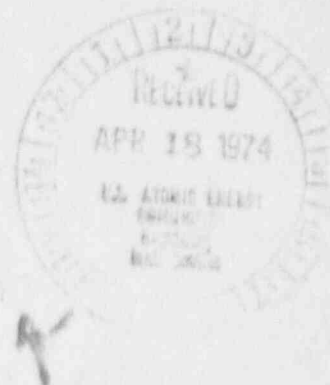


OPERATOR REQUALIFICATION PROGRAM
PRAIRIE ISLAND AND MONTICELLO NUCLEAR GENERATING PLANTS
NORTHERN STATES POWER COMPANY

December 14, 1973



1. General

The Northern States Power Company operator requalification program at the Monticello and Prairie Island Nuclear Generating Plants is formulated to meet the requirements established by 10CFR55 Appendix A.

The requalification program will be established, maintained and controlled by knowledgeable personnel assigned to the respective plant organizations. It will include preplanned lectures and seminars and may be supplemented by the selective use of films, videotapes and individual study material. The use of films, videotapes and individual study material will be limited to less than one-half of the requalification lecture program. The preplanned lectures and seminars will normally be presented or directed by a member of the plant staff or a designated qualified member of the group that is receiving the training. Although simulator training may be used to supplement the training of the plant operators, it is intended that the requirements of the requalification program relating to reactivity control manipulations will be satisfied at the facility. If simulator training is determined to be necessary, plans will be made in a manner consistent with the approval requirements of 10CFR50.54(i)(1).

The fundamental approach to the retraining of all licensed personnel at the plants is to conduct retraining lectures and seminars for individual shift groups. Each group includes a senior licensed Shift Supervisor and licensed control room operators.

At Monticello the duration of a normal shift cycle is approximately four weeks long. During this period each operating shift is assigned to off-the-job retraining for three or four days. This is accomplished by having the relief shift take over the normal operating duties for the scheduled day shift operators.

At Prairie Island, the shift cycles are of 5-week duration. During retraining periods, each operating shift will normally be assigned to retraining for 3 to 4 half-day sessions per cycle. This will be accomplished by relief from a 5th fully staffed rotating shift.

With this approach to retraining, similar preplanned lectures are presented four or five times over the period of the shift cycles. Since the preplanned lectures are presented during normal working hours on weekdays, the retraining program provides ample flexibility for nonoperating licensed personnel to attend required lectures. Individual operators who miss an assigned lecture for one reason or another or individual operators who need additional attention can be rescheduled to attend specific lectures on a timely basis without affecting the established sequence of training.

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Seminars, which include on-the-job and off-the-job discussions and simulation of emergency and abnormal conditions, will be used to satisfy some of the requirements of the requalification program. They will be controlled to satisfy the established conditions and requirements of a lesson plan or training guide. Each of these activities will be conducted four or five times during each retraining cycle giving all operating and non-operating licensed personnel ample opportunity to participate in the activities which may be required for them.

The established schedule, which includes three or more periods of retraining per shift cycle during the retraining months, provides an appropriate means of keeping operating personnel knowledgeable of current happenings and developments and provides them an opportunity to discuss these developments with knowledgeable staff personnel on a timely basis.

If changes in the following paragraphs of the program are proposed which would decrease the scope, time allotted for the program or frequency in conducting different parts of the program, they will be made in a manner consistent with the approval requirements of 10CFR50.54(i)(1).

2. Scope of the Regualification Program

A. General

A written examination will be completed annually by each licensed operator and senior operator to determine the areas in which retraining lectures are required to maintain the required levels of knowledge. Based on the results of the examination, a preplanned lecture series will be developed and conducted to meet the minimum durations established in Section 2-C.

Seminars will be held on or off shift for operating personnel to supplement the retraining received during the preplanned lecture series. The seminars will be conducted to meet the minimum durations established in Section 2-D.

On-the-job evaluations for all licensed personnel in the form of drill sessions or oral examinations will be conducted. Each licensed person will receive a minimum of 4 hours of on-the-job evaluation each year.

Reactivity control manipulations will be scheduled, when necessary, to provide each licensed operator and senior operator with a minimum of 10 control manipulations during each term of his license. Senior operators may either manipulate the controls directly or direct the activities of individuals performing the control manipulations.

B. Examinations

An annual examination will be administered to each licensed operator and senior operator to provide a basis for determining the content of the preplanned lecture series for the subsequent retraining year. The examination will include the following subjects:

- (1) Provisions of the Plant Operating License
- (2) Technical Specifications
- (3) Theory and principles of reactor operations

- (4) General and specific plant operating characteristics
- (5) Plant instrumentation and control systems
- (6) Plant protection systems
- (7) Integrated, abnormal and emergency operating procedures
- (8) Engineered safety systems
- (9) Radiation control and safety
- (10) Applicable positions of Title 10, Chapter I, Code of Federal Regulations

In addition to the annual examination, periodic quizzes will be conducted during the preplanned lecture series to evaluate the effectiveness of the retraining lectures. These quizzes will be completed by the licensed operators and senior operators who are required to attend the preplanned lectures. A passing grade for these quizzes is 80%. An operator or senior operator scoring below 80% will be required to repeat the specific lecture covered by the quiz.

C. Preplanned Lecture Series

All licensed shift operating personnel will attend a minimum of 144 hours of preplanned lectures each two-year term of their license. The lecture series will include instructions on the previously listed examination subjects with emphasis on the areas which were determined to require upgrading. Licensed operators will be required to attend all lectures relating to any annual examination subject in which they received a grade of 80% or less.

Non-operating licensed personnel will be required to attend all lectures relating to:

- (1) Integrated, abnormal and emergency operating procedures
- (2) Radiation control and safety

In addition, they will be required to attend all lectures relating to any annual examination subject in which they received a grade of 80% or less.

D. Seminars

Seminars or discussion periods will be scheduled on or off shift to supplement the preplanned lecture series and will include the following subjects:

- (1) Review of significant facility design, procedural and licensing changes
- (2) Detailed review of integrated operating procedures
- (3) Review of abnormal and emergency operating procedures
- (4) Review of abnormal occurrences and unusual events
- (5) Review of administrative matters of significance to operating personnel
- (6) Preview of refueling outage activities

All licensed shift operating personnel will attend a minimum of 60 hours of on-shift or off-shift scheduled seminars each year.

Non-operating licensed personnel will be required to attend scheduled seminars relating to the detailed review of integrated operating procedures and the review of abnormal and emergency operating procedures.

E. On-the-Job Evaluations

Each licensed operator and senior operator will participate in designated operating drills for a minimum of two hours per year for the purpose of evaluating the individual's operating knowledge and performance ability including an evaluation of actions taken during simulated abnormal or emergency conditions. The drill sessions may be conducted on an individual or shift crew basis and will be evaluated by a qualified licensed senior operator. Reactivity control manipulations may be used for drill purposes.

Oral examinations of licensed personnel by a qualified licensed senior operator may be conducted to satisfy a portion of the four hours of on-the-job evaluations each year; however, drill sessions may satisfy the entire four hours of on-the-job evaluations.

F. Reactivity Control Manipulations

Each licensed operator and senior operator will perform or supervise, when applicable, at least ten reactivity control manipulations during each two-year term of his license. The reactivity control manipulations shall involve a variety of the evolutions listed below:

Prairie Island

1. Startup to the point of adding heat.
2. Orderly shutdown
3. Manual control of S/G's during startup and shutdown.
4. Operation of EHC in manual during startup.
5. Boration during power operation.
6. Dilution
7. Operation of manipulator crane during refueling over the core.
8. Control manipulation during significant ($>10\%$) power changes.
9. Manual rod control prior to and during generator synchronization.

Monticello

1. Plant or reactor startup to include a range such that reactivity feedback from heat addition is noticeable.
2. Orderly plant shutdown.
3. Control rod sequence changes.
4. Shutdown margin checks.
5. Control rod scram insertion time tests.
6. Any reactor power change of 10% or greater, including testing of equipment where load changes are performed with control rods, "load selector" of the EHC system or where the recirculation system is in manual speed control.
7. Plant and reactor operation that involves emergency or transient procedures when reactivity is changed by 10% or more.
8. Refueling operations where fuel is moved over the core.

Time will be allotted, if required, during the annual refueling outage or during other major outages to schedule reactively control manipulations for licensed operators and senior operators. Simulator training may be used to satisfy the reactivity control manipulation requirements subject to the stipulation in Section 1 on simulator training.

3. Accelerated Retraining Program

The performance of each licensed operator and senior operator will be reviewed on a routine basis to verify that the attendance and performance requirements of the requalification program are met. Any individual who does not meet the requirements of the requalification program must complete an individually assigned accelerated study program as specified below. The accelerated study programs will be developed on an individual basis by the Training Supervisor and will be reviewed and approved by the Superintendent of Operations & Maintenance before implementation. Participation in an accelerated study program will not excuse the participant from other requalification program activities.

- A. Any licensed operator or senior operator who fails the annual written examination with an average grade of less than 70% will be required to complete an accelerated study program. During participation in the accelerated study program, the licensed operator or senior operator will be removed from his normally assigned duties. The licensed operator or senior operator will be returned to his normally assigned duties after passing a written examination at the completion of his accelerated retraining program. A grade of 75% or greater will be required for passing. If the operator scores less than 80% on any part of this examination he will be required to attend a lecture on those parts.
- B. Any licensed operator or senior operator who does not maintain the annually required attendance at the preplanned lecture series of seminars will be required to complete an accelerated training program if less than 80% of the required lectures or seminars were attended. If more than 80% but less than 100% of the required lectures or seminars were attended, the performance and examination results for the individual will be reviewed by the Training Supervisor and the Superintendent of Operations & Maintenance to determine if an accelerated study program is required.
- C. On-the-job evaluations of all licensed operators and senior operators will be reviewed by the Training Supervisor and the Superintendent of Operations and Maintenance to determine if the assignment of individual accelerated study programs are required.
- D. Any licensed operator or senior operator who has been inactive for four or more months for any reason will not be allowed to perform unsupervised licensed activities until he has completed an individually assigned accelerated study program and successfully passed a written and oral examination. The written examination will be similar to the annual examination and a grade of 75% or greater will be required for passing. The oral examination of two or more hours duration will verify that the individual is thoroughly knowledgeable of the existing status of the plant systems and controls.

4. Records

Records of the requalification program will be maintained by the Training Supervisor to document the participation of each licensed operator and senior operator in the previously described requalification program. The records will include the following:

- a. Copies of all administered written examinations and the answers to the examination questions.
- b. General description of the preplanned lecture series including the number of hours of lectures anticipated for each general subject and the general content of the lectures.
- c. Records of individual participation during the preplanned lecture series showing the dates of attendance and the time allotted for each lecture.
- d. General description of the seminar program including the hours allotted for each discussion.
- e. Records of individual participation in the seminar program showing the topics of discussion and the date and time of each discussion.
- f. Records of individual participation in the on-the-job evaluation program.
- g. Records of individual participation in accelerated study programs including the basis for the participation and the results of required testing, where applicable.
- h. Documentation of reactivity control manipulations performed by each individual and records of individual participation in simulator training when applicable.

5. Auditing of the Requalification Program

The Training Supervisor will prepare a brief summary of the status of the requalification program every three months. This summary will include a general progress report on the requalification program and will list existing or potential difficulties with respect to meeting its requirements. The summary report will be subject to review and discussion by the Plant Manager, the Superintendent of Operations & Maintenance and the Training Supervisor. Corrective actions will be initiated as required.

The Plant Manager may have the requalification program audited periodically by a designated qualified member of the plant organization. Such audits will include a written audit report which will be subject to review and discussion by the Plant Manager, Superintendent of Operations & Maintenance and the Training Supervisor. Corrective actions will be initiated as required.

If periodic audits of the Requalification Program are performed by an independent review and audit group, the audits initiated by the Plant Manager may not be required.