

UNITED STATES OF AMERICA NUCLEAR REGULATORY COMMISSION

Title: BRIEFING ON STATUS OF TECHNICAL SPECIFICATIONS
IMPROVEMENT PROGRAM

Location: ROCKVILLE, MARYLAND

Date: JUNE 2, 1989

Pages: 34 PAGES

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UNITED STATES OF AMERICA
NUCLEAR REGULATORY COMMISSION

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COMMISSION BRIEFING ON THE
TECHNICAL SPECIFICATIONS IMPROVEMENT PROGRAM

- - - -

PUBLIC MEETING

Nuclear Regulatory Commission
One White Flint North
Rockville, Maryland

Friday, June 2, 1989

The Commission met in open session, pursuant to notice, at 9:30 a.m., Lando W. Zech, Jr., Chairman, presiding.

COMMISSIONERS PRESENT:

LANDO W. ZECH, JR., Chairman of the Commission
THOMAS M. ROBERTS, Commissioner
KENNETH C. ROGERS, Commissioner
KENNETH M. CARR, Commissioner
JAMES R. CURTISS, Commissioner

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STAFF AND PRESENTERS SEATED AT THE COMMISSION TABLE:

SAMUEL J. CHILK, Secretary
WILLIAM C. PARLER, General Counsel
CHARLES E. ROSS
THOMAS MURLEY
JAMES TAYLOR
MARK REINHART
DAVID C. FISCHER

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

9:50 a.m.

CHAIRMAN ZECH: Good morning, ladies and gentlemen.

We apologize for the delay. In fact, our utilities around here may be telling us something, I'm not sure.

This morning the Commission will be briefed by representatives of the NRC Office of Nuclear Reactor Regulation concerning the status of the Technical Specifications Improvement Program. The Commission was last briefed on this subject on January 6, 1989 and we've recently received an excellent status report on this subject dated May the 30th, 1989.

After the meeting in January, the Commission requested the staff to provide this additional briefing specifically to address implementation and results of the Technical Specification Improvement Program, including the status of the proposed final policy statement on Technical Specification Improvements and the adequacy of the criteria developed by the staff and published in the interim policy statement on Technical Specification Improvements.

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1 This meeting is an information meeting
2 today. I understand that copies of the slides are
3 available at the entrance to the room.

4 Do any of my fellow Commissioners have any
5 comments to make before we begin? If not, Mr. Taylor,
6 you may proceed.

7 MR. TAYLOR: Good morning, sir.

8 The staff, in briefing you on this, would
9 emphasize that the process and what is going on, and
10 the overall goal, is to improve operational safety
11 which, of course, is one of our major goals on your
12 part and the staff for operating reactors. And so the
13 work that has been going on to resolve the
14 complexities and some of the issues and testing and so
15 forth is all geared to keep in mind that behind it is
16 to improve operational safety.

17 And with that introduction, I'll ask Dr.
18 Murley to commence the briefing.

19 CHAIRMAN ZECH: Thank you very much.

20 Dr. Murley, you may proceed.

21 DR. MURLEY: Thank you, Mr. Chairman.

22 When we were here in January briefing the
23 Commission, I sensed some concerns on the part of the
24 Commission; three in particular that I want to address
25 up front.

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1 First was kind of the slow pace of events.
2 In fact, this is a long program. It's going to take
3 still another four to five years before all of the
4 TECH SPECS for all the plans are updated. We are
5 basically ~~on~~ schedule. The pace of activities has
6 recently picked up and Mark Reinhart will talk in
7 detail about the details of those activities. But I
8 want to make a point that we are not sitting and
9 waiting for the final standard TECH SPECS. There are
10 many improvements that we're making all along now in
11 the current TECH SPECS that we have.

12 We've issued five generic letters approving
13 line-item improvements. For example, allowing
14 utilities to take the organization charts out of their
15 TECH SPECS. That is now a line-item improvement that
16 they come in and do right now.

17 We've also issued eight topical reports,
18 which allow certain improvements in TECH SPEC's
19 surveillance testing intervals and that sort of thing.
20 And as of April of this year, we had had 123 requests
21 for improvements of those types, and we've issued 66
22 approvals and 57 were still under review, most likely
23 will be approved. So we are moving ahead on
24 improvements, not waiting for the standard TECH SPECS
25 package.

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1 A second concern that the Commission had, I
2 believe, was the backlog of TECH SPEC amendments that
3 is in our action file. And that is a concern, and we
4 have taken some significant management actions in the
5 last five months to improve that, one of which was a
6 task force that I put in place starting in March. So
7 for the last three months, March, April and May, this
8 task force has been looking at ways to improve the
9 backlog. And I can report today that we've made
10 significant progress.

11 Of the 285 TECH SPECS amendments that were
12 over two years old, some of these go back to the early
13 1970s and very, very old, we've taken action on 249 of
14 those, which is 87 percent. There are 36 remaining
15 and we believe that of those 36, 21 will be completed
16 this month. So there will be about 15 of the 285
17 original TECH SPEC amendments over two years old,
18 there will be 15 only, we call them the "hard core
19 tough ones," that will remain probably for yet a
20 couple more months to complete. So I think we have
21 made progress on cleaning up the backlog and we have a
22 paper coming to the Commission that's going to explain
23 how we'll keep it cleaned up.

24 COMMISSIONER CARR: Of those 249, how many
25 were actually completed and how many of them were sent

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1 back for other information or returned to the issuer
2 or something?

3 DR. MURLEY: Yes, I don't have a firm
4 estimate, but the staff tells me they think about 75
5 percent we acted on positively. And the others we
6 either sent back or we needed more information on
7 those.

8 COMMISSIONER CARR: Okay.

9 DR. MURLEY: The Commission also had asked
10 on how were we going to respond to all these
11 applications when they do come in? And I don't have
12 the organization yet in place for that, but the plans
13 are that we'll have a separate branch, that is
14 probably the current branch that we have but it'll be
15 beefed up to act on the standard TECH SPECS when they
16 come in so that we can act expeditiously when they
17 come in.

18 Finally, there was a question on the part of
19 the Commission, I thought, about working closely with
20 industry. We are, in fact, working, I feel, very
21 well, very closely with industry. The staff tells me
22 they interact almost weekly by phone and probably
23 monthly meetings with NUMARC and the owners groups on
24 the standard TECH SPECS. In addition, I meet with the
25 NUMARC executive group probably once every few months

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1 to make sure that this program stays on track. I
2 recently, I would say within the last month, met with
3 the group again and Murray Adleman chairs it for
4 NUMARC. And they seemed to be pleased that things are
5 generally on track. So we intend to keep it that way.

6 So with those introduction remarks, then
7 I'll turn it over to Mark Reinhart.

8 CHAIRMAN ZECH: Before we do that, Dr.
9 Murley, let me just say from my personal prospective I
10 really appreciate the leadership you've show in this
11 program because I do think your personal involvement
12 is the reason we really are making progress now. And
13 I know it's taken some of your time, as well as your
14 people, but I really do believe that your personal
15 involvement and your willingness to tackle this
16 problem, and it is a big problem and it has been for
17 some time, frankly has been a big part, anyway, of why
18 we're starting to make real progress. And I
19 appreciate that effort.

20 DR. MURLEY: And we're committed to wrestle
21 this down until we've got it fixed for once and for
22 all.

23 CHAIRMAN ZECH: Well, I appreciate that.
24 And again, I appreciate your own involvement in it
25 because I know that you have many, many

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1 responsibilities and this is only one other one. But
2 we are making progress and I appreciate your efforts
3 in that regard.

4 All right, Mr. Reinhart, you may continue.
5 Proceed.

6 MR. REINHART: Could we have slide 2,
7 please? (Slide 2.)

8 The Technical Specifications Improvement
9 Program with the goal of improving operational safety
10 is implementing the Commission's interim policy
11 statement of February 1987 by using three aspects:
12 development of new standard technical specifications,
13 a parallel program for line-item improvements and
14 other supporting activities. We feel we're making
15 significant progress in each of those areas.

16 On the next slide we see the status of the
17 development of the new standard technical
18 specifications. If we could have 3, please? (Slide).

19 Based on the staff's report, commonly called
20 the Split Report, which gave the staff's conclusions
21 on which limiting conditions for operation of the
22 current standard technical specifications would be
23 included in the new standard technical specifications,
24 and which of those requirements may be relocated to
25 licensee control documents. Based on that report,

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1 industry proposed to offer the staff new STS by March
2 of 1989. While industry was working on those proposed
3 new STS, the staff developed a process and an
4 ambitious schedule which would review and issue an SER
5 on each of those documents ten months following a
6 submittal. And our slide shows the dates that we
7 received the submittal from each of the owners groups,
8 the most recent -- the main bulk of the submittal came
9 in last night. And based on those submittals, our
10 SERs are scheduled for February through April, 1990.

11 The first step of the staff's process is to
12 perform an acceptance review where we look at the
13 submittal and determine if we have enough information
14 to start that review. We've completed that review for
15 the Westinghouse submittal and are almost through the
16 B&W and the General Electric or BWR submittals.

17 Based on the Westinghouse acceptance review,
18 we accepted the document, however there were a number
19 of proposed changes that went beyond what we
20 anticipated and within complete justification, we felt
21 that we had to look into that a little bit before we
22 could absolutely determine the impact on our schedule.
23 We believe at this point, with Westinghouse's
24 response, we've been able to or will be able to absorb
25 that and still meet our February 1990 SER date.

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1 The Combustion Engineering owners group
2 submittal will go into an acceptance review starting
3 next week.

4 If we could see the next slide, (Side),
5 these new STS will be implemented by plant specific
6 conversions. I want to point out that we have five
7 lead sites providing conversions and their submittals
8 are due in September and October 1989, which is before
9 the new STS are approved. What we hope to do is take
10 the new STS and look at that implemented on an actual
11 plant to try and learn between the theoretical and the
12 applied, if you will, so that we can feed back
13 anything that we learn into the new STS development.

14 The license amendments for those submittals
15 are due nine months following their submittal. And
16 we're looking at a June/July time frame of 1990. The
17 five lead conversions: the sites for Westinghouse are
18 North Anna 1 and 2; General Electric is Hatch 2 and
19 Grand Gulf 1; Babcock and Wilcox is Crystal River 3,
20 and Combustion Engineering is San Onofre 2 and 3.

21 Westinghouse North Anna plant is planning in
22 coming in to talk to the staff the week after next
23 regarding their lead plant submittal. So even that's
24 going on as the development of the new STS progresses.

25 COMMISSIONER CARR: Why did you pick two

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1 sites for the GE?

2 MR. REINHART: The Hatch plant is a BWR-4
3 design and the Grand Gulf is a BWR-6 and GE felt that
4 the differences in those two designs were significant
5 enough that they wanted to test out their new STS on
6 two sites.

7 COMMISSIONER CURTISS: Do you have a feel
8 yet whether the substance of the changes will involve
9 significant hazards considerations?

10 MR. REINHART: Do I have a feel for what?

11 COMMISSIONER CURTISS: If the subject of the
12 amendment, in incorporating the technical
13 specification changes, would involve significant
14 hazards consideration?

15 MR. REINHART: I think our feeling now,
16 Commissioner, is that it would not involve a
17 significant hazards consideration.

18 Following the lead plants, we anticipate at
19 this time 70 to 80 additional conversions between 1990
20 and 1995. To efficiently use our resources to review
21 those submittals, the staff is working on a
22 certification process by which the licensee would
23 certify that he's adopted the new STS to the extent
24 practicable and then he certifies that he's identified
25 and justified all deviations from those new STS. The

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1 staff's effort would involve an audit of the sample to
2 verify that, in fact, he did adopt a new STS and then
3 a technical review of all of the deviations and all of
4 the justifications.

5 We anticipate a six to nine month review of
6 those follow on conversions and the time difference is
7 going to depend on the extent to which they adopt a
8 new STS or take deviations. The more deviations, the
9 longer it will be to review.

10 Go to the next slide, please, 5. (Slide).
11 The specific request the Commission made in the staff
12 requirements memo on the final policy statement, the
13 first was the staff's intent to submit the final
14 policy statement. We're scheduled to submit that on
15 September 1, 1989 and our intent is to meet that date.
16 However, we are learning and are continuing to learn
17 during the review process, and from what we learn we
18 may find some reasons that we could come in and ask
19 for an extension for that time.

20 As far as the acceptability of the criteria
21 based on what we're learning, the acceptability is
22 still under review. During the Split Report we
23 identified several issues that needed clarification on
24 the proper implementation and application of the
25 criteria, and they are included in that Split Report.

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1 Our intent is to factor those into the final policy
2 statement.

3 If we could identify one primary issue, it
4 would be a need to clarify the criteria's need to
5 capture active—design features in operating
6 restrictions that keep the plant within its design
7 basis. We're talking about things like the pressure
8 temperature limits for brittle fracture
9 considerations, we're looking at things like the high
10 pressure/low pressure interfaces between the primary
11 and secondary decay heat removal system that would be
12 actuated or allowed a permissive on pressure changes.
13 Those particular items weren't clearly captured by the
14 criteria and we feel we need to clarify that somehow.

15 As I said, we are learning as we are working
16 with industry's proposal on the new STS. For example,
17 we have two of the three submittals at least have
18 taken some deviations from the Split Report as the
19 staff issued it, and we'd like to take a look at their
20 reasonings to see what motivated that action and we
21 hope that we can learn from that.

22 Our priority over the next several months,
23 we feel, has to be on the review of the new STS.

24 If we could go to the next slide, (Slide),
25 we go to the second of three aspects of the TECH SPEC

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1 improvement program. The first we discussed was
2 development of the new STS. The second is the program
3 for line-item improvements. As it was mentioned, we
4 have approved five generic letters, eight topical
5 reports. These are currently available for licensees
6 to implement if they submit an amendment request. We
7 expect to factor these and others that are under
8 development now into the new STS that would eliminate
9 any need for licensees to specifically adopt these
10 amendments if they adopt a new STS.

11 Our next slide talks about our other
12 supporting activities. That's slide 7. (Slide). The
13 first of those is a guidance document for 10 CFR 50.59
14 which governs licensee safety evaluations for changes,
15 tests or experiments they make to their facility.
16 Industry proposed a guidance document, the staff
17 commented on their second draft, returned comments to
18 industry in May of 1989. We expect to see industry
19 issue their document called NSAC 125 this month. And
20 the staff expects to participate in some workshops
21 with the industry on that document this month also.

22 Our activity on reduced testing, the staff
23 has completed the second draft of that report. We
24 expect to go to CRGR with that report this summer and
25 we'll implement that in two ways. Overall, we expect

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1 to take all those recommendations on reduced testing
2 and put them into the new STS during the review
3 period. We also were looking for a few of the more
4 safety significant aspects and initiate two, three,
5 four, whatever it comes out to, generic letters to get
6 those aspects available to licensees as soon as
7 possible.

8 The final aspect of our supporting
9 activities is the risk based technical specification,
10 which is more of a future development but currently
11 there is a working group that's been established and
12 it plans towards developing a prototype of a
13 configuration and management system at an actual plant
14 site and use that plant's current PRA in developing
15 this program.

16 Slide 8, please. (Slide).

17 CHAIRMAN ZECH: Before you go to that one.

18 MR. REINHART: Sure.

19 CHAIRMAN ZECH: On reduced testing, is that
20 going to encompass diesel generators and reduced
21 testing of diesel generators?

22 MR. REINHART: Yes, sir. What we've done
23 there, I might put up either backup slide B-2, it
24 gives a few aspects of that. Could I have backup
25 slide B-2, please. (Slide).

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1 We start with the chronology of where we are
2 in the development. But implementation, we mentioned
3 that the changes are to be factored into the new STS
4 and the more significant ones, as generic letters, one
5 of the generic letters we already have in progress
6 addresses what we've learned from the diesel generator
7 activity. And between that generic letter and
8 revision three to Reg. Guide 1.9 which research is
9 currently working on, we believe that all of the
10 benefits that we derive from that report will be
11 included in those two documents. So we have an
12 aggressive effort in addition to that report working
13 on the diesel generator aspects.

14 CHAIRMAN ZECH: Thank you very much.

15 COMMISSIONER CARR: What time frame do you
16 have on that revision to the Reg. Guide and generic
17 letter on diesel?

18 MR. REINHART: The generic letter, we're
19 looking for a fall time frame. The Rev 3 to Reg.
20 Guide 1.9 we believe was probably looking towards
21 summer to late summer.

22 CHAIRMAN ZECH: All right, let's proceed.

23 MR. REINHART: If we could go back to slide
24 8, please. (Slide). We feel that the Technical
25 Specification Improvement Program is moving in the

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1 right direction to improve operational safety and will
2 result in more reliable and efficient plant
3 operations. We feel that we've made and will
4 continue to make significant progress in each of these
5 -- three areas; development of the new STS, the parallel
6 program for line-item improvements which will
7 continue, and in bringing our supporting activities to
8 completion.

9 That concludes the presentation.

10 CHAIRMAN ZECH: All right. Thank you very
11 much.

12 DR. MURLEY: I have one point that I might
13 add, Mr. Chairman. I probably should have mentioned it
14 earlier. But it has to do with resources. And the
15 Commission is, I think, properly concerned that we be
16 organized as efficiently as we can be. We have some
17 experience in recent conversion to TECH SPECS. We
18 reviewed the Turkey Point 3 and 4 conversion to
19 current standard TECH SPECS. And that required two
20 calendar years and one and a half staff years to do
21 that review and conversion. Now, if you multiple that
22 by the 70 to 80 conversions that we expect in 1990 to
23 1995, you see we're talking a large number of
24 resources. So we do expect to organize ourselves to
25 be more efficient. But, nonetheless, I think it's

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1 still going to require additional resources and the
2 budget -- the EDO budget that has been sent to you
3 does include our estimated --

4 COMMISSIONER ROBERTS: You mean it does?

5 DR. MURLEY: It does, yes, for fiscal '91.
6 I just wanted to mention that.

7 CHAIRMAN ZECH: All right. Thank you very
8 much. Does that conclude the staff briefing, Mr.
9 Taylor?

10 MR. TAYLOR: That concludes the staff's
11 presentation.

12 CHAIRMAN ZECH: All right. Questions from
13 my fellow Commissioners? Commissioner Roberts?

14 COMMISSIONER ROBERTS: I don't have any
15 question, but a comment. I think this is a very
16 important program. Unfortunately, it's not glamorous,
17 it's not high profile, it's not solving an immediate
18 problem that's gotten everybody's attention, but I
19 think it is terribly important. And I hope that you
20 will continue to provide good people to work on it,
21 which you're doing now, and continue to provide the
22 resources to get the job done. This is slow, long,
23 hard work but it's terribly important. And again, it
24 is not a glamorous job, per se, but it is terribly
25 important. That's all I have.

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1 DR. MURLEY: We have very good people --

2 COMMISSIONER ROBERTS: I think you do, but
3 don't let the next crisis snatch these people away to
4 put out the little brush fire. And that's going to
5 happen, as you well know. I mean, there are going to
6 be brush fires.

7 DR. MURLEY: I've resisted that and I
8 understand your point exactly.

9 COMMISSIONER ROBERTS: Okay. That's all I
10 have.

11 CHAIRMAN ZECH: Thank you. Commissioner
12 Carr?

13 COMMISSIONER CARR: Well, I'm encouraged by
14 what appears to be significant progress and I
15 compliment you on that. I'm a little -- I still don't
16 have a feel for how many technical specs have actually
17 been changed, say, in the last six months. When the
18 backlog comes down, does that mean you've actually
19 changed some technical specs?

20 DR. MURLEY: Yes. I don't have the latest
21 statistics. As I said, of the 249 of the over two
22 year old TECH SPECS that we've acted on, staff tells
23 me about 75 percent of those. So that would be about
24 200 actually involved changes of those.

25 COMMISSIONER CARR: Okay.

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1 DR. MURLEY: Now, in addition, one has to
2 add the normal routine TECH SPECS that come in and are
3 acted on within a matter of a few months. But we're
4 putting them out.

5 -- COMMISSIONER CARR: Yes. I guess I'm
6 feeling around for some kind of a score sheet where I
7 can measure progress, but I'm not sure I want to make
8 it meet it based just -- I don't want you to stop
9 doing work to make a score sheet, but I'd feel
10 comfortable if I knew how far you've come and how far
11 you've got to go, you know. And other than that, I
12 think, I certainly agree with Commissioner Roberts,
13 it's one of my favorite programs. Progress is what
14 I'm looking for.

15 I'm with the Chairman. For three years I've
16 been hearing about we're over testing the diesels. So
17 it seems like it'd be simple to just say, "Well, quit
18 testing them so much."

19 MR. ROSS: But let me add something here.

20 COMMISSIONER CARR: We've got another year
21 to go to say that, you know.

22 MR. ROSS: Let me add something to what Dr.
23 Murley said about TECH SPEC amendments. NRR receives
24 an excess of 1,000 technical specification amendment
25 requests each year and we complete approximately that

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1 same number of amendment requests each year. So there
2 are a 1,000 coming in each year and we complete about
3 a 1,000 each year.

4 CHAIRMAN ZECH: Commissioner Rogers?

5 -----COMMISSIONER ROGERS:-- I just wanted to get a
6 little more information on the relocation of cycle
7 specific parameter limits. Can you tell me a little
8 bit more about what that entails and how it relates to
9 the need to capture active design features?

10 MR. REINHART: Yes, sir. The cycle specific
11 parameters really focuses on what has come to be
12 called a core operating limits report. And those are
13 things like parameters that will change each refueling
14 -- they're primarily nuclear. There are some others
15 that aren't necessarily nuclear, but they're related
16 and those type of things are what are going into this
17 core operating limits report.

18 There's a couple of plants outside of this
19 program, Oconee was the lead plant, has submitted a
20 core operating limits report, has it approved,
21 they're, in fact, the lead plant on that activity.

22 The new STS is building that in. We had a
23 meeting just about two weeks ago with industry to
24 discuss in detail what types of items could go in and
25 what would stay out. Now that really is separate from

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1 your question on the need to capture active design
2 features. Those aren't limits that change cycle-to-
3 cycle, but things like if you look at the pressure
4 temperature curve. The way the industry first looked
5 at that they go, "Wow, that's not an initial condition
6 to a design basis accident." We said, "Well, wait a
7 minute, that's to keep you from getting outside of the
8 bounds so you won't have an accident in unanalyzed
9 conditions." So there's really two different issues
10 there.

11 COMMISSIONER ROGERS: Yes, I understand now
12 what the difference is. I just couldn't tell from
13 what happened before.

14 Could you say a little bit more about the
15 risk based technical specs working group? Whose
16 involved, what's the schedule for it and what it's
17 really supposed to accomplish?

18 MR. REINHART: I have a backup slide for
19 that. It's B-3, if we could look at that, please
20 (Slide). Could we have backup slide B-3, please.
21 Okay, there it is.

22 The risk based technical specifications work
23 has a goal to develop a real time risk based
24 configuration management system that looks at a plant
25 and based on equipment that's out of service right now

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1 what is the risk of doing a test or taking another
2 piece of equipment out of service?

3 COMMISSIONER ROGERS: Yes. Good.

4 MR. REINHART: Ed Butcher, who is here
5 ~~today, has established a working group to start some~~
6 work on this. The working group includes the Nuclear
7 Regulatory Commission, Science Applications
8 International Corporation, three utilities have
9 volunteered; Southern California Edison Company,
10 Philadelphia Electric Company, Pacific Gas and
11 Electric Company. And that group plans to, first,
12 resolve technical and institutional issues that are
13 needed to get such a program in place, look at the
14 costs involved and then to provide some guidance on
15 practical issues, the software. How do we develop the
16 software that's being developed today? What kind of
17 hardware is involved? How can we have it interactive
18 that we can get real time results? And they're really
19 looking at having this prototype demonstration at an
20 operating reactor that can put that into effect while
21 the current TECH SPECS are still there, but still get
22 a feel for what benefits will be derived.

23 COMMISSIONER ROGERS: That strikes me as a
24 very important program.

25 COMMISSIONER ROBERTS: Excuse me. Can we

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1 see the slide again? (Slide). How does Science
2 Applications International Corporation function? Are
3 they a consultant to the NRC?

4 MR. REINHART: I believe so. Maybe Ed could
5 ~~address that for us.~~ Ed?

6 COMMISSIONER CARR: Imagine they developed
7 the software.

8 CHAIRMAN ZECH: Would you step to the
9 microphone and identify yourself to the reporter,
10 please?

11 MR. BUTCHER: My name is Ed Butcher. I was
12 the former chief of the technical specifications
13 branch and was involved with initiating this program.

14 Science Applications International, I guess
15 it is now, is the primary contractor and consultant to
16 the NRC in this program. This specific system is
17 somewhat patterned after some systems which were
18 developed, I guess, in the last couple of years in
19 Europe but we, as a part of this program, went to
20 Great Britain and observed their ESSM, essential
21 system status monitor program, in operation there. It
22 was a very impressive system.

23 It's principle value is that it gives you a
24 real time estimate of the actual risk of the
25 configuration that you happen to be in. It's not

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1 based upon some theoretical projections of failure
2 rates and of recurrence intervals for accident
3 sequences. It's based upon the real configuration of
4 the plant.

5 Such a system is also under development for
6 the new generation of reactors that are planned by
7 Rumania right now. Science Application in conjunction
8 with funding through, I think it's the International
9 Atomic Energy Agency is developing such a system to
10 function as the technical specifications for that
11 future generation of nuclear reactors as opposed to
12 the deterministic system that we have now.

13 It is a very powerful system. I've seen it
14 in operation, personally. Southern California Edison
15 has an ad hoc version of this sort of an approach in
16 place right now where they actually review the
17 operating configurations that existed, say, over the
18 last three months and they go back and take that data
19 and rerun their PRA based upon actual configurations
20 as opposed to theoretical assumed entries into
21 different allowed outage times. And they find the
22 peaks and valleys in risk that result from that and
23 then they go back and review operations, operating
24 procedures so that they outlaw those configurations in
25 the future. When you do that, what you find is there

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1 is a steady decline in risk from operation. This is
2 one of those strange and unusual opportunities to have
3 your cake and eat it, so to speak, at the same time.
4 You can improve the availability, the reliability of
5 the facility and at the same time reduce risk and you
6 can show through rigorous evaluation that that has
7 actually occurred.

8 COMMISSIONER ROBERTS: I would think the
9 utilities would be terribly interested in this?

10 MR. BUTCHER: Yes, sir, they are. We've had
11 a great deal of interest and they've been willing to
12 come forward and volunteer to participate in this
13 program. We hope to be able to develop a pilot for it
14 and actually demonstrate it in parallel with the
15 existing technical specifications, as Mark Reinhart
16 has indicated. And we think we can show that it will,
17 in fact, improve safety over the current deterministic
18 system of technical specifications. It's only in the
19 last five -- I'd say five, seven, eight years that the
20 technology of risk analysis and the hardware and the
21 software have developed to the point where this is now
22 a practical alternative.

23 COMMISSIONER CARR: But the improvement in
24 safety comes from alerting you to possible things that
25 could happen when you have a piece of equipment out

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1 but right now you can't take all the time to analyze
2 it?

3 MR. BUTCHER: Exactly. I can give you a
4 very graphic example. One of the first things it will
5 show you is--that you ought not be doing routine
6 maintenance on the main feed water system at the same
7 time you're doing it on auxiliary feed water system.
8 That's almost common sense, but as a practical matter
9 there's nothing in the current deterministic specs
10 that deal with things like that. It would also tell
11 you don't do diesel testing or maintenance at the same
12 time that you're doing routine balance of plant
13 testing in the switch yard. It would eliminate those
14 kinds of scenarios that actually represent precursors
15 to severe accidents. There are major implications in
16 that area for programs and systems like this.

17 CHAIRMAN ZECH: Thank you very much.

18 COMMISSIONER ROGERS: Is this an expensive
19 operation to work out? Presumably, it's quite plant
20 specific so that each plant has to go through an
21 analysis. Is there anything else that we're doing and
22 requiring in, say, the IPEs that could make for an
23 economy of scale effort here so that the benefits of
24 this could also be derived partly as a result of other
25 work that has to be done as part of an IPE?

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1 DR. MURLEY: We haven't totally thought it
2 out, so I'll just have to give you my top-of-the-head
3 answer. In order to implement this, it requires a PRA
4 type of analysis. At least you have to know the
5 systems--and--have--a model for your plant. It could
6 very well be that the type of analysis that is being
7 gone through for the IPE, most of which will be a PRA,
8 could form the basis for these kinds of risk based
9 TECH SPECS in the future. We haven't taken that step
10 yet because I think we're doing it kind of exactly the
11 right way. Try it out on a couple of plants with a
12 few volunteers, see how it work and then as it works--
13 I think this has two big applications. One is for
14 future designs. I think we can move to it relatively
15 quickly while their still preparing their TECH SPECS.
16 And then as other plants develop PRAs, we might look
17 to this to be the next phase, I would say maybe five
18 to ten years from now.

19 COMMISSIONER ROGERS: It's just that it has
20 such an immediate application right now.

21 MR. TAYLOR: We all know about the air
22 system and air system problems and the problems with
23 compressors and backup air systems. And that's a
24 perfectly good example of where this type of thing may
25 begin to tell you the unexpected failure in

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1 compressors that you're on your way to more risks than
2 you need and that's a complex system in many plants.

3 COMMISSIONER ROGERS: Well, it's a real aid
4 to operators, I would think, in avoiding any
5 difficulties. And it brings the whole plant together
6 as a unit, in a sense. And it seems to me it's got
7 all the good features that you really want.

8 MR. TAYLOR: And it will provide us with a
9 more rational basis for limiting condition of
10 operation outage times. Those times are usually just
11 set by judgment, engineering judgment, many of which
12 go back ten to 20 years, probably. But this
13 methodology will allow us to have a rational basis for
14 these times.

15 COMMISSIONER ROGERS: Well, just as
16 Commissioner Roberts has praised the general program,
17 which I also think is very important, it seems to me
18 this is also extremely important. We didn't hear
19 enough about it, I think. I think during your
20 presentation I know you have a lot of other things to
21 talk about, but I would want you to really keep
22 pushing on that and to think of ways in which we can
23 help to coordinate efforts so that there isn't a
24 required duplication of effort to put this in in
25 addition to an IPE; that somehow linking those two

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1 together through our actions would make an awful lot
2 of sense.

3 MR. TAYLOR: I might suggest that there be a
4 Commission briefing sometime in the future when this
5 working group gets a little more work done as to
6 progress. And maybe we can arrange that at the
7 appropriate time. It would be months before--
8 specifically on this topic when it's sufficiently
9 developed.

10 COMMISSIONER ROGERS: Well, I heard about
11 this British system when I was in England a few weeks
12 ago and I was very impressed with it. And it seemed
13 to me that it's something worth pursuing.

14 Thank you.

15 CHAIRMAN ZECH: All right. Thank you very
16 much.

17 Commissioner Curtiss?

18 COMMISSIONER CURTISS: I don't have any
19 questions.

20 CHAIRMAN ZECH: All right. Well, let me
21 thank all of you for a very informative discussion
22 this morning. I think that you can see the interest
23 the Commission has on this subject, not only by having
24 the meeting here, of course, follow on to the meeting
25 we had in January, but also the questions and the

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1 comments you've heard from the Commissioners to show
2 our real interest in this program. And so we do
3 commend the staff for your efforts and we are
4 encouraged, I think, by the results we've seen today.

5 I think another Commission briefing here in
6 the future, perhaps, focusing on some of the risk
7 based issues and how they are applicable to the
8 recommendations to the utilities as regards, for
9 example, the specific testing that you pointed out and
10 how we look at that in a more integrated sort of way
11 rather than specific testing of systems. Those are
12 very, very important matters, I think, and as we all
13 know, could bear directly on the operation of the
14 plant, safety and reliability both.

15 So I think as you described today, too,
16 obviously significant additional work remains to be
17 accomplished before all the safety benefits from this
18 program can be realized at the plants, but I do think
19 another briefing of the Commission in the future would
20 be certainly appropriate. But I commend you for the
21 continuing effort you've made and the hard work you've
22 put into improving technical specifications. And it's
23 so clear that the obvious safety and reliability
24 benefits can result from this program, that it is
25 worth all the effort that is going into it.

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1 And I commend the utilities, also, who have
2 volunteered to be part of this program. To me it's
3 clearly in their best interest and not only theirs,
4 but all the other utilities, too, can benefit from the
5 results of this very fine effort.

6 I'd also encourage you to continue working
7 with the industry towards the adoption of the uniform
8 standard for performance of safety evaluations under
9 our requirements in 10 CFR 50.59. That's also a very
10 important effort, I think, and I would encourage you
11 to continue your efforts in that regard, too.

12 Let me just conclude by saying, again, how
13 much we appreciate, Mr. Taylor, your and Mr. Stello's
14 leadership with Dr. Murley in this regard because this
15 is a very important program. And as others have
16 pointed out, it may not have some of the great
17 interest of some of the other specific issues we get
18 involved with, but it certainly directly impacts on
19 safety of operations, reliability of operations,
20 efficiency of operations. And I think that, again,
21 this is why the Commission is so interested in making
22 some progress in the technical specification program,
23 not only per se, but as it relates and as it
24 integrates to the entire operation of the power
25 plants. So, again, I'm pleased at the efforts the

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1 staff has made in this regard and I want you to assure
2 yourself of the continuing Commission interest and
3 involvement in this particular area.

4 Are there any other final comments from my
5 colleagues? If not, thank you very much for an
6 excellent presentation and excellent work.

7 We stand adjourned.

8 (Whereupon, the briefing was concluded at
9 10:33 a.m.)
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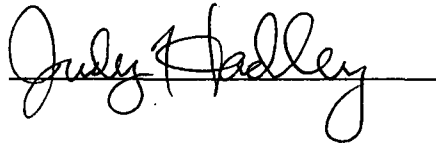
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of the United States Nuclear Regulatory Commission entitled:

TITLE OF MEETING: Briefing on Status of Technical Specifications
Improvement Program

PLACE OF MEETING: Rockville, Maryland

DATE OF MEETING: June 2, 1989

were transcribed by me. I further certify that said transcription
is accurate and complete, to the best of my ability, and that the
transcript is a true and accurate record of the foregoing events.



Reporter's name: Trevor Goodchild

COMMISSION BRIEFING

ON THE

TECHNICAL SPECIFICATIONS

IMPROVEMENT PROGRAM

June 2, 1989

Mark Reinhart

TECHNICAL SPECIFICATIONS IMPROVEMENT PROGRAM

GOAL: Improve Operational Safety

Commission's Interim Policy Statement: Feb 87

New Standard Technical Specifications (STS)

Parallel Program For Line-Item Improvements

Other Supporting Activities

NEW STS DEVELOPMENT

Split Report:

May 1988

Proposed New STS:

<u>Owners Group</u>	<u>Submittal Date</u>	<u>SER Date</u>
<u>W</u>	Mar 30, 89	Feb 90
GE	May 8, 89	Mar 90
B&W	May 1, 89	Mar 90
CE	Jun 1, 89	Apr 90

PLANT-SPECIFIC CONVERSIONS TO NEW STS

Five Lead Conversions:	<u>Submittal Date</u>	<u>License Amendment</u>
	Sept/Oct 89	June/July 90

Follow On Plants:

Anticipate 70 To 80 Conversions From 1990 to 1995

FINAL POLICY STATEMENT

Submit To Commission: September 1989

Criteria:

Acceptability Still Under Review

Clarification Provided In Split Report

***Clarify The Need To Capture Active Design
Features And Operating Restrictions That
Keep The Plant Within Its Design Basis***

Learning From Owners Groups Proposed New STS

PROGRAM FOR LINE-ITEM IMPROVEMENTS

Approved:

Extensions For Specified RPS and ESFAS AOT's and STI's

Revisions Of General Requirements – Sections 3.0 and 4.0

Relocation Of Organization Charts

Relocation Of Fire Protection System Requirements

Relocation Of Cycle-Specific Parameter Limits

Relocation Of Radiological Effluent Requirements (RETS)

OTHER SUPPORTING ACTIVITIES

**Guidance Document For 10 CFR 50.59
(Licensee Safety Evaluations)**

Reduced Testing

Risk-Based Technical Specifications

OVERALL PROGRAM IMPACT AND PROGRESS

Improve Operational Safety

New STS Development

Parallel Program For Line-Item Improvements

Other Supporting Activities

REDUCED TESTING

Draft Report Issued **November 1988**

Staff Review Complete: **February 1989**

Second Draft Issued: **March 1989**

Staff Review Complete: **May 1989**

CRGR Review: **Summer 1989**

Issue NUREG: **Summer 1989**

Implementation:

Changes To Be Factored Into New STS

More Safety Significant Changes As Generic Letters

Diesel Generator To Be Separated From Report

Revision To Regulatory Guide 1.9

Generic Letter

RISK-BASED TECHNICAL SPECIFICATIONS

**GOAL: Develop A Real-Time, Risk-Based, Configuration
Management System**

Working Group Established:

Nuclear Regulatory Commission

Science Applications International Corporation

Southern California Edison Company

Philadelphia Electric Company

Pacific Gas & Electric Company

Plans:

Resolve Technical And Institutional Issues

Identify Cost Elements

Provide Guidance On Practical Issues

Software

Prototype Demonstration At An Operating Reactor