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Docket Nos.: 52-025
52-026

ND-16-0598
10 CFR 55.11
10 CFR 55.40(a) and (b)
10 CFR 55.45(b)

U. S. Nuclear Regulatory Commission
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Washington, D. C. 20555-0001

Ms. Jennifer L. Uhle
Director, Office of New Reactors
U.S. Nuclear Regulatory Commission
Washington, DC 20555-0001

Southern Nuclear Operating Company
Vogtle Electric Generating Plant (VEGP) Units 3 and 4
Request for Exemption:
Plant Walkthrough

Ladies and Gentlemen:

Pursuant to 10 CFR 55.11, "Specific Exemptions," Southern Nuclear Operating Company (SNC) requests NRC approval of an exemption from the plant walkthrough requirement of 10 CFR 55.45(b), "55.45 Operating Tests, Implementation and Administration" and, to the extent the NRC deems necessary, from requirements in NUREG-1021, "Operator Licensing Examination Standards for Power Reactors," which is incorporated by reference into 10 CFR 55.40(a) and (b), "Written Examinations and Operating Tests, Implementation."

An exemption from the plant walkthrough requirement of 10 CFR 55.45(b) is necessary because it is not possible for NRC Staff (Examiners) to administer the plant walkthrough portion of the operating test as described in NUREG-1021 given the current state of VEGP Unit 3 construction.

The exemption is also necessary to ensure SNC has licensed operators prior to fuel receipt for VEGP Unit 3.

SNC requests that the exemption authorize NRC to conduct the in-plant portion of the operating test as follows:

1. A random selection will be made from In-Plant On-the-Job Training (OJT) tasks instead of from NUREG-2103, "Knowledge and Abilities Catalog for Nuclear Power Plant Operators: Westinghouse AP1000 Pressurized-Water Reactors" (which is in draft form and not scheduled for acceptance until after December 31, 2016). The list of tasks must be sufficient in number and difficulty such that it meets the quantitative and qualitative acceptance criteria for maintaining acceptable levels of examination consistency, uniformity, and fairness as described in NUREG-1021, Appendix A, "Overview of Generic Examination Concepts." Enclosure 2, Table E-2 provides a list of tasks from which JPMs supporting the plant walkthrough portion of the operating test could be selected. Enclosure 2 assesses the impact using Cold Licensing OJT evaluation methods has on uniform conditions and predictability as described in NUREG-1021, Appendix A.
2. An applicant's performance during a plant walkthrough JPM will be evaluated using the same alternative evaluation methods SNC uses when evaluating trainee performance under SNC's Cold Licensing Training Plan as approved and described in VEGP 3&4 Updated Final Safety Analysis Report (UFSAR), Section 13.2A.3, "Conduct of On-the-Job Training (OJT)."

SNC recommends termination of this exemption within 30 days after completion of the first VEGP Unit 3 refueling outage. This termination point aligns with UFSAR, Section 13.2A.6, "Cold Licensing Process Applicability and Termination."

This exemption is authorized by law, will not endanger life or property, and is otherwise in the public interest.

Enclosure 1 provides background information, related regulations and a discussion of the legality of the exemption.

Enclosure 2: provides details regarding components 1 and 2 of the exemption; describes how the administration of the plant walkthrough portion of the operating test maintains uniform conditions that are consistent and reliable; and, provides a table of high importance in-plant tasks.

Enclosure 3 provides detail supporting an approach to licensing operators early.

This letter contains no regulatory commitments as the exemption only affects activities regulated and performed by NRC Staff. It does not impact licensee activities approved under the current license.

SNC requests staff approval of this exemption by April 29, 2016.

Should you have any questions, please contact Michael Yox at (706) 848-6459.

Respectfully submitted,

SOUTHERN NUCLEAR OPERATING COMPANY

A handwritten signature in black ink, appearing to read "Karen D. Fili". The signature is written in a cursive, flowing style.

Karen D. Fili
KDF/MC/amm

- Enclosure 1: Plant Walkthrough Exemption Request
- Enclosure 2: In-Plant Tasks & Uniform Conditions
- Enclosure 3: Advantages to Licensing Operators Early

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Southern Nuclear Operating Company
Vogtle Electric Generating Plant (VEGP) Units 3 and 4

ND-16-0598

Enclosure 1

Plant Walkthrough Exemption Request

(This Enclosure consists of 11 pages, including this cover page)

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1.0 Background:

Pursuant to 10 CFR 55.11, "Specific Exemptions," Southern Nuclear Operating Company (SNC) requests NRC approval of an exemption from the plant walkthrough requirement of 10 CFR 55.45(b), "55.45 Operating Tests, Implementation and Administration" and, to the extent the NRC deems necessary, from requirements in NUREG-1021, "Operator Licensing Examination Standards for Power Reactors," which is incorporated by reference into 10 CFR 55.40(a) and (b), "Written Examinations and Operating Tests, Implementation."

1.1 Early Approach Needed for Licensing Operators

VEGP 3&4 "Updated Final Safety Analysis Report" (UFSAR), Section 13.1.2.1.1, states that prior to fuel arriving on site, the necessary positions for unit operations will be filled. Fuel receipt for VEGP Unit 3 is currently scheduled to start in the Fall of 2018. UFSAR, Section 13.2.1, "Licensed Operator Training," states, "Before initial fuel loading, the number of persons trained in preparation for Reactor Operator (RO) and Senior Reactor Operator (SRO) licensing examinations will be sufficient to meet regulatory requirements, with allowances for examination contingencies and without the need for planned overtime." Enclosure 3 provides more detail supporting an approach to licensing operators early.

1.2 JPMs versus Cold Licensing Plan

10 CFR 55.40(a) directs the Commission to use the criteria in NUREG-1021 to evaluate operating tests. 10 CFR 55.45(b) requires the operating test administered to licensed operator applicants to include a plant walkthrough. NRC Staff (Examiners) administer the plant walkthrough. NUREG-1021, section ES-301.B, states the walkthrough portion of the operating test consists of two parts, "Administrative Topics" and "Control Room/In-Plant Systems." NUREG-1021, section ES-301.D.4.a, makes a further distinction between the Control Room and In-Plant Systems. NUREG-1021, Appendix E, section D.1, states that Examiners will use job performance measures (JPMs) to evaluate the areas covered during the walkthrough test.

An exemption from the plant walkthrough requirement of 10 CFR 55.45(b) is necessary because it is not possible for Examiners to administer the plant walkthrough as described in NUREG-1021 given the current state of VEGP Unit 3 construction. To the extent the NRC concludes that an exemption is also needed from the plant walkthrough requirements in NUREG-1021, which is incorporated into 10 CFR 55.40(a) and (b) by reference, the same justifications provided herein to support SNC's requested exemption from 10 CFR 55.45(b) apply to an exemption from the requirements of 10 CFR 55.40(a) and (b).

In a Safety Evaluation Report dated December 5, 2008, NRC Staff approved Appendix A, "Cold License Training Plan," of NEI 06-13A, Revision 1, as an acceptable template for describing the licensed operator training program and the licensed operator cold license eligibility requirements for Combined License Applications (COLAs). NEI 06-13A, Revision 2 was issued to incorporate the NRC's December 5, 2008, Safety Evaluation Report.

The requirements of NEI 06-13A, Revision 2, were subsequently incorporated into UFSAR, Section 13.2A. Section 13.2A.3, "Conduct of On-the-Job Training (OJT)," states, "Until plant construction is completed, acceptable methods for the conduct of on-the-job training include discussion, simulation, and use of mockup equipment and virtual reality technology."

SNC requests that the exemption authorize NRC to conduct the in-plant portion of the operating test as follows:

1. NUREG-1021, ES-301, Section D.4.b allows for selecting from "the applicable K/A [knowledge/ability] catalog or the facility licensee's site-specific task list *one* task for which a JPM exists or can be developed." SNC developed a list of site-specific, in-plant tasks (Table E-2) from which a task might be randomly selected and from which a JPM might be developed and administered using cold licensing OJT methods (i.e., discuss, simulate, etc.).

A random selection will be made from In-Plant OJT tasks instead of from the Knowledge & Abilities (K/A) Catalog. The list of tasks will be sufficient in number and difficulty such that it meets the quantitative and qualitative acceptance criteria for maintaining acceptable levels of examination consistency, uniformity, and fairness as described in NUREG-1021, Appendix A, "Overview of Generic Examination Concepts." Table E-2 provides a list of tasks from which JPMs supporting the plant walkthrough portion of the operating test could be selected. Enclosure 2 assesses the impact using Cold Licensing OJT evaluation methods has on uniform conditions and predictability as described in NUREG-1021, Appendix A.

2. An applicant's performance during a plant walkthrough JPM will be evaluated using the same evaluation methods SNC uses when evaluating trainee performance under the Cold Licensing Training Plan (UFSAR, Section 13.2A.3).

1.3 Summary

The two-component exemption will facilitate the equitable and consistent administration of the operating test because In-Plant JPM sampling will require the same level of discrimination as is performed using a K/A Catalog. The development of JPMs for use during examinations will only be affected in so much as sampling will occur through a random sample taken directly from SNC's task list (Table E-2) instead of from a K/A catalog. The manner of sampling, item construction criteria, level of item bank use, levels of knowledge and difficulty, and the evaluation methodology employed during the examination will not impact examination reliability. SNC has determined that examination reliability will remain unaffected and consistent.

Employing Cold Licensing Training Plan evaluation methods during the administration of In-Plant JPMs will ensure the consistent and reliable administration of operating tests in a manner that evaluates candidates' knowledge, skills, and abilities with the same effectiveness as plant walkthroughs in an operating plant. These evaluation methods have

added value in that the NRC has already endorsed (NEI 06-13A) and approved (VEGP USFAR, Section 13.2A.3) them as acceptable for use by the licensee.

Accordingly, employing cold licensing evaluation methods in the administration of the operating test is an acceptable alternative for complying with Section 107 of the Atomic Energy Act of 1954 (42 USC 2137) as amended and is in keeping with the Commission's statutory responsibility to prescribe uniform conditions for operator licensing examinations.

This exemption will terminate within 30 days after completion of the first VEGP Unit 3 refueling outage. This termination point aligns with UFSAR, Section 13.2A.6, "Cold Licensing Process Applicability and Termination," and NEI 06-13A, Appendix A, Section 1.6, "Cold Licensing Process Applicability and Termination."

2.0 Regulations

This section provides a summary of regulations applicable to this exemption request.

2.1 10 CFR Part 55, "Operators' Licenses"

Section 55.40, "Implementation," states in part that:

(a) The Commission shall use the criteria in NUREG-1021, "Operator Licensing Examination Standards for Power Reactors," to evaluate the operating tests prepared by power reactor facility licensees pursuant to paragraph (b) of this section.

(b) Power reactor facility licensees may prepare, proctor, and grade the written examinations required by 55.41 and 55.43 and may prepare the operating tests required by 55.45, subject to the following conditions:

(1) Power reactor facility licensees shall prepare the required examinations and tests in accordance with the criteria in NUREG-1021 as described in paragraph (a) of this section.

Section 55.45(b), "Implementation--Administration," states in part that:

(b) The operating test will be administered in a plant walkthrough and in either:

(1) A simulation facility that the Commission has approved;

(2) A plant-referenced simulator; or

(3) The plant.

2.2 NUREG-1021, "Operator Licensing Examination Standards for Power Reactors"

The "Abstract" states in part that, *"The examination standards are intended to help NRC examiners and facility licensees better understand the processes associated with initial and requalification examinations. The standards also ensure the equitable and consistent administration of examinations for all applicants."*

ES-301, "Preparing Initial Operating Tests"

Section B, "Background," states in part that:

The plant walkthrough consists of two parts ("Administrative Topics" and Control Room/In-Plant Systems"), each of which focuses on specific knowledge and abilities required for licensed operators to safely discharge their assigned duties and responsibilities.

Section D, "Instructions," paragraph 1.c, states:

The facility licensee's site-specific task list may be used to supplement or override, on a case-by-case basis, selected individual items in the NRC's K/A catalogs. To maintain examination consistency, the site-specific task list shall not be used in place of the entire K/A catalog.

Section D, "Instructions," paragraph 4.a, differentiates between Control Room JPMs and In-Plant Systems JPMs. It further specifies that the In-Plant portion consists of 3 JPMs.

Appendix E, "Policies and Guidelines for Taking NRC Examinations"

Section D.1, "Walkthrough Test Guidelines," states in part that:

The walkthrough test covers control room systems, local system operations, and administrative requirements. The examiner will evaluate these areas using job performance measures (JPMs) and specific follow-up questions, as necessary.

2.3 NEI 06-13A, Rev 2, "Template for an Industry Training Program Description"

NEI 06-13A, Rev 2, was incorporated into the VEGP 3&4 UFSAR, Section 13.2A by License Document Change Request, LCDR 2013-047.

2.4 VEGP 3&4 UFSAR, Rev. 4.0, "Updated Final Safety Analysis Report"

Chapter 13, "Conduct of Operation"

Section 13.1.2.1.1, "Plant Manager," states:

"The minimum shift manning requirements are shown in Table 13.1-202. Prior to fuel arriving on site, the necessary positions for unit operations will be filled."

Table 13.1-202, "Minimum On-Duty Operations Shift Organization for Two-Unit Plan," indicates 3 ROs and 2 SROs as the minimum number on-duty.

Section 13.2.1, "Licensed Operator Training," states:

"Before initial fuel loading, the number of persons trained in preparation for RO and SRO licensing examinations will be sufficient to meet regulatory requirements, with allowances for examination contingencies and without the need for planned overtime."

Section 13.2A, "Cold License Training Plan"

Section 13AA.1.1.1.2.3, "Development and implementation of Staff Recruiting and Training Programs," states:

"Personnel selected to be licensed reactor operators and senior reactor operators along with other staff necessary to support the safe operation of the plant are hired with sufficient time available to complete appropriate training programs, and become qualified, and licensed, if required, prior to fuel being loaded in the reactor vessel."

Section 13.2A.3, "Conduct of On-the-Job Training (OJT)," states:

"Until plant construction is completed, acceptable methods for the conduct of on-the-job training include discussion, simulation, and use of mockup equipment and virtual reality technology."

Section 13.2A.6, "Cold Licensing Process Applicability and Termination," states in part that:

"The cold licensing process will terminate after completion of the first refueling outage."

3.0 Discussion

The criteria for granting specific exemptions from 10 CFR 55 regulations are stated in 10 CFR 55.11, "Exemptions." 10 CFR 55.11 states, "The Commission may, upon application by an interested person, or upon its own initiative, grant such exemptions from the requirements of the regulations in this part as it determines are authorized by law and will not endanger life or property and are otherwise in the public interest."

3.1 Authorized By Law

3.1.1 Uniform Conditions

The Commission has the authority to grant exemptions and such exemptions are authorized by law in accordance with the regulatory process of 10 CFR 55.11. Further, the exemption: will utilize a random selection from a pool of tasks sufficient in number and difficulty that it meets the quantitative and qualitative acceptance criteria for maintaining acceptable levels of examination consistency, uniformity, and fairness; brings JPM evaluation methods in alignment with the cold licensing OJT evaluation methods the NRC has already approved for SNC to use (as reflected in UFSAR, Section 13.2A.3); and, will only be in effect until after completion of the first VEGP Unit 3 refueling outage. This exemption is justified, is fully within the authority of the Commission to grant the relief requested in accordance with 10 CFR 55.11, and will not result in a violation of the Atomic Energy Act of 1954, as amended, or other laws.

At the present time it is not possible for Examiners to administer the plant walkthrough as described in NUREG-1021 given the current state of VEGP Unit 3 construction. Examiners use of OJT tasks developed under UFSAR, Section 13.2A.3 will enable Examiners to develop the JPMs necessary to administer a Plant Walkthrough that will be a consistent and reliable test of the applicant's knowledge. By employing this

method, the NRC will facilitate the equitable and consistent administration of the operating test because Examiners will, in effect, be utilizing a method similar to that which was used by SNC to train its operators while maintaining the effectiveness of the operating test. The manner of sampling, item construction criteria, level of item bank use, levels of knowledge and difficulty, and the evaluation methodology employed during the examination will not impact examination reliability. SNC has determined that examination reliability will remain unaffected and consistent. For this reason, this exemption will not impact the ability to maintain equitable and consistent testing under uniform conditions.

Enclosure 2 contains additional detail regarding uniform conditions.

3.2 Will Not Endanger Life or Property

3.2.1 UFSAR, Section 13.2A, "Cold License Training Plan:"

During the period this exemption is in place, SNC will continue to train its operators to operate the plant in accordance with the VEGP 3&4 UFSAR.

During construction of a new plant, the majority of the operating tests (i.e., the simulator operating test, the Control Room JPMs, and the Administrative Topic JPMs) can be performed independent of construction activities. Only the In-Plant Systems JPMs cannot be performed using existing evaluation methods until a sufficient amount of equipment is installed in the plant to ensure a quality testing environment. SNC's combined operating license includes in its UFSAR, a Cold Licensing Training Plan that describes acceptable methods the licensee can use to meet OJT requirements until plant construction is completed. 10 CFR 55.45(b) makes no provision for NRC Staff to administer the plant walkthrough portion of the operating test during plant construction. The requested exemption would reconcile the requirements of 10 CFR 55.45(b) to the Vogtle 3 & 4 licensing bases, thereby permitting examination of all 13 items described in 10 CFR 55.45(a). Each operator license applicant would still be evaluated based on In-Plant Systems JPMs, although the evaluation would involve using discussion, simulation, and use of mockup equipment and virtual reality technology rather than using a plant walkthrough.

The NRC endorsed (NEI 06-13A) and approved the cold license training plan (UFSAR, Section 13.2A.3) that incorporates these alternatives to walkthrough activities. During cold licensed operator training, applicants are trained to evaluate the safety functions of in-plant systems and evolutions that one might expect to see included in an operating test. The method SNC is recommending for administering the plant walkthrough portion of the operating test aligns with the cold license training plan contained in the license. For the same reasons that the use of alternative methods instead of the plant itself provides adequate training as approved in the Vogtle Units 3 and 4 cold license training plan, the use of those alternative methods

allows for an examination satisfying the intent of 10 CFR 55.45(a). Therefore, this exemption will not endanger life or property.

SNC recommends termination of this exemption within 30 days after completion of the first VEGP Unit 3 refueling outage. This termination point aligns with UFSAR, Section 13.2A.6, "Cold Licensing Process Applicability and Termination." This termination point was selected because regardless of when enough of the plant has been constructed and equipment installed to support normal JPM administration, licensed operator applicants will still be required to be trained and evaluated under the Cold Licensing Training Plan. Thought was given to selecting an earlier termination point such as the milestone represented by the 10 CFR 52.103(g) finding, which is scheduled to occur late in 2018. However, such a selection would, in turn, require amending the VEGP 3&4 license to terminate the Cold Licensing Training Plan.

- 3.2.2 10 CFR 51.22(c)(25)(vi)(E), "51.22 Criterion for categorical exclusion; identification of licensing and regulatory actions eligible for categorical exclusion or otherwise not requiring environmental review:"

The requested exemption meets the eligibility criteria for categorical exclusion set forth in 10 CFR 51.22(c)(25)(vi)(E).

The requested exemption does not make any changes to the facility or operating procedures and does not:

- a) involve a significant hazards consideration under the standards set forth in 10 CFR 50.92(c), in that it does not:
- alter the design, function or operation of any plant equipment. Therefore, granting this exemption would not increase the probability or consequence of any previously evaluated accident.
 - create any new accident initiators. Therefore, granting this exemption does not create the possibility of a new or different kind of accident from any accident previously evaluated.
 - exceed or alter a design basis or safety limit. Therefore, granting this exemption does not involve a significant reduction in a margin of safety.

Therefore, a finding of "no significant hazards considerations" is justified.

- b) involve any changes that would introduce any change to effluent types, affect any plant radiological or non-radiological effluent release quantities, or affect any effluent release paths, or the functionality of any design or operational features that are credited with controlling the release of effluents during plant operation. Therefore, it is concluded that the proposed exemption does not involve a significant change in the types or a significant increase in the amounts of any effluents that may be released offsite.

- b) affect any plant radiation zones, nor change any controls required under 10 CFR Part 20 that preclude a significant increase in occupational radiation exposure. Therefore, it is concluded that the proposed exemption does not involve a significant increase in individual or cumulative occupational radiation exposure.

Therefore, the exemption meets the eligibility criteria for categorical exclusion set forth in 10 CFR 51.22(c)(25).

Pursuant to 10 CFR 51.22(b) no environmental impact statement or environmental assessment need be prepared in connection with the issuance of this exemption.

3.3 Otherwise in the Public Interest

The proposed exemption is in the public interest because it facilitates more effective plant operator testing for initial license applicants by aligning (as described in section 1.0 above) the administration of the plant walkthrough portion of the operating test with the cold license training methods the NRC previously approved and which are described in SNC's license. It is also in keeping with the NRC's mandate to "*ensure the equitable and consistent administration of examinations for all applicants*" in that Examiners would conduct the plant walkthrough portion of the operating test utilizing the same cold licensing alternatives the NRC has already evaluated as acceptable for the conduct of on-the-job training, while maintaining the consistency and reliability of the operating tests (see Enclosure 2).

The exemption is in keeping with the NRC's Principles of Good Regulation, including "Clarity", which states that regulations should be coherent, logical, and practical, and "Reliability", which states that regulations should be based on the best available knowledge from research and operational experience. The requested exemption ensures that the plant walkthrough portion of the operating test can meet the NRC objective of demonstrating an understanding of, and ability to perform, the actions necessary to accomplish a representative sample of the 13 criteria within 10 CFR 55.45(a). Approval of the exemption ensures that a logical and practical regulatory path forward is maintained to support the training and licensing of well-qualified operators who will be prepared to support the extensive pre-operational and startup testing associated with new construction. This is achieved by allowing operating examinations to proceed prior to substantial completion of the plant, while still ensuring that the candidates' knowledge is sufficient to support safe operation. Approval of the exemption also ensures stability in the nuclear operational and planning processes by allowing training and licensing of operators to follow the path to cold licensing outlined by industry and NRC.

4.0 **Conclusion**

The Commission has the authority under the law to grant this exemption from the plant walkthrough portion of the operating test. The exemption would not endanger life or property and would be in the public interest.

This exemption would not impact the ability to maintain equitable and consistent testing under uniform conditions.

5.0 References

1. Final Safety Evaluation for Topical Report NEI 06-13A, "Template for an Industry Training Program Description," Revision 1, dated December 5, 2008 [ML082950140]
2. VEGP 3&4 Updated Final Safety Analysis Report (UFSAR), Revision 4.0
3. NEI 06-13A, Rev 2, "Template for an Industry Training Program Description"
4. NUREG-1021, Rev 10, "Operator Licensing Examination Standards for Power Reactors"

Southern Nuclear Operating Company
Vogtle Electric Generating Plant (VEGP) Units 3 and 4

ND-16-0598

Enclosure 2

In-Plant Tasks & Uniform Conditions

(This Enclosure consists of 14 pages, including this cover page)

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Table E-2: In-Plant Task List

1.0 Summary:

Section 107 of the Atomic Energy Act of 1954 (42 USC 2137) as Amended states that the Commission shall prescribe uniform conditions for licensing individuals as operators. 10 CFR 55.40(a) directs the Commission to use the criteria in NUREG-1021, "Operator Licensing Examination Standards for Power Reactors," to evaluate operating tests. ES-201, Section B of NUREG-1021 states, "Licensees may propose alternatives to the examination criteria contained here and evaluate how the proposed alternatives provide an acceptable method of complying with the Commission's regulations. The NRC staff will review any proposed alternatives and make a decision regarding their acceptability. The NRC will not approve any alternative that would compromise the agency's statutory responsibility to prescribe uniform conditions for the operator licensing examinations."

Appendix A, Section B of NUREG-1021 states, "If the internal and external attributes of examinations are allowed to vary significantly, the uniform conditions that are required by Section 107 of the Atomic Energy Act of 1954, as amended, and the basis upon which the NRC's licensing decision rest are challenged. The NRC must reasonably control and structure the examination processes to ensure the integrity of the licenses it issues." The NUREG goes on to provide discussions to clarify the intent of the NRC's examination criteria which is designed to decrease the likelihood of inconsistencies among examinations, particularly with regard to the level of knowledge and difficulty. Section 3 of this enclosure is included to show that this exemption establishes an alternative set of protocols to ensure that examinations administered during plant construction are administered successfully and consistently.

NUREG-1021, ES-301, Section D.4.b allows for selecting from "the applicable K/A [knowledge/ability] catalog or the facility licensee's site-specific task list *one* task for which a JPM exists or can be developed." SNC developed a list of site-specific, in-plant tasks (Table E-2) from which a task might be randomly selected and from which a JPM might be developed and administered using cold licensing OJT methods (i.e., discuss, simulate, etc.).

The two-component exemption will facilitate the equitable and consistent administration of the operating test because In-Plant JPM sampling will require the same level of discrimination as is performed using a K/A Catalog. The development of JPMs for use during examinations will only be affected in so much as sampling will occur through a random sample taken directly from SNC's task list (Table E-2) instead of from a K/A catalog. The manner of sampling, item construction criteria, level of item bank use, levels of knowledge and difficulty, or the evaluation methodology employed during the examination will not impact examination reliability. SNC has determined that examination reliability will remain unaffected and consistent.

SNC has determined that JPMs can be created from the tasks in Table E-2 and that adequate evaluations can be performed using the Cold Licensing alternative methods. Employing Cold Licensing Training Plan evaluation methods during the administration of In-Plant JPMs will ensure the consistent and reliable administration of operating tests in a

manner that evaluates candidates' knowledge, skills, and abilities with the same effectiveness as plant walkthroughs in an operating plant. These evaluation methods have added value in that the NRC has already endorsed/approved them as acceptable for use by the licensee.

Accordingly, employing cold licensing evaluation methods in the administration of the operating test is an acceptable alternative for complying with Section 107 of the Atomic Energy Act of 1954 (42 USC 2137) as amended and is in keeping with the Commission's statutory responsibility to prescribe uniform conditions for operator licensing examinations.

SNC recommends termination of this exemption within 30 days after completion of the first VEGP Unit 3 refueling outage. This termination point aligns with UFSAR, Section 13.2A.6, "Cold Licensing Process Applicability and Termination," and NEI 06-13A, Appendix A, Section 1.6, "Cold Licensing Process Applicability and Termination."

1.1 Normal JPM Administration

Normally, administration of the plant walkthrough portion of an operating test at a site with an operating reactor is to conduct in-plant JPMs on location in the plant. This enables the Examiner to evaluate the applicant's knowledge and familiarity with the plant and equipment locations. The performance of the JPM then occurs at or near the location where the applicant would take the action being evaluated. In-plant JPMs rarely require the applicant to actually perform the activity being evaluated because doing so would result in operation of the plant by an un-licensed operator. That is why NUREG-1021, ES-301, Attachment 2, page 21 requires that the Examiner "*actually observe the applicant perform an action, or in the case of a JPM in the plant, describe exactly what it takes to perform an action.*"

1.2 Proposed Cold Licensing JPM Administration

Until plant construction is completed, UFSAR, Section 13.2A.3 allows the licensee to conduct on-the-job training using discussion, simulation, and use of mockup equipment and virtual reality technology. SNC reviewed the list of tasks licensed operators might be expected to perform, either in full or in part, outside the control room (i.e., in-plant) to determine if an applicant's performance could be evaluated using the methods just described. SNC determined that applicants could be effectively evaluated using cold licensing OJT methods. The only real deviation from the methods currently employed by Examiners is that the questions Examiners typically ask applicants will now be asked in a location other than "in-plant." The questions will remain the same, but some additional description of plant layout and equipment location will be required of the applicant.

NUREG-1021, ES-301, Section D.4.b allows for selecting from "the applicable K/A [knowledge/ability] catalog or the facility licensee's site-specific task list *one* task for which a JPM exists or can be developed." SNC developed a list of site-specific, in-plant tasks (Table E-2) from which a task might be randomly selected and from which a JPM might be developed and administered using cold licensing OJT methods (i.e., discuss, simulate, etc.).

SNC requests that the exemption authorize NRC to conduct the in-plant portion of the operating test as follows:

1. A random selection will be made from In-Plant OJT tasks instead of from the Knowledge & Abilities (K/A) Catalog. The list of tasks must be sufficient in number and difficulty that it meets the quantitative and qualitative acceptance criteria for maintaining acceptable levels of examination consistency, uniformity, and fairness as described in NUREG-1021, Appendix A, "Overview of Generic Examination Concepts." Table E-2 provides a list of tasks from which JPMs supporting the plant walkthrough portion of the operating test could be selected. Enclosure 2 assesses the impact using Cold Licensing OJT evaluation methods has on uniform conditions and predictability as described in NUREG-1021, Appendix A.
2. An applicant's performance during a plant walkthrough JPM will be evaluated using the same evaluation methods SNC uses when evaluating trainee performance under the Cold Licensing Training Plan (UFSAR, Section 13.2A.3).

1.3 Task List

Using a Systematic Approach to Training, SNC conducted a needs analysis, job analysis, and task analysis to identify on-the-job training activities licensed operators might be expected to perform, either in full or in part, outside the control room (i.e., in-plant). A set of tasks was identified as a result of this process. The job task analysis (JTA) focused on delineation of essential knowledge and abilities (K/As) and included difficulty-importance-frequency (DIF) analysis of each task. DIF ratings were then assigned. Tasks with DIF ratings greater than 2.5 were deemed to be challenging enough to warrant further screening.

Tasks with DIF ratings greater than 2.5 were then screened for their suitability for evaluation using the Cold Licensing alternate methods. Most of these tasks were determined to be suitable for evaluation using the Cold Licensing alternate methods. Some were not. The reason some tasks were unsuitable was because no procedure had, as yet, been developed to support performing these tasks. This is important because without a procedure, a task can neither be performed nor evaluated. SNC evaluated the set of tasks having procedures and determined that the total number was adequate to meet the validity and reliability criteria set forth in NUREG-1021, Appendix A. Section 3 of this enclosure describes in greater detail the criteria SNC used to make this determination.

To summarize, SNC reviewed the group of tasks that: had DIF ratings greater than 2.5; had been found suitable for evaluation using the Cold Licensing alternate methods; and, could be performed using a procedure. SNC determined that the number of tasks that was left following this screening process was sufficient to preclude predictability and that no applicant would be able to predict what task would appear on an exam. The set of tasks that met this full set of screening criteria is listed in Table E-2.

It should also be noted that the JTA process described above is an iterative process. As the plant is constructed, SNC expects to develop and approve new procedures and instructions. Commensurate with the JTA process, new tasks will continue to be identified and rated. In some ways, this process mirrors the current development and addition of new K/As that continue to be added to NUREG-2103, the Westinghouse AP1000 K/A Catalog currently open for comment. SNC reserves the right to add these additional tasks, contingent upon their passing the screening criteria, to the list reflected in Table E-2. The updated task list will be available for each subsequent exam.

1.4 Summary

The two-component exemption will facilitate the equitable and consistent administration of the operating test because In-Plant JPM sampling will require the same level of discrimination as is performed using a K/A Catalog. The development of JPMs for use during examinations will only be affected in so much as sampling will occur through a random sample taken directly from SNC's task list instead of from a K/A catalog. The manner of sampling, item construction criteria, level of item bank use, levels of knowledge and difficulty, or the evaluation methodology employed during the examination will not impact examination reliability. SNC has determined that examination reliability will remain unaffected and consistent.

Employing Cold Licensing Training Plan evaluation methods during the administration of In-Plant JPMs will ensure the consistent and reliable administration of operating tests in a manner that evaluates candidates' knowledge, skills, and abilities with the same effectiveness as plant walkthroughs in an operating plant. These evaluation methods have added value in that the NRC has already endorsed/approved them as acceptable for use by the licensee.

Accordingly, employing cold licensing evaluation methods in the administration of the operating test is an acceptable alternative for complying with Section 107 of the Atomic Energy Act of 1954 (42 USC 2137) as amended and is in keeping with the Commission's statutory responsibility to prescribe uniform conditions for operator licensing examinations.

This exemption will terminate within 30 days after completion of the first VEGP Unit 3 refueling outage. This termination point aligns with UFSAR, Section 13.2A.6, "Cold Licensing Process Applicability and Termination."

2.0 Regulations

This section provides a summary of regulations applicable to this exemption request.

2.1 Atomic Energy Act of 1954 (42 USC 2137) as Amended

Section 107, "Operators' Licenses," states in part that:

The Commission shall prescribe uniform conditions for licensing individuals as operators.

2.2 NUREG-1021, "Operator Licensing Examination Standards for Power Reactors"

ES-201, "Initial Operator Licensing Examination Process"

Section B, "Background," states in part that:

Licensees may propose alternatives to the examination criteria contained here and evaluate how the proposed alternatives provide an acceptable method of complying with the Commission's regulations. The NRC staff will review any proposed alternatives and make a decision regarding their acceptability. The NRC will not approve any alternative that would compromise the agency's statutory responsibility to prescribe uniform conditions for the operator licensing examinations.

ES-301, "Preparing Initial Operating Tests"

Section D.4.b states in part that:

For each system selected for evaluation, select from the applicable K/A catalog or the facility licensee's site-specific task list one task for which a JPM exists or can be developed.

Appendix A, "Overview of Generic Examination Concepts"

Section B, "Background," states in part that:

If the internal and external attributes of examinations are allowed to vary significantly, the uniform conditions that are required by Section 107 of the Atomic Energy Act of 1954, as amended, and the basis upon which the NRC's licensing decision rest are challenged. The NRC must reasonably control and structure the examination processes to ensure the integrity of the licenses it issues.

The discussions herein clarify the intent of the NRC's examination criteria, thereby decreasing the likelihood of inconsistencies among examinations, particularly with regard to the level of knowledge and difficulty.

Sections C and D contain discussions of examination validity and reliability referred to in Section B.

Section C, "Validity," states:

For a test to be considered valid, it must be shown to measure that which it is intended to measure. In the case of the NRC examinations, the intent is to measure the examinee's knowledge and ability, such that those who pass will be able to perform the duties of a reactor operator (RO) or senior reactor operator (SRO) to ensure the safe operation of the plant.

Section D, "Reliability," states:

Examinations should differ only in the specific content covered, not in their developmental processes, manner of sampling, item construction criteria, level of item bank use, or their levels of knowledge and difficulty. The standardization of the process creates consistency of measurement.

3.0 Validity

3.1 Content Validity (NUREG-1021, Appendix A, Section C.1)

Establish a Link to Job Duties - NUREG-2103, "Knowledge and Abilities Catalog for Nuclear Power Plant Operators: Westinghouse AP1000 Pressurized-Water Reactors," has been issued for public comment, but will not be accepted until December 31, 2016. In order to develop valid examinations, SNC must utilize some methodology to establish a link to job duties required by licensed operators. SNC accomplished this by conducting a Job Task Analysis (JTA). The JTA process SNC employed focused on delineation of essential job duties that licensed operators might be expected to perform outside the control room. The JTA process resulted in a set of tasks that appear in Table E-2. Utilizing cold licensing evaluation methods during the administration of in-plant walkthrough JPMs should not, and does not, alter the method in which JPMs are selected or sampled. For this reason, utilizing cold licensing evaluation methods does not impact the validity of examination content.

Use a Sample Plan - The development of test specifications is not impacted by using the pool of essential in-plant tasks instead of the K/A Catalog. The sample plan will simply indicate what portion of items or questions will deal with each task versus each K/A. Systematic sampling will remain unaffected because the pool of tasks is large enough that the sample will be evenly distributed. Since the each task has been rated on its importance, content validity is maintained. The pool that tasks that are sampled from is large enough to prevent focusing upon any particular segment of instruction, yet not so much as to disconnect the instructional process from the testing process.

3.2 Operational Validity (NUREG-1021, Appendix A, Section C.2)

The tasks listed in Table E-2 were developed to address the mental and psychomotor activities that licensed operators might be expected to perform outside the control room. Only tasks that required higher cognitive levels or comprehension and analysis were included in Table E-2. Any questions, discussions, or other cold licensing methods used for task evaluation will still differentiate between competent and less-than competent applicants and will not impact operational validity.

3.3 Discrimination Validity (NUREG-1021, Appendix A, Section C.3)

Criterion-Referenced Testing - *Criterion-Referenced Testing* will not be affected because the pool of tasks has been screened such that both the individual tasks and the overall examination into which they are included will discriminate between applicants who have and have not mastered the required knowledge, skills, and abilities. Additionally, for each of the three tasks selected for the in-plant portion of the examination, the incorporation of alternate

paths during development of the three corresponding JPMs (either “faulted” or not “faulted”) will elevate cognitive levels. Any questions, discussions, or other cold licensing methods used for task evaluation will still discriminate at an agreed-upon minimal measure of knowledge or performance.

For this reason, a criterion-referenced test remains unaffected and achievable because both the individual JPMs and the overall examination will discriminate between applicants who have and have not mastered the required knowledge, skills, and abilities.

Cut Scores - Any questions, discussions, or other cold licensing methods used for evaluating JPMs developed from a random selection of discriminating tasks (Table E-2) vs from a random selection of K/As will not impact the ability to set overall *Cut Scores* at 80 percent such that the minimally qualified applicant will be able to obtain a score of at least 80 percent.

Level of Knowledge Versus Level of Difficulty - Only tasks having a level of difficulty of 2.5 or higher were selected for inclusion into Table E-2. Although the initial task analysis included identifying the knowledge (cognitive component) necessary for performance of the task, no knowledge value was assigned. In-plant tasks generally involve lower cognitive levels and the application of additional cognitive screening would so reduce the pool of tasks that the additional screening would outweigh the resulting negative impact on operational validity (i.e., very small task selection pool). However, once each of the three tasks have been selected and alternate paths incorporated during JPM development, any questions, discussions, or other cold licensing methods used for task evaluation will still discriminate between safe and unsafe operators. For this reason, discrimination validity is not affected.

Cut Scores and the Level of Difficulty - Using JPMs developed from a random selection of discriminating tasks vs from a random selection of K/As will not impact the ability to set cut scores at 80 percent while achieving a level of difficulty range of 70 to 90 percent for individual JPMs. Additionally, questions, discussions, or other cold licensing methods used for task evaluation will continue to incorporate the concepts described in NUREG-1021, Appendix A, Section C.3.d, for setting item difficulty, thereby maintaining a functional level of discrimination with a minimal pass score of 80 percent. For this reason, cut scores and level of difficulty will not be affected.

Use of Item Banks - The Plant Walkthrough portion of an operating test requires the administration of three JPMs. SNC recognizes that when examination banks are small, discrimination is reduced because the cognitive level at which the examinees are tested could decrease to the simple recognition level. NUREG-1021 states that when the bank of items from which the examination is drawn is known to the examinees before the examination (such as occurs by their inclusion into this document), the examination is said to be highly predictable. Predictable examinations tend not to discriminate because what is being tested is simple recognition of the answer. However, the tasks listed in Table E-2 represent the sum total of higher level DIF In-Plant tasks a licensed operator might be expected to perform on an AP-1000 reactor plant. Additionally, once each of the three tasks have been selected, the incorporation of alternate and/or “faulted” paths during the

development of the JPMs will elevate cognitive levels. Therefore, using JPMs developed from a random selection of discriminating tasks vs selection from a random selection of K/As will not impact discrimination validity. Any questions, discussions, or other cold licensing methods used for task evaluation will have no impact on how the examination bank is used.

4.0 Reliability

The two-component exemption will facilitate the equitable and consistent administration of the operating test because In-Plant JPM sampling will require the same level of discrimination as is performed using a K/A Catalog. The development of JPMs for use during examinations will only be affected in so much as sampling will occur through a random sample taken directly from SNC's task list instead of from a K/A catalog. The manner of sampling, item construction criteria, level of item bank use, levels of knowledge and difficulty, or the evaluation methodology employed during the examination will not impact examination reliability. SNC has determined that examination reliability will remain unaffected and consistent.

5.0 Conclusion

Employing Cold Licensing Training Plan evaluation methods during the administration of In-Plant JPMs will ensure the consistent and reliable administration of operating tests in a manner that evaluates candidates' knowledge, skills, and abilities with the same effectiveness as plant walkthroughs in an operating plant. These evaluation methods have added value in that the NRC has already endorsed/approved them as acceptable for use by the licensee.

Accordingly, employing cold licensing evaluation methods in the administration of the operating test is an acceptable alternative for complying with Section 107 of the Atomic Energy Act of 1954 (42 USC 2137) as amended and is in keeping with the Commission's statutory responsibility to prescribe uniform conditions for operator licensing examinations.

6.0 References

1. NUREG-1021, Rev 10, "Operator Licensing Examination Standards for Power Reactors"

Table E-2
In-Plant Task List

<u>ID</u>	<u>Task Description</u>	<u>Task D,I,F^[1]</u>	<u>Outside MCR^[2]</u>
AP-LT-R-CCS.015	Perform the required local actions in the event of a loss of Component Cooling Water System (CCS)	3.00, 4.00, 1.00	100%
AP-LT-R-ECS.002	Restore a motor control center (MCC) bus to service	3.33, 3.33, 1.33	75%
AP-LT-R-ECS.008	De-energize a motor control center (MCC) bus	3.00, 3.00, 1.80	80%
AP-LT-R-GCS.001	Start-up the Stator Water Cooling System	3.50, 3.50, 1.00	75%
RO-ELE-ZAS-001-02	Place/remove the generator condition monitor to/from service	2.80, 3.00, 1.80	100%
RO-ELE-ZOS-002-02	Operate the diesel generator	3.00, 3.30, 2.40	100%
RO-ELE-ZOS-002-04	Operate the diesel-starting air compressor	2.80, 2.70, 2.20	100%
RO-ELE-ZOS-002-05	Synchronize the diesel generator with a loaded bus	3.00, 3.33, 3.00	100%
RO-INC-DAS-007	Block/Unblock Diverse Actuation System (DAS) sensor	2.50, 3.00, 1.00	100%
RO-INC-DDS-008-00	Transfer function from the Main Control Room to the Remote Shutdown Workstation	3.33, 4.00, 1.00	100%
RO-INC-DDS-009-00	Operate from Remote Shutdown WorkStation	3.00, 4.00, 1.00	100%
RO-INC-IIS-003	Start up the In Core Instrument System	3.00, 2.50, 1.00	100%
RO-INC-PMS-001-02	Manually block, unblock, and reset reactor trip and ESAS functions using dedicated switches at the Remote Shutdown Workstation (RSW)	3.66, 4.33, 1.00	100%
RO-INC-PMS-010-00	Manually initiate system-level actuations using dedicated switches on the RSW (Rx trip, turbine trip, and non-onerous actuations)	2.80, 4.30, 1.40	100%
RO-LT-R-IDS.001	Operate the Class 1E DC and UPS System (IDS)	3.00, 3.30, 3.60	75%
RO-LT-R-IDS.003	Remove a Class 1E inverter from service and operate in maintenance bypass mode using backup power source	3.00, 3.66, 1.00	100%
RO-PRI-CNS-001-00	Perform Containment System (CNS) surveillance testing	3.00, 3.80, 2.20	100%
RO-PRI-CVS-001-00	Perform lineups of the Chemical and Volume Control System (CVS)	2.90, 3.60, 2.80	75%
RO-PRI-CVS-003-02	Align CVS demineralizers	3.33, 4.00, 4.00	75%
RO-PRI-CVS-003-06	Add chemicals to the Reactor Coolant System (RCS)	3.20, 3.70, 3.00	60%
RO-PRI-PCS-001-02	Fill the PCCWST from Demineralized Water Transfer and Storage System (DWS)	3.00, 3.50, 2.00	75%
RO-PRI-PCS-001-03	Add chemicals to the Passive Containment Cooling Water Storage Tank (PCCWST)	3.00, 3.60, 2.10	100%
RO-PRI-PCS-001-04	Fill the PCCWST from alternate water supply	3.00, 3.50, 2.10	75%
RO-PRI-PSS-004-00	Align the Primary Sampling System	2.60, 3.40, 2.10	75%
RO-PRI-PXS-001-04	Fill, vent, and align the Passive Residual Heat Removal Heat Exchanger (PRHR HX)	3.67, 4.00, 2.00	75%
RO-PRI-RNS-001-07	Perform Normal Residual Heat Removal System (RNS) fill and vent	3.00, 4.00, 1.00	75%
RO-PRI-VLS-004-00	Verify operability of each hydrogen igniter during each refueling outage	3.00, 3.67, 1.00	75%

Table E-2 (continued)

ID	Task Description	Task D,I,F^[1]	Outside MCR^[2]
RO-PRO-AOP-013-00	Respond to control room evacuation using AOP-601	4.00, 4.00, 1.00	75%
RO-PRO-AOP-057-00	Respond to a loss of remote shutdown workstation using AOP-602	4.00, 4.00, 1.00	100%
RO-SEC-CDS-002-05	Filling/venting an isolated condensate pump.	3.00, 3.00, 2.00	70%
RO-SEC-CDS-002-06	Isolate a condensate pump with vacuum in the condenser	3.00, 4.00, 2.00	100%
RO-SEC-CDS-002-07	Fill and vent the Condensate System (CDS)	2.80, 3.10, 1.30	70%
RO-SEC-FWS-002-03	Main Feedwater Pump Fill and Vent at Power	3.50, 3.00, 1.00	100%
RO-SEC-FWS-002-04	Fill and vent startup feedwater	3.00, 3.00, 1.00	70%
RO-SEC-FWS-002-05	Fill and vent main feedwater	3.00, 3.00, 1.00	70%
RO-SEC-FWS-002-06	Startup and operate a startup feedwater pump	3.00, 3.33, 1.33	75%
RO-SEC-HDS-001-00	Fill, Vent, and MRS Shell Drain Tank Pump Startup for Heater Drain System (HDS)	3.00, 3.00, 1.00	100%
RO-SEC-HDS-003-02	Remove and return to service the MSR Shell Drain Tank Pumps	2.66, 2.66, 1.66	80%
RO-SUP-CAS-003-02	Enable/stop the high-pressure air compressor	2.67, 3.00, 2.67	100%
RO-SUP-CMS-003-00	Operate the Condenser Air Removal System (CMS)	2.80, 2.90, 2.90	90%
RO-SUP-CMS-003-02	Place the swing vacuum pump package in standby	2.60, 2.90, 1.40	80%
RO-SUP-CMS-004-00	Shutdown the CMS	2.40, 2.80, 1.40	100%
RO-SUP-FPS-001-00	Lineup the Fire Protection System (FPS)	2.20, 2.80, 1.40	100%
RO-SUP-FPS-002-00	Operate the FPS	2.50, 2.70, 2.50	100%
RO-SUP-FPS-002-01	Startup the Fire Protection System	2.50, 2.90, 1.30	100%
RO-SUP-HSS-001-00	Startup the HSS	2.80, 3.30, 1.30	75%
RO-SUP-LOS-001-00	Start-up the Main Turbine and Generator Lube Oil System (LOS)	2.70, 3.40, 1.30	75%
RO-SUP-SFS-015-00	Make up to the spent fuel pool from the Demineralized Water Transfer and Storage System (DWS)	2.70, 3.20, 2.50	70%
RO-SUP-TOS-008-01	Place Electro-Hydraulic Fluid Supply Pump in Service	3.00, 3.00, 1.00	70%
RO-SUP-TOS-008-03	Swap EHC Fluid Coolers	3.00, 4.00, 3.00	100%
RO-SUP-TOS-008-04	Place TOS Purification in service	3.00, 4.00, 1.00	75%
RO-SUP-WGS-002-00	Start-up the WGS	3.66, 3.33, 1.33	75%
RO-SUP-WLS-001-01	Start-up the vacuum degasifier	3.33, 3.00, 1.33	70%
RO-SUP-WLS-002-04	Perform a liquid radwaste release	2.50, 3.00, 3.20	60%
RO-SUP-WLS-003-00	Shutdown the vacuum degasifier	2.66, 2.66, 1.33	70%
RO-VNT-VBS-001-18	Remove division A/C or B/D Class 1E Electrical Room HVAC Subsystems from service	2.30, 2.90, 1.50	70%
RO-VNT-VES-004-00	Place Nuclear Island Nonradioactive Ventilation System (VBS) ancillary fans in service within 72 hours of an accident	4.33, 4.33, 1.00	70%
AP-NL-CAS.001	Locally Perform Compressed and Instrument Air System (CAS) Instrument Air Subsystem Startup	3.00, 2.70, 1.50	NLO
AP-NL-CCS.002	Place One CCS Pump and Hx in Service	2.80, 3.30, 2.30	NLO
AP-NL-CVS.010	Isolate Dilution Flow Paths	2.80, 3.30, 1.70	NLO

Table E-2 (continued)

<u>ID</u>	<u>Task Description</u>	<u>Task D,I,F^[1]</u>	<u>Outside MCR^[2]</u>
AP-NL-ECS.001	Startup and Shutdown the Ancillary Diesel Generator (D/G)	2.80, 3.00, 1.20	NLO
AP-NL-FPS.001	Align FPS Inside Containment	2.60, 2.80, 1.80	NLO
AP-NL-FPS.004	Locally Fill Primary Fire Water Tank	2.60, 2.70, 2.30	NLO
AP-NL-FPS.005	Locally Fill Secondary Fire Water Tank	2.70, 2.60, 2.30	NLO
AP-NL-FPS.007	Start Motor Driven Fire Pump	2.80, 2.60, 2.70	NLO
AP-NL-FPS.008	Start Diesel Driven Fire Pump	2.80, 2.60, 2.80	NLO
AP-NL-FPS.013	Fill the Fire Pump Diesel Fuel Day Tank	2.60, 2.60, 2.50	NLO
AP-NL-IDS.003	Transfer 125 VDC System to the Spare Charger / Battery	2.80, 3.70, 1.30	NLO
AP-NL-IDS.007	Place Inverters and AC Distribution Panels in Service	3.00, 3.50, 1.90	NLO
AP-NL-IDS.008	Place Reg Trans and AC Distribution Panels in Service	3.00, 3.70, 1.70	NLO
AP-NL-MTS.001	Locally engage the Turning Gear	3.20, 3.30, 1.30	NLO
AP-NL-PCS.003	Fill the PCCWST from Passive Containment Cooling Ancillary Water Storage Tank (PCCAWST)	2.90, 2.80, 1.60	NLO
AP-NL-PCS.004	Fill the PCCWST from DWS	2.60, 2.70, 1.20	NLO
AP-NL-PCS.006	Fill the PCCWST from Alternate Water Supply	2.70, 2.80, 1.20	NLO
AP-NL-PCS.009	Fill the PCCAWST from DWS	2.90, 2.80, 1.50	NLO
AP-NL-PCS.013	Align the FPS from PCCAWST	3.10, 2.80, 1.20	NLO
AP-NL-PCS.014	Supply water directly to the Passive Containment Cooling System (PCS) Distribution Bucket	3.30, 3.00, 1.30	NLO
AP-NL-PCS.017	Refill the PCCWST using the FPS	3.50, 3.80, 1.20	NLO
AP-NL-PXS.008	Operate the In-Containment Refueling Water Storage Tank (IRWST) Discharge Line and Containment Recirc Line	2.70, 3.50, 1.30	NLO
AP-NL-PXS.010	Place an Accumulator in Service	2.80, 4.00, 1.50	NLO
AP-NL-RCS.002	Operate an Reactor Coolant Pump (RCP) Variable Frequency Drive (VFD) Breaker	3.30, 4.30, 1.50	NLO
AP-NL-RNS.003	Cool the IRWST using RNS	3.10, 3.40, 1.20	NLO
AP-NL-RNS.004	Place RNS from service for Shutdown cooling	3.50, 4.50, 1.20	NLO
AP-NL-SFS.006.1	Fill the Refueling Cavity from the In-Containment IRWST and establish Refueling Cavity Recirculation	2.90, 3.70, 1.00	NLO
AP-NL-SFS.006.2	Drain the Refueling Cavity to the IRWST and establish IRWST Recirculation	3.20, 3.70, 1.00	NLO
AP-NL-SFS.006.3	Drain the Refueling Cavity to the Containment Sump	2.50, 3.80, 1.00	NLO
AP-NL-SFS.008.1	Transfer water from the Spent Fuel Pool (SFP) to the Refueling Cavity	3.20, 4.20, 1.20	NLO
AP-NL-SFS.008.2	Transfer water from the SFP to the IRWST	3.00, 4.20, 1.20	NLO
AP-NL-SFS.009	Transfer water from the Cask Loading Pit (CLP), Fuel Transfer Canal (FTC), or Cask Washdown Pit (CWP) to the SFP	3.00, 3.80, 1.20	NLO
AP-NL-SFS.010	Transfer water from the FTC to the CLP or CWP	3.00, 3.70, 1.20	NLO
AP-NL-SFS.012	Add water to the SFP from CVS	2.80, 3.30, 1.50	NLO

Table E-2 (continued)

<u>ID</u>	<u>Task Description</u>	<u>Task D,I,F^[1]</u>	<u>Outside MCR^[2]</u>
AP-NL-SFS.013	Add water to the SFP from DWS	2.50, 3.20, 1.80	NLO
AP-NL-VES.001	Recharge Main Control Room Emergency Habitability (VES) Air Storage Tanks	3.00, 3.70, 1.30	NLO
AP-NL-VFS.001	Remove Smoke from Containment	2.90, 3.00, 1.00	NLO

Note 1: D,I,F means Difficulty, Importance, Frequency

Note 2: "Outside MCR" is the approximate percentage of the task that is performed outside the Main Control Room (MCR).

NLO: Non-licensed operator task. 100% of task is performed outside the MCR.

Southern Nuclear Operating Company
Vogtle Electric Generating Plant (VEGP) Units 3 and 4

ND-16-0598

Enclosure 3

Advantages to Licensing Operators Early

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

Discussion:

SNC developed long term training schedules to support licensing of personnel necessary to support the Vogtle Units 3&4 fuel load milestone. The following assumptions were included in development of the training schedules:

- A need of 45 licensed operators was targeted for VEGP Unit 3 fuel load
- An additional 30 licensed operators was targeted for Unit 4 fuel load
- U3 fuel load is currently scheduled for Q4 2018, U4 fuel load lags approximately one year
- Initial license classes are approximately 18 months in duration
- Physical and human resource limitations dictate the number of students per class and the overlap between classes
 - Simulator training has the greatest impact; students must be trained in crew sizes that mimic actual control room staffing levels
- Limitations exist to the number of students that can be examined in a single NRC exam
 - The operating test is the limiting factor; a number of students greater than the number that can be tested in a single day would result in having to develop a second operating test for the same NRC exam
- Student throughput assumptions were based on a 70% pass rate
- The personnel that will be licensed are also the same personnel that will be relied on to perform preoperational testing
 - It is not practical to have large numbers of personnel in license classes immediately prior to fuel load, as this is when the preoperational testing resource demands will be the greatest

These assumptions resulted in the determination that a minimum of 3 license classes with 24 candidates each taking an NRC exam were needed prior to VEGP Unit 3 fuel load and that these classes would need to start well before fuel load. This number provides some margin to the actual licenses needed, and also provides for personnel to support preoperational testing while the 3rd class is in progress. The classes were overlapped to the maximum extent possible, with the limitation being that two classes cannot be in simulator training concurrently.

Licensing operators early allows SNC to plan, train and employ the numbers of trainers and licensed operator applicants far enough in advance to prevent the planned use of overtime. This is in keeping with UFSAR, Section 13.2.1, "Licensed Operator Training," which states, "Before initial fuel loading, the number of persons trained in preparation for RO and SRO licensing examinations will be sufficient to meet regulatory requirements, with allowances for examination contingencies and without the need for planned overtime."

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VEGP Units 3 and 4 Plant Walkthrough Exemption Request

This early approach to licensing operators is in keeping with the NRC's Efficiency Principle of Good Regulation. This approach also supports the Reliability Principle of Good Regulation. The methodical approach to meeting licensed operator needs minimizes risk in that it provides for a highly trained workforce to perform the preoperational testing for the plants, thereby providing assurance of safe startup and operation.