



**PUBLIC
SERVICE
INDIANA**

S. W. Shields
Senior Vice President -
Nuclear Division

June 16, 1981

Dr. Steven H. Hanauer, Director
Human Factors & Safety Division
U. S. Nuclear Regulatory Commission
7920 Norfolk Avenue, Room P-518
Bethesda, Maryland 20014



Dear Dr. Hanauer:

We have reviewed the draft proposed regulation addressing "Operator Qualifications and Licensing Proposed Rule" (SECY-81-84), and have serious concerns over the rules proposed therein. While we agree that upgraded training requirements for SROs and Shift Supervisors are desirable, we are not positive that a realistic position and task analysis process would indicate the need for training to the level specified in the draft. In any event, we believe that the requirements as specified therein would be an extreme burden on a utility staffing its first nuclear units as Public Service Indiana is presently doing.

Public Service Indiana is currently staffing its Shift Supervisors' positions utilizing personnel with previous SRO licenses, previous RO licenses, experienced fossil personnel (a minority) and experienced navy nuclear personnel. Since we do realize the significance of the Shift Supervisor position, all of these personnel will receive extensive theory, simulator, and on-the-job training prior to plant fuel loading, now scheduled for mid-1986. Our Control Supervisors (SRO Unit Foremen) will consist of personnel with previous RO licenses (a minority), previous navy nuclear experience and experienced fossil personnel. They will also receive extensive training. However, following the letter of your proposed regulations, a majority of our Shift Supervisors and Unit Foremen would not be eligible for licensing. We do recognize that the rules state that waivers on a case-by-case can be made, but this does not provide the predictability we would strive for in formulating a long-term training program.

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Your rule requires two years' experience as an SRO as a qualification for a Shift Supervisor position. The only way for Public Service Indiana or any utility staffing its first unit to meet your requirements is to obtain all of its Shift Supervisors and Unit Foremen from other operating plants. Such personnel are already in demand, and your proposed requirements will aggravate the already serious problem of lack of qualified personnel. Utilities, especially those starting their first units, could be forced into a bidding war to obtain the necessary licensed personnel. Such a situation would only work to decrease the qualifications of shift crews at operating plants.

Definitive means should be established to permit utilities to provide experienced and qualified personnel by means other than hiring their senior personnel away from other utilities. It is not presently practical to obtain non-licensed personnel (e.g., naval nuclear personnel) and then license them on another utility's reactor and have them stand shift work in responsible positions at that utility's plant. The utility with the operating plant has to certify that people trying to license on its plants have need for a license. Additionally, such a situation could raise serious liability questions in the event of plant transients and possible equipment damage. As was done in the past but possibly to a greater extent, the cold plant licensing process could be more comprehensive than the hot license process and this comprehensiveness could be used to assure qualified senior personnel for a plant initially starting up.

You also state that sixty (60) semester hours and forty-five (45) semester hours of college level subjects are required for Shift Supervisors and SROs, respectively. (Credit is given for experience prior to 1985.) As written, the use of the term "semester hour" implies that only college courses taught by colleges are desirable. If such is what is meant, it is impractical. You should, as soon as possible, expand on the type and hours of training which are acceptable in the context of "semester hours".

There are also difficulties in meeting your proposed semester hour requirements with college instruction. Public Service Indiana has established with an engineering college an STA academic program. Because of course prerequisites and basic length of courses (three to five semester hours), it is not possible with existing college courses to cover all of the area subjects required in the thirty to forty-five hour program and then cover them in additional depth for fifteen to thirty additional semester hours. A reactor physics course is four semester hours and it does require all prerequisite mathematics. We (and probably the college with which we are working) would be reluctant to modify existing engineering courses and programs developed over many years to design a thirty to forty-five semester hour program, covering all necessary areas such as reactor theory and thermal hydraulics, that could be augmented with thirty additional semester hours

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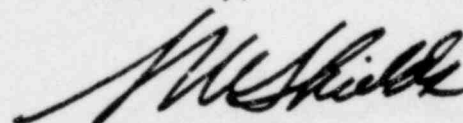
covering the same subjects. Any proposed rule should clearly specify that there are acceptable substitutes to training provided by an accredited college and give general guidelines as to what that is (e.g., fifteen hours of contact time is equivalent to one semester hour).

The NRC proposes conducting initial examinations for RO, SRO licenses and now an examination every two years for requalification. This is a potential bottleneck which could adversely affect plant operation. Public Service Indiana believes that it is very desirable to have all shift crews fully manned and, in addition, personnel with RO and SRO licenses in positions not requiring those licenses, ready to fill vacancies if they occur. If such standby personnel are not available, vacancies could remain open many months waiting for required completion of training and licensing. We believe that this could be detrimental to overall plant operation. We also understand that now the NRC is reluctant to examine any personnel other than those immediately needed for plant operation. With the proposed increased examination requirements, the problem of keeping shift crews fully manned could be aggravated.

Also, recently Commissioner Ahearne has recommended a plan with a long-term objective of requiring "all new reactor operators to hold a BS or BE degree". We believe this to be impractical and that a realistic position and task analyses process would show it to be unnecessary for reactor operators and even Shift Supervisors (such is stated by an NRC contractor in "Analysis, Conclusions and Recommendations Concerning Operator Licensing" (NUREG/CR-1750)).

On the impractical side, besides the future general shortage of engineers predicted by some credible organizations, it should be realized that the Reactor Operator position, at utilities with bargaining units, is generally classified (greater than 90 percent of the time) as a bargaining unit position. As such, in filling the position, seniority and qualifications to perform the duties of the position must be considered. It would be very difficult to prove to the Bargaining Unit that a person with a degree (and probably very little plant experience) was the only type of person that would be qualified to be a Reactor Operator or that the position of Reactor Operator was other than a bargaining unit position. Without such determinations, a degreed person would, in most cases, to eventually advance to a Reactor Operator position, have to start at the entry level of the operations series -- a position that would not be very desirable to a degreed engineer. Of course, by regulation, the NRC could overcome those impediments existing for utilities with bargaining units; but we doubt that such action could be justified on just consideration of the qualifications required to be able to perform the duties of Reactor Operator.

Sincerely,



S. W. Shields