SUMMARY OF SECOND MEETING OF NRC WITH FOUR FACILITY LICENSEES
PROPOSING TO APPLY FOR NRC APPROVAL FOR SIMULATION FACILITIES

A public meeting was held between the NRC staff, contractors, and utility representatives to discuss the revised proposal submitted by four facility licensees to comply with NRC's requirement for simulation facilities under 10 CFR 55.45(b). The four facility licensees have combined their efforts under an informal organization called the "Utility Simulation Facility Group" (USFG). The meeting was held from 8:30 am to 11:30 am on December 7, 1987, in Room 2242, Air Rights Building, 4550 Montgomery Avenue, Bethesda, Maryland. The meeting was conducted by the staff of the Operator Licensing Branch (OLB), Division of Licensee Performance and Quality Evaluation (DLPQE) for the Commission, and by Larry Bennett and R. Michael Kirby of Southern California Edison Company for the USFG. An attendance list is provided at Enclosure 1.

The revised proposal submitted by the USFG responded to the statement of "Conclusions and Agreements Reached" which had been prepared by the NRC as a result of an earlier meeting, and which had been included as Enclosure 5 to the minutes of that meeting. That statement is included for reference as Enclosure 2 to these minutes. The revised USFG proposal, known as Revision 1 to the document titled: "Guidance for Development of a Simulation Facility to Meet the Requirements of 10CFR55.45," and dated October 1987, is provided at Enclosure 3.

Opening remarks were made by Leonard Wiens, a Section Leader with the Operator Licensing Branch. He expressed his appreciation to the USFG members for the attention they had given to the stated NRC concerns, as reflected in their revised document. He stated his expectation that this meeting would clarify any remaining differences between NRC and the USFG, and that, at the conclusion of the meeting, the USFG would know exactly what additional effort was required of them.

Open discussions then took place during which the USFG's responses to NRC's statement of "Conclusions and Agreements Reached" were addressed. The NRC's remaining concerns were expressed, and one new issue raised by the revised proposal, was also addressed. A summary of these discussions, together with item-by-item statements of resolution or open concern, is provided at Enclosure 4.

The meeting was concluded with an agreement that the USFG would further revise the guidance document to reflect the NRC's remaining concerns (except for those concerns which, it was agreed, could only be resolved in plant-specific plans). Further, it was agreed that, if these revisions were acceptable to the Staff, the NRC would issue an informal endorsement of the document. Such an endorsement would enable each of the four member utilities to proceed with development of its plant-specific plan for compliance with the regulation, using the generic plan as a starting-point. It was also concluded that additional formal meetings were probably unnecessary, but that working meetings between the NRC and each of the four individual utilities should take place from time-to-time during simulation facility development.

ENCLOSURE 1

LIST OF ATTENDEES

NAME	ORGANIZATION
Len Wiens	NRC/NRR/DLPQ/OLB
Shelley Spilberg	NRC/NRR/DLPQ/OLB
Jerry Wachtel	NRC/NRR/DLPQ/OLB
Dennis LaCroix	Big Rock Point
David A. Maidrand	Yankee Atomic
Ralph R. Frisch	Consumers Power Company
Kathy P. Owens	Public Service of Colorado
Robert D. Hagerman	Westinghouse
David White	Yankee Atomic
Tim Henderson	Yankee Atomic
Mary Raymond	Public Service Co. of Colorado
Jose G. Ibarra	Southern California Edison
Tony Llorens	Southern California Edison
Larry Bennett	Southern California Edison
Chris Plott	Micro Analysis and Design
Ken Heitner	NRC/NRR/PD-IV (PM - FSV)
Michael J. Kirby	Southern California Edison

ENCLOSURE 2

ENCLOSURE 5

CONCLUSIONS AND AGREEMENTS REACHED

1. USE OF PLANT PROCEDURES, AND DEMONSTRATION OF THE "ABILITY TO PERFORM"

Agreement was reached on the use of controlled copies of the reference plant procedures. Pen and ink mark-ups of the procedures will be considered deviations from the requirements and shal be only made as a last resort. Such changes will be made only after the following steps have been taken:

a. Determination has been made that the procedure cannot be performed on existing simulation devices.

b. Upgrades to existing simulation devices, or the development of new simulation devices for the procedure(s) or part of the procedure(s) which cannot be conducted require an excessive effort or burden in relation to the benefit gained.

c. The use of controllers or similar mechanisms would result in a degradation to the examination process.

It was agreed that it is necessary, in order to comply with 10CFR55.45, for the simulation facility to provide the capability to allow license candidates to demonstrate their "ability to perform" the operations required by the procedures. This capability may include, if so determined by the facility licensee, the use of the reference plant for the performance of normal plant operations.

2. PHYSICAL AND FUNCTIONAL FIDELITY

It was agreed that both physical and functional fidelity should be included in the simulation facility. There was however, a distinct difference between the approaches for meeting this goal proposed by the USFG and the NRC staff. It was the USFG's position that this goal could be met by using separate simulation devices to provide physical and functional fidelity. It was the staff's position that both should be included in a single device for a given procedure or event.

Given this point of contention, the NRC staff requests that the USFG perform the research and/or analysis to support or refute its position, and present these findings to the NRC. The staff expects that this analysis, if performed adequately, would demonstrate a requirement for some degree of simultaneous physical and functional fidelity.

3. EXISTING VS NEW SIMULATION DEVICES

The USFG will include, in their plan, the consideration of obtaining or developing new simulation devices as a higher priority than the use of controllers or procedure changes.

4. HARDWARE ALTERNATIVES AND INTEGRATION

The USFG will include a general discussion of the overall integration of the simulation facilityies in the current plan. Specific discussions for each facilty licensee will be included in that facility licensee's plant-specific plan to be submitted no later than May 26, 1988.

5. BEST ESTIMATE ANALYSIS AND BASELINE DATA

Reference plant operating history data will be applied to simulation devices as appropriate.

Reference plant operating history data will not be applied to non-plant referenced simulators (NPRS) because they, by definition, are not referenced to the facility licensee's reference plant. Instead, best estimate data will be utilized to initially validate the NPRS models.

6. REAL-TIME SIMULATION

Criteria and evaluation procedures for determining real time fidelity in both the pragmatic sense and the "computer simulation" sense will be developed and applied to simulation devices, as appropriate, by the USFG.

7. SKILLS AND KNOWLEDGES

The use of the skills and knowledges as a basis for the development of the simulation facility will be more clearly defined and described in the USFG plan. Methods for showing the relationships between the skills and knowledges, the analyses to be conducted, and the regulation, will also be explored.

8. USE OF CONTROLLERS

The role, functions, and limitations of the controllers will be more clearly delineated by the USFG. Mechanisms for ensuring the integrity of examinations when using controllers will also be explored. Controller qualifications will be determined by the specific utilities and included in their plant-specific plans.

9. HUMAN FACTORS ISSUES

The USFG will more clearly delineate the criteria and evaluation procedures for the human factors issues.

10. OPERATIONAL CUE ANALYSIS

The USFG will provide more detail on the information and reference plant characteristics to be included in the operational cue analysis.

11. MULTI-DISCIPLINARY TEAM

The USFG will provide information about the guidance and criteria to be used by this team, and its overall role in the development of the simulation facility. Team make-up will be addressed by the individual utilities and included in their plant-specific plans.

12. CONFIGURATION MANAGEMENT

The USFG will provide more information on plans for configuration management. This will include consideration of such changes made to NPRS as a result of changes made to the NPRS's reference plant.

13. MISCELLANEOUS

The USFG plan will be changed to delete references to the utility review and approval of NRC examinations on the simulation facility, and to the repeated use of examiners.

14. WORKING REALTIONSHIP

It was agreed that the USFG and the staff would maintain close working relationships during the development of the simulation facilities.

Distribution and Concurrence for memo to Inez K. Bailey dated FEB 12 1988.

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UNITED STATES
NUCLEAR REGULATORY COMMISSION
WASHINGTON, D. C. 20555

FEB 12 1988

MEMORANDUM FOR: Inez K. Bailey, Chief
Records Services Branch

FROM: John N. Hannon, Chief
Operator Licensing Branch
Division of Licensee Performance
and Quality Evaluation

SUBJECT: MINUTES OF FOLLOWUP MEETING BETWEEN NRC AND UTILITIES PROPOSING NON-ANS 3.5 SIMULATORS HELD DECEMBER 7, 1987

Please place the enclosed minutes in the Public Document Room (PDR).

Theodore T. Szymanski for
John N. Hannon, Chief
Operator Licensing Branch
Division of Licensee Performance
and Quality Evaluation

Enclosure:
As stated