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ND-16-1349
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U.S. Nuclear Regulatory Commission
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Washington, DC 20555-0001

Southern Nuclear Operating Company
Vogtle Electric Generating Plant Units 3 and 4
Request for License Amendment and Exemption:
Design Reliability Assurance Program (D-RAP) Changes (LAR-16-017)

Ladies and Gentlemen:

Pursuant to 10 CFR 52.98(c) and in accordance with 10 CFR 50.90, Southern Nuclear Operating Company (SNC), the licensee for Vogtle Electric Generating Plant (VEGP) Units 3 and 4, requests an amendment to Combined License Numbers NPF-91 and NPF-92, for VEGP Units 3 and 4, respectively. The requested amendment includes changes to the Updated Final Safety Analysis Report (UFSAR) in the form of departures from the incorporated plant-specific Design Control Document Tier 2 information and involves related changes to the VEGP Units 3 and 4 COL Appendix C (and corresponding plant-specific DCD Tier 1) information. Pursuant to the provisions of 10 CFR 52.63(b)(1), an exemption from elements of the design as certified in the 10 CFR Part 52, Appendix D, design certification rule is also requested for the plant-specific Tier 1 material departures.

The proposed changes involve changes to the Design Reliability Assurance Program (D-RAP) to identify the covers for the IRWST vents and overflow weirs as the risk-significant components included in the D-RAP and to differentiate between the rod drive motor-generator (MG) sets field control relays and the rod drive power supply control cabinets in which the relays are located.

Enclosure 1 provides the description, technical evaluation, regulatory evaluation (including the Significant Hazards Consideration Determination), and environmental considerations for the proposed changes in the License Amendment Request (LAR).

Enclosure 2 provides the background and supporting basis for the requested exemption.

Enclosure 3 provides the proposed changes to the licensing basis documents.

This letter contains no regulatory commitments.

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SNC requests staff approval of this license amendment by November 22, 2016, to support installation of the control cabinets for the rod drive motor-generator sets and closure of a D-RAP Inspections, Tests, Analyses, and Acceptance Criteria (ITAAC). Approval by this date will allow sufficient time to implement the licensing basis changes prior to the associated construction and ITAAC closure activities. SNC expects to implement this proposed amendment (through incorporation into the licensing basis documents; e.g., the UFSAR) within 30 days of approval of the requested changes. South Carolina Electric and Gas has indicated the requested approval date for the Virgil C. Summer Units 2 and 3 license amendment request for this topic will be May 15, 2017.

SNC also expects to seek a No Objection letter from the NRC Staff by submittal of a Preliminary Amendment Request (PAR) following this LAR submittal. The No Objection letter is necessary to allow installation of the control cabinets for the rod drive motor-generator sets, PLS-JD-RDM001 and PLS-JD-RDM002, which is currently scheduled to begin on October 26, 2016.

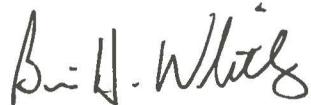
In accordance with 10 CFR 50.91, SNC is notifying the State of Georgia of this LAR by transmitting a copy of this letter and enclosures to the designated State Official.

Should you have any questions, please contact Mr. Adam G. Quarles at (205) 992-7031.

Mr. Brian H. Whitley states that: he is the Regulatory Affairs Director of Southern Nuclear Operating Company; he is authorized to execute this oath on behalf of Southern Nuclear Operating Company; and to the best of his knowledge and belief, the facts set forth in this letter are true.

Respectfully submitted,

SOUTHERN NUCLEAR OPERATING COMPANY



Brian H. Whitley



BHW/NH/ljs

Sworn to and subscribed before me this 23rd day of August, 2016

Notary Public: Lisa Myrick Spears

My commission expires: June 18, 2019

- Enclosures:
- 1) Vogtle Electric Generating Plant (VEGP) Units 3 and 4 – Request for License Amendment: Design Reliability Assurance Program (D-RAP) Changes (LAR-16-017)
 - 2) Vogtle Electric Generating Plant (VEGP) Units 3 and 4 – Exemption Request: Design Reliability Assurance Program (D-RAP) Changes (LAR-16-017)
 - 3) Vogtle Electric Generating Plant (VEGP) Units 3 and 4 – Proposed Changes to the Licensing Basis Documents (LAR-16-017)

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Southern Nuclear Operating Company

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Enclosure 1

Vogtle Electric Generating Plant (VEGP) Units 3 and 4

Request for License Amendment:

Design Reliability Assurance Program (D-RAP) Changes

(LAR-16-017)

(Enclosure 1 consists of 19 pages, including this cover page)

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Enclosure 1

Request for License Amendment: Design Reliability Assurance Program (D-RAP) Changes
(LAR-16-017)

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Enclosure 1

Request for License Amendment: Design Reliability Assurance Program (D-RAP) Changes
(LAR-16-017)

Pursuant to 10 CFR 52.98(c) and in accordance with 10 CFR 50.90, Southern Nuclear Operating Company (SNC, or the "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. The amendment involves changes to the Design Reliability Assurance Program (D-RAP) risk-significant components described in Combined Operating License (COL) Appendix C (and plant-specific Design Control Document (DCD) Tier 1) Table 2.5.1-4 and Table 3.7-1, and associated UFSAR Tier 2 information. The proposed changes revise equipment descriptions, tag numbers, and functions for the risk-significant components within the scope of D-RAP.

1. SUMMARY DESCRIPTION

Mechanical covers are being added to the in-containment refueling water storage tank (IRWST) vents and overflow weirs. The proposed changes add the IRWST vent and overflow weir covers by including unique equipment tag numbers for each cover in the UFSAR. The licensing basis currently refers to the IRWST vents using the general equipment tag number for the IRWST, PXS-MT-03, and does not refer to vent covers. These changes modify the design of the IRWST vents and overflow weirs to include the covers as separate, auxiliary pieces of equipment in the D-RAP, as described in COL Appendix C (and plant-specific DCD Tier 1) Table 3.7-1 and associated UFSAR Tier 2 information.

Each rod drive motor-generator (MG) set consists of a skid-mounted, motor-driven flywheel/generator. Two control cabinets house control relays. The control relays function to permit the rods to drop following a diverse actuation system (DAS) reactor trip signal. These control relays are risk-significant as identified in UFSAR Table 17.4-1. However, the description of the system, structure, or component (SSC) identifies the rod drive MG sets and refers to equipment tags PLS-MG-01A/B (for PLS-MG-01A and PLS-MG-01B). This component description and equipment tag identify the skid-mounted portion of the rod drive MG sets and not the control cabinet where the relays are located. Changes are required to identify the control cabinets for the rod drive MG sets as the correct description and equipment tags for the risk-significant components within the D-RAP, described in COL Appendix C (and plant-specific DCD Tier 1) Tables 2.5.1-4 and 3.7-1, and associated UFSAR Tier 2 information.

The requested amendment requires changes to the UFSAR in the form of departures from the plant-specific Tier 2 information (as detailed in Section 2) and involves changes to COL Appendix C (and corresponding changes to plant-specific DCD Tier 1) information. This enclosure requests approval of the license amendment necessary to implement the UFSAR Tier 2 and COL Appendix C changes. Enclosure 2 requests exemptions necessary to implement the involved changes to the plant-specific DCD Tier 1 information.

2. DETAILED DESCRIPTION

The D-RAP, as described in UFSAR Section 17.4, provides confidence that reliability is designed into the plant and important reliability assumptions made as part of the AP1000 probabilistic risk assessment (PRA) will remain valid throughout the life of the plant. The D-RAP identifies aspects of plant operation, maintenance, and performance monitoring

pertinent to risk-significant systems, structures and components (SSCs). UFSAR Table 17.4-1 identifies risk-significant components within the scope of D-RAP. Risk-significant SSCs are also described in COL Appendix C (and plant-specific DCD Tier 1) Table 3.7-1. Risk-significant components are evaluated to determine their dominant failure modes and the effects associated with those failure modes.

Change 1, IRWST Vent and Overflow Weir Covers:

The current licensing basis describes the IRWST vent and overflow weirs in UFSAR Subsection 6.3.2.2.3. The terms "vent" and "overflows" were intended to imply the use of a cover on the vent and overflow in order to perform the intended design function. However, this designation of "cover" is not described in the licensing basis. The IRWST vents and overflow weirs do not have a unique equipment tag number in the licensing basis. The licensing basis currently refers to the IRWST vents using the general equipment tag number, PXS-MT-03, and does not refer to covers.

The design of the IRWST vents and overflow weirs as described in the UFSAR is revised to include the covers. Individual equipment tags are created for the IRWST vent and overflow weir covers. These covers are separate components attached to the vents and overflow weirs on the IRWST. The covers provide a separate active (i.e., moving) function of preventing over-pressurization, preventing debris from entering the tank and accommodating volume and mass increases in the tank. The covers are safety-related and considered risk-significant components and therefore are listed in UFSAR Tables 3.2-3 and 17.4-1. Currently, the vents are considered an integral part of the IRWST, PXS-MT-03, and are not assigned unique equipment tags.

A change is proposed to revise UFSAR Table 3.2-3 to include the safety-related IRWST vent and overflow weir cover equipment tags [PXS-MY-YXX, where XX is a unique two-digit numerical code] as part of the passive core cooling system (PXS) components. The seismic Category I vent covers provide the safety-related function of preventing debris from entering the IRWST and preventing internal and external over-pressurization of the IRWST. The seismic Category I overflow weir covers provide a flow path for increases in volume and mass in the tank and prevent water from leaking back into the IRWST.

Originally, the IRWST vents, PXS-MT-03, were added to UFSAR Table 17.4-1 to represent the function of reducing the risk of containment failure and large releases due to overtemperature from sustained hydrogen combustion along the containment pressure boundary. However, as written, the table is misleading as is because the vent structures are not included within the scope of the D-RAP. The vents are considered passive structures and do not perform an active function related to the IRWST. A change is proposed to add the equipment tags for the covers to UFSAR Table 17.4-1 and include the covers in the scope of D-RAP. The covers provide a separate active function of preventing over-pressurization, preventing debris from entering the tank and accommodating volume and mass increases in the tank. Insights and assumptions are added to UFSAR Table 17.4-1 to identify the function of the IRWST vent and overflow weir covers.

The proposed change to UFSAR Table 17.4-1 involves a change to COL Appendix C (and plant-specific DCD Tier 1) Table 3.7-1, Risk-Significant Components, to include the individual equipment tags for each vent and overflow weir cover. The identification of IRWST

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vents (PXS-MT-03) is removed from COL Appendix C (and plant-specific DCD Tier 1) Table 3.7-1 as the vent and overflow openings in the modules are considered rigid structures and do not perform an active function related to the tank. The vents are not included within the scope of D-RAP.

These covers are new components and their design function is currently described in the IRWST design in UFSAR Subsection 6.3.2.2.3. The terms for vent and overflow weirs refer to the functionality of the covers; although the covers are not specifically identified in the IRWST description. This proposed change adds the IRWST vent and overflow weir covers and new associated equipment tags to the scope of D-RAP. Changes are proposed to revise UFSAR Subsection 6.3.2.2.3 to include the covers. UFSAR Subsections 6.3.2.2.3 and 6.3.2.2.7.2 are revised to clarify that the correct terminology for use is “overflow weirs” instead of “overflows” when referring to the components that accommodate volume and mass increase in the tank. This is considered a non-technical change as there is no technical difference between the use of these words.

Change 2, Rod Drive MG Sets Field Control Relays:

COL Appendix C (and plant-specific DCD Tier 1) Table 3.7-1 and UFSAR Table 17.4-1 were revised per VEGP Units 3 and 4 Amendment No. 38 [ADAMS Accession No. ML15187A258] to identify that the risk-significant D-RAP components associated with the rod drive MG sets are not breakers, but instead generator field control relays. However, this change did not take into account the separate tag numbers of the two portions of the system (MG sets and control cabinets). Since the relays are within the control cabinets, there was a missed impact to the licensing basis, as this does not accurately reflect the correct equipment tag and component description in both COL Appendix C (and plant-specific DCD Tier 1) Table 3.7-1 and UFSAR Table 17.4-1.

The proposed change revises UFSAR Table 17.4-1 to identify, in conjunction with the existing Insights and Assumptions, that the control relays are the risk-significant portion of the rod drive MG sets included within the scope of D-RAP. The description of the system, structure or component (SSC) is changed from “Rod Drive MG Sets (Generator Field Control Relays)” to “Control Cabinets for the Rod Drive MG Sets (Generator Field Control Relays).” The equipment tags referenced are changed from PLS-MG-01A/B to PLS-JD-RDM001 and PLS-JD-RDM002. The Rationale column and the Insights and Assumptions column are not changed by this activity as the correct component (the relays) and its function within the D-RAP scope is already described per the amendments described above. This change provides the means to make the referenced SSC consistent with the risk-significant D-RAP function identified in the Insights and Assumptions column for the relays within the control cabinets.

The proposed change to UFSAR Table 17.4-1 involves a change to COL Appendix C (and plant-specific DCD Tier 1) Table 2.5.1-4 Inspections, Tests, Analyses, and Acceptance Criteria (ITAAC) Nos. 2.5.01.02a and 2.5.01.02c.i to identify that the relays are a part of the control cabinets for the rod drive MG sets. This change serves to associate the relays to the control cabinets as opposed to only the rod drive MG sets. The required function of the relay to open upon receipt of a DAS signal is not changed by this activity. The intent of ITAAC for DAS functions is not changed or adversely impacted.

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The proposed change to UFSAR Table 17.4-1 involves a change to COL Appendix C (and plant-specific Tier 1) Table 3.7-1, Risk-Significant Components, for the DAS section of equipment. The proposed change to this table reflects the description of the risk-significant function of the control relays within the control cabinets for the rod drive MG sets. “Rod Drive MG Sets (generator field control relays)” and their associated equipment tags, PLS-MG-01A/B, are removed from the table. “Control Cabinets for the Rod Drive MG Sets (generator field control relays)” is added to the table to identify the risk-significant portion of the rod drive MG sets. Equipment tag numbers for the control cabinets, PLS-JD-RDM001 and PLS-JD-RDM002, are added to represent the association of the relays. Existing equipment tags PLS-MG-01A/B are removed as they do not represent the relays.

Licensing Basis Change Descriptions

The following changes to COL Appendix C (and corresponding plant-specific Tier 1), and UFSAR Tier 2 text, tables, and figures are proposed:

COL Appendix C (and Plant-Specific Tier 1) Table 2.5.1-4, ITAAC Nos. 2.5.01.02a and 2.5.01.02c.i.

- Revise to identify the control relays are contained in the control cabinets.

COL Appendix C (and Plant-Specific Tier 1) Table 3.7-1

- Revise the table to include individual equipment tags for IRWST hood vent covers, IRWST steam generator (SG) wall vent covers, and IRWST overflow weir covers. Remove the line for IRWST Vents (PXS-MT-03).
- Revise equipment name from “Rod Drive MG Sets (generator field control relays)” to “Control Cabinets for the Rod Drive MG Sets (generator field control relays).” Revise equipment tags from PLS-MG-01A/B to PLS-JD-RDM001, PLS-JD-RDM002.

UFSAR Table 3.2-3 (Tier 2)

- Revise table to include individual equipment tags for IRWST hood vent covers, IRWST SG wall vent covers, and IRWST overflow weir covers.

UFSAR Subsection 6.3.2.2.3 (Tier 2)

- Include the covers in the description of the IRWST vents and overflow weirs. Revise “overflows” to “overflow weirs.”

UFSAR Subsection 6.3.2.2.7.2 (Tier 2)

- Revise “overflows” to “overflow weirs.”

UFSAR Table 17.4-1 (Tier 2)

- Revise SSC “Rod Drive MG Sets (Generator Field Control Relays) (PLS-MG-01A/B)” to “Control Cabinets for the Rod Drive MG Sets (Generator Field Control Relays) (PLS-JD-RDM001, PLS-JD-RDM002).”

- Revise table to include individual equipment tags for IRWST hood vent covers, IRWST SG wall vent covers, and IRWST overflow weir covers. Add rationale and insights and assumptions. Remove the line item for IRWST Vents (PXS-MT-03), including the associated rationale and insights and assumptions.

3. TECHNICAL EVALUATION

Change 1, IRWST Vent and Overflow Weir Covers:

As described in UFSAR Subsection 6.3.2.2.3, vents are installed on the roof of the IRWST. These vents are normally closed to contain water vapor and radioactive gases in the tank during normal operation and prevent debris from entering the tank from the containment operating deck. The vents open with a slight pressurization of the IRWST. These vents provide a path to vent steam released by the spargers or generated by the passive residual heat removal heat exchanger (PRHR HX), into the containment atmosphere. The vents minimize pressure differential between the IRWST and containment during events.

Additionally, overflow weirs are provided from the IRWST to the refueling cavity to accommodate volume and mass increases in the tank during PRHR HX or automatic depressurization system operation.

The IRWST vents and overflow weirs are provided with normally closed covers. However, these covers were not specifically identified as separate components in the licensing basis associated with the design function. The covers prevent debris from entering the IRWST during normal plant operation. These covers also have safety functions to allow steam venting and overflow water discharge. This protects the IRWST from internal and external over-pressurization and directs hydrogen produced in a severe accident away from the containment wall through pressure sequencing the opening of the covers. The SG wall vent covers and some overflow weir covers open first upon pressurization of the IRWST. The IRWST hood vent covers and three of the overflow weir covers subsequently open following the opening of the IRWST SG wall vent covers. These covers provide the active functions of the IRWST vent and overflow weirs.

The IRWST vents are categorized into two types – hood vent covers and SG wall vent covers. The hood vent covers utilize two mechanical flow directions (i.e., flow in and flow out). There are three types of hood vents, of which two are hooded vents and one is a vacuum breaker hooded vent. These vents protect against internal and external over-pressurization. They also prevent debris from entering the tank and minimize evaporation within the tank. The SG wall vents allow steam to flow from the IRWST to protect against internal over-pressurization. They also prevent debris from entering the tank and minimize evaporation within the tank. Overflow weir covers provide a path for liquid to flow from the IRWST to accommodate volume and mass increase and prevent the tank from becoming water solid. They also prevent water from leaking back to the IRWST when the refueling cavity is filled during an outage. The overflow weir covers also prevent debris from entering the tank and minimize evaporation. All three types of covers support hydrogen venting strategies. The addition of the covers does not adversely impact the design function of the vents and overflow weirs.

The proposed change to add the IRWST vent and overflow weir covers does not adversely impact any safety-related functions of safety-related systems, structures or components (SSCs). The proposed change does not prevent the IRWST vents and overflow weirs from performing the intended function of providing pathways for venting steam and accommodating volume and mass increases in the tank. The design function of the covers is to prevent debris from entering the IRWST, prevent internal and external over-pressurization of the IRWST, and accommodate volume and mass increases in the tank. The proposed change further supports the IRWST vent and overflow weir functions. This change does not have an adverse impact on the response to anticipated transients or postulated accident conditions because the function of the IRWST vent and overflow weir covers is not changed. Required IRWST venting is not affected for any accident conditions. Probabilistic Risk Assessment (PRA) modeling and analyses for the PXS are not impacted by this change because the functions of the IRWST vents and overflow weirs are not changed by this design activity. The covers are not specifically identified in the PRA description of the vents, but are assumed in the described functions of the vents and overflow weirs. The functional requirements of the covers are included as references to the PRA. Additionally, the assumptions and sources of uncertainty related to the IRWST vents as described in the PRA are not changed as the function of opening and closing requirements of the vents are not changed. The proposed change to the design of the IRWST vents and overflow weirs do not involve an interface with any SSC accident initiator or initiating sequence of events related to the accidents evaluated in the UFSAR. Inspections, Tests, Analyses, and Acceptance Criteria (ITAAC) related to IRWST vents are not adversely impacted by this activity.

UFSAR Table 3.2-3 is revised to include the covers for the IRWST vents and overflow weirs. The description of each IRWST vent and overflow weir is added as IRWST Hood Vent Cover, IRWST SG Wall Vent Cover, and the IRWST Overflow Weir Cover. The AP1000 Class specified for each cover is equipment Class C, which represents safety-related components with safety-related functions required to mitigate design basis accidents or events. These specific components support core cooling. The covers are seismic Category I, which applies to safety-related systems, structures or components (SSCs) that must remain functional during and following a safe shutdown earthquake. This seismic Category I designation of the vent and overflow weir covers is consistent with the seismic Category I designation for the IRWST. The Principal Construction Code specified for each cover is Manufacturer Std. The structural elements of the vent and overflow weir cover assemblies are designed to meet the requirements of the manufacturer's standard as supplemented by American Society of Mechanical Engineers (ASME) AG-1 (Article DA). No comments are added to this table by this change.

UFSAR Table 17.4-1 is revised to include the covers for the IRWST vents and overflow weirs because they are the mechanical component that performs the active function of preventing over-pressurization, preventing debris from entering the tank and accommodating volume and mass increases in the tank. The covers are considered risk-significant and within the scope of the D-RAP. Originally, the vents and overflow weirs equipment tag, PXS-MT-03, was added to UFSAR Table 17.4-1 to be included in the scope of the D-RAP to represent the function of reducing the risk of containment failure and subsequent large releases due to overtemperature from sustained hydrogen combustion along the containment pressure boundary. However, the equipment tag that represents the vents, PXS-MT-03, is removed from the table because the vent and overflow openings in

the modules are considered rigid structures that do not perform any active function related to the IRWST. The specified rationale in UFSAR Table 17.4-1, RAW/CCF represents Risk Achievement Worth (RAW) and Common Cause Failure (CCF). Per Note 2 of the table, this designation describes that the RAW is based on common cause failure of two or more of the specified SSCs. The insights and assumptions describe the functions of the IRWST vent and overflow weir covers. The covers for the vents and overflow weirs prevent debris from entering the IRWST, minimize evaporation, and support venting strategies. Hydrogen venting occurs through the various pressure differential sequencing of each type of vent and overflow weir cover during a severe accident. The IRWST hood and SG wall vent covers also prevent over-pressurization of the IRWST. The overflow weir covers also accommodate volume and mass increases in the tank.

The proposed change does not adversely affect any safety-related equipment or a fission product barrier. System and equipment qualifications are not adversely affected by the proposed change. The proposed change does not result in a new failure mode, malfunction or sequence of events that could adversely affect a radioactive material barrier or safety-related equipment. The vent and overflow weir covers open upon differential pressure between the IRWST and containment. There is acceptable margin in the design because the vent and overflow weir cover opening differential pressure is specified to be sufficiently lower than the IRWST design pressure. The vent covers are a louver type and the overflow weir covers are a hinged flapper type. These simply designed covers do not represent a unique design that would result in a new failure mode. There are not any new credible failure modes associated with the addition of the covers.

The proposed changes do 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 fuel cladding failures.

The design of the IRWST vent and overflow weir covers does not adversely impact any functions associated with containing, controlling, channeling, monitoring, or processing radioactive or non-radioactive materials. The types and quantities of expected plant effluents are not changed. An effluent release path is not associated with the IRWST. Therefore, radioactive or non-radioactive material effluents are not affected by this activity.

The change to the design of the IRWST vents and overflow weirs does not impact radiologically controlled zones. Plant radiation zones, radiation controls established to satisfy 10 CFR 20 requirements, and expected amounts and types of radioactive materials are not affected by the proposed changes. Therefore, individual and cumulative radiation exposures are not significantly affected by this change.

Change 2, Rod Drive MG Sets Field Control Relays:

The rod drive motor-generator (MG) sets provide the power to the control rod drive mechanisms (CRDMs) through the reactor trip switchgear as described in UFSAR Subsection 7.1.3.7. Each of the two MG sets consists of a skid-mounted, motor-driven flywheel/generator. Two control cabinets house the rod drive supply control relays. The rod drive MG sets are included in the plant control system (PLS). The nonsafety-related diverse actuation system (DAS) permits the insertion of control rods by de-energizing the rod drive MG sets. When the generator field control relays within the control cabinets open upon a

DAS signal, the rod drive MG sets are de-energized; current to the magnetic jack mechanisms stops and the gripper coils open, allowing the rods to drop into the core. Operational tests are performed to verify this function as shown in COL Appendix C (and plant-specific DCD Tier 1) Table 2.5.1-4, ITAAC Nos. 2.5.01.02a and 2.5.01.02c.i.

UFSAR Table 17.4-1 is revised to identify, in conjunction with the existing Insights and Assumptions, that the control relays are the risk-significant portion of the rod drive MG sets included within the scope of D-RAP and these components are located within the control cabinets for the rod drive MG sets. The description of the system, structure or component (SSC) is changed from "Rod Drive MG Sets (Generator Field Control Relays)" to "Control Cabinets for the Rod Drive MG Sets (Generator Field Control Relays)." The referenced equipment tag numbers are changed from PLS-MG-01A/B to PLS-JD-RDM001 and PLS-JD-RDM002. The scope of D-RAP is not changed by this activity.

COL Appendix C (and plant-specific DCD Tier 1) Table 2.5.1-4 Inspections, Tests, Analyses, and Acceptance Criteria (ITAAC) 2.5.01.02a and 2.5.01.02c.i are revised to identify that the generator field control relays are a part of the control cabinets for the rod drive motor-generator sets. The proposed change serves to associate the relays to the control cabinets as opposed to only the rod drive MG sets. The intent of ITAAC for DAS functions are not changed or adversely impacted. Acceptance criteria are not adversely impacted.

COL Appendix C (and plant-specific DCD Tier 1) Table 3.7-1, Risk-Significant Components, is revised for the DAS section of equipment. The proposed change to this table reflects the description of the risk-significant function of the control relays housed within the control cabinets for the rod drive MG sets. "Rod Drive MG Sets (generator field control relays)" and their associated equipment tags, PLS-MG-01A/B, are removed from the table. "Control Cabinets for the Rod Drive MG Sets (generator field control relays)" is added to the table to identify the portion of the rod drive MG sets that is risk-significant. Equipment tags for the control cabinets, PLS-JD-RDM001 and PLS-JD-RDM002, are added to represent the association of the relays. This change is in conjunction with UFSAR Table 17.4-1 changes for risk-significant components, but does not impact the risk-significant function for the control relays.

The proposed changes do not adversely impact any safety-related functions of safety-related SSCs because including control cabinet relays as part of the rod drive MG sets does not prevent the control relays from performing their function to open upon receipt of a DAS reactor trip signal to de-energize the rod drive MG sets and allow the rods to drop into the core. The skid-mounted portion of the rod drive MG sets is not affected by this activity because the function of the rod drive MG sets is not changed and the relays are not located on the skid-mount. Accident analyses are not adversely impacted by this change and frequency of accidents is not changed. PRA is not affected because the function of any SSC is not changed by this activity. The location of the relays is not changed.

The proposed changes do not adversely affect any safety-related equipment or a fission product barrier. System and equipment qualifications are not adversely affected by the proposed changes because the location of the control cabinet relays is not changed. The changes do not result in a new failure mode, malfunction or sequence of events that could adversely affect a radioactive material barrier or safety-related equipment.

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

The design of the control cabinets relays does not adversely impact any functions associated with containing, controlling, channeling, monitoring, or processing radioactive or non-radioactive materials. The types and quantities of expected plant effluents are not changed. An effluent release path is not associated with control relays for the rod drive MG sets. Therefore, radioactive or non-radioactive material effluents are not affected by this activity.

The proposed changes do not impact radiologically controlled zones. Plant radiation zones, radiation controls established to satisfy 10 CFR 20 requirements, and expected amounts and types of radioactive materials are not affected by the proposed changes. Therefore, individual and cumulative radiation exposures are not significantly affected by this change.

Summary

The proposed change to add covers to the IRWST vents and overflow weirs do not affect safety-related equipment or function, design function, radioactive material barrier or safety analysis. The covers allow the vents and overflow weirs to perform the design functions, which include preventing debris from entering the IRWST, preventing over-pressurization and accommodating volume and mass increases in the tank. The covers also support hydrogen venting strategies during severe accidents.

The proposed changes to revise the equipment description and tag number to reflect the control relays (contained within the control cabinets) for the rod drive MG sets do not affect safety-related equipment or function, design function, radioactive material barrier or safety analysis. The control relays continue to perform the design function of opening in order to de-energize the rod drive MG sets and permit subsequent rod drop into the core.

4. REGULATORY EVALUATION

4.1 Applicable Regulatory Requirements/Criteria

10 CFR 52.98(f) requires NRC approval for any modification to, addition to, or deletion from the terms and conditions of a combined license (COL). This activity involves a departure from COL Appendix C, Inspections, Tests, Analyses and Acceptance Criteria (ITAAC) information and corresponding change to plant-specific DCD Tier 1 information; therefore, this activity 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 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. The proposed changes

for the in-containment refueling water storage tank (IRWST) vent and overflow weir covers and the MG sets field control relays, which include various changes to Updated Final Safety Analysis Report (UFSAR) Tier 2 text, tables, and figures, involve changes to COL Appendix C (and plant-specific DCD Tier 1) Tables 2.5.1-4 and 3.7-1. Therefore, in accordance with 10 CFR 52, Appendix D, Section VIII.B.5.a, NRC approval is required for the Tier 2 changes and involved Tier 1 departures.

10 CFR 50, Appendix A, "General Design Criteria for Nuclear Power Plants," *General Design Criterion (GDC) 2 – Design bases for protection against natural phenomena*. Structures, systems, and components important to safety shall be designed to withstand the effects of natural phenomena such as earthquakes, tornadoes, hurricanes, floods, tsunami, and seiches without loss of capability to perform their safety functions. The design bases for these structures, systems, and components shall reflect: (1) Appropriate consideration of the most severe of the natural phenomena that have been historically reported for the site and surrounding area, with sufficient margin for the limited accuracy, quantity, and period of time in which the historical data have been accumulated, (2) appropriate combinations of the effects of normal and accident conditions with the effects of the natural phenomena and (3) the importance of the safety functions to be performed.

The proposed change does not adversely affect the physical design and the existing seismic Category I design requirements of the IRWST. The addition of the covers protect against over-pressurization of the IRWST and work in conjunction with the vents to direct hydrogen away from containment during a severe accident. The addition of the covers does not modify any structures, systems or components important to safety in a manner that would adversely impact protection against natural phenomena. Therefore, compliance with GDC-2 is not changed.

10 CFR 50, Appendix A, GDC-4 - *Environmental and dynamic effects design bases*. Structures, systems, and components important to safety shall 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. These structures, systems, and components shall be appropriately protected against dynamic effects, including the effects of missiles, pipe whipping, and discharging fluids, that may result from equipment failures and from events and conditions outside the nuclear power unit. However, dynamic effects associated with postulated pipe ruptures in nuclear power units may be excluded from the design basis when analyses reviewed and approved by the Commission demonstrate that the probability of fluid system piping rupture is extremely low under conditions consistent with the design basis for the piping.

The proposed change maintains the physical capability of the IRWST to withstand dynamic effects associated with missiles, pipe whipping, and discharging fluids as required by this criterion. The addition of the covers protect against over-pressurization of the IRWST and work in conjunction with the vents to direct hydrogen away from containment during a severe accident. The proposed changes do not change the requirements for anchoring safety-related components and supports to seismic Category I structures. Therefore, compliance with GDC-4 is not changed.

10 CFR 50, Appendix A, *GDC-20 – Protection system functions*. The protection system shall be designed (1) to initiate automatically the operation of appropriate systems including the reactivity control systems, to assure that specified acceptable fuel design limits are not exceeded as a result of anticipated operational occurrences and (2) to sense accident conditions and to initiate the operation of systems and components important to safety.

The proposed change does not adversely impact the function of the control relays to open upon receipt of a diverse actuation system (DAS) signal, permitting subsequent rod drop. Protective functions are not changed. Therefore, compliance with GDC-20 is not changed.

10 CFR 50, Appendix A, *GDC-26 – Reactivity control system redundancy and capability*. Two independent reactivity control systems of different design principles shall be provided. One of the systems shall use control rods, preferably including a positive means for inserting the rods, and shall be capable of reliably controlling reactivity changes to assure that under conditions of normal operation, including anticipated operational occurrences, and with appropriate margin for malfunctions such as stuck rods, specified acceptable fuel design limits are not exceeded. The second reactivity control system shall be capable of reliably controlling the rate of reactivity changes resulting from planned, normal power changes (including xenon burnout) to assure acceptable fuel design limits are not exceeded. One of the systems shall be capable of holding the reactor core subcritical under cold conditions.

The proposed change does not adversely impact the function of the control relays to open upon receipt of a diverse actuation system (DAS) signal, permitting subsequent rod drop. The function of the rod drive MG sets is not changed. Therefore, compliance with GDC-26 is not changed.

10 CFR 50, Appendix A, *GDC-35 – Emergency core cooling*. A system to provide abundant emergency core cooling shall be provided. The system safety function shall be to transfer heat from the reactor core following any loss of reactor coolant at a rate such that (1) fuel and clad damage that could interfere with continued effective core cooling is prevented and (2) clad metal-water reaction is limited to negligible amounts. Suitable redundancy in components and features, and suitable interconnections, leak detection, isolation, and containment capabilities shall be provided to assure that for onsite electric power system operation (assuming offsite power is not available) and for offsite electric power system operation (assuming onsite power is not available) the system safety function can be accomplished, assuming a single failure.

The proposed change does not modify the design of the IRWST or associated vents and covers in a manner that adversely affects emergency core cooling. The addition of the covers enhances the functionality of the IRWST by preventing debris from entering the IRWST and over-pressurization of the tank. This change does not adversely affect any heat transfer functions and does not impact any fuel or cladding. The safety-related functions of the IRWST and associated components are not affected. Therefore, compliance with GDC-35 is not changed.

10 CFR 50, Appendix A, *GDC-41 – Containment atmosphere cleanup*. Systems to control fission products, hydrogen, oxygen, and other substances which may be released into the reactor containment shall be provided as necessary to reduce, consistent with the functioning of other associated systems, the concentration and quality of fission products released to the environment following postulated accidents, and to control the concentration of hydrogen or oxygen and other substances in the containment atmosphere following postulated accidents to assure that containment integrity is maintained.

The proposed change does not impact the ability of the IRWST vents and overflow weirs to direct hydrogen that is produced during an accident away from containment. Therefore, compliance with GDC-41 is not changed.

4.2 Precedent

No precedent identified.

4.3 Significant Hazards Consideration Determination

Mechanical covers are being added to the in-containment refueling water storage tank (IRWST) vents and overflow weirs. The proposed changes add the IRWST vent and overflow weir covers by including unique equipment tag numbers for each cover in the UFSAR. The licensing basis currently refers to the IRWST vents using the general equipment tag number for the IRWST, PXS-MT-03, and does not refer to vent covers. These changes modify the design of the IRWST vents and overflow weirs to include the covers as separate, auxiliary components in the D-RAP, as described in COL Appendix C (and plant-specific DCD Tier 1) Table 3.7-1 and associated UFSAR Tier 2 information.

Each rod drive motor-generator (MG) set consists of a skid-mounted, motor-driven flywheel/generator. Two control cabinets house control relays. The control relays function to permit the rods to drop following a diverse actuation system (DAS) reactor trip signal. These control relays are risk-significant as identified in UFSAR Table 17.4-1. However, the description of the system, structure, or component (SSC) identifies the rod drive MG sets and equipment tags PLS-MG-01A/B. This component description and equipment tag identify the skid-mounted portion of the rod drive MG sets and not the control cabinet where the relays are located. Changes are required to identify the control cabinets for the rod drive MG sets as the correct description and equipment tags for the risk-significant components within the D-RAP, described in COL Appendix C (and plant-specific DCD Tier 1) Tables 2.5.1-4 and 3.7-1, and associated UFSAR Tier 2 information.

The requested amendment requires changes to the UFSAR in the form of departures from the plant-specific Tier 2 information (as detailed in Section 2) and involves changes to COL Appendix C (and corresponding plant-specific DCD Tier 1) information.

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 in-containment refueling water storage tank (IRWST) provides flooding of the refueling cavity for normal refueling. The tank also serves as a heat sink during Passive Residual Heat Removal (PRHR) Heat Exchanger (HX) operation and in the event of a loss-of-coolant-accident (LOCA) provides injection in support of long-term RCS cooling. This activity adds normally closed covers to the IRWST vents and overflow weirs to prevent debris from entering the tank, prevent over-pressurization and accommodate volume and mass increases in the tank. The vent and overflow weir covers open upon differential pressures between the IRWST and containment.

The rod drive MG sets provide the power to the control rod drive mechanisms through the reactor trip switchgear. This activity revises the equipment description and equipment tag associated with the risk-significant control relays which open to de-energize the rod drive MG sets and permit rods to drop.

The proposed changes to add the IRWST vent and overflow weir covers and to change the description of the equipment and equipment tag related to the rod drive MG sets does not inhibit the SSCs from performing their safety-related function. The design bases of the IRWST vents and overflow weirs are not modified as a result of the addition of the covers to the vents and overflow weirs and the change to the control cabinet relay description and equipment tag. This proposed amendment does not have an adverse impact on the response to anticipated transients or postulated accident conditions because the functions of the SSCs are not changed. Required IRWST venting is not affected for any accident conditions. Safety-related structure, system, component (SSC) or function is not adversely affected by this change. The changes to include the IRWST covers and to change the control cabinet relay description and tag number do not involve an interface with any SSC accident initiator or initiating sequence of events, and thus, the probabilities of the accidents evaluated in the UFSAR are not affected. The proposed changes do not involve a change to the predicted radiological releases due to postulated accident conditions, thus, the consequences of the accidents evaluated in the UFSAR are not affected. Probabilistic Risk Assessment (PRA) modeling and analyses associated with the SSCs are not impacted by this change.

Therefore, the proposed 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 to the design of the IRWST vent and overflow weir covers do not adversely affect any safety-related equipment, and do not add any new interfaces to safety-related SSCs. No system or design function or equipment qualification is affected by these changes. The changes do not introduce a new failure mode, malfunction or sequence of events that could affect plant safety or safety-related equipment as the simplistic design of the cover louvers and hinged flappers are not considered unique designs. No new credible failure modes are introduced by the addition of the covers.

The proposed changes to the description and equipment tag associated with the risk-significant control relays for the rod drive MG sets do not adversely affect any safety-related equipment, and do not add any new interfaces to safety-related SSCs. No system or design function or equipment qualification is affected by these changes. The changes do not introduce a new failure mode, malfunction or sequence of events that could affect plant safety or safety-related equipment because the design function of the control relays, control cabinets, or rod drive MG sets is not changed.

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

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

Response: No

The proposed changes maintain compliance with the applicable Codes and Standards, thereby maintaining the margin of safety associated with these SSCs. The proposed changes do not alter any applicable design codes, code compliance, design function, or safety analysis. Consequently, no safety analysis or design basis acceptance limit/criterion is challenged or exceeded by the proposed change, thus the margin of safety is not reduced. Because no safety analysis or design basis acceptance limit/criterion is challenged or exceeded by these changes, no margin of safety is reduced.

Therefore, the proposed amendment 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. The above evaluations demonstrate that the requested changes can be accommodated without an increase in

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the probability or consequences of an accident previously evaluated, without creating the possibility of a new or different kind of accident from any accident previously evaluated, and without a significant reduction in a margin of safety. Having arrived at negative declarations with regard to the criteria of 10 CFR 50.92, this assessment determined that the requested change does not involve a Significant Hazards Consideration.

5. ENVIRONMENTAL CONSIDERATIONS

This review supports a request to amend Combined License (COL) Appendix C (and corresponding Plant-Specific Tier 1) information, and associated changes to Tier 2 information in the Updated Final Safety Analysis Report (UFSAR).

Mechanical covers are being added to the in-containment refueling water storage tank (IRWST) vent and overflow weirs. The proposed changes describe the IRWST vent and overflow weir covers by including individual equipment tag numbers for each cover in the Updated Final Safety Analysis Report (UFSAR). The licensing basis currently refers to the IRWST vents using the general equipment tag number for the IRWST, PXS-MT-03, and provides no reference to vent covers. These changes modify the design of the IRWST vents and overflow weirs to include the covers.

Each of the rod drive motor-generator (MG) sets consists of a skid-mounted, motor-driven flywheel/generator. Two control cabinets house the control relays. The control relays for the rod drive MG sets function to permit the rods to drop following a diverse actuation system (DAS) reactor trip signal. These control relays are risk-significant as identified in the UFSAR, but are not described in the licensing basis correctly as the description of the component and equipment tag reference a separate portion of the rod drive MG sets. The proposed changes identify the control relays (contained in the control cabinets) and the associated equipment tags PLS-JD-RDM001 and PLS-JD-RDM002 as the correct description for the risk-significant components within the licensing basis.

A review has determined that the proposed amendment would change how a requirement is met with respect to the installation or use of a facility component located within the restricted area, as defined in 10 CFR Part 20, or would change an inspection or surveillance requirement. This review has determined that the proposed change would require an amendment from the COL; however, a review of the anticipated construction and operational effects of the proposed 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, No Significant Hazards Consideration Determination, 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 No Significant Hazards Consideration 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 in the requested amendment add the IRWST hood vent covers, IRWST SG wall vent covers, and IRWST overflow weir covers and provide individual equipment tag numbers for each cover. The proposed change also revises the description and equipment tag of the risk-significant DAS functions related to the control relays for the rod drive MG sets. The changes are unrelated to any aspects of plant construction or operation that would introduce any changes 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. The IRWST vent and overflow weir covers and the control relays provide a safety-related function. These changes do not 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 changes add covers for the IRWST vents and overflow weirs. These covers are also given new individual equipment tags. The proposed changes also revise the description and equipment tag associated with the risk-significant control relays for the rod drive MG sets. Plant radiation zones, radiation control established to satisfy 10 CFR 20 requirements, and expected amounts and types of radioactive materials are not affected by the proposed changes because the SSCs are not changed in any manner. Therefore, it is concluded that 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 do 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

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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), an environmental impact statement or environmental assessment of the proposed exemption is not required.

6. REFERENCES

None.

Southern Nuclear Operating Company

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Enclosure 2

Vogtle Electric Generating Plant (VEGP) Units 3 and 4

Exemption Request:

Design Reliability Assurance Program (D-RAP) Changes

(Enclosure 2 consists of eight pages, including this cover page)

1.0 PURPOSE

Southern Nuclear Operating Company (the Licensee) requests a permanent exemption from the provisions of 10 CFR 52, Appendix D, Section III.B, Design Certification Rule for the AP1000 Design, Scope and Contents, to allow a departure from elements of the certification information in Tier 1 of the generic AP1000 Design Control Document (DCD). The regulation, 10 CFR 52, Appendix D, Section III.B, requires an applicant or licensee referencing Appendix D to 10 CFR Part 52 to incorporate by reference and comply with the requirements of Appendix D, including certified information in DCD Tier 1. The Tier 1 information for which a plant-specific departure and exemption is being requested includes changes to the Design Reliability Assurance Program (D-RAP) risk-significant components described in plant-specific DCD Tier 1 Table 2.5.1-4 and Table 3.7-1.

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 will apply the requirements of 10 CFR 52, Appendix D, Section VIII.A.4 to allow departures from generic DCD Tier 1 information due to proposed changes to the D-RAP risk-significant components described in plant-specific DCD Tier 1 Table 2.5.1-4 and Table 3.7-1.

2.0 BACKGROUND

The Licensee is the holder of Combined License Nos. NPF-91 and NPF-92, which authorize construction and operation of two Westinghouse Electric Company AP1000 nuclear plants, named Vogtle Electric Generating Plant (VEGP) Units 3 and 4, respectively.

The Design Reliability Assurance Program (D-RAP), as described in UFSAR Section 17.4, provides confidence that reliability is designed into the plant and important reliability assumptions made as part of the AP1000 probabilistic risk assessment (PRA) will remain valid throughout the life of the plant. The D-RAP identifies aspects of plant operation, maintenance, and performance monitoring pertinent to risk-significant systems, structures and components (SSCs). Risk-significant components are evaluated to determine their dominant failure modes and the effects associated with those failure modes. Plant-specific Tier 1 Table 3.7-1 identifies risk-significant components within the scope of D-RAP, and is consistent with the D-RAP scope described in UFSAR Section 17.4 and listed in UFSAR Table 17.4-1.

Mechanical covers are being added to the in-containment refueling water storage tank (IRWST) vents and overflow weirs. The proposed changes add the IRWST vent and overflow weir covers by including unique equipment tag numbers for each cover in the UFSAR. The licensing basis currently refers to the IRWST vents using the general equipment tag number for the IRWST, PXS-MT-03, and does not refer to vent covers. These changes modify the design of the IRWST vents and overflow weirs to include the covers as separate, auxiliary components in the D-RAP, as described in plant-specific Tier 1 Table 3.7-1 and associated UFSAR Tier 2 information.

Each rod drive motor-generator (MG) set includes a skid-mounted, motor-driven flywheel/generator and two control cabinets, which house control relays. The control relays function to permit the rods to drop following a diverse actuation system (DAS) reactor trip signal. These control relays are risk-significant, as identified in UFSAR Table 17.4-1. However, the SSC description identifies the rod drive MG sets and equipment tags PLS-MG-01A/B. This component description and equipment tag identify the skid-mounted portion of the rod drive MG sets and not the control cabinets in which the relays are located. Changes are required to more

precisely identify the control cabinets for the rod drive MG sets as the description and equipment tags of the risk-significant components in the D-RAP, as described in plant-specific Tier 1 Tables 2.5.1-4 and 3.7-1, and associated UFSAR Tier 2 information.

This enclosure requests approval of the exemption necessary to implement the involved changes to the plant-specific Tier 1 information. The following changes to plant-specific Tier 1 are proposed:

Plant-Specific Tier 1 Table 2.5.1-4, ITAAC Nos. 2.5.01.02a and 2.5.01.02c.i.

- Revise to identify the control relays are contained in the control cabinets.

Plant-Specific Tier 1 Table 3.7-1

- Revise the table to include individual equipment tags for IRWST hood vent covers, IRWST steam generator (SG) wall vent covers, and IRWST overflow weir covers. Remove the line for IRWST Vents (PXS-MT-03).
- Revise equipment name from “Rod Drive MG Sets (generator field control relays)” to “Control Cabinets for the Rod Drive MG Sets (generator field control relays).” Revise equipment tags from PLS-MG-01A/B to PLS-JD-RDM001, PLS-JD-RDM002.

3.0 TECHNICAL JUSTIFICATION OF ACCEPTABILITY

An exemption is requested to depart from AP1000 generic DCD Tier 1 material in regard to the AP1000 by revising the controller logic information, including equipment name and tag numbers for the diverse actuation system (DAS) identified in the Tier 1 system-specific ITAAC table and in the Tier 1 table of risk-significant components and by revising the description of the IRWST vents and overflow weirs to include the covers for these components in the Tier 1 table of risk-significant components . The proposed exemption would allow a change to the plant-specific Tier 1 system-based ITAAC information consistent with concurrent revisions proposed for the plant-specific DCD Tier 2 information descriptions.

The proposed change to identify the IRWST vent and overflow weir covers in plant-specific Tier 1 Table 3.7-1 results in the addition of these components to the D-RAP analysis required by Tier 1 Table 3.7-3, ITAAC Item 1. This change is consistent with a corresponding change to add these same components to the D-RAP scope in UFSAR Table 17.4-1, along with the supporting rationale, insights and assumptions for their inclusion in the scope of D-RAP. The design function of the covers is to prevent debris from entering the IRWST, prevent internal and external over-pressurization of the IRWST, and accommodate volume and mass increases in the IRWST. The proposed change to replace the IRWST vents with the associated vent covers in the D-RAP scope recognizes that the vent and overflow weir covers are the mechanical components that perform these active functions. Inclusion in the scope of D-RAP provides assurance that the design of the vent and overflow weir covers is consistent with the risk insights and key assumptions regarding the design, reliability, and availability of these risk-significant components and their importance in the accomplishment of their design functions. Including the IRWST vent and overflow weir covers in the D-RAP scope in Tier 1 Table 3.7-1 does not adversely impact any safety-related functions of safety-related systems, structures or components (SSCs). The proposed change does not prevent the IRWST vents and overflow

weirs from performing the intended function of providing pathways for venting steam and accommodating volume and mass increases in the tank. The proposed change further assures the ability of the IRWST vent and overflow weirs to perform their design functions.

The proposed change to Tier 1 Tables 2.5.1-4 and 3.7-1 more accurately identifies the location of the MG sets field control relays as inside the control cabinets for the MG sets and is consistent with a corresponding change to the D-RAP information presented in UFSAR Table 17.4-1. The MG sets field control relays are currently identified as risk-significant components within the scope of D-RAP for the Diverse Actuation System (DAS) based upon their design function to open on a DAS reactor trip signal demand to de-energize the rod drive MG sets and allow the rods to drop. The proposed change serves to associate the relays to the control cabinets as opposed to only the rod drive MG sets. The required function of the relays to open upon receipt of a DAS signal is not changed by this activity. This change provides the means to make the referenced SSC description consistent with the risk-significant, D-RAP function identified in the Insights and Assumptions column.

The intent of ITAAC for DAS functions are not changed or adversely impacted. The proposed changes to add the IRWST vent and overflow weir covers to the D-RAP scope in Tier 1 Table 3.7-1 and to more accurately identify the location of the MG sets field control relays in the control cabinets for the MG sets in Tier 1 Tables 2.5.1-4 and 3.7-1 do not adversely impact any safety-related functions of safety-related systems, structures or components (SSCs).

Detailed technical justification supporting this request for exemption is provided in Section 3 of the associated License Amendment Request in Enclosure 1 of this letter.

4.0 JUSTIFICATION OF EXEMPTION

10 CFR Part 52, Appendix D, Section VIII.A.4 and 10 CFR 52.63(b)(1) govern the issuance of exemptions from elements of the certified design information for AP1000 nuclear power plants. Since SNC has identified changes to the Tier 1 information as discussed in Enclosure 1 of the accompanying License Amendment Request, an exemption from the certified design information in Tier 1 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 design change will 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, Section III.B would allow changes to elements of the plant-specific Tier 1 DCD to depart from the AP1000 certified (Tier 1) design information. The plant-specific DCD Tier 1 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 elsewhere in Tier 1 of the DCD. Therefore, the affected plant-specific DCD Tier 1 ITAAC will continue to serve its required purpose.

The intent of ITAAC for DAS functions are not changed or adversely impacted. The proposed changes to add the IRWST vent and overflow weir covers to the D-RAP scope in Tier 1 Table 3.7-1 and to more precisely identify the location of the MG sets field control relays in the control cabinets for the MG sets in Tier 1 Table 2.5.1-4 and Tier 1 Table 3.7-1 do not adversely impact any safety-related functions of safety-related systems, structures or components (SSCs). These proposed D-RAP ITAAC changes recognize the risk significance of these components and provide assurance that the design of these risk-significant components is consistent with the risk insights and key assumptions regarding the design, reliability, and availability of these risk-significant components and their importance in the accomplishment of their design functions. The changes to the D-RAP ITAAC for the IRWST vent and overflow weir covers and MG sets field control relays will include these components in the scope of the analysis to confirm that their design has been completed in accordance with the applicable D-RAP activities. The changes to Tier 1 ITAAC Tables 2.5.1-4 and 3.7-1 does not represent an adverse impact to the design function of these components or the systems, structures, and components therein and accordingly, they will continue to protect the health and safety of the public in the same manner.

The proposed changes do not introduce any new industrial, chemical, or radiological hazards that would represent a public health or safety risk, nor do they modify or remove any design or operational controls or safeguards intended to mitigate any existing on-site hazards. Furthermore, the proposed change 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 fuel cladding failures. Accordingly, this change does not present an undue risk from any existing or proposed equipment or systems.

Therefore, the requested exemption from 10 CFR 52, Appendix D, Section III.B 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, Section III.B would allow the licensee to depart from elements of the plant specific DCD Tier 1 design information. 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 10 CFR 52, Appendix D, Section III.B, which requires that a licensee referencing the AP1000 Design Certification Rule (10 CFR Part 52, Appendix D) shall incorporate by reference and comply with the requirements of Appendix D, including Tier 1 information. The VEGP Units 3 and 4 COLs reference the AP1000 Design Certification Rule and incorporate by reference the requirements of 10 CFR Part 52, Appendix D, including Tier 1 information. The underlying purpose of Appendix D, Section III.B is to describe and define the scope and contents of the AP1000 design certification, and to require compliance with the design certification information in Appendix D.

The proposed exemption, discussed in Section 2.0, would revise and clarify the scope of the analyses for the reliability assurance program in Tier 1 Table 3.7-1 for consistency with the risk insights and key assumptions (e.g., SSC design, availability and reliability) addressed in the D-RAP description in UFSAR Table 17-4-1. The proposed exemption would also provide a more precise description of the location of the MG sets field control relays as inside the control cabinets for the motor-generator sets. The proposed changes support the implementation of the D-RAP, while maintaining the required design function of the IRWST vent and overflow weir covers to prevent debris from entering the IRWST, prevent internal and external over-pressurization of the IRWST, and accommodate volume and mass increases in the IRWST and the design function of the MG sets field control relays to open on a DAS reactor trip signal demand to de-energize the rod drive MG sets and allow the rods to drop. The proposed changes do not adversely affect any function or feature used for the prevention and mitigation of accidents or their safety analyses. The proposed changes neither involve nor interface with any SSC accident initiator or initiating sequence of events related to the accidents evaluated and therefore do not have an adverse affect on any SSC's design function. Accordingly, this exemption from the certification information will enable the Licensee to safely construct and operate the AP1000 facility consistent with the design certified by the NRC in 10 CFR 52, Appendix D.

Therefore, special circumstances are present, because application of the current generic certified design information in Tier 1 as required by 10 CFR Part 52, Appendix D, Section III.B, in the particular circumstances discussed in this request 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.

Based on the nature of the changes to the plant-specific DCD Tier 1 information and the understanding that these changes support the design functions of the IRWST vent and overflow weir covers and the MG sets field control relays, it is expected that this exemption may be requested by other AP1000 licensees and applicants. However, a review of the reduction in standardization resulting from the departure from the standard DCD determined that even if other AP1000 licensees and applicants do not request this same departure, the special circumstances will continue to outweigh any decrease in safety from the reduction in standardization because the key design functions of the components associated with this request will continue to be maintained. Furthermore, the justification provided in the license amendment request and this exemption request and the associated mark-ups demonstrate that there is a limited change from the standard information provided in the generic AP1000 DCD, which is offset by the special circumstances identified above.

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.

The exemption revises the plant-specific DCD Tier 1 information by adding the IRWST vent and overflow weir covers to the scope of D-RAP and more accurately identifying the location of the MG sets field control relays in the system-specific ITAAC and in the scope of D-RAP, as discussed in Section 2.0. The changes to D-RAP relative to the IRWST vent and overflow weir covers and to the system-specific ITAAC and D-RAP for the MG sets field control relays maintain the ability of these components to perform their design functions. Because these functions continue to be met, there is no reduction in the level of safety.

5.0 RISK ASSESSMENT

A risk assessment was not determined to 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 certified information in Tier 1 of the generic AP1000 DCD. The Licensee has determined that the proposed departure would require a permanent exemption from the requirements of 10 CFR 52, Appendix D, Section III.B, Design Certification Rule for the AP1000 Design, Scope and Contents, with respect to installation or use of facility components located within the restricted area, as defined in 10 CFR Part 20, or which changes an inspection or a surveillance requirement; however, the Licensee evaluation of

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Enclosure 2

Exemption Request: Design Reliability Assurance Program (D-RAP) Changes (LAR-16-017)

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, 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.

Specific details of the environmental considerations supporting this request for exemption are provided in Section 5 of the associated License Amendment Request provided in Enclosure 1 of this letter.

8.0 CONCLUSION

The proposed changes to Tier 1 are necessary to more precisely identify the location of components in the system-specific ITAAC and to implement the analyses for D-RAP, consistent with the plant design as described in the UFSAR and the D-RAP rationale, insights and assumptions provided in UFSAR Section 17.4. 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.

9.0 REFERENCES

None.

Southern Nuclear Operating Company

ND-16-1349

Enclosure 3

Vogtle Electric Generating Plant (VEGP) Units 3 and 4

**Proposed Changes to the Licensing Basis Documents
(LAR-16-017)**

Note:

Added text is shown as bold **Blue Underline**

Deleted text is shown as bold **Red Strikethrough**

Omitted text is shown as three asterisks (* * *)

(Enclosure 3 consists of seven pages, including this cover page)

COL Appendix C (and Plant-Specific Tier 1) Table 2.5.1-4

Revise COL Appendix C (and Plant-Specific Tier 1) Table 2.5.1-4, Inspections, Tests, Analyses, and Acceptance Criteria, by revising the Acceptance Criteria for ITAAC Nos. 2.5.01.02a and 2.5.01.02c.i, as follows:

Table 2.5.1-4 Inspections, Tests, Analyses, and Acceptance Criteria		
Design Commitment	Inspections, Tests, Analyses	Acceptance Criteria
1. The functional arrangement of the DAS is as described in the Design Description of this Section 2.5.1.	Inspection of the as-built system will be performed.	The as-built DAS conforms with the functional arrangement as described in the Design Description of this Section 2.5.1.
2.a) The DAS provides an automatic reactor trip on low wide-range steam generator water level, or on low pressurizer water level, or on high hot leg temperature, separate from the PMS.	Electrical power to the PMS equipment will be disconnected and an operational test of the as-built DAS will be performed using real or simulated test signals.	The generator field control relays of the control rod motor-generator sets (contained in the control cabinets for the rod drive motor-generator sets) open after the test signal reaches the specified limit.
2.b) The DAS provides automatic actuation of selected functions, as identified in Table 2.5.1-1, separate from the PMS.	Electrical power to the PMS equipment will be disconnected and an operational test of the as-built DAS will be performed using real or simulated test signals.	Appropriate DAS output signals are generated after the test signal reaches the specified limit.
2.c) The DAS provides manual initiation of reactor trip, and selected functions, as identified in Table 2.5.1-2, separate from the PMS. These manual initiation functions are implemented in a manner that bypasses the control room multiplexers, if any; the PMS cabinets; and the signal processing equipment of the DAS.	Electrical power to the control room multiplexers, if any, and PMS equipment will be disconnected and the outputs from the DAS signal processing equipment will be disabled. While in this configuration, an operational test of the as-built system will be performed using the DAS manual actuation controls.	i) The generator field control relays of the control rod motor-generator sets (contained in the control cabinets for the rod drive motor-generator sets) open after reactor and turbine trip manual initiation controls are actuated. ii) DAS output signals are generated for the selected functions, as identified in Table 2.5.1-2, after manual initiation controls are actuated.
2.d) The DAS provides MCR displays of selected plant parameters, as identified in Table 2.5.1-3, separate from the PMS.	Electrical power to the PMS equipment will be disconnected and inspection will be performed for retrievability of the selected plant parameters in the MCR.	The selected plant parameters can be retrieved in the MCR.
* * *		

COL Appendix C (and Plant-Specific Tier 1) Table 3.7-1, Risk-Significant Components

Revise COL Appendix C (and Plant-Specific Tier 1) Table 3.7-1, Risk-Significant Components, as follows:

Table 3.7-1 Risk-Significant Components	
Equipment Name	Tag No.
* * *	
Diverse Actuation System (DAS)	
DAS Processor Cabinets and Control Panel (used to provide automatic and manual actuation)	DAS-JD-001 DAS-JD-002 DAS-JD-003 OCS-JC-020
Auxiliary Building UPS Distribution Panels (provide power to DAS)	EDS2-EA-12, EDS3-EA-14A
Control Cabinets for the Rod Drive MG Sets (generator field control relays)	PLS-MG-01A/B PLS-JD-RDM001 PLS-JD-RDM002
Containment Isolation Valves Controlled by DAS	CVS-PL-V045, -V047 VFS-PL-V003, -V004, -V009, -V010 WLS-PL-V055, -V057
* * *	
Passive Core Cooling System (PXS)	
IRWST Vents	PXS-MT-03
IRWST Hood Vent Covers	PXS-MY-Y21, -Y22, -Y23, -Y24, -Y25, -Y26, -Y27, -Y28, -Y29, -Y30, -Y31, -Y32, -Y33, -Y41, -Y47, -Y48
IRWST Steam Generator Wall Vent Covers	PXS-MY-Y61, -Y62, -Y63, -Y64
IRWST Overflow Weir Covers	PXS-MY-Y71, -Y72, -Y73, -Y74, -Y75, -Y76
IRWST Screens	PXS-MY-Y01A/B/C
* * *	

**UFSAR Tier 2 Table 3.2-3,
 AP1000 Classification of Mechanical and Fluid Systems, Components, and Equipment**

Revise Tier 2 information in UFSAR Table 3.2-3, as follows:

Tag Number	Description	AP1000 Class	Seismic Category	Principal Construction Code	Comments
Passive Core Cooling System (Continued)					
* * *					
PXS-MY-Y04B	pH Adjustment Basket 4B	C	I	Manufacturer Std.	
PXS-MY-Y21	IRWST Hood Vent Cover	C	I	Manufacturer Std.	
PXS-MY-Y22	IRWST Hood Vent Cover	C	I	Manufacturer Std.	
PXS-MY-Y23	IRWST Hood Vent Cover	C	I	Manufacturer Std.	
PXS-MY-Y24	IRWST Hood Vent Cover	C	I	Manufacturer Std.	
PXS-MY-Y25	IRWST Hood Vent Cover	C	I	Manufacturer Std.	
PXS-MY-Y26	IRWST Hood Vent Cover	C	I	Manufacturer Std.	
PXS-MY-Y27	IRWST Hood Vent Cover	C	I	Manufacturer Std.	
PXS-MY-Y28	IRWST Hood Vent Cover	C	I	Manufacturer Std.	
PXS-MY-Y29	IRWST Hood Vent Cover	C	I	Manufacturer Std.	
PXS-MY-Y30	IRWST Hood Vent Cover	C	I	Manufacturer Std.	
PXS-MY-Y31	IRWST Hood Vent Cover	C	I	Manufacturer Std.	
PXS-MY-Y32	IRWST Hood Vent Cover	C	I	Manufacturer Std.	
PXS-MY-Y33	IRWST Hood Vent Cover	C	I	Manufacturer Std.	
PXS-MY-Y41	IRWST Hood Vent Cover	C	I	Manufacturer Std.	
PXS-MY-Y47	IRWST Hood Vent Cover	C	I	Manufacturer Std.	
PXS-MY-Y48	IRWST Hood Vent Cover	C	I	Manufacturer Std.	
PXS-MY-Y61	IRWST SG Wall Vent Cover	C	I	Manufacturer Std.	
PXS-MY-Y62	IRWST SG Wall Vent Cover	C	I	Manufacturer Std.	
PXS-MY-Y63	IRWST SG Wall Vent Cover	C	I	Manufacturer Std.	
PXS-MY-Y64	IRWST SG Wall Vent Cover	C	I	Manufacturer Std.	
PXS-MY-Y71	IRWST Overflow Weir Cover	C	I	Manufacturer Std.	
PXS-MY-Y72	IRWST Overflow Weir Cover	C	I	Manufacturer Std.	
PXS-MY-Y73	IRWST Overflow Weir Cover	C	I	Manufacturer Std.	
PXS-MY-Y74	IRWST Overflow Weir Cover	C	I	Manufacturer Std.	
PXS-MY-Y75	IRWST Overflow Weir Cover	C	I	Manufacturer Std.	
PXS-MY-Y76	IRWST Overflow Weir Cover	C	I	Manufacturer Std.	
PXS-PL-V002A	CMT A CL Inlet Isolation	A	I	ASME III-1	
* * *					

UFSAR Tier 2 Subsection 6.3.2.2.3, In-Containment Refueling Water Storage Tank

Revise Tier 2 information in the third paragraph of UFSAR Section 6.3, Passive Core Cooling System, Subsection 6.3.2.2.3, as follows:

* * *

Vents are installed in the roof of the in-containment refueling water storage tank. These vents are provided with normally closed covers in order to contain water vapor and radioactive gases within the tank during normal operation and to prevent debris from entering the tank from the containment operating deck. The vents vent covers open with a slight pressurization of the in-containment refueling water storage tank. These vents provide a path to vent steam released by the spargers or generated by the passive residual heat removal heat exchanger, into the containment atmosphere. Other vents vent covers also open on small pressure differentials to allow air/steam to enter the in-containment refueling water storage tank from containment, such as during a loss of coolant accident, to prevent damage to the tank. Overflows Overflow weirs with covers are provided from the in-containment refueling water storage tank to the refueling cavity to accommodate volume and mass increases during passive residual heat removal heat exchanger or automatic depressurization system operation, while minimizing the floodup of the containment.

* * *

UFSAR Tier 2 Subsection 6.3.2.2.7.2, IRWST Screens

Revise Tier 2 information in the first and second paragraphs of UFSAR Section 6.3, Passive Core Cooling System, Subsection 6.3.2.2.7.2, as follows:

The IRWST screens are located inside the IRWST at the bottom of the tank. Figure 6.3-6 shows a plan view and Figure 6.3-7 shows a section view of these screens. Three separate screens are provided in the IRWST, one at either end of the tank and one in the center. A cross-connect pipe connects all three IRWST screens to distribute flow. The IRWST is closed off from the containment; its vents and overflows weirs are normally closed by louvers. The potential for introducing debris inadvertently during plant operations is limited. A cleanliness program (refer to Subsection 6.3.8.1) controls foreign debris from being introduced into the tank during maintenance and inspection operations. The Technical Specifications require visual inspections of the screens during every refueling outage.

The IRWST design eliminates sources of debris from inside the tank. Insulation is not used in the tank. Air filters are not used in the IRWST vents or overflows weirs. Wetted surfaces in the IRWST are corrosion resistant such as stainless steel or nickel alloys; the use of these materials prevents the formation of significant amounts of corrosion products. In addition, the water is required to be clean because it is used to fill the refueling cavity for refueling; filtering and demineralizing by the spent fuel pit cooling system is provided during and after refueling.

UFSAR Tier 2 Table 17.4-1, Risk-Significant SSCs Within the Scope of D-RAP

Revise Tier 2 information in UFSAR Section 17.4, Design Reliability Assurance Program, Table 17.4-1, by revising the SSC for Rod Drive MG Sets to refer to Control Cabinets for the Rod Drive MG Sets, as follows:

System, Structure, or Component (SSC) ⁽¹⁾	Rationale ⁽²⁾	Insights and Assumptions
* * *	* * *	* * *
System: Diverse Actuation System (DAS)		
DAS Processor Cabinets and Control Panel (used to provide automatic and manual actuation) (DAS-JD-001, -002, -003, OCS-JC-020)	RAW	The DAS is diverse from the PMS and provides automatic and manual actuation of selected plant features including control rod insertion, turbine trip, passive residual heat removal (PRHR) heat exchanger actuation, core makeup tank actuation, isolation of critical containment lines, and passive containment cooling system (PCS) actuation.
Auxiliary Building UPS Distribution Panels (EDS2-EA-12, EDS3-EA-14A)	RAW	These panels distribute power to the DAS equipment.
<u>Control Cabinets for the Rod Drive MG Sets (Generator Field Control Relays)</u> (PLS-MG-01A/B) <u>(PLS-JD-RDM001, PLS-JD-RDM002)</u>	RAW	These relays open on a DAS reactor trip signal demand to de-energize the control rod MG sets and allow the rods to drop.
* * *	* * *	* * *

Revise Tier 2 information in UFSAR Table 17.4-1, by including individual equipment tags for IRWST hood vent covers, IRWST SG wall vent covers, and IRWST overflow weir covers, including the rationale, insights and assumptions, as follows:

System, Structure, or Component (SSC) ⁽¹⁾	Rationale ⁽²⁾	Insights and Assumptions
Passive Core Cooling System (PXS)		
<u>IRWST Vents (PXS-MT-03)</u>	RAW/GCF	The IRWST vents provide a pathway to vent steam from the tank into the containment. The IRWST vents also have a severe accident function to prevent the formation of standing hydrogen flames close to the containment walls. This function is accomplished by designing the vents located further from the containment walls to open with less IRWST internal pressure than the other vents.
<u>IRWST Hood Vent Covers (PXS-MY-Y21, PXS-MY-Y22, PXS-MY-Y23, PXS-MY-Y24, PXS-MY-Y25, PXS-MY-Y26, PXS-MY-Y27, PXS-MY-Y28, PXS-MY-Y29, PXS-MY-Y30, PXS-MY-Y31, PXS-MY-Y32, PXS-MY-Y33, PXS-MY-Y41, PXS-MY-Y47, PXS-MY-Y48)</u>	RAW/CCF	IRWST hood vent covers provide the functionality to vent steam into containment. The IRWST hood vent covers prevent debris from entering the IRWST and minimize evaporation. Safety functions support hydrogen venting strategy and prevent overpressurization of the IRWST.
<u>IRWST SG Wall Vent Covers (PXS-MY-Y61, PXS-MY-Y62, PXS-MY-Y63, PXS-MY-Y64)</u>	RAW/CCF	IRWST SG wall vent covers provide the functionality to vent steam into containment. The IRWST SG wall vent covers prevent debris from entering the IRWST and minimize evaporation. Safety functions support hydrogen venting strategy and prevent overpressurization of the IRWST.
<u>IRWST Overflow Weir Covers (PXS-MY-Y71, PXS-MY-Y72, PXS-MY-Y73, PXS-MY-Y74, PXS-MY-Y75, PXS-MY-Y76)</u>	RAW/CCF	IRWST overflow weir covers allow water overflow into the refueling cavity during ADS blowdown and PRHR Hx operation. The IRWST overflow weir covers prevent debris from entering the IRWST and minimize evaporation. Safety functions accommodate volume and mass increases and support hydrogen venting strategy.
IRWST Screens (PXS-MY-Y01A/B/C)	RAW/CCF	The IRWST injection lines provide long-term core cooling following a LOCA. These screens are located inside the IRWST and prevent large particles from being injected into the RCS. They are designed so that they will not become obstructed.
* * *	* * *	* * *