



**UNITED STATES  
NUCLEAR REGULATORY COMMISSION  
REGION IV  
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October 3, 2005

George A. Williams, Site Vice President  
Grand Gulf Nuclear Station  
Entergy Operations, Inc.  
P.O. Box 756  
Port Gibson, MS 39150

**SUBJECT: GRAND GULF NUCLEAR STATION - NRC INITIAL LICENSE EXAMINATION  
REPORT 05000416/2005301**

Dear Mr. Williams:

On August 17, 2005, the U.S. Nuclear Regulatory Commission (NRC) completed an examination at the Grand Gulf Nuclear Station. The enclosed examination report documents the examination findings, which were discussed on September 13, 2005, with Mr. J. Miller and other members of your staff.

The examination included an evaluation of one applicant for reactor operator license, one applicant for an instant senior operator license, and two applicants for upgrading their reactor operator licenses to senior operator licenses. The written and operating examinations were developed using NUREG-1021, "Operator Licensing Examination Standards for Power Reactors," Revision 9. The license examiners determined that all four of the applicants satisfied the requirements of 10 CFR Part 55, and the appropriate licenses have been issued.

In accordance with 10 CFR 2.390 of the NRC's "Rules of Practice," a copy of this letter and its enclosure will be available electronically for public inspection in the NRC Public Document Room or from the Publicly Available Records (PARS) component of NRC's document system (ADAMS). ADAMS is accessible from the NRC Web site at <http://www.nrc.gov/reading-rm/adams.html> (the Public Electronic Reading Room).

Sincerely,

/RA/

Ryan E. Lantz  
Operations Branch  
Division of Reactor Safety

Docket: 50-416  
License: NPF-29

Entergy Operations, Inc.

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Enclosure:

Examination Report 05000416/2005301;  
w/Attachment: Supplemental Information

cc w/enclosure:

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ENCLOSURE

U.S. NUCLEAR REGULATORY COMMISSION  
REGION IV

Docket: 50-416  
License: NPF-29  
Report No.: 05000416/2005301  
Licensee: Entergy Operations, Inc.  
Facility: Grand Gulf Nuclear Station  
Location: Waterloo Road  
Port Gibson, Mississippi  
Dates: August 15 through September 13, 2005  
Examiners: P. Gage, Senior Operations Engineer  
S. Garchow, Operations Engineer  
Approved By: Ryan E. Lantz, Chief  
Operations Branch  
Division of Reactor Safety

## SUMMARY OF FINDINGS

IR 05000416/2005301; 8/15-9/13/2005; Grand Gulf Nuclear Station, Initial operator license examination.

NRC examiners evaluated the competency of one applicant for an operator license and three applicants for senior operator licenses. The licensee developed the written examination and the operating examination using NUREG-1021, "Operator Licensing Examination Standards for Power Reactors," Revision 9. NRC examiners provided assistance in the development of the written examination. The licensee proctored the written examination on August 22, 2005. The NRC examiners administered the operating examination on August 15-17, 2005.

A. NRC-Identified and Self Revealing Findings

No findings of significance were identified.

B. Licensee-Identified Findings

No findings of significance were identified.

## REPORT DETAILS

### 4OA5 Initial License Examination

#### .1 Operator Knowledge and Performance

##### a. Examination Scope

The NRC examination team administered the operating examinations to four applicants on August 15-17, 2005. The operator applicant and instant senior operator applicant participated in 2 dynamic simulator scenarios, a control room and facilities walkthrough examination consisting of 10 or 11 job performance measures, and an administrative examination consisting of 4 or 5 job performance measures. The two senior operator upgrade applicants participated in 1 dynamic simulator scenario, a control room and facilities walkthrough examination consisting of 5 job performance measures, and an administrative examination consisting of 5 job performance measures. In addition, the chief examiner sampled historical records of the applicants to verify the accuracy of data on their license applications, in accordance with Examiner Standard 202.C.2.e of NUREG-1021, "Operator Licensing Examination Standards for Power Reactors," Revision 9. .

On August 22, 2005, the licensee proctored the administration of the written examination to all four applicants.

##### b. Observations and Findings

No findings of significance were identified.

All four applicants passed all parts of the examinations. The average score for the applicants was 86.6 percent. The applicant scores ranged from 81 to 92 percent.

The licensee conducted a performance analysis for the written examinations with an emphasis on the 10 questions that were missed by one-half, or greater, of the applicants on each examination. This analysis determined the answer key was correct for all the questions on the reactor operator and senior operator examinations. Upon subsequent review, the examiners agreed with this analyses and that no corrections of the answer key were necessary.

#### .2 Initial Licensing Examination Development

##### a. Scope

The written examination and operating test was developed by the licensee in accordance with NUREG-1021.

NRC examiners reviewed the initial examination submittal during the week of June 27, 2005, and identified several deficiencies with the written examination. These included knowledge/ability identification errors, excessive use of open reference format, senior operator questions not written at the senior operator level, excessively long and complex

question stems, as well as other construction and psychometric errors. NRC examiners provided the review results to the licensee for correction of the observed errors. On July 15, 2005, the licensee resolution of the comments was received and reviewed by NRC examiners. This review indicated that many of the fundamental errors observed during review of the initial written examination submittal remained, and that the written examination would potentially not be ready for administration on the originally planned date of August 12. During the week of July 25, 2005, one NRC examiner was dedicated to assist the licensee training staff in developing a revised written examination. The licensee completed the revised written examination and conducted an on site validation of the examination using site licensed operators. On August 4, 2005, NRC examiners then completed the review of the written examination and provided some minor revision comments to the licensee. The final version of the written examination was reviewed and approved on August 11, 2005, and the licensee was then authorized to administer the written examination on August 22, 2005.

The NRC staff completed review of the operating test outlines on April 19, 2005, with no comments for revision. The chief examiner conducted an onsite validation of the operating test and provided comments to the licensee on July 21, 2005. These comments were incorporated into the final operating tests. The operating test was also validated by site licensed operators.

b. Findings

No findings of significance were identified.

The examiners identified a weakness in the licensee's understanding of the qualitative attributes of NRC written examination questions and, to a lesser extent, the examination development process, as described in NUREG-1021. The licensee acknowledged a weakness in this area, and wrote Condition Report CR-GGN-2005-03066 to evaluate the observed weakness and identify corrective actions to address.

.2.1 Simulator Facility Performance

a. Scope

The examination team observed simulator performance with regard to plant fidelity during the examination validation and administration.

b. Findings

No findings of significance were identified.



.2.2 Examination Security

a. Scope

The examiners reviewed examination security both during the onsite preparation and examination administration weeks with respect to NUREG-1021 requirements. Plans for simulator security and applicant control were reviewed and discussed with licensee personnel. Licensee facility training and operations staff involved in examination development and/or validation were on a security agreement.

b. Findings

No findings of significance were identified.

4OA6 Meetings, Including Exit

On September 13, 2005, the chief examiner presented examination results to Messrs. J. Miller and M. Chase. The examiners confirmed that proprietary information was not provided or examined during the examination process.

ATTACHMENT

SUPPLEMENTAL INFORMATION

KEY POINTS OF CONTACT

Licensee personnel

M. Chase, Supervisor, Operations Training (Classroom)

M. Ellis, Supervisor, Operations Training (Simulator)

J. Miller, Manager, Training

M. Rasch, Senior Operations Instructor