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Mr. Paul F. Collins

FROM:
Wisconsin Public Svc. Corp.
Green Bay, Wisconsin
E. W. James

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PLANT NAME: Kewaunee
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ENCLOSURE

Consists of the 9/30/77 revision of the Kewaunee Operator Requalification Program submitted for NRC review.....

(9-P)

1 ENCL *

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REGULATORY DOCKET FILE COPY

WISCONSIN PUBLIC SERVICE CORPORATION



P.O. Box 1200, Green Bay, Wisconsin 54305

October 4, 1977

10/11/77

Mr. Paul F. Collins, Chief
Operator Licensing Branch
Directorate of Licensing
U. S. Nuclear Regulatory Commission
Washington, D. C. 20555



Dear Mr. Collins:

SUBJECT: Operator Requalification Program
Docket No. 50-305
Operating License DPR-43

Attached please find the 9/30/77 revision of the Kewaunee Operator Requalification Program submitted for your review. As required by Section 9.0 of our current program, this revision is being submitted to present a definitive program for the use of a simulator in our operator requalification program.

The Kewaunee Nuclear Power Plant has been operating with a very high capacity factor; therefore, very few load changes or outages have occurred to provide the reactivity manipulations required by our requalification program. Rather than pay the high costs of plant outages for requalification training, we desire to use a simulator to augment our program.

Our guidelines for a simulator program provide for a minimum course of three days duration with an average of six hours per day on the simulator covering reactivity manipulations and casualties. Completion of the simulator program will be counted as two formal requalification sessions because of the time involved and the concentrated nature of the training provided. In addition, one hour of simulator time is considered to be equivalent to five hours in the control room because the range of reactivity manipulations encountered with the simulator provide substantially more experience than the control room during typical steady state power operation.

Wisconsin Public Service Corporation intends to utilize the Westinghouse Electric Corporation power plant simulator facility at Zion, Illinois, or a comparable facility capable of simulating of a PWR type power plant such as the Kewaunee Plant.

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This revision of the Kewaunee Operator Requalification Program also clarifies that non-shift senior licensed operators fulfill their group discussion participation requirements through attendance at staff meetings and Plant Operations Review Committee meetings. We feel that this allowance is acceptable because plant problems, procedure changes, incidents, and other topics normally covered in group discussions are discussed in these meetings.

Your timely review of this revision to our Operator Requalification Program would be greatly appreciated.

Very truly yours,

Carl W. James
for

E. W. James
Senior Vice President
Power Supply & Engineering

EWJ:sna
Attach.

KEWAUNEE OPERATOR REQUALIFICATION PROGRAM

1.0 PURPOSE

The Operator Requalification Program is a requirement of Appendix A, 10 CFR 55, designed to ensure that all licensed Reactor Operators and Senior Reactor Operators maintain the proficiency to continue to operate the Kewaunee Nuclear Power Plant safely, efficiently and within the requirements of the Technical Specifications.

2.0 APPLICABILITY

This program applies to all licensed Reactor Operators and Senior Reactor Operators who are required or intend to maintain a current, valid license.

3.0 REFERENCES

3.1 10 CFR 50.54 (i) (i-1)

3.2 10 CFR 55, Appendix A - Requalification Programs for Licensed Operators of Production and Utilization Facilities.

3.3 ACD 13.3 - Operator Training

4.0 PROGRAM SCHEDULE

4.1 Each requalification program is established to span a two-year period. Promptly upon termination of one program, a successive program will commence, consistent with the time of year and operational status of the plant at the time of program termination.

4.2 The formal sessions and group discussions specified by this program will normally be conducted during the months of October through April. The months May and September are contingency months available for postponed or additional formal sessions as may be required. The months June, July and August are reserved for vacations; no formal sessions will be scheduled in this period, although the individual study will be encouraged.

4.3 On-the-job training which is conducted mostly on shift will be scheduled continuously. It is not expected that vacations will affect this portion of the retraining program significantly.

4.4 The general schedule of formal sessions is specified in Paragraph 5.8.

5.0 FORMAL SESSIONS

5.1 It is our belief that, since all licensed personnel have received in-depth, initial training in the various subject areas while preparing

for license exams, the traditional lecture approach for many of the formal requalification sessions planned would be inappropriate. Since most of the formal requalification sessions will be a review of material, we believe that a well disciplined seminar format would prove more beneficial because, in participating, rather than merely listening, the individuals will be more encouraged to keep their mind actively applied to the subject matter under discussion.

Therefore, we intend to employ either the seminar or lecture format as appropriate for each of the formal requalification program sessions. In either case, an instructor will be present with organized, pre-planned subject matter to either deliver or use as the basis for discussion or question and answer period.

- 5.2 Each operating crew will participate in the formal requalification sessions while on relief shift. Each session will, therefore, be repeated five times. In this manner, the scheduler provisions of Paragraph 4.2 will permit a minimum of six formal sessions per year per crew. Special provisions have been established to permit the making up of formal sessions missed due to illness or vacation.
- 5.3 The general subject categories of the formal requalification sessions are as follows:
 - 5.3.1 Reactor Theory and Principles of Plant Operation
 - 5.3.2 Plant Major Fluid Systems (includes Engineered Safety Systems) and Facility Design
 - 5.3.3 Instrumentation, Control and Protection Systems
 - 5.3.4 Electrical Distribution and Control Systems
 - 5.3.5 Plant Operating Characteristics
 - 5.3.6 Normal, Abnormal and Emergency Operating Procedures
 - 5.3.7 Technical Specifications
 - 5.3.8 Radiation Monitoring and Health Physics
 - 5.3.9 Applicable Portions of Title 10, Chapter 1, Code of Federal Regulations
- 5.4 The specific subject matter to be covered in the formal sessions will be determined primarily by the results of the annual examination discussed in Paragraph 7.1.2.
- 5.5 Attendance at the formal sessions shall normally be mandatory for all licensed persons; however, anyone scoring higher than 70% overall and 85% in a specific subject area on the annual written examination may, at the discretion of the Training Supervisor, be excused from attendance at formal sessions on this subject area.

A record of attendees at formal sessions will be maintained, reviewed and discussed periodically with plant management.

- 5.6 The Kewaunee Plant presently has a very extensive library of video tapes which will be utilized in the formal sessions, as required. However, no more than one-half of the formal sessions will consist of these tapes or other films.
- 5.7 During the formal sessions, the background and reasons behind design, procedure and facility license changes will be discussed as time permits. This will supplement the group discussion coverage of these changes and help to insure that the licensed personnel have a thorough understanding of these changes.
- 5.8 The following is the preliminary schedule of formal sessions. This schedule may be changed to accommodate special needs indicated by the annual examination. The term "period" refers to the five (5) week time period corresponding to one rotating shift cycle.

<u>Period</u>	<u>Subject</u>
1 and 2	Reactor Theory and Principles of Operation
3 and 4	Plant Fluid Systems and Facility Design
5 and 6	Instrumentation, Control and Protection Systems
7	Electrical Distribution and Control Systems
8	Plant Operating Characteristics
9	Plant Operating Procedures
10	Technical Specifications
11	Radiation Monitoring and Health Physics
12	Applicable portions of Title 10, Chapter 1, Code of Federal Regulations

6.0 ON-THE-JOB TRAINING

6.1 Reactivity Control Manipulations

- 6.1.1 Each licensed operator will be required to manipulate the plant controls during at least ten(10) significant reactivity control manipulations during the course of each two year requalification period. Each senior licensed operator will be required either to manipulate the plant controls or direct the activities of licensed operators during at least ten (10) significant reactivity control manipulations during the course of each two year requalification period.

- 6.2.4 The objective of the group discussions will be the following:
- a. To review the operation of systems, mechanisms, and apparatus of the plant.
 - b. To review the normal and abnormal operating procedures associated with these systems, mechanisms and apparatus.
 - c. To review all abnormal and emergency operating procedures at least once per requalification program.
- 6.2.5 Participation in the group discussions is mandatory for all licensed persons; however, any individual scoring higher than 70% overall and 85% in a specific subject area on the annual written examination may, at the discretion of the Training Supervisor (and the Shift Supervisor for shift personnel) be excused from participation in discussions on the specific subject areas. Group discussion requirements for non-shift senior licensed operators are fulfilled by participation in staff meetings and Plant Operations Review Committee meetings.

6.3 Individual Study

- 6.3.1 During the course of the requalification period, each licensed person shall be responsible for pursuing individual study. Individual study will supplement the formal sessions and group discussions in that it is expected that the material to be covered in these sessions will be reviewed in advance by all licensed persons and, if necessary, afterwards. By means of individual study, each licensed person is also afforded the opportunity to concentrate on specific areas of weakness.
- 6.3.2 Individual study will include a review of design, operating procedure and facility license changes. Descriptions of these changes will be routed to each licensed person by the Plant Administrative Assistant.
- 6.3.3 As a general guideline, each licensed operator and Shift Supervisor should schedule at least an average of four (4) hours of individual study per week; while Staff licensed personnel should schedule an average of eight (8) hours per month.
- 6.3.4 Individual study is an individual responsibility. Except as specified in Paragraph 10.1.c, no documentation of individual study is planned.

7.0 EVALUATION

7.1 Annual Examination

- 7.1.1 An annual examination comparable to an NRC examination for the type of license held shall be part of the requalification program.
- 7.1.2 The annual written examination will be used for the following purposes:

- 6.1.2 The following activities are considered to be significant re-activity control manipulations:
- a. Reactor startup to the point of adding heat.
 - b. Orderly reactor shutdown.
 - c. Manual control of steam generator level during startup or shutdown.
 - d. Operation of the turbine EH control panel during startup.
 - e. Boration of reactor coolant system to produce a temperature change or rod motion.
 - f. Dilution of reactor coolant system.
 - g. Operation (or direction of operation for SRO) of manipulator crane in the core area during refueling. A minimum of four (4) fuel elements must be taken into, removed from or transferred from one location to another in the core in order to take credit for this manipulation.
 - h. Any power change in excess of 10% with rod control in manual.
 - i. Manual rod control prior to and during generator synchronization.
 - j. Heatup of the reactor coolant system by 50°F or more with nuclear heat.
 - k. Cooldown of the reactor coolant system by 50°F or more.

6.1.3 During each two year requalification period, every effort will be made to have each licensed operator perform (or direct, as applicable) a combination of control manipulations as outlined in 6.1.2 above.

6.2 Group Discussions

- 6.2.1 Group discussion sessions will be scheduled periodically during the requalification in accordance with Paragraph 4.2. For shift personnel, group discussions will occur on-shift on a not-to-interfere-with-plant-operation basis and will normally be led by the Shift Supervisor. For the licensed staff personnel, group discussions will occur during normal working hours and be led by one member of that group.
- 6.2.2 The subject matter to be discussed in the group discussion sessions will normally be assigned by the Training Supervisor to ensure subject consistency among groups. The topics chosen for discussion will be based on the annual examination results, indications, and suggestions from the formal sessions and other training and operational needs as determined by the Plant Superintendent or the Training Supervisor.
- 6.2.3 During the months that group discussions are scheduled, a minimum of one (1) group discussion session for each shift crew and the day shift licensed personnel shall be scheduled every five (5) weeks. More discussions can be scheduled if the need arises.

- a. To verify that the requalification program is effectively maintaining the knowledge level of licensed personnel consistent with the license they hold.
- b. To determine areas of weak knowledge level to be emphasized in future requalification program sessions.
- c. To determine the need for individual participation in remedial training on specific subject areas (Ref. Paragraph 8.1.1).
- d. To determine the need for individual participation in an accelerated requalification program (Ref. Paragraph 8.2.1).
- e. To determine that an individual may be excused from mandatory attendance at or participation in all training sessions (formal or group) in specific subject areas (Ref. Paragraphs 5.5 and 6.2.5).

7.1.3 The annual examination is to be given in its entirety to all licensed persons during a single, consecutive, seven day period that conforms most conveniently to the established rotating shift schedule. A special examination will be administered to anyone missing the annual examination for any bona fide reason.

7.1.4 The Training Supervisor and a qualified individual appointed by the Plant Superintendent shall be responsible for the preparation and grading of the annual examination. One individual shall be designated as the examination author and the other will become its reviewer. The Training Supervisor will administer the examination.

Both the examination author and reviewer shall, of necessity, be exempt from the written examination requirements of the requalification program. These individuals, however, shall not be exempt from attendance at any required training sessions (formal or group), and must comply with all other provisions of the requalification program.

7.2 (Deleted)

7.3 Performance Observation and Evaluation

7.3.1 Each licensed person shall be individually observed and evaluated to determine his overall ability to perform activities for which he is licensed. Each individual will be observed performing, simulating, or discussing as many normal operations and coping with as many abnormal and emergency situations as is practical consistent with actual plant operation and the availability of qualified observers.

7.3.2 As a minimum, each licensed person shall be observed and evaluated once per year.

7.3.3 The Plant Superintendent shall appoint qualified individuals from the Plant Staff and/or the Corporate Nuclear Engineering Staff or outside organizations to observe and evaluate licensed personnel.

8.0 REMEDIAL AND ACCELERATED TRAINING

8.1 Remedial Training

8.1.1 Participation in remedial training in specific subject areas shall be required of each individual who receives an overall grade of 70% or greater but scores below 80% in a specific subject category on the annual written examination.

8.1.2 Remedial training will be developed to serve the needs of the individual. Normally this will take the form of guided and monitored self-study in specific subject areas concurrent with participation in the normal requalification program. At the completion of remedial training, the individual will be given a written examination on the subject(s) studied. A grade of 80% or greater will signify satisfactory completion of this training.

8.2 Accelerated Training

8.2.1 An individual receiving an overall grade on the annual written examination of less than 70% will be given an oral examination as soon as possible but not in excess of fourteen (14) days of the date he completed the written examination. The oral examination of the deficient areas will be administered by at least two qualified individuals appointed by the Plant Superintendent. Documentation of the subject areas covered and results will be retained by the Training Supervisor for each individual given an oral examination.

8.2.2 If the results of the oral examination indicate that the individual's overall plant knowledge level is satisfactory, the individual will attend all normal requalification program training sessions in addition to participation in an accelerated program in the deficient areas of the written examination.

8.2.3 If the results of the oral examination indicate that the individual is deficient of knowledge level in a minority of the subject areas covered by the written examination, but capable of safety operating the reactor, he shall immediately commence accelerated training. This individual may continue to perform functions for which he is licensed. Upon completion of accelerated training, the individual will be given a written examination in the demonstrated weak subject areas; an overall grade of 70% indicates satisfactory results.

- 8.2.4 If the results of the oral examination indicate that the individual is deficient of knowledge level in a majority of the subject areas covered by the written examination, he shall immediately be relieved of licensed duties and commence accelerated training. Upon completion of accelerated training, the individual will be given a written and an oral examination in the deficient areas. An overall grade of 70% on the written examination and satisfactory results on the oral examination are both required to restore the person's qualification to perform licensed functions.
- 8.2.5 Accelerated training will be developed to serve the needs of the individual(s) involved. Participation in normal requalification sessions which might be in progress concurrently can be considered a part of accelerated training if the subject matter matches the needs of the individual(s).

9.0 SIMULATOR TRAINING

- 9.1 The Kewaunee Plant requalification program may include the use of a simulator in meeting some program requirements. If a simulator program is used, it will involve at least three days at a simulator facility with an average of six hours per day spent on the simulator. A typical simulator program will expose the operator to reactivity control manipulations such as start-ups, shutdowns, and power changes and will also present casualty situations to the operator ranging from minor instrumentation and control failures to major accidents such as a double-ended shear of a main coolant loop. Use of the simulator will be at the discretion of the training supervisor.
- 9.2 As a minimum, the simulator will be used to augment the requalification program in the following areas:
- a. Reactivity control manipulations required by Paragraph 6.1.
 - b. Group discussions in the areas outlined by Paragraph 6.2.4.
 - c. Plant operation during minor casualties.
 - d. Plant operating during major casualties.
- 9.3 The following criteria for equivalency of simulator time will be used:
- a. The completed simulator program will be credited as two formal requalification sessions.
 - b. For non-shift senior licensed operators, one hour of simulator time will be counted as five hours in the control room.
 - c. Simulator experience will apply to reactivity control manipulations on a one-for-one basis.
 - d. The simulator facility used will be one approved by the NRC, Operator Licensing Branch, for Westinghouse PWR reactor plants.

10.0 RECORDS

10.1 The following records of the requalification program will be maintained:

- a. Annual examinations and each licensed operator's answers to these examination questions.
- b. Documentation indicating that each licensed operator has reviewed the contents of abnormal end emergency procedures.
- c. Documentation indicating that each licensed operator is cognizant of significant facility design, procedure, and facility license changes.
- d. Details and results of any accelerated and/or remedial training conducted.
- e. Results of observations and evaluations performed on each licensed operator, including any deficiencies in the individual's training results.
- f. Documentation indicating that group discussions were held, including attendance and subject matter discussed.
- g. Documentation of oral examinations given due to a failure of the written examination indicating areas covered and the results.

11.0 SPECIAL ACTION

- 11.1 Licensed personnel required to participate in remedial or accelerated training who fail to achieve the required examination results at the completion of this training may be at the discretion of the Plant Superintendent "recycled" through additional remedial or accelerated training or become the subject of special action.
- 11.2 Special action is whatever action is deemed appropriate by the Plant Superintendent in the case of the individual consistent with his performance and the requirements to maintain current his license.