

UNITED STATES
NUCLEAR REGULATORY COMMISSION
WASHINGTON, D. C. 20555

D. Beckham

Enclosure F



July 6, 1982

MEMORANDUM FOR: Chairman Palladino
Commissioner Gilinsky
Commissioner Roberts
Commissioner Ahearne
Commissioner Asselstine

FROM: *[Signature]*
Forrest J. Remick

SUBJECT: USE OF NON-PLANT-SPECIFIC SIMULATORS FOR INITIAL,
REPLACEMENT, AND REQUALIFICATION EXAMINATIONS FOR
LICENSED REACTOR OPERATORS AND SENIOR OPERATORS; OPE
COMMENTS ON SECY-82-232

As requested by Commissioner Ahearne's memorandum of June 17, 1987, we have reviewed the subject paper and have obtained comments from our consultants on reactor operator qualifications, Dr. Don Miller and Mr. Brian Hajek of Ohio State University (see Attachment 1).

The staff requested the Commission to approve the following recommendation:

"For power reactors with a plant-specific simulator, continue the requirements of a simulator licensing exam of all new and replacement candidates and require, for the NRC-administered requalification exam, only a simulator exam of at least 20% (per year) of the currently licensed operators. For power reactors without a plant-specific simulator, require an operating test (oral exams) in accordance with 10 C.F.R. Sec. 55.23 as well as a written exam of all new and replacement candidates and require, for the NRC-administered requalification exams, oral and written exams of at least 20% (per year) of the currently licensed operators."

Table 1 provides a comparison of previous Commission direction with the staff proposal.

Contact:
Jim Milhoan (OPE)
634-3295

82-110-20366
WA

In SECY-82-232, the staff stated that it does not believe that the information gained from a non-plant-specific simulator provides a basis to accurately judge the ability or competence of an operator with sufficient confidence to justify denial of a license. The staff further stated that non-plant-specific simulators qualify reasonably well as training tools, but are not effective examination tools for operator licensing. OPE consultants also concluded that use of non-plant-specific simulators are of little value for license examinations and should be abandoned immediately as an examination tool.

In SECY-82-232, the staff estimated, that using the resources saved by removing the requirements for non-plant-specific simulator examinations, that NRC-administered requalification examinations could be conducted for 25-30% of the currently licensed operators, if the requalification examinations were given during scheduled site visits for replacement examinations. In followup conversations with the staff, they indicated that it would be at least the Spring of 1983 before they could begin administering requalification examinations if they were still required to conduct simulator examinations on non-plant-specific simulators. Based on the above, we recommend the Commission approve the staff recommendation.

OPE Comments

We have the following comments which the Commission may wish to consider in arriving at its decision on the staff proposal.

1. The staff indicated that since the mid-1970's actual plant manipulation has not been required for licensing examinations in accordance with the approved staff guidance in NUREG-0094 (NRC Operator Licensing Guide). One of the provisions of NUREG-0094 is that, as an alternative to conducting a reactor startup, the candidate complete an NRC approved training program of at least one-week duration at a nuclear power plant simulator and that the candidate's application contain a certification from the simulator training center attesting to a candidate's ability to perform satisfactorily on a simulator. We recommend continuation of the practice described in NUREG-0094, pending completion of the results of the studies of the examination process. In followup conversations with the staff, we learned that the staff planned to continue this practice.
2. OPE consultants recommend that the Operator Licensing Branch (OLB) develop objectives, procedures, and new forms to assure near equivalency between examinations at plants with and without simulators. We agree with this recommendation.

3. OPE consultants recommend that NRC-administered requalification examinations should not be implemented until after October 1, 1982, to provide sufficient time for OLB to develop objectives and procedures, and to disseminate them to all examiners and to all examinees. We agree that procedures for conducting requalification examinations should be developed prior to NRC conducting these examinations. We believe such procedures should be developed expeditiously and NRC-administered requalification examinations started as soon as possible after CRGR review of the procedures, in accordance with item 3 of the recommendation section of SECY-82-232. It appears October 1, 1982, is not an unreasonable target date and would allow discussion of the examination procedures at the OLB Examiner's Conference during the week of September 20, 1982.
4. OPE consultants recommend that the NRC consider a rulemaking to require plant-specific simulators for all plants except for the several unique low power facilities. For those unique plants without simulators, OPE consultants recommend that an OLB study provide analysis of those tasks that might legitimately be tested on a non-plant-specific simulator, or a strategy for monitoring the simulator training programs for those plants.

In SECY-82-232, the staff indicated it has underway programs to determine the validity and reliability of the current examinations and to evaluate alternative methods for the examinations process. One of the subjects to be covered in the staff review is further evaluation of the role of simulators in operator licensing to determine whether they should be required for all facilities. We agree with the staff and OPE consultants that the subject of NRC requiring plant-specific simulators should be pursued. We suggest the Commission await the results of staff studies prior to making a decision whether to begin rulemaking to require plant-specific simulators.

In followup discussion with the staff, they indicated that current simulator manufacturing capability was being fully utilized. Thus, awaiting results of staff studies presumably would have little effect on increasing the number of plant-specific simulators in the near future.

Early this year, the staff conducted an informal survey of simulator vendors to determine whether utilities were buying plant-specific simulators. The staff found that over 65% of the operating plants own or have announced intentions of buying plant-specific simulators. Further, over 80% of the operating license applicants and over 90%

of the plants presently holding construction permits will have plant-specific simulators. 10 CFR Sec. 50.34 (f)(2)(i) requires pending construction permit applicants to provide simulator capability that correctly models the control room and includes the capability to simulate small-break LOCA's. Enclosure 1 of SECY-82-232 indicates there are presently 9 operating plant-specific simulators. Based on the above survey, it appears that this number may increase dramatically in the near future.

5. OPE consultants recommend that it be made clear that the implementation of the recommendation in SECY-82-232 is a one-year plan. We agree that implementation of SECY-82-232 should be regarded as a trial program. As part of Commission consideration of the results of staff review of the examination process, the Commission might wish to reexamine the staff recommendation in SECY-82-232 following experience with the revised examination program.

Summary

We recommend that the Commission approve the staff recommendation in SECY-82-232. In addition, we recommend the Commission give consideration to the following:

- Request the staff to prepare procedures that assure near equivalency between examinations at plants with and without simulators.
- Request the staff to describe, as part of its July 1983 status report to the Commission on the staff program for improving the examination process, experience gained in implementation of SECY-82-232, and to provide recommendations for any changes in the examination process based on such experience.

Enclosure:
As Stated

cc: Leonard Bickwit
Samuel Chilk
William Dircks
Hugh Thompson
Harold Denton
Don Beckham

TABLE 1

COMPARISON OF PREVIOUS COMMISSION DIRECTION WITH STAFF PROPOSAL

IN SECY-82-232

RO AND SRO LICENSE EXAMS^{1/}

	<u>Plants Without Plant-Specific Simulators</u>	<u>Plants With Plant-Specific Simulators</u>
Previous Commission Direction	Written, Oral, Simulator	Written, Oral, Simulator
Staff Proposal	Written, Oral	Written, Oral, Simulator

NRC Requalification Exams^{2/}

	<u>Plants Without Plant-Specific Simulators</u>	<u>Plants With Plant-Specific Simulators</u>
Previous Commission Direction	100% Simulator, 20% Written and Oral	100% Simulator, 20% Written and Oral
Staff Proposal	20% Written and Oral	20% Simulator

^{1/} Examinations conducted in accordance with Sections 55.20 - 55.25 of the Commission's regulations.

^{2/} Annual examinations administered by the NRC in conjunction with the requalification program for licensed personnel.