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T.F. B7.1.2

United States Nuclear Regulatory Commission
Washington, DC 20555

Attention: Mr. Vincent S. Noonan, Project Director
PWR Project Directorate No. 5

Reference: (a) Construction Permits CPPR-135 and CPPR-136, Docket
Nos. 50-443 and 50-444

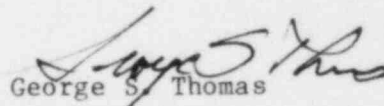
Subject: Seabrook Station Operator Training Program

Dear Sir:

Enclosed please find our response to the Staff's concerns regarding our operator training program described in FSAR Section 13.2. Also enclosed, for your convenience, are marked-up pages of FSAR Section 13.2 which reflect the necessary changes described in our response. These changes will be incorporated into the FSAR in a future amendment.

We trust that the enclosed information is acceptable, and we request that this be reflected in the next supplement to Seabrook's SER. Should you have any further questions regarding this matter, please contact Mr. Peter Richardson at (603) 474-9521, extension 2605.

Very truly yours,


George S. Thomas

Enclosure

cc: Atomic Safety and Licensing Board Service List

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1. The Staff expressed a concern about a reduction in the number of hours devoted to mitigating core damage (MCD) training. Actually, there has been no reduction in the number of instructional hours devoted to MCD training. As indicated on the revised FSAR page 13.2-6 provided herewith, we specifically teach MCD and transient and accident analysis (TAA) over a three week period, or for approximately 120 instructional hours. We have used the word "specifically" because accident training including MCD is addressed throughout our entire program. For example, it would not be practical to teach emergency procedure response without addressing the mitigation of core damage. It should be noted that this three week training period for MCD and TAA is more than that required by NUREG-0737 (i.e., 80 hrs.).
2. As the Staff requested, we will delete the phrase "more than once" from FSAR page 13.2-16. However, as a result of this change, we have found it necessary to change the phrase "performance review" to "academic review" as provided on the enclosed revised FSAR page 13.2-16 provided herewith. We believe that the term academic review better describes the content of Section f on this page. The academic review process functions in a three-tiered way as indicated on FSAR page 13.2-9. Depending upon the severity of the matter under review, the academic review process could include action by the Performance Review Board. The review action by that board could result in removing an operator from license duties.
3. As discussed with the Staff, we will delete the phrase "reactor operator" as indicated on the revised FSAR page 13.2-4 provided herewith. This change is being made to clarify that the Fundamentals I program is a program conducted for all license candidates (i.e., both RO and SRO). This change would also make this paragraph consistent with Section 13.2.1.4, paragraph a.1, which describes the Fundamentals I program for the Replacement Operator program.
4. The following provides justification regarding the removal of specific contact hours under the technical training sections for "Supervisory Training" (page 3.2-22) and "Chemistry" and "Health Physics" (page 13.2-26).

The removal of the contact hours from the FSAR listing of training courses is a consequence of the application of the Training System Development (TSD) approach to our instruction. The institution of this approach represents good instructional practice in line with INPO recommendations. Under the TSD approach, contact hours are determined separately for each training group based on the results of a training needs analysis. Consequently, contact hours cannot be designated by a fixed number, but the number of hours varies from group to group, reflecting the specific duration of instruction required by each particular training group.

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The license training program schedule will insure that a sufficient number of licensed personnel will be available prior to fuel load, and will continue to meet applicable technical specification conditions with respect to the number of licensed operators on shift crews.

A program for effectiveness monitoring is established for all areas of license training. Evaluation of program effectiveness shall be performed by: 1) Training Center management periodic assessment of classroom presentation and simulator instruction; 2) independent party oral and demonstrative audits conducted on at least a yearly basis; 3) student generated evaluations. Revisions are made to the license training program to strengthen weak areas identified through the evaluation process.

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The following paragraphs provide a general description of the various training segments:

a. Introductory Training

In addition to the initial orientation and general employee training described in Section 13.2.2, those individuals specifically designed to become license holders will attend an introductory program on PWR systems. The first portion of the program is a generic course covering the Nuclear Steam Supply System (NSSS). License candidates will also be given an introductory course covering the balance of Seabrook's systems.

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b. Nuclear Fundamentals Training Program

Fundamentals I

This is an eighteen to twenty week program presented by the Training Center Staff or an outside vendor. The program provides the ~~reactor operator~~ license candidates with a thorough understanding of the basic principles, characteristics and unique features of a nuclear system. The major areas to be covered are mathematics and classical physics, basic nuclear physics, reactor operations, core performance, radiation protection, plant chemistry, instrumentation and control, fluid flow, thermodynamics, heat transfer, and plant performance. An integral part of the Fundamentals I training program is reactor start-up experience. This is a one week program presented at a research or training facility by an outside vendor. Experiments, discussions and demonstrations are conducted to complement the principles and theory taught in the fundamentals program. Specific training objectives are selected which place additional emphasis on concepts which are difficult to visualize in the classroom environment.

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d. Formal On-Site School

This segment of approximately 14 to 18 weeks duration will encompass the on-site formal classroom lecture series. The instructors for this lecture series will be permanent and temporary members of the Seabrook Station Training Center staff, Seabrook Station Supervisory staff and Yankee Atomic staff. Other consultants and vendor representatives will be invited to discuss topics of special interest.

The subjects to be taught and/or reviewed in the formal on-site school are listed below:

- Math and Physics
- Reactor Operations
- Plant Chemistry (Primary and Secondary)
- Health Physics
- Heat Transfer
- Fluid Flow
- Materials Science
- Thermodynamics
- Specific Systems & Components
- Instrumentation & Controls
- Mitigating Core Damage (per Table 13.2-3)
- Technical Specifications
- Administrative Controls
- Special Topics

replace with
insert "A"

~~Lectures applicable to Mitigating Core Damage (per Table 13.2.3) will total in excess of forty (40) contact hours. Credit will be taken, where applicable, for contact hours presented in other subjects as listed above.~~

Included in the classroom training segment will be periodic simulator exercises and demonstrations. In addition, directed in-station tours will be conducted to review system and component layout and interface.

e. Simulator Training

Seabrook has the distinct advantage of including a site specific simulator as part of the operator training program. The simulator was modeled and built to duplicate the Seabrook main control board as well as real time system response. The simulator meets the requirements of Regulatory Guide 1.149, 1981, except as noted in FSAR Section 1.8, Conformance to NRC Regulatory Guides.

INSERT "A"

(Insert for FSAR page 13.2-6)

A three week block of instruction is included to address transient and accident analysis and mitigating core damage. This three weeks of training consists of classroom instruction, practice sessions on the simulator and supervised study with problem solving.

An academic review board as described in 13.2.1.3

~~A performance review~~ will be conducted when any of the following situations occur:

- o A licensed operator receives a modular exam score of less than 70 percent ~~more than once~~ during the annual cycle, or an annual overall grade average of less than 80 percent.
- o A licensed operator receives a poor performance evaluation.
- o Prior to resuming or assuming active license responsibilities after absence of four months or longer from actively performing the functions of an operator or senior operator.

The purpose of the review will be to determine a course of action necessary to upgrade an individual's performance to an acceptable level. A supplemental training program will be established to upgrade areas where deficiencies are shown.

The review will be conducted as soon as practical after one of the above conditions occur. The action taken will be dependent on such factors as examination performance, watch standing performance, observed operational performance and judged overall competence.

An academic

~~A performance~~ review will be conducted to determine the necessary actions to be performed by a licensee, prior to assuming responsibilities at any operational shift level; RO, SRO, Unit Shift Supervisor, Shift Superintendent. Typically this ~~performance~~ review would address actions to be performed by an inactive licensee prior to being placed in an operating position requiring a license. The results of this review will be used to certify to the commission that the licensee's knowledge and understanding of facility operation and administration are satisfactory, as required by 10CFR55.31(e).

g. Regualification Training Program Records

Regualification training program records will be maintained for a minimum of two years from the date of the recorded event to document the participation of each licensed operator and senior licensed operator in the program. The records will include copies of written examinations administered, the answers given by the licensee, results of evaluations, and documentation of any additional training in areas in which the licensee had exhibited deficiencies.

13.2.1.4 Replacement Operator License Training

Individual advancement to increasing levels of responsibilities as opportunities develop within the organization will be encouraged. For an individual to advance to a more responsible position, he must be fully qualified technically and possess sufficient experience to meet the job requirements.