

UNITED STATES OF AMERICA
NUCLEAR REGULATORY COMMISSION

BEFORE THE ATOMIC SAFETY AND LICENSING BOARD

In the Matter of)
SOUTH CAROLINA ELECTRIC & GAS) Docket No. 50-395 O.L.
COMPANY)
Virgil C. Summer Nuclear Station,)
Unit 1)

TESTIMONY OF JAMES C. SNELL ON FAIRFIELD
UNITED ACTION CONTENTIONS 1, 2, AND 27 *

Q.1. Would you please state your name and place of employment?

A. My name is James C. Snell. I am employed by the U.S. Nuclear Regulatory Commission as a Nuclear Engineer (Management Systems) in the Licensee Qualifications Branch, Division of Human Factors Safety, Office of Nuclear Reactor Regulation. I am the management review specialist assigned to the Summer operating license. A copy of my professional qualifications is attached.

* FUA Contentions 1, 2 and 27 are as follows:

Contention 1

The overall corporate management of the Applicant is insufficiently experienced in the operations of a nuclear power facility and is generally deficient in management abilities essential to the safe operation of a nuclear power facility or properly to respond under accident conditions.

Contention 2

The Applicant lacks sufficient "hands on" experience among its reactor operator staff to safely run the Virgil C. Summer Nuclear Station, Unit 1, and no Operating License should be granted until adequate "hands on" experience is had by the Applicant's reactor operations staff.

Contention 27

The Applicant lacks the technical and management resources to fulfill the post-TMI requirements set forth in NUREG-0660, NUREG-0694, and NUREG-0737.

Q.2. Did you prepare, or substantially assist in, the preparation of any portion of the Staff Safety Evaluation Report or supplements?

A. Yes. I participated in the preparation of the NRC Staff Safety Evaluation Report (SER) (NUREG-0717), Section 13.1 and Supplement No. 1 (SSER), Sections 13.1 and 22 (pages 22-1 to 22-19), regarding the evaluation of the operations management organization capability.

Q.3. Do you adopt these sections as part of your direct testimony in this proceeding?

A. Yes.

Q.4. Did you reach any conclusion regarding this subject as the result of your review?

A. Yes. As noted on pages 22-11, 22-13, and 22-15 of the SSER, the Staff has concluded that the Applicant's operations organization is in accordance with the draft guidelines of NUREG-0731.

Q.5. Could you explain what NUREG-0731 is and how it came about?

A. The NRC recognized that based on the independent evaluations of the accident at Three Mile Island, a more comprehensive review by the NRC Staff was needed of the overall management of utilities seeking to design, construct and operate nuclear power plants. To address this area, the NRC Staff has published draft guidelines in the form of NUREG-0731, "Guidelines for Utility Management Structure and Technical Resources." The purpose of this NUREG was to present some initial guidance for applicants of pending operating licenses. As such, SCE&G was evaluated to see how they conformed to the draft

guidelines of NUREG-0731. Draft NUREG-0731 was used as one of the tools to evaluate the management structure of SCE&G.

Q.6. What other "tools" were employed to evaluate the management of SCE&G?

A. The additional "tools" used were various industrial guidelines published by the American Nuclear Society: ANSI/ANS 18.1, 1971, entitled "Selection and Training of Nuclear Power Plant Personnel;" ANSI/ANS 3.1, 1978 and its Draft 12/6/79 version, entitled "Selection and Training of Nuclear Power Plant Personnel;" and ANSI/ANS 3.2, entitled "Administrative Controls and Quality Assurance for the Operational Phase of Nuclear Power Plants." We also compared SCE&G's management structure with similar utilities.

Q.7. The basis provided for Contention 1 suggests that Mr. Thomas C. Nichols, the Vice President and Group Executive for Nuclear Operations is not qualified because he lacks the requisite experience in nuclear operation. Does the Staff agree with this view?

A. No. The Staff concludes on page 22-13 of its SSER that this senior management official has the requisite qualifications to manage the nuclear operation since he is supplementing his managerial and technical experience at Summer with individuals who have nuclear operating experience. Additionally Mr. Nichols has personally overseen the design, construction, and pre-operation testing of Summer over the last few years. He has also taken a one week systems simulator course given by Westinghouse at its training center. Therefore, Mr. Nichols has, by virtue of his position in SCE&G, been involved in the decision-making process of the nuclear plant and has recently

taken formal training in nuclear power plant operations. This, supplemented by senior people with nuclear operating experience on the corporate staff, personally prepares him for making operating decisions necessary in his position.

Q.8. What is the Staff's position on whether serious deficiencies exist in the education, qualifications and experience of the Plant Manager, Ollie S. Bradham?

A. The Intervenors contend that since the plant manager does not hold a college degree this would be a serious deficiency in his managerial role. It should be pointed out that there are not now any requirements that a plant manager hold a bachelor's degree. Mr. Bradham's total practical nuclear experience exceeds that which we contemplated when using NUREG-0731 as a guideline. Specifically, his basic education and training, his experience at various operating plants and the experience he gained in managing the Summer plant completion and startup qualifies him within the intent of NUREG 0731. In addition, the Summer plant organization has an assistant plant manager with a degree in Nuclear Engineering and who formerly held an NRC senior reactor operator (SRO) license. Under the plant organization, which was reviewed and approved by the NRC Staff, the majority of the staff under the Summer plant manager first reports directly to the assistant plant manager, who in turn reports to the plant manager. Therefore, decisions of safety and operation from the plant will generally first be screened by the assistant, whose qualifications exceed our guidance, before they are passed to the plant manager.

Q.9. Would you also please state the Staff's position regarding the qualifications of the Maintenance Supervisor, Steve Smith?

A. The Intervenors have also assumed that the NRC Staff has a requirement that the maintenance supervisor is required to have a college degree. Again this is not the case. NUREG-0731 is not a regulatory requirement but only draft guidance and was used as such, in part, in this review (see Summer SER page 22-12). However, the maintenance supervisor, Mr. Smith, has had a multitude of nuclear training, particularly in the maintenance area and this provides him with the requisite knowledge to effectively serve as the maintenance supervisor.

Q.10. What conclusion has the Staff reached about the Summer plant staff?

A. We concluded that the plant staff "meets the guidance provided in NUREG-0731...." SSER page 22-14. The basis for that conclusion was our review of the organization, the individuals qualifications, training and personal interviews which enabled us to favorably assess the total composite of the SCE&G organization in relation to NUREG 0731.

Q.11. Is the Group Manager for Licensing and Nuclear Engineering, Mark Whitaker, qualified for that position.

A. Yes. Although neither Staff guidance nor NUREG-0731 specify any specific criteria for corporate technical managers, it is generally recognized that managers should have experience in the area for which they are managing. Mr. Whitaker has held a variety of management positions including Manager of Licensing which he has held for five years and has made him thoroughly familiar with nuclear engineering

safety. This background along with his formal education provides the requisite background knowledge to make management decisions in both engineering and licensing which are required of him.

Q.12. Has SCE&G done anything to further compensate for the lack of nuclear experience in its corporate licensing and engineering organization staff?

A. Yes. Since the IE/NRR audit team visit earlier this year, SCE&G has supplemented the corporate licensing and engineering organization staff with additional nuclear engineers and persons with previous nuclear plant operating experience.

Q.13. Is the "in-house" engineering capability of SCE&G adequate to properly support plant operations?

A. Yes. As noted on page 22-13 of the SSER the "applicant has satisfied our concern in the area of technical support for the operation of the plant." This conclusion was based upon the fact that the Applicant had stated that he would increase the size of his corporate technical staff by adding people who have had previous nuclear plant experience and the Applicant committed to a plan of rotating corporate and plant engineers, thereby providing operations experience at the corporate level.

Q.14. Does Training Manager, B. T. Estes, satisfy the guidance for that position?

A. Yes. Mr. Estes meets the criteria because he meets the criteria requested in NUREG-0731. He has a college degree, participated in Westinghouse training programs and has certified as an SRO

on the Zion training simulator. Additionally he has overseen the operator training program for over 3 years. Again there does not exist any regulatory requirement other than that supervisors should have experience in the area they supervise (ANSI 18.1-1971). Mr. Estes and his staff (Al Sanders, etc.) have college degrees in Mechanical, Chemical Engineering, Business and Computer Sciences, experience at professional courses, and practical experience gained over the past years in managing the Summer Training Department.

Q.15. Is Mr. Estes committed to maintaining a quality training organization?

A. Yes. Since the SSER, the Applicant has instituted an interim change to the training organization. We were informed of this change by a letter dated May 13, 1981. Mr. Estes is now supervising the implementation of the Applicant's decision to build a Summer simulator and training center. In the interim, before operation, the Applicant has placed additional emphasis on operator training and qualification programs. The Applicant has committed to have (1) the Training Department report offsite to corporate management and (2) provide a training staff which will meet or exceed the qualifications in the draft guidelines given in NUREG-0731. I have concluded that this is an acceptable arrangement for the training organization.

Q.16. FUA Contention 2 alleges that the Applicant lacks sufficient "hands on" experience to safely operate the plant. Do you agree with this contention?

A. No. As noted on page 22-14 of the SSER, the solution proposed by the Applicant is acceptable. To compensate for the lack of operating experience, the Applicant is trying to obtain the service of PWR experienced SRO personnel to act in an advisory capacity in the plant control room and the contracts of present SRO personnel will hopefully be extended to continue through the plant's initial operating phase and at least until full operation is achieved. Additionally, since our supplement, the Applicant has increased the training emphasis on operator licensing and is actively seeking additional plant personnel with prior operating plant experience.

Q.17. Throughout your testimony regarding the management qualifications of particular individuals, you have mentioned that lack of nuclear experience has been supplemented by qualified assistants. Could you please explain why the NRC Staff finds this acceptable?

A. NUREG-0731 was never intended to be an absolute prescriptive method to satisfy our general requirements for assessing managerial and Technical competence. NUREG-0731 is not intended to be back fitted immediately nor cause good managers to be replaced. The NRC Staff, therefore, looks at the overall capability of each subset of the organization. In the cases where one person is designated as the individual to fill a supervisory position we will assess his/her qualifications, responsibilities and his/her respective assistants against the position's functional duties. Then we will make an overall assessment of the capabilities of the individuals to perform those functional duties. In some cases the supervisor may not possess

the exact finite draft requirements. However, the supervisor and/or assistant(s) assigned to implement those functional duties meet or exceed the draft requirements. Therefore, we will assess the people as a whole.

0.18. Contention 27 states that the Applicant lacks the technical and management resources to fulfill post-TMI requirements set forth in NUREG-0660, NUREG-0694 and NUREG-0737. What is the Staff position with regard to this allegation?

A. The three NUREGs just cited provide some base requirements that the Staff should evaluate the technical and management capabilities of utilities more thoroughly since TMI. NUREG-0731 provides the first conceptual idea of how to implement the suggestions. The Summer SSER, on pages 22-11, 22-13, and 22-15, concludes that the Applicant's organization is in accordance with draft guidelines of NUREG-0731. Therefore, I believe the Summer organization meets the suggestions of the three NUREGs.

JAMES C. SNELL

PROFESSIONAL QUALIFICATIONS

I am presently a Nuclear Engineer (Management Systems) in the License Qualifications Branch, Division of Human Factors Safety, Office of Nuclear Reactor Regulation of the U.S. Nuclear Regulatory Commission. My present duties include the review and evaluation of nuclear utility management organization and technical qualifications for design, construction and operation of nuclear power plants. I have been in this position since the division and branch were formed a little over a year ago. I have been the principal review specialist for many new operating license reviews and participated in developing NRC review criteria in this area.

Prior to the formation of the Division of Human Factors Safety, I was a member of the Rogovin task force where I evaluated the management of Met Ed/GPU in regard to their operations management of TMI. Subsequent to my assignment to the Rogovin task force and prior to the formation of the Division of Human Factors, I participated in a task force assigned to develop criteria for applying the Commission's task action plan NUREG-0660 to new applications for construction permits. My primary responsibility was in the area of operations and utility management. In addition, I was a member of the review teams assigned to review these areas in the initial applications pending operating permits post-TMI (Sequoyah, North Anna 2, Susquehanna and Shoreham).

I have been employed with the Commission since 1972 and served as a licensing project manager from then until the accident at TMI. As a project manager, I was the Commission's primary contact with utility management for all licensing matters concerning both construction permits and operating license applications assigned to me. As such, I had very close contact with a variety of top utility corporate and plant management in the course of managing the safety reviews of construction permits and operating licenses involving design, construction and preparation for startup of various nuclear power plants.

Prior to joining the Commission, I was employed by Bechtel Power Corporation where I served a variety of engineering and supervisory positions involving the design, construction and operation of nuclear power plants.

I am a 1964 college graduate with a Bachelor of Science degree in Physics and have done post graduate work in Nuclear Physics. Upon graduation from college I served three and one-half years in the Navy where I was a communication officer on various fleet staffs.