

OFFICIAL TRANSCRIPT OF PROCEEDINGS

Agency: Nuclear Regulatory Commission

Title: Workshop on Certification of
Evolution Light-Water Reactor
Designs

Docket No.

LOCATION: Bethesda, Maryland

DATE: Tuesday, November 23, 1993 **PAGES:** 1 - 38

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UNITED STATES
NUCLEAR REGULATORY COMMISSION

WORKSHOP ON
CERTIFICATION OF EVOLUTION LIGHT-WATER
REACTOR DESIGNS

Ambassador I Room
Ramada Inn
8400 Wisconsin Avenue
Bethesda, Maryland

Tuesday, November 23, 1993

The above-entitled workshop commenced, pursuant to
notice, at 8:45 a.m.

1 APPEARANCES:

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P R O C E E D I N G S

[8:45 a.m.]

1
2
3 MR. TOVMASSIAN: Good morning. Today we will be
4 conducting a public workshop on the form and content of
5 rules which will provide standard design certification for
6 light-water reactor designs.

7 On behalf of the Nuclear Regulatory Commission, I
8 would like to welcome you to this public workshop. We would
9 like to ask each of you to register if you have not yet, and
10 obtain copies of the handout materials that are available to
11 you.

12 For those of you who are parked here in the Ramada
13 Inn, you may get one of these pink parking passes, and that
14 will allow you free parking. You can get that at the back
15 tables.

16 I would like to introduce the NRC Representatives
17 to this workshop. My name is Harry Tovmassian, and I am
18 representing the Office of Nuclear Regulatory Research.
19 This is the office that is responsible for developing the
20 upcoming rule making for design certification.

21 At the table to my left is Jerry Wilson. He will
22 be representing the Office of Nuclear Reactor Regulation.
23 Mr. Wilson will conduct the bulk of the technical
24 discussions on the issues related to form and content of
25 design certification.

1 Also at the table are Mr. Martin Malsch and Mr.
2 Geary Mizuno representing the Office of the General Counsel.
3 They will advise us on any legal matters which may come up
4 during this meeting.

5 Copies of the agenda for this meeting have been
6 placed on the registration table in the back. We plan to
7 conduct this workshop until 5:00 p.m., with a lunch break
8 around noon, and breaks in both morning and afternoon
9 sessions.

10 The proceedings of this workshop are being
11 recorded by court reporter, and a transcript will be
12 available to the public. Copies of this transcript may be
13 obtained if you leave your name at the registration desk.
14 This does not mean that you have bought one; this means that
15 somebody will call you and arrange to have you get a copy of
16 the transcript.

17 The purpose of this meeting is to inform the
18 public on the NRC's current proposal for providing design
19 certification for standard light-water reactor designs for
20 rule making, and to clarify misunderstanding so that the
21 public comments can be as focused as possible.

22 We ask that anyone having questions or comments
23 utilize the microphone and identify themselves to the court
24 reporter. We also ask that any prepared statements or
25 presentations that participants plan to make be limited to

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1 two minutes in duration, so that we may adhere to the
2 agenda. Please note that we have time allocated at the end
3 of the day for a questions and answer period that anything
4 we cannot address during the regular sessions we can bring
5 up at that time.

6 In June of 1993, the Commission directed the Staff
7 to obtain early public participation in the development of
8 design certificate rules through the use of advanced notices
9 of proposed rule making, which we refer to as ANPRs, and
10 through public workshops.

11 In order to inform the public of this workshop
12 early enough so that participants could plan to attend, the
13 NRC published the workshop notice early -- excuse me -- the
14 workshop notice in advance of the ANPR. This workshop
15 notice identified all the documents that were germane to the
16 issues to be discussed. It listed a number of topics on
17 which the public comment would be sought.

18 The notice also indicated that the ANPR was
19 expected to be published prior to the workshop. The public
20 notice for this workshop was published in the federal
21 register on October 13, 1993. This workshop was also
22 announced in Administrative Letter 93-05, which went out to
23 all licensees. Also, a number of special interest groups
24 were invited to attend through direct invitation.

25 The NRC then published the advance notice of

1 proposed rule making in the Federal Register on November 3,
2 1993. This notice also requested public comment on the
3 Staff's proposals for design certification. This notice
4 contained a Draft-Proposed Design Certificate Rule, which
5 has been developed by the Staff, incorporating the
6 Commission's guidance.

7 The ANPR also references all the pertinent Staff
8 papers which we refer to as SECY papers and Staff
9 Requirements Memoranda which we refer to as SRMs, which
10 brought us to the point that we have reached today.

11 In the ANPR we have used the term ELWR design
12 because we do not yet know which of the designs will be
13 ready for the rule making first. Also, the Staff has
14 prepared copies of this draft proposed rule in which several
15 portions of the rule have been underlined. You have
16 probably received that this morning.

17 This has been done to indicate places in which
18 this rule is different from Part 52. Now, these differences
19 and the reasons for them will be discussed in detail in the
20 upcoming sessions.

21 Copies of this Draft-Proposed Rule are also
22 available if you have gotten them from the registration
23 desk.

24 We strongly urge that all meeting participants
25 submit their comments and recommendations in writing in

1 response to the ANPR in addition to their oral remarks at
2 this workshop.

3 Before going into detail on the various issues
4 associated with the form and content of design certification
5 rules, I would like to give a very general overview of how
6 we've gotten to this point and what kind of a schedule we
7 are working toward's.

8 10 CFR Part 52 provides a regulatory basis for
9 certifying standard light-water reactor designs through rule
10 making. Since the issue of 10 CFR Part 52 in 1989, the
11 Staff has been developing guidance for implementing the
12 requirements for design certification. The Staff proposals
13 for implementing these requirements for design certification
14 have been set forth in various papers to the Commission.
15 The Commission guidance has been provided in several staff
16 requirement memoranda for these Commission papers.

17 The Commission approved an industry proposal for
18 two-tiered design certification structure in its February
19 15, 1991 Staff Memorandum document. This was in response to
20 SECY 90-377. Since this approach was significantly
21 different from what was envisioned during the development of
22 Part 52, this two-tiered rule structure will be a major
23 subject for discussion in this workshop.

24 Specifically, workshop participants and ANPR
25 commentors are being asked to comment on the usefulness of a

1 two-tier design certification rule.

2 The Staff also proposed guidance on the form and
3 content of the rule that certifies a design as required by
4 Section 50.54. The Staff's proposals were set forth in SECY
5 92-287, form and content for a design certification rule.
6 This was dated August 18, 1992. A second SECY, 92-287A,
7 which amended the previous SECY and was dated March 26,
8 1993.

9 The Commission's guidance on these SECYs was
10 provided in -- excuse me -- in SRMs dated September 30,
11 1992, and June 23, 1993, respectively. These papers contain
12 several issues that we are planning to discuss at this
13 workshop, in particular the participants and commentors will
14 be asked about the acceptability and usefulness of the
15 proposed change process in standards for Tier 2 information,
16 including a Tier 2 exemption and a 50.59-like change
17 process.

18 SECY 92-287 contained a draft proposed design
19 certification rule which reflected the Staff's thinking on
20 what such a rule would require.

21 Currently, the Staff has received and is reviewing
22 four applications for standard design certification. Two of
23 these applications are nearing completion, but at this time
24 there is no certainty as to which application will be first.
25 The latest schedules indicate that the first design will be

1 in the rulemaking phase in June 1994.

2 The NRC will be considering comments and
3 recommendations from this workshop as they appear in the
4 transcripts. The NRC will also consider the public comments
5 which it obtains in response to the ANPR. We will then
6 develop a separate design certificate rule for each light-
7 water reactor design which is approved.

8 The Commission has directed the Staff to publish a
9 proposed design certificate rule within 90 days after the
10 final design approval for each standard design which it
11 approves.

12 The ANPR which I refer to was developed and
13 included a revised draft design certification rule which
14 reflected the Commission's directives since SECY 92-287.
15 Now, this ANPR is somewhat atypical. In most circumstances,
16 an ANPR would contain much less detail than the one which
17 was published on November 3, 1993. However, the Staff has
18 been trying to develop the certification process for some
19 time as part of its initial review, and has been closely
20 interacting with the Commission on many of the related
21 issues.

22 We believe that this is the time to seek public
23 comments on the rule structure and the workings as we get
24 ready to prepare the proposed rule. However, we are not
25 ready to go to proposed rule making stage as yet, because we

1 don't know which applicant will be first and have not
2 completed the design control document for either. Also, we
3 are implementing Commission guidance for early Staff
4 interaction with the public.

5 Finally, I would like to point out that the Staff
6 held a workshop on July 20, 1992, and issued SECY 92-381,
7 Rule Making Procedures for Design Certification, on November
8 10, 1992. The Commission provided guidance on this rule
9 making procedure for design certification in its SRM dated
10 April 30, 1993.

11 Since the public has already commented on these
12 issues, we are not soliciting further comment on these
13 procedural issues at this time.

14 Now, what I would like to do is turn the meeting
15 over to Jerry Wilson. He will proceed with his discussion.
16 Thank you.

17 MR. WILSON: Good morning. As Harry said, I am
18 Jerry Wilson. I am with the Office of Nuclear Reactor
19 Regulation. By way of background, I have been working on
20 the development and implementation of Part 52 since 1987.

21 I want to conduct this workshop today similar to
22 the way we did the workshops on Part 52. It is interesting
23 that some of the people that were participants in that
24 workshop are here today. We want to conduct the workshop
25 such that we make an effort to explain our proposals and

1 have interactions to improve the understanding of the
2 parties on the various issues.

3 Please interrupt me anytime as we go along to be
4 sure that you understand what the Staff is proposing at this
5 point in time. We will view these discussions as
6 preliminary and we anticipate that you will make your final
7 positions in your written comments to the ANPR.

8 Now, as is identified in the agenda, I am going to
9 have my talk in two parts. The first part is the rule
10 itself, and I am going to walk through the various points in
11 the rule. I would encourage everyone to get a copy of the
12 rule which is at the registration desk.

13 As Harry noted, the rule is a little bit different
14 than what you saw in the ANPR, only in regard to
15 underlining, and I want to talk about that as I go through.

16 Now, if you are looking at the draft proposed
17 rule, you will see the first item is Scope. This is merely
18 to define the particular design that we are about to certify
19 in the rule. You will see there the underlines are for the
20 fill in the blank purposes; whichever design happens to be
21 certified, we will put in the name of that design and the
22 applicant for that design at that point.

23 As Harry pointed out, at this point in time I do
24 not know which of the two evolutionary designs that are
25 nearing completion of their review are going to finish

1 first, so right now the rule is neutral on that point.

2 New, item is definitions. What we've do is we've
3 put in some definitions for terms that are used in the rule
4 itself and when I say rule I am talking about Appendix A.
5 We would like to hear from you if you believe there are
6 other definitions that we should also include in this list
7 here.

8 The rule, as I will point out later, is going to
9 reference a design control document, and that design control
10 document will have its own definitions. So we are not going
11 to repeat those definitions here in the rule, we are just
12 going to define new terms that are in the Appendix itself.

13 There is an item A.4 in the rule that we added
14 just recently. Our view is that the recordkeeping
15 requirements that are in the latter part of the rule will
16 require us to seek OMB approval. We need to research this a
17 little more, and so that is why it is an item A.4. If it is
18 determined that that is not needed, we will just delete that
19 item.

20 Now, the next item deals with the contents of the
21 design that is to be certified, in particular the documents
22 that are going to be referenced from the rule. The actual
23 design information is very voluminous and it wouldn't be in
24 the rule itself. We plan to reference it from the rule, and
25 that requires us to meeting the referencing requirements of

1 the Office of the Federal Register. I will discuss that in
2 a little more detail later on when I talk about the guidance
3 for the design control document.

4 So you will see we have an item here where we
5 reference the particular design control document, and then
6 we also have some additional references dealing with the
7 concern that we will discuss later, secondary references
8 that come from the design control document.

9 The Staff's proposal at this point in time to
10 resolve a concern about secondary references is to bring
11 those references up and make them primary references, just
12 like the design control document. That would entail a list
13 of various codes and standard. I have provided some
14 examples here in the rule to give an indication of what that
15 would look like.

16 The item A.5b is to make it clear that if you
17 reference the particular certified design you must reference
18 both tiers of information.

19 Finally, item C, if there is a conflict between
20 the design control document and other documents related to
21 this design, we want to make it clear that the design
22 control document is the controlling document and the
23 information set forth in there is what much be complied
24 with.

25 Now, item A.7, what we are trying to do here is to

1 make it clear what are the regulations that were used in
2 approving a particular design. There are a number of
3 references in Part 52 to the regulations that are applicable
4 and in effect at the time the design was certified. We need
5 to make that list clear as to what those are. That is the
6 purpose of A.7. What I plan to do is have in here the list
7 of additional requirements the Staff used in approved this
8 design, and have those approved as regulations applicable to
9 that specific design in this section of the rule.

10 I have provided a couple of examples here, and I
11 am going to discuss more about this issue of applicable
12 regulations later on in the meeting.

13 Item A.9, Issue Resolution, this is where we
14 define the scope of the issues that are part of the review
15 of the design and, as I say, to define the scope of the
16 issues that are resolved, and as a result, we will have
17 issued a conclusion at the combined license stage for
18 applicants that reference this particular certified design.

19 Item A.11, is pretty straight forward. That just
20 sets forth the specific time period that you can reference
21 this design, and item A.13, which I am going to go into
22 detail a little later, is the change process that would
23 apply to this design information.

24 Finally, there is an item A.15 on recordkeeping.
25 As you recognize, if changes are made during the time period

1 that an applicant uses this design, their design would be
2 different than other applicant's designs that reference this
3 certification, and we need to keep records so we know the
4 specifics of the design that has been approved.

5 That, very quickly, is an outline of the rule, the
6 various parts and why we have them here.

7 I am going to talk about some specific topics
8 related to the rule, but before I do that, let me be sure we
9 don't have any questions about the basic framework of the
10 rule.

11 [Slide.]

12 MR. WILSON: Seeing no questions, let's proceed.
13 When we were developing the ANPR we thought back to the time
14 at which Part 52 was passed and tried to think of those
15 areas where the manner in which we had been implementing the
16 design certification portion of Part 52 has changed from
17 what we had originally envisioned.

18 From that we have picked out some topics that seem
19 to be significantly different than what we were talking
20 about at the time Part 52 was passed, and also a couple of
21 other issues that the Staff perceives as being of interest
22 or controversial as part of the development of this proposed
23 rule.

24 The first of these is the two-tiered structure of
25 the rule. Harry mentioned that that is a proposal by NUMARC

1 back in, I believe, 1990. The Commission instructed the
2 Staff to follow and try to implement this two-tiered
3 structure. At this stage we need to ask the question that
4 based on how this has been developed, is this still the
5 appropriate way to proceed. We are seeking public comments
6 on that.

7 [Slide.]

8 MR. WILSON: Now, to try and understand it, I am
9 going to use a slide here and discuss what we originally
10 envisioned for Part 52 and how I see that it has changed at
11 this point in time. Now, this diagram is just to indicate
12 the volume of information. It is not to scale, obviously,
13 but I want to use that to discuss the relationship of that
14 information and how certification would affect it.

15 As you see in the left-hand side, I am
16 representing the basic application that is submitted to meet
17 the requirements of Subpart B of Part 52. That is the
18 Standard Safety Analysis Report.

19 Underneath there you will see a small box labeled
20 Detailed Design and Engineering. As you recognize, when you
21 submit an application there is a lot of detailed information
22 about the design that is not part of the application and is
23 not typically reviewed by the NRC.

24 I just want to recognize that that information is
25 not in the information we will be discussing. There is

1 information on as built, as procured information, details of
2 the design that are not typically in an application, and are
3 not needed by the Staff to form its safety finding.

4 Now, what we envisioned originally in Part 52 was
5 that of that information in the application we would extract
6 key features of the design. We would certify those key
7 features and that is represented by the block "Certified
8 Design Information."

9 Then to achieve the goals of Part 52, namely to
10 have a more predictable and stable licensing process, we
11 would put higher backfit restrictions than are currently in
12 existence on that information and that led to a change
13 process that is currently set forth in Part 52 in Section
14 52.63.

15 That is pretty much what we had in mind at the
16 time we passed Part 52. We also had a requirement that I
17 will discuss a little later, 52.63(b)(2) which said that any
18 information that is not in the certified design information,
19 if you wish to change that, you could do that without NRC
20 review and approval provided it didn't change any of the
21 certified design information, and didn't constitute an
22 unreviewed safety question as defined in 50.59 of our
23 regulations.

24 Now, that as you can see, and once again, it is
25 not to scale, would indicate we would have some design

1 information that would be very restricted and the rest of
2 the design information could be changed under a typical
3 50.59 approach.

4 By the way, we would file the requirements set
5 forth in 52.63(a)(3) and if an applicant sought a change to
6 their design because of special circumstances, they would
7 follow the exemption process for certifying information,
8 which is in 52.63(b)(1).

9 So that lays out in a different format the
10 existing requirements in Part 52 for certified information.
11 We are applying that to Tier 1. Then we set out to do a
12 parallel requirements for Tier 2.

13 Now, if you are following along in the double-
14 spaced version of the rule that was handed out at the
15 registration table, you will see Item A.13(c) for Tier 2
16 rule changes. Once again, this is a generic requirement to
17 make a generic change to Tier 2.

18 What we have done is written out the standard.
19 Once again, the underlines come into play here. It is
20 important to see where I've underlined this. What I've
21 done, given the guidance from the Commission to use the same
22 standard for generic changes to Tier 2 as applied to Tier 1,
23 I've taken the requirement from 52.62(a)(1) and it is
24 restated. It is only changed in those places where it is
25 underlined. You can see where I have put in the name of the

1 design and put in Tier 2 information.

2 So when you are looking at this and making your
3 proposal as to how you think this particular requirement for
4 generic changes to Tier 2 should be stated, I want you to
5 understand where the Staff started from. We started from
6 the exact wording that is in 52.63(a)(1) and just made those
7 change where they are underlined. The same for (c)(2); it
8 parallels 52.63(a)(2).

9 Now, that's generic changes to Tier 2. It works
10 just the same as for Tier 1, the same standards.

11 We also have a parallel process for plant specific
12 changes to Tier 2. Once again, there may be special
13 circumstances where an applicant would want to change Tier 2
14 on his design, but wouldn't want to make that a generic
15 changes to all designs.

16 So I have in (d)(1) the situation where if the NRC
17 or, in response to petition, we sought to make it plant-
18 specific change to Tier 2 information, I have the
19 requirement and the standard in (d)(1) and this is also
20 taken from 52.63. The only changes are where I've
21 underlined it.

22 I have also added in a Tier 2 exemption. That's
23 in (d)(2). Once again, it is words taken out of
24 52.63(b)(1), and I have underlined the changes.

25 [Slide.]

1 MR. WILSON: Here, there is a difference. If you
2 will see from the chart we are providing an exemption for
3 Tier 2 that parallels Tier 1 but the standard is different.
4 If you look at the standard for an exemption for Tier 1, it
5 says that you have to show special circumstances that are
6 defined in 50.12 of the regulations. And you have to do a
7 balancing effect that shows that the benefits of this change
8 outweigh the loss associated with the loss and
9 standardization by making the change.

10 In this Tier 2 exemption, I've taken out the
11 second part of the requirement. It is merely a matter of
12 showing special circumstances in accordance with 50.12.

13 In commenting on this, I think you should comment
14 on what is the appropriate standard for Tier 2 exemption,
15 whether that additional balancing should be in there. The
16 view of the Staff was that the Tier 2 information is a lower
17 level of information, it didn't need the same level of
18 restriction on it in terms of changes as to your own
19 information, and so we've taken out that additional
20 requirement associated with the loss in standardization.
21 That is an important point.

22 Now, for having the Tier 2 exemption here, they
23 were two points. One, we are paralleling the rule for Tier
24 1. We have a Tier 1 exemption. We felt it appropriate to
25 have a Tier 2 exemption. Also, we wanted to be able to have

1 a manner for applicants to deal with a situation where if
2 they were trying to make a change without NRC review and
3 approval, and they determined it constituted an unreviewed
4 safety question, they could either seek to change that in a
5 manner that would affect all designs or seek an exemption
6 for their particular design.

7 So that is the Tier 2 exemption. It is an issue
8 that the Commission in particular identified that they
9 wanted to hear more from, so I would encourage the parties
10 to provide your views on this particular requirement.

11 Now, another item that we put down was another
12 requirement similar to 50.59 that would allow applicants who
13 reference this design to make changes to the Tier 2
14 information without prior NRC review and approval. You will
15 see that this is all underlined.

16 This is all -- it appears to be a creation, but in
17 reality it parallels the wording in 50.59. The standards
18 here are that you can make this change without NRC review
19 and approval provided that the change does not affect this
20 appendix or the Tier 1 information, doesn't change the
21 technical specifications and it doesn't create an unreviewed
22 safety question as defined in 50.59, "or identified below,"
23 and that last phrase is important.

24 What we have done is in certain areas as we are
25 doing our review, as we have identified areas that the Staff

1 believes would constitute an unreviewed safety question, and
2 we are identifying those in our safety evaluation reports
3 for the first two applications. What we plan to do is take
4 those issues and bring them up and put them in the rule, as
5 I have done here with a couple of examples.

6 These exist in limited circumstances. The apply
7 to methods that the Staff has come to agreement with the
8 applicants on for changing certain acceptance for -- excuse
9 me -- the standards for evaluating certain design
10 information that is going to be developed under ITAAC.

11 The Staff viewed this as particularly significant,
12 so we won't get into ongoing interchange as to whether that
13 can be changed under this requirement. We are specifically
14 calling out in advance. These are items that we view as
15 unreviewed safety questions, pre-identified so to speak, and
16 we would expect applicants referencing this rule that if
17 they saw the change in those areas, they would come in for
18 review and approval.

19 Finally, there is an item on here that also says
20 if you make these changes it is the Staff's view that you
21 would no longer have issue preclusion on that information
22 that you changed.

23 So that is discussion of how we've laid out the
24 change process. I think I have covered all the items on
25 here. Are there any questions on the addition of a Tier 2

1 change process to what we had originally envisioned for Part
2 52?

3 [Pause.]

4 [Slide.]

5 MR. WILSON: Okay. Next items on these topics
6 that we had identified in the notice for this workshop was
7 the Tier 2 exemption. I had already covered that as I went
8 through the change process.

9 As I said, we had two goals here. Basically, we
10 felt that it was appropriate to provide an exemption for
11 Tier 2 just like it was provided for Tier 1. Also, we
12 wanted to provide a mechanism for those situations where
13 someone couldn't meet the requirements to make a change
14 without prior Staff review and approval.

15 The fourth item on the list of topics that we
16 identified in the workshop notice has to do with the timing
17 of the item in A.13(d)(3). You will notice, if you are
18 following along in the handout, that we state that an
19 applicant or licensee who references this design may make
20 changes to the Tier 2 information.

21 The original guidance from the Commission on this
22 point was that only licensees could make changes to Tier 2
23 without prior approval. It was the Staff's view that during
24 the time period when applicants would identify the need for
25 these changes is when they were completing their design and

1 preparing their application.

2 We felt that they shouldn't be limited to making
3 these changes only after the combined license was issued,
4 and we felt that, therefore, this provision of the rule
5 should be also applicable prior to the issuance of the
6 license. In other words, applicable both to the applicant
7 or a licensee. That is why A.13(d)(3) is worded as it is,
8 "applicant or licensee."

9 So when you are making comments on the rule we
10 would encourage you to also address this issue of timing.
11 Is it appropriate to also have this flexibility both before
12 and after the issuance of the combined license.

13 Now, the fifth issue on here is this item I've
14 already mentioned. The acceptability of identifying
15 selected technical positions from the safety evaluation
16 report as unreviewed safety questions that cannot be changed
17 under what is called in the notice a 50.59-like change
18 process or, specifically, the process that is set forth in
19 A.13(d)(3).

20 As I've said, what the Staff has done is
21 identified specific areas where we feel would constitute
22 unreviewed safety questions and therefore changes could not
23 be made without a review and approval. I have just provided
24 examples here in the draft rule.

25 What would happen is in the preparation of a rule

1 for any particular design, we would go into the safety
2 evaluation report for that design, pick out those areas
3 where the Staff has identified issues as constituting
4 unreviewed safety questions and put them in the rule, as I
5 have done in this example. That is issue number 5. I don't
6 know if there are any questions on that.

7 [Pause.]

8 MR. WILSON: The next item deals with the future
9 use of Section 52.63(b)(2) given how the rule is current
10 developed. For those of you who follow the regulations
11 closely, you will see that we had a provision in 52.63(b)(2)
12 which was like of like a 50.59 process. It dealt with all
13 of the information.

14 [Slide.]

15 MR. WILSON: If you look at this chart where I
16 have indicated what we envision for the rule at the time
17 Part 52 was passed, all of the information that wasn't
18 certified would come under this provision of 52.63(b)(2).
19 Now that we have added in a two-tier rule structure and a
20 Tier 2 change process, that information is now covered in
21 the rule that we have proposed.

22 So the question becomes how do we see this
23 particular provision in Part 52. One way of looking at it
24 is that what we have done with our process set forth in the
25 proposed rule is, in effect, implemented the intent of

1 52.63(b)(2). What I envision is if an applicant who
2 references this certified design would follow the change
3 process in A.13, then would not use 52.63(b)(2).

4 This is an item that hasn't really been discussed
5 during out development of the rule. It is why we have added
6 it into the topics that I would encourage people to comment
7 on. What do you think we should do with (b)(2)?

8 As I said, the Staff's view is that you would
9 implement A.13(d) as written, and you, in effect, wouldn't
10 use 52.63(b)(2). We feel that they are consistent with each
11 other, but it does cover a different scope of information in
12 effect.

13 Any questions on that?

14 [Slide.]

15 MR. WILSON: The next item on the list came up
16 during the development of the rule. In particular after the
17 issuance of SEC 92-287, the Commission asked a number of
18 questions about the Staff's proposal. One of the questions
19 was whether the Commission should either incorporate or
20 identify the information in Tier 1 or Tier 2, or both, in
21 the combined license.

22 Now, I recognize that this isn't an issue that
23 needs to be solved at this point in time. It is an issue
24 that we need to resolve as part of our development of what a
25 combined license will look like. But it was raised during

1 the design certification development process.

2 In our response to these questions in SECY 92-
3 287-A, the staff proposed an answer to this question. I
4 will be frank. I am not sure what the consequences of that
5 answer is. That is why I think it is an issue that we need
6 to think about more as we are finishing up design
7 certification and preparing our rules of what a combined
8 license would look like.

9 Whether it is appropriate, as the staff proposed,
10 to incorporate Tier 1 and identify Tier 2, what are the
11 consequences of doing it that way as opposed to some other
12 way, I think you should provide comments on your views on
13 that.

14 As I say, speaking for myself, I am not exactly
15 sure what the consequences are. I think this is a matter
16 that needs further consideration and a matter that we should
17 hear from the public on before we proceed on our development
18 on what a combined license should look like. But that is
19 why that item is there.

20 Now, the next item is an item that is listed up
21 here, "Applicable Regulations." As I said earlier when we
22 were going through the rule, we put a section in the rule to
23 set forth the regulations that were applicable and in effect
24 at the time the design was issued.

25 Now let me go back and cover a little bit of

1 history on this. In implementing the Commission's Severe
2 Accident Policy Statement, and also some of the goals set
3 out for Part 52, the staff has set out to achieve a higher
4 level of performance for these designs in the area of severe
5 accidents and also in selected other areas.

6 We have been working on this process for a number
7 of years now. I have identified a number of SECYs on this
8 chart that is in your hand-out where the staff has been
9 making various proposals to the Commission on how to
10 implement these goals.

11 In summary, the Staff in the '88 time period felt
12 that the best way to proceed was to have generic rules for
13 severe accidents. We felt that it would facilitate the
14 hearing process for design certification to have these rules
15 developed and in effect prior to that time. So, in ^{SECY} 88-248,
16 you will see that is the proposal that the staff initially
17 made.

18 Subsequent to that, concerns arose regarding
19 whether these requirements would truly be generic or would
20 they be more design-specific. Also, there were concerns at
21 that time -- and a little hard to understand today -- that
22 if we sent out a generic rulemaking in 1988, it might affect
23 our ability to complete these design certification reviews.
24 So, there are schedular concerns.

25 The Staff rethought its proposal and came up with

1 a new proposal to proceed with design specific rulemaking
2 for the first two applications, namely the Advanced Boiling
3 Water Reactor and the System 80+ design, and then continued
4 to proceed on generic rulemaking for the remaining designs.

5 That proposal, I believe, was in SECY 91-262 that
6 is listed there. The Staff has continued to work under that
7 process ever since then as a kind of a two-track effort. We
8 are trying to develop these design specific rules for the
9 evolutionary designs.

10 We are still considering whether it is better to
11 go to a generic rulemaking process for the other designs at
12 a later date, depending on how this proceeds, with two
13 evolutionary designs. We may decide that we should continue
14 on the design-specific approach.

15 Now, the question is: What are the areas where
16 the staff feels that we should regulations beyond our
17 current regulations? The staff has made this proposal in a
18 number of different SECY papers, the most recent of which,
19 and the most comprehensive of which is SEC 93-087 where we
20 have identified a number of areas where we believe these new
21 designs should be required to meet standards that go beyond
22 our current requirements.

23 We have set out staff positions in that paper. We
24 have received Commission response. What we plan to do for
25 each design is from that list pick out those items that are

1 appropriate and applicable to that particular design in
2 those areas where we have gone beyond current requirements
3 to achieve this higher level of safety that we are seeking
4 for future plants.

5 What we will do in the SER is state the
6 requirement that we used in approving the design, explain
7 how this particular design meets that requirement, and make
8 our finding of acceptability based on that. Then what we
9 will do, and as we prepare the proposed rule, we will go
10 into the SER, pick out those additional requirements that
11 don't currently exist for that design, and place them in the
12 rule where I identified earlier, Section A.7.

13 So, I would envision there would be several
14 additional regulations that would apply to the particular
15 design that this rule covers. That constitutes the base of
16 regulations that we used to approve the design.

17 Then in the future, if there are questions about
18 the proper implementation of these requirements or changes
19 in the requirements, we will have the basic framework that
20 we used at the time we approved the design that will be
21 documented and those decisions can be made on the basis of
22 those documented regulations.

23 So, in summary, the staff has been working for a
24 number of years now on a two-pronged approach to implement
25 rulemaking, to implement the goals of the Severe Accident

1 Policy Statement, and also the goals in Part 52 where, as
2 the slide shows, we are planning to use design-specific
3 rulemaking for the first two evolutionary designs. We are
4 deferring the decision as to the approach for the other
5 designs, but at the moment it looks like it is going to be
6 generic rulemaking.

7 That is the issue on "Applicable Regulations." If
8 there are any questions or comments on that item, this would
9 be a good time to hear those.

10 [Slide.]

11 MR. WILSON: Seeing none, the last item on the
12 topics that we identified in the Federal Register Notice was
13 this issue of a "Design Control Document."

14 As I showed in an earlier slide, the Design
15 Control Document is the master document of the information
16 for this particular design that has been approved and
17 certified. It is the document that an applicant referencing
18 this design would have to conform with.

19 To achieve the stability for this information that
20 we sought under Part 52, we were making this part of this
21 rule. It will be referenced from the rule. That means it
22 has to meet the requirements of the Office of the Federal
23 Register.

24 So, the staff has been interacting with the Office
25 of the Federal Register as to what this document should look

1 like. We have prepared preliminary guidance to the
2 applicants for design certification, setting forth how staff
3 sees this document being prepared. We are continuing to
4 consider this matter and interact with the applicants on
5 this.

6 In a shorthand, the way we see this is we want to
7 retain as much of the information that is in the
8 application. We want to do that to achieve conformance with
9 this information that we have approved and to achieve issue
10 resolution on the most issues that we can. But there is
11 some information that will have to be deleted.

12 As I said earlier, proprietary information is in
13 that category. You can't reference information that is
14 being withheld as proprietary, so that will have to be
15 deleted from the application in the preparation of the
16 Design Control Document.

17 Also, there is certain conceptual design
18 information that the staff needed to complete its review.
19 That information deals with systems that are outside the
20 scope of the certified design.

21 There are also questions about the proper
22 treatment of secondary references, various codes and
23 standards that the staff relied on to form the basis of its
24 finding. As I stated earlier, what we are proposing to do
25 to deal with that is to make those, in effect, primary

1 references.

2 That, in a nutshell, is the issue of guidance on
3 the preparation of the Design Control Document. While we
4 don't need that issue resolved for the purposes of -- well,
5 I should say that. We do need this issue resolved for the
6 purposes of this rule because it affects whether or not we
7 make those secondary references into primary references and
8 retain all of those standards.

9 But that is about all I planned to say on that
10 unless there are further questions. I have gone through
11 this pretty quickly. We haven't heard from the audience. I
12 think this would be a good time.

13 If there are members of the audience who would
14 like to speak to the staff's proposal, I could ask if there
15 are comments or questions in general about what we have
16 proposed at this point in time.

17 MR. BISHOP: Good morning. My name is Bob Bishop.
18 I am with NUMARC. I just wanted to comment that we have had
19 an extensive series of public meetings and dialogues with
20 these issues, and a great many more, over the last seven
21 years representing the industry, the specific vendors in a
22 number of other contexts.

23 The purpose of the workshop today is obviously to
24 hear from members of the public. We had not intended to go
25 in detail through any of our comments. Our silence should

1 not be taken as necessarily acquiescence to the staff's
2 position. But we intend to submit detailed extensive
3 written comments on the November 3rd ANPR.

4 So those were my comments.

5 MR. WILSON: Okay. Thank you very much. Are
6 there other members of the audience that would like to make
7 some general statements concerning staff's proposal?

8 [No response.]

9 MR. WILSON: The meeting has proceeded much faster
10 than we anticipated. I recognize that there are a lot of
11 issues here that are different than what was discussed at
12 the time Part 52 was developed.

13 I think I should emphasize that when you are
14 preparing your comments, it is important to review the
15 Commission papers that were identified in the Advanced
16 Notice of Proposed Rulemaking. These lay out the rationale
17 for what was proposed in the rule and how we see the rule
18 working.

19 However, as we have made it clear, we are
20 continuing to develop what this rule is going to look like
21 as we are completing our reviews. So, it is somewhat of a
22 fluid situation that that is where you would go to best
23 understand our proposal.

24 Once again, I would say that we encourage and hope
25 that everyone would put their views in on the structure of

1 the rule and the workings of the rule. It is our goal that
2 in preparing for the proposed rule that we try to work out
3 all of the concerns on the actual structure of the rule so
4 that once we have completed our design reviews and are ready
5 to start the rulemaking phase for design certification.

6 That effort would be primarily focused on the
7 content of the rule and we wouldn't have to deal so much
8 with the actual workings, or the mechanism of the rule,
9 which is set forth in our proposal.

10 I think that covers what we set out to discuss at
11 the meeting today. I would like to open it up to any
12 questions related to design certification, not just what the
13 staff proposed in their ANPR.

14 [No response.]

15 MR. WILSON: Seeing none, this is going to be one
16 of our shortest workshops in history. It didn't even make
17 it to the first break.

18 [Laughter.]

19 MR. WILSON: I want to thank you all for coming.
20 I hope the workshop has been useful in understanding what
21 the staff is proposing. We look forward to receiving your
22 comments.

23 Do you have anything more, Harry?

24 MR. TOVMASSIAN: I don't think so.

25 MR. WILSON: On behalf of the staff, thanks a lot

1 for coming.

2 [Whereupon, at 9:55 a.m., the workshop was
3 concluded.]

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REPORTER'S CERTIFICATE

**This is to certify that the attached proceedings
before the United States Nuclear Regulatory
Commission
in the matter of:**

NAME OF PROCEEDING: Workshop on Light-Water
Reactor Designs

DOCKET NUMBER:

PLACE OF PROCEEDING: Bethesda, MD

were held as herein appears, and that this is the original transcript thereof for the file of the United States Nuclear Regulatory Commission taken by me and thereafter reduced to typewriting by me or under the direction of the court reporting company, and that the transcript is a true and accurate record of the foregoing proceedings.



Official Reporter
Ann Riley & Associates, Ltd.

**DRAFT-PROPOSED DESIGN CERTIFICATION RULE
JERRY N. WILSON**

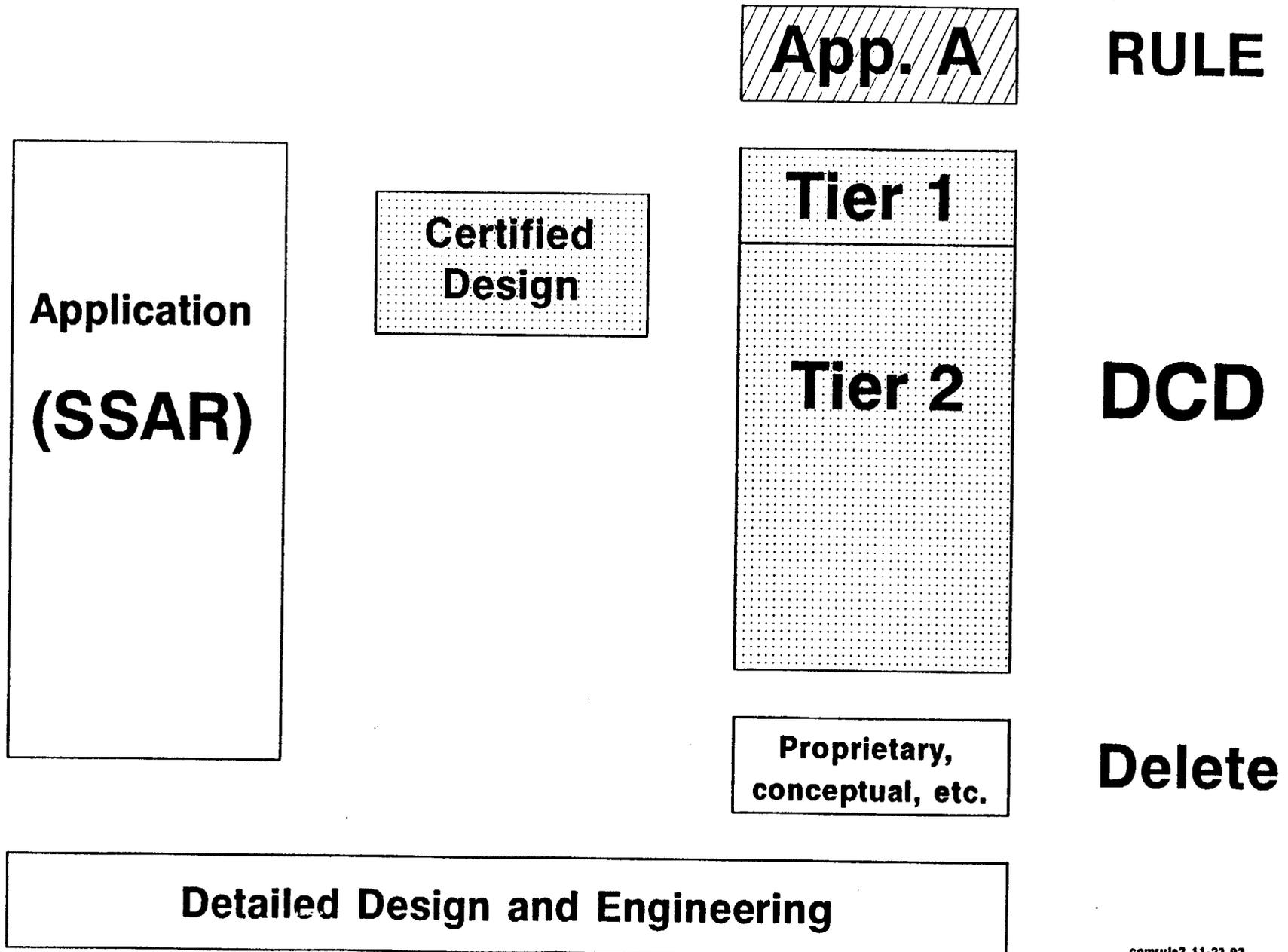


**PUBLIC WORKSHOP: TOPICS RELATED TO CERTIFICATION OF
EVOLUTIONARY LIGHT-WATER REACTOR DESIGNS
RAMADA INN, BETHESDA, MARYLAND
NOVEMBER 23, 1993**

SPECIFIC TOPICS

- 1. Two-tiered structure**
- 2. Tier 2 change process**
- 3. Tier 2 exemption process**
- 4. Timing of "50.59-like" process**
- 5. Unreviewed Safety Questions**
- 6. Treatment of § 52.63(b)(2)**
- 7. Incorporate or identify**
- 8. "Applicable Regulations"**
- 9. Design Control Document**

DESIGN CERTIFICATION



CHANGE PROCESS

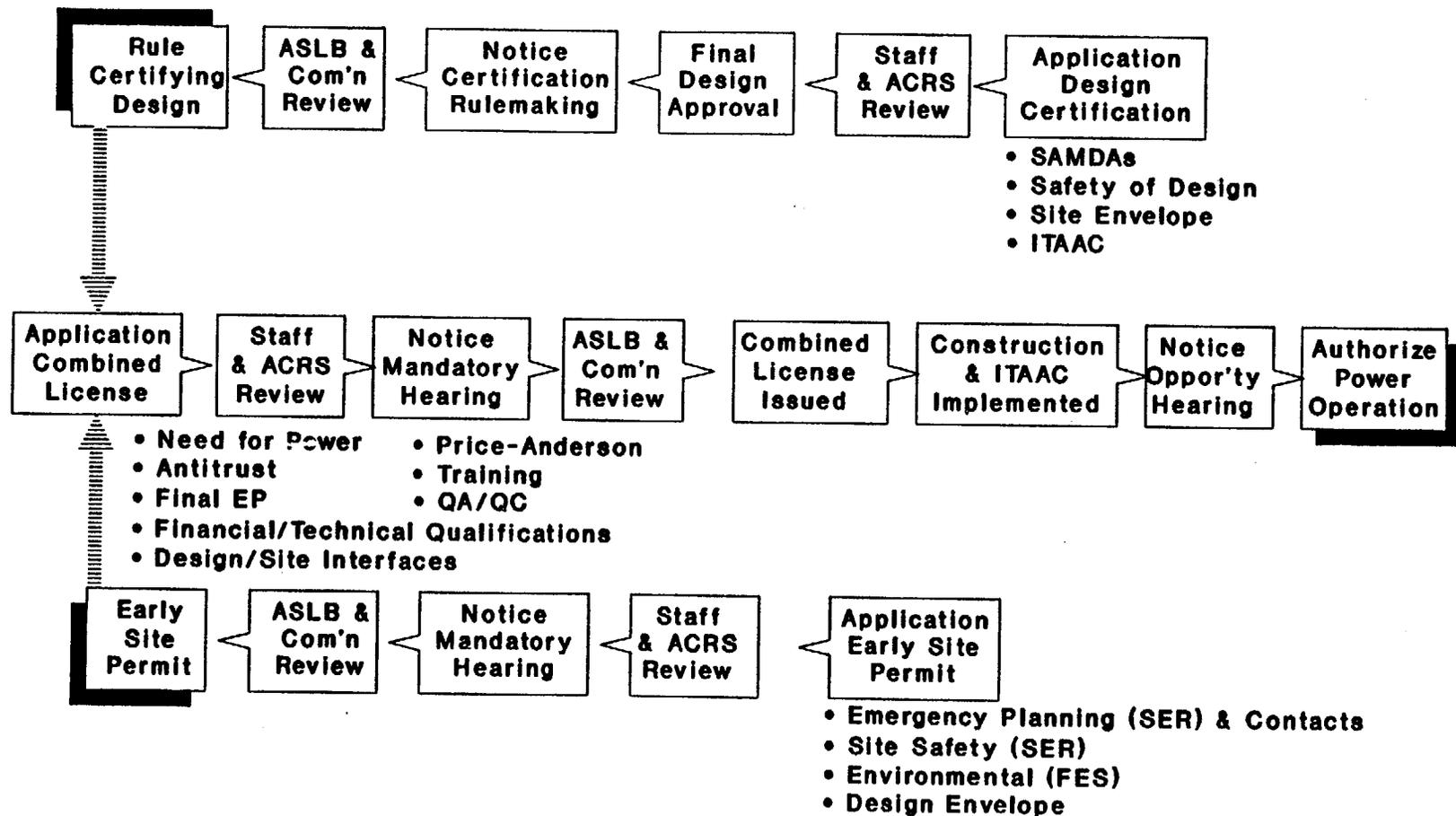
INFO.	APPLICABILITY		REGULATION	STANDARD
Tier 1	Generic	All	A.13(a)	adequate protection
	Plant-Specific	NRC	A.13(b)(1)	adequate protection and special circumstances
		Utility	A.13(b)(2)	special circumstances and standardization
Tier 2	Generic	All	A.13(c)	adequate protection
	Plant-Specific	NRC	A.13(d)(1)	adequate protection and special circumstances
		Utility	A.13(d)(2)	special circumstances
		Utility	A.13(d)(3)	Appendix A or Tier 1 Technical Specifications Unresolved Safety Question

Current Regulatory Strategy to Resolve Severe Accident Issues

Design Specific Rule	Generic Rule
At Least: GE ABWR CE System 80+	Other Evolutionary LWRs All Passive Designs

**Bases: SECYs 88-147, 88-248, 90-016, 93-087, 91-262,
92-287, 92-287A, 93-226**

Part 52 Licensing Process



DRAFT-PROPOSED STANDARD DESIGN CERTIFICATION RULE

10 CFR Part 52, Appendix A

A.1 Scope

This Appendix constitutes the standard design certification for the Evolutionary Light Water Reactor (ELWR) design, in accordance with 10 CFR Part 52, Subpart B (Section 52.54). The applicant for the certification of the ELWR design was _____.

A.3 Definitions

As used in this appendix:

Design control document (DCD) is the master document that contains the Tier 1 and Tier 2 design-related information that is incorporated by reference into this design certification rule.

Tier 1 is the portion of the design-related information contained in the DCD that is certified by this rule. This information consists of the Tier 1 design descriptions, the inspections, tests, analyses, and acceptance criteria (ITAAC), the site parameters, and the interface requirements.

Tier 2 is the remainder of the design-related information contained in the DCD that is approved by this rule. Tier 2 contains detailed information on the ELWR design that supports the information provided in Tier 1. Tier 2 includes safety analyses for the ELWR design and supporting details on the

inspections, tests, and analyses that will be performed to demonstrate that the acceptance criteria in the ITAAC have been met.

A.4 Information collection requirements: OMB approval.

(a) The Nuclear Regulatory Commission has submitted the information collection requirements contained in this appendix to the Office of Management and Budget (OMB) for approval as required by the Paperwork Reduction Act of 1980 (44 U.S.C. 3501 *et seq.*). OMB has approved the information collection requirements contained in the appendix under control number 3150-_____.

(b) The approved information collection requirements contained in this appendix appear in Section A.15.

A.5 Contents of the ELWR design certification.

(a) The following documents, which have been approved by the Office of the Federal Register for incorporation by reference, are deemed to be part of the ELWR design certification:

(1) ELWR DCD dated _____.

(The following are examples of secondary references)

(2) ASME Boiler and Pressure Vessel Code, Section III, Subsection NE, Division 1, Class MC.

(3) ANSI Standard A58.1, Minimum Design Loads for Buildings and Other Structures, American National Standards Institute.

(4) Regulatory Guide 1.59, Rev. 2, "Design Basis Floods for Nuclear Power Plants."

(5) Other documents considered necessary.

(b) An applicant for a construction permit or license that references this standard design certification must reference both tiers of information in the ELWR DCD.

(c) If there is a conflict between the information in the ELWR DCD and the application for standard design certification or the Final Safety Evaluation Report on the application and supplements thereto, then the ELWR DCD is the controlling document.

A.7 Regulations applicable to the ELWR design certification.

The following were considered to be regulations that are applicable to the ELWR design certification, including the regulations identified in § 52.48, and were in effect at the time this design certification was issued for the purposes of §§ 52.48, 52.54, 52.59, and 52.63:

(The following are examples of applicable regulations)

(a) The standard design must include features that reduce the potential for and effect of interactions with molten core debris by:

(1) Providing reactor cavity floor space to promote core debris spreading;

(2) Providing a means to flood the reactor cavity to assist in the cooling process; and

(3) Protecting the containment liner and other structural members from direct contact by molten core debris.

(b) An application for design certification must contain:

(1) The description of the reliability assurance program used during the initial ELWR design that includes, scope, purpose, and objectives;

(2) The methodology used to evaluate and prioritize the structures, systems, and components in the ELWR design, based upon their degree of risk-significance;

(3) The structures, systems, and components designated as risk-significant; and

(4) For those structures, systems, and components designated as risk-significant:

(i) The methodology used to determine dominant failure modes that considered industry experience, analytical models, and existing requirements;

(ii) The key reliability assumptions and risk insights; and

(iii) Operation, maintenance, and monitoring activities to be performed by a licensee that references the ELWR design.

(c) Other applicable regulations considered necessary.

A.9 Issue resolution for the ELWR design certification.

(a) All radiological safety issues necessarily associated with approval of the information set forth in the ELWR DCD are "resolved in connection with

the issuance or renewal of a design certification" within the meaning of 10 CFR 52.63(a)(4).

(b) All environmental issues necessarily associated with approval of the information set forth in the ELWR DCD, and the Environmental Impact Statement or Environmental Analysis for this design are "resolved in connection with the issuance or renewal of a design certification" within the meaning of 10 CFR 52.63(a)(4).

A.11 Duration of the ELWR design certification.

This standard design certification may be referenced for a period of 15 years from [insert date 30 days after publication in the Federal Register], except as provided for in §§ 52.55(b) and 52.57(b). This standard design certification will remain valid for an applicant or licensee that references this certification until their application is withdrawn or their license expires.

A.13 Change Process.

(a) For rule changes, refer to § 52.63(a)(1) for generic changes to this appendix or Tier 1 information.

(b) For changes to this appendix or Tier 1 information, for plants that reference the ELWR design certification:

- (1) Refer to § 52.63(a)(3) for NRC mandated changes; and
- (2) Refer to § 52.63(b)(1) for exemptions.

(c) For Tier 2 rule changes:

(1) Notwithstanding any provision in 10 CFR 50.109, while the ELWR design certification is in effect under §§ 52.55 or 52.61, the Commission may not modify, rescind, or impose new requirements on Tier 2 information, whether on its own motion or in response to a petition from any person, unless the Commission determines in a rulemaking that a modification is necessary either to bring the Tier 2 information or the referencing plants into compliance with the Commission's regulations applicable and in effect at the time the ELWR design certification was issued, or to ensure adequate protection of the public health and safety or the common defense and security. The rulemaking procedures must provide for notice and comment and an opportunity for the party which applied for the certification to request an informal hearing which uses the procedures described in § 52.51.

(2) Any modification the NRC imposes under A.13(c)(1) will be applied to all plants referencing the ELWR design, except those to which the modification has been rendered technically irrelevant by action taken under A.13(d).

(d) For Tier 2 changes, for plants that reference the ELWR design certification:

(1) While the ELWR design certification is in effect under Section 52.55 or 52.61, unless

(i) A modification is necessary to secure compliance with the Commission's regulations applicable and in effect at the time the ELWR design certification was issued, or to assure adequate protection of the public health and safety or the common defense and security, and

(ii) Special circumstances as defined in 10 CFR 50.12(a) are present,

the Commission may not impose new requirements by plant-specific order on the Tier 2 information of a specific plant referencing the ELWR design certification.

(2) An applicant or licensee who references the ELWR design certification may request an exemption from the Tier 2 information. The Commission may grant such a request only if it determines that the exemption will comply with the requirements of 10 CFR 50.12(a).

(3) An applicant or licensee who references the ELWR design certification may make changes to the Tier 2 information, without prior NRC approval, unless the proposed change involves a change to this appendix or the Tier 1 information, the technical specifications, or an unreviewed safety question as defined in 10 CFR 50.59(a)(2) or identified below. These Tier 2 changes will no longer be considered "matters resolved in connection with the issuance or renewal of a design certification" within the meaning of 10 CFR 52.63(a)(4).

(The following are examples of identified unreviewed safety questions)

(i) The fuel and control rod design criteria for the ELWR design; the first cycle fuel, control rod, and core design; and the methods used to analyze these components.

(ii) The ELWR human-system interface design implementation process.

(iii) Other identified unreviewed safety questions.

A.15 Recordkeeping

(a) An applicant or licensee that references the ELWR design certification must maintain records of all changes resulting from Section

A.13(b) or (d). These records must describe the changes, discuss the need for the change, and, as applicable, discuss any decrease in safety that may result from the reduction in standardization caused by the change, as required by 10 CFR 52.63.

(b) An applicant or licensee that references the ELWR design certification must maintain and submit quarterly reports of all changes to the facility under Section A.13(d)(3) until the applicant or licensee receives either an operating license under 10 CFR Part 50 or the Commission makes its findings under 10 CFR 52.103. Records must be maintained and submitted in accordance with the recordkeeping requirements of 10 CFR 50.59 thereafter.

(c) An applicant or licensee that references the ELWR design certification must maintain all records required by this section in an auditable form and make them available for inspection until their application is withdrawn or their license expires.