NUCLEAR REGULATORY COMMISSION

ORIGINAL

COMMISSION MEETING

In the Matter of: PUBLIC MEETING

DISCUSSION OF REVISIONS TO REACTOR OPERATOR QUALIFICATIONS

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1 UNITED STATES OF AMERICA

2 NUCLEAR REGULATORY COMMISSION

3

4 DISCUSSION OF REVISIONS TO REACTOR

5 OPERATOR QUALIFICATIONS

6

7 PUBLIC MEETING

8

9 Nuclear Regulatory Commission

10 Room 1130
1717 H Street, N. W.
Washington, D. C.

11

12 Thursday, May 28, 1981

13 The Commission met, pursuant to notice, at

14 2:07 p.m.

15 BEFORE:

16 JOSEPH M. HENDRIE, Chairman of the Commission
VICTOR GILINSKY, Commissioner

17 PETER A. BRADFORD, Commissioner
JOHN F. AHEARNE, Commissioner

18 STAFF PRESENT:

19 S. CHILK
S. HANAUER

20 H. DENTON
W. DIRCKS

21 J. AUSTIN
P. COLLINS

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1 P R O C E E D I N G S

2 CHAIRMAN HENDRIE: If we could come to order. I
3 am sorry to be late. We started yesterday afternoon's
4 meeting at 2:30 and unaccountably I had in mind the same
5 hour for today.

6 We meet this afternoon to discuss a proposed rule
7 for comment on reactor operator qualifications. This is
8 based on a paper whose number is SECY 81-84, but the
9 material in hand today has come out of Commissioner
10 Gilinsky's office primarily with, I am compelled to confess,
11 some discussion in support from me. It presents some
12 changes in the 81-84 proposal of the staff.

13 Let me tell you in advance so there may be no
14 expectations that won't come due that I do not expect the
15 Commission to vote on the matter this afternoon. The
16 proposition has only recently come into hand. I think the
17 briefing and discussions have much to be desired to get on
18 with it, but I think it is rather too soon to ask the
19 Commissioners to close on the matter and try to vote one or
20 another of these elements of the proposed rule for comment
21 up or down.

22 Now, the format that I propose to use this
23 afternoon is to ask John Austin from Commissioner Gilinsky's
24 office to guide us through the recent paper that has been
25 produced since he is the principal operator on that document.

1 We will want to hear then discussion from the
2 staff. We have the Executive Director, Mr. Denton and Steve
3 Hanauer, who is in charge of this sort of thing here at the
4 table and I hope Commissioners will lead them vigorously to
5 discuss these matters.
6 I kind of think that we are looking at several
7 discussion meetings probably before this thrashes on to a
8 point where we might be ready to see how the Commission's
9 sentiments stand on publishing for comment, but clearly it
10 is high time for us to get on with the discussion.
11 John.
12 MR. AUSTIN: Thank you, Chairman Hendrie.
13 The Commission last considered the proposed rule
14 on operator qualifications in April. Since then
15 Commissioner Gilinsky has built on that proposal trying to
16 emphasize even more the importance of and qualifications for
17 shift supervisors in terms of both experience and formal
18 training.
19 To that end the draft rule before you now would
20 create a new category of licenses, that being a shift
21 supervisor license.
22 In dealing with educational requirements across
23 the board we have modified the earlier draft to attempt to
24 achieve several things.
25 First, the revision retains the basic educational

1 requirements but without Jefferson has termed the artificial
2 embelishment of a degree.
3 (Laughter.)
4 COMMISSIONER AHEARNE: John, this is Thomas?
5 (Laughter.)
6 CHAIRMAN HENDRIE: Good quote, John.
7 (Laughter.
8 MR. AUSTIN: I must thank the good Commissioner
9 Gilinsky.
10 (Laughter.)
11 COMMISSIONER GILINSKY: I picked that up in
12 Charlottsville over the weekend.
13 (Laughter.)
14 MR. AUSTIN: A degree requirement imposes
15 difficulties out of proportion to the advantages no matter
16 how much we may want to encourage utilities to bring degreed
17 individuals into the control room.
18 The second consideration was how to take into
19 account in a reasonable way the need for a transition
20 period, including new entrants, since the industry has
21 developed recruiting and training plans without the thought
22 of the Commission's regulations specifying college-level
23 education as a prerequisite.
24 Third, for operators, senior operators and shift
25 supervisors now in place we have tried to strike a balance

1 between exempting them altogether from formal education
2 requirements and imposing the full requirements which would
3 cause substantial hardships and may drive qualified persons
4 out of the ranks.
5 We have attempted to set requirements to encourage
6 those with few or no college level courses to obtain formal
7 education in the fundamentals.
8 With this as background I would like to summarize
9 the significant changes proposed in Commissioner Gilinsky's
10 draft rule that was sent to you yesterday.
11 The Commission has previously agreed to specify
12 requirements for shift supervisors, but the proposed rule
13 did not address the regime under which the requirements
14 would be mandated.
15 The proposal offered now is to create a new
16 category of licensed individuals, that being the shift
17 supervisor. There would be no special examinations for this
18 license, but in addition to the educational, training and
19 experience requirements in Appendix B there would be a
20 utility certification that the applicant's personal
21 characteristics and pervious experiences are sufficient to
22 supervise the shift operations in a "competent and safe
23 manner."
24 The most significant change being proposed is the
25 replacement of the bachelor degree requirement for shift

1 supervisors and senior operators with standards of 60
2 semester hours of college-level technical subjects for shift
3 supervisors and 45 units for senior operators. These
4 requirements would apply for new candidates when the rule
5 becomes effective which would be nominally January 1, 1982.
6 To permit a smooth transition individuals with
7 operator or senior operator licenses would be allowed to
8 substitute operating experience before January 1, 1985, for
9 up to 60 percent of the educational requirement at the rate
10 of six units per year of experience. In all a bachelor
11 degree in engineering would be taken to fulfill the
12 educational requirements for senior operators and shift
13 supervisors.
14 I would like to now explain how this proposal
15 would work. If I could have the first viewgraph, please.
16 (Slide.)
17 What I have shown on the viewgraph on the left are
18 three categories of licensed individuals under the
19 proposal. They are the reactor operator, senior reactor
20 operator and shift supervisor.
21 On the left we have listed the proposed
22 requirements for those individuals to keep the position that
23 they have at the time the rule becomes effective.
24 On the right are the proposed requirements for
25 those individuals who wish to be promoted to the next higher

1 level of responsibility.

2 For example, in the proposed rule for reactor

3 operators today there would be no additional educational

4 requirements to keep that position. For an RO who wants to

5 advance to the senior reactor operator license they would

6 have to have 45 units of college-level technical subjects.

7 Under this proposal there would be a minimum educational

8 requirement, depending upon the year in which they advance

9 and depending upon the level of prior experience as a

10 licensed operator that individual has.

11 If an RO wishes to obtain a senior reactor

12 operator license after January 1, 1983, they would have to

13 have as a minimum six units of college-level education. The

14 actual number that they would have to have would be

15 dependent upon the years of experience that they could

16 credit toward the 45 unit requirements. After January '84

17 they would have to have 12 units and after January '85 they

18 would have to have 18 units.

19 COMMISSIONER AHEARNE: That is units of experience?

20 MR. AUSTIN: Units of college-level course work.

21 In here the units refer to semester hours.

22 If I could now treat the case of the SRO that is

23 licensed at the time the rule becomes effective. At his

24 first renewal of that SRO after January 1, 1985, he would

25 have to have a minimum of 18 semester hours of courses.

1 That person could continue on with an SRO without taking any
2 courses provided that by that time, January 1, 1985, he has
3 a total of 18.
4 It could be that that person would have to take 27
5 units if it he is one of the SROs with less experience. I
6 will give some examples of this formula later.
7 For the SRO who desires to become a shift
8 supervisor, again they would have to have 60 units of
9 college-level technical subjects but they may receive credit
10 at the rate of six units per year of operator experience up
11 through January 1, 1985, but in all cases they would have to
12 have a minimum of six units after the effective date of the
13 rule, and again nominally it would be January 1, 1982, 12
14 units after January '83 and 18 after January 1984 and 24
15 units after January 1985.
16 For the shift supervisors that are now assigned
17 those responsibilities they would not have a license because
18 we don't license them at this point. After the effective
19 date of the rule they could continue in the position of a
20 shift supervisor but when their SRO renewal date occurs they
21 must apply for a shift supervisor's license and would have
22 to meet the noneducational requirements of the shift
23 supervisor license specified in Appendix B. The
24 noneducational requirements would be the five years of
25 responsible nuclear power plant experience including a

1 minimum of two years as an SRO.

2 For the shift supervisor licensed at the time of

3 January 1, 1985, on their first renewal following that date

4 they would have to have completed a minimum of 24 semester

5 hours of technical subjects or a maximum of 36 hours,

6 depending upon their prior experience.

7 Now that is all perfectly clear. Let me give some

8 examples of how this translates into various categories of

9 individuals.

10 Yes, sir.

11 CHAIRMAN HENDRIE: Before you launch on that let

12 me just comment that the time scales which are laid out here

13 assume an effective date of the first of '82 and then

14 appropriate times after that that the requirements come into

15 play. It is clearly scaled so that an operator or a senior

16 operator who wants to supplement his position and be

17 eligible for promotion and so on by taking sort of one

18 course, one course per semester, then comes out right on the

19 educational requirements by the dates due.

20 The comment I wanted to make just was the scale

21 has been set up so that that is in fact true and it starts

22 nominally at 1/1/82 and then there are a set of requirements

23 in 1/1/85 and so on. I think we should recognize that there

24 isn't anything, you know, divinely ordained about 1/1/82 and

25 1/1/85. That is, I think the way the scale is spaced along

1 is about right and it allows time for people to do the
2 things that they would have to do, but, you know, one might
3 reasonably ask is 1/1/82 too soon to start it and maybe it
4 ought to be July 1st, and then move everything downstream in
5 a proportionate amount.
6 I think in contemplating the dates one ought to
7 recognize if this proposition goes forward where the
8 three-year period starts is a matter for further discussion
9 and understanding of what all the transition problems may be.
10 MR. AUSTIN: We have taken a look at a number of
11 what we would call the worst case situations, that being
12 operators with no prior licensed experience and with no
13 college courses in the past. My recollection is that it
14 works out at a rate under those worst cases of about six
15 semester hours per year up to maybe eight semester hours per
16 year for all of these worst cases under these deadlines.
17 CHAIRMAN HENDRIE: Well, the attempt clearly was
18 to have these dates be about right, but if in due time we
19 can get comments, why then we will see what the difficulties
20 are, if there are any difficulties.
21 MR. AUSTIN: I can give two examples here on how
22 this would impact the senior operators.
23 For that individual with no college units who
24 becomes an SRO the date before the rule takes effect, he
25 would have to take 27 semester hours of technical subjects

1 by about January 1, 1987. So the deadline in this case does
2 not fall on January 1, 1985. Actually that individual is
3 every two years.
4 CHAIRMAN HENDRIE: But it would after that.
5 MR. AUSTIN: Yes. Again, to emphasize the point,
6 January 1, 1985, is a target date but within that
7 prescription there is the allowance for the normal
8 expiration date of a license. For all cases of ROs, SROs
9 and shift supervisors the time frame for a license would be
10 two years. So in some cases it would wind up that all these
11 requirements could be in place by January 1, 1987, and in
12 others it could fall on January 1, 1985.
13 So, again, the person who gets his SRO just before
14 this rule becomes he would have to take 27 units over the
15 next five years.
16 The individual with no college units who becomes
17 the SRO the date after the rule takes effect would have one
18 year's experience as an RO, since that now is a condition
19 for becoming an SRO under this rule and would gain three
20 additional years by January 1, 1985. That person would need
21 to take 21 semester hours by January 1, 1985.
22 I would like to point out that in the statement of
23 considerations under this proposal there is an explicit
24 request for public comment on the extent to which the
25 existing training programs for licensed individuals can be

1 used as a substitution for college-level courses.

2 We have not tried to set out what kinds of

3 standards should be in place to allow for such a

4 substitution but we would be seeking comments on how to

5 bring together, if that become an acceptable mode, the

6 training program of the utility and the college-level

7 courses that would be required under this proposal.

8 Let me give two examples of the shift supervisor.

9 Again, the basic standard there is 60 semester hours of

10 college-level courses. At one extreme the shift supervisor

11 received his SRO the day before the rule became effective,

12 had no previous experience and had no college credits. That

13 person would need to take a total of 42 units by January 1,

14 1987, again because of the two-year renewal period.

15 While I have not canvassed at all the unitility, I

16 would doubt that there are shift supervisor with absolutely

17 no previous experience on reactors, but perhaps Steven

18 Hanauer could comment on that. This is I think an extreme

19 example of 42 hours within five years.

20 A shift supervisor who attains that status the day

21 after the rule would have to have two years of SRO

22 experience, would accrue an additional three years of

23 experience by January 1, 1985, and would have to take six

24 units a year under this formula to meet the requirements for

25 the shift supervisor license. That individual would have to

1 take 24 units by January 1, 1985.

2 That concludes my presentation on the proposal, if

3 there are any questions.

4 CHAIRMAN HENDRIE: Okay. There are bound to be

5 lots of questions and discussion. Let me lead off with a

6 comment of my own.

7 When we were discussing the form that the shift

8 supervisor requirements Vic wanted to propose might take and

9 again shakedown on this kind of a pattern, the question then

10 arose, okay, as a first cut these look like a reasonable set

11 of requirements for a shift supervisor.

12 But now the question is should we create a

13 specific license class for shift supervisors so there is a

14 third kind of license in the system, or should the shift

15 supervisor be licensed as an SRO and required to have the

16 incremental experience and education and his personnel

17 jacket would simply reflect that and the utility's

18 confirmation that indeed he had the additional attributes

19 appropriate under the rule for shift supervisor. So there

20 wouldn't be a separate license but simply an affirmation

21 that he indeed possessed the additional qualifications.

22 And, Joe, we discussed these back and forth. As

23 written the proposition is to create the third class of

24 license, the shift supervisor license. It is a perfectly

25 reasonable way to do it, it seems to me, but the other way

1 is also a possible option. If we had discussed it a while
2 longer it might have been written that way and then the
3 third license would have been the alternate option.
4 I am inclined to think I would like if we want to
5 ultimately go forward with this proposition to suggest that
6 the alternative to the third class of license is a subject
7 on which comment would be especially appreciated.
8 I haven't been sure that I foresee all of the
9 ramifications in creating a third class of license. On the
10 other hand, the arguments for it, it seem to me, are also
11 reasonable. There is a substantial responsibility with the
12 shift supervisor.
13 If captains of ships have to have a ticket from
14 the Coast Guard, why maybe shift supervisors at these plants
15 should, too. Not from the Coast Guard.
16 (Laughter.)
17 CHAIRMAN HENDRIE: Let's see, where should I look
18 first.
19 Vic, this is your proposition.
20 COMMISSIONER GILINSKY: I just had one comment
21 which was that the proposal, which looks complicated, is
22 simple in one sense in that there is a basic requirement of
23 45 units for senior operators and 60 for shift supervisors
24 in the distant future and with lower levels of 18 and 24 for
25 highly experience individuals. The complication comes in

1 trying to phase from where we are now to those new
2 requirements and that is where you get that whole list of so
3 many units by a certain date and so on.
4 CHAIRMAN HENDRIE: John?
5 COMMISSIONER AHEARNE: John, just a couple of
6 questions.
7 In this backfit, grandfathering provision was your
8 rule of thumb basically to look at a reasonable requirement
9 being one course per semester or essentially two courses a
10 year?
11 MR. AUSTIN: That was certainly an element, one
12 course a semester and what could we do with that, plus, with
13 an end product of essentially the technical courses that
14 would correspond to an engineering degree.
15 COMMISSIONER AHEARNE: But the time frame by which
16 something has been met, at least listening to Joe talk,
17 would be more based upon in a sense that a reasonable amount
18 would be one course per semester of a person being required
19 to take which does seem reasonable. I just wanted to see
20 whether that was sort of the rule of thumb.
21 MR. AUSTIN: The one course itself if not the
22 easiest thing to do for individuals who are on shift work.
23 Requiring a person to take two courses or to leave their
24 home town to take a couple of courses over a semester is
25 somewhat of a difficult thing to think about. So we just

1 left it with one course a semester.

2 COMMISSIONER AHEARNE: And, as you point out,

3 perhaps those training courses might be able to be used, I

4 suppose if suitable accreditation can be accomplished, in

5 some of the other training programs that are available and

6 could substitute.

7 MR. AUSTIN: Yes, that appears to be the case.

8 COMMISSIONER AHEARNE: In the shift supervisor are

9 all utilities sort of uniform in what they call a shift

10 supervisor?

11 MR. HANAUER: They have various names for them,

12 but the duties are allocated similarly in most plants. Some

13 plants have assistant shift supervisors. The NRC has

14 mandated an extra senior operator in every control room

15 besides the shift supervisor and he is being given various

16 names like, for example, in some plants he is called an

17 assistant shift supervisor.

18 COMMISSIONER AHEARNE: John, could you reiterate,

19 if it goes the license route for the shift supervisor, what

20 is the requirement that individual has to meet both to

21 become a shift supervisor and then to recertify?

22 MR. AUSTIN: To become a shift supervisor, to

23 receive a shift supervisor's license after the effective

24 date of the rule, Appendix B would require that that

25 individual have five years ---

1 COMMISSIONER AHEARNE: No, I am sorry. I didn't
2 mean the educational experience. To become a reactor
3 operator or senior reactor operator you have to take a test
4 and pass some certain things. Other than experience and
5 education is there some requirement for a shift supervisor?
6 MR. AUSTIN: It would be a utility certification
7 that the applicant's personal characteristics and past
8 experiences were deemed to be sufficient to take on these
9 responsibilities. The notion of the license in my mind came
10 from having the utility submit that evidence.
11 COMMISSIONER AHEARNE: Certify or evidence?
12 MR. AUSTIN: We can get into precisely how that
13 would take place.
14 COMMISSIONER AHEARNE: I can understand the
15 experience and education part and I know we have this
16 procedure for the RO and the SRO on examinations and
17 walk-throughs and such. I am trying to focus in on what it
18 is. Is it the licensee, that is the utility submits
19 information on this individual or does it submit a
20 certification?
21 MR. AUSTIN: The way it is worded is it is a
22 certification.
23 COMMISSIONER GILINSKY: It formalizes the
24 designation you give to the official character.
25 COMMISSIONER AHEARNE: So the criteria then to

1 become a shift supervisor are, first, a certain amount of
2 experience and then educational.
3 MR. AUSTIN: Additional training in supervisory
4 schools, et cetera.
5 COMMISSIONER AHEARNE: Well, you can check the
6 education and you can the experience. Those are similar
7 tabular statistical information.
8 The other element is the utility certifies this
9 person is acceptable to be a shift supervisor; is that
10 correct?
11 MR. AUSTIN: Yes.
12 COMMISSIONER AHEARNE: So there is no further
13 testing.
14 CHAIRMAN HENDRIE: There isn't a second and third
15 class of examinations.
16 COMMISSIONER AHEARNE: That is what I was trying
17 to get at.
18 CHAIRMAN HENDRIE: Did we decide whether shift
19 supervisors ought to pass SRO exams?
20 MR. AUSTIN: They most certainly would have to.
21 As a condition for a shift supervisor you must be an SRO.
22 This is the next step up the ladder.
23 CHAIRMAN HENDRIE: It is the SRO examination plus
24 some education, some experience and a certification that
25 says that you are good enough to handle the job.

1 COMMISSIONER AHEARNE: The requirement two years
2 later if one has met all those other is the utility
3 recertifying that they still want this individual to be
4 shift supervisor.
5 MR. AUSTIN: Yes. What were the experiences of
6 that individual as a shift supervisor over the last two
7 years.
8 COMMISSIONER AHEARNE: Are you saying that more
9 than certification is required then and the utility would
10 have to submit justification for the certification?
11 MR. AUSTIN: The rule doesn't specify the extent
12 to which that certification addresses the performance of the
13 shift supervisor in the past.
14 COMMISSIONER GILINSKY: One way or another you
15 want a more formal designation in assignment and
16 reassignment.
17 MR. HANAUER: Well, Mr. Chairman, in the couple of
18 days that we have had this we have thought about this, too.
19 I wouldn't want to dignify it by calling it a recommedation,
20 but we felt that if there was a shift supervisor license
21 that there ought to be some fairly serious consideration.
22 One of the things that we have been thinking about
23 is some kind of a board, discussion with a board. Maybe we
24 haven't gotten this far yet. One possibility is for the
25 utility to do this in a formal way. Another possibility is

1 to do it jointly and to have some NRC representation and
2 some utility representation.
3 The examiners who go there periodically, the
4 resident inspector and one or more senior utility people
5 would convene themselves a board and rather formally examine
6 the candidate. One would have to establish rather general I
7 would recommend criteria and then it would be more than
8 counting his years and his college credits.
9 COMMISSIONER AHEARNE: I have great respect for
10 that eminent Virginian, Thomas Jefferson, but I think you
11 have some more recent quotes, don't you, that justify the
12 position that a college degree isn't necessary?
13 (Laughter.)
14 MR. AUSTIN: Most recent positions?
15 COMMISSIONER AHEARNE: Yes. I thought you had had
16 a number of discussions with some of the utilities and I
17 thought you had a more recent position arguments.
18 COMMISSIONER BRADFORD: Less eminent requirements.
19 (Laughter.)
20 COMMISSIONER AHEARNE: Perhaps more germane to
21 nuclear power reactors.
22 CHAIRMAN HENDRIE: There certainly have been a
23 series of communications by way of letters to the Commission
24 and to the staff and certainly we have had comments to all
25 and sundry that a bachelor's degree as a requirement was, on

1 the one hand, going to be a very difficult barrier to get
2 over. A lot of people have expressed the opinion that it
3 was really not in the interests of keeping overall the most
4 capable operatoring staffs in place, the difficulties with
5 keeping degreed people as a whole group on shift work and
6 the feeling that by requiring a degree you then shut out
7 what is probably an extremely capable class of person who
8 have not gone the degree route but who have a natural
9 aptitude for things mechanical and steam plant like and
10 whose intelligence is certainly up to snuff, who have good
11 experience and for whom these sorts of jobs of working on
12 through operator, senior operator and shift supervisor
13 constitute a very desirable career path to which they would
14 devote themselves with a intensity and a devotion which on
15 the average you might have a lot of trouble getting out of
16 degreed individuals who perhaps have got their sights set on
17 consulting engineers or board presidents or chiefs of
18 operation.
19 COMMISSIONER AHEARNE: Or Commissioners.
20 CHAIRMAN HENDRIE: Or Commissioners for that
21 matter.
22 COMMISSIONER AHEARNE: I gather then, John, you
23 did not present in these discussions or communications the
24 argument that degreed individuals would be unwilling to work
25 on shifts. Is this based upon experience?

1 COMMISSIONER GILINSKY: I certainly didn't start
2 with that notion. It is really trying to cope with the
3 situation as it is. We didn't get started off with degreed
4 individuals.
5 COMMISSIONER AHEARNE: I understand the backfit
6 issue very well and I think you have done a really fine job
7 in working on that problem.
8 COMMISSIONER GILINSKY: We think degrees are
9 useful and are regarded to satisfy the requirements as laid
10 out and utilities are encouraged to bring degreed
11 individuals into the ranks.
12 CHAIRMAN HENDRIE: I must say, John, in the sort
13 of discussions and communications that I have had on this
14 subject from utility people that, you know, it isn't that
15 people are coming and saying, look, you just can't get
16 degreed people to work on shifts. That is not what they are
17 saying. What they are saying is if you create a requirement
18 for a degree at the senior level and at the shift supervisor
19 level and so on then as a group across the industry you are
20 shutting out these non-degreed individuals who may in fact
21 be among some of the best operating people out there for the
22 kinds of reasons that I have outlined and they don't think
23 that as a group degreed engineers are going to be a good as
24 the kind of group of people that you would have under some
25 regime like the one presented here.

1 People aren't saying, no, you can't get degreed
2 people to work on shift because you can. But applied as a
3 standard requirement across the whole industry they are just
4 saying that that won't turn out to be an optimum group of
5 hands-on operating people and that they are quite strong
6 about.
7 COMMISSIONER AHEARNE: Of course probably our goal
8 isn't to get to the optimum but it is to get significant
9 improvement.
10 CHAIRMAN HENDRIE: Well, just so, but I think you
11 will find a substantial body of opinion which will say to
12 you that the present configuration, and I suspect once they
13 look at it, something along the lines of what is suggested
14 here, that it is a much better operational staff situation
15 then to start after something requiring degrees.
16 COMMISSIONER AHEARNE: I think this looks to be a
17 good approach for solving here is where we are and how to
18 get an improvement. I have got to think through it a little
19 bit more but at least that is my initial look at it.
20 Those are all my questions.
21 CHAIRMAN HENDRIE: Peter, any comments, before I
22 launch the staff to further discussion?
23 COMMISSIONER BRADFORD: Well, it doesn't matter
24 whether you launch the staff to further discussion now.
25 Can you give me a bit better feeling, John, for

1 your worst case type of individual when you talk about his
2 having to take however many hours it was, I have forgotten
3 now, of courses over the next five years? What does that
4 really mean? Leaving out the worst case and taking more the
5 average case if you rather but then also assume that he has
6 got a couple of kids and likes to get home at night at least
7 once in a while, what kind of a burden are you putting on
8 him?

9 MR. AUSTIN: The average case is hard to formulate
10 right here. Perhaps we could show the second viewgraph that
11 I have that was taken from SECY 79-330A dated May 29, 1979.

12 (Slide.)

13 As I recall, the staff canvassed I think it was 12
14 facilities at night sites two years ago. At that time the
15 facilities ranged in terms of their power operation from
16 like one year to seven or eight years, something like that.
17 So there was quite a cross-section.

18 CHAIRMAN HENDRIE: That is only about five percent
19 of the licensed operators.

20 MR. AUSTIN: A small percentage of the licensed
21 operators. From that survey it shows that about 78 percent
22 of the SROs at those facilities had some college and 22
23 percent had just high school.

24 I guess I should say it was pointed out to me when
25 I presented those figures to a utility representative that

1 that did not represent their case, and this was Duke Power.
2 They said that they felt that fewer of their SROs had
3 college experience than indicated by these figures.
4 For those people actually in the control room
5 directing activities that there are a number of SROs that
6 have licenses, that are preparing procedures and are doing
7 other things but not running the reactor, that those people
8 happened to have some of this college-level experience.
9 So it was, according to them, was a bit skewed to
10 the higher side of the expectation.
11 But if you took a person with say three or four
12 courses which would amount to say 12 hours, that a shift
13 supervisor by 1985 may have to take on the average say 20
14 semester hours. That would be 20 in three years and it
15 averages out to about seven semester hours a year which
16 would mean that that person would have to take a course a
17 semester or the utility could bring in a university over the
18 summer to teach two courses and given the individual time
19 off to take those courses. So there would be quite a mix of
20 the impacts on shift supervisors and SROs.
21 I would almost just throw my hands up and say
22 let's get the data because I just don't think there is
23 really hard data on what the average would be like, you
24 know, and what do the hands-on people really have by way of
25 college-level experience.

1 COMMISSIONER AHEARNE: John, I guess this wasn't
2 your data. Paul, is this yours?
3 MR. COLLINS: Yes.
4 COMMISSIONER AHEARNE: Do you have any reason for
5 the anomalous GE where you have got a little over 60 percent
6 of them with a college degree in the SRO?
7 MR. COLLINS: No. I can't recall now why we came
8 up with this sample.
9 COMMISSIONER BRADFORD: There are also too few GE
10 operators for the sample, aren't there?
11 COMMISSIONER AHEARNE: This subset here is only
12 about 40 percent of the total. When John said 12 plants
13 there were 300 operators, or 303. This is a subset of those.
14 COMMISSIONER BRADFORD: All I meant to say,
15 though, was that GE operators as a percentage of total
16 operators is smaller than what you would get if you just
17 took GE as a percentage of the industry.
18 COMMISSIONER AHEARNE: But still out of the 13
19 SROs.
20 MR. HANAUER: What we don't know in this sample is
21 at these particular plants what the population was of
22 engineers and managers who maintain their SRO licenses and
23 what fraction of these people were on shift in the control
24 room which is the present subject.
25 There are in the plants some senior operators and

1 shift supervisors with some amount of college but the data
2 are very thin.
3 COMMISSIONER BRADFORD: Does anybody have a feel
4 for what you would get if you took those people, the
5 comparable number you have used out of college as your
6 average operator and your average senior operator in each of
7 those regions and just did an average salary for them and
8 compared them to the average salaries made by operators and
9 SROs?
10 MR. HANAUER: We have no data. I just glanced at
11 Paul.
12 CHAIRMAN HENDRIE: What was that again?
13 COMMISSIONER BRADFORD: I am trying to figure out
14 whether those operators and SROs ---
15 CHAIRMAN HENDRIE: That the salary levels would
16 attract degreed people?
17 COMMISSIONER BRADFORD: Yes, that question, among
18 others, how those salary levels compare to what people with
19 college degrees a comparable number of years out of college
20 would be making.
21 COMMISSIONER AHEARNE: I can't speak to all of
22 them here, but I remember at the time one particular set of
23 those numbers and it turned out there was a lot of overtime
24 in that salary.
25 COMMISSIONER BRADFORD: That is interesting.

1 MR. COLLINS: Excuse me. The figures that you see
2 up there now I think you would have to multiply by about 20
3 percent to get the salaries today.
4 COMMISSIONER AHEARNE: Yes, they are '79.
5 MR. COLLINS: That data is two years old.
6 COMMISSIONER AHEARNE: But we have cut back on the
7 overtime.
8 (Laughter.)
9 COMMISSIONER BRADFORD: I must say just to pick
10 the lowest number up there and allowing for the point that
11 Paul just made, $18,600 is almost an astonishingly low
12 number to be paying a reactor operator I would say.
13 COMMISSIONER AHEARNE: Considering the investment
14 in the instruments that he is running.
15 COMMISSIONER BRADFORD: Yes.
16 CHAIRMAN HENDRIE: Well, look how little they pay
17 Commissioners versus the heavy responsibility.
18 (Laughter.)
19 COMMISSIONER AHEARNE: Joe, I would stop that line
20 of discussion. The path isn't fruitful.
21 (Laughter.)
22 COMMISSIONER BRADFORD: For us or for them.
23 CHAIRMAN HENDRIE: It might relieve a lot of
24 feelings; you can't tell.
25 I tell you what, why don't we turn to Messrs.

1 Dircks, Denton, Hanauer and friends and see what comments
2 they have for, against or sideways.
3 MR. DIRCKS: Generally along the same lines as has
4 been proposed we have had quite a few discussions of the
5 paper that was sent down with the proposed rules and we do
6 see some need to make some adjustments.
7 There are about three points we would like to make
8 and we haven't filled in the details. But if you carry on
9 in this direction we would like to participate in getting
10 some of these ideas put forward.
11 CHAIRMAN HENDRIE: I have a notion that
12 Commissioner Gilinsky and Mr. Austin would be pleased to
13 pass them on to the staff in further pursuit of the matter.
14 You don't feel any sense of possessiveness ---
15 (Laughter.)
16 You would be perfectly willing to give them the
17 mag cards.
18 MR. DIRCKS: After he hears what we have to say he
19 may want to think it over.
20 (Laughter.)
21 One, I think we in taking a look at the conditions
22 out there and the people who are currently working in their
23 current jobs and the current stress in the industry, and I
24 am not quite sure this is shared by everyone, my personal
25 inclination would be to essentially grandfather everyone out

1 there, anyone who holds a current license under existing
2 qualifications or requirements to essentially say you are
3 covered and not require them to meet any additional
4 educational requirements that we may have outlined. To be
5 promoted they would have to meet the new requirements.
6 CHAIRMAN HENDRIE: I take it, Bill, this general
7 proposition you would contemplate either as a proposition to
8 be considered against this draft or against the staff
9 proposal?
10 MR. DIRCKS: Yes.
11 The second essential element that we have thrown
12 in here is to make a clear, as has already been done, make a
13 clear distinction between the shift supervisor and the other
14 ranks, the reactor operators and the senior reactor
15 operators.
16 The reasoning there in our view and in my viewing
17 anyway is that the shift supervisor using the Naval analogy
18 or the military analogy is the equivalent of the engineering
19 officer of the watch, the other members of the control room
20 team being essentially the noncommissioned officers, the
21 petty officers, the technicians and the other personnel.
22 I would then recommend, and I think Harold was
23 with me this morning and may still be with me now, and Steve
24 I think is there, too, that we then look to the shift
25 supervisor possessing additional substantial educational

1 requirements than the other members of the team. I would be
2 inclined to not have the reactor operator or the senior
3 reactor operator be required to get formal college
4 accreditation courses. I would require technical training
5 courses, experience and so on, but the college degree
6 requirements or the college or university requirements I
7 would forego at that level but look to the shift supervisor
8 for that type of educational background.
9 The third point, and I may be wandering here, is
10 for those utilities and licensees that do come up to meet
11 the additional beefed up shift supervisor requirement, and
12 as soon as they meet it, I think we would recommend that
13 their requirement for the shift technical adviser disappear
14 in those cases and the shift supervisor pick up the line
15 responsibility or the command responsibility.
16 This would imply, and again I stress we would have
17 to work out the details for you, a different mode of entry
18 into this career ladder for those people going to the shift
19 supervisor chain than has been done in the past. Instead of
20 working his way up as an auxiliary operator, a reactor
21 operator, a senior reactor operator and finally to shift
22 supervisor, that there be a different accelerated entry path
23 for these educationally qualified individuals. They would
24 have to have a compressed on-the-job training program and
25 they would also have to have additional training courses,

1 but they could enter into this career ladder not by going
2 through the step-wise job situation that is out there now.
3 Harold, have I covered the main points, and, Steve
4 jump in there.
5 MR. DENTON: This situation turned out to be far
6 more complex than I realized I guess when we first started
7 sending down reports on it. I am not sure we have heard
8 from all 2,700 licensed operators, but a lot of them we
9 have. They are a valuable resource and we didn't pay enough
10 attention to this issue of grandfathering. We have got a
11 large number of plants being finished.
12 If we are not careful, these resources would just
13 be stretched too thin unless we come up with some scheme
14 such as this to allow the people still in these positions to
15 continue to fill these kinds of positions and people in the
16 training program, because with such a long training program
17 you can't just change it overnight. There are people who
18 have already been in it for several years.
19 I like this kind of scheme of keeping people in
20 their present jobs and then listing what they may have to be
21 to advance.
22 One comment on this particular one. It doesn't
23 seem to encourage college degrees in the shift supervisor
24 other than just giving the credit for the 60 units. I would
25 like to see some sort of career path or initiative built

1 into the provide a bit more incentive for young engineers to
2 go in this route. Now the college only serves to replace
3 the training.
4 We long though that maybe we ought to get the STA
5 position rolled in with the shift supervisor type and that
6 way you would have all the knowledge in the line rather than
7 having it on the staff. So perhaps there could be some way
8 at the shift supervisor level that would provide two career
9 paths. One career path would be coming up this chain by
10 ROs, SROs and then the shift supervisors without a shift
11 supervisor ever holding a college degree. Another path
12 might be to provide a path where college engineers could
13 come in with somewhat less arduous time in grade so to speak
14 and still hold that job.
15 MR. DIRCKS: That is where you would run into
16 difficulty if you went the college accredited route. You
17 would have great difficulty in getting those people to go
18 the auxiliary operator, reactor operator, senior reactor
19 operator and then shift supervisor routine. This is why you
20 wouldn't be able to keep them in those jobs. But through
21 having a more accelerated entry level into the shift
22 supervisor position I think it is a way of getting that
23 talent into that type of position. It also looks toward the
24 movement of those people from the shift supervisor job
25 category, and it is almost at that level, into the

1 management phase of the company and into other positions
2 within the company.
3 COMMISSIONER GILINSKY: Let me ask you, what would
4 you do with someone who is now a senior reactor operator and
5 aspires to become a shift supervisor some day, what would
6 you require of them?
7 MR. DENTON: They would have to get educated along
8 the lines of your proposal.
9 COMMISSIONER GILINSKY: I see. So the
10 grandfathering only applies to staying in the present job.
11 COMMISSIONER BRADFORD: It would requirement
12 something of this sort to move up. The point is I am not
13 sure how much we should stress it in terms of what you have
14 got to do by next year and the next year and the next year
15 because there are reports of a number of our senior people
16 leaving.
17 COMMISSIONER GILINSKY: Next year is simply
18 phasing in the requirement for moving up. It isn't that he
19 has to do those to continue.
20 MR. DENTON: It wasn't clear to me I guess what he
21 had to do.
22 COMMISSIONER GILINSKY: There is a requirement in
23 the scheme for SROs and shift supervisors to stay in place,
24 but that comes into force several years down the line, up to
25 five years down the line. Neither the number of units, or

1 as Joe said, the dates are immutable.

2 CHAIRMAN HENDRIE: Your proposal would be to

3 remove those two boxes, the ones under to keep positions for

4 SROs.

5 COMMISSIONER GILINSKY: Right. I was trying to

6 understand what he means.

7 MR. DIRCKS: Coupled with that I would back off a

8 bit on the educational requirements, the formal educational

9 requirements.

10 CHAIRMAN HENDRIE: For SROs.

11 MR. DENTON: I would maintain and maybe even up it

12 a bit for shift supervisors.

13 COMMISSIONER AHEARNE: You might in order to get

14 your two ladders have one ladder which has reduced

15 educational requirements but that clearly doesn't get to

16 shift supervisor and the other which have more educational

17 requirements that does get to shift supervisor.

18 MR. DIRCKS: Right, or you could get to it with a

19 great deal of work and there would be a lot of incentive if

20 you want to be a shift supervisor to have that.

21 COMMISSIONER AHEARNE: Right. You could get it so

22 that in order to get the education without the degree, the

23 education would end up being the pacing item rather than the

24 experience.

25 MR. DIRCKS: There would be a lot of incentive in

1 the education.

2 MR. DENTON: The two career paths would give mixed

3 shift supervisors but you would be trading off the time for

4 training.

5 COMMISSIONER AHEARNE: Except that the second

6 career path without the degree, the person would have to put

7 a lot more effort into it.

8 MR. DENTON: Yes.

9 COMMISSIONER GILINSKY: Let's see, a degreed

10 person under this scheme coupled with other requirements

11 would have to have what, something like three years of

12 experience. He could become a shift supervisor in something

13 like three years.

14 COMMISSIONER AHEARNE: That doesn't seem out of

15 place.

16 CHAIRMAN HENDRIE: No, it is more than that.

17 MR. DENTON: I thought it was five in that scheme.

18 COMMISSIONER GILINSKY: But the five is not always

19 a licensed operator.

20 MR. AUSTIN: The five is responsible nuclear power

21 plant experience which could be in the engineering

22 department.

23 CHAIRMAN HENDRIE: Let's take a graduate. He

24 could hired at a power plant on the engineering staff. This

25 would constitute responsible experience around the plant.

1 Now there is a year of that required for an RO. So he has
2 now got one year around the plant in the engineering section
3 or something like that. If he passes the exam he can now be
4 an RO. He now has to be an RO for one year before he can
5 take the SRO exam. Then he has to ---
6 MR. AUSTIN: --- be an SRO for two years to become
7 a shift supervisor. That only gives him four years.
8 CHAIRMAN HENDRIE: That is four years. Well, we
9 said five, didn't we?
10 MR. AUSTIN: That is correct. The proposal would
11 be five years.
12 COMMISSIONER AHEARNE: There is nothing wrong with
13 five years, given the responsibility that the shift
14 supervisor has.
15 CHAIRMAN HENDRIE: For the degree individual you
16 might give him a year's credit for the degree or something
17 like that by way of encouragement.
18 MR. DIRCKS: I might even give him more.
19 CHAIRMAN HENDRIE: I think it would be kind of
20 tough You know, you come into the operation and you have
21 got your degree, and taking a shift in much less than four
22 years may be pressing things a little bit.
23 MR. HANAUER: The point to the alternative path is
24 not to decrease the number of years of experience required
25 to be shift supervisor but to provide an alternative to the

1 requirement of going through the one-year plus RO training
2 and then spending one year as an RO on shift which are now
3 and are in the proposal are requirements to become an SRO.
4 That seems out of place in the career path we are talking
5 about. It seemed like an alternative career path ought to
6 be offered for the degreed individual.
7 COMMISSIONER AHEARNE: I would strongly endorse
8 the alternative path for the degreed individual except for
9 the part which replaces a lot of the operating experience
10 because I think that is critical.
11 MR. DIRCKS: Maybe I am operating off an
12 incomplete deck of knowledge, but the analogy may be that
13 someone being commissioned as an officer in the Navy, he has
14 an accelerated path to be the engineering officer of the
15 watch. He is not required to be a machinist mate third
16 class and a chief machinist mate and a chief petty officer.
17 He gets that position through technical training plus some
18 on-the-job work.
19 COMMISSIONER GILINSKY: Well, but he doesn't
20 command the ship when he comes out of school.
21 MR. DIRCKS: No, he doesn't, but that is why I am
22 saying he has to have on-the-job work and he has to have
23 on-the-job training, but he is not required to serve as an
24 apprentice seaman.
25 COMMISSIONER AHEARNE: It takes them about 12

1 years at least to get where he commands the ship.

2 MR. DENTON: I guess what drives me toward trying

3 to encourage degreed engineers to get to be shift

4 supervisors is the point that Bill has often made which is

5 the career advancement so the people they pick as system

6 plant managers, operation superintendents and vice

7 presidents come up this line rather than going totally the

8 engineering downtown routes.

9 COMMISSIONER AHEARNE: Right. That really

10 underlies a lot of my push for a degree there because I want

11 those people eventually that are running the utilities to be

12 people that understand the plant as well because they ran

13 the plant.

14 MR. DENTON: As everyone knows, shift work is hard

15 to stay in for a long time. There is no problem with people

16 working these sorts of jobs during the daytime shift but

17 rotating is a problem.

18 COMMISSIONER AHEARNE: I grant particularly the

19 point that Steve made that this data is weak to interpert

20 but apparently there are at least some people with degrees

21 who manage to work shifts.

22 MR. HANAUER: We don't know if they are on shift

23 or not.

24 COMMISSIONER AHEARNE: That is true.

25 MR. AUSTIN: I would like to comment on the

1 example we just went through with the degreed individual.
2 There are two ladders embedded in this proposal. When you
3 asked about the requirements for an RO and we said one year
4 on the plant, that is assuming an engineering degree, a
5 person at the entry level.
6 The proposed rule requires three years of
7 experience in the testing, operation and maintenance of
8 power generating plants, not necessarily nuclear. What we
9 would propose here is that two of those years could be
10 substituted by an engineering degree to help accelerate and
11 to recognize the value of the training in fundamentals.
12 COMMISSIONER AHEARNE: I have one other question,
13 John. You struck an item on page 3. What you struck is
14 "additional requirements under development will provide
15 mechanisms to screen license candidates relative to their
16 ability to perform under stress and evaluation of prior
17 commercial and/or military experience to assure the
18 experience satisfies the applicable experience requirements
19 of the regulation." I wondered why you struck those two.
20 MR. AUSTIN: The strike started earlier on page
21 3. What was proposed to be said was that there are a number
22 of additional amendments under consideration and that what
23 is being proposed here by way of education, experience and
24 training were only first steps.
25 CHAIRMAN HENDRIE: This was done at my instigation

1 I must say. So let me defend it, John.

2 I found objectionable a rule which would have as

3 profound an effect as the staff's proposal or this proposal

4 on the operating staffs out there. To have it come out

5 saying this is just first step, fellows, and we are going to

6 rack you all around, but, hell, that is nothing. Wait until

7 you see what is coming.

8 (Laughter.)

9 CHAIRMAN HENDRIE: Enough already. I am not sure,

10 you know, and it remains a question whether in fact the

11 system can stand this one. But, you know, I am sure not

12 going to come out with this and say, well, this is just the

13 beginning. If there is any way you are going to chase the

14 good people right out of operating these plants it is to

15 come out and say something like that.

16 It is furthermore my feeling that if such a

17 proposition as this one goes forward ultimately into rule

18 form, this version or the staff's version or a combination

19 version or whatever, that it in fact will stand as the

20 Commission's requirements on operator qualification for a

21 long time.

22 I think the mutterings about we are going to test

23 your ability to perform under stress and, you know, X-ray

24 the insides of your head ---

25 (Laughter)

1 CHAIRMAN HENDRIE: --- and let the shrinks loose
2 on you is so much garbage and I trust future Commissions
3 will stop all issues of that kind with the same vigor that I
4 would were I to be here.
5 COMMISSIONER AHEARNE: How about the second part.
6 CHAIRMAN HENDRIE: The second part, evaluation of
7 prior commercial or military experience, is a fair
8 proposition. I just didn't see an easy way to sort it out
9 and I just struck through the whole thing. Obviously
10 evaluation of prior experience, military experience or
11 commercial experience, is a perfectly reasonable thing. But
12 I don't know that we need to start out this very significant
13 proposition on operator qualifications by trying to guess
14 what all we may do down the line. Some of the elements of
15 the struck words I found just absolutely totally
16 objectionable. That part I find no means objectionable but
17 it just didn't seem to me to rise to a need to be noted
18 particularly.
19 I thought it was enough to say that these
20 amendments are important steps and never mind first steps.
21 If we ever get them done, why I think they are going to
22 stand a long time.
23 COMMISSIONER AHEARNE: Steve wants to say
24 something.
25 CHAIRMAN HENDRIE: All right.

1 MR. HANAUER: Could I say a couple of things.
2 Since they are both negative, let me start by saying there
3 are many positive things that have already been said.
4 There are two snakes in this thing that I think
5 ought to be noted.
6 The first one has to do with education. What we
7 have been discussing is almost all education. I would like
8 to point out again the difficulty of older people on shift
9 work taking what amounts to night school. We have a few
10 data points at Oconee. Duke has been working with eight
11 non-shift SROs at Clemson University. They go to college
12 for a period of time and then they come back and work.
13 COMMISSIONER AHEARNE: How far is it?
14 MR. HANAUER: It is only a few miles. It is easy
15 commuting distance.
16 The trouble is that they work hard in college and
17 they have been out of high school a long time and they have
18 some trouble with this. While they are gone everybody else
19 has to work overtime and it is killing them. They are
20 starting to look for other jobs.
21 Furthermore, to get 60 credits the way they have
22 it worked, and these are not shift people, it is going to
23 take until 1988 and they have already started.
24 COMMISSIONER AHEARNE: How many credits are they
25 picking up a semester?

1 MR. HANAUER: They are not doing it with
2 semesters. There is some kind of special phasing even
3 there, even for these non-shift people.
4 CHAIRMAN HENDRIE: It must be sort of half time in
5 which they go full time for a while.
6 MR. HANAUER: It is a little less than half time
7 because of vacations and such, most of which they don't get
8 any more because they are so short handed. It is like a
9 third time over the year which is like one semester per year
10 because a semester is not half a year. It half a school
11 year which is shorter.
12 I teach night school and it is really hard for
13 people who aren't in that kind of high stress work to take a
14 course per semester. They work hard. I think we are being
15 too glib with the idea that some people are going to take a
16 course per semester for several years.
17 Now, on the positive side is the idea which I
18 would like to see more emphasis on of upgrading and
19 accrediting better training programs in the utilities, in
20 regional centers, in the plants and some companies are
21 working very progressively with some colleges to do this.
22 So it is not impossible but I think the dates in this
23 particular proposal need to be stretched out.
24 The other snake which I regard as the more serious
25 one is the experience snake. To require at the first

1 renewal, for example, January '82, that all shift
2 supervisors have five years of experience is to lose a
3 substantial number of shift supervisors at all the young
4 plants and to mandate a wholesale piracy, which is bad
5 enough now, of stealing from each other.
6 Now, a certain amount of this I think should go
7 on. That is to say, when a new plant is started up we have
8 seen on several occasions that none of the regular shift
9 personnel have a substantial amount of operating experience
10 and we have mandated consultants and rent-a-text to provide
11 experience on each shift.
12 However, if you consider, just to pick an example,
13 Sequoyah, there is not a shift supervisor on the plant that
14 I know of that can put together from all sources more than a
15 couple of years of experience. This rule will result in
16 kicking them all out because there is no grandfathering
17 proposed for this experience.
18 There needs to be some kind of a ramp which has to
19 be invented for all new plants and the experience level
20 should not be zero as we have been accepting with these
21 special arrangements. Something else needs to be done about
22 experience. In our concentration on college credits the
23 experience requirement for shift supervisor as presently
24 written will shut down plants and one has to decide whether
25 the gain is worth this kind of impact.

1 CHAIRMAN HENDRIE: The intent certainly wasn't to
2 shut down plants. In fact, we had some discussions in the
3 draft stages on this about just that point. You come to the
4 effective date and then shift supervisors at their first
5 renewal after that are supposed to meet the requirements and
6 so on, and the question was how many shift supervisors will
7 that catch short without an appropriate transition having
8 been provided. You know, we speculated but we couldn't
9 guess.
10 MR. HANAUER: It is even worse than that because
11 the plants that are due to come on line two and three years
12 from now have their shift supervisors, they working hard at
13 pre-up and start-up tests which is not under the
14 definition. It is pretty vague in the paper but it was
15 explained to me informally that that meant licensed
16 experience and nobody has any licenses, you see, until the
17 plant is about ready to load fuel.
18 So that all the new plants are going to have
19 people who have spent several years with the plant and
20 really know it who are going to get fired under this rule.
21 So something has to be done.
22 CHAIRMAN HENDRIE: Well, I think some appropriate
23 kind of grandfathering or transition ramp was clearly our
24 intention. We just didn't know what the magnitude of the
25 problem was. You know, if there were going to be seven guys

1 out there who were going to have that problem, why the thing
2 to do is to write, you know, the customary except for good
3 cause showing or whatever into the rule and then treat those
4 individuals and provide waivers to them and so on. If it is
5 going to be 50 or 100, why we had better do something about
6 it.

7 COMMISSIONER AHEARNE: I think what Steve is
8 saying is everybody at every new plant.

9 MR. HANAUER: It is everybody at every new plant
10 because we don't give them licenses. It might be fixed
11 partly with a different definition, but there needs to be
12 some kind of ramp for all the new plants.

13 CHAIRMAN HENDRIE: I think my only problem would
14 be in devising one that took everybody into account.

15 COMMISSIONER GILINSKY: Actually it wouldn't be so
16 terrible. I think that is what you were saying earlier when
17 you said a certain amount of this ought not to happen if
18 experienced persons were hired for new facilities.
19 Certainly that is the way you would do it if this was all
20 one utility.

21 MR. HANAUER: One problem is that we have
22 effectively doubled the required number of SROs with the
23 decision of a year and a half ago that effective in July '82
24 there have to be in effect two SROs on shift instead of
25 one. This really makes things a whole lot more binding

1 because there is also an experience requirement for SROs
2 that is hard to get. To put this one on top of it is to
3 make things I think impossible for some plants.
4 COMMISSIONER GILINSKY: Well, it is clear that
5 each of these proposals has got to be tested in at least
6 various ways and checked out.
7 CHAIRMAN HENDRIE: Steve, suppose we looked again
8 at the question of grandfathering the question of at what
9 rate can you reasonably expect people to acquire credits and
10 maybe we should put more emphasis on the business of the
11 existing training programs with the upgrading that is
12 required here being acceptable bases for the educational
13 requirement and fix the ramp in on shift supervisors at the
14 obvious places where one can see that there would be
15 difficulty in implementation.
16 Suppose we did that, how do you feel about it as a
17 general proposition by which I mean creating the shift
18 supervisor, the recogition of that as a licensed position
19 with its own title, and how do you feel about the ability of
20 the industry that is out there to accommodate over an
21 appropriate phase-in time the proposition? You know, is it
22 too much or can they do it?
23 MR. HANAUER: I rather like the idea. I think it
24 is pretty tough. I would want to get some information. You
25 might want to phase it in over a substantially longer period

1 in order to provide for the revision of hiring patterns and
2 career paths. If you want to have shift supervisors who are
3 substantially better educated than a large fraction of the
4 ones we now have and if you don't want to fire the ones we
5 now have, you might choose quite a bit longer period bearing
6 in mind these things are going to run for 30 years.
7 CHAIRMAN HENDRIE: You know, in our discussions
8 about this thing, Vic, I think our intent clearly was to try
9 to shape something in these modifications which did not
10 result in any licensed individual or current trainee out
11 there losing his job on the basis just of requirements that
12 we would institute.
13 COMMISSIONER AHEARNE: You mean not automatically
14 losing their job.
15 CHAIRMAN HENDRIE: True.
16 COMMISSIONER AHEARNE: Certainly there are some,
17 for example SROs, who might lose that if they were unwilling
18 to do some of the work in the industry.
19 COMMISSIONER GILINSKY: Let me say something about
20 that requirement. One of the things I had in mind was not
21 to have a sharp difference between a license that was
22 obtained the day before the rule went into effect and one
23 that was obtained the day after so that there isn't, you
24 know, a great rush to obtain these licenses or be designated
25 the shift supervisor or whatever and then being

1 grandfathered for all time.

2 Again, it is a question of trying to find some way

3 to impose the new requirements and bring the existing group

4 of operators up only part way but nevertheless to some

5 extent.

6 CHAIRMAN HENDRIE: Other comments?

7 COMMISSIONER BRADFORD: What is meant by the

8 provision that a shift supervisor has demonstrated to the

9 satisfaction of the faciltity licensee that the applicant's

10 personal characteristics and pervious experience are

11 sufficient to supervise the shift operations?

12 COMMISSIONER GILINSKY: It is a more formal

13 finding than simply designating someone as a shift

14 supervisor. It means you have work think a little harder

15 before you sign your name.

16 COMMISSIONER BRADFORD: Well, for example, does

17 previous experience mean at the plant or does that get into

18 the previous, for example, military experience?

19 MR. AUSTIN: The pervious experience goes partly

20 to the five-year responsible nuclear power plant experience,

21 including two years as an SRO and one of which of those must

22 be at the facility for which the license is sought.

23 COMMISSIONER AHEARNE: What do you mean by

24 personal characteristics?

25 MR. AUSTIN: Management skills, communication

1 skills ---

2 COMMISSIONER BRADFORD: Whatever was relevant.

3 (Laughter.)

4 COMMISSIONER AHEARNE: Do you mean personal life?

5 MR. AUSTIN: No.

6 CHAIRMAN HENDRIE: I wouldn't define it further

7 than that. I would leave it to the utility. One the same

8 basis that you select people to be chiefs of crews now you

9 judge them in an overall sense as human beings. Technically

10 competent people who absolutely can't get along with another

11 human being don't get to be chiefs. On the other hand,

12 charmers who can't find their way to the men's room don't

13 get to be chiefs either.

14 COMMISSIONER AHEARNE: This is a Hendrie theory of

15 the world, isn't it?

16 (Laughter.)

17 CHAIRMAN HENDRIE: Well, I guess it doesn't apply

18 to certain government organizations.

19 (Laughter.)

20 CHAIRMAN HENDRIE: Was that what you meant?

21 COMMISSIONER AHEARNE: I did.

22 CHAIRMAN HENDRIE: Okay. I thought so.

23 (Laughter.)

24 COMMISSIONER BRADFORD: There are charmers around

25 here that I have seen.

1 (Laughter.)

2 COMMISSIONER GILINSKY: This format of our first

3 chart is a useful one. I think if you would fill in the

4 boxes ---

5 (Laughter.)

6 COMMISSIONER GILINSKY: --- for your proposal, and

7 I suppose there would be two. There would be a track "A"

8 and a track "B" and then we could set them all side by side

9 and we can think about it.

10 CHAIRMAN HENDRIE: I think it would be useful if

11 the proposition you have suggested ---

12 COMMISSIONER AHEARNE: I might have a track "C" to

13 propose.

14 COMMISSIONER GILINSKY: Rather than rewrite that

15 rule, I think if we can agree on a one-page version of it ---

16 MR. DIRCKS: That is what we would like to do.

17 COMMISSIONER GILINSKY: --- then I think there

18 wouldn't be any problem then in ultimately writing the rule.

19 CHAIRMAN HENDRIE: Steven, think some about, you

20 know, about the transition wedge and how does one do it and

21 what time scale is appropriate.

22 What we will look forward to then when you get a

23 chance to work on it some is, as Vic says, not necesarily a

24 rewrite of the whole rule, and there may be some language

25 that you think ought to be changed for one reason or another

1 and some substitute language proposed, but perhaps a more
2 outline sort of memoranda in chart type which would suggest
3 how these things might fit together which would be a subject
4 for further discussion of the Commission.
5 We would leave it to you to indicate when it is a
6 reasonable time to come back up with that. It is obviously
7 a matter of interest, but there are a lot of things going on.
8 Now, one other aspect before we quit on this
9 subject today. Vic, this was typed down in your office and
10 it comes with a memorandum from you. It doesn't have a SECY
11 paper number.
12 I don't know whether we had copies in the back.
13 We did have copies in the back?
14 MR. McGEE: Yes.
15 CHAIRMAN HENDRIE: It seems to me it would be
16 useful to have copies in the document room.
17 MR. CHILK: It will automatically go in the
18 document room.
19 CHAIRMAN HENDRIE: I would encourage the staff to
20 make copies of it available to people on the industry side
21 and various interested utility organizations. You know,
22 there are various ways you can get comments. You know, you
23 can get some preliminary reading, especially on a
24 proposition like this where the people that really know how
25 it affects operating organizations are the operating chiefs

1 out there. You can get some feedback without having to go
2 to a formal proposal and publication for comment route and I
3 think that would be helpful in helping us calibrate these
4 things both in the present proposal and in alternate
5 versions to come.
6 Other comments?
7 (No response.)
8 CHAIRMAN HENDRIE: Thank you very much.
9 (Whereupon, at 3:35 p.m., the public meeting
10 adjourned.)
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NUCLEAR REGULATORY COMMISSION

This is to certify that the attached proceedings before the

COMMISSION MEETING

in the matter of: Discussion of Revisions to Reactor Operator Qualifications

Date of Proceeding: May 28, 1981

Docket Number:

Place of Proceeding: Washington, D. C.

were held as herein appears, and that this is the original transcript thereof for the file of the Commission.

Mary C. Simons

Official Reporter (Typed)

Mary C Simons

Official Reporter (Signature)