

UTILITY ADVISOR EVALUATION TEAM  
REPORT  
ON  
GRAND GULF NUCLEAR STATION SHIFT ADVISOR PROGRAM  
April 24-26, 1984

April 27, 1984

## TABLE OF CONTENTS

- I. EXECUTIVE SUMMARY
- II. OBJECTIVE, SCOPE AND METHODOLOGY
- III. EVALUATION RESULTS BY SECTION
  - A. INTERVIEWS
  - B. SHIFT OBSERVATION
  - C. SIMULATOR OBSERVATION
  - D. RESUME REVIEW
  - E. ADVISOR DUTIES REVIEW
  - F. TRAINING LESSON PLAN REVIEW
  - G. EXAM REVIEW
  - H. EVALUATION TEAM RECOMMENDATIONS
- IV. UTILITY ADVISOR EVALUATION TEAM MEMBER EXPERIENCE
- V. TEAM ENDORSEMENT OF REPORT

## I. EXECUTIVE SUMMARY

Recent industry efforts have focused on identifying appropriate experience for NTOL plants as a part of a broader program to improve the managerial and technical experience of those involved in the operation of nuclear plants. A special NTOL experience group chaired by H. B. Tucker, Vice President Nuclear Production, Duke Power Company, was asked by Mississippi Power & Light Company (MP&L) to assemble a team to evaluate the Grand Gulf Nuclear Station Shift Advisor Program.

The six member Utility Advisor Evaluation Team (UAET) consisting of representatives from five major nuclear utilities, conducted a comprehensive evaluation of the Grand Gulf Advisor Program on April 24, 25 and 26, 1984. The UAET evaluated all aspects of the program between the shift crews and the advisor, procedures and examinations. The evaluation included documentation reviews, interviews with advisors and MP&L management and operations staff, and direct observation of shift operations and simulator instruction.

The UAET concludes that MP&L has defined an effective Advisor program, has selected qualified individuals and has provided training appropriate for the shift advisors. The MP&L Advisor program equals, and in many cases exceeds, the position presented to the NRC by the NTOL Utility Group on February 24, 1984. Additionally, MP&L agreed to incorporate the UAET recommendations into their Advisor program which will further strengthen the effort.

The UAET also concludes that these advisors can rapidly and effectively communicate their experience to the MP&L shift crew. It is the UAET's unanimous opinion that MP&L's Advisor program provides additional assurance that the Grand Gulf Nuclear Station can be started up and operated safely and in accordance with NRC regulatory requirements.

II. OBJECTIVE, SCOPE AND METHODOLOGY

- o The objective was to evaluate the effectiveness of the Grand Gulf Shift Advisor Program including the qualifications of each advisor on shift.
  - o The Scope of the evaluation consisted of a review of the following:
    - a) The training provided the advisors, including the extent of the training, the criteria for the training, the specific procedures (administrative, normal, abnormal, and emergency), Plant Technical Specifications, specific plant systems, and the scope, content, and grading of the examinations given.
    - b) The standing orders and other communications that define the specific duties and responsibilities of the Shift Advisor, the instruction provided to the shifts to ensure their understanding of the program, the advisor's functions, their limitations and access to plant management above the Shift Superintendent.
    - c) The training records review, observation of simulator training in-progress and observation of on-shift crews performing routine operation including shift turnovers.
  - o The team divided into groups and conducted reviews of assigned areas including normal shift operations, shift turnovers, observation of the shift crews/advisor interface, the training program, resumes of the individual advisors, interviews with most of the advisors, interviews with operations, training and plant management, and observation of simulator training in progress.
- A post evaluation discussion was held with MP&L's management to review the team findings.

### III. EVALUATION RESULTS BY SECTION

#### A. INTERVIEWS

There were several types of interviews conducted with the MP&L Shift Advisors and operating staff. These included a control room crew interview with all UAET members present, and interviews of three shift operating crews with two or more UAET members present.

The purpose of these interviews was threefold. First, to verify the adequacy of communications relating to the duties and responsibilities of the Shift Advisor. This verification was performed by comparing the responses obtained from the various advisors, control room RO's and SRO's to the responses obtained from plant management delineating the duties and responsibilities of these advisors. Second, all the responses were compared to the duties and responsibilities stated in MP&L's standing orders and memos. Third, to evaluate the Shift Advisors specific training needs relative to their duties and responsibilities. This again was accomplished by comparing responses as described previously.

In summary, the UAET members found that MP&L's advisors, shift crews and plant management generally agree on the function of the shift advisor. UAET members agree that the training provided meets or exceeds the requirements necessary to adequately function as Shift Advisors at MP&L's Grand Gulf Nuclear Station.

#### B. SHIFT OBSERVATIONS

One shift turnover was observed by members of the UAET. This review enabled the team to evaluate, in part, the Shift Advisor's conformance to stated responsibilities and performance of duties. These responsibilities and duties are defined by written standing orders and a related memo.

The advisor's turnover requirements are not described by procedure. The advisors maintain their own special log. They used this log and a control board walkdown to inform the oncoming advisor of significant activities accomplished during the previous shift or those in progress. It was stated that the Shift Advisor attended the shift turnover between the oncoming and offgoing Shift Superintendent. This is an additional method for the advisor to maintain awareness of activities and was observed on one shift turnover.

The Shift Advisor is normally stationed in the main control room. This location facilitates observation of unit status as well as communication with the Shift Supervisor and the control room operator.



### C. SIMULATOR OBSERVATION

UAET members observed a portion of the simulator training provided the Shift Advisor. The training provided was consistent with the training staff's course outline and objectives. The Shift Advisor was utilized by other control room personnel in discussion of procedures and Technical Specifications and he made recommendations consistent with his position concerning equipment operations. The pace of the class was appropriate for the student level of training and experience. The program, as presented, represents SRO level instruction and content.

### D. RESUME REVIEW

Each of the five current Shift Advisor's resumes were reviewed and the authenticity of previous NRC licenses was verified. Verification of license was provided by the advisor contractor (Quadrex). All candidates resumes indicated that they exceeded the industry requirements proposed for the Shift Advisor position.

In addition to the resume review and license verification, four of the five candidates were personally interviewed. Additional information about the advisor usefulness and their experience was obtained by direct interviews with the Shift Superintendents, Shift Supervisors, Shift Technical Advisors and Control Room Operators.

### E. ADVISOR DUTIES REVIEW

MP&L developed a memo with attached standing orders to cover the scope, responsibilities, duties and working relationships of the Shift Advisor. The order covered all the important aspects of the Advisor's role and specifically stated his key responsibilities:

"Specifically, the role of the Shift Advisor is to advise the Shift Superintendent on matters of plant operations which may have safety implications."

The UAET believes that MP&L's description of duties and responsibilities meet the current industry NTOL position. The UAET made recommendations for improving these instructions and MP&L agreed to implement these recommendations.

### F. TRAINING LESSON PLAN REVIEW

A training course for the Shift Advisors was developed by the station's training department. The training staff performed a review of the duties of the advisor and developed a training plan with elements specific to the needs of the advisors. This course was seven weeks in duration and included Technical Specifications, plant procedures, plant systems, simulator training and Mitigation of Core Damage. The UAET reviewed the lesson plans for the

simulator training. One week of Power Ascension testing training and one week of Plant Transient Response and Recovery training were selected since these weeks included training in all areas within the scope of our program evaluation, i.e., plant procedures, Technical Specifications, and plant systems. Evaluation of the examination is discussed below. The lesson plans were considered satisfactory for the Shift Advisor position. Emphasis was placed on the more significant operating and emergency procedures and plant systems. The UAET considered the Shift Advisor's training plans to meet the requirements of the NTOL Utility Working Group.

#### G. EXAMINATION REVIEW

The UAET reviewed the content and grading of MP&L's oral, written and simulator examinations which were administered to the first group of Shift Advisors to complete training. All examinations were representative of the Advisor Training Program. The written examinations and the oral examinations given by the Operator Training Evaluation Committee had sufficient depth including plant specific and General Electric generic questions to assure that any Advisor who passed these examinations would be able to effectively relate and communicate their experience to the Grand Gulf operators. The grading of the examinations was considered appropriate. A majority of the questions on the examinations were considered to be at an SRO level.

#### H. EVALUATION TEAM RECOMMENDATIONS

In order to enhance the existing Advisor Program, the UAET members recommended the following improvements:

- o Develop a specific plant procedure delineating the advisors duties and responsibilities to replace the existing memos and standing orders.
- o Discuss the new procedure with the shift crew, advisors and appropriate plant staff.
- o Establish a structured Shift Advisor Evaluation Program to ensure adequate advisor performance.
- o Minimize administrative support assignments to the advisor during power operation and testing to enable maximum attention to the plant condition.

IV. UTILITY ADVISOR TEAM MEMBER EXPERIENCE

Nick S. Catron  
BWR Simulator Training Supervisor  
Tennessee Valley Authority

Mr. Catron has approximately sixteen years of nuclear experience including ten years of commercial experience. He is currently SRO licensed on Brown's Ferry 1, 2 and 3 with seven years SRO experience with duties including Assistant Shift Engineer and Shift Engineer and currently supervision of plant specific simulator and classroom instructions. Specific plant experience includes plant construction and startup of Brown's Ferry Units 1, 2 and 3 as Hot Licensed SRO Assistant Shift Engineer and Shift Engineer. Training experience includes classroom and simulator training for both licensed and non-licensed training and currently as BWR Simulator Training Supervisor. He served as a member of the Peer Advisory Panel to NRC on Operator Qualifications.

Max Manry  
Manager of Nuclear Performance  
Georgia Power Company

Mr. Manry has thirty years of commercial power plant experience of which sixteen years were in the area of fossil plant experience and fourteen years of nuclear experience. The fossil experience consists of various engineering positions and a member of plant management. The nuclear experience consists of eight years as Assistant Plant Manager and four years as Plant Manager during construction, preoperational testing, startup and operation of the Plant Hatch Nuclear Plant Units 1 and 2; one year experience as Plant Manager of Plant Vogtle during construction in preparation for startup; one year experience in the Corporate Office as Manager of Nuclear Performance responsible for developing a program to improve the performance of Georgia Power Company's operating nuclear power plant. He obtained a Cold SRO License on the Plant Hatch facility and now maintains a Georgia Power Company SRO certification requirement. As Plant Manager of the Plant Hatch facility, he served as Chairman of the onsite Plant Review Board and as a member of the offsite Safety Review Board.



J. Norman Pope  
Superintendent of Operations  
Oconee Nuclear Station  
Duke Power Company

Mr. Pope has twenty-two years power plant experience, ten of these years have been commercial nuclear power plant experience. He obtained an SRO license at Oconee, a 3 Unit 900 Mwe B&W power plant. He has held the positions of Shift Supervisor, Operating Engineer, and Superintendent of Operations at this plant. In these line management positions, he has been responsible for portions of the initial testing programs, initial fuel loadings and initial startup testing on all three units, and the continued safe and efficient operation of Oconee.

E. L. Thomas  
Manager Nuclear Reliability Assurance  
Duke Power Company

Mr. Thomas has thirty-seven years power plant experience including thirteen years nuclear involvement. Specific nuclear experience includes eight years in defining, developing and operating Duke Power Company's Nuclear Power Technical Training Program. He served as Director of the Training and Education Division of the Institute of Nuclear Power Operations for 2.5 years. Currently responsible for developing and implementing a program to improve the reliability/availability of Duke's nuclear generating units.

Jimmy D. Vandergrift  
Training Superintendent, Arkansas Nuclear One  
Arkansas Power & Light Company

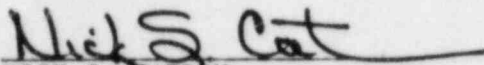
Mr. Vandergrift has twenty years training and experience in nuclear power. He had six years experience in the nuclear Navy before joining AP&L in 1970 as an operator at Arkansas Nuclear One (ANO). He has held SRO license on both the ANO B&W and the CE Nuclear Units and served as Shift Operating Supervisor from 1974 to 1978 during the initial startup of both units. He has been in the ANO training organization since 1978 serving as the Training Supervisor and Superintendent. He served on the Institute of Nuclear Power Operations' Training and Education Division Industry Review Group (IRG) from July 1981 until December 1984.

Jerald M. Waldorf  
Principal Engineer Nuclear Staff Support Section  
Carolina Power & Light Company

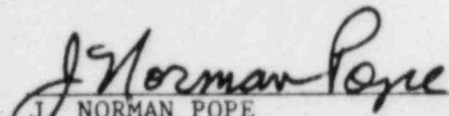
Mr. Waldorf has over fourteen years of power plant experience with CP&L including over thirteen years of nuclear plant experience. Mr. Waldorf received a Cold SRO License on Brunswick Plant in 1974. He maintained the license until 1980. He held the position of Senior Operations Engineer during the preoperational and startup test phases. Duties included fulfilling licensed engineer on shift commitments for significant testing and line supervision on all operating shift personnel. Mr. Waldorf has also held the positions of Project Engineer with plant technical support staff, Site TMI Manager and Resident Engineer responsible for onsite retrofit engineering activities.

V. TEAM ENDORSEMENT OF REPORT

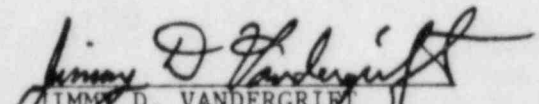
This report reflects my observations and opinions.


  
NICK S. CATRON  
TENNESSEE VALLEY AUTHORITY

  
MAX MANRY  
GEORGIA POWER COMPANY

  
J. NORMAN POPE  
DUKE POWER COMPANY

  
E. L. THOMAS  
DUKE POWER COMPANY

  
JIMMY D. VANDERGRIET  
ARKANSAS POWER & LIGHT COMPANY

  
GERALD M. WALDORF  
CAROLINA POWER & LIGHT COMPANY