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June 27, 2007

Docket Nos.: 50-424
50-425

NL-07-1261

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

Vogtle Electric Generating Plant Units 1 and 2
Application for License Renewal

Ladies and Gentlemen:

Pursuant to 10 CFR Part 54, Southern Nuclear Operating Company (SNC) hereby applies for the renewal of the operating licenses for the Vogtle Electric Generating Plant (VEGP), Units 1 and 2.

SNC is the licensed operator of VEGP, which it operates for the benefit of Georgia Power Company, Oglethorpe Power Company, Municipal Electric Authority of Georgia, and the City of Dalton, Georgia (collectively, the "owners"). The current license for Unit 1 (Facility Operating License No. NPF-68) expires on January 16, 2027, and the license for Unit 2 (Facility Operating License No. NPF-81) expires on February 9, 2029. By this submittal, SNC seeks to extend the term of each operating license by 20 years beyond the current expiration dates.

As of the date of this submittal, VEGP Unit 2 has 18 years of operating experience, instead of 20 years as required by 10 CFR 54.17(c). By letter dated January 9, 2007, the NRC granted SNC an exemption to the requirements of 10 CFR 54.17(c) for VEGP Unit 2, thus allowing the license renewal application for Unit 2 to be submitted concurrently with the application for Unit 1.

The enclosed License Renewal Application contains the information required by the license renewal regulations set forth in 10 CFR Part 54. In addition, it satisfies the environmental regulations set forth in 10 CFR Part 51.

As required by 10 CFR 54.21(b), current licensing basis changes which have a material effect on the content of this application will be identified at least annually while the application is under NRC review, and at least three months prior to the scheduled completion of the NRC review.

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Enclosure 1 provides a single compact disc (CD), formatted in a manner that is consistent with "Guidelines for Electronic Submissions to the Commission," published in the Federal Register on October 10, 2003 at 68 FR 58826.

To facilitate NRC review, the following items are also provided:

- One (1) CD with the VEGP LRA in electronic format suitable for posting on the NRC web page,
- Eighty (80) CDs containing the VEGP LRA, associated boundary drawings, and the Updated Final Safety Analysis Report (Revision 14) for Vogtle Electric Generating Plant in electronic format, and
- Five (5) paper copies of the VEGP LRA and associated boundary drawings (four copies sent to NRR and one copy sent to Region II).

The boundary drawings are being submitted to aid in the review of the application, and are not part of the application.

Enclosure 2 provides the License Renewal Future Action Commitment List. This list will be updated as required throughout the LRA review process.

Mr. L. M. Stinson states he is a Vice President of Southern Nuclear Operating Company, 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.

If you have any questions, please advise.

Respectfully submitted,

SOUTHERN NUCLEAR OPERATING COMPANY



L. M. Stinson
Vice President Fleet Operations Support

Sworn to and subscribed before me this 27th day of JUNE, 2007.



Notary Public

My commission expires: 10-11-2009

LMS/JAM/daj

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Enclosures:

1. VEGP License Renewal Application
2. License Renewal Future Action Commitment List

cc: Southern Nuclear Operating Company

Mr. J. T. Gasser, Executive Vice President w/o Enclosures

Mr. T. E. Tynan, Vice President – Vogtle w/o Enclosures

Mr. D. H. Jones, Vice President – Engineering w/o Enclosures

Mr. B. J. George, Manager – Nuclear Licensing w/ Enclosures

Mr. N. J. Stringfellow, Licensing Supervisor – Vogtle w/ Enclosures

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Dr. W. D. Travers, Regional Administrator w/ Enclosures

Mr. B. K. Singal, NRR Project Manager – Vogtle w/ Enclosures

Mr. D. J. Ashley, License Renewal Project Manager – Vogtle w/ Enclosures

Mr. G. J. McCoy, Senior Resident Inspector – Vogtle w/Enclosures

State of Georgia

Mr. N. Holcomb, Commissioner – Dept. of Natural Resources w/o Enclosures

VEGP License Renewal Future Action Commitment List				
ITEM NO.	COMMITMENT	UFSAR SUPPLEMENT LOCATION	SCHEDULE	RELATED LRA SECTIONS/ REFS
1	Implement the ACCW System Carbon Steel Component Program as described in VEGP LRA Section B.3.1.	A.2.1	Prior to the period of extended operation	B.3.1
2	Implement the Bolting Integrity Program as described in VEGP LRA Section B.3.2.	A.2.2	Prior to the period of extended operation	B.3.2
3	Enhance Boric Acid Corrosion Control Program documents to address the effects of borated water leakage onto materials other than steels, including electrical components (e.g., electrical connectors), that are susceptible to boric acid corrosion.	A.2.3	Prior to the period of extended operation	B.3.3
4	Implement the Buried Piping and Tanks Inspection Program as described in VEGP LRA Section B.3.4.	A.2.4	Prior to the period of extended operation	B.3.4
5	Implement the CASS RCS Fitting Evaluation Program as described in VEGP LRA Section B.3.5.	A.2.5	Prior to the period of extended operation	B.3.5
6	Enhance Closed Cooling Water Program documents to indicate the components in each system that are most susceptible to various corrosion mechanisms and to ensure that corrosion monitoring is appropriately accomplished.	A.2.6	Prior to the period of extended operation	B.3.6

VEGP License Renewal Future Action Commitment List				
ITEM NO.	COMMITMENT	UFSAR SUPPLEMENT LOCATION	SCHEDULE	RELATED LRA SECTIONS/ REFS
7	Implement the External Surfaces Monitoring Program as described in VEGP LRA Section B.3.8.	A.2.8	Prior to the period of extended operation	B.3.8
8	<p>Implement the following enhancements to the Fire Protection Program:</p> <ul style="list-style-type: none"> • Wall thickness evaluations will be performed on water suppression piping systems using non-intrusive volumetric testing or visual inspections to ensure that wall thicknesses are within acceptable limits. Initial wall thickness evaluations will be performed before the end of the current operating term. Subsequent evaluations will be performed at plant specific intervals during the period of extended operation. The plant specific inspection intervals will be determined based on previous evaluations and site operating experience. • A sample of sprinkler heads will be inspected using the guidance of NFPA 25 "Inspection, Testing and Maintenance of Water-Based Fire Protection Systems" (1998 Edition), Section 2-3.1.1, or NFPA 25 (2002 Edition), Section 5.3.1.1.1. Where sprinkler heads have been in service for 50 years, they will be replaced or representative samples from one or more sample areas will be submitted to a recognized testing laboratory for field service testing. This sampling will be performed every 10 years after the initial field service testing. The 50 years of time in service begins when the system was placed in service, not when the plant became operational. • Fire Protection Program procedures will be revised to provide more detailed instructions for visual inspection of Fire Pump Diesel fuel supply lines for leakage, corrosion, and general degradation while the engine is running during fire suppression system pump tests. 	A.2.9	<p>Prior to the period of extended operation, except for sprinkler head replacement or testing;</p> <p>Sprinkler head replacement or testing will be implemented prior of 50 years from time system was placed in service.</p>	B.3.9

VEGP License Renewal Future Action Commitment List				
ITEM NO.	COMMITMENT	UFSAR SUPPLEMENT LOCATION	SCHEDULE	RELATED LRA SECTIONS/ REFS
9	Enhance the Flux Thimble Tube Inspection Program by preparing an overall program procedure documenting the Flux Thimble Tube Inspection Program administration and implementing activities credited for license renewal.	A.2.11	Prior to the period of extended operation	B.3.11
11	Implement the following enhancements to the Generic Letter 89-13 Program: <ul style="list-style-type: none"> • Develop an overall program procedure for the Generic Letter 89-13 Program to describe the various program activities that comprise Generic Letter 89-13 Program and their implementing controls such as chemistry procedures, maintenance activities, scheduled surveillances, or other mechanisms. • Add inspection of the NSCW Transfer Pumps' casings and bolting. • Add the NSCW Cooling Tower spray nozzles as a specific item to be inspected during the cooling tower inspection. 	A.2.12	Prior to the period of extended operation	B.3.12

VEGP License Renewal Future Action Commitment List				
ITEM NO.	COMMITMENT	UFSAR SUPPLEMENT LOCATION	SCHEDULE	RELATED LRA SECTIONS/ REFS
12	<p>Implement the Nickel Alloy Management Program for Non-Reactor Vessel Closure Head Penetration Locations as described in VEGP LRA Section B.3.14.</p> <p>The program will be based on the following commitments:</p> <ul style="list-style-type: none"> (1) SNC will continue to participate in industry initiatives directed at resolving PWSCC issues, such as owners group programs and the Electric Power Research Institute Materials Reliability Program. This is an ongoing commitment. (2) SNC will comply with applicable NRC Orders. This is an ongoing commitment. (3) SNC will submit a program inspection plan for VEGP that includes implementation of applicable Bulletins, Generic Letters, and staff accepted industry guidance. The inspection plan will be submitted to the staff for review and approval not less than 24 months prior to entering the period of extended operation for VEGP Units 1 and 2. 	A.2.14	<p>Program implementation to be completed prior to the period of extended operation</p> <p>Numbered items are implemented as noted in the item.</p>	B.3.14
13	<p>The Nickel Alloy Management Program for Reactor Vessel Closure Head Penetrations will implement commitments for reactor vessel closure head penetrations associated with nickel alloys from:</p> <ul style="list-style-type: none"> (1) NRC Orders, Bulletins, and Generic Letters, and; (2) Staff-accepted industry guidelines. 	A.2.15	Ongoing	B.3.15

VEGP License Renewal Future Action Commitment List				
ITEM NO.	COMMITMENT	UFSAR SUPPLEMENT LOCATION	SCHEDULE	RELATED LRA SECTIONS/ REFS
14	Implement the following enhancements to the Oil Analysis Program: <ul style="list-style-type: none"> • An overall program procedure or guideline will be prepared to formalize the sampling and analysis activities performed. • Viscosity, neutralization number and flash point of lubricating oil samples will be required for components where the oil is changed based on its analyzed condition (instead of being changed on a regular schedule regardless of condition). • When a lubricating oil sample's particle count exceeds established limits or action levels, analytical ferrography or elemental analysis will be used to identify wear particles or corrosion products for the lubricating oil system components in the scope of license renewal. 	A.2.16	Prior to the period of extended operation	B.3.16
15	Implement the One-Time Inspection Program as described in VEGP LRA Section B.3.17.	A.2.17	Inspections will be performed within a window of ten years immediately preceding the period of extended operation.	B.3.17

VEGP License Renewal Future Action Commitment List				
ITEM NO.	COMMITMENT	UFSAR SUPPLEMENT LOCATION	SCHEDULE	RELATED LRA SECTIONS/ REFS
16	Implement the One-Time Inspection Program for ASME Class 1 Small Bore Piping as described in VEGP LRA Section B.3.18.	A.2.18	inspections will be performed within a window of ten years immediately preceding the period of extended operation.	B.3.18
17	Implement the One-Time Inspection Program for Selective Leaching as described in VEGP LRA Section B.3.19.	A.2.19	Inspections will be performed within a window of ten years immediately preceding the period of extended operation.	B.3.19
18	Enhance the Periodic Surveillance and Preventive Maintenance Activities to include the following: <ul style="list-style-type: none"> • Steam Generator Blowdown Secondary Sample Bath Shell inspections • Steam Generator Blowdown Corrosion Product Monitor cooler shell inspections • Potable Water System water heater housing inspections (for the in-scope water heaters) 	A.2.21	Prior to the period of extended operation	B.3.21

VEGP License Renewal Future Action Commitment List				
ITEM NO.	COMMITMENT	UFSAR SUPPLEMENT LOCATION	SCHEDULE	RELATED LRA SECTIONS/ REFS
19	Implement the Piping and Duct Inspection Program as described in LRA Section B.3.22.	A.2.22	Prior to the period of extended operation	B.3.22
20	<p>Implement the Reactor Vessel Internals Program as described in LRA Section B.3.24.</p> <p>The program will be based on the following commitments:</p> <p>(1) SNC will participate in the industry program for investigating and managing aging effects on reactor internals. This is an ongoing commitment.</p> <p>(2) SNC will evaluate and implement the results of the industry programs, such as the Electric Power Research Institute Material Reliability Program, as applicable to the VEGP reactor internals. This commitment will be fully implemented prior to the period of extended operation.</p> <p>(3) SNC will submit an inspection plan for the VEGP reactor internals to the NRC for review and approval not less than 24 months before entering the period of extended operation for VEGP Units 1 and 2.</p>	A.2.24	<p>Program implementation to be completed prior to the period of extended operation;</p> <p>Numbered items are implemented as noted in the item.</p>	B.3.24

VEGP License Renewal Future Action Commitment List				
ITEM NO.	COMMITMENT	UFSAR SUPPLEMENT LOCATION	SCHEDULE	RELATED LRA SECTIONS/ REFS
21	<p>Implement the following enhancements to the Reactor Vessel Surveillance Program:</p> <p>(1) Prior to removal of the last surveillance capsule in each unit, program documents will be revised to require that tested and untested specimens from all capsules removed from the VEGP reactor vessels remain in storage.</p> <p>(2) Alternate dosimetry will be installed to monitor neutron fluence on the reactor vessel after removal of the last surveillance capsule in that unit. This enhancement will be implemented prior to removal of the last surveillance capsule in each unit.</p>	A.2.25	As noted in the numbered items	B.3.25
23	<p>Implement the following enhancements to the Structural Monitoring Program:</p> <ul style="list-style-type: none"> • The scope of the Structural Monitoring Program will be expanded to include the additional structures that require monitoring for license renewal. • The scope of inspection for structures that require monitoring for license renewal will be clarified. An area-based inspection will be performed unless a detailed inspection scope is provided. • The Structural Monitoring Program scope for hangers and supports will be clarified. • Program requirements will be revised to include periodic ground water monitoring to confirm that groundwater chemistry remains non-aggressive as defined in NUREG 1801. • Underwater inspection of the NSCW cooling tower basins, including appropriate inspection and acceptance criteria, will be added to the Structural Monitoring Program. 	A.2.32	Prior to the period of extended operation	B.3.32

VEGP License Renewal Future Action Commitment List				
ITEM NO.	COMMITMENT	UFSAR SUPPLEMENT LOCATION	SCHEDULE	RELATED LRA SECTIONS/ REFS
24	Enhance the Structural Monitoring Program - Masonry Walls to include monitoring of masonry walls in the structures that are in scope for license renewal, but are not currently monitored under the program.	A.2.33	Prior to the period of extended operation	B.3.33
25	Implement the Non-EQ Cables and Connections Program as described in LRA Section B.3.34.	A.2.34	Implement program and complete first inspection prior to the period of extended operation	B.3.34
26	Implement the Non-EQ Inaccessible Medium-Voltage Cables Program as described in LRA Section B.3.35.	A.2.35	Implement program and complete first inspection prior to the period of extended operation	B.3.35

VEGP License Renewal Future Action Commitment List				
ITEM NO.	COMMITMENT	UFSAR SUPPLEMENT LOCATION	SCHEDULE	RELATED LRA SECTIONS/ REFS
27	Implement the Non-EQ Cable Connections One-Time Inspection Program as described in LRA Section B.3.36.	A.2.36	Inspections will be performed within a window of ten years immediately preceding the period of extended operation.	B.3.36
28	<p>Implement the following enhancements to the Fatigue and Cycle Monitoring Program:</p> <ul style="list-style-type: none"> • Implementing documents will be revised to address the effect of the full structural weld overlays applied to the pressurizer spray and surge nozzles on the stress-based module calculation of CUF. • The VEGP UFSAR will be revised to require fatigue monitoring of the Accumulator/RHR nozzles and pressurizer heater penetrations. • Implementing documents will be revised to reduce acceptable CUF values to account for environmental fatigue effects for those NUREG-6260 locations monitored for fatigue. • Implementing documents will be revised to explicitly require that the corrective actions initiated for exceeding an acceptance criterion include a review to identify and assess any additional affected reactor coolant pressure boundary locations. 	A.2.38	Prior to the period of extended operation	B.3.38

VEGP License Renewal Future Action Commitment List				
ITEM NO.	COMMITMENT	UFSAR SUPPLEMENT LOCATION	SCHEDULE	RELATED LRA SECTIONS/ REFS
29	To ensure that the fatigue cycle limits are not exceeded, SNC will replace the steam generator secondary side handhole bolts after 30 years of service. The handhole bolts have been previously replaced and are scheduled to be replaced again during the spring outages in 2026 and 2028 for Units 1 and 2, respectively. Alternatively, a less restrictive replacement schedule may be developed and documented based on updated analyses initiated by the Bolting Integrity Program.	A.3.2.5	As stated in the commitment	4.3.5 B.3.2
30	To ensure that the fatigue cycle limits are not exceeded, SNC will replace the steam generator secondary side manway bolts after 30 years of service. The manway bolts have never been replaced and are scheduled for replacement during the spring outages in 2017 and 2019 for Units 1 and 2, respectively. Alternatively, a less restrictive replacement schedule may be developed and documented based on updated analyses initiated by the Bolting Integrity Program.	A.3.2.5	As stated in the commitment	4.3.5 B.3.2
31	The VEGP Pressure-Temperature Limits Report (for each unit) will be updated to address neutron embrittlement for a 60-year operating life, including any changes to the cold-overpressure mitigation system setpoints.	A.3.1.5 A.3.6.4	Prior to the unit entering the period of extended operation	4.2.5 4.7.4

VEGP License Renewal Future Action Commitment List				
ITEM NO.	COMMITMENT	UFSAR SUPPLEMENT LOCATION	SCHEDULE	RELATED LRA SECTIONS/ REFS
32	Implement a replacement schedule for the small diameter (\leq 2-inch) flexible hoses described below: <ul style="list-style-type: none"> • Radiation Monitoring System flexible hoses associated with the vent stack radiation monitor sample line. • Emergency Diesel Generator System flexible hoses associated with the fuel oil supply lines from the fuel oil headers to the fuel injector pumps. • ACCW System flexible hoses associated with the normal charging pump motor coolers. • Hydrogen Recombiner and Monitoring System flexible hoses associated with the calibration gas and oxygen bottles. • Main Steam System flexible hoses between the ARV hydraulic actuator and the hand pump unit. • Drain System flexible hoses installed on the Containment Bldg Tendon Gallery Sump Pump discharge lines. • Fire Protection System flexible hoses associated with the fire pump diesel fuel oil system. 	None	Prior to the period of extended operation	2.3.3.25 2.3.3.20 2.3.3.6 2.3.3.20 2.3.4.1 2.3.3.23 2.3.3.19
33	Ensure the fatigue monitoring limits implemented as part of the Fatigue and Cycle Monitoring Program are adequate to ensure that charging and letdown intermediate break location CUF values remain less than 0.1 for 60 years of operation.	A.3.2.1	Prior to the period of extended operation	4.3.1.7