



UNITED STATES
 NUCLEAR REGULATORY COMMISSION
 REGION II
 101 MARIETTA STREET, N.W.
 ATLANTA, GEORGIA 30323

ENCLOSURE 1

EXAMINATION REPORT - 50-416/OL-90-01

Facility Licensee: Entergy Operations
 P. O. Box 756
 Port Gibson, MS 39150

Facility Name: Grand Gulf Nuclear Station

Facility Docket No.: 50-416

Facility License No.: NPF-29

Requalification retake operating tests were administered at the Grand Gulf Nuclear Station near Port Gibson, Mississippi.

Chief Examiner: George T. Hopper 8/16/90
 Date Signed

Approved By: John F. Munro 8/17/90
 Date Signed
 for John F. Munro, Chief
 Operator Licensing Section 1
 Division of Reactor Safety

SUMMARY:

Operating tests were administered on May 31, 1990, to three operators who had previously failed the simulator portion of their requalification exam administered in November 1989. Two ROs passed this re-examination.

Analysis of the questionable performance of the SRO operator resulted in the determination that additional data was necessary for the NRC to make a fair assessment of this operator's competence. An additional operating test was administered to the SRO on July 20, 1990. The SRO passed this re-examination.

REPORT DETAILS

1. Facility Employees Contacted During the Examination

M. Williams, Training Manager
W. Shelly, Operations Training Superintendent
C. Roberts, Operations Training
E. Cresap, Operations Training

2. Examiners

G. Hopper, Chief Examiner, Region II
B. Holbrook, Examiner, Region II
J. Munro, Chief, Operator Licensing Section 1, Region II

3. Exit Meeting

At the conclusion of the site visit the examiners met with representatives of the plant to discuss the results of the re-examinations. The facility and NRC agreed that no critical tasks had been missed, however, performance of the crew during scenario 016 raised several concerns.

Following the exam, the NRC conducted a post-exam review of the video tape in the Region II office to further evaluate questionable operator performance. The examiners made the following observations and conclusions concerning your training program:

- a. The NRC determined that all critical tasks of scenario 016 for the Shift Supervisor (SS) had been accomplished. However, the critical task which had the SS direct emergency depressurization if level could not be maintained above -197 in. or if the Heat Capacity Temperature Limit (HCTL) was exceeded, had been accomplished by default. The SS gave an order to maintain pressure at 900 lbs. The BOP operator used SRVs as necessary (up to eight at one time), in an attempt to maintain pressure. This caused level to drop below the indicating range and HCTL to be exceeded. In effect, an emergency depressurization was being performed without the SS having knowledge of it. The entire crew failed to monitor level during this critical time period when large inventory loss was occurring with the SRVs open and injection terminated. When the level was noted to be off scale low, the SS then directed an emergency depressurization. It is also unclear if the SS was aware that he had exceeded the HCTL. The NRC was concerned that he was trying to reduce pressure to get back into the safe region of the HCTL curve rather than direct an emergency depressurization as required by EP-3. A follow-up question by an NRC examiner to investigate this concern was answered by a facility evaluator rather than the examinee. Questions posed to the examinee are not to be answered by facility evaluators. The concern raised by the NRC was found to be indeterminate.

- b. The performance of the Shift Technical Advisor (STA) and Shift Superintendent was noted to be ineffective. The recommendations made to the SS were few, and were subdued in volume so as to be inaudible to the examiners. It is recognized that, in a real plant casualty, the Shift Superintendent and STA WOULD take a more active role in supporting the SS. Whispering plant parameters to the SS would seem unlikely, and the Shift Superintendent would undoubtedly take a more active role in supervising the Shift Supervisor's actions. The divergence from normal operating practices to examination techniques so as to reduce information flow available for the examiners scrutiny, jeopardizes examination validity and is strongly censured.
- c. During the performance of scenario 016, following emergency depressurization, the SS was observed to have taken six minutes to restore level into the indicating range. The NRC was concerned that he did not aggressively pursue core reflood and was essentially without adequate core cooling for six minutes. The facility did not consider this to be a problem, the argument being that the SS was more concerned about a power excursion which could result from high feedwater injection rates. While this is important, it does not exonerate the requirement to achieve and maintain adequate core cooling using every available means per the Emergency Operating Procedures. The NRC noted that step 83 of EP-2A contained no guidance on injection flow rates and questioned the facility training in this area. The facility stated that there was no printed guidance but that operators had been trained to commence injection at around 2 million lbm/hr, although there was no minimum amount that would be considered inadequate. The facility initially was unconcerned about the lack of adequate guidance and training on this step of the EOPs until questioned by the NRC. The facility should have taken the initiative to either implement corrective actions or provide justification invalidating the NRC's concern.
- d. The NRC was also concerned about the performance of the facility evaluators. As previously mentioned, one evaluator answered a question that was posed to an examinee. Additionally, the NRC review of the video tape disclosed that the Reactor Core Isolation Cooling System had not been secured when the SS directed that injection be terminated per EP-2A step 55. The facility failed to notice this deficiency, both during the scenario and after reviewing the video tape, until it was identified by the NRC examiners following their review of the video tape. This error is significant in that the scenario contained two critical tasks which might have been failed by the BOP operators:
- (1) Controls injection systems as directed.
 - (2) As directed overrides ECCS to terminate/prevent injection to the reactor.

The fact that the RPV Flooding leg of EP-2A, which was entered following recognition of the loss of level indication, allows RCIC injection to continue with eight SRVs open, mitigated the consequences of this error.

The requalification program has been designed to place the burden of responsibility on the individual utilities to construct and administer examinations following NRC guidelines as set forth in NUREG 1021, ES-601. The NRC evaluates the ability of the facilities to adequately prepare and administer these examinations and their ability to properly evaluate their operators' performance. This program will only succeed if the facility evaluators are properly trained and forthright with their findings. It is hoped that the corrective actions taken as set forth in Entergy Operations letter AECM-90/0115 dated June 26, 1990, will alleviate these concerns and improve future requalification performance. The NRC intends to conduct the next requalification examination with one examiner for every operator on the operating crew being evaluated, in accordance with ES-604.

ENCLOSURE 2

SIMULATION FACILITY FIDELITY REPORT

Facility Licensee: Grand Gulf Nuclear Station

Facility Docket No.: 50-416

Operating Tests Administered On: May 31 and July 20, 1990.

This form is to be used only to report observations. These observations do not constitute audit or inspection findings and are not, without further verification and review, indicative of non-compliance 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 licensee action is required in response to these observations.

During the conduct of the simulator portion of the operating test, the following items were observed:

ITEM

DESCRIPTION

Model	The GGNS simulator computer model may not realistically simulate the response of reflooding the core from an uncovered condition. The simulator core model is being evaluated for possible upgrade as part of the simulator certification effort.
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