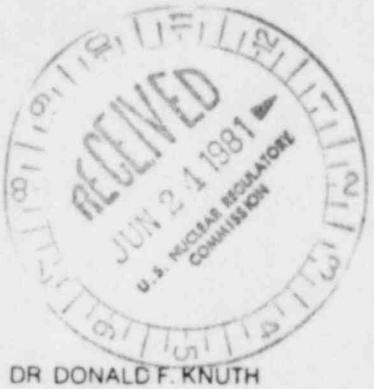


June 9, 1981

DR DONALD F. KNUTH
President

Mr. Samuel J. Chilk
Secretary of the Commission
Nuclear Regulatory Commission
Washington, D.C. 20555

Dear Mr. Chilk:

On Thursday, May 28, 1981, the NRC staff briefed the Commissioners on a proposed revision to SECY-81-84 related to operator licensing requirements. At that meeting the commission requested that the staff obtain input from industry as well as other sources on the draft proposal. KMC, Inc. and the 18 utilities listed in Enclosure A are pleased to offer comments for the Commission's consideration.

We consider that this proposed regulation can have profound implications for the safe operation of power reactors. One key ingredient to continued safe operation is maintaining experienced and well trained operators.

If, for example, vaguely defined educational requirements such as a requirement to obtain college credits on a defined schedule are imposed without a defined need for that training the likely effect will be for otherwise qualified personnel to seek employment elsewhere, where such requirements don't exist. Since the Three Mile Island accident, the Commission has imposed significant upgrades in training, which stemmed from its multiple task forces. Operators, of necessity, have been required through overtime or cancellation of vacations to receive added instruction. There is a growing undercurrent that more and more requirements from the NRC are likely, which will impose additional hardships on the individual with no clear incremental increase in safety. Without a perceived need to take courses such as calculus or differential equations, many well qualified or potentially well qualified individuals are encouraged to seek employment elsewhere. We are firmly convinced that job-task analyses should be used to determine what skills are needed and then that training programs (or permissible equivalent methods) be provided which fulfill the identified requirements.

The utility group on Qualification of Reactor Operators (QRO) previously provided comments on NUREG/CR-1750 "Analysis, Conclusions, and Recommendations Concerning Operator Licensing," which were broader in scope and are still relevant to the proposed rule now under consideration. In view of the short time we were permitted to prepare our preliminary comments on revisions to SECY-81-84, we did not provide a comparative text of a proposed rule, rather, we prepared a set of tables which itemizes proposed requirements on elements which could be written in rule form. (Enclosure B) We have also prepared for comparison our current understanding of the proposed changes to SECY-81-84 as obtained from the papers by Commissioner Gilinsky, the summary sheet, and the transcript of the Commission's meeting. (Enclosure C)

The principal problems, although not totally inclusive, center on three major issues:

1. The newly-generated requirement that in addition to the shift supervisor being a senior operator that he be licensed as a shift supervisor;

2. The imposition of newly-generated college level requirements will impose unnecessary requirements for currently licensed personnel and future operators; and,

3. The required experience levels of operators will be unattainable for new plants licensed in the future.

We believe our proposed concept will provide competence levels equivalent or superior to the Commission's current proposal, eliminate the objections enunciated above, and enhance retention of the current cadre of well trained and competent operators. Each of the major issues will be discussed in the following sections.

The need to license a shift supervisor other than a SRO is not apparent. There is no question that a shift supervisor needs to be competent and well trained. The utility, which has the responsibility for the safe operation of its facility, should retain the perogative of selecting and appointing its managers for shift operations. The technical competence of a shift supervisor should be that of a senior operator and he should have recognized supervisory skills, leadership qualities, and personality traits to be an effective manager. The recognition and monitoring of

these attributes can best be accomplished by licensee management without the need of the administrative burden of a licensing process. (This burden would also fall heavily on the understaffed Operator Licensing Branch.) Our proposed regulation would require licensee management to consider those traits enumerated as necessary for the selection criteria for a shift supervisor, but would not include the NRC in the selection process.

The imposition of approved college level training or college degree may or may not assure technical competence in a desired area. Two obvious problems that arise in considering college level courses are: What constitutes a "college level" course, and what prerequisite courses and accreditation difficulties will have to be met? It is our opinion that the proper course of action is to establish the needed area of technical knowledge through a job-task analysis (or other means), and then determine if an individual has acquired knowledge of those areas through previous college work, military instruction, commercial instruction, equivalent work experience; or if additional training is required. If a prospective senior operator or supervisor is in need of additional instruction, the avenues available to attain them are varied. These techniques are used in other high technology areas such as establishing requirements for operators of aircraft (airline captains). Our proposal would require a determination of the needs for instruction for a particular level within 2 years with the requisite training to be completed within 5 years.

The establishment of excessive required experience levels would most likely promote supervisory instability through encouragement of pirating of personnel. As currently written, for newly licensed plants, there is no way of meeting the requirements except by hiring talent from another operating plant (which decreases experience level at that plant), or obtaining a waiver to the regulations (a difficult, if not impossible, task.) Our proposal would permit the licensing branch to reduce the experience levels a specified amount for new plants based upon their review of the qualification of the incumbent.

One final item which we believe should be considered is that of the shift technical advisor. If a utility elects to upgrade training to a designated shift person, it should be permitted to discontinue the use of a shift technical advisor.

We believe this was intended by the initial lessons learned task activity. The requirements for this alternative should also be considered in the development of the final rule.

We would be pleased to discuss our proposed alternative with you or your staff at your convenience.

Sincerely,

Donald F. Knuth

Donald F. Knuth

DFK/cs
Enclosures

cc: NRC Commissioners
Mr. Hanauer
Mr. Denton

ENCLOSURE A

QUALIFICATION OF REACTOR OPERATORS UTILITY GROUP

BALTIMORE GAS & ELECTRIC COMPANY
CINCINNATI GAS & ELECTRIC COMPANY
CONSUMERS POWER COMPANY
FLORIDA POWER CORPORATION
FLORIDA POWER & LIGHT COMPANY
GULF STATES UTILITIES
MAINE YANKEE ATOMIC POWER
NEBRASKA PUBLIC POWER DISTRICT
NORTHEAST UTILITIES
OMAHA PUBLIC POWER DISTRICT
PACIFIC GAS & ELECTRIC COMPANY
PENNSYLVANIA POWER & LIGHT COMPANY
PUBLIC SERVICE ELECTRIC & GAS
ROCHESTER GAS & ELECTRIC COMPANY
SACRAMENTO MUNICIAPL UTILITY DISTRICT
TOLEDO EDISON COMPANY
WISCONSIN PUBLIC SERVICE
YANKEE ATOMIC ELECTRIC

ENCLOSURE B

QRO PROPOSED

SHIFT SUPERVISOR

| | CURRENTLY DESIGNATED | DESIGNATED AFTER EFFECTIVE DATE OF REGULATION |
|---|---|---|
| EDUCATION | NONE | HIGH SCHOOL DIPLOMA OR EQUIVALNET |
| EXPERIENCE | NONE | AFTER 1/1/83 3 YEARS RESPONSIBLE NUCLEAR EXPERIENCE INCLUDING 1 YEAR AS SRO AT THE PLANT. FOR NEWLY LICENSED PLANTS. EXPERIENCE REQUIREMENT MAY BE REDUCED 50% AT THE DISCRETION OF NRC LICENSING BRANCH |
| TRAINING | . SAME AS REQUIRED FOR SRO | |
| CERTIFICATION | NONE | UTILITY MANAGEMENT SELECTION TO INCLUDE REVIEW OF ALL PERTINENT TECHNICAL SKILLS, SUPERVISORY SKILLS, LEADERSHIP ABILITIES AND PERSONNEL TRAITS IN SELECTION OF SHIFT SUPERVISOR. |

NOTE: OTHER THAN MAINTAINING A SRO LICENSE, THIS INDIVIDUAL IS NOT LICENSED BY NRC. RATHER, THIS TABLE PROVIDES REQUIREMENTS UPON UTILITY TO GRANT THIS DESIGNATION.

## QRO GROUP

## SENIOR OPERATOR LICENSE

| | CURRENTLY LICENSED OPERATORS | INITIAL LICENSE AFTER EFF. DATE OF REGULATION |
|---|---|---|
| EDUCATION | NONE | HIGH SCHOOL DIPLOMA OR EQUIVALENT |
| EXPERIENCE | NONE | TWO YEARS EXPERIENCE AT NUCLEAR POWER PLANT INCLUDING 6 MONTHS AT FACILITY, 1 YEAR SHALL BE AS LICENSED OPERATOR.* FOR A NEWLY LICENSED PLANT, EXPERIENCE REQUIREMENT MAY BE REDUCED 50% AT THE DISCRETION OF NRC LICENSING BRANCH. |
| TRAINING | . SIMULATOR TRAINING<br>. TRAINING IN AREAS OF 55.21 & 55.22**<br>. 3 MONTHS SHIFT TRAINING (MAY BE WAIVED FOR NEWLY LICENSED PLANTS) | |
| CERTIFICATION | MANAGEMENT OFFICIAL MUST CERTIFY INDIVIDUAL AS READY. | |

*THE ONE YEAR REQUIREMENT FOR EXPERIENCE AS AN RO MAY BE ELIMINATED BY NRC LICENSING BRANCH UPON GOOD CAUSE SHOWN BY THE LICENSEE.

** WITHIN 5 YEARS OF THE EFFECTIVE DATE OF THE REGULATION THE TRAINING IN AREAS OF 55.21 & 55.22 SHALL BE BASED UPON A COMPLETED JOB-TASK ANALYSIS FOR A SRO. IN MEETING THE TRAINING REQUIREMENT, CREDIT MAY BE OBTAINED FROM COLLEGE LEVEL TRAINING IN TECHNICAL SUBJECTS, RELEVANT MILITARY TECHNICAL TRAINING, AND UTILITY AND/OR CONTRACTOR CONDUCTED TRAINING. THE JOB-TASK ANALYSIS TO ESTABLISH THE TRAINING REQUIREMENTS SHALL BE COMPLETE WITHIN TWO YEARS OF THE EFFECTIVE DATE OF THE REGULATION AND TRAINING COMMENCE AS SOON AS PRACTICABLE SO AS TO INCREMENTALLY APPROACH THE FULL IMPLEMENTATION WITHIN THE 5 YEAR TIME FRAME.

## QRO GROUP

## PROPOSED OPERATOR LICENSE

| | CURRENTLY LICENSED OPERATORS | INITIAL LICENSE AFTER EFFECTIVE DATE OF REGULATION |
|---|---|---|
| EDUCATION | NO REQUIREMENT | HIGH SCHOOL DIPLOMA OR EQUIVALENT |
| EXPERIENCE | NO REQUIREMENT | ONE AND ONE-HALF YEARS EXPERIENCE AT POWER PLANTS, ONE YEAR OF WHICH AT FACILITY. FOR NEWLY LICENSED PLANTS, EXPERIENCE MAY BE REDUCED 50% AT DISCRETION OF NRC LICENSING BRANCH. |
| TRAINING | | . SIMULATOR TRAINING<br>. INSTRUCTIONS IN AREA OF 55.21<br>. THREE MONTHS SHFIT TRAINING (MAY BE WAIVED FOR NEW PLANTS) |
| CERTIFICATION | | MANAGEMENT OFFICIAL MUST CERTIFY INDIVIDUAL AS READY. |

ENCLOSURE C

# NRC PROPOSED
# SHIFT SUPERVISOR

| | CURRENTLY LICENSED OPERATORS | NEAR TERM LICENSES | FUTURE > 5 YEARS |
|---|---|---|---|
| EDUCATION | 60 SEMESTER CREDITS AT FIRST RENEWAL AFTER 1/1/85. MAX OF 36 CREDITS BASED UPON 6 CREDITS/YEAR OF EXPERIENCE | JAN 1,82 6 SEM.HRS.<br>83 12<br>84 18<br>85 24 | 60 SEMESTER CREDITS @ 6 CREDITS PER YEAR PRIOR TO 1/1/85. MINIMUM OF 24 FOR ANY RENEWAL AFTER 1/1/85. |
| EXPERIENCE | AFTER 1/1/82 5 YEARS RESPONSIBLE NUCLEAR EXPERIENCE AND 2 YEARS SRO. 1 YEAR AT PLANT. | | |
| TRAINING | . SRO AT PLANT<br>. INSTRUCTION IN SUPERVISORY SKILLS<br>. THREE MONTHS SHIFT TRAINING (MAY WAIVE FOR NEW PLANT). | | |
| CERTIFICATION | MANAGEMENT OFFICIAL MUST CERTIFY INDIVIDUAL AS READY. | | |

## NRC PROPOSED

## SENIOR OPERATOR LICENSE

| | CURRENTLY LICENSED OPERATORS | NEAR TERM LICENSES | FUTURE >5 YEARS |
|---|---|---|---|
| EDUCATION | 45 CREDITS FIRST RENEWAL AFTER 1/1/85. MAX OF 27 CREDITS BASED ON 6 CREDITS PER YEAR OF EXPERIENCE | JAN 1,83 6 SEM.HRS.<br>84 12 SEM.HRS.<br>85 18 SEM.HRS. | 45 SEMESTER CREDITS. 6 CREDITS ALLOWED PER YEAR OF EXPERIENCE PRIOR TO 1/1/85 WITH A MIN 18 CREDITS FOR ANY RENEWAL AFTER 1/1/85. |
| EXPERIENCE | 2 YEARS EXPERIENCE AT NUCLEAR POWER PLANT INCLUDING 6 MONTHS AT FACILITY - 1 YEAR SHALL BE AS LIENSED OPERATOR (MAY WAIVE FOR NEW PLANT) | | |
| TRAINING | . SIMULATOR TRAINING<br>. TRAINING IN 55.21 & 55.22<br>. THREE MONTHS SHIFT TRAINING (MAY BE WAIVED FOR NEW PLANTS) | | |
| CERTIFICATION | MANAGEMENT OFFICIAL MUST CERTIFY INDIVIDUAL AS READY. | | |

NRC PROPOSED

OPERATOR LICENSE

| | CURRENTLY LICENSED OPERATORS | FUTURE LICENSEES |
|---|---|---|
| EDUCATION | NONE | AFTER DECEMBER 31, 1981 HIGH SCHOOL DIPLOMA |
| EXPERIENCE | THREE YEARS OF EXPERIENCE IN POWER PLANTS, ONE YEAR OF WHICH AT FACILITY, SIX MONTHS OF WHICH AS NON-LICENSED OPERATOR. MAY SUBSTITUTE 2 YEARS EXPERIENCE BY 45 SEMESTER HOURS IN TECHNICAL COURSES. (MAY WAIVE FOR PLANTS NOT OPERATED.) | |
| TRAINING | . SIMULATOR TRAINING<br>. INSTRUCTION IN AREA OF 55.21<br>. THREE MONTHS SHIFT TRAINING & MAY BE WAIVED FOR NEW PLANT.) | |
| CERTIFICATION | MANAGEMENT OFFICIAL MUST CERTIFY INDIVIDUAL AS READY. | |