



Cheryl A. Gayheart
Regulatory Affairs Director

3536 Colonnade Parkway
Birmingham, AL 35243
205 982 5318

cagayhea@southernco.com

March 30, 2021

Docket Nos.: 50-424
50-425

NL-21-0265

U. S. Nuclear Regulatory Commission
ATTN: Document Control Desk
Washington, D. C. 20555-0001

Vogtle Electric Generating Plant - Units 1 & 2
Revision 23 to the Updated Final Safety Analysis Report, Technical Specification
Bases Changes, Technical Requirements Manual Changes,
10 CFR 50.59 Summary Report, and Revised NRC Commitments Report

Ladies and Gentlemen:

In accordance with 10 CFR 50.4(b) and 50.71(e), Southern Nuclear Operating Company (SNC) hereby submits the Vogtle Electric Generating Plant Units 1 and 2 (VEGP) Updated Final Safety Analysis Report (UFSAR). The revised VEGP UFSAR pages, Revision 23, reflect changes through February 28, 2021.

The VEGP Technical Specifications, Section 5.5.14, "Technical Specifications (TS) Bases Control Program," provides for changes to the Bases without prior NRC approval. In addition, TS Section 5.5.14 requires that Bases changes made without prior NRC approval be provided to the NRC on a frequency consistent with 10 CFR 50.71(e). Pursuant to TS 5.5.14, SNC hereby submits a complete copy of the VEGP TS Bases. The revised VEGP TS Bases pages, Revision 69, reflect changes through February 28, 2021.

In accordance with Regulatory Issue Summary (RIS) 2001-05, "Guidance on Submitting Documents to the NRC by Electronic Information Exchange or on CD-ROM," all of the current pages of the VEGP UFSAR, the UFSAR reference drawings, the TS Bases, and the Technical Requirements Manual (TRM) are being submitted on CD-ROM in portable document format (PDF). The revised VEGP TRM pages, Revision 54, reflect changes through March 12, 2021.

In accordance with 10 CFR 50.59(d)(2), SNC hereby submits the 10 CFR 50.59 Summary Report containing a brief description of any changes, tests, or experiments, including a summary of the safety evaluation of each. This report is based on the same time period as Revision 23 of the UFSAR.

In accordance with NEI 99-04, "Guidelines for Managing NRC Commitment Changes," Revision 0, SNC reviewed its Commitment Database and identified no commitment changes for the applicable reporting period (October 1, 2019 to February 28, 2021).

Enclosure 1 provides a table of contents with associated file names for the set of three CD-ROMs (Enclosure 2). Enclosure 3 provides the 10 CFR 50.59 Summary Report.

This letter contains no NRC commitments. If you have any questions, please contact Jamie Coleman at (205) 992-6611.

I declare under penalty of perjury that the foregoing is true and correct. Executed on this 30th day of March 2021.

Respectfully submitted,



Cheryl Gayheart
Regulatory Affairs Director

CAG/TLE

Enclosures:

1. CD-ROM Table of Contents
2. CD-ROMs (3 discs) containing Files 001 – 029
3. 10 CFR 50.59 Summary Report

cc: Regional Administrator, Region II (w/o enclosures)
Senior NRR Project Manager – VEGP Units 1 and 2 (w/o enclosures)
Senior Resident Inspector – VEGP Units 1 and 2 (w/o enclosures)
INPO Emergency Management Manager (Enclosure 2, CD ROMs, only)
RType: CVC7000

NL-21-0265

**Vogtle Electric Generating Plant, Units 1 & 2
Revision 23 to the Updated Final Safety Analysis Report,
Technical Specification Bases Changes, Technical Requirements Manual
Changes, 10 CFR 50.59 Summary Report, and Revised NRC Commitments Report**

**Enclosure 1
CD-ROM Table of Contents**

Enclosure 1 to NL-21-0265
 CD-ROM Table of Contents

SEQ	CONTENT	FILENAME	EXTENSION
DISC 1			
001	VEGP FSAR_CH1, CH2 (PRT 1) Chapter 1 Chapter 2 (PRT 1) Section 2.1 to Figure 2.3.5-4		.pdf
002	VEGP FSAR_CH2 (PRT 2) & CH3 (PRT 1) Chapter 2 (PRT 2) Figure 2.3.5-5 to Appendix 2B Chapter 3 (PRT 1) Section 3.0 to Figure 3.7.B.2-24		.pdf
003	VEGP FSAR_CH3 (PRT 2) Chapter 3 (PRT 2) Figure 3.7.B.2-25 to Figure 3D-17		.pdf
004	VEGP FSAR_CH3 (PRT 3) Chapter 3 (PRT 3) Figure 3D-18 to Figure 3D-40		.pdf
005	VEGP FSAR_CH3 (PRT 4) Chapter 3 (PRT 4) Figure 3D-41 to Figure 3D-65		.pdf
006	VEGP FSAR_CH3 (PRT 5) Chapter 3 (PRT 5) Figure 3D-66 to Figure 3D-92		.pdf
007	VEGP FSAR_CH3 (PRT 6) Chapter 3 (PRT 6) Figure 3D-93 to Figure 3D-136		.pdf
008	VEGP FSAR_CH3 (PRT 7) & CH4 (PRT 1) Chapter 3 (PRT 7) Figure 3D-137 to Appendix 3F Chapter 4 (PRT 1) Section 4.1 to Section 4.3		.pdf
009	VEGP FSAR_CH4 (PRT 2), CH5, & CH6 (PRT 1) Chapter 4 (PRT 2) Table 4.3-1 to Appendix 4A Chapter 5 Chapter 6 (PRT 1) Section 6.0 to Figure 6.2.1-15 (SH 14)		.pdf
010	VEGP FSAR_CH6 (PRT 2) Chapter 6 (PRT 2) Figure 6.2.1-15 (SH 15) to Figure 6.2.1-21		.pdf

Enclosure 1 to NL-21-0265
 CD-ROM Table of Contents

SEQ	CONTENT	FILENAME	EXTENSION
DISC 2			
011	VEGP FSAR_CH6 (PRT 3) & CH7 (PRT 1) Chapter 6 (PRT 3) Figure 6.2.1-22 to Section 6.6 Chapter 7 (PRT 1) Section 7.1 to Figure 7.6.4-1		.pdf
012	VEGP FSAR_CH7 (PRT 2), CH8 (PRT 1) Chapter 7 (PRT 2) Figure 7.6.5-1 to Figure 7.7.2-2 Chapter 8 (PRT 1) Section 8.1 to Figure 8.3.1-1 (SH 4)		.pdf
013	VEGP FSAR_CH8 (PRT 2) Chapter 8 (PRT 2) Figure 8.3.1-1 (SH 5) to Figure 8.3.1-1 (SH 24)		.pdf
014	VEGP FSAR_CH8 (PRT 3), CH9, CH10 (PRT 1) Chapter 8 (PRT 3) Figure 8.3.1-1 (SH 25) to Section 8.4 Chapter 9 Chapter 10 (PRT 1) Section 10.1 to Figure 10.2.2-2b		.pdf
015	VEGP FSAR_CH10 (PRT 2), CH11, CH12, CH13, CH14, CH15 (PRT 1) Chapter 10 (PRT 2) Section 10.3 to Appendix 10A Chapter 11 Chapter 12 Chapter 13 Chapter 14 Chapter 15 (PRT 1) Section 15.0 to Figure 15.1.5-11		.pdf
016	VEGP FSAR_CH15 (PRT 2), CH16, CH17, CH18, CH19, TABLE OF CONTENTS, REV 23 EFFECTIVE PAGE LIST Chapter 15 (PRT 2) Section 15.2 to Appendix 15B Chapter 16 Chapter 17 Chapter 18 Chapter 19 Table of Contents List of Tables List of Figures Rev 23 Effective Page List		.pdf

Enclosure 1 to NL-21-0265
 CD-ROM Table of Contents

SEQ	CONTENT	FILENAME	EXTENSION
017	VEGP TECHNICAL REQUIREMENTS MANUAL		.pdf
018	VEGP BASES		.pdf
DISC 3			
019	VEGP FSAR REF DWGS PART 1 (1K5-1305-058-01 thru 1X3D-BD-J02D)		.pdf
020	VEGP FSAR REF DWGS PART 2 (1X3DG001 thru 1X4DB150-1)		.pdf
021	VEGP FSAR REF DWGS PART 3 (1X4DB151-1 thru 1X4DB203)		.pdf
022	VEGP FSAR REF DWGS PART 4 (1X4DB205-1 thru 1X4DE507)		.pdf
023	VEGP FSAR REF DWGS PART 5 (1X4DE508 thru 1X6AA02-00238)		.pdf
024	VEGP FSAR REF DWGS PART 6 (1X6AA02-00239 thru 2X4DB170-2)		.pdf
025	VEGP FSAR REF DWGS PART 7 (2X4DB174-2 thru AX1D11A04-1)		.pdf
026	VEGP FSAR REF DWGS PART 8 (AX1D11A04-3 thru AX4DB241)		.pdf
027	VEGP FSAR REF DWGS PART 9 (AX4DB242-1 thru AX4DJ8047)		.pdf
028	VEGP FSAR REF DWGS PART 10 (AX4DJ8048 thru AX6DD303)		.pdf
029	VEGP FSAR REF DWGS PART 11 (AX6DD304 thru CX5DT101-58)		.pdf

NL-21-0265

**Vogtle Electric Generating Plant, Units 1 & 2
Revision 23 to the Updated Final Safety Analysis Report,
Technical Specification Bases Changes, Technical Requirements Manual
Changes, 10 CFR 50.59 Summary Report, and Revised NRC Commitments Report**

**Enclosure 2
CD-ROMs (3 discs) containing Files 001 – 029**

NL-21-0265

**Vogtle Electric Generating Plant, Units 1 & 2
Revision 23 to the Updated Final Safety Analysis Report,
Technical Specification Bases Changes, Technical Requirements Manual
Changes, 10 CFR 50.59 Summary Report, and Revised NRC Commitments Report**

**Enclosure 3
10 CFR 50.59 Summary Report**

10 CFR 50.59 Summary Report

Activity: Caution Tagout - 1-CA-20-1805-00091

Title: 10 CFR 50.59 Evaluation for Caution Tagout 1-CA-20-1805-00091

10 CFR 50.59 Evaluation Summary:

Caution Tagout 1-CA-20-1805-00091 was placed to electrically isolate a non-safety related faulty transformer temperature monitor, 1 TIS23046, a tag was placed on 120VAC panel supply breaker 1 BYB112 for configuration control and communication of an abnormal configuration. Tagout configuration will stay in place until resources and plant conditions support removal, correction is being tracked by SNC1057675 and will need to be worked in the Unit 1 outage. During completion of the 10 CFR 50.59 screening it was determined that an adverse effect was identified.

The high temperature alarm function that is removed by the current plant configuration is indication only and does not represent any automatic functions that are associated. The alarm monitors for malfunction and notifies the control room of conditions, this specific control room annunciation is a generic alarm for all 1 BB 16 improper switch gear conditions. Operator response to alarm is to dispatch an operator for investigation. Plant configuration allows for all other specified/miscellaneous alarms to remain functional. Absence of the high temperature alarm does not more than minimally increase the frequency of an accident, the likelihood of a malfunction, the consequences of an accident, the consequences of a malfunction, the possibility of an accident, the possibility of a malfunction, or any impact to fission product barriers.

Activity: CDP SNC1074228

Title: Yokogawa Recorder Replacement

10 CFR 50.59 Evaluation Summary:

The Main Control Room (MCR) existing recorders are obsolete and will be replaced with Yokogawa DX 1000/DX2000 series recorders. Many of these recorders are included within the Post Accident Monitoring (PAM) display instrumentation system. This 10 CFR 50.59 Screening/Evaluation evaluates the replacement of the MCR recorders with Yokogawa DX1000/DX2000 recorders. All subject SR and ITS recorders are designated as Regulatory Guide 1.97 Category 1 instruments.

The Yokogawa DX1000/2000 series recorder uses proprietary firmware to perform its design function (monitoring & recording) and it uses the Daqstandard software for configuration purposes. Based on engineering judgment, this design change activity is conservatively considered to be more than simple. For Category 1 instrumentation, R.G. 1.97 specifies particular guidelines that should be met. All commitments concerning recording, separation, qualification, and redundancy have been met.

Based on the following reviews and evaluations completed for this Common Design Package, the proposed activity of replacing the existing recorders with Yokogawa DX1000/DX2000 series

Enclosure 3 to NL-21-0265
10 CFR 50.59 Summary Report

recorders meets applicable NRC requirements as well as the design, material and construction standards applicable to the recorders.

- CJ-D-20-007 has been reviewed and determined to satisfactorily meet the verification and validation activities which will minimize the probability of a software failure.
- The recorders have proven to be reliable with no known reported common mode failures which may prevent the recorders from performing their intended safety functions.
- CC-D-20-003 was evaluated and the seismic testing performed was determined to acceptably meet the required response spectra for the Main Control Room.
- The MCR will remain seismically qualified, and the replacement recorders are seismically qualified for use on the MCR.
- The Yokogawa DX1000/DX2000 series recorders will not create an EMI/RFI environment which will adversely affect other safety related SSCs to perform the intended UFSAR design function nor does it increase the probability of occurrence of a malfunction.
- The operator will use the DX1000/DX2000 series recorders in the same way the obsolete recorders are used. The same information will be provided to support the Post Accident Monitoring function.
- The thermal load of the control room HVAC system has been evaluated and verified satisfactory.
- There are no CDA adverse impacts introduced with the DX1000/DX2000 series recorders as related to the likelihood of failure of the recorders.
- There are no new failure modes or effects on the design function as compared to the old recorder.
- Diverse backup indications are available in the main control room, in the event a single failure renders these recorders inoperable. The recorders are isolated from these backup indications. These diverse backup indications are not changed by this design activity.
- The Yokogawa DX1 000/DX2000 series recorders all fail to a "no display" condition. This condition has no impact on the operation or controls of other equipment.

As evaluated, replacing the existing recorders with the Yokogawa DX1000/DX2000 series recorders has no adverse impact on the specific R. G. 1.97 requirements as described in the Design and Qualification Review Criteria section of the R. G. 1.97 Compliance Report. Based on the evaluations completed and reviewed, replacing the existing recorders with the Yokogawa DX1000/DX2000 series recorders complies with the requirements of 10 CFR 50.59, and NRC prior approval is not required for the proposed design activity.

Activity: TE 1057533

Title: Updates to LOCA Mass & Energy Release and Containment Analyses for Vogtle Units 1 and 2 to address NSAL Reconciliation Program

10 CFR 50.59 Evaluation Summary:

The updates to the long-term LOCA mass and energy release and containment response evaluations for Vogtle Units 1 and 2 made to address Westinghouse's NSALs (NSAL-06-6, NSAL-11-5, and NSAL-14-2) and the conforming changes to the Vogtle UFSAR Section 6.2.1 do not require prior NRC approval to implement. Additionally, changes to Technical Specification Bases B 3.6.4 are required due to the changes to the AOR. These changes are to the description of the applicable safety analyses and change the limiting DBA analysis for maximum containment internal pressure from LOCA to SLB as a result of the peak LOCA containment pressure decreasing. The results of these changes are that the design function of the containment system remains valid with no change to those functions due to the updates. The frequency of occurrence of an accident or of a malfunction of an SSC are not increased due to these changes. These changes do not increase the consequences of an accident or of a malfunction of an SSC. No accidents of a different type or malfunction of an SSC with a different result are created due to these changes. The changes do not result in an exceedance or alteration of a fission product barrier. Lastly, the changes do not depart from a method of evaluation described in the UFSAR to establish the design bases or safety analyses.

Activity: DECP SNC1125090TCC

Title: U1 Main Turbine Vibration System Trip Function

10 CFR 50.59 Evaluation Summary:

Temporary DECP SNC1125090TCC, provides a means of temporarily defeating the automatic turbine trip from excessive bearing vibration for one refueling cycle. The automatic trip associated with excessive bearing vibrations is for asset protection only and will have no impact on the UFSAR safety analysis. No safety related SSCs, nor those important to safety, will be impacted by the proposed temporary modification. Tripping on excessive bearing vibration is one of the protective trips listed in Section 10.2.2.4 of the UFSAR. Section 3.5.1.3 does not credit the automatic trip on excessive bearing vibration with prevention of turbine induced missiles. In addition, Section 15.2.3.1 analyzes the impact of a turbine trip without a reactor trip (most limiting scenario) but does not cite the reason for the turbine trip itself is bounding with respect to safety analysis. As such, the automatic trip on excessive bearing vibration functionality is not credited as a safety mitigation function. The excessive bearing vibration trip function is to be restored during the next Unit 1 refueling outage.

Activity: DECP SNC1111310TCC

Title: Unit 2 Main Turbine Vibration System Trip Function

10 CFR 50.59 Evaluation Summary:

Temporary DECP SNC1111310TCC, provides a means of temporarily defeating the automatic turbine trip from excessive bearing vibration for one refueling cycle. The automatic trip associated with excessive bearing vibrations is for asset protection only and will have no impact on the UFSAR safety analysis. No safety related SSCs, nor those important to safety, will be impacted by the proposed temporary modification. Tripping on excessive bearing vibration is one of the protective trips listed in Section 10.2.2.4 of the UFSAR. Section 3.5.1.3 does not credit the automatic trip on excessive bearing vibration with prevention of turbine induced missiles. In addition, Section 15.2.3.1 analyzes the impact of a turbine trip without a reactor trip (most limiting scenario) but does not cite the reason for the turbine trip itself is bounding with respect to safety analysis. As such, the automatic trip on excessive bearing vibration functionality is not credited as a safety mitigation function. The excessive bearing vibration trip function is to be restored during the next Unit 2 refueling outage (2R22).

Activity: TE 910415

Title: VTIP: IG-14-1, Material Properties for LOCA Mass and Energy Release Analyses

10 CFR 50.59 Evaluation Summary:

This change covers the incorporation of PWROG-17034-P-A into the analysis of record and the FSAR: This change documents the NRC acceptance that the WCAP-10325-P-A methodology is acceptable for use. While the underlying methodology (WCAP-10325-P-A) is unchanged, incorporation of PWROG-17034-P-A is a supplement to a method of evaluation. This change, however, is not considered to be a departure from a method of evaluation described in the Updated FSAR since PWROG-17034-PA has been approved generically for the intended application (i.e. to generically address a material properties issue found in the Westinghouse mass and energy methodology WCAP-10325-P-A).

Activity: SNC1034923

Title: Vogtle 2 Cycle 22 Reload Core and Associated COLR

10 CFR 50.59 Evaluation Summary:

The Vogtle 2 Cycle 22 Reload Core will be refueled with 89 fresh Westinghouse VANTAGE+ fuel assemblies and 100 previously burned VANTA~E+ fuel assemblies. The fresh VANTAGE+ fuel assemblies (OFA) have the same design features as the Cycle 21 fresh fuel assemblies, except for the addition of Optimized Zirlo cladding for the fuel rods. The enrichment and burnable poison loading is consistent with past cycles. Four FRAMATOME GAIA lead test assemblies (L TAs), including Enhanced Accident Tolerant Fuel (EATF) features, will be reinserted in Vogtle Unit 2 Cycle 22. The EATF features include Chromia-doped pellets and full-

length Chromium-coated fuel rod cladding. The cladding of all fuel rods is M5, an optimized Zirconium alloy. Each assembly will be composed of the following four fuel rod types:

- 228 rods incorporating M5 cladding, Chromia-doped pellets at 3.80 w/o U-235, zircaloy-4 end caps, and a nickel alloy plenum spring,
- 4 rods (located in the four corners of the assembly) incorporating Chromium-coated M5 cladding, Chromia-doped pellets at 3.80 w/o U-235, zircaloy-4 end caps, and a nickel alloy plenum spring,
- 20 rods incorporating M5 cladding, 8% Gadolinia pellets at 3.11 w/o U-235, blanket pellets at 2.60 w/o U-235, zircaloy-4 end caps, and a nickel alloy plenum spring, and
- 12 rods incorporating M5 cladding, 4% Gadolinia pellets at 3.19 w/o U-235, blanket pellets at 2.60 w/o U-235, zircaloy-4 end caps, and a nickel alloy plenum spring.

The Core Operating Limits Report (COLR) for Vogtle Unit 2 will be updated to reflect the new core design and cycle-dependent data.

The purpose of the LT A program is to collect data around not only the EATF features, but also the GAIA design as a whole in a high duty core. The data obtained through core monitoring and post-irradiation inspections will be used to enhance FRAMATOME codes and methods and facilitate the research and development of accident tolerant fuel.

In accordance with the guidance in Reference 15, Section 4.2.2, Example 4; the GAIA LTAs are conservatively being deemed a test or experiment. Answering in this manner on the 50.59 screening, required the performance of a 50.59 evaluation.

The GAIA LTAs have been evaluated for mechanical and functional compatibility including interfaces associated with reactor internals, handling and storage equipment, co-resident fuel assemblies, in-core instrumentation, non-fuel components, and auxiliary equipment. The GAIA LT As have also been evaluated for hydraulic compatibility, normal operation component stresses and loads, and faulted component stresses and loads. In all cases the requirements for the GAIA LTAs, resident Westinghouse OFA fuel assemblies, and the overall reload core were met. The design of the reload core and GAIA LT As are such that the GAIA LTAs have the neutronic equivalence of a resident OFA fuel assembly that would be sufficiently non-limiting with respect to power peaking. There are four (4) GAIA L TAs loaded into the core, which represents approximately two percent of the total core loading. The locations of the GAIA L TAs were chosen such that they would be non-rodged, further ensuring safety analyses are not adversely affected and power peaking remains non-limiting. These criteria are in compliance with Technical Specification 4.2.1. Along with the neutronic equivalence, the GAIA LT As were shown to have mechanical equivalence to the Westinghouse RFA fuel design. The GAIA LT As were modeled by Westinghouse in their evaluations as the RFA fuel design. Penalties were conservatively applied as appropriate due to the mixed core environment between the resident OFA fuel design and GAIA LTAs. The Westinghouse evaluations, which form the licensing basis for the reload core and associated COLR, demonstrated that all applicable design criteria and pertinent licensing basis acceptance criteria were met. Neither the reload core nor the associated COLR result in existing acceptable safety limits for any accident being exceeded, and do not result in any adverse changes. Confirmatory evaluations were also performed by FRAMATOME and SNC which demonstrated that no changes to the established design bases or safety analysis limits were necessitated by the utilization of the GAIA LT As.

Enclosure 3 to NL-21-0265
10 CFR 50.59 Summary Report

The GAIA LTAs will be utilized and controlled with the same handling, storage, and operational requirements as the resident Westinghouse OFA fuel assemblies. Operations in compliance with the limits specified in the COLR and Technical Specifications is sufficient to ensure that margin to the Specified Acceptable Fuel Design Limits (SAFDLS) is maintained, as required by the reactor core design basis.

Therefore, the responses to Questions 1-7 all result in "NO" answers. Question 8 was not addressed because NRC-approved methods were used to ensure compliance with the SAFDLS.

Activity: DCP SNC121506

Title: Digital – Unit 1 DRMS 1RE12444

10 CFR 50.59 Evaluation Summary:

The proposed activity replaces existing radiation monitoring system 1RE12444, Plant Vent Effluent Post Accident Radiation Monitor, because the existing monitor is obsolete and replacement parts are becoming difficult to procure. This monitor has continuous sampling for particulates (1RE12444A and F) and iodine (1RE12444B and G) as well as continuous on-line monitoring of noble gas across three 6-decade overlapping detectors (1RE12444C, D, and E). The original system was digital, and the replacement system is digital.

The 1RE12444 radiation monitoring system is described in the Updated FSAR as a PAM type C category 2 and type E category 2 variable. As such, it is required to be seismically and environmentally qualified. It is required to be powered by a reliable power source. It has no control functions but is required to provide continuous sampling capabilities for particulates and iodine as well as continuous monitoring of noble gas radiation with intermediate and high alarms at appropriate setpoints.

The 1RE12444 radiation monitoring system is not identified in the Updated FSAR as equipment with the potential to prevent an accident, potential to initiate an accident, potential for a malfunction to lead to an accident, or as equipment used to mitigate an accident. It is equipment used to identify an accident has occurred, and to assess the magnitude of the accident.

The proposed activity was screened in and evaluated in accordance with approved plant procedures and the guidance of NEI 97-04 and NEI 01-01, because the replacement of radiation monitoring system 1RE12444 is considered a digital upgrade. It was concluded that the seismic, environmental, and software qualification was sufficiently rigorous for the function of this monitoring system as a PAM category 2 variable. It was also concluded that the proposed activity did not increase the frequency or consequences of previously evaluated accidents or malfunctions. Furthermore, the proposed activity does not introduce the possibility of any new accidents or malfunctions and does not impact the integrity of a fission product barrier. Therefore, the proposed activity may be implemented without prior NRC approval.

Activity: DCP SNC131179

Title: Digital – Unit 2 DRMS 2RE12444

10 CFR 50.59 Evaluation Summary:

The proposed activity replaces existing radiation monitoring system 2RE12444, Plant Vent Effluent Post Accident Radiation Monitor, because the existing monitor is obsolete and replacement parts are becoming difficult to procure. This monitor has continuous sampling for particulates (2RE12444A and F) and iodine (2RE12444B and G) as well as continuous on-line monitoring of noble gas across three 6-decade overlapping detectors (2RE12444C, D, and E). The original system was digital, and the replacement system is digital.

The 2RE12444 radiation monitoring system is described in the Updated FSAR as a PAM type C category 2 and type E category 2 variable. As such, it is required to be seismically and environmentally qualified. It is required to be powered by a reliable power source. It has no control functions but is required to provide continuous sampling capabilities for particulates and iodine as well as continuous monitoring of noble gas radiation with intermediate and high alarms at appropriate setpoints.

The 2RE12444 radiation monitoring system is not identified in the Updated FSAR as equipment with the potential to prevent an accident, potential to initiate an accident, potential for a malfunction to lead to an accident, or as equipment used to mitigate an accident. It is equipment used to identify an accident has occurred, and to assess the magnitude of the accident.

The proposed activity was screened in and evaluated in accordance with approved plant procedures and the guidance of NEI 97-04 and NEI 01-01, because the replacement of radiation monitoring system 2RE12444 is considered a digital upgrade. It was concluded that the seismic, environmental, and software qualification was sufficiently rigorous for the function of this monitoring system as a PAM category 2 variable. It was also concluded that the proposed activity did not increase the frequency or consequences of previously evaluated accidents or malfunctions. Furthermore, the proposed activity does not introduce the possibility of any new accidents or malfunctions and does not impact the integrity of a fission product barrier. Therefore, the proposed activity may be implemented without prior NRC approval.

Activity: DCP SNC922254

Title: Vogtle Unit 1 Auxiliary Feedwater Orifice Modifications

10 CFR 50.59 Evaluation Summary:

The installation of the orifices in the AFW system piping for SNC's Vogtle Unit 1 plant does not constitute a need to notify or seek permission from the Nuclear Regulatory Commission as specified in 10 CFR 50.59 using the guidance obtained from supporting document NEI 96-07 Revision 1, "Guidelines For 10CFR50.59 Implementation". These installed components cannot cause any condition II, III or IV event and thus their frequency and severity of occurrences are not changed. The analyses have documented that the revised design basis flows, temperatures and pressures can be maintained and are acceptable to meet the revised accident analyses. All potential failures of the new orifices along with the existing orifices (resized and reinstalled) are

bounded within the revised accident analyses. The increase in off-site doses due to the SGTR event do not result in more than a minimal increase in the consequences of an accident. The changes to the AFW pumphouse internal flooding do not create the possibility of a malfunction of an SSC important to safety with a different result than previously evaluated in the UFSAR. The updated HZP SLB analysis including the AFW flow requirement change does not create the possibility of a malfunction of a SSC important to safety with a different result than previously evaluated in the Updated UFSAR or have any impact on the integrity of the fuel cladding, the reactor pressure boundary, or containment. Therefore, this modification can be implemented without having prior NRC approval.

Activity: DCP SNC922258

Title: Vogtle Unit 2 Auxiliary Feedwater Orifice Modifications

10 CFR 50.59 Evaluation Summary:

The installation of the orifices in the AFW system piping for SNC's Vogtle Unit 2 plant does not constitute a need to notify or seek permission from the Nuclear Regulatory Commission as specified in 10 CFR 50.59 using the guidance obtained from supporting document NEI 96-07 Revision 1, "Guidelines For 10CFR50.59 Implementation". These installed components cannot cause any condition II, III or IV event and thus their frequency and severity of occurrences are not changed. The analyses have documented that the revised design basis flows, temperatures and pressures can be maintained and are acceptable to meet the revised accident analyses. All potential failures of the new orifices along with the existing orifices (resized and reinstalled) are bounded within the revised accident analyses. The increase in off-site doses due to the SGTR event do not result in more than a minimal increase in the consequences of an accident. The changes to the AFW pumphouse internal flooding do not create the possibility of a malfunction of an SSC important to safety with a different result than previously evaluated in the UFSAR. The updated HZP SLB analysis including the AFW flow requirement change does not create the possibility of a malfunction of a SSC important to safety with a different result than previously evaluated in the Updated UFSAR or have any impact on the integrity of the fuel cladding, the reactor pressure boundary, or containment. Therefore, this modification can be implemented without having prior NRC approval.

Activity: DCP SNC1062133 (Unit 1)

Title: Eliminate SPVs from MSIV Control Circuits for Normally Energized MDR Relays and Micro Switches

10 CFR 50.59 Evaluation Summary:

The proposed activity is to eliminate SPVs from the MSIV control circuits which have caused inadvertent MSIV closures during the operating history of Vogtle Units 1 and 2. Review of the accident analysis contained in the UFSAR shows the analysis relies on the closure of the MSIVs within their designed fast closure time of 5 seconds. It is assumed for accident analysis that up to one MSIV may fail to close, but because there are two redundant MSIVs on each steam line there would be no loss of Steam Line Isolation function. Section 15.2.4 assumes an inadvertent

closure of a MSIV and therefore does not rely on the correct function of the MSIV or its control circuit. This modification will maintain the existing function of the MSIV control circuits as described in the UFSAR with the exception of the In-Service 10% stroke test described in UFSAR sections 7.1.2.5, 7.3.2 and 10.3.4.4. The modification being made will remove the automatic function of the 153A/B microswitch contacts which currently facilitate closure while testing either the non-pump side or pump side of the actuator. The function can still be performed manually by opening a sliding link contact within the MSIV control circuit after demanding a test closure from the associated valve testing hand switch. Note that the 10% stroke test function as described in the UFSAR is not utilized in any analyzed accident and instead only the fast closure response is required for the described MSIV function. Therefore, the proposed change does not affect the accident analysis, consequences of accident, SSC malfunction, or consequence of malfunction described in the UFSAR. Additionally, the proposed modification does not impact the integrity of containment related to the function of the MSIVs.

Activity: DCP SNC1062134 (Unit 2)

Title: Eliminate SPVs from MSIV Control Circuits for Normally Energized MDR Relays and Micro Switches

10 CFR 50.59 Evaluation Summary:

The proposed activity is to eliminate SPVs from the MSIV control circuits which have caused inadvertent MSIV closures during the operating history of Vogtle Units 1 and 2. Review of the accident analysis contained in the UFSAR shows the analysis relies on the closure of the MSIVs within their designed fast closure time of 5 seconds. It is assumed for accident analysis that up to one MSIV may fail to close, but because there are two redundant MSIVs on each steam line there would be no loss of Steam Line Isolation function. Section 15.2.4 assumes an inadvertent closure of a MSIV and therefore does not rely on the correct function of the MSIV or its control circuit. This modification will maintain the existing function of the MSIV control circuits as described in the UFSAR with the exception of the In-Service 10% stroke test described in UFSAR sections 7.1.2.5, 7.3.2 and 10.3.4.4. The modification being made will remove the automatic function of the 153A/B microswitch contacts which currently facilitate closure while testing either the non-pump side or pump side of the actuator. The function can still be performed manually by opening a sliding link contact within the MSIV control circuit after demanding a test closure from the associated valve testing hand switch. Note that the 10% stroke test function as described in the UFSAR is not utilized in any analyzed accident and instead only the fast closure response is required for the described MSIV function. Therefore, the proposed change does not affect the accident analysis, consequences of accident, SSC malfunction, or consequence of malfunction described in the UFSAR. Additionally, the proposed modification does not impact the integrity of containment related to the function of the MSIVs.

Activity: DCP SNC1091658

Title: Unit 2 RCP-1 Vibration Alert Setpoint Change

10 CFR 50.59 Evaluation Summary:

The proposed activity involves a design change to raise the vibration alert setpoint on Unit 2 RCP-1 from the current limit of 15 mils to an adjustable limit of 15-18 mils. Westinghouse Vendor Manual 2X6AB09-00119, Section 7.1, gives guidance on the alarm and manual trip setpoints associated with the RCPs and the actions associated with increasing vibration in the RCPs. Shaft vibration is measured by two relative shaft probes mounted on top of the pump seal housing. The probes have alert settings with output to the control room for operator responses per 17008-2 and 13003-2. These alert setpoints are not documented in the UFSAR. The guidance in these procedures including the 20 mil RCP manual shutdown setpoint will remain unchanged, only the alert setpoint associated with entering ARP 17008-2 will change. Chapter 15 of the UFSAR documents scenarios associated with RCP failures to include shaft seizure and shaft breakage. In addition, the results of a locked rotor accident are listed in table 15.3.3-3 of the UFSAR. The doses are well within the guideline values of 10 CFR 100. Therefore, any condition resulting from an RCP accident associated with increased vibration levels has been analyzed and the increase in RCP vibration alarm setpoint will not negatively affect any increase in the frequency, likelihood, or an increase in consequences of an accident as described in the UFSAR. This change also does not create the possibility for an accident of a different type than any previously evaluated in the Updated FSAR, create the possibility for a malfunction of an SSC important to safety with a different result than any previously evaluated in the Updated FSAR, or change any method of evaluation as described in the UFSAR.

Activity: DCP SNC1042051

Title: U1 & U2 Low Condenser Vacuum Alarm and C9 Interlock Setpoint Change

10 CFR 50.59 Evaluation Summary:

The proposed activity involves a design change to lower the low condenser vacuum alarm and C9 setpoints. The proposed change will change both the low condenser vacuum alarm and C9 from fixed setpoints to adjustable setpoints based on turbine load(%). The C9 interlock arms the steam dumps when condenser vacuum is above 24.7" Hg and the low condenser vacuum alarm alerts the Main Control Room when Main Condenser vacuum degrades below 24.7" Hg. DCP SNC1042051 lowers the C9 setpoint from 24.7" Hg to a new minimum of 23.7" Hg Vac, allowing for steam dump availability at a higher condenser backpressure. This will allow for more operator flexibility during times when the condenser vacuum is challenged.

Activity: TE 1059509

Title: Change to Control of the Polar Crane Main Hoist Load Block During Refueling Outages

10 CFR 50.59 Evaluation Summary:

The activity being implemented changes the way the polar crane main hoist load block is controlled when the core is exposed. Instead of prohibiting load block travel over the exposed core, the main hoist will be made inoperable when the load block is traveling over the exposed core, except during removal or installation of the vessel head or upper internals. The affected section of the FSAR is 9.1.5.3.1.1.3 and will be supported by changes to the 93247-C, 93240A-C and 932408-C procedures to ensure the necessary controls on the polar crane main hoist. Additionally, the FSAR is being revised to eliminate the polar crane main hoist load block from being considered a load or heavy load in section 9.1.5.6 and Table 9.1.5-3 in accordance with current industry guidance. The questions posed in section B above were each addressed for the activity being performed and it was determined each of the questions can be answered "NO". Therefore, this activity can be implemented without NRC approval.

Activity: TE 1041412

Title: Revision of TS Bases 3.8.3

10 CFR 50.59 Evaluation Summary:

This activity involves a revision of TS Bases 3.8.3 to provide clarification that based on the availability of additional sources of fuel oil such as the other unit and Plant Wilson, the opposite train of Emergency Diesel Generator should not be considered inoperable when an EDG fuel oil storage tank is drained. The following statement is being added to the end of the LCO description for TS Bases 3.8.3.

The requirement for sufficient fuel oil to support ~ 7 days of operation may be met by alternative means as discussed in FSAR section 9.5.4.2.2 when performing required maintenance (draining and cleaning) of a storage tank.

The responses to the evaluation questions concluded that NRC prior approval of this activity is not required.