KEWAUNEE OPERATOR REQUALIFICATION FECGRAM

1.0 PURPOSE

The Operator Regualification 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 Regualification Programs for Licensed Operators of Production and Utilization Facilities.
- 3.3 (Deleted)
- 3.4 March 28, 1980 letter from Harold R. Denton to All Power Reactor Applicants and Licensees.

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 shall commence, consistent with the time of year and operational status of the plant at the time of program termination.

4.2 The annual Formal Sessions specified by this program will normally be conducted during the months of October through April. The months of May and September are contingency

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months available for postponed or additional Formal Sessions, as may be required. The months of June, July and August are reserved for vacations; therefore no Formal Sessions will be scheduled in this period, although individual study will be encouraged.

- 4.3 On-the-job training, which is conducted mostly on shift, will be conducted continucusly. It is not expected that vacations will affect this portion of the retraining program significantly.
- 4.4 The normal schedule of Fcrmal Sessions is specified in Paragraph 5.8

5.0 FORMAL SESSIONS

5.1 It is our belief that, since all licensed personnel have received indepth initial training in the various subject areas while preparing for license exams, the traditional lecture approach for many of the formal requalification sessions would be inappropriate. Since most of the formal requalification sessions will be a review of license material, we believe that a well disciplined seminar format would prove more beneficial. 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. For either format, an instructor will be present with organized, pre-planned material to either present or use as the basis for discussion.

- Normally, the licensed personnel on each operating crew will 5.2 participate in the formal regualification sessions while on session will, therefore, be shift. Each relief their the schedule this manner, In repeated five times. provisions of Paragraph 4.2 will permit a minimum of six Formal Sessions per year per crew. Special provisions to make up formal Sessions which have been missed will be established.
- 5.3 The general subject categories cf the formal requalification sessions are as follows:
 - 5.3.1 Reactor Theory and Frinciples cf Plant Operation
 - 5.3.2 Major 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 Heat Transfer, Fluid Flow and Thermodynamics
- 5.3.8 Technical Specifications
- 5.3.9 Radiation Monitoring and Health Physics
- 5.3.10 Applicable Portions of Title 10, Chapter I, Code of Federal Regulations
- 5.3.11 Training in the use of installed plant systems to control or mitigate an accident in which the core is severely damaged
- 5.4 The specific subject matter of each session of Paragraph 5.3 to be covered in the Formal Sessions will be determined by the results of the annual examination discussed in Paragraph 7.1.
- 5.5 Attendance at the Formal Sessions shall normally be mandatory for all licensed persons. However, anyone scoring higher than 80% overall and 80% in a specific subject area on the annual written examination may, at the discretion of the Training Supervisor, be excused from attendance at the Formal Sessions on this subject area.

A record of attendees at Formal Sessions shall 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 Individual Study and help to insure that licensed personnel have a thorough understanding of these changes.
- 5.8 The following is the normal 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 as discussed in Paragraph 5.2.

PERIOD SUBJ

SUBJECT

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/Plant Operating Procedures
	9	Heat Transfer, Fluid Flow and Thermodynamics
	10	Technical Specifications, Applicable portions of Title 10, Chapter I, Code of Federal Regulations
	11	Radiation Monitoring and Health Physics
	12	Plant Transients, Training in the use cf installed plant systems to control or mitigate an accident i which the core is severely damaged

5.9 Quizzes shall be given on all lectures.

6.0 ON-THE-JOB TRAINING

6.1 Reactivity and Control Manipulations

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

6.1.2 The following activities are considered to be reactivity control manipulations and plant evolutions:

The starred items shall be performed on an annual basis.

*a. Reactor startup to the point of adding heat.

b. Plant shutdown.

*c. Manual control of steam generator level during startup cr shutdown.

d. Operation of the turbine EH control panel during startup.

- e. Boration or dilution of reactor coolant system to produce a temperature change or rod motion.
- *f. Any power change in excess of 10% with rod control in manual.
- 'g. Manual rod control prior to and during generator synchronization.
- h. Heatup of the reactor coolant system by 50°F or more with nuclear heat.
- *i. Loss of coolant including:
 - 1. Significant steam generator leaks
 - 2. Inside and outside primary containment
 - 3. Large and small, including leak-rate determination
 - 4. saturated Reactor Coclant System response
- j. Loss of electrical power (and/or degraded power sources).
- *k. Loss of reactor ccolant flow/natural circulation
- 1. Loss of condenser vacuum
- m. Loss of service water
- n. Loss of shutdown cooling
- o. Loss of component cooling system or cooling to an individual component
- p. Loss of normal feedwater or normal feedwater system failure
- *q. Loss of all feedwater (ncrmal and emergency)
- r. Loss of protective system channel
- s. Mispositioned control rcd or rods (or rod drops)
- t. Inability to drive control rods
- u. Conditions requiring use of emergency boration
- v. Fuel cladding failure or high activity in reactor coolant system.

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- . Reactor trip
- x. Malfunction of automatic control system(s) which affect reactivity
- y. Malfunction of reactor ccolant pressure/volume control system
- z. Steam line break (inside or outside containment)

aa. Nuclear instrumentation failure(s)

6.2 (Deleted)

- 6.3 Individual Study
 - During the course of the regualification program, 6.3.1 each licensed person shall be responsible for pursuing individual study. Individual Study will supplement the Formal Sessions; it is expected that the material to be covered in the Formal Sessions will be reviewed in advance by all licensed persons and, if necessary, afterwards. By means cf individual study, each licensed person is also afforded the opportunity to concentrate on specific areas of weakness.
 - 6.3.2 Individual Study shall include a review of design, operating procedure and facility license changes.
 - 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 maintained.
- 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:

- 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 regualification program sessions.
- c. To determine the need for individual participation in Remedial Training on specific subject areas (Pef. Paragraph 8.1).
- d. To determine the need for individual participation in an Accelerated Training program (Ref. Paragraph 8.2).
- e. To determine that an individual may be excused from mandatory attendance at or participation in all training sessions in specific subject areas (Ref. Paragraph 5.5)
- examination is to be given in its 7.1.3 The annual entirety to all licensed persons during a single, consecutive, fourteen-day period that conforms most conveniently to the established rotating shift special examination shall be schedule. A missing the annual administered to anyone examination for any bona fide reason. The annual exam will be given price to the commencement of the next annual Formal Session.
- 7.1.4 The Training Supervisor and a gualified individual appointed by the Plant Manager 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 regualification 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 regualification 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 Manager shall appoint qualified individuals from the Plant Staff; 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 Remedial Training in specific subject areas shall be required of each individual who receives an overall grade of 80% or greater but scores below 80% in a specific subject category on the annual written examination.
 - 8.1.2 Remedial Training shall be developed to serve the needs of the individual. Normally this will take form of guided and monitored self-study in the specific subject areas concurrent with participation in the normal requalification program. At the completion of Remedial Training, the individual given a written examination shall be cn the subject(s) studied. A grade of 80% or greater shall signify satisfactory completion of this training.
- 8.2 Accelerated Training

An individual receiving an overall grade on the annual written examination of less than 80%, or less 8.2.1 70% in any section, shall be given an oral than examination as soon as possible but not in excess of fourteen (14) work 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 Manager. Documentation of the subject areas covered results will be retained by the Training and Supervisor as stated in Paragraph 10.0.

8.2.2

If the results of the oral exam show that the individual is capable of safely operating the reactor, he shall immediately commence Accelerated Training. During Accelerated Training this individual may continue to perform duties for which he is licensed. Upon completion of Accelerated Training, the individual shall be given a written examination in the demonstrated weak subject areas; an overall grade of 80% indicates satisfactory results.

- 8.2.3 If the results of the oral examination indicate that the individual is not capable of safely operating the reactor, he shall immediately be relieved of licensed duties and commence Accelerated Training. completion of Upon Accelerated Training, the individual shall be given a written and an oral examination in the deficient areas. An overall grade of 80% cn the written examination and satisfactory results on the oral examination are required to restore the person's qualification to perform licensed duties.
- 8.2.4 The Accelerated Training program shall 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. A typical simulator program will expose the operator to reactivity control manipulations and plant evolutions such as startups, shutdowns, and power changes and will also present emergency situations to the operator ranging from minor instrumentation and control failures to major accidents.
- 9.2 The simulator may be used to augment the regualification program in the following areas:
 - a. Reactivity control manipulations and plant evolutions required by Paragrah 6.1.
 - b. C Plant operation during minor emergencies.
 - c. Plant operation during major emergencies.
 - d. Normal control manipulations, such as plant or reactor startups.
 - e. Performance Observation and Evaluation as given in Paragraph 7.3.

- 9.3 Kewaunee Flant Procedures shall be utilized at the simulator.
 - a. The discussion time at the simulator will be credited as one Formal Session on abnormal and emergency operating procedures.
 - b. The simulator facility used will be one approved by the NRC Operator Licensing Branch for the Kewaunee Bequalification Program.

10.0 RECORDS

- 10.1 The following records of the requalification program will be maintained for two years from the recorded event:
 - a. Annual examinations and answers to these examination questions.
 - b. Documentation indicating that all licensed personnel have reviewed the contents of abnormal and emergency procedures.
 - c. Documentation indicating that all licensed personnel are 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, including any deficiencies in the individual's training results.
 - Documentation of the performance of the reactivity and control manipulations in Section 6.1.
 - g. Documentation of oral examinations given due to a failure of the annual written examination indicating areas covered and the results.

h. Quiz results.

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11.0 SPECIAL ACTION

- 11.1 Licensed personnel, required to participate in Remedial or Accelerated Training, who fail to achieve the required examination results may, at the discretion of the Plant Manager, be returned for additional Remedial or Accelerated Training or become the subject of special action.
- 11.2 Special action is that which is deemed appropriate by the Plant Manager in the case of the individual consistent with his performance and the requirements to maintain current his license.

12.0 PROGRAM CHANGES

12.1 Changes to the Regualification Program may be made in accordance with 10 CFR 50.54 (i) (i-1). All changes to the Regualification Program shall have written approval of the Plant Manager.