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COMMONWEALTH EDISON COMPANY

REQUALIFICATION PROGRAM FOR LICENSED OPERATORS, SENIOR OPERATORS, AND SENIOR OPERATORS (LIMITED)

The requalification program is designed to assure station management that all licensed Operators, Senior Operators, and Senior Operators (Limited) maintain a high level of competency. The program consists of lectures, simulator training, and on-the-job training. Records shall be maintained and evaluations made of each man's performance.

The Station Superintendent at each Commonwealth Edison Company nuclear power station has delegated to the Training Supervisor responsibility for implementing and coordinating the requalification program for the station.

I. Lectures

Lectures will be given as required by Section IV of this document in the general subject areas outlined in Appendix A, 10CFR55, Section 2. Additional subject areas addressed in the lecture series are the appropriate sections of 10CFR20, 10CFR21, 10CFR50, 10CFR55, 10CFR73 and the general subject areas listed below. The minimum time requirement for review of subject areas shall be 80 hours over the two year requalification cycle.

A. Principles of Nuclear Power Plant Operation and Fundamentals of Thermodynamics, Heat Transfer, and Fluid Flow

Lectures shall include review of reactor kinetics, control rod worths, reactivity coefficients, reactor and flow transients, core damage mitigation concepts, fuel, safety limits, thermal limits and DNB considerations.

B. Plant Design Including Safety and Emergency Systems

Lectures shall include review of plant operating characteristics during normal and abnormal operating conditions, analyzed transients, and accidents. Incidents and abnormal occurrences at Edison stations and at other utilities shall also be reviewed.

C. Instruments and Controls

Lectures shall include review of the operation and control of the reactor protection systems, plant instrumentation, emergency core and containment cooling systems, core damage mitigation systems, engineered safeguards, and other related plant systems.

D. Procedures - Normal, Abnormal, Emergency and Radiological Control

Lectures shall include review of normal, abnormal, and emergency procedures, including fuel handling procedures. Federal and company radiation exposure limitations, control methods, monitoring equipment and waste disposal systems.

E. Administrative Procedures, Conditions and Limitations

Lectures shall include review of administrative procedures, security procedures, quality assurance procedures, station emergency plan implementation procedures, and facility license (including technical specifications).

F. Plant Modifications

Lectures shall provide up-to-date information concerning system design changes, instrument setpoint changes, wiring modifications, and any other plant modifications implemented during the most recent requalification interval.

G. General Information

Lectures shall include, as appropriate, information on upcoming outages and other events of operational significance.

II. Simulator Training

A. Each Operator or Senior Operator shall spend a minimum of three full days per year at a training simulator which has the characteristics of the plant for which he is licensed. During this time he shall perform operating functions under simulated normal, abnormal, and emergency conditions.

B. Control manipulations performed on the training simulator may be used toward satisfying the requirements of Section III of this document.

III. On-the-Job Training

A. Each licensed Operator shall manipulate plant controls during the term of his license. Each Senior Operator shall manipulate plant controls or direct the activities of individuals performing plant control manipulations during the term of his license. Such plant control manipulations shall include those commensurate with the plant evolutions listed in Attachment A of this document on an annual (once in every calendar year) or bi-annual (once in every two calendar years) basis, as indicated.

B. Credit for control manipulations performed or supervised on a given unit shall be given to a licensed Operator or Senior Operator who has performed or supervised such control manipulations on a training simulator or on a different unit, provided that such simulator or different unit has operating characteristics and control and instrumentation arrangements similar to those of the given unit.

C. Stations shall maintain a system to record plant control manipulations by Operators or supervision of plant control manipulations by Senior Operators. The system may consist of a log kept by the individual or an authenticated list of qualifying manipulations extracted from the unit log, or simulator record of manipulations.

D. Each Licensed Operator and Senior Operator shall review facility design changes, procedure revisions, facility license changes, information on upcoming outages and other events of operational significance so as to remain cognizant of relevant plant information. Each change will be reviewed to determine urgency of dissemination. In all cases, the review and any related training will be complete within 60 days. Stations shall maintain a system to accomplish these reviews, including documentation.

E. Each Senior Operator (Limited) shall review facility design changes, procedure revisions, facility license changes, information on upcoming outages and other events of operational significance (the review shall be limited to their area of responsibility) so as to remain cognizant of relevant plant information. Each change will be reviewed to determine urgency of dissemination. In all cases, the review and related training will be complete within 60 days. Stations shall maintain a system to accomplish these reviews, including documentation to substantiate accomplishment of the reviews.

IV. Evaluation

A. Annual written examinations shall be given to licensed Operators and Senior Operators to determine their knowledge of subjects covered in the requalification program, to provide a basis for evaluating their knowledge of abnormal and emergency procedures, and to determine areas in which retraining is needed. An operator's ability to safely operate the plant cannot solely be determined by his performance on a single exam or phase of an exam. The individual's past performance, the type of exam, the nature of the license position and the severity of the observed deficiencies are all factors that need to be carefully weighed. If the evaluation clearly indicates a deficiency, additional training and/or suspension of license duties will be considered. Examinations shall be given on the Operator and Senior Operator level.

1. The annual examinations may be given as one examination or as a set of two examinations. If given as a set of two examinations, these examinations shall be given within a three-month period.

2. An Operator or Senior Operator achieving a grade of 80% or greater in any examination subject is not required to attend a lecture on that subject.

3. An Operator or Senior Operator receiving a grade of less than 80% on any examination subject shall attend a lecture on that subject.

4. An Operator or Senior Operator who receives an overall grade of less than 80% on the annual written examination, or a grade of less than 70% in any examination subject, shall have his case presented to the Station Operations and Training Review for recommendation on continuance of license duties. The Operations and Training Review Board shall be comprised of Senior Staff Management including an Operations Engineer and a Training Supervisor. The Board will convene within 7 working days of the original findings and review the licensed operator or senior operator past performance, written examination deficiencies and recommendations for accelerated training. The following procedures will be followed.

   a. The Board will review the findings and recommendations and may suspend the individual from licensed duties while in an accelerated training program.

b. The Board may conduct an oral examination and determine if the deficient areas in the written examination and responses in the oral examination represents a decrease in knowledge and competency which could affect safe operation. The Board may recommend suspension or waiver of suspension of licensed duties while participating in an accelerated training program.

c. Accelerated training and re-examination of personnel who have been granted a waiver of suspension of licensed duties will be completed within 60 days of the Board's review.

d. The accelerated requalification program shall address all subject areas wherein the Operator or Senior Operator received an exam grade of less than 80%.

e. The Operator or Senior Operator shall be considered to have completed the accelerated requalification program only after he has been re-examined and has attained an overall examination grade not less than 80%, with a grade not less than 70% in any examination subject.

B. If a licensed individual prepares, grades, or reviews the annual examination, the licensed individual need not take the examination. This exclusion shall extend to only three individuals at each station. These three individuals shall participate in all other phases of the operator requalification program.

C. A quiz shall be administered upon completion of lectures in each of the subject areas specified in Section I. Any individual whose attendance at such lectures is required under the provisions of Section IV of this document, and who receives a grade of less than 80% on the quiz, shall receive additional training.

D. An oral examination shall be administered at least once during each two year license interval to all licensed personnel. This examination may consist of an oral review to determine the operator's knowledge of normal and emergency procedures and equipment or an oral review of an operator's performance conducted after a reactor startup, shutdown, or emergency. The oral examination shall be administered by a licensed member of the training staff or other licensed supervisor. If the examination clearly indicates a deficiency, then the examination information shall be presented to a board for review within twenty-four hours. The board shall consist of at least the highest ranking operations manager available on-site and the Training Supervisor. After a review of the examination results, the board will make a decision regarding additional training and/or suspension from licensed duties.

E. Evaluations shall be made by supervisors and/or training staff member, including vendors, of the performance and competency of licensed operators during actual or simulated abnormal and emergency conditions. If the evaluations clearly indicates a deficiency, then the evaluations information shall be presented to a board for review within twenty-four hours. The board shall consist of at least the highest ranking operations manager available on-site and the Training Supervisor. After a review of the evaluations results, the board will make a decision regarding additional training and/or suspension from licensed duties.

F. An annual review shall be made by Station Management of each licensee's performance in Section IV A through Section IV D and a determination shall be made concerning the licensee's qualification to continue in his assigned duties and the need for retraining or accelerated retraining.

V. Training for Senior Operators (Limited) - Fuel Handlers

A. Senior Operators (Limited) when required by examination results shall attend lectures as designated in Section I appropriate to fuel handling operations. Lectures considered appropriate for fuel handlers in Section I are as follows:

1. Review of terminology, reactor theory, rod worth, core loading physics, and calculations.

2. Review of federal and company radiation exposure limitations, control methods, monitoring equipment, waste disposal systems when pertaining to the fuel pool systems, calculations for exposure dose, and shielding.

3. Fuel handling procedures.

4. The Generating Station Emergency Plan and all items directly related to fuel handling indicated in the documents listed in this series.

5. Plant modifications directly or indirectly related to the performance and maintenance of fuel handling operations or equipment.

6. FSAR transients, operating experience, incident review related to fuel handling.

7. Plant instrumentation, systems, and engineered safeguards related to fuel handling operations and vessel internals.

8. Open lectures such as a briefing prior to refuel operations.

B. Senior Operators (Limited) shall participate in special reviews of fuel handling procedures in preparation for refueling or receipt or shipment of fuel. Senior Operators (Limited) are responsible for review of design changes, procedure revisions, facility design changes, and abnormal and emergency procedures as described in Paragraph III E.

C. Senior Operators (Limited) are not required to participate in simulator training.

D. The knowledge and performance of Senior Operators (Limited) in fuel handling operations shall be evaluated in accordance with Section IV.

VI. Licensed Personnel Not Actively Performing the Function of an Operator or Senior Operator

A. Absence from Station duties due to illness, or other causes, including job assignment, for a period of four months or longer.

1. The licensee shall be enrolled in an accelerated retraining program and must satisfactorily complete an annual examination and evaluation by the Operations and Training Review Board prior to assuming license duties.

B. Assigned at the Station but not performing duties of an Operator or Senior Operator as defined in 10CFR55 Paragraph 55.4.

1. The licensee shall maintain license elgibility by participation in and satisfactory completion of the requalification program. Prior to resumption of licensed duties, Operators and Senior Operators shall be evaluated by the Operations and Training Review Board which will consider the day-to-day involvement with license activities. The Review Board may require additional training prior to resuming license activities.

VII. Schedules

A. The requalification program shall be conducted continuously for two years.

The lecture series shall be conducted on a continuous basis during the periods when licensed personnel are relieved of shift duties and are available for scheduled classes. Each lecture shall be repeated as necessary to afford licensed personnel the opportunity to meet lecture requirements as determined by the written examination evaluation.

B. Lectures should not normally be scheduled during the months of June, July, and August due to the minimum availability of shift personnel during this prime vacation period.

VIII. Records

A. The training Supervisor shall maintain records of the training progress for each man in the requalification program to include as a minimum:

1. Written evaluation examination, answer key, answers given by licensee, and grade for each man.

2. Records of procedure review, facility design changes, procedure changes, facility license change review, and plant manipulations required in Section III.

3. Results of evaluation required in this procedure Section IV.C, IV.D, and IV.E.

4. Results of evaluations and documentation of any additional training administered in areas in which an Operator or Senior Operator has exhibited deficiencies.

ATTACHMENT A

The following plant evolutions shall be performed on an annual basis pursuant to the requirements of paragraph III A.

1. Plant or reactor startup, to the point of adding measurable heat.

2. Manual control of steam generator level or feedwater flow during startup or shutdown.

3. Any change in power of greater than 10%, using manual rod control, recirculation flow, or chemical control.

4. Loss of forced core flow; natural circulation conditions.

5. Loss of all feedwater, both normal and emergency.

6. Loss of coolant, including:
   a. significant PWR steam generator leaks
   b. inside and outside primary containment
   c. large and small, including leak-rate determination
   d. saturated reactor coolant response (PWR)

The following plant evolutions shall be performed on a biennial basis pursuant to the requirements of paragraph III A.

1. Plant shutdown.

2. Reactor trip.

3. Turbine or generator trip.

4. Main steam line break.

5. Loss of condenser vacuum.

6. Loss of normal feedwater.

7. Loss of shutdown cooling.

8. Component malfunction due to loss of cooling.

9. Required activation of emergency boration or standby liquid control.

10. Control rod drive mechanism failure.

11. Increase in coolant or offgas activity indicative of fuel failure.

ATTACHMENT A (continued)

12. Mispositioned control rod or bank.
13. Loss or degradation of electrical power source.
14. Loss of protective system channel.
15. Malfunction of nuclear instrumentation.
16. Malfunction of automatic control system affecting reactivity.
17. Malfunction of reactor water level control or coolant volume control.
18. Loss of instrument air (if sumulated plant specific).
19. Loss of service water if required for safety.
20. Loss of component cooling system or cooling to an individual component.
21. Malfunction of reactor coolant pressure control.