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Reg. Guide**

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Secretary of the Commission
U.S. Nuclear Regulatory Commission
Washington, D.C. 20555

Attention: Docketing and Service Branch

Gentlemen:

The ANS-3 Reactor Operations and Support System Management Committee met June 26-28, 1979, to review the proposed revision to Regulatory Guide 1.8 and American National Standard ANSI/ANS-3.1-1978. In this meeting a decision was reached and assignments were made to revise this standard. Substantial changes are planned and being considered in light of the Three Mile Island incident. A revised draft is scheduled to be available for committee review prior to August 1. Enclosed are guidelines and statements of policy which will be considered in preparing this revision.

In addition, Regulatory Position C.2 of proposed Revision 2 to Regulatory Guide 1.8 concerns the ANS-3 Committee as follows.

Parts C.2b and C.2c and C.2d Regulatory Position Equating any of these three qualifications to the equivalent of a bachelor's degree seems to us to degrade the worth of a bachelor's degree and to decrease the likelihood of obtaining qualified personnel. If candidates for the jobs listed in this guide claim that they meet educational requirements by virtue of fulfilling NRC's requirements, then a licensee who finds a job candidate's credentials unacceptable, will not be able to defend himself. Such broad base definitions of equivalency rules out a licensee establishing more stringent requirements. Often we face this issue of equivalency and it leads to disputes. The guide should be more specific. Just because an employee has spent four years as a technician in a nuclear plant does not guarantee he has the equivalent of a bachelor's degree. The Regulatory position appears to equate experience to formal education on a one for one time basis.

Sincerely,

HJ Green
H. J. Green
Chairman - ANS-3

Acknowledged by card 8/10

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Enclosure

ENCLOSURE

Guidelines for Revision of ANSI/ANS 3.1-1978

Paragraph numbering and headings refer to specific sections in ANSI/ANS 3.1-1978.

2. - Definitions

A definition for "high school diploma or equivalent" will be added to clarify that the General Educational and Development Test (GED) is the only recognized equivalent for a high school education.

Nuclear power plant experience. The experience under item 1 will be restricted to a maximum of one year. Item 4 will be revised to clarify that the training must be at an operating nuclear reactor.

3.1 - General

The second paragraph in this section will be replaced by the following.

The qualifications of the personnel filling positions due to the absence of a principal shall as a minimum possess the qualifications of the next lower level in that field. This does not apply to positions requiring senior reactor operator or reactor operator licensees.

The individual who replaces the reactor engineer or the radiation protection group leader shall have a B.S. degree or equivalent and 2 years' experience, 1 of which will be nuclear power plant experience or an advanced degree and 1 year nuclear power plant experience. Shall have been onsite for a minimum of 6 months.

The individuals who replace the instrumentation and control or chemistry and radiochemistry group leaders shall have a minimum of three years' experience in their field, of which one year shall be at an operating nuclear power plant and a minimum of 6 months at the site.

4.2.1 - Plant Managers

These paragraphs will be rewritten to include the following requirements.

The plant manager or his designated alternate shall have held or, in the case of a new plant, receive at the first opportunity a senior reactor operator's license.

The plant manager shall have a minimum of ten years' experience at an operating power plant.

The designated alternate to the plant manager shall have a minimum of eight years' experience at an operating power plant.

Either the plant manager or his designated alternate shall have a minimum of four years of supervisory responsibility at an operating nuclear power plant.

Both the plant manager and his delegated alternate should have a B.S. degree or above in an engineering or scientific field generally associated with power plants.

4.2.2, 4.2.3, and 4.2.4 - Operations, Maintenance, and Technical Managers

These sections will be revised to require the manager at a new plant to be onsite six months prior to the commencement of preoperational testing. Experience requirements must be met at the time of commencement of preop testing or appointment to position whichever is later.

4.4.4 - Radiation Protection

This section will be revised to require the radiation protection engineer to be located onsite.

4.4.5 - Quality Assurance

This paragraph will be revised to require a QA organization to be functioning not less than six months prior to commencement of preoperational testing.

4.4.6 - Test Results Review

Qualification requirements will be addressed for persons responsible for conducting and reviewing the results of preoperational and startup testing.

4.4.7 - Training

The standard will address qualifications for those responsible for employee training.

4.5.1 - Operators

The standard will include requirements for unlicensed operators.

4.5.2 - Technicians

A high school or equivalent shall be required of all technicians. The standard may address instrument technicians separately from other technicians because of greater training and experience requirements.

4.6.1 - Engineer in Charge

The paragraph will be revised to clarify that the "engineer in charge" is not a position in the plant operating organization. It is not necessary for him or his organization to be physically located on site.

5.2 - Training of Personnel to Be Licensed by the NRC

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The following will be considerations in rewriting this section.

Provide more specific guidance evolutions to be performed in the simulator.

Provide guidance concerning the content of the training program including suggested number of hours for each aspect.

Provide guidance concerning acceptable level of performance.

At the completion of training at a simulator training center, each candidate will be comprehensively examined by the training center staff on his performance during normal and abnormal conditions and certification of the results shall be provided to the owner-operator organization.

In addition to evaluation during the training program, the owner-operator organization shall provide a comprehensive examination of each candidate at the completion of training. This examination shall be of the same type and level of difficulty as the NRC-administered examinations. Successful completion of this examination shall be required prior to certification of competency of this individual to the NRC.

5.5 - Operator Retraining and Replacement Training

Last two sentences of 5.5.1.3.4 shall be moved to the end of 5.5 and first 6 words deleted. "Records indicative of on-the-job proficiency and performance shall be maintained. Repeated errors indicative of degraded proficiency shall be reviewed by facility management and appropriate training or other corrective actions shall be initiated."

5.5.1 - Requalification Program for Licensed Operators

A simulator shall be used to fulfill portions of requalification program.

Retraining should be on an annual basis including present plant preplanned lectures, on-the-job training, and operator evaluation on a regular and continuing basis.

Requalification training shall include simulator training in handling single and multiple emergency and abnormal conditions.

The training program shall be evaluated by persons other than those directly responsible for the training and for content and quality such as exam difficulty and grading quality.

Requalification training shall include a walk through sufficient in scope to ensure familiarization with the facility.

Simulator portion of requalification training should not be less than 40 hours per year, recognizing that training is divided between classroom and board.

5.5.1.1.1 - General (lectures)

The minimum number of lectures will be identified as a requirement rather than a recommendation.

5.5.1.1.2 - Attendance

Facility management shall have all licensed individuals attend every preplanned lecture except as follows. The requalification program shall contain a grade criterion for exemption from attendance at a given lecture. The minimum grade acceptable for exemption from a particular lecture is 80 percent in that category of the examination.

5.5.1.2.1 - Control Manipulation

As applicable to the plant type, the following control manipulations and plant evolutions are acceptable for meeting the reactivity control manipulations required. The starred items shall be performed on an annual basis, all other items shall be performed on a two-year cycle. However, the requalification programs shall contain a commitment that each individual shall perform or participate in a combination of reactivity control manipulations based on the availability of plant equipment and systems. These control manipulations which are not performed at the plant shall be performed on a simulator. The use of the technical specifications should be maximized during the simulator control manipulations. Personnel with SRO licenses are credited with these activities if they direct or evaluate control manipulations as they are performed.

PWR/BWR/HTGR

- * (1) Plant or reactor startups to include a range that reactivity feedback from nuclear heat addition is noticeable and heatup rate is established
- (2) Plant shutdown
- * (3) Manual control of steam generators and/or feedwater during startup and shutdown
- (4) Boration and/or dilution during power operation
- * (5) Any significant (>10 percent) power changes in manual rod control or recirculation flow
- (6) Any reactor power change of 10 percent or greater where load change is performed with load limit control or where flux, temperature, or speed control is on manual (for HTGR)
- * (7) Loss of coolant
 - 1. including significant PWR steam generator leaks
 - 2. inside and outside primary containment
 - 3. large and small, including leak-rate determination
 - 4. saturated reactor response (PWR)
- (8) Loss of instrument air (if simulated plant specific)
- (9) Loss of electrical power (and/or degraded power sources)

- * (10) Loss of core coolant flow/natural circulation
- (11) Loss of condenser vacuum
- (12) Loss of containment integrity
- (13) Loss of service water if required for safety
- (14) Loss of shutdown cooling
- (15) Loss of component cooling system or cooling to individual components
- (16) Loss of normal feedwater or normal feedwater system failure
- * (17) Loss of all feedwater (normal and emergency)
- (18) Loss of protective system channel
- (19) Mispositioned control rod or rods (or rod drops)
- (20) Inability to drive control rods
- (21) Conditions requiring use of emergency boration or standby liquid control system
- (22) Fuel cladding failure or high activity in reactor coolant or offgas
- (23) Turbine or generator trip
- (24) Malfunction of automatic control system(s) which affect reactivity
- (25) Malfunction of reactor coolant pressure/volume control system
- (26) Reactor trip
- (27) Main steam line break (inside or outside containment)
- (28) Nuclear instrumentation failure(s)

5.5.1.2.4 - Review of Abnormal, Emergency, and Security Procedures

Fire protection procedures will be incorporated into this section.

The word "simulated" will be deleted from subitem (3).

5.5.1.3.1 - Annual Examinations

Annual examinations comparable in scope and degree of difficulty to an NRC examination shall be given to each licensed operator and senior operator.

The annual written examination shall contain categories of examination questions identified in Appendix A to 10 CFR Part 50 plus another category covering operating experiences from similar plants. A grade of less than 70 percent in any category shall require accelerated requalification in that category. A grade of less than 75 percent overall requires accelerated requalification in all categories graded less than 75 percent.

An annual oral requalification examination shall be given. The examination shall be graded as pass/fail. Persons failing the examination shall require accelerated requalification.

5.5.1.3.3 - Observation

The following rewording is being considered:

The program shall provide for systematic observation and documented evaluation of each licensed operator's performance and competency by the immediate supervisor. Such observation and evaluations shall include a review of actions taken, or to be taken, during actual or postulated abnormal and emergency conditions.

Delete second paragraph.

A management evaluation shall be conducted quarterly of each shift supervisor's management of his shift. The evaluation shall include (as a minimum overall) shift conduct, shift turnover, and content of appropriate log books.

5.5.1.3.4 - Accelerated Requalification

Persons qualifying for accelerated requalifications as a result of annual examination results shall not perform license duties until successfully completing the program. Accelerated requalification shall be given in the categories required or areas identified in the oral examination. Successful completion of the program shall be measured by a reexamination in individual categories (<70 percent in any category), repeating an entire written annual (<75 percent overall) on repeating the oral examination.

HJG:SS
7/5/79

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