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SOUTHERN COMPANY

December 30, 2014

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

Vogtle Electric Generating Plant – Units 1 and 2
Expedited Seismic Evaluation Process Report -
Fukushima Near-Term Task Force Recommendation 2.1

References:

1. NRC Letter, *Request for Information Pursuant to Title 10 of the Code of Federal Regulations 50.54(f) Regarding Recommendations 2.1, 2.3, and 9.3 of the Near-Term Task Force Review of Insights from the Fukushima Daiichi Accident,* dated March 12, 2012.
2. NEI Letter to NRC, *Proposed Path Forward for NTTF Recommendation 2.1: Seismic Reevaluations*, dated April 9, 2013.
3. NRC Letter, *Electric Power Research Institute Final Draft Report XXXXXX, "Seismic Evaluation Guidance: Augmented Approach for the Resolution of Fukushima Near-Term Task Force Recommendation 2.1: Seismic" as an Acceptable Alternative to the March 12, 2012, Information Request for Seismic Reevaluations,* dated May 7, 2013.

Ladies and Gentlemen:

On March 12, 2012, the Nuclear Regulatory Commission (NRC) issued a request for information pursuant to 10 CFR 50.54(f) associated with the recommendations of the Fukushima Near-Term Task Force (NTTF) (Reference 1). Enclosure 1 of Reference 1 requested each licensee to reevaluate the seismic hazards at their sites using present-day NRC requirements and guidance, and to identify actions taken or planned to address plant-specific vulnerabilities associated with the updated seismic hazards.

The NRC endorsed the Electric Power Research Institute (EPRI) Report, *Seismic Evaluation Guidance: EPRI Guidance for the Resolution of Fukushima Near-Term Task Force Recommendation 2.1: Seismic*, Draft Report, as an acceptable alternative to the information requested in Reference 1 by letter dated May 7, 2013 (Reference 3). In its endorsement, the NRC staff determined that the EPRI Guidance will provide an important demonstration of seismic margin and expedite plant safety enhancements through evaluations and potential near-term modifications of certain core and containment cooling equipment while more comprehensive plant seismic risk evaluations are performed. Reference 3 also provided NRC staff approval of the schedule modifications requested by

Reference 2. Based on the modified schedule, Central and Eastern United States (CEUS) licensees are required to submit the reports resulting from the Expedited Seismic Evaluation Process (ESEP) by December 2014. Accordingly, the Vogtle Electric Generating Plant ESEP Report for Units 1 and 2 is provided in Enclosure 1. A table of outstanding actions required for completion of the ESEP activities, with a schedule for completion of each, is provided in Enclosure 2.

This letter contains NRC commitments described in Enclosure 3. If you have any questions, please contact John Giddens at 205.992.7924.

Mr. C. R. Pierce states he is the Regulatory Affairs Director for 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.

Respectfully submitted,

C. R. Pierce

C. R. Pierce
Regulatory Affairs Director

CRP/JMG/TWS

Sworn to and subscribed before me this 30th *day of* December, *2014.*

Notary Public

My commission expires: 1/2/2018

Enclosures: 1. Expedited Seismic Evaluation Process (ESEP) Report
2. Required Actions and Schedule for Completion of ESEP Activities
3. Table of Regulatory Commitments

cc: Southern Nuclear Operating Company
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Mr. D. G. Bost, Executive Vice President & Chief Nuclear Officer
Mr. D. R. Madison, Vice President – Fleet Operations
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Vogtle Electric Generating Plant – Units 1 and 2
Expedited Seismic Evaluation Process Report -
Fukushima Near-Term Task Force Recommendation 2.1

Enclosure 1

Expedited Seismic Evaluation Process (ESEP) Report

MPR
ASSOCIATES INC.
ENGINEERS

MPR-4122
Revision 1
December 29, 2014

Plant Vogtle Units 1 and 2 Expedited Seismic Evaluation Process (ESEP) Report

QUALITY ASSURANCE DOCUMENT
This document has been prepared, reviewed, and approved in accordance with the Quality Assurance requirements of 10CFR50 Appendix B and/or ASME NQA-1, as specified in the MPR Nuclear Quality Assurance Program.

Prepared for

Southern Nuclear Operating Company

MPR
ASSOCIATES INC.
ENGINEERS

Plant Vogtle Units 1 and 2 Expedited Seismic Evaluation Process (ESEP) Report

MPR-4122
Revision 1
December 29, 2014

QUALITY ASSURANCE DOCUMENT
This document has been prepared, reviewed, and approved in accordance with the Quality Assurance requirements of 10CFR50 Appendix B and/or ASME NQA-1, as specified in the MPR Nuclear Quality Assurance Program.

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RECORD OF REVISIONS

Revision	Affected Pages	Description
0	All	Initial issue.
1	i, ii, iii, A-2	Modified description of item 1-1805-D3-37T in Table A-1 per SNC direction.

Contents

Tables

Figures

Executive Summary

Plant Vogtle Units 1 and 2 have performed the Expedited Seismic Evaluation Process (ESEP) as an interim action in response to the NRC's 50.54(f) letter (Reference 1). The purpose was to demonstrate seismic margin through a review of a subset of the plant equipment that can be relied upon to protect the reactor core following beyond design basis seismic events. The ESEP was performed using the methodologies in the NRC endorsed industry guidance in EPRI 3002000704, Seismic Evaluation Guidance: Augmented Approach for the Resolution of Fukushima Near-Term Task Force Recommendation 2.1 – Seismic (Reference 2). As a result of the ESEP, no modifications have been identified as necessary to meet ESEP acceptance criteria specified in Reference 2.

1 Purpose and Objective

Following the accident at the Fukushima Dai-ichi nuclear power plant resulting from the March 11, 2011, Great Tohoku Earthquake and subsequent tsunami, the Nuclear Regulatory Commission (NRC) established a Near Term Task Force (NTTF) to conduct a systematic review of NRC processes and regulations and to determine if the agency should make additional improvements to its regulatory system. The NTTF developed a set of recommendations intended to clarify and strengthen the regulatory framework for protection against natural phenomena. Subsequently, the NRC issued a 50.54(f) letter on March 12, 2012 (Reference 1), requesting information to assure that these recommendations are addressed by all U.S. nuclear power plants. The 50.54(f) letter requests that licensees and holders of construction permits under 10 CFR Part 50 reevaluate the seismic hazards at their sites against present-day NRC requirements and guidance. Depending on the comparison between the reevaluated seismic hazard and the current design basis, further risk assessment may be required. Assessment approaches acceptable to the staff include a seismic probabilistic risk assessment (SPRA), or a seismic margin assessment (SMA). Based upon the assessment results, the NRC staff will determine whether additional regulatory actions are necessary.

This report describes the Expedited Seismic Evaluation Process (ESEP) undertaken for Vogtle Electric Generating Plant (Plant Vogtle) Units 1 and 2. The intent of the ESEP is to perform an interim action in response to the NRC's 50.54(f) letter (Reference 1) to demonstrate seismic margin through a review of a subset of the plant equipment that can be relied upon to protect the reactor core following beyond design basis seismic events.

The ESEP is implemented using the methodologies in the NRC endorsed industry guidance in EPRI 3002000704, Seismic Evaluation Guidance: Augmented Approach for the Resolution of Fukushima Near-Term Task Force Recommendation 2.1 – Seismic (Reference 2).

The objective of this report is to provide summary information describing the ESEP evaluations and results. The level of detail provided in the report is intended to enable NRC to understand the inputs used, the evaluations performed, and the decisions made as a result of the interim evaluations.

2 Brief Summary of the FLEX Seismic Implementation Strategies

The Plant Vogtle FLEX strategies for Reactor Core Cooling and Containment Function are summarized below. This summary is derived from the Plant Vogtle Overall Integrated Plan (OIP) in Response to the March 12, 2012, Commission Order EA-12-049 (Reference 3). A flow diagram and an electrical diagram depicting the FLEX strategies are shown in Figure 2-1 and Figure 2-2 (Reference 3), respectively.

2.1 Modes 1 through 4 and Mode 5 with Steam Generators Available

During FLEX Phase 1, reactor core cooling is achieved by natural circulation of the RCS coolant through the steam generators (SGs) with makeup provided by the turbine driven auxiliary feedwater (TDAFW) pump with suction from the Condensate Storage Tank (CST) and steam release through the Main Steam Safety Valves (MSSVs). The combined CST inventory is sufficient to feed the steam generators for more than 72 hours.

During FLEX Phases 2 and 3, RCS natural circulation will continue to provide reactor core cooling using the TDAFW pump or the SG FLEX pump. Prior to depletion of the initial CST inventory, a portable Makeup FLEX pump can be used to transfer additional water from the Reactor Makeup Water Storage Tank (RMWST) to the CST.

During FLEX Phase 1, RCS inventory control and subcriticality will be maintained by use of low-leakage reactor coolant pump (RCP) seals and injection of borated water from the Safety Injection (SI) accumulators. During FLEX Phases 2 and 3, supplemental boron will be injected to the RCS cold legs by a portable Boron Injection FLEX pump taking suction from the Boric Acid Storage Tank (BAST) or the Refueling Water Storage Tank (RWST) while venting the RCS by remote operation of the 125 V DC reactor head vent valves.

Because of the minimal mass and energy input into containment, no FLEX coping strategies are required for the containment function beyond monitoring containment pressure.

2.2 Mode 6 and Mode 5 without Steam Generators Available

During FLEX Phase 1, core cooling and RCS inventory control can be achieved by providing makeup to the RCS via gravity feed from the Refueling Water Storage Tank (RWST) via the SI system flow path to the RCS cold legs. During FLEX Phase 2, core cooling and RCS inventory control can be maintained using a portable, electric-motor driven pump (Mode 5-6 RCS FLEX Pump) for injection to the RCS cold legs via the RHR system with suction from the RWST. During FLEX Phase 3, portable equipment delivered from off-site can provide a supply of borated water to restore the RWST inventory if it is needed after 72 hours.

For events that are initiated when the plant is in Mode 6 or Mode 5 without steam generators available, containment integrity is maintained through manual actions to establish a containment vent path. This is accomplished by removing flanges inside containment and at grade level from one of two lines normally used for containment integrated leak rate testing, and then manually opening an isolation valve to establish a vent path and maintain containment temperature and pressure within design limits.

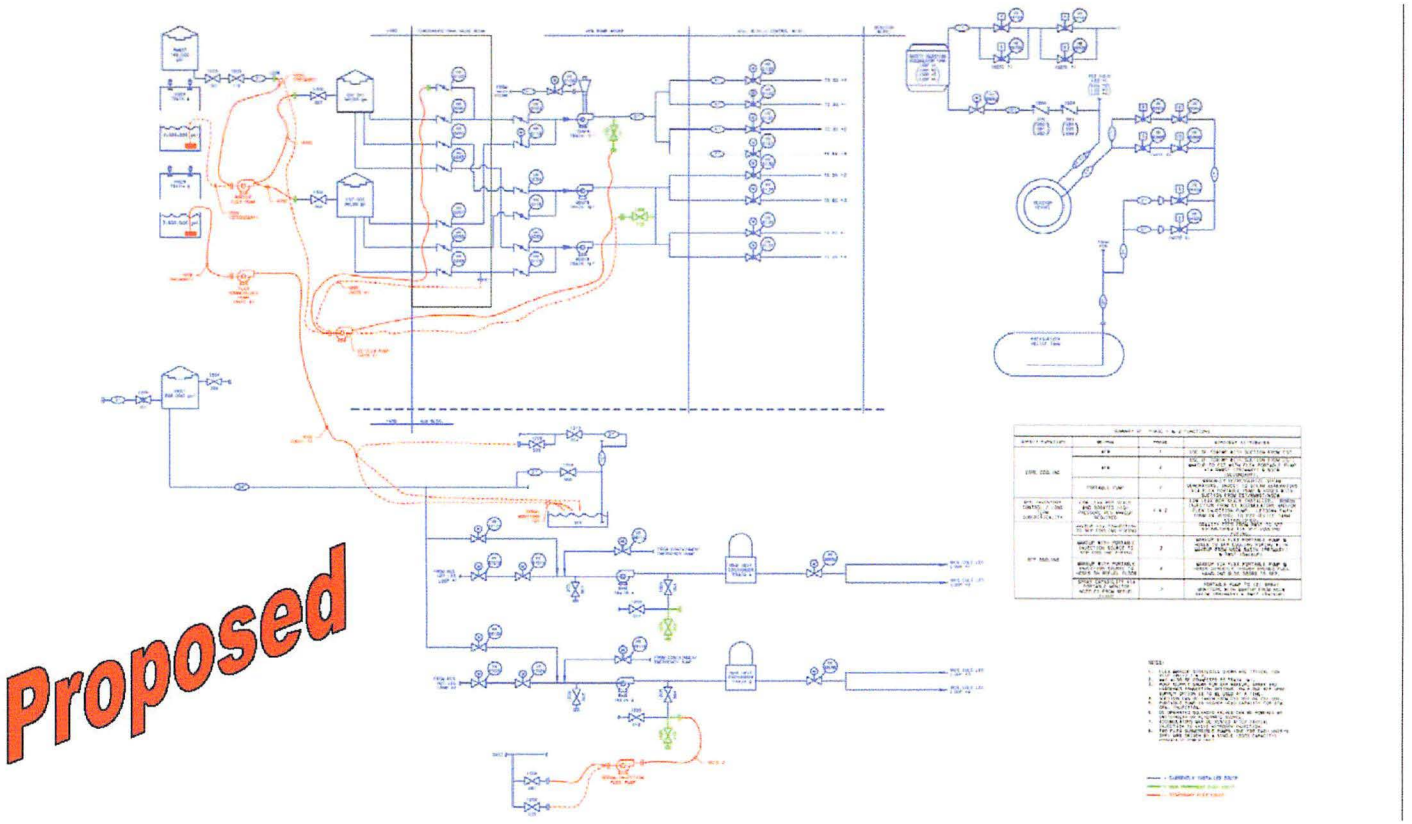

Figure 2-1. Flow Diagram for Plant Vogtle FLEX Strategies (Reference 3)

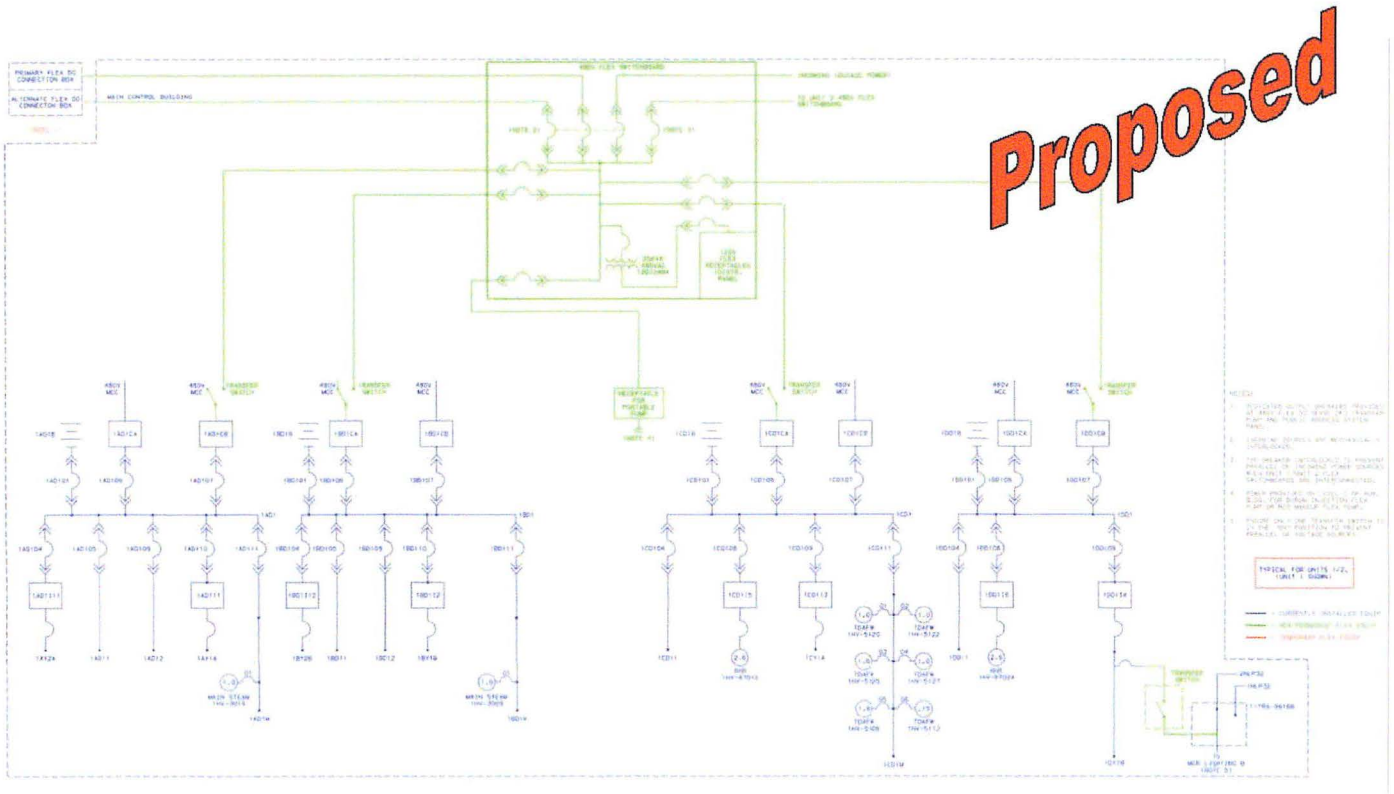

Figure 2-2. Electrical Diagram for Plant Vogtle FLEX Strategies (Reference 3)

3 Equipment Selection Process and ESEL

The selection of equipment for the Expedited Seismic Equipment List (ESEL) followed the guidelines of EPRI 3002000704 (Reference 2) as described in SNCV086-PR-001 (Reference 4) and SNCV-086-PR-002 (Reference 5). The ESELs for Unit 1 and Unit 2 are presented in Attachments A and B, respectively.

3.1 Equipment Selection Process and ESEL

The ESEL component selection followed the EPRI guidance outlined in Section 3.2 of Reference 2. The selection of equipment to be included on the ESEL was based on installed plant equipment credited in the FLEX strategies during Phase 1, 2 and 3 mitigation of a Beyond Design Basis External Event (BDBEE), as outlined in the Plant Vogtle Overall Integrated Plan (OIP) in Response to the March 12, 2012, Commission Order EA-12-049 (Reference 3). The OIP provides the Plant Vogtle FLEX mitigation strategy and serves as the basis for equipment selected for the ESEP.

The Plant Vogtle ESEL includes permanently installed plant equipment that could be relied upon to accomplish the core cooling and containment safety functions identified in Table 3-2 of Reference 2 in response to a beyond-design-basis earthquake. Per Reference 2, the ESEL does not include portable or pre-staged FLEX equipment (not permanently installed) or equipment that is used only for Phase 3 recovery strategies. The scope of equipment on the ESEL includes that required to support a single FLEX success path. Instrumentation monitoring requirements for core cooling and containment integrity functions are limited to those discussed in Reference 2.

In accordance with Reference 2, the following structures, systems, and components were excluded from the ESEL:

- Structures (e.g., containment, auxiliary building, control building)
- Piping, cabling, conduit, HVAC, and their supports
- Manual valves and check valves
- Power-operated valves not required to change state as part of the FLEX mitigation strategies.
- Nuclear steam supply system components (e.g., reactor pressure vessel and internals, reactor coolant pumps and seals, steam generators)

3.1.1 ESEL Development

The ESEL was developed by reviewing the Plant Vogtle FLEX OIP (Reference 3) to determine the major equipment involved in the FLEX strategies. Plant drawings (e.g., Process and Instrumentation Diagrams (P&IDs) and electrical one-line diagrams) were reviewed to specify the boundaries of the flow paths used in the FLEX strategies and to identify other components needed to support operation of the systems credited in the FLEX strategies. Boundaries were established at an electrical or mechanical isolation device (e.g., isolation amplifier, valve) in branch circuits / branch lines off the defined strategy electrical or fluid flowpath. P&IDs were the primary reference documents used to identify mechanical components and instrumentation needed for FLEX. Once the flow paths were identified, specific components were selected using guidance in Reference 2. Electrical components needed to support FLEX were identified using one-line diagrams and schematics. Based on this review, base list tables of components were developed for each of the methods credited with accomplishing key functions in the FLEX strategies.

The base list tables were then reviewed to determine which equipment should be included on the ESEL. Most of the equipment decisions were clearly outlined in Reference 2; however, some judgments were necessary as discussed below.

3.1.2 Power Operated Valves

Per the Reference 2 EPRI guidance, the ESEL does not need to include power operated valves that are not required to change state as part of the FLEX mitigating strategies. However, Reference 2 also states, "In addition to the physical failure modes (load path and anchorage) of specific pieces of installed equipment, functional failure modes of electrical and mechanical portions of the installed Phase 1 equipment should be considered." Because relay chatter could cause a functional failure, the following criteria were used to determine whether specific power-operated valves should be included on the ESEL:

- Power operated valves in the primary success path will be included on the ESEL if they need to remain energized during Phase 1 in order to maintain core cooling and containment integrity (e.g., certain DC-powered valves).

- Power operated valves not required to change state as part of the FLEX mitigation strategies may be excluded from the ESEL if they would be de-energized by the event that causes an Extended Loss of all AC Power (ELAP) event.

- AC power operated valves not required to change state as part of the Phase 1 FLEX mitigation strategies may be excluded from the ESEP if they are re-energized and operated during Phase 2 or 3 activities.

3.1.3 Pull Boxes

Pull boxes were deemed unnecessary to add to the ESELs as these components provide completely passive locations for pulling or installing cables. No breaks or connections in the

cabling are included in pull boxes. Pull boxes were considered part of the conduit and cabling, which are excluded in accordance with Reference 2.

3.1.4 Termination Cabinets

Although termination cabinets and junction boxes provide a passive function similar to pull boxes, they were included on the ESEL to ensure industry knowledge on panel/anchorage failure vulnerabilities is addressed.

3.1.5 Critical Instrumentation Indicators

Critical indicators and recorders are typically physically located on panels/cabinets and are included as separate components; however, seismic evaluation of the instrument indication may be included in the panel/cabinet seismic evaluation (rule-of-the-box).

3.1.6 Phase 2 and Phase 3 Piping Connections

As noted in Section 3.2 of Reference 2, "the scope of the ESEL is limited to installed plant equipment and FLEX equipment connections" and "the selection process for the ESEL should assume the FLEX strategies (modifications, equipment, procedures, etc.) have been implemented." Section 3.2 of Reference 2 goes on to explain that "piping, cabling, conduit, HVAC, and their supports" are excluded from the ESEL scope. Therefore, piping and pipe supports associated with FLEX Phase 2 and Phase 3 connections are excluded from the scope of the ESEP evaluation. Except as described in Sections 3.1 and 3.1.2 above, valves required to change position to establish/maintain FLEX Phase 2 and Phase 3 flow paths (i.e., active valves) are included in the ESEL.

3.1.7 Inaccessible Valve Interlocks

Some components have interlocks that could potentially inhibit valve operation during Phase 2 or 3 of FLEX. Reference 2 specifically allows exclusion of interlock failures from the ESEL if plant procedures provide instructions for manual operation to ensure performance of the required FLEX function. For valves that cannot be operated locally due to location in containment or high radiation areas, this statement is interpreted as allowing the interlocks in the control circuit to be bypassed to allow remote manual operation. Therefore, these interlocks are excluded in Phase 3.

3.2 JUSTIFICATION FOR USE OF EQUIPMENT THAT IS NOT THE PRIMARY MEANS FOR FLEX IMPLEMENTATION

All components on the ESEL for Plant Vogtle Units 1 and 2 are associated with the primary FLEX strategies. Therefore, since no alternate equipment is being used, no justification is needed.

4 Ground Motion Response Spectrum (GMRS)

In response to the 50.54(f) letter (Reference 1), SNC reevaluated the Plant Vogtle seismic hazard in accordance with the NRC-endorsed industry guidance (Reference 6).

4.1 Plot of GMRS Submitted by Licensee

The plot of the Plant Vogtle GMRS submitted by SNC to the NRC in Reference 7 is shown in Figure 4-1. Table 4-1 contains the corresponding numerical values that were also included in Reference 7. The GMRS and SSE control point elevation are defined at plant grade at an elevation of 220 feet mean sea level (msl).

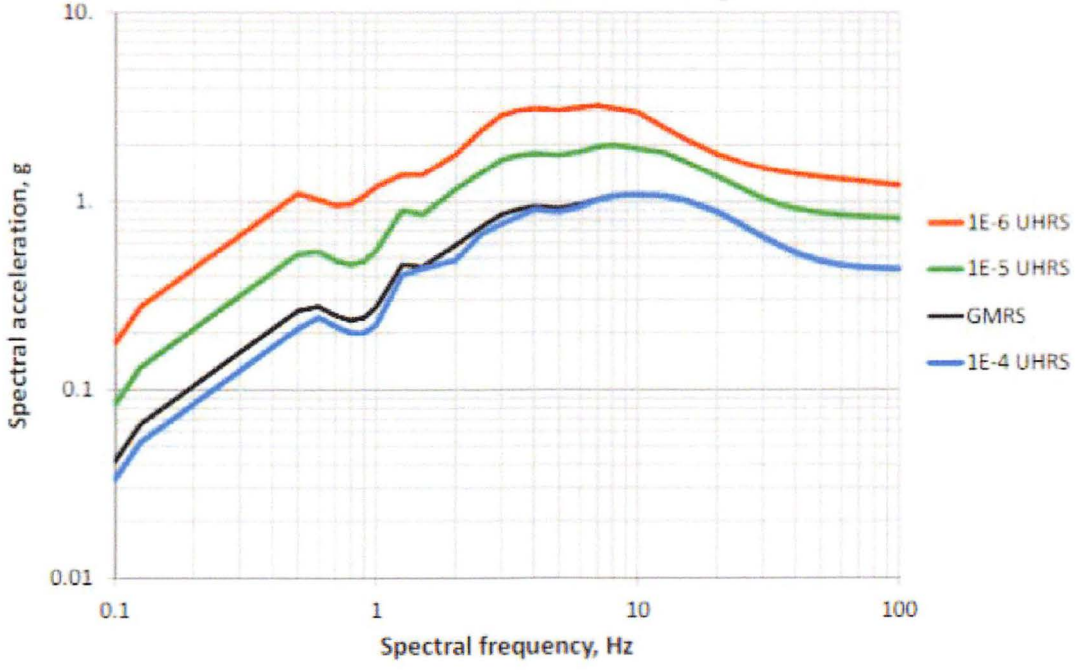

Figure 4-1. Plant Vogtle GMRS

Table 4-1. GMRS for Plant Vogtle Units 1 and 2

Frequency (Hz)	Spectral Acceleration (g)	Frequency (Hz)	Spectral Acceleration (g)
100	0.436	3.5	0.909
90	0.438	3	0.855
80	0.441	2.5	0.731
70	0.447	2	0.587
60	0.458	1.5	0.449
50	0.480	1.25	0.460
40	0.534	1	0.276
35	0.583	0.9	0.242
30	0.651	0.8	0.233
25	0.748	0.7	0.247
20	0.883	0.6	0.276
15	1.02	0.5	0.262
12.5	1.07	0.4	0.210
10	1.09	0.35	0.184
9	1.09	0.3	0.157
8	1.07	0.25	0.131
7	1.03	0.2	0.105
6	0.964	0.15	0.0787
5	0.921	0.125	0.0656
4	0.939	0.1	0.042

4.2 COMPARISON TO SSE

The plot of the safe shutdown earthquake (SSE) for Plant Vogtle Units 1 and 2, submitted by SNC to the NRC in Reference 7, is shown in Figure 4-2. Table 4-2 contains the corresponding numerical values that were also included in Reference 7.

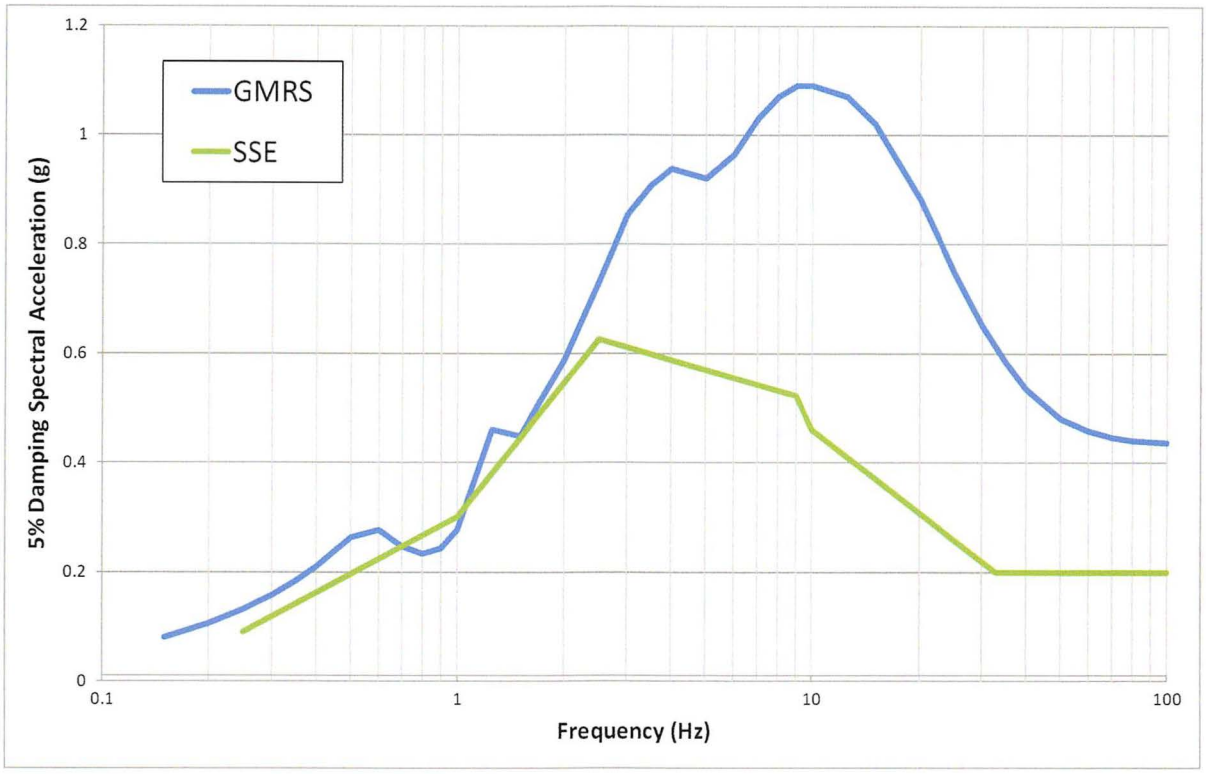

Figure 4-2. GMRS and SSE for Plant Vogtle Units 1 and 2

Table 4-2. Safe shutdown earthquake (SSE) for Plant Vogtle Units 1 and 2

Frequency (Hz)	Spectral Acceleration (g)
100	0.2
33	0.2
10	0.46
9	0.522
2.5	0.626
1	0.3
0.25	0.09

5 Review Level Ground Motion (RLGM)

Reference 2 states that the ESEP may be performed using either the GMRS or a linearly scaled version of the SSE. The SSE is to be linearly scaled by the maximum ratio of the GMRS/SSE between the 1 and 10 Hz range (not to exceed 2 x SSE). In-structure RLGM seismic motions are to be derived using existing SSE-based in-structure response spectra (ISRS) scaled with the same factor.

5.1 Description of RLGM Selected

The Plant Vogtle ESEP was performed using an RLGM equal to two times the SSE as shown in Figure 5-1 and Table 5-1. This spectrum exceeds or is similar to the GMRS in the frequency range of 1 to 10 Hz.

To facilitate an early start (prior to obtaining the GMRS) and timely completion of the ESEP, 2 x SSE was used as the ESEP RLGM.

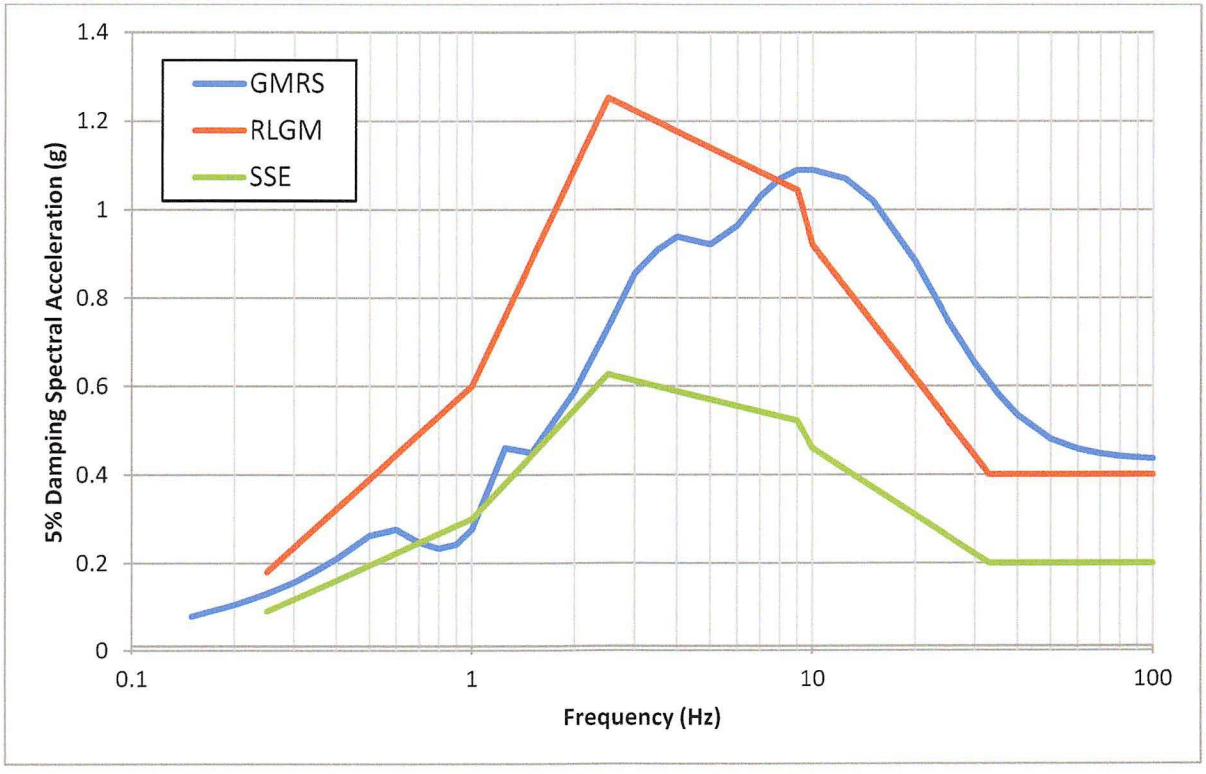

Figure 5-1. Plant Vogtle ESEP RLGM compared to SSE and GMRS

Table 5-1. Plant Vogtle ESEP RLGM

Frequency (Hz)	Spectral Acceleration (g)
100	0.4
33	0.4
10	0.92
9	1.044
2.5	1.252
1	0.6
0.25	0.18

5.2 METHOD TO ESTIMATE IN-STRUCTURE RESPONSE SPECTRUM (ISRS)

The seismic demand used in the ESEP is 2 x Plant Vogtle SSE in-structure response spectra (ISRS). As explained in Reference 10, the Vogtle ISRS were conservatively developed (e.g., enveloping orthogonal horizontal directions to a single horizontal, absolute summing torsional effects). This approach provides additional seismic margin not explicitly requested in the Reference 2 guidance.

6 Seismic Margin Evaluation Approach

The objective of the ESEP is to demonstrate that the ESEL items have sufficient seismic capacity to meet or exceed the seismic demand associated with the RLGM. Section 5 of Reference 2 provides guidance for characterizing the seismic capacity by determining a high confidence of low probability of failure (HCLPF) using either the Seismic Margin Assessment (SMA) methodology of EPRI NP-6041-SL (Reference 8) or the fragility analysis methodology of EPRI TR-103959 (Reference 9). The Plant Vogtle ESEP used the EPRI NP-6041-SL SMA approach, consistent with the earlier Individual Plant Examination of External Events (IPEEE) Program.

The HCLPF capacity is based on the weakest or most seismically limiting attribute of the equipment (structural, anchorage, or functional). The HCLPF evaluation considers the dynamic response of the equipment, but the HCLPF value is expressed in terms of a peak ground acceleration (PGA) to provide a common point of reference relative to the RLGM. Per Reference 2, ESEL items have sufficient seismic capacity if the HCLPF capacity is equal to or greater than the RLGM PGA.

6.1 Summary of Methodologies Used

Seismic Margin Assessments (SMAs) were performed for Plant Vogtle Units 1 and 2 in the early 1990s as part of the IPEEE Program and are documented in Reference 10. Those SMAs consisted of screening walkdowns and anchorage calculations, and they included several of the items on the ESEL. As part of the ESEP, the Seismic Review Team (SRT) evaluated each accessible item for seismic capacity, anchorage, and relay functionality (when a FLEX methodology relay was identified in the ESEL). (Inaccessible items are discussed in Section 7.1). The ESEP walkdowns and evaluations were documented in Screening and Evaluation Work Sheets (SEWS), which include checklists that were developed from Appendix F of EPRI NP-6041-SL (Reference 8).

Each member of the SRT was trained as a SQUG Seismic Capability Engineer in accordance with the Generic Implementation Procedure (GIP) and trained in the use of EPRI NP-6041-SL. Selected team members also took the EPRI HCLPF course, which was developed for the ESEP implementation and is based on EPRI NP-6041-SL.

6.2 HCLPF Screening Process

ESEL items were screened based on an RLGM equal to 2 x SSE as shown in Figure 5-1. When seismic qualification test data were readily available, equipment capacity was compared to the RLGM using simple scaling to determine seismic demand (e.g., 2 times the Vogtle SSE ISRS), and the evaluation was documented in the SEWS. When such data were not readily available, equipment capacity screening was performed using the criteria specified for the middle column (0.8-1.2g peak spectral acceleration) of Table 2-4 in EPRI NP-6041-SL (Reference 8).

Most of the anchorage capacity evaluations were performed by scaling existing design calculations and were documented in the SEWS. Loads on anchorage were determined using broadened ISRS. The ISRS were developed using the SSE ground motion. Accelerations were multiplied by two to determine RLGM acceleration levels. For equipment with anchorage that could not meet the HCLPF criteria for the RLGM using scaling, detailed HCLPF calculations were performed as discussed in Section 6.4. ESEL items were excluded from further evaluation if they were shown to have equipment and anchorage capacities greater than or equal to the RLGM, unless they contained relays needing functional evaluations.

6.3 SEISMIC WALKDOWN APPROACH

6.3.1 Walkdown Approach

ESEP walkdowns were performed in accordance with the criteria provided in Section 5 of Reference 2, which refers to EPRI NP-6041-SL (Reference 8) for the Seismic Margin Assessment process. Pages 2-26 through 2-30 of EPRI NP-6041-SL (Reference 8) describe the seismic walkdown criteria, including the following key points.

> *"The SRT [Seismic Review Team] should "walk by" 100% of all components which are reasonably accessible and in non-radioactive or low radioactive environments. Seismic capability assessment of components which are inaccessible, in high-radioactive environments, or possibly within contaminated containment, will have to rely more on alternate means such as photographic inspection, more reliance on seismic reanalysis, and possibly, smaller inspection teams and more hurried inspections. A 100% "walk by" does not mean complete inspection of each component, nor does it mean requiring an electrician or other technician to de-energize and open cabinets or panels for detailed inspection of all components. This walkdown is not intended to be a QA or QC review or a review of the adequacy of the component at the SSE level.*
>
> *If the SRT has a reasonable basis for assuming that the group of components are similar and are similarly anchored, then it is only necessary to inspect one component out of this group. The "similarity-basis" should be developed before the walkdown during the seismic capability preparatory work (Step 3) by reference to drawings, calculations or specifications. The one component or each type which is selected should be thoroughly inspected which probably does mean de-energizing and opening cabinets or panels for this very limited sample. Generally, a spare representative component can be found so as to enable the inspection to be performed while the plant is in operation. At least for the one component of each type which is selected, anchorage should be thoroughly inspected.*
>
> *The walkdown procedure should be performed in an ad hoc manner. For each class of components the SRT should look closely at the first items and compare the field configurations with the construction drawings and/or specifications. If a one-to-one correspondence is found, then subsequent items do not have to be inspected in as great a detail. Ultimately the*

walkdown becomes a "walk by" of the component class as the SRT becomes confident that the construction pattern is typical. This procedure for inspection should be repeated for each component class; although, during the actual walkdown the SRT may be inspecting several classes of components in parallel. If serious exceptions to the drawings or questionable construction practices are found then the system or component class must be inspected in closer detail until the systematic deficiency is defined.

The 100% "walk by" is to look for outliers, lack of similarity, anchorage which is different from that shown on drawings or prescribed in criteria for that component, potential SI [Seismic Interaction[1]] problems, situations that are at odds with the team members' past experience, and any other areas of serious seismic concern. If any such concerns surface, then the limited sample size of one component of each type for thorough inspection will have to be increased. The increase in sample size which should be inspected will depend upon the number of outliers and different anchorages, etc., which are observed. It is up to the SRT to ultimately select the sample size since they are the ones who are responsible for the seismic adequacy of all elements which they screen from the margin review. Appendix D gives guidance for sampling selection."

6.3.2 Application of Previous Walkdown Information

Several ESEL items were previously walked down during the Plant Vogtle IPEEE program and more recently in response to the seismic walkdown request for information in Reference 1 (NRC Near-Term Task Force Recommendation 2.3). Although the ESEP SRT reviewed the IPEEE results, new walkdowns were performed and new SEWS were generated for items on the ESEL. For two 125V DC motor control centers (1-1806-S3-DCC and 2-1806-S3-DCC), the NTTF 2.3 internal photos (Reference 11 and Reference 12) were used to eliminate the need for electrical bus outages and minimize the risk of tripping the plant by not opening this energized electrical equipment.

6.3.3 Significant Walkdown Findings

Consistent with guidance from Reference 8, no significant findings were identified during the walkdowns at Plant Vogtle. Some small issues identified during the walkdowns (e.g., missing or loose fasteners on cabinet internals) were entered into the corrective action program to be resolved under the normal processes.

Block walls were not identified as a concern because there are no block walls in the vicinity of the ESEL items.

[1] EPRI 3002000704 [2] page 5-4 limits the ESEP seismic interaction reviews to "nearby block walls" and "piping attached to tanks" which are reviewed "to address the possibility of failures due to differential displacements." Other potential seismic interaction evaluations are "deferred to the full seismic risk evaluations performed in accordance with EPRI 1025287 [15]."

6.4 HCLPF Calculation Process

The simple methods discussed in Section 6.2 were sufficient for ensuring that the HCLPF capacity of most component failure modes was greater than the RLGM. A few ESEL items, however, had failure modes requiring more detailed HCLPF calculations. Those calculations are listed in the "Notes/Comments" columns of Table A-1 and Table B-1 in Attachments A and B.

For most ESEL item failure modes requiring detailed analyses, HCLPF capacities were developed using the conservative deterministic failure margin (CDFM) methodology of EPRI NP-6041-SL (Reference 8).

The Separation of Variables approach outlined in EPRI TR-103959 (Reference 9) was used to develop the seismic fragilities and HCLPF capacities referenced to the PGA of the 10^{-4} UHRS at plant grade for the Vogtle Units 1 and 2 Condensate Storage Tanks and Refueling Water Storage Tanks. These values were used to develop conservative estimates for HCLPF capacities referenced to the PGA of twice the SSE.

6.5 Functional Evaluation of Relays

For each unit, the ESEL contains four relays with active functional requirements associated with the FLEX Phase 1 response. Two relays are in a motor control center (MCC), and two relays are in cabinets. Each relay was evaluated using the SMA relay evaluation criteria in Section 3 of Reference 8.

These eight relays were functionally qualified as part of the seismic test qualification of the MCC and cabinets. Therefore, in-cabinet amplification was included within the testing. The test response spectra used to excite the MCC and cabinets bounded two times the applicable SSE ISRS.

The ESEP relay functional evaluations were documented in the SEWS packages for the items containing the relays.

6.6 Tabulated ESEL HCLPF Values (Including Key Failure Modes)

Tabulated ESEL HCLPF results are provided in Attachments A and B for Plant Vogtle Units 1 and 2, respectively. The following notes apply to the information in the tables.

- Items which screened out of an explicit functional capacity analysis using EPRI NP-6041-SL (Reference 8) Table 2-4, or dynamic test qualification documentation, have a HCLPF greater than or equal to the RLGM; therefore, the HCLPF is shown as "≥RLGM" in Tables A-1 and B-1. This is consistent with the SMA methodology of not calculating an explicit HCLPF capacity if the criteria for functional capacity (e.g., EPRI NP-6041-SL Table 2-4) are met and instead providing results as meeting or exceeding the seismic input level selected as the RLGM.

- It is unknown whether anchorage is the controlling failure mode for items that were screened for their functional capacity because the functional capacity may or may not be

higher than the anchorage capacity. The one exception to this is that large, flat-bottom vertical tanks (e.g., the Condensate Storage Tanks (CSTs), Refueling Water Storage Tank (RWST), and Boric Acid Storage Tank (BAST)) were evaluated using a methodology that includes all failure modes (i.e., anchorage failure modes and tank shell failure modes). The HCLPF values for these tanks are reported in Tables A-1 and B-1. In the few cases where an explicit HCLPF value for anchorage was calculated, this value is provided in the "Notes/Comments" column of Tables A-1 and B-1.

- Equipment containing FLEX Methodology ("FM") relays was assessed for relay functional capacity as described in Section 6.5 of this report. Because it is not known whether the capacity of the equipment containing the relay, the equipment's anchorage, or the relay's capacity is the controlling HCLPF, the HCLPF is shown as "≥RLGM" in Tables A-1 and B-1, and the "Notes/Comments" column identifies the presence of FM relay(s).

7 Inaccessible Items

7.1 Identification of ESEL Items Inaccessible for Walkdown

7.1.1 Items in Locked High Radiation Areas

The Vogtle ESELs contain two neutron flux instruments (one in each unit) and two junction boxes (one in each unit) that are located in Locked High Radiation Areas. These ESEL items were evaluated to determine whether a walkdown was necessary.

Appendix D of Reference 8 provides information regarding "Sampling." Specifically, on page D-1, "sampling is technically valid for identical or similar components if there is evidence that the components are manufactured and installed in a consistent manner. ...In some instances access is severely limited by radioactive environments and limited sampling is the only practical method of conducting a walkdown."

Several local instruments and junction boxes were walked down during the ESEP, and no seismic issues have been identified. Therefore, sufficient sampling has been conducted to justify avoiding the dose associated with walking down these eight components (total for both units).

7.1.2 Insulated Junction Boxes

Three junction boxes (two in Unit 1, one in Unit 2) located inside containment were heavily insulated such that the boxes and their anchorage were not visible. Dozens of junction boxes were walked down during the ESEP, and no seismically significant issues were identified due to the passive nature and small weight of these devices; therefore, junction boxes in the drywell do not merit walkdowns.

Each component discussed above is identified in Table A-1 or B-1 in Attachments A and B.

7.2 Planned Walkdown/Evaluation Schedule/Close Out

Walkdowns have been completed for installed accessible items on the ESELs. Section 7.1 discusses the disposition for inaccessible items. ESEL items that have not been installed as of the time of the final walkdowns/report preparation will be evaluated after installation per the SMA methodology outlined in Reference 8. See Section 8.4 and Tables A-1 and B-1 for details.

8 ESEP Conclusions and Results

8.1 SUPPORTING INFORMATION

Plant Vogtle has performed the ESEP as an interim action in response to the NRC's 50.54(f) letter (Reference 1). It was performed using the methodologies in the NRC endorsed guidance in EPRI 3002000704 (Reference 2).

The ESEP provides an important demonstration of seismic margin and expedites plant safety enhancements through evaluations and potential near-term modifications of plant equipment that can be relied upon to protect the reactor core following beyond design basis seismic events.

The ESEP is part of the overall Plant Vogtle response to NRC's 50.54(f) letter (Reference 1). On March 12, 2014, NEI submitted to the NRC results of a study (Reference 13) of seismic core damage risk estimates based on updated seismic hazard information as it applies to operating nuclear reactors in the Central and Eastern United States (CEUS). The study concluded that site-specific seismic hazards show that there has not been an overall increase in seismic risk for the fleet of U.S. plants based on the re-evaluated hazard. As such, the "current seismic design of operating reactors continues to provide a safety margin to withstand potential earthquakes exceeding the seismic design basis."

The NRC's May 9, 2014 NTTF 2.1 Screening and Prioritization letter (Reference 14) concluded that the "fleetwide seismic risk estimates are consistent with the approach and results used in the GI-199 safety/risk assessment." The letter also stated that "As a result, the staff has confirmed that the conclusions reached in GI-199 safety/risk assessment remain valid and that the plants can continue to operate while additional evaluations are conducted."

An assessment of the change in seismic risk for Plant Vogtle was included in the fleet risk evaluation submitted in the March 12, 2014 NEI letter (Reference 13); therefore, the conclusions in the NRC's May 9 letter (Reference 14) also apply to Plant Vogtle.

In addition, the March 12, 2014 NEI letter (Reference 13) provided an attached "Perspectives on the Seismic Capacity of Operating Plants," which (1) assessed a number of qualitative reasons why the design of SSCs inherently contain margin beyond their design level, (2) discussed industrial seismic experience databases of performance of industry facility components similar to nuclear SSCs, and (3) discussed earthquake experience at operating plants.

The fleet of currently operating nuclear power plants was designed using conservative practices, such that the plants have significant margin to withstand large ground motions safely. This has been borne out for those plants that have actually experienced significant earthquakes. The seismic design process has inherent (and intentional) conservatisms which result in significant seismic margins within structures, systems and components (SSCs). These conservatisms are reflected in several key aspects of the seismic design process, including:

- Safety factors applied in design calculations
- Damping values used in dynamic analysis of SSCs
- Bounding synthetic time histories for in-structure response spectra calculations
- Broadening criteria for in-structure response spectra
- Response spectra enveloping criteria typically used in SSC analysis and testing applications
- Response spectra based frequency domain analysis rather than explicit time history based time domain analysis
- Bounding requirements in codes and standards
- Use of minimum strength requirements of structural components (concrete and steel)
- Bounding testing requirements, and
- Ductile behavior of the primary materials (that is, not crediting the additional capacity of materials such as steel and reinforced concrete beyond the essentially elastic range, etc.).

These design practices combine to result in margins such that the SSCs will continue to fulfill their functions at ground motions well above the SSE.

8.2 Identification of Planned Modifications

No modifications have been identified as necessary to meet ESEP acceptance criteria.

8.3 Modification Implementation Schedule

No modifications have been identified for the items that have been evaluated. SNC intends to comply with the ESEP schedule (Attachment 2 of Reference 19) for any modifications determined to be necessary for items to be walked down as identified in Sections 7.2 and 8.4.

8.4 Summary of Regulatory Commitments

Please refer to the Table of Regulatory Commitments that will accompany this report.

9 References

1. NRC Letter to All Power Reactor Licensees et al., "Request for Information Pursuant to Title 10 of the Code of Federal Regulations 50.54(f) Regarding Recommendations 2.1, 2.3, and 9.3 of the Near-Term Task Force Review of Insights from the Fukushima Dai-ichi Accident," dated March 12, 2012 [ADAMS Accession Number ML12053A340].

2. EPRI Report 3002000704, "Seismic Evaluation Guidance: Augmented Approach for the Resolution of Fukushima Near-Term Task Force Recommendation 2.1 – Seismic," Electric Power Research Institute, May 2013.

3. SNC Nuclear Letter NL-14-0594, "Vogtle Electric Generating Plant Units 1 and 2 Third Six-Month Status Report of the Implementation of the Requirements of the Commission Order with Regard to Mitigation Strategies for Beyond Design-Basis Events (EA-12-049)," dated August 26, 2014.

4. ENERCON Engineering Report SNCV086-PR-001, Rev. 4, "Equipment Selection for the Expedited Seismic Evaluation Process for Southern Nuclear Operating Company, Inc., Vogtle Electric Generating Plant Unit No. 1."

5. ENERCON Engineering Report SNCV086-PR-002, Rev. 4, "Equipment Selection for the Expedited Seismic Evaluation Process for Southern Nuclear Operating Company, Inc., Vogtle Electric Generating Plant Unit No. 2."

6. EPRI Report 1025287, "Seismic Evaluation Guidance: Screening, Prioritization and Implementation Details (SPID) for the Resolution of Fukushima Near-Term Task Force Recommendation 2.1: Seismic," Electric Power Research Institute, February 2013.

7. SNC Nuclear Letter NL-14-0344, "Vogtle Electric Generating Plant Units 1 and 2 Seismic Hazard and Screening Report for CEUS Sites," dated March 31, 2014.

8. EPRI NP-6041-SL R1, "A Methodology for Assessment of Nuclear Power Plant Seismic Margin, Revision 1," Electric Power Research Institute, August 1991.

9. EPRI TR-103959, "Methodology for Developing Seismic Fragilities," Electric Power Research Institute, 1999.

10. SNC, "Vogtle Electric Generating Plant Individual Plant Examination of External Events for Severe Accident Vulnerabilities," dated November 1, 1995, C.K. McCoy to NRC.

11. SNC Report No. SNCV061-RPT-01, "Vogtle Unit 1 Seismic Walkdown Report, RER SNC432485 for Resolution of Fukushima Near-Term Task Force Recommendation 2.3: Seismic," Version 1.0.

12. SNC Report No. SNCV061-RPT-02, "Vogtle Unit 2 Seismic Walkdown Report, RER SNC432485 for Resolution of Fukushima Near-Term Task Force Recommendation 2.3: Seismic," Version 2.0.

13. NEI (A. Pietrangelo) letter to NRC (E. Leeds) dated March 12, 2014, "Seismic Risk Evaluations for Plants in the Central and Eastern United States."

14. NRC (E. Leeds) letter dated May 9, 2014, "Screening and Prioritization Results Regarding Information Pursuant to Title 10 of the Code of Federal Regulations 50.54(f) Regarding Seismic Hazard Re-Evaluations for Recommendation 2.1 of the Near-Term Task Force Review of Insights from the Fukushima Dai-ichi Accident."

15. MPR Calculation 1380-0004-01, "HCLPF Evaluation for Anchorage of Vogtle 1 & 2 7.5 kVA Inverters," Revision 0.

16. MPR Calculation 1380-0004-03, "Vogtle 1 & 2 Processing Unit Anchorage HCLPF Calculation," Revision 0.

17. MPR Calculation 1380-0004-05, "Vogtle 1 & 2 Residual Heat Removal Heat Exchanger HCLPF Calculation," Revision 0.

18. MPR Calculation 1380-0004-06, "Vogtle 1 & 2 Boric Acid Storage Tank HCLPF Calculation," Revision 0.

19. NEI (A. Pietrangelo) letter to NRC (D. Skeen) dated April 9, 2013, "Proposed Path Forward for NTTF Recommendation 2.1: Seismic Reevaluations."

Attachment A: Plant Vogtle Unit 1 ESEL

Table A-1. Plant Vogtle Unit 1 ESEL Items and HCLPF Results

Equipment		Operating State		HCLPF Screening Results	Notes/ Comments
ID	Description	Normal	Desired		
1-1201-P5-TIA	RVLIS TRANSMITTER RACK TRAIN A	Operating	Operating	≥ RLGM	
1-1204-T4-001	RWST	Available	Available	0.51	See Sections 6.4 & 6.6
1-1205-E6-001	RHR HEAT EXCHANGER A	Available	Available	≥ RLGM	Anchorage HCLPF = 0.4g (Reference 17)
1-1208-T4-003	BORIC ACID STORAGE TANK (BAST)	Available	Available	0.44g	Reference 18
1-1302-P4-001	TDAFW PUMP AND TURBINE SKID	Standby	Operating	≥ RLGM	
1-1302-P4-001-K01	AUX FEED PUMP, TURBINE DRIVER	Standby	Operating	≥ RLGM	
1-1302-P5-AFP	AUXILIARY FEEDWATER TURBINE PUMP CONTROL PANEL	Standby	Operating	≥ RLGM	
1-1302-P5-AFT	AUX FDW TURB CONTRL PNL	Standby	Operating	≥ RLGM	
1-1302-V4-001	CONDENSATE STORAGE TANK (CST) #1	Available	Available	0.55g	See Sections 6.4 & 6.6
1-1302-V4-002	CONDENSATE STORAGE TANK (CST) #2	Available	Available	0.55g	See Sections 6.4 & 6.6
1-1601-Q5-MCB	MAIN CONTROL BOARD	Available	Available	≥ RLGM	
1-1601-U3-T03	MCB TERMINATION CABINET	Available	Available	≥ RLGM	
1-1601-U3-T04	MCB TERMINATION CABINET	Energized	Energized	≥ RLGM	
1-1601-U3-T19	MCB TERMINATION CABINET	Energized	Energized	≥ RLGM	
1-1602-P5-NFA	NFMS AMPLIFIER - TRAIN A	Operating	Operating	≥ RLGM	
1-1602-Q5-NIR	NIS INSTRUMENT RACK 1	Operating	Operating	≥ RLGM	
1-1604-Q5-PP1	BOP PROTECTION PANEL 1	Operating	Operating	≥ RLGM	
1-1604-Q5-PP2	BOP PROTECTION PANEL 2	Operating	Operating	≥ RLGM	
1-1604-Q5-PP3	BOP PROTECTION PANEL 3	Operating	Operating	≥ RLGM	
1-1604-Q5-PS1	PROCESS I&C PROTECT I	Operating	Operating	≥ RLGM	
1-1604-Q5-PS2	PROCESS I&C PROTECT II	Operating	Operating	≥ RLGM	

Equipment		Operating State		HCLPF Screening Results	Notes/ Comments
ID	Description	Normal	Desired		
1-1605-C5-ASI	ALTERN SHTDWN IND EAGLE 21 CAB	Available	Available	≥ RLGM	Anchorage HCLPF = 0.47g (Reference 16)
1-1605-P5-SDA	SHUTDOWN PANEL - TRAIN A	Available	Available	≥ RLGM	
1-1605-P5-SDB	SHUTDOWN PANEL - TRAIN B	Available	Available	≥ RLGM	
1-1612-P5-TRA	THERMOCOUPLE REF JUNCTION A	Available	Available	≥ RLGM	
1-1623-D5-002	REMOTE PROCESSING UNIT A CAB 2 - TEMP AND LEVEL	Operating	Operating	≥ RLGM	Anchorage HCLPF = 0.47g (Reference 16)
1-1623-D5-005	REMOTE PROCESSING UNIT - HYDRAULIC ISOLATORS	Operating	Operating	≥ RLGM	Anchorage HCLPF = 0.47g (Reference 16)
1-1623-D5-006A	DISPLAY PROCESSING UNIT A	Operating	Operating	≥ RLGM	Anchorage HCLPF = 0.47g (Reference 16)
1-1805-D3-04T	FLEX Manual Transfer Switch 1BBA04T for Battery Charger 1BD1CA	Normal	FLEX	N/A	Not yet installed (See Section 8.4)
1-1805-D3-37T	FLEX Manual Transfer Switch 1ABE37T for Battery Charger 1CD1CA	Normal	FLEX	N/A	Not yet installed (See Section 8.4)
1-1805-D3-38T	FLEX Manual Transfer Switch 1ABE38T for Battery Charger 1AD1CB	Normal	FLEX	N/A	Not yet installed (See Section 8.4)
1-1805-D3-39T	FLEX Manual Transfer Switch 1BBE39T for Battery Charger 1DD1CB	Normal	FLEX	N/A	Not yet installed (See Section 8.4)
1-1805-F3-009	Electrical Termination Box	Available	Available	N/A	Not yet installed (See Section 8.4)
1-1805-R3-01P	FLEX Primary Connection Box	Available	Available	N/A	Not yet installed (See Section 8.4)
1-1805-R3-09R	FLEX Boron Injection Pump Receptacle	Available	Available	N/A	Not yet installed (See Section 8.4)
1-1805-S3-B30	480V FLEX Switchboard	Standby	Operating	N/A	Not yet installed (See Section 8.4)
1-1805-S3-RHR1A	TRAIN C RHR ISO VLV STARTER	Available	Available	≥ RLGM	

Equipment		Operating State		HCLPF Screening Results	Notes/ Comments
ID	Description	Normal	Desired		
1-1805-S3-RHR2A	TRAIN D RHR ISO VLV START (DISCONNECT)	Available	Available	≥ RLGM	
1-1805-Y3-IC5	25KVA 3 PHASE INVERTER	Energized	Energized	≥ RLGM	
1-1805-Y3-ID6	TR D 480V 3 PHASE INVERTER	Energized	Energized	≥ RLGM	
1-1806-B3-BYA	125 VDC BATTERY	Energized	Energized	≥ RLGM	
1-1806-B3-BYB	125 VDC BATTERY	Energized	Energized	≥ RLGM	
1-1806-B3-BYC	125 VDC BATTERY	Energized	Energized	≥ RLGM	
1-1806-B3-BYD	125 VDC BATTERY	Energized	Energized	≥ RLGM	
1-1806-B3-CAB	BATTERY CHARGER	Energized	Energized	≥ RLGM	
1-1806-B3-CBA	BATTERY CHARGER	Energized	Energized	≥ RLGM	
1-1806-B3-CCA	BATTERY CHARGER	Energized	Energized	≥ RLGM	
1-1806-Q3-DA2	125 VDC DIST PANEL	Energized	Energized	≥ RLGM	
1-1806-Q3-DB2	125 VDC DIST PANEL	Energized	Energized	≥ RLGM	
1-1806-Q3-DC1	125 VDC DISTR PANEL	Energized	Energized	≥ RLGM	
1-1806-S3-DCC	125 VDC MCC	Energized	Energized	≥ RLGM	
1-1806-S3-DSA	125 VDC SWITCHGEAR	Energized	Energized	≥ RLGM	
1-1806-S3-DSB	125 VDC SWITCHGEAR	Energized	Energized	≥ RLGM	
1-1806-S3-DSC	125 VDC SWITCHGEAR	Energized	Energized	≥ RLGM	
1-1806-S3-DSD	125 VDC SWITCHGEAR	Energized	Energized	≥ RLGM	
1-1807-Q3-VI1	120 VAC VITAL DISTR PANEL	Energized	Energized	≥ RLGM	
1-1807-Q3-VI2	120 VAC VITAL DISTR PANEL	Energized	Energized	≥ RLGM	
1-1807-Q3-VI3	120 VAC VITAL DISTR PANEL	Energized	Energized	≥ RLGM	
1-1807-Q3-VI5	120 VAC VITAL DISTR PANEL	Energized	Energized	≥ RLGM	
1-1807-Y3-IA1	VITAL AC INVERTER	Energized	Energized	≥ RLGM	Anchorage HCLPF = 0.48g (Reference 15)
1-1807-Y3-IA11	VITAL AC INVERTER	Energized	Energized	≥ RLGM	
1-1807-Y3-IB2	VITAL AC INVERTER	Energized	Energized	≥ RLGM	Anchorage HCLPF = 0.48g (Reference 15)
1-1807-Y3-IC3	VITAL AC INVERTER	Energized	Energized	≥ RLGM	Anchorage HCLPF = 0.48g (Reference 15)
1-1816-U3-002	AUX RELAY PANEL	Available	Available	≥ RLGM	
1-1816-U3-007	ELECTRICAL AUXILLIARY BOARD	Available	Available	≥ RLGM	
1-1821-U3-001	SF SEQUENCER BOARD TRAIN A	Operating	Operating	≥ RLGM	

Equipment		Operating State		HCLPF Screening Results	Notes/ Comments
ID	Description	Normal	Desired		
11RNFMSJB1	JUNCTION BOX	Available	Available	≥ RLGM	
1-2207-N6-009	I/H CABLE CONNECTOR PLATE	Available	Available	≥ RLGM	
13WJB2729	JUNCTION BOX	Available	Available	≥ RLGM	
1ARJB0056	JUNCTION BOX	Available	Available	N/A	Inaccessible - Insulated (see Section 7.1)
1ARJB0285	JUNCTION BOX	Available	Available	≥ RLGM	
1ARJB0286	JUNCTION BOX	Available	Available	≥ RLGM	
1ARJB0297	JUNCTION BOX	Available	Available	≥ RLGM	
1ARJB0298	JUNCTION BOX	Available	Available	≥ RLGM	
1ARJB0309	JUNCTION BOX	Available	Available	≥ RLGM	
1ARJB0310	JUNCTION BOX	Available	Available	≥ RLGM	
1ARJB0321	JUNCTION BOX	Available	Available	≥ RLGM	
1ARJB0322	JUNCTION BOX	Available	Available	≥ RLGM	
1ARJB3613	JUNCTION BOX	Available	Available	≥ RLGM	
1ARJB3614	JUNCTION BOX	Available	Available	≥ RLGM	
1ARJB3677	JUNCTION BOX	Available	Available	≥ RLGM	
1ARJB4931	JUNCTION BOX	Available	Available	≥ RLGM	
1ARJB4960	JUNCTION BOX	Available	Available	≥ RLGM	
1ARJB4961	JUNCTION BOX	Available	Available	≥ RLGM	
1ARJB4962	JUNCTION BOX	Available	Available	≥ RLGM	
1ARJB4963	JUNCTION BOX	Available	Available	≥ RLGM	
1ATJB2453	JUNCTION BOX	Available	Available	≥ RLGM	
1ATJB2458	JUNCTION BOX	Available	Available	≥ RLGM	
1ATJB2464	JUNCTION BOX	Available	Available	≥ RLGM	
1ATJB2467	JUNCTION BOX	Available	Available	≥ RLGM	
1ATJB2781	JUNCTION BOX	Available	Available	≥ RLGM	
1BRJB0287	JUNCTION BOX	Available	Available	≥ RLGM	
1BRJB0288	JUNCTION BOX	Available	Available	≥ RLGM	
1BRJB0299	JUNCTION BOX	Available	Available	≥ RLGM	
1BRJB0300	JUNCTION BOX	Available	Available	≥ RLGM	
1BRJB0311	JUNCTION BOX	Available	Available	≥ RLGM	
1BRJB0312	JUNCTION BOX	Available	Available	≥ RLGM	
1BRJB0323	JUNCTION BOX	Available	Available	≥ RLGM	
1BRJB0324	JUNCTION BOX	Available	Available	≥ RLGM	

Equipment		Operating State		HCLPF Screening Results	Notes/ Comments
ID	Description	Normal	Desired		
1BRJB3615	JUNCTION BOX	Available	Available	≥ RLGM	
1BRJB3679	JUNCTION BOX	Available	Available	≥ RLGM	
1CDJB0001	JUNCTION BOX	Available	Available	≥ RLGM	
1CRJB0924	JUNCTION BOX	Available	Available	N/A	Inaccessible - High Dose (see Section 7.1)
1CRJB0925	JUNCTION BOX	Available	Available	≥ RLGM	
1CRJB0929	JUNCTION BOX	Available	Available	≥ RLGM	
1CRJB0930	JUNCTION BOX	Available	Available	≥ RLGM	
1CRJB0931	JUNCTION BOX	Available	Available	≥ RLGM	
1CRJB0931A	JUNCTION BOX	Available	Available	≥ RLGM	
1CRJB0942	JUNCTION BOX	Available	Available	N/A	Inaccessible - Insulated (see Section 7.1)
1CRJB3682	JUNCTION BOX	Available	Available	≥ RLGM	
1CRJB3683	JUNCTION BOX	Available	Available	≥ RLGM	
1CWJB2680	JUNCTION BOX	Available	Available	≥ RLGM	
1CWJB2681	JUNCTION BOX	Available	Available	≥ RLGM	
1CWJB2683	JUNCTION BOX	Available	Available	≥ RLGM	
1CWJB2684	JUNCTION BOX	Available	Available	≥ RLGM	
1CWJB2686	JUNCTION BOX	Available	Available	≥ RLGM	
1CWJB2687	JUNCTION BOX	Available	Available	≥ RLGM	
1CWJB2689	JUNCTION BOX	Available	Available	≥ RLGM	
1CWJB2690	JUNCTION BOX	Available	Available	≥ RLGM	
1DDJB0001	JUNCTION BOX	Available	Available	≥ RLGM	
1DRJB3684	JUNCTION BOX	Available	Available	≥ RLGM	
1DRJB3685	JUNCTION BOX	Available	Available	≥ RLGM	
1DRJB4957	Electrical Termination Box	Available	Available	≥ RLGM	
1FI-5150A	AFW FLOW INDICATOR	Operating	Operating	≥ RLGM	
1FI-5151A	AFW FLOW INDICATOR	Operating	Operating	≥ RLGM	
1FI-5152A	AFW FLOW INDICATOR	Operating	Operating	≥ RLGM	
1FI-5153A	AFW FLOW INDICATOR	Operating	Operating	≥ RLGM	
1FT-5150	AFW FLOW TO SG 4	Operating	Operating	≥ RLGM	
1FT-5151	AFW FLOW TO SG 2	Operating	Operating	≥ RLGM	
1FT-5152	AFW FLOW TO SG 1	Operating	Operating	≥ RLGM	
1FT-5153	AFW FLOW TO SG 3	Operating	Operating	≥ RLGM	

Equipment		Operating State		HCLPF Screening Results	Notes/ Comments
ID	Description	Normal	Desired		
1-FV-0610	RHR PUMP 1 MINIFLOW	Open	Closed	≥ RLGM	
1-HV-0442A	REACTOR HEAD LETDOWN SOV	Closed	Open/ Closed	≥ RLGM	
1-HV-0442B	REACTOR HEAD LETDOWN SOV	Closed	Open/ Closed	≥ RLGM	
1-HV-0943A	ACCUM NITROGEN HDR VENT VALVE	Closed	Open/ Closed	≥ RLGM	
1-HV-5106	MAIN STEAM TO TDAFWP INLET VALVE	Closed	Open	≥ RLGM	
1-HV-5113	TDAFW PUMP SUPPLY FROM CST 2 MOV	Closed	Closed/ Open	≥ RLGM	
1-HV-5120	TDAFW DISCH MOV TO S/G 4	Open	Throttled	≥ RLGM	
1-HV-5122	TDAFW DISCH MOV TO S/G 1	Open	Throttled	≥ RLGM	
1-HV-5125	TDAFW DISCH MOV TO S/G 2	Open	Throttled	≥ RLGM	
1-HV-5127	TDAFW DISCH MOV TO S/G 3	Open	Throttled	≥ RLGM	
1-HV-8095A	RX HEAD VENT TO LETDOWN ISOLATION	Closed	Open/ Closed	≥ RLGM	
1-HV-8095B	RX HEAD VENT TO LETDOWN ISOLATION	Closed	Open/ Closed	≥ RLGM	
1-HV-8096A	RX HEAD VENT TO LETDOWN ISOLATION	Closed	Open/ Closed	≥ RLGM	
1-HV-8096B	RX HEAD VENT TO LETDOWN ISOLATION	Closed	Open/ Closed	≥ RLGM	
1-HV-8701B	RHR PMP A SUCT FROM HL LOOP 1 MOV	Open	Closed	≥ RLGM	
1-HV-8702A	RHR PMP-B DNSTRM SUCT FROM HOT LEG LOOP-4	Open	Closed	≥ RLGM	
1-HV-8812A	RHR PUMP A SUCTION FROM RWST	Open/ Closed	Open	≥ RLGM	
1-HV-8821A	SIP TRAIN A TO RCS COLD LEG ISO	Closed	Open/ Closed	≥ RLGM	
1-HV-8835	SIS COLD LEG LOOP IN HDR ISO	Open/ Closed	Open/ Closed	≥ RLGM	
1-HV-8875A	ACCUMULATOR 1 NITROGEN VENT VALVE	Closed	Open/ Closed	≥ RLGM	
1-HV-8875B	ACCUMULATOR 2 NITROGEN VENT VALVE	Closed	Open/ Closed	≥ RLGM	
1-HV-8875C	ACCUMULATOR 3 NITROGEN VENT VALVE	Closed	Open/ Closed	≥ RLGM	
1-HV-8875D	ACCUMULATOR 4 NITROGEN VENT VALVE	Closed	Open/ Closed	≥ RLGM	

Equipment		Operating State		HCLPF Screening Results	Notes/ Comments
ID	Description	Normal	Desired		
1-HY-0442A	I/P CONVERTER	Operating	Operating	≥ RLGM	
1-HY-0442B	I/P CONVERTER	Operating	Operating	≥ RLGM	
1-HY-0943A	I/P CONVERTER	Operating	Operating	≥ RLGM	
1LI-0102A	BAST LEVEL INDICATOR	Operating	Operating	≥ RLGM	
1LI-0459A	PRESSURIZER LEVEL INDIC, PROT SET I	Operating	Operating	≥ RLGM	
1LI-0529	SG 2 LEVEL INDICATOR, PROT SET I	Operating	Operating	≥ RLGM	
1LI-0539	SG 3 LEVEL INDICATOR, PROT SET I	Operating	Operating	≥ RLGM	
1LI-0551	SG 1 LEVEL INDICATOR, PROT SET I	Operating	Operating	≥ RLGM	
1LI-0554	SG 4 Level Indicator, PROT SET I	Operating	Operating	≥ RLGM	
1LI-0990A	RWST LEVEL INDICATOR	Operating	Operating	≥ RLGM	
1LI-5100	CST NO. 1 LOCAL INDICATION	Operating	Operating	≥ RLGM	
1LI-5115	CST NO. 2 LOCAL INDICATION	Operating	Operating	≥ RLGM	
1-LT-0102	BAST LEVEL XMTR	Operating	Operating	≥ RLGM	
1LT-0459	PRESSURIZER LEVEL TRANSMITTER	Operating	Operating	≥ RLGM	
1LT-0529	SG 2 NARROW RANGE LEVEL, SET I	Operating	Operating	≥ RLGM	
1LT-0539	SG 3 NARROW RANGE LEVEL, SET I	Operating	Operating	≥ RLGM	
1LT-0551	SG 1 NARROW RANGE LEVEL, SET I	Operating	Operating	≥ RLGM	
1LT-0554	SG 4 NARROW RANGE LEVEL, SET I	Operating	Operating	≥ RLGM	
1-LT-0990	RWST LEVEL XMTR	Operating	Operating	≥ RLGM	
1LT1310	RV PLENNUM LEVEL UPPER RANGE	Operating	Operating	≥ RLGM	
1LT1311	RV LEVEL NARROW RANGE	Operating	Operating	≥ RLGM	
1LT1312	RV LEVEL WIDE RANGE	Operating	Operating	≥ RLGM	
1LX1310	CONTAINMENT COMPONENT	Available	Available	≥ RLGM	
1LX1311	CONTAINMENT COMPONENT	Available	Available	≥ RLGM	
1LX1312	CONTAINMENT COMPONENT	Available	Available	≥ RLGM	
1NRJB0940	JUNCTION BOX	Available	Available	≥ RLGM	
1PDIC-5180A	AUX FW TURB STM IN - PMP OUT	Operating	Operating	≥ RLGM	
1PI-0438	RCS LOOP 4 HOT LEG PRESSURE INDIC	Operating	Operating	≥ RLGM	

Equipment		Operating State		HCLPF Screening Results	Notes/ Comments
ID	Description	Normal	Desired		
1PI-0514A	SG 1 PRESSURE INDICATOR, PROT SET I	Operating	Operating	≥ RLGM	
1PI-0524A	SG 2 PRESSURE INDICATOR, PROT SET I	Operating	Operating	≥ RLGM	
1PI-0534A	SG 3 PRESSURE INDICATOR, PROT SET I	Operating	Operating	≥ RLGM	
1PI-0544A	SG 4 PRESSURE INDICATOR, PROT SET I	Operating	Operating	≥ RLGM	
1-PI-0937	CONTAINMENT PRESSURE INDICATOR	Operating	Operating	≥ RLGM	
1-PSV-3001	SG 1 MAIN STEAM SAFETY RELIEF VALVE	Closed	Open/ Closed	≥ RLGM	
1-PSV-3002	SG 1 MAIN STEAM SAFETY RELIEF VALVE	Closed	Open/ Closed	≥ RLGM	
1-PSV-3011	SG 2 MAIN STEAM SAFETY RELIEF VALVE	Closed	Open/ Closed	≥ RLGM	
1-PSV-3012	SG 2 MAIN STEAM SAFETY RELIEF VALVE	Closed	Open/ Closed	≥ RLGM	
1-PSV-3021	SG 3 MAIN STEAM SAFETY RELIEF VALVE	Closed	Open/ Closed	≥ RLGM	
1-PSV-3022	SG 3 MAIN STEAM SAFETY RELIEF VALVE	Closed	Open/ Closed	≥ RLGM	
1-PSV-3031	SG 4 MAIN STEAM SAFETY RELIEF VALVE	Closed	Open/ Closed	≥ RLGM	
1-PSV-3032	SG 4 MAIN STEAM SAFETY RELIEF VALVE	Closed	Open/ Closed	≥ RLGM	
1PT-0438	RCS LOOP 4 HOT LEG PRESSURE XMTR	Operating	Operating	≥ RLGM	
1PT-0514	SG 1 PRESSURE TRANSMITTER	Operating	Operating	≥ RLGM	
1PT-0524	SG 2 PRESSURE TRANSMITTER	Operating	Operating	≥ RLGM	
1PT-0534	SG 3 PRESSURE TRANSMITTER	Operating	Operating	≥ RLGM	
1PT-0544	SG 4 PRESSURE TRANSMITTER	Operating	Operating	≥ RLGM	
1PT-0937	CNMT PRESS	Operating	Operating	≥ RLGM	
1-PV-15129	TDAFW PUMP, TRIP AND THROTTLE	Open	Open	≥ RLGM	
1-PV-3000	SG 1 ATMOSPHERIC RELIEF VALVE	Closed	Open/ Closed	≥ RLGM	
1-PV-3010	SG 2 ATMOSPHERIC RELIEF VALVE	Closed	Open/ Closed	≥ RLGM	
1-PV-3020	SG 3 ATMOSPHERIC RELIEF VALVE	Closed	Open/ Closed	≥ RLGM	

Equipment		Operating State		HCLPF Screening Results	Notes/ Comments
ID	Description	Normal	Desired		
1-PV-3030	SG 4 ATMOSPHERIC RELIEF VALVE	Closed	Open/ Closed	≥ RLGM	
1-PX-0937	XMTR CONTAINMENT COMPONENT	Available	Available	≥ RLGM	
1RE13135A	NEUTRON FLUX - TRAIN A	Operating	Operating	N/A	Inaccessible - High Dose (see Section 7.1)
1-SC-15109	AUX FW TURB SPEED CONTROLLER/ GOVERNOR	Standby	Operating	≥ RLGM	
1SE-15109A	AUX FW PUMP 1 TURB SPEED	Standby	Operating	≥ RLGM	
1SE-15109B	AUX FW PUMP 1 TURB SPEED	Standby	Operating	≥ RLGM	
1-SV-15133	TDAFW PUMP GOVERNOR VALVE	Closed	Open	≥ RLGM	
1TI-0413A	TEMP INDICATOR HOT LEG, LOOP 1, SET I	Operating	Operating	≥ RLGM	
1TI-0413B	TEMP INDICATOR HOT LEG, LOOP 1, SET II	Operating	Operating	≥ RLGM	
1TI-0423A	TEMP INDICATOR HOT LEG, LOOP 2, SET I	Operating	Operating	≥ RLGM	
1TI-0423B	TEMP INDICATOR HOT LEG, LOOP 2, SET II	Operating	Operating	≥ RLGM	
1TI-0433A	TEMP INDICATOR HOT LEG, LOOP 3, SET I	Operating	Operating	≥ RLGM	
1TI-0433B	TEMP INDICATOR HOT LEG, LOOP 3, SET II	Operating	Operating	≥ RLGM	
1TI-0443A	TEMP INDICATOR HOT LEG, LOOP 4, SET I	Operating	Operating	≥ RLGM	
1TI-0443B	TEMP INDICATOR HOT LEG, LOOP 4, SET II	Operating	Operating	≥ RLGM	
1ZIS1310	RVLIS HYDRAULIC ISOLATOR	Operating	Operating	≥ RLGM	
1ZIS1311	RVLIS HYDRAULIC ISOLATOR	Operating	Operating	≥ RLGM	
1ZIS1312	RVLIS HYDRAULIC ISOLATOR	Operating	Operating	≥ RLGM	

Attachment B: Plant Vogtle Unit 2 ESEL

Table B-1. Plant Vogtle Unit 2 ESEL Items and HCLPF Results

Equipment		Operating State		HCLPF Screening Results	Notes/ Comments
ID	Description	Normal	Desired		
2-1201-P5-TIA	RVLIS TRANSMITTER RACK TRAIN A	Operating	Operating	≥ RLGM	
2-1204-T4-001	RWST	Available	Available	0.51g	See Sections 6.4 & 6.6
2-1205-E6-001	RHR HEAT EXCHANGER A	Available	Available	≥ RLGM	Anchorage HCLPF = 0.4g (Reference 17)
2-1208-T4-003	BORIC ACID STORAGE TANK (BAST)	Available	Available	0.44g	Reference 18
2-1302-P4-001	TDAFW PUMP AND TURBINE SKID	Standby	Operating	≥ RLGM	
2-1302-P4-001-K01	AUX FEED PUMP, TURBINE DRIVER	Standby	Operating	≥ RLGM	
2-1302-P5-AFP	AUXILIARY FEEDWATER TURBINE PUMP CONTROL PANEL	Standby	Operating	≥ RLGM	
2-1302-P5-AFT	AUX FDW TURB CONTRL PNL	Standby	Operating	≥ RLGM	
2-1302-V4-001	CONDENSATE STORAGE TANK (CST) #1	Available	Available	0.55g	See Sections 6.4 & 6.6
2-1302-V4-002	CONDENSATE STORAGE TANK (CST) #2	Available	Available	0.55g	See Sections 6.4 & 6.6
2-1601-Q5-MCB	MAIN CONTROL BOARD	Available	Available	≥ RLGM	
2-1601-U3-T03	MCB TERMINATION CABINET	Available	Available	≥ RLGM	
2-1601-U3-T04	MCB TERMINATION CABINET	Energized	Energized	≥ RLGM	
2-1601-U3-T19	MCB TERMINATION CABINET	Energized	Energized	≥ RLGM	
2-1602-P5-NFA	NFMS AMPLIFIER - TRAIN A	Operating	Operating	≥ RLGM	
2-1602-Q5-NIR	NIS INSTRUMENT RACK 1	Operating	Operating	≥ RLGM	
2-1604-Q5-PP1	BOP PROTECTION PANEL 1	Operating	Operating	≥ RLGM	
2-1604-Q5-PP2	BOP PROTECTION PANEL 2	Operating	Operating	≥ RLGM	
2-1604-Q5-PP3	BOP PROTECTION PANEL 3	Operating	Operating	≥ RLGM	
2-1604-Q5-PS1	PROCESS I&C PROTECT I	Operating	Operating	≥ RLGM	
2-1604-Q5-PS2	PROCESS I&C PROTECT II	Operating	Operating	≥ RLGM	

Equipment		Operating State		HCLPF Screening Results	Notes/ Comments
ID	Description	Normal	Desired		
2-1605-C5-ASI	ALTERN SHUTDOWN IND EAGLE 21 CAB	Available	Available	≥ RLGM	Anchorage HCLPF = 0.47g (Reference 16)
2-1605-P5-SDA	SHUTDOWN PANEL - TRAIN A	Available	Available	≥ RLGM	
2-1605-P5-SDB	SHUTDOWN PANEL - TRAIN B	Available	Available	≥ RLGM	
2-1612-P5-TRA	THERMOCOUPLE REF JUNCTION A	Available	Available	≥ RLGM	
2-1623-D5-002	REMOTE PROCESSING UNIT - TEMP AND LEVEL	Operating	Operating	≥ RLGM	Anchorage HCLPF = 0.47g (Reference 16)
2-1623-D5-005	REMOTE PROCESSING UNIT - HYDRAULIC ISOLATORS	Operating	Operating	≥ RLGM	Anchorage HCLPF = 0.47g (Reference 16)
2-1623-D5-006A	DISPLAY PROCESSING UNIT A	Operating	Operating	≥ RLGM	Anchorage HCLPF = 0.47g (Reference 16)
2-1805-D3-04T	FLEX Manual Transfer Switch for Battery Charger	Standby	Standby	N/A	Not Yet Installed (See Section 8.4)
2-1805-D3-37T	FLEX Manual Transfer Switch for Battery Charger	Standby	Standby	N/A	Not Yet Installed (See Section 8.4)
2-1805-D3-38T	FLEX Manual Transfer Switch for Battery Charger	Standby	Standby	N/A	Not Yet Installed (See Section 8.4)
2-1805-D3-39T	FLEX Manual Transfer Switch for Battery Charger	Standby	Standby	N/A	Not Yet Installed (See Section 8.4)
2-1805-F3-009	Electrical Termination Box	Available	Available	N/A	Not Yet Installed (See Section 8.4)
2-1805-R3-01P	FLEX Primary Connection	Available	Available	N/A	Not Yet Installed (See Section 8.4)
2-1805-R3-09R	FLEX Boron Injection Pump Receptacle	Available	Available	N/A	Not Yet Installed (See Section 8.4)
2-1805-S3-B30	480V FLEX Switchboard	Standby	Operating	N/A	Not Yet Installed (See Section 8.4)
2-1805-S3-RHR1A	TRAIN C RHR ISO VLV START	Available	Available	≥ RLGM	
2-1805-S3-RHR2A	TRAIN D RHR ISO VLV START	Available	Available	≥ RLGM	
2-1805-Y3-IC5	25KVA 3 PHASE INVERTER	Energized	Energized	≥ RLGM	
2-1805-Y3-ID6	TR D 480V 3 PHASE INVERTER	Energized	Energized	≥ RLGM	
2-1806-B3-BYA	125 VDC BATTERY	Energized	Energized	≥ RLGM	
2-1806-B3-BYB	125 VDC BATTERY	Energized	Energized	≥ RLGM	
2-1806-B3-BYC	125 VDC BATTERY	Energized	Energized	≥ RLGM	
2-1806-B3-BYD	125 VDC BATTERY	Energized	Energized	≥ RLGM	

Equipment		Operating State		HCLPF Screening Results	Notes/ Comments
ID	Description	Normal	Desired		
2-1806-B3-CAB	BATTERY CHARGER	Energized	Energized	≥ RLGM	
2-1806-B3-CBA	BATTERY CHARGER	Energized	Energized	≥ RLGM	
2-1806-B3-CCA	BATTERY CHARGER	Energized	Energized	≥ RLGM	
2-1806-Q3-DA2	125 VDC DIST PANEL	Energized	Energized	≥ RLGM	
2-1806-Q3-DB2	125 VDC DIST PANEL	Energized	Energized	≥ RLGM	
2-1806-Q3-DC1	125 VDC PANEL	Energized	Energized	≥ RLGM	
2-1806-S3-DCC	125VDC MCC	Energized	Energized	≥ RLGM	
2-1806-S3-DSA	125 VDC SWITCHGEAR	Energized	Energized	≥ RLGM	
2-1806-S3-DSB	125 VDC SWITCHGEAR	Energized	Energized	≥ RLGM	
2-1806-S3-DSC	125 VDC SWITCHGEAR	Energized	Energized	≥ RLGM	
2-1806-S3-DSD	125 VDC SWITCHGEAR	Energized	Energized	≥ RLGM	
2-1807-Q3-VI1	120 VITAL AC PANEL	Energized	Energized	≥ RLGM	
2-1807-Q3-VI2	120 VAC VITAL DISTR PANEL	Energized	Energized	≥ RLGM	
2-1807-Q3-VI3	120 VAC VITAL PANEL	Energized	Energized	≥ RLGM	
2-1807-Q3-VI5	120 VAC VITAL DISTR PANEL	Energized	Energized	≥ RLGM	
2-1807-Y3-IA1	VITAL AC INVERTER	Energized	Energized	≥ RLGM	Anchorage HCLPF = 0.48g (Reference 15)
2-1807-Y3-IA11	VITAL AC INVERTER	Energized	Energized	≥ RLGM	
2-1807-Y3-IB2	VITAL AC INVERTER	Energized	Energized	≥ RLGM	Anchorage HCLPF = 0.48g (Reference 15)
2-1807-Y3-IC3	VITAL AC INVERTER	Energized	Energized	≥ RLGM	Anchorage HCLPF = 0.48g (Reference 15)
2-1816-U3-002	AUX RELAY PANEL	Available	Available	≥ RLGM	
2-1816-U3-007	ELECTRICAL AUXILLIARY BOARD	Available	Available	≥ RLGM	
2-1821-U3-001	SF SEQUENCER BOARD TRAIN A	Operating	Operating	≥ RLGM	
21RNFMSJB1	JUNCTION BOX	Available	Available	≥ RLGM	
2-2207-N6-009	I/H CABLE CONNECTOR PLATE ITEM 01	Available	Available	≥ RLGM	
2-2403-P4-001	D.F.O. STOR TANK PUMP-1	Standby	On/Off	≥ RLGM	
2-2403-P4-001-M01	DIESEL FUEL OIL STORAGE TANK PUMP 1 MOTOR	Standby	On/Off	≥ RLGM	
2-2403-T4-001	DIESEL FUEL OIL STORAGE TANK A	Available	Available	≥ RLGM	
2-2403-T4-003	DIESEL FUEL OIL DAY TANK	Available	Available	≥ RLGM	

Equipment		Operating State		HCLPF Screening Results	Notes/ Comments
ID	Description	Normal	Desired		
23WJB2729	JUNCTION BOX	Available	Available	≥ RLGM	
2ARJB0056	JUNCTION BOX	Available	Available	N/A	Inaccessible - Insulated (see Section 7.1)
2ARJB0285	JUNCTION BOX	Available	Available	≥ RLGM	
2ARJB0286	JUNCTION BOX	Available	Available	≥ RLGM	
2ARJB0297	JUNCTION BOX	Available	Available	≥ RLGM	
2ARJB0298	JUNCTION BOX	Available	Available	≥ RLGM	
2ARJB0309	JUNCTION BOX	Available	Available	≥ RLGM	
2ARJB0310	JUNCTION BOX	Available	Available	≥ RLGM	
2ARJB0321	JUNCTION BOX	Available	Available	≥ RLGM	
2ARJB0322	JUNCTION BOX	Available	Available	≥ RLGM	
2ARJB3613	JUNCTION BOX	Available	Available	≥ RLGM	
2ARJB3614	JUNCTION BOX	Available	Available	≥ RLGM	
2ARJB3677	JUNCTION BOX	Available	Available	≥ RLGM	
2ARJB4931	JUNCTION BOX	Available	Available	≥ RLGM	
2ARJB4960	JUNCTION BOX	Available	Available	≥ RLGM	
2ARJB4961	JUNCTION BOX	Available	Available	≥ RLGM	
2ARJB4962	JUNCTION BOX	Available	Available	≥ RLGM	
2ARJB4963	JUNCTION BOX	Available	Available	≥ RLGM	
2ATJB2453	JUNCTION BOX	Available	Available	≥ RLGM	
2ATJB2458	JUNCTION BOX	Available	Available	≥ RLGM	
2ATJB2464	JUNCTION BOX	Available	Available	≥ RLGM	
2ATJB2467	JUNCTION BOX	Available	Available	≥ RLGM	
2ATJB2781	JUNCTION BOX	Available	Available	≥ RLGM	
2-AZ-JB-3740	JUNCTION BOX	Available	Available	≥ RLGM	
2-AZ-JB-3741	JUNCTION BOX	Available	Available	≥ RLGM	
2BRJB0287	JUNCTION BOX	Available	Available	≥ RLGM	
2BRJB0288	JUNCTION BOX	Available	Available	≥ RLGM	
2BRJB0299	JUNCTION BOX	Available	Available	≥ RLGM	
2BRJB0300	JUNCTION BOX	Available	Available	≥ RLGM	
2BRJB0311	JUNCTION BOX	Available	Available	≥ RLGM	
2BRJB0312	JUNCTION BOX	Available	Available	≥ RLGM	
2BRJB0323	JUNCTION BOX	Available	Available	≥ RLGM	
2BRJB0324	JUNCTION BOX	Available	Available	≥ RLGM	
2BRJB3615	JUNCTION BOX	Available	Available	≥ RLGM	

Equipment		Operating State		HCLPF Screening Results	Notes/ Comments
ID	Description	Normal	Desired		
2BRJB3679	JUNCTION BOX	Available	Available	≥ RLGM	
2CDJB0001	JUNCTION BOX	Available	Available	≥ RLGM	
2CRJB0924	JUNCTION BOX	Available	Available	N/A	Inaccessible - High Dose (see Section 7.1)
2CRJB0925	JUNCTION BOX	Available	Available	≥ RLGM	
2CRJB0929	JUNCTION BOX	Available	Available	≥ RLGM	
2CRJB0930	JUNCTION BOX	Available	Available	≥ RLGM	
2CRJB0930A	JUNCTION BOX	Available	Available	≥ RLGM	
2CRJB0930B	JUNCTION BOX	Available	Available	≥ RLGM	
2CRJB0931	JUNCTION BOX	Available	Available	≥ RLGM	
2CRJB3682	JUNCTION BOX	Available	Available	≥ RLGM	
2CRJB3683	JUNCTION BOX	Available	Available	≥ RLGM	
2CWJB2680	JUNCTION BOX	Available	Available	≥ RLGM	
2CWJB2681	JUNCTION BOX	Available	Available	≥ RLGM	
2CWJB2683	JUNCTION BOX	Available	Available	≥ RLGM	
2CWJB2684	JUNCTION BOX	Available	Available	≥ RLGM	
2CWJB2686	JUNCTION BOX	Available	Available	≥ RLGM	
2CWJB2687	JUNCTION BOX	Available	Available	≥ RLGM	
2CWJB2689	JUNCTION BOX	Available	Available	≥ RLGM	
2CWJB2690	JUNCTION BOX	Available	Available	≥ RLGM	
2DDJB0001	JUNCTION BOX	Available	Available	≥ RLGM	
2DRJB3684	JUNCTION BOX	Available	Available	≥ RLGM	
2DRJB3685	JUNCTION BOX	Available	Available	≥ RLGM	
2DRJB4957	Electrical Termination Box	Available	Available	≥ RLGM	
2FI-5150A	AFW FLOW INDICATOR	Operating	Operating	≥ RLGM	
2FI-5151A	AFW FLOW INDICATOR	Operating	Operating	≥ RLGM	
2FI-5152A	AFW FLOW INDICATOR	Operating	Operating	≥ RLGM	
2FI-5153A	AFW FLOW INDICATOR	Operating	Operating	≥ RLGM	
2FT-5150	AFW FLOW TO SG 4	Operating	Operating	≥ RLGM	
2FT-5151	AFW FLOW TO SG 2	Operating	Operating	≥ RLGM	
2FT-5152	AFW FLOW TO SG 1	Operating	Operating	≥ RLGM	
2FT-5153	AFW FLOW TO SG 3	Operating	Operating	≥ RLGM	
2-FV-0610	RHR PUMP 1 MINIFLOW	Open	Closed	≥ RLGM	
2-HV-0442A	REACTOR HEAD LETDOWN SOV	Closed	Open/ Closed	≥ RLGM	

Equipment		Operating State		HCLPF Screening Results	Notes/ Comments
ID	Description	Normal	Desired		
2-HV-0442B	REACTOR HEAD LETDOWN SOV	Closed	Open/ Closed	≥ RLGM	
2-HV-0943A	ACCUM NITROGEN HDR VENT VALVE	Closed	Open/ Closed	≥ RLGM	
2-HV-5106	MAIN STEAM TO TDAFWP INLET VALVE	Closed	Open	≥ RLGM	
2-HV-5113	TDAFW PUMP SUPPLY FROM CST 2 MOV	Closed	Closed/ Open	≥ RLGM	
2-HV-5120	TDAFW DISCH MOV TO S/G 4	Open	Throttled	≥ RLGM	
2-HV-5122	TDAFW DISCH MOV TO S/G 1	Open	Throttled	≥ RLGM	
2-HV-5125	TDAFW DISCH MOV TO S/G 2	Open	Throttled	≥ RLGM	
2-HV-5127	TDAFW DISCH MOV TO S/G 3	Open	Throttled	≥ RLGM	
2-HV-8095A	RX HEAD VENT TO LETDOWN ISOLATION	Closed	Open/ Closed	≥ RLGM	
2-HV-8095B	RX HEAD VENT TO LETDOWN ISOLATION	Closed	Open/ Closed	≥ RLGM	
2-HV-8096A	RX HEAD VENT TO LETDOWN ISOLATION	Closed	Open/ Closed	≥ RLGM	
2-HV-8096B	RX HEAD VENT TO LETDOWN ISOLATION	Closed	Open/ Closed	≥ RLGM	
2-HV-8701B	RHR PMP A SUCT FROM HL LOOP 1 MOV	Open	Closed	≥ RLGM	
2-HV-8702A	RHRP-B IRC SUCT ISO FROM LOOP 4 HL,*,*,B	Open	Closed	≥ RLGM	
2-HV-8812A	RHR PUMP A SUCTION FROM RWST	Open/ Closed	Operating	≥ RLGM	
2-HV-8821A	SIP TRAIN A TO RCS COLD LEG ISO	Closed	Open/ Closed	≥ RLGM	
2-HV-8835	SIS COLD LEG LOOP IN HDR ISO	Open/ Closed	Open/ Closed	≥ RLGM	
2-HV-8875A	ACCUMULATOR 1 NITROGEN VENT VALVE	Closed	Open/ Closed	≥ RLGM	
2-HV-8875B	ACCUMULATOR 2 NITROGEN VENT VALVE	Closed	Open/ Closed	≥ RLGM	
2-HV-8875C	ACCUMULATOR 3 NITROGEN VENT VALVE	Closed	Open/ Closed	≥ RLGM	
2-HV-8875D	ACCUMULATOR 4 NITROGEN VENT VALVE	Closed	Open/ Closed	≥ RLGM	
2-HY-0442A	I/P CONVERTER	Operating	Operating	≥ RLGM	
2-HY-0442B	I/P CONVERTER	Operating	Operating	≥ RLGM	
2-HY-0943A	I/P CONVERTER	Operating	Operating	≥ RLGM	

Equipment		Operating State		HCLPF Screening Results	Notes/ Comments
ID	Description	Normal	Desired		
2LI-0102A	BAST LEVEL INDICATOR	Operating	Operating	≥ RLGM	
2LI-0459A	PRESSURIZER LEVEL INDIC, PROT SET I	Operating	Operating	≥ RLGM	
2LI-0529	SG 2 LEVEL INDICATOR, PROT SET I	Operating	Operating	≥ RLGM	
2LI-0539	SG 3 LEVEL INDICATOR, PROT SET I	Operating	Operating	≥ RLGM	
2LI-0551	SG 1 LEVEL INDICATOR, PROT SET I	Operating	Operating	≥ RLGM	
2LI-0554	SG 4 LEVEL INDICATOR, PROT SET I	Operating	Operating	≥ RLGM	
2LI-0990A	RWST LEVEL INDICATOR	Operating	Operating	≥ RLGM	
2LI-5100	CST NO. 1 LOCAL INDICATION	Operating	Operating	≥ RLGM	
2LI-5115	CST NO. 2 LOCAL INDICATION	Operating	Operating	≥ RLGM	
2-LT-0102	BAST LEVEL XMTR	Operating	Operating	≥ RLGM	
2LT-0459	PRESSURIZER LEVEL TRANSMITTER	Operating	Operating	≥ RLGM	
2LT-0529	SG 2 NARROW RANGE LEVEL, SET I	Operating	Operating	≥ RLGM	
2LT-0539	SG 3 NARROW RANGE LEVEL, SET I	Operating	Operating	≥ RLGM	
2LT-0551	SG 1 NARROW RANGE LEVEL, SET I	Operating	Operating	≥ RLGM	
2LT-0554	SG 4 NARROW RANGE LEVEL, SET I	Operating	Operating	≥ RLGM	
2-LT-0990	RWST LEVEL XMTR	Operating	Operating	≥ RLGM	
2LT1310	RV PLENNUM LEVEL UPPER RANGE	Operating	Operating	≥ RLGM	
2LT1311	RV LEVEL NARROW RANGE	Operating	Operating	≥ RLGM	
2LT1312	RV LEVEL WIDE RANGE	Operating	Operating	≥ RLGM	
2LX1310	CONTAINMENT COMPONENT	Available	Available	≥ RLGM	
2LX1311	CONTAINMENT COMPONENT	Available	Available	≥ RLGM	
2LX1312	CONTAINMENT COMPONENT	Available	Available	≥ RLGM	
2NRJB0940	JUNCTION BOX	Available	Available	≥ RLGM	
2PDIC-5180A	AUX FW TURB STM IN - PMP OUT	Operating	Operating	≥ RLGM	
2PI-0438	RCS LOOP 4 HOT LEG PRESSURE INDIC	Operating	Operating	≥ RLGM	

Equipment		Operating State		HCLPF Screening Results	Notes/ Comments
ID	Description	Normal	Desired		
2PI-0514A	SG 1 PRESSURE INDICATOR, PROT SET I	Operating	Operating	≥ RLGM	
2PI-0524A	SG 2 PRESSURE INDICATOR, PROT SET I	Operating	Operating	≥ RLGM	
2PI-0534A	SG 3 PRESSURE INDICATOR, PROT SET I	Operating	Operating	≥ RLGM	
2PI-0544A	SG 4 PRESSURE INDICATOR, PROT SET I	Operating	Operating	≥ RLGM	
2-PI-0937	CONTAINMENT PRESSURE INDICATOR	Operating	Operating	≥ RLGM	
2-PSV-3001	SG 1 MAIN STEAM SAFETY RELIEF VALVE	Closed	Open/ Closed	≥ RLGM	
2-PSV-3002	SG 1 MAIN STEAM SAFETY RELIEF VALVE	Closed	Open/ Closed	≥ RLGM	
2-PSV-3011	SG 2 MAIN STEAM SAFETY RELIEF VALVE	Closed	Open/ Closed	≥ RLGM	
2-PSV-3012	SG 2 MAIN STEAM SAFETY RELIEF VALVE	Closed	Open/ Closed	≥ RLGM	
2-PSV-3021	SG 3 MAIN STEAM SAFETY RELIEF VALVE	Closed	Open/ Closed	≥ RLGM	
2-PSV-3022	SG 3 MAIN STEAM SAFETY RELIEF VALVE	Closed	Open/ Closed	≥ RLGM	
2-PSV-3031	SG 4 MAIN STEAM SAFETY RELIEF VALVE	Closed	Open/ Closed	≥ RLGM	
2-PSV-3032	SG 4 MAIN STEAM SAFETY RELIEF VALVE	Closed	Open/ Closed	≥ RLGM	
2PT-0438	RCS LOOP 4 HOT LEG PRESSURE XMTR	Operating	Operating	≥ RLGM	
2PT-0514	SG 1 PRESSURE TRANSMITTER	Operating	Operating	≥ RLGM	
2PT-0524	SG 2 PRESSURE TRANSMITTER	Operating	Operating	≥ RLGM	
2PT-0534	SG 3 PRESSURE TRANSMITTER	Operating	Operating	≥ RLGM	
2PT-0544	SG 4 PRESSURE TRANSMITTER	Operating	Operating	≥ RLGM	
2PT-0937	CNMT PRESS	Operating	Operating	≥ RLGM	
2-PV-15129	TDAFW PUMP, TRIP AND THROTTLE	Open	Open	≥ RLGM	
2-PV-3000	SG 1 ATMOSPHERIC RELIEF VALVE	Closed	Open/ Closed	≥ RLGM	
2-PV-3010	SG 2 ATMOSPHERIC RELIEF VALVE	Closed	Open/ Closed	≥ RLGM	

Equipment		Operating State		HCLPF Screening Results	Notes/ Comments
ID	Description	Normal	Desired		
2-PV-3020	SG 3 ATMOSPHERIC RELIEF VALVE	Closed	Open/ Closed	≥ RLGM	
2-PV-3030	SG 4 ATMOSPHERIC RELIEF VALVE	Closed	Open/ Closed	≥ RLGM	
2-PX-0937	XMTR CONTAINMENT COMPONENT	Available	Available	≥ RLGM	
2RE13135A	NEUTRON FLUX - TRAIN A	Operating	Operating	N/A	Inaccessible - High Dose (see Section 7.1)
2-SC-15109	AUX FW TURB SPEED CONTROLLER/ GOVERNOR	Standby	Operating	≥ RLGM	
2SE-15109A	AUX FW PUMP 1 TURB SPEED	Standby	Operating	≥ RLGM	
2SE-15109B	AUX FW PUMP 1 TURB SPEED	Standby	Operating	≥ RLGM	
2-SV-15133	TDAFW PUMP GOVERNOR VALVE	Closed	Open	≥ RLGM	
2TI-0413A	TEMP INDICATOR HOT LEG, LOOP 1, SET I	Operating	Operating	≥ RLGM	
2TI-0413B	TEMP INDICATOR HOT LEG, LOOP 1, SET II	Operating	Operating	≥ RLGM	
2TI-0423A	TEMP INDICATOR HOT LEG, LOOP 2, SET I	Operating	Operating	≥ RLGM	
2TI-0423B	TEMP INDICATOR HOT LEG, LOOP 2, SET II	Operating	Operating	≥ RLGM	
2TI-0433A	TEMP INDICATOR HOT LEG, LOOP 3, SET I	Operating	Operating	≥ RLGM	
2TI-0433B	TEMP INDICATOR HOT LEG, LOOP 3, SET II	Operating	Operating	≥ RLGM	
2TI-0443A	TEMP INDICATOR HOT LEG, LOOP 4, SET I	Operating	Operating	≥ RLGM	
2TI-0443B	TEMP INDICATOR HOT LEG, LOOP 4, SET II	Operating	Operating	≥ RLGM	
2ZIS1310	RVLIS HYDRAULIC ISOLATOR	Operating	Operating	≥ RLGM	
2ZIS1311	RVLIS HYDRAULIC ISOLATOR	Operating	Operating	≥ RLGM	
2ZIS1312	RVLIS HYDRAULIC ISOLATOR	Operating	Operating	≥ RLGM	

Vogtle Electric Generating Plant – Units 1 and 2
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Enclosure 2

Required Actions and Schedule for Completion of ESEP Activities

Vogtle Unit 1 Required Actions and Schedule for ESEL Items Not Installed as of Walkdowns/Report Issuance				
#	**Equipment Number**	**Outage Required**	**Required Action**	**Scheduled Completion Date**
1	• 1-1805-D3-04T - FLEX Manual Transfer Switch 1BBA04T for Battery Charger 1BD1CA • 1-1805-D3-37T - FLEX Manual Transfer Switch 1ABE37T for Battery Charger 1CD1CA • 1-1805-D3-38T - FLEX Manual Transfer Switch 1ABE38T for Battery Charger 1AD1CB • 1-1805-D3-39T - FLEX Manual Transfer Switch 1BBE39T for Battery Charger 1DD1CB • 1-1805-F3-009 - Electrical Termination Box • 1-1805-R3-01P - FLEX Primary Connection Box • 1-1805-R3-09R - FLEX Boron Injection Pump Receptacle • 1-1805-S3-B30 - 480V FLEX Switchboard	Does NOT require outage to walk down or install modification (if modification is necessary)	After the item is installed, perform Seismic Walkdown, generate HCLPF evaluations in accordance with EPRI 3002000704 and EPRI NP-6041-SL, and design/ implement any modifications necessary to meet ESEP requirements.	December 2016 (2 years after ESEP Report submittal)
2	NA	NA	Submit letter to NRC summarizing results of Item 1 above and provide confirmation that corresponding plant modifications, if required, are complete.	March 31, 2017 (90 days following completion of ESEP activities)

Vogtle Unit 2 Required Actions and Schedule for ESEL Items Not Installed as of Walkdowns/Report Issuance				
#	**Equipment Number**	**Outage Required**	**Required Action**	**Scheduled Completion Date**
1	• 2-1805-D3-04T - FLEX Manual Transfer Switch 2BBA04T for Battery Charger 2BD1CA • 2-1805-D3-37T - FLEX Manual Transfer Switch 2ABE37T for Battery Charger 2CD1CA • 2-1805-D3-38T - FLEX Manual Transfer Switch 2ABE38T for Battery Charger 2AD1CB • 2-1805-D3-39T - FLEX Manual Transfer Switch 2BBE39T for Battery Charger 2DD1CB • 2-1805-F3-009 - Electrical Termination Box • 2-1805-R3-01P - FLEX Primary Connection • 2-1805-R3-09R - FLEX Boron Injection Pump Receptacle • 2-1805-S3-B30 - 480V FLEX Switchboard	Does NOT require outage to walk down or install modification (if modification is necessary)	After the item is installed, perform Seismic Walkdown, generate HCLPF evaluations in accordance with EPRI 3002000704 and EPRI NP-6041-SL, and design/ implement any modifications necessary to meet ESEP requirements.	December 2016 (2 years after ESEP Report submittal)
2	NA	NA	Submit letter to NRC summarizing results of Item 1 above and provide confirmation that corresponding plant modifications, if required, are complete.	March 31, 2017 (90 days following completion of ESEP activities)

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Enclosure 3

Table of Regulatory Commitments

Enclosure 3 to NL-14-1996
Vogtle Electric Generating Plant – Units 1 and 2
Table of Regulatory Commitments

Commitment	Type		Scheduled Completion Date (If Required)
	One-Time Action	Continuing Compliance	
Vogtle Unit 1			
Complete the remaining NTTF 2.1 Unit 1 ESEL walkdowns/evaluations for items that are not currently installed. These items are identified in Attachment A of the Vogtle Units 1 and 2 ESEP Report (Enclosure 1 of this letter) and summarized in Enclosure 2.	X		Within 90 days following completion of ESEP activities but no later than March 31, 2017.
Vogtle Unit 2			
Complete the remaining NTTF 2.1 Unit 2 ESEL walkdowns/evaluations for items that are not currently installed. These items are identified in Attachment B of the Vogtle Units 1 and 2 ESEP Report (Enclosure 1 of this letter) and summarized in Enclosure 2.	X		Within 90 days following completion of ESEP activities but no later than March 31, 2017.