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ENCLOSURES:
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NIAGARA MOHAWK POWER CORPORATION

NIAGARA MOHAWK

300 ERIE BOULEVARD WEST
SYRACUSE, N.Y. 13202

December 10, 1973

RECEIVED DEC 19 1973 U.S. ATOMIC ENERGY COMMISSION Regulatory Mail Section

Mr. Donald J. Skovholt
Assistant Director for Reactor Operations
Division of Reactor Licensing
United States Atomic Energy Commission
Washington, D. C. 20545

Re: Provisional Operating License: DPR-17
Docket No.: 50-220

Dear Mr. Skovholt:

Pursuant to 10 CFR 50.54 (i-1), effective September 17, 1973 (38 F.R. 22222) the following is submitted:

"Program for Requalification of AEC Licensed Personnel"

Enclosure 1 to this letter contains the Nine Mile Point Site Administrative Procedure AP-21 which is designed to meet the requirements of Appendix A 10 CFR 55, effective September 17, 1973 (as corrected September 20, 1973). AP-21 has passed all necessary reviews and was implemented on December 1, 1973.

Very truly yours,

Rudolph R. Schneider
Vice President - Electric Operations

RRS:cm

Enclosure - 1

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9042

NINE MILE POINT NUCLEAR STATION

JAMES A. FITZPATRICK NUCLEAR POWER PLANT

SITE ADMINISTRATIVE PROCEDURES

PROCEDURE NO. AP-21 APPENDIX B

LICENSED AEC OPERATOR RETRAINING

APPROVALS BY NAME	DATE AND INITIAL		
	REVISION 0	REVISION 1	REVISION 2
Reactor Analyst Supervisor R. J. Pasternak	_____	_____	_____
Radiochemistry & Radiation Prot. Supv. R. A. Burns	_____	_____	_____
Station Superintendent (NMPNS) T. J. Perkins	_____	_____	_____
Plant Superintendent (JAFNPP) T. E. Lempges	_____	_____	_____
General Superintendent Nuclear Generation P. A. Burt	_____	_____	_____

NIAGARA MOHAWK POWER CORPORATION

POWER AUTHORITY OF THE STATE OF NEW YORK

AP-21

LICENSED AEC OPERATOR RETRAINING

TABLE OF CONTENTS

APPENDIX B

LICENSED AEC OPERATOR RETRAINING

1.0 PURPOSE:

The purpose of this procedure is to formally establish the procedures, programs, responsibilities and requirements for requalification of AEC Licensed Reactor Operators and Senior Operators at the Nine Mile Point Nuclear Station Unit #1 and the James A. FitzPatrick Nuclear Power Plant.These programs are established in compliance with 10 CFR 50.54 (i-1) and are designed to meet the requirements of Appendix A 10 CFR 55 and to provide documentation to be used in operator license renewal as required by 10 CFR 55.33. This requalification program is subject to approval by the Atomic Energy Commission.

2.0 APPLICABILITY:

The programs, administrative procedures and controls established by this procedure shall be enforced and adhered to for the life of each plant. For Nine Mile Point Nuclear Station Unit #1, this requalification program shall become effective with the date of issue of this procedure. For the James A. FitzPatrick Nuclear Power Plant, the program shall commence within three months of the issuance of an operating license. In accordance with 10 CFR 50.54 (i-1) no changes shall be made in this program to reduce the scope or time allotted without prior approval by the AEC.

3.0 REFERENCES:

This program is designed to fulfill the operator personnel training and requalification requirements included in the following documents:

3.1 10 CFR 50-Licensing of Production and Utilization Facilities

3.2 10 CFR 55.23 - Renewal of Licensed

3.3 10 CFR 55 - Appendix A - Requalification Program for Licensed Operators

3.4 ANSI N 18.1 - Paragraph 5.5.1 - Retraining Program.

4.0 DEFINITIONS:

The following definitions are extracted from 10 CFR 55.4 "Simulator" and "Simulate" are derived from 10 CFR 55, Appendix A, Section 4.d.

4.1 "Facility" means any production facility or utilization facility as defined in 10 CFR 50.

4.2 "Operator" is any individual who manipulates a control of a facility. An individual is deemed to manipulate a control if he directs another to manipulate a control.

4.3 "Senior Operator" is any individual designated by a facility licensee under 10 CFR 50 or by a holder of an authorization under 10 CFR 115 to direct the licensed activities of licensed operators.

4.4 "Controls" when used with respect to a nuclear reactor means apparatus and mechanisms the manipulation of which directly affect the reactivity or power level of the reactor. "Controls" when used with respect to any other facility means apparatus and mechanisms the manipulation of which could effect the chemical, physical, metallurgical or nuclear processes of the facility in such a manner as to affect the protection of health and safety against radiation.

4.5 "Simulator" a working model of the control room similar to the plant for which the individual is licensed or is a candidate for license may be considered a "Simulator" provided it reproduces the general operating characteristics of the plant with similar arrangements of instrumentation and controls.

4.6 "Simulate" when an individual "Walks-thru" the actions to be taken using the control panel involved, discussing each step without actually operating any controls he has "simulated" the operation. This method is used as a means of teaching or reviewing actions required by an emergency or abnormal condition.

5.0 SCOPE:

Operator and Senior Operator requalification programs shall be conducted on a two year cycle. The following portions will be included in the program:

5.1 Annual written examinations

5.2 Regularly scheduled lectures

5.3 Assigned individual study

5.4 On the Job Training - this will include reactor control manipulations such as reactor startups, shutdowns, and power changes.

5.5 Observation and Evaluation - including simulation of emergency and abnormal conditions.

6.0 SCHEDULE:

Requalification programs shall be conducted on a two year cycle. cycle. For the Nine Mile Point Nuclear Station Unit #1, the first cycle will begin on December 1, 1973 and shall continue until November 30, 1975. For the James A. FitzPatrick Nuclear Power Plant the first two year requalification program shall being within 3 months of the issuance of an operating license. For each plant, successive requalification programs using the same format and schedule shall follow the first in a continuous cycle of two year programs.

7.0 TECHNICAL TRAINING:

7.1 Lectures

The requalification program shall include preplanned lectures to be given throughout the two year period. Lectures will normally be scheduled to average four hours per month per man to accomodate all licensed operating personnel. Emphasis shall be placed on those areas where annual operator and senior operator written examinations indicate that an increase in scope and depth of coverage is needed in the following general subjects:

7.1.1 Theory and Principles of Operation

7.1.2 General and Specific Plant Operating Characteristics, including operational limitations, precautions and set points.

7.1.3 Plant Instrumentation and Control Systems.

7.1.4 Plant Protection Systems including emergency plans and security procedures.

7.1.5 Engineered Safety Systems.

7.1.6 Normal, Abnormal, and Emergency (Special Operating Procedures).

7.1.7 General Safety, First Aid, and Radiation Control and Safety.

7.1.8 Technical Specifications.

7.1.9 Changes in Equipment and Operating Procedures.

7.1.10 Applicable portions of title 10 Chpater 1 Code of Federal Regulations (10 CFR).

7.2 Training Aids

Films, video tapes, and other effective training aids may be used to supplement lectures but may not be used as a substitute for "live" instructions.

7.3 Individual Study

Reading assignments will be periodically made for operators and senior operators to be completed while on shift. Oral and/or written quizzes may be given to evaluate the knowledge level of the operators in these areas. The subjects covered shall include but need not necessarily be limited to the following areas:

7.3.1 Facility Design Changes

7.3.2 Procedure Changes

7.3.3 Facility License Changes

7.3.4 Operating Procedures

7.3.5 Special Procedures, including simulation whenever possible

7.3.6 Emergency Plan and Procedures

7.3.7 Radiation Protection Procedures.

8.0 ON THE JOB TRAINING:

8.1 Control Manipulations

All licensed operators and senior operators shall participate as much as possible in plant control manipulations involving reactivity changes to demonstrate their skill and/or familiarity with reactivity control systems. These manipulations shall involve reactor startups, reactor shutdowns, and other control evolutions such as:

a. Power changes at 10% or greater

b. control rod interchange

c. control rod exercise

d. shutdown margin testing

e. startup or shutdown of a reciruclation pump with the reactor critical

f. control rod scram insertion time tests

g. turbine stop valve testing

h. adjustments of control rods or recirculation flow to compensate for transient conditions

i. reactor operations involving emergency or special procedures where reactivity is changing

j. changing of pressure regulator set point with reactor critical.

8.2 Licensed Operator Manipulations

Each licensed operator shall manipulate the controls a minimum of 10 times during reactivity changes, as described in Section 8.1 above, during the term of his license.

8.3 Licensed Senior Operator Manipulations

Each licensed senior operator shall manipulate the controls or direct the activities of operators during plant control manipulations a minimum of 10 times during reactivity changes as described in Section 8.1 above, during the term of his license.

8.4 Simulator Training

Some or all of the licensed operators and senior operators may participate in simulator training during the term of their licenses. A simulator may be used in meeting the requirements of Sections 8.1 through 8.3 above if the simulator reproduces the general operating characteristics of the plant involved,

8.4 Cont'd.

and the arrangement of the instrumentation and controls of the simulator is similar to that of the plant involved.

8.5 Log of Control Operation and Simulation

Whenever an operator or senior operator participates in a plant manipulation or performs a "walk through" he shall log the date and time of the exercise in his individual training manual and note whether he actually performs a manipulation or rather it was a simulation or performed under his direction. Each entry shall be initialed by the Station Shift Supervisor or another licensed senior operator present.

9.0 INACTIVE LICENSE:

In accordance with 10 CFR 55.31, any licensed operator or licensed senior operator who, for any reason, has not been actively performing the functions of an operator or senior operator for a period of four months or longer shall prior to resuming activities for which he is licensed, complete the following requirements to demonstrate that his knowledge of facility operation and administration are satisfactory.

9.1 Complete all reading assignments made during the period of his absence.

9.2 Review all changes in operating and administrative procedures, license changes, standing orders, and instructions for the period of his absence.

9.3 Meet with the supervisor in charge of operator training to cover the material from all requalification lectures which were missed.

9.4 Successfully complete an oral examination and evaluation authorized by the Station Superintendent to demonstrate that his knowledge and understanding of the facility is satisfactory.

9.5 The facility licensee must certify to the AEC that the operator or senior operator is requalified. This certification shall be initiated by the Station Superintendent.

10.0 EVALUATION:

10.1 Written Examinations

10.1.1 Written examinations shall be given annually with the first examination scheduled for approximately 48 weeks following the initiation of the requalification program. The examination shall closely parallel the AEC written examinations outlined in 10 CFR 55.21 and 10 CFR 55.22.

10.1.2 All written examinations will be graded and filed in the individual training file for audit by the AEC.

10.1.3 Each first annual written examinations shall be used to determine the areas in which retraining is needed to upgrade licensed operator and senior operator knowledge.

10.1.4 An operator scoring above 80% in all sections of the annual requalification examination shall not be required to attend further requalification lectures until the next annual requalification examination. Other operators may be excused from lectures in subjects for which they scored above 80% but shall be required to attend lectures on all other topics.

10.1.5 An accelerated requalification program consisting of additional lectures and "walk through" shall be scheduled for all individuals whose average score for all sections of the annual requalification examination is below 70%. Individual programs consisting of any or all of the following shall be tailored to place emphasis where required:

a. individual reading assignments

b. additional on shift evolutions

c. individual review with members of the operating staff

d. attendance at formal lectures.

The accelerated program shall last at least one month and shall be completed within approximately 6 weeks following the annual examination. Each person assigned to the accelerated program shall be required to successfully complete a second oral and/or written requalification examination at the completion of the accelerated review program. All written re-examinations will be graded and placed in the individual training file along with the results of oral examinations.

10.1.6 From time to time written quizzes will be administered to determine the licensed operators or senior operators knowledge of particular subjects covered in the lectures or as the result of specific reading assignments or "walk through" exercises. These quizzes shall be graded and their results placed in the individual training files.

10.1.7 Approximately 100 weeks after the start of each two year requalification program a second annual written examination shall be given to all licensed operators and licensed senior operators. This examination shall be similar in content to the first annual examination and shall be used to determine knowledge of subjects covered in the requalification program and provide a basis for evaluating knowledge of abnormal and emergency procedures. This second annual examination shall be used to evaluate the effectiveness of the two year requalification program including the accelerated instructional sessions. It shall be used by the Station Superintendent and supervisors assigned to operator training, in designing the second two year cycle, requalification program.

10.1.8 The second requalification examination shall be graded and placed in the individual training folders. Selection for further training shall be on the same basis as in 10.1.4 and 10.1.5 above.

10.2 Oral Examinations and Evaluations

10.2.1 Continuous Evaluation

Systematic observation and evaluation of the performance and compentency of licensed operators and senior operators shall be made by the Station Superintendent and his designated representatives. The following procedure will be used:

a. The Assistant to the Superintendent for Operations and/or the Supervisor responsible for on shift operator training shall audit each individual training manual at least once per month.

b. He shall arrange with the Station Superintendent to schedule reactivity control manipulations if possible so that each individual may complete the prescribed manipulations prescribed on a timely basis. Throughout the year the supervisor in charge of operator training shall schedule "walk through" interviews with each operator and senior operator which shall cover responses to alarms and instrumentation signals, responses to abnormal and emergency situations, and operations of selected auxiliary systems important to overall plant safety.

10.2.2 Superintendent's Audit

Within approximately 52 and 104 weeks respectively following the start of each two year requalification program each operator and senior operator shall participate in an oral examination with the Station Superintendent or his appointed representative. This examination and evaluation shall as a minimum contain the following:

a. A discussion of required actions to be taken during abnormal and emergency conditions and the reasons for these actions.

b. A simulation of abnormal and emergency conditions while in the control room showing each action and each controlling device to be operated.

c. Should the performance of the operator or senior operator be deemed unsatisfactory, the operator or senior operator will participate in an accelerated review program tailored to place emphasis where there is a clear indication of need.

d. Upon completion of the review program but no later than one month following the intial interview he shall be subject to re-examination.

10.2.3 A written record of the results of these oral examinations and evaluations shall be placed in each individuals training file.

11.0 RECORDS:

11.1 Individual Training Manual

Each licensed operator and licensed sneior operator shall be furnished an individual training manual which shall contain check lists of plant evolution, individual reading assignments and similar items which may be assigned by the Supervisor in charge of operator training.

11.1.1 Whenever an individual participates in a reactivity control manipulation or other evolutions he shall log the date and times as prescribed in Section 8 of this procedure.

11.1.2 The date and title of each reading assignment shall be logged.

11.2 Individual Training File

And individual training file shall be maintained for each licensed operator and senior operator. The contents pertaining to requalification shall be used in support of application for license renewal. Training files will contain the following information:

11.2.1 A check list giving the subjects of the formal training lectures presented with a record of the name of the instructor presenting the lecture, the date and time of attendance.

11.2.2 A log of all requalification examinations taken which shall include the general subject or system covered and the specific items if applicable. Results shall be recorded as to whether the candidate has mastered the subject or requires further study. Copies of the actual examination sheet as completed by the individual and as graded by the examiner shall be included.

11.2.3 A log of reading assignments and the date and time on which a quiz was given on reading assignments. Notations shall indicate whether the individual has mastered the subject or requires further study.

11.2.4 A transcript of the on the job training or experience record as contained in the individual training manual.

11.2.5 A log of the manipulations or evolutions which the individuals shall be required to perform or simulate and the results of an audit evaluation in terms of whether or not the candidate has successively mastered the operation or requires additional practice and/or study.

11.2.6 A log of all mandatory repeat sessions to which the individual has been assigned including items covered in an accelerated requalification program. Results of tests on these special assignments shall be recorded as to whether the individual mastered the subject or requires further study.

11.2.7 Transcript of off-site training and results.

11.3 Record Forms and Check Sheets

Examples of record forms which may be used with this procedure are attached.

11.3.1 Individual training manual and check list.

11.3.2 Record of participation in reactivity changes, plant manipulations and simulations.

11.3.3 Record of attendance of requalification lectures

11.3.4 Record of reading assignments made and quizzes given.

11.3.5 Record of oral tests and evaluations.