

UNITED STATES OF AMERICA NUCLEAR REGULATORY COMMISSION

Title: BRIEFING ON INTEGRATION OF POLICY STATEMENTS FOR
SEVERE ACCIDENTS, ADVANCED REACTORS, SAFETY GOALS,
AND STANDARDIZATION

Location: ROCKVILLE, MARYLAND

Date: JULY 26, 1989

Pages: 64 PAGES

SECRETARIAT RECORD COPY

NEAL R. GROSS AND CO., INC.

COURT REPORTERS AND TRANSCRIBERS
1323 Rhode Island Avenue, Northwest
Washington, D.C. 20005
(202) 234-4433

DISCLAIMER

This is an unofficial transcript of a meeting of the United States Nuclear Regulatory Commission held on July 26, 1989, in the Commission's office at One White Flint North, Rockville, Maryland. The meeting was open to public attendance and observation. This transcript has not been reviewed, corrected or edited, and it may contain inaccuracies.

The transcript is intended solely for general informational purposes. As provided by 10 CFR 9.103, it is not part of the formal or informal record of decision of the matters discussed. Expressions of opinion in this transcript do not necessarily reflect final determination or beliefs. No pleading or other paper may be filed with the Commission in any proceeding as the result of, or addressed to, any statement or argument contained herein, except as the Commission may authorize.

NEAL R. GROSS
COURT REPORTERS AND TRANSCRIBERS
1323 RHODE ISLAND AVENUE, N.W.
WASHINGTON, D.C. 20005

(202) 234-4433

(202) 232-6600

UNITED STATES OF AMERICA
NUCLEAR REGULATORY COMMISSION

- - - -

BRIEFING ON INTEGRATION OF POLICY
STATEMENTS FOR SEVERE ACCIDENTS, ADVANCED REACTORS,
SAFETY GOALS, AND STANDARDIZATION

- - - -

PUBLIC MEETING

Nuclear Regulatory Commission
One White Flint North
Rockville, Maryland

Wednesday, July 26, 1989

The Commission met in open session, pursuant
to notice, at 10:00 a.m., Kenneth M. Carr, Chairman,
presiding.

COMMISSIONERS PRESENT:

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

NEAL R. GROSS
COURT REPORTERS AND TRANSCRIBERS
1323 RHODE ISLAND AVENUE, N.W.
WASHINGTON, D.C. 20005

STAFF AND PRESENTERS SEATED AT THE COMMISSION TABLE:

SAMUEL J. CHILK, Secretary

WILLIAM C. PARLER, General Counsel

VICTOR STELLO, JR., Executive Director, Operations

THOMAS MURLEY, Director, NRR

THOMAS KING, Chief Advanced Reactor and Generic Issues
Branch, Office of Research

DOCTOR THEMIS SPEIS, Deputy Director for Generic
Issues, Office of Research

ERIC S. BECKJORD, Director, Office of Research

NEAL R. GROSS

COURT REPORTERS AND TRANSCRIBERS

1323 RHODE ISLAND AVENUE, N.W.

WASHINGTON, D.C. 20005

(202) 234-4433

(202) 232-6600

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

10:00 a.m.

CHAIRMAN CARR: Good morning, ladies and gentlemen.

The purpose of today's meeting is for the NRC staff to brief the Commission on the integration of policy statements for severe accidents, advanced reactors, safety goals and standardization.

The Commission requested the staff to prepare a briefing paper for the Commission that considers integration of the four major Commission policy statements promulgated over the last few years and to identify any issues requiring a Commission decision.

The staff has provided the Commission with SECY-89-178, Policy Statement Integration. In addition to this request, the Commission has requested the staff and the ACRS to provide their thoughts on how best to integrate the regulatory process. These papers are expected in August.

The Commission has the ultimate responsibility to integrate the regulatory process. To accomplish this, we depend upon staff for the timely development of the necessary technical information. Further, support from the ACRS in its

NEAL R. GROSS

COURT REPORTERS AND TRANSCRIBERS

1323 RHODE ISLAND AVENUE, N.W.

WASHINGTON, D.C. 20005

(202) 234-4433

(202) 232-6600

1 advisory capacity is most valuable to the Commission
2 in working toward appropriate integration of
3 regulatory issues.

4 Copies of the slide presentation are
5 available at the entrance of the meeting room.

6 Do my fellow Commissioners have any opening
7 comments?

8 I might add one comment, Mr. Stello. That
9 is, from my personal opinion this is the toughest
10 issue I've grappled with since I've been here. I've
11 had more trouble trying to get through the papers that
12 support this kind of work than any other. I hope at
13 the end of the briefing, you'll have it cleared up for
14 me.

15 You may proceed, Mr. Stello.

16 MR. STELLO: With that introduction, I think
17 I'd better go see my dentist.

18 This has, and continues to be, an issue for
19 which we have devoted considerable effort in trying to
20 pull together the policy that the Commission has given
21 us with respect to the various subjects that you
22 identified in your opening remarks. I believe, if we
23 took a particular cross-cut, which you were briefed on
24 before in several meetings on the ABWR, for example,
25 you could see how each of the policy statements, in

1 fact, contribute to guiding a staff review on the
2 ABWR.

3 When we get into the issue of how we're
4 going to integrate all these policy statements in all
5 of the things that we have to do, we're obviously
6 talking about a very, very big job. We're going to,
7 this morning, try to tell you how we do that, both for
8 advanced reactors, for the evolutionary reactors, for
9 reactors that are going to be subjected to the
10 certification process. But I think the end result
11 will be you will have, all of us will have, a far
12 better understanding of how that is achieved as we
13 take each and every project and run it through the
14 entire process.

15 I think we have a fairly clear presentation
16 that we've made to the Commission on how we are, for
17 example, integrating severe accident policy
18 requirements for current operating plants. We briefed
19 you on that before. So, I think as you take each
20 subject and take that cross-cut, it looks okay. But
21 when you look at the big picture, there's an awful lot
22 of information, and awful lot of policy and an awful
23 lot of coordination and integration that's required.

24 With that brief introduction, let us try to
25 respond to the challenge you've given us this morning

NEAL R. GROSS

COURT REPORTERS AND TRANSCRIBERS

1323 RHODE ISLAND AVENUE, N.W.

WASHINGTON, D.C. 20005

(202) 234-4433

(202) 232-6600

1 and see how far we can get.

2 Eric?

3 MR. BECKJORD: Mr. Chairman, the thinking
4 and approach to resolution of severe accident issues
5 has evolved in the four years since the severe
6 accident policy statement issuance in 1985. It's
7 evolved from policy to the development of plans,
8 research programs and regulation development.

9 Concurrently, thinking has developed on the
10 subject of safety in licensing requirements and also
11 standardization for future reactors in the three years
12 since the first policy paper on advanced reactor
13 licensing in 1986. This is looking ahead to the
14 license applications that could be expected in the
15 future.

16 These developments are expressed in four
17 major Commission papers. The purpose of this meeting
18 is to address and explain the integration and
19 coordination of these four major Commission papers.
20 The briefing is based on SECY-89-178, which I believe
21 you have, Policy Statement Integration, dated June 9th
22 of 1989. This paper was prepared in response to the
23 staff requirements memo of Mr. Chilk dated the 12th of
24 May.

25 Doctor Speis and Mr. King of the Office of

NEAL R. GROSS
COURT REPORTERS AND TRANSCRIBERS
1323 RHODE ISLAND AVENUE, N.W.
WASHINGTON, D.C. 20005

1 Research will make the presentation to you and it will
2 address primarily the inter-relationships in the key
3 elements of these papers rather than purely the
4 technical aspects, of which there are many.

5 DOCTOR SPEIS: Thank you, Mr. Chairman,
6 Commissioners. I'll do my best to rise to the
7 challenge in spite of my bad throat and my not perfect
8 accent. So, you have to listen very carefully, as
9 everyone has said so far.

10 The purpose of the presentation is to
11 discuss our integration and coordination of the four
12 major policy statements and the four policy statements
13 have been mentioned already. I do not plan to
14 summarize what is in each of these policy statements.
15 A brief summary on each one of them is in the
16 Commission paper in front of you.

17 (Slide) So, I would like to go to slide 3.

18 In all of the four policies, especially in
19 the plans to implement them, there is mention of
20 future plants. In this slide, I show the types of
21 plants that have been considered. In fact, the new
22 Part 52, which I'll discuss shortly, was developed to
23 be applicable to all future plants. Later on I'll
24 tell you how the different elements were fed into the
25 Part 52.

NEAL R. GROSS

COURT REPORTERS AND TRANSCRIBERS

1323 RHODE ISLAND AVENUE, N.W.

WASHINGTON, D.C. 20005

(202) 234-4433

(202) 232-6600

1 The future plants that we're talking about,
2 of course, are the evolutionary LWRs. Examples are
3 the advanced boiling water reactor, which is in
4 pursuit by General Electric; Combustion Engineering's
5 System 80 and Westinghouse SP/90, the last two being
6 pressurized water reactors. All three of them are
7 approximately 1300 megawatt electric.

8 The advanced LWRs, there's Westinghouse
9 Advanced Passive 600 and 600 refers to the power
10 rating. There is the Pius Reactor, which is Process
11 Inherent Ultimate Safe Reactor. The SBWR. It is GE's
12 also passive 600 megawatt electric. And the new
13 concept which has been worked out between Combustion
14 Engineering and the United Kingdom, which is called
15 SIR. It stands for Safe Integral Reactor. It's a
16 smaller than the other three. It's about 300 megawatt
17 electric.

18 Then we have the advanced non-LWRs, which
19 the Department of Energy is pursuing, the first one
20 being the Advanced Liquid Metal Reactor and the Modular
21 High Temperature Gas Reactor. Of course there is the
22 CANDU 3 Reactor, which we might be reviewing,
23 depending on what the Commission decides in the near
24 future.

25 Currently, we have under review all the

NEAL R. GROSS

COURT REPORTERS AND TRANSCRIBERS

1323 RHODE ISLAND AVENUE, N.W.

WASHINGTON, D.C. 20005

1 evolutionary LWRs, the three of them. We have the
2 Advanced Passive 600 megawatts and the last two of the
3 advanced non-LWRs, the ALMR and the MHTGR.

4 (Slide) Let's proceed now to discuss the
5 integration. We'll start with the policy statement
6 integration. It is show on the next viewgraph.

7 We have performed the coordination
8 integration of the four major policy statements
9 through the use of six implementation plans which were
10 previously presented to the Commission. The
11 interrelationship of the four policy statements in
12 these implementation plans is shown in this slide, of
13 course.

14 In this figure, which is entitled
15 "Integration," I have identified each policy
16 statement, the date of its issuance and the supporting
17 documentation. I have also identified each
18 implementation plan and the Commission paper that
19 describes the staff proposal.

20 Now, due to the overlapping nature of the
21 policy statements, their implementation plans also
22 overlap in that certain implementation plans address
23 more than one policy statement.

24 Let's start to go through this diagram now.
25 If we start from the left, we see that the

NEAL R. GROSS

COURT REPORTERS AND TRANSCRIBERS

1323 RHODE ISLAND AVENUE, N.W.

WASHINGTON, D.C. 20005

(202) 234-4433

(202) 232-6600

1 implementation plan for the safety goal is described
2 in SECY-89-102. In fact, this is a very important
3 coupling of the whole process because the fundamental
4 principles of the safety goal affect implementation of
5 the other three issues, policy issues. I will discuss
6 later on in more detail how this is done when I
7 discuss the safety integration.

8 I don't want to jump ahead, but I will split
9 the policy statement integration into standardization
10 integration and safety integration because one
11 involves procedural issues, the other one involves
12 safety issues. I thought by breaking it down it will
13 facilitate the discussion.

14 If we proceed on this diagram in front of
15 us, the severe accident policy statement is
16 implemented by a SECY-88-147 for existing plants.
17 This is the integration plan that was presented to you
18 last year. For the advanced reactors, by SECY-88-
19 203, and for the ABWR, the first evolutionary LWR, by
20 SECY-89-153. Later on you will see that this process
21 will continue with all the specific designs that we'll
22 be reviewing.

23 If we get to the advanced reactor policy
24 statement next, we see that it is implemented via two
25 SECYs, SECY-88-203 and SECY-88-202, which discuss the

NEAL R. GROSS

COURT REPORTERS AND TRANSCRIBERS

1323 RHODE ISLAND AVENUE, N.W.

WASHINGTON, D.C. 20005

(202) 234-4433

(202) 232-6600

1 DOE-sponsored advanced reactor designs.

2 COMMISSIONER ROBERTS: But if I may --

3 DOCTOR SPEIS: Yes, sir.

4 COMMISSIONER ROBERTS: It is my
5 understanding those papers had been withdrawn.

6 MR. KING: SECY-88-202 was incorporated into
7 10 CFR Part 52. That one was not withdrawn. SECY-88-
8 203, the Commission has put that on hold and the staff
9 owes a revision of that paper to the Commission on
10 receipt from DOE of additional information on the
11 containment question.

12 MR. STELLO: Which is due this summer.
13 Which is due to be given to us this summer.

14 DOCTOR SPEIS: Yes. 203 discusses the
15 safety issues and the containment is an important part
16 of that. 202 discusses the standardization elements
17 which, as Mr. King said, were folded into Part 52.
18 I'll say more about that later on.

19 The standardization policy statement, again,
20 is implemented by SECY-88-202 and SECY-89-36. We have
21 talked about 88-202. 89-36 is the paper that proposed
22 to the Commission the final rulemaking to implement
23 the provisions of the standardization policy, the so-
24 called 10 CFR 52.

25 Now, having said this, in order to

NEAL R. GROSS

COURT REPORTERS AND TRANSCRIBERS

1323 RHODE ISLAND AVENUE, N.W.

WASHINGTON, D.C. 20005

1 facilitate my presentation -- again I said this
2 already -- I'm going to separate the policy statements
3 and the related implementation plans into two groups.
4 The first group deals with standardization issues and
5 the second group involves safety issues. Now, since
6 the standardization issues are primarily procedural in
7 nature, their inter-relationship is distinct from that
8 of the safety issues. If you look at the overhead
9 monitors, as well as the slides that I have in front
10 of you, you see that Figure 1 is color coordinated.
11 The standardization issues are in blue and the safety
12 issues are in red. I hope that this will facilitate
13 the discussion as we go to the next viewgraph.

14 COMMISSIONER CURTISS: Excuse me.

15 DOCTOR SPEIS: Yes.

16 COMMISSIONER CURTISS: Before you go
17 forward, I want to make sure I understand --

18 DOCTOR SPEIS: Yes.

19 COMMISSIONER CURTISS: -- which initiative
20 these policy statements apply to. If I understand the
21 four boxes across the top, with the exception of the
22 advanced reactor policy statement, the other three
23 apply to all future reactors, including the
24 evolutionary, the passive and the advanced non-LWRs.
25 The green box, advanced reactor policy statement,

NEAL R. GROSS

COURT REPORTERS AND TRANSCRIBERS

1323 RHODE ISLAND AVENUE, N.W.

WASHINGTON, D.C. 20005

1 applies to everything -- all future reactors except
2 for evolutionary LWRs. Is that correct?

3 MR. KING: Yes, that's correct.

4 DOCTOR SPEIS: Yes, that's correct.

5 COMMISSIONER CURTISS: Okay. Thank you.

6 DOCTOR SPEIS: (Slide) Now, if we go to
7 the -- let's proceed with the standardization
8 integration first, which is slide number 5, the blue
9 and the slide green.

10 Now, this diagram shows the relationship of
11 the two Commission papers which implement the
12 standardization policy. In SECY-89-36, the staff
13 proposed a final rule to establish a new Part 52.
14 This new rule implements the Commission's
15 standardization policy statement and embodies as much
16 of the Commission's Proposed Standardization and
17 Licensing Act of '87 as our current legislative
18 authority permits. The new rule, of course, provides
19 for early site permits, standard design certification,
20 and combined licenses.

21 Unlike the other sections of Part 52 -- you
22 see here under Part 52 there are three main sections,
23 early site permits, standard design certifications,
24 combined licenses. The standard design certification
25 section applies only to certified designs. Excuse me,

NEAL R. GROSS

COURT REPORTERS AND TRANSCRIBERS

1323 RHODE ISLAND AVENUE, N.W.

WASHINGTON, D.C. 20005

(202) 234-4433

(202) 232-6600

1 applies only to standardized plans. Of course, this
2 is the focal point of Part 52 because the
3 standardization policy encourages the use of certified
4 designs in all future license applications.

5 Now, we have coordinated the development of
6 the criteria for design certification so that it
7 applies to both evolutionary LWRs and advanced reactor
8 designs. The criteria that were included in Part 52
9 to address the advanced reactor designs were derived
10 from SECY-88-202, as I said earlier.

11 Although the criteria in SECY-88-202
12 resulted from the staff's review of DOE's proposed
13 plans for standardization of their three advanced
14 reactor design concepts, the criteria are applicable
15 to all advanced reactor designs and therefore they
16 provide the basis for certain sections of the new rule
17 on standard design certifications as indicated in
18 figure 2. The criteria, of course, addressed the
19 standardization issues of scope of design to be
20 standardized, which is listed here; level of details
21 to be standardized; plan options to be standardized;
22 and the need for prototype testing.

23 COMMISSIONER CURTISS: On that latter part,
24 I went back to your breakdown of the future plants.
25 You've added CANDU to the list of advanced non-LWRs.

NEAL R. GROSS

COURT REPORTERS AND TRANSCRIBERS

1323 RHODE ISLAND AVENUE, N.W.

WASHINGTON, D.C. 20005

1 Given the terminology that we use, that's the place it
2 ought to be added. We've conventionally thought of
3 that category as reactors that have been paper designs
4 that would require prototype demonstrations. Do you
5 have a feel yet as to whether the CANDU design the
6 people are talking about is going to require a
7 prototype given what we know to date?

8 MR. MURLEY: Our understanding is that the
9 CANDU design, of which we are being asked to review,
10 will actually be built in New Brunswick. So, there
11 will be, in effect, a prototype done.

12 CHAIRMAN CARR: My reading of the recent
13 press the last week said that Ontario Hydro decided
14 not to build that plant and so they didn't have a
15 purchaser.

16 MR. MURLEY: No --

17 CHAIRMAN CARR: Maybe I misread it.

18 MR. MURLEY: Ontario Hydro does not have an
19 interest in this size plant, is my understanding.
20 We've had discussions --

21 CHAIRMAN CARR: So, they weren't -- who's
22 going to build it?

23 MR. MURLEY: New Brunswick.

24 CHAIRMAN CARR: Okay.

25 MR. MURLEY: The provisional government

NEAL R. GROSS

COURT REPORTERS AND TRANSCRIBERS

1323 RHODE ISLAND AVENUE, N.W.

WASHINGTON, D.C. 20005

1 will -- the deal isn't set yet, I'm told, but that
2 it's practically done. That will be the size that we
3 will be asked to review, which is that plant.

4 COMMISSIONER CURTISS: Let me follow up on
5 that, since it's an evolution of a Canadian design of
6 the third step down the line. If, for some reason, a
7 prototype of that size, the size that they'll seek to
8 certify in this plant, were not built, would prototype
9 be required in that case or would the experience
10 they've had up there with the CANDU design be
11 sufficient to address the safety issues?

12 MR. MURLEY: We haven't really discussed
13 that, Commissioner, in detail. My own thoughts on the
14 matter would be we probably would not because the
15 technology is really just an extrapolation from wide
16 experience that they do have in Canada.

17 COMMISSIONER CURTISS: Okay.

18 MR. STELLO: Let me add, I think one of the
19 points that they made when I talked to them is that
20 they were going to have a prototype in operation in
21 Canada. So, we really hadn't thought about it very
22 much. We were operating under the assumption that was
23 going to happen. Assuming that happens, then I think
24 we will have a prototype as part of it. Whether or
25 not then -- if they cancel it or they don't build it,

NEAL R. GROSS

COURT REPORTERS AND TRANSCRIBERS

1323 RHODE ISLAND AVENUE, N.W.

WASHINGTON, D.C. 20005

1 then it certainly will raise a question.

2 I think it's an issue of policy significance
3 such that the Commission itself would have to decide.
4 We'd bring to you our understanding and the facts as
5 best we know them, but I think that's a significant
6 policy question that the Commission itself would have
7 to take on. We're not prepared today to tell you
8 either way, except to say right now we understand that
9 the proposal that they have before us -- there will
10 be, in fact, such a plant in existence before we are
11 faced with that issue.

12 DOCTOR SPEIS: Mr. Chairman, Part 52 is very
13 flexible. It talks about the need to assess the needs
14 of prototype testing. Once we make the assessment,
15 then we'll come to the Commissioners.

16 The other point I was going to make on the
17 standardization integrations, the criteria for
18 resolution of these standardization issues were
19 developed to be consistent with the intent of the
20 Commission's policy on standardization advanced
21 reactors. These criteria, of course, provide the
22 basis for certain sections of the design certification
23 rule as indicated in this diagram, which I have listed
24 the pertinent sections.

25 The other point I would like to make, which

1 is not explicitly shown here, is that 10 CFR 52 also
2 incorporates the key provisions of the Commission's
3 severe accident policy statement for future plants by
4 specifying that designs should perform a PRA and
5 demonstrate technical resolution of the applicable
6 USIs, GSIs and the applicable TMI issues.

7 Accordingly, the staff has coordinated the
8 implementation of the standardization policy with the
9 applicable portions of the other policy statements and
10 promulgated the results through the 10 CFR 52
11 rulemaking.

12 (Slide) I would like now to turn to the
13 last viewgraph, the last slide, which addresses the
14 safety integration.

15 Now, this diagram again shows that the
16 safety goal, the top left, severe accident and
17 advanced reactor policies are implemented by four
18 Commission papers. Now, the key ingredient to this
19 whole effort here, to this whole process or approach,
20 is that the safety goal implementation plan, which is
21 described in 89-102, provides guidance for the other
22 three implementation plans. By following the guidance
23 in this SECY-89-102, the staff will achieve
24 coordination, integration in the resolution of the
25 safety issues addressed under the severe accident and

1 advanced reactor policies.

2 Since the Commission has been recently
3 briefed by the staff on the safety goal implementation
4 plan, I do not plan to discuss it farther. But in
5 SECY-89-102, the staff recommended Commission
6 authorization on a number of proposals dealing with
7 regulatory implementation of the safety goal. I would
8 like to be a little bit more explicit when I'm through
9 with the presentation on what are all these key
10 elements.

11 Mr. Chairman, you mentioned in the beginning
12 of the opening of this meeting that you would like to
13 hear from the staff what issues need some immediate
14 Commission attention and I think that's an important
15 one, the safety goal.

16 Being on the safety goal, if we -- we're on
17 the left and we'll proceed down under implementation
18 plan SECY-89-102. You see below, provides guidance to
19 existing plants and for future plants. In fact, the
20 level 4 safety goal objectives, which again are
21 discussed in the SECY-89-102, which are the accident
22 prevention objectives, address both existing and
23 future plants. The targets for existing plants will
24 be used to guide the staff in the integration and
25 closure of severe accident issues that apply to

NEAL R. GROSS

COURT REPORTERS AND TRANSCRIBERS

1323 RHODE ISLAND AVENUE, N.W.

WASHINGTON, D.C. 20005

(202) 234-4433

(202) 232-6600

1 existing plants as described in SECY-88-147.

2 The 88-147 is the integration plan that
3 discusses closure of severe accident issues for
4 existing plants, which we talked in detail last year,
5 and discusses the key programs, the IPE, the
6 development of generic containment performance
7 improvements with respect to severe accidents,
8 upgrading of staff and industry programs to improve
9 plant operations, a severe accident research program,
10 a program to define which and to what extent
11 vulnerabilities to severe accidents from external
12 events need to be included in the severe accident
13 policy integration. This is something that we owe you
14 by the next spring. And, of course, a program to
15 insure that licensees develop and implement severe
16 accident management programs at their plants, which
17 was discussed in SECY-89-12.

18 Let's see now. Moving to the center, the
19 implementation of the severe accident policy for future
20 plants is addressed separately for the evolutionary
21 LWRs and the advanced reactors. The implementation
22 plan for the evolutionary LWR designs, such as those
23 identified in table 1, is partially described in SECY
24 89-153. Of course this is the paper that describes
25 the design features of General Electric's advanced BWR

NEAL R. GROSS

COURT REPORTERS AND TRANSCRIBERS

1323 RHODE ISLAND AVENUE, N.W.

WASHINGTON, D.C. 20005

1 that Mr. Murley and his staff briefed you the last few
2 months. And we believe that the staff will
3 satisfactorily address the severe accident issues and
4 meet the safety goal targets for future plants as
5 specified in the implementation of the safety goal
6 Commission paper.

7 Now, the implementation of the severe
8 accident policy for other evolutionary LWRs, such as
9 combustion engineering system 80 and Westinghouse USR
10 SP/90, will be addressed in a similar fashion and be
11 described in future Commission papers. So the only
12 one we have given you so far from the evolutionary
13 LWRs is the advanced boiling water reactor paper.

14 Now this approach, going on a plant -- on a
15 design specific -- to implement the severe accident
16 policy for evolutionary LWRs replaces the staff's
17 previous proposal in SECY-88-248 to initiate generic
18 rulemaking for severe accidents. We understand that
19 you people would like to have more explanations why
20 this change and Tom can provide some answers today.
21 But I understand you want something more, describing
22 them in a complete Commission paper.

23 Finally, the implementation of the severe
24 accident in advanced reactor policies for the three
25 DOE sponsored advanced reactor designs is described in

1 SECT-88-203. In this SECY, the staff proposed a
2 general approach and criteria for the review of
3 advanced, non-LWR designs and specific criteria to
4 address the licensing issues.

5 These key issues can be summarized as
6 follows: what range of accidents must be considered
7 for design, siting and emergency planning? How should
8 siting source terms be calculated and used for designs
9 significantly different than current generation LWRs?
10 How should the adequacy of or the need for a
11 containment building be evaluated? This is the reason
12 that the paper, this specific paper, is on hold,
13 because we're waiting for additional information from
14 the Department of Energy, as Mr. King indicated
15 earlier.

16 Last, how should the adequacy of or need for
17 off-site emergency evacuation, sheltering and drills
18 are evaluated.

19 In addition, the criteria in SECY-88-203
20 also require an assessment of enhanced safety which is
21 consistent with the advanced reactor policy statement,
22 that "expects designs to provide enhanced margins of
23 safety." The proposed review approach and criteria
24 for the three DOE designs were developed to be
25 consistent with the intent and the guidance from the

NEAL R. GROSS

COURT REPORTERS AND TRANSCRIBERS

1323 RHODE ISLAND AVENUE, N.W.

WASHINGTON, D.C. 20005

1 Commission safety goal and severe accident policies.

2 Now, we intend, of course, to upgrade,
3 update SECY-88-203 to reflect additional information
4 to be provided by DOE, as I said already. We will
5 insure that the proposed review approach and criteria
6 in the revised SECY-88-203 again is consistent with
7 the general approach for safety goal implementation.

8 COMMISSIONER CURTISS: On the point, let me
9 follow up on Commissioner Roberts' question about 88-
10 203 because I'm a little bit confused --

11 DOCTOR SPEIS: Okay.

12 COMMISSIONER CURTISS: -- by the posture
13 that we're in on that paper at this point. The paper
14 was up before the Commission and, as I understand it,
15 proposed to address three key policy issues,
16 containment, emergency planning and source term for
17 the advanced non-LWRs and to do it in a generic
18 fashion prior to actual review of individual designed
19 SERs or individual designed PSIDs.

20 It was withdrawn because of a concern over
21 the approach that DOE was taking to containment for
22 the MHTGR that they were looking at for the production
23 reactor.

24 So, the posture that we're in now is SECY-
25 88-203 is formally withdrawn. I gather it's going to

NEAL R. GROSS

COURT REPORTERS AND TRANSCRIBERS

1323 RHODE ISLAND AVENUE, N.W.

WASHINGTON, D.C. 20005

1 be resubmitted in some form with those three issues
2 addressed.

3 I have two questions. Number one, we have
4 draft SERs coming through now, first on the MHTGR,
5 that's out, and on the prism draft SER pending before
6 the Commission. What's the staff's thinking in terms
7 of the need to address those policy issues prior to
8 the draft SERs rather than the final? Secondly, when
9 we address those issues, what's the staff's thinking
10 of whether we should address them in the context of
11 the specific designs or generically as 88-203
12 originally proposed?

13 MR. STELLO: Let me take a shot at trying to
14 answer, starting with the last question.

15 I think the more we've learned, the more
16 difficult it is to address that question generically
17 without some notion of what the design is. I'm sure
18 there are designs that one can come up with where
19 improvements in safety can be achieved by not having
20 the containment concept as we now know it. On the
21 other hand, I think equally so, there is a possibility
22 it would detract from safety by not having it. That
23 would depend on the specifics of the design. I think
24 attempting to --

25 COMMISSIONER CURTISS: Excuse me. It may

NEAL R. GROSS

COURT REPORTERS AND TRANSCRIBERS

1323 RHODE ISLAND AVENUE, N.W.

WASHINGTON, D.C. 20005

1 eve detract from safety given some aspects of the
2 design to have a containment from the standpoint of
3 natural circulation.

4 MR. STELLO: That's precisely the first
5 point he's making.

6 COMMISSIONER CURTISS: Okay.

7 MR. STELLO: There are things that one can
8 add to a facility to enhance safety where if you force
9 a containment you will detract then from overall
10 safety. On the other hand, there are other designs
11 where that is not the case and you could add a
12 significant improvement in safety by adding the
13 containment to it. But they are all, in my view,
14 really going to be driven by the proposed design.

15 So, I think trying to answer that question
16 generically is going to be very, very difficult and
17 will not be very, very useful until you actually,
18 physically have a design such as we now have on the
19 liquid metal designs or on the MHTGR where we can look
20 at it and provide enough analysis and enough
21 information for the Commission to make an informed
22 judgment on that particular design.

23 But to go and use that particular approach
24 and say, "This will now fit some other design," I
25 think is going to be so difficult that I'm not so sure

1 that it's worth you all doing at all.

2 COMMISSIONER CURTISS: Let me follow up on
3 that. We'll have the information -- in fact, I gather
4 we do, on the three designs now that are being
5 considered safer in Prism and the MHTGR, maybe more
6 detail on the latter. Are you saying that it's
7 premature to establish a generic policy before we go
8 through the draft SER but it would be appropriate
9 between the draft and the final or even before the
10 final SER --

11 MR. STELLO: I'm offering my personal
12 opinion. I think it would be best to make those
13 judgments for each design concept and to recognize
14 when you do so you may not have the same conclusion
15 for each design, the conclusions may be different.

16 COMMISSIONER CURTISS: I guess one of the
17 strains that I see running through here and what we're
18 talking about, much of what we're looking at here is,
19 as I understand it, the objective is to insure that
20 the next generation of plants will be standardized and
21 uniform. I guess in the instances where the
22 Commission and the staff have gone back and forth on
23 whether an issue should be addressed generically and
24 perhaps more uniformly, severe accident 88-248, 88-203
25 on advanced reactors, versus in the context of

NEAL R. GROSS

COURT REPORTERS AND TRANSCRIBERS

1323 RHODE ISLAND AVENUE, N.W.

WASHINGTON, D.C. 20005

(202) 234-4433

(202) 232-6600

1 individual designs.

2 It seems to me that the latter approach is
3 something that staff seems to strongly prefer. But
4 doesn't that get us back into the situation that we
5 have set out to avoid, which is we don't want each
6 individual reactor design having its own set of
7 requirements with its own safety philosophy? Isn't
8 that the objective to avoid?

9 MR. STELLO: Well, you need to be careful
10 because that's basically, I think, the Commission
11 recognizes that that may in fact be the case for
12 advanced reactors. I think the policy statement in
13 its simplest form simply says, "Look, for advanced
14 reactors, don't be preoccupied with our current rules
15 and regulations. But rather go with a clean sheet of
16 paper and see what one can come up with which would
17 make significant advances and improvements in safety
18 and not be constrained by regulation. We'll worry
19 about regulation after, not before, when it gets
20 complete freedom." Hence, you have concepts being
21 proposed with something as fundamental as not having a
22 containment. That's advanced reactors.

23 For the evolutionary reactors, we have had
24 considerable discussion in terms of what you will
25 really achieve and we have the ABWR before the

NEAL R. GROSS

COURT REPORTERS AND TRANSCRIBERS

1323 RHODE ISLAND AVENUE, N.W.

WASHINGTON, D.C. 20005

1 Commission. When that is finished and we are done, it
2 will, in fact, be a certified design. It will be
3 standardized.

4 Now, the next design to be certified, is it
5 clear that it has to meet the same detailed
6 requirements that were imposed on the ABWR by its
7 designer? This is one of the issues that we have
8 discussed at length. It isn't clear to me that that's
9 the case.

10 COMMISSIONER CURTISS: Should there be some
11 minimal degree of uniformity or standardization, for
12 lack of a better term?

13 MR. STELLO: Well, you're going to get the
14 standardization and certification through the process
15 itself.

16 COMMISSIONER CURTISS: I understand that.

17 MR. STELLO: Once it is finished, it is a
18 certified design and those are the designs we'll be
19 building.

20 COMMISSIONER CURTISS: So, for every GE ABWR
21 that's built, the Part 52 process will --

22 MR. STELLO: They will all be that way.

23 COMMISSIONER CURTISS: -- lead to the result
24 that all the reactors are the same. The question that
25 I'm raising is, for the GE ABWR that's built and the

1 CE plant and the Westinghouse plant and then if you
2 get into the passive reactors, the four additional
3 ones, should there be some degree of uniformity
4 standardization between and among those standardized
5 designs given the common safety features if they're
6 all LWRs?

7 MR. STELLO: The answer, I think, in terms
8 of safety goal policy is yes, they ought to have the
9 same end result in terms of their safety, overall
10 safety. But whether the detailed requirements ought
11 to be the same, I think my view is that that could
12 turn out to be unwise.

13 COMMISSIONER CURTISS: So you see the safety
14 goal driving the standardization?

15 MR. STELLO: That's really what you're
16 looking for. You'd like to see this improvement in
17 safety. If that's achieved in detail in a different
18 way in the next plant to be certified other than the
19 ABWR, it seems perfectly acceptable to me that it
20 could in detail.

21 COMMISSIONER CURTISS: Okay.

22 CHAIRMAN CARR: You mean in a specific, it
23 might be that some of those plants would require
24 different EPZs than others?

25 MR. STELLO: No, not in concept of the EPZ.

NEAL R. GROSS

COURT REPORTERS AND TRANSCRIBERS

1323 RHODE ISLAND AVENUE, N.W.

WASHINGTON, D.C. 20005

1 CHAIRMAN CARR: They might be able to do
2 that generically?

3 MR. STELLO: Yes. You have in front of you
4 today a regulation which they're all committed to meet
5 in terms of emergency planning. For the evolutionary
6 designs, one can raise the question should we go back
7 and reexamine --

8 CHAIRMAN CARR: But emergency planning is
9 one of those key issues that we have to make a
10 decision on.

11 DOCTOR SPEIS: Yes.

12 MR. STELLO: That's correct.

13 DOCTOR SPEIS: But it is possible that you
14 could have a graded approach to EPZ for advanced LWRs.

15 MR. STELLO: But if you look at the
16 evolutionary PWRs, the 600 megawatt ABWR and PWR
17 coming down the pike, one can raise the question is it
18 possible to improve safety enough in those designs
19 where we would be able to justify for those designs
20 different emergency planning requirements than you may
21 have for the ABWR. I think that that question ought
22 to be allowed to be on the table.

23 CHAIRMAN CARR: Well, it seems logical if
24 you're talking 1300 megawatts or 300 megawatts that
25 there is some difference.

NEAL R. GROSS

COURT REPORTERS AND TRANSCRIBERS

1323 RHODE ISLAND AVENUE, N.W.

WASHINGTON, D.C. 20005

1 MR. STELLO: And I think it ought to be on
2 the table. So, if I said -- if I want emergency
3 planning then to be the same for the ABWR that it was
4 going and everyone down the pike ought to have that, I
5 think you are creating an environment where the
6 incentive to improve safety might not be what we want.
7 Perhaps you can get a significant enough improvement
8 where at least the question should be asked and
9 answered. So, I would leave it as hopefully an
10 option.

11 Remember we're talking about the three kinds
12 of reactors. We're talking about -- if you turn the
13 slide. I forgot which one it is anymore, that lists
14 the reactors.

15 DOCTOR SPEIS: The second slide.

16 MR. STELLO: When you talk about the
17 evolutionary light water reactors, the advanced light
18 water reactors and then advanced non-light water
19 reactors, I can see that you want to leave the
20 flexibility and that's what I think the policy that
21 you have on the table does, to allow for things to be
22 different in each of these.

23 COMMISSIONER CURTISS: To go back to that
24 point, to take the Chairman's example of emergency
25 planning, you see the potential for -- at least we

NEAL R. GROSS

COURT REPORTERS AND TRANSCRIBERS

1323 RHODE ISLAND AVENUE, N.W.

WASHINGTON, D.C. 20005

1 ought to leave open the option that we would take a
2 different approach for those three categories because
3 the evolutionary or the 1250 megawatt ABWR may lead
4 you to a different conclusion than the 600 megawatt
5 SBWR. So, the regulatory approach ought to permit
6 that kind of flexibility.

7 Back to my earlier point, is that also true
8 between and among the individual plants within those
9 categories? What we we're talking about now in severe
10 accident, for example, is to address severe accident
11 first in the context of the ABWR and then the System
12 80+ and then the SP/90, do it plant specific within
13 the category of evolutionary LWRs, where it seems to
14 me that the safety principles and the systems and
15 components are much more common to one another.

16 It's in that area -- I understand your point
17 that there's a need to permit flexibility between
18 those three categories. But within the categories, I
19 guess it's in that area that my concern arises, that
20 there is a design specific approach emerging in the
21 case of severe accidents 88-248 and for reactors to
22 jump over 88-203 that permits greater flexibility but
23 different perhaps detracts from the extent to
24 standards and the standardization that could be
25 achieved.

NEAL R. GROSS

COURT REPORTERS AND TRANSCRIBERS

1323 RHODE ISLAND AVENUE, N.W.

WASHINGTON, D.C. 20005

1 MR. STELLO: Well, if you look at the chart,
2 you're asking for the -- with respect to emergency
3 planning judgment, is it likely to be the same for all
4 reactors in that case, judgment? Probably yes. Will
5 it be possible to get it to be different from the
6 evolutionary light water reactors to the advanced
7 light water reactors? I would think clearly you ought
8 to allow the question to be opened. More
9 emphatically, you have allowed it to be opened in your
10 policy statement for the advanced reactors. So, you
11 have some gradation, and I'm being specific with
12 emergency planning.

13 So, I think for emergency planning, I can at
14 least give you judgments. It's probably going to be
15 the same. Our rule right now basically says you apply
16 Part 50 as it is. However, in its technical detail,
17 and let's take whether you inert or don't inert,
18 that's a difference. If you want to write a rule
19 saying everybody should inert, I think that would be a
20 big mistake. I don't think you should do that.

21 Should you take any technical detail and
22 say, "I want to freeze it with respect to the severe
23 accident issue and not allow that to be handled
24 differently"? You could do that if you wanted to. I
25 wouldn't suggest it because I don't think we have

NEAL R. GROSS

COURT REPORTERS AND TRANSCRIBERS

1323 RHODE ISLAND AVENUE, N.W.

WASHINGTON, D.C. 20005

1 enough information and looked at enough of the designs
2 to feel comfortable that we won't somehow interference
3 with safety if you do do it. I just don't feel
4 comfortable. That doesn't mean you can't do it. You
5 certainly can.

6 COMMISSIONER CURTISS: Take a different
7 example, source term for the evolutionary LWRs. At
8 the GE ABWR briefing, the staff laid out its thinking
9 on the application of the source term to the GE plant,
10 but emphasized that the decision was only being made
11 for the GE plant and not for closing the discussion of
12 a different approach in the context of the accident
13 design requirements document.

14 Does that mean that within the evolutionary
15 category, on an issue that in my judgment just
16 viscerally seems to be an issue that ought to be
17 treated generically, could be treated differently for
18 the GE plant, the CE and the Westinghouse plant?

19 MR. STELLO: I think it very well -- you
20 want to treat it differently for those plants. I
21 don't think you want it to be the same. We need to
22 get away from this hypothetical source term work into
23 the reality of the realism of how is, in fact, science
24 and nature controlling source terms.

25 In the boiling water reactor with the pool

NEAL R. GROSS

COURT REPORTERS AND TRANSCRIBERS

1323 RHODE ISLAND AVENUE, N.W.

WASHINGTON, D.C. 20005

(202) 234-4433

(202) 232-6600

1 design that it has a natural scrubbing mechanism where
2 the source term, even under severe accident sequences,
3 would be different than a large dry concept. So, I
4 think even for something as fundamental as that
5 question, I would strongly urge that we not try to
6 freeze requirements in.

7 It concerns me because I think you tend to
8 make a decision that when a designer sees it, will
9 move a design and preclude some good ideas from coming
10 forward that I don't think we're smart enough or I
11 feel comfortable enough wanting to do that. I would
12 rather allow a lot more latitude with the designers to
13 do more innovation with safety within the framework of
14 our current goals than try to sit down and freeze them
15 out.

16 I said it's my view --

17 CHAIRMAN CARR: So, the standardization in
18 design is not going to standardize regulation?

19 MR. STELLO: Correct.

20 CHAIRMAN CARR: That's what I read you're
21 saying.

22 MR. STELLO: Yes.

23 CHAIRMAN CARR: All those advanced BWRs,
24 however you approve that standardized design, they're
25 all going to look like cookie cutters.

NEAL R. GROSS

COURT REPORTERS AND TRANSCRIBERS

1323 RHODE ISLAND AVENUE, N.W.

WASHINGTON, D.C. 20005

1 MR. STELLO: That's exactly the concept.

2 CHAIRMAN CARR: If one's inerted, they're
3 all inerted.

4 MR. STELLO: That's correct.

5 CHAIRMAN CARR: Okay.

6 COMMISSIONER ROGERS: Well, I think this
7 conversation that we've been having for the last 15
8 minutes or so illustrates a very important point that
9 is implicit, I think, in some of the things that
10 you've been saying, Vic. That is that really the
11 setting of policy and the implementation of that
12 policy cannot be entirely separate activities, that
13 the setting of policy, in fact, has to be in the
14 context of the reality of implementation. It cannot
15 be an open loop process. It has to be a feedback
16 process.

17 I think we've been somewhat approaching this
18 from the point of view that we can set policy and then
19 we implement -- you set the policy, you freeze it,
20 then you implement it. I think that's a very
21 simplistic view and a too simplistic view of, in fact,
22 what has to happen. So, I think we're getting into
23 that problem because we approach policy with a set of
24 preconceived notions that are somewhat colored by the
25 state of affairs at the moment the policy is set.

NEAL R. GROSS

COURT REPORTERS AND TRANSCRIBERS

1323 RHODE ISLAND AVENUE, N.W.

WASHINGTON, D.C. 20005

(202) 234-4433

(202) 232-6600

1 But as implementation proceeds, new
2 perceptions emerge as to important issues -- you've
3 been citing some of them here today -- that, in fact,
4 raise new policy issues. I think that what I'm
5 concerned about is that those are the policy issues
6 that really have to be dealt with by the Commission,
7 namely those things that come out and emerge from an
8 apparent diversity within the possibilities of
9 implementation and that somehow this integration of
10 policy has to include the, if you want, a kind of
11 higher level of thinking than we've seen so far with
12 respect to the issues that come out of implementation.

13 So, I'm uncomfortable with the process
14 because we're groping with a process here. I don't
15 think we have a process. I think we're groping with
16 one. But I think that all of my experience over the
17 last couple of decades in anything involving policy
18 and implementation is that you cannot separate those
19 entirely, that they evolve together. We're seeing
20 that and we're seeing an attempt to try to bring some
21 consistency into our process in the changing world of
22 implementation. I think that it's always going to be
23 a challenge and I don't think it's a process that's
24 ever going to be entirely finished.

25 So, I hope that as we approach this question

NEAL R. GROSS

COURT REPORTERS AND TRANSCRIBERS

1323 RHODE ISLAND AVENUE, N.W.

WASHINGTON, D.C. 20005

1 of integrating policy, you really recognize those
2 realities of life in the real world and not try to
3 think that we can do the whole thing in an open-ended
4 way. It's got to be a closed loop process.

5 MR. STELLO: I agree with you. I think
6 we're in that process right now on the ABWR. I think
7 what you just described is precisely what's going on
8 in the ABWR.

9 COMMISSIONER ROGERS: But, you see, what's
10 surfacing, I think, is a new collection of what, in
11 effect, are policy issues that if we're not careful
12 will simply become implementation issues. It's those
13 policy issues that I think ought to get back up to
14 this level so that we can deal with them.

15 MR. MURLEY: Could I comment on -- I'd like
16 to explain it this way. We think that we're under the
17 broad -- we're moving ahead on the ABWR under the
18 broad policy of the severe accident policy statement.
19 But in implementing it, you're quite right, we bring
20 out new issues which are themselves policy issues,
21 like the source term, like other things. What we do
22 in that case is we come to the Commission with those
23 sub-issues which --

24 COMMISSIONER ROGERS: Okay. But now they
25 have to be integrated. You see?

NEAL R. GROSS

COURT REPORTERS AND TRANSCRIBERS

1323 RHODE ISLAND AVENUE, N.W.

WASHINGTON, D.C. 20005

1 MR. MURLEY: Yes.

2 COMMISSIONER ROGERS: That's the concern
3 that I have, that they're going to pop up like
4 mushrooms. They may not, apparently, have a
5 connection and yet from an overall policy point of
6 view, they should be integrated as well.

7 COMMISSIONER CURTISS: Let me pick up on
8 that point because the ABWR is a good example of that
9 and I understand how it's driving the process because
10 it's the lead application here. I think the point
11 that Commissioner Rogers is making, that the policy,
12 when implemented, I think is going to lead to
13 additional policy questions or at least focus in our
14 own eyes the way the policy is being implemented and
15 whether that requires any adjustment in the policy.

16 Take the GE plant, for example. At the last
17 briefing when we discussed the vent question, I guess
18 I didn't understand the full nuance of the approach
19 that was being suggested for the GE plant where a
20 vent is being proposed that has two rupture disks and
21 two open valves.

22 Now, if that's the design, the policy
23 question, as I went back to my office and looked at
24 that, it seems to me is do we in the context of that
25 design review or any design review want to have an

NEAL R. GROSS

COURT REPORTERS AND TRANSCRIBERS

1323 RHODE ISLAND AVENUE, N.W.

WASHINGTON, D.C. 20005

1 advanced reactor, a future reactor that has an
2 engineering containment failure mechanism built into
3 it, first. Secondly, does it make any difference
4 whether that design without that mechanism could meet
5 the safety goal?

6 I want to come back to how we apply the
7 safety goal in a minute, but it seems to me that those
8 are two significant policy questions that have arisen
9 as I reflected upon that briefing, taking a look at
10 the implementation of the policy already established
11 that led to that result. In my own mind, I guess,
12 that's an example of what I see Commissioner Rogers
13 emphasizing, that as the policy gets applied and
14 implemented, as the broad outlines that are laid out
15 drive the staff in the direction of addressing issues,
16 it's conceivable that additional policy questions will
17 come up and that the dimensions of those need to be
18 explained to and understood by the Commission.

19 COMMISSIONER ROGERS: And there may be
20 inconsistencies that we're forced into that then have
21 to be examined.

22 MR. STELLO: I agree. The question, I
23 think, is driven by should valves be open or closed?
24 If they're closed, you meet all of the regulations for
25 current designs. So, I think the debate then centers

NEAL R. GROSS

COURT REPORTERS AND TRANSCRIBERS

1323 RHODE ISLAND AVENUE, N.W.

WASHINGTON, D.C. 20005

1 around we don't have that particular specific
2 arrangement built into the regulation. If you close
3 both vales, they would be.

4 CHAIRMAN CARR: Well, a lot depends on
5 whether those valves are on the reactor side, the
6 rupture disks or external to the rupture disks.

7 MR. STELLO: Well, if they're in a connected
8 pipe and there is a penetration and you go to our
9 general design criteria and they tell you what to do
10 for the location of the valves. If they're both
11 normally closed valves, I think you can deal with
12 these.

13 COMMISSIONER CURTISS: I guess I'd back up
14 even a step further.

15 MR. STELLO: But the question was, should
16 you have a vent at all?

17 COMMISSIONER CURTISS: Right, do you even
18 need the containment penetration for that plant.

19 The 5034-F, I think --

20 MR. STELLO: Right.

21 COMMISSIONER CURTISS: -- provides for if
22 that design, without that penetration, would be in our
23 safety goal.

24 CHAIRMAN CARR: But that's not a policy.
25 The policy is already there. It's a technical

NEAL R. GROSS

COURT REPORTERS AND TRANSCRIBERS

1323 RHODE ISLAND AVENUE, N.W.

WASHINGTON, D.C. 20005

(202) 234-4433

(202) 232-6600

1 question whether it meets the policy with or without
2 the vent. There is a policy question of if the vent
3 is in, do you have -- are you riding on those rupture
4 disks or are you going to have some manual control
5 over the venting.

6 MR. STELLO: And I think that that's
7 strictly a technical question that we provide the
8 technical basis to the Commission and say, "Here is
9 what we believe is the right way to deal with that
10 issue." Our regulation already requires the opening.
11 They have put a vent in it and they have designed it
12 in a certain way. Technically is it correct? We
13 analyze it, come to the Commission and we say, "We
14 believe this is technically correct. We believe this
15 is the correct way to go and then the Commission
16 decides that that is an acceptable way for that
17 design. Eventually that will be codified in the
18 regulations through the process of certification. So,
19 whatever it is eventually becomes part of the
20 Commission's regulations itself at the end.

21 But is that, in fact, as Commissioner Rogers
22 pointed out, that sub-policy question that gets raised
23 then, is it handled correctly? I think that's a
24 legitimate question to ask. Hopefully we've answered
25 it. If we haven't, then that's a legitimate issue to

NEAL R. GROSS

COURT REPORTERS AND TRANSCRIBERS

1323 RHODE ISLAND AVENUE, N.W.

WASHINGTON, D.C. 20005

1 pursue further, whether technically an analysis to
2 support that particular proposal is correct or is what
3 the Commission wants. Ultimately, the Commission must
4 decide. You can decide it now or you again will be
5 faced with the issue through the incorporation of that
6 certified design in your regulations. By definition,
7 you will decide it then.

8 So, there's two occasions when it will come
9 up. Now, as we've briefed you, because we think we've
10 faithfully implemented your policy and your guidance
11 and the implementation of it gave certain technical
12 details which we've hopefully done a good job on.

13 CHAIRMAN CARR: I hate to bring this up, but
14 I don't think they answered your original question and
15 I don't remember it. Do you want to proceed?

16 COMMISSIONER CURTISS: Well, I had one other
17 question on the safety goal subject. Since we're on
18 the topic, let me just ask it.

19 The safety goal, as I understand it, is a
20 concept that would be applied not to individual plants
21 but to regulations or to the collective average of
22 plants. The idea was not to apply it to Peach Bottom
23 or to Surry or to specific plants given its inherent
24 uncertainties.

25 As you look at the question of future

NEAL R. GROSS

COURT REPORTERS AND TRANSCRIBERS

1323 RHODE ISLAND AVENUE, N.W.

WASHINGTON, D.C. 20005

1 reactors where there's going to be a specific design
2 certified to be referenced by potential multiple
3 applicants, how do you envision applying the safety
4 goal say to the GE ABWR or to the Pius reactor where
5 you really are talking about applying it to a specific
6 design and where the collective average of the
7 industry isn't available at that point? How do you
8 envision -- it wasn't clear to me the implementation
9 plan as I read through that, how that would actually
10 be brought to bear.

11 DOCTOR SPEIS: Can I talk about it?

12 MR. STELLO: Go ahead.

13 DOCTOR SPEIS: We have attempted to do this
14 on the MHTGR, which is discussed in the paper. We
15 used the safety goal to address the issue of accident
16 selection source term.

17 Tom, could you describe the process? You
18 recall it more than I do.

19 MR. KING: Yes. Using the MHTGR as an
20 example, we did use the safety goal objectives to try
21 and define the range of events and accidents that need
22 to be looked at in that design. Those, when you apply
23 them to the MHTGR, they're applied in a design
24 specific way, but the objective is the same, to meet
25 the safety goal objectives.

NEAL R. GROSS

COURT REPORTERS AND TRANSCRIBERS

1323 RHODE ISLAND AVENUE, N.W.

WASHINGTON, D.C. 20005

1 We view for future plants, particularly the
2 ones that are going into design certification, that
3 they will be a class of plants. They won't be applied
4 to an individual plant and therefore the application
5 to the safety goal or the use of the safety goal
6 objectives in trying to develop criteria for those
7 plants is consistent with the use of the safety goal
8 not on individual plants but on a group of plants.

9 We did allude to that or talk about that in
10 the SECY paper on the policy statement integration.
11 It does cover that on page 6. Maybe it's not as clear
12 as it should be.

13 COMMISSIONER CURTISS: Jumping back to the
14 ABWR example, is it correct to say that the safety
15 goal would be applied in a manner where you'd look at
16 the application submitted by GE, you'd evaluate the
17 vent and use the safety goal for purposes of
18 determining whether that plant needs a vent to meet
19 the safety goal?

20 MR. STELLO: Tom, start to answer the
21 question on the ABWR.

22 MR. MURLEY: I can give you an example of
23 how we have used it as guideline in our thinking about
24 approaching the review of the ABWR. The severe
25 accident policy statement and guidance by the

1 Commission is that the evolutionary plants, the next
2 generation ought to be safer than today's current
3 plant.

4 So, we have taken that to mean that the core
5 melt guideline ought to be about 10^{-5} per reactor year
6 in these plants. And that for any given individual
7 sequence, it ought to be 10^{-6} per reactor year for
8 station blackout, for whatever. These are just
9 guidelines now. The overall large release guideline
10 in the safety goal, which is 10^{-6} per reactor year,
11 ought to be met and demonstrated through PRA.

12 In addition, we have used a guideline on the
13 containment itself, even though it does not show up in
14 the safety goals. We have kind of taken a belt and
15 suspenders approach which says that whether we try to
16 meet that large release guideline by knocking down the
17 core melt frequency very, very low, which is a good
18 thing to do, we think you also ought to work on the
19 containment and we have a goal there of 10^{-1} ,
20 conditional containment failure probability.

21 That guideline has caused GE to make some
22 changes in the design or some design features, one of
23 which I understand is the vent which caused them to
24 install that feature in order to insure that the
25 containment doesn't fail via over pressure means.

NEAL R. GROSS

COURT REPORTERS AND TRANSCRIBERS

1323 RHODE ISLAND AVENUE, N.W.

WASHINGTON, D.C. 20005

1 These are kind of the thinking that has gone
2 into the ABWR review. They are consistent. It's, I
3 think, a self consistent kind of set of guidelines.
4 We're not being absolutely rigid on them, but on the
5 other hand it's helped us in our review and they seem
6 to be able to meet them.

7 COMMISSIONER CURTISS: Okay.

8 DOCTOR SPEIS: But this is not that much
9 different from present plants because we take the PRA,
10 which is the underpinning of the safety goal and go
11 through the process. After we review a plant that has
12 done a PRA, we ask the question why has it met or not
13 met the safety goal. Then we use that information to
14 look at regulations, source specific systems. It's
15 that process that we partake.

16 COMMISSIONER CURTISS: Thank you.

17 CHAIRMAN CARR: Proceed, if you can remember
18 where you were.

19 DOCTOR SPEIS: I think I have finished, Mr.
20 Chairman.

21 CHAIRMAN CARR: Anybody disagree with that?

22 MR. MURLEY: I have one comment.

23 DOCTOR SPEIS: The only one I was going to
24 make is that I think the issue of the safety goal is a
25 very important one. Tom just described the process

NEAL R. GROSS

COURT REPORTERS AND TRANSCRIBERS

1323 RHODE ISLAND AVENUE, N.W.

WASHINGTON, D.C. 20005

1 that he used to assess whether the ABWR meets the
2 advanced reactor and the severe accident policy.
3 There are a number of things that we have proposed,
4 both in the 89-102 and the 88-147 that deals with
5 safety goals. It is very important that we get your
6 guidance in this area because we are proceeding to
7 make many decisions. It's almost a daily happening at
8 NRC, in resolution of safety issues, of USIs.

9 MR. STELLO: Okay. Tom had one additional
10 comment, Mr. Chairman, if he may, on the CANDUs and
11 then I'd like to conclude, if I can.

12 MR. MURLEY: Yes. The discussion talks
13 about the three categories of plants, the evolutionary
14 LWRs, advanced LWRs and advanced non-LWRs. There's a
15 point I need to make, that the CANDU, although it's in
16 the third category, in fact it is a very mature design
17 and well developed in Canada. It's not known to us in
18 the United States. But when we get an application in,
19 and we've already got a letter of intent to submit an
20 application for review, we are approaching that from
21 the point of view that it is going to meet the kinds
22 of guidelines and regulations that we have today.
23 That is to say we're assuming it's going to have a
24 containment and that it will have emergency planning
25 and that sort of thing.

NEAL R. GROSS

COURT REPORTERS AND TRANSCRIBERS

1323 RHODE ISLAND AVENUE, N.W.

WASHINGTON, D.C. 20005

1 So, I don't personally consider the CANDU in
2 the same kind of category as a developmental liquid
3 metal reactor or gas cooled reactor.

4 If the Commission wants us to back up and
5 consider all the options on the CANDU, then our
6 thinking is going to change. That is, our approach to
7 reviewing the design will change.

8 COMMISSIONER CURTISS: Well, that was really
9 my earlier point to when I raised the point. It seems
10 to me that now that we've got CANDU in or there's
11 discussion of CANDU coming before us, the Part 52
12 approach was developed really before that. That
13 category of plants we had traditionally thought about
14 as being the plants that are paper designs that
15 haven't operated and from the standpoint of the
16 prototype requirements we've just informally viewed in
17 a particular way. They'd have to have a prototype
18 constructed or a test of some sort that could
19 demonstrate the safety features.

20 The CANDU reactor, while it's not operating
21 in this country, is operating and it seems to me that
22 there's a significant amount of information we could
23 gain from that, even if the third generation isn't
24 built as a prototype up in Canada. But as I recall,
25 in Part 52 there was some discussion about the

NEAL R. GROSS

COURT REPORTERS AND TRANSCRIBERS

1323 RHODE ISLAND AVENUE, N.W.

WASHINGTON, D.C. 20005

1 prototype in the context of reactors built in this
2 country. That's why I raised the question. I'll go
3 back and take a look at that. But I do think that's a
4 good point.

5 MR. STELLO: Well, let me conclude, Mr.
6 Chairman. I think your comment at the opening of the
7 meeting is this is an issue you've had some difficulty
8 with. I think maybe it is at least clear that this
9 is, in fact, a very complicated issue or set of
10 issues, perhaps, that really embraces the entire
11 process of regulation for everything that's coming
12 down the pike in the future. We're trying to take on
13 a great deal by being guided at what to do for this
14 very large collection of plants that we're likely to
15 see in the future.

16 So, I hope we've made some progress. But if
17 you can help direct us as to what more you want, we'd
18 be happy to do it.

19 CHAIRMAN CARR: Any questions? Commissioner
20 Rogers?

21 COMMISSIONER ROGERS: Just an observation
22 and maybe some comments. What you say is absolutely
23 right, that we are facing here really the essence, in
24 a sense, of the whole future of what we do and how we
25 do it. We're talking about bringing together in an

NEAL R. GROSS

COURT REPORTERS AND TRANSCRIBERS

1323 RHODE ISLAND AVENUE, N.W.

WASHINGTON, D.C. 20005

1 integrated fashion all of the policies that govern
2 this whole regulatory business that we're engaged in.

3 So, I think that we ought to regard this as
4 a very, very serious challenge to be met, that it
5 isn't simply bringing the papers altogether in some
6 way so that they connect. What we've seen here is a
7 collection of diagrams that indicate the
8 interconnections of these various papers. Now, that's
9 very important. That's very helpful for us to try to
10 see how they relate in a sense.

11 But what I'm concerned about is somehow or
12 other distilling the essence out of this whole
13 process, which comes from boiling it, to get to really
14 the key policy matters which guide us for the future
15 and should guide any Commission for the future, that
16 we perceive what they are, that we're not bound too
17 much either by the past or the immediacy of
18 applications to rise to a somewhat higher level of
19 abstraction and try to keep that in a consistent way
20 as we proceed. It's a constant challenge as we see
21 how to apply these policies and what they are.

22 So, I think that you're engaged here in an
23 extremely important activity. I don't think it's ever
24 going to be totally completed, but it's something that
25 in my view needs constant work and somehow we have to

NEAL R. GROSS

COURT REPORTERS AND TRANSCRIBERS

1323 RHODE ISLAND AVENUE, N.W.

WASHINGTON, D.C. 20005

1 bring to the process those tools which we've found in
2 our own business have been very important.

3 For example, what do we have in the way of a
4 quality assurance program on our integration efforts?
5 We're trying to do it. What do we have that gives us
6 confidence in a sense that somehow we're succeeding in
7 this integration of policy statements? That's a
8 terrific challenge. How can we be assured that there
9 aren't any contradictions in any of these things that
10 have been developed, at least initially, largely
11 independently within staff, different offices?

12 So, are there any contradictions, are there
13 any gaps, are there any new policy issues which emerge
14 from the total system we've created that we didn't
15 perceive when we started piecemeal upon it? So, I
16 think we're talking about a process where which is at
17 the heart of the whole regulatory philosophy that
18 we're engaged in.

19 So, while your presentation to us may be
20 done, for today it seems to me we've opened something
21 here that I think has to be pursued in a very
22 systematic way that gives confidence and comfort to
23 the entire Commission.

24 I have to tell you that I'm not there yet.
25 I feel that you're working very hard, you're doing

1 some good things. I want to compliment you and not
2 criticize you, but it's a very tough problem. I don't
3 feel comfortable that we've integrated our policies
4 because I think there are a whole host of policies
5 that that very activity brings to the surface that I
6 haven't heard anything about that. I don't even know
7 what all of those are. So, I haven't given you any
8 guidance, but I have put a great big question mark up
9 there about how we proceed from here.

10 CHAIRMAN CARR: Commissioner Curtiss?

11 COMMISSIONER CURTISS: Just one loose end to
12 tie up. There was a question that I'm not sure I
13 understood the answer to.

14 On 88-203, **Vie**, based upon what your
15 current thinking is and as you've seen the reactor
16 designs come in for review for advanced reactors, do
17 you envision at this point that the major policy
18 issues that were identified in 88-203, containment,
19 emergency planning and source term, are issues that
20 you're going to want to address in the context of
21 specific designs rather than in a broader approach
22 along the lines that was originally suggested?

23 MR. STELLO: That's my view.

24 COMMISSIONER CURTISS: Okay.

25 MR. STELLO: It would be better.

1 COMMISSIONER CURTISS: All right. Thank
2 you.

3 That's all I have.

4 CHAIRMAN CARR: When is the staff's estimate
5 on when DOE is going to provide the additional
6 information on containment?

7 MR. STELLO: Do you know the date?

8 MR. KING: I don't have an exact date. I am
9 told it will be months from now. Plural, not
10 singular.

11 COMMISSIONER ROGERS: It was months from a
12 year ago, wasn't it?

13 MR. STELLO: The original date was June.
14 Then I heard this summer and now what I'm hearing is--
15 - I guess months could still mean this summer, but
16 that would be September.

17 CHAIRMAN CARR: If they were only defense
18 reactors, we could get some action on this pretty
19 soon, hopefully.

20 MR. BECKJORD: Tom, my understanding is that
21 the study and the information was submitted to DOE and
22 it's in review and they're going back to make
23 undertake some further consideration.

24 MR. STELLO: Do you think it will be this
25 summer?

1 MR. BECKJORD: I don't think so.

2 MR. STELLO: No?

3 CHAIRMAN CARR: Well, after we do get it,
4 how long is it going to take us to provide the updated
5 paper on the key licensing issues?

6 MR. STELLO: Mr. Chairman, I think we can
7 answer that question when we see what we get. If we
8 don't get --

9 CHAIRMAN CARR: Well, that's bounded a
10 little.

11 MR. STELLO: If we get garbage, we won't
12 have anything. If we get an absolutely first-class,
13 super answer, we would be ready to come back to you in
14 a month

15 MR. BECKJORD: Well, we need a couple
16 months, right?

17 MR. STELLO: I said it depends. It depends
18 on what we get.

19 CHAIRMAN CARR: From one month --

20 MR. STELLO: Usually you get somewhere in
21 the middle.

22 CHAIRMAN CARR: Well, say from a month up,
23 depending on quality. How's that?

24 MR. STELLO: I said the soonest we could do
25 it if we had a first-class job, absolutely first-

NEAL R. GROSS

COURT REPORTERS AND TRANSCRIBERS

1323 RHODE ISLAND AVENUE, N.W.

WASHINGTON, D.C. 20005

(202) 234-4433

(202) 232-6600

1 class, where we don't have to go back to them, is a
2 month.

3 CHAIRMAN CARR: Now, while we're waiting,--

4 COMMISSIONER CURTISS: Let me follow up on
5 that while you're on it. One of the points that I
6 guess I've never understood is if the department is
7 making the decision to put a containment on their NPR - -
8 MHTGR, production reactor, for policy reasons, that is
9 to say there's no safety basis for doing it in their
10 view but they recognize the concerns that the public
11 might have about that, is there a nexus between that
12 issue and that approach and what we might decide to do
13 for the advanced reactors?

14 Or put it differently. If we didn't get
15 anything back from DOE on that issue or we got poor
16 explanation, would we have to stop in our tracks? I
17 presume we'd go forward and make a safety
18 determination on containments or advanced reactors.

19 MR. STELLO: You recognize that even in the
20 package that we've given the Commission there are a
21 number of issues in there that, depending on the
22 outcome of them, it could change a view whether you
23 needed containment or not. Fuel design, for example.
24 If the fuel doesn't really work out, notwithstanding
25 no matter what DOE says, we may then say, "I'm sorry,

NEAL R. GROSS

COURT REPORTERS AND TRANSCRIBERS

1323 RHODE ISLAND AVENUE, N.W.

WASHINGTON, D.C. 20005

1 you needed containment." So, there are other issues
2 that drive whether or not you're going to need a
3 containment. Those are issues that they have yet to
4 address.

5 So, if it's strictly a -- I don't understand
6 that --

7 COMMISSIONER CURTISS: Not just the issue of
8 containment.

9 MR. STELLO: No, there are other issues that
10 in there that could drive that issue as well. We
11 explained those in the paper. I'm not so sure I
12 understand if somebody says it's a matter -- "I just
13 decided this because of policy."

14 COMMISSIONER CURTISS: Well, whatever the
15 reason. If they don't come back for --

16 MR. STELLO: That's not what we were told
17 when we met with them.

18 COMMISSIONER CURTISS: If they don't come
19 back with a safety justification for it and if we
20 continue to spin our wheels on resolving the apparent
21 differences in approach between the NPR and the
22 commercial version of the HTGR, then at some point if
23 the commercial version is pursued, I think we're going
24 to have to make the same --

25 MR. STELLO: I agree with you and we will

1 bite that bullet and recommend to the Commission which
2 way to go based on what we get.

3 COMMISSIONER CURTISS: Okay.

4 CHAIRMAN CARR: Okay. My next question is,
5 should we not separate out some of the key licensing
6 issues and resolve them by the Commission prior to
7 receiving that?

8 MR. KING: I would recommend we don't. The
9 issues in 88-203 are interrelated. The question of
10 containment is driven by the question of --

11 CHAIRMAN CARR: But your charts show that
12 you're using 88-203 all the way down the line and it's
13 just sitting there and we're not giving you any
14 decision on it. You're operating as if it's already
15 been approved. So, six months from now we come back
16 and say "Uh-uh." Is that going to cause you a
17 problem? Six months is too early. A year from now
18 when we come -- we may not have the paper in six
19 months. But a year from now when we come back and
20 say, "Uh-uh, we don't like that," then what's going to
21 happen?

22 MR. STELLO: My recommendation, Mr.
23 Chairman, would be to find out what the schedule is.
24 I assume it's several months. We'll get the
25 information from DOE and then we'll have that in front

NEAL R. GROSS

COURT REPORTERS AND TRANSCRIBERS

1323 RHODE ISLAND AVENUE, N.W.

WASHINGTON, D.C. 20005

1 of us and that ought to drive the whole system because
2 I think some of the issues that are in that paper that
3 you have to address are pretty tightly coupled to what
4 I think we're going to get from them.

5 CHAIRMAN CARR: So, whatever you need the
6 decision on in your charts there for 203, you don't
7 care what we do with it when we finally get it?

8 MR. STELLO: No.

9 CHAIRMAN CARR: Well, you don't have it and
10 you're using it.

11 COMMISSIONER CURTISS: Well, I think they're
12 using it in a way that Vic's described. I think what
13 they're saying, if I understood the answer, is that
14 they, at this point, do not think that the basic
15 approach in 88-203 of generically addressing those
16 issues prior to the SERs is the way to go.

17 Frankly, one of my concerns here is that as
18 the draft SERs go through, these issues may well get
19 addressed reflecting that policy while 88-203 is out
20 there somewhere in the twilight zone with the
21 continuing debate over DOE.

22 CHAIRMAN CARR: But the problem is if we
23 decide it is the way to go --

24 COMMISSIONER CURTISS: Right.

25 DOCTOR SPEIS: We had that concern,

NEAL R. GROSS

COURT REPORTERS AND TRANSCRIBERS
1323 RHODE ISLAND AVENUE, N.W.
WASHINGTON, D.C. 20005

1 Commissioners, and DOE insisted that they would like
2 to see our views as they are being developed,
3 evolving. It would be very helpful to them because
4 the design is proceeding right now and you people
5 decided to forward, to give them the SERs even though
6 they are in that unstable form, if I want to use the
7 word "unstable."

8 MR. STELLO: Let me answer the specific
9 question you asked. If the Commission decides
10 whatever, we're going to do it.

11 CHAIRMAN CARR: Go back and start over
12 again?

13 MR. STELLO: If that's what you want us to
14 do, that's exactly what we'll do. It's up to the
15 Commission to make that judgment.

16 CHAIRMAN CARR: Well, I'm trying to, I
17 guess, get ahead of a problem and I don't even know
18 what it is.

19 MR. STELLO: Well, that's why I proposed to
20 you the way to get at the problem is to wait until we
21 get this response back, close out on that issue, come
22 back and make a recommendation to the Commission on
23 how to go.

24 CHAIRMAN CARR: I can wait if they can wait.

25 Okay. Let me ask one more question. Are

1 there any other areas in which the Commission
2 decisions besides key licensing issues, the safety
3 goal implementation plan and policy questions
4 associated with a review of evolutionary and advanced
5 light water reactors?

6 DOCTOR SPEIS: I think those three are some
7 of the more important ones, especially the safety
8 goal. I think the safety goal is of paramount
9 importance.

10 CHAIRMAN CARR: The implementation plan?

11 DOCTOR SPEIS: The implementation plan.

12 MR. STELLO: Well, he mentioned that one and
13 he mentioned the ABWR. I think those are all of them.
14 We'll check.

15 CHAIRMAN CARR: Well, let me say you've shed
16 a little light on this, but I'm still seeing through
17 that glass darkly, as the quotation goes.

18 An important aspect of the exercise is to
19 identify those issues you want us to give you a
20 decision on. From a review of that 89-178, in this
21 briefing it seems to me the Commission needs to decide
22 on the key licensing issues associated with the DOE
23 sponsored advanced reactor designs and that paper you
24 say we don't have and we won't get it for a long time.
25 So, that's going to be held in abeyance. That ball's

NEAL R. GROSS

COURT REPORTERS AND TRANSCRIBERS

1323 RHODE ISLAND AVENUE, N.W.

WASHINGTON, D.C. 20005

(202) 234-4433

(202) 232-6600

1 in your court.

2 The implementation plan for the safety goal
3 policy, which we have now, and the policy questions
4 associated with the review of the evolutionary and
5 advanced light water reactor, particularly the
6 handling of severe accident issues.

7 DOCTOR SPEIS: Yes.

8 CHAIRMAN CARR: Okay. It would be helpful
9 to me and maybe the rest of the Commission. As you
10 can see, we seem to have a little -- we're trying to
11 work the problem. If you give us a paper outlining
12 what you just told me. When the key licensing is,
13 don't bother with that one because the key licensing
14 issues aren't going to be coming over for awhile, huh?

15 DOCTOR SPEIS: Yes.

16 MR. STELLO: Correct.

17 CHAIRMAN CARR: But if you could firm up a
18 date on that, we'd appreciate it.

19 MR. STELLO: Okay, we'll try.

20 CHAIRMAN CARR: In any other decision
21 making -- what I'm concerned about is we don't have
22 much of a process to get through this thing for
23 ourselves. I'm trying to figure out what you need in
24 a hurry and we get it in time so that you don't end up
25 spinning your wheels or have to change your positions.

NEAL R. GROSS

COURT REPORTERS AND TRANSCRIBERS

1323 RHODE ISLAND AVENUE, N.W.

WASHINGTON, D.C. 20005

1 We can get you the 203 paper, but I think that's the
2 one we're talking about, right? That one, I'm not
3 sure whether it's going to solve more questions than
4 it asks or not.

5 So, what we're trying to do is we're trying
6 to get to the position where we can make some
7 decisions that will make things proceed down the pike.
8 So, if we can be a little more specific from you in
9 what you need and then we can address it specifically
10 instead of in generalities. It would help me out. I
11 don't know if it would help my fellow Commissioners or
12 not.

13 But as I say, I appreciate the light you've
14 shed on the subject. I still am going to have
15 problems trying to understand how we're doing all this
16 and I'll watch it closely.

17 Any other questions?

18 COMMISSIONER ROGERS: Just a comment. I
19 think your new slide presentations are very nice. I
20 think the colors do assist in separating things --

21 CHAIRMAN CARR: That's the light they shed
22 on it.

23 COMMISSIONER ROGERS: That was one of the
24 best parts in the whole presentation.

25 CHAIRMAN CARR: If there are no other

1 questions, we stand adjourned.

2 (Whereupon, at 11:21 a.m., the above-
3 entitled matter was concluded.)
4
5
6
7
8
9
10
11
12
13
14
15
16
17
18
19
20
21
22
23
24
25

CERTIFICATE OF TRANSCRIBER

This is to certify that the attached events of a meeting
of the United States Nuclear Regulatory Commission entitled:

TITLE OF MEETING: BRIEFING ON INTEGRATION OF POLICY STATEMENTS FOR SEVERE
ACCIDENTS, ADVANCED REACTORS, SAFETY GOALS, AND STANDARDIZATION

PLACE OF MEETING: ROCKVILLE, MARYLAND

DATE OF MEETING: JULY 26, 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: Peter Lynch

NEAL R. GROSS
COURT REPORTERS AND TRANSCRIBERS
1323 RHODE ISLAND AVENUE, N.W.
WASHINGTON, D.C. 20005

**Commission Briefing
on**

POLICY STATEMENT INTEGRATION

**by
Office of Research
July 26, 1989**

PURPOSE

Discuss Coordination of Policy Statements

✓ SAFETY GOAL

✓ SEVERE ACCIDENT

✓ ADVANCED REACTOR

✓ STANDARDIZATION

FUTURE PLANTS

Evol LWRs - ABWR, SYSTEM 80+, SP/90

Adv'd LWRs - AP 600, PIUS, SBWR, SIR

Adv'd non-LWRs - ALMR, CANDU, MHTGR

Table 1

POLICY STATEMENT INTEGRATION

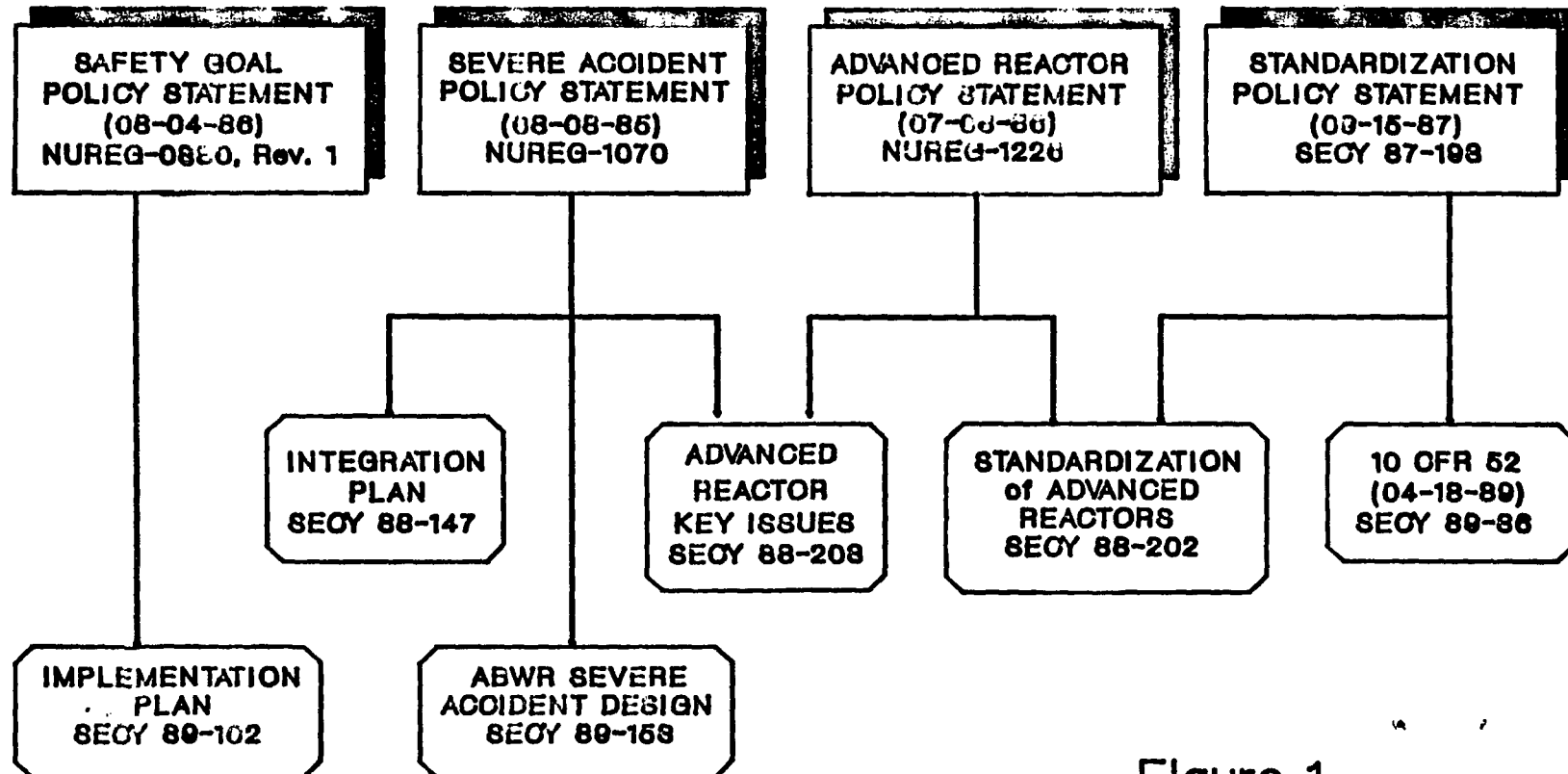


Figure 1

STANDARDIZATION INTEGRATION

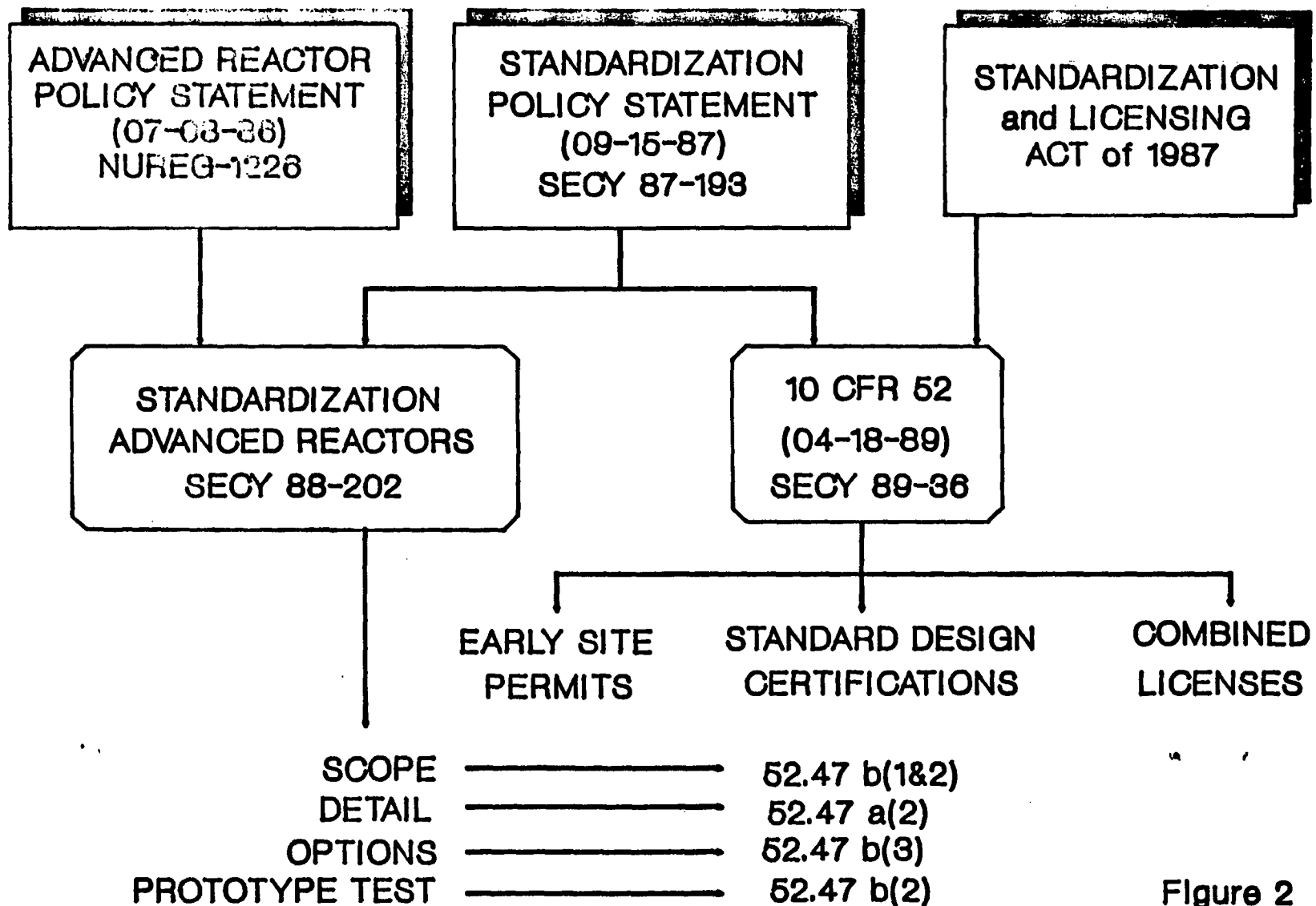


Figure 2

SAFETY INTEGRATION

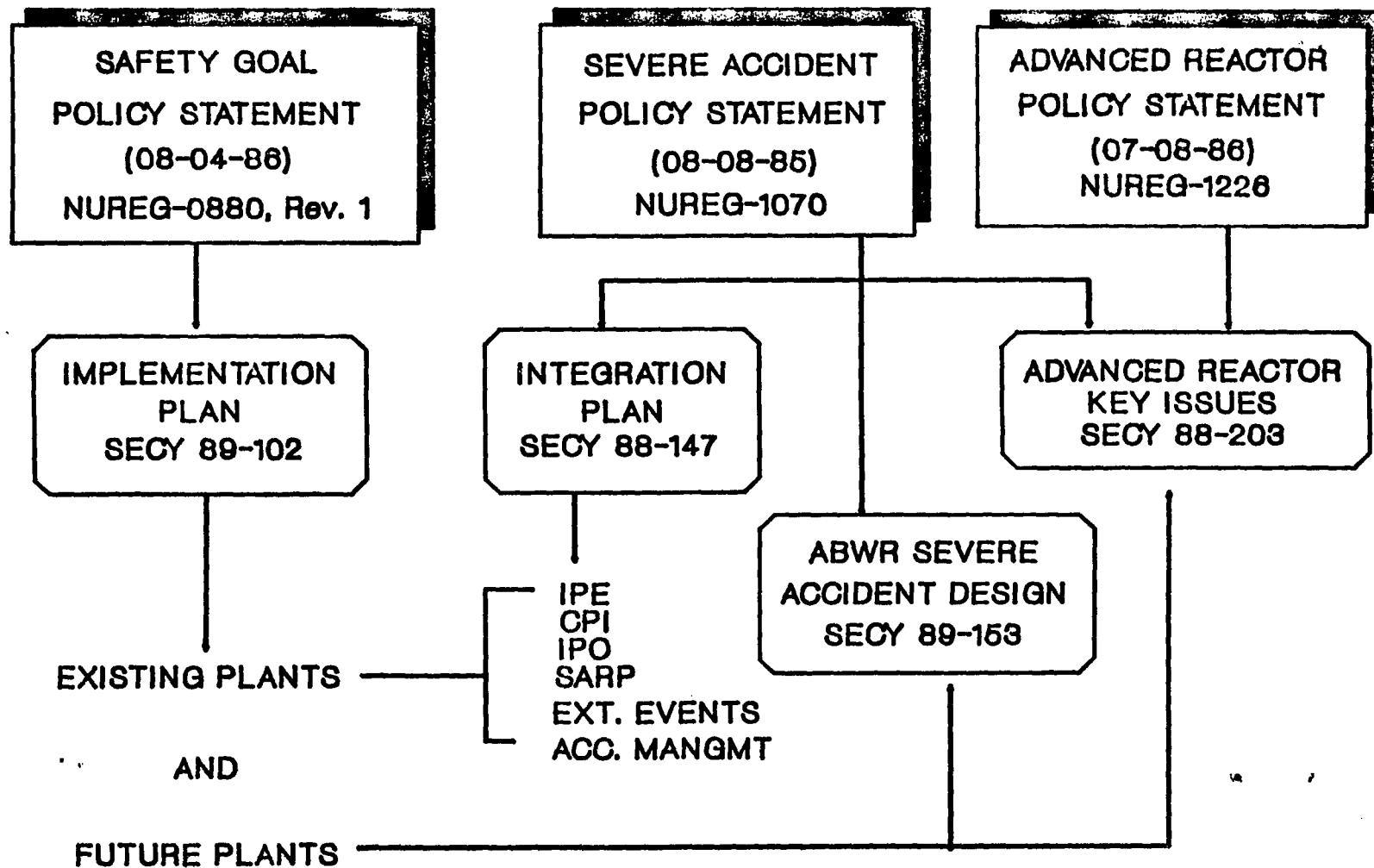


Figure 3