

NUCLEAR REGULATORY COMMISSION

ORIGINAL

COMMISSION MEETING

In the Matter of: PUBLIC MEETING

BRIEFING ON MINIMUM NUMBER OF SHIFTS
REQUIRED AT OPERATING REACTORS

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UNITED STATES OF AMERICA
NUCLEAR REGULATORY COMMISSION

BRIEFING ON MINIMUM NUMBER OF SHIFTS
REQUIRED AT OPERATING REACTORS

PUBLIC MEETING

Nuclear Regulatory Commission
Room 1130
1717 H Street, N. W.
Washington, D. C.

Wednesday, July 21, 1982

The Commission met, pursuant to notice, at

2:04 p.m.

BEFORE:

NUNZIO PALLADINO, Chairman of the Commission
VICTOR GILINSKY, Commissioner
JOHN AHEARNE, Commissioner
THOMAS ROBERTS, Commissioner

STAFF AND PRESENTERS SEATED AT COMMISSION TABLE:

S. CHILK
F. REMICK
R. LEVI
H. DENTON
J. ZWOLINSKI
J. KRAMER

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DISCLAIMER

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P R O C E E D I N G S

CHAIRMAN PALLADINO: With regard to the topic scheduled for this afternoon, the Commission meets to receive a briefing from the staff on the minimum number of shifts required at operating reactors.

Currently the Commission has no specific regulations that require a minimum number of shifts at operating reactors. However, the Nuclear Regulatory Commission has issued regulatory guidance that has an indirect impact on the number of shifts required, such as guidance on training programs and the use of overtime. The staff will provide recommendations on the question of the minimum number of shifts.

For this meeting the Commissioners have agreed to try a different approach than that normally used. We will attempt to listen to the staff's briefing without interruption, except for questions of fact.

(Laughter.)

CHAIRMAN PALLADINO: After the staff has concluded the formal presentation, of course the meeting will be open to questions from the Commissioners.

Now unless any of my fellow Commissioners have additional remarks ---

(Laughter.)

COMMISSIONER AHEARNE: Wasn't there another

1 factor in that the staff agreed to limit its
2 presentation.

3 CHAIRMAN PALLADINO: Oh, yes, to 30 minutes.

4 COMMISSIONER GILINSKY: Thirty minutes!

5 (Laughter.)

6 CHAIRMAN PALLADINO: I think they are going to
7 be more brief.

8 We also had as a condition of this that we
9 start on time and we end on time.

10 COMMISSIONER AHEARNE: And the staff would
11 restrict its presentation to a fixed period of time.

12 CHAIRMAN PALLADINO: Thirty minutes at most.
13 You are free to be briefer.

14 (Laughter.)

15 MR. DENTON: I don't think we will exceed the
16 30 minutes, Mr. Chairman.

17 There have been some significant changes in
18 the handouts that we had previously given you. John
19 Zwolinski on my right will make the presentation, and to
20 my left is Joel Kramer, the Assistant Division Director.

21 We have established that there will be no
22 utility with less than five shifts in operation by the
23 end of 1982. So based on our most recent finding of
24 that, we will not be recommending any change in our
25 present practice considering that those number of shifts

1 in combination with our requirements on overtime and
2 training ---

3 COMMISSIONER GILINSKY: There is no
4 requirement on the number of shifts now, is there?

5 MR. DENTON: That is correct.

6 COMMISSIONER GILINSKY: Is that a factual
7 question?

8 (Laughter.)

9 MR. DENTON: I am getting into John's
10 presentation and I had best turn it over to him.

11 CHAIRMAN PALLADINO: Well, why don't we give
12 him a chance to say it.

13 COMMISSIONER AHEARNE: Go ahead, John.

14 MR. ZWOLINSKI: Correct, there is no
15 regulation.

16 COMMISSIONER GILINSKY: Thank you.

17 (Slide presentation.)

18 MR. ZWOLINSKI: Mr. Chairman and
19 Commissioners, as you know the staff has not developed a
20 paper on the subject of the number of shifts.
21 Therefore, in this area where most enjoy an opinion, I
22 have attempted to develop the facts regarding the number
23 of shifts. Based on my remarks and additional
24 discussion today, I trust the staff will be provided
25 firm guidance regarding this issue.

1 As a means to introduce the subject, the
2 Commission has not in the past attempted to specify a
3 minimum number of operating shifts to be used at
4 commercial nuclear power plants. Rather, the emphasis
5 has been placed upon the number of operators per shift
6 in various operating modes, the requirements for
7 operator requalification training and more recently on
8 the need to control usage of overtime.

9 In practice these staff requirements have
10 effectively established the number of shifts that must
11 be utilized by a utility to operate the nuclear power
12 plant.

13 Four operating shifts are required in order to
14 allow 24-hour coverage by eight-hour shifts and provide
15 for days off, leave and illness. The need for operator
16 retraining requires additional licensed operators, in
17 addition to the four shift complement.

18 COMMISSIONER GILINSKY: I have been in several
19 plants where people were working 12 hours a day, or at
20 least more than one plant.

21 MR. ZWOLINSKI: That is possible.

22 COMMISSIONER AHEARNE: A factual question.
23 Does not 737 and its associated statements say 12 hours
24 is the upper limit?

25 MR. ZWOLINSKI: That is correct. Our overtime

1 statement talks of eight hours and then a maximum amount
2 of overtime of up to 12 hours with 72 hours for the work
3 week.

4 By the time of the TMI-2 accident most
5 utilities were employing a five-shift rotation in order
6 to provide for adequate retraining time. The continuing
7 emphasis on working hour limitations and the more
8 stringent retraining requirements since TMI-2 have led
9 those utilities with newly licensed plants to adopt a
10 six-shift rotation scheme so that one full shift can be
11 devoted to retraining without the necessity of working
12 overtime. Other licensees are adopting a six-shift or
13 even seven-shift rotation in order to meet the various
14 staff requirements.

15 We have recently completed an industry
16 survey ---

17 COMMISSIONER GILINSKY: I have got to raise a
18 point here. When we approved Salem, and I must say I
19 wasn't as aware of this problem at that time as I think
20 I am now, they were on three shifts, as I recall. Is
21 that not right?

22 MR. DENTON: I don't recall the facts of
23 Salem. Our Standard Review Plan uses as a guide five
24 shifts and we have exercised flexibility.

25 What we are going to tell you today are the

1 results of a survey of all operating plants and where
2 they stand. There have been some exceptions for short
3 periods of time, such as strikes or storms or new
4 licensees who were not up to those standards, but we can
5 report today on what the experience is.

6 COMMISSIONER GILINSKY: The reason I raise
7 this is because I think the picture that is getting
8 painted here is a rather more cheerful one than at least
9 the facts up to now warrant. It may well be that it is
10 getting corrected.

11 CHAIRMAN PALLADINO: Why don't we go through
12 the results of the survey and I think that will answer
13 your question.

14 MR. ZWOLINSKI: We have recently completed an
15 industry survey which indicates that all licensees will
16 have by the end of this calendar year five-shift
17 rotation schemes in place.

18 As Mr. Denton noted, our SRP Section 13.1.2
19 review procedures does indeed identify that the staff is
20 looking for five-shift rotation to be implemented. On
21 the NTOL's we have gone so far as to push for the six
22 shifts.

23 In past practice, and I think this will answer
24 one of your questions, Commissioner Gilinsky, we have
25 found a two-shift operation for start-up situations

1 where there has been the need for a large number of
2 licensed personnel to perform that function.

3 A three-shift operation is very typical for
4 refueling operations. We find as we go into the four,
5 five and six-shift rotational schemes retraining and
6 overtime are affected. The most shifts, the better the
7 retraining, the less overtime.

8 CHAIRMAN PALLADINO: What do you mean by
9 "brief periods" in the first one?

10 MR. ZWOLINSKI: I am talking two to three to
11 four weeks.

12 COMMISSIONER GILINSKY: Let's see, where does
13 that happen? I didn't realize it was for that long.
14 This is for regular operation of a plant at full power?

15 MR. ZWOLINSKI: Your example of Salem, they
16 for a short period of time were on two shifts of 12
17 hours each.

18 COMMISSIONER GILINSKY: They were on a strike?

19 MR. ZWOLINSKI: There was this strike, that
20 was one situation. But when you go back to when they
21 were initially licensed they were on a three-shift
22 rotation.

23 To the Salem question, there was not
24 sufficient licensed personnel at that time when they
25 were initially licensed.

1 COMMISSIONER GILINSKY: Harold earlier was
2 saying that there are certain circumstances where we
3 have had a smaller number of shifts, for example, at
4 start-up. Now it seems to me start-up is a time when
5 there are just a lot of things happening and it would be
6 the time when you don't want to ---

7 MR. ZWOLINSKI: Okay. The two-shift can be a
8 little bit of a misnomer. If I had six-shift rotation
9 in place, I would have three shifts working at one
10 period of time and three shifts working at the other
11 period of time. I need a large number of qualified
12 people at any given 12-hour increment.

13 COMMISSIONER AHEARNE: I would point our, Vic,
14 that some time ago we originally had a rule or a
15 proposed rule that would have restricted the amount of
16 time, and the Commission for a variety of reasons I
17 guess backed off of that and ended up with the 12
18 hours. There was a movement to try to restrict the
19 amount of time a person could work.

20 MR. DENTON: There was a problem in the first
21 few OL's with the number of shifts because we had made
22 these increases in overtime requirements and staffing,
23 but I don't think that is a problem in the current OL
24 vintages, such as Susquehanna or LaSalle or Southern Cal.

25 MR. ZWOLINSKI: That is correct. They were

1 all pretty much five and six shifts.

2 COMMISSIONER AHEARNE: But you say that during
3 the refueling for nonpower operation, is that when the
4 three-shift operation is common?

5 MR. ZWOLINSKI: Most typically. There has
6 been, as Harold mentioned, the strikes. Recognize
7 during refueling you are going to longer hours. It is
8 is ten days to two weeks and the three-shift rotation
9 seems to have evolved.

10 If I can move along, there have been a number
11 of things that have driven the number of shifts, clearly
12 the three issues that we have identified on this slide.
13 In addition to that, there have been union agreements, a
14 career path, vacations, sick leave concerns, the issue
15 with respect to refueling and more recently the
16 requirement for the second SRO indeed may be driving the
17 industry to reduce the number of shifts over a very
18 short period of time.

19 We in fact just recently queried Fort St.
20 Vrain and they were on six-shift rotation and with the
21 implementation of the second SRO had to back down to
22 five-shift rotation to accommodate the second SRO. We
23 feel that may be a small burp in the system.

24 The general effect of this that indeed most
25 utilities are committed to a five or more shift rotation.

1 CHAIRMAN PALLADINO: What do you mean "are
2 committed to"? You mean they plan to?

3 MR. ZWOLINSKI: The results of our survey have
4 shown, and in fact it is the next slide, that
5 essentially all the utilities are on a five-shift
6 rotation working philosophy, except that there are
7 selected utilities that may have two or three operators
8 move along and they will have to adopt a modified
9 four-shift rotation.

10 COMMISSIONER AHEARNE: Which plant is that
11 that had the three-shift rotation?

12 MR. ZWOLINSKI: I wanted to preface that. It
13 turns out that the three is no longer in existence. We
14 thought that was Fort St. Vrain and we got on the phone
15 and straightened that.

16 CHAIRMAN PALLADINO: Where does Fort St. Vrain
17 come in now?

18 MR. ZWOLINSKI: They are down under five
19 shifts and planning for six shifts.

20 CHAIRMAN PALLADINO: Should I cross out that
21 first one?

22 MR. ZWOLINSKI: Yes, you cross that out and
23 the 17 becomes 18 on the slide under "Number of
24 Facilities," and the 24 goes to 25.

25 I thought the most impressive part of the

1 survey was the vast number of utilities that indeed are
2 committed to either five shifts or six shifts and even
3 headed toward seven shifts. That bottom one is
4 Fitzpatrick.

5 Again, for those two that are on four shifts,
6 both of those are moving vigorously to indeed have five
7 shifts in place by the end of this year.

8 COMMISSIONER AHEARNE: Which ones are those?

9 MR. ZWOLINSKI: They are North Anna and
10 McGuire.

11 What I have developed on the next slide are
12 the pros and cons that I felt would tend to drive either
13 the need for six shifts or five. I think the bottom
14 line to much of this is the need to assure retraining
15 and that the operators are not working an extensive
16 amount of overtime and that their vacations and sick
17 leave are addressed.

18 I think when you have the six-shift rotation
19 in place it allows for much better planning of outages.
20 We find that you would have additional licensed
21 personnel available to conduct your periodic test as
22 required by the technical specifications.

23 Selected cons of the six-shift, there is a
24 population out there of reactor operators that relies on
25 a measure of overtime as an addition to their pay check,

1 and we would reduce the amount of overtime with six
2 shifts in place.

3 COMMISSIONER GILINSKY: What a minute, that is
4 an odd disadvantage for us to put forward.

5 COMMISSIONER AHEARNE: But it was a major
6 disadvantage that was raised when we were debating
7 previously the length of maximum time you would be
8 allowed.

9 COMMISSIONER GILINSKY: Well, I still think it
10 is an odd thing for us to be bringing up.

11 COMMISSIONER AHEARNE: I agree. We shouldn't
12 have that as one of our factors of consideration.

13 MR. ZWOLINSKI: Well, we will scratch that one
14 off.

15 COMMISSIONER GILINSKY: I mean it may very
16 well be that from the point of view of an individual
17 operator that is a disadvantage and he would like to
18 work as many hours as possible, but it seems to be
19 saying that we would like operators to work as many
20 hours as possible.

21 MR. DENTON: The pros and cons I think were
22 not just NRC cons, but how you perceive it would affect
23 operations.

24 COMMISSIONER GILINSKY: Would you say that
25 operators would quit because they won't make as much

1 money as they expected to and therefore there won't be
2 enough operators, which I doubt.

3 MR. ZWOLINSKI: I am not sure I can make that
4 statement, Commissioner Gilinsky. The point was one of
5 affected the man's pay check. I will strike that from
6 my notes.

7 COMMISSIONER AHEARNE: It is a morale factor.

8 MR. ZWOLINSKI: I think so.

9 There is one con that is not on the
10 viewgraph. If you have six-shift rotation, the operator
11 will be on shift in the control room about 50 percent of
12 his normal work year time.

13 CHAIRMAN PALLADINO: Say that again?

14 MR. ZWOLINSKI: If you have the six-shift
15 rotation in place, the operator spends about half his
16 time in the control room. The other half is ---

17 COMMISSIONER GILINSKY: Half of the working
18 time.

19 MR. ZWOLINSKI: Half of his working time. The
20 other half would be in retraining, in his planned
21 vacations and the other shift is a relief shift in which
22 he is assisting your technical support group, for
23 example.

24 On the five shifts the pros and cons, if you
25 assume that the five shifts are fully manned and there

1 are relief personnel ---

2 COMMISSIONER GILINSKY: Just to go back to
3 that previous one, you never put the fact that the
4 operators may make less money ---

5 COMMISSIONER AHEARNE: On the six shift.

6 COMMISSIONER GILINSKY: You said it may need
7 to attract more candidates into RO/SRO training
8 programs. I don't see that that is a con either. It
9 sounds to me like that may be a good thing.

10 MR. ZWOLINSKI: If I adopted a six shift over
11 a short period of time, what would evolve is that the
12 industry would use their trainers or their licensed
13 operators that are on the engineering staff to come in
14 and make up that shift. You may take away from some of
15 the other job activities that are needed to be
16 accomplished, and I don't think we want to detract from
17 retraining.

18 MR. DENTON: I think it is hard to find a
19 safety con for having six, seven or eight shifts. I
20 just come out that five shifts met all the
21 requirements. I don't want to stretch to find things
22 wrong with more than five shifts, but I would like to
23 turn the page and show that five shifts fully satisfy ---

24 COMMISSIONER GILINSKY: In terms of costs and
25 benefits obviously it costs more money and that has got

1 to be taken into account.

2 MR. ZWOLINSKI: To the five shifts, again the
3 five-shift rotation allows for full shift coverage and a
4 full retraining program. What is required is a number
5 of relief personnel to fill in for what I had called
6 intangibles on the slide. I am talking about sick leave
7 or the vacation time.

8 COMMISSIONER AHEARNE: What do you mean by
9 "use of training personnel to backfill operations"?

10 MR. ZWOLINSKI: If I have five shifts with no
11 relief personnel, and as the shift is beginning I find
12 that a man is not reporting to work, I typically go to
13 their training program and take a man out of training
14 and put him on the shift. It affects his retraining
15 program.

16 MR. DENTON: The ideal case I think would be
17 five shifts plus a few people who would be able to step
18 in the event that somebody on the normal four shifts was
19 not able to fill his normal slot. One way to do that
20 would be to have a sixth shift. Then you guarantee that
21 you always have five shifts plus one or two people who
22 don't normally work in this capacity.

23 COMMISSIONER AHEARNE: Are you saying that the
24 principal of the sixth shift is to provide a float?

25 MR. ZWOLINSKI: Yes, you are covered at all

1 times and you do not detract from your retraining
2 program.

3 COMMISSIONER AHEARNE: But in the absence of
4 that need to fill in an unexpected hole, doesn't the
5 five-shift cover the training program?

6 MR. DENTON: Five shifts provides four shifts
7 for the normal work and one shift being trained. So
8 then that meets the requirements.

9 COMMISSIONER AHEARNE: So the extra people
10 above the five-shift are floaters to cover this
11 unexpected ---

12 MR. DENTON: --- vacancy. That is right.

13 CHAIRMAN PALLADINO: But when you have six
14 shifts, does the six shift come in the rotation process?

15 MR. ZWOLINSKI: Yes, they do. The sixth shift
16 would be assigned to performing duties such as assisting
17 your technical support group at the plant and they would
18 perform other roles in assisting the training
19 organization.

20 CHAIRMAN PALLADINO: Always or do they get
21 into the same cycle as one of the other five? Is there
22 enough rotation so that this sixth group or sixth shift
23 maintains its viability?

24 MR. ZWOLINSKI: Mr. Chairman, it is my
25 understanding that the four licensed operators when they

1 move off of their licensed duties in the control room
2 that they don't work as a team of four people in support
3 of the engineering group, for example. They have
4 responsibilities that they carry.

5 COMMISSIONER AHEARNE: Maybe there is more to
6 it, but so far it sounds like the Navy has its people
7 chip paint.

8 COMMISSIONER ROBERTS: I don't follow you.

9 COMMISSIONER AHEARNE: Well, on shipboard
10 during lengthy periods when there is not too much to do
11 you have got to keep the crew busy because if the crew
12 isn't busy then they have got other kinds of morale
13 problems. So you have them chip the paint and then sand
14 it down and then repaint it and then chip the paint and
15 sand it down and repaint it.

16 (Laughter.)

17 COMMISSIONER ROBERTS: I have a hard time with
18 that, John. I spent three years on a destroyer and I
19 don't agree with that.

20 (Laughter.)

21 COMMISSIONER AHEARNE: This is purportedly a
22 carrier.

23 COMMISSIONER ROBERTS: I don't know anything
24 about carriers.

25 (Laughter.)

1 COMMISSIONER GILINSKY: I don't think these
2 are factual questions.

3 (Laughter.)

4 CHAIRMAN PALLADINO: You are right.

5 COMMISSIONER AHEARNE: I was just concerned
6 that so far it really sounded like that sixth shift ---

7 COMMISSIONER ROBERTS: You are using a shift
8 meaning a team of people.

9 MR. ZWOLINSKI: Yes.

10 COMMISSIONER ROBERTS: Tell me what a shift is
11 as a period of work in hours.

12 MR. ZWOLINSKI: We have been using an
13 eight-hour period as the typical shift.

14 COMMISSIONER ROBERTS: Is that standard
15 practice?

16 MR. ZWOLINSKI: Yes.

17 CHAIRMAN PALLADINO: Do we have any
18 requirement on that?

19 COMMISSIONER AHEARNE: No.

20 MR. ZWOLINSKI: Not for the eight hours. We
21 have an overtime requirement.

22 CHAIRMAN PALLADINO: Eventually I am going to
23 ask you to review what our requirements are so that we
24 can keep them in perspective.

25 COMMISSIONER GILINSKY: I think there is

1 another factor which is that we are talking about how
2 much a plant budgets for, and they are not going to have
3 a full complement of operators at all times. People
4 come and go and various other factors. So that if you
5 are budgeting for six, you may end up with a full
6 complement for five. That is one of the things that
7 gets taken care of when you have six shifts. Then if
8 you are budgeting for five, you may end up with four as
9 a practical matter.

10 MR. DENTON: I was a little surprised by the
11 results, because, like you, I recall that they had
12 pretty skimpy staffing a while back and I am pleased to
13 see that everyone has actually moved as far as they
14 have. It looks like about half of the utilities on your
15 chart are moving towards six.

16 COMMISSIONER GILINSKY: I agree. It looks
17 like a very much better situation than I must say I
18 expected.

19 MR. DENTON: I had not expected it to turn out
20 that favorable either.

21 MR. ZWOLINSKI: If I might move to the future
22 actions that the Commission might consider. I developed
23 this particular slide assuming that we had a lot of bad
24 actors, three and four-shift operations, and the
25 Commission might consider getting on with perhaps a

1 rulemaking or policymaking or what-have-you.

2 I think the results of the survey compel me to
3 refocus again on three issues. It is the overtime, it
4 is the retraining and our licensed operator population,
5 our requirements now for the second SRO in the control
6 room.

7 I think the staff comes out very strongly in
8 favor of continuing our present practice, which would be
9 to accept the industry survey of the five and six-shift
10 rotational schemes as being an acceptable method to
11 operate power plants safely.

12 COMMISSIONER GILINSKY: Well, I must say I am
13 certainly pleased to see as many plants in that category
14 as there appear to be, but the question we have to deal
15 with is to what extent are we willing to permit a lower
16 number of shifts for whatever length of time is involved.

17 MR. ZWOLINSKI: Certainly is a strike
18 situation occurred at a power plant and it was not going
19 to be resolved in a short term, a month, for example,
20 and I assume we would be on a three-shift rotation, the
21 Commission may want to look at how long does one allow
22 that to progress without resolution. I didn't focus the
23 presentation on those types of abnormalities.

24 COMMISSIONER GILINSKY: The overtime
25 restriction, it seems to me, doesn't amount to much.

1 What it comes down to is that the man in charge has got
2 to sign and approve overtime and when he need it he just
3 approves it.

4 CHAIRMAN PALLADINO: Would it be helpful to
5 just review what constraints you have now on the
6 operators?

7 MR. DENTON: I think there are the three that
8 John mentioned. That is the overtime requirement ---

9 CHAIRMAN PALLADINO: And nobody works more
10 than 12 hours in one continuous ---

11 MR. ZWOLINSKI: Correct, or 72 hours in a work
12 week.

13 COMMISSIONER AHEARNE: Well, there are four,
14 at least as I am reading from 737.

15 MR. ZWOLINSKI: You have it in front of you.

16 CHAIRMAN PALLADINO: Do you want to read them,
17 John?

18 COMMISSIONER AHEARNE: Well the four are:

19 An individual should not be permitted to work
20 more than 12 hours straight, not including shift
21 turnover time.

22 Second, there should be a break of at least 12
23 hours which can include shift turnover time between all
24 work periods.

25 Third, an individual should not work more than

1 72 hours in any seven-day period.

2 Fourth, an individual should not be required
3 to work more than 14 consecutive days without having two
4 consecutive days off.

5 Then it goes on to say that deviation can be
6 authorized by the plant manager or his deputy.

7 COMMISSIONER GILINSKY: And when they need
8 deviations they just authorize them.

9 MR. DENTON: I think we modified that since
10 that went out. This caused a great deal of comment.

11 COMMISSIONER AHEARNE: This is the modified
12 version. There was a previous one, right, but it was
13 superseded.

14 MR. DENTON: That is one area for the need for
15 the training program to be an integral part for
16 operators as a second ---

17 CHAIRMAN PALLADINO: How much time do they
18 spend in training? Is there any amount specified in
19 that?

20 MR. ZWOLINSKI: There is not a time specified
21 by the Commission. When the man sits for his
22 requalification exam and he doesn't do well, he is
23 certainly put into a number of one-week courses to get
24 him back up to an acceptable level. If he does poorly
25 on his exam, they will give him immediate courses and

1 take him off of shift work.

2 CHAIRMAN PALLADINO: Do we have any feel on
3 the average for what fraction of time the people are
4 spending on training?

5 MR. DENTON: One shift is always in training.

6 CHAIRMAN PALLADINO: So that is one-sixth.

7 MR. ZWOLINSKI: My understanding is it is
8 between one-fifth and one-sixth. So that would be
9 something like 20 percent. Now some utilities, if the
10 man scores 100 percent on his exam, still put him
11 through the retraining program to focus, not necessarily
12 on requalification issues, but on issues of the day that
13 have affected the nuclear power industry.

14 COMMISSIONER ROBERTS: Can you give me some
15 sort of feel on what sort of turnover there is, or can
16 you not make such a general statement?

17 MR. DENTON: We can. Do don't have anyone
18 from the Licensing Branch down here today that keeps
19 that type of statistics.

20 MR. KRAMER: We can get you that.

21 MR. REMICK: I have some statistics, it is
22 outdated now, but I remember back a few years ago when
23 Paul Collins gave a paper and I was surprised. For both
24 an RO and an SRO, the average tenure was about four
25 years. I ion't know if that has changed, but the

1 average tenure of an RO or SRO was about four years.
2 Now that meant that some of these people went on to
3 other positions, some RO's went on to SRO's and some
4 SRO's went on to management.

5 COMMISSIONER AHEARNE: I have the same
6 recollection, it was a surprisingly high turnover.

7 MR. REMICK: Yes.

8 MR. DENTON: Then the third area, that is the
9 number of operators per shift, I think that is before
10 the Commission now.

11 COMMISSIONER AHEARNE: Yes.

12 COMMISSIONER GILINSKY: Do you know the extent
13 to which plant managers have approved deviations from
14 those guidelines or requirements?

15 MR. DENTON: I don't know right off.

16 COMMISSIONER AHEARNE: I don't think there is
17 any requirement. They are not required to notify us.
18 Is that something that is ever checked or verified?

19 MR. DENTON: There have been a couple of times
20 that I recall where the Regional Inspector would call
21 and we talked about what was going on, but it is more
22 that the I&E inspector would check it if there is a
23 problem. In things like the Salem case, it was a
24 regional decision that they were adequately covered. I
25 think by not having a requirement you give some

1 flexibility for handling these cases to make an on-site
2 judgment about the people there.

3 CHAIRMAN PALLADINO: They are not required to
4 come back and report extended deviations from the
5 guidelines?

6 MR. DENTON: No.

7 This concludes our 30-minute presentation.

8 (Laughter.)

9 CHAIRMAN PALLADINO: You know, that took only
10 30 minutes even with interruptions.

11 COMMISSIONER AHEARNE: We have 286 in front of
12 us which is a rulemaking on staffing. To what extent do
13 you believe the utility industry's positions that you
14 have here would be modified by a choice of either of
15 these options? Is it independent?

16 COMMISSIONER GILINSKY: That is an interesting
17 point because I thought a number of the utilities were
18 not going to staff up to the extent we recommended after
19 TMI for some time.

20 MR. DENTON: I think John mentioned that there
21 were indications that in order to come onboard with the
22 two SRS's, there were indications they were dropping the
23 number of shifts temporarily.

24 COMMISSIONER AHEARNE: Right, and what I am
25 asking is that you have two options here that you lay

1 out particularly focused on the SRO, and depending on
2 which way the Commission comes, do you see that as
3 driving the utilities' commitment here? You have got
4 everybody by the end of this year will be at five and a
5 number you have saying that they are going towards six.
6 Your recommendation here in the paper, at least in the
7 charts, was that the Commission strongly endorsed going
8 towards six.

9 MR. DENTON: I would no longer support that
10 recommendation.

11 MR. ZWOLINSKI: It was just policy statement.

12 MR. DENTON: When we were talking about the
13 need for it, I wasn't sure what the results of the
14 survey would turn out to be, and I am really pragmatic
15 having seen the survey ---

16 COMMISSIONER AHEARNE: But I think what you
17 are saying is that you are happy with the industry, the
18 bulk of them at five and some of them moving toward six,
19 and you are satisfied with that.

20 The point I am asking is that if we choose one
21 or the other of your options in this other paper, do you
22 think that that will affect where the industry is? Will
23 it lead, for example, to a number dropping back to four,
24 or would it reinstitute your recommendation of the
25 policy statement?

1 MR. KRAMER: Commissioner Ahearne, we had not
2 considered that in the drafting of the proposed rules.

3 MR. ZWOLINSKI: I see the codifying of
4 SECY-82-286 as really the Commission endorsing the
5 second SRO and most of the industry has adopted that.
6 Now what we are trying to do is put it into the formal
7 rulemaking process rather than arm twisting and
8 technical specifications. This is cleaning up our act a
9 little bit.

10 COMMISSIONER AHEARNE: Are you saying that it
11 is at least your belief that if we went for the second
12 RO in the rule that wouldn't modify any of the utility
13 behavior?

14 MR. DENTON: Well, I think the response we
15 have gotten to the audit assumes that is what we were
16 going to do and that results in this temporary dip from
17 six to five.

18 COMMISSIONER AHEARNE: I see.

19 MR. DENTON: It might perturb a few
20 individuals, but most everybody seems to be adopting
21 their own preferred staffing plans that fully meet our
22 requirements.

23 MR. ZWOLINSKI: Clearly if the Commission
24 wanted six shifts and so stated, the industry would go
25 to its training people and engineering support people

1 that have licenses and form that sixth shift. The
2 licensed operator population is there at most facilities.

3 CHAIRMAN PALLADINO: Harold, the requirements
4 that we have now, do you feel that they meet the
5 objectives that the staff felt need to be met with
6 regard to having enough people without working them too
7 long?

8 MR. DENTON: I feel they are met in a
9 sufficiently large fraction of all cases out there that
10 we don't need to make a ruling. I can't guarantee that
11 tomorrow there won't be some ---

12 COMMISSIONER GILINSKY: Isn't that what rules
13 are for?

14 CHAIRMAN PALLADINO: My point is if they met
15 these rules, would they have met all the objectives? If
16 they are not meeting these rules, then we take a
17 different kind of action.

18 MR. DENTON: I guess in my view five shifts
19 can fully meet our requirements for overtime and the
20 number of people in training.

21 CHAIRMAN PALLADINO: What is in the back of my
22 mind is we don't want to take over management's job
23 completely ---

24 (Laughter.)

25 CHAIRMAN PALLADINO: --- and we have certain

1 objectives and we want to make sure there are enough
2 people on the job, that they are not overworked and that
3 they are training. Then after we have specified that,
4 leave it to the utility to decide how many shifts it
5 needs to do all those things.

6 Now what I am saying is if they meet these
7 requirements, the 12 hours, the 12 hour break, the 72
8 hours and seven days and 14 days and then at least two
9 days off and training and so many on a shift, would we
10 have achieved all the objectives that you felt needed to
11 be achieved?

12 MR. DENTON: In my view, yes.

13 COMMISSIONER GILINSKY: But we don't know
14 whether they are meeting them.

15 CHAIRMAN PALLADINO: That is a different
16 question.

17 COMMISSIONER GILINSKY: They are not really
18 requirements. It is just a line, and if you want to
19 exceed that line, you have got to get the manager's
20 signature. That is all it is. It is not like a
21 requirement on the number of diesel generators. You
22 know, you can't exceed that with the manager signing a
23 piece of paper. So it is a very different matter.

24 CHAIRMAN PALLADINO: Well, somewhere if you
25 are going to have management you have got to have some

1 flexibility there. What you want to make sure is that
2 they are exercising that responsibility in a
3 straightforward and effective manner.

4 MR. DENTON: We can audit this area a year
5 from now and see if they are still meeting these
6 commitments. My view is that they are and I prefer to
7 have the flexibility to deal with the unusual cases on a
8 case-by-case basis. I think there have been cases in
9 which we haven't agreed in the past that people could
10 safely operate and acted there. I guess it is a matter
11 of style as to whether you want a rule of five or six
12 shifts or whether you think you need one or not.

13 COMMISSIONER GILINSKY: Why should we
14 differentiate this from say a requirement on batteries
15 or diesel generators?

16 MR. DENTON: I guess, Commissioner, the only
17 reason I see the difference is that those things stay in
18 play for four years. They occasionally don't work. The
19 people problem and turnover in the company and
20 unexpected attrition or illness makes running and
21 meeting people requirements somewhat different. I can
22 see a need for flexibility if the underlying functions
23 of those people are performed or not.

24 COMMISSIONER GILINSKY: Well, by setting a
25 requirement on shifts you still need a fair degree of

1 flexibility as far as individuals go, but it means that
2 the company is forced to have a certain staff which
3 ought to go a long way to making sure of the fact that
4 most people will not get overworked and so on.

5 CHAIRMAN PALLADINO: But we have that when we
6 say how many people and what quality we want on each
7 shift, and when we give them the rules around which ---

8 COMMISSIONER GILINSKY: But those rules ---

9 CHAIRMAN PALLADINO: That is what I was going
10 to say though. You are saying we are not enforcing them.

11 COMMISSIONER GILINSKY: Yes.

12 CHAIRMAN PALLADINO: Maybe the better thing is
13 to enforce these rules rather than try to set another
14 rule up.

15 COMMISSIONER AHEARNE: But there is a
16 fundamental difference between those rules and what we
17 are talking about here. Those rules are on hours people
18 work and these are the number of complementing people,
19 although you can argue about what a shift is also.

20 COMMISSIONER GILINSKY: There are various ways
21 to do this. I just think that setting the number of
22 shifts is a simple way of doing it which still leaves a
23 fair degree of flexibility and it still allows for some
24 accommodation of special circumstances. It means that
25 you are making sure that the company at the corporate

1 level is going to have to budget for a certain staff,
2 and you are taking the burden off the manager of the
3 facility and putting it with his corporate management
4 and making sure they budget for an adequate operating
5 staff. From then on it is his responsibility and he has
6 got to manage the people.

7 COMMISSIONER AHEARNE: I would be a lot more
8 comfortable with doing that if I felt we really had
9 something more than a feeling for what is the right
10 number of shifts or even what is the right number of
11 hours that people should work. I am a little uneasy
12 about, in fact I am very uneasy about stepping in and
13 saying that we will decide how many shifts or here are
14 the fixed number of hours that people should work based
15 upon the information that we have.

16 COMMISSIONER GILINSKY: Well, I thought
17 setting the number of shifts leaves more flexibility
18 than specifying hours per day.

19 COMMISSIONER AHEARNE: It does leave
20 flexibility, but, as you have described, it is taking
21 over a part of the management ---

22 COMMISSIONER GILINSKY: You are saying you
23 have got to budget this much for an operating staff.

24 CHAIRMAN PALLADINO: I think you are saying
25 something different. Maybe using shifts is a shorthand,

1 but I don't understand six shifts, unless you just have
2 a shift that is just waiting.

3 COMMISSIONER GILINSKY: Well, we are not
4 talking about a specific number here.

5 CHAIRMAN PALLADINO: By the time you say how
6 many people should be on a shift ---

7 COMMISSIONER GILINSKY: Well, the number could
8 be six, it could be five, it could be four or it could
9 be seven.

10 CHAIRMAN PALLADINO: When we pass the rule
11 that we acting on it will say "X" number of operators,
12 "Y" number of senior operators, and one shift supervisor.

13 COMMISSIONER GILINSKY: Duplicated so many
14 times.

15 CHAIRMAN PALLADINO: And duplicated so many
16 times. Now if you say six shifts, then you have to
17 precisely have six shift supervisors, if I interpret
18 your rule right. And if one quits, then I am out of
19 compliance.

20 COMMISSIONER GILINSKY: It is just like if you
21 have diesel generators, if they don't work ---

22 CHAIRMAN PALLADINO: But the reason you had
23 the six was because you wanted one more than the minimum.

24 COMMISSIONER GILINSKY: Well, maybe they can
25 just set the minimum at five and recommend six. You

1 know, I am not arguing for a specific number here. A
2 prudent manager would make sure that he had enough
3 people over that line so he doesn't get himself in a
4 situation where he goes below the minimum.

5 CHAIRMAN PALLADINO: Well, a prudent manager
6 would not try to micro-manage, and that is what I think
7 we are trying to do. We said here is the maximum number
8 of hours and here are the number of hours you have got
9 to have between breaks.

10 COMMISSIONER GILINSKY: That is why I don't
11 like those rules.

12 CHAIRMAN PALLADINO: I think they are
13 excellent rules, except that I think we are not
14 enforcing them.

15 COMMISSIONER GILINSKY: Joe, you are talking
16 about us not getting involved in the details of
17 precisely how many hours each individual should work,
18 but you want to go ---

19 CHAIRMAN PALLADINO: That is because we have
20 got them. I don't want to add another one here on top
21 of them.

22 COMMISSIONER GILINSKY: Well, I would suggest
23 replacing these with a requirement on shifts. That was
24 my point.

25 CHAIRMAN PALLADINO: Then let them work it out.

1 COMMISSIONER GILINSKY: Let them sort it out.
2 But I think if they have enough people, I assume they
3 will spread the work around and they won't load up a
4 small fraction of the work force and let the others sit
5 around.

6 CHAIRMAN PALLADINO: Well, I guess my own view
7 is I am not sure we have a problem.

8 COMMISSIONER GILINSKY: Well, I think the
9 situation looks a lot better, I must say, than I
10 expected and I am pleased to see that. But suppose we
11 were looking, just to get back to the example, batteries
12 or diesel generators, I don't think we would say well
13 most of them have got enough diesel generators so there
14 is no point in having a requirement.

15 COMMISSIONER AHEARNE: No, but I think we
16 would on diesel generators come in with at least a
17 better either an historical base or an analysis to
18 justify why it is there ought to be a requirement on
19 diesel generators and we are not there yet. At least I
20 don't think we are there yet on any of these.

21 We are moving slowly on the number of people
22 in the control, and I think we feel fairly comfortable
23 we have got that. We are moving very slowly on the
24 qualifications of those people whose numbers we have
25 specified in the control room. Then to move further to

1 then say in addition how long shall those people be
2 allowed to work, which is either hours or shifts, I
3 think we are still farther away from. At least I feel
4 that way.

5 COMMISSIONER GILINSKY: Well, we are more or
6 less pretending that we have a requirement in that area.

7 COMMISSIONER AHEARNE: Given advice.

8 CHAIRMAN PALLADINO: When we come to the
9 number of people on shift, I presume that is going to be
10 a requirement.

11 COMMISSIONER GILINSKY: No, that is a
12 requirement. I am talking about the number of hours ---

13 CHAIRMAN PALLADINO: Well, that is more
14 comparable to your diesel generators or your batteries.

15 COMMISSIONER GILINSKY: No, I don't think so.

16 CHAIRMAN PALLADINO: Well, if I have got to
17 have so many diesel generators available when I run the
18 plant, that is the same as how many I have got to have.

19 COMMISSIONER GILINSKY: Oh, in the control
20 room?

21 CHAIRMAN PALLADINO: Yes.

22 COMMISSIONER GILINSKY: Yes, I think that is
23 right, but not when you say 12 hours per day.

24 CHAIRMAN PALLADINO: Oh, I agree with you.
25 You don't work batteries that hard.

1 (Laughter.)

2 COMMISSIONER GILINSKY: Well, if you don't
3 feel there is a problem.

4 CHAIRMAN PALLADINO: Let's ask the staff. Do
5 you feel there is a problem that we need to solve by
6 passing some policy or rule?

7 COMMISSIONER GILINSKY: Well, let me ask you
8 this. What happens if a plant goes down to three shifts
9 or two shifts? Do they notify somebody?

10 MR. DENTON: What happens in real life is the
11 resident is the first person to know it. I remember in
12 recent times the Salem experience and the Regional
13 Director made some evaluation and calls us here and
14 discusses his views on whether they can safely continue
15 or not, and we either support him or not. So it is a
16 decision made by the people close up to the facility who
17 know the specific individuals involved and their
18 capabilities rather than by a rigid system.

19 COMMISSIONER GILINSKY: One of the things you
20 would be accomplishing by setting a requirement is that
21 you would be making sure that corporate management does
22 not slack off in providing enough funds and supporting
23 the individual plants and plant managers in this area.
24 If we don't care all that much, I don't know what will
25 happen.

1 COMMISSIONER AHEARNE: That is a
2 mischaracterization, Vic. You can go ahead and say we
3 don't care, and maybe you have detailed information that
4 leads you to conclude the details. I just have not seen
5 us with enough information that will enable me to reach
6 a conclusion of what that number should be that I can
7 say all right, utility, you must have no less than
8 this. We don't have that.

9 CHAIRMAN PALLADINO: Can I ask Harold a
10 question. We keep saying these are not requirements,
11 the 12 hours, et cetera. Are they requirements or
12 aren't they requirements?

13 MR. DENTON: You are speaking of the overtime
14 requirements?

15 CHAIRMAN PALLADINO: Yes, the 12 hours, the 72
16 hours ---

17 (Laughter.)

18 MR. DENTON: They are not Commission
19 regulations. That is clear. Many of the utilities have
20 committed to abide by these in their letters to us.

21 CHAIRMAN PALLADINO: And once they commit to
22 it does it have the force of regulation?

23 MR. DENTON: Well, not the same force a
24 regulation would have. Then the inspector inspects that
25 obligation just like he does others, and if he doesn't

1 think they are honoring it, he can take action.

2 COMMISSIONER GILINSKY: But honoring it means
3 that they will not exceed it unless the plant manager or
4 whoever the designated official is will approve it,
5 which means that they can exceed these limits.

6 CHAIRMAN PALLADINO: My experience is they do
7 it only under duress. They don't do it as a routine
8 thing because your whole organization goes to pot when
9 you do it.

10 MR. DENTON: I think we specifically had the
11 plant manager approve it so it would not be abused by a
12 lower level and it would have the highest level of
13 approval.

14 COMMISSIONER AHEARNE: These are incorporated
15 in this sort of nebulous document, 737, which is a
16 letter. Now the title of the letter is "Post-TMI
17 Requirements" and it is written to all licensees of
18 operating plants, for example, and it does say the
19 letter incorporates all TMI related items approved for
20 implementation by the Commission. So all the words and
21 flavor characterize it as though it were a requirement,
22 although as we know it is a little difficult to really
23 pin down exactly what is the legal action.

24 As I recall on a number of other times when
25 this issue has come up either you, Harold, or ELD has

1 pointed out or I&E that if they don't follow this, then
2 you would expect to issue them an order making them
3 follow it.

4 MR. DENTON: If they deliberately didn't
5 follow it, then we would issue a show cause order and
6 that would then have the force ---

7 COMMISSIONER GILINSKY: But not following it
8 means exceeding those limits without the manager's
9 approval. That is what not following it means.

10 COMMISSIONER AHEARNE: Well, the whole
11 sentence says "Recognizing that circumstances may
12 arising requiring deviation from the above restrictions,
13 such deviations shall be authorized by the plant manager
14 or his deputy or higher levels of management in
15 accordance with published procedures and with
16 appropriate documentation of the cause."

17 So that to follow this would mean that they,
18 if they are following it, that they are either living
19 within those guidelines or else there is not only a
20 record of approval but a record of the cause of the
21 approval. That is why I think it might be interesting
22 to find out whether we have ever checked any of those.

23 CHAIRMAN PALLADINO: Do we check into that?
24 Do we check whether or not the approval for exceptions
25 is used?

1 MR. DENTON: I don't know whether that is a
2 part of the routine inspection package or whether it is
3 audited by the region or not.

4 CHAIRMAN PALLADINO: It might be well to do
5 some spot checking in some of the forthcoming
6 inspections.

7 Are there any other questions or expressions
8 of opinion?

9 (No response.)

10 CHAIRMAN PALLADINO: I don't know whether I
11 got the sense of the Commission or not. I would like to
12 go away knowing what we want to do.

13 Does the Commission wish to take any steps to
14 develop a policy or a rule on the number of shifts?

15 COMMISSIONER AHEARNE: Not at this time.

16 COMMISSIONER ROBERTS: I wouldn't.

17 COMMISSIONER GILINSKY: I guess I would.

18 CHAIRMAN PALLADINO: One, two, three "No" and
19 you say "Yes." Then I would suspect that we not do
20 that, that we not make any policy or rule.

21 I do think though it would be appropriate in
22 some of the forthcoming or future inspections that some
23 spot checking be made of the extent to which the
24 exception authority might be abused or how it is being
25 used.

1 COMMISSIONER AHEARNE: That would probably be
2 an SRM to EDO for relay to the regions.

3 CHAIRMAN PALLADINO: Where is staff? Oh,
4 there he is. Okay, he heard it.

5 (Secretary Chilk nodded positively from the
6 back of the room.)

7 CHAIRMAN PALLADINO: Any other items we should
8 cover on this point?

9 (No response.)

10 CHAIRMAN PALLADINO: Okay. I note we started
11 on time and I think we ending ahead of time.

12 COMMISSIONER ROBERTS: I hope you are setting
13 a precedent.

14 (Laughter.)

15 COMMISSIONER AHEARNE: I would like to also
16 comment that it is good for once for the staff to have
17 come having done a survey and found that things are
18 better than they thought.

19 COMMISSIONER GILINSKY: That was good to
20 discover.

21 CHAIRMAN PALLADINO: Well, it may be showing
22 they recognize requirements, too.

23 Thank you. We will stand adjourned.

24 (Whereupon, at 3:05 p.m., the meeting
25 adjourned.)

NUCLEAR REGULATORY COMMISSION

This is to certify that the attached proceedings before the
COMMISSION MEETING

in the matter of: PUBLIC MEETING - Briefing on Minimum Number of Shifts
Required at Operating Reactors

Date of Proceeding: July 21, 1982

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)

PURPOSE

TO PROVIDE COMMISSION WITH A STATUS REPORT
REGARDING THE NUMBER OF SHIFTS EMPLOYED
FOR VARIOUS OPERATING MODES AT OPERATING
FACILITIES.

BACKGROUND

- TOTAL NUMBER OF SHIFTS DRIVEN
BY PAST INDUSTRY PRACTICE
AND NRC CONCERNS
- NO REGULATIONS
- NO REGULATORY GUIDES
- NO BRANCH TECHNICAL POSITIONS
- NOT IN TECHNICAL SPECIFICATIONS

PAST PRACTICE

- TWO SHIFT OPERATION FOR BRIEF PERIODS
- THREE SHIFT OPERATION WITH RELIEF FOR EXTENDED PERIODS
- FOUR SHIFT OPERATION WITH RELIEF FOR EXTENDED PERIODS
- FIVE SHIFT OPERATION WITH RELIEF EVOLVING
- SIX SHIFT OPERATION EVOLVING

PRESENT PRACTICE

No. OF SHIFTS DETERMINED BY:

- 1) RETRAINING
- 2) OVERTIME
- 3) LICENSED OPERATORS AVAILABLE
FOR EACH SHIFT

EFFECT

- MOST LICENSEES

- 1) USE FIVE OR MORE SHIFTS
- 2) USING LESS THAN FIVE SHIFTS
HAVE CANDIDATES IN PIPELINE

PRESENT INDUSTRY STATUS

<u>SHIFTS USED</u>	<u>NUMBER OF FACILITIES</u>	<u>NUMBER OF UNITS</u>
3 SHIFTS PLUS SPARE OPERATORS	1	1
4 SHIFTS - PLANNING FOR 5 SHIFTS	2	4
5 SHIFTS - NO PLANS TO INCREASE	16	26
5 SHIFTS - PLANNING FOR 6 SHIFTS	17	24
6 SHIFTS - NO PLANS TO INCREASE	10	14
6 SHIFTS - PLANNING FOR 7 SHIFTS	1	1

FACILITIES ON 3 SHIFTS

- . FORT ST. VRAIN

FACILITIES ON 4 SHIFTS

- . NORTH ANNA 1 & 2
- . MCGUIRE 1 & 2

FACILITIES ON 5 SHIFTS

- . ARKANSAS NUCLEAR ONE 1 & 2
- . BEAVER VALLEY 1
- . BIG ROCK POINT 1
- . BROWNS FERRY 1, 2 & 3
- . CALVERT CLIFFS 1 & 2
- . COOPER
- . DAVIS BESSE 1
- . D. C. COOK 1 & 2
- . DRESDEN 2 & 3
- . DUANE ARNOLD 1
- . FARLEY 1 & 2
- . GINNA
- . HATCH 1 & 2
- . INDIAN POINT 2 & 3

FACILITIES ON 5 SHIFTS (CONT.)

- . KEWAUNEE
- . LACROSSE
- . MAINE YANKEE
- . OCONNE 1, 2 & 3
- . OYSTER CREEK
- . PALISADES
- . PEACH BOTTOM 2 & 3
- . PILGRIM 1
- . POINT BEACH 1 & 2
- . QUAD CITIES 1 & 2
- . RANCHO SECO
- . SALEM 1 & 2
- . SAN ONOFRE 1
- . SEQUOYAH 1 & 2
- . SURRY 1 & 2
- . TROJAN
- . VERMONT YANKEE
- . YANKEE ROWE
- . ZION 1 & 2

FACILITIES ON 6 SHIFTS

- . CRYSTAL RIVER
- . FITZPATRICK
- . FORT CALHOUN
- . H. B. ROBINSON 2
- . MILLSTONE 2 & 3
- . MONTICELLO
- . NINE MILE POINT
- . PRAIRIE ISLAND 1 & 2
- . ST. LUCIE 1
- . TMI-1 (SHUTDOWN)
- . TURKEY POINT 3 & 4

6 SHIFTS

PROS

- . ASSURES COMPLETE COMPLEMENT OF LICENSED STAFF
- . ADDRESSES RETRAINING AND OVERTIME CONCERNS
- . ALLOWS INTERACTION BETWEEN OPERATIONAL STAFF AND TECHNICAL STAFF

CONS

- . INDUSTRY MAY NEED TO ATTRACT MORE CANDIDATES INTO RO/SRO TRAINING PROGRAM

5 SHIFTS

PROS

- . ALL SHIFTS FULLY COVERED WITH A SHIFT
IN TRAINING
- . WITH RELIEF PERSONNEL INTANGIBLES
ADDRESSED

CONS

- . INDIVIDUAL REPLACEMENT PREDOMINANT
- . USE OF TRAINING PERSONNEL TO BACKFILL
OPERATIONS
- . OVERTIME

4 SHIFTS

PROS

- . COVERAGE FOR ALL SHIFTS

CONS

- . IF RELIEF PERSONNEL ARE AVAILABLE
INTANGIBLES ARE COVERED
- . LITTLE OR NO RETRAINING ACTIVITIES
- . OVERTIME
- . LITTLE COHESIVE INTERACTION
BETWEEN OPERATIONAL STAFF AND
TECHNICAL STAFF

PROS/CONS

3 SHIFTS

PROS

- . UTILITY USING MINIMUM NUMBER
OF LICENSED PERSONNEL

CONS

- . INSUFFICIENT LICENSED PERSONNEL
AT FACILITY
- . NO RETRAINING PROGRAM ACTIVITIES
- . OVERTIME
- . 12-HOUR SHIFT RULE RATHER THAN EXCEPTION

FUTURE ACTION

COMMISSION COULD -

- 1) DIRECT A RULEMAKING
- 2) DIRECT A POLICY MAKING
- 3) DIRECT NRR TO ISSUE A LETTER
TO ALL LICENSEES AND APPLICANTS
- 4) CONTINUE PRESENT PRACTISE
 - OVERTIME
 - RETRAINING

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016 Phillips

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DATE: 7/21/82 cc: OPS File

From: SECY OPS Branch

C&R (Natalie)

Attached are copies of a Commission meeting transcript/s/ and related meeting document/s/. They are being forwarded for entry on the Daily Accession List and placement in the Public Document Room. No other distribution is requested or required. Existing DCS identification numbers are listed on the individual documents wherever known.

Meeting Title: Report on Minimum Number of Shifts
Required at Operating Reactors

MEETING DATE: 7/21/82 Open 1
Closed _____
Copies (1 of each Checked)

ITEM DESCRIPTION:	Copies Advanced To PDR:	*	DCS COPIES:		
			Original Document	May be Dup*	Duplicate Copy*
1. <u>transcript</u> <u>21 new graphs attached</u>	<u>1</u>	*	<u>1</u>		
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