Tier 2* information. The safety evaluation for the amendment states “The staff focused on whether the proposed exemption and new license condition would assure that departures from Tier 2* information would be governed by regulatory controls commensurate with the safety significance of the information.” As noted above, SNC agrees with “The intent of the § 50.59 process is to permit licensees to make changes to the facility, provided the changes maintain acceptable levels of safety as documented in the SAR.” Thus, it is reasonable to deduce that if the § 50.59 process maintains acceptable levels of safety for Part 50 plants, that the § 50.59 process would also be appropriate “regulatory controls commensurate with the safety significance of the information” and that the additional Tier 2* designations and change controls are, therefore, unnecessary.

SNC is aware of the proposal in SECY-22-0052 to change Commission regulations to add a definition that contains two general principles for Tier 1 information content: (1) Tier 1 information should be described at a qualitative and functional level of detail, and (2) Tier 1 information should not include detail that could necessitate NRC approval for departures from the certified design that have minimal safety significance, and that the NRC is proposing the same refinements to the definition of Tier 2* information. However, the proposed rule changes would provide no relief from the burdens imposed by the current 10 CFR Part 52 Appendix D requirements applicable to combined license holders who reference the AP1000 certified design. Accordingly, Southern Nuclear Operating Company (SNC or the Licensee) is requesting a permanent exemption from the provisions of 10 CFR 52, Appendix D, to maintain, and to evaluate and document departures and further exemptions from, the plant-specific Tier 1 and Tier 2* information applicable to the VEGP Unit 3 and Unit 4 COLs. With approval of the requested exemption, SNC would no longer maintain or consider any Tier 1 information, and all Tier 2* information would revert to Tier 2 information for future considerations.

4.0 Justification of Exemption

10 CFR Part 52, Appendix D, Sections VIII.A.4 and VIII.B.6 and 10 CFR 52.63(b)(1) govern the issuance of exemptions from elements of the design information for AP1000 nuclear power plants. Since SNC is requesting to eliminate the Tier 1 and Tier 2* requirements, an exemption from 10 CFR Part 52, Appendix D, is needed.

10 CFR Part 52, Appendix D, and 10 CFR 50.12, §52.7, and §52.63 state that the NRC may grant exemptions from the requirements of the regulations provided six conditions are met: 1) the exemption is authorized by law [§50.12(a)(1)]; 2) the exemption will not present an undue risk to the health and safety of the public [§50.12(a)(1)]; 3) the exemption is consistent with the common defense and security [§50.12(a)(1)]; 4) special circumstances are present [§50.12(a)(2)]; 5) the special circumstances outweigh any decrease in safety that may result from the reduction in standardization caused by the exemption [§52.63(b)(1)]; and 6) the changes do not result in a significant decrease in the level of safety [Part 52, App. D, VIII.A.4].

The requested exemption satisfies the criteria for granting specific exemptions, as described below.

1. This exemption is authorized by law

The NRC has authority under 10 CFR 52.63, §52.7, and §50.12 to grant exemptions from the requirements of NRC regulations. Specifically, 10 CFR 50.12 and §52.7 state that the NRC may grant exemptions from the requirements of 10 CFR Part 52 upon a proper showing. No law exists that would preclude the changes covered by this exemption request. Additionally, granting of the proposed exemption does not result in a violation of the Atomic Energy Act of 1954, as amended, or the Commission's regulations.

Accordingly, this requested exemption is "authorized by law," as required by 10 CFR 50.12(a)(1).

2. This exemption will not present an undue risk to the health and safety of the public

The proposed exemption from the requirements of 10 CFR 52 Appendix D would allow elements of the VEGP Units 3 and 4 design to depart from the AP1000 Tier 1 and Tier 2* plant-specific design information based on criteria consistent with Part 50 licensed nuclear power plants. The VEGP Units 3 and 4 safety analysis report (incorporating the plant-specific DCD) will continue to reflect the approved licensing basis for VEGP Units 3 and 4 and will maintain the level of detail currently provided in the UFSAR. Therefore, the affected VEGP Unit 3 and Unit 4 plant-specific DCD will continue to serve its required purpose.

Approval of the proposed exemptions from the Tier 1 and Tier 2* requirements would maintain the Tier 2 detailed design information within the licensing basis, and subsequent changes to the facility design would continue to maintain acceptable levels of safety through evaluations in accordance with the "50.59-like" criteria provided in Section VIII of Appendix D to 10 CFR Part 52.

With continued consideration of the Tier 2 information, the proposed activity does not involve a significant change in the types or significant increase in the amounts of any effluents that may be released offsite.

Therefore, the requested exemption from 10 CFR 52 Appendix D as shown in Attachment 2 would not present an undue risk to the health and safety of the public.

3. The exemption is consistent with the common defense and security

The requested exemption from the requirements of 10 CFR 52, Appendix D, would allow the licensee to depart from elements of the VEGP Units 3 and 4 Tier 1 and Tier 2* plant-specific DCD design information without submitting an exemption request (for Tier 1), and/or license amendment request (for Tier 1 and Tier 2*), for NRC approval simply because it is designated as Tier 1 or Tier 2*. The proposed exemption does not alter the design, function, or operation of any structures or plant equipment that is necessary to maintain a safe and secure status of the plant. The proposed exemption has no impact on plant security or safeguards procedures.

Therefore, the requested exemption is consistent with the common defense and security.

4. Special circumstances are present

10 CFR 50.12(a)(2) lists six “special circumstances” for which an exemption may be granted. Pursuant to the regulation, it is necessary for one of these special circumstances to be present in order for the NRC to consider granting an exemption request. The requested exemption meets the special circumstances of 10 CFR 50.12(a)(2)(ii). That subsection defines special circumstances as when “Application of the regulation in the particular circumstances would not serve the underlying purpose of the rule or is not necessary to achieve the underlying purpose of the rule.”

The rule under consideration in this request for exemption is the portion of 10 CFR Part 52, Appendix D, which requires that a licensee referencing the AP1000 Design Certification Rule (10 CFR Part 52, Appendix D) maintain, and evaluate and document departures and further exemptions from, the plant-specific Tier 1 and Tier 2* information applicable to the combined licenses (COLs).

As previously noted, exemptions and/or associated license amendment requests have been required to make even editorial Tier 1 and Tier 2* changes. Processing of such editorial or other changes that are not consequential to safety utilizes resources that could be applied to actual improvements in safety. Approval of the proposed exemptions from the Tier 1 and Tier 2* requirements would maintain the detailed design information within the licensing basis, and subsequent changes to the facility design would continue to maintain acceptable levels of safety through evaluations in accordance with the “50.59-like” criteria provided in Section VIII of Appendix D to 10 CFR Part 52. Significant changes that are consequential to

safety would still require NRC review prior to implementation under § 50.59 or the "50.59-like" criteria provided in Section VIII of Appendix D to 10 CFR Part 52.

Therefore, since the underlying purpose of the rule is to consider proposed design changes and maintain acceptable levels of safety, the application of the Tier 1 and Tier 2* regulation is not necessary to achieve the underlying purpose of the rule.

5. The special circumstances outweigh any decrease in safety that may result from the reduction in standardization caused by the exemption.

Since the revised processes for evaluating changes to the plant-specific design would continue to maintain acceptable levels of safety through evaluations in accordance with other regulations and the "50.59-like" criteria provided in Section VIII of Appendix D to 10 CFR Part 52, and there is no significant benefit to be achieved by the added burden of existing processes. It is expected that similar changes would be requested by other AP1000 stations once their § 52.103(g) finding is complete. Maintaining the existing processes during construction will continue to support a high level of standardization since the construction period is when most major changes would be proposed.

The reduction in standardization resulting from potential future departures from Tier 1 and Tier 2* where other AP1000 licensees and applicants do not request this same departure, would still provide that the key design functions will continue to be maintained at acceptable levels of safety. Further, as discussed above, maintenance of the standardized design has not been a significant factor in approvals of previously requested changes, and thus, future standardization has been effectively delegated to the combined license holder decisions. Finally, approval of the exemption may actually promote standardization by reducing the cost and delay of implementation by each of the combined license holders through simplification of the process for evaluation and acceptance of many of the changes.

Therefore, the special circumstances associated with the requested exemption outweigh any decrease in safety that may result from the reduction in standardization caused by the exemption.

6. The design change will not result in a significant decrease in the level of safety.

There are no design changes associated with this request. The proposed exemption from the requirements of 10 CFR 52 Appendix D would allow elements of the VEGP Units 3 and 4 design to depart from the AP1000 Tier 1 and Tier 2* plant-specific design information without submitting an exemption request (for Tier 1), and/or license amendment request (for Tier 1 and Tier 2*), for NRC approval. The VEGP Units 3 and 4 safety analysis report (incorporating the plant-specific DCD) will continue to reflect the approved licensing basis for VEGP Units 3 and 4 and will maintain a consistent level of detail with that which is currently provided in the Tier 1 and Tier 2* information. Therefore, the VEGP Units 3 and Unit 4 plant-specific DCD will continue to serve its required purpose with the revised change control processes.

With continued consideration of the Tier 2 information, the proposed activity does not involve a significant increase in the individual or cumulative occupational radiation exposure.

Approval of the proposed exemptions from the Tier 1 and Tier 2* change control requirements would not alleviate the requirement to maintain the detailed design information within the licensing basis, nor the requirement to continue to maintain acceptable levels of safety through evaluations in accordance with the “50.59-like” criteria provided in Section VIII of Appendix D to 10 CFR Part 52. Thus, there is no reduction in the level of safety as a result of this activity.

5.0 Risk Assessment

A risk assessment was determined to not be applicable to address the acceptability of this proposal.

6.0 Precedent Exemptions

None

7.0 Environmental Consideration

The Licensee requests a departure from elements of the Tier 1 and Tier 2* requirements of 10 CFR Part 52, Appendix D. The Licensee has determined that the proposed departure would require a permanent exemption from the requirements of 10 CFR 52, Appendix D, with respect to maintaining a Tier 1 document, Tier 2* designations, and to the processes used to determine that a proposed change would require NRC review and approval prior to implementation; The Licensee evaluation of the proposed exemption has determined that the proposed exemption meets the eligibility criteria for categorical exclusion set forth in 10 CFR 51.22(c)(9).

Based on the above review of the proposed exemption and the corresponding Enclosure 1 review, the Licensee has determined that the proposed activity does not involve (i) a significant hazards consideration, (ii) a significant change in the

types or significant increase in the amounts of any effluents that may be released offsite, or (iii) a significant increase in the individual or cumulative occupational radiation exposure. Accordingly, the proposed exemption meets the eligibility criteria for categorical exclusion set forth in 10 CFR 51.22(c)(9). Therefore, pursuant to 10 CFR 51.22(b), an environmental impact statement or environmental assessment of the proposed exemption is not required.

8.0 Conclusion

The proposed change removes requirements related to VEGP Unit 3 and Unit 4 design change processes that have no identified benefit to offset the additional burden imposed by the restrictions. The exemption request meets the requirements of 10 CFR 52.63, *Finality of design certifications*, 10 CFR 52.7, *Specific exemptions*, 10 CFR 50.12, *Specific exemptions*, and 10 CFR 52 Appendix D, *Design Certification Rule for the AP1000*. Specifically, the exemption request meets the criteria of 10 CFR 50.12(a)(1) in that the request is authorized by law, presents no undue risk to public health and safety, and is consistent with the common defense and security. Furthermore, approval of this request does not result in a significant decrease in the level of safety, satisfies the underlying purpose of the AP1000 Design Certification Rule, and does not present a significant decrease in safety as a result of a reduction in standardization.

The Tier 1 document is removed from the Licensing Basis Documents for Units 3 and 4.

Units 3 and 4 Combined License (COL) Mark-ups:

COL Section 2.F.(1), Exemptions, is revised to add new item (b):

(b) The licensees are exempt from the requirements of 10 CFR Part 52, Appendix D, with respect to Tier 1 document compliance, maintenance, change process, and change documentation, including but not limited to:

(1) Section III to comply with the requirements of a plant-specific DCD document for Tier 1 information;
(2) Section VIII.A and Section X.A.3 to prepare and maintain written evaluation for determinations of departures from Tier 1 information;
(3) Section VIII.B.5.a with regard to Tier 2 information involving a change to or departure from Tier 1 information;
(4) Section IX.B.3 to comply with Tier 1 design descriptions; and
(5) Sections X.A.1 and X.A.2 to maintain a plant-specific DCD document for Tier 1 information.

COL Section 2,F.(1), Exemptions, is revised to add new item (c):

(c) The licensees are exempt from the following requirements of 10 CFR Part 52, Appendix D, with respect to Tier 2* information and related regulations, including but not limited to:

(1) Section VIII.B.5.a with regard to Tier 2 information involving a change to or departure from Tier 2* information; and
(2) Section VIII.B.6 with regard to the designation of, and associated requirements, for Tier 2* information.

COL Section 2.D.(13) is removed:

~~(13) Departures from Plant-specific DCD Tier 2* Information~~

~~(a) SNC is exempt from the requirements of 10 CFR Part 52, Appendix D, Paragraphs VIII.B.6 and VIII.B.5.a for prior NRC approval of departures from Tier 2* information and departures from Tier 2 information involving a change to or departure from Tier 2* information; except for departures that:~~

~~1. Involve a deviation from a code or standard credited in the plant-specific DCD for establishing the criteria for the design or construction of a structure, system, or component (SSC) important to safety,~~

~~2. Result in a change to a design process described in the plant-specific DCD that is material to implementation of an industry standard or endorsed regulatory guidance,~~

~~3. (i) Result in a change to the fuel criteria evaluation process, the fuel principal design requirements, or the nuclear design of the fuel or the reactivity control system that is material to a fuel or reactivity control system design function, or the evaluation process in WCAP-12488, "Westinghouse Fuel Criteria Evaluation Process," or~~

~~(ii) Result in any change to the maximum fuel rod average burn-up limits; or the small break LOCA analysis information in UFSAR Subsections 15.6.5.4B.2.2 or 15.6.5.4B.2.3,~~

~~4. Adversely affect the containment debris limits or debris screen design criteria,~~

~~5. Change the Reactor Coolant Pump (RCP) type from a canned motor to a different type of RCP,~~

~~6. Result in a change to the Passive Residual Heat Removal Heat Exchanger natural circulation test (first plant test), the Core Makeup Tank Heated Recirculation Tests (first three plants test), or the Automatic Depressurization System Blowdown Test (first three plants test) that is material to the test objectives or test performance criteria,~~

~~7. Involve structural materials or analytical or design methods, including design codes and analytical assumptions, that deviate from those credited in the plant-specific DCD for critical sections,~~

8. 8. Result in a change to the design of the steel faceplates, internal trusses, tie bars, or headed studs of the steel-concrete (SC) module walls in the Nuclear Island or the Shield Building, including SC-to-reinforced concrete (RC) connections,

9. Result in an increase in the demand to capacity (D/C) ratio of a critical section of the structure. SNC shall determine the D/C ratio under this condition for each critical section structural member including, but not limited to, wall segments, wall sections, concrete panels, slabs, or basemat sections, affected by a departure by:

(i) Using the Tier 2* information in the UFSAR Section 3.8 or Appendix 3H table that directly states the D/C ratio or states the area of steel provided and the area of steel required for the affected structural member, or

(ii) Providing the same total area of steel across the entire critical section using any combination of rebar sizes and spacing allowed by the design basis codes used in the UFSAR as the total area of steel specified in UFSAR Section 3.8 and Appendix 3H tables marked Tier 2*;

(b) For a departure from Tier 2* information that does not require prior NRC approval under the exemption in License Condition 2.D.(13)(a), SNC may take the departure provided that SNC complies with the requirements for Tier 2 departures in 10 CFR Part 52, Appendix D, Paragraph VIII.B.5, as modified by the exemption in License Condition 2.D.(13)(a). For each departure authorized by this License Condition:

1. The departure or change to Tier 2* information shall remain Tier 2* information in the plant-specific DCD.

2. SNC shall prepare and maintain a written evaluation that provides the bases for its determinations regarding the criteria in License Condition 2.D.(13)(a). In the report that 10 CFR Part 52, Appendix D, Section X.B.1 requires SNC to submit, SNC shall include a brief description of each departure and a summary of the evaluation of the departure.

The UFSAR is revised as follows:

UFSAR Section 1.1 is revised to read:

A limited set of DCD Tier 2 information was further designated as Tier 2* matter information. As provided by approved exemption to 10 CFR Part 52, Appendix D, Sections VIII.B.5 and VIII.B.6, the Tier 2* matter information is reverted to Tier 2 information.

~~As provided in 10 CFR Part 52, Appendix D, Section VIII.B.6.c, much of the Tier 2* matter information reverts to Tier 2 information for the unit once the unit first achieves full power operation. Tier 2* matter information that continues to be designated as Tier 2* for the unit beyond the unit's first full power operation is identified in Table 1.1-201. Changes to Tier 2* matter information may require prior NRC approval pursuant to License Condition 2.D.(13) in accordance with the departure evaluation process specified therein.~~

Appendix D to 10 CFR Part 52 is hereby incorporated by reference into the COL application with consideration of approved exemptions.

UFSAR Table 1.1-201, "Post First Full Power Operation Continuing Tier 2* Matter Information," is revised to read:

Not Used.

UFSAR Section 14.3, Certified Design Material, is revised to be designated as "Historical Information" by revising the title to read as shown below and appropriately marking the pages.

14.3 Certified Design Material (Historical Information)

UFSAR (all affected sections) will be revised to remove the Tier 2* designations and associated footnotes.