

UNITED STATES OF AMERICA
NUCLEAR REGULATORY COMMISSION

**Title: BRIEFING ON STATUS OF NRC OPERATOR
 LICENSING INITIAL EXAMINATION PILOT
 PROCESS - PUBLIC MEETING**

Location: Rockville, Maryland

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Washington, D.C. 20005
(202) 842-0034

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2 NUCLEAR REGULATORY COMMISSION

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4 BRIEFING ON STATUS OF NRC OPERATOR LICENSING
5 INITIAL EXAMINATION PILOT PROCESS

6 ***

7 PUBLIC MEETING

8
9 Nuclear Regulatory Commission
10 Commissioners Conference Room
11 One White Flint North
12 11555 Rockville Pike
13 Rockville, Maryland

14
15 Tuesday, June 18, 1996
16

17 The Commission met in open session, pursuant to
18 notice, at 10:02 a.m., the Honorable SHIRLEY A. JACKSON,
19 Chairman of the Commission, presiding.
20

21 COMMISSIONERS PRESENT:

22 SHIRLEY A. JACKSON, Chairman of the Commission
23 KENNETH C. ROGERS, Member of the Commission
24 GRETA J. DICUS, Member of the Commission
25

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1 STAFF AND PRESENTERS SEATED AT THE COMMISSION TABLE:

2

3 John C. Hoyle, Secretary

4 Karen D. Cyr, General Counsel

5 James Milhoan, NRR

6 Frank Miraglia, NRR

7 Bruce Boger, NRR

8 Stuart Richards, NRR

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P R O C E E D I N G S

[10:02 a.m.]

CHAIRMAN JACKSON: Good morning, everyone. The purpose of this meeting is for the NRC staff to brief the Commission on the results of the operator licensing program.

The Commission previously consented to the staff's proposal to initiate a pilot process to examine the feasibility of revising the operator licensing program to allow facility licensees to draft the written examinations and operating tests that the NRC administers as part of initial operator licensing.

The Commission directed the staff to carefully consider the experience gained from the pilot program before considering full implementation.

The staff provided its recommendation regarding this program to the Commission in SECY 96-123. The Commission now must make a decision on whether to fully implement the new examination process on a voluntary basis and consider the pursuit of rule-making to require all power reactor licensees to implement the new program.

Before the Commission makes its decision, it is important for us to review the results of the pilot program and hear not only the potential gains to be made and achieved by full implementation, but also to weight any potential negative consequences of changing a program of

1 such importance, that we have successfully performed for
2 quite some time.

3 And I would say that in reading the SECY paper,
4 96-123, it leaned very much on the gain side and there was
5 essentially very little in terms of the consequence. So it
6 would be important today that the balance be presented.

7 So the Commission is very interested in the pilot
8 results, especially a comparison, and there was an
9 interesting comparison between historical past fail rates
10 and those experienced under the pilot program.

11 The Commission would also like to understand what
12 controls a plant, because, again, the paper was a bit light
13 on that, to ensure that a challenging test of initial
14 licensed operator applicants continues to take place.

15 Finally, a discussion on the staff's position that
16 a rule change would be necessary to implement the revised
17 program, if it is considered acceptable, is warranted.

18 So we'll look forward to a full discussion of all
19 aspects of the proposed revision to the operator licensing
20 program with you today.

21 Now, I understand that copies of your presentation
22 materials are available at the entrance to the meeting. Do
23 any of my fellow Commissioners have any comments at this
24 point? Mr. Milhoan.

25 MR. MILHOAN: Good morning. I think you have

1 certainly stated the purpose of the meeting and I will not
2 repeat that. With me at the table today is Frank Miraglia,
3 Deputy Director of NRR; Bruce Boger, Director, Division of
4 Reactor Controls and Human Factors; and, Stu Richards, Chief
5 of the Operator Licensing Branch.

6 Bruce will lead off the first part of the
7 presentation. Bruce.

8 MR. BOGER: Good morning. I'd like to spend a few
9 moments with you to review some background information to
10 set the stage for Stu Richards, who will really talk about
11 the pilot exam process. Can I have the slide numbered two,
12 please?

13 [Slide.]

14 MR. BOGER: As a result of our favorable
15 experience with the transfer of examination responsibilities
16 to facility licensees as part of the requalification
17 examination process and the potential for us to save about
18 \$3 to \$4 million in resources, the staff felt that we ought
19 to embark on a path to consider alternate approaches to the
20 exam process. As you indicated, Chairman Jackson, we
21 outline those in SECY 95-75.

22 Our underlying authority to conduct examinations
23 stems from the Atomic Energy Act. It requires us to
24 determine the qualifications of candidates, to prescribe
25 uniform conditions for licensing, and to issue licenses as

1 appropriate. 10 CFR 55 is our guidance and our rules and it
2 establishes the requirements for applications and the
3 contents for examinations. It identifies that a written
4 examination and an operating test be administered, but it
5 does not state who will create the exam, who will write,
6 administer and grade the exams.

7 NUREG 1021 is the NUREG that provides the guidance
8 to the examiners. Specifically, it provides procedures for
9 examiners to use and follow to prepare and conduct exams.
10 Historically, these examiner standards have been used by the
11 NRC and contract examiners. However, facility licensees
12 have had considerable experience with them and are quite
13 familiar with the standards.

14 As you indicated, we did receive an SRM indicating
15 that we could go ahead with the pilot process and we are
16 here today to talk about the final implementation.

17 CHAIRMAN JACKSON: The hoped final.

18 MR. BOGER: Yes, ma'am. When we considered the
19 exam process a little over a year ago, we had several
20 objectives in mind and I thought we might go over those just
21 to see where we stand. We saw this as an opportunity to
22 improve our efficiency and maintain effectiveness if we
23 maintained a high level of NRC involvement in the process
24 and also to get the people that have the most knowledge of
25 the plant design and operations, the facility licensees, to

1 contribute more in the exam process. At the same time, that
2 would allow us to reduce our reliance upon contractors.

3 Our intent was to remain consistent with the act
4 and Part 55 and, in fact, we originally considered that a
5 change to Part 55 would not be necessary because the rule
6 was silent with respect to who administers the exams and
7 also because we determined that it was not a backfit.

8 However, we now believe that rule-making is
9 appropriate because we want it to be a mandatory process
10 across all licensees and also because it's a task that has
11 been historically performed by the government, by the NRC,
12 and that would require rule-making or issuance of orders.
13 We decided to stay away from the issuance of orders because
14 that would lead to individual orders for each plant and we
15 felt that rule-making would be the cleaner and the clearer
16 way of establishing that regulation.

17 We wanted to make sure that the process was not -
18 - changes to the process were not apparent to the candidate.
19 We didn't want the test-taker to suffer any consequences
20 because of the change in the examination process.
21 Accordingly, the exam format, the exam content and the level
22 of difficulty are expected to remain unchanged from the
23 current process.

24 One of our objectives was to implement the process
25 early in 1997. In view of the aspects of rule-making, we

1 will have to delay that somewhat. So it will take a little
2 longer transition for us if we do, in fact, proceed into a
3 full implementation.

4 Stu has the results of the pilot program that you
5 requested.

6 MR. RICHARDS: Slide four, please.

7 [Slide.]

8 MR. RICHARDS: I'm Stu Richards. I'm the Chief of
9 the Operator Licensing Branch. The first slide talks a
10 little about the genesis of the program, the pilot process.
11 After briefing the Commission on the proposed changes to the
12 program in April of 1995, we formed a team of examiners to
13 define the proposed new process. All four regions were
14 represented on the team. The results of the team's efforts
15 were used to issue Generic Letter 95-06 in August of 1995.

16 Generic Letter 95-06 outlined the pilot process to
17 the industry and solicited participants on a strictly
18 voluntary basis. We advertised with the power program. We
19 scheduled a run from October of '95 to March of 1996 and we
20 followed up on the Generic Letter with a public workshop in
21 September of 1995. During the workshop, we explained the
22 process and we fielded questions from the industry.

23 We were fortunate to have 20 sites volunteer to
24 participate. I might add I think we had a lot of help from
25 NEI on that. Between October 1st of 1995 and April 5th of

1 '96, we administered 22 exams; that is, of those 20 sites,
2 there were two sites that had two exams.

3 The exams were administered without contractor
4 assistance. All four regions participated and all the
5 reactor vendors were represented in the sample size.

6 We had 95 reactor operator candidates and 92
7 senior reactor operator candidates tested as a part of the
8 pilot process.

9 CHAIRMAN JACKSON: The slide says 54.

10 MR. RICHARDS: 54, I'm sorry. You're right.

11 [Slide.]

12 MR. RICHARDS: Slide five starts an overview of
13 the process and then weighs out the facilities'
14 responsibilities under the pilot program. In accordance
15 with the pilot program, facility licensees drafted the
16 initial operator licensing written exams and the operating
17 tests, submitted the to the regional offices for review and
18 approval about 30 days before they were scheduled to be
19 given.

20 To maintain the uniformity required by the Atomic
21 Energy Act, the staff expected that the examinations would
22 be drafted in accordance with our examiner standards and the
23 supplemental information provided in Generic Letter 95-06.
24 We did not consider any alternative testing methods.

25 The Generic Letter also contained the

1 supplementary criteria in addition to what was already in
2 the examiner standards. The criteria were added recognizing
3 that this was a change; no longer were we preparing the
4 exams, but now the utilities were. So additional criteria
5 were added to ensure the integrity of the examination
6 process, to maintain the consistency of the examinations,
7 and to limit predictability to the candidates.

8 Examples of the additional criteria that were
9 added; to minimize a potential conflict of interest in
10 writing exams, facility employees who played a substantial
11 direct role in training the license applicants were not
12 permitted to write the licensing examinations or tests.
13 Because the NRC does not regulation examination banks and
14 some utilities maintain question banks, we placed limits on
15 drawing questions out of the examination banks. We allowed
16 up to 50 percent of the questions to be drawn from the
17 utility's question bank. We allowed another 40 percent to
18 be drawn as long as those questions were substantially
19 modified, and required ten percent of the questions to be
20 new.

21 Limits were also placed on the degree to which
22 examination questions could be duplicated from examinations
23 or quizzes that the candidates had seen during their
24 training process or questions being duplicated from the last
25 two NRC exams administered at that facility.

1 Additionally, the licensees were required to state
2 the source of each examination, written examination item,
3 and if it was given at the facility in the past, to state
4 when it was past given, so we could recognize if this was a
5 question that the candidates had been exposed to in the
6 past.

7 CHAIRMAN JACKSON: Let me just ask. How many of
8 these criteria that were in this Generic Letter then were
9 migrated or remained parts of NUREG 1021? Because it seemed
10 from the SECY paper that, in fact, you were proposing
11 relaxations along each of these lines that you said were
12 part of the pilot.

13 MR. RICHARDS: I think it's really a mix. There
14 were some areas where, in discussions with the industry, we
15 feel it was appropriate to relax, not significantly, but
16 there were other areas where we added more restrictions. So
17 I think on whole, the steps we're taking should ensure the
18 integrity of the exam.

19 CHAIRMAN JACKSON: Can you walk us through?

20 MR. RICHARDS: It's largely covered on a later
21 slide, if it would be all right to wait until then.

22 CHAIRMAN JACKSON: Sure.

23 MR. RICHARDS: And if that slide doesn't answer
24 all the questions, we'll add to it at that point, if that's
25 all right.

1 CHAIRMAN JACKSON: Yes.

2 MR. RICHARDS: The last bullet there talks about
3 the utility administering and grading the written
4 examinations. Upon approval by the NRC staff of the written
5 examination, the utility was allowed to administer the exam.
6 You should note that the examination is a 100-point multiple
7 choice test. It's not an essay test. So the answer key is
8 developed before the test is administered.

9 Administering the exam is largely placing it in
10 front of the candidate, ensuring that the appropriate
11 security measures are maintained. There can be questions
12 asked during the exam, but there are guidelines on how to
13 address those questions or whether they should even be
14 fielded at all. So it's largely an administrative function.

15 The licensee, after administering the test and
16 grading the test, again, it's a multiple choice test, they
17 submit the results to the regional offices with any
18 recommended changes in the answer key. Then the regional
19 office would review the results, check the grading, review
20 any changes recommended by the facility, and then make the
21 final decisions on whether those changes should be made and
22 approve the final grading.

23 CHAIRMAN JACKSON: Is the grading machine grading
24 or is it done by individuals?

25 MR. RICHARDS: It varies. I think some people do

1 it machine at sites. Some people use hand. I think it's
2 mostly hand right now.

3 [Slide.]

4 MR. RICHARDS: Slide six, please. This slide is
5 an overview of the NRC's participation in the pilot process.
6 As stated before, the examinations, once drafted by the
7 utilities, were submitted to the regional offices for review
8 and approval. We did not restrict the regional offices on
9 how many changes that they could ask the facility to make.

10 Basically, we told the regional examiners that we
11 wanted this examination to be on par with an examination
12 that we would administer and were adamant that we would not
13 administer any examinations that did not meet that criteria.

14 The examiners were focused to or instructed to
15 focus on the content and construction of the written exam,
16 that being the format and the level of knowledge and
17 difficulty, rather than on the technical accuracy. One of
18 the things we felt we could save some time on here was when
19 we write the exam, frequently the utilities will review it
20 ahead of time and they'll comment that, well, this valve
21 number is not right or we don't use that terminology.

22 We expected that the fact that the facilities were
23 writing the exam, that all the terminology, the technical
24 details would be correct, but we did focus on the level of
25 difficulty and format and the psychometric principles of the

1 examination.

2 We did administer all the operating tests. This
3 is the simulator portion of the test and the plant walk-
4 throughs. This is a change from our intent when we briefed
5 the Commission back in the spring of '95. At that time; we
6 still hadn't worked out the details on what we proposed to
7 do, but 'I think the discussion was more along the lines of
8 there being parallel grading, where the facilities would
9 actually administer the operating tests, be grading their
10 own candidates, and the NRC examiners would be doing
11 parallel grading or some kind of an oversight inspection.

12 When we got our team of examiners together and
13 looked at the pros and cons of that, we felt that, one, we
14 had about the same number of resources that it would take to
15 do one or the other. We felt it would be more independent
16 for us to do that portion of the exam. Additionally, the
17 industry was generally opposed to the concept of doing
18 parallel grading. So we decided that we would go with the
19 NRC examiners performing, in the field, the operating
20 portion of the test.

21 Of course, we graded those tests in accordance
22 with the existing examiner standards. So that portion of
23 the test, once the exam is written by the facility, has not
24 substantially changed.

25 As noted before, we did review the facility

1 grading of the written exams. Management and the regions
2 continue to review the examination results and we were
3 ultimately responsible for making the final licensing
4 decisions. We did administer the appeal process that was
5 preexisting before the pilot process was put into effect.
6 The operators had the opportunity to ask for an informal
7 review if they should fail the exam. The process calls for
8 the candidates to submit a package to the regional office.

9 They have an opportunity to consider the
10 information and if they contend that the failure is still
11 valid, then the package comes to headquarters. The process
12 presently has us forming an appeal panel of three examiners
13 from an uninvolved region or regions. They consider the
14 candidates' contentions and then they provide a
15 recommendation to my branch. We put together a final
16 package and Mr. Boger is the final decision-maker on whether
17 to uphold that failure or overturn it.

18 Slide seven, please.

19 [Slide.]

20 MR. RICHARDS: Overall, we felt that the
21 examinations drafted by facility licensees subject to review
22 and changes were appropriate by the NRC staff or as
23 effective as examinations written by our contractors and
24 administered in the traditional manner.

25 We felt that --

1 CHAIRMAN JACKSON: Let me ask you a question in
2 terms of pass rates. How many total SRO examiners were
3 there during the pilot period on SRO exams?

4 MR. RICHARDS: It's in the table attached to the
5 Commission paper. The total number was 85 written and 85
6 operating tests.

7 CHAIRMAN JACKSON: Is that the number of pilot
8 tests?

9 MR. RICHARDS: Yes.

10 CHAIRMAN JACKSON: I'm asking for the total for
11 '95 for all tests.

12 MR. RICHARDS: For 1995.

13 CHAIRMAN JACKSON: That's right.

14 MR. RICHARDS: In 1995, I believe we gave 386
15 examinations.

16 CHAIRMAN JACKSON: Okay. And what about operating
17 exams?

18 MR. RICHARDS: I don't have the breakdown between
19 written and operating. Typically, that 386, the vast
20 majority of those are going to be people taking both the
21 written and the operating. The difference by a few numbers
22 is in the case where a candidate passes one part of the test
23 and fails the other. Typically, we will wave the part that
24 they passed, and so they only have to retake the part that
25 they failed.

1 So there's a few odds and ends that way that they
2 don't add to the same number.

3 On the effectiveness issue, we noted that some of
4 the written -- well, we felt that the as-written
5 examinations that were administered to the candidates were
6 comparable in quality and level of difficulty to those that
7 we traditionally give. We did note that a number of the
8 examinations that the facilities submitted required
9 substantial involvement by the NRC examiners and re-work in
10 order to get that up, that examination up to the standards,
11 we felt were acceptable.

12 CHAIRMAN JACKSON: I had a question for you anyway
13 on that one. Can you square for me, when you say that they
14 were comparable, within the substantial number required
15 significant work, those don't seem to track.

16 MR. RICHARDS: The examinations that were put in
17 front of a candidate for an exam we felt were comparable.

18 CHAIRMAN JACKSON: But not as written.

19 MR. RICHARDS: Not as written. The examinations
20 that we received from the facilities, there were some that
21 were fairly well written. There were a few that,
22 particularly in the written exam, we felt were actually
23 harder than what we typically would have produced. But
24 there were others that we felt missed the mark.

25 CHAIRMAN JACKSON: Did you actually keep

1 statistics on how many needed to be changed and what were
2 the major kinds of changes?

3 MR. RICHARDS: I can talk to the major kinds of
4 changes. Actually, there were a few that were not very well
5 that stick in mind and there were a few that were very well
6 done generally that stick in mind and then the rest kind of
7 fall in the middle of the pack and they were in need of some
8 work, but not too far off the mark.

9 CHAIRMAN JACKSON: Did you keep those statistics?

10 MR. RICHARDS: I can give you the names of the
11 plants. I can't tell you ten percent at the bottom and two
12 percent at the top. We only had 22 facilities that -- or 22
13 exams with 20 facilities that participated.

14 MR. BOGER: Is your question directed at the types
15 of problems that we saw on the exams and whether --

16 CHAIRMAN JACKSON: It's twofold. It's kind of the
17 -- how widespread or not, what the problems were, where they
18 concentrated at a few plants, and then, yes, then among
19 those, where you had to make -- have the change and work
20 with the licensees, what were the kinds of problems you
21 found.

22 MR. RICHARDS: There were four or five facilities
23 where it required substantial involvement on our part in
24 order to get to the exam, where we felt it was ready to go.
25 The kind of problems that we noticed on the written

1 examination, probably the number one issue was that too many
2 of the questions were at too easy of a level, simple memory
3 level questions. Sometimes the questions were not
4 psychometrically sound. We have instructions on how to
5 construct questions and in a number of cases, the questions
6 weren't constructed the way we felt they were appropriate or
7 that they should be. But number one was that too many of
8 the questions were too simple.

9 On the operating exams, the exams split into the
10 simulator portion of the test and then the walk-through
11 portion. I think generally the simulator examinations were
12 close to the mark. In some cases, we felt they might be a
13 little bit too easy, but generally they weren't too bad.

14 In the walk-through portions, this is where you
15 ask the candidate on a one-on-one basis to perform some kind
16 of a task, a surveillance or a system lineup, we felt that
17 some of those job performance measures, as they're called,
18 were too simple or that once the job performance measure is
19 conducted, there are two questions that are prescribed or
20 asked the candidate, once the evolution is conducted. Those
21 questions are supposed to challenge the candidate's depth of
22 knowledge in the area.

23 A number of times, we felt that those questions
24 were too simple, a simple look-up question where you would
25 go to the tech specs or a procedure and read it, and those

1 are not the type of questions we expected to see.

2 Any more on that?

3 COMMISSIONER ROGERS: Just a general comment that
4 multiple choice questions are a lot harder to write
5 ambiguously than most people recognize. Even today, on SAT
6 exams, which get put through all kinds of reviews, people
7 turn up alternative answers that are not regarded as a
8 correct answer, that are, in fact, correct, they are an
9 acceptable answer.

10 So it's a very tough area to deal with and I was
11 just curious as to how you felt the licensees were dealing
12 with that. I know that our experience has probably kind of
13 honed our ability to write multiple choice questions, but
14 how do you feel licensees dealt with that?

15 MR. RICHARDS: Again, it's a mixed bag, but I
16 think it's an area that the industry as a whole will need to
17 gain experience in. I mentioned before that the
18 psychometric construction of the questions was a problem in
19 a number of cases and that's exactly the challenge of
20 writing a multiple choice question. You need to have, one,
21 a hopefully higher level of knowledge, not simply a memory
22 level question, and, secondly, you need to have distractors
23 that are reasonably close to being correct, but clearly
24 wrong at the same time, and that makes a good multiple
25 choice question very difficult to write.

1 We did have that problem with a number of exams.
2 As we address later, though, we feel that the industry is
3 learning quickly. It is a steep learning curve, but we feel
4 that with some additional experience, that they will be able
5 to write those questions as well as we do.

6 COMMISSIONER ROGERS: Do you mean that they are
7 learning very fast or that there's a tough challenge?

8 CHAIRMAN JACKSON: A tough hill.

9 MR. RICHARDS: Well, it's a tough hill. I think
10 that -- the sense I got was that they are learning quickly.
11 We did have two sites that did two exams and in both cases,
12 they maintained that the second time around was quite a bit
13 easier than the first.

14 There's the challenge of understanding what we
15 expect in the writing of questions and then there's the
16 challenge of just understanding the entire process, which is
17 quite detailed and strictly controlled.

18 So for somebody who thinks that you're going to
19 sit down and write an examination in a few days time, they
20 have the wrong concept.

21 MR. BOGER: We've had over ten years experience in
22 writing the questions and provided instructions to the
23 examiners, training sessions and the like, and I think the
24 utilities got into the mode of reviewing our questions
25 instead of having to create the questions, and there's a

1 difference in that area. But it was positive that we
2 thought people were seeing the light as we went through the
3 program.

4 CHAIRMAN JACKSON: And now we're going to switch
5 it. We'll be the reviewers.

6 MR. BOGER: Right. Yes, ma'am.

7 MR. MIRAGLIA: But the key to that, Madam
8 Chairman, is NRC involvement. At your opening remarks, you
9 talked about controls and Stu indicated some of the controls
10 that we tried to institute above 1021, since we are having
11 the utilities write the exam, and it's the NRC involvement
12 that I think is the key to that control and we'll have to
13 maintain that level of involvement to have confidence in
14 those examinations.

15 MR. RICHARDS: Unless there are further questions,
16 the next item speaks to a point that I believe, Chairman
17 Jackson, you mentioned in your opening remarks, and that's
18 the pass rates. We felt that the pass rates on the exams
19 compare with the pass rates prepared in past NRC
20 examinations.

21 Those pass rates are contained in the Commission
22 paper in the last table attached. Actually, the pass rates
23 from the pilot examinations were a little bit lower than
24 what we've seen in fiscal year '95.

25 Generally, as I've said before, we felt the

1 examinations were as challenging as the ones that we had
2 given traditionally in the past and the pass rates seem to
3 bear that out.

4 CHAIRMAN JACKSON: But that was after your
5 involvement.

6 MR. RICHARDS: Yes, ma'am. We feel that our
7 involvement is very important in getting the proper product
8 in front of the candidate.

9 The staff believes that the new examination
10 process can be implemented with the same level of direct NRC
11 resources that are currently allotted to the operator
12 licensing program. We estimated that we would spend about
13 370 hours, on average, for each pilot examination and when
14 we were done, the average came out to be about 350 hours per
15 examination.

16 There is quite a range from the low to the high,
17 depending upon how well the licensee did in writing the
18 initial product.

19 We did not ask for feedback from the facilities on
20 exactly how many hours it took them to write their products,
21 but the feedback that we got from NEI was that it was taking
22 roughly 400 to 600 staff hours to prepare the examinations
23 by the utilities. This is somewhat higher than we would
24 have expected and it's higher than it would have taken us to
25 write the exams, but, again, we feel there is a steep

1 learning curve and with experience that that number will
2 come down and the industry will become more efficient.

3 In talking with the industry, it appears that they
4 feel that they would get better at it, also.

5 Slide eight.

6 [Slide.]

7 MR. RICHARDS: This slide speaks a little bit to
8 the lessons learned from the pilot process. The industry
9 generally agrees with the changes that the staff proposes to
10 make to the licensing process. In February of this year, as
11 I think was previously mentioned, the staff issued for
12 public comment and for industry comment a draft revision to
13 the examiner standards. The revision incorporated the
14 lessons learned up to that point through the pilot process.

15 The Nuclear Energy Institute submitted comments
16 and recommendations on behalf of the nuclear industry. In
17 addition, two facility licensees provided additional
18 comments which generally mirrored the NEI comments.

19 CHAIRMAN JACKSON: The NEI comments, do you have
20 any way of judging how many -- the universe of licensees who
21 actually -- that actually represented?

22 MR. RICHARDS: I do know that NEI formed a working
23 group on this issue and, in fact, we met with the working
24 group on two occasions. The NEI representative on that
25 group is here today and I believe there were ten or 12

1 utilities represented on that group.

2 So I feel that their comments -- the NEI comments
3 incorporated those received from the working group. We did
4 have a number of utilities, a large number, represented at
5 our workshop in September. We spoke to the issue at the
6 regulatory information conference. The regions have talked
7 probably to all utilities almost on a one-on-one basis and
8 had training managers meetings in the last year. So there's
9 been a lot of opportunity to receive feedback.

10 CHAIRMAN JACKSON: Have you solicited the industry
11 to know that they also support the rule-making to impose
12 this on all licensees?

13 MR. RICHARDS: No, we did not, and the reason for
14 that is that that was a change that came about late in the
15 process. We felt that because we had told the industry that
16 we intended to implement this as an administrative change,
17 to go back in the recent times and to talk to the industry
18 would have been, in effect, sharing something that was pre-
19 decisional at that point, because we hadn't really shared it
20 publicly.

21 So I don't understand or I really can't speak to
22 the industry's viewpoint on rule-making.

23 CHAIRMAN JACKSON: Please go on.

24 MR. RICHARDS: The comments that we received from
25 NEI and the two facilities are summarized, the major ones

1 are summarized on the additional or the later slide which I
2 will cover in a minute.

3 We already addressed the fact that the facility
4 learning curve was fairly steep, but with time, we feel that
5 they will gain experience and become more efficient at
6 producing the exams. I think as they gain experience and
7 become more efficient, that will also reduce the amount of
8 time that we have to spend working with them to produce the
9 exams.

10 I might note that if the change is approved, the
11 staff is also anticipating participating in a national
12 workshop that NEI would arrange later in the year to, again,
13 cover the finer points of how to construct an NRC exam and
14 some of the lessons learned from the pilot process.

15 One of the lessons that we did learn was to
16 increase emphasis on the technical accuracy of the
17 examinations. As I had mentioned before, we had hoped that
18 because the facilities were writing the exams, that the
19 exams would be technically accurate when received.
20 Unfortunately, there were cases where that was not so.

21 We have taken some corrective action in the final
22 examiner standards to address that and we're encouraging the
23 licensees to take more deliberate steps to validate the
24 examinations before they provide it to us. We're also going
25 to ask the regional examiners to validate or check a

1 sampling of the technical accuracy of the questions on the
2 examinations as part of their review process.

3 COMMISSIONER ROGERS: For every exam.

4 MR. RICHARDS: Every exam, yes. One of the
5 additional items that we did learn out of the pilot process
6 that involved technical accuracy has to do with the number
7 of appeals that we got. The appeal rate jumped up
8 substantially from the pilot. We have roughly ten failures
9 from the appeal process out of 21, where the candidate
10 appealed the decision.

11 Based on that appeal rate, we decided to take some
12 additional actions to make sure that we were making the
13 right licensing decisions. We're encouraging the licensees
14 to provide to us the candidate comments after the written
15 examination is complete. Typically, after the examination
16 is over, the facility will provide comments on the written
17 examination, asking that different answers be accepted or
18 questions be deleted because of the experience of having
19 given the exam.

20 It wasn't clear to us that because the licensees
21 were now writing it, that they were as open to accepting
22 comments from the candidates. So for the future, we would
23 ask that the facilities provide us not only the facility
24 endorsed comments on the examination, but they also provide
25 us the comments that they receive from their candidates,

1 even if they don't endorse those comments. So hopefully we
2 would get that feedback early on rather than getting that
3 through the appeal process.

4 CHAIRMAN JACKSON: What happened with those
5 appeals?

6 MR. RICHARDS: We have two of the appeals that are
7 still in the process of being reviewed. But of the ten
8 failures to date, two of them were overturned and resulted
9 in licenses being issued. I might add that one of the two
10 that were overturned were overturned at the region and
11 basically it was the result of an examiner making an error
12 in the way he administered part of the test and it was
13 really not related to the pilot process.

14 There was a third appeal where the candidate had
15 failed both the written exam and the operating exam, and we
16 at headquarters had overturned one part of the examination,
17 that being the operating exam, but we sustained the failure
18 on the written examination. We count that as a half. So of
19 the ten appeals to date, two and a half of one have been
20 overturned.

21 Unless there are other questions on lessons
22 learned. The next slide, slide nine, please, speaks to our
23 coordination with the industry.

24 [Slide.]

25 MR. RICHARDS: I mentioned before that we have

1 communicated regularly with the industry generally through
2 NEI. I might note, again, that last September, we did have
3 a workshop with the industry here in Rockville before we
4 kicked off the pilot process, where we described the process
5 and answered their questions.

6 At that point, in January, midway through the
7 pilot program, we attended a public meeting with NEI and
8 their working group to get feedback from the industry on the
9 process at that point and also to share our views.

10 After completing the pilot program, we conducted
11 another public meeting with NEI and other industry
12 representatives to review their comments and
13 recommendations. At this point, the draft examiner
14 standards had been issued for public comment, so they had
15 the benefit of that to provide us their feedback on.
16 Because the pilot examinations had been complete, we had
17 full benefit of our feedback to share with them.

18 As noted earlier, we do plan to have a workshop
19 later in the year if we go forward with this process.

20 There was a formal comment period. We issued a
21 full public comment in February. We put the entire examiner
22 standards on the worldwide web. I already mentioned that we
23 did three responses, one from NEI and two from the facility
24 licensees.

25 COMMISSIONER ROGERS: But as you pointed out, that

1 was not on the basis of it being a rule. Is that right?

2 MR. RICHARDS: That is correct. At the time it
3 went out, the examiner standards were a format that they
4 would be implemented on a mandatory basis. And in the
5 Federal Register, as a matter of fact, we specifically asked
6 for feedback on the burden on the industry and the three
7 comments we got back spoke to specific details in the
8 examiner standards, but we didn't get any comments back
9 about the burden.

10 The last bullet on the slide talks about some
11 specific industry concerns and hopefully this will address
12 some of the questions you had earlier, Chairman Jackson.

13 CHAIRMAN JACKSON: When you go through it, could
14 you explain what was in NUREG 1021 relative to this, when we
15 were giving the exams, and as you talk about the concerns,
16 what -- proposed changes in the NUREG that addresses that
17 concern and what vulnerabilities you see in making that
18 change.

19 MR. RICHARDS: All right. The first issue is
20 probably the largest issue we've faced from day one, and
21 clearly this is the biggest issue of the industry. It
22 involves who can participate in writing the examination.
23 Originally, the Generic Letter that kicked off the pilot
24 program said that if you had substantial involvement in
25 instruction of the candidates, that you could not be

1 involved in writing the examinations.

2 Now, in the Generic Letter, there was an out. It
3 said if this is too hard on you, come and talk to us and
4 we'll accept, on a case-by-case basis, other arrangements,
5 recognizing that we couldn't foresee every situation. But
6 generally speaking, we limited the people who authored the
7 exams to people who were not substantially involved. At the
8 time, we did not define what substantially involved meant.

9 We had a lot of dialogue with the industry on this
10 and for the larger utilities, this isn't very much of a
11 concern. They have enough of a trained staff that they have
12 people to draw on without too much difficulty. But
13 generally speaking, for the smaller utilities, they may only
14 have four or five people who are involved in licensing
15 initial classes and they don't have a lot of experienced
16 people elsewhere in the training staff to draw on, they felt
17 that this was a burden.

18 The industry argues, and I think with some merit,
19 that because of all the other restrictions we've added to
20 the way the examination is constructed, where you can draw
21 up the questions from the fact that there is a sample plan
22 that has to be developed, that basically locks you into
23 examining in various areas, that it's very difficult to bias
24 the test in a significant way.

25 There is some merit, I believe, to that argument.

1 But nonetheless, on our side, the concern was we didn't want
2 people who were teaching candidates, even so consciously,
3 that in writing the exam, writing the exam, recognizing what
4 they had presented to the candidates, because the test
5 should be an independent judgment of those candidates'
6 ability to be licensed.

7 What we proposed to do, because of the numerous
8 restrictions we have placed on the construction of the
9 examination, is to allow the facility to have one individual
10 who was involved in a substantial way participate in
11 constructing the exam. That individual would not be allowed
12 to write questions in an area in which they instructed and
13 their total involvement in the class would be limited to 15
14 percent of the scheduled construction time in the classroom
15 and an additional five percent in the simulator, for a total
16 involvement of 20 percent.

17 Additionally, I'd have to go back and check on the
18 numbers, but I believe that if somebody has had less
19 involvement than 40 hours in instructing, we would allow a
20 limited number of those people to participate, recognizing
21 that in a lot of these classes, you might have an engineer
22 come over and teach a class for a day or somebody come out
23 of the plant and spend the day teaching the class. We don't
24 want to completely eliminate all of those people from
25 participation. So we said if you have less than, say, 40

1 hours of involvement, I believe the number is, those people
2 can participate in an unlimited number, but, again, they
3 can't write questions in the areas in which they instructed.

4 That's our proposal to address that area.

5 CHAIRMAN JACKSON: What are the vulnerabilities?

6 MR. RICHARDS: Well, again, the vulnerabilities
7 are for the one individual that you have instruct,
8 substantially involved, the person who may have up to 20
9 percent involvement, somehow introducing a bias into the
10 exam. But I believe that we have addressed that by
11 precluding them from writing questions in the areas that
12 they participate in the instruction by requiring that a
13 sample plan be drawn up. And I didn't mention this before,
14 but we're going to require that the sample plan be defined
15 by somebody who has had no involvement in the instruction of
16 the class.

17 So that the base document that the examination
18 construction is drawn from is the sample plan; that is,
19 somebody who has not participated. Then the NRC review;
20 typically, these pilot examinations demonstrate that we get
21 these examinations and we're going to recognize questions
22 that we felt are overly simplistic. The examiners, I think,
23 are in a good position with their experience to recognize an
24 examination that, on its whole, is felt to be too easy.

25 So we put a lot of faith in the examiners in

1 ensuring that the proper level of difficulty is included in
2 that examination.

3 The second item addresses a burden that the
4 industry felt was too excessive with regard to defining the
5 history of examination questions. We put limits on where
6 they can draw these questions from, but I think as the
7 industry gains experience, they'll probably get good at
8 sharing their examination banks to increase efficiency,
9 working together on this. We see an opportunity for a lot
10 of gains in efficiency that way.

11 But at the same time, you want to make sure that
12 the examination is not predictable to the candidate. So we
13 want to know where the questions come from. This issue
14 basically had to do with the industry feeling that we were
15 asking for an extensive amount of information on the history
16 of each question. We really hadn't intended that. We just
17 wanted to know if it came out of a bank, whether -- has it
18 been seen by the class or not, if it was modified from the
19 bank, what the original question looked like, and if it came
20 from outside the utility, where did it come from.

21 For instance, a utility may go to a facility
22 elsewhere that has a similar power plant and take the NRC
23 exam that was administered six months before and convert it
24 into their product. Well, if they're going to do that, we
25 want to know that because there's a chance that the

1 candidates may have had access to that old exam at another
2 site. So for that reasons, we do want to know the history
3 of where all these questions come from, but we think we've
4 clarified our requirements in that area to demonstrate that
5 it's not that burdensome on the industry.

6 CHAIRMAN JACKSON: Are you then asking for the
7 same thing?

8 MR. RICHARDS: Yes. We think it's the same
9 material we've always asked for. It's the material we need
10 to ensure that the questions aren't predictable to the
11 candidates.

12 CHAIRMAN JACKSON: Whereas in the first area, the
13 revision you've made of NUREG 1021 is actually a relaxation
14 in terms of the restrictions on exam authors.

15 MR. RICHARDS: It's a relaxation specifically with
16 regard to who can participate, but, again, I think we've
17 inserted some additional safeguards to address that; for
18 example, the sampling plan being written by somebody who was
19 not involved in the instruction of the class at all. That
20 was something we had not spelled out previously.

21 CHAIRMAN JACKSON: I'm sorry. Go ahead.

22 COMMISSIONER ROGERS: Just one observation. It's
23 a little off to the side, but I think we ought to keep it in
24 mind. That is the -- we're concerned here about the
25 validity of the examinations and that there not be any

1 opportunity to pass an exam without knowing the material
2 that's appropriate. I think it's well to keep in mind some
3 thought with respect to the relationship between instruction
4 and examination.

5 One of the negatives of having people make out the
6 exams that teach is that they will be teaching to the exams.
7 And it isn't so much that they're prepping the students for
8 the exam, that's a problem, but the problem is that other
9 things are left out that might be important that aren't
10 necessarily on the exam.

11 And so the best quality instruction covers a lot
12 more material than will ever be tested on any one exam and
13 one of the big difficulties in having people who teach also
14 make the exams is if they are participating continuously in
15 this process, they may unconsciously be teaching to the
16 material which they know is on the exam, whether they quite
17 recognize that or not. That's why it's very good to have
18 someone else do the teaching from making out the exam.

19 MR. RICHARDS: I might add that once somebody
20 becomes involved in developing the examination, one of the
21 requirements is that you are no longer involved in the
22 instruction of the candidates. So typically a utility may
23 start this process as much as 90 days ahead of time and at
24 that point, that person is removed from any involvement with
25 that class.

1 The next bullet talks to the duplication of items
2 from an audit exam. An audit exam is typically an
3 examination that the facility either writes themselves
4 presently or has a contractor write it for them that they
5 give their candidates towards the end of the instruction and
6 just prior to the examination. It's a screening tool
7 typically or a tool that demonstrates where they have weak
8 areas. The examination is intended typically to look just
9 like an NRC exam.

10 One of our original criteria was that there would
11 be no questions repeated from the audit exam on the
12 examination written by the facility. The industry's comment
13 on that was, well, we, the NRC, don't apply that same
14 standard to our exams right now. If we have a few questions
15 that happen to show up on both examinations, it's the luck
16 of the draw, we're not going to change our test. Their
17 comment was that if the people developing the audit
18 examination and the people developing the facility-developed
19 NRC exam are independent and a few questions happen to be
20 common to both written exams, somewhere through the rules we
21 apply to ourselves, why should they have to come up with
22 more questions at the last minute.

23 We felt that that was an agreeable comment, up to
24 a limit, and our proposal is to say that's acceptable up to
25 five percent. That's not uncommon. You might say, well,

1 that's the chances of a question showing up on both exams,
2 because one of the sources for building questions is a
3 utility's examination bank. If you happen to go to the same
4 question area, it can happen.

5 The next comment had to do with facilities who
6 have closed examination banks. Some facilities do not allow
7 candidates the opportunity to study from the examination
8 banks that they maintain. The industry felt that in those
9 cases, the ability to draw questions out of those banks
10 ought to be treated differently.

11 We agree that that's a valid argument, but we feel
12 that that whole issue is a complex issue. We would have to
13 get into security of those closed banks and how you ensure
14 that the candidates don't have access, and our decision was
15 originally and is now to maintain or to consider all the
16 banks as being open, recognizing that some facilities do
17 control their banks.

18 We had two commenters who recommended that the
19 facilities be able to use site-specific task lists when
20 defining the contents of the exams. We haven't discussed it
21 in any detail here today, but there is a fairly rigid
22 procedure for building an examination. Part of that
23 procedure is to make sure that you sample across many
24 different areas of knowledge.

25 We have a document called a Knowledge and

1 Abilities Catalog and it lays out a large number of items
2 that reactor operators, senior reactor operators are
3 required to know in order to do their job. The test items
4 are based on drawing these so-called K&As out of these
5 catalogs. The licensees would like to be able to substitute
6 their own site-specific task lists for those knowledge and
7 ability catalog items, but our conclusion is that on a
8 wholesale basis, that would be inappropriate, but that on a
9 task-by-task basis, that may be appropriate.

10 So if there is some specific area of an
11 examination that a utility wants to examine and they would
12 like to substitute that, in a few cases, before it would be
13 required by the typical sampling plan, we would find that
14 acceptable, but that would be discussed in the review with
15 the NRC examiner.

16 The last comment we received from one of the
17 utilities was that the process did not appear to allow for
18 utilities who did not want to draft their own examinations
19 to ask the NRC to draft those exams for them.

20 Originally, of course, our intent was to implement
21 this on a mandatory basis. Of course, here today, we're
22 proposing to implement it on a voluntary basis for those
23 utilities who do not want to draft their exams. They would
24 be able to ask us to do it and we would do that consistent
25 with resources. But over the long term, we don't feel that

1 that would be a predictable way to go without knowing how
2 many utilities would want us to draft exams and how many
3 would want to do their own.

4 It would make the scheduling of resources and the
5 planning of resources very difficult. So we feel it's
6 important in the long term to either have them do it on a
7 mandatory basis or not.

8 CHAIRMAN JACKSON: And you feel it's not a
9 backfit.

10 MR. RICHARDS: No, I don't feel that it's a
11 backfit. We talked with the Office of the General Counsel
12 extensively on this issue. The backfit rule, 50.109, the
13 entry conditions discuss what defines a backfit for entering
14 50.109. Basically, it says if you're going to change the
15 facility in a physical way, if you're going to require a
16 change in the procedures to operate the facility, or require
17 a change in the staffing, then you must require or consider
18 the change to be a backfit.

19 What we propose to do, if it does not change the
20 physical plant and it does not involve an operating
21 procedure for operating the facility, our examiner standards
22 are written strictly to produce an examination that is
23 really not related to the operation of the facility and it
24 does not impact the facility organization, in that all
25 facilities already have training organizations and they have

1 staff who already evaluate their candidates prior to taking
2 them up for an NRC exam.

3 COMMISSIONER ROGERS: But it might require them to
4 add more people in that organization.

5 MR. RICHARDS: Well, there's the legal question of
6 whether you meet the backfit rule, 50.109, and in consulting
7 with OGC, the answer is it does not constitute a backfit
8 under 50.109.

9 The issue of whether it increases the burden on
10 the utility is a little bit different. I agree that it
11 shifts the burden of providing the examinations to the
12 utility. Our view is that the utility is already paying for
13 that burden. We go with the contractors generally now and
14 have contractors write these examinations, and that bill has
15 passed on directly to the facility who asks for the exam.

16 This process would allow the facility to go to the
17 same contractors or other contractors and, I think likely
18 for the same amount of money or less, have an exam produced
19 for them. If they feel they have the resources internally
20 to produce the test in a more efficient way, they have that
21 option. They can work cooperative agreements with other
22 utilities to share resources.

23 Additionally, it provides them the opportunity to
24 have more input into the technical content of the exam on
25 the front end.

1 So we see this as resource-neutral for the
2 utilities and perhaps if they're efficient at it or good at
3 the way they go about it, resulting in a resource reduction
4 for them.

5 CHAIRMAN JACKSON: Have you actually got that
6 input from NEI or from the industry?

7 MR. MIRAGLIA: No, we haven't to that degree,
8 Madam Chairman. Commissioner Rogers, you raised the issue.
9 It could be perceived and may be initially and maybe in the
10 long term an imposed imposition of burden. That's why the
11 staff has come to the conclusion that if we do this in a
12 mandatory way, it should either by rule or order, because it
13 is, and that would put it through the process of proposed
14 rule, comment, and fully expose and indicate what those
15 concerns may or may not be.

16 So it is that potential and perceived imposition
17 of burden that we're addressing through the proposal of
18 changing the rule in order to make it mandatory. Until such
19 time, we would continue it in a voluntary way.

20 MR. RICHARDS: The informal feedback we have
21 received from some of the utilities that participated in the
22 pilot process, I think some of the facilities' views on the
23 process depended upon how well they did and the effort they
24 put into it.

25 But some facilities came out very positive. They

1 felt that it wasn't an overburdensome thing to write the
2 exam. Of course, those were the facilities that generally
3 did a good job. Some of the facilities, it turned out to be
4 somewhat of a struggle. Having gotten through the process,
5 they seemed willing to go along because they recognized that
6 there was that learning curve, but once it was overcome,
7 they saw the opportunity to be more efficient rather than
8 paying for the contractors through us.

9 There were a few facilities, however, that felt
10 that the burden was significant and it may have impacted the
11 results of the examination and probably felt that they
12 shouldn't have volunteered. But I think as a whole, in
13 talking with the NEI and the industry working group, through
14 the meetings we've had with them, that the feeling is
15 generally positive, that they think they can write these
16 exams, that they're in the training business, they are much
17 more familiar with the plant and the rest of the materials.
18 They should be in a better position to write them more
19 efficiently, and I think, generally, they want to take it
20 on.

21 CHAIRMAN JACKSON: So OGC agrees that this was not
22 a backfit, even in the procedural -- with respect to
23 operating procedures. That's what you're saying.

24 MR. RICHARDS: Yes, ma'am. The Commission paper
25 has about three-quarters of a page specifically addressing

1 those aspects. That was written with a heavy input from
2 OGC, and, of course, they concurred on the Commission paper.

3 CHAIRMAN JACKSON: Why don't you finish.

4 MR. RICHARDS: The last slide, please, number ten.

5 [Slide.]

6 MR. RICHARDS: The planning milestones for the
7 future. I might note that in EDO's memorandum of April 12
8 of this year, sent to the Commission, indicated that we
9 intended to continue to use the pilot process through the
10 end of this calendar year, and we have solicited volunteers
11 to continue that process. So we are doing that.

12 With the Commission approval, our intent is to
13 issue Revision 8 to the examiner standards. That would
14 provide all the changes that we have considered necessary to
15 date. We would issue that and implement that revision six
16 months after the date at which it's published. It's been
17 our tradition to give the industry six months to acclimate
18 themselves to that revision and to prepare to carry out the
19 examinations in accordance with Revision 8.

20 Of course, it's a voluntary program at this point.
21 So that would be for those utilities who wanted to volunteer
22 under Revision 8 to write their own exams. We would also go
23 out with a supplemental Generic Letter 95-06, where we would
24 describe the lessons learned from the pilot examination
25 process and formally solicit volunteers to continue to write

1 their exams.

2 We are also asking the Commission to approve the
3 staff pursuing with rule-making to make writing of
4 examinations by the power facilities mandatory in the
5 future.

6 That concludes my prepared remarks.

7 MR. BOGER: In that regard, we would like the
8 Commission to consider this SECY paper as our submittal of a
9 formal rule-making plan. That was not explicit in the paper
10 itself.

11 CHAIRMAN JACKSON: Has there been unanimous
12 support from headquarters and the regions regarding this
13 initiative?

14 MR. RICHARDS: It depends on who you want to count
15 as unanimous. I don't think that if we had asked every
16 examiner in the nation if they felt this was the way to go,
17 they would all say yes.

18 On the other hand, we did have feedback --

19 CHAIRMAN JACKSON: What is the breakdown? Can you
20 give us a rough idea?

21 MR. RICHARDS: I think that given the
22 circumstances, we feel that -- we entered into this process
23 change because of the resource issue and I think basically
24 with the resource issue being considered, the examiners
25 recognized the changes. They largely, I would say 90

1 percent of the people that participated in the pilot
2 programs would say that the examinations that were
3 administered after our involvement were as effective as the
4 ones we administered.

5 There are feedback forms that were filled out by
6 examiners that say that the process was more effective or
7 the examination was harder than what we would have typically
8 written. But I think the large majority of the feedback was
9 that the new process is as effective.

10 I don't think anyone was dissatisfied with the old
11 way of writing exams. We thought we were doing a good job
12 and we were effective and sometimes change is hard. But I
13 think from the feedback forms, probably 80 to 90 percent of
14 the people felt that this new process was as effective, as
15 efficient or more efficient, and, in some cases, more
16 demanding.

17 CHAIRMAN JACKSON: Your paper states that the
18 revised process could be implemented at all power reactor
19 facilities with existing NRC resources allocated to the
20 operator licensing program and then it further states that
21 an initial resource investment would have to be made to
22 train additional NRC employees as examiners.

23 Have you quantified what that additional
24 investment would be?

25 MR. RICHARDS: Right now, the budget plan I think

1 is still in the draft stage and has not been sent to the
2 Commission, is looking at, for fiscal year '97, an
3 additional seven FTE that would be provided in the way of
4 inspection support out of headquarters to allow additional
5 inspectors in the region to be qualified as examiners.

6 Our intent here is to increase the examiner pool
7 in the regions to provide flexibility for the scheduling of
8 exams. It does not require more resources to actually carry
9 out the program. But because we've always depended upon our
10 contractors to be our surge tank of resources for the highs
11 and lows and exam demands, we recognize that that surge tank
12 is no longer going to be available. So in order to have
13 that surge tank of examiners, we have to have those in the
14 regions.

15 In order to have those people in the regions, we
16 have to train up more people. We have to be in a better
17 position to have examiners move on to new jobs or leave the
18 agency. So we have to staff up more people and there are
19 seven FTE, I think, in the draft budget in '97 and then an
20 additional five beyond that in '98.

21 But we see that as a short-term investment until
22 we staff up to a higher level and then we anticipate that
23 additional support dropping off and returning to a
24 maintenance level of examiners.

25 MR. MIRAGLIA: It's basically a transition from

1 contractors, Madam Chairman, to in-house capabilities and
2 talent. As Stu has indicated, the contractors were sort of
3 the surge tank.

4 Operator examiners in the region have been dual-
5 qualified in order to be an examiner. There is a
6 qualification program. So it takes time to build up those
7 kinds of capabilities within the staff and the program. So
8 what we have is a transition to get that in-house capability
9 and reliance on contractors decreased in the transitional
10 kind of way, and that's what that --

11 CHAIRMAN JACKSON: So you're going to try to be
12 revenue-neutral. You talk about savings of three to four
13 million in contractor funds.

14 MR. MIRAGLIA: In terms of the contractors, yes.
15 The contractor numbers will go down and the staff
16 capabilities in terms of number of examiners and inspectors
17 qualified to give operating exams would go up.

18 MR. MILHOAN: That will be addressed as part of
19 the budget process, assuming what the Commission would
20 reflect -- the Commission decision in the budget review
21 process, whatever that decision would be.

22 CHAIRMAN JACKSON: Would sufficient resources then
23 be available in-house on a moment's notice if we had to
24 assess a licensee's program if we thought it was perhaps
25 deficient?

1 MR. MIRAGLIA: I think the answer to that
2 questions is yes, because consistent with what we do at re-
3 qual, we have an inspection module, and I think our
4 expectations are, as Stu explained, the controls in the NRC
5 involvement in the front end. We also recognized that while
6 we're in this voluntary mode, we're going to have to try to
7 respond to utilities' requests for exams and the question of
8 -- depending upon availability of resources, is how
9 responsive could they be.

10 They need to give enough notice such that we can
11 plan and utilize resources perhaps from headquarters or
12 other regions to support those kinds of things. So it's a
13 planning and resource application issue in that kind of
14 context.

15 CHAIRMAN JACKSON: Do you imagine any role or does
16 INPO accreditation of training programs play any role in any
17 of this?

18 MR. MIRAGLIA: I would say that we wouldn't expect
19 any changes to that program, because our goal and objective
20 is to make this exam as effective as if we were doing it.
21 That's not to say that given the change, they might look at
22 things differently, but we have not had any indication of
23 that at this point in time, nor would it necessarily be
24 expected.

25 MR. BOGER: INPO has, likewise, created a task

1 force, if you will, to take a look at the issue. So they
2 might be able to respond to it. To date, they haven't come
3 forth in any way to say that they would like to volunteer to
4 sponsor a program or anything like that.

5 CHAIRMAN JACKSON: We were talking a long time
6 about instructors being involved in making up exams and
7 there are two sides to it. One may be instructors teaching
8 to an exam and that's a clear vulnerability. Or the
9 converse, that if there's too much involvement, that the
10 exams could too much reflect what an instructor would teach.

11 But, again, I ask you, the paper was very thin on
12 pros and cons. Are there any vulnerabilities that the
13 Commission needs to know about today?

14 MR. MIRAGLIA: I think that Stu tried to address
15 those vulnerabilities in terms of having instructors that
16 were involved in the process. We probably -- it could be
17 perceived as a relaxation from a going-in position, as
18 exposed -- a 95-08 Generic Letter, but there was
19 countervailing provisions to try to limit those kinds of
20 vulnerabilities. And I think the key is the NRC involvement
21 in the review of the process.

22 MR. BOGER: And certainly each candidate is
23 receiving an operating test from an NRC examiner. So that
24 way, we will have --

25 CHAIRMAN JACKSON: Repeat that again.

1 MR. BOGER: Each candidate will receive an
2 operating test from an NRC examiner. So there will be one-
3 on-one contact with each candidate and an NRC examiner, both
4 in the simulator setting and the plant walk-through.

5 MR. MIRAGLIA: That might be worth emphasizing and
6 maybe it was inferred and maybe not said explicitly. As Stu
7 mentioned, when we first conceived of the program, the
8 operating test would also be administered with kind of a
9 parallel grading line examiner. But the way the program was
10 implemented, it's just a written piece, with the NRC
11 involvement at the front end that's administered. Then they
12 prepare the operating exam, but we administer everything
13 else and do the walk-down. So there is independent eyeball-
14 to-eyeball contact by an NRC examiner with each candidate,
15 as well. So that's a difference.

16 COMMISSIONER ROGERS: I think this has been a very
17 interesting presentation and I feel quite comfortable with
18 the fact that this will lead to equally demanding tests of
19 operators, and I don't really see it as offering too much in
20 the way of -- or anything that I can see in the way of a
21 diminution of safety.

22 Nevertheless, there is a public perception
23 question that I think has to be addressed here and I think
24 we have to think very hard and take whatever steps we can to
25 try to make clear to anyone who is concerned and might be

1 concerned about a diminution in safety as a result of this
2 that we really have gotten on top of it and do not believe
3 that there is any diminution in safety, if that is, in fact,
4 the case.

5 So I think some real thought has to be given to
6 how to present this to the public, because I can see it as a
7 sensitive issue.

8 MR. MILHOAN: I understand.

9 CHAIRMAN JACKSON: Commissioner Dicus.

10 COMMISSIONER DICUS: No questions.

11 CHAIRMAN JACKSON: I'd like to thank you for your
12 briefing of the Commission. You've presented a lot of
13 information that indicates that the staff is concerned with
14 changes to the operating licensing program and has carefully
15 measured the pilot program to assess the impact.

16 All the changes sound positive. I just will say,
17 and this is a personal comment, I, frankly, did find the
18 SECY paper thin with respect to, in a sense, providing that
19 comfort to the public in the sense of truly laying out not
20 only the pros and the pros for the industry, but what the
21 vulnerabilities are and laying out how those vulnerabilities
22 are specifically addressed in the proposed changes or what
23 remains in the NUREG 1021.

24 I think that that would have been helpful to the
25 Commission not only in terms of the evidentiary record on

1 which to ask the Commission to make a decision, but also
2 addresses the public perception piece. So I think that
3 there are questions that have been raised or that kind of a
4 balance that I think, as part of a submittal for the record,
5 that you need to make, because the Commission wants to
6 ensure that all positive and negative aspects of the program
7 have been considered and that they have been fully
8 understood before you take steps to permanently change the
9 operator licensing program and that the appropriate controls
10 have been put into place relative to the changes in the
11 NUREG.

12 It's clear that you're aware of the sensitive
13 nature and the Commission is particularly aware of the
14 sensitive nature of changing a process, as important as the
15 initial licensing. I know we do -- we have changed already
16 the requalifications and we're talking about the control on
17 operators. So, again, it's important that the Commission
18 fully understand the expected benefits and be able to weigh
19 them against any vulnerabilities of a change like this and
20 understanding the extent of the industry sign-off in this
21 regard.

22 I think the Commission, even in spite of your
23 comment, Mr. Boger, would benefit from a more complete
24 discussion of whether a rule change is appropriate and
25 looking again at the question of the backfit. And since

1 you're talking about a proposed rule-making, I think you owe
2 it to the Commission to present something that specifically
3 addresses that.

4 Unless my fellow Commissioners have any further
5 comments, we're adjourned.

6 [Whereupon, at 11:17 a.m., the briefing was
7 adjourned.]

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CERTIFICATE

This is to certify that the attached description of a meeting of the U.S. Nuclear Regulatory Commission entitled:

TITLE OF MEETING: BRIEFING ON STATUS OF NRC OPERATOR
LICENSING INITIAL EXAMINATION PILOT
PROCESS - PUBLIC MEETING

PLACE OF MEETING: Rockville, Maryland

DATE OF MEETING: Tuesday, June 18, 1996

was held as herein appears, is a true and accurate record of the meeting, and that this is the original transcript thereof taken stenographically by me, thereafter reduced to typewriting by me or under the direction of the court reporting company

Transcriber: Natalie Kenner

Reporter: Jon Hundley



OPERATOR LICENSING PROGRAM CHANGES

**Frank J. Miraglia, Deputy Director
Office of Nuclear Reactor Regulation**

**Bruce A. Boger, Director
Division of Reactor Controls and Human Factors**

**Stuart A. Richards, Chief
Operator Licensing Branch**

June 18, 1996

BACKGROUND

- **SECY 95-75**
- **Atomic Energy Act of 1954**
- **10 CFR 55, “Operators’ Licenses”**
- **NUREG-1021, “Examiner Standards”**
- **SRM Dated April 18, 1995**

OBJECTIVES

- **Improve Efficiency and Maintain Effectiveness**
 - **Eliminate Reliance on NRC Contractors**
 - **Increase Involvement by Facility Licensees**
- **Remain Consistent with the Act and Part 55**
- **Changes Should be Transparent to Applicants**
- **Full Implementation Early in Fiscal Year 1997**

PILOT EXAMINATION PROGRAM

- **Generic Letter 95-06**
 - **Outlined Process**
 - **Solicited Volunteers**
- **22 Examinations Conducted**
- **All Regions and Vendors Represented**
- **54 ROs and 92 SROs Tested**

OVERVIEW OF PILOT PROCESS

- FACILITY LICENSEES -

- **Prepared Examinations Per NUREG-1021 and the Generic Letter**
- **Generic Letter Criteria**
 - **Ensure Integrity of the Examinations**
 - **Maintain Consistency**
 - **Limit Predictability**
- **Administered and Graded Written Examinations**

OVERVIEW OF PILOT PROCESS

- NRC -

- **Reviewed and Approved Examinations**
- **Administered Operating Tests**
- **Reviewed Facility Grading of Written Examinations**
- **Made Licensing Decisions and Issued Licenses**
- **Administered Appeal Process**

PILOT EXAMINATION DISCUSSION

- **Effectiveness**
 - Examination Quality
 - Pass-Rates
- **Efficiency**
 - NRC Resource Utilization
 - Facility Resource Estimates
- **Efficiency Expected to Improve**

PILOT PROGRAM LESSONS LEARNED

- **Staff and Industry Generally Support Change**
- **Facility Learning Curve Steeper Than Expected**
- **Increase Emphasis on Technical Accuracy**

INDUSTRY COORDINATION

- **Meetings and Workshop**
- **Formal Comment Period**
- **Industry Concerns**
 - **Restrictions on Examination Authors**
 - **Test Item Histories**
 - **Duplication from Audit Examinations**
 - **Examination Banks**
 - **Site-Specific Task Lists**
 - **NRC-Prepared Examinations**

PLANNING MILESTONES

- **Continue the Revised Process**
- **Upon Commission Approval -**
 - **Issue Revision 8 of NUREG-1021**
 - **Issue Generic Letter Supplement**
- **Pursue Mandatory Implementation Via Rulemaking**