UNITED STATES
NUCLEAR REGULATORY COMMISSION
REGION IV
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May 11, 2000

Craig G. Anderson, Vice President,
Operations
Arkansas Nuclear One
Entergy Operations, Inc.
1448 S.R. 333
Russellville, Arkansas 72801-0967

SUBJECT: NRC INSPECTION REPORT NO. 50-313/00-301; 50-368/00-301

Dear Mr. Anderson:

This refers to the inspection conducted on April 24 to 27, 2000, at the Arkansas Nuclear One, Units 1 and 2 facilities. The enclosed report presents the results of this inspection.

The inspection included an evaluation of four applicants for operator licenses and three applicants for senior reactor operator licenses. We determined that all 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 placed in the NRC Public Document Room (PDR).

Should you have any questions concerning this inspection, we will be pleased to discuss them with you.

Sincerely,

/***RA***/

John L. Pellet, Chief
Operations Branch
Division of Reactor Safety

Docket Nos.: 50-313; 50-368
License Nos.: DPR-51; NPF-6

Enclosure:
NRC Inspection Report No.
50-313/00-301; 50-368/00-301

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ENCLOSURE

U.S. NUCLEAR REGULATORY COMMISSION
REGION IV

Docket Nos.:	50-313; 50-368
License Nos.:	DPR-51; NPF-6
Report No.:	50-313/00-301; 50-368/00-301
Licensee:	Entergy Operations, Inc.
Facility:	Arkansas Nuclear One, Units 1 and 2
Location:	Junction of Hwy. 64W and Hwy. 333 South Russellville, Arkansas
Dates:	April 24 to 28, 2000
Inspector(s):	S. L. McCrory, Chief Examiner, Operations Branch M. E. Murphy, Senior Operations Engineer, Operations Branch P. C. Gage, Senior Operations Engineer, Operations Branch J. L. Pellet, Chief, Operations Branch
Approved By:	J. L. Pellet, Chief, Operations Branch Division of Reactor Safety

ATTACHMENT: Supplemental Information

EXECUTIVE SUMMARY

Arkansas Nuclear One, Units 1 and 2
NRC Inspection Report No. 50-313/00-301; 50-368/00-301

NRC examiners evaluated the competency of four applicants for operator licenses and three applicants for senior reactor operator licenses at the Arkansas Nuclear One, Unit 2, facility. The facility developed the written and operating examinations using NUREG-1021, "Operator Licensing Examination Standards for Power Reactors," Revision 8. The chief examiner reviewed and commented on the proposed examinations and the facility incorporated those comments, as appropriate, into the final examinations. The written examinations were administered to all applicants on April 21, 2000, by facility proctors in accordance with instructions provided by the chief examiner. The NRC examiners administered the operating tests on April 24 to 27, 2000.

- No findings.

Report Details

Summary of Plant Status

Units 1 and 2 were operating at full power for the duration of this inspection.

4. OTHER ACTIVITIES

4OA4 Operator Knowledge and Performance

.1 Initial License Examination

a. Inspection Scope

The licensee developed the written and operating examinations using facility training and operations staff on the security agreement to prepare and validate the examinations. On April 21, 2000, the licensee proctored the administration of the written examination to all seven applicants. The licensee staff graded the written examinations, analyzed the results, and presented their evaluation and post-examination comments for examination revision to the NRC on May 1, 2000. The examination team administered the various portions of the operating examination to the seven applicants on April 24 to 27, 2000. Each reactor operator applicant participated in two dynamic simulator scenarios and received a control room and facilities walkthrough test, which consisted of 10 system tasks. The senior reactor operator applicants (all of whom were upgrading reactor operator licenses to senior operator licenses) each participated in one dynamic simulator scenario and received a control room and facilities walkthrough test, which consisted of 5 system tasks. Additionally, the examination team tested each applicant on 5 subjects in 4 administrative areas with a combination of administrative tasks and questions.

b. Observations and Findings

All seven applicants passed the written examinations using the final answer key and incorporating comments resulting from licensee and NRC post-examination analysis. Scores ranged from 83.67 to 93.88 percent for the reactor operator applicants with an average of 88.52 percent. Scores for the senior operator applicants ranged from 80.61 to 85.71 percent with an average of 83.33 percent.

During the post-examination review, the licensee recommended that three questions should be modified to accept additional answers or deleted from the written examination. The licensee's post-examination comments are located in the ADAMS system under Accession No. ML003713286. The text of the examination questions may be accessed in the ADAMS system under Accession Nos. ML003713226 and ML003713371.

The licensee proposed that either Choice A or B for Question RO 10/SRO 39 be accepted as a correct answer. The chief examiner reviewed the technical basis for the proposed change and concurred with the licensee's recommendation to accept either choice A or B for Question RO 10/SRO 39.

The licensee similarly proposed to credit either Choice A or B for Question RO 59/SRO 27. The chief examiner rejected the licensee's proposal to accept an additional choice as correct. As a result of reviewing the question, the chief examiner determined that there was no fully correct answer among the choices and deleted the question from the examination. The chief examiner determined that the diagnostic conclusion required to answer the question correctly, that the turbine was being unloaded at an excessive rate, could only be reached based on the relationship between average temperature (Tave) and reference temperature (Tref). The substantiating evidence was that the difference between Tave and Tref was greater than administrative limits and increasing and that Tave was larger than Tref. Since none of the choices contained this relationship as the evidence of the problem and since neither Tave nor Tref alone was sufficient evidence, the chief examiner concluded that there was no correct answer and deleted the question from both examinations.

The licensee proposed deleting Question RO 55/SRO 57 from the reactor operator written examination only, stating that it was beyond expected reactor operator knowledge. The chief examiner reviewed the licensee's justification and concurred with deleting the question from the reactor operator written examination only.

During the review of individual question performance, the chief examiner observed that two of three senior reactor operator applicants answered the question SRO 97 incorrectly. (This question was part of the senior operator examination only.). The chief examiner evaluated the question further and determined that the question solicited knowledge inappropriate for a closed reference question. The question evaluated procedural knowledge of an abnormal operating procedure's contingency actions that were not immediate actions. The chief examiner deleted this question from the senior reactor operator written examination.

During the post-examination review, the licensee identified 15 written examination questions that were missed by 50 percent or more of the applicants responding to the question. The licensee determined that there were no generic weaknesses of the initial license training program based on their review of these 15 questions. However, the chief examiner observed that 4 of the 15 questions (RO 91/SRO 22, RO 1/SRO 82, RO 36/SRO 17 and SRO 97) focused on the control element assembly system design, operation, or impact.

All applicants passed the operating examinations. The applicants demonstrated proficient 3-way communications, alarm response, and peer checking. No significant findings were identified.

.2 Initial Licensing Examination Development

The facility training staff developed the written and operating examinations in accordance with NUREG-1021, Revision 8.

.2.1 Examination Outline and Examination Package

a. Inspection Scope

The facility licensee submitted the written and operating examination outlines on January 14, 2000. The chief examiner reviewed the submittal against the requirements of NUREG-1021, Revision 8, and provided comments to the licensee on January 19, 2000. The facility licensee submitted the completed draft written examination package on February 8, 2000. The chief examiner and a peer reviewer reviewed the draft submittal against the requirements of NUREG-1021, Revision 8. The chief examiner provided comments on the written examinations to the licensee on February 23, 2000. The facility licensee submitted the completed draft operating examinations on March 17, 2000. The chief examiner and a peer reviewer performed an initial review of the draft submittal against the requirements of NUREG-1021, Revision 8. The chief examiner provided initial comments on the operating examinations to the licensee on March 29, 2000. The chief examiner conducted an onsite validation of the operating examinations and provided additional comments during the week of April 10, 2000.

b. Observations and Findings

Region IV approved the initial examination outline with minor comments for enhancement and advised the licensee to proceed with the operating examination development.

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

The final as-administered written examinations are located in the ADAMS system under Accession Nos. ML003713226 and ML003713371. No significant findings were identified.

.3 Simulation Facility Performance

a. Inspection Scope

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

b. Observations and Findings

No findings were identified.

.4 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.

b. Observations and Findings

No significant findings were identified.

40A5 Management Meetings

.1 Exit Meeting Summary

The examiners presented the inspection results to Mr. C. Anderson, Vice President, Operations, and other members of the licensee management at the conclusion of the inspection on April 27, 2000. The licensee acknowledged the findings presented.

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

ATTACHMENT

PARTIAL LIST OF PERSONS CONTACTED

Licensee

C. Anderson, Vice President, Operations
R. Barnes, Supervisor, Simulator Training
S. Cotton, Manager, Training and Emergency Preparedness
J. Giles, Supervisor, Operations Training
T. Mayfield, Supervisor, Unit 2 Operations Training
T. Mitchell, Manager, Unit 2 Operations
D. Sealock, Initial Licensed Operator Training Coordinator

ADAMS DOCUMENTS REFERENCED

Accession No.	
ML003713226	Reactor Operator As-Given Examination Questions
ML003713371	Senior Reactor Operator As-Given Examination Questions
ML003713286	Licensee Post-Examination Comments