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Plant Manager

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WO 01-0007

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

Subject: Docket No. 50-482: Request for Exemption from the Requirements of
10 CFR 55, "Operators' Licenses"

Gentlemen:

Wolf Creek Nuclear Operating Corporation (WCNOC) herewith transmits a request for exemption from certain requirements of 10 CFR 55, "Operators' Licenses," in accordance with the provisions of 10 CFR 55.11 for the Wolf Creek Generating Station (WCGS). The exemption request is provided as Attachment I to this letter.

Specifically, WCNOC requests an exemption from the requirements of 10 CFR 55.31(a)(5), which requires that five significant control manipulations, which affect reactivity or power level must be performed on the actual plant as a prerequisite for license eligibility. This exemption will allow WCNOC to perform the control manipulations on the WCGS simulator facility in lieu of using the actual plant.

At WCNOC, a current reactor operator and senior reactor operator license class is in progress, in which each of these candidates must obtain five control manipulations. Attachment II provides the names of the individuals, to whom this exemption would be granted, who are candidates enrolled in the reactor operator and senior reactor operator license training programs. There are limited, scheduled plant activities between now and the December 2001 examination date that could be used to perform the control manipulations. Even if the candidates are scheduled to conduct the control manipulations as they occur in the plant, they will still lack a substantial number of control manipulations and currently unplanned plant power maneuvering will have to occur to complete the required manipulations.

The requested exemption will promote more effective plant operating experience for initial license applicants by allowing use of the simulator facility in lieu of the actual plant to satisfy the license eligibility requirements for performance of control manipulations that affect reactivity or power level.

The WCGS simulator uses models relating to the nuclear and thermal-hydraulic characteristics that models the core load that exists in the plant for which a license is being sought at the time of the candidate's operating examination. Simulator fidelity is demonstrated so that significant control manipulations are completed without procedural exceptions, simulator performance exceptions, or deviation from the approved training scenario sequence. Use of the simulator facility will also allow for enhanced training through a wider range of available operation in an environment that is more conducive to individualized instruction.

The need for the requested exemption is driven by improvements in plant operations and capacity factors that have reduced the opportunities for candidates for reactor operator and senior reactor operator licenses to perform the number of required reactivity or power level changes on the actual plant without impacting planned full power operation. The reduction in the number of reactivity manipulation opportunities in the plant could result in an increase in operating cost if the plant were required to be cycled to ensure all required reactivity manipulations were completed. Additionally, plant safety is maintained by not intentionally initiating plant maneuvers to perform the control manipulations.

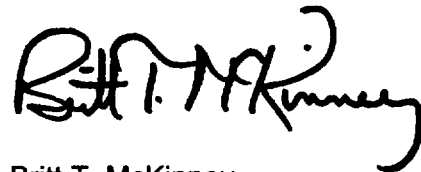
The requested exemption satisfies the requirements of 10 CFR 55.11 in that it is authorized by law and will not endanger life or property and is otherwise in the public interest.

WCNOC is requesting NRC approval of the exemption by July 2001 to avoid the planning effort and potential operational costs associated with candidates for reactor operator and senior reactor operator licenses having to perform all the reactivity manipulations on the plant. In June 2001, the reactor operator and senior reactor operator candidates will enter the simulator phase of the training program in which significant reactivity manipulation would be performed on the simulator. In July 2001, the candidates will perform on-shift activities and perform control manipulations as part of planned operating evolutions.

There are no new commitments contained in this exemption request.

If you should have any questions regarding this submittal, please contact me at (620) 364-4112, or Mr. Tony Harris at (620) 364-4038.

Very truly yours,

A handwritten signature in black ink, appearing to read "Britt T. McKinney". The signature is fluid and cursive, with a large, stylized "B" and "M".

Britt T. McKinney

BTM/rlr
Attachments

cc: J. N. Donohew (NRC), w/a
W. D. Johnson (NRC), w/a
E. W. Merschoff (NRC), w/a
Senior Resident Inspector (NRC), w/a

EXEMPTION REQUEST

1.0 INTRODUCTION

The purpose of this submittal is to request, in accordance with the provisions of Title 10 Code of Federal Regulations Section 55.11 (10 CFR 55.11), "Specific Exemptions," an exemption from the requirements of 10 CFR 55.31(a)(5) for the Wolf Creek Generating Station (WCGS).

2.0 BACKGROUND

Pursuant to 10 CFR 55.31(a)(5), a licensee shall provide evidence that an applicant, as a trainee, has successfully manipulated the controls of a facility for which a license is sought. At a minimum, five significant control manipulations must be performed which affect the reactivity or power level. At WCGS, a current license class is in progress, which includes 13 candidates that are reactor operator or senior reactor operator license candidates who must obtain five control manipulations each for a total of 85 manipulations. There are limited, scheduled plant activities between now and the December 2001 examination date that could be used to perform the control manipulations. Even if the candidates are scheduled to conduct the control manipulations as they occur in the plant, they will still lack a substantial number of control manipulations and currently unplanned plant power maneuvering will have to occur to complete the required manipulations.

The standards applied by the NRC to grant an exemption from regulatory requirements are set forth in 10 CFR 55.11. The standards are:

"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."

3.0 REQUESTED EXEMPTION

Wolf Creek Nuclear Operating Corporation (WCNOC) requests an exemption from the requirements of 10 CFR 55.31(a)(5) which requires that five significant control manipulations which affect reactivity or power level be performed on the actual plant as a prerequisite for license eligibility, so that a simulator facility may be considered acceptable for completion of this requirement. This exemption will promote more effective plant operating experience for initial license applicants by allowing use of the simulator facility in lieu of the actual plant to satisfy the license eligibility requirements for performance of control manipulations that affect reactivity or power level. Use of the WCGS simulator will also allow for enhanced training through a wider range of available operation in an environment that is more conducive to individualized instruction.

The need for the requested exemption is driven by improvements in plant operations and capacity factors that have reduced the opportunities for candidates for reactor operator and senior reactor operator licenses to perform the number of required reactivity or power level changes on the actual plant without impacting planned full power operation. The reduction in

the number of reactivity manipulation opportunities in the plant could result in an increase in operating cost if the plant were required to be cycled to ensure all required reactivity manipulations were completed. Additionally, plant safety is maintained by not intentionally initiating plant maneuvers to perform the control manipulations.

The NRC is currently proposing to amend (65 FR 41021) the regulations of 10 CFR 55.31(a)(5) for operator and senior operator licenses to fulfill a portion of the experience prerequisites for license eligibility by manipulating a plant-referenced simulator as an alternative to use of the actual plant. The plant-referenced simulator used must meet the requirements of the proposed revisions to 10 CFR 55.45(b) (65 FR 41021).

SECY-99-225, "Rulemaking Plan for Changes to 10 CFR Part 55 to Reduce Unnecessary Regulatory Burden Associated With the Use of Simulation Facilities in Operator Licensing," dated September 8, 1999, discusses the rulemaking plan for changes to 10 CFR 55. Specifically in the background section entitled "Interim Regulatory Burden Relief Through Exemptions to 10 CFR Part 55.31(a)(5)," it states that during the rulemaking, the staff is prepared to favorably consider requests for exemption from the requirements of 10 CFR 55.31(a)(5). These exemptions will be reviewed on a case by case basis with evidence from the facility licensee that, with respect to the planned reactivity manipulations scenarios, simulator fidelity is assured by adequate software controls and is confirmed before the training session.

Basis for Requested Exemption

The requested exemption is consistent with the requirements of 10 CFR 55.11 and should be granted. In accordance with Section 55.11, it is clear from the discussion herein that the exemption sought by WCNOC is authorized by law, and will not endanger life or property and is otherwise in the public interest.

- (1) Authorized by Law. As discussed above, exemptions from 10 CFR 55 are expressly authorized by 10 CFR 55.11.
- (2) Endanger Life or Property. The proposed exemption from the Operators' License requirements for control manipulations that affect the reactivity or power level will not endanger life or property because use of a plant-referenced simulator facility essentially replicates the experience received from the actual plant. Use of a plant-referenced simulator facility for these reactivity control manipulations is appropriate based on improvements in simulator technology and successful experience in using plant-referenced simulators. The plant-referenced simulator at WCGS provides accurate and validated operator training and examination scenarios that convey realism in reactivity control manipulations, other normal and abnormal procedure operations, complex plant operations, and emergency operating procedure evolutions, including simultaneous task management and faulted conditions. Performance of control manipulations that affect reactivity or power level constitute only a small part of a candidate's preparedness to perform licensed duties. As such, adequate protection of the public health, safety, and property is provided.
- (3) Otherwise in the Public Interest. The proposed exemption is in the public interest because the exemption will promote more effective plant operating experience for initial license candidates by allowing use of the simulator facility in lieu of the actual plant to

satisfy the license eligibility requirements. Use of the simulator facility will also allow for enhanced training through a wider range of available operation in an environment that is more conducive to individualized instruction. Additionally, the reduction in the number of reactivity manipulation opportunities in the plant could result in an increased risk of plant unavailability if the plant were required to be cycled to ensure all required reactivity manipulations were completed.

4.0 SIMULATOR ASSESSMENT

As discussed in SECY-99-225, the NRC has identified two areas of concern with respect to considering a plant-referenced simulator suitable for fulfilling the requirements of a license candidate. The first area is that the reactor core modeled on the simulator represents the actual core that will exist in the plant at the time that the candidate is tested for a license. Second, appropriate testing of simulator performance to ensure that the simulator is capable of being used without significant discrepancies or deviation from the approved scenario sequence.

WCNOC has certified in accordance with 10 CFR 55.45(b)(5) that the WCGS simulator meets the requirements of 10 CFR 55.45. The WCGS simulator is certified based on the guidance in ANSI/ANS 3.5-1993, "Nuclear Power Plant Simulators for Use in Operator Training," as endorsed in Regulatory Guide 1.149, "Nuclear Power Plant Simulation Facilities for Use in License Examinations." Exceptions to the guidance in ANSI/ANS 3.5-1993 are identified in the WCGS Simulator Certification Report submitted on January 10, 2001 (letter CO 01-0002).

The WCGS simulator was recently upgraded with the Anthem advanced 2-phase thermal hydraulic model and the Comet reactor kinetics model provided by CAE Electronics Ltd. The reactor core model was modified using Cycle 12 (current operating cycle) core design data. Simulator software modifications are controlled by a plant procedure which establishes the process for initiation, evaluation, approval, implementation, testing, and documentation of software modifications.

Simulator fidelity is demonstrated so that significant reactivity control manipulations are completed without procedural exceptions, simulator performance exceptions, or deviation from the approved training scenario sequence. Validation and documentation of simulator performance for each training scenario is in accordance with plant procedures. This process ensures that the simulator is capable of being used without significant discrepancies from the approved scenario sequence and reflects conditions comparable to the actual plant.

5.0 SUMMARY AND CONCLUSION

10 CFR 55 addresses Operators' License requirements. Exemptions are provided under the provisions of 10 CFR 55.11. The exemption requested is consistent with Section 55.11 of the Commission's regulations in that it is authorized by law and will not endanger life or property and is otherwise in the public interest. Accordingly, the requested exemption should be granted.

**LIST OF REACTOR OPERATOR (RO) OR SENIOR REACTOR OPERATOR (SRO)
CANDIDATES**

<u>Name</u>	<u>License</u>	<u>Docket Number</u>
Seth Bell	SRO-Instant	55-41333 (from GFES)
Darrin Helm	SRO-Instant	55-41335 (from GFES)
Tammy Jensen	SRO-Instant	55-41336 (from GFES)
Steven Koenig	SRO-Instant	55-41338 (from GFES)
Joseph Partridge	SRO-Upgrade	55-40854 (from RO license)
Gary Pendergrass	SRO-Instant	55-41340 (from GFES)
Ronnie Sims	SRO-Instant	55-41342 (from GFES)
Steve Yunk	SRO-Instant	55-41345 (from GFES)
John Keating	RO-Instant	55-41337 (from GFES)
Troy Lazarowski	RO-Instant	55-41339 (from GFES)
Edgar Pitt	RO-Instant	55-41341 (from GFES)
Mark Wilson	RO-Instant	55-41343 (from GFES)
Edward Winn	RO-Instant	55-41344 (from GFES)