



UNITED STATES
NUCLEAR REGULATORY COMMISSION
REGION IV
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November 5, 2004

Paul D. Hinnenkamp
Vice President - Operations
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5485 US Highway 61N
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SUBJECT: RIVER BEND STATION - NRC EXAMINATION REPORT 05000458/2004-301

Dear Mr. Hinnenkamp:

On September 23, 2004, the NRC completed an examination at your River Bend Station. The enclosed report documents the examination findings, which were discussed on September 23, 2004, with Mr. S. Belcher and other members of your staff.

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

In accordance with 10 CFR 2.790 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/

Anthony T. Gody, Chief
Operations Branch
Division of Reactor Safety

Docket: 50-458
License: NPF-47

Entergy Operations, Inc.

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Enclosure:
NRC Examination Report
05000458/2004-301

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ENCLOSURE

U.S. NUCLEAR REGULATORY COMMISSION
REGION IV

Docket: Docket: 50-458
License: License: NPF-47
Report No.: 05000458/2004-301
Licensee: Entergy Operations, Inc.
Facility: River Bend Station
Location: 5485 U.S. Highway 61
St. Francisville, Louisiana
Dates: September 20-23, 2004
Examiners: T. Stetka, Senior Operations Engineer, Operations Branch
M. Haire, Operations Engineer, Operations Branch
A. Sanchez, Resident Inspector, Projects Branch A
Approved By: Anthony T. Gody, Chief
Operations Branch
Division of Reactor Safety

SUMMARY OF FINDINGS

ER 05000458/2004-301; 9/20-23/2004; River Bend Station; Initial Operator Licensing Examinations.

NRC examiners evaluated the competency of four applicants for reactor operator licenses, one applicant for an instant senior operator license, and four applicants for upgrade senior operator licenses. The written and operating examinations were developed by the licensee using NUREG-1021, "Operator Licensing Examination Standards for Power Reactors," Draft Revision 9. The written examination was administered by the facility to the applicants on September 17, 2004. The NRC examiners administered the operating tests on September 20-23, 2004.

Cornerstone: Human Performance

No findings of significance were identified (Section 40A4.1).

Report Details

4. OTHER ACTIVITIES (OA)

4OA4 Initial Operator License Examination

.1 Operator Knowledge and Performance

a. Scope

On September 17, 2004, the licensee proctored the administration of the written examination to all nine applicants. The licensee staff graded the written examinations, analyzed the results, and presented the proposed grades together with their analysis to the NRC on September 29, 2004.

The NRC examination team administered the operating test to the applicants on September 20-23, 2004. All nine applicants participated in 2 dynamic simulator scenarios. The four applicants for reactor operator participated in a control room and facilities walkthrough test consisting of 11 system tasks, and an administrative test consisting of 1 task in each of four areas. The four applicants that were upgrading their operator license to a senior operator license participated in a control room and facilities walkthrough test consisting of 5 system tasks. The applicant seeking an instant senior operator license participated in a control room and facilities walkthrough test consisting of 10 system tasks. The administrative test for all senior operator applicants consisted of performing tasks in five areas.

b. Findings

All nine of the applicants passed all parts of the operating test. One reactor operator applicant failed the written examination. For the written examinations, the reactor operator applicants' average score was 84.8 percent and the senior operator applicants' average score was 88.7 percent. The reactor operator applicant scores ranged from 76 to 93.3 percent and the senior operator applicant scores ranged from 85 to 95 percent. The text of the examination questions may be accessed in the ADAMS system under the accession numbers noted in the attachment.

Chapter ES-403 and Form ES-403-1 of NUREG 1021 require the licensee to analyze the validity of any written examination questions that were missed by half or more of the applicants. The licensee conducted this performance analysis for six questions that met this criteria and submitted the analysis to the chief examiner on September 29, 2004. This analysis concluded that one of the questions (Examination Question 64) required minor rewording in the question stem, that two of the questions would be further evaluated in the hot license training program, and that three of these questions were recommended for deletion from the examination. The licensee issued a River Bend Training Evaluation and Action Request (TEAR) RBS-2004-490 to followup on these actions.

The licensee's deletion recommendations and the NRC response follow:

Reactor/Senior Operator Question 7

The licensee recommended deleting this question because there was no correct answer. In the stem of the question, the applicant is directed to align the standby service water to the control rod drive (CRD) pump bearing coolers and to start a CRD pump. The question then asked for the purpose of placing the reactor plant component cooling water (RPCCW) Division 1 test switch in TEST. The correct answer was intended to be Choice D: "allows starting either CRD pump." However, a post-examination review by the licensee revealed that placing the RPCCW Division 1 test switch in TEST does not, by itself, allow starting either CRD pump. Both test switches (Division 1 and 2) must be placed in TEST to allow starting either CRD pump. This electrically bypasses the 56 psig low pressure interlocks from both RPCCW divisions which are in each of the CRD pump start circuitry. A 56 psig low pressure condition in either RPCCW loop will trip both CRD pumps and prevent either from being restarted. The correct purpose for placing the RPCCW Division 1 test switch in TEST at Step 5.2.3 of Abnormal Operating Procedure AOP-0011, "Loss of Reactor Plant Component Cooling Water," was to allow the opening of motor-operated Valve CCP-MOV169, which was not a choice in this question. The subsequent abnormal operating procedure steps, which place the RPCCW Division 2 test switch in TEST and opened both motor-operated Valves CCP-MOV163 and CCP-MOV169, was needed to permit the starting of either CRD pump.

NRC Response: The NRC agrees with the licensee's recommendation to delete Question 7 based on the fact that there was no correct answer. Placing the Division 1 test switch in TEST does not, by itself, allow starting of either CRD pump - it is merely one of several steps in the procedure whose aggregate result is to allow the starting of either CRD pump. The correct answer for placing the Division 1 test switch in TEST is to allow the opening of motor-operated Valve CCP-MOV169, which was not one of the answer choices available.

Reactor/Senior Operator Question 18

The licensee recommended deleting this question because there was no correct answer. In the stem of the question, the applicant was told that a manual scram was inserted, the scram pilot solenoid valve white status lights were off, and that no control rod motion had occurred. The applicant had to determine what the Emergency Response Information System (ERIS) - Safety Parameter Display System, Critical Plant Variables Screen would display. It is correct that "NO SCRAM" will be displayed. However, the highlight box around the "NO SCRAM" words is colored cyan (light blue), and not green as is the case for other status boxes on ERIS. No change in color occurs and the highlight box remains cyan colored. Therefore, the only correct answer for this question was that the status box would read "NO SCRAM" with the highlight box around the no scram words remaining colored in cyan or light blue. This answer was not provided as a choice.

NRC Response: The NRC agrees with the licensee's recommendation to delete Question 18 based on the fact that there was no correct answer. The ERIS screen does show that the status box would read "NO SCRAM" and be surrounded by a highlight box that was colored cyan or light blue. Since this was not provided as a choice, there was no correct answer.

Reactor/Senior Operator Question 60

The licensee recommended deleting this question because there is no correct answer. The stem of the question provided loss of coolant accident conditions, the initiation of both divisions of the main steam line Positive Leakage Control System (PLCS), and the alarming of numerous annunciators. It also stated that 6 minutes after initiation of both divisions of main steam isolation valve (MSIV) PLCS, the "INBOARD MSIV PLCS HIGH AIR FLOW" alarm was received, but no value of system air flow was provided. The applicant was asked to determine the position of certain valves following these conditions. Following a post-examination review, the licensee determined that the "INBOARD MSIV PLCS HIGH AIR FLOW" alarm will alarm after a 5-minute time delay if the setpoint of >6 scfm is exceeded. The licensee also determined that this was only an alarm function and that no automatic actuations would occur. Furthermore, the licensee determined that if the flow was >14 scfm then annunciator "INBOARD MSIV PLCS TRIPPED" will alarm and will initiate automatic operation of the valves in the system to prevent excessive air loss. However, since the question stem did not provide an airflow value nor did it provide the alarm status of the "INBOARD MSIV PLCS TRIPPED" annunciator, it would be impossible to determine whether any automatic operations had occurred. Furthermore, if automatic operation had occurred due to a high flow rate (>14 scfm), none of the valve positions given in the distractors were correct. The correct combination of positions for the valves listed under high flow rate conditions (>14 scfm) should have been Injection Valve F005 - OPEN, Drain Valve F006 - CLOSED, and Isolation Valve F007 - OPEN.

NRC Resolution: The NRC agrees with the licensee's recommendation to delete Question 60 based on the fact that there is no correct answer. Since the airflow rate was not provided, the status of annunciator "INBOARD MSIV PLCS TRIPPED" was not provided, and the distractors were incorrect, there was no correct answer.

.2 Initial Licensing Examination Development

The licensee developed the examinations in accordance with NUREG-1021, Draft Revision 9. Licensee facility training and operations staff involved in examination development were on a security agreement.

.2.1 Examination Outline and Examination Package

a. Scope

The facility licensee submitted the operating examination outlines on May 24, 2004. Examiners reviewed the submittal against the requirements of NUREG-1021, Draft Revision 9. The facility licensee submitted the draft examination package on July 26, 2004. Examiners reviewed the draft submittals against the requirements of NUREG-1021, Draft Revision 9 and provided comments to the licensee on August 27, 2004. The chief examiner conducted an onsite validation of the examinations and provided further comments during the week of September 6, 2004. The licensee satisfactorily completed comment resolution on September 15, 2004.

b. Findings

Examiners approved the initial examination outline with minor comments and advised the licensee to proceed with the operating examination development.

The chief examiner determined that the operating examinations initially submitted by the licensee were within the range of acceptability expected for a proposed examination.

No findings of significance were identified.

.2.2 Simulation Facility Performance

a. Scope

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

b. Findings

No findings of significance were identified.

.2.3 Examination Security

a. Scope

The examiners reviewed examination security both during the onsite preparation week and examination administration week for compliance with NUREG-1021 requirements. Plans for simulator security and applicant control were reviewed and discussed with licensee personnel.

b. Findings

No findings of significance were identified.

4OA5 Management Meeting

.1 Exit Meetings

The chief examiner presented the examination results to Mr. S. Belcher, Operations Manager, and other members of your staff on September 23, 2004. The licensee acknowledged the findings presented.

The licensee did not identify as proprietary any information or materials examined during the examination.

ATTACHMENT

KEY POINTS OF CONTACT

Licensee

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R. Persons, Operations Instructor
R. Godwin, Training Manager
M. Wagner, Operations Training Supervisor - Classroom
J. Fralick, Operations Instructor
A. Orgeron, Operations Instructor

ADAMS DOCUMENTS REFERENCED

Accession No. ML042990539 Written Examination for Senior Operators
Accession No. ML042990544 Written Examination for Reactor Operators
Accession No. ML042990550 Licensee Post-Examination Comments