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Honorable Nunzio J. Palladino  
Chairman  
U. S. Nuclear Regulatory Commission  
Washington, D. C. 20555

Dear Dr. Palladino:

SUBJECT: ACRS COMMENTS ON REQUALIFICATION PROGRAMS FOR LICENSED POWER  
REACTOR OPERATORS

During its 308th meeting, December 5-7, 1985 and in previous meetings of its Subcommittee on Human Factors, the Advisory Committee on Reactor Safeguards reviewed the issue of requalification for licensed power reactor operators. We had the benefit of presentations from the NRR Staff and Regional Offices, and from industry representatives.

This letter, in part, is a response to the questions asked by Commissioner Asselstine in the Commission meeting on February 8, 1985 with the ACRS.

Annual examinations have been an integral part of requalification programs for licensed power reactor operators for many years. An original incentive for the annual examinations was to identify weak areas in the knowledge and skill levels of operators so that the re-training program could be properly adjusted. Requalification programs have been conducted on a two-year cycle corresponding to the two-year period between license renewals; however, requalification examinations have been administered annually.

Until 1982 requalification examinations were administered by facility licensees for their own operators. The staffs from NRR and IE audited the overall process.

Since 1982, at the Commission's direction, the NRC Staff has been administering about 10 percent of the individual operator examinations each year. The practice has been to write, conduct, and grade the examinations for about 20 percent of the operators at half of the nuclear power plants. Selection of facilities has not been random, but is based in part on indications of weak performance from previous examinations and training records, Licensee Event Reports, Systematic Assessment of Licensee Performance ratings, audits, and observations.

Some utilities and the licensed operators have objected strenuously to NRC-administered requalification examinations. There have been complaints that the examinations are unfair and inappropriate. We conclude that there has been a negative impact on operator morale and motivation. Both utilities and operators believe that too much of an operator's professional time must be devoted to training directed toward passing the requalification written examination as opposed to training directed toward safe operation of the plant. There is a strong feeling that there has been an unwarranted shift in emphasis from evaluating programs to evaluating individual operators.

On the other hand, NRC examiners cite numerous examples of poor performance on examinations, even in cases where controversial questions were eliminated by common agreement. They believe, based on their experience, that NRC-administered examinations provide indications of the strengths and weaknesses of the requalification programs of the utilities, otherwise unavailable.

An effective requalification program, including the periodic examination of individual licensed operators, is essential for maintaining operator proficiency. We conclude that there have been some deficiencies in the programs of some utilities; some of these have been discovered by traditional Staff audits; some have been subsequently confirmed by follow-up NRC-administered requalification examinations.

We believe the primary purpose of annual examinations of individual operators should return to the original intent, that is to provide input into formulation of the content of requalification training programs. No useful purpose is served by subjecting individuals to de facto challenges to their licenses as often as once per year. On this point, in a separate letter on Operating Licensing Rulemaking dated December 12, 1985, we endorse the Staff proposal to extend the period of operator licenses to six years, with written examinations being administered every two years and with operating tests administered yearly.

In our discussions, industry representatives strongly recommended that the NRC discontinue the administration of "annual" requalification examinations and offered suggestions on how to improve and make more effective the NRC auditing program. These suggestions included the following:

- . that the licensee prepare "annual" requalification examinations and submit them to the NRC for review and critique; however, care should be taken to safeguard the integrity of the process; and
- . that the licensee administer written, oral, and simulator "annual" requalification examinations and provide examination schedules so that the NRC could monitor the administration of the examinations and review the results.

We conclude that the present program of NRC-administered requalification examinations should be discontinued. Instead, a portion of the resources being devoted to this should be assigned to a stronger NRC program of comprehensive audits of utility requalification programs. High standards should be maintained, but the NRC can more efficiently promote high standards by auditing rather than by directly participating in the process. The Commission should return to its former practice of permitting the licensees to conduct the "annual" examinations. As we indicated in our letter of January 15, 1985, we believe that the concept of using "check-operators" to administer these examinations is worthy of consideration.

The NRC must continue to upgrade the quality of the examinations it administers and the operating experience of its examiners -- whether for the administration of requalification examination or, as we propose, only for administering initial licensing examinations.

Operator examinations must involve more than testing of the practical

skills and knowledge required to operate the plants under normal conditions. Requalification training should address off-normal plant situations and the rarely used knowledge, skills and abilities operators must have to deal with plant emergencies. Many or most severe emergencies will never be actually encountered in the working life of an operator. It follows that requalification examinations, as well as initial licensing examinations, must verify such knowledge, skills and abilities.

The responsibility for administration of licensing and requalification examinations has been moved from NRC Headquarters to the Regional Offices in recent years. We were told that this has enhanced the NRC programs by attracting to operator licensing positions competent individuals who were willing to work out of Regional Offices but who were less willing, or unwilling, to live in the Washington metropolitan area. We have no reason to disagree with this conclusion. The major disadvantage of decentralizing this particular activity is the potential for undesirable differences among Regions. Centralized standards and strong periodic oversight from the NRR group in Bethesda can overcome this disadvantage. The same Regional employees engaged in administering requalification examinations under the present practice can be used effectively in the more intensive audit effort we have recommended above.

Present requalification programs, even programs modified as we recommend, will do little to increase the level of "engineering expertise on shift" -- in the sense that is usually meant. Requalification programs are not intended for that purpose. That issue should be addressed separately.

Additional comments by ACRS Members Max W. Carbon, Jesse C. Ebersole, and Carlyle Michelson are presented on the following page.

Sincerely,

David A. Ward  
Chairman

Additional Comments by ACRS Members Max W. Carbon, Jesse C. Ebersole, and Carlyle Michelson

We believe the NRC-administered requalification examinations should not be discontinued until an improved means of auditing the licensee's requalification program performance has been established. It is our understanding that in those cases where unsatisfactory requalification programs have been identified, the extent and seriousness of the deficiencies were not fully appreciated from audits conducted prior to the NRC-administered examinations. Apparently, the auditing process alone was not adequate to verify program acceptability.

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