UNITED STATES
NUCLEAR REGULATORY COMMISSION
REGION II
245 PEACHTREE CENTER AVENUE NE, SUITE 1200
ATLANTA, GEORGIA 30303-1257

August 10, 2016

Mr. B. Keith Taber
Vice President
Southern Nuclear Operating Company, Inc.
Vogtle Electric Generating Plant
7821 River Road
Waynesboro, GA 30830

SUBJECT: VOGTLE ELECTRIC GENERATING PLANT - NRC EVALUATION OF RISK-INFORMED CATEGORIZATION AND TREATMENT OF SYSTEMS, STRUCTURES, AND COMPONENTS, INSPECTION REPORT 05000424/2016008 AND 05000425/2016008

Dear Mr. Taber:

On June 30, 2016, the U.S. Nuclear Regulatory Commission (NRC) completed an inspection at your Vogtle Electric Generating Plant, Units 1 and 2, and discussed the results of this inspection with you and other members of your staff. The inspectors documented the results of this inspection in the enclosed inspection report.

The inspection involved a review of the station's program procedures and implementation activities as they relate to license amendment under Title 10 of the *Code of Federal Regulations* (10 CFR) 50.69, "Risk-Informed Categorization and Treatment of Structures, Systems, and Components," as approved by the U.S. NRC staff and documented in the staff's Safety Evaluation Report. The inspectors reviewed selected procedures and records and interviewed station personnel.

The NRC inspectors did not identify any findings or violations of more than minor significance.

In accordance with Title 10 of the Code of Federal Regulations 2.390, "Public Inspections, Exemptions, Requests for Withholding," of the NRC's "Rules of Practice," a copy of this letter, its enclosure, and your response (if any) will be available electronically for public inspection in the NRC's Public Document Room or from the Publicly Available Records (PARS) component of the NRC's Agencywide Documents Access and Management System (ADAMS).

ADAMS is accessible from the NRC Web site at http://www.nrc.gov/reading-rm/adams.html (the Public Electronic Reading Room).

Sincerely,

/RA/

Shane Sandal, Chief
Reactor Projects Branch 2
Division of Reactor Projects

Docket Nos.: 50-424, 50-425
License Nos.: NPF-68 and NPF-81

Enclosures: IR 05000424/2016008; 05000425/2016008
w/Attachment: Supplemental Information

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ADAMS: ☒ Yes ACCESSION NUMBER: ML16223A738 ☒ SUNSI REVIEW COMPLETE ☒ FORM 665 ATTACHED

OFFICE	RII:DRP	RII:DRP	RII:DRP	RII: DFFI	RII:DRP
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DATE	8/10/2016	8/05/2016	8/05/2016	8/09/2016	8/10/2016
E-MAIL COPY?	YES NO	YES NO	YES NO	YES NO	YES NO

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Letter to B. Keith Taber from Shane Sandal dated August 10, 2016

SUBJECT: VOGTLE ELECTRIC GENERATING PLANT - NRC EVALUATION OF RISK-INFORMED CATEGORIZATION AND TREATMENT OF SYSTEMS, STRUCTURES, AND COMPONENTS, INSPECTION REPORT 05000424/2016008 AND 05000425/2016008

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U.S. NUCLEAR REGULATORY COMMISSION

REGION II

Docket Nos.:	50-424, 50-425
License Nos.:	NPF-68, NFP-81
Report No.:	05000424/2016008; and 05000425/2016008
Licensee:	Southern Nuclear Operating Company, Inc.
Facility:	Vogtle Electric Generating Plant, Units 1 and 2
Location:	Waynesboro, GA 30830
Dates:	June 13, 2016 through June 30, 2016
Inspectors:	A. Alen, Vogtle NRC Resident Inspector (Team Leader) J. Hanna, Senior Reactor Analyst D. Mas-Peñaranda, Project Engineer K. Kirchbaum, Project Inspector
Approved by:	Shane Sandal, Chief Reactor Projects Branch 2 Division of Reactor Projects

Enclosure

SUMMARY OF FINDINGS

IR 05000424/2016008; and 05000425/2016008, June 13, 2016, through June 30, 2016; Vogtle Electric Generating Plant, Units 1 and 2; NRC Evaluation of Risk-Informed Categorization and Treatment of Systems, Structures, and Components

This report covers onsite inspection and in-office review by the resident and three regional inspectors. No findings were identified. The NRC's program for overseeing the safe operations of commercial nuclear power reactors is described in NUREG-1649, "Reactor Oversight Process," Revision 6. Documents reviewed by the inspectors which are not identified in the Report Details are identified in the List of Documents Reviewed section of the Attachment.

REPORT DETAILS

Summary of Facility Activities

In November of 2004, the NRC added to its regulations Title 10 of the *Code of Federal Regulations* (10 CFR) Section 50.69, "Risk-informed categorization and treatment of structures, systems and components (SSCs) for nuclear power reactors." The rule allowed power reactor licensees to implement an alternative regulatory framework with respect to "special treatment." Special treatment refers to the requirements, as identified in 10 CFR 50.69(b)(1), that provide increased assurance, beyond normal industry practices, that SSCs will perform their design basis functions. Implementation of 10 CFR 50.69 required licensees first categorize, per 10 CFR 50.69(c), safety-related and non-safety-related SSCs according to their safety significance, as high or low safety significant (HSS or LSS.) "Alternative treatment," per 10 CFR 50.69 (b)(1) and (d), can then be applied consistent with the categorization of the SSCs. The rule also established requirements, per 10 CFR 50.69 (e)(1), to monitor and collect performance data of categorized SSCs and to conduct periodic reviews to identify potential adverse performance trends, resulting from alternate treatment allowed by 10 CFR 50.69, and make adjustments as necessary.

In August 2012, Southern Nuclear Operating Company, Inc. (SNC) submitted a license amendment request (ADAMS Accession No. ML12248A035) to allow for the voluntary implementation of 10 CFR 50.69 at the Vogtle Electric Generating Plant (VEGP) Units 1 and 2. In December 2014, the NRC issued the staff's safety evaluation report (SER) and license amendment (ML14322A839) granting SNC's implementation of 10 CFR 50.69 at VEGP Units 1 and 2. SNC's categorization process was based on the guidance in Nuclear Energy Institute (NEI) 00-04, Revision 0, "10 CFR 50.69 SSC Categorization Guideline," which was endorsed by NRC in Regulatory Guide (RG) 1.201, Revision 1, "Guidelines for Categorizing Structures, Systems, and Components in Nuclear Power Plants according To Their Safety Significance."

At the time of this inspection the licensee had developed its 10 CFR 50.69 program implementing procedures for the categorization, alternate treatment, and feedback and adjustment processes. A total of four systems had been categorized; containment spray (CS) and radiation monitoring (RM) in 2015, and essential chilled water (ECW) and component cooling water (CCW) in 2016. Only one alternate treatment application had been implemented for in-service testing (IST) of the CS pumps. Due to the early phases of implementation of the rule, the licensee's 10 CFR 50.69 feedback and adjustment process activities were limited.

4OA5 Other Activities

.1 10 CFR 50.69 Risk-Informed Categorization and Treatment of Systems, Structures, and Components (Inspection Procedure 37060)

a. Inspection Scope

The inspection team performed an inspection as outlined in NRC Inspection Procedure (IP) 37060, "10 CFR 50.69 Risk-Informed Categorization and Treatment of Systems, Structures, and Components Inspection," dated September 14, 2011.

Review of Licensee's Programs and Procedures: The inspectors reviewed the licensee's 50.69 program document and implementing program instructions to ensure they properly incorporated the license amendment under 10 CFR 50.69, "Risk-informed categorization and treatment of structures, systems and components (SSCs) for nuclear power reactors", as approved by the NRC staff and described in the staff's SER and the licensee's Updated Final Safety Analysis Report (UFSAR). The inspectors focused their review on the following aspects of the program.

i. SSCs categorization into risk-informed safety classes (RISC)-1, 2, 3, and 4 using probabilistic risk assessment (PRA) and means other than PRA: Licensee program instructions NMP-ES-065-001, Version 2.0 "10 CFR 50.69 Active Component Risk Significance Insights," and NMP-ES-065-002, Version 2.0 "10 CFR 50.69 Passive Component Categorization," described the processes for determining the risk significance for active and passive SSCs.

The active categorization process described the use and evaluation of the following risk hazards to determine the risk importance of SSCs:

- Internal Events and Fire risk, using PRA models for fire and internal events (at power), and conducting sensitivity studies and integrated assessments;
- Seismic margin analysis for seismic risk;
- Shutdown safety assessment for shutdown risk, using NUMARC 91-06, "Guidelines for Industry Actions to Assess Shutdown Management," Dec.1991;
- Individual Plant Evaluation for External Events (IPEEE) screening for other external hazards risks; and,
- Qualitative assessment of system functions

The passive categorization process described the use of the methodology approved by the NRC for Arkansas Nuclear One, Unit 2, as outlined in the SER "Arkansas Nuclear One, Unit 2 – Approval of Request for Alternative AN02-R&R-004, Revision 1, Request to use Risk-Informed Safety Classification and Treatment for Repair/Replacement Activities in Class 2 and 3 Moderate and High Energy Systems," April 22, 2009 (ML090930246).

The inspectors determined the licensee's process for categorization, using PRA and other means, as described in their program instructions was consistent with the categorization process approved in the SER.

ii. SSC functional importance determined using an integrated, systematic categorization process: Licensee program instruction NMP-ES-065-003, Version 2.0 "10 CFR 50.69 Risk Informed Categorization for Structures Systems and Components," provided instructions and guidance for the categorization process of SSCs. The inspectors reviewed these instructions and verified it covered essential elements of the categorization process, including: scope definition of SSCs categorization, identification of SSC functional information, use of risk hazards using PRA and non-PRA methods, consideration of SSC operational information (i.e. industry and plant operating experience, performance data, commitments, and operating practices), defense-in-depth evaluations, and review and approval by an integrated decision-making panel. The inspectors determined the licensee's procedures for categorization of SSCs described an integrated, systematic process for determining the functional importance of SSCs and was consistent with the process approved in the SER.

iii. Defense-in-depth (DID): Licensee program instruction NMP-ES-065-003, Version 2.0 "10 CFR 50.69 Risk Informed Categorization for Structures Systems and Components," required the performance of DID assessments for all SSCs preliminarily determined to be LSS, as part of the categorization process. The inspectors reviewed applicable instructions and guidelines for conducting DID assessment and determined they were consistent with Section 6 of NEI 00-04.

iv. Basis for acceptance of evaluations that provide reasonable confidence that sufficient safety margins are maintained: Licensee program instruction NMP-ES-065-001 described the evaluations (performed for PRA modeled SSCs) and acceptance measures the licensee will use to demonstrate, with reasonable confidence, that sufficient safety margins are preserved. The evaluations consisted of sensitivity studies, for the system being categorized, and cumulative sensitivity studies for all systems categorized under 50.69. The studies evaluated the potential overall impact and relative contribution of each system on core damage frequency (CDF) and large early release frequency (LERF), based on postulated changes in reliability. The procedure specified studies be conducted by increasing the unavailability and unreliability of all LSS (i.e. RISC-3) SSC candidates, modeled in the PRA, by a factor of 3. The results were compared with the quantitative acceptance guidelines outlined in the Regulatory Guide 1.174, "An Approach for Using Probabilistic Risk Assessment in Risk-Informed Decisions on Plant-Specific Changes to Licensing Basis." The inspectors determined the evaluations and basis for their acceptance were consistent with the process approved in the SER.

v. Scope of SSC categorization: Program instruction NMP-ES-065-003 described a systematic process for establishing the scope of SSCs categorized for a particular system. The inspectors evaluated this process and conducted interviews with plant personnel to verify the process supported identification and evaluation of all system functions associated with a system or structure such that entire set of components were considered and addressed.

vi. Integrated decision-making panel (IDP): Licensee program instruction NMP-ES-065-005, Version 1.0, Integrated Decision-Making Panel for Risk Informed SSC Categorization Duties and Responsibilities," described the IDP structure, responsibilities, and qualifications. The inspectors reviewed this instruction to verify it established specific requirements for ensuring adequate expertise levels,

qualification, and quorum of IDP members in the areas of operations, safety analysis, PRA, and design and systems engineering. The inspectors also reviewed the initial and refresher qualification training material to verify it contained sufficient technical aspects of the categorization process and was consistent with Section 9 of NEI 00-04.

vii. Alternate treatment applied to RISC-3 SSCs: Licensee program instruction NMP-ES-065-004, Version 2.0, "10 CFR 50.69 Alternative Treatment Requirements," described the general process for application of alternate treatment to RISC-3 SSCs. It required that all RISC-3 SSCs be subject to the following:

- treatment that ensured, with reasonable confidence, that SSCs remained capable of performing their safety-related functions under design bases conditions, including seismic and environmental conditions and effects throughout their service life;
- periodic testing and inspection that ensured SSCs remained capable of performing their safety-related functions; and,
- a corrective action program (CAP) to identify and correct, in a timely manner, conditions that would prevent SSCs from performing their safety-related functions. In addition, for significant conditions adverse to quality, measures must be taken to provide reasonable confidence that the cause of the condition is determined and corrective actions taken to preclude repetition.

The procedure required that exempted special treatment requirements for RISC-3 SSCs be maintained until the programs and processes controlling these activities were revised to incorporate application of alternate treatment for a particular program. Due to the early stages of the licensee's 50.69 program implementation, exempted special treatment programs were still under review for application of alternate treatment. The inspectors reviewed the following revised programs: environmental qualification (EQ – 50.49), in-service testing (IST – 50.55a(g)), and maintenance rule (50.65). The EQ program procedure outlined activities that could be performed in order to support the "reasonable confidence" standard, including the use of guidelines in EPRI report 1009748[1], "Guidance for Accident Function Assessment for RISC-3 Components," and required a documented evaluation of the proposed alternate treatment. The IST program also required documentation and approval of the alternate treatment plan. The alternate test plan would have to consider maintenance and surveillance history, as well as operational considerations. The inspectors reviewed these procedures to verify they contained proper controls to support the "reasonable confidence" standard. For the maintenance rule program, the inspectors verified the revised program was adequate to monitor the maintenance effectiveness of non-exempted SSCs (i.e. RISC-1 and RISC-2) and safety significant functions they support.

The inspectors determined that the instructions contained in the reviewed alternate treatment procedures, along with the station's CAP were consistent with the requirements in 10 CFR 50.69(d).

viii. Treatment applied to RISC-1 and RISC-2 SSCs: Licensee program instruction NMP-ES-065-004 provided instructions for evaluation of treatment of RISC-1 and

[1] The inspectors did not conduct a detailed review of this EPRI report.

RISC-2. The inspectors reviewed applicable instructions and verified the evaluations required assessment of: credited beyond design bases capability of RISC-1 SSCs, and assumed performance of RISC-2 SSCs. Depending on the results of these evaluations the instruction required establishing additional treatment requirements for RISC-1 and 2.

ix. Feedback and process adjustments: Licensee program instruction NMP-ES-065-006, Version 1.0, "Requirements for Immediate Reviews, Periodic Reviews, and Performance Monitoring," described the program requirements and instructions for conducting performance monitoring, and periodic and immediate reviews. Periodic reviews were performed once every two refueling outages and required consideration of plant changes, industry and plant operating experience, impact of updated risk information, and performance monitoring results as collected from the licensee's CAP database, for RISC-1, 2, and 3 SSCs. Immediate reviews were performed for confirmed conditions where a RISC-3 or RISC-4 SSC would prevent an HSS function from being satisfied and for critical design, operational, and PRA model changes. The inspectors determined the 50.69 program description and requirements for feedback and process adjustments were consistent with Section 12 of NEI 00-04 and satisfied the review requirements of 10 CFR 50.69(e).

x. Program documentation, change control, and maintenance of records: The inspectors reviewed licensee program instructions associated with documentation and change control requirements. The licensee's program required that the bases for categorization of SSCs be documented in a risk basis document (RBD). The RBD was a structured documentation package containing bases information and results of the preliminary and final categorization of SSCs, as approved by the IDP. The IDP meeting minutes for initial SSC categorization and immediate and periodic reviews were required to be documented and include the outcome of the categorization review, bases for determination, and resolution of any differing opinions and significant issues discussed. The RBDs were required to be updated as a result of immediate or periodic reviews. These records were identified as quality assurance records required to be maintained for the life of the plant.

The inspectors reviewed the UFSAR and Quality Assurance Topical Report (QATR) changes resulting from initial implementation of the 10 CFR 50.69 program. The inspectors verified that appropriate controls were in place to make changes to these documents thereafter. The inspectors determined the licensee's program was consistent with Section 11 of NEI 00-04 and the requirements of 10 CFR 50.69(f).

xi. Reporting requirements: The inspectors reviewed the licensee's reporting requirements procedure and verified it incorporated the reporting requirement of 10 CFR 50.69(g).

Review of Licensee's 10 CFR 50.69 Program Implementation: The inspectors sampled the following four systems categorized under the licensee's 50.69 categorization process: containment spray (CS), radiation monitoring (RM), essential chilled water (ECW), and component cooling water (CCW). In verifying the proper categorization of these SSCs, the inspectors reviewed design basis documents, UFSAR, operations procedures, and piping and instrumentation diagrams to identify design and licensing bases requirements and commitments for these systems. The inspectors also reviewed system health reports and corrective action program documents to gain perspectives of

historical performance of the systems. The inspectors focused their review on implementation of the following aspects.

i. Proper categorization of SSCs: The inspectors confirmed the licensee properly categorized key active and passive SSCs, which had the potential to affect the system safety functions. The inspector sampled the RBDs for several SSCs (particularly RISC-3 SSCs), and reviewed supporting documentation. In particular, the inspectors conducted an extensive review of the loss of function of the ECW system and the potential impact on supported electrical components.

The inspectors validated the quantitative risk results obtained by the licensee by review of the following: 1) overall risk rankings and cutsets that supported the Fussel-Vessely (FV) and Risk Achievement Worth (RAW) importance values, 2) success criteria used in the PRA model, and 3) sampled Birnbaum values for individual basic events/SSCs and compared these to the NRC's standardized plant analysis risk (SPAR) model for VEGP, Units 1 and 2. The inspectors also reviewed the following elements of the RBD packages, for each reviewed system, in order to confirm SSCs were properly categorized:

- PRA of severe accident scenarios, at full-power
- PRA fire modeling
- Sensitivity Studies and Integral Assessments
- Seismic margin analyses
- Other external hazards
- Shutdown safety assessment
- Qualitative assessment of system functions
- Passive categorization

ii. Maintenance of plant-specific PRA: The inspectors reviewed the PRA model and outputs in order to determine if it was of sufficient quality and level of detail to support the categorization process. Reviewed items included:

- Revision of the VEGP PRA model
- Resolution of the Findings and Observations from the most recent peer review
- Truncation value used on the PRA model
- Sampling of nominal values used in the PRA model, e.g., CCW test and maintenance terms

The inspectors verified there was a feedback method, as described in licensee instructions NMP-ES-065-001 and NMP-ES-065-003, that would update the PRA model at least once every two refueling outages.

iii. Defense-in-depth: The inspectors reviewed the DID assessments documented in the RBD packages for the selected systems. The inspectors verified the assessments considered key safety-related SSCs whose preliminary overall risk was LSS (i.e. RISC-3), after considering insights from PRA, analyses of non-modeled hazards, qualitative evaluations, and passive risk. The inspectors verified the DID assessments were appropriate and consistent with the guidelines outlined in Attachment 1, "Guidelines for Defense-In-Depth Assessments," of NMP-ES-065-003. Specifically, the inspectors verified the DID assessments confirmed SSCs

being LSS, for both core damage or containment integrity; otherwise that the SSCs were preliminarily re-categorized as HSS.

iv. Implementation of the integrated, systematic categorization process: The inspector reviewed the RBD packages to verify that essential elements of the categorization process, as outlined in the licensee's program instructions, were adequately evaluated and incorporated in the categorization basis documents.

v. RISC-3 SSC categorization evaluations: The inspectors sampled key SSCs, for reviewed systems, and verified sensitivity studies were performed before incorporating new SSCs into the program and that results were being compared to appropriate quantitative guidelines. The inspectors concluded that any potential risk increase, resulting from alternate treatment, would likely result in small changes to CDF and LERF based on the FV and RAW results. The sensitivity studies included both initial sensitivity studies for the subject system and cumulative sensitivity studies.

For SSCs categorized by means other than PRA (i.e. ECW and RM), the inspectors verified that evaluations provided adequate basis for concluding that any potential risk increase resulting from alternate treatment would be small.

vi. Scope of SSC categorization: The inspectors verified, on a sampling basis, the licensee performed evaluations of entire systems and structures, not just selected components within a system or structure. Specifically, the inspectors reviewed system drawings, plant equipment list database, and conducted plant walkdowns to verify the completeness of SSCs identified in the RBD packages.

vii. Staffing of IDP: The inspectors reviewed the composition of IDP members which reviewed and approved categorization of selected systems. The inspectors reviewed the qualifications, as documented in the licensee's IDP member qualification form NMP-ES-065-005-F01, for each IDP quorum member to verify the IDPs were staffed with joint expertise in the areas of plant operations, safety analysis, PRA, and design and systems engineering. Additionally, the inspectors interviewed IDP members to confirm members understood their roles and responsibilities.

viii. Alternate treatment applied to RISC-3 SSCs: The inspectors reviewed the IST (10 CFR 50.55a(g)) alternate treatment test plan for the, RISC-3, CS pumps (both units). This was the only alternate treatment application available at the time of the inspection. The inspectors verified the alternate test plan was documented in accordance with IST program instruction NMP-ES-013-009, Version 1.2, "Application of Risk Based Approach to IST Program," and that it appropriately considered surveillance and maintenance history, and operational considerations in establishing the alternate test plan. The inspectors determined the alternate test plan for the CS pumps provided reasonable confidence that the pumps would remain capable of performing their safety-related functions and was consistent with the requirements 10 CFR 50.69(d).

ix. Treatment applied to RISC-1 and RISC-2 SSCs consistent with assumed performance in PRA model: For reviewed systems the inspectors verified the licensee conducted or was tracking the performance of evaluations of treatment

applied to RISC-1 and RISC-2 SSCs, as outlined in licensee procedure NMP-ES-065-004 and required by 10 CFR 50.69(d)(1).

x. Feedback and process adjustments: Due to early stages of 50.69 program implementation, no periodic reviews were available for inspection. The first periodic reviews were not scheduled until 2017 for the first categorized systems, CS and RM. Additionally, no immediate reviews had been conducted at the time of the inspection. The inspectors reviewed condition reports and system health reports, for selected systems, to identify and verify that no immediate reviews were required since categorization of the systems.

The inspectors also reviewed the licensee's self-assessment report, in preparation for NRC's 10 CFR 50.69 program inspection, to assess the thoroughness and self-criticism of the assessment, and to verify that problems identified were entered into the CAP for resolution. The licensee's self-assessment was detailed and critical, as evidenced by findings consistent with the inspector's independent review. The inspectors verified that condition reports were created to document areas for improvement and findings resulting from the self-assessment.

xi. Documentation: The inspectors reviewed the RBD packages and associated IDP meeting minutes to verify that the categorization bases for reviewed systems was documented, as required by 10 CFR 50.69(f). Specifically, the inspectors verified the RBDs documented all categorization elements required by NMP-ES-065-003 and that the results of the IDP's review and approval documented the categorization review outcome, including the bases for the determination, disposition of differing opinions, discussion of significant issues, and open actions. The inspectors also reviewed the UFSAR and QATR changes resulting from initial and subsequent implementation of the 10 CFR 50.69 program.

xii. Reporting: The inspectors reviewed conditions reports generated, since categorization of the systems, to confirm the licensee was implementing the reporting requirements of 10 CFR 50.69, 50.72, 50.73, and 10 CFR Part 21.

b. Findings

No findings were identified.

4OA6 Meetings, Including Exit

On June 30, 2016, the team presented the inspection results to Mr. Keith Taber and other members of the licensee's staff. The team confirmed that no proprietary information was retained by the inspectors or documented in this report.

ATTACHMENT: SUPPLEMENTAL INFORMATION

SUPPLEMENTAL INFORMATION

KEY POINTS OF CONTACT

Licensee personnel:
K. Taber, Site Vice-President
D. Myers, Plant Manager
G. Gunn, Site Regulatory Affairs – Manager
S. Harris, Operations – Shift Operations Manager
J. Martin, Nuclear Oversight – Engineer Supervisor
K. Walden, Site Regulatory Affairs – Sr. Engineer
J. Crites, Engineering Systems – 50.69 Coordinator
A. Coker, Risk Informed Engineering – Lead Engineer
R. Chackal, AER, Inc. – Consultant

NRC personnel:
Shane Sandal, Chief, Region II Reactor Projects Branch 2
James Isom, Nuclear Reactor Regulation Senior Reactor Operations Engineer
Stephen Dinsmore, Nuclear Reactor Regulation Senior Reliability and Risk Analyst

LIST OF DOCUMENTS REVIEWED

Licensing Basis Documents
ML12248A035, Vogtle Electric Generating Plant, Units 1 and 2 – License Amendment Request to Implement Risk-Informed Categorization of Systems, Structures, and Components for Nuclear Power Reactors, August 31, 2012
ML14322A839, Vogtle Electric Generating Plant, Units 1 and 2 – Issuance of Amendments RE: Use of 10 CFR 50.69, December 17, 2014

Procedures
11887-1(2), Control Building Rounds Sheets, Ver. 68(53)
13431-1(2), 120V AC 1E Vital Instrument Distribution System, Ver. 31.1(30.3)
17050-1(2), Annunciator Response Procedures for ALB 50 on QHVC Panel, Ver. 19.3(15.2)
17053-1(2), Annunciator Response Procedures for ALB 53 on QHVC Panel, Ver. 29(26)
18031-1(2), Loss of Class 1E Elect Systems, Ver. 1.1(2.1)
19100-1(2), ECA – 0.0 Loss of all AC Power, Ver. 2.1(3.2)
NMP-AD-028, 10 CFR Part 21 Evaluations and Reporting Requirements, Ver. 3.0
NMP-AD-031, SNC Reportability Roles, Responsibilities, and Fleet Requirements, Ver. 8.0
NMP-ES-016-002, Environmental Qualification Central File Maintenance, Ver. 12.0
NMP-ES-027-001, Maintenance Rule Implementation, Ver. 6.0
NMP-ES-065, 10 CFR 50.69 Program, Ver. 2.0

Drawings
1K3-1204-038-01, SI System Fabrication Isometric – AB Level D Area 3E, Ver. 20
1K3-1206-001-01, CS System Fabrication Isometric – AB Level D Area 3G, Ver. 38
1K3-1206-002-01, CS System Fabrication Isometric – AB Level D Area 3G, Ver. 17
1K3-1206-004-01, CS System Fabrication Isometric – AB Level D Area 3G & 3H, Ver. 37
1K3-1206-005-01, CS System Fabrication Isometric – AB Level D Area 3G, Ver. 34

1K3-1206-005-03, CS System Fabrication Isometric – AB Level A Area 3G, Ver. 13
1K3-1206-006-01, CS System Fabrication Isometric – AB Level D Area 3G & 3E, Ver. 26
1K7-1206-002-01, CS System Fabrication Isometric – FHB Area 3D Level C, Ver. 15
1K7-1206-006-01, CS System Fabrication Isometric – FHB Area 3D Level A Plan, Ver. 14
1X4DB121, Rev. 42.0, P&I Diagram – Safety Injection System – System 1204
1X4DB131, Rev. 35.0, P&I Diagram – Containment Spray System – System N0. 1206
1X4DB136, Rev. 33.0, P&I Diagram – Component Cooling Water System – System No. 1203
1X4DB137, Rev. 19.0, P&I Diagram – Component Cooling Water System – System No. 1203

Other

10CFR50.69 Passive Classification, Vogtle, Unit 1 & 2, Component Cooling Water (CCW). EPRI, Palo Alto, CA: 2016. IR-2016-659
Appendix G, "Loss of Room Cooling and Effect on VEGP Component," to Southern Company Calculation V-RIE-IEIF-U00-001, "Vogtle Electric Generating Plant Initiating Events Notebook," Ver. 2.0
Draft Component Cooling Water System RBD, 5/17/16
Draft Essential Chilled Water System RBD, 5/17/16
Focused Area Self-Assessment (FASA) Plan and Report – Vogtle 1 & 2 10CFR50.69 Categorization and Treatment Program, April 11-22, 2016
GP-17289, Letter Regarding Pump, Electrical, and Diesel Generator Room Temperature Heat up Analysis Calculations Extended to 72 hours for VEGP, dated August 24, 2001
IDP Meeting Minutes V-16-01, Categorization of CCW and ECW
LDCR 2015019, Change to Vogtle 1 & 2 UFSAR for Implementation of 10 CFR 50.69, Ver. 1.0
LDCR 2015024, Quality Assurance Topical Report, Ver. 1
LDCR No. 2015017, Program changes for the adoption of 50.69 process for the Unit 1 CS pumps, Ver. 1.0
LDCR No. 2016006, Program changes for the adoption of 50.69 process for the Unit 2 CS pumps, Ver. 1.0
ML071150108, Entergy – Request to Use Risk-Informed Classification and Treatment for Repair/Replacement Activities in Class 2 and 3 Moderate Energy Systems, April 17, 2007
ML12061A245, Vogtle Electric Generating Plant, Units 1 and 2 – Audit Report for the Process Being Developed to Support a License Amendment Request to Implement Risk Informed Categorization of Systems, Structures, and Components, March 5, 2012
RBA 15-008, 032, 033 and 034, "Risk Based Analysis," for the Containment Spray, Radiation Monitoring, Essential Chilled Water and Component Cooling Water systems, Revision 1
RBD V12-5069-1206, 10 CFR 50.69 Categorization of the Containment Spray System, Rev. 1
RBD V12-5069-1609, 10 CFR 50.69 Categorization of the Radiation Monitoring System, Rev. 1
S-ES-PP-IDP, Southern Nuclear 50.69 Risk Informed Categorization Integrated Decision-Making Panel (IDP) Training, Ver. 1.0
SO006/RP/001, "Southern Nuclear Company Vogtle Plant LOCA and MSLB Study," Revision 1
Southern Company Calculation PRA-BC-V-16-002, "Vogtle Unit 1 Room Cooling Opening Doors HEP Risk Impact," Version 1
Southern Company Calculation REA-VAA093, "Vogtle Electric Generating Plant – Units 1 & 2, Room Heat-Up Calculations" dated June 4, 1996
Southern Company Calculation V-RIE-IEIF-U00-012, "Vogtle PRA Model Peer Review Finding and Observation Resolution" Version 2
Southern Nuclear PRA Calculation, PRA-BC-V-11-008, "Evaluation of Other External Hazards," Ver. 1
Unit 1 and 2 CS Pumps Alternate Treatment Testing Plan and IST Program Alternate Treatment Advisory Panel (ATAP) Meeting Minutes for meetings #2015-1 and #2015-2
V-LO-TX-10101, Component Cooling Water – System Description, Rev. 3.0

V-LO-TX-15105, Containment Spray – System Description, Rev. 3.0
V-LO-TX-23601, Chilled Water – System Description, Rev. 3.0
V-LO-TX-32101, Digital Radiation Monitoring System – System Description, Rev. 0
Vogtle Electric Generating Plant Units 1 and 2 Component Cooling Water System Notebook for PRA Model, Revision 4
Vogtle Generating Plant – Units 1 & 2, Individual Plant Examination of External Events, Volume 1, dated November 1, 1995
Vogtle Generating Plant – Units 1 & 2, Individual Plant Examination of External Events, November 1, 1995
Westinghouse Calculation WWA-5212, "Vogtle Electric Generating Plant – Units 1 & 2, Room Heat-Up Calculations" dated August 24, 2001

Corrective Action Program Documents
CR list for Unit 1 and 2 CS System (System No. 1206) ranging from 7/1/15 thru 6/1/16
CR list for Unit 1 and 2 RM System (System No. 1609) ranging from 7/1/15 thru 6/1/16

Condition Reports generated as result of inspection

10236667	10237277	10237279
10241427	10241438	10242289
10242291	10242901	10242910