ENCLOSURE

U.S. NUCLEAR REGULATORY COMMISSION
REGION IV

Docket Nos.:	50-498; 50-499
License Nos.:	NPF-76; NPF-80
Report No.:	50-498/99-301; 50-499/99-301
Licensee:	STP Nuclear Operating Company
Facility:	South Texas Project Electric Generating Station, Units 1 and 2
Location:	FM 521 - 8 miles west of Wadsworth Wadsworth, Texas
Dates:	July 6-15, 1999
Inspectors:	H. Bundy, Chief Examiner, Senior Reactor Engineer, Operations Branch G. Johnston, Senior Reactor Engineer, Operations Branch R. Lantz, Reactor Engineer, Operations Branch S. McCrory, Senior Reactor Engineer, Operations Branch T. Meadows, Senior Reactor Engineer, Operations Branch
Accompanying Personnel:	T. Stetka, Examiner-in-Training, Senior Reactor Engineer, Operations Branch
Approved By:	John L. Pellet, Chief, Operations Branch Division of Reactor Safety

ATTACHMENTS:

Attachment 1:	Supplemental Information
Attachment 2:	Simulation Facility Report
Attachment 3:	Final Written Examinations and Answer Key

EXECUTIVE SUMMARY

South Texas Project Electric Generating Station, Units 1 and 2
NRC Inspection Report No. 50-498/99-301; 50-499/99-301

NRC examiners evaluated the competency of 9 senior operator and 8 reactor operator license applicants for issuance of operating licenses at the South Texas Project Electric Generating Station. The licensee developed the initial examinations using NUREG-1021, Revision 8. NRC examiners reviewed and approved the examinations. The initial written examinations were administered to all 17 applicants on July 2, 1999, by facility proctors in accordance with the guidance in NUREG-1021, Revision 8. The NRC examiners administered the operating tests on July 6-15, 1999.

Operations

- All 17 applicants passed the examinations and exhibited no broad knowledge or training weaknesses. The applicants performed well during the operating test while exhibiting good oversight and peer checking. Consistent with past observations, the applicants demonstrated strong communications skills throughout the operating test as did the plant control room personnel during special activities (Sections 04.1 and 04.2).

- The licensee submitted an examination of excellent quality in that it was technically accurate, responsive to the examination standards without significant changes from NRC review, and required no post examination changes to the grading keys. Detailed licensee process procedures contributed to excellent performance by the examination development and administration team (Section 05.1.2).

Report Details

Summary of Plant Status

Both units operated at power for the duration of this inspection.

I. Operations

04 Operator Knowledge and Performance

04.1 Initial Written Examination

a. Inspection Scope

On July 2, 1999, the facility licensee proctored the administration of the written examinations approved by the NRC to eight individuals who had applied for initial reactor operator (RO) licenses, four individuals who had applied for initial instant senior operator (SO) licenses, and five individuals who had applied for upgrading their RO operator licenses to SO licenses. The licensee proposed grades for the written examinations and evaluated the results for question validity and generic weaknesses. The examiners reviewed the licensee's results.

b. Observations and Findings

All applicants passed the written examination. The minimum score was 80 percent. The overall average score was 89.4 percent. Applicant scores ranged from 83 to 95 percent. The licensee's post-administration analysis identified that five questions were missed by 50 percent or more of the applicants for each examination. Two of these questions were common to both examinations. The questions missed were RO 3, RO 88, RO 90, SO 19, SO 20, SO 70, RO 87/SO 91, and RO 91/SO 93. The chief examiner determined that the erroneous answers were not interrelated and no broad training or knowledge weaknesses were identified. There were no post-examination comments or changes to the written examination.

c. Conclusions

All 17 applicants passed the written examinations. No broad knowledge or training weaknesses were identified as a result of evaluation of the graded examinations.

04.2 Initial Operating Test

a. Inspection Scope

The examination team administered the various portions of the operating examination to the 17 applicants on July 6-15, 1999. Each applicant participated in the appropriate number of dynamic simulator scenarios. Each RO and instant SO applicant received a walkthrough test, which consisted of tasks in 10 system and 4 administrative areas. The upgrade SO applicants were tested in five system and four administrative areas.

b. Observations and Findings

All applicants passed all portions of the operating test. Overall, the applicants performed well in the dynamic simulator scenarios with good oversight and peer checks. Consistent with past practices at this facility, the examiners observed strong communications throughout the operating test. Good crew briefs and status updates were consistently practiced in a form meeting licensee expectations. Communications clearly identified expected actions with consistent acknowledgment by the operators. During the examinations the examiners observed similar communication practices by Unit 2 control room personnel when several special activities were in progress.

The applicants researched and applied technical specifications appropriately and correctly applied abnormal and emergency procedure entry conditions during the dynamic scenarios. The applicants demonstrated a high level of proficiency in operating plant equipment from the simulator control room and in correctly locating and simulating operating local plant components. The examiners observed one minor knowledge deficiency by several applicants who did not know that the startup feedwater pump should start with the control room hand switch in the "AUTO" position if one of the two operating main feedwater pumps tripped.

c. Conclusions

All 17 applicants passed the operating tests. The applicants performed well during the operating test while exhibiting good oversight and peer checking Consistent with past observations, the applicants demonstrated strong communications skills throughout the operating test as did the plant control room personnel during special activities.

05 Operator Training and Qualification

05.1 Initial Licensing Examination Development

The facility licensee developed the initial licensing examination in accordance with guidance provided in NUREG-1021, "Operating Licensing Examination Standards," Revision 8.

05.1.1 Examination Outline

a. Inspection Scope

The facility licensee submitted the initial examination outlines on January 25, 1999. The chief examiner reviewed the submittal against the requirements of NUREG-1021, Revision 8.

b. Observations and Findings

Region IV approved the initial examination outlines with very minor comments and advised the licensee to proceed with examination development. The licensee supported the outlines well with background information such as scenario overviews and probabilistic risk assessment relationships, which greatly facilitated the NRC reviews.

c. Conclusions

The licensee submitted well supported examination outlines which Region IV approved with minor comments.

05.1.2 Examination Package

a. Inspection Scope

The draft examinations were transmitted by the licensee to the NRC on April 21, 199. The licensee submitted the completed final examination package on June 24, 1999, following the chief examiner's onsite review. The chief examiner reviewed the examinations against the requirements of NUREG-1021, Revision 8.

b. Observations and Findings

The licensee submitted a technically valid draft examination of excellent quality that was responsive to the outline submitted by the licensee on January 25, 1999. Following two independent examiner reviews, the chief examiner provided editorial and enhancement suggestions for 10 questions. The comments generally related to distractor plausibility. After discussion of the suggested enhancements, the licensee modified the examinations as agreed. The NRC reviewers observed that the submitted examination appeared to discriminate at a very high level. In response, the licensee performed a further validation of the examination and proposed modification of seven and replacement of four questions with substitutes, which discriminated at a lower level. The chief examiner concurred with the resolution of the comments, the proposed question modifications and replacements, and the final product.

The licensee submitted four scenarios including a backup that were of excellent quality. The NRC reviewers had no comments following in-office reviews. The chief examiner

validated the four scenarios during the week of June 14, 1999, and determined that Scenario 1 was unusually complex and lengthy for initial license applicants and discriminated at too high a level. The chief examiner further determined that Scenario 4 (backup scenario) discriminated at an appropriate level and it was modified to serve as a primary scenario.

To support the systems walkthrough section of the operating test, the facility licensee provided 11 job performance measures (JPMs) of excellent quality to evaluate selected operator tasks. Ten of the JPMs were common to the RO and instant SO applicants. The upgrade SO applicants were evaluated on four of the common JPMs plus one unique JPM. The examiners provided a few minor enhancement comments and the licensee made minor changes to several JPMs during the chief examiner's onsite review.

To support the administrative topics section of the operating test, the licensee submitted nine administrative JPMs. This provided a unique set of five administrative JPMs for each applicant license level with the exception that the same JPM was used to evaluate the radiation control topic for either license level. In addition to minor enhancement comments, the examiners viewed one JPM to be too complex and another JPM to be too simplistic to discriminate at the appropriate level and the licensee replaced them during the chief examiner's onsite review.

The licensee facilitated the examination development and administration process through detailed licensee written procedures, which contributed to excellent performance by the examination development and administration team. No changes to the grading keys were required as a result of post examination review. Stated objectives for the examination validation process were particularly useful. The licensee compiled all operating test materials in a manner, which greatly facilitated administration.

c. Conclusions

The licensee submitted an examination of excellent quality in that it was technically accurate, responsive to the examination standards without significant post review changes from NRC review, and required no post examination changes to the grading keys. Detailed licensee process procedures contributed to excellent performance by the examination development and administration team.

05.2 Simulation Facility Performance

a. Inspection Scope

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

b. Observations and Findings

The simulation facility supported the validation and administration of the operating test well. Proposed job performance measures and dynamic scenarios ran on the simulator as designed. No simulator issues arose during validation and the two simulator issues discussed in Attachment 2 had minor impact on examination administration.

c. Conclusions

The simulator and simulator staff supported the examination well.

V. Management Meetings

X1 Exit Meeting Summary

The examiners presented the inspection results to members of the licensee management at the conclusion of the inspection on July 14, 1999. The licensee acknowledged the findings presented.

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

ATTACHMENT 1

SUPPLEMENTAL INFORMATION

PARTIAL LIST OF PERSONS CONTACTED

Licensee

P. Arrington, Licensing Administrator
J. Calvert, Operations Training Manager
K. Coates, Nuclear Training Department Manager
M. DeFrees, Lead Instructor, Licensed Operator Training
W. Dowdy, Unit 2 Operations Manager
R. Lovell, Generations Support Manager
B. Markham, Senior Operator Training Instructor
B. Mookhoek, Licensing Administrator
B. Neurohr, Senior Operator Training Instructor
J. Sheppard, Vice President, Engineering and Technical Services
K. Struble, Senior Operator Training Instructor
K. Turner, Senior Operator Training Instructor
T. Werk, Project Lead for Examination Development

NRC

G. Guerra, Resident Inspector
W. Sifre, Resident Inspector

ATTACHMENT 2

SIMULATION FACILITY REPORT

Facility Licensee: STP Nuclear Operating Company

Facility Docket: 50-498; 50-499

Operating Examinations Administered at: STP Electric Generating Station, Units 1 and 2

Operating Examinations Administered on: July 6-15, 1999

These observations do not constitute audit or inspection findings and are not, without further verification and review, indicative of noncompliance with 10 CFR 55.45(b). These observations do not affect NRC certification or approval of the simulation facility, other than to provide information, which may be used in future evaluations. No license action is required in response to these observations.

Deficiencies identified During Examination Preparation

None

Deficiencies Identified During Examination Administration

- During performance of Scenario 3, Drain Valves FV-7952, -7953, and -7954 did not open as expected upon trip of Steam Generator Feedwater Pump No. 12.

- The non-safety grade plant computer (ERFDADS) did not initialize properly when establishing the initial conditions for Scenario 3. After some delay the simulator staff was able to force it to properly initialize, but they could not determine why the extra steps were necessary.