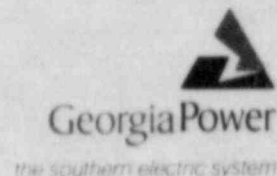


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L. T. Gucwa  
Manager Nuclear Safety and  
Licensing Department

December 17, 1985



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0183C

Director of Nuclear Reactor Regulation  
Attention: Mr. D. Muller, Project Director  
BWR Project Directorate No. 2  
Division of Boiling Water Reactor Licensing  
U. S. Nuclear Regulatory Commission  
Washington, D. C. 20555

NRC DOCKETS 50-321, 50-366  
OPERATING LICENSES DPR-57, NPF-5  
EDWIN I. HATCH NUCLEAR PLANT UNITS 1 AND 2  
ADDITIONAL INFORMATION - REQUALIFICATION TRAINING

Gentlemen:

Georgia Power Company's letter of September 24, 1985, provided, for NRC approval, a description of the re-established License Requalification Program for Plant Hatch. Your letter of November 14, 1985, provided comments resulting from NRC review of the program and identified areas requiring submittal of additional information. The requested information is hereby enclosed. Attachment 1 provides responses to the NRC comments. Attachment 2 is the License Requalification Program description, as amended to incorporate NRC comments.

Please contact this office if further information is desired.

Very truly yours,

L. T. Gucwa

8512240229 851217  
PDR ADOCK 03000321  
V PDR

ADD: BWR - L/BC's TECH SUPPORT

REB/lc

Enclosure

c: Mr. J. T. Beckham, Jr.  
Mr. H. C. Nix, Jr.  
Dr. J. N. Grace (NRC-Region II)  
Senior Resident Inspector

EB (LIAW)  
PSB (L. HULMAN)  
EICS (SRINIVASAN)  
RSB (ACTING)  
FOB (VASSALLO)  
AD - G. LAINAS (Ltr only)

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ATTACHMENT 1

RESPONSE TO NRC COMMENTS ON LICENSE REQUALIFICATION PROGRAM

GENERAL COMMENTS:

- 0 Upon completion of resolution of our comments GPC should submit the program as the program of record as described in Generic Letter 84-14. The program should be in accordance with the Plant Hatch Administrative and Quality Assurance Procedures, contain applicable references and be reviewed and approved by designated personnel.
- 0 Several Sections of the program contain significant requirements in one paragraph. These requirements can be more readily understood if each individual requirement were identified. For example, Section 3.2.1, Active Status, identifies the method to remain on active status. Sections 3.2.2.2, 4.2, 4.3, and 4.4 could be made more clear if they were rewritten using the style in Section 3.2.1.

RESPONSE:

The License requalification Program has been revised to address initial comments and is hereby submitted as the Program of record. After your approval, this program will be proceduralized and fully implemented per our administrative procedures within approximately 120 days of receipt of your approval. In the interim, the intent of this program as submitted, is being followed.

Paragraphs with several requirements have been rewritten for clarity.

SPECIFIC COMMENTS:

COMMENT:

- 0.1 Individuals who are exempt from participating in portions of the program should be clearly identified in the program or in a suitable administrative procedure. For example:
  - 0 The number of instructors who prepare and administer examinations.
  - 0 Personnel who prepare notice of procedure, design and license changes as described in Section 3.3 of the program.

RESPONSE:

Revised 0.0 and added 0.1.1 for clarity.

COMMENT:

- 0.2 The staff recommends that license candidates become enrolled in training described in Section 3.3, "Plant Changes", at a suitable period in the initial training program. They should continue to participate in this portion of the program after administration of license examinations.

RESPONSE:

Pertinent plant changes are presented to license candidates prior to their license examination. However, this does not fall within the scope of the License Requalification Program.

Revised 0.2 to provide for enrollment in 3.3.

COMMENT:

- 0.3 Senior operator Upgrade Program candidates should continue to participate in training described in Section 3.3, "Plant Changes".

We have not been able to identify the qualification and requalification requirements of instructors in this program. GPC should refer to the H. R. Denton letter of March 28, 1980, contained in NUREG-0737 and include instructor criteria and requalification requirements or reference an administrative procedure in this section of the program.

RESPONSE:

Revised 0.3 to require section 3.3.

Revised 0.0 and added 0.1.1 to address instructor requalification and clarify items. Department procedures (71TR-PQL-001-OS) require instructors to demonstrate a knowledge greater than that which trainees are expected to obtain in appropriate subject area. For License requalification, this requires SRO certification. 71TR-PQL-001-OS further provides that license instructors participate in the requalification program. This requirement is added here to clarify applicability.

COMMENT:

- 2.0 Lectures

- 0 The September 24, 1985, letter and section 4.2, Written Evaluations, refer to a four segment lecture series. Therefore, the lecture series description should be contained in this section.

RESPONSE:

Revised 2.0 to address segments.

COMMENT:

- 0 Since segment training, evaluation, and the exemption request in the September 24, 1985, letter represents a new training and evaluation process, all personnel must attend the lecture series for the first 2 years of the program. Provisions to "test out" portions of the program will be considered after completion of the 2 year period.

RESPONSE:

Testing out of segments is not provided for in this submittal.

COMMENT:

- 0 GPC should evaluate the review of operating experience and Plant Changes as additional subjects in the lecture series.

RESPONSE:

Revised 2.0 to include.

COMMENT:

- 0 The use of self-study, as stated in Item 2 of Appendix A, should be included in limitations of the program.

RESPONSE:

Revised 2.0 to limit use of self-study. This section also revised to clarify extent of participation.

COMMENT:

3.1 Reactivity controls

- 0 If credit for manipulations may be granted for those who direct or evaluate licensed personnel, GPC should indicate how these personnel are evaluated. (Refer to Item C.3, Enclosure 1, of the March 28, 1980, H. R. Denton Letter).

RESPONSE:

Supervision or performance of manipulations in segment training and annual examinations is evaluated as provided in departmental instructions. Revised 3.1 to limit use of evaluations in lieu of performance/supervision. This will ensure periodic evaluation of the performance or supervision of items.



COMMENT:

- 0 "Loss of feedwater (normal and emergency)" should be a "Starred" item in lieu of "loss of normal feedwater or normal feedwater system failure" (refer to Enclosure 4 of the March 28, 1980, H. R. Denton letter).

RESPONSE:

Typo correction made.

COMMENT:

- 0 With regard to the Plant Hatch simulator, GPC should commit to implementation of Regulator Guide 1.149, "Nuclear Power Plant Simulator for use in Operating Training".

RESPONSE:

Since implementation of Regulatory Guide 1.149 affects all operator license programs, including but not limited to Requalification Training, this is a separate issue. Currently Plant Hatch maintains an updated simulator that accurately reproduces the operating characteristics and panel layouts of the Plant. Modifications are controlled by DI-TRN-24 to require simulator fidelity. While the items specified in ANSI 3.5 are being used as guidelines, the impact of committing to Regulatory Guide 1.149 is being considered.

COMMENT:

- 0 GPC should also consider introduction, review and evaluation of charges described in Section 3.3 as part of the reactivity control portion of the program.

RESPONSE:

Revised 3.1 and 3.3 to include.

COMMENT:

- 3.2 Knowledge of Systems

GPC should indicate how this segment is evaluated and how the evaluation is documented.

RESPONSE:

Evaluations are defined in Section 4.0. Documentation is specified in Section 5.0.

Revised 3.2.1 to require 32 hours per four months to be consistent with anticipated NRC requirements. Also modified notification requirements.

COMMENT:

3.2.2.2 Inactive Status

0 Refer to General Comments.

RESPONSE:

Rewrote paragraph

COMMENT:

0 GPC should reference 10 CFR 55.31(e) in this section of the program.

RESPONSE:

Revised to reference 10 CFR 55.31(e)

COMMENT:

0 Before inactive licensees are evaluated by management, the program should require: review of license changes and any other required reading; review of the material presented in the segment lecture and examination on that segment; performance of the reactivity control manipulations which were missed during the previous segment(s).

RESPONSE:

Revised paragraph to include.

COMMENT:

0 Inactive licensees should also perform a period of licensed activities under supervision.

RESPONSE:

Revised to include.

COMMENT:

3.3 Plant changes

GPC should evaluate whether or not a review of operating experience (Item I.C.5 or NUREG-0737) should be added to this segment of the program.

RESPONSE:

Revised 2.0 to include.

COMMENT:

4.1 Annual Diagnostic Examinations

Diagnostic examinations may be administered at any time during the requalification cycle. Diagnostic examinations are a suitable device to determine strengths and weaknesses in retention and application of knowledge. However, diagnostic examinations, at this time, do not substitute for the Annual Examination required by Appendix A of 10 CFR 55.

RESPONSE:

Revised 4.1 to clarify. The intent of annual diagnostic examinations is to meet 10 CFR 55, Appendix A, 4.a.

COMMENT:

4.2 Written Evaluations

The segment examination does not include category or subject areas, and therefore, does not appear to comply with criteria contained in Section C.2, Enclosure 1 of the March 28, 1980, H. R. Denton letter. GPC should explain how category/subject areas are evaluated in the segmented program. (Refer to Section 4.4)

RESPONSE:

The scope of segment topics is addressed in Section 2.0, which encompasses all subjects required by 10 CFR Appendix A and the Denton letter. While each segment does not correspond to each category contained in NUREG 1021, (Operator Licensing Examiner Standards), each segment is broader and therefore a better indicator of an operator's overall knowledge on a periodic basis. The criteria of Item C.2 of the Denton letter is met in that 70% per segment and 80% overall is equivalent to 70% per category and 80% overall. It is felt that major weaknesses in a particular subject will be identified through failure to meet the criteria established in Section 4.2, as well as or better than could be met by requiring each segment to correspond to one subject (category) area.



COMMENT:

4.3 Observation and Evaluation

- 0 Annual examinations should include simulator and oral operating examinations. Exceptions may be granted if the simulator is not available.

RESPONSE:

Revised paragraph to include.

COMMENT:

- 0 Since simulator exercises are included in the segmented program, GPC should include evaluation of each segment's exercises. (Refer to our comments in section 3.1).

RESPONSE:

Revised for clarity.

COMMENT:

- 0 Suspension from licensed duties due to unsatisfactory performance on actual events should be clearly identified in this section. (Refer to general comments).

RESPONSE:

Revised to clarify.

COMMENT:

4.4 Accelerated requalification program

- 0 Clarify whether re-examinations are administered in sections or one comprehensive examination without sections.
- 0 In lieu of the minimum number of questions for re-examinations, examination questions should be based on the objectives of the accelerated training program.

RESPONSE:

Revised paragraph to clarify. Also revised passing criteria for a segment reexamination to 70% to be consistent with other criteria.



COMMENT:

5.4 Individual files

0 Individual files should also include waivers and justification for participation in the program.

RESPONSE:

Revised paragraph. 70AC-TRN-001, Plant Training Program, requires justification for waivers.

COMMENT:

0 The records must include the training administered during an accelerated program. (Refer to Section 5, Appendix A, 10 CFR part 55).

RESPONSE:

Program files also apply to the accelerated requalification program. Where only one individual is enrolled, this program file may be contained in his individual file. Section 5.0 revised to clarify.

## ATTACHMENT 2

### LICENSE REQUALIFICATION PROGRAM

- 0.0 Applicability The program applies to all NRC licensed reactor operators and senior operators in the plant organization including staff members, Senior Reactor Operator certified instructors and certified Shift Technical Advisors.

#### NOTE

Vendor Senior Reactor Operator certified instructors will be allowed to teach license and requalification programs upon presenting documentation to the utility that they are certified and meet the requirements of an approved vendor requalification program. Such vendor instructors are exempt from this procedure, except that attendance or presentation of Section 3.3 topics will be required for those vendor instructors assigned to the Training Department for a period of greater than on quarter (3 months).

- 0.1 Individuals who maintain operator or senior operator licensed for the purpose of providing backup capability to the operating staff shall participate in the program except to the extent that their normal duties preclude the need for specific retraining in particular areas.

- 0.1.1 Waivers from specific portions of the Licensed Requalification Program may be granted in accordance with 70AC-TRN-001, "Plant Training Program", for the following reasons:

Licensed and certified personnel

- 0 Who present lectures, for those lectures which that individual has presented.
- 0 Licensed and certified instructors who prepare or grade segment or diagnostic examinations for that segment, limited to no greater than two instructors per segment.
- 0 Performance evaluation during a segment may be waived for instructors who conduct evaluations of all manipulations scheduled for that segment. However, the annual simulator and oral examination may not be waived.
- 0 Personnel who prepare notice of procedure, design, and license changes as described in Section 3.3

- 0.2 Newly licensed individuals shall be enrolled in this program beginning with the subsequent training segment. However, enrollment in Section 3.3 will begin upon receipt of license. An individual receiving his license within six months of the annual simulator and oral examination is exempted from taking this exam.
- 0.3 Reactor operators enrolled in a Senior Reactor Operator upgrade program may be exempt from the requirements of this procedure, with the exception of Section 3.3, while so enrolled. However, if the individual does not obtain an SRO license, he will pass a simulator and comprehensive written examination and meet the requirements of Section 3.2.2.2 prior to resuming licensed duties as a reactor operator.
- 1.0 Schedule The program will run continuously on an annual basis during a two year cycle.
- 2.0 Lectures The requalification program shall include planned lectures on a continuing, segmented basis over a period of two years in those areas where diagnostic and other written examinations indicate that emphasis in scope and depth of coverage is needed in the following subjects:
- a. Theory and principles of operation.
  - b. General and specific plant operating characteristics.
  - c. Plant Instrumentation and control systems.
  - d. Plant protection systems.
  - e. Engineered safety systems.
  - f. Normal, abnormal, and emergency operating procedures.
  - g. Radiation control and safety.
  - h. Technical Specifications.
  - i. Applicable portions of Title 10, Chapter I, Code of Federal Regulations.
  - j. Quality assurance for operations.
  - k. Major upcoming events (necessary personnel only).
  - l. Heat transfer, fluid flow, and thermodynamics.
  - m. Mitigation of accidents involving a degraded core.



- n. Operating experience
- o. Plant changes

The lecture series is presented primarily by Plant Hatch Training Staff. A minimum of 20 contact hours per segment with a minimum of four segments per year will be scheduled for the lecture series where a contract hour is defined as presentation or self study with an instructor immediately available. Use of films, videotapes and self study will not exceed 50 percent of the minimum time.

One hundred percent participation in the lecture series is required unless otherwise specified in this program and with the provision that lectures missed due to unexpected absences are made up with instructor contact or documented self study prior to completion of the subsequent segment.

### 3.0 On-The-Job Training

- 3.1 Reactivity Controls Each licensed operator manipulates the plant controls and each licensed senior operator either manipulates the controls, or directs the activities of individuals during plant control manipulations, during the term of their licenses. For reactor operators and senior operators, these manipulations shall consist of at least 10 reactivity manipulations in any combination of reactor startups, reactor shutdowns, or other control manipulations which demonstrate skill and/or familiarity with reactivity control system.

The following control manipulations and plant evolutions are acceptable for meeting the reactivity control manipulations required by Appendix A, Paragraph 3.a of 10 CFR Part 55. The starred items shall be performed on an annual basis; all other items shall be performed over a two year cycle. Each individual shall perform or participate in a combination of reactivity control manipulations based on the availability of plant equipment or a plant specific simulator. The use of Plant Hatch Technical Specifications will be maximized during the manipulations. Personnel with senior licenses are credited with these activities if they direct or evaluate control manipulations as they are performed. The use of evaluating manipulations should be limited to no more than fifty percent of those manipulations performed in a segment.

Where appropriate, items that fall under Section 3.3 will be included in segment simulator training.

- \* 0 Plant or reactor startups to include a range that reactivity feedback from nuclear heat addition is noticeable and heatup rate is established.
- 0 Plant shutdown.

- \* 0 Manual control of feedwater during startup and shutdown.
- \* 0 Any significant ( > 10 Percent) power changes in manual rod control or recirculation flow.
- \* 0 Loss of coolant including:
  - Inside and outside primary containment,
  - Large and small, including leak-rate determination.
- 0 Loss of instrument air
- 0 Loss of electrical power (and/or degraded power sources).
- \* 0 Loss of core coolant flow/natural circulation.
- 0 Loss of condenser vacuum.
- 0 Loss of service water.
- 0 Loss of shutdown cooling.
- 0 Loss of component cooling system or cooling to an individual component.
- 0 Loss of normal feedwater or normal feedwater system failure.
- \* 0 Loss of all feedwater (normal and emergency).
- 0 Loss of protective system channel.
- 0 Mispositioned control rod or rods (or rod drops).
- 0 Inability to drive control rods.
- 0 Conditions requiring use of standby liquid control systems.
- 0 Fuel cladding failure or high activity in reactor coolant or off-gas.
- 0 Turbine or generator trip.
- 0 Malfunction of automatic control system(s) which affect reactivity.
- 0 Malfunction of reactor coolant pressure/volume control system.
- 0 Reactor trip.
- 0 Main steam line break (inside or outside containment).
- 0 Nuclear instrumentation failure(s).

### 3.2 Knowledge of Systems

Each licensed reactor operator or senior reactor operator is required to demonstrate, in the performance of his duties, his satisfactory understanding of the operation of systems and apparatus and his knowledge of operating procedures in each area for which he is licensed.

#### 3.2.1 Active Status

To remain on active status for the purpose of performing licensed duties, a reactor operator or senior operator must:

- 0 Participate in the License Requalification Program, and
- 0 Perform licensed duties for thirty two hours during the preceding four months. Department Managers are responsible for notifying the Training Department when this requirement has been met.

License duties shall be considered to be those duties performed on shift by Operations Supervisors, Shift Supervisors, Plant Operators, and Assistant Plant Operators, duties involving fuel handling, and duties involving on-site line responsibility for directing day-to-day control room activities.

#### 3.2.2 Inactive Status

3.2.2.1 Any individual who fails to meet the requirements of active license activities as defined in Section 3.2.1 or who is removed from license duties as required elsewhere in the requalification program shall be designated as inactive. This will be documented with written notification to the individual and to the appropriate Department Manager. Inactive license maintenance will require participation in the license requalification program.

3.2.2.2 Any licensed reactor operator or senior reactor operator placed in an inactive status pursuant to 10 CFR 55.31(e) is required to demonstrate that his knowledge of current plant operations and administration is satisfactory by the following steps:

- 0 Review of all applicable plant, procedure and license changes during the period the license was inactive, and review of missed material presented during segment lecture and examination, and
- 0 Satisfactory performance of all reactivity manipulations required by section 3.1 which were missed during the previous segment, and
- 0 Satisfactory performance of four shifts under supervision, and
- 0 Evaluation by the Manager-Operations, Deputy General Manager, or General Manager-Plant Hatch, or



- 0 Satisfactory completion of written, simulator and oral/walkthrough examinations, the extent of which will be based on the length of inactivity.

An unsatisfactory result on the evaluation requires the operator to have On-The-Job training in areas determined as weak until either the Manager-Operations, Deputy General Manager, or General Manager-Plant Hatch is satisfied that he has adequate knowledge of current operations.

### 3.3 Plant Changes

Each reactor operator and senior reactor operator is kept informed of all plant design changes, procedure changes, and license changes. This is accomplished by written notice of these changes to each holder of an operator or senior operator license. Changes of a magnitude requiring detailed explanation are reviewed by lecture or simulator as appropriate with 100 percent attendance of licensed personnel.

### 3.4 Procedure Reviews

Each licensed operator and senior operator reviews the contents of all applicable abnormal and emergency procedures on an annual basis as scheduled in the requalification program. A delinquency of 30 days on a procedure review cycle requires that the licensee shall be removed from license duties until such a review is complete.

## 4.0 Evaluation

### 4.1 Annual Diagnostic Examinations

Annual written diagnostic examinations which serve to determine areas in which retraining is needed to upgrade licensed operator and senior operator knowledge will be administered to all licensed operators and senior operators. Since these examinations are diagnostic, no minimum passing grade will be established, and they may not be substituted for examinations required under section 4.2. However, individual scores less than 70 percent of the average score will require the individual to be removed from license duties until he attends accelerated retraining and passes a simulator and/or oral examination.

#### 4.2 Written Evaluations

- 0 Written examinations which determine licensed operators' and senior licensed operators' knowledge of subjects covered in the requalification program and provide a basis for evaluating their knowledge of abnormal and emergency procedures will be administered on a segmented basis.
- 0 Scores on the segment examinations administered during an annual cycle will be averaged to determine an overall annual examination score.
- 0 Individual segment scores of less than 70 percent or overall scores of less than 80 percent will require that an individual be removed from licensed duties and enrolled in an accelerated requalification program.
- 0 If an individual is administered a segment re-examination, the new score may be used in determining the final overall score.
- 0 Examinations will be prepared by either Plant Hatch Training Department Personnel or an outside agency.
- 0 Evaluation of examinations will be completed within thirty (30) days (this period may be extended by thirty (30) days under unusual conditions and with corporate office approval).

#### 4.3 Observation and Evaluation

- 0 Systematic evaluation of the performance and competency of licensed operators and senior licensed operators by supervisors and/or training staff members will be accomplished as follows:
  - 0 Evaluation during regularly scheduled segment simulator training.
  - 0 Conduct of an annual simulator and oral examination. The simulator portion may be waived only if the plant specific simulator is not available.
  - 0 The evaluation will include actions taken during actual or simulated, abnormal and emergency conditions.
  - 0 An unsatisfactory evaluation by any of the above methods or unsatisfactory performance during an actual event while on shift, will require that the individual be removed from licensed duties and enrolled in an accelerated requalification program.

#### 4.4 Accelerated Requalification Program

- 0 Unsatisfactory performance as determined in Sections 4.1 through 4.3 shall require that the individual be removed from licensed duties and enrolled in an accelerated requalification program.
- 0 This program shall be based on weak areas as determined by existing Departmental Instructions for examination and/or evaluation analysis.
- 0 Unsatisfactory performance as defined in Sections 4.1 and 4.3 shall require successful completion of a simulator and/or oral examination.
- 0 Unsatisfactory performance on a segment exam as defined in Section 4.2 shall require successful completion of a written segment examination with a minimum score of 70%
- 0 Unsatisfactory performance based on an overall annual score of less than 80% on the segmented examination will require successful completion of a comprehensive, 4 category, examination with a score of 80% overall and 70% in each category.
- 0 Accelerated requalification program lectures require a minimum of two instructor contact hours for each segment or category below 70%.
- 0 Acceptable re-examinations will be based on the program objectives for weakness identified.

#### 4.5 Nuclear Regulatory Commission Requalification Program Evaluation

The segment of training prior to a Requalification Program Evaluation may consist of a preparation period. When the evaluation is not scheduled sufficiently in advance of the segment, previously scheduled topics for that segment may be deferred until after the evaluation.

5.0 Records The following records are required to be maintained to document the participation of each licensed and senior operator in the requalification program, and accelerated requalification program.

5.1 Lesson plans.



5.2 Program File:

- a. Master/key of all written examinations
- b. Summary of exam results
- c. Curriculum
- d. Attendance records

5.3 Distribution cover sheets of design, procedure and license changes.

5.4 Individual files:

- a. Examination answers/results.
- b. Results of all evaluations.
- c. Observation results.
- d. Reactivity control manipulations.
- e. Accelerated Requalification attendance.
- f. Documentation related to individual's license status.
- g. Waivers from specific portions.