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DESCRIPTION:

Ltr re our 11-9-73 ltr.....trans the following.
.....

ENCLOSURES:

Operators Requalification Program for H.B. Robinson.

Responses to AEC's questions.

(40 cys encl rec'd)

PLANT NAME: H.B. Robinson

FOR ACTION/INFORMATION 11-30-72 JB

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Carolina Power & Light Company

November 23, 1973

FILE: NG-3514 SERIAL: NG-73-377

50-261

Mr. Paul F. Collins, Chief
Operators Licensing Branch
Division of Reactor Licensing
U. S. Atomic Energy Commission
7920 Norfolk Avenue
Bethesda, Maryland

Dear Mr. Collins:

H. B. ROBINSON UNIT NO. 2
LICENSE DPR-23
REQUALIFICATION OF OPERATORS

In reply to your letter dated November 9, 1973, Carolina Power & Light Company is submitting a revised proposal for the requalification of the licensed operators and senior operators at the H. B. Robinson Nuclear Power Generation Station. Included also are the answers to the questions that you requested. (Attachment A)

The revised proposal and answers to your question meets all requirements stated in 10CFR55 and in most cases exceeds them.

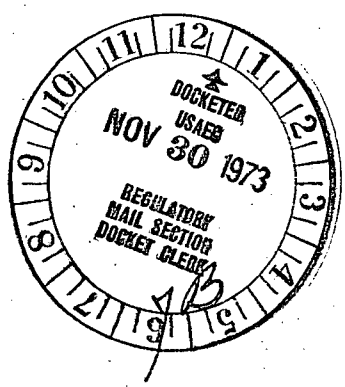
Yours very truly,

N. B. Bessac
Manager
Nuclear Generation

JEH/rbl

Attachment

cc: Mr. C. D. Barham
Mr. T. E. Bowman
Mr. B. J. Furr
Mr. J. E. Hall
Mr. D. V. Menscer
Mr. E. E. Utley
Mr. D. B. Waters



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H. B. ROBINSON'S OPERATOR RETRAINING PROGRAM

H. B. Robinson's Retraining Program is designed to ensure that all licensed reactor operators and senior reactor operators will maintain proficiency in their assigned plant operating tasks. Further, it is expected that participation in this program will allow all licensed personnel to meet or exceed the requirements set forth by USAEC operator licensing group.

The following is a detailed summary of the H. B. Robinson's Operator Retraining Program which will be conducted to fulfill the requirements of 10 CFR 55. The full program will be implemented in such a manner as to minimize scheduling difficulties that will be incurred by plant management. Three to four months during the two-year interval will be allotted for refueling and maintenance downtime.

The entire Retraining Program will be conducted in three (3) phases: 1) retraining on-site, 2) retraining off-site, and 3) operator evaluation. The training coordinator will be responsible for the scheduling and supervision of all training.

PHASE I - RETRAINING ON-SITE

The on-site portion of the retraining program will consist of approximately 120 hours of instruction. This instruction will be given in two (2) parts: 1) formal classroom lectures, and 2) on-shift training. The scheduling on site will be such that every licensed operator will have the opportunity to attend all lectures. The following is an outline of what subjects may be covered in each of these parts, but not necessarily in the order stated.

1. Formal Classroom Lectures
   - a. Theory and Principles of Operations
     1. Atomic and nuclear physics
     2. Subcritical multiplication
     3. Xenon and samarium effects
     4. Rod worth
     5. Boron worth
     6. Coefficients and defects
        - a) Moderator temperature
        - b) Fuel temperature
        - c) Voids
        - d) Pressure
        - e) Redistribution
        - f) Power
     7. Shutdown margin
     8. Rod insertion limits
   - b. General and Specific Plant Operating Characteristics
     1. Normal plant transients
        - a. Rod worth curves
        - b. Xenon transients
        - c. Step load changes

2. Safety analysis
   a. Review of minor accidents
   b. Review of major accidents

c. Plant Instrumentation and Control Systems
   1. Excore nuclear instrumentation
   2. Incore nuclear instrumentation
   3. Full length rod control
   4. Part length rod control
   5. Rod position indication
   6. Pressurizer pressure control
   7. Pressurizer level control
   8. Make-up water control
   9. Steam dump control
   10. Steam generator level control
   11. Reactor protection system
   12. Electro-hydraulic control
   13. All logics

d. Normal and Abnormal Procedures and Emergency Instructions
   1. Engineered safety systems
   2. Site emergency plan
   3. Overall plant operating procedures

e. Radiation Control and Safety
   1. Nuclear radiation
   2. Biological effects of radiation
   3. 10 CFR 20
   4. Radiation protection manual
   5. Radiation monitoring system
   6. Radiation procedures

f. Technical Specifications
   1. Safety limits, reactor core
   2. Heatup and cooldown limits
   3. Core power distribution
   4. Discharge limits

g. Chemistry
   1. Chemistry control
   2. Radiation chemistry
   3. Specifications and criteria

h. Quality Assurance Responsibilities

Annually a comprehensive examination will be given to each licensed operator. From the results of this exam an annual schedule will be formulated using the above topics as a guide. If any operator shows that he is clearly deficient in his performance (his examination results are less than 70% overall) he will be removed from work requiring an operator's license and placed in an accelerated requalification program until the management is satisfied that he is again proficient. Any operator who clearly shows he would have passed an AEC exam on a particular section (with an 85 percent or greater on that section) will be exempt from the lecture series on that section.

Certain licensed personnel, in the performance of their normal duties, may be very much involved with one or more of the areas covered in classroom lectures. These individuals would not be required to attend the applicable classroom lectures. In some cases, these individuals may be called upon to conduct lectures in their areas of expertise, i.e. Engineering Supervisor for Radiation Control and Safety lectures.

2. ON-SHIFT TRAINING

a. All procedures and instructions will be covered in a group discussion and where applicable a walkthru of controls and instrumentation will be conducted by the shift foreman. This method will be particularly helpful to ensure each licensed operator will be kept updated in procedure, instruction, and design changes of the H. B. R. Plant. While reviewing the above mentioned subjects, the following will also be reviewed for that particular procedure or instruction:

1. Technical Specifications
2. Precautions, Limits, and Setpoints
3. Flow diagrams, Logics, and Functional Diagrams Where Applicable.

The staff personnel holding an AEC operator license will stand an average of four (4) hours watch in control room per month. During this four (4) hours he will carry out those duties normally conducted by either the shift foreman or control room Operator.

During all plant operation a record will be kept of any major reactivity changes a licensed operator will perform. The following is a list of some reactivity changes CP&L considers as major:

1. Startup to point of adding heat
2. Orderly shutdown
3. Manual control of S/G's during startup and shutdown
4. Operation of EHC in manual during startup
5. Boration
6. Dilution
7. Operation of manipulator crane during refueling
8. Any power changes in manual rod control.

CP&L does not mean that the above list is complete. If credit is taken for any other major reactivity change other than those listed above, they will be documented fully.

PHASE II RETRAINING OFF-SITE (SIMULATOR TRAINING)

This phase will be five days per two years for each licensed operator. The course will be held at the CP&L Training Center near Raleigh, N. C. During the five days the operator will gain much "Hands on" practical experience that is very difficult to get at the H. B. R. Plant. The following is an outline of the operations to be performed on the CP&L Nuclear Power Plant Training Simulator.

Day 1

a. Introduction to 5-day retraining course.
b. Take plant from a cold shutdown condition to a hot shutdown condition
c. Take plant from a hot shutdown condition to minimum power

Day 2

a. Power Operations
    1. Various ramp rates
    2. Escalation and de-escalation in power by various step changes
b. Take plant from full power to hot shutdown condition
c. Take plant from hot shutdown condition to cold shutdown condition

Day 3

a. Take plant from cold shutdown condition to minimum power with mini malfunctions
b. Take plant from minimum power to cold shutdown conditions with mini malfunctions

Day 4

a. At power operations with mini malfunctions
b. At power operations with major malfunctions

Day 5

a. Major malfunctions at all conditions
*b. Licensees time

* It is believed that during an operator's time performing his tasks, as a licensed operator, he will see things that he's not quite sure why something happened the way it did. Therefore, it is intended to allow him 2-4 hours on the last day at the simulator to request certain transients or casualties. By doing this and being able to analyze the results he will become a much better and safer operator.

The five-day simulator course will be five (5) consecutive days, totaling 40 hours of instruction, for three (3) licensed operators. During all operations they will function as a shift. They will also rotate stations so that they will perform all operations at all stations.

PHASE III OPERATOR EVALUATION

At the completion of Phase I and Phase II each licensed operator will take an USAEC type comprehensive written examination. This examination will be written and graded by the

instructors at the CP&L Training Center. Periodically an instructor from CP&L Training Center will conduct oral examinations on 1 or 2 licensed operators.

Attached is the documentation that will be used to keep a personal file on each licensed operator. The following is a list of records to be kept.

1. Startup, Shutdown, and Reactivity Changes
2. Formal Lecture Attendance
3. On-shift Training
4. Grade Sheet for Periodic Examinations
5. Evaluation Sheets for Simulator Training
6. Evaluation Sheets for Written Comprehensive Examinations
7. Evaluation Sheets for Oral Examination
8. Additional Training

In a master file will be copies of all periodic examinations and a copy of all comprehensive examinations given.

Any licensed operator absent from the site for a period of four (4) months or longer will be given a written examination and/or an oral walk through the plant to determine if an accelerated training program is necessary prior to returning him to his normal duties.

ATTACHMENT A

Request For Additional Information
CAROLINA POWER & LIGHT COMPANY
Docket No. 50-261

Question

1. Provide the frequency with which lectures will be given, or other information, that will allow us to make the determination that they will be presented on a regular and continuing basis.

Response

1. It is the intention of CP&L to have a continuing training program between the time each annual examination is given. This consists of 2-4 months of formal lectures given weekly if Plant Operation allows and continuing with on-shift training thru the remainder of the year. This will exclude the 1-3 months that the plant is down for maintenance and refueling.

Question

2. Provide the specific criterion that will be used to determine if lecture attendance is required pursuant to Section 2 of Appendix A of 10CFR55. We believe a category grade of less than 85% on an AEC-type comprehensive examination should require an individual's attendance at a lecture on that topic.

Response

2. Answered in proposal Page 3 - RETRAINING ON-SITE

Question

3. Provide the specific criterion that will be used to judge an operator clearly deficient, at which point he will be removed from regular duties and placed in an accelerated requalification program pursuant to Section 4e of Appendix A of 10CFR55. We believe an overall grade of less than 70% on an AEC-type comprehensive examination should require an operator's enrollment in an accelerated requalification program.

Response

3. Answered in proposal Page 3 - RETRAINING ON-SITE

Question

4. Following an operator's participation in an accelerated program what method will be used by management to determine that he may resume licensed duties?

Response

4. It will be determined by a written and/or an oral examination.

Question

5. Indicate whether it is the intention of CP&L to administer topical examinations throughout the lecture series and, if so, the passing grade below which attendance in that lecture will be repeated. We believe the criterion in Item 2 should apply.

Response

5. Yes, CP&L does intend to give topical examinations. Our criteria for additional training in that area will be determined by the training coordinator if the licensed operator receives less than 70% on that examination.

Question

6. Provide additional information on the degree of responsibility that will be assumed by staff personnel during their assignment to four hours watch standing in the control room per month. For example, we believe a staff member with a senior operator license should assume the responsibility of the shift supervisor during those four hours.

Response

6. Answered by proposal Page 3 - ON-SHIFT TRAINING.

Question

7. Is it the intention of CP&L to require a combination of reactivity manipulations to meet the required ten manipulations in two years, or would CP&L expect credit for a single method of reactivity control performed ten times; for example, ten operations of the manipulator crane during refueling? We believe a combination of manipulations more closely meets the intent of the regulation. Further, a startup should be to the point of adding heat, a shutdown should be a plant shutdown, operation of the EHC during startup should be in manual and any power changes in manual rod control should be greater than ten percent.

Response

7. CP&L concurs with your beliefs. With this Company having a nuclear power plant simulator it will be a combination of reactivity changes between license renewal periods.

Question

8. Periodically an instructor from the CP&L Training Center will conduct oral examinations of 1 or 2 licensed operators. Is it the intention of CP&L that each licensed operator will be given an oral examination at least once during each two-year licensed interval?

Response

8. NO

Question

9. In your proposed requalification program, does the use of the term "licensed operator" mean licensed reactor operator and licensed senior reactor operator?

Response

9. The term "licensed operator" means any person holding an AEC license to operate a nuclear power plant, whether it be senior reactor operator or reactor operator.

Question

10. What person, on site, by title, will have overall responsibility for the functioning of the requalification program?

Response

10. Answered in proposal Page 1 - OPERATOR RETRAINING PROGRAM.

Question

11. In the case of a licensee who has not been actively performing the function of an operator or senior operator for a period of four months or longer, what method will be used to ensure that his knowledge and understanding of facility operation and administration are satisfactory prior to his resuming licensed activities?

Response

11. Answered in proposal Page 5 - OPERATOR EVALUATION.