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UNITED STATES
NUCLEAR REGULATORY COMMISSION

IN THE MATTER OF:	DOCKET NO:
SHEARON HARRIS NUCLEAR	50-400-OL
POWER PLANT	50-401-OL

LOCATION: RALEIGH, N. C. **PAGES:** 3385 - 3613

DATE: September 12, 1984

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UNITED STATES OF AMERICA

NUCLEAR REGULATORY COMMISSION

BEFORE THE ATOMIC SAFETY AND LICENSING BOARD

In the matter of:	:	
CAROLINA POWER AND LIGHT COMPANY and NORTH CAROLINA EASTERN MUNICIPAL POWER AGENCY	:	Docket Nos. 50-400 OL 50-401 OL
Shearon Harris Nuclear Power Plant Units 1 and 2	:	

Raleigh Civic Center,
500 Fayetteville Street Mall,
Raleigh, North Carolina.

Wednesday, 12 September 1984.

The hearing in the above-entitled matter was reconvened, pursuant to adjournment, at 9:00 a.m.

BEFORE:

JAMES L. KELLEY, Esq., Chairman,
Atomic Safety and Licensing Board.

DR. JAMES H. CARPENTER, Member.

DR. GLENN O. BRIGHT, Member.

APPEARANCES:

(As heretofore noted.)

ADDITIONAL APPEARANCE:

HILL CARROW, Esq., Carolina Power & Light Company,
P. O. Box 1551, Raleigh, North Carolina 27602.

9/12/84
wrb

C O N T E N T S

WRB/eb1

P R O C E E D I N G S

JUDGE KELLEY: Back on the record.

Good morning.

Is there any further word, other than what one reads in the papers, about the storm?

We had people yesterday from Brunswick. There is nothing further, really? Okay.

No news is good news.

MR. BARTH: I talked to Mr. Bemis about 11:00 and things were pretty quiet in terms of damage in the plant.

JUDGE KELLEY: Okay, we'll go to the next panel then.

Mr. Carrow.

MR. CARROW: Yes, Judge Kelley.

I am Hill Carrow, and I'll be representing the Applicants for this panel.

The Applicants are calling their third and final panel. On this panel we have Mr. R. A. Watson, Mr. J. L. Willis, Mr. James M. Davis, Junior, and Mr. A. Wayne Powell.

Whereupon,

R. A. WATSON,

J. L. WILLIS,

JAMES M. DAVIS, Jr.

and

A. WAYNE POWELL

WRB/eb2

were called as witnesses and, having been first duly sworn, were examined and testified as follows:

MR. CARROW: Mr. Chairman, the way the testimony has previously been prefiled in this action, Mr. Watson and Mr. Willis have jointly sponsored what we are calling the Harris testimony, and Mr. Davis and Mr. Powell have jointly sponsored what we are calling the training testimony. What I would like to do is go through the introductions of their testimony first with the Harris panel, and the two gentlemen on the Harris testimony, and then the two on the training after that.

JUDGE KELLEY: Okay.

Is there an expected overlap? I mean I assume that's the reason for having a panel format, that there's an overlap among the four.

MR. CARROW: Yes. The training, much of it goes toward training at the Harris facility, and that is the reason for our having this panel all together.

JUDGE KELLEY: Fine. Thank you.

DIRECT EXAMINATION

BY MR. CARROW:

Q Mr. Watson, could you state what is your name, your position, and place of employment?

A (Witness Watson) Yes. My name is R. A. Watson. I am employed at Carolina Power and Light Company. The

WRB/eb3

position I hold is Vice President, the Harris Nuclear Project Department.

Q Mr. Willis, could you state for us your name, position and the place of employment?

A (Witness Willis) I am James L. Willis, employed by Carolina Power and Light Company as Plant General Manager of the Shearon Harris Plant.

Q Gentlemen, I call your attention to a document entitled "Applicants' Joint Testimony of R. A. Watson and J. L. Willis on Joint Intervenors' Contention I (Management Capability)." It is dated August 9th, 1984, and it consists of 19 pages and two attachments.

Do you have that document in front of you?

A Yes, I do.

Q Mr. Watson, does this document represent testimony prepared by you and Mr. Willis, or under your direct supervision?

A (Witness Watson) Yes, it does.

Q And do you have any changes or corrections that need to be made to this testimony?

A Yes, I do.

Subsequent to the prefiling of our testimony on August 9th, a change was made in the Harris organization which should be reflected in my testimony. A sixth organizational section has been added entitled "Completion

WRB/eb4

Confirmation." This is set forth in the first full paragraph found in Replacement Page 4 which is being handed out now, I believe.

Replacement Pages 5 and 6 and a new Watson-Willis Attachment 1 simply contains the corresponding changes which are a result of the addition of the new section.

Also on page 13 of the testimony at the end of the fourth line from the bottom of the large paragraph on that page is a typographical error. There are two "the's" in a row, and one should be dropped out.

That's all the corrections that I have.

Q All right.

Mr. Willis, do you have any further changes or corrections to be made?

A (Witness Willis) Yes, I have one correction.

On page 1 of the Joint Testimony I would like to acknowledge my youth, and on the last line and the next to the last line, change those numbers to 29 and 26, 31 to 29 and 28 to 26.

Q Gentlemen, with these changes and corrections which you have just made, is this testimony true and correct to the best of your knowledge and belief?

A (Witness Watson) Yes, it is.

A (Witness Willis) Yes, it is.

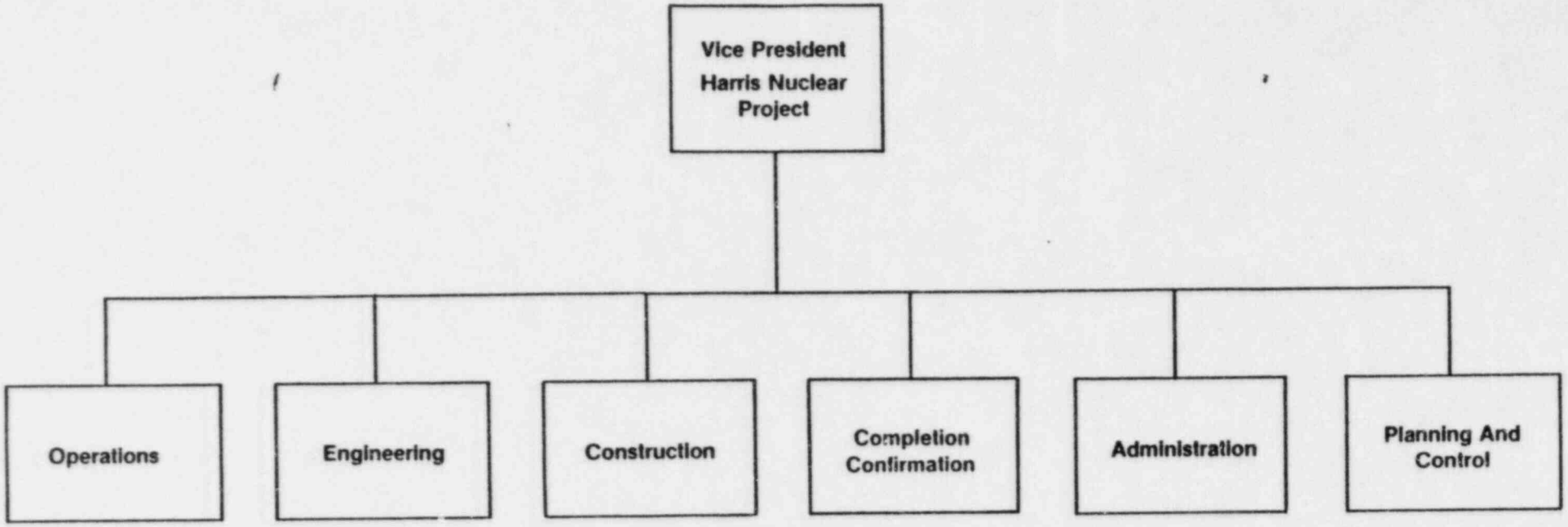
MR. CARROW: Mr. Chairman, at this time I ask that

WRB/eb5

this testimony be copied into the record, together with the replacement pages inserted at 4, 5 and 6, and Attachment 1.

(The documents follow:)

HARRIS NUCLEAR PROJECT



Watson-Willis Attachment 1

APPLICANTS' JOINT TESTIMONY OF
R.A. WATSON AND J.L. WILLIS ON JOINT INTERVENORS'
CONTENTION I (MANAGEMENT CAPABILITY)

REPLACEMENT PAGES

with the authority and responsibility for all line functions at the site. This has provided more direct management control over the engineering, construction, startup, operation, and maintenance activities at the Harris plant. Quality assurance and corporate nuclear safety organizations are also located on site but report off-site to ensure the organizational independence of these functions.

The Harris Nuclear Project Department, located entirely on site, is organized into six sections: Operations, Engineering, Construction, Completion Confirmation, Administration, and Planning and Controls. Each section is headed by a manager who reports directly to the Vice President — Harris Nuclear Project Department.

The Harris Plant Operations Section, which we will discuss in greater detail later, is responsible for all operational phases of plant management, including startup and testing, operation, maintenance, chemistry, environmental and radiation controls, and on-site technical site support.

Administration of the design of the Harris plant during construction is the responsibility of the Harris Plant Engineering Section. During the testing, startup, and operation of the Harris plant, this section will have the continuing responsibility to direct engineering modifications and design configuration control for the operating unit and to provide additional on-site technical support to the Operations Section. The Harris plant will thus benefit from the fact that the same technical staff that administered its design during construction will be responsible for providing technical support to plant operations personnel during the first several years of plant operation.

A5. The Manager - Harris Plant Engineering Section, Mr. L. I. Loflin, has a bachelor's degree in electrical engineering, has a professional degree in nuclear engineering, and is a registered professional engineer. He has had 19 years of engineering and power plant operations experience, 13 years of which have been in nuclear engineering. He was employed as operating supervisor responsible for all plant operational functions at VEPCO's Surry Nuclear Plant, and has held a Senior Reactor Operator's (SRO) license. After joining CP&L, Mr. Loflin served for a time as engineering startup coordinator at the Brunswick plant and later as Manager of the Corporate Nuclear Safety Section.

The Project General Manager - Harris Plant Construction Section, Mr. C. C. Wagoner, a Daniel employee, has a bachelor's degree in Mechanical engineering and a masters degree in power and fuel engineering from Virginia Polytechnical Institute. He has 24 years in nuclear power engineering and 10 years in plant construction management. He has served as Project Manager for Daniel Construction Company on the Farley Nuclear Plant, V.C. Summer Nuclear Plant, and most recently the Callaway Nuclear Project.

The Project General Manager - Harris Plant Completion Confirmation Section, Mr. R. M. Parsons, holds a bachelor's degree in civil engineering, is a registered professional engineer, and has 16 years of experience in nuclear power plant construction management. Prior to joining CP&L, he was employed by Ebasco Services, Inc., the Architect - Engineer for the Harris plant. During that time, he received construction management experience at the Virgil C. Summer and St. Lucie Nuclear Plants, and at CP&L's nuclear-powered Robinson Unit 2. Mr. Parsons has been with CP&L for eight years.

The Manager - Harris Project Planning and Controls Section, Mr. T. J. Allen, has a bachelor's degree in civil engineering and a masters degree in business administration. Mr. Allen is a registered professional engineer with nine years experience in planning and scheduling activities, two of which were directly related to nuclear plant activities. He was previously assistant to the Executive Vice President at CP&L's Brunswick plant.

August 9, 1984

UNITED STATES OF AMERICA
NUCLEAR REGULATORY COMMISSION

BEFORE THE ATOMIC SAFETY AND LICENSING BOARD

In the Matter of	)	
	)	
CAROLINA POWER & LIGHT COMPANY AND NORTH CAROLINA EASTERN MUNICIPAL POWER AGENCY	)	Docket No. 50-400 OL
	)	
(Shearon Harris Nuclear Power Plant, Unit 1)	)	

APPLICANTS' JOINT TESTIMONY OF R.A. WATSON AND J.L. WILLIS ON JOINT INTERVENORS' CONTENTION I (MANAGEMENT CAPABILITY)

JOINT TESTIMONY OF

R. A. WATSON AND J. L. WILLIS

Q1. Please state your name, business address, and position with Carolina Power & Light Company and describe your educational background and professional experience.

A1. Watson:

My name is R. A. Watson. I am Vice President - Harris Nuclear Project Department. My business address is the Shearon Harris Nuclear Power Plant, Post Office Box 165, New Hill, North Carolina. I have a bachelor's degree from North Carolina State University in nuclear engineering and a master's degree from Union College in physics. I have also studied at the Oak Ridge School of Reactor Technology in Oak Ridge, Tennessee. I am a registered professional engineer, I have previously qualified as a senior reactor operator at another facility and have 28 years of experience in nuclear engineering activities. I was with the Knolls Atomic Power Laboratories for 13 years. I have been with Carolina Power & Light Company (CP&L) for 15 years and was Vice President of the Fuel Department prior to assuming my current position.

Willis:

My name is J. L. Willis. I am General Manager - Harris Plant Operations Section. My business address is the Shearon Harris Nuclear Power Plant, Post Office Box 165, New Hill, North Carolina. I have a bachelor's degree from the United States Naval Academy in electrical engineering and I attended the Navy's Nuclear Power School. I have 31 years in Navy and utility power plant engineering, maintenance, operation, and management, including 28 years of nuclear power

experience. Immediately prior to my employment with CP&L, I was Manager of Nuclear Training for Southern California Edison. I have been with CP&L since October 1981 and have been the plant General Manager at Shearon Harris since April 1982. I was assigned as Manager - Plant Operations at Harris from October 1981 to April 1982.

Q2. What is the purpose of your testimony?

A2. The purpose of this testimony is to describe the Harris Plant Nuclear Project Department organization and to demonstrate that CP&L possesses the management capability to operate the Harris plant safely.

Q3. Mr. Watson and Mr. Willis, will you please describe your approach to managing the Harris Plant?

A3. Watson:

My objective is to operate the plant in such a manner that the health and safety of the general public is assured at all times. My management philosophy incorporates some rather fundamental concepts:

Good management must start with good people who work as a unified and cohesive team. Thus, strong organization consisting of highly qualified and dedicated people with a clear definition of responsibility and authority is the foundation of the Harris Nuclear Project Department. Effective communication, upward as well as downward, is essential at all levels of the organization. Management follow-through and personal accountability are required at all levels of management. Finally, discipline and strict adherence to procedures are absolute requirements for any nuclear activity.

I have attempted to communicate this philosophy to all plant personnel and I will continue to refine my approach to managing Harris based on feedback from personnel in all levels of our organization. I believe that this will ensure that operations of the Harris plant will meet the highest of standards.

Willis:

I share Mr. Watson's views, and I would add that our philosophy of management includes ensuring a sound training program for our management and operating personnel. Also, the importance of staff attention to detail and procedural compliance cannot be over-emphasized. There must be a desire and willingness to take the time to do a job right the first time and to search for root causes of problems. We insist that constant vigilance and attention to detail be maintained.

Q4. Please describe the organizational structure of the Harris Nuclear Project Department.

A4. The Harris Nuclear Project Department is organized in a manner similar to the organization presently in place at CP&L's Robinson and Brunswick plants. It is structured to ensure clear lines of authority, responsibility, and communication in order to promote effective managerial control. The organization has been designed to provide an orderly and efficient transition from the Harris plant design and construction phases to the operating phase.

A chart depicting the organization of the Harris Nuclear Project Department is shown on Watson-Willis Attachment 1. As discussed by Mr. Utley in his testimony, in 1983 CP&L assigned Mr. Watson, a company Vice President, to the plant site

with the authority and responsibility for all line functions at the site. This has provided more direct management control over the engineering, construction, startup, operation, and maintenance activities at the Harris plant. Quality assurance and corporate nuclear safety organizations are also located on site but report off-site to ensure the organizational independence of these functions.

The Harris Nuclear Project Department, located entirely on site, is organized into five sections: Operations, Engineering, Construction, Administration, and Planning and Controls. Each section is headed by a manager who reports directly to the Vice President — Harris Nuclear Project Department.

The Harris Plant Operations Section, which we will discuss in greater detail later, is responsible for all operational phases of plant management, including startup and testing, operation, maintenance, chemistry, environmental and radiation controls, and on-site technical site support.

Administration of the design of the Harris plant during construction is the responsibility of the Harris Plant Engineering Section. During the testing, startup, and operation of the Harris plant, this section will have the continuing responsibility to direct engineering modifications and design configuration control for the operating unit and to provide additional on-site technical support to the Operations Section. The Harris plant will thus benefit from the fact that the same technical staff that administered its design during construction will be responsible for providing technical support to plant operations personnel during the first several years of plant operation.

The Harris Plant Construction Section manages the construction of the Harris plant and has control over construction-related contractors at the plant site.

The Harris Project Administration Section is responsible for the efficient and effective overall site administration activities such as directing the records management and document control programs, developing and coordinating state-of-the-art communications and management systems, and providing administrative support to the project management and various project organizations.

Finally, the Harris Project Planning and Controls Section provides site planning and scheduling, cost accounting and controls, industrial engineering, and related activities. These related activities include short- and long-range planning, cost monitoring and reporting, and performance evaluation and reporting.

In addition to the Harris Nuclear Project Department, other corporate organizations provide essential support to the Harris plant. These include the on-site Quality Assurance (QA) organization, the on-site Nuclear Safety (ONS) Unit, the on-site Training Unit, and the on-site Employee Relations Unit, which are all integral parts of the operation of the Harris plant. Although they report off-site, these units work directly with our plant organization to ensure the quality of work performed, safety of operations, and adequate training of plant personnel, and to assist in recruitment and retention of personnel. The activities of these organizations are further discussed in the testimony of Messrs. Utley, et al. and Messrs. Davis and Powell.

Q5. Please describe the educational qualifications and experience of the other Harris plant managers.

A5. The Manager - Harris Plant Engineering Section, Mr. L. I. Loflin, has a bachelor's degree in electrical engineering, has a professional degree in nuclear engineering, and is a registered professional engineer. He has had 19 years of engineering and power plant operations experience, 13 years of which have been in nuclear engineering. He was employed as operating supervisor responsible for all plant operational functions at VEPCO's Surry Nuclear Plant, and has held a Senior Reactor Operator's (SRO) license. After joining CP&L, Mr. Loflin served for a time as engineering startup coordinator at the Brunswick plant and later as Manager of the Corporate Nuclear Safety Section.

The Project General Manager - Harris Plant Construction Section, Mr. R. M. Parsons, holds a bachelor's degree in civil engineering, is a registered professional engineer, and has 16 years of experience in nuclear power plant construction management. Prior to joining CP&L, he was employed by Ebasco Services, Inc., the Architect - Engineer for the Harris plant. During that time, he received construction management experience at the Virgil C. Summer and St. Lucie Nuclear Plants, and at CP&L's nuclear-powered Robinson Unit 2. Mr. Parsons has been with CP&L for eight years.

The Manager - Harris Project Planning and Controls Section, Mr. T. J. Allen, has a bachelor's degree in civil engineering and a masters degree in business administration. Mr. Allen is a registered professional engineer with nine years experience in planning and scheduling activities, two of which were directly related to nuclear plant activities. He was previously assistant to the Executive Vice President at CP&L's Brunswick plant.

The Manager - Harris Project Administration Section, Mr. W. J. Hindman, Jr., holds a bachelor's degree in civil engineering, and is a registered professional engineer. He has nine years of experience in nuclear plant engineering and construction-related activities with CP&L. He has been at the Harris site since 1979 as a Senior Engineer and Director - Project Analysis prior to his current position.

Q6. Returning to the Harris Plant Operations Section, will you describe its basic structure?

A6. The Harris Plant Operations Section will actually operate the plant and is headed by the Plant General Manager who reports directly to the Vice President - Harris Nuclear Project. The Plant General Manager is supported by five units, and three subunits: Administration, Regulatory Compliance, Startup, Technical Support, and Plant Operations Units, and Maintenance, Environmental and Radiation Control, and Operations Subunits. A chart depicting the Operations Section is set forth in Watson-Willis Attachment 2. The qualifications of the men who manage those units and subunits are summarized in Chapter 13 of the Harris Final Safety Analysis Report (FSAR) Amendment 13. See Applicants' Exhibit [redacted].

The Administration Unit provides administrative support to the Plant General Manager, manages the operations-related administrative functions, and directs emergency preparedness planning and operational security activities.

The Regulatory Compliance Unit coordinates activities at the plant to ensure that commitments, responses, and reports to regulatory agencies as well as plant records are prepared, submitted, and maintained in accordance with regulatory

requirements. This unit maintains a tracking system that monitors the status of plant safety and environmental concerns until their resolution. It also serves as the on-site contact with the NRC and provides expertise necessary to support plant activities in accordance with the plant license and Technical Specifications.

The Startup and Test Unit is responsible for performing the Harris Nuclear Project preoperational and startup test program which we will discuss later.

The Technical Support Unit provides engineering support for the entire plant staff. Their support involves investigations of day-to-day equipment and system operation. Based on their investigations, they recommend modification tasks to maintain the plant in compliance with new regulations or to improve efficiency of operation.

The Plant Operations Unit is comprised of the Maintenance, Environmental and Radiation Control, and Operations Subunits. The Unit is responsible for operating the Harris reactor plant and required support facilities safely and efficiently. Its responsibilities include ensuring timely completion of scheduled periodic tests and ensuring adherence to the terms of the operating license and plant Technical Specifications.

The Maintenance Subunit is responsible for all corrective and preventive maintenance on plant systems and equipment. This includes ensuring that the equipment and associated instrumentation and controls and mechanical and electrical systems in the plant are maintained at optimum dependability and operating efficiency.

The Environmental & Radiation Control Subunit administers the plant radiation safety and control (health physics) programs, the chemical control programs, and the environmental programs.

The Operations Subunit is headed by the Operations Manager and includes six shift operating crews assigned to the Harris plant. Each shift will be supervised by a Shift Foreman who will have been licensed as a SRO. At a minimum, each shift will consist of two Senior Control Operators who have SRO licenses, two Control Operators who have Reactor Operator (RO) licenses, and four Auxiliary Operators (AO). Each shift operating crew will be charged with responsibility for operating the plant in a safe and reliable manner within the plant Technical Specifications, operating procedures, the corporate nuclear safety and health physics policies, the corporate QA and as low as reasonably achievable (ALARA) programs, and NRC and other applicable regulatory requirements.

Four of the shift operating crews will operate the plant on three rotating shifts, the fifth crew will be used as a relief shift for vacationing and sick operators, and the sixth crew will be in training. Each shift will periodically function as the relief shift or the training shift. The use of six shifts in this manner is intended to provide ample opportunity for all personnel to receive training and retraining without imposing excessive or unusual working hours on the other personnel.

Q7. Is the Harris Operations Section being staffed in accordance with NRC guidelines?

A7. Yes. The staffing positions we have established and the qualifications for personnel filling those positions were developed in accordance with ANSI/ANS 3.1, Selection, Qualification and Training of Personnel for Nuclear Power Plants, September 1979 Draft, as documented in the Harris Plant FSAR at Chapter 1.

Q8. How has CP&L gone about staffing the Harris Plant Operations Section?

A8. CP&L began staffing the Operations Section in 1979. The Harris Operations/Startup Group, consisting of 57 personnel, moved from the corporate office to the site in September 1981, when construction of Harris Unit 1 was approximately 50 percent complete. At that time, there were 187 Operations Section personnel assigned to the Harris plant but stationed at other CP&L facilities for training or other assignments. In 1982, the number of Operations Section personnel on site grew to 370 with the transfer of personnel from other CP&L facilities and the hiring of new employees. Formation of the Harris Nuclear Project Department in September 1983 resulted in reassignment of some personnel to the Harris Project staff. The current Operations Section staffing is 374 persons.

Our Operations Section staff at comencement of commercial operation, including Startup Unit personnel, is planned to total 459. We intend to fill the 85 positions which are now open by transferring current CP&L personnel from other CP&L facilities (while maintaining more than sufficient good personnel at those other plants) and hiring new employees through CP&L's recruitment program.

During the first two years of operation, we plan to maintain the total Operations Section staff at approximately the same level as at initial commercial operation to ensure proper staffing including integration of startup personnel into the operating plant staff.

Q9. Describe CP&L's recruiting and hiring program in more detail.

A9. The Company recognizes the necessity for a strong recruiting program as an important means of fulfulling its manpower needs. Thus, the Company has developed a comprehensive program for recruiting new employees from colleges, universities, community colleges, two-year technical schools, and naval installations. Particular emphasis is placed on recruiting engineering and technical personnel. The Company also participates in a Cooperative Education Program which has been established at eight four-year and six two-year educational institutions. This program, along with the Company's summer employment program, provides vocational training to students, and serves as a means of identifying potential employees.

Q10. How many previously licensed operators are currently employed at the Harris plant and how many will be employed during startup and normal operations?

A10. Currently, 20 personnel in the Harris Plant Operations Section have previously obtained commercial SRO or RO licenses at other nuclear plants. These personnel collectively have over 60 years of licensed nuclear experience and over 200 years of total nuclear experience.

We plan to have 26 licensed SROs and 18 licensed ROs, for a total of 44, at initial commercial operation. This staffing projection is based on the numbers of personnel whom we believe will pass our training program and be recommended for and receive licenses from the NRC. We expect to have more than the minimum number of licensed personnel required to man the six shifts. This planned staffing exceeds regulatory requirements. Incidently, this number does not include the Shift Technical Advisors. It is our intention that they also will be licensed.

Q11. How many Harris plant personnel are currently in the licensed operator training program?

A11. Currently there are 95 Harris plant personnel in the licensed operator training program: 51 SRO candidates, 30 RO candidates, and 14 AO candidates. Cold license exams (all exams given prior to commercial operation of the reactor) are slated for the spring of 1985 and hot license exams (those given after commercial operation) are scheduled for 1986. Training for the latter exams will begin in late 1985.

The Company's comprehensive training programs are described in detail in the joint testimony of James M. Davis, Jr. and A. Wayne Powell. We would like to mention, however, a few of the features of the operator training program which are of particular importance to the operation of the Harris plant.

CP&L's operator training program incorporates several state-of-the-art techniques and has several special features. Much of the training is conducted in CP&L's modern training facilities at the Shearon Harris Energy & Environmental (E&E) Center. The Harris plant simulator is used to provide comprehensive operator training for normal and emergency plant conditions. This simulator, delivered in 1977, was one of the first of its kind in the southeast. We are now in the process of purchasing a new simulator which will more closely replicate the plant and will be even more accurate in its depiction of design transients. This new simulator is expected to be in place by October 1985. In addition, CP&L makes use of the Pulstar Reactor at North Carolina State University to reinforce the trainees' understanding of reactor theory.

Another major feature of Harris operator training is that operating shifts will be set up on the six-shift rotating basis to ensure that all operators receive adequate time off, vacation, and a maximum amount of refresher training.

Q12. Please describe the Harris plant startup and test program.

A12. The startup and test program is conducted in three sequential programs: (1) the component testing and initial operation program, (2) the preoperational test program, and (3) the startup power test program.

The program is based on the criteria set forth in the NRC Regulatory Guide 1.68, Revision 2 as described in Chapter 14 of the FSAR, see Applicants' Exhibit 4 information obtained from other utilities and from Westinghouse, the NSSS supplier; and on CP&L's experience in placing its three other nuclear units into service. The program is designed to provide the necessary assurance that the facility can be operated in accordance with design requirements and in a manner that will protect the health and safety of the public and our employees. The program's objectives are: (1) to verify that system performance meets design; (2) to train the plant operating and technical staff and familiarize them with the the facility as an operating plant; (3) to verify the plant operating and emergency procedures, to the extent practicable, during the performance of the program; and (4) to verify or improve through minor design changes the reliable performance of both safety and non-safety systems/equipment.

The component test program begins upon completion by construction personnel of portions of systems which are "released for test" to the Startup Group. The primary objective of this program is to prepare systems for preoperational testing

by verifying that components within the system have been checked out, calibrated, and/or initially operated. The first Harris system was released for test in September 1982. As of August 1984, more than 500 out of 1064 of such systems or system components have been released for test.

The preoperational test program will begin upon turnover of systems to the Harris Plant Operations Section. The primary objective of preoperational testing is to verify prior to initial core loading that systems perform in accordance with design and safety requirements. The safety-related preoperational tests described in Section 14.2.12 of the FSAR will receive the most scrutiny. It is obviously important to CP&L, however, that non-safety systems operate efficiently and reliably. For this reason, we will also perform system functional tests on non-safety systems of the same type and format as those we conduct on safety-related systems. One hundred and fifty-five safety and 71 non-safety test procedures will be performed during this program.

The startup power test program will begin with initial core loading after receipt of the plant's operating license. The program encompasses initial criticality, zero power operation, ascension to full power, and the 100-hour full power test. The primary objectives of this program are to verify nuclear and thermal hydraulic parameters of the reactor and to demonstrate the plant's ability to withstand anticipated transients.

All phases of our testing program are coordinated and directed by the Startup Unit of the Operations Organization. This Unit consists of engineers who prepare test procedures and plan and direct the testing of all plant systems. The Unit was formed in 1979 and assigned to the Harris site in September 1981, 45 months prior to scheduled fuel loading.

The Startup Unit reports to the Plant General Manager and is divided into four groups each under a startup supervisor. One group is responsible for the nuclear steam supply systems, another, the balance of plant systems, a third, the radwaste and HVAC systems, and the fourth group is responsible for electrical and electronic systems.

The Harris Startup Unit is supported by other units of the Operations Section. There are currently approximately 280 plant personnel directly involved in supporting the startup activities. We expect to increase this number to over 400 personnel prior to commercial operation.

Q13. What programs do you have in place to ensure that surveillance and testing of plant systems will be carried out in accordance with NRC requirements?

A13. The Plant Operating Procedures for Surveillance and Testing and the on-site Quality Assurance/Quality Control (QA/QC) Section ensure that surveillance and testing will be carried out in accordance with NRC requirements. A computer-based tracking and scheduling system will be utilized to assist us in assuring that surveillance tests are scheduled and completed as required. The Operating Procedures for Surveillance and Testing incorporate NRC requirements. The on-site QA/QC section is responsible for independently assuring adherence to NRC requirements during the startup and subsequent operation of the Harris plant. In addition to these activities performed by the on-site QA/QC Section, the off-site Corporate QA Services Section performs periodic auditing of the procedures and the surveillance and testing activities.

Q14. Please explain how the ALARA concept is being implemented at Harris.

A14. The Company is committed to ensuring that occupational radiation exposures are as low as reasonably achievable (ALARA). In implementing the ALARA concept, the Company will follow the NRC's requirements in 10 C.F.R. Part 20 and the guidance of NRC Regulatory Guides 1.8, 8.8, and 8.10.

The ALARA concept is embodied in the corporate health physics policy which insists upon compliance with all state and federal regulations that pertain to radiation protection. The Company's Radiation Control and Protection Manual provides the direction for implementing this corporate policy and comprises part of the plant operating procedures. This manual sets forth the philosophy and general radiation protection standards and procedures that are essential to the safe operation of CP&L's nuclear plants.

The Harris ALARA program consists of plant design features for radiation protection, carefully prepared plant operating and maintenance procedures, and a health physics training program for all plant personnel. Additionally, during the construction phase, plant operations personnel conduct reviews of equipment and components for accessibility and maintainability. Considerations of ALARA principles and work efficiency are key factors in their assessment.

The responsibility for implementation of the Harris ALARA program resides with the Plant General Manager, with the support of the Manager - Environmental and Radiation Control and the radiation control staff.

Q15. Please review your radiation protection program for Harris.

A15. The Harris plant health physics program is part of the ALARA program and is designed to ensure that the exposure to radiation of CP&L personnel, contractor personnel, and the general public will be maintained ALARA. The Harris plant health physics program includes procedures, job planning, record-keeping, special equipment, and an operating philosophy which emphasizes the importance of meeting the ALARA objective. Proper preparation and planning will be conducted before personnel enter radiation areas where significant doses could be received. Adequate supervision and radiation protection surveillance will be provided in radiation areas to ensure that the appropriate work practices and procedures are followed.

Q16. How have CP&L's experiences in operating the Robinson and Brunswick plants aided you in managing the Harris Nuclear Project?

A16. The Harris Nuclear Project management has benefitted significantly from the experiences at the Robinson and Brunswick plants. Lessons learned at those plants are reflected in the Harris plant organization structure, our management controls and experience, our efforts in advanced planning and early staffing, and in the personnel training program.

We have benefitted substantially from the reorganization of our plant management organization. Consolidating all line functions under the direction of a Project Manager who is on-site has improved management controls over the Harris project. The management organization has also benefitted from management experience gained by Harris plant personnel who previously held positions at the Robinson or Brunswick plants. We have learned from Robinson and Brunswick the

value of early staffing. Thus the planning for the Harris plant staffing began early - in 1978 - and actual staffing began in 1979. Moreover, the training and experience that some of our Harris operators and staff gained at the Robinson and Brunswick plants has helped minimize the need for additional training. For example, the Harris plant already has 12 ROs and 6 SROs who were previously licensed at the Robinson or Brunswick plants. Thus the valuable experiences at Robinson and Brunswick have enhanced the ability of the Harris plant management to safely and reliably operate the plant.

Q17. Mr. Watson and Mr. Willis, how will you personally ensure your philosophies of Harris Plant management will be carried out?

A17. Watson:

Implementation of my management philosophy will be ensured in a number of ways. An efficient and effective management organization structure is in place with clear lines of authority and responsibility. This organization is staffed with well-qualified personnel who are dedicated to carrying out our mission. As I stated earlier, this is the foundation of the Harris team. Effective communication channels within the plant organization, with other parts of the Company, and with our regulators are essential. Continuing attention to developing even more effective communications is a necessary action in my management philosophy. I will demand 100% effort from each member, and I will evaluate the performance of each as well as the effectiveness of management. Further, I will continue to monitor the collective effectiveness as a team directing the efforts to the overall plant objectives. My direct involvement and presence in plant activities and decision making, through my regular personal inspections of plant area and my participation in key meetings, provides me with knowledge that my management

philosophy is being carried out. Prompt follow-up of significant issues is essential. Continuous quality support to the plant staff will be provided by the on-site QA Unit, ONS, corporate management, and the corporate support units.

I believe these actions will ensure successful implementation of this philosophy.

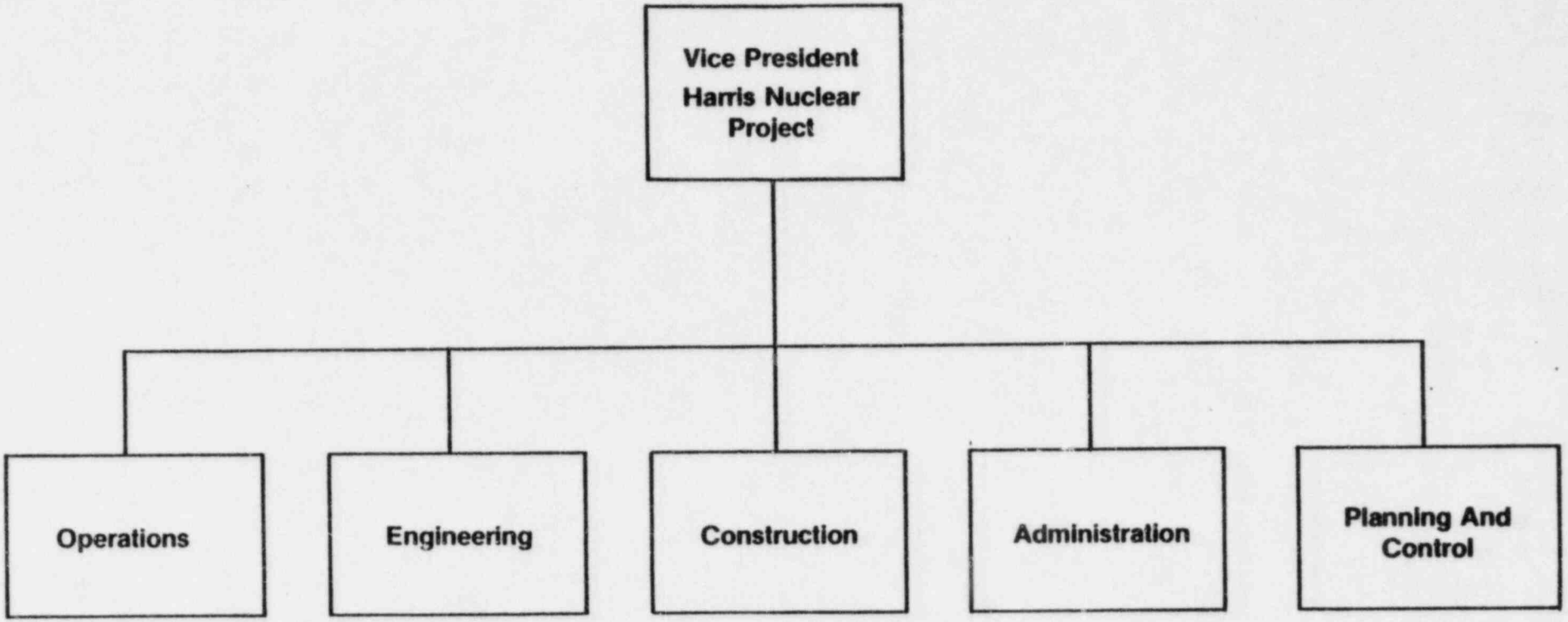
Willis:

I will ensure implementation of my management philosophy through my personal involvement in the day-to-day activities of the plant; by setting high standards for performance, communicating those standards and making sure they are enforced. Personnel will be held accountable for their assigned responsibilities and actions, and my own frequent observations of plant operations will help confirm that the high standards for performance are being met.

Q18. Does this conclude your testimony?

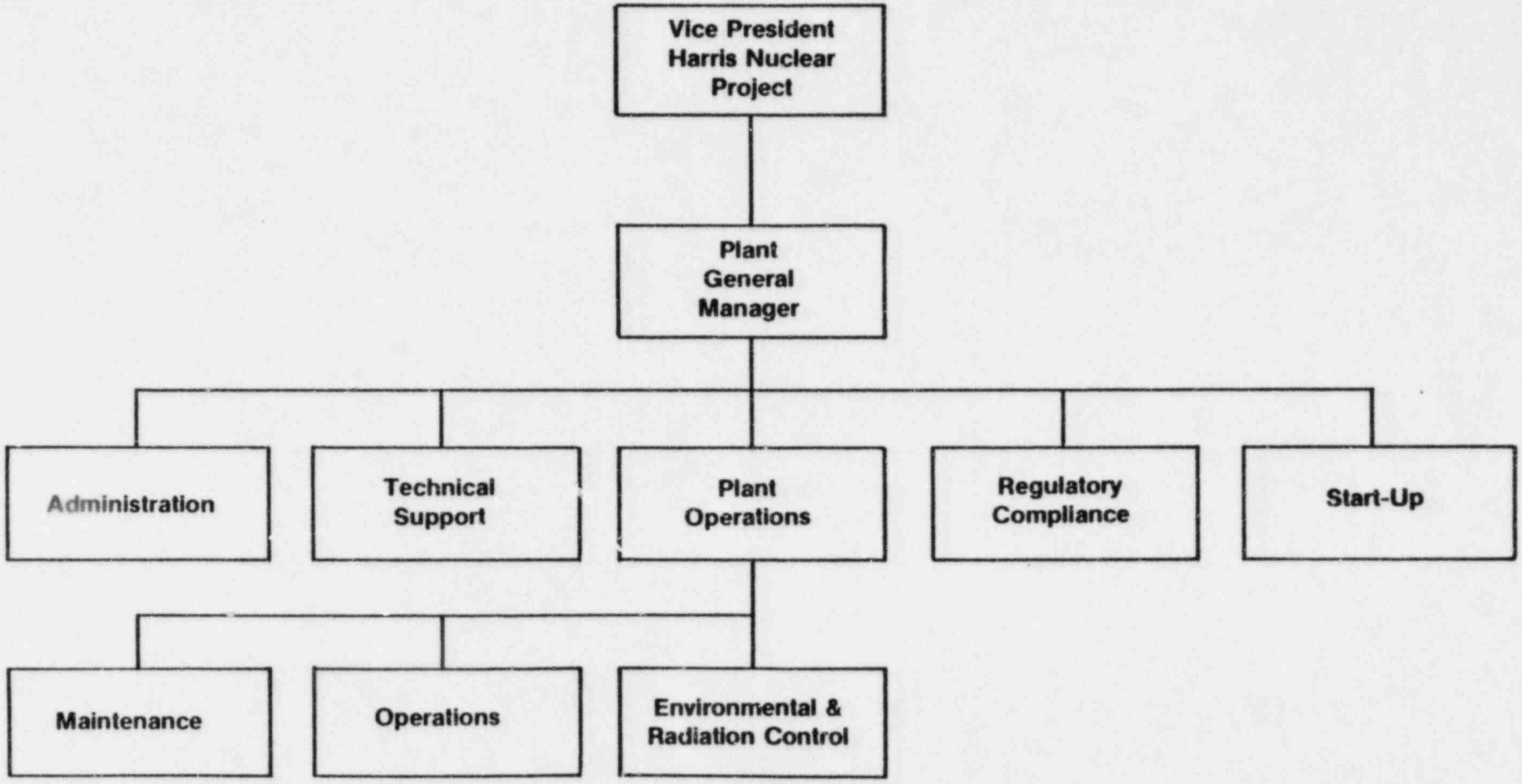
A18. Yes, it does.

HARRIS NUCLEAR PROJECT



Watson-Willis Attachment 1

HARRIS PLANT OPERATIONS SECTION



Watson-Willis Attachment 2

WRB/eb6

MR. CARROW: Also there are two exhibits that were prefiled. We now have the number for one, and another gets numbered at this time. There are references found in the testimony.

The first reference would be to Exhibit 1, and the second reference in the testimony will now come in as Applicants' Exhibit 4, which is Chapter 14 of the FSAR. And we would like to move all this into evidence at this time.

MR. RUNKLE: Could Counsel give us the page numbers, please?

MR. CARROW: Yes. The first is on page 7, and that would be Applicants' Exhibit 1, which has previously been put into evidence in this proceeding.

And the second is on page 13. You will see the blanks there, and that will become Applicants' Exhibit 4, which is Chapter 14 of the FSAR.

(Whereupon, FSAR Chapter 14 was marked as Applicants' Exhibit 4 for identification.)

JUDGE KELLEY: Are there any objections?

MR. RUNKLE: No.

JUDGE KELLEY: These documents are admitted.

(Whereupon, Applicants' 4, marked for identification, was received in evidence.)

WRB/eb7

BY MR. CARROW:

Q Mr. Watson, at this time do you have a summary which you would like to give of your testimony?

A (Witness Watson) Yes, I do.

Mr. Willis, the General Manager of the Plant Operations, and I prefiled joint testimony regarding the Harris Plant Nuclear Project Department. At this time I would like to present a brief summary of that testimony.

The purpose of the testimony is to describe the Harris Plant Nuclear Project Department organization, and to demonstrate that CP&L possesses the management capability to operate the plant safely.

The Harris Plant Nuclear Project Department is organized into six sections: Engineering, Construction, Completion Confirmation, Administration, Planning and Controls, and Operations. The Operations Section which will actually operate the plant is headed by Mr. Willis who reports to me directly.

The Operations Section is comprised of five units which are Administration, Regulatory Compliance, Startup, Technical Support, and Plant Operations, and three subunits, Maintenance, Environmental and Radiation Control, and Operations.

The Operations subunit in turn includes six shift operating crews, each of which consists of two senior control operators with senior reactor operator licenses, two control

WRB/eb8

operators with reactor operating licenses, and four auxiliary operators. These crews are charged with the safe operation of the plant.

The staffing of the Operations Section began early in 1979, seven years prior to our March 1986 commercial in-service date, and has grown to its current level of 376 persons. It is planned that the section staff will number 459 at commercial operation. Already 20 of these personnel have obtained SRO or RO licenses at other nuclear plants, and we plan to have a total of 44 licensed operators, 26 SROs and 18 ROs, at initial commercial operation.

It is our intention that our shift technical advisors would be licensed also.

Our startup and test program is based on NRC Regulatory Guide 1.68 and is divided into three sequential programs. Number one, component testing and initial operation program; Number two, pre-operational test program; and Number three, the startup test power program.

The program as a whole is designed to provide the necessary assurance that the Harris plant can be operated in accordance with the design requirements and in a manner that protects the health and safety of the public and our employees.

In preparing to operate the Harris plant, the Harris Nuclear Project management has benefitted from CP&L's

WRB/eb9

experience at the Robinson and the Brunswick plants. We have restructured the Harris project organization by placing all line functions under the responsibility of the Project Manager. and we began early to plan for and carry out the staffing and training of our operational organization.

In addition, we have the benefit of training and experience gained by various plant personnel who previously held positions at Brunswick and Robinson.

The primary objective of both CP&L and the Harris plant management is to operate the plant in such a manner as to produce both electricity and assure that the public health and safety is assured at all times. Mr. Willis and I are directly involved in day-to-day activities at the Harris plant. We have staffed the organizations with well-qualified personnel and we will continue to monitor closely the effectiveness of our team.

We are confident that the Harris Nuclear Project has the commitment and capability to ensure the safe and reliable operation of the Harris plant.

It should be noted that certain questions contained in the testimony are directed specifically either to myself or Mr. Willis. The answers to such questions are sponsored by the individual to whom the questions are addressed. In all other respects the testimony is sponsored jointly by myself and Mr. Willis.

WRB/eb10

That concludes my comments.

Q All right.

Mr. Davis, could you please state your name, position and place of employment?

A (Witness Davis) I am James M. Davis, Jr. I am employed by Carolina Power and Light Company as Senior Vice President, Operations Support.

Q Mr. Powell, could you state your name, position and place of employment?

A (Witness Powell) My name is Alvin Wayne Powell. I am employed by Carolina Power and Light as Director of Training at the Harris plant.

Q Gentlemen, I call your attention to a document entitled "Applicants' Joint Testimony of James M. Davis, Jr. and A. Wayne Powell on Joint Intervenors' Contention I (Management Capability)." This document is dated August 9th, 1984, and consists of some 17 pages, and one attachment.

Do you have that document before you?

A (Witness Davis) Yes.

Q Mr. Davis, does this document represent testimony prepared by you and Mr. Powell, or under your direct supervision?

A Yes.

Q At this time, Mr.Davis, do you have any changes or corrections that need to be made to this testimony?

WRB/eb11

A Yes, I do.

Looking first at page 3, in Answer 4, the second paragraph, at the end of the paragraph is the number 136. That number should be corrected to 137.

Also in the same answer, in the third paragraph, the next to the last line, that figure is shown as a $32 million investment in training facilities. That number should be corrected to $35 million.

On page 4, in Answer 5, in the first paragraph in the middle of that paragraph the same number, 136, appears that I corrected earlier. That number should also be 137.

On page 6, the second full paragraph, there is a reference to a Mr. Howard Smith at the end of that line. It should read "Mr. Smith has 16 years of nuclear experience...."

On page 7, the last paragraph in the answer shown on the page, the two figures shown on the fist line should be corrected. The Nuclear Training Section staff has 780 man-years of plant experience of which more than 580 man-years are nuclear.

Finally, on page 13, in Answer 10, the results related to the Brunswick NRC-administered requalification exam in 1983 should be corrected. The last line in reference to that should read:

"Of the fifteen Brunswick operators who took the exam, eleven passed all sections of the

WRB/eb12

exam. One individual failed only one section, which he passed on re-examination of that failed area. The three individuals who failed more than one section were re-examined on all areas of the exam after a period of retraining and all have passed."

That completes the corrections.

JUDGE KELLEY: On the last correction, that was on the bottom of 13?

WITNESS DAVIS: Yes, where there is reference to the fifteen operators who took the exam. It says thirteen passed all sections of that. I needed to clarify that. Only eleven passed all sections of it on the original exam.

JUDGE KELLEY: But then what you said after that is also to be a part of the text?

WITNESS DAVIS: Yes, I would like to add that.

JUDGE KELLEY: All right. People are writing it down, and I think you went too fast. It will be in the transcript, but if you could just read it more slowly?

WITNESS DAVIS: Sure, I'll be glad to repeat it. It should read:

"Of the fifteen Brunswick operators who took the exam, eleven passed all sections of the exam. One individual failed only one section, which he passed on re-examination of that failed area. The three individuals --"

WRB/eb13

MR. RUNKLE: Slow down.

WITNESS DAVIS: "The three individuals who failed more than one section of the original exam were re-examined on those areas after a period of retraining and all passed."

So I have corrected it to say that of the fifteen, eleven passed all sections first, one failed one section, three failed more than one section, and those four have subsequently passed.

JUDGE KELLEY: Does everybody have that?

BY MR. CARROW:

Q Mr. Powell, are there any further corrections or changes that you need to make to this testimony?

A (Witness Powell) My changes were incorporated in Mr. Davis'.

MR. CARROW: Mr. Chairman, at this time I would like to ask that this testimony, together with the changes and corrections made by Mr. Davis, be copied into the record.

There is also one exhibit that needs to be marked and entered with this testimony, and that is mentioned on page 8 of the testimony, Section 13.2 of the FSAR, Amendment 14, which would then become Applicants' Exhibit Number 5.

(FSAR Section 13.2 was identified as Applicants' Exhibit 5.)

WRB/eb14

JUDGE KELLEY: The testimony and exhibit are placed in the transcript and marked and admitted.

(Applicants' Exhibit 5, marked for identification, was received in evidence.)

(The document follows:)

August 9, 1984

UNITED STATES OF AMERICA
NUCLEAR REGULATORY COMMISSION

BEFORE THE ATOMIC SAFETY AND LICENSING BOARD

In the Matter of	)	
	)	
CAROLINA POWER & LIGHT COMPANY	)	
AND NORTH CAROLINA EASTERN	)	Docket No. 50-400 OL
MUNICIPAL POWER AGENCY	)	
	)	
(Shearon Harris Nuclear Power Plant,	)	
Unit 1)	)	

APPLICANTS' JOINT TESTIMONY OF JAMES M. DAVIS, JR. AND A. WAYNE POWELL ON JOINT INTERVENORS' CONTENTION I (MANAGEMENT CAPABILITY)

JOINT TESTIMONY
OF
JAMES M. DAVIS, JR. AND A. WAYNE POWELL

Q1. Will you please state your name, employer, position, and business address?

A1. Davis:

I am James M. Davis, Jr., and my business address is 411 Fayetteville Street, Raleigh, North Carolina. I am Senior Vice President of Operations Support for Carolina Power & Light Company (CP&L).

Powell:

My name is A. Wayne Powell. I am the Director-Training - Harris Plant in CP&L's Nuclear Training Section. My business address is Post Office Box 165, New Hill, North Carolina.

Q2. Will you briefly describe your educational and professional background?

A2. Davis:

I am a graduate of North Carolina State University, from which I received a B.S. degree in mechanical engineering. After three years service as an officer in the U. S. Air Force, I was employed by Pratt and Whitney Aircraft as a test engineer in the Experimental Engineering Department. In 1965, I went to work with CP&L as an engineer in the Special Services Section. I joined the Rates and Regulation Department in February 1968 and was named Manager of Rates and Service Practices in December 1976. In May 1979, I was elected a Vice President of the Company and on June 1, 1979 became a Group Executive for Fuel & Materials Management. In December 1980, I became Senior Vice President of the Company. I was named Senior Vice President for Operations Support in the reorganization of August 1983. Among the departments under my management is the Operations Training and Technical Services Department which includes the Nuclear Training Section.

Powell:

While serving in the United States Navy for almost 19 years, I received extensive training in various Navy Service Schools. For one year I attended the Navy's Nuclear Power School which provided training in all aspects of nuclear reactor operations. In addition, I received training from the Navy's Radar School, Instructor School, Curriculum Development School and Electronic Maintenance School. While in the Navy, I was also trained in the areas of quality assurance inspection and leadership and management. I have accumulated approximately 60 hours of credit toward a bachelor's degree from Baptist College at Charleston, South Carolina.

After completing the Nuclear Power School, I served on a number of nuclear-powered ships, first as a reactor operator then as Reactor Control Division Supervisor. I was also qualified as Engineering Watch Supervisor and Engineering Officer of the Watch. In 1976, I became an instructor and curriculum developer at the Navy Fleet Ballistic Missile Submarine Training Center in Charleston, South Carolina. While there I was certified as a Master Training Specialist. I was also awarded the Navy Commendation Medal for achievements in training program development and instruction.

After my retirement from the Navy, I joined CP&L in July 1979 as a Generation Specialist in the Generation Department. Subsequently, I served as a Senior Specialist in the Nuclear Training Section. I was certified by the NRC as a senior reactor operator instructor. In December 1983, I became Director-Training of the Harris Training Unit in the Nuclear Training Section. That is the position which I currently hold.

Q3. What is the purpose of your joint testimony?

A3. It is important that the personnel who operate and maintain nuclear power plants be properly trained and qualified. The purpose of our testimony is to discuss the way in which CP&L provides technical training for its nuclear plant personnel. We will highlight CP&L's corporate commitment to training, the structure of our training organization, the scope of the training program, the personnel who provide this training, the Harris training program and some of the positive results that indicate that we have a good program.

Q4. Discuss CP&L's commitment and philosophy related to training.

A4. CP&L's written Corporate Policy on Training states, in effect, that it is CP&L's policy to provide highly trained and qualified personnel to operate and maintain its nuclear plants. Our training programs are designed to achieve those results.

One indicator of CP&L's commitment to training is the resources we devote to it. The Nuclear Training Section currently has an authorized staff of 136.

CP&L has also committed significant resources toward construction of modern training facilities. We have new training centers at both the Robinson and Brunswick plants, and the Harris training staff will soon occupy new facilities. Both the Brunswick and Harris plants have control room simulators, and CP&L has recently issued a request for bids for a Robinson plant simulator. In fact, CP&L was the first utility in the southeast to procure and operate a nuclear plant simulator. This simulator, which is associated with the Harris plant, will be replaced in 1985 with a newer model which more closely replicates the Harris control board. To date, CP&L has invested $32 million in training facilities and equipment.

CP&L's commitment to training is further highlighted by the emphasis we place on obtaining accreditation by the Institute of Nuclear Power Operations

(INPO) of our training programs. In May 1984, CP&L became only the fourth utility to achieve accreditation of a portion of its training programs. Accreditation of the Robinson plant operator training programs was granted by the Accreditation Board based on an evaluation by the INPO Accreditation staff and presentation of these programs at the May 16, 1984 meeting of the Board.

Q5. Please describe the CP&L organization for technical training.

A5. In 1973, CP&L established its first full time training staff when it created the position of training coordinator at the Robinson and Brunswick plants. As our training needs and student population have grown, the training staff has grown to its present strength of 136. More than half of these people are assigned to the three plant training units. The current structure of the training organization and the reporting relationships with the nuclear projects is shown in Davis-Powell Attachment 1.

The Nuclear Training Section provides training for all major classifications of plant personnel including operators, mechanics, electricians, instrumentation and control (I&C) technicians, radiation control technicians, environmental and chemistry technicians, engineers, and managers. This Section is also responsible for training craft and technical personnel at CP&L's fossil and hydro plants.

The Nuclear Training Section is made up of eight units which support the nuclear projects. One unit is located at each of the three nuclear project sites. The other five units are located at the Shearon Harris Energy & Environmental Center (E&E Center) at New Hill, North Carolina.

In general, the five units at the E&E Center provide generic training, i.e., training applicable to all plants, in a classroom or laboratory environment, and the plant training units provide plant-specific training, i.e., training on the systems, equipment and procedures of a particular plant. For example, much of the

auxiliary operator classroom training, which is primarily generic, is conducted at the E&E Center while most reactor operator training, which is primarily plant specific, is conducted by the plant units. These programs are coordinated to ensure completeness without unnecessary duplication.

The three plant training units are similar. Each is composed of about 24 members and is headed by a plant training director. The Harris Training Unit is directed by Wayne Powell whose qualifications have already been discussed. In addition, there are directors at the Company's two other nuclear plant sites.

The Director - Training - Robinson Plant is Charlie Bethea. Mr. Bethea holds an SRO license on Robinson and was one of the original Robinson licensees in 1970. He served as a shift foreman on Robinson and has five years of experience in training.

The Brunswick Training Unit is directed by Perry Hopkins. Mr. Hopkins retired after an aviation career in the U.S. Army and Air Force. He has a master's degree in political science from the University of South Carolina. He was a Department Head and Director/Coordinator at Midlands Technical College in Columbia, South Carolina, for six years and worked with the NRC as a resident inspector for one year.

Davis-Powell Exhibit 1 shows the relationships between the plant managers and the plant training directors. We believe that these relationships are a strong feature of our training organization. The plant training directors report off-site to the Manager - Nuclear Training for matters related to integration with the corporate training program, but they function as part of the plant organization for day-to-day working relationships. This allows us to have the centralized resources required for a corporate program and at the same time to be on-site at each plant to provide direct support to the plant staff. We find that this is the most effective

way to implement a corporate training organization that is flexible enough and independent enough to meet plant training needs.

At the centrally located E&E Center, the Nuclear & Simulator Training Unit (N&STU) and the Fossil Operator Training Unit are responsible for conducting basic and advanced training for auxiliary operators and control operator candidates. The N&STU also operates the Harris plant control room simulator which is currently used for initial training and retraining of Harris and Robinson plant operators.

The N&STU is supervised by Mr. Howard Smith. Mr. Smith has 20 years of nuclear exp ·ience with CP&L and wes among the original Senior Reactor Operator (SRO) licensees on the Robinson plant. He has six years of experience as a shift foreman at Robinson.

The Fossil Operator Training Unit is directed by Mr. Tom Suggs. Mr. Suggs has 20 years power plant experience with CP&L and was a fossil plant shift foreman for 10 years.

The Craft Technical Training Unit provides classroom and laboratory training for plant mechanics, electricians, I&C technicians, radiation control technicians, and environmental and chemistry technicians. These courses typically involve extensive "hands on" laboratory training in our well-equipped laboratories where the students perform troubleshooting exercises on actual equipment which is "guaranteed not to work the first time."

The Craft Technical Training Unit is supervised by Mr. Marvin Pate. Mr. Pate has seven years experience with CP&L. Prior to his employment with CP&L, he was employed by Wake Technical College for 10 years, the last 3 years of which he served as Dean of the Vocational Program.

The Curriculum Development Unit supports training in four major areas. This Unit administers the training evaluation program which lets us know how well our

courses and instructors are doing, which programs can be improved, and how. They take the lead role in CP&L's efforts to obtain INPO accreditation. The Curriculum Development staff is also responsible for developing and conducting initial and continuing training for our instructors, i.e., they teach our instructors how to teach and provide advice and counsel on the latest training methods and techniques. Most important, the Curriculum Development Unit assists section instructors in actual development of curriculum and lesson material to support classroom and laboratory training.

The Curriculum Development Unit is directed by Dr. Jerry Wright. Dr. Wright has a D.Ed. in industrial education from Texas A&M University and served for four years on the North Carolina State Advisory Council on Education.

The Administrative Unit maintains records, compiles statistics and reports, produces the budget, maintains the technical library, and provides other administrative assistance to the Section.

Mr. Jim Millen supervises the Administrative Unit. Mr. Millen has a degree in business management from Coker College and has worked in several administrative capacities in his twelve year career with CP&L. Most recently, he was Senior Specialist - Administration working directly for the Vice President - Operations Training & Technical Services.

Currently, the Nuclear Training Section staff has 690 man-years of power plant experience of which more than 500 man-years are nuclear. Thirteen of our personnel have held or currently hold NRC SRO or Reactor Operator (RO) licenses and an additional 11 of our personnel are certified by the NRC as SRO instructors.

We believe that we have an effective organization and a well-qualified staff.

Q6. Describe how CP&L qualifies its instructors.

A6. To ensure that our instructors are well qualified in the techniques of teaching, we have developed an Instructor Certification Course which is administered by the Curriculum Development Unit. The initial course is approximately three weeks in length and teaches the "criterion referenced instruction" method. It includes instruction on program design, test construction, presentation skills and program administration. The course culminates with a ceremony in which the Company honors newly certified instructors in order to emphasize the importance of the instructor's role in training.

Each certified instructor attends a periodic refresher course that often includes guest lecturers from the Education Department of North Carolina State University. There is also a technical skills renewal component that requires instructors to periodically return to a plant assignment in their job skill areas.

Q7. Please review the technical training programs currently in place at CP&L.

A7. We provide a wide variety of courses for plant personnel, but the focus is on training of operators, maintenance personnel, radiation control technicians, and chemistry technicians. For the operator, mechanic, and electrician classifications, the training programs are designed to take an employee from entry level as a high school graduate to the top of the classification, i.e., licensed SRO for operations personnel, or a first-class electrician or mechanic for employees in the maintenance area. For technicians, such as I&C, radiation control, and environmental and chemistry technicians, the program is designed to take a two-year technical school graduate to the top of classification, i.e., Technician I. In addition, we have a variety of courses designed for shift technical advisors, engineers, management personnel, and general plant employees. The training program for the Harris plant is described in Section 13.2 of the Harris Final Safety Analysis Report (FSAR), Amendment 14 which is Applicants' Exhibit 5.

To illustrate the scope and depth of our programs we would like to focus on three areas — General Employee Training, Operator Licensing & Requalification Training, and Craft Technical Training.

CP&L's General Employee Training (GET) is divided into three courses — GET Levels I, II, and III. Levels I and II satisfy the regulatory requirements for training of employees working in radiation areas. GET Level I is a four hour course designed for all CP&L employees, contract employees and vendors working at CP&L's nuclear facilities. It provides basic knowledge in the areas of plant description and operation, personal safety, security, emergency alarms, alcohol and drug abuse and the fundamentals of radiation. GET Level II is an eleven hour course that provides basic knowledge and skills in radiation protection.

GET III is a forty hour program that provides advanced health physics training for personnel who work in radiation areas. The purpose of this training is to give personnel a better appreciation for radiation protection principles in order that they can be more responsible for their own radiation protection. We began this program with the training of CP&L supervisors and contract personnel who direct the activity of workers in radiation areas. Eventually it will be part of the training for all employees whose regular work assignment in radiation control areas requires this advanced level of training.

Our Operator License and Requalification Programs are designed to produce highly trained operators to operate safely the controls of our nuclear units. We offer training courses for qualification as auxiliary operator, reactor operator, and senior reactor operator. These courses include generic and plant-specific classroom training and structured on-the-job training, and licensed operators also receive simulator training.

The auxiliary operator training is designed to provide knowledge and skills in the basic science and technology of power plant operation, including nuclear and reactor theory, heat transfer and fluid flow, mathematics and nuclear plant instrumentation and systems.

The reactor operator training provides skills and knowledge in the areas of advanced nuclear and reactor theory, advanced mathematics, chemistry, metallurgy, fluid flow, and advanced plant systems.

The senior reactor operator training provides advanced academics and fundamentals to prepare a licensed reactor operator to meet the requirements for passing an NRC SRO license exam. The course consists of training in plant operation and procedures, advanced components and systems, transient and accident analysis and a prelicense review.

Craft Technical Training is currently taught at the E&E Center in three levels — basic, intermediate, and advanced. These programs include classroom and laboratory training for nuclear, fossil and hydro plant electricians, mechanics, I&C technicians, radiation control technicians, and environmental and chemistry technicians. The basic courses are designed for recently hired employees who have completed plant orientation and are ready to learn the fundamentals of the tools, instruments, equipment, and procedures for the routine work they will encounter in their jobs. The intermediate courses get into more specialized maintenance procedures and repairs, and, for the employees in technical classifications, more sophisticated equipment and procedures. The advanced courses deal with the theory of operation of plant equipment, the interrelationship of plant systems, troubleshooting, and directing the work of others.

Finally, in preparation for commercial operation of Harris, we are presently conducting cold-license training.

All of our training programs are designed, implemented, and evaluated following the same guidelines and procedures. They incorporate and reflect our corporate commitment to ALARA, and they are modified as necessary to reflect new regulatory requirements, operating experiences, INPO evaluations, CP&L audits, and plant modifications.

Q8. Would you describe the cold-license training at Harris in more detail?

A8. This program consists of several phases of training. We start with theory. This is a ten week course consisting of a math review, nuclear and reactor theory, heat transfer, fluid flow, thermodynamics, health physics, radiation protection and chemistry.

Following this is a seven day program at North Carolina State University utilizing the Pulstar reactor. Students perform precritical and critical operations of the training reactor, as well as reactor startups. The University gives an NRC-style written exam and operator test at the conclusion of this training.

Eighteen weeks of Harris plant system training is next. The students alternate in one week intervals between formal classroom presentations and system checkouts.

To prepare the trainees for simulator training, a four week pre-simulator course is provided. Topics include theory review; control systems review; emergency, abnormal and normal operating procedures; and a review of recent and related industry events. Another three weeks is devoted to transient and accident analysis and mitigating core damage.

Our simulator training is provided using the Harris simulator. It is approximately a nine week simulator training program designed to duplicate actual plant operations. Rotating shifts are manned by four trainees and two instructors per shift. The shift arrangement allows the trainee to experience realistic plant

operations and also allows the training staff an opportunity to observe the trainee during varying conditions.

Q9. How does the Nuclear Training Section interact with and support the nuclear plants?

A9. Powell:

Although the Nuclear Training Section has a separate reporting chain from the plant staff, it does not operate independently of the plant staff. The three plant training units are located on-site and report on a dotted line (matrix) basis to the Plant General Manager. This allows day-to-day communications between the plant training director and the plant supervisors and Plant General Manager. For example, at the Harris plant, I discuss training issues with Jim Willis, Plant General Manager, on an average of twice a week, and I attend weekly management meetings and speak for the Nuclear Training Section in those sessions.

The Manager-Nuclear Training, Mr. A. C. Tollison, visits the plants frequently. He typically goes to each of the three plants at least monthly and makes it a practice to talk with the Plant General Manager or with other key managers. This gives them the opportunity to discuss with him any problems or issues that might require his attention. In addition, it gives him an opportunity to discuss training plans with them and to get their thoughts and suggestions on how training might be improved.

Each year, Mr. Tollison holds an evaluation and planning meeting to discuss the medium- and long-range plans of the Section. This meeting is attended by the Section staff and management and by key members of the plant staffs. This year there was a separate meeting with each of the three nuclear plant staffs and with a group of senior management personnel which included each of the three nuclear Project Managers. At these meetings, the plans for nuclear training for the next three years were discussed.

Below the management level, the training staff and the plant staff maintain close communication and continually interact. Operator instructors frequently visit the plant control rooms and, when possible, accompany operators on their shift assignments. When developing or revising programs, plant input is incorporated by using the operating staff as subject matter experts for job analysis and as Training Advisory Committee members.

We have nine Training Advisory Committees which are composed of first-line supervisors from each of the nuclear and fossil plants, an instructor from the training unit responsible for the program, and a member of the Curriculum Development Unit. These Committees meet to review the appropriateness of our curriculum for the craft and technical classifications and any significant proposed changes to the curriculum.

In summary, there is a close relationship between the Nuclear Training Section and the plants.

Q10. What factors demonstrate the adequacy of CP&L's training programs?

A10. There are many indicators that demonstrate the success of our training programs.

The recent success rate on NRC RO and SRO exams for the Robinson plant has been excellent. Of the 25 candidates who have taken the NRC license exam over the past three years, 24 have passed, for a success rate of 96 percent. The Brunswick operators were also quite successful on the NRC-administered requalification exams in 1983. These exams were the first fully NRC-administered requalification exams given at a utility. Of the fifteen Brunswick operators who took the exam, thirteen passed all sections of it. Two others failed one section of the exam, which they passed after retraining.

Another positive indicator of our training success is the recent accreditation of Robinson operator training programs by the INPO Accreditation Board. The INPO accreditation procedure is similar in many respects to the accreditation program for colleges and universities. It features a self-evaluation report by the utility, an accreditation team visit from INPO, a period of response and completion of actions recommended by the team, and presentation of the training program to the Accreditation Board in Atlanta. INPO accreditation teams are made up of qualified INPO training evaluators and peer evaluators from utilities. This team examines the training program in detail both at the plant site and at central training facilities. The INPO Accreditation Board is made up of five individuals who are nationally prominent in the field of training.

In addition to the Board members, in our case, four members of the alternate Board were present as was Mr. Hugh Thompson, Director - Division of Human Factors Safety of the NRC. As noted earlier, the INPO Accreditation Board in May 1984 considered the Robinson operator training programs, and granted accreditation. CP&L was only the fourth utility to have any of its programs accredited by INPO. We are currently beginning work toward accreditation of a second series of CP&L training programs.

Adequacy of the cold-license program at Harris can be evidenced by the successful completion of a certification exam given upon completion of the simulator training phase. Thus far, 28 persons have been certified at the SRO level and 7 persons at the RO level. We have provided over 2,800 hours of simulator training in the first six months of 1984 with a 99.5+ percent simulator availability factor. For most of 1984, the simulator has run three shifts per day.

In summary, we believe that current indicators demonstrate that our training program is strong. As with any program, no matter how good, we can make

improvements. We are currently working on improvements in several areas in both scope and depth. Current efforts underway include development and implementation of the Craft & Technical Development Program which ties training to employee promotion, and development of improved plant-specific training at each of the nuclear plants, particularly for craft and technical personnel.

Q11. Is your training program in accordance with NRC and INPO guidelines and regulations?

A11. Yes. Our training programs comply with NRC regulations and guidelines and the intent of INPO guidelines and criteria. An integral component of our program development process is a review of regulations and guidelines in conjunction with the task analyses for identifying program content. Applicable regulations and guidelines are referenced in plant training instructions for each training program. We periodically evaluate and review our programs to determine whether there are any new or amended regulations which should be reflected in the program. Currently, our training programs comply with applicable NRC regulations and INPO guidelines.

CP&L's training programs are also designed to meet the INPO evaluation performance objectives and criteria. Additionally, we are working to meet the accreditation criteria for Robinson and Brunswick and intend to have training programs at those plants accredited by 1986 and at Harris within two years after fuel loading. We use INPO training guidelines as we revise our training programs to ensure that we meet their intent.

Q12. How do you personally ensure that your training programs and instructors are effective?

A12. Davis:

It is my philosophy that the quality and success of our training program should be measured by the results that are obtained by the nuclear plants. The bottom line is how well our employees perform and how well our plants operate. To judge this result, I review the quality factors that were mentioned earlier, such as success rate on examinations, progress on INPO accreditation, and other quantifiable indicators. We have established a Corporate goal on passing rates for examinations and retention of qualified students in the training program. In addition to these direct measurements, I review other information such as the Systematic Assessment of Licensee Performance (SALP) assessment reports and INPO evaluations.

In addition to reviewing information relative to our training programs, I also obtain feedback first-hand. I think it is very important for all levels of management to stay directly involved in our training activities. I meet with the department manager each week in a staff meeting where I receive reports on our training activities. In addition, I attend a monthly senior management review where the status of our nuclear program including training activities is reviewed. I have visited our training facility at the E&E Center and each of our plant training units at the plant sites, and have sat in on classes conducted by our instructors so that I can view first-hand the material that we are presenting to our students. I also make visits to our plant facilities and talk directly to key plant managers. This helps me assess how well we are meeting our objective of supporting the nuclear plants with trained and qualified people.

Powell:

I try to assess the effectiveness of the training programs and the instructors in several ways. I periodically observe the instructors in the classrooms and at the simulator to see how well the two types of training complement each other.

Frequently, I meet with the Harris Training Unit staff to get their views on how training is progressing. I also review the students' evaluations of their courses and instructors, and I review statistics of test scores in order to ascertain any unusually high rate of error on particular questions.

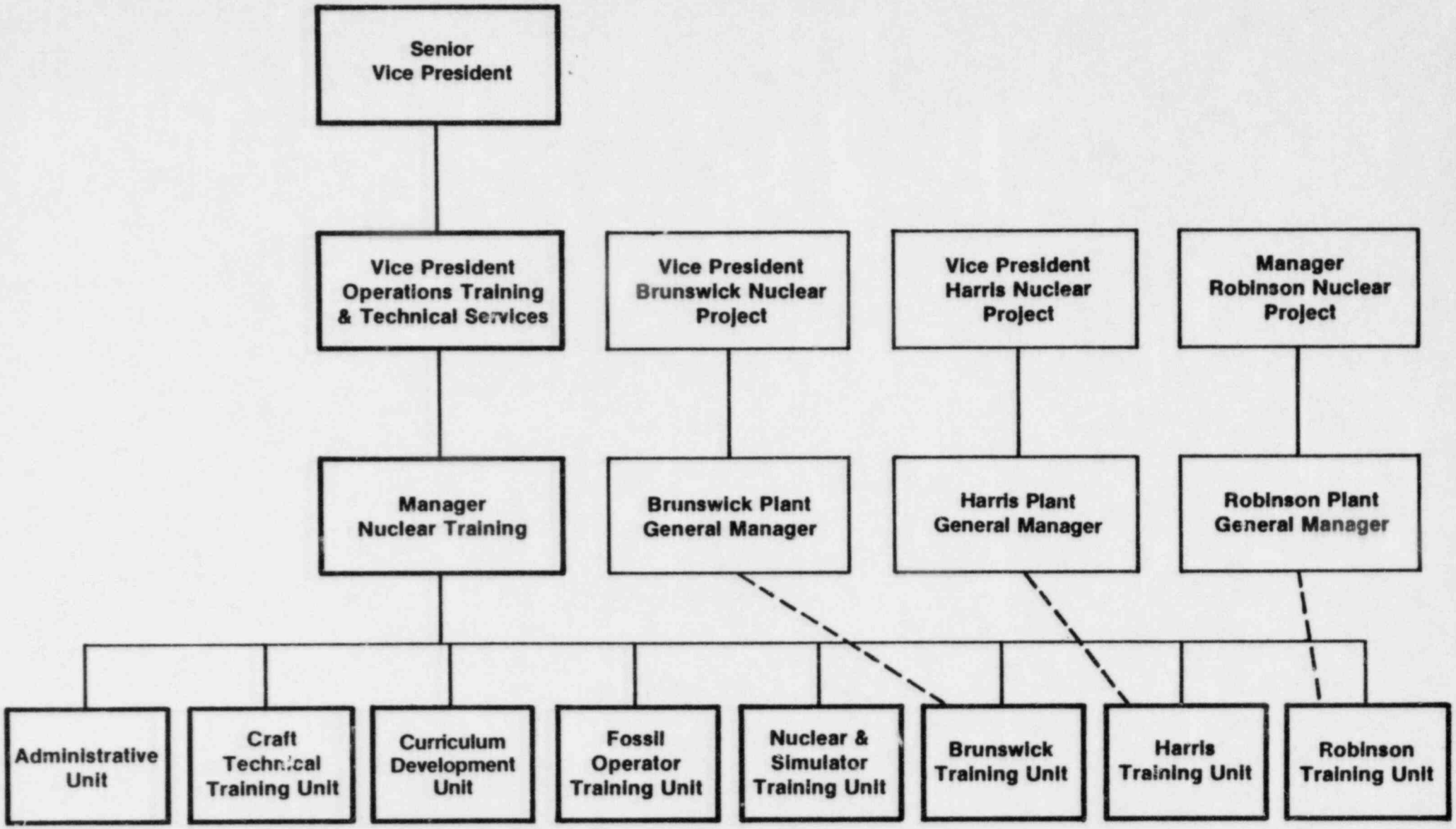
In order to ensure that courses meet the needs of the Harris staff, I encourage input on course development from plant managers and supervisors. In addition, I review industry and NRC publications for significant events that merit incorporation into our training programs.

Finally, I communicate with the training directors at Brunswick and Robinson to learn how their programs are being received and any changes they have made to improve their programs.

Q13. Does that conclude your testimony?

A13. Yes, it does.

DAVIS - POWELL
ATTACHMENT 1



WRB/ebl

BY MR. CARROW:

Q Mr. Davis, at this time do you have a summary of your testimony?

A (Witness Davis) Yes, I do, Mr. Carrow. But I believe the reference to our exhibit should refer to Attachment 1, which is the organizational chart.

Q Yes. Mr. Davis, the attachment is part of your testimony, and then this is just filling in a reference to the exhibit which is contained therein.

A Yes, I have a summary of the testimony.

#2 WRBwb

Mr. Wayne Powell, director of training for the Harris plant, and I sponsor the testimony which was pre-filed in this proceeding, and which relates to CP&L's programs for training of personnel at its nuclear facilities.

In our testimony we focus on CP&L's corporate commitment to training, the structure of our training organization, the scope of the training program, the personnel who provide this training, and some of the positive results we have achieve which indicate we have a good, effective program.

We devote particular attention in the testimony to the training program for the Harris plant, which is designed to ensure that the Harris personnel will be fully trained to operate the plant in a manner which will ensure the protection of the health and safety of the public.

Certain questions contained in the testimony are directed toward either Mr. Powell or me. The answers to such questions are sponsored by the person to whom the questions are addressed. IN all other respects the testimony is sponsored jointly by Mr. Powell and by me.

This completes the summary.

MR. CARROW: Mr. Chairman, these witnesses are now available for cross-examination.

I would like to clarify something: that the exhibits referred to were not to be bound into the transcript but, rather, to come in as exhibits.

WRBwb2

JUDGE KELLEY: That's right. Just the testimony is bound in.

MR. CARROW: Yes, sir.

JUDGE KELLEY: Mr. Runkle.

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CROSS-EXAMINATION

BY MR. RUNKLE:

Q. Gentlemen, I would like to start with Mr. Davis and Mr. Powell first, so Mr. Willis and Mr. Watson can just relax this morning.

Mr. Davis, in your position as senior vice president for operations support you have many more responsibilities than training, do you not?

A. (Witness Davis) Yes.

Q. And that would include fuel purchases, would it not?

A. Yes. The operations support group includes support services for our operations. Fuel procurement is a part of those responsibilities.

Q. And your responsibility would also include materials purchase and control?

A. Yes. I have three departments in my group. One is the fuel department, one is materials management, which does provide material procurement and support, material support services, and the operations and training and technical services department which includes the training

WRBwb3

responsibility.

Q. And you would also have assorted environmental services and environmental regulations?

A. Yes; I have two sections in my group: one is environmental services and includes our environmental programs and our activities in the environmental area.

Q. Sir, how many.... Now, the operations support is a department, is it not?

A. Operation support is what we refer to as a group.

Q. A group?

A. Yes, a group. It includes the three departments that I names and two sections that report directly to me.

Q. How many CP&L employees are in the group?

A. The group includs 594 positions.

Q. And of those, how many are in the training department?

A. In the department of which training is a part, operations training and technical services, there are 220. Of those directly involved in training, the nuclear training section, there are 137.

Q. On page 3 of your prefiled testimony with the correction, you said the nuclear training section had an authorized staff of 137, did you not?

A. That's correct.

Q. Are all those positions filled?

WRBwb4

A. Not at the present time. There are 121 employees. So that would be sixteen vacancies at the present time.

Q. And do you intend to fill those vacancies?

A. Yes; we are actively recruiting to fill those vacancies.

Q. And the nuclear training section would include people in the corporate offices at each of the reactors, would it not?

A. Yes. There are eight units in the nuclear training section. Five of those units are located at the Harris Energy and Environmenal Center. Then, in addition, there are three units, one located at each of the nuclear sites.

Q. Mr. Powell, where is the unit that is assigned to the Harris nuclear plant? Where are you located?

A. (Witness Powell) I'm located on the site. I'm in the admin building with the operations group.

Q. And that is different from the E&E center?

A. Yes, it is.

Q. And that's off-site?

A. It is off-site, but about three-quarters of a mile down the road.

Q. It is on the same-- It is fairly close?

A. It's very, very close.

Q. And in the prefiled testimony you said you were

WRBwb5

soon to move to a new location. Where is that?

A. We'll be moving to the fuel handling building, which is just another location. It will give me more room, give me more classrooms. So I will have more facilities. I will retain what I've got as far as classrooms, but there will be more.

Q. And what will be-- How will that building be used when fuel is being handled?

A. It is a separate building. It was originally constructed, I believe, to handle all four units originally, and we are able to utilize the section that is not going to be necessary to support Unit 1.

Q. So you will remain in that building even when fuel is being handled?

A. Yes.

Q. All right.

Mr. Davis, do you have any academic training in the area of training for nuclear plants?

A. (Witness Davis) Not formally in that specific area. I have a degree, a batchelor's degree, in mechanical engineering. Also, during my work experience I have had a number of management courses. But I have not had specific training or courses in nuclear training.

Q. Do you have any academic training in the fields of management?

WRBwb6

A. Yes.

Q. In psychology?

A. Only those aspects that are included in management courses concerning leadership, and those types of psychological factors; but no specific training in psychology.

Q. And did you have academic training in personnel management?

A. Well, a number of management courses certainly have a lot of material related to personnel, and I've had a number of those.

Q. Mr. Powell, you stated in your prefiled testimony that when you joined CP&L in July of 1979 you served as a generation specialist. What is that?

A. (Witness Powell) It's a position title. I was an instructor.

Q. And who did you instruct?

A. I instructed classroom and simulator for non-licensed people such as auxiliary operators, and I instructed on the simulator up through reactor operator, senior reactor operator, and performing team training.

Q. And what simulator did you use?

A. We used the Harris simulator at the E&E site.

Q. And when you were training the different personnel on the Harris simulator, were they from the Brunswick and Robinson plants?

WRBwb7

A. They were not from the Brunswick plant; they were from the Robinson plant.

Q. Is the Harris simulator comparable to the actual control room at the Robinson plant?

A. It is not-- It depends on what you consider comparable. It is not a replica of the control room. But the simulator is programmed with many of the Robinson features in it, and the systems are very similar.

We did, as we trained, point out differences in the control room at Robinson to ensure that they realized the differences. We were not training them to learn the Harris simulator as such, but the concepts.

Q. Mr. Davis, does the Robinson unit have a simulator at this time?

A. (Witness Davis) No, not on site specifically for Robinson. But, of course, the simulator that Mr. Powell was just referring to at the Harris Center has been available for the Robinson operators. In fact, CP&L was the first utility in the southeast to acquire a nuclear operator training simulator back in 1977, and have been training on it since 1978.

We have in process now procurement of an additional simulator for the Robinson plant, which will be located on-site, and will be a plant-referenced simulator for Robinson.

WRBwb8

But in the meantime the Robinson operators have been trained on the CP&L simulator at the Harris Center. And I would point out that we had very favorable exam results for the operators at Robinson who were trained on the simulator and have taken the NRC license examination.

Q. Now, you stated that CP&L had purchased and began using a simulator in 1978. Was that the simulator that is now at Harris?

A. Yes; that was the simulator that is presently installed at the Harris Energy and Environmental Center. This has been used to train the Robinson operators, and is being used to train the Harris operators in the cold license.

I might also add that we have a training simulator at the Brunswick plant for training of the Brunswick operators, and we are in the process of replacing and upgrading the present simulator at Harris, which will be plant-referenced to the Harris plant.

Q. And when you say "plant referenced," you would try to get it as close as possible to the actual control room?

A. Yes; and we have included the modifications to the Harris plant.

Q. And when did the Brunswick reactor receive a simulator?

A. It received it during 1983 and began its initial operation. And we started the first class in February of

WRBwb9

this year, 1984.

Q. Did the reactor operators at Brunswick receive any simulator training before that time?

A. Yes; all of the operator classes received simulator training, and Brunswick operators prior to the simulator being located at Brunswick went off-site to use other simulators that were available.

Q. And which simulators were these?

A. I believe we used the General Electric simulator at Morris, Illinois. And we used for a portion of the operators, I believe, Georgia Power's simulator for the Hatch plant, and possibly one other, possibly Peach Bottom. I'd have to check that But that's to the best of my recollection.

Q. But these would not be plant referenced simulators at all?

A. No; not specifically to the Brunswick plant, which the new simulator is, but it is referenced to the BWR. They are BWR simulators, and that's the reason we used them, which conformed to the design and general principles of the Brunswick plant. And they certainly teach the operators the basic operating conditions that exist at Brunswick.

Q. Mr. Powell, also in your prefiled testimony you stated that after being a generation specialist you served as a senior specialist in the nuclear training section.

What did that position entail?

WRBwbl0

A. That was essentially the same. It was a promotion, and I still continued to instruct, and just took on a few more responsibilities.

Q. When did that occur, that promotion?

A. I don't recall the exact date, but it was some time in 1982.

Q. And prior to that time was all training handled in the generation department?

A. When you say "all training--"

Q. All nuclear training.

A. To the best of my recollection that would be true. If there were anything else it would be very minor.

Leadership type training would be handled by the management development group.

Q. In looking at the organizational chart, is there still a generation department?

A. That is now operations, training and technical support.

Q. And there is now a special section under that for nuclear training?

A. Yes.

Q. When was this organizational change made?

A. I don't know when it was made. We actually had a training section, or a training group when I reported to CP &L.

A. (Witness Davis) I might comment on that, sir.

WRB/ebl
fls wrb 10

We have had training coordinators, training specialists, at each of our nuclear sites since 1973. The form of the organization has changed since that time, and they are now a part of the Nuclear Training Section which is in the Operations Training and Technical Services Department.

That change in the organization we presently have with that department being in the Operations and Services group was made last year in the organizational change in August of 1983. And prior to that time the organization had different forms, but we've had training people at the nuclear sites since 1973.

Q But it is true, is it not, that in 1973 that there was only one training position at the site?

A That's correct. There was a training coordinator at each site in 1973.

Q And right now the training staff has an authorized staff loading of 137, does it not?

A Yes. We have increased that, expanded the training positions and organization, and now have an authorized complement of 137 which includes positions at each of the nuclear sites.

Q Has this been a steady growth since 1973 to the present, or....

A There have been periods-- And it has certainly

WRB/eb2

been steady in terms of the total increase, but there have been periods of larger increases in the size of the staff than at other periods, especially since 1979, the Three Mile Island event. We've significantly expanded the facilities and people since that time.

Q Okay.

Prior to the Three Mile Island accident, what was the staff complement in the Nuclear Training?

A I am not exactly sure, Mr. Runkle. It was not under my organization at that time, and I'm not sure of the exact number, but it certainly increased and included a number of positions. But I don't recall. I don't have that immediately available.

B3

Q When did you reach your present position?

A My present position in terms of being a Senior Vice President was in December of 1980. I became a Vice President and a group executive in 1979.

In 1983, my group was expanded to include Operations Training and Technical Services and the Enviornmental Services we discussed earlier. But I have been a group executive since 1979, a Senior Vice President since 1980, and my present position since this time in 1983.

En WRB2
AGB 3 fls

A&B/pp 1
#3

Q So at what time did nuclear training become part of your responsibility?

A In the organizational change that I described earlier in August of 1983, the nuclear training section and department came into my group and I became directly responsible for training at that time.

Q And what was the staff complement in August of 1983 for nuclear training?

A I would have to check but I believe it was about 120 to 125. I believe we added -- I would have to check that but we probably added about 10 positions. I would have to review that.

Q Could I have a minute please?

(Pause.)

JUDGE KELLEY: Why don't we have a cup of coffee. We'll take about a 5 or 10 minute break.

(Brief recess.)

JUDGE KELLEY: Back on the record.

Mr Runkle can resume his questioning.

MR. POWELL: Mr. Runkle,earlier you asked a question about when the training session was formed. It was formed in 1977.

BY MR. RUNKLE:

Q And that would be a nuclear --

A (Witness Powell) That would be the nuclear training

AGB/pp 2

section that was formed at that time.

Q Does not the nuclear training section also have the responsibility for training craft in technical personnel at the CP&L's fossil and hydro plants?

A (Witness Davis) Yes, the nuclear training section trains crafts for the operating plants, trains for nuclear plants, our fossil and hydro plants. And the necessary crafts to provide the operation and maintenance.

Q Does it also train the operators of the fossil and hydro plants?

A Yes. We train the operators for those plants auxiliary and control room.

Q So when you speak in terms of craft and technical personnel, that would be all the operating staff at coal and hydro plants?

A Yes. We usually approach it on the basis of the operators. Certainly for the nuclear plant, the licensed operators and the nonlicensed operators, that's one portion of training. And then the crafts including mechanics, electricians, I&C technicians, E&C technicians and RC technicians.

Q But at the fossil and hydro plants, the nuclear training section would be responsible for training all the operations people at those plants?

A Yes. Operators and crafts people plus they obtain

AGB/pp 3

other training by going off of our system to other places like they've been recently to somewhere that has a fossil plant simulator. But we do provide training for the fossil plants.

Q CP&L does not have a fossil plant simulator?

A Not at this time.

Q Do you expect to obtain one in the near future?

A We are looking at that question now. I don't expect that we would obtain one right away. But we're certainly studying that.

Q How many operating personnel does CP&L have at its fossil and hydro plants?

MR. CARROW: Objection, your Honor. I'm not sure what the operation of our fossil plants has to do with the safe operation of our nuclear plant at Harris.

JUDGE KELLEY: Mr. Runkle?

MR. RUNKLE: Well, if they have additional responsibility for the fossil plants if they were responsible for training a vast number of additional personnel, then it becomes relevant to how much time they have to train particularly the nuclear people.

JUDGE KELLEY: Couldn't you reach the same line by just asking what percentage of their time is spent training nuclear people?

MR. RUNKLE: Sure.

AGB/pp 4

JUDGE KELLEY: Why don't you do that?

BY MR. RUNKLE:

Q WHat percentage of the nuclear training section's time is spent on training nuclear related personnel?

A (Witness Davis) More than the majority of the time I don't have an exact percentage right now, but most of our training effort in a high percentage is directed toward the nuclear plant personnel. And I don't know of any other way to approach it except that we merged the fossil auxiliary operators and craft training in. We do not include them in the nuclear license training or specifically in the nuclear classes. Those are maintained completely for the nuclear program. Especially our training of the operators.

The place where they're combined is in the craft and the auxiliary operator training programs, the majority of the time it's for the nuclear plants.

A (Witness Powell) I would also like to add that for the fossil training we have a group that handles fossil training of the operators separate from the nuclear training group. We have them broken out into nuclear training and fossil training. We do interface definitely but we do have it broken out that way so we can concentrate on nuclear training operators.

Q And we can see this by looking at Attachment 1 to your testimony, can we not?

AGB/pp 5

A (Witness Powell) Yes.

Q And Mr. Davis, you would be in the upper lefthand corner, would you not?

A THat's correct.

Q And besides the other responsibilities that you have that we talked about earlier, one of those would be operations training and technical services, is it not?

A Yes, that is the department that includes nuclear training section.

Q And who is the vice-president of Operations, Training and Technical Services?

A Mr. Ben Furr.

Q Then when did he become vice-president of Operations, Training and Technical Services?

A In August, 1983.

Q ANd besides his various responsibilities he is also responsible for nuclear training, is he not?

A Yes. At the management level below me and reporting to me and then we have a specific manager of nuclear training that reports to Mr. Furr.

Q And who is that?

A Mr. Fred Tollison.

Q And does attachment to your prefile testimony include all of the different units that are reporting directly to Mr. Tollison?

AGB/pp 6

End #3
AGB fls

A Yes.

Q And the craft and technical training unit is responsible for training both nuclear and fossil craft people?

A That's correct.

Q And curriculum development would be designing curriculum for both craft and fossil personnel -- I mean for nuclear and for fossil personnel?

A That's correct. They provide support. A lot of the curriculum is developed specifically with response to plant needs and is developed within the training unit for each nuclear plant. But the curriculum development unit shown separately located at the corporate level assists each of the plants and is available to them.

Q And what are the responsibilities for the nuclear and simulator training unit?

A The nuclear and simulator training unit trains the nuclear operators and provides the operations staff instructors for the operations simulator in support of the Harris and Robinson plant.

AGB#4
agb/agbl

Q. And that would be -- They would be located at corporate headquarters?

A. They are located at the Harris Energy and Environmental Center where the simulator we discussed earlier.

Now there are instructors also at Brunswick for the simulator at Brunswick, but for the one at the Harris Center, those instructors are a part of the nuclear and simulator training unit.

Q. So on your Attachment 1, this bottom line of eight units, the five to the left would be at the E&E Center and the three to the right would be at the individual plants?

A. That's correct.

BU-4

Q. Do you have any breakdown as to the number of training personnel assigned to each of these eight units?

A. (Witness Davis) Yes.

Q. And what are those, please?

A. At Brunswick we have 26 authorized positions. At Robinson we have 20. At the Harris training unit we have 21. At the Energy and Environmental Center for those five we have a total of 53.

We have in addition to that five co-op positions which are students at one of the universities who are working for us part of the time and going to

agb/agb2

school part of the time. And those are assigned to the E&E Center.

So there's 58 at the E&E Center and the others are at the three plants.

Q. At the different plant sites you spoke in terms of "authorized."

What are the actual figures at this time?

A. Excuse me, Mr. Runkle, I did give you the actual figures. Those are actual at the present time and do not include vacancies; I misspoke on that.

So the figures I gave you are actual. It should add to 125 and then there are 12 vacancies, which would add to 137.

Q. Would it be fair to say that the 12 vacancies are across the board?

A. Yes, I think that that's true. We have some vacancies in each of them, yes.

Q. At each plant site the training unit is responsible for a specific training for that site, is that not true?

A. Yes.

Q. Does the plant site training unit train craft personnel?

A. (Witness Powell) We do train craft personnel in some plant-specific training. In the sense right now

agb/agb3

we have general employee training that everyone goes to, all plant employees. We also have systems training that is devoted to the craft for general training and then specific training would be for E&C type people, mechanics, electricians, we'll break it down from there.

Q. And when you refer to E&C, what is that?

A. Environmental and chemistry technicians.

Q. E&C.

A. Right.

Q. If we would look at the full complement of staffing for each of the units, let's say, Brunswick units, yesterday we determined that the number of staff personnel at that unit -- what percentage of those people would be trained by the Brunswick training unit?

A. (Witness Davis) The Brunswick training unit would provide the same training that Mr. Power just reviewed for Harris. The GET training at Harris would apply to all personnel that come to the site. There it would break down into the particular jobs that the people hold.

But we provide the same training courses and services that Mr. Powell reviewed for Harris; that is, for the operators -- both licensed non-operator and the crafts as far as plant-specific training.

Q. And that would be the operations unit of the

agb/agb4

Brunswick plant?

A. Yes, that includes the operations section and also included in that as a part of operations is the maintenance.

We provide craft training on a generic basis at the E&E Center for the Brunswick and the plant training unit is involved in the training.

Also, Brunswick has training specialists on the plant staff itself that provide continuing training to those personnel at Brunswick in the operations section.

Q. At this time there are additional contract personnel at Brunswick.

A. Yes.

Q. Nuclear training is a department, is it not?

A. Nuclear training is a sectior, the nuclear training section.

Q. Does the nuclear training section have any responsibility for training contract personnel at the different power plants?

A. Only for the GET training which is necessary for them to have access to the plant.

Q. Do you review any other training that, say, one of the -- Davis Construction Company or Ebasco would

agb/agb5

give its contract employees?

A. No, that is not under our responsibility.

Q. Do you review the contracts with the contract personnel to determine the level of training those personnel will get?

A. The contracting people for the nuclear plant is under Mr. McDuffie's group. He reviews the contract requirements for those personnel.

In addition he, through his group, provides training for the construction contractors.

Q. And then they, in turn, would be training their own contract workers?

A. Yes.

Q. Now you talk about the GET training, what does that refer to?

A. GET is general employee training.

Q. How much does each employee receive?

A. I believe we have got a breakdown of that in the filed testimony as to the three levels of GET training, and it would be determined on the job assignment of a particular individual as to which level he receives.

Q. GET Level I is a four-hour course.

Who would receive that training?

A. Everybody receives GET I that needs access to

agb/agb6

the plant, that is, unescorted access to the plant.

Q. So if somebody received escorted access -- I think the term we used is a tourist -- would not receive any GET training?

A. Not the formal course itself. They would be instructed by their guide as to what they should be aware of on the tour and they would go through the access requirements of the plant but they would not be formally trained in the GET training program.

Q. So CP&L employees, contract employees and vendors would receive the GET Level I training?

A. Yes.

And if they need it, and their job assignment was going to be out in the radiation area, they would also receive GET Level II, which is the knowledge and skills in the radiation protection procedures.

Q. And at GET Level I, the four-hour course, what areas are covered?

A. It's listed in the testimony. It covers the basics of the areas of the plant description and operation, personal safety and security, the alarm systems, alcohol and drug abuse and the basic fundamental knowledge of radiation.

Q. And that would be page nine of your prefiled testimony?

agb/agb7

A. That's correct.

Q. In the four-hour course, how much is spent on the fundamentals of radiation?

A. Mr. Powell's unit provides that at Harris. He would probably be in a better position to give you a breakdown.

A. (Witness Powell) It's running about two hours. This four hours we have here is running closer to five hours now, but it is approximately two hours.

Q. And this would be in addition to any initial personnel screening in a different department that might be solely into employee relations and salaries and that kind of thing?

A. (Witness Davis) Absolutely.

Q. How is the CP&L policy on alcohol and drug abuse conveyed to the employees in the GET Level I?

A. (Witness Powell) It is addressed through a lesson plan we have, very formal, explaining to them about the alcohol and drug abuse program and we hand out to them a page that they are to review and sign.

And the only ones that have to do this are the ones that may have not attended another formal class, which we have another formal class given by employee relations which lasts approximately one hour.

Q. And how long in the GET Level I is the area

agb/agb8

of personal safety?

A. I would estimate about 20 minutes, somewhere along there.

Q. And what are the areas of personal safety that are reviewed?

A. We train on the concern for hardhats, proper use of safety equipment, observing workers as they go through, being careful where they go; just general industrial safety.

Q. After this GET Level I training session, do you evaluate those employees and other personnel to determine how well they understood what had occurred?

A. Yes, we do. We give a written exam.

Q. And how long is the written exam?

A. It depends on the individuals how long it is going to take them. It runs 30 minutes to an hour.

Q. And do you have a certain score that is a passing score?

A. Yes, they have to get an 80 on it, and if they don't pass it they may have to go through a retraining.

Q. And would the retraining to be to sit through another GET Level I course?

A. It could be sit through another GET course, it could also be specialized instruction.

agb/agb9

Q. And if an employee does not pass GET Level I, are they allowed on the plant site?

A. No. There may be a case where they would be escorted, but in general no.

Q. And which employees receive the GET Level II?

A. GET Level II would be required if they would be working -- would have to go into radiation controlled areas.

Q. And is it clear to you and the other trainers which areas are the radiation control areas?

A. Yes, it is.

Q. And that's not -- Strike that, please.

What is covered in the GET Level II?

A. GET Level II goes into more depth, into radiation fundamentals, it goes into how to handle radiation work permits in more depth, it goes into access to these areas. It gives them the knowledge to be able to work in a radiation controlled area. It also, at the end of that, goes through a practical demonstration of putting on proper NIC clothing and removal. And it will have a written exam at the end also.

Q. And that would include individual radiation detection devices?

A. Yes.

Q. TLD's?

agb/agb10

A. Yes.

Q. What other ones?

A. Use of -- I don't remember the title of them, but the use of radiation detection equipment, detectors.

Q. Jim, were you at this hearing yesterday?

A. (Witness Davis) I was not.

A. (Witness Powell) I was.

Q. In the questions I posed to the Brunswick panel, we discussed an incident that occurred at the Brunswick plant over a misuse of TLD's.

Do you recall that series of questions?

A. I recall the series of questions. I don't recall the details.

Q. Was it likely that those contract personnel had received GET Level II training?

A. You say was it likely?

Q. Yes.

A. I'm sure they had.

Q. You're sure that they had received at least Level II.

Had they received Level III?

A. I would not know.

Q. After an employee receives Level I and Level II training they receive a written exam?

A. Yes.

agb/agbll

Q. Is there any testing -- follow-up exam after that period?

A. Yes, annual retraining.

Q. And what is the annual retraining?

A. Annual retraining is basically they are given a study guide to review and make sure that they are upgraded to review things that may have changed and then we'll go through some plant specifics and sound the alarms and so forth for them and then they'll take another written exam and they have a dress-out period also on this one; it's about a four-hour examination.

Q. In developing the annual retraining, is there any effort made to individualize the retraining?

A. No, we don't make an effort to individualize the retraining as such. We will -- Any changes that have been made during the past year or so, we'll bring that to their attention but as far as trying to pick out a particular individual, no, we do not individualize it.

Q. Do you review any reports in the employee relations field to look at a worker's personnel file to see if he had violated any of the guidelines established in GET Level I and Level II training?

A. I'm not sure what your question is leading to. I do not review employee relations files, those are personal files.

agb/agb12

Q. Do you review any of the reporting to NRC or to quality assurance on specific violations that have occurred?

A. Yes, those would come through to me as a review for training. We do implement anything of this nature. We look at it, we assess it and determine whether to put it into training.

Also it would go through the plant manager and he would also possibly direct me to put it into my training.

A. (Witness Davis) I might comment on that, Mr. Runkle, on a overall corporate basis.

Our training program -- not only at Harris, but at the other plants and at corporate level -- do review reports from the NRC and other -- not only for our own company but for other companies as well. They come to us also through on-site nuclear safety; as Dr. Elleman reviewed, they review all LER's.

And in their review, they identify if any of them may have any training implications. If they do, they will forward it to the training section with a formal routing which we then review and report back to them as to whether any changes were made to update our training based on that incident.

Q. And those would be in your annual -- those

agb/agb13

would be incorporated into your annual retraining program?

A. They would be incorporated in our total training program.

I thought you were asking about did we review just general incidents, NRC reports or LER's. I was giving you the overall answer.

Mr. Powell indicated earlier we do update our GET program as we get the feedback, and I was adding to that that we follow that same process in our other training programs as well.

Q. So in your review of these other reports, you would incorporate those into the GET training, your annual retraining and what other training programs would you incorporate those into?

A. That depends on the training program they would apply to. We include them in the lesson plans for whatever classification of employee that was involved in the reported incident.

It would include all operator training, the license operator simulator training and in some cases mechanics and technicians.

A. (Witness Powell) In fact we have recently included some of the overexposure in the BWR cavities, we added that to the GET, we discuss that in the program, they certainly are very aware of this.

agb/agbl4

From a lessons learned standpoint we added it into the lesson plans and the cold license program, fuel handling, protection against radiation, and we've included it in our continuing program for cold license personnel.

A. (Witness Davis) Could I go back to one comment made earlier?

You asked about are the radiation protection areas identified and known for our GET program. That is certainly true and I would point out though that at the Harris site at the present time there are no radiation protection areas because fuel has not been brought on the site.

Q. But you would know which those areas are --

A. Yes, they have been identified and included in the Harris training but I was just pointing out at the present time they are not in effect.

We are conducting all of our training on the basis of the plant being loaded with fuel and in operation.

Q. In the GET Level I training, how much time is spent in the area of security?

ndAGB#4

AGB5/eb1

A (Witness Powell) I haven't totalled a lot of these times up, and they are very rough. I would say we're spending about 20 or 30 minutes on that also.

Q And what areas does this cover?

A We talk about their responsibility as far as security is concerned, access into the plant, access into various areas, and the layout of the plant, what the protected areas are.

Q If an individual line worker did something that was described in one of the training programs as something that he shouldn't do, how would he find out about that? Would that be through his supervisor?

A (Witness Davis) I'm not sure I understand the question, Mr. Runkle.

Q Let me rephrase it.

The individual line worker receives the GET training, and during that training something is said to him that says You shouldn't do this on the site. Okay? He later does that thing.

How would that come to his attention, that that was something he shouldn't do?

MR. CARROW: Your Honor, I would ask that the question be a little more specific than that. That could cover an unbelievable variety of things. I think if Mr. Runkle would come up with a more specific instance, the

AGB/eb 2

witnesses can answer the question.

JUDGE KELLEY: I'm a little unclear, too.

You are hypothesizing that the employee takes the course and then forgets, or does it on purpose, notwithstanding the instruction, or what?

MR. RUNKLE: Either way.

JUDGE KELLEY: How does he get caught? Is that the question?

MR. RUNKLE: Yes.

JUDGE KELLEY: How do you detect an employee who is violating instructions on radiation?

WITNESS DAVIS: I would think that that may occur in several ways, depending upon what the situation or incident might be. I don't know. If he does something that the supervisor observes, then that would be the way it would be detected and handled.

If he did something that led to an exposure, a radiation exposure, it would be picked up on his dosimetry instrument and that would be reviewed. It just depends on what the circumstances of the event would be, plus, of course, as we pointed out, they are subject to retraining each year.

BY MR. RUNKLE:

Q Do you make an evaluation of the effectiveness of your training program?

A (Witness Davis) Yes.

AGB/eb3

Q Do you evaluate its effectiveness in the light of the kind of incidents that we just described?

A Yes. If it were significant and indicated something that should be looked at in the training, as I indicated earlier, any LER or information we get concerning an incident, anything from our company or outside, or comes through INPO, we evaluate right then.

Plus as a general practice, we go out into the plant and our training people talk directly to supervisors in the plant and get what we call a feedback from them to find out how the workers are performing, and if they've got any suggestions for our training program which we would review and incorporate.

Plus we have committees for each one of our areas, what we call advisory committees, which include foremen from each of the plants to go over our training program and help us evaluate it.

Q Do the operators receive an evaluatioan of their on-the-job performance?

A Yes, they are evaluated by their management supervision.

Q ANd you do not review those evaluations, do you?

A I don't believe that we do. I believe you are talking about performance. No, we get feedback through either the operators or the supervisors, informing our training

AGB:eb4

people of an area that may need some training attention, but not from the individual employee's performance unless it was involved in one of the reports that we reviewed earlier.

But as far as his performance for compensation and employee relations, we do not review those.

Q So would it be fair to say then that the supervisor evaluates the performance of all of the people underneath him and then would discuss that with you?

A Only as it related to training.

A (Witness Powell) One way we do get some feedback that would be on performance is when then do their qualification cards and any exam or anything and make their oral reports that they were examined. Then we will have that in some of their training records. That is directed only to the training aspect, not from his total performance. That's an evaluation system by the supervisor.

A (Witness Davis) The training requirements of his job are set out very clearly and they're administered, and there are qualification cards that relate directly to those. When supervisors review and evaluate those, they complete the evaluation cards.

Now that information is reviewed with us, but I thought you were talking about general performance on the job of his work. That's reviewed by his supervisor.

Q Would one of the goals of training to be reducing

AGB/eb5

the potential for human error?

A Yes, I think that's a general statement as to the purpose, the reason you train people and qualify them so they can do their job in a safe manner without errors. I'm talking a general principle of the training.

Q And one of the areas that would be required to reduce human error would be to provide that employee with enough knowledge.

A Yes, and that's the basis of our training program, as has been described in the testimony. Our training is directed to what we call systems analysis where the individual requirements of his job, what we call "job task," "job task analysis," are established. And that identifies the training that relates to that employee's responsibilities, and he is specifically trained with the skill and knowledge necessary to do those tasks.

That is the basis of our training program.

A (Witness Powell) I would like to add one part to that:

We're talking about the systematic approach to training. You do a job analysis to determine what his needs are and develop a task analysis from that, and you determine what the program needs to include. Then you go through a program of developing this material and put it into a lesson plan format with objectives directly linked back to his job

AGB/eb6

with a task analysis.

At the conclusion of that the third phase would be that you would conduct that particular training.

And the next phase would be very important. It would get the evaluation of the training that we've performed. We'd get it at the time he finishes the course. He will give us a written-up -- his evaluation of the course, his evaluation of the materials, an evaluation of the instructor that provided that training.

And then approximately six months later, the curriculum development unit will come back in and evaluate the course. It will pass out the particular questionnaires and they will fill these out, and it will go to supervisors and to the person that took the training.

So you are going to get the supervisor that says, "Well, yes, this training was beneficial. I've seen the results from this."

And the person that got the training has an opportunity to say "Well, I did or did not have sufficient training in an area," or "I don't feel that I needed this training."

And then we will evaluate the program, and I have to give a written response as to what I do to the program to meet these needs.

Q In the goal of reducing human error, are not some

AGB/eb7

of the other reasons for human error personal problems, job-related problems, conflicts between supervisors and workers, employee relations, and those kind of problems?

A (Witness Davis) I'm sure, Mr. Runkle, there are a lot of reasons for human errors when they occur. It depends on what the area is and what the conditions were at the time it occurred.

Q Do you do any training in the areas of employee relations to help your people with job stresses and that kind of things?

A That type of training is provided through employee relations in what we call our organizational development training. And they do provide courses in those areas.

They have seminars and courses on stress and stress reduction, and they have different types of management training and specific courses related to those. That is not a part of our training responsibilities; that is provided elsewhere in the company.

A (Witness Powell) There is one thing I would like to add to that is we do not do the specific training on that, but part of our training on the simulator, one of our lessons that we teach there is to -- is called "Conduct of Operations," and that is the person should be fully mentally alert, he should be in a capacity where he can take the watch, and we stress upon him that it is his responsibility that if he is

AGB/eb8

not feeling good that he should not work. He should get a replacement.

A (Witness Willis) I would like to add if I could also that that part of training that you're discussing, management of stress, interpersonal relationships and this sort of thing, is an integral part of our license training program.

Q You said it was a licensee training program?

A Yes, it's an integral part of the licensing training program.

Q ANd what is a licensing training program?

A That's the training program for operators leading to an NRC license to operate the plant.

Q Is this area also-- Is this area of training also given to other employees besides operators?

A Yes, it is, in various and sundry courses that are provided by the Organizational and Development Group.

The specific course that I'm speaking about that is an integral part of the operator training is principally given to operators. However, it has been made available to other people in the plant.

But there are individual courses that are also offered that cover the separate areas.

Q Mr. Davis, do you review the SALP reports when they are issued?

AGB/eb9

A (Witness Davis) Yes.

Q Do you review them for problems that may have an impact on training?

A Yes, I do. And I have reviewed those more in depth since I have been directly responsible for training.

Q So have you reviewed the SALP III report and the SALP IV report?

A Yes.

Q Have you made changes in your training program based on your review of the various SALP reports?

A Yes.

Q Have you made any changes as a result of the recommendations in the SALP IV report?

A The SALP IV report I believe you are referring to is the one that was just issued very recently.

Q A couple of weeks ago, yes.

A Yes, I have reviewed that and it makes a number of comments about -- that are favorable on our training program. It observes the improvements that have been made in our training program. And I would say that it will be reviewed and I will review it further as to whether there are additional improvements that can be made.

Q Will you review in depth the different areas, say Operations?

A Yes, because the SALP report itself does not

AGB/eb10

evaluate training as a separate function or category at this time so you need to look at the other areas to identify those things that may be related to training, and we would do that in the functional areas that are evaluated.

Q If I can draw your attention to the top of page 11 of your prefiled testimony, in the first sentence you say all of your training programs follow the same guidelines and procedures.

When you refer to all of your training programs, what do you refer to?

A I refer to the training programs that come under mine and Mr. Powell's direct responsibility. That would be the training programs provided by the Nuclear Training Section.

Q And those would be the ones that were included in Applicants' Exhibit 5, which is Section 13.2 of the Final Safety Analysis Report?

A Yes. That gives the requirements for training and training that will be provided for the plant staff, and then we have programs to address each one of those requirements.

A (Witness Powell) That exhibit that you referred to is the FSAR exhibit that is for the Harris site specifically.

Q All right.

But there would be similar types of training

AGB/eb11

programs at the other reactors?

A (Witness Davis) Yes.

Q ANd when you state that all these training programs follow the same guidelines and procedures, what are these guidelines and procedures?

A We're talking about there the general approach that I reviewed earlier, and that is the systematic approach. It is based on job task analysis. It is designed for the particular classification of the job or the requirements, but it follows the same general approach, the same policy guidelines and procedures.

And I spell out specifically that in addition to that we incorporate and reflect information that becomes available to us.

There are, as I'm sure you're aware, specific NRC guidelines to training that is required for nuclear operating personnel. In addition, there are industry INPO guidelines. And the reference here is that we design our programs to meet those requirements following the same general approach.

We really have got an overall training program that is administered from the corporate level so that we can be consistent, but at the same time, we have a training site located at each one of our -- a training unit located at each one of our nuclear sites so we can be directly on site and on hand to give the training specifically needed for that

AGB/eb12

plant.

And I think the testimony here is that that our overall program follows the same principles, guidelines, and procedures.

And would each training program be conducted in the same manner, say GET Level I?

A I'm not sure what you mean by "same manner." I just reviewed that it's got the same approach and the same principles, but obviously it would vary depending on what the class is.

Q Okay.

And it would also vary on which unit it was at?

A Somewhat, yes. It would be plant-specific for that plant.

Q ANd say at the Harris plant, is there a standard agenda, a standard syllabus for each of the training sessions?

A (Witness Powell) Yes, we have a training manual that lists courses that we provide, not only at Harris and at the other plants and at the E&E Center. And it describes the topics that will be covered in each course.

End 5
AGB 6 fls

AGB/pp 1
#6

Q And is each of the instructors for each of these training sessions, do they conduct these sessions in the same manner?

A Absolutely. We utilize lesson plans that have lesson objectives and he goes into the classroom with each person using the same lesson plans. In other words, you've got two instructors teaching the same course. They would have lesson plans that would be the same. They would just personalize them maybe for their own benefit, but that's how we know the individual's do their required training.

Q Is there an opportunity in the lesson plan to receive instant readback from the personnel that are being trained?

A Absolutely. If we run across a particular case in a classroom and it is pointed out to us something that may need to be added or if they feel something should be expended upon, they have an opportunity at that particular moment to bring it up.

Q And there would be times for questions and answers on each topic?

A Sure.

A (Witness Davis) Let me add that I can give you a specific example of that because I have sat in on a number of classes that are being taught by our unit. And at each of the plant sites we have a technical library that

AGB/pp 2

includes additional material available to instructors including slides and visual aids. In some of the classes I've been in, when a student asked a question on a break, the instructor would go to the library and bring a slide that he thought more clearly showed the part of the equipment related to the student's question. And have a specific question on that.

A (Witness Powell) We also have procedures to upgrade lesson plans on a short term basis prior to going through and then go through a complete retyping.

Q Let's shift focus a little bit to cold license training.

Part of the cold license training is a program at North Carolina State University, is it not?

A Yes, it is. It's a seven-day program.

Q When was the last time this was done?

A I don't have the exact dates but it was done in the timeframe of February and March of this year. I think we had a session last year. I think we had a total of four sessions with NC State directly related to cold license training.

Q And who was the professor at the last training session?

A I do not know the name. They have various instructors that participate in it and I know two of the individuals personally but I can't recall their names at the

AGB/pp 3

present time.

Q Are those instructors -- do those instructors receive any training at the Harris Plant or one of the other reactors?

A They do not receive specific training at either of the sites. They are qualified and licensed on the research reactor at NC State and they do go for periodic orientation at the NA center to see what we have for a simulator and they are aware of our program. In fact we have utilized some of their instructors in our classrooms for short term periods.

Q And the research reactor is the Pulstar that you refer to a couple times in your prefile testimony?

A Yes.

Q Can you briefly describe the Pulstar reactor in terms of megawatt size, that kind of thing? Let me ask specific questions: How large is the Pulstar reactor in megawatts?

A It's not in megawatts. I don't recall exactly the power rating on it. I've been through the program, by the way, but I don't recall the number.

Q Is it a PWR?

A It's an open pool plant, totally different. It is not there to produce power as such for any particular use. It is there for experimental and reactor operations, training.

AGB/pp 4

Q What are the similarities between the Pulstar and the Harris reactor?

A Similarities would be that it has fuel assemblies similar but definitely different. It allows the operation of reactor startups, reactor shutdowns, and manipulations that would apply classroom training, as far as theory and so forth, be able to see responses of instruments in an actual operating condition.

It is not very similar if you're trying to think of it in terms of a power reactor. It does not relate to that term.

Q In Applicant's Exhibit 5, which is the section of the FSAR on page 13.2.1-1, which is the second page of this document --

A What page was that again?

Q 13.2.1-1.

A Okay.

Q Also on the following page under each of the sections there it says, "A training course will be taught by the Westinghouse Nuclear Service Divisions or the equivalent."

A Yes.

Q What is the equivalent to a training course taught by the Westinghouse Nuclear Services Division?

A It would be, we would look at their program which is already laid out. What would be included in that. It may

AGB/pp 5

be another contractor or we may decide to teach it ourselves.

Q And you would contract with Westinghouse?

A That's what that is meant to be. Westinghouse had that particular course and that's why it was referenced.

Q And do you have the inhouse capability to conduct this training course or any of the next several training courses in this section?

A We would possibly have the capability but if you're only going to send one or two people it's probably more beneficial to go ahead and contract somebody who has a training organization to handle it. Rather than set up a special program. It costs a lot of money just to design it for a few people.

Q And they would have that someplace offsite?

A Yes, they do have that.

Q And they might be training engineers, operators, and a whole series of plants?

A Yes.

Q All right.

In the very top of that same page, it has the word "training" and then it has an asterisk "further information is contained in TMI Appendix." What information is contained in the TMI Appendix that is not contained in this section?

A Where does that asterick refer back to? I've got it

AGB/pp 6

down at the bottom of the page, but I don't see the asterick in there.

Q It's at the very top of the page.

A Okay. I'm sorry. There is a section, I believe this is referring to -- I don't know whether, I'd have to look for a minute here and see if there's an Appendix for this piece but I know it's in -- I believe they're referring to the 0737, NUREG 737.

(Pause.)

Q Is there, to your knowledge, a TMI Appendix to the FSAR?

A I don't recall off the top of my head. I would have to look at the total FSAR and that is quite a few volumes. There probably is. I think I see one but I just don't recall for sure.

Q Would this section, which is Appendix 5 include all of the material in the FSAR relating to training at the Harris plant?

A Could you ask that again?

Q Does Applicant's Exhibit 5, which is the document, contain all of the training that is contained in the FSAR?

A I don't believe that's the way you asked the question the first time, your Honor. I believe he asked if this contained all the information on training at the Harris site. And I didn't understand him to say that wording when he

AGB/pp 7

repeated his question.

MR. RUNKLE: I thought that the questions were equivalent.

BY MR. RUNKLE:

Q Is there anything else on training besides in this section?

A I'm having a little trouble with the question. It is very general. We utilize the FSAR's requirements for training but we also utilize NUREG's other regulatory requirements. This is a general classification here that would go to other documents. I'm not sure we have the total training program.

A (Witness Davis) When you say all, Mr. Runkle, I'm not sure because there are other sections of the FSAR. I don't have the contents or index. There may be some training related to positions that are not provided through the training program that we have been discussing specific to the plant staff. I'm just not sure of that.

But this is intended to be the training guide for our program for the specific positions identified in this section.

Q Thank you. That answers my question. At the very last page of this document, it lists applicable NRC documents, does it not?

A Yes.

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Q And would you rely on all of these documents in your training?

A Yes.

Q Would you also rely on INPO guidelines?

A Yes.

Q ANSI guidelines?

A Yes. In fact the FSAR identifies the particular ANSI standard and draft revision that we're using in our program.

Q ANSI is an acronym for the American Nuclear Society -- what is that? Okay. ANSI is an acronym for American National Standards Institute, is it not?

A Yes.

Q On page 1-5 of this document --

A Which document?

Q Applicant's Exhibit 5. 13.2.1-5. It lists a series of some 89 systems and functions of various equipment, does it not, for coal license system training?

Are these all the systems in the nuclear power plant?

A (Witness Powell) They are all the systems that we have at the site. Now if we have a modification that adds another system. We will obviously pick that up and train on that too.

Q You would provide training for each one of these systems?

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A Yes.

Q And on page 13.2.1-11 of this document, in the first full program at the top, does this refer to your GET program?

A (Witness Davis) Which paragraph --

MR. CARROW: Was that a paragraph?

MR. RUNKLE: The first full paragraph that begins, "The Nuclear Operations Department."

A Yes, that's referring to GET. We have the General Employee Training program and we have an orientation program for these people reporting to the Harris site. The GET does include this.

BY MR. RUNKLE:

Q And at the orientation program for each new employee, what additional information is presented that is not presented in the GET training?

A (Witness Davis) They are listed here. It includes corporate quality assurance, corporate nuclear safety, and the overall health physics. Some of the health physics training is also included in GET. But these are specific subjects in orientation.

Q How long is that training session?

A (Witness Powell) Let me add one thing. On the orientation program that's an orientation for the new man reporting to the plant and that is intended to let him meet

AGB/pp 10

the managers of different groups. So he gets to meet who is in the training session. What do they do? Startup, what do they do. Different managers. So they come in as orientation to welcoming to the plant for the CP&L person. We show plant layout, we show some slides, how construction has progressed. It's familiarization with the plant.

So it's a little bit different. But they do go through these quality assurance programs, policies, and this type of thing. So it's a little different from the GET.

The General Employee Training is focused primarily on his access to the plant and this type of thing.

MR. WILLIS: I would like to address that. That's a plant-conducted program. It's about a day and a half in length. It includes an introduction, generally, by the plant general manager. Some discussion of the purpose of the orientation. Some general philosophy discussion about how they expect the plant to be operated and maintained. A discussion of safety, both nuclear and industrial. The various managers introduce their particular units and how they -- what their unit does. It is an orientation on the rules of the site with regard to safety security or any administrative policies. It has a review of QA practices. And just a general orientation of a new employee to the work site.

JUDGE KELLEY: It's about time for a break. Is this

AGB/pp 11

End #6

WRB fls

as good a place as any?

MR. RUNKLE: Let me ask one more question on this area.

BY MR. RUNKLE:

Q Sir, when you said it was a plant conducted program who in the plant management conducts this program?

A (Witness Willis) A number of people starting off with me, the plant general manager. And then I have a series of speakers who will represent various parts of the plant staff and cover the various topics. So it's probably on the order of seven or eight different people that speak.

Q So that would be your line management at the plant?

A That's correct.

MR. RUNKLE: This would be a good place.

JUDGE KELLEY: Ten minutes?

(Recess.)

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JUDGE KELLEY: We'll be back on the record.

Mr. Runkle, will you resume your cross-examination?

WITNESS DAVIS: Mr. Runkle, if I might: you asked a qestion about the FSAR, about the reference to the TMI appendix, whether it was included in the FSAR. I had a chance during the break to check.

It is included. It is found in Volume 20. And it does, as Mr. Powell testified, relate to NUREG 0737, and it's a cross-reference to the training related to the TMI action plan.

MR. RUNKLE: I would like to inform the other parties that Mr. Payne will be here about four o'clock.

WITNESS POWELL: I would like to clarify one item also, to make sure I answered your question as you asked it.

I was under the impression that you had asked if the systems that were listed were all the systems that we trained on. And besides the systems that we trained on, there are other systems that we would not train on; things like the sewage treatment system, and things of that nature. But these are the systems that we trained on. There may be some systems listed in a different way that would be sub-systems of these. But these are the major ones that we train on.

BY MR. RUNKLE:

WRB/wb2

Q. And these systems would be those found at page 13.2.1-5?

A. (Witness Powell) Yes.

Q. And, in your opinion, are these all the systems that are relevant to cold license system training?

A. Yes.

Q. And these are the ones that are relevant to operator training?

A. Yes.

Q. Gentlemen, let me draw your attention to page 14 of your prefiled testimony.

In the first two paragraphs of this page you discuss accreditation of the Robinson operator training program by the INPO accreditation board, do you not?

A. (Witness Davis) Yes.

Q. Were all of the Robinson operator training programs accreditated?

A. Those that relate to operator training were accredited. There are other training programs that we plan that are in the process of having accreditation. But the first accreditation was for our operator related training program.

Q. And that would include training for SROs, ROs and AOs?

A. It would include the license training of ROs,

RB/wb3

SROs and requalification -- license requalification.

Q. You state that the INPO accreditation team that visited the facility was made up of qualified INPO training evaluators.

Who were these training evaluators?

A. They were people from the Institute in their training program and are evaluators. Plus they were supplemented by people from other utilities who accompanied them on the evaluation.

Q. How many were from INPO and how many were from other utilities?

A. I'll have to check, Mr. Runkle. I don't believe I have a breakdown of the make-up of the evaluaqtion team.

(Pause.)

No, I do not have a breakdown of the exact numbers of the Robinson team.

Q. Do any of the CP&L training personnel participate in similar types of INPO accreditation of other utilities?

A. Yes. We have loaned people from our training organization to assist INPO on their evaluations, both in connection with their normal evaluations, and I believe also in connection with accreditation.

Q. And who are these people you have loaned to INPO accreditation?

A. Mr. Fred Tolleson has been on accreditation

WRB/wb4

visits -- excuse me; evaluation visits. I don't know whether that included accreditation or not. I could check.

Also, Mr. Ben Furr, and I believe Mr. Howard Smith.

Q. And those latter, have they been on INPO accreditation visits?

A. I'm just not sure. They were INPO evaluations, but whether they were related to accreditation I don't know.

I would point out that we're only the fourth utility, or were the fourth at the time that we received accreditation, to have any portion of the program accredited by INPO. I believe since we did in May, there has been a fifth. But at that time we were the fourth utility to receive accreditation.

Q. Have you attempted to have the operator training programs at Brunswick and Harris accredited?

A. Yes; it is our plan-- When you say "attempted," I would say the proper way to look at it is, it's in our plan, and we're involved in the particular process and with steps that you have to take.

We have initiated steps at Brunswick. The first step is the staff evaluation review which is under way now. Also, we're planning, and have a schedule for Harris, which would result in the Harris program being accredited within two years of receiving its operating license.

WRBwb5

If I could, Mr. Runkle, the three programs accredited at Robinson, the three specific programs are non-licensed operator training, licensed operator training, and licensed operator requalification training, which are all the operator training programs.

Q. And those are all training programs conducted by CP&L training people?

A. Yes; it is the training program conducted at the Robinson plant under the direction of the Robinson training unit.

Q. Mr. Davis, on Friday in the cross-examination of Mr. Utley he stated that you were responsible for preparing CP&L's reponse to the Cresap report.

What was your role in responding to the Cresap report?

A. I believe the question was, and Mr. Utley's reference was that I was the company's designated representative, what you might refer to as a contact or project manager for the initial Cresap audit itself.

When the Commission established the audit, they asked that the company designate one management official to be the coordinator for the company. That's the role I filled. The Commission designated one, as did Cresap.

Q. And your role as the designated representative was to funnel all Cresap requests to the rest of the management?

WRB/wb6

A. Well, in the sense that I coordinated and represented the company in those matters, that's right.

The way it actually worked was,we had a project team, because this was an extensive comprehensive audit that covered a period of eight months. And we didn't funnel information in terms of responding to their questions; what we did was, they asked for certain documents and we made those documents available; they asked to interview certain people, we coordinated the schedules and made those people available, and just generally provided them with what they requested that was necessary to their audit review, and then we coordinated with them on any matters that came up.

Q. When did you become aware of their specific recommendations?

A. The specific recommendations in their entirety, and complete, were included in the draft report which was submitted to us at the same time it was to the utilities commission.

Now, as far as the individual areas that the recommendations covered, and their general findings, they made those available to us prior to completing the draft report. Their process was that they would interview a manager in a certain area and re-iew the items they were going to review in his area, and they would discuss specific items with him. Then they would go through his area. They would

WRB/wb7

come back and review with him their general findings, not the specific recommendations but their general findings.

They also reviewed with me and with the project team at certain points their findings, so they could verify the data on which they were going to rely, and give us an opportunity to see that that data was correct and complete.

So that kind of review went on during the audit itself. But the final review of the draft report was made available to us at the same time it was to the Commission.

Q. I would now like to address my questions primarily to the Harris part of the panel.

Mr. Watson, in your prefiled testimony you stated that you have been with CP&L for fifteen years, and previous to becoming vice president for the Harris project you were vice president of the fuel department.

What were your duties as vice president of the fuel department?

A. (Witness Watson) My responsibilities in the fuel department as vice president were to basically manage the procurement and the control of all fuels required by the generation plants for CP&L.

Q. And how long did you serve in that position?

A. I was in that position approximately six years.

Q. And prior to that time what were the positions you held with CP&L?

WRB/wb8

A. Prior to that period of time I had responsibilities for the nuclear fuel exclusively for approximately six years, six years prior to that point in time. I think it was in 1977 that I took over the responsibility for nuclear and fossil fuels.

Q. And you also state that you were qualified as an SRO at another facility. What facility was that?

A. I was a qualified RO and SRO for a test reactor called the Pressurized Test Reactor at the Knolls Atomic Power Laboratory.

Q. You are not an SRO qualified for Harris, are you?

A. I am not.

Q. Mr. Willis, prior to your employment with CP&L you were the manager of nuclear training at Southern California Edison, were you not?

A. (Witness Willis) That's correct.

Q. How long did you have that position?

A. Approximately one year.

Q. What was your employment before that position?

A. I was with the Systems Development Corporation of Santa Monica, California, as a consultant to power plants for power plant reliability and availability studies.

Q. And how long were you in that position?

A. Approximately one year.

Q. And what was your position before that?

WRB/wb9

A. I spent twenty-four years in the U. S. Navy.

Q. What was your experience with nuclear and atomic power with the U. S. Navy?

A. Twenty-one of those twenty-four years I was directly involved in the management, operation, maintenance and supervision of atomic reactors.

Q. And were those submarine reactors?

A. Both submarine and surface ship reqctors.

Q. Have you ever been qualified as an SRO for a nuclear reactor?

A. The term "SRO" refers to commercial nuclear reactors, and I have not held that qualification. I have had a similar qualification for Navy reactors, but it is not called that.

Q. Gentlemen, does the Harris project have a similar program to the Brunswick Improvement Program?

A. It is similar in that-- The answer to your question is yes; we have one that is similar in that it is a formally defined program that we use internally to track the particular areas that we want to ensure that we profit from the experience at the Brunswick project and others. It is different in that it is an internal program only, it is not one required or monitored by the NRC in a formal manner.

Q. When was this Harris improvement program initiated?

A. It was initiated in 1983, I believe, shortly

WRB/wb10

after the Brunswick Improvement Program came about. We used that as a basis for examining for similar items as well as inputs from other areas.

Q. Did you prepare the Harris Improvement Program in response to the Brunswick Improvement Program?

A. Not in response to, but recognizing that there were a number of things that provided valuable experience and lessons learned that we wanted to profit from in the development of our program and procedures at the Harris plant.

We decided to form a program that we identified as the Harris Operations IMprovement Program, and albeit that may be a misnomer because it's not an improvement program but, rather, it's a listing of things that we want to ensure that we incorporate in the initial development of our procedures and practices, and we wanted to ensure that we profited from the experience of others, and documenting that.

Q. Before the Harris Operations Improvement Program was initiated what procedures and practices did you operate under?

A. Let me clarify one thing. The Operations Improvement Program at Harris is not -- are not procedures, but, rather, it's a listing of things that we want to ensure are included in our program as we develop the procedures.

Now, as we have formed the organization and built toward the operating conditions, we have systematically

WRB/wb11

developed procedures in the various areas on a schedule consistent with our need to be involved in testing or operation or administration of various parts of the plant.

All of the procedures required to operate the plant will not be completed until some time later. But we are developing them sequentially, and, as we do that, we want to ensure that we incorporate into these procedures and practices the lessons that we have learned from other places.

Q. Gentlemen, if you can turn to Attachment 2 to your prefiled testimony. It would help me clarify my questions if we could just put project, department, section on each of these different levels.

The top one would be a project; isn't that correct?

A. (Witness Watson) That would be a department.

Q. A department.

A. (Witness Willis) It's a project department.

Q. And under the department head would be sections?

A. The plant general manager would be a section.

Q. And that would be reflected on the replaced Attachment 1. At the bottom those are all sections?

A. (Witness Watson) Correct.

Q. And under the section, the operations section, are different units?

WRB/wbl2

A. (Witness Willis) That's correct; yes.

Q. Including plant operations?

A. Yes.

Q. And under the units are different subunits?

A. Correct.

Q. And one of the subunits is also operations?

A. Correct.

Q. All right.

So, Mr. Watson, you report directly to Mr. McDuffie?

A. (Witness Watson) That's correct.

Q. And, Mr. Willis, you report directly to Mr. Watson?

A. (Witness Willis) That's correct.

Q. Mr. Watson, will the Harris Nuclear Project retain engineering and construction departments after Harris comes on line?

A. (Witness Watson) Yes. The basic concept of creating a project department for the operating units is to have within that organization the necessary resources and organiaation to be able to do a considerable amount of internal engineering as well as internal construction. Those departments will be maintained in the operational phase. Those sections will be maintained, but, of course, they will not have the number of employees they presently have.

End 7

WRB/pp 1;
#8

It will be quite similar to the organizational structures at the two operating plants. now.

Q In the administration section, what are the responsibilities there?

A The responsibilities of the administration section is to basically take on the total administrative burden of the department to the extent it does not cover administrative aspects with respect to regulatory compliance.

Regulatory compliance administrative function still remains in the operational section under Mr. Willis. But their responsibilities at this point in time are centralized document control, material control, personnel records and personnel matters, THere is a certain amount of training coordination in that organization. And other types of general site services are administered through that organization.

Q And can you briefly describe the responsibilities for the planning and control section.

A Yes. That's basically provides three key functions to the site. There is an industrial engineering function that they provide. Secondly, they provide a function on planning and scheduling. ANd lastly, they provide a cost accounting and budgetary support for the project.

Q And your newest section, Completion Confirmation, what are their responsibilities?

WRB/pp 2

A Their principal responsibilities as we've defined at this point in time are in the area of construction inspection, which is a first line inspection following craft completion of construction items.

An area called document assembly, which is the function of packaging and confirming appropriate dccumentation is available to support and provide evidence, clear evidence, that we're meeting all the requirements of construction site, nuclear construction site.

They do have a responsibility for contract administration over construction subcontracts. ANd in essence, they have the regulatory compliance responsibility over the construction permit. Basically those functions.

Q Will you retain this section when the plant is in operation.

A That section will not be retained once we go operational. Those functions then fall under the operating license and Mr. Willis will have that responsibility.

Q Which of the sections is primarily responsible for startup?

A Startup support and management is provided as a unit under Mr. Willis.

Q Mr. Willis, you also have a unit underneath you of administration. What functions does that unit have that are not done by the administration section?

WRB/Pp 3

A (Witness Willis) That unit provides administrative support to me. It is responsible for emergency preparedness and for the operational security of the plant in its operation.

Q Mr. Watson, do you expect to have a section to manage outages similar to that of Brunswick when the plant is in operation?

A (Witness Watson) We have not finalized that at this point in time but I would expect we would have resources exclusively dedicated to planning of outages?

Q When did you say that the new department came into effect? The completion confirmation section?

A THat was early in August of this year. We added that particular component to the existing organization.

Q Besides that section, when were the rest of the administrative -- when was the rest of the organization in place?

A Well, the basic organization that we have built from put in place in September of 1983 when the company made the decisions to establish project departments and transfer the responsibility of the nuclear operating plants directly to a project manager at each site. And that was in late August or early September of 1983 for the Robinson and Harris plants.

The Brunswick plant which served, I guess as a pilot, occurred approximately a year plus before that.

WRB/pp 4
End #8

AGB fls

Q And Mr. Watson, you are stationed at the Harris site?

A My office is at the Harris site, yes.

Q How often do you come to corporate headquarters in Raleigh?

A On a typical month, which this month is not, probably three times a month.

Q Do you also attend the monthly manager's meeting?

A Yes, I do.

Q Do you stay in contact with Mr. Utley by phone?

A My immediate supervisor is Mr. McDuffie.

Q Do you stay in contact with Mr. McDuffie by phone?

A I stay in contact with Mr. McDuffie typically on a daily basis. And in addition to that, he is typically out on the site at least once a week. So we have direct contact during his visit to the site.

MR. RUNKLE: This would actually be a good place to stop for lunch for me.

JUDGE KELLEY: Fine, why don't we stop until about 1:30. It's about 20 after, so certainly by 1:30.

(Whereupon, at 12:22 p.m., the hearing was recessed, to reconvene at 1:30 p.m., this same day.)

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#9

AFTERNOON SESSION

(1:30 p.m.)

Whereupon,

R. A. WATSON,

J. L. WILLIS,

J. M. DAVIS, JR.,

and

A. WAYNE POWELL

resumed the stand and having been previously duly sworn, were examined and testified further as follows:

JUDGE KELLEY: We'll go back on the record.

MR. RUNKLE: First thing this morning I had passed out most of the remaining exhibits we intend to introduce in the next couple of days. And during lunchtime I gave them to the reporter. I would like to have them identified at this time. JI 30 through 37 are I-E reports, which are reports about violations, CP&L responses and DA letters on all of the -- there have been 11 CP&L violations for operations of their nuclear plants. Two have not been available from the PDR in Washington. They have been out. We have requested to get copies of them. Some how or another they are checked out. We would like to introduce those when they become available just to complete the record.

JUDGE KELLEY: I wonder just for clarity although it may take a little time whether you shouldn't read off each

AGB/pp 2

exhibit number on each particular thing. Can you do that?

MR. RUNKLE: Sure.

JI 30 is the I-E report 50-324/75-10. JI 31 is --

MR. BARTH: Your Honor, these are exhibits, I understand they intend to use for the staff, pieces of paper he handed out this morning, I-E report 50-324/75-10 is missing from the papers he's given to me. The CP&L response is missing. The notice of civil penalty is there. These are a mess. I would like to have brought it up some other time but we have a bad, bad record on exhibits.

The type of pieces of paper he gave me, the two that he says that he has here are not here. ANd what we have is one that is not listed.

JUDGE KELLEY: Let me get my stack. Excuse me.

MR. BARTH: I would suggest your Honor, that since we have the panel here and these are exhibits he intends to use with the NRC witness Mr. Bemis, perhaps Mr. Runkle might wish to reconsider over afternoon and evening this pile of paper he has passed out. And prior to Mr. Bemis appearing try to introduce it and do something with it in going along with the questions of these gentlemen who are sitting before us with a contention which is live.

But I've been through the exhibits like glue this morning. There's all kinds of things missing. In spite of what the representation of Counsel is.

AGB/pp 3

MR. CARROW: Applicant's would agree with Mr. Barth's suggestion that perhaps we could proceed on with the panel and this kind of procedural matter could be discussed a little later on.

JUDGE KELLEY: We were going to go ahead thinking it was a mechanical thing that would take a minute or two. If there are disputes over the content of the exhibit, perhaps we should wait. What do you think, Mr. Runkle?

MR. RUNKLE: It makes no difference to us, sir.

JUDGE KELLEY: All right. Well, let's put it over then. Let me ask you this. Could you meet with Mr. Barth and Mr. Carrow after this panel, whenever it can be done, and see if we can't narrow down areas of dispute. And we'll take it up again then, prior to the time Mr. Bemis takes the stand, I gather. But that'll be the only crucial point.

MR. BARTH: Thank you, your Honor.

JUDGE KELLEY: Can we resume cross?

MR. RUNKLE: Fine

CROSS EXAMINATION (Continued)

BY MR. RUNKLE:

Q Mr. Watson, what percentage of Shearon Harris is completed?

A (Witness Watson) We are reporting the unit to be 88 percent complete at this time.

Q Let me refer you to page 14 of your prefile

AGB/pp 4

testimony. At the top of the page, the first full sentence -- the second full sentence, you state that 500 out of 1,064 systems have been released for test, do you not?

A That is correct.

Q When you refer to systems and systems components, what do you refer to in this context?

A Well, the systems basically, in fact the entire plant has been broken up into approximately 1,064 systems or subsystems. And these systems, as they are complete, are turned over for initial testing and this information provided here is the status of various systems which have been turned over for initial testing.

Q And this figure of 1,064 systems, at times in the past there have been less systems that needed to be tested, have there not?

A I don't understand your question.

Q Has this number always been 1,064?

A No, it has not.

Q At January of this year, how many systems had there been that needed to be tested?

A It was a number probably less than that. I do not know what the number is but as we proceed along and see that a particular set of subsystems represent a testable entity, we will, if they are not on the current list, we will add them as a testable entity. And achieve to complete them

AGB/Pp5

and conduct initial checkouts on the systems.

Q Who determines whether a system or subsystem is a testable entity?

A The startup organization under Mr. Willis makes that determination. They are the party that's responsible for testing those systems and they are the ones who define the testable boundary.

Q Of the more than 500 systems that have been released for tests, how many have been actually tested?

A (Witness Willis) Of the more than 500 that have been released for tests, all of them have received some testing. To explain better the methodology, a release for test RFT, as we're speaking about, is defined as a release for test boundary, which is generally a portion of a system or a component that provides some testing opportunity.

Within that RFT boundary, there may be a number of tests that have to be done. There may be only one. And then the RFT's, let's say for a given system, there may be several RFT's that combine together, put a whole system together. And therefore, the testing on the individual RFT's would ultimately depend on the other RFT's associated with it in that system boundary as well as possibly RFT's in other systems that would be required to support that.

So it's a progressive sort of thing. ANd there has

AGB/pp 6

been testing performed on all of these RFT's to a degree. But it has not yet been completed.

Q Is there a procedure where the startup unit will make a final determination that a system is completely tested?

A Yes there is. All the testing has been planned in advance. The testing program is divided into three phases.

There is basically a checkout phase which entails the initial rotation of motors, the initial run-in of pumps, calibration of instrumentation, alignment of couplings, transmission checks to insure that signals are going to the right place, and that sort of thing. That is followed by the pre-operational test program in which entire systems are tested as a unit and may be -- and possibly several systems tested as an integrated subset.

Finally, when that is done it leads to the initial criticality and power range testing, which comes after the licensing of the plant. We are currently in the initial phase, the first phase, which is equipment checkout.

MR. RUNKLE: Excuse me for just a minute.

(Counsel conferring.)

BY MR. RUNKLE:

Q Has the startup unit -- are they operating from a schedule for testing?

A Yes. Yes, we are.

Q Can you pinpoint where on their schedule they are.

AGB/pp 7

If we were to look at the schedule today, could you say that the startup unit is at this point?

A You would have to be a little more specific. I'm not sure I understand your question.

Q On the overall schedule for testing of the different systems and system components, the startup unit is at a certain point. They are doing certain -- the initial phase right now, are they not?

A Yes.

Q Can you give us a percentage of how much they have done and how much they still have to go on the testing?

MR. CARROW: Your Honor, can we just get a clarification as to what is meant in terms of perhaps all the systems or whatever Mr. Runkle is referring to? I think if he was a little more specific on the question our witnesses would be able to answer it.

JUDGE KELLEY: Is it all or is it just those that have been turned over so far? Or some other --

MR. RUNKLE: It would be all the systems whether they have been turned over or not.

JUDGE KELLEY: Total systems.

MR. RUNKLE: Yes.

MR WILLIS: I can give you an approximation in terms of numbers of evolutions that we have identified as definable tests. And of some 4,000 plus evolutions that we

AGB/pp 8

have identified we have completed 800 plus.

So it's around 20 percent in terms of numbers.

BY MR. RUNKLE:

Q So the 4,000 plus evolutions would correspond to the 1,064 systems?

A (Witness Willis) That's correct. That would include all three phases of testing as well.

Q In some of the areas of construction, do you also maintain records on the installed quantities of the job?

A (Witness Watson) Yes, we do.

Q Such as concrete pouring?

A A typical example, yes.

Q And you have a figure for how much concrete that needs to be poured at the Harris plant?

A Correct.

Q And for concrete pouring, what percentage are you on that job?

A I don't have those figures immediately in front of me,but my recollection is we are approximately 99 percent complete on concrete.

Q What percentage of cable is left to be pulled and terminated?

A Do you want specific numbers? I do not have those available.

Q Can you give us a rough number?

AGB/pp 9

A I can give you approximate. We have approximate 50 percent of the cable required for the plant pulled.

Q How many pipe hangers are there in the plant?

A Upon completion there is something like 19,000 seismic hangers, something like 17,000 nonseismic hangers, and maybe 15,000 of a variety of assortments of other kinds of hangers.

Q On the seismic hangers, what percentage have been installed?

MR. BARTH: Your Honor, I object to the line of questions. The number of pipe hangers or the number of pipe hangers that are installed are unrelated to the contention which is the management capability of Carolina Power and Light to safely operate the Harris facility.

The fact that there are 19,000 pipe hangers is irrelevant to that contention and this line of questioning. He's only been asking these kinds of numbers. It has no relation to management qualification. We object to the line and the particular question, your Honor.

MR. CARROW: Your Honor, I was going to also object particularly in line of our previous discussions during this proceduring of construction. We have said that that has possibly some relevance but it's marginal and perhaps certainly not as strong as evidence of their ability to operate the Harris plant safely. And I think we're venturing

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End #9

AGB fls

with each question deeper and deeper into the construction area which has minimal relevance.

JUDGE KELLEY: Mr. Runkle, do you want to respond?

MR. RUNKLE: Where I am going in this line of questions is to first of all, quantify how much work that needs to be done and second, to see if there's any relationship to that. And how they evaluate the performance of their employees.

And that would be based on productivity rates or what have you.

AGB10/eb1
fls AGB 9

MR. BARTH: Assuming that's the proffer, your Honor, I think it clearly makes the case for the Staff that it is totally unrelated to the contention which is management capability of these people to operate the plant safely when it goes on line in 1985 or 1986.

JUDGE KELLEY: Wouldn't you have to have a predicate? I mean if I follow your point, your thesis, roughly stated, would be there is an awful lot yet to go, we're really behind, we're playing catch-up ball, so let's rush along and meet the schedule.

Is that the point?

MR. RUNKLE: That would be a fair summary.

JUDGE KELLEY: Have we established that they are behind? Apart from the statement the other day about the possibly slippage of a matter of three months -- is that what it was? -- I don't know that we've heard anything to support that thesis that the testing figure we got....

I think you would have to have some predicate, predicate in terms of what the answers are that establish that they are way behind, so to speak, before we would get to evaluating employees and giving high marks for people who get the most out the fastest, and so forth.

MR. RUNKLE: We do have at this time that the plant is 88 percent complete.

JUDGE KELLEY: Right.

AGB/eb2

MR. RUNKLE: And we do have a June '85 fuel loading date.

JUDGE KELLEY: That's so. Does that establish that they're behind? I don't know that it does or it doesn't.

MR. RUNKLE: We would argue that they are, and that they cannot do that in ten months.

JUDGE KELLEY: Well, we heard Mr. McDuffie, I believe yesterday, say that they reevaluate the schedule periodically and they are about to reevaluate again toward the end of this year, and at that time they may be adjusting the schedule and slipping the fuel load by some amount of time. I don't think he gave any very specific figure.

You can argue that it only being 88 percent done in that time frame is behind, but I don't know that you've got much to support if from that we've heard.

Do you want to ask some questions about whether things are generally behind, and how much? Go ahead. You can try that.

BY MR. RUNKLE:

Q In January of 1984, what percentage of the plant was complete?

MR. BARTH: Your Honor, the objection still stands. This is exactly the same question to which we objected before. He--

JUDGE KELLEY: He said January '84.

AGB/eb3

MR. RUNKLE: Right.

JUDGE KELLEY: Your question earlier was right now, and January '84 is the first of the year.

MR. RUNKLE: Yes, sir.

JUDGE KELLEY: You're trying to-- All right.

Go ahead, if you can give the number. I don't know if you brought these numbers with you. If you can give an estimate?

WITNESS WATSON: I don't have that number available. It would be in the very high 70s or low 80s.

Let me just clarify one thing.

The figure I gave you and the figure I'm talking about is a relative measure of the percent complete with respect to construction. It has no relevance at all to the testing program. It has principal relevance to completion of the construction effort, and 100 percent is not necessarily a requirement for the license.

Our measure includes landscaping, aerial lighting, and other non-required items.

BY MR. RUNKLE:

Q At what percent completion would the plant be at when you load fuel?

A (Witness Watson) I don't have that figure. We would have to see how construction progressed, and clearly, when we met all the requirements for the license, we would

AGB/eb4

proceeding towards acquiring a license.

Q What is the minimum percentage of construction that could occur before you begin to load fuel?

A I don't know that there is a figure. The minimum is obviously meeting all the regulatory requirements which are prerequisites for achieving fuel loading.

Q You don't need to landscape before you fuel load, do you?

A That's correct.

Q What percentage--

A I don't know.

MR. CARROW: I believe he just answered that he did not know.

I object to the question, your Honor.

JUDGE KELLEY: Sustained. He doesn't know.

BY MR. RUNKLE:

Q Would it be fair to say that since January of 1984 you have completed on the order of 5 to 6 percent completed?

A (Witness Watson) I don't think that's a fair characterization.

Q Why do you think that was not a fair characterization?

A Because I believe I testified in January of '84 we were someplace in the high 70s to low 80 percent, and I said earlier that we, at this point in time, were 88 percent.

AGB/eb5

I would say the span is more like 8 percent.

Q Okay.

Would it be fair to say that you have completed 8 percent since January?

A It is probably a fair characterization.

Q All right.

Would it be fair to say that that would be about 1 percent completion a month over the last eight months?

A I think numerically if you made that division you will find its percent a month. Then if you looked forward I guess you would say we would probably finish in about 12 months. It would be at 100 percent.

Q Will you finish within 12 months?

A We are examining the schedule and at this point in time we see systems that are behind, we see some systems that are ahead of schedule. At this point in time we do not have a clear definition exactly what our best projections are with respect to achieving fuel loading.

Q Sir, one of your responsibilities is for construction, is it not?

A My responsibility covers all the site activities which certainly includes construction, yes.

Q And in Mr. McDuffie's evaluation of your performance, does he look on the percent completed of the plant?

AGB/eb6

A I would suggest you ask Mr. McDuffie that question.

Q When he discusses your evaluation with you, does he discuss the percent completion of the plant construction?

A Probably on a weekly basis, or even more frequently than that, we discuss the status of construction. Whether it's by percent or whether it's by systems, we continue to discuss that on a daily basis, essentially.

Now you would have to ask Mr. McDuffie as to whether he is judging my performance against those conversations.

Q In your opinion, does he judge your performance by those conversations?

A In my opinion, Mr. McDuffie conveys to me through our conversations his appraisal of my performance. Now whether he uses that specific number I do not know.

Q Does Mr. McDuffie convey to you his satisfaction with the way -- with the speed in which the plant is being constructed?

A I think we all, including Mr. McDuffie, would like to see our progress at a higher rate than we are presently achieving. The cost of these projects clearly is a tremendous amount of incentive to get the plant built as soon as possible, but in the safest configuration as possible.

Q In your Planning and Control Section do you receive regular reports on how much the plant is costing?

AGB/eb7

A Yes.

Q Do you then present those to Mr. McDuffie?

A There is a continuous flow of that kind of information to those parties that require that information.

Q And Mr. McDuffie would be one of those parties?

A He certainly is.

Q In general would you say that Mr. McDuffie was satisfied with your performance in your position at the Harris project?

A I would say Yes.

Q How does he convey this to you?

A As I mentioned, we have essentially daily conversations. And I guess in summation of those conversations, I typically feel I'm getting the signal that he is reasonably pleased with my performance. He certainly has lots of constructive ideas and suggestions for me which he would like for me to implement, and I attempt to implement those.

Q Do you and Mr. McDuffie, on a regular basis, review such things as the percentage of cable left to be pulled and terminated?

A Yes, we do.

Q Is the percentage of cable left to be pulled and terminated within the schedule that you had set up for the percentage of cable to be pulled and terminated?

A Please restate that.

AGB/eb8

Q Let me put it simply.

A Yes, please.

Q In the area of cable pulling and termination, are you on schedule or behind schedule?

A We believe-- I believe the remaining work to be done with respect to cable pulling will not be an impediment in us meeting our schedule.

Q Do you operate in construction using the critical-path method?

A Yes, we do.

Q What is the critical path for the completion of Shearon Harris?

A At this point in time, the chemical and volume control system completion.

JUDGE KELLEY: What is that in sort of simple terms, lawyers' terms?

WITNESS WATSON: That is a large system containing many, many subsystems which provide makeup water to the reactor coolant system. It conditions -- cleans up the system. It provides conditioning of reactor coolant pump leakoff systems.

It is a very complicated, large-piping, small-diamter system.

JUDGE KELLEY: Thank you.

BY MR. RUNKLE:

AGB/eb9

Q Is the chemical and volume control system on schedule?

A (Witness Watson) It is not.

Q How many months or weeks is it behind schedule?

A It is approximately 13 weeks behind schedule. I believe that's consistent with the three-months discussion Mr. McDuffie had.

End C10

C 11 fls

AGB#11
agb/agb1

Q. On the schedule for the construction of the chemical and volume control system, does it also need to be inspected after it is installed?

A. Yes, very much so.

Q. Is that included in the 13 weeks' delay?

A. Is what included in the 13 weeks' delay?

Q. Is inspection included in the overall completion of this system, the overall installation of this system?

A. Inspection is a prerequisite for that system to be turned over to the startup organization at what I had identified identified to you as the scheduled point in time that that system was to be turned over to the startup organization. So it clearly would include all of the necessary quality inspections that would be required for that system prior to turnover.

Q. And the startup units would then have to test those systems?

A. That's correct.

Q. All right. That wasn't as complicated as we made it there; I think that's much simpler.

Has equipment originally slated for Units 2, 3 and 4 been delivered to the Harris site?

A. Much of it has been, yes.

Q. Do you plan on using that equipment for Harris Unit 1?

agb/agb2

A. We have examined our inventory of equipment and are continuing to define parts, pieces and systems that would be advantageous to put in inventory as spare parts in lieu of procuring additional spare parts. So some portions of those systems indeed will represent spares for Unit 1.

Q. By "spares," are you also referring to backups, is that the same term?

A. That's the same term, yes.

One would normally have a reasonably large inventory of spare parts in any system like this, a nuclear system. And, in lieu of procuring additional spare parts, it is advantageous to both the company and to the ratepayer to utilize existing parts.

Q. How is this equipment in your inventory stored?

A. The equipment is stored in accordance with the vendors' requirements for storage, whether it requires a particular temperature or condition -- electronic gear typically requires moisture temperature control -- that equipment is appropriately stored.

Q. And those facilities are available at the Harris site?

A. Those facilities are available. That equipment is stored in those environments.

agb/agb3

Q. In your storage of your inventoried equipment, have you ever had any problems with maintaining the vendor requirements for storage, such as a humidity, temperature drop, that kind of thing?

A. I would expect we've had some difficulties at times, yes.

Q. How would those difficulties be noticed?

A. Through routine surveillance or inspection of the equipment being stored?

Q. And who would do this routine inspection and surveillance?

MR. CARROW: Your Honor, I'm going to object at this time to this whole line of questioning. I don't really see the relevance of this to the contention which is the ability to safely operate the Shearon Harris plant and I was wondering if Counsel for the Intervenors could direct us as to where we are going.

JUDGE KELLEY: Mr. Runkle, could you tell us where we are going?

MR. RUNKLE: If the equipment is not handled right or stored right, it won't function when it is put into operation at the plant.

The witness stated that they had equipment that had been ordered for the other units that had since been cancelled and they need to have long-term storage

agb/agb4

of this equipment in their inventory.

JUDGE KELLEY: So?

The thing is almost anything that happens at a nuclear power plant is relevant to management. If you start talking now about storage of parts in as superficial a way as will necessarily be the case for the next 20 minutes, it's sort of hard to see how that is going to advance the inquiry very much.

MR. RUNKLE: I don't have 20 minutes of questions, I think that was about the last one.

JUDGE KELLEY: It was the last one?

MR. RUNKLE: It can be.

JUDGE KELLEY: I will sustain the objection. I think it is just too far afield.

(Pause.)

BY MR. RUNKLE:

Q. Sir, how many contract personnel are now employed at the Harris plant?

A. (Witness Watson) Approximately?

Q. Yes, approximately.

A. There are approximately 5000 contract employees at the Harris plant total.

Q. And your line supervisors -- excuse me, your line inspectors would inspect all the work done by these contract personnel?

agb/agb5

A. If the work required inspection, whatever the requirements for inspection that are mandated by a regulation or that are prudent, that work would be inspected and judged as to whether it met the appropriate quality or not.

Q. And those would be the CP&L employees that would be the inspectors?

A. Not necessarily. We do have contract personnel providing construction inspection as well as quality assurance functions for the site.

However, in essentially all cases, they are under the supervision of CP&L personnel.

Q. So CP&L would have some oversight or inspection of the inspectors?

A. Absolutely. We ultimately have the responsibility.

Q. How many inspectors does CP&L have at the Harris plant?

A. When you say "inspectors," I would have to say that we're talking about people who assess the quality of safety-related equipment and I would place those somewhere between 350 and 400.

But you recognize, of course, that those are specifically designated and qualified inspectors, but you recognize that there is a line management that certainly has an inspection requirement. All line management has

agb/agb6

a responsibility for assuring that the work done under their supervision is of appropriate quality.

Q. And the figure you gave of 350 to 400 inspectors, would that include contract inspectors?

A. Yes, that would include some number of contract inspectors.

A. (Witness Willis) I might point out that the exact number, I believe, was given in Mr. Banks' testimony earlier on, so those numbers are available.

Q. Now is there a differentiation between QA personnel that are inspectors and line inspectors or other inspectors?

A. (Witness Watson) Yes. There are two formal inspection organizations at the site. One reports in the line function called the construction inspection and the other organization reports through -- outside the Harris project in to Mr. Banks. I think he probably discussed that organization in some detail several days ago.

Q. So in the figure of 350 to 400 that would be your construction inspectors?

A. No --

MR. CARROW: Your Honor, I'm going to object again at this point for two primary reasons: Number one is that this very same area has been gone over by

agb/agb7

Mr. Runkle with Mr. Banks previously and, second, again I think we're venturing afield here and not getting to the point of the contention, so relevance would be the second objection.

JUDGE KELLEY: Mr. Runkle, specifically on the point I thought the number of QA people at Shearon Harris -- I thought we got that from Mr. Banks.

MR. RUNKLE: We had gotten that from Mr. Banks and we also had gotten the number of 350 to 400 inspectors and then Mr. Willis said that Banks had given that number on inspectors. I think that the testimony in the record will be confusing at this point how many inspectors there are there.

JUDGE KELLEY: I frankly don't remember. Are you saying that Banks gave different numbers?

MR. RUNKLE: No. Banks gave a number of 154 Harris inspectors and 200 contract inspectors that report directly to him through the QA program.

JUDGE KELLEY: Right.

MR. RUNKLE: Now these witnesses are saying that there are another line of inspectors in construction inspection.

MR. CARROW: Mr. Banks also testified to that, too.

JUDGE KELLEY: These are other than QA people

agb/agb8

people I understand, is that right?

MR. RUNKLE: Yes.

JUDGE KELLEY: Okay.

Now do you think there is some significant inconsistency between what Banks said and what has been said here today?

MR. RUNKLE: I don't have anything in my notes that Banks had said how many additional inspectors there were not in QA. If he did that, I would be glad to rely on that in the record.

JUDGE KELLEY: These gentlemen have said how many contract -- not contract, construction inspectors approximately?

WITNESS WATSON: I did not say.

JUDGE KELLEY: Do you know?

WITNESS WATSON: I think there is approximately 150.

JUDGE KELLEY: Are these people -- They don't perform any QA function at all, is that right?

MR. WATSON: They perform a QC function in certain areas.

JUDGE KELLEY: But are the same areas then inspected by QC inspectors?

WITNESS WATSON: There is not a redundancy, no.

agb/agb9

JUDGE KELLEY: There is not a redundancy.

WITNESS WATSON: That's correct.

JUDGE KELLEY: Then Mr. Carrow has brought an objection about where we are going with this in light of our previously expressed view that construction activity is somewhat secondary.

So where are we? What point do you want to make, Mr. Runkle?

MR. RUNKLE: The point is just looking at the overall control of the construction by the contract personnel, they pointed to two principal methods of inspecting the work and also a line management function.

JUDGE KELLEY: What gives me some pause is that typically when you get into an area like this is if you really want to know about it in some kind of depth, it really takes quite a lot of time and we're sort of giving a once-over-lightly, five or ten minutes apiece to a lot of areas that one can't do justice to in that kind of time.

I gather you are not coming to this with any particular evidence of management failure or malfeasance, but you're just asking questions about these various areas, is that right?

MR. RUNKLE: Yes, sir.

JUDGE KELLEY: Have you got any evidence

agb/agb10

suggesting in this area there is something wrong?

MR. RUNKLE: Just the numeric evidence.

JUDGE KELLEY: What is the numeric evidence that anything is wrong?

MR. RUNKLE: That they have 150 inspectors, construction inspectors, to look at the work of 5000 construction contract personnel plus their other employees.

MR. CARROW: He's leaving out the QA inspectors.

JUDGE KELLEY: Maybe we can shed some light on that.

Can one of you comment on the 150 covering the work of 5000 people, is that what's happening out there?

WITNESS WATSON: I'm not sure how he comes up with his numerics, but I think the key thing is there is adequate coverage -- and the SALP IV certainly made strong reference to this -- there is adequate coverage with respect to inspection personnel and qualification of inspection personnel to conduct the necessary inspection on safety-related equipment.

The organizations that we have just talked about, construction inspection and quality assurance/ quality control organizations, principally are focusing their attention on safety-related construction items.

agb/agb11

I also pointed out that there are other mechanisms for inspection of quality of non-safety-related equipment as well as safety-related equipment which is fundamentally my responsibility as well.

The inspection program is an oversight on top of line management to provide some redundancy with respect to quality.

The bottom line is that in our professional opinion -- with a substantial amount of experience behind us -- that we have a sufficient number of inspections to cover the issues and the level of construction we are currently achieving and that there is additional evidence certainly in the SALP report that supports our position.

endAGB#11
WRBflws

WRB12/eb1
fls AGB

JUDGE KELLEY: Can I just ask you a question? I'm not quite clear on this yet.

Mr. BAnks is head of QA/QC. Correct?

WITNESS WATSON: Site QA/QC reports in through Mr. Banks. That's correct.

JUDGE KELLEY: Okay.

And I gather that all safety-related construction work done there -- take, for example, welding on safety-related items -- is inspected by a QC inspector who is ultimately in Mr. Banks' bailiwick.

WITNESS WATSON: With respect to welding, that is correct.

JUDGE KELLEY: Whether he be an employee of CP&L or he be a contractor employee, he still works for Banks. Is that correct?

WITNESS WATSON: That's correct.

JUDGE KELLEY: Now these 150 construction inspectors do not work for Banks?

WITNESS WATSON: That's correct.

JUDGE KELLEY: I thought the Banks QA/QC program was QA/QC for the entire site. Is that not the case?

WITNESS WATSON: That is not totally correct.

JUDGE KELLEY: There are certain things that get inspected by this category of construction inspectors outside of the QA/QC system?

RB/eb2

WITNESS WATSON: Outside of the direct line of responsibility. However, the QC function provides an umbrella over the top of them to insure -- to assure that they are following the necessary procedures and they are following the necessary qualifications of the inspectors, but not necessarily doing redundant inspection.

So there is a QC -- a QA envelope put on top of the construction and inspection organization by Mr. Banks' organization.

JUDGE KELLEY: Banks is over those 150 people in that sense?

WITNESS WATSON: In that sense, yes.

JUDGE KELLEY: He does not actually-- He and his people don't go out and look at welds, but they do see to it that the procedures followed by the construction inspectors are consistent with their standards. Is that right?

WITNESS WATSON: Absolutely correct.

JUDGE KELLEY: That helps me. I don't know if it helps you, Mr. Runkle. It helped me a little bit.

MR. RUNKLE: That was my understanding of it once we got the numbers pinpointed.

WITNESS WILLIS: I just might add, specifically on your question on the welds, all non-destructive examination in support of construction is done by Mr. Banks' personnel. The construction inspectors are principally in-process

inspectors, bolts tightened, couplings aligned, for which they provide documentation which is ultimately reviewed by the QA organization.

JUDGE KELLEY: Thank you.

BY MR. RUNKLE:

Q Who directly supervises the construction inspectors?

A (Witness Watson) A gentleman named Mr. William Langlois.

Q And which unit or subunit is he in?

A He is in the-- He reports through the Completion Confirmation organization.

Q That's the new section?

A That's correct.

Q Where was he before the Completion Confirmation section was established?

A It was an independent arm of Construction.

Q In the Construction section are there inspectors?

A Currently no.

MR. CARROW: Judge Kelley, I'm not sure that we finally got a resolution of whether this area was -- or an answer to the objection on the relevance of this.

JUDGE KELLEY: Well, that may be well taken. I think I sort of jumped into it, and then Mr. Runkle's question or questions after I got my problems straightened out might arguably have been raised by my intervention.

WRB/eb4

So I guess I am still concerned, though. Mr. Carrow has an objection about this general line, even though I went in to straighten out something in my own mind.

Let me ask you how much longer you intend to pursue this, Mr. Runkle?

MR. RUNKLE: We need to determine why inspection was taken out of Construction and put into a new unit.

JUDGE KELLEY: We do? Why?

It seems to me we spent a long time, for example, talking about the $600,000 fine, and we established that there was a management lapse there, and so we got into that in great depth.

But I have the feeling that we are just sort of wandering around here, that you don't have anything out of the discovery process which is any solid indication of a problem, and it is a sort of random questioning about the construction of the Shearon Harris to see where it leads. And that is something not warranted.

MR. RUNKLE: There are managerial changes at Harris and at their other plants in the last -- well, since '79. By just looking at the number and the reason why, I think it demonstrates that the management of these reactors have been in flux. They have been constantly being changed.

JUDGE KELLEY: Which particular official are we looking at now who was where?

WRB/eb5

MR. RUNKLE: Well, the inspection was an independent arm of Construction.

JUDGE KELLEY: "The inspection." Now what exactly is "the inspection"?

MR. RUNKLE: Okay. That would be construction inspection at the Harris plant.

JUDGE KELLEY: Construction inspection at the Harris plant.

And this was moved how?

WITNESS WATSON: It was moved within the last three weeks to the new organization that I discussed earlier.

JUDGE KELLEY: Well, we have been talking changes at upper levels of management at Brunswick and other places. Right now we're in construction of Shearon Harris, which you have already said is secondary. You are a ways down from the top of the management chart.

We will sustain the objection to this line of inquiry.

Switch to something more pertinent, please.

BY MR. RUNKLE:

Q Mr. Watson, in your management of the Harris Nuclear Project, do you review the SALP reports when they are issued?

A (Witness Watson) Yes, very critically.

Q Did you review the SALP III report?

WRB/eb6

A I have superficially read the SALP III, yes. I was not in my present position when SALP III was issued. I am generally familiar with its contents.

Q Have you read the SALP IV report?

A Yes, I have.

MR. BARTH: Objection, your Honor. It has been asked and answered several times by Mr. Watson.

JUDGE KELLEY: About SALP?

MR. BARTH: SALP IV, your Honor. He testified that he read it with great interest and he looked at its recommendations.

JUDGE KELLEY: Okay.

Go ahead.

BY MR. RUNKLE:

Q Sir, have you made a comparison of the findings and recommendations in the SALP III report as opposed to those contained in the SALP IV report?

A (Witness Watson) Yes, superficially I have tried to assess the findings of SALP III against the findings of SALP IV. Fundamentally I conclude that there has been significant improvement in a variety of areas as measured by the SALP reports.

Q And in your opinion, what are those areas that significant improvement has been made?

A I think in the area of containment and other

WRB/eb7

related structures, the SALP report shows a clear indication of an improvement between the two time periods.

In the area of support systems, there is clear indication of improvement.

There is strong indication in the area of quality assurance that significant improvements were likewise made, and that is very vividly indicated by the numerical writings.

I think in reading the test of the two reports one would conclude that, you know, principally in all areas, strengthening has been made.

Q And in your opinion there are no areas that have gone down or -- I think gone down.

A In the opinion of the SALP report, I believe that is what it concludes.

Q In your opinion are there areas that--

A You must recognize that I was not on-site during SALP III, so I have some difficulty in drawing that relevance.

Q In the three areas that you discussed, containment, support systems, and QA, did the numerical ratings go up or down?

A In two of those three they went up. In all cases the numerical ratings either stayed the same or went up for all categories evaluated between III and IV.

Q Which two went up?

A Containment and support systems.

WRB/eb8

12:36

MR. RUNKLE: Excuse me. This would be a good time for a break for me.

JUDGE KELLEY: Okay. Let's take about ten minutes.

(Recess.)

JUDGE KELLEY: Back on the record.

Mr. Runkle, will you resume your cross?

WITNESS WATSON: If I could clarify my answer to the last question, I was looking at some information whereby I may have confused everyone.

There is a clear statement of the trends in SALP IV against SALP III on page 8 of the SALP IV report. And I will be glad to read that into evidence if that is what you would like.

JUDGE KELLEY: Is it very long? Is it a sentence? Is it a paragraph?

WITNESS WATSON: It's a table which identifies areas. It identifies Region II's impression or trend of whether there has been improvements or not in those areas.

JUDGE KELLEY: SALP IV is already in evidence, so I think your having reference to that would be sufficient.

WITNESS WATSON: All right, fine. That would correct my answer if there were any mistakes in my answer.

JUDGE KELLEY: Fine.

BY MR. RUNKLE:

Q Why don't you turn to page 8 of the SALP IV?

WRB/eb9

Sir, I think you said before our break that the facility performance of the Harris plant had improved, in your opinion, after your review of the SALP IV in the areas of containment and other safety-related structures, support systems and QA.

A (Witness Watson) I was just attempting to correct that mistake that I made earlier. I was incorrectly looking at some other information.

Incidentally it was not my opinion. I think I was reading from the SALP report.

Q All right.

So you would agree with page 8 of the SALP IV report that the performance at Harris had improved in these four categories it states?

A I believe I answered that question by saying I was not privy to the activities at the site during the generation of SALP III and therefore I really could not make a judgment with respect to improvements. I think the SALP report has made -- established that. But not having been there during that period of time, I cannot judge that.

Q Could you turn to pages 61 and 62 of the SALP IV report? Actually it starts on page 60 of that report.

Do you have that in front of you, sir?

A Yes, I do.

Q In the period covered by the review in SALP IV,

WRB/eb10

has Harris had problems in the category area of electric power supply and distribution?

A I think SALP IV clearly identifies the violations that occurred and NRC's observations with respect to that area.

Q And there were 12 violations in this area, were there not?

A That's correct.

Q And of these, two were Category IV and ten were Category V.

A That is also correct.

Q Let's look a little closer at the first of these violations as listed here on page 61.

A Yes.

Q Are you familiar with this violation?

A In general, yes; the specifics, no.

Q Do you recall when this violation was issued?

A No, I do not.

Q Can you refer to page 60 of the SALP IV report?

At the bottom paragraph, the second sentence, it states that this violation was issued in May of 1983.

A Thank you.

Q To your recollection that would be correct?

A I will accept that, yes.

Q And did not this violation result in 100 percent

WRB/eb11

reinspection of all previously inspected cable tray supports and hanger welds?

A Yes, it did.

Q In your opinion, did all the cable tray supports and hanger welds need to be reinspected?

A If I recall the instance, I think we concurred it was certainly prudent to go back and do a complete reexamination of that in light of the findings that had surfaced.

Q And have you gone back and reinspected the cable tray supports and hanger welds?

A It is my understanding we have completed that reinspection for the areas in question.

I cannot attest to the fact that we have completed those inspection for all cable raceways.

End C12
WRB 13 fls

WRB/pp 1

#13

Q Mr. Willis, do you know how far along the inspection program is for the cable tray and hanger welds?

A (Witness Willis) No, I do not.

Q Sir, if I can draw your attention to page 56 of the SALP III report.

Sir, in the period of time covered by the SALP III report, there were only eight violations, were there not?

A (Witness Watson) In total, are you referring to page 56?

Q Yes, sir. Page 56.

A That's correct.

Q And on page 55 in the second paragraph, it describes a weakness in the welding and welding inspection of electrical items and supports, does it not?

A Yes.

Q To your knowledge, what efforts were made after the issuance of SALP III report and the specific violations to remedy this weakness?

A I do not have that specific information. However, I am aware of the fact that when SALP III was issued, action plans were developed to implement actions where shortfalls or deficiencies were identified. ANd those action plans were fully carried through, expeditiously, I might say. And that's the specific correction that was taken with regard to that. I cannot provide any detail with respect to it.

WRB/pp 2

Q Mr. Willis, can you add anything to that?

A (Witness Willis) I cannot add anything to that from personal knowledge, but I might point out that the SALP III report, page 55, the second paragraph under 6A, the second paragraph, the latter portion of that delineates some corrective actions which included "increased surveillance of manufacturers' shop activities, increased onsite inspections required of material, reinspection of material, equipment that may have not conformed well or defective, an improved training program for welding inspection personnel."

That's quoted from the SALP report itself.

Q You would be fairly confident that those types of corrective actions would have been taken and completed?

A (Witness Watson) Yes.

Q Sir, are you aware of how many what have been called CDRs and also 5055-E reports have -- are in each of the SALP reports?

MR. CARROW: Your Honor, I think I'm going to have to object again really on the same grounds that we discussed before. This line of questioning has gone on for a while and it seems like it has just stalled in the construction area. We're not getting any closer to talking about the safe operation of the Harris plant.

JUDGE KELLEY: The question is about 5055-E reports arising at Harris?

WRB/pp 3

MR. RUNKLE: Yes, sir.

JUDGE KELLEY: And where is that going to lead us to.

MR. RUNKLE: Rather than go down and make comparisons in each of the items between SALP III and SALP IV, I only took one out of the nine. And I also wanted to compare the CDRs before asking the witness about his evaluations, his performance evaluations.

JUDGE KELLEY: Do it briefly. I overrule the objection to that extent.

BY MR. RUNKLE:

Q Sir, if you could turn to page 68 of SALP IV?

A (Witness Watson) Yes, I have it.

Q ANd compare that to 61 of SALP III.

A Yes.

Q If you could look at, up at the top, do you understand what I mean when I ask about a 5055-E report?

A ARe you talking about CDRs?

Q Yes, sir.

A Okay. THe 5055-Es I understand.

Q That are the same thing?

A Yes.

Q Do you regularly review the construction deficiency reports?

A Yes, I do.

WRB/pp 4

Q All right. In the SALP IV it lists 23 CDRs, does it not?

A That is correct.

Q And in the SALP III it lists 24?

A Okay.

Q In looking at this, can you support your statement that there was substantial improvement at the Harris plant between SALP III and SALP IV?

MR. BARTH: Objection, your Honor. I don't think he testified to this in regard to these particular aspects. He testified as to what NRC itself stated. I don't believe he has testified in this regard as to his own personal judgment.

JUDGE KELLEY: Well, let's let that be the response if that's what it is.

I overrule the objection.

MR. WATSON: The response is but I have not, as I have testified earlier this is -- I have stated or read into what the SALP III versus SALP IV stated. I also stated that I was not onsite during SALP III and therefore cannot make a personal judgment.

BY MR. RUNKLE:

Q Do you also review the violations that occur at the Harris plant?

A (Witness WAtson) Yes, I do.

WRB/wb1

Q Subject to check, will you accept that there were 20 violations at Harris in the period of the SALP III?

MR. CARROW: I would appreciate a reference to that, your Honor.

MR. RUNKLE: Page 61 underneath the CDR reports it does give violations. It gives a total.

JUDGE KELLEY: For SALP III?

MR. RUNKLE: Yes, sir.

WITNESS WATSON: That'- what the summary of the SALP III report states, yes.

BY MR. RUNKLE:

Q And on page 68 of the SALP IV it gives a total of 36 violations.

A (Witness Watson) Yes.

Q Is that an improvement, in your opinion?

A If one were to try to judge changes against strictly those numbers, I do not believe they accurately represent anything of any significanc. I think one must examine the level of activity, the level of inspection, and there are a large number of factors.

I think to take two numerical numbers like that has absolutely no relevance whatsoever.

Q But if we could summarize all the various numbers in SALP III and SALP IV, in your opinion would that demonstrate improvements made at Harris in this time?

WRB/wb2

MR. CARROW: Your Honor, I think that Mr. Runkle would have to be more specific than that to ask a question which I think our witnesses could answer. And I would object on that basis.

MR. BARTH: We would object differently, your Honor. Both of the reports are in evidence. I think that the kind of conclusion that Mr. Runkle wants to make is the kind of conclusion for counsel to state in proposed findings. The facts of the SALPs speak for themselves. This kind of conclusion he wants to make, that he can summarize these -- which I doubt, and as to which we have no evidence that they can be summarized -- is the type of thing for counsel to argue in the proposed findings.

JUDGE KELLEY: What do you mean by "summarized," Mr. Runkle?

MR. RUNKLE: If we look at all the numbers in both SALP reports--

JUDGE KELLEY: All the numbers?

MR. RUNKLE: Yes. And I asked the witness-

JUDGE KELLEY: Which numbers? Like rankings?

MR. RUNKLE: Yes.

JUDGE KELLEY: It's like golf, the rankings: the lower you are the better off you are; right? You can't add them up.

Can we stipulate that Shearon Harris comes off

WRB/wb3

better in SALP IV than it does in SALP III?

MR. RUNKLE: No, we cannot do that.

JUDGE KELLEY: You can't?

MR. RUNKLE: No.

JUDGE KELLEY: I'm not aware that a rational argument to the contrary could be made. Speaking for myself, that's my view.

I'm referring to the grades. All I'm looking at is the grade. The grades are better, are they not?

MR. RUNKLE: I would not be willing to accept that as a stipulation.

JUDGE KELLEY: I'm using the term loosely. I'm not seriously asking you to stipulate. That's a colloquial use of the term.

But isn't it true that the grade and the categories for Shearon Harris in SALP IV are better than they are in SALP III?

MR. RUNKLE: The only one that I see any improvement on is licensing, and the rest of them are exactly the same.

JUDGE KELLEY: Excuse me a minute.

(Pause.)

MR. BARTH: Your Honor, I might call the Board's attention to page 8 where this is set forth.

JUDGE KELLEY: On SALP IV? Yes, I got that.

WRB/wb4

Where is it in SALP III? A comparable table in SALP III, where is that?

MR. RUNKLE: Sir, that would be on page 4 in SALP III.

MR. BARTH: I draw your attention to the heading for the last column on page 8 of SALP IV, which is "Trend During this Period," which is the rating period. You don't even need to look at SALP III.

JUDGE KELLEY: Well, if you look at the right period it either stayed the same, was not determined, or got better; isn't that right?

MR. RUNKLE: Yes, as do the category ratings. I think you can make that comparison.

JUDGE KELLEY: Okay. And there were various 3's in '83, and the 3's are all gone in '84.

My understanding of SALP is that that ranking is -- if there is a bottom line in here, that's where it is. That was my understanding. Am I wrong?

MR. RUNKLE: Well, that gives the bottom line between the different SALPs. That is the summary for SALP III on page 4, and that's the summary for SALP IV on page 8.

JUDGE KELLEY: For Shearon Harris?

MR. RUNKLE: Yes, sir.

JUDGE KELLEY: Right. And my statement was I thought it was clear to me at least that Shearon Harris did

WRB/wb5

better in SALP IV than they did in SALP III. But I think you disagreed with that; right?

MR. RUNKLE: I disagree if you're looking at the -- you know, solely at the category ratings.

JUDGE KELLEY: The category ratings are an attempt, are they not, to summarize how a plant did? There's a lot of detail on the back, violations and all the rest.

But isn't that an attempt to sort of draw together and say this is where they came out on these various categories?

MR. RUNKLE: I have questions about that that we will need to ask Mr. Bemis when the NRC Staff presents their case.

JUDGE KELLEY: I guess you and I are testifying at great length, which is not supposed to be done. But then I thought you said to the witness that you were going to ask him about a summary of these two reports and what conclusion he drew. Can you restate your question?

MR. RUNKLE: My question was, in his opinion did the differences in the violations, which increased from 20 in SALP III to 36 in SALP IV, did that illustrate the improvement that he said came from the SALP IV -- that was shown in SALP IV?

JUDGE KELLEY: You answered that, didn't you?

WITNESS WILLIS: Yes.

MR. CARROW: Your Honor, I would have to disagree

WRB/wb6

that that was the question. The question that set us off on this was when he asked him to look at -- quote/unquote -- all the numbers and make some sort of a comparison.

JUDGE KELLEY: Yes; and then I jumped in because I said, Gee, when I look at numbers in SALP I look at the grades, and that I thought the grades were better in IV than in III. And I looked at that again, and I'm right about that. But you're saying that some of the numbers are somehow more significant.

Do you want to restate your question?

MR. RUNKLE: Why don't I just withdraw it? I think we have pretty well plowed it under.

End 13
C fls

JUDGE KELLEY: Okay.

WRB/pp 1
#14

BY MR. RUNKLE: Let me draw your attention to page 17 of your prefile testimony. In this and the following page, you discuss or you present that reactor operators and senior reactor operators now at Harris may have had their experience at the Robinson and Brunswick plant.

A (Witness Willis) A number of them have, that's correct.

Q How many licensed SROs and ROs are currently on the staff of Harris?

A As we have not yet taken the NRC exam for licensing of operators, we have none that are licensed on the Harris plant. However we have 20 personnel who were previously licensed on other reactors, other commercial reactors.

We have nine personnel who were previously licensed on PWR reactors and 11 who were previously licensed on BWR reactors.

Q And on page 18 of your prefile testimony, you state that 12 ROs and 6 SROs were previously licensed at the other plants, at the other CP&L plants, do you not?

A That's correct.

Q And of the 12 ROs, how many of those have PWR experience and how many have BWR experience?

A There's a total of four reactor operators who have PWR experience. ANd eight reactor operators who have BWR experience. And five senior reactor operators who have PWR

experience. And three senior reactor operators who have BWR experience.

Q And when you are referring to PWR experience, that would be at the Robinson plant?

A Not necessarily. There are -- we have some people from other plants as well.

Q Okay. When do you expect to have your reactor operators and senior reactor operators licensed for the Harris plant?

A In 1985. We have a tentative schedule now that would submit the candidates for licensing, I believe, starting in February. And continue through April, I believe.

Q And then when would the licensing take place.

A The format is that the candidates are submitted to the NRC for licensing. They administer an oral,written and simulator examination. They then go back to the region and evaluate the results of those and notify the company at some time later of the results of those examinations. And issue a license accordingly.

Q And when do you expect a license to be issued for the Harris ROs and SROs?

A Generally you would expect that a decision would be made within 60 days thereabouts, of completion of the examination. So for those in February, it would be probably April.

WRB/pp 3

Q When the Harris plant is at its full complement of staffing, how many SROs and ROs do you expect to have?

A The minimum -- let me start off first and say -- the minimum number required to meet the regulatory requirements are 12 of each. Twelve senior reactor operators and 12 reactor operators.

We have considerably more number than that in training. And we would hope to license the majority of those people. However, we have made an allowance for attrition and our expectation would be that we would end up with something in the neighborhood of around 44 to 50 or something in that neighborhood, licensed. Assuming normal attrition rates.

Q How many shifts will be operated at Harris when it's in operation?

A We plan to operate six shifts.

Q With the same scheme as the Brunswick reactor, six shift rotational --

A Yes.

Q What's the minimum staff that you will have no a shift?

A Approximately 15.

Q And would that be a normal shift?

A That would be a normal shift. It could be -- that number could be larger.

WRB/pp 4

Q And of these 15, how many would have SRO, would be SRO licensed?

A Two.

Q And how many would be RO licensed?

A Two.

MR. RUNKLE: I have no other questions for this panel.

JUDGE KELLEY: Okay, thank you.

MR. BARTH: The Staff has no questions, your Honor.

EXAMINATION BY THE BOARD

BY MR. BRIGHT:

Q Mr. Davis, will you turn to page 11 in your testimony and let's talk about the cold licensing and licensing training just a little more. I want to get it clear in my own mind what you're able to do and what you plan to do.

It says here that you have a four-week presimulator course in which you, among other things, you have topics of emergency and abnormal operating procedures and related industry events.

Of that four weeks, the emergency and abnormal procedures, how much time in that four-week time period would you expect those topics to take up?

A (Witness Davis) Mr. Bright, we have a specific lesson plan to cover those subjects, including the emergency and abnormal procedures. I'm not sure exactly in terms of days or weeks how much time that would take. But that does

WRB/pp 5

include training on emergency operating procedures, the logic flow diagrams for the procedures and I will see if I have a finer breakdown on that.

Q Well I'm not -- I just wonder how much emphasis you put on it. The quantitative time is not hearly as valuable as the qualitative effort you put into it.

A Yes, it is a principal subject covered during that period for the presimulator. And then of course those procedures are reviewed and practiced on the simulator portion that comes after that.

A (Witness Powell) I might add on that that we spend -- I don't have exact numbers on it either -- but we spend approximately three days probably going over procedures, having them familiar with the procedures. We don't go into a great detail but we show how flow charts work, how the procedures work, and how they would utilize them. And we do some table-top problems. We'll give them one and have them go through and see if they can trace it through the procedures, planned emergency procedures, this type of thing, if they can classify the events.

And what we're doing is preparing them to go to the simulator. Once they get to the simulator they go over every procedure, abnormal procedure, general operating procedure in detail, discuss and then they actually manipulate it on the boards. So this is getting them ready for the

WRB/pp 6

simulator. It's an overview type thing. To get them ready to use them.

Q Well, you say also that another three weeks is devoted to transient and accident analysis and mitigating core damage. Now, does that follow from your emergency and normal procedures that you studied in the first four weeks?

A This is additional three weeks and it is broken up right now and is presented after they complete the simulator training.

Q You mean you go directly from the four-week to the simulator then back to the three-week?

A Yes. It's laid out so that you're preparing them for the simulator. It's strictly devoted to simulator preparation. So when we go to simulator we will not waste any time on the simulator trying to give them a big overview of what's going on. They're ready to step in and start 8 hour shift training on the simulator.

Q Let me ask you about the simulator. What are the capabilities of your present setup. I mean, in terms of abnormal -- setting the simulator up for some kind of abnormal situation.

A Yes, we have software for the computer system on the present simulator that does set up the conditions, the plant conditions, that would exist during abnormal conditions and those can be programmed in so that the students are not

WRB/pp 7

aware of the exact events that have been included. We have a lesson plan for each of the sequences of events. The instructor follows that and programs in then the students actually observe the conditions that change and they react to those. The computer software is programmed to give a wide range of those types of analyses. I'm not sure of the exact number, but there are a full range of the types of transients and abnormal conditions that we've included. And we go back and look at those as we observe actual reports of other incidents and we see that we have those covered in one or more of the lessons planned.

Q Would you say that these standard situations--I guess that's kind of a sense I got out of what you said--have these been studied before? Are they applying something that they have studied actually in your classes?

A Yes. They are tied to the overall program subject matter to demonstrate and to show the operating conditions. And a number of them are normal conditions, such as startup and going critical and then sending power, operating at power, then coming down. Different types of shutdowns. NOrmal conditions. In addition we have programmed abnormal conditions that might occur during actual operations relating to one or more malfunctions within the plant.

Those are the sequences that are programmed in and during various parts of the training, the students are not

WRB/pp 8

aware of what conditions are programmed in. They just react to the simulator and then the instructors observe that.

Q I was wondering just how your philosophy of education, maybe I guess that could be it -- when something strange happens -- you get a weird thermocouple reading and something else happens, you wonder did the temperature actually go up that high. And this over here seems to say that it did. And in case that was so then it would mean this.

But on the other hand, if that thermocouple was lying then it's something else entirely. If you'd like to look at TMI.

Is your training really sort of formulated around inducing these people to develop a logic pattern, perhaps. What to do when something really unexpected happens?

A Yes, our philosophy is to try to make it as realistic as to conditions and occurrences that might occur during operation and trying to get as realistic an opportunity for them to train under those different types of conditions as we can present to them. And that does include them reacting to readings and questioning whether the instruments are correct. And does it -- because as these conditions come up, they would refer to the operating procedures that are available in the simulator just like they would be in the control room. And they track out the logic of what sequence is occurring. And that's part of their reaction

WRB/pp 9

that the instructors observe and grade them on how their logic reaction was to the conditions that presented themselves.

And as we develop the lesson plans, we have tracked how that lesson plan satisfies one or more requirements of the license testing -- instruction requirements. Plus we tie that to actual events in industry that have occurred. Either our plants or at other plants. And during the course of that the instructors will review with them why this sequence and what it might relate to in an actual plant.

A (Witness Powell) Part of what I think you were asking also is about instrument failure. If one instrument fails what do you do? We go into this in quite a bit of detail in the sense of redundant instrumentation. If one fails we utilize tech specs, what do you have to do? Are these indications realistic? You've got two or three different ways to verify this indication. Does it make sense?

We go into theory that they've learned before. Into how thermocouples, RTDs, things of this nature work. If you shut down a reactor coolant pump you got an instrumentation over here that operates something else. You've got to be aware to override that particular instrumentation.

So we spend quite a bit of time on this. ANd when a failure does occur they have to go back through the logic diagrams and show how this could occur and why it did occur the way it did. And we will put in multiple failures and

WRB/pp 10

sometimes see if they can follow it through the logic part and realize that something else may have failed.

So we spend quite a bit of time. We don't just also train on failures. We put a lot of time into normal operations. What is a plant normally look like when it is operating. And so we're doing normal reactor startups, normal power operates without any failures whatsoever. Because you've got to know what it normally looks like to determine if something failed or not or if it's operating properly.

We can take instruments, fail them high low, stick them exactly where they're at, various things.

Q Yes. I was assuming that you gave them excellent training on normal operation. I was just curious as to what your philosophy is.

Then you say you devote this next three weeks to transient and accident analysis and mitigating core damage. And what -- now you've gone through some abnormal and emergency operating procedures in class and then you've done the simulator training for nine weeks and you've done a lot of abnormal situation work. I'm just curious as to what you do in that three weeks after you get through with the simulator.

A Right now this is under contract with Westinghouse. They come in and give two weeks of transient accident analysis

WRB/Pp 11

and mitigating core damage. And it is focused primarily on the FSAR Chapter 15, which is the major transients that are reviewed for the site for the plant.

We had run one course prior to the simulator where we had contracted and it did not go very well. It did not seem to fit in as well. So a decision was made to put it after the simulator because they been out seeing these evolutions some of their tracks and so forth, and now they were able to analyze just a little bit better.

Q So the training that they get on the simulator and the experience there makes them able to appreciate the real analytical.

A Yes. We felt it was logical to have it before the simulator the first time it was run. And it just didn't work out as well. We shifted it and there was pro and con both ways. And it seems to fit a little better now.

Q Thank you.

JUDGE KELLEY: We've heard some indications of the problems experienced at Brunswick in the past. One problem may have been shortage of enough highly trained personnel, people like operators. And you seem to be on a program to acquire and train a sufficient number as you've indicated earlier.

When you hear about shortage you always think, well what about pay scales. And I wonder if your pay scales are

WRB/pp 12

comparable and competitive. And if so, how do you know that? And would you agree that it's important that they be competitive. I would think so.

A (Witness Davis) Yes. It's a very competitive market.

Q How do you stand up in the market and hold onto people?

A We run salary surveys and look at data that's available to us that we can obtain from other sources of the utilities. And we try to judge the pay. And we do have a license pay which is an additional compensation for licensed operators. Plus we have salaries recognizing the credible nature of the skill. And we do review this to try to keep it competitive.

B-15

Because this is a competitive field and we want to be able to attract and maintain these qualified operators.

Q It's a rather narrow question, but we're talking about training and annual retraining. And I believe in the annual retraining context, Mr. Runkle asked whether there was also individualized training for people with some particular weakness. I don't know whether he had in mind tutoring or whatever. But I think the answer was well, no there was not individualized training.

But if the person flunks the test, if he is individualized in the sense that until he passes the test

WRB/Pp 13

he can't do the job, isn't that right?

A Yes, Mr. Chairman, I think the questions by Mr. Runkle as to individual training pay have been in the field of GET and there we do not normally look at individual students. They are generally exposed to the same types of training. But in the operator training and in some of the class --

Q In the GET you can take a test?

A Yes, we take a test on each section of it. And you take a test on the annual retraining. But it is not normally looked at in terms of the individual employee.

Q I don't understand. If you take a test you have to pass, don't you?

A Yes, sir.

Q So if you flunk, what happens? You just go back to your job?

A No. If you flunk the test, you are not given the unescorted access until you retake the test and pass. Or you provide an escorted access.

But I understood your question to be do we tailor the lesson plan and give specific instruction to a student based on his success in the various phases of the training? We do that in the operator and craft training. And I think your question was more directed toward that phase of the training as opposed to Mr. Runkle's questions of the GET.

But in the operator training and in the craft where

WRB/pp 14

we have the longer periods of classroom training and lesson plans, we do provide individual instruction. Certainly based on the examinations. And of course when you take the various parts of the licensing exam, it's broken up into many sections and you have an indication and the instructors there assign specific lessons. And they make specific instruction based on the individual employees performance in those areas.

Q Thank you.

A question about SALP which I guess could be to any of you. Perhaps Mr. Watson was being asked about SALP.

WRB15/eb1
fls WRB 14

We have talked about the various SALP reports in here for the past several days, and I think it is fair that they have been treated with respect if not reverence. I haven't heard a single critical word about the SALP process, and it is a bit of a contrast with my own experience.

A year ago, for example, I was in a case involving Catawba and Duke Power. They were very unhappy about some of their SALP marks, and quite critical of the process. The one main example that I remember was they testified that the SALP evaluators would count violations and you would have 12 or 18 or 33 and they would add that up, and then you would be good or medium or kind of poor, depending on what the number was, but they would not take into account the level of activity at the particular site.

THey said during that particular year they were building at Catawba like crazy, and they had a lot of people there and a lot of activity, so they had, you know, more violations, but they built two or three times as much as there might have been some other year, and that was not taken into consideration.

That's as an example.

But I do think that to the extent the SALP reports criticize the Applicants, I guess you do comment on it. You in effect respond to them. Is that right?

A (Witness Davis) Yes, sir.

WRB/eb2

Q In fact I think we put some of those responses in the record.

But do you want to make any observations about the SALP process in terms of its accuracy or its fairness?

A I would say that the responses have indicated individual areas where we took exception and pointed out the ratings in particular areas, and we have tried to include those comments in our response.

A (Witness Watson) I don't know that we have any significant criticism. We feel it is a measure. There are a number of other measures, INPO and other type measures.

I think one of the key things, however, is that we do have a very high level of interaction with the Resident Inspectors and we typically are not surprised by events that do occur or violations that do occur. I think that helps to mitigate a lot of the criticism because we are able to discuss it on an issue-by-issue basis.

And the summation is still very-- It's an undefined sort of mechanism for arriving at an evaluation, and overall I think collectively we feel it is one of several measures that has certainly some accuracy.

Q Thank you.

JUDGE KELLEY: Mr. Carrow, do you have redirect?

MR. CARROW: If we could just take a minute?

JUDGE KELLEY: Surely. Stand up and stretch if

RB/eb3

you want to.

(Brief recess.)

JUDGE KELLEY: On the record.

MR. CARROW: Applicants do not have any redirect examination of this panel.

JUDGE KELLEY: Okay. Thank you.

MR. RUNKLE: I have nothing further.

JUDGE KELLEY: All right.

Gentlemen, that takes us through the process then. We appreciate your attendance and your attention. Thank you very much. You are excused.

(Witness panel excused.)

JUDGE KELLEY: Let's see. We need Mr. Payne I guess. It is not four yet, I realize, but I just wondered.

MR. RUNKLE: We also had some arguments on our subpoenaed witnesses from CP&L. We can do that until Mr. Payne arrives.

JUDGE KELLEY: That's a thought.

MRS. FLYNN: That is what Applicants were going to suggest.

JUDGE KELLEY: Fine.

MR. RUNKLE: I could use about a five-minute break.

JUDGE KELLEY: Let's take five minutes.

(Recess.)

AGB/ebl
fls WRB/eb3

JUDGE KELLEY: Back on the record.

The Applicants have now put on their direct case, and we have really two issues to hear arguments from Counsel on this afternoon. One would be some further argument on the request for subpoenaes for additional witnesses from among Applicants' employees. We talked about this earlier, and this would be some argument based upon what has happened in the last week, and what we now know about the issue and what people can speak to.

The separate question relates to Mr. Clewett's appearance as a witness for the Intervenors. And we've heard briefly and informally from Counsel earlier today, and the Applicants and the Staff both indicated that they propose to make objections to Mr. Clewett's testifying, and it appeared that some of these objections at least we could go ahead and hear before Mr. Clewett was here as a witness.

So the idea is to go ahead and hear that and decide it this afternoon so that we will know whether there is any point in Mr. Clewett's coming down. And if these objections are not sustained, he will be here tomorrow morning. There may be some voir dire and we would then presumably hear from him.

But that is where we are now.

Is there preference among Counsel as to which of these two areas is addressed first?

AGB.eb2

MRS. FLYNN: Applicants would prefer to discuss the subpoena issue first.

JUDGE KELLEY: Any objection to that?

MR. RUNKLE: No, your Honor.

JUDGE KELLEY: There is no objection to that.

It is the Joint Intervenors' application for subpoenaes that is at issue. It seems logical that the Joint Intervenors--

You can assume we remember, not word for word but basically what was said two weeks ago when we had the original discussion. I think now that the focus, Mr. Runkle, ought to be on knowing what we know from the last six days of hearings, what could be added by these people that we couldn't have gotten from those people who have been here. That's the basic point.

But go ahead.

MR. RUNKLE: Yes, sir.

This adds to and clarifies what we stated in the conference call we had on August 31st. Why don't we go down, one witness at a time, and address Mr. Smith first?

JUDGE KELLEY: Yes. And in that connection, I will put it out as a suggestion.

Are you suggesting that you would make your arguments in favor of calling Mr. Smith,--

MR. RUNKLE: Yes.

AGB.eb3

JUDGE KELLEY: -- and then you'd respond, Staff would come in third, and then we'd pass onto the next one? That sounds sensible. Yes.

MR. RUNKLE: May I ask the Applicants if they still have the posture of opposing all four?

MRS. FLYNN: Yes.

MR. RUNKLE: All right.

We propose to call Mr. Smith, and I have an estimate of the time for cross-examination. We would see it restricted to about an hour and a half.

JUDGE KELLEY: Well, I think it is very helpful to add that feature.

MR. RUNKLE: An hour and a half, two hours maximum.

The specific areas that would be addressed to Mr. Smith would be a brief description of his responsibilities for Carolina Power and Light, who reports to him directly, and briefly what the responsibilities of those people are.

Second would be his relationship to the board of directors, his contract with the board of directors, and a couple of brief questions on the decision not to hire outside directors with nuclear plant experience. And that was questions that we asked of Mr. Utley who was not familiar with how that decision was made.

The third questions to Mr. Smith would be briefly

AGB/eb4

describing his outside commitments to other organizations besides CP&L.

The fourth would be brief questions to Mr. Smith eliciting the percent of time he spends on power production, in that area, the percent of time he spends on nuclear operations, specifically what criteria he uses to evaluate Mr. Utley's performance. And that would be the similar questions that we asked of Mr. Utley on how he evaluates Mr. Banks' performance, Mr. McDuffie's performance, and the like.

And then with a brief summary of him describing from his point of view as the three top position in the company CP&L's commitment to nuclear power and CP&L's commitment to nuclear safety.

And those would be all the questions that we would ask Mr. Smith.

JUDGE KELLEY: Is that it?

MR. RUNKLE: Yes, those are the questions we would ask. I could also get into the reasons why he needs to answer those as opposed to somebody else.

JUDGE KELLEY: Yes. Please do.

MR. RUNKLE: He does hold the three top positions of the company, and has the final word on most of the decisions that are made in the company.

We have various statements from him in responses

AGB/eb5

to interrogatories that we questioned the Applicants about where he is very verbal in expressing CP&L's commitment to nuclear power, nuclear safety.

MRS. FLYNN: Could Mr. Runkle give a citation? I don't know what you mean.

MR. RUNKLE: In the attachment to our interrogatories to the Applicants, we listed a lot of newspaper quotes and that kind of thing, from -- and also it would be different statements made at transcripts. And most of them, the most articulate ones came from Mr. Smith.

Now we're not, you know, going to ask him about all these, but he seems to be the one in the company that can best describe the company's commitment.

End C15
AGB 16 fls

MRS. FLYNN: Mr. Chairman, shall I respond?

JUDGE KELLEY: Is that it?

MR. RUNKLE: Yes, sir.

MRS. FLYNN: Applicants have several points to make.

I think the first and primary point is that none of the subject areas that he has mentioned has any particular significance with respect to the issue of CP&L's management capability to safely operate the Shearon Harris plant that has not been fully addressed by Mr. Utley specifically in his testimony or any of the other witnesses who have been here.

Some of these matters are, at best -- at best, this is information which might be interesting for Mr. Runkle to know but certainly does not have significant bearing on the issues in this case.

We can go through point-by-point -- I think that would be helpful: with respect to Mr. Smith's responsibilities and who in the company reports directly to him, I believe the record will reflect that Mr. Utley answered both of those questions.

With respect to his relationship to the board, it is also in the testimony that he is the Chairman of the Board and I think that, a priori, defines his relationship to the Board.

agb/agb2

With respect to his contact with the board, again, I think that the importance of that has to be weighed against the other competing interests which are involved here, which are: calling him to come here and testify; second, the Board's right and responsibility to limit testimony to the extent that it is creating an unnecessarily long record or that it is duplicative or that it is marginally relevant.

With respect to --

JUDGE KELLEY: Are you going to address the burden that this would impose on Mr. Smith?

MRS. FLYNN: The burden that it would impose on Mr. Smith -- obviously it's not an extraordinary amount of time that Mr. Runkle is proposing, I think it is significant only when balanced against the significance of these particular issues.

JUDGE KELLEY: Mr. Smith is here in town and he can come, right?

MRS. FLYNN: I believe that he is. We would certainly make every effort to have him here.

JUDGE KELLEY: But there is no claim of hardship in the sense of competing matters?

MRS. FLYNN: So far as I am aware of at the moment, no, but I think that given all of his responsibilities, those which he has have to be

agb/agb3

weighed against the significance of these matters which have been raised which just don't seem to be significant.

With respect to the decision not to hire outside directors, we have testimony by Mr. Utley and an exhibit in evidence which adequately explains the company's decision to accept the Cresap recommendation and its basis for implementing that recommendation.

Questions about his outside commitments, I think, are again not significant to this issue. The corporate policies of this company with respect to nuclear safety are in the testimony already: in the Utley panel's testimony there is discussion of this corporation's policy with respect to nuclear safety and the company's attitude towards it.

So I don't see anything in here that is meaningful and that significantly adds to the testimony that was offered by Mr. Utley and the panel of witnesses who testified with Mr. Utley.

JUDGE KELLEY: What about the point of outside directors?

MRS. FLYNN: As I mentioned, I believe that Mr. Utley's testimony concerning that, plus the exhibits which we offered to supplement his testimony on redirect examination adequately explains the company's position with respect to that recommendation by the firm of

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Cresap, Paget and McCormick and the action that we took and the way in which we notified the North Carolina Utilities Commission of our decision and the actions that we would take.

JUDGE KELLEY: It was precisely the way in which you notified the Commission that disturbed me.

MRS. FLYNN: That's why Applicant offered the additional exhibits --

JUDGE KELLEY: Could you refresh my recollection as to what is in the exhibit?

MRS. FLYNN: Yes.

The report that had been introduced -- it was a partial report that had been introduced by Mr. Runkle as an exhibit and it contained a very summary description of the Cresap recommendation and CP&L's actions with respect to those -- to the implementation of those recommendations. And in the column which said implementation or action taken, there was merely the word "completed."

And what was apparent in cross-examination was that what was meant by the word "completed" was that CP&L had retained a consultant to advise the board. And that appeared to Mr. Chairman to be somewhat misleading.

The Applicants presented two exhibits and then conducted redirect examination of Mr. Utley to make

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clear that that was only a summary of much more detailed information that had been given a year previously.

In June of 1983 the company had reported to the Commission its precise intentions -- it indicated precisely what it intended to do and why it intended to do that and that is what is reflected on those exhibits and in his redirect testimony; the whole point to show that it had been explained in detail and therefore in the follow-up report there was a more cursory explanation given.

JUDGE KELLEY: Okay.

Is that it?

MRS. FLYNN: That's it.

JUDGE KELLEY: Staff?

MR. BARTH: I would like very briefly to run through Mr. Runkle's points.

The first is he wants a description of the responsibilities of Mr. Sherwood Smith. That is in the record, he is the president and presiding -- chief executive officer of the company. His present here will add nothing to that of materiality.

The second point is who reports to him. Mr. Utley stated that the executive vice-presidents report to him. Mr. Smith's presence will not add to that.

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His relationship to the Board of Directors. He is a member of the Board of Directors and there is an adequate description that he attends those board meetings.

To go any further: he has an obligation as thedirector of the company by statute. That is a matter of law; his testimony would add nothing further to it.

His outside commitments I think are unrelated to this case in the absence of some special showing that he is infirm or sick or on vacation and never attends to his duties. There is no showing of that. There is no showing that Mr. Smith's outside commitments are in any way related to the issue before us.

His criteria to evaluate Utley: I don't think -- we have heard evaluation pyramids from the janitor up to Mr. Utley. I do not think that for Mr. Sherwood Smith to come in to state how he evalutes Mr. Utley is going to add anything material at all to this record. There is no question of that, your Honor.

His description of CP&L's commitment to nuclear power and nuclear safety: Can anyone with any honesty and integrity have any doubt that Mr. Smith will come in and state under oath the company is committed to it, I am committed to the public health and safety. It is inconceivable that we need to drag

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Mr. Smith from his office as president of the company to come in and make a statement like that. That's just stretching the point.

The matter of directorship, your Honor: This was covered on transcript page 3106 and Applicant's Exhibit Number 3 in which they explained that -- the exhibit states that as vacancies on the Board of Directors occur from time to time in the future the company will consider many fields of experience for eligible candidates.

This was a report which they submitted to the Public Utility Commission prior to the piece of paper which Mr. Runkle submitted in which they showed what they had done for compliance.

I think from our point of view the thrust of the Public Utility Commission was to get someone close to that Board of Directors with outside experience in the nuclear field. That has been accomplished, your Honor.

I think this summarizes our views of the facts stated by Mr. Runkle for bringing Mr. Sherwood Smith here. In our view, Mr. Sherwood Smith would not add any relative, probitive or substantial evidence under 5 USC 556(d) which would aid the Board in reaching a decision.

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Thank you.

JUDGE KELLEY: Okay. Let's go right to Mr. Jones.

I think it was indicated earlier that Mr. Jones, although retired, is in this area.

MRS. FLYNN: Yes.

JUDGE KELLEY: All right.

MRS. FLYNN: Let me make just one clarification:

When we had our conference call, he was in the area. Since that time -- I found out after the fact that he went on vacation.

We would make every effort to locate him but I don't believe that he is in the area right now. But that happened subsequent to our conversation and I had no idea of that until very recently. But we would make every effort to locate him.

MR. RICHARD JONES: He may be back, he had a cottage rented at Myrtle Beach.

(Laughter.)

JUDGE KELLEY: Okay. Go ahead.

MR. RUNKLE: I thought I had my notes as to his exact title when he retired from Carolina Power and Light. He was one of the senior vice-presidents in charge of nuclear operations, power generation and the like. He retired from the company in 1982 and

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has consulted briefly from time to time after that.

JUDGE KELLEY: Can we just establish whether he is roughly comparable to McDuffie or somebody else or can you say? It gives us a picture.

MRS. FLYNN: At the time of his retirement I think his position was comparable to that of Mr. Utley.

JUDGE KELLEY: Okay.

MR. RUNKLE: He was responsible for nuclear operations during the time of the incidents at Brunswick that resulted in the $600,000 civil penalty.

The specific questions to him on that are: first of all, when was it brought to his attention; who brought it to his attention; was that inside or outside the normal chain of command and, lastly, did his evaluations -- his personnel evaluations reflect the poor nuclear performance at Brunswick.

And our time would be on the order of a half-hour, forty-five minutes.

JUDGE KELLEY: Okay.

And the reasons for the need to call him?

MR. RUNKLE: In the company at that time, he was the one responsible for the operations of the plant.

JUDGE KELLEY: Mrs. Flynn.

MRS. FLYNN: Applicants have one fundamental

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objection to the subpoenaing of Mr. Jones beyond the marginal relevance of these particular subjects for this proceeding and that is that in the Joint Intervenors interrogatories to Applicants -- which Applicants answered on May 1st -- the Intervenors asked whether or not Applicants intended to call Mr. Jones as a witness and Applicants said no. It was not we don't know or we're thinking about it, we gave notice then that we were not.

With respect to him, they knew as of May 1st that he would not be a witness and therefore had ample time to request subpoenas or to take a deposition of him at that time.

As you remember, Intervenors' position on why they waited until after August 9th to subpoena these particular people or to request subpoenas for these particular people is that they didn't know whom Applicants intended to call as witnesses. Well in that particular case, they certainly did know.

With respect to the issue of the $600,000 fine: By the time the fine in fact was levied, Mr. Jones had already left the company and therefore I don't know that there is any significant information that he could give.

JUDGE KELLEY : Tell us again when that incident

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occurred?

MRS. FLYNN: I'm sorry?

JUDGE KELLEY: When the incident occurred?

MRS. FLYNN: The incident occurred in June or July of 1982.

JUDGE KELLEY: '82?

MRS. FLYNN: Yes.

JUDGE KELLEY: Was Mr. Utley --

MRS. FLYNN: That's when we discovered that the incident had --

JUDGE KELLEY: It was discovered in July of '82.

Was Mr. Utley in his present position at that time?

MRS. FLYNN: Yes -- I believe he was.

MR. BARTH: Your Honor, Mr. Utley testified that he was in the office and got a telephone call from someone at the site at the time this arose.

MRS. FLYNN: Yes, he was.

JUDGE KELLEY: All right.

Mr. Barth?

MR. BARTH: I have nothing material to add to the statement by Counsel for the Applicants, your Honor.

JUDGE KELLEY: Okay.

Mr. Ronnie Coates?

MR. RUNKLE: Yes, sir.

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We propose to keep Ronnie Coates' cross-examination on the order of two hours.

Mr. Coates was the rebuttal witness to the Jacobstein report in the North Carolina Utilities Commission Docket E2-sub-444 and he has familiarity with that report.

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Specific issues will be --

JUDGE KELLEY: I'm on the first point, but we excluded the Jacobstein report, right?

MR. RUNKLE: Yes, sir.

JUDGE KELLEY: Well why do we need Coates to speak to something that isn't in the case?

MR. RUNKLE: We can still ask him about events. The witnesses that were on the stand were not familiar with those events and did not understand some of the terminology that was used in the Jacobstein report such as "key upsetting events."

JUDGE KELLEY: Okay.

And the areas are where?

MR. RUNKLE: The history of turbine outages at Brunswick and the repeated problems with the --

MRS. FLYNN: I'm sorry, I missed the second one that you said.

MR. RUNKLE: The repeated turbine outages at Brunswick, which -- it is summarized in the Jacobstein

report, although he would be familiar with those dates and incidents; and the MSIV valves, there was a series of problems with them.

JUDGE KELLEY: I'm sorry, you may have said, but Mr. Coates' job was what?

Is he at Brunswick now?

MR. RUNKLE: No, he is not. He is a corporate PR department.....

MRS. FLYNN: No, he is not in the corporate PR department.

MR. RUNKLE: I thought that was something he had said on the phone.

JUDGE KELLEY: Where is he?

MRS. FLYNN: He is the assistant to the group executive for fossil generation.

JUDGE KELLEY: But he used to be in nuclear, I take it?

MRS. FLYNN: Yes.

MR. RUNKLE: I will apologize to Mr. Coates. This was stuck in my head there.

JUDGE KELLEY: Right.

MR. RUNKLE: Mr. Coates also supplied specific responses to Intervenors interrogatories to Applicants that related to the staffing history of the Brunswick nuclear power plant; specifically, response to I-58 and

I-60.

JUDGE KELLEY: And they in turn pertain to what?

MR. RUNKLE: To the staffing of Brunswick.

JUDGE KELLEY: Okay.

And on the subject of why he, in particular, is necessary?

Some of these events, it does seem to me that questioning of events involving violations and so on were open. I don't recall standing objections to those, things of that nature, MSIV valves and other things.

Haven't we either talked about these things already or couldn't we have talked about these things with some other witness?

MR. RUNKLE: Mr. Coates has done a more complete analysis of those incidents and can reflect -- his testimony will make the record more complete on those incidents.

JUDGE KELLEY: I think we need that link here if we can get it from someone present.

Did Mr. Coates work at Brunswick at some point?

MRS. FLYNN: No.

MR. RICHARD JONES: Yes.

MRS. FLYNN: Oh --

JUDGE KELLEY: But he was in nuclear matters

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at some prior point?

It seems to me it would be important to know just what Mr. Coates did that makes him a resource of information on these matters.

MR. RICHARD JONES: Mr. Chairman, Mr. Coates worked at the Brunswick years ago, in the early days I think, but he has been in corporate headquarters for the last seven, eight years at least doing various tasks associated with nuclear operations.

JUDGE KELLEY: He hasn't worked at the site for seven or eight years?

(Mr. Richard Jones nodding affirmatively.)

JUDGE KELLEY: Okay.

Anything else?

MR. RUNKLE: No, sir.

JUDGE KELLEY: Okay.

MRS. FLYNN: With respect to the Jacobstein report, Applicants do object to any questions based upon terminology that Mr. Jacobstein used. There is no reason to believe that Mr. Coates has any better understanding of the phrase "key upsetting events" than any of the other witnesses did and I don't remember any objection to Mr. Runkle asking other witnesses whether they understood the term.

With respect to repeated turbine outages,

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he didn't ask any of the witnesses who were available about the turbine outage matter and he certainly had an opportunity to do that.

With respect to the MSIV valves, there was a series of questions on that which I believe Mr. Howe answered quite fully.

With respect to the staffing history of Brunswick, not only did Mr. Utley speak about that, but Mr. Howe spoke about it also.

So there is nothing in these issues that would provide anything beyond cumulative evidence.

And Mr. Runkle's belief that Mr. Coates has done a greater analysis is purely speculation on his part. He has no basis for that whatsoever.

Finally, in preparing answers to interrogatories, there were many people in the company below management level involved in that preparation. We listed a number of them.

And I would just point out that Mr. Coates was not in a management position at the company.

JUDGE KELLEY: Mr. Barth?

MR. BARTH: Two very quick observations, your Honor.

To subpoena Mr. Coates to come and define the term "key upsetting reports," a three-word term in a

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paper he did not write which has not been introduced into evidence I think really comes as a frivolous reason to subpoena him. It is difficult to take that as a serious reason to put forth to subpoena this man to define a term that he didn't use in a report which is not in evidence.

I would also point out that in regard to outages, there have been other exhibits on outages. There has been no restriction at all by the bench on questions on outages.

I think it is incumbent upon Mr. Runkle to show why this man is necessary to provide additional substantive evidence in this proceeding and I think there has been no showing made.

Thank you, your Honor.

JUDGE KELLEY: I expressed some skepticism about the relevance of certain kinds of outages, so I think --

(Brief power failure.)

JUDGE KELLEY: Like that.

(Laughter.)

JUDGE KELLEY: Is a turbine outage something -- I don't know who to ask exactly -- I would guess I can ask Judge Bright -- whether a turbine outage is a safety matter, turbine trips?

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MRS. FLYNN: This was not, no, your Honor. This was an outage that entailed some repairs to a turbine that had been damaged while the turbine was out of service. This was not particularly a safety issue at all.

I would just re-emphasize that Mr. Runkle did not ask any of the witnesses about this particular subject and he could have.

JUDGE KELLEY: I had this laymen's notion that problems with a turbine aren't generally safety-related.

MRS. FLYNN: This was not.

MR. BARTH: That is the view of the Staff, your Honor.

JUDGE KELLEY: Is there some particular safety significance of this turbine outage that you would want to urge?

One can argue that if you're careless with turbines you may be careless with something else, I know that, but apart from that point....

MR. RUNKLE: A worker had sabotaged the turbine --

MRS. FLYNN: Objection. There is absolutely no evidence whatsoever in this record or anywhere that there was sabotage.

MR. RUNKLE: I think a reasonable analysis of

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the incident would -- maybe you don't like the word "sabotage" but it was, you know, a direct act by somebody.

JUDGE KELLEY: Okay.

Let's go to Mr. Furr, Benny Furr.

First of all, what's his job now, if you could tell us?

MRS. FLYNN: He's the manager of technical services.

JUDGE KELLEY: Corporate or on-site?

MRS. FLYNN: He reports to Mr. Davis and he is a vice-president.

MR. RUNKLE: In the time period preceding the discovery of the -- Mr. Furr was a vice-president for nuclear operations in the time period covered by the $600,000 fine.

Specific questions to him are: Did his personnel evaluations reflect those incidents and the poor performance of the Brunswick power plant; was he disciplined, transferred or had any other adverse employment actions taken against him for the poor performance of the Brunswick plants; and when did he find out about the problem and through what route was he made aware of the problem.

And we only propose to keep him on the stand for a half-hour to forty-five minutes.

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JUDGE KELLEY: Okay.

And his special reason for being called?

MR. RUNKLE: He, too, was in a position of responsibility at Brunswick during that time.

JUDGE KELLEY: He was at Brunswick?

MR. RUNKLE: He was the vice-president for nuclear operations, he was a corporate manager.

JUDGE KELLEY: But that sounds like Mr. McDuffie, if I can make an analogy, is that accurate?

MRS. FLYNN: He was in the corporate office.

JUDGE KELLEY: He was corporate.

And was he in more or less the job Mr. McDuffie has now?

MRS. FLYNN: He had that type of responsibility.

MR. RUNKLE: But it was more limited than Mr. McDuffie --

MRS. FLYNN: That's right.

JUDGE KELLEY: Okay.

But he had responsibilities other than Brunswick?

MRS. FLYNN: That's right.

JUDGE KELLEY: Okay.

Mrs. Flynn?

MRS. FLYNN: Again the $600,000 fine was discussed at length in the cross-examination of Mr. Utley

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and Mr. Howe and there was no restriction on the amount of questioning that was conducted on that issue; Applicants did not object to questions conducted on that issue.

Mr. Utley has already testified with respect to the issue of discipline of or transfer of any officers of the company or managers of the company.

And the only other question that Mr. Runkle would ask is when Mr. Furr found out about the problem. And it seems that the relevance of that particular question and that answer to the entire issue in this case and to the volume of testimony that has already been received is de minimus.

JUDGE KELLEY: Okay.

Mr. Barth.

MR. BARTH: Your Honor, as I made a note, Mr. Runkle wanted to know whether Benny Furr's personnel assessment by the company reflected his Brunswick performance.

This is a question that could have been equally well asked of Mr. Utley. This is no time to subpoena a man to come in and answer yes and no on a question like that, your Honor.

This is a question which, if it was necessary to the case -- which I don't think it is -- could well have been asked directly of Mr. Utley, who had

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supervisory responsibility over his head at the time, not now, two weeks later.

Thank you, your Honor.

JUDGE KELLEY: We're going to take a break and we'll go next door and come back. We might be able to resume in 15 minutes, maybe a little less.

(Recess.)

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JUDGE KELLEY: Back on the record.

The Board is prepared to give rulings on the pending request for subpoenaes to three employees of CP&L and one former employee.

The net effect of all this is that we are going to deny the request for subpoenaes with respect to Messrs. Jones, Coates and Furr. We are going to grant the request on a limited basis with respect to Mr. Smith.

Turning first to the denials as to Jones, Coates and Furr, I'm not going to go over each one of these and comment on each point a d each area of interest and all the rest. It just seems to us that the areas pointed out were either already the subject of extensive questioning, particularly the $600,000 fine, or they could have been raised. And all in all, there was really nothing in there that we see as jumping out and really crying out for more attention, that has not already received more than adequate attention, or there has been an opportunity for it.

Some of it is rather stale. I believe it is Mr. Furr particularly who has been away from Brunswick for seven or eight years. There are some other particulars. Mr. Jones, after all, is retired. That is not a compelling consideration but it is a factor we think in calling somebody in.

For those reasons we are going to deny the

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subpoena request for those people.

Now as to Mr. Smith, what we think is particularly significant here is that after all, this is a contention about the management of Shearon Harris as an operating facility, and we think that the chief executive officer of a company like CP&L does have a unique perspective on that. Certainly his authority exceeds that of anyone else in the company, and his attitudes and opinions do have a pertinence to a management contention that they would not have to other kinds of contentions.

Indeed, we don't know of another kind of contention for which we would call the CEO. He would not know anything in particular about QA or broken pipes or dead fish, or whatever, but he does know something about management, it seems to us, or he should. And therefore the proponents of a contention of that nature do have a rather special claim to call such a person.

We have considered the subject areas that Mr. Runkle enumerated and we are going to put it this way:

We are not going to go down point by point and say yes, no, maybe, to areas of interest. We will list a few that seemed to us to be legitimate.

Certainly his role as the chief executive officer in relation to the operation of Shearon Harris, the amount of time that he devotes to nuclear, expects to devote to

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nuclear, how he evaluates those directly under him like Mr. Utley, and I think particularly the company's commitment to nuclear power and to nuclear safety from his perspective as the chief executive officer.

And those are either the same as or close to some of the things Mr. Runkle mentioned. We don't mean to imply that other things you mentioned are necessarily out of bounds, but we're giving that as an indication of our view. In the course of questioning when Mr. Smith appears we can just follow the usual objection process.

MRS. FLYNN: Mr. Chairman,--

JUDGE KELLEY: I would just like to add one thing.

We have considered the time limit feature. We think that's important. We do respect the fact that Mr. Smith is a man with many commitments, and also that the areas we have talked about, although they may sound rather broad, can be spoken to we think fairly briefly and to the point, so we are not going to require his attendance for more than an hour.

And as to the exact time, that can be worked out. We expect to be here tomorrow and part of Friday at least, and maybe all of Friday, and we would ask the Applicants to check with him and see when his appearance could be arranged.

MRS. FLYNN: Mr. Chairman, three items.

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First, Applicants will call Mr. Smith voluntarily. There will be no need for a subpoena.

JUDGE KELLEY: All right.

MRS. FLYNN: Secondly, we are checking his schedule right now and as soon as we can schedule him, we will talk with the Board and Mr. Runkle in order to make him available.

Third, I want a clarification. I understood that you said that the fact that you enumerated certain subjects did not necessarily exclude others that Mr. Runkle had mentioned. But I did want to be clear that the questioning would be limited to those specific items that Mr. Runkle had identified.

JUDGE KELLEY: Yes, I think that's fair.

MRS. FLYNN: All right.

JUDGE KELLEY: He had set forth his areas, and rather than try to parse that exactly, -- you know, we don't have the transcript, and my notes aren't that good -- we just thought we would give a few examples of what sounded okay to us, which were close to some of the things that you had said. Okay?

MRS. FLYNN: Yes. Thank you.

JUDGE KELLEY: And then you will have a transcript tomorrow morning and you can work against that.

MRS. FLYNN: Thank you.

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MR. RUNKLE: Sir?

JUDGE KELLEY: Mr. Runkle?

MR. RUNKLE: An hour is not a whole lot of time. I wanted to ask the Board if they were satisfied with the Applicants' response to that Cresap report recommendation about the outside director.

JUDGE KELLEY: I can't really speak to it as a Board. Satisfied? Maybe you can spell it out a little more. In what sense?

I can tell you that I said what I said when Mr. Utley was here and the exhibits were put in, and I haven't read them yet. I will read them tonight. But I just don't know.

MR. RUNKLE: I'm just trying to, you know, limit the amount of argument. I mean if I only have the man for an hour--

JUDGE KELLEY: Well, let me add this. WHen we say an hour, I think what we basically mean, and not to the minute or second, but basically an hour to ask questions and get answers. If we find ourselves in an elaborate lawyer argument we will take that into account and it will just take a little longer.

MR. RUNKLE: Okay, I can operate under that. I think that will be enough time.

JUDGE KELLEY: Okay.

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MR. RUNKLE: Also any scheduling that we need to do, that will be fine, too. There will be no problem.

JUDGE KELLEY: Okay.

Well, then, shall we turn to the question of the prefiled testimony of John Clewett on behalf of Joint Intervenors on Joint Contention I?

Maybe I can suggest a way of proceeding, and take comments and we will work out something mutually agreeable.

The Applicants I understand wish to lodge....

Now we are talking now, are we not, about objections that can be heard and presumably decided without Mr. Clewett being here? This is not voir dire? This is objections of another nature?

MRS. FLYNN: That's correct.

JUDGE KELLEY: Okay.

So do you want to go ahead and make your arguments first, and then Mr. Barth may have a separate argument, or he may join in some of the Applicants? And then I guess we can hear from Mr. Payne.

Go ahead.

MRS. FLYNN: Thank you.

Applicants object to Mr. Clewett's testimony on the ground that it is unreliable. Section 2.743(c) of 10 CFR states that only relevant material and reliable evidence will be admitted in NRC proceedings.

JRB/eb8

We believe that his testimony is unreliable on two grounds and therefore lacking in probative value.

JUDGE KELLEY: When you say "his testimony" just sharpen this. Are you talking about the report primarily?

MRS. FLYNN: I'm talking about the report sponsored by Mr. Clewett with his two pages of testimony that are attached to the report.

JUDGE KELLEY: All right.

MRS. FLYNN: First, Applicants submit that Mr. Clewett, as shown by his prefiled testimony, is not competent to testify with respect to the conclusions and assertions that are set forth in what I will call the Critical Mass report which is the attachment to his testimony.

The statement of his qualifications on his two pages of testimony indicates that he is trained as a lawyer, with a bachelor's degree in economics. The conclusions of the Critical Mass report relate to determinations based upon some NRC data and conclusions drawn about the safety significance of particular events at nuclear power plants, the implications of exposure, radiological exposure of workers, and other various, quite technical, complex issues relating to nuclear power.

There is absolutely no indication on the face of the testimony that Mr. Clewett has the competence to sponsor

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this kind of testimony and to be properly cross-examined as to it.

JUDGE KELLEY: Let me ask you:

I am already wondering whether we can really come to grips with this without Mr. Clewett. Are you saying that-- Are you arguing to us that Mr. Clewett's qualifications to perform this study and reach these conclusions has to be manifest on the face of the papers?

MRS. FLYNN: Yes, that is Applicants' position.

JUDGE KELLEY: Can you cite something for that?

MRS. FLYNN: I cannot cite to a particular opinion. I can only cite to the ruling in this proceeding, and the groundrules in this proceeding which are that the prefiled testimony shall be filed as of a particular date, and the qualifications of the sponsoring witness certainly should be apparent on the face of that prefiled testimony.

Mr. Clewett is a lawyer, and to have Mr. Clewett sitting and making -- drawing conclusions and making statments about the safety significance of events at nuclear power plants is about as helpful or relevant as any lawyer who practices before the NRC taking the witness stand and testifying about matters of nuclear safety.

The Critical Mass report I think without question draws some very negative and very sweeping conclusions about the industry in general and CP&L and its Brunswick plant

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in particular. And to not have meaningful cross-examination of the sponsor -- a sponsor of that document, the proper sponsor of that document would be highly prejudicial to Applicants.

JUDGE KELLEY: Well, in that regard-- I mean this is not the Jacobstein problem. Jacobstein wrote a report and he didn't come to the hearing so we excluded his study. But I thought Clewett was listed here as the director or the executive director--

MR. PAYNE: Judge, he was in fact the primary author of the report.

MRS. FLYNN: The fact that somebody is an author of a report doesn't make it ipso facto reliable.

JUDGE KELLEY: No, but you were saying you needed a sponsoring witness, and Clewett wrote it.

MRS. FLYNN: What we mean by "sponsor" is somebody not merely who participated or even authored the report but who is competent to testify in a meaningful way as to the validity of the conclusions and assertions drawn in the report, and the bases of those conclusions.

The second aspect in which this report -- this testimony is unreliable -- and I think that this perhaps ties in with the lack of qualifications of Mr. Clewett to present this kind of -- this purported testimony -- is that the methodology of the Critical Mass report itself is

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severely flawed.

Essentially what it amounts to is the taking of some raw data that was received from the NRC, LER statistics and grades from a single SALP report, and make some extremely sweeping and judgmental conclusions based upon those statistics.

There is no evidence at all that LERs-- In fact there is all evidence to the contrary that LERs, standing alone, are not evidence of significant events. We heard testimony in this proceeding that there are many insignificant events that are included within LERs, particularly prior to the new reporting requirements.

Similarly we know from the Critical Mass report itself that LERs are not reliable because different plants have different technical specification requirements, different attitudes about reporting, and they are not reliable for comparative judgments.

Second, we know that taking a single SALP report and purporting to average the grades in a SALP report is not a meaningful measure of a particular nuclear plant performance.

In addition one finds on examining the Critical Mass report that Critical Mass premises its theories on some definitions that are obviously entirely the creation of the Critical Mass organization or Mr. Clewett. The terms

JRB/eb12

"mishaps" and particularly "significant mishaps" are terms of their own derivation. These are not terms that are used by the NRC, nor by the industry.

Finally, Applicants would point out that to the extent that the SALP data for the particular yea-- What was used is the first SALP report. That document is already in evidence and I believe that that is the best evidence of the ratings that are in that report.

JUDGE KELLEY: Just so I'm clear, the Exhibit 8 document here insofar as it uses SALP only uses SALP I?

MRS. FLYNN: That's correct-- For the conclusion that was based-- For the conclusion about management competence, which is reflected -- to which he refers in his two pages of testimony, and which is reflected in a table on page 7 of the report, a check of the background data later on in the report indicates that it is a single SALP report which formed the basis of that table.

JUDGE KELLEY: But the--

MRS. FLYNN: And that was covering the period of 1980 through part of 1981.

MR. PAYNE: Your Honor, just to clarify, I believe under the nomenclature that has been employed here, it may be the SALP II report and not the SALP I. I am not sure because I haven't been here at the hearing.

MRS. FLYNN: It is SALP I. It is confusing

WRB/eb13

because of the date of issuance of the report, but if you look at the table it is pretty clear that it is the report that was issued first for the period of something in 1980 to 1981.

JUDGE KELLEY: One thing I wasn't clear about. It might be one thing, I'm not sure, but it might be one thing--

MRS. FLYNN: I'm sorry, it was the second report. I'm sorry. SALP II. I'm sorry.

JUDGE KELLEY: All right.

If the Clewett exhibit, when you analyzed it, turned out to be merely some quotes or use of numbers from the SALP report, perhaps one could say Well, we've already got the SALP report, and why do we want to have this?

But my impression, looking at this, and it is only an impression, is that there was a use of SALP II data, but then there were certain conclusions drawn by the drafts people of this report about what this all meant, --

MRS. FLYNN: That's right.

JUDGE KELLEY: -- e.g., the worst managed plant. That is a conclusion of the writers'. Correct?

MRS. FLYNN: That's right. And that's precisely why Applicants object strenuously to its admission, because it is presenting conclusions based on data-- First, we believe that the methodology is incorrect and that there is

WRB/eb14

no basis for drawing those conclusions, but second, that there is no qualified expert here or who can be here. Mr. Clewett is not qualified as an expert to testify as to those conclusions and to be cross-examined as to them, and as to their bases.

That's the heart of Applicants' objections.

JUDGE KELLEY: What assumption are you using when you say that there is no qualified expert here? What you mean is-- You're saying that Clewett is not qualified?

MRS. FLYNN: That's right.

JUDGE KELLEY: And all we know from the paper is-- Well, we know more than that. We know that he has a B. A. in economics, and a J. D. from UCLA. And then he has some trade commission experience, and he has worked at a couple of other places.

What expertise do you say is lacking and how can we be sure it isn't there?

MRS. FLYNN: I think that expertise in the area of any of the disciplines, academic disciplines that relate to nuclear energy would be relevant, any experience in nuclear energy would be relevant. Obviously from the face of the document he has none such experience.

In addition, there are other scientific degrees which would be meaningful in his ability to draw conclusions concerning the impact of radiological exposures, for instance.

WRB/eb15

He has no degree in any such area, nor does he have experience working in any such area.

JUDGE KELLEY: One reason I just wanted to raise that, because what we're used to in these cases, obviously, on the technical issues, most of the witnesses have Ph. D.s in metallurgy or biology --

MRS. FLYNN: Right.

JUDGE KELLEY: -- or whatever it may be, so there is not a problem.

MRS. FLYNN: And we are not--

JUDGE KELLEY: But here you do have a fairly liberal open-ended rule in the Federal Rules of Evidence about expert testimony. I'm talking about 702, which I've borrowed once more from the Staff. I will just read it. It's short.

> "If scientific, technical or other specialized knowledge will assist the trier of fact to understand the evidence or determine a fact at issue, a witness qualified as an expert by knowledge, skill, experience, training or education may testify thereto in the form of a opinion on it or otherwise."

It is just to say that the lack of a degree is not dispositive, and I don't think you are really arguing about that.

WRB/eb16

MRS. FLYNN: No.

The only reason that this report would be meaningful is if it were scientific, technical or other specialized knowledge. I assume that is why it would be being offered. If so, the sponsor of that report would have to have some particular skill, expertise, knowledge that qualifies him to form opinions in the areas covered by the report, and these are matters of nuclear safety, radiological safety, and he has no training or experience that qualifies him as an expert in those subjects.

JUDGE KELLEY: But it is even more complicated than that, isn't it, because the issue is not any particular scientific field, it's management.

MRS. FLYNN: It is management to the extent that this report purports to deal with a host of so-called significant or particularly significant mishaps.

JUDGE KELLEY: I'm not arguing with you that it does not involve any safety issues. I'm just saying the bottom line here is management. And as we all know by now, management is sort of murky. It is hard to define.

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9 fls WRB

WRB/pp 1
#19

MRS. FLYNN: The problem is in this particular case he's trying to draw conclusions about management based on some extremely limited data by a federal regulatory agency. That is technical data, in fact. And it's limited data. He's drawn a conclusion about management from it. There is no basis to believe that if he has a separable conclusion. And there's nothing to indicate he has any expertise to evaluate management on the basis of that data or on the basis of anything else.

JUDGE KELLEY: How do you deal with the point that would undoubtedly be raised, that various lines of impeachment on evidence go to weight and not admissibility. And even if the study is vulnerable to various technical criticisms, do I let it in and allow cross examination and then judge its weight in light of the record.

MRS. FLYNN: The reason is that the cross examination will not be meaningful to assist the Applicants in probing the deficiencies in the methodology and therefore could be prejudicial to Applicant's position and Applicant's case.

JUDGE KELLEY: I don't understand your point.

MRS. FLYNN: If he is unqualified to adequately describe the nature of the -- the reasoning process and methodology by which conclusions were drawn and he doesn't have sufficient expertise to draw the conclusions that are

made in this report. It's very difficult for Applicants to demonstrate the flaws.

JUDGE KELLEY: I am just assuming that he's the principal author and can come in here and say this is how I reached that conclusion. You may not agree with how he got there but at least he can tell you how he got there.

MRS. FLYNN: That's true.

JUDGE KELLEY: -- if he fulfills that role.

I think I've interrupted too much.

Mr. Barth, do you join in the objection. I will ask you that first, basically.

MR. BARTH: We have another and different argument, your Honor. I abide by your Honor's dictates. I think it would be appropriate in my mind that Mr. Payne responded to the Applicant's arguments. I will make mine, you should respond to mine. Because they are quite different, your Honor.

JUDGE KELLEY: Okay.

MR. PAYNE: Well, your Honor, with regard to the Applicant's objection, I think your exactly right. Their objections go to the weight of the testimony and evidence. They don't go to the relevance and they don't go to his ability to come here before the court and sponsor the exhibit.

Now in fact, Mrs. Flynn's objection that he is not

WRB/pp 3

an expert in the field of nuclear engineering or nuclear operation or any of those things is not well taken.

The methodology of the report is spelled out in some detail at pages 30 and 31. We called attention to that in the second page of the prefiled testimony. WHat basically was done is an examination was made of NRC documents obtained at a public document room or through the Freedom of Information Act procedure. The data from those reports and documents was not really subjectively interpreted at all. It was merely compiled. Any person who is reasonably literate could have done that.

And I believe that Mr. Clewett's qualifications establish him as a literate person. We're not offering him as an expert in nuclear operation or even nuclear management. We are offering him as a person who spent many, many, many hours pouring over documents, NRC documents, compiling that data and presenting it in a succinct report.

I had seriously considered trying to put into the record just a whole mountain of NRC documents. ANd when I started thinking about that I began looking for a summary. It's customary in a number of proceedings -- employment discrimination cases -- an area I'm very familiar with for the court to encourage the parties to generate summaries so that mountains of documents don't have to go into the record.

This appeared to be such a summary.

WRB/pp 4

In general, parties generally stipulate to those summaries when they come in. It's that kind of summary which saves all of us I think, a great deal of time. That this is really being offered for.

Mr. Clewett is not being presented as an expert witness. I don't intend to qualify him as an expert. I intend for him to testify about the methodology and about the conclusions. And he's perfectly capable of doing that.

For those reasons I just think that the objections -- I mean you may or may not give his testimony certain weight. They can question him about his methodology as I say I don't think there was much subjectivity in. I think it is merely a lifting primarily of numbers and conclusions that were found in the NRC reports.

There are and it's pointed out in the report, I believe, there's some subjectivity within the NRC as to how they rate the various incidents. That's pointed out from region to region. There may be some variability. That's even raised in the report. I think it's a fairly objective report in that fashion and I think he can testify as to all of that.

MRS. FLYNN: Mr. Chairman, I think that Mr. Payne has very adequately stated the precise problem that we're facing and the basis for Applicant's objection. If this were a mere compilation of data and if that's the -- well, let

JRB/pp 5

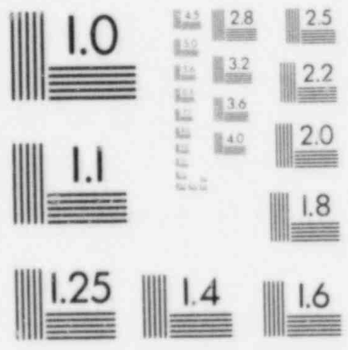
me say this. If this is the purpose for which Mr. Payne is presenting it, then Mr. Clewett should not be entitled to testify as to any conclusions based upon that data. The problem with this report and the reason why we need an expert who will be qualified is that rather than merely compiling data many, many conclusions are drawn from the data. It is the -- the report is riddled with conclusions and when one looks at page 30 and looks at the methodology, one finds that there has been a conclusion drawn about how particular terms will be defined. There was a judgment, obviously a subjective judgment, made about how particular items would be classified and categorized.

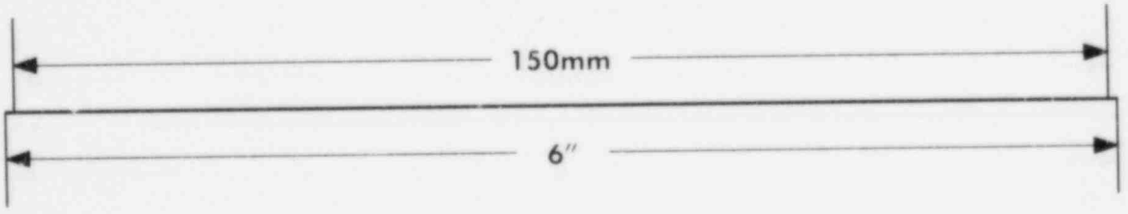
For that reason it is imperative that if this is to be offered, that Mr. Clewett would have the competence to testify as to those conclusions. Mr. Payne has just stated he doesn't have that competence and he's not intending to offer him as an expert witness and therefore the documents should not be admitted.

MR. PAYNE: Judge, with regard to the conclusions, I think the conclusions come from the compilation. His conclusion is based on the numbers that were out there, the incidents that were reported to the NRC. That the Brunswick plant was the worst managed operating plant for the time in question.

And I think that it's nothing but a statement of

IMAGE EVALUATION TEST TARGET (MT-3)





what the compilation shows.

JUDGE KELLEY: But does it, does it. I mean the SALP reports themselves -- and we've got all of them I think in evidence. All of them on CP&L. Well, you know the format you're graded in certain areas, 1, 2, or 3. But as I recall, they don't then conclude that any particular plant is the worst or the best in the country.

In fact, the NRC has pulled together one set of SALPs in the orange book, I think. But they don't do that every year, I don't believe. So that the -- I'm not even sure it was done with respect to '82.

MR. PAYNE: In fact, Judge, I believe that's where the Freedom of Information Act comes in. Mr. Clewett will be prepared to testify as to the documents he relied on. It is much more than just the SALP reports.

JUDGE KELLEY: Yes. But then would you then -- I will put it to you this way: Suppose the Applicants say, well, okay. This is going to come in. Let's edit it. This thing about worst managed plant, we'll strike that because that's Clewett's conclusion and we'll just have all these numbers out of the SALP report.

Would you object to that?

MR. PAYNE: I would have no strong objection. I mean we would certainly argue that that's an appropriate conclusion for the Board to draw in our proposed findings to you.

Certainly if the Applicants would stipulate to the report coming in that way and save Mr. Clewett some inconvenience, I have no problem, you know, editing that from the report. But if they're going to make him come down here anyway, I'm going to want him to testify to that.

JUDGE KELLEY: Okay.

Mr. Barth?

MR. BARTH: Your Honor, we have several objections. First the primary objection is that the document on its face is not relevant. I'd like to point, your Honor, to page 2 of Mr. Clewett's testimony. In line 10. "These documents," and he means the documents that formed the basis of his study, "covered the operation of all the nuclear power plants in the United States during 1982 and part of 1983."

I'd like to point out your Honor, that the figures on page 8 of Mr. Clewett's report and line 4 relating to Brunswick, in the column for the SALP date shows a SALP date of 5-82. That is the exhibit No. 20 in evidence by the Intervenors which covers the period July 1, 1980 to the period December 31, 1981. This is not 1982 and part of 1983 data. This is a misrepresentation of the substantive contents which appears on the face of the document. We do not need to have Mr. Clewett here to explain this.

The SALP itself is in evidence as Exhibit No. 20, that you can compare at your leisure.

WRB/pp 8

I would point out, your Honor, short though the statement is, you have a question at the bottom of page 2. And he asks for conclusion regarding the management of the Brunswick Nuclear Power Plant. The response is that Brunswick was not well run.

I would like to point out to you, your Honor, that the contention is that the Applicants have not demonstrated the adequacy to operate Shearon Harris safely.

The conclusion regarding Brunswick was taken from July 1, 1980 to December 31, 1981 data. That is three year old data relating to one plant which he concludes was not well managed.

That is not a conclusion of the overall management capability to operate Shearon Harris which will go online in 1985.

I would like to point out that his conclusion is based, summarized, upon the data set forth on page 8 of the report. That arithmatic average comes to a 2.47 according to Mr. Clewett for Brunswick.

I would like to point out that the testimony in the record on transcript page 2975 and the individual SALP reports themselves, which are Intervenor's Exhibits 19, 20, and 21, point out that a rating of 3 provides safe operation of the plant. In very technical terms, your Honor, if you would say to me Mr. Barth you are wrong, we're

WRB/pp 9

going to let this in for what it is worth. And we'll take his conclusion. His conclusion is that Brunswick is operated at a 2.57 efficiency and that is a safe operation.

If we had no other evidence in this case whatsoever, only Mr. Clewett's conclusion that he states on page 9, your conclusion must be that Brunswick was operated safely during the period of July 1, 1980 to 1981.

This whole document --

JUDGE KELLEY: That is true if we accept the SALP report as conclusive evidence of the truth, right?

MR. BARTH: That is why it is here. But you could do away with the SALPs, your Honor. You could take Mr. Clewett's word himself and average arithmatically his 2.57 and the Intervenors have introduced evidence to show that a 2.57 rating means a safe plant.

I would like to point out, as I have before your Honor, that this is unrelated to the management of Carolina Power and Light in 1985 to operate that Shearon Harris facility safely.

I would like to point out further, your Honor, that the main reason we are here is to look at the application for an operating license under 42 USC Section 2232, which is Section 182 of the Atomic Energy Act which requires that these people be technically qualified to operate the Shearon Harris facility.

RB/pp 10

The testimony submitted by Mr. Clewett on its face without challenging it, accepting it as it is, your Honor, does not challenge that conclusion that they can operate this plant safely in 1985, the Harris facility.

All it says here is that of the various SALP categories, for the period July 1, 1980 to December 31, 1981, they could have improved but they did operate safely. That's the bottom line.

They could have done better but they done all right. If I may use the poor grammar to emphasize the point, your Honor.

I would like to further point out, that there is no basis, frankly, for the arithmatic average which appears on page 8 of Mr. Clewett's attachment, which is his article that that data was taken from. Page 2 of Joint Intervenor's Exhibit 20, which is the SALP which covers July 1, 1980 to December 31, 1981.

The Atomic Energy Act for which we are the successor agency sets up a licensing board consisting of a lawyer, chairman and two technical members. Mr. Bright is the technical member with experience in nuclear capabity, your Honor. Nuclear operations, if you look at the bottom of page 2 at Intervenor's Exhibit No. 20, which is the SALP report at issue. It lists eight categories of areas, functional areas which are rated. None of those functional

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End #19

WRB fls.

B-19

areas at any time is of equal weightwith any other.

This is apparent from the study. There is no question --

JUDGE KELLEY: You're going to have to let us catch up. Hold on.

MR. BARTH: Thank you, your Honor. My co-counsel is supposed to punch me when I go too fast.

#20 WRBwbl

JUDGE KELLEY: Exhibit No. 20, that is?

MR. BARTH: Yes, your Honor.

JUDGE KELLEY: That's SALP II?

MR. BARTH: SALP II.

JUDGE KELLEY: Page 2?

MR. BARTH: Yes, your Honor, the bottom of page 2 and the top of page 3.

JUDGE KELLEY: Okay.

MR. BARTH: The categories listed for Brunswick running from Nos. 1 through 14, on their face, your Honor, are not of equal equivalent weight, and, therefore, they cannot be manipulated agebraically to make an arithematic average.

The fundamental principle of Mr. Clewett's conclusion on page 8 of his report is that all things are equal, and, therefore, we may average these things algebraically. This Mr. Bright will understand, from a review of the categories of functional areas at the bottom of page 2 and the top of page 3, is fundamentally in error. That is a flaw which appears on the face of the document.

I would like to point out that Mr. Clewett's scheme on page 8 omits categories 13 and 14 which appear at the top of page 3 of the SALP report. Therefore he would have a different arithematic average. It comes to 2.615 rather than 2.517; still well within the 3 which is acceptable, your Honor.

WRBwb2

JUDGE KELLEY: Just so we're clear: we're looking at Brunswick A through K: is that only twelve?

MR. RUNKLE: That's eleven, sir.

JUDGE KELLEY: And yet there are fourteen. But there is something not evaluated.

There's only one thing not evaluated, so there should have been thirteen; is that right?

MR. BARTH: The table on page 8, your Honor, omits K for the Clewett document. K is quality assurance, and that comes in a category classification of 13. This appears at the top of page 3 of SALP II, which is Joint Intervenors' Exhibit 20.

JUDGE KELLEY: I think I may have lost you on that.

MR. BARTH: Let me summarize, your Honor, in less detail.

JUDGE KELLEY: In Brunswick, on page 8, there are only eight. --seven.

MR. BARTH: Correct, your Honor. You have spotted the problem.

JUDGE KELLEY: Seven grades; right?

Now, SALP II has --

MR. BARTH: SALP II has thirteen rated categories, your Honor.

JUDGE KELLEY: That's right; and has no evaluation

WRBwb3

for refueling.

MR. BARTH: That's correct.

On the face of the document proffered, looking at its source, which has already been submitted into evidence by the Joint Intervenors themselves, not by the applicants or by the staff, there is a gross discrepancy in how these figures are arrived at as far as numbers.

Secondly, I would like to very firmly urge that the premise upon which he argues is that each of these categories is of equal weight. The technical membersof the Board will realize that this is not so.

I would like your indulgence, your Honor, to recapitulate very briefly my arguments which have been in several veins.

One, on the face of the document, looking at the two pages which are typed, there are gross inaccuracies. The periods covered by the data are not the periods covered in the report. He's wrong on that.

Second of all, your Honor, the document itself shows that it cannot reach the conclusion that it does, because of the difficulty in equal weighting of different areas of functions, and the fact that he did not include all those areas.

Third, your Honor, let us assume that you looked aqt me and said: Mr. Barth, everything you said is nice, but

WRBwb4

I will accept this document anyway and take it for what it's worth. What is it worth? The conclusion is that Brunswick operates at 2.57 according to Mr. Clewett, and if you will look at the Intervenors' evidence in Exhibits 19, 20 and 21, the conclusion that a 2.57 operating average is safe, commensurate with public safety.

The fourth point I would like to leave firmly with your Honor, is: the document on its face, by Mr. Clewett, and the attendant piece of paper which is his study, on their face do not address the contention, which is that Carolina Power and Light and its co-applicant are not technically qualified to operate the Shearon Harris facility when it goes on line in 1985. These documents do not relate in any scintilla of a way to that premise, and, therefore, they are irrelevant to your consideration.

Thank you, your Honor, for your indulgence.

JUDGE KELLEY: Thank you.

MR. PAYNE: Does the applicant get argument on this, or is it just me and Mr. Barth? If they get to argue I want them to go next.

JUDGE KELLEY: That makes sense.

Do you want to make any further points?

MRS. FLYNN: Yes. Picking up on something Mr. Payne said earlier, if Mr. Payne's purpose in presenting this document for admission is to put into evidence the

WRBwb5

so-called raw data that purportedly was obtained from the NRC documents, applicants would not object to its admission for that limited purpose. But that would mean without conclusions, without the headings, without the analysis that is done on that data; because that is where applicants find the deficiency in this testimony.

We have not independently verified this data, and there may be limitations with it, some of which Mr. Barth has just pointed out, which could correctly be pointed out later on. But we would not object to its admission for that limited purpose.

JUDGE KELLEY: Would it necessarily be necessary-- Let me just put something forward for you to consider:

Mr. Barth's point about a couple of places where it apears that the dates are wrong and the numbers are wrong, or whatever. And if you were headed down a road such as the one you indicate: put it in for its data and not its conclusions: would we necessarily now have to go through it line-by-line and determine -- and compare the SALP numbers, or could we agree that at some future point you just make a written submission saying "Exceptions to Exhibit x," and point out the ones you don't agree with? --in terms of practicality, is what I'm suggesting.

MRS. FLYNN: I believe that that's an appropriate course, although I think it could be done in the proposed

WRBwb6

findings.

JUDGE KELLEY: Well, maybe that's the right place to do it; but someplace other than here, with all of us sitting here going down the page.

MRS. FLYNN: No. I think that would be tedious beyond belief.

JUDGE KELLEY: I don't think it's necessary.

MR. BARTH: Your Honor, the Staff will never agree to accept the argument that these areas to be rated are of equal weight.

JUDGE KELLEY: Would that be the proposition? I mean, the proposition would be that the Critical Mass project did this calculation and came up with 2.57 and that would be their view of what ought to be done. You'll not agree with that; I assume you wouldn't from what you said.

MRS. FLYNN: That would be, in our view, --

JUDGE KELLEY: You're not stipulating to the significance of the number, you're just saying "This is what the number is," whatever it means, and then you argue later about what conclusions we should draw from the number.

MRS. FLYNN: That's correct.

Therefore there would be no need to cross-examine Mr. Clewett; Mr. Clewett would not need to be here.

JUDGE KELLEY: Well, let's hear from Mr. Payne in response to Mr. Barth. Maybe you can work something out; and

WRBwb7

if so, that's fine.

Go ahead.

End 20

WRB/agbl

MR. PAYNE: With regard to Mr. Barth's objections -- and there is a number of them and I'm not sure I can cover all of them because I'm not sure I've got them all in my notes -- his primary objection seems to be a relevancy objection. I believe he stated in fairly absolute terms that there is nothing whatsoever in this report that applies to the contention.

If one reads the contention carefully, it concerns the ability to operate and maintain and manage the Shearon Harris Nuclear Power Plant as evidenced by their record of safety in performance at their other nuclear power facilities.

Now I think that's what this hearing has spent most of its time on is examining the operation of Brunswick and Robinson. I think if you will just total up the hours, the actual discussions about the Harris plant are in the minority here.

This document is mainstream part of this hearing, it has to do with Brunswick; we're not saying it has to do with Shearon Harris. I think it is directly relevant to the contention as framed and as admitted by the Board.

With regard to the errors in the prefiled testimony that Mr. Barth raised--particularly the statement about the operation of all plants in the United

WRB/agb2

States during 1982 and part of '83 -- I think that's a poor choice of words and an ambiguous sentence, it refers to the documents and in fact it's the documents that were available in 1982 and part of 1983, and those documents covered a different period of time.

That's not clear in that sentence and that's probably my fault as much as Mr. Clewett's in the preparation of this. I don't think it goes to anything of substance that would prevent the testimony from coming in. He can clarify that.

The documents are in fact specifically cited in the report. Mr. Barth can't claim any surprise, he's figured out the dates by going back to the original documents, so I don't see that that's a particular substantive objection.

With regard to his very strong objection as to the averaging of various types of ratings, ratings in various areas and saying that the NRC would never agree to do that and so on, in fact if you look at page seven of Mr. Clewett's report he indicates that as a result of Freedom of Information Act requests documents were found in which the NRC itself had in fact done those averages.

I don't think that this was just something that was concocted by Mr. Clewett. Obviously the NRC didn't report the averages for some reason; perhaps

WRB/agb3

that goes to their feeling that there is some ambiguity in doing that, but at least some folks at the NRC have done this, it's not something that was pulled out of the air by Critical Mass.

I might also add that with regard to the relevance of this particular report and the summary of the various SALP reports and data that's in here, Mr. Bemis, in his prefiled testimony continually talks about the treatment of CP&L as being somewhat different, that the NRC has instituted a much more strict program of surveillance for examination of the procedures and operation of CP&L.

I think this report provides some of the background for that, too. I don't think Mr. Bemis lays it out there and I think this report is relevant as to that.

Whether or not the number 2.57 shows that the Brunswick plant was in fact operated safely is a conclusion for the panel to draw. We are reporting a number, a number that was in fact derived from the NRC and in their own subjective way they have rated certain events.

I don't think the fact that a SALP report comes out with that kind of average necessarily means that a plant was safely operated; in fact, we've heard

WRB/agb4

testimony I believe that there haven't been any incidents that the Staff has rated above a level of three, even though Categories 4 and 5 seem to exist they just don't do that. So it's impossible for any plant in the United States to be rated under their scheme as unsafe. You know, that's sort of a priori let's all go home right now.

I don't think the fact that the number comes out less than three is of any significance. I think what is significant and what we're presenting the documentation for is that there is a serious management problem at CP&L; it appears to be one of the most serious in the industry.

And I think no matter what number you come out with here that that in fact is the general thrust of the report no matter how you juggle it; the severity of the problem at CP&L in fact is relevant to the determination of whether or not they can safely operate the Shearon Harris plant.

As to the error -- and I'll be brief on that -- I don't know whether or not it is an error. Mr. Barth pointed out that there were apparently 13 ratings in the SALP report and only eight or nine of them are here; Mr. Clewett can speak to that when he's here and can certainly be cross-examined as to how that occurred.

MR. BARTH: May I make a two-line rejoinder, your Honor?

WRB agb5

First of all, it is the Intervenors' evidence, not mine nor the Applicant, that says that operating at a figure less than three --

MR. PAYNE: Your Honor, I take exception to that. We have never put that into evidence.

JUDGE KELLEY: One at a time.

MR. BARTH: Those are Intervenors Exhibits, your Honor, 19, 20 and 21, in spite of the interruption.

The second line I would like to make, your Honor, is there is no SALP category above a three. If this plant is operated unsafely, the NRC closes it down. Categories 1, 2 and 3 are safe operation categories.

This is a representation of counsel; I will have Mr. Bemis confirm this on the stand. There is no plant which operates safely, in our view, that is permitted for any time at all.

That was also the testimony, your Honor, as you recall in the remand hearing by Floyd Cantrell, that the NRC will not permit a plant to operate unsafely.

JUDGE KELLEY: Okay.

MRS. FLYNN: May Applicants have just a few minutes?

First, the face of the SALP reports from their inception indicate that there are only three categories; there is no Category 4 or 5.

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Second, the number 2.57 is not an NRC number. The NRC does not average those grades. That was done by Critical Mass and that is, in effect, a conclusion.

And Applicants strenuously continue in their position that to offer this report as it stands -- as this document is in its present form is totally objectionable for the reasons we've stated.

JUDGE KELLEY: Okay.

Let me just ask one question:

There was some discussion here which we would like to have you pursue. We're going to step outside in a minute or two and talk about this, but there was some suggestion that it might be possible to take the Critical Mass report and, in effect, edit it so as to keep the data and not put in the conclusions. I'm oversimplifying but I think you know what I mean.

If that approach were taken, what would we be adding inasmuch as SALP I through IV are already in the record? Maybe there is other data here that is significant. Is there? I don't know.

What would be the purpose if we took out the conclusions?

MR. PAYNE: Your Honor, this is data not just about Brunswick but this is data about other plants. I think this indicates the severity of the management

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problem at CP&L and it is directly relevant to the contention.

And that's really the reason for submitting this is this is a summary of SALP reports for all the operating plants in the country.

JUDGE KELLEY: You're saying the SALPs we have then are all CP&L SALPs and this has numbers about other plants?

MR. PAYNE: Yes, sir.

JUDGE KELLEY: And there would be a purpose that would be served?

MR. PAYNE: Yes, sir.

JUDGE KELLEY: All right. I had not focused on that.

How about if we take a break and we'll see what we can do about deliberating on this and come back in a little bit.

And if there is any basis here, I would urge you to discuss the possibility of doing that. My understanding is if you go down that road the purpose would be to come up with a mutually acceptable exhibit and then, insofar as you disagree with anything in it, you can come back in your findings and file your disagreements.

If that is a possibility, please talk it over

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among yourselves while we go out.

Thank you.

(Recess.)

endwrb#21

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JUDGE KELLEY: We'll go back on the record.

Who's the spokesperson?

MRS. FLYNN: This is Mr. Payne.

MR. PAYNE: Judge, I think this is correct and I'm sure that other folks will correct me if I don't state this right.

I think we have a stipulation amongst the parties that the following portions of Mr. Clewett's report or the report he would be sponsoring can, by stipulation, go in the record with some changes. That would be on page 5 of his report. There are some tables that -- tables in the righthand column would be deleted. The heading at the top, "the worst" would be deleted. That the headings on the two tables at the top left would be changed. And I'm going to do this and prepare a clean exhibit to submit. But just to make sure that we're all in agreement.

JUDGE KELLEY: I understand. Right.

MR. PAYNE: That the heading on the lefthand top table would be more than 100 LERs. ANd the top right one would be five or more incidents with a rating of -- an NRC rating of 2?

MRS. FLYNN: Yes.

MR. PAYNE: Would that be okay with --

JUDGE KELLEY: Right.

MR. PAYNE: An NRC rating of 2. And --

JUDGE KELLEY: Is the word severity rating, is that what we're after?

MR. PAYNE: It's defined. There's one sentence or two sentences out of the methodology on page 30, if you want to --

JUDGE KELLEY: Okay, I don't want to disturb what you've got until -- go ahead.

MR. PAYNE: Okay. The bottom -- the four tables in the bottom lefthand half of that page would also come in.

JUDGE KELLEY: Right.

MR. PAYNE: Then pages 8 and 9 which are the summaries from the SALP reports would come in with the deletion from the caption of management ratings. It would just be ratings of operating of nuclear plants. And a summary of the SALP reports.

With regard to the methodology on page 30, in the fourth paragraph which starts with a computer printout obtained through FOIA, et cetera. That the first two sentences of that paragraph which I believe goes back to the tables on page 5 and explains those tables, that that methodology will come in without some of the semantics that got us all hung up.

JUDGE KELLEY: Yes.

MR. PAYNE: And I think that the stipulation is that these numbers are taken from NRC documents and that the

exhibit would be stipulated to without Mr. Clewett having to testify, is that correct?

MRS. FLYNN: Yes, May I just make one mention. On page 5 there is small type in the middle of the page. That should be stricken.

MR. PAYNE: Fine, nc problem.

MR. BARTH: The staff agrees, your Honor.

JUDGE KELLEY: Okay. That this would come in in lieu of Mr. Clewett's appearance as a witness.

MRS. FLYNN: That's right.

MR. PAYNE: That's right.

JUDGE KELLEY: Well, I think that's a very constructive compromise of the whole thing. And we appreciate getting together and working this out. It seems fine.

As a point of information, all I can tell you is if you had not come to a stipulation we just would have prolonged the agony for everybody because we concluded we could not decide this without bringing Clewett in for a voir dire. So we would have spent half the morning on that.

And this is a much better resolution it seems to us.

Then will we start in the morning with Mr. Bemis?

MR. BARTH: That's our understanding, your Honor.

JUDGE KELLEY: Okay, we can start at 9?

MRS. FLYNN: Mr. Chairman, Applicants, I hope,

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will know more about Mr. Smith's schedule in the morning. We've not been able to learn anything thus far today.

JUDGE KELLEY: Okay. And I would think you knew, with a little bit of notice, if he has got an hour at some point and wants to come on over, we could put him on and Mr. Bemis could resume.

Anything else?

MR. RUNKLE: I would prefer not having at 9 o'clock on Friday morning, till about 10:30. But if he can only be available at that time, I would prefer it -- I'd be willing to work with you on that. But I prefer it not that time.

MRS. FLYNN: All right. I'll report on the schedule tomorrow and that may make it easier for us to resolve.

JUDGE KELLEY: I didn't say and I should just have said it should be worked out with Mr. Runkle.

MRS. FLYNN; Let me ask this: May I ask how much at time, Mr. Runkle estimates spending cross examining Mr. Bemis. That would help us.

MR. RUNKLE: Mr. Payne will --

MRS. FLYNN: Mr. Payne --

MR. PAYNE: I don't expect anywhere near the extensive kind of cross examination we've gone through. I would expect in the neighborhood of three of four hours. I really can't be sure.

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MRS. FLYNN: All right, that will help me in scheduling.

MR. PAYNE: It's obviously going to be how he responds to some questions and stuff. But that's sort of the order that I contemplate.

JUDGE KELLEY: Anything else?

Okay. Let's quit for tonight.

(Whereupon, at 6:30 p.m., the hearing was adjourned, to reconvene at 9:00 a.m., Thursday, September 13, 1984.)

CERTIFICATE OF OFFICIAL REPORTER

This is to certify that the attached proceedings before the UNITED STATES NUCLEAR REGULATORY COMMISSION in the matter of:

NAME OF PROCEEDING:

CAROLINA POWER AND LIGHT COMPANY
and NORTH CAROLINA EASTERN MUNICIPAL
POWER AGENCY

(Shearon Harris Nuclear Power Plant,
Units 1 and 2)

DOCKET NO.: 50-400 OL & 50-401 OL

PLACE: Raleigh, North Carolina

DATE: 12 September 1984

were held as herein appears, and that this is the original transcript thereof for the file of the United States Nuclear Regulatory Commission.

(Sigt) _____
(TYPED) William R. Bloom & Anne G. Bloom

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