

August 16, 1984

Docket  
File

Docket Nos. 50-348  
and 50-364

LICENSEE: Alabama Power Company (APCo)

FACILITY: Joseph M. Farley Nuclear Plant, Units 1 and 2

SUBJECT: SUMMARY OF MEETING HELD ON JULY 25, 1984, BETWEEN  
NRC AND APCo REPRESENTATIVES TO DISCUSS APCo's DETAILED  
CONTROL ROOM DESIGN REVIEW (DCRDR)

Introduction

The NRC Project Manager (E. Reeves) reviewed the purpose of the meeting which resulted from NRC's request for a meeting contained in letter dated May 24, 1984. Human Factors Engineering Branch (J. Kramer) briefly reviewed the licensee's DCRDR Program Plan to which NRC provided seventeen plant specific comments by letter dated March 9, 1984. APCo has referenced NUTAC documents which were docketed by APCo April 3, 1984. NRC draft comments were provided by letter dated April 11, 1984 from NRC to chairman DCRDR, NUTAC on the NUTAC documents. A list of attendees is enclosed.

Background

The meeting was held to provide APCo the opportunity to discuss in greater detail information regarding their DCRDR Program Plan and the NRC staff review comments on the Program Plan. APCo also discussed their position on the validity of using the NUTAC documents as an aid in completing the NUREG-0737 Supplement 1 requirements for Farley Nuclear Plant, Units 1 and 2. Highlights of the discussion are provided below.

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Discussion

APCo has been an active participant in the Westinghouse Owners' Group (WOG) subcommittee for the development of technical guidelines for Emergency Operating Procedures. One of their employees, Doug McKinney, is the chairman of that committee.

APCo has also indicated that they intend to use the NUTAC criteria to perform their control room survey. All NUTAC documents have been reviewed by the NRC staff and found to be lacking in several areas which were appropriately covered by NUREG-0700. The NUREG-0700 has been suggested as guidance for the control room survey by the NRC. The NRC and NUTAC members met during the week of July 16, 1984 to discuss differences in NUREG-0700 and the NUTAC documents. Although all the differences were not resolved at that meeting, the NRC understands that APCo does not consider that the NUTAC documents provide complete methods, but rather the NUTAC reports provide part of the basis for conducting a control room survey.

APCo indicated that they wanted to discuss the seventeen points raised by the NRC review of their program plan. They intend to use their simulator as a tool for task analysis, survey, verification, validation, etc., because it is practically identical to both their units 1 and 2. Where differences between the simulator and the control rooms arise, they will be discussed in the summary report.

APCo does not intend to take final credit for their 1980 CRDR effort. Instead they are planning a comprehensive new plan to comply with NUREG-0737 Supplement 1. One of the purposes of the meeting was to present how APCo intends to modify their program plan so that their DCRDR will be satisfactory. APCo intends to submit a schedule for completing their DCRDR in November of 1984.

Qualifications and Structure of the DCRDR Team

APCo stated that the human factors specialist would be participating in the on-site survey, task analysis and the preliminary assessment and resolution of the HEDs. They also indicated that they have identified some of the engineers and specialists to supplement the DCRDR team with the exception of a reliability and risk assessment engineer. The NRC accepted this.

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Function and Task Analysis

APCo stated that they intend to use Rev. 1 of the WOG ERGs. They will use the event-oriented emergency procedures E0, E1, E2, and E3. Also they will use all of the symptom-oriented procedures in the function restoration guidelines (FRGs). When using their simulator to perform walk-throughs, APCo does not intend to adhere to a strict real-time simulation because the time element might prevent a thorough analysis. However, when performing V&V functions for HED solutions, the real-time simulator will be used in conjunction with other techniques.

With regard to the use of the WOG ERGs, APCo intends to write the plant-specific EOPs identifying all tasks. Their core team located in Birmingham, not at Farley, will establish the information and control needs for all tasks. Lastly, the needed characteristics of the instruments and controls will be determined. This will be performed independently of the existing controls and displays in the control room. Also, one of the core team members who is not an operator at Farley, but who does have Navy reactor operating experience will be included on this team.

While the NRC found all of the above points acceptable, the staff will do an in-progress audit of the licensee's task analysis -- tentatively in September or October of this year.

Control Room Inventory

APCo indicated that the function of a control room inventory would be carried out by the simulator without the real-time constraints. Therefore ample time would be available to compare the required instruments and controls identified in the task analysis with those exhibited on the simulator. The NRC found this acceptable.

Control Room Survey

APCo intends to use the NUTAC documents for their control room survey. This was discussed in detail at a meeting last week. APCo maintains that together the NUTAC "survey" and "principles" documents cover all of the NUREG-0700 guidelines. The NRC is skeptical that all of the guidelines in NUREG-0700 are accounted for. Prime areas of concern are guidelines relating to CRTs in the control room. Also of concern are guidelines which

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NUREG-0700 defined in objective measurable quantities (e.g., ft/sec air velocity, percent relative humidity, etc., for HVAC systems) instead of NUTAC subjective criteria (e.g., "is there a draft in the control room?" or, "is the control room too humid or too dry?"). APCo is confident that they can conduct a control room survey which will comply with NUREG-0737 Supplement 1 by using the NUTAC documents. This point was not resolved. The NRC stated that they intend to do a pre-implementation audit after the DCRDR Summary Report is received. This audit would emphasize the control room survey and HED's identified. Staff will conduct a mini-NUREG-0700 survey and compare HED's against those identified by the licensee using the NUTAC documents and guidelines. This audit is tentatively planned for mid 1985.

Assessment of Human Engineering Discrepancies (HEDs)

APCo has completely revised their assessment criteria and methodology from their program plan. They will categorize HEDs according to three criteria: (1) likelihood for an HED causing an accident; (2) effect that accident might have on plant safety; and (3) effect that the accident might have on plant operations. These criteria will be arrived at by a seven point scale. It was designed to be objective and repeatable. Thus APCo will have a tool for categorizing their HEDs. Four categories resulted. APCo agreed, at the NRC suggestion, to include HEDs known to have caused a problem in the past in the first category. They also have deleted the cost element from their assessment methodology.

One of the categories for HEDs was a paint-label-tape (P-L-T) category which APCo now agrees, on a case-by-case basis, to correct as soon as possible (not waiting for several refueling outages as originally scheduled). Their criterion for near-term correction is safety. If a P-L-T HED solution is safety significant, they will schedule it for prompt correction, otherwise they will give it a lower priority. The NRC accepted this process.

Selection of Design Improvements

APCo intends to institute a comprehensive policy for design improvements that would include human factors principles in policy design standards. They will look for the best solution to solve the HEDs during

their conceptual design process. They they will handle it as they do other

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design changes with rigorous sign-offs required for the entire process, thus they will assure that corrections are made according to design drawings; that procedures are changed when necessary; and that operator training is used when necessary. The NRC found this to be an acceptable process.

Verification that Improvements Will Provide Necessary Corrections and that Control Room Modifications Do Not Introduce New HEDs

APCo verbally agreed to verify their HED solutions by a visual and physical checkout via a mock-up, a detailed conceptual layout or walk-down in the simulator. They will implement a tracking system for HED corrections. The NRC accepted this process.

Coordination of the DCRDR With Other Programs

APCo very proudly referred to Figure 3 in the December, 1983 NUTAC, "Guidance for an Integrated Plan for Emergency Response Capabilities." This figure ties together EOPs, CRDR, Reg. Guide 1.97, SPDS, Emergency Response Facilities and implementation. Apparently this figure was adopted by NUTAC from original APCo work. The NRC accepted this approach.

Summary

In closing, the NRC staff indicated that much additional information on the licensee's DCRDR Program Plan had been provided to give the staff greater assurance that the DCRDR would be successful. APCo will submit docketed responses to staff comments on the Program Plan. NRC staff will conduct an in-progress audit of the licensee's task analysis and a pre-implementation audit of the control room survey result. Firm dates remain to be determined. However, tentative target dates for the audit is September 1984 and APCo's Summary Report submittal in mid-1985.

/s/S.Varga

Edward A. Reeves, Project Manager  
 Operating Reactors Branch #1  
 Division of Licensing

Enclosure:  
 As stated

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MEETING SUMMARY DISTRIBUTION  
OPERATING REACTORS BRANCH NO. 1

Docket or Central File

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NRC Participants