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NUCLEAR REGULATORY COMMISSION
OFFICE OF THE SECRETARY

BRIEFING ON STATUS
OF SPENT FUEL PROJECTS

Nuclear Regulatory Commission
One White Flint North
Commissioner's Conference Room
11555 Rockville Pike
Rockville, Maryland

Wednesday, February 23, 2000

The Commission met in open session, pursuant to notice, at 9:03 a.m., the Honorable RICHARD A. MESERVE, Chairman of the Commission, presiding.

COMMISSIONER'S PRESENT:

- RICHARD A. MESERVE, Chairman of the Commission
- GRETA J. DICUS, Member of the Commission
- NILS J. DIAZ, Member of the Commission
- EDWARD McGAFFIGAN, JR., Member of the Commission
- JEFFREY S. MERRIFIELD, Member of the Commission

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STAFF AND PRESENTERS SEATED AT THE COMMISSION TABLE:

- ANNETTE L. VIETTI-COOK, Secretary
- KAREN D. CYR, General Counsel
- WILLIAM KANE, NMSS
- WAYNE HODGES, NMSS
- CARL PAPERIELLO, EDO
- WILIAM TRAVERS, EDO
- BILL BRACH, SFPO
- SUSAN SHANKMAN, SFPO, NMSS
- EARL EASTON
- EDWARD DAVIS, NAC International
- RALPH BEEDLE, NEI
- KEVIN KAMPS, NIRS

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P R O C E E D I N G S

[9:03 a.m.]

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CHAIRMAN: Good morning. As I'm sure you all know, the Commission is meeting this morning to hear from the Office of Nuclear Safety and Safeguards, Spent Fuel Project Office. The purpose of our meeting this morning is to discuss the status of its activities and its program's performance and plans. This meeting supplements the briefing that was held on February 11 in which we heard about other activities of the Office of Nuclear Materials, Safety and Safeguards.

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This is, of course, a panel of the staff that is now before us that, after we complete our questioning of this panel, there will be panel of stakeholders who are going to be presenting their views and some of the issues that affect the office.

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Let me urge all of you to be careful in watching the time. One of the most valuable parts of the interaction with you is the question and answer period that we have, both with the staff and with the second panel. We have had the opportunity to review the materials that were filed beforehand and are familiar with those materials. So, we really can cut to the chase, I think. Let me add that that comment is also directed at the second panel.

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Let me turn to my colleagues and see if they have

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any opening comments, and if not, why don't we proceed.

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MR. TRAVERS: Good morning. We appreciate this opportunity, Chairman, to brief the Commission on the status of Spent Fuel Project Office activities and initiatives. I believe it was in 1995 that the Commission and the staff created the Spent Fuel Project Office in response to the obviously growing significance of spent fuel transportation and storage issues, and so I think it's appropriate that we provide you with this briefing on the status of things.

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We have the right team here to do that. Beginning on my right, Bill Kane is the director of NMSS; Carl Paperiello, who is the deputy director in my office; Bill Brach, who is the director of the Spent Fuel Project Office; Dr. Susan Shankman, who is the deputy director of the Spent Fuel Project Office in licensing and inspection; and Wayne Hodges, who is the deputy director and SFPO for technical review.

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The only three directors of that office are at the table. I was the first director of the Spent Fuel Project

20 Office. Bill Kane was the second. Bill Brach was the
21 third. So, we ought to have the right story and hopefully
22 be able to answer your questions this morning.

23 MR. MERRIFIELD: No excuses.

24 MR. TRAVERS: No excuses today. So, let me turn
25 it over to Bill who's going to give the presentation.

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1 MR. BRACH: Thank you, and good morning. The
2 purpose of the briefing, as Bill mentioned, is to provide
3 the Commission an overview of the Spent Fuel Project Office
4 activities. Slide two is an outline of the presentation.
5 First, I'll provide a brief summary of SFPO's
6 responsibilities for storage of spent fuel and for
7 transportation review of all nuclear materials, including
8 spent fuel transportation.

9 I have two slides that give a picture of the U.S.,
10 which show the location and type of currently operating
11 facilities, spent fuel storage facilities, and planned and
12 projected facilities. I'll then move to discuss initiatives
13 we've taken to improve the cask certification and review
14 process, the status of our current case work completions
15 over the past year, and initiatives we are currently
16 developing to further develop the certification process.

17 Next, I'll provide a brief overview of some of our
18 transportation activities and two studies we have underway
19 to address spent fuel transportation issues. I'll then
20 conclude with a brief summary of our status in ongoing
21 activities.

22 If we could move to slide three, please. The
23 first two bullets on slide three summarize SFPO's primary
24 responsibilities, which are to review and certify packages
25 for the transportation of nuclear materials, including spent

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1 fuel under the requirements of 10 C.F.R. Part 71 and to
2 license spent fuel storage facilities and certify storage
3 casks under 10 C.F.R. Part 72.

4 We additionally have the responsibility to develop
5 and maintain the inspection program for both transportation
6 and storage. We provide technical support to the regional
7 offices on these inspections. I'll point out the regional
8 offices have the responsibility for the implementation of
9 the inspection programs under both transportation and
10 storage. We within the SFPO headquarters office conduct a
11 limited number of inspections of cask and package vendors.

12 The third bullet notes our significant involvement
13 with the U.S. Department of Transportation and the
14 International Atomic Energy Agency on both storage and
15 transportation activities. A later slide will address our

16 activities in this regard in a little more detail, and I'll
17 note that we as well review and approve licensees' quality
18 assurance programs -- that's licensees' and vendors' quality
19 assurance programs for both transportation under Part 71 and
20 storage under Part 72.

21 If we could move to slide four. This slide and
22 the next slide give a picture of the current and planned
23 independent spent fuel storage facility installations in the
24 U.S. There are currently 15 operating and licensed
25 facilities located in 13 different states. There are ten

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1 site specific licenses -- they are noted by a triangle on
2 the page -- and five generally licensed facilities which are
3 noted by a circle. Let me just briefly explain the
4 difference in a site specific and a generally licensed
5 facility.

6 A site specific license requires an application to
7 the NRC for a licensed facility. The applicant must
8 describe in detail all aspects of the planned facility, the
9 site description, the cask system and design and operations,
10 and the ongoing controls and programs to be in place to
11 assure safe operations. This process includes opportunities
12 for hearings, and requires an NRC licensing decision and
13 action.

14 A general license is conveyed to all holders of
15 Part 50 power reactor licenses to use a currently certified
16 cask listed in Part 72 without application to the NRC. The
17 reactor licensee must assure that their site, planned use
18 and programs are all bounded by the cask design parameters.

19 I'll also note that the facilities are for dry
20 storage of spent fuel with one exception, and that's the
21 G.E. Morris facility located in Illinois, which uses spent
22 fuel storage pool. I'll point out on this slide that there
23 are two existing DOE licenses for storage of spent fuel --
24 the TMI II fuel debris facility in Idaho and the Fort St.
25 Vrain facility located in Colorado.

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1 We move now to page five. Page five, again,
2 presents the planned and potential facilities. There are
3 approximately 20 planned facilities over the next five or so
4 years in 14 additional states. The mix and types of
5 facilities is changing as the slide shows, for most planned
6 or projected facilities will be generally licensed
7 facilities which do not require NRC issuance of a license.
8 Page five also shows that there are five site specific
9 licenses planned and 15 general licenses planned. This
10 information is based on meetings that we've had with
11 applicants and licensees and general information from
12 reactor licensees on their future plans.

13 I want to identify a third DOE site to be licensed
14 by NRC. This will be another facility located in Idaho to
15 store Peach Bottom shipping port and freighter fuel. The
16 application from DOE to NRC is expected later this calendar
17 year.

18 Before we leave this page, I want to note that
19 there are a number of decommissioning reactors which are
20 planning to have generally licensed storage for their spent
21 fuel. For example, you'll note Maine Yankee, Connecticut
22 Yankee and Big Rock Point, just to name a few. The plans
23 for general licensed storage facility will require that
24 these reactor licensees maintain and not terminate their
25 Part 50 license. The matter of how to transition from a

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1 general license to a site specific license is a topic we've
2 had some discussions on with the industry.

3 If we could move now to slide six, the Commission
4 has indicated an interest in hearing from the staff and the
5 next panel of representatives comments and activities in
6 support of certificate review process. In the next three
7 slides, I'll briefly cover recently implemented initiatives
8 to improve the process, our current status, review status,
9 as well as initiatives under development.

10 We have implemented four significant changes to
11 the Part 72 cask certificate rule making process this past
12 year. These changes are listed under the first bullet. All
13 these changes have markedly improved our efficiency and
14 timeliness. Perhaps our biggest gains in effectiveness and
15 efficiencies to date have also come about through some of
16 our internal process improvements. Through our rules for
17 engagement, we have developed review schedules with clear
18 identification of dates and expectations for both NRC review
19 activities and for applicant actions. We have met those
20 dates and expectations and in doing so, we have brought both
21 stability and predictability to the cask review and
22 certification process.

23 The remaining bullets identify some of the
24 important tools we've developed and implemented in the
25 process. Our efforts to standardize our process and provide

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1 clear review guidance have assisted the staff and
2 applicants. This helps to assure consistency across review
3 teams and to assure consistency from review member to review
4 member. Our use of interim staff guidance documents
5 provides a means for us to implement and come to closure on
6 technical issues. I'll discuss the use of interim staff
7 guidance documents a little more as we discuss high priority
8 technical issues.

9 Moving to slide number seven, the information on
10 this page covers fiscal year '99 and the first quarter of
11 fiscal year 2000. You'll note the shift from single purpose
12 storage cask to dual purpose storage and transportation
13 casks. We've been extremely busy. Note that there are four
14 dual purpose casks and one single purpose cask certificates
15 currently in rulemaking process. We expect these to be
16 completed in the next few months. Two applications, two
17 dual purpose cask applications, are under review and a third
18 application is expected, scheduled later for receipt later
19 this fiscal year.

20 The transportation statistics include those spent
21 fuel and non-spent fuel case work. The bulk of the
22 transportation reviews are for non-spent fuel cases, and the
23 bulk of that work is for amendments to currently certified
24 transportation packages.

25 I've already mentioned the two DOE facilities, TMI

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1 II fuel debris and Fort St. Vrain facilities that were
2 completed this year. The third facility that was completed
3 is the Trojan facility in Oregon. The three facilities
4 under review include the Rancho Seco facility, and action
5 which is near to completion now; private fuel storage
6 facility for which we provide periodic monthly reports to
7 the Commission and Congress on the status, and that review
8 is proceeding. The third review is in support of the
9 Department of Energy's Naval Reactors program. We are
10 performing a technical review for their planned Naval
11 reactor facility to be located at Idaho. The technical
12 support to Naval reactors is being done under a reimbursable
13 agreement and will not result in an NRC license.

14 I'd like to draw your attention to the footnote on
15 this page which highlights the shift in certificate case
16 work from reviewing new cask designs to amendments of
17 currently certified cask designs. You can see the work load
18 shift simply in the number of cases. I will point out that
19 each cask amendment will result in a rulemaking to amend the
20 certificate, and this is an issue I'll discuss more on the
21 next slide.

22 We want to focus our NRC staff activities on
23 efforts to streamline and improve the certificate process.
24 First, we're working to assure that the certificates only
25 contain conditions that are required. For example, where

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1 the technical basis exists to support parameters or bounding
2 numbers, we will be using that data in the certificates
3 instead of individual point numbers. You may have heard a
4 phrase called smarter certificates, and this is an example
5 of our efforts in that regard.

6 Second, we're standardizing the technical
7 specifications building on the reactor initiative in this
8 area. Again, it goes to assure that the tech specs only
9 contain what's truly needed in the tech specs and the other
10 information stays in the safety analysis report.

11 Collectively, these efforts support the
12 implementation of a change to 7248, which will allow
13 licensees and certificate holders to make changes to their
14 cask systems without NRC prior review and approval as long
15 as a specific change does not result in a change to a
16 certificate condition or a technical specification. As
17 noted in the slide, we're working with the industry to
18 develop guidance on the implementation of 7248.

19 We recognize that alternative approaches to
20 certificate amendment rulemaking need to be examined. One
21 of the suggestions we're currently reviewing is to revise
22 Part 72 to specifically identify the types of amendments
23 which can be identified through direct final rulemaking. As
24 long as an amendment falls within those limitations, the
25 amendment could be issued as a final certificate change and

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1 final rule. We clearly are looking at other options and
2 looking to the industry for suggestions as well.

3 We also are reviewing our internal review process.
4 We want to institute a review schedule that would only allow
5 for one round of questions. The expectation is that the
6 application should be complete at the outset, and therefore
7 the goal should be no more than one round of questions.
8 This action, too, would shorten the schedule for reaching a
9 final regulatory decision.

10 Another process area of high SFPO activity is
11 preparation for dry cask storage license renewal. As noted
12 on the overhead, we have a group developing the guidance and
13 technical basis to support renewal and will be ready for the
14 first dry cask license renewal request, which is expected
15 from Surry in mid-2001. As noted on the overhead, Surry's
16 license expires in six years, in the year 2006.

17 If we could move to slide nine, please. SFPO and
18 the industry had a public workshop in mid-December to
19 identify and discuss the prioritization of technical issues
20 needing resolution to support dry cask reviews. The new
21 issues listed on this page are not only two of the top
22 priority issues identified, but have also been a subject of
23 many technical workshops and exchanges. High burn-up fuel
24 is a top priority issue, the highest issue needing technical
25 resolution. NEI's farming and industry working group to

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1 help focus industry generic efforts, while we at NRC are

2 working both with NRC's office of research on generic
3 technical research. We're also working on individual
4 application requests to meet individual licensee needs for
5 high burn-up fuel. I'll offer we're making progress, as
6 noted in the first bullet in both regards.

7 I should note that there are competing interests
8 in the resolution of high burn-up and other technical
9 issues. We in the industry would like to resolve the issues
10 generically and broadly, but that takes time, resources and
11 technical data development and analysis. Meanwhile,
12 licensees, especially some plants that are decommissioning,
13 need resolution of their site specific needs on time frames
14 meeting their decommissioning schedules and resource
15 availability. We clearly are trying to support both
16 objectives and resolution of their term licensing needs, as
17 well as generic issue resolution.

18 NRC efforts to address burn-up credit I think
19 should be seen as a success to date. In 1999, NRC took the
20 first steps to provide limited approval. In May of 1999, we
21 issued our first interim staff guidance document on burn-up
22 credit, and then in August we issued a revised ISG which
23 expanded the allowance for burn-up credit. Previously, NRC
24 had not allowed credit for burn-up. There is clearly more
25 to do on burn-up credit from our meetings with the industry.

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1 We are working to develop additional revisions to our
2 interim staff guidance document on burn-up credit, and with
3 NRC's research support, Office of Research Support, we're
4 making very good progress and data development and analysis
5 to support future interim staff guidance provisions.

6 Moving now to slide ten, I want to briefly discuss
7 some of our transportation activities and move into some of
8 our studies with regard to spent fuel transportation. At
9 the Commission briefing on NMSS program the Chairman
10 referenced earlier, a few questions were asked about the
11 NRC's transportation regulations and consistency with the
12 IAEA standards. As described on the slide, we are
13 developing a plan to develop a revision to Part 71 that
14 would incorporate the latest IAEA transportation standards
15 referred to as ST-1. The U.S. and most other countries,
16 including the European community, have initiatives underway
17 to incorporate ST-1, the IAEA transportation standard.
18 International adoption of the IAEA standard is important to
19 support international nuclear commerce.

20 The staff plan for developing this rulemaking is
21 due to the Commission is May of this year. It will include
22 other issues, some of which are listed in the second
23 sub-bullet. The staff will be using the enhanced public
24 participatory approach in this rulemaking, as directed by

25 the Commission this past fall. We are planning workshops,
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1 extensive use of the web, and much stakeholder involvement
2 in preparation of the proposed rulemaking.

3 SSPO participates in international transportation
4 activities primarily in support of the Department of
5 Transportation, who serves as the U.S. competent authority
6 for transportation. As noted on the slide, we participate
7 in main committee and working groups in the review and
8 development of transportation standards and guides, as well
9 as we meet bilaterally with our foreign transportation
10 regulatory counterparts.

11 SSPO staff have for the past few years been
12 advocating a risk based approach to international
13 transportation regulations. Recalling Commissioner Dicus'
14 and McGaffigan's comments two weeks ago, surface
15 contamination limits, as well as other standards, may
16 benefit from these considerations.

17 Moving to slide 11, I want to shift the focus now
18 briefly to discuss two spent fuel transportation studies we
19 have underway. Spent fuel transportation is an area that's
20 frequently receiving much stakeholder interest. This is
21 frequently a topic when high level waste disposal and the
22 future repository are discussed. The next two slides
23 provide a brief overview of two studies we have underway --
24 the re-examination of the generic environmental impact
25 statement for spent fuel shipments and the review of spent

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1 fuel package performance in transportation accidents beyond
2 the accidents considered in Part 71.

3 If we could move to slide number 12. The focus of
4 the review is on the updates to some of the technical bases
5 or assumptions used in the 1977 study. For example, some of
6 the shipment parameters for age or cooling time for spent
7 fuel have changed significantly. In 1977, there was an
8 assumption that spent fuel would be recycled and that fuel
9 would be cooled for 90 days to one year before shipment,
10 which is in marked contrast to today, where most spent fuel
11 is cooled for five, ten or more years before planned
12 shipment for storage or disposal.

13 Also, cask designs today are bigger and contain
14 more fuel. Advances in computers and modeling techniques
15 have also brought markedly improved dose and accident
16 modeling capabilities. The re-examination of NUREG 0170
17 also builds on the results of the 1987 Vogtle study. The
18 NUREG contractor report on the re-examination of NUREG 0170
19 will be available in March, next month, of this year. As we
20 move to the next slide, I'll describe how we plan to

21 incorporate the results of the re-examination review and the
22 public comments on the report into our ongoing activity.

23 Slide 13. There's been much interest in the
24 physical testing of spent fuel shipping packages to validate
25 the assumptions and modeling used in risk analyses. The

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1 objective of this study is shown in the first bullet. We've
2 taken a very open approach to our study planning for this
3 review. We've held four public meetings to engage other
4 federal agencies, state and local government
5 representatives, Native Americans, interested citizens,
6 citizen interest groups, the nuclear industry, International
7 Atomic Energy Agency, and the general public, to ask of all
8 of them for their input to our study planning. We found
9 these meetings and input to be very informative, as well as
10 necessary for us to be sure that as we move forward in our
11 study planning, we're aware of and can address our
12 stakeholders' interests.

13 The four meetings that we held this past fall were
14 one in Bethesda, Maryland in November, two meetings in the
15 Las Vegas area, and one in Parump, Nevada. Mr. Kevin Kemps,
16 who will address the Commission later in the second panel
17 this morning, participated in the Bethesda meeting this past
18 November.

19 Our plan is to issue a summary report in June this
20 year on the stakeholder interests we received from the
21 meetings, as well as a web page we've established, and as
22 well as the views and comments of our contractor, Sandia
23 Labs, who will be preparing the study review report. We
24 will then plan to hold additional meetings later in the
25 summer to receive stakeholder comments on the June report.

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1 We plan to issue a report in June this year, and we'll hold
2 additional meetings later in the summer to receive
3 stakeholder comments on the June report, as well as any
4 comments stakeholders may have on the report, on the
5 re-examination of NUREG 0170, which I discussed on a
6 previous slide.

7 Our plan is to finalize the study plan and report
8 and to identify additional testing that may be recommended
9 to validate the assumptions and models we used, and this
10 report should be completed by the end of this year.

11 Moving then to our last page, page 14 on the
12 summary, let me just briefly summarize that our activities
13 to date are meeting current industry needs. By the end of
14 the year, we plan to have or should have three, maybe four,
15 dual purpose cask systems approved. I mentioned three
16 instead of four in that it's my understanding that one of
17 the transportation applications that we had expected to be

18 receiving shortly may be a little bit later. So, it clearly
19 looks like we'll have three dual purpose casks reviewed and
20 approved by the end of this year, a fourth possibly.

21 We've devoted significant staff and management
22 time, effort and commitment to complete our work in a timely
23 manner. Safety is always paramount in our reviews. As
24 noted, we believe that expectations for both staff and
25 applicants have been clearly established, resulting in a

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1 very predictable and stable process. Yes, there is more we
2 can do. I've noted two areas for improvement, which I've
3 discussed earlier. That is, the amendment process review,
4 as well as technical issue resolution.

5 I want to stress that we are continuing our effort
6 to interact with our stakeholders. In the past 12 months,
7 we've supported over 20 major conferences and workshops on
8 SFPO activities, and this is not including our ongoing
9 licensee/vendor/applicant meetings. This is a significant
10 investment of management resources, but we believe it's
11 important as we move our programs forward.

12 This completes our presentation, and be pleased to
13 address any questions the Commission may have.

14 CHAIRMAN: I've got a few questions. One, just
15 something to follow up on something in your last couple of
16 slides. You had indicated that you were undertaking both
17 the re-examination of NUREG 0170.

18 MR. BRACH: Yes.

19 CHAIRMAN: And undertaking this evaluation of
20 transportation accidents. Is the thought that once you've
21 completed your re-examination of transportation accidents
22 you may come back and make further revisions of the NUREG?
23 How do these things -- I mean, they are obviously parallel
24 and they ought to relate to one another, and so what's the
25 plan?

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1 MR. BRACH: Let me give a little bit more
2 background. NUREG 0170 is our generic environmental impact
3 statement to support Part 71 transportation. Our
4 re-examination that we are just about completing now will
5 support the continued validity of the generic environmental
6 impact statement with regard to bounding transportation.
7 The package performance study that we're initiating is
8 looking at accidents, if you will, beyond design basis
9 accident considerations. That would go markedly beyond the
10 bounding, if you will, the confines of a technical basis
11 supporting the environmental impact statement.

12 However, to answer your question, if through our
13 package performance study there are findings through our

14 physical testing or modeling or analysis to show that there
15 are, if you will, shortcomings or issues we need to revisit,
16 and clearly we will, but it right is envisioned that the
17 package performance study will complement the analysis done
18 to support the update re-examination of 0170.

19 CHAIRMAN: I understand. So, you may not have to
20 come back and re-examine the NUREG, depending on how that
21 study turns out?

22 MR. BRACH: May not have to. It clearly,
23 depending on the outcome -- if it indicates we have to, we
24 clearly will.

25 CHAIRMAN: I'd like to ask you a question about

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1 the general license issue, and it really prefigures some
2 comments that we're going to get in the second panel. There
3 was some commentary to the general effect that for Part 50
4 licensees that have the benefit, therefore, of a general
5 license for casks, that there are issues that are important
6 that are site specific that are escaping public scrutiny,
7 and they give an example of the fact that there might be
8 erosion under the pads which the casks are placed. There's
9 a further assertion that the 72.48 process has been used in
10 a way so that you get a general license and then you make
11 modifications, and then that also escapes public scrutiny.
12 I would appreciate it if you would react to those comments.

13 MR. BRACH: Let me first, in our review and
14 determination that a cask meets the Part 72 requirements and
15 can be certified by the NRC is dependent upon our doing a
16 very detailed technical review of the dry cask storage cask,
17 its design and cask system, its use. In that review, we are
18 reviewing all aspects of the acceptability of the cask
19 design with regard to meeting all of the performance
20 requirements contained in Part 72 to assure safe storage of
21 spent fuel, as well as the use of that cask. In the safety
22 evaluation report we issue, the certificate and its
23 conditions and the technical specifications that go along
24 with that certificate lay out the bounding and the
25 conclusions and conditions that must be met to assure the

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1 safe use of that cask based on our technical review of all
2 aspects of a design planned use.

3 That support, that information supports a
4 determination we make with regard to issuance of a
5 certificate. That entire process is subject to and made
6 available to the public for their review and comment through
7 a formal rulemaking process. We publish the proposal to
8 issue the certificate. The public has access to the draft
9 certificate, the draft technical specifications, the draft
10 safety evaluation reports supporting those actions, as well

11 as the safety analysis report of the vendor to support those
12 actions.

13 Our review -- the comment review and resolution
14 --the opportunity of the public to comment on that is
15 afforded through the issuance of those rules, and then we
16 have the responsibility to review the comments received and
17 make a determination as to changes that maybe are needed or
18 not needed or if not needed, why not, to support resolution
19 of those comments, then supporting the staff's
20 recommendation for issuance of a final rule that would
21 address the comments received from the public on the
22 proposed certificate and associated documentation, and to
23 address those issues. I mention that because the specifics
24 with regard to the cask design, its use, those bounding
25 parameters are stated in the certificate and the technical

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1 specifications as a Part 50 power reactor licensee under the
2 general license provisions decides that a particular cask
3 that's currently listed in Part 72 is a cask they want to
4 employ at their site, it's incumbent on the Part 50 power
5 reactor licensee that they must assure that all the site
6 specific characteristics at their facility are bounded by
7 the specific criteria and the bounding conditions of the
8 cask that went through the Part 72 certificate review
9 process.

10 The two aspects of the question, in response to
11 your question, sir, is that the detailed review of the cask,
12 its acceptability and meeting the requirements of Part 72
13 and supporting information is reviewed by our staff and is
14 available to the public for review and comment as part of
15 the formal rulemaking process to add that certificate to the
16 list of casks contained in Part 72. Then it's incumbent on
17 the power reactor licensee to assure that they use that cask
18 only within the confines of those bounding parameters and
19 conditions in the certificate and technical specifications.

20 CHAIRMAN: The example that's given that we'll be
21 discussing a little while is the issue of whether a pad on
22 which the casks are to be placed are the appropriate size
23 and strength and durability in terms of erosion resistance,
24 for example. Would that kind of an issue be something that
25 would be covered by the conditions for the certification of

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1 the casks?

2 MR. BRACH: The cask conditions and technical
3 specifications would lay out the conditions on which the
4 cask must be able to perform -- excuse me, the pad must be
5 able to perform to hold the cask under different conditions.
6 It's incumbent upon the reactor licensee to assure that the

7 site specifics of their facility with regard to the pad, its
8 construction and its stability meet and satisfy those
9 bounding parameters in the certificate.

10 As Bill Travers just mentioned as well, part of
11 the NRC's process is to do inspections of the -- whether it
12 be a site specific facility or a generally licensed
13 facility, the NRC conducts inspections of the licensee's
14 activities in construction of the pad as well as does
15 inspections and overviews of the licensee's determinations
16 and evaluations to assure that their actual activities are
17 bounded by the conditions in the certificate.

18 CHAIRMAN: On an unrelated question, and then I'll
19 turn to my colleagues, we got a recent SECY paper that
20 indicated that amendments of the certificates were
21 proceeding using a direct final rulemaking process, which I
22 understand to mean that at the same time the proposed rule
23 is published for notice, the final rule is also published
24 and would become effective 30 days thereafter. You made
25 reference to it, I think, in slide six here today. How is

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1 that process working? I mean, have you been effective in
2 assessing whether amendments are going to prove
3 controversial or not, and therefore been able to determine
4 whether the direct final rulemaking is appropriate?

5 MR. BRACH: We have on a couple of occasions
6 attempted to use the direct final rulemaking approach for a
7 certificate amendment. An important responsibility we have
8 in making first that decision should we proceed down a
9 direct final rulemaking path for an amendment or go forward
10 with a proposed amendment is a staff's determination as to
11 whether we believe the issues involved in the amendment may
12 be controversial or not. For those -- based on staff's
13 understanding of technical issues, deemed that we do not
14 believe the issues will be controversial, have proposed a
15 direct final amendment approach. In one occasion that we
16 have issued a direct final rulemaking, we did receive a
17 comment that we, the staff, determined was a significant
18 adverse comment that resulted in our pulling back the direct
19 final rulemaking, turning that into a proposed rulemaking to
20 modify the amendment, and are now in the final stages of
21 review and resolution of the comment received to support
22 staff's recommendation for further rulemaking. So, the one
23 occasions we've had, we did receive a significant adverse
24 comment that did leave us with a decision on our part, that
25 appropriate action is to withdraw the direct final rule and

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1 go down the proposed and final rulemaking.

2 CHAIRMAN: And how many have you done by direct
3 final rulemaking?

4 MS. SHANKMAN: I was going to say, the number is
5 very small. We've only put out three. One couldn't be
6 direct final because it was closing out a director's
7 decision related to a 2.206 petition, and the other, Phil
8 described, we had to make a proposed rule. So, we'll know
9 probably in the next six months how successful we are.

10 MR. BRACH: Let me add, on the one -- Bill Travers
11 reminded me -- on the one direct final rule amendment that
12 we had proposed and then withdraw, the comment and our
13 review of that comment has not resulted in any staff's
14 proposed changes to the certificate or cask design. The
15 question involved an issue that the staff had not adequately
16 provided a public documented face to explain some of the
17 review issues we had gone through reaching the decision we
18 had reached.

19 CHAIRMAN: Let me turn to Commissioner Dicus.

20 MS. DICUS: Thank you, Mr. Chairman. I want to
21 follow on on my issues with transportation with a couple of
22 questions, one of which you've probably answered or at least
23 partially answered with the Chairman's, I think, first
24 question, but these really relate to slides three, 10 and
25 12. The first question, specifically what are we looking

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1 for with respect to the DOT IAEA interface, and how is that
2 going, as DOT is the lead and obviously they must be very
3 much involved with what is occurring there. Can you comment
4 a little further on it?

5 MR. BRACH: There's a memorandum of understanding
6 that the NRC and Department of Transportation have
7 negotiated some years ago with regard to interface of our
8 two agencies. As noted on the one overhead, the Department
9 of Transportation is the U.S. competent authority on
10 transportation and really takes the U.S. lead.

11 NRC's support to DOT is primarily in the realm of
12 technical support with regard to nuclear transportation that
13 falls within NRC's purview. The Department of
14 Transportation clearly has hazardous cargo and other
15 considerations that go markedly beyond NRC's purview, and
16 well as international responsibilities there.

17 MS. DICUS: What impacts on the industry with IAEA
18 standards?

19 MR. BRACH: There's a direct potential impact in
20 that there's responsibility we within the U.S. have to
21 support international commerce to implement and to adopt
22 through our regulatory processes the international standards
23 for transportation. Directly with regard to NRC, the IAEA
24 standard ST-1 is an international standard that we, as
25 mentioned beforehand, will be developing now the plan to

1 proceed with the rulemaking to incorporate that standard in
2 NRC's Part 71 regulations, and that will go through the
3 proposed rule of public comment process, for sure, as well
4 as our existing Part 71 is based on earlier IAEA standards.
5 So, there's a continuity, if you will, of the international
6 standards that are established and the responsibilities we
7 have to implement those standards domestically here.

8 MS. DICUS: All right. The second question is
9 really from slide 12, and it has to do with, and we
10 discussed part of this, and I think in response to the
11 Chairman's question. What gaps have you identified with
12 respect to shipment parameters, cask designs and does models
13 that you're really going to have to address?

14 MR. BRACH: When you say gaps, I believe the
15 biggest issues are what we see in some of the assumptions
16 that were used in 1977 with regard to cask designs today,
17 fuel loadings, enrichments, burn-up, as well, as I mentioned
18 earlier, that in the middle 1970's, there clearly was an
19 expectation then that reprocessing would be a part of the
20 fuel cycle, if you will, and that today -- that resulted in
21 assumptions in the middle '70's that fuel would be cooled to
22 a markedly less period of time than today.

23 What we are looking at are the advances, or the
24 changes, if you will, in the fuel as it's manufactured, as
25 well as the casks and the size and types of materials of the

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1 casks. We also are looking at the advances in modeling. If
2 I recall correctly, I believe RADTRAN 1 was maybe developed
3 as part of the NUREG 0170 back in the middle '70's, and I
4 believe we're up to RADTRAN 5 or 6 -- RADTRAN 5, a markedly
5 further progressed modeling technique for modeling
6 transportation activities. Susan, are there other --

7 MS. SHANKMAN: No, we use more up-to-date
8 information from the Department of Transportation. We
9 collaborated with the Volpe Center, and they gave us better
10 data to use for accident forces.

11 MS. DICUS: Okay. In slide eight, industry and
12 certainly certificate holders have expressed some concerns
13 with respect to streamlining, standardizing our tech specs
14 and changes tests, experiments, et cetera, and the whole
15 processes that we're involved and we'll probably hear from
16 the industry about that. Now, on slide eight, you listed
17 several thing you're working on to try to deal with this.
18 Are those things going to deal with all the issues that have
19 been raised?

20 MR. BRACH: All the issues is probably a little
21 broad question for me to say absolutely yes. Let me answer
22 it this way. I think the efforts we're working on --

23 MS. DICUS: That was a set-up question.

24 MR. BRACH: Yes. Let me offer, I believe the
25 efforts we have underway to be sure our certificates only

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1 contain first, the information that clearly is required to
2 support our regulatory decision are contained in the
3 certificates, and second, as I mentioned beforehand, that to
4 the point the technical analysis supports at bounding
5 numbers or parameters be used as opposed to a point number,
6 that we would incorporate that in the certificates. Our
7 efforts to standardize the technical specifications is an
8 evolving project we've had within SFPO. Again, the purposes
9 there are to assure that the tech specs one, only contain
10 the information that needs to be in the technical
11 specifications, the supporting information and the bases or
12 elsewhere would be in the safety analysis report.

13 Both of those initiatives are important because as
14 we move forward with regard to Part 7248, a licensee or
15 vendor or a certificate holder can only make a change under
16 7248 without NRC prior review and approval if that change
17 they're proposing to make does not in any way impact a
18 certificate condition or a technical specification. If a
19 proposed change under 7248 by a licensee or a by a
20 certificate holder would result in a change to the
21 certificate condition or a change to the technical
22 specifications, that must then be submitted to us as an
23 amendment request and be processed through the certificate
24 amendment process.

25 It's not trying to make the certificate conditions

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1 very, very brief or technical specifications brief. It's
2 just to be sure that we are not having additional
3 information that's not needed to be in the technical
4 specifications or conditions because to modify any of that
5 additional non-important information in and of itself would
6 require an amendment change to modify that. So, we want to
7 be sure our certificates and technical specifications are as
8 exact and precise as they need to be to support our
9 regulatory decisions, our technical review that supports
10 regulatory actions.

11 MS. DICUS: Okay.

12 MR. KANE: We've, as directed by the Commission,
13 attempted to get alignment of that process with the process
14 that's used in reactors with 5059 for making changes, and
15 we've tried to conform those to processes along the way to
16 make sure that they do exactly the same thing, same way.

17 MS. DICUS: Okay, and one final question, if I
18 may, Mr. Chairman, on slide 13. You discussed the large

19 number of meetings that you've had with both the public and
20 with industry, which I certainly support. I appreciate the
21 fact that you've gone to this effort. What's the public
22 telling us? What's their views? We hear some of them, but
23 in general?

24 MR. BRACH: Two things. I'll start off with the
25 positive. For sure, I think we've had very, very positive

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1 feedback from all the stakeholders, including state and
2 local government representatives and others, Native
3 Americans and public interest groups in the meeting. Very
4 appreciative of the initiative we've taken in this regard,
5 but before we have laid out, if you will, the NRC staff
6 plans and here's our proposal, that we're going to our
7 stakeholders and asking them for the input with regard to
8 their issues, their interests, their concerns, so that we
9 can take that information and use that as we develop our
10 plans. I wanted to mention that because I heard very, very
11 positive feedback at all four of the meetings that we've had
12 in regard to our -- my perspective, very open approach to
13 listen to the stakeholders before we move forward to make
14 recommendations.

15 More directly with regard to a number of the
16 comments we've received, a good number of the stakeholders
17 have raised questions with regard to the actual physical
18 testing that's been done to demonstrate that the modeling,
19 the assumptions that have been made with regard to how
20 materials would perform, if you will, under certain accident
21 conditions. I'd say been a dominant comment we've heard is
22 that there would be a very much marked interest in seeing
23 physical testing of the cask, whether that be full scale
24 testing or scale model testing and query those types of
25 decision. One needs to be based on the need and also

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1 there's a cost aspect with regard to the type of physical
2 testing that may be embellished.

3 MS. DICUS: Okay. Yeah, I've heard that from the
4 citizens of Nevada. Thank you, Mr. Chairman.

5 CHAIRMAN: Mr. Diaz?

6 MR. DIAZ: I'm going to quote Commissioner
7 McGaffigan. I'm going to sound like a broken record, but
8 there is an issue that, you know, keeps coming up, and it is
9 the fact that we are at a point in the technical development
10 and capabilities in which conducting state of the art
11 analysis is relatively more easy than it was before, and I
12 want to emphasize the importance of conducting conservative
13 if we have to, but realistic analysis when we deal with any
14 of those issues. The area of that obviously requires
15 sometimes a little more in depth is when you're doing

16 amendments which could actually be very simple or could be
17 complicated, and that's an area that I would strongly
18 encourage you use the state of the art techniques.

19 Having said that and since the 5059 was brought
20 up, I'd like you to go back to your slide number eight and
21 see how we maintain a consistent language as we deal with
22 rules and other things that we do. If you look at the
23 number eight, you have minor changes not require NRC
24 approval. Could you tell me where those minor lies between
25 zero as small, negligible, and minimal?

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1 MR. BRACH: Let me offer on the slide, the same as
2 5059.

3 MR. DIAZ: All right, then the word must be
4 changed.

5 MR. BRACH: Maybe if the word minor could be
6 removed because in trying to discuss earlier to the terms
7 question, Commissioner Dicus as well, what we really are
8 making reference to are changes that do not impact the
9 certificate or the tech specs as they've been issued. My
10 phraseology of the use of the word minor meant to be it's a
11 level below that. A number scale I don't want to offer.

12 MR. DIAZ: Yes. You might want to offer the
13 escape, but you might want to be consistent since we
14 struggled for so long with the use of the word minimal, and
15 if that's what you mean, then that's what you should use.

16 MR. BRACH: Let me offer, I think your point also,
17 with regard to the change, the rulemaking change to Part
18 7248, you may recall that when the change to 5059 went
19 through through the Commission review, there were two
20 parallel rulemakings that were going forward together, the
21 proposed change to 5059 and the proposed change to 7248,
22 coupled with the implementation of 7248 was staggered, to be
23 18 months after the effective date of the published rules.

24 There are two aspects of that. One is that the
25 5059 process had an earlier implementation date with the

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1 NRR, our reactor counterparts, and the industry working to
2 develop implementation guidance for 5059. The clear intent
3 was that that implementation guidance would be developed,
4 and then we on the Part 72 spent fuel storage side would be
5 learning from and to the extent the reason we're following,
6 the guidance as is developed, a guide 5059 reviews and
7 activities, that that same template would be used as we move
8 forward under 7248. So, they were staggered on purpose, and
9 we clearly have the intent to follow that same methodology.

10 MR. DIAZ: I just want to be helpful in the sense
11 that we already struggled with minimal for so long that we

12 don't want to resurrect a different word right now that
13 might have different meaning. We want to be in the same
14 area.

15 MR. BRACH: Yes, that makes sense.

16 MR. DIAZ: Okay, next question on your slide
17 number ten. Could you explain to me what bubble containment
18 for plutonium means?

19 MR. BRACH: Yes, and it's in CFR 7163. There's a
20 requirement that packages plutonium be contained in what's
21 referred to as double containment. That means two
22 leak-tight, if you will, physical containments. We received
23 a petition request -- two years ago -- in the recent past
24 where the petitioner was asking that NRC revisit that
25 question in a technical basis for continuing to require

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1 double containment for plutonium packages.

2 MR. DIAZ: I'm sorry. That's what my question is.
3 What is a plutonium package? All spent fuel contains
4 plutonium. Is this something that's packaged different than
5 spent fuel, or is the spent fuel --

6 MS. SHANKMAN: No, it's not spent fuels.

7 MR. DIAZ: It's not spent fuel?

8 MS. SHANKMAN: No, it's plutonium and it has to be
9 greater than 20 curies.

10 MR. DIAZ: Oh, that's what I was -- so, it is not
11 plutonium in spent fuels.

12 MS. SHANKMAN: No.

13 MR. DIAZ: Specifically plutonium in some other
14 form.

15 MS. SHANKMAN: Right.

16 MR. BRACH: Right.

17 MR. DIAZ: Being outside, metal, it's just based
18 on the quantity of plutonium.

19 MS. SHANKMAN: Yes.

20 MR. DIAZ: Not a chemical or physical shape.

21 MS. SHANKMAN: No.

22 MR. BRACH: Twenty curies.

23 MS. SHANKMAN: Bigger than 20 curies.

24 MR. DIAZ: It could be in any form?

25 MS. SHANKMAN: No.

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1 MR. PAPERIELLO: No, I think it has to be shipped
2 as solid.

3 MR. BRACH: Yes. Plutonium, it can only be
4 shipped by regulations as a solid form.

5 MR. DIAZ: No, no, I mean, could it be metal?
6 Could it be an outside?

7 MR. BRACH: Right, as a solid, yes.

8 MR. DIAZ: As a solid.

9 MR. BRACH: Yes.
10 MR. DIAZ: Okay, so that's what the difference is.
11 The last thing --
12 MR. MERRIFIELD: I'm sorry, I don't mean to
13 interrupt, but I need a clarification of your question.
14 What about mox fuel test assemblies? Would that be included
15 or excluded from this definition?
16 MR. BRACH: My understanding is mox fuel would be
17 required to meet the 7163 requirements for double
18 containment.
19 A staff member is clarifying for me, and I thank
20 you, that a fuel assembly is not required to be contained in
21 double containment.
22 MR. DIAZ: That was the point of my question
23 because it came out like plutonium, you know. All right,
24 thank you.
25 MR. BRACH: And we've clarified yes, that is

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1 correct, in 7163.
2 MR. DIAZ: All right. I appreciate it. The next
3 quick question is again on the issue of transportation spent
4 fuel shipment, et cetera, et cetera. Last year, there was a
5 little bit of problem of coordination between the offices.
6 I'm sure that Dr. Travers have now made sure that there's no
7 lack of coordination between NRR and NSS and so forth. I
8 mean, just a plain question, is all of these issues that
9 went last year, something was published ahead of time. I
10 mean, we have resolved the coordination between the office
11 on the issue of the spent fuel shipments. There was an
12 issue last year.
13 CHAIRMAN: I don't recall an issue.
14 MR. TRAVERS: Oh, yes, I remember it now. I think
15 I know what you're referring to, and we are striving for
16 even better coordination on that point, but I recognize that
17 issue, and I think we're in a good condition to give you
18 assurance.
19 MR. DIAZ: I'm just asking if you are personally
20 aware that this was an issue and that it has been resolved.
21 MR. TRAVERS: Yes, yes.
22 MR. DIAZ: Thank you, sir.
23 MR. TRAVERS: Yes, sir.
24 CHAIRMAN: Mr. McGaffigan.
25 MR. MCGAFFIGAN: I'll start by commending you all

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1 for the improvements I think that have been made over the
2 last couple of years in getting a businesslike process in
3 place for approving dual purpose canisters. I know much of
4 the problem we had in the office that we had a couple years

5 ago when we were getting Congressional report language,
6 stemmed from the decision by Congress to terminate the
7 multi-purpose canister program. You were expecting one high
8 quality application from DOE and Westinghouse and ended with
9 multiple applications and had a lot of problems with the
10 quality of some of those applications, so I think we've made
11 a lot of progress.

12 Let me start with transportation, and I possibly
13 will either require a second round or whatever. Let me just
14 try to run. One issue you haven't mentioned that I
15 mentioned last time, this nuclear fuel article of February 7
16 talked about UF6 containers and the Europeans trying to deal
17 with -- apparently it's the ST-1 IAEA initiative. IPSN has
18 perhaps determined that the current Uf6 canisters are going
19 to have to be upgraded and has suggested a solution in order
20 to be compatible with the IAEA standard. The article had a
21 line in it to the effect that European regulators have begun
22 discussing a common approach, but U.S. authorities aren't
23 yet in this discussion. So, I was wondering whether we are
24 in the discussion or not.

25 MR. BRACH: Let me answer that in part and I'll

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1 ask Wayne Hodges, our deputy director for technical review,
2 to follow. I mentioned earlier that both in the U.S. as
3 well as European community and other nations currently have
4 efforts underway to start the process of adopting ST-1. The
5 European community has a unique aspect in that a number of
6 the western European countries; for example, U.K., Germany,
7 France and others, are jointly looking at the adoption of
8 ST-1 in the European community of regulations. They are
9 clearly amongst themselves having meetings and interactions.

10 This past fall we did meet bilaterally with
11 representatives from the U.K., France and Germany, talking
12 about transportation, both spent fuel transportation and
13 actual aspects of activities of both storage and
14 transportation. Much of the discussion did focus on ST-1
15 and the efforts the European community has underway to adopt
16 that rule within the community as well as our efforts that
17 we are initiating to start that same process here in the
18 U.S.

19 With regard to specifics on the UF-6 testing --
20 Wayne, are you --

21 MR. HODGES: Well, I know it satisfies our current
22 testing for the drop testing, the puncture testing, and the
23 fire testing. I'm not -- and immersion, right.

24 MR. MCGAFFIGAN: The article claims that IPSN has
25 determined that it will not pass the 800 degree centigrade

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1 burning requirement for 30 minutes.

2 MR. BRACH: Can I have a staff member? Earl
3 Easton, who's been involved in much of ST-1 over the years.
4 Earl, if you can come to the mike at the side there, please.

5 MR. EASTON: Commissioner, I think this issue
6 deals with the shipment of unenriched UF-6 cylinders, which
7 for about 40 years has been shipped not subject to Type B
8 fire tests, shipped as low specific activity material. The
9 Europeans, led by the French, did indeed lead the push to
10 get a standard to have these cylinders subject to a fire
11 test, 1475 degrees. The United States strongly opposed that
12 provision. We had then the EDO, Mr. Taylor, write to the
13 ACSS chairman, Mrs. Bishop of Canada saying that we would
14 take that to the Board of Governors at IAEA. The opposition
15 was that strong. We opposed it on a risk informed basis.

16 It turns out that the U.S. has thousands of these
17 cylinders sitting in storage yards. It's a large, large
18 impact, and also that the French had led a research program
19 down at Tenerife about whether existing cylinders would pass
20 this test. The research was not finished at the time the
21 rule was adopted, so we opposed it both on the risk basis
22 and on the research not being done. We said that the hazard
23 from unenriched UF-6 is a chemical hazard. It ought to be
24 treated as a chemical hazard, and let's look at the chemical
25 industry on how they ship HF and those type of chemicals and

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1 come up with an equivalent type standard.

2 We lost that battle. This is primarily a
3 Department of Transportation issue. They have jurisdiction
4 over shipping unenriched. They have not chosen to be that
5 engaged with the Europeans because we have a different
6 problem. We have a different outlook on the standard, and I
7 don't think DOT has really made up their mind where they
8 want to go.

9 MR. MCGAFFIGAN: Can I briefly follow -- you said
10 you lost the battle despite Mr. Taylor writing --

11 MR. EASTON: Yeah, we lost the battle. We got
12 outvoted.

13 MR. MCGAFFIGAN: So ST-1 does include this
14 provision that we think is unrisk informed and stupid?

15 MR. EASTON: Yes, there's a couple like that, yes.

16 MR. MCGAFFIGAN: I'm sorry to, you know, four
17 baccarels per square centimeter. I mentioned last time our
18 French colleague wanted us all to understand, Mr. Phillippe
19 St. Raymond, deputy director of DSIN, that this is a
20 cleanliness standard. It isn't connected with health
21 effects. But this cleanliness standard results in people
22 wandering around casks getting does trying to prove that
23 there isn't four baccarels per square centimeter of

24 contamination left on the cask. So, we trade real does for
25 theoretical dose, and you know, our regulations, as I said

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1 last time, I think the Atomic Energy Act asks us to protect
2 public health and safety, not cleanliness. So, is there --
3 what is there -- and there's also apparently within IAEA
4 some talk of this. This article is about updating, I guess,
5 ST-1 and what other activity may or may not change an ST-1.
6 Is four baccarels per square centimeter in the DOT or our
7 regulations at the current time, and is it possibly pass a
8 risk informed test?

9 MR. BRACH: It is in the ST-1. As I mentioned, we
10 are starting a plan to develop how we'll be proposing the
11 public interaction with our stay coders and proposing a rule
12 change to Part 71 that would incorporate ST-1. We clearly
13 would expect that there will be public views and comments
14 offered on that and other measures in ST-1.

15 You might recall at the previous briefing, I had
16 two mention that and as well simply the bilateral
17 discussions I had this past fall with our counterparts in
18 western Europe. We discussed the existing requirement, and
19 it's my understanding that the European community is not
20 proposing a change to that standard, that they have seen
21 that to be a compliance issue that needs to be met through
22 compliant actions by the user's part, the transporter's
23 part, to make sure that the external surface of the casks
24 are clean to appropriate levels.

25 MR. McGAFFIGAN: But it's not a health and safety

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1 standard. I remember when the issue came up in France and
2 other countries last year and they were trying to -- people
3 were exceeding the standard by factors of 100 or a thousand,
4 and they were still getting, I think microrems per year or
5 something. So, you know, I don't know where else in our
6 regulations we try to prevent microrems.

7 MS. SHANKMAN: Let me give a little -- maybe some
8 background. This standard applies to all packages, and it
9 was developed, my understanding is that it was developed
10 more for the nonspent fuel packages where you had handlers
11 -- think of Fedex -- that had lots of packages.

12 MR. McGAFFIGAN: That might be dealing with a
13 thousand of them, right.

14 MS. SHANKMAN: Right, and the idea was to maintain
15 a standard that would prevent them from getting overexposed
16 or meeting the occupational limits. It is true that it also
17 applies to the spent fuel casks, and as far as taking a
18 reading, whatever standard we have, they'd have to check to
19 see that they met that standard. The overexposure or the
20 extra exposure may come from efforts to decontaminate the

21 casks, and the amount of weeping is accounted for by that
22 standard because there is cask weeping. It's a phenomenon
23 that's known but not fully understood. So, we allow in this
24 country -- it's still the same standard, but we allow a
25 hundred times that when it gets to its destination if it

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1 starts off meeting the four baccarels per centimeter
2 squared.

3 MR. MCGAFFIGAN: I don't want to delay the
4 Commission too long. There's another aspect of this that
5 goes in the opposite direction, and I think it may be an
6 ST-1, or you'll have to tell me where it is. I know it's in
7 DOT. There's a definition of radioactive material that we
8 know from a previous briefing gets incorporated in things
9 like RCRA permits for states. It's 2,000 picacuries per
10 gram. If material is contaminated to radioactive material
11 less than 2,000 picacuries per gram, it isn't radioactive
12 material, doesn't require radioactive packaging, et cetera.
13 If it's above that, then it comes under -- is that an ST-1
14 deal, or where does that come from, the 2,000?

15 MS. SHANKMAN: Earl has been our emissary to many
16 of the meetings.

17 MR. MCGAFFIGAN: You can't lose Earl here.

18 MS. SHANKMAN: He and John Cook have -- John Cook
19 also have gone to these meetings.

20 MR. EASTON: I'll shoot myself in the foot again.
21 Yes, that definition has been in the IAEA regulations, U.S.
22 regulations for over 40 years. In this time in ST-1, the
23 community of states, again over U.S. opposition -- this was
24 the second issue that Mr. Taylor wrote. They adopted
25 so-called radiospecific exemption values which now for every

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1 radionuclide, there's a limit below which it's radioactive
2 and above which, okay. So, the U.S. opposition is why are
3 you changing this definition after 40 good years of use when
4 you have to go through retraining; you have to figure out
5 how to handle with mixtures. They had things like coal
6 being radioactive, you know, as an unintended consequence.

7 This is now one of the provisions that will come
8 to see whether we're going to be compatible with ST-1 or
9 not. It got so confusing in the latter days of IAEA, the
10 member states actually took a vote whether to strip out the
11 definition of radioactive materials from the regulations,
12 and the vote passed. They were left temporarily without a
13 definition of radioactive materials which they cleverly put
14 back in. It's a very controversial issue. It was supported
15 by the European union. They had the clout to get it passed.
16 We understand that there was a cost benefit analysis done

17 later by the European union that didn't turn out to be very
18 favorable. We've been unable to get copies of that because
19 they have processes where their contractors can keep this
20 proprietary, even though the governments pay for it.

21 MR. MCGAFFIGAN: Now, if coal is now a radioactive
22 material, we may be hearing from some non-normal
23 stakeholders fairly quickly. Why don't I stop there, Mr.
24 Chairman. I have a couple of other issues, not on
25 transportation. I do suggest to the staff, and if I don't

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1 get another round, I don't, but I think this paper that
2 comes forward on Part 71 in May -- I learned a great deal
3 that I didn't know from this discussion we just had. I hope
4 it's a full paper, and I hope you guys don't pull any
5 punches in terms of discussing, as your staff did today, you
6 know, what the pros and cons of some of these provisions
7 are. You know, we can get outvoted in IAEA, and if it
8 involves by the European union, if it involves international
9 commerce, perhaps we have to do it, but if it involves
10 domestic commerce and it's idiotic, then maybe we have to
11 think about making exceptions, some of which will be in one
12 direction and others of which may be in another direction.

13 CHAIRMAN: Mr. Merrifield?

14 MR. DIAZ: Mr. Sherman, just one comment on this
15 area which might clarify the differences between chemical
16 hazards and radioactive hazards. Uranium tetrafluoride,
17 which is a solid at standard pressures and temperatures, is
18 shipped around the world in double brown bags. Up to ten
19 pounds, you can get uranium tetrafluoride delivered to your
20 door, you have a license, by UPS. I've seen it multiple
21 times. They come in, they come and lift the brown bag and
22 they drop it on your door and say sign right here. The
23 thing is that uranium tetrafluoride is very chemically
24 stable, okay, it doesn't decompose, and therefore, it has no
25 chemical hazards and so it's handled different. Now, if it

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1 has changes the last three years, I don't know, but up to
2 three years ago, I used to get the shipments, and a very
3 happy trucker came and dropped the bags on my front door. A
4 comment for the Commission. Thank you.

5 MR. MERRIFIELD: I've got some questions I'd like
6 to move through relatively quickly. I think, you know, the
7 staff is obviously to be commended for a lot of hard work on
8 getting past certifications through. We've had a lot of
9 demands on the office and on the agency and the speed to
10 which we would be able to address concerns of our licensees
11 I think is certainly something we should be very pleased
12 with the work that the staff has done.

13 That having been said, there are still some issues

14 out there, obviously associated with high burn-up fuel and
15 damaged fuel. These become more noteworthy as it relates to
16 those licensees who are in the process of decommissioning.
17 We have had testimony for Maine Yankee. Similar
18 circumstances are involved at Yankee, Rowe and others.

19 To what extent can we marshal our resources and
20 triage these things so that we are obviously dealing with
21 ongoing requests from plants that are operating but at the
22 same time address some of these high burn-up and damaged
23 fuel issues so that those facilities which are in
24 decommissioning and which have high costs associated with
25 maintaining spent fuel pools can be addressed so that they

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1 can move forward with their decommissioning.

2 MR. BRACH: What I'd mentioned before, kind of
3 what my perspective was, are competing interests with regard
4 to meeting individual licensee or vendor applications as we
5 have in hand as well as the effort to resolve issues
6 generically. You mentioned Maine Yankee. I'd use some
7 other examples. At Big Rock Point and Connecticut Yankee,
8 who had a facility that has an amendment coming in the near
9 term. The example I used on the overhead where we have one
10 case where it looks like we will be able to approve for that
11 site specific vendor burn-up up to 60,000 megawatt days.
12 That's in result of our review a specific cask application
13 for a decommissioning plant who, for their particular needs,
14 needs a cask with those certain parameters to meet their
15 decommissioning needs and their time frames and schedules.
16 We understand very clearly the time limitations and resource
17 limitations on their part as well with regard to their
18 schedules moving forward.

19 I want to say we're reasonably successful in that
20 regard, but one thing that's resulting in, and that's where
21 we're kind of at a quandary of what I mentioned in competing
22 interests. As we're moving forward, Maine Yankee is another
23 application we have under review in higher burn-up, not
24 quite as high as that, is an issue requiring resolution. As
25 we're moving forward with individual cask amendments,

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1 reviews and approvals, we're able to come to partial closure
2 in some aspects, but particularly as it meets that one
3 licensee's needs. What we're trying to do, and this is
4 something Wayne Hodges has been very instrumental in, as we
5 develop interim staff guidance documents based on individual
6 cask review, and we can take the technical underpinnings of
7 that review and step back and see if we can more broadly or
8 generically apply it, that's been the basis for ISG's that
9 we've been issuing. We have one ISG on high burn-up right

10 now. We have a draft that we're working on. Based on some
11 of our ongoing, current application reviews today that are
12 very site specifically directed, but yet there are some
13 generic underpinnings from those reviews that have broader
14 application.

15 We also have, though, stepping back now from the
16 broader generic issue, we clearly are one, looking to the
17 industry's initiative where they're going to muster industry
18 and vendors forces collectively to lay out the framework for
19 addressing high burn-up fuel on a generic basis, as well as
20 an effort we, NRC, have with our own NRC's office of
21 research, working both with NRR, going back to Commissioner
22 Diaz's earlier question, coordination with what's being
23 looked at on the reactor side of the house with regard to
24 higher burn-up fuel and what we're looking at with regard to
25 the eventual storage of that fuel. So, we're coordinating

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1 our efforts through the office of research to look at that
2 issue broadly and generically, but we have -- if we have a
3 quandary of both the individual cask applications with
4 specific time frames and individual specific needs that
5 we're doing our best to be sure -- to review the technical
6 basis and move forward there as we can, as well as the
7 broader, or generic, issue.

8 MR. HODGES: Triage is a good description of the
9 way a lot of our work goes. We have one particular
10 application now that we're looking at. We're dealing with
11 failed fuel and how to handle it. There was a method of
12 handling it proposed by NEI which we were not in complete
13 agreement with, but we're probably close to agreement on.
14 It's been now submitted by this one applicant and through
15 that process, we will probably work out any differences that
16 remain on how to handle failed fuel.

17 We did have an ISG that we issued a
18 year-and-a-half ago as an initial point, and we're moving
19 from there. On the high burn-up, we're doing the same type
20 of thing. We're taking what data are available from any
21 source, and we're recently -- are now in the process of up
22 to 60,000 megawatt days per ton for one application with
23 some strings.

24 MR. MERRIFIELD: You know, to the extent that we
25 can take specific licensee issues and apply those, you know,

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1 learn those lessons and apply them generically the time when
2 we're research challenged certainly makes sense, and to the
3 extent that we can utilize, you know, appropriate
4 cooperation within the industry, that seems to make sense as
5 well.

6 These, you know, issues associated with casks are

7 not -- they are obviously important issues for us to grapple
8 with. We've got some very highly qualified people that
9 we're dealing with, and they are not necessarily the most
10 technologically sophisticated issues with which we deal with
11 as an agency. I don't mean that in any negative sense to
12 the people who work on it, but that's just a fact.

13 They are, however, some of the issues which do
14 generate significant public interest and concern. Are we
15 satisfied -- now, I know you all have been working a lot in
16 terms of increasing the amount of public communication and
17 listening to the concerns of the public, but are you
18 satisfied that we're doing the best job that we can do as an
19 agency in providing communication and information to the
20 public in a balanced and objective manner so that they are
21 able to gain greater understanding of this and perhaps
22 clarify some of the doubt that is simply, in my eyes, borne
23 by a lack of understanding of these issues?

24 MR. BRACH: In your question I think you've laid
25 out the objectives of what we're trying to do. As I

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1 mentioned beforehand, we've in the last year participated in
2 20 workshops and conferences, and those are open, and many
3 of those were active public involved and stakeholder
4 involved interactions. Can we improve or do better? The
5 answer clearly is yes. What you mention is the objectives
6 in your question are also our objectives and our
7 interactions with the stakeholders, not just to say what
8 we've done but to explain and hopefully have the dialogue
9 where the technical understanding as well as the process of
10 understanding can be parlayed from us to our stakeholders
11 and we can benefit from interactions and suggestions they
12 may have as well, but can we do better? I'm sure we can,
13 yes, sir, but the objectives that you laid out are what our
14 objectives are in these interactions.

15 MR. MERRIFIELD: I don't know the extent to which
16 you've had interactions with our counterparts in the Navy
17 who are involved with significant discussions with the
18 public relative to transportation issues associated with the
19 casks that they use. I don't know if there may be some
20 benefit in searching out some of the lessons that they've
21 learned and helping us communicate because they seem to be
22 relatively successful as well.

23 I do want to make a note in that regard as related
24 to the Navy. I have had a discussion recently with Admiral
25 Bowman, and I do want to represent that he said he was very

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1 pleased with the level of support being provided by this
2 agency and certainly wanted the staff to hear that comment

3 from the Admiral.

4 The last comment I wanted to make was getting back
5 to 10 C.F.R. 7248. Are we -- do we have some level of
6 confidence that licensees will actually be able to make
7 reasonable changes relative to this new process? Do we
8 think this is going to be a successful path for us?

9 MR. BRACH: We had a workshop with the industry
10 earlier this month in February, and Susan was our lead
11 representative at that. Susan, if you can just discuss
12 briefly the views as you hear it from the industry and
13 licensees and others on implementation?

14 MS. SHANKMAN: One of the issues that came up at
15 the workshop is that now that 7248 has been extended to
16 vendors, in the past it was only licensees, the issue comes
17 up of who is the keeper, if you will, of the design. I
18 think that's something that the industry is working on, so
19 that the significant design changes that would be within the
20 tech specs and the certificate of compliance would be made
21 with the vendors' support. We now have a requirement that
22 the licensees have to send their 7248's to the vendor and
23 the vendor has to notify all the users of the cask because
24 the issue is to maintain some consistency across the design
25 as changes are made. So, that's all in the 7248 process.

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1 Are we confident there? The same group that
2 designs it should be able to make the 7248. We intend to
3 inspect those 7248's as they're completed, and we'll inspect
4 them more in the beginning as we get a better sense of how
5 they're accomplished. At the licensee level, it will be the
6 same process they use for the 5059 and the same degree of
7 sophistication and engineering. So, yeah, but confident
8 they should be able to do it.

9 MR. KANE: I can give you a personal perspective,
10 and I believe that this can open up a large scope of simple
11 changes that can be made under that process. You know,
12 that's the way it's expected to be and it's the way I'm sure
13 we can make it. I can think of one recent amendment which
14 went through rulemaking which I am absolutely sure could
15 have been done under 7248 if we had arranged the technical
16 specifications and the certificates to be appropriate. I
17 would think there are a lot of simple changes that could be
18 made under that process.

19 MR. MERRIFIELD: An associated question which is
20 hopefully a yes/no answer, one of the concerns out there has
21 been -- one set of issues on the design side. There's a
22 whole other set of issues on the manufacturing side where we
23 had problems recently. Are we satisfied that there have
24 been improvements on the manufacturing side from past
25 experience?

1 MS. SHANKMAN: Yes, yes. We're going to continue
2 to inspect that process to be sure that those improvements
3 are maintained.

4 MR. MERRIFIELD: And continued.

5 MS. SHANKMAN: Yes.

6 MR. BRACH: Let me just, on that I would add, they
7 -- not only is Susan's answer based on NRC inspection, but
8 we clearly have been laying out to licensees the purchaser
9 of these cask systems, the responsibility they have to
10 assure the quality of the manufactured cask and its
11 conformance with all aspects of the certificate.

12 CHAIRMAN: I'd like to thank the staff. I
13 appreciate the very informative and helpful briefing, and
14 with apologies to Commissioner McGaffigan, however, in light
15 of the fact that we have invited some others to speak. I
16 wanted to make sure we had ample time for them to be able to
17 make their presentations. So, I think that we have to bring
18 this to a close and again, thank you for your help.

19 MR. MERRIFIELD: Mr. Chairman, if I may make a
20 suggestion. We've done this in the past when we run short
21 of time. Perhaps the Chairman may entertain Commissioner
22 McGaffigan having a couple of questions in writing to the
23 staff.

24 CHAIRMAN: Okay. Shall we call on the second
25 panel now? The second panel consists of Mr. Ralph Beedle,

1 who is Senior Vice President and Chief Nuclear Office for
2 NEI; Mr. Edward Davis, who is the President and CEO of NAC
3 International; and Mr. Kevin Kamps from the Nuclear
4 Information and Resource Service. Mr. Beedle, why don't you
5 proceed first?

6 MR. BEEDLE: Thank you, Chairman, Commissioners.
7 May I have the first slide, please?

8 I think this slide indicates that I have Lynnette
9 Hendricks with me, and so she's my staff back-up if we have
10 real technical questions. When the staff talks about
11 involvement of NEI in industry, Lynnette Hendricks has been
12 at the forefront of all that effort, so she's very
13 knowledgeable and willing and able to answer any questions
14 if we have any.

15 Second slide, please. The challenges that the
16 staff describes in the previous panel I think are ones that
17 I would like to characterize as ones that face not only the
18 NRC but the industry. If the industry is to be successful,
19 the NRC has to be successful in this process, so this isn't
20 something that it's a win-lose. We have to win-win in this
21 case if we're going to be successful.

22 One of the things that I would like to do is kind
23 of punctuate the need for this effort, the effort being
24 successful construction of dry casks for our spent fuel. In
25 1999, we loaded about 128 casks. In 2005, we expect to load

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1 530, and by 2010, we expect that number to be well over
2 1,000 casks, so it's a problem that is going to face us in
3 terms of numbers and some other characteristics that I'll
4 get to in just a moment.

5 The other challenge that we have in dealing with
6 numbers is also improving the licensing process, and I think
7 the staff covered that very well, so I won't belabor that
8 point.

9 Next slide, please. Just to give you some visible
10 evidence of the nature of the problem, in addition to these
11 numbers, we're changing the characteristics of the materials
12 that we have in our spent fuel pools. This is for an
13 average -- excuse me -- average PWR. Here we are at
14 1999-2000 breakpoint in this graph, and we show that the
15 characterization of that spent fuel is exceeding the roughly
16 45,000 megawatt days per ton burn-up.

17 The dotted line represents the cask designs that
18 are available to us today at the stored fuel, which means
19 that when we get to the point where we have removed from the
20 fuel pools all the material below 45, then we're in a
21 position where we've got to have a different design
22 certified cask to deal with this inventory of materials.
23 So, it's a problem that's growing as we find higher and
24 higher burn-up fuels authorized in the reloads of the plant,
25 and it's one that we need to have a corresponding change in

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1 the way we design the casks and fabricate those casks in
2 order to deal with that inventory.

3 Next slide, please. This is another way of
4 characterizing that change in inventory, and it's a bar
5 graph. I think you can see here where we find that that's
6 greater than 45, it's just another demonstration of the
7 significance of the problem.

8 I'd like for you to flip through the next two
9 slides. These are BWR graphs. It shows the same problem,
10 not quite to the same extent but nonetheless one that will
11 face us in a very real way in the year 2005.

12 Could we go to the next slide and then the next
13 one. Go to slide seven. Licensing progress successes. The
14 rules of engagement that the NRC has developed for vendors
15 and NRC interactions have been extremely helpful. The SRP's
16 and ISG's again mentioned frequently during the conversation
17 that was held just a little earlier this morning also has
18 made a significant difference in the course of the last year

19 and how we deal with dry cask storage construction
20 certification.

21 Areas that we still need to look at in terms of
22 improving a licensing process, we need to resolve and
23 develop a good process for making these changes to the cask,
24 the 5059 and the 7248. You had asked the question of what
25 does that mean to us. It means that you need a certificate.

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1 Not that it's open ended, but it has sufficient latitude in
2 it that you can make minor changes as they come about. This
3 is an engineering product. It's of minimal significance, I
4 should add. These are engineering products and, in any
5 case, when you're dealing with engineering products, there
6 are times when you need to make some changes to them. It
7 doesn't take a great deal to see that the ability to make
8 these changes under the 7248 are something that would
9 certainly benefit the industry that are fabricating, as well
10 as the NRC and the licensing and control of them.

11 The next slide, please. Bill mentioned
12 consistency in the reviews, and I would like to just
13 emphasize the value of consistency in just about any
14 process, and this is no different than the dry cask. If we
15 know what the reviewers are looking for to answer the right
16 questions, then the initial submittals are much better. The
17 process of only having one round of REI's I think has
18 significantly reduced the complexity of trying to deal with
19 staff's concerns. It helps the staff focus on what they
20 need to know, and it gives the vendor the ability to answer
21 those questions.

22 Next slide, please. Improving the licensing
23 process. We mentioned the fact that there is a need to take
24 some of the very specific lessons learned, for example, in
25 burn-up, and apply that to the generic application and cask

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1 design. We need to continue to look for areas in which
2 that's possible and apply generic lessons across the board.

3 Next slide, please. One of the examples that was
4 touched on earlier, the high burn-up issue. Several years,
5 like two years ago when Bill Kane was faced with some of the
6 problems of trying to deal with moving on down the line with
7 certification of the cask, it dealt with burn-up. So, he
8 ended up having to constrain some of his design parameters
9 in order to make it possible to move ahead with the design
10 certification process. I think it's now time where we need
11 to put a little more resources into looking at that and open
12 that up, and I think that's what the whole discussion was
13 about.

14 Next slide, please. Industry activities, we've

15 developed guidelines for maintaining quality in the
16 construction fabrication of the casks. We've created a new
17 committee to audit vendors and fabricators, and I think
18 that's gone a long way to improve the quality in the
19 product. We've encouraged utilities to notify the NRC five
20 years in advance of their needs to try and give the NMSS
21 staff time to gear up and plan for the workload that they
22 anticipate. NEI has developed a number of brochures to
23 educate not only the industry but the public in general.

24 We plan to do some workshops. Bill mentioned a
25 working group. I don't think we're going to create a

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1 working group, but we will have workshops that will probably
2 run about one a month for probably the next five to six
3 months, somewhere in that order, in order to focus some
4 attention on the issues that we face today. I think that's
5 going to be just as effective in getting at the issues and
6 developing common understanding and resolution of problems
7 as a work group would be. It would also permit wider
8 latitude participation in the process than just an NEI
9 working group.

10 Risk was mentioned in this cask storage process,
11 and we intend to turn to EPRI and ask them to develop a
12 detailed PRA on dry cask storage so that we'll have some
13 basis for determining risk as the various cask designs are
14 examined.

15 In the 7248, NEI is in fact working on guidance
16 for that. Just as we did with the 5059, we expect that we
17 will have the staff approval and support for the development
18 of that.

19 Next slide, please. In summary, the 7248 is very
20 important to us. Increase in case load for amendments is
21 something that we're very mindful of and one way to
22 eliminate that is through that 7248. More resources to
23 address, the generic and technical issues, and I think
24 that's one where we need to focus some attention in order to
25 learn the lessons from the previous applications and apply

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1 them to ones in the future. Then the change in rule to get
2 consistency between 72 and Part 71.

3 If we turn to the last slide, please, the spent
4 fuel project office, I think, and I would agree with Mr.
5 McGaffigan and Commissioner Merrifield, that they really
6 have done a tremendous amount of work in the last year to
7 improve this process. I'd be the first one to applaud them
8 for that. That's not to say that we've ironed out all the
9 wrinkles. It's not entirely in their hands. It's also in
10 the industry's hands. We need to work together and move
11 forward to develop better casks, better cask designs and at

12 the same time be mindful of the concerns that the public has
13 as we go about this process.

14 With that, I'll conclude, Chairman.

15 CHAIRMAN: Thank you very much. Let me turn to
16 Mr. Kamps now.

17 MR. KAMPS: Thank you for this opportunity to
18 address you today. I'll be -- I don't have slides, but I'll
19 be referring to my presentation which was on the handout
20 tables for others as well.

21 Mr. Beedle referred to a win-win process for NRC
22 and the industry, and I think that it's a win-win-lose
23 process, where the public is the loser. From the public
24 perspective, the effective versus efficient struggle is
25 swaying way over to the side of effective for the industry

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1 and efficient for the NRC, but it's leaving the public as
2 the losers with a consequent loss of public confidence and
3 trust in both the NRC and in the industry.

4 At the top of the public's list of concerns is the
5 use of the general license to circumvent public
6 participation. These nuclear waste dumps are being located
7 next to environmental treasures, fresh drinking water
8 supplies, public property and nearby communities. With
9 7248, there is no such thing as a generic dry cask. The
10 regulator can't even be certain that the cask's safety
11 evaluation report continues to apply because of the
12 modifications that are being made by utilities. In short,
13 the NRC has stripped the public of its right to an
14 adjudicatory process of the right to discovery and cross
15 examination which they would have with public hearings.

16 There really are very good reasons to conduct site
17 specific environmental impact statements and adjudicatory
18 public hearings. In Michigan, it was mentioned earlier, the
19 Palisades plant dry storage cask pad is located on shifting
20 sand dunes, which the Michigan Department of Natural
21 Resources and the Army Corps of Engineers have declared as
22 high risk erosion zones. In addition, a memo was written to
23 the former NRC chairman, Ivan Selin, from NRC staff person
24 Ralph Landsman, which pointed out that the Palisades dry
25 storage pad is endangered of not only erosion but the risks

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1 of earthquakes that could even -- I'll read from the memo so
2 I'll get his exact words.

3 Actually, it's the consequences that might occur
4 from an earthquake that I'm concerned about. The casks can
5 either fall into Lake Michigan or be buried in the loose
6 sand because of liquefaction. As of last summer, he still
7 did not have an adequate response from the Commissioners,

8 and that came out at a public meeting at the Palisades
9 plant.

10 The next part of my presentation is the first rule
11 of holes. When you are in one, stop digging. This refers
12 to the fact that no safe unloading procedure has ever been
13 demonstrated for dry cask storage. It was one of the major
14 contentions at Palisades in the lawsuit that saw an
15 injunction against the loading of the VSC-24's in the first
16 place back in the early 90's. The fourth cask to be loaded
17 at Palisades was found to be effective, and Consumers Energy
18 Company, as a sign of its commitment to public confidence,
19 announced that they would unload the cask. It was then that
20 they ran into unforeseen complications, such as the
21 radioactive steam flash that would result from putting the
22 thermally hot fuel back into the storage pool.

23 So, the public is fully aware, now that it's
24 nearly six years later, that there is no demonstrated safe
25 unloading procedure. That cask has sat there for nearly six

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1 years. The first rule of loading dry casks must be do not
2 load unless you have demonstrated how to safely unload. The
3 public will have no confidence that the NRC or the industry
4 knows how to safely unload dry storage casks until it is
5 demonstrated.

6 About the issue of fabrication before certificate
7 of compliance, the public is very concerned that cheap,
8 quick fixes are going to replace rigorous regulation. Once
9 the major investment of large amounts of money have been
10 made into the fabrication of casks, the pressure will be to
11 allow these casks to be used, no matter what problems
12 develop.

13 The next section refers to the problems that have
14 developed, not in decades but in a short few years' time.
15 The explosion at the cask in Wisconsin at Point Beach was a
16 surprise to the NRC, to the industry and to cask
17 manufacturers. This is a clear sign that paper reviews are
18 not adequate, and I'll get to that shortly. What defies
19 comprehension is that the NRC and the industry would repeat
20 the same mistakes after Point Beach.

21 In June, 1999, after a three-year stop on loading
22 VSC-24's, there were two hydrogen burns at Palisades, which
23 clearly demonstrated that administrative controls were not
24 in place. Shortly after that incident, there was a
25 suspicious fire at the Palisades plant in the document

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1 storage room. The public does not know what documents were
2 lost in that fire relating to the incidents at Palisades
3 that had just occurred.

4 Just after that, there were the bubbles at Trojan that

5 stopped the loading of a cask in the pool.

6 These repeated problems clearly show that paper
7 reviews are not adequate. Real tests are not an absolute
8 guarantee against unforeseen problems, but they would
9 certainly go a long way. Before casks are manufactured,
10 full scale tests must be done. Full scale, real life, tip
11 tests, drop tests, dip tests, and chemical interaction tests
12 under real life conditions are very much in order. For
13 transportation casks, full scale testing under real life
14 accident scenarios must be conducted.

15 Given the public's distrust of the NRC and the
16 industry on these issues, a genuinely independent third
17 party must be an integral part of the testing process. It's
18 interesting to note that lead test assemblies and tridium
19 test rods are required before a production mode gets into
20 full swing, but the same approach is not followed with dry
21 storage casks. Trial and error is certainly not in the
22 public's interest, and in the long run, it's not in the cask
23 manufacturer's, the NRC's or the industry's interest as
24 well.

25 The public sees the present, innocent until proven

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1 defective licensing process as nuclear experimentation in
2 their back yard, or front yard, as the case may be. There's
3 a growing list of faults and defects and failures with dry
4 storage casks, so it's growing evermore evident that the
5 safe operation of these facilities for 20 years is not the
6 case at all. Failures have developed within a few years,
7 not decades. A TN-40 cask at Surrey Nuclear Plant in
8 Virginia has suffered a helium leak and cracks in its
9 concrete outer shield. VSC-24's at Palisades and Arkansas
10 One have suffered weld flaws and helium leaks, not to
11 mention the hydrogen ignition events at Palisades and at
12 Point Beach.

13 Along with the helium leaks, there's the question
14 of fuel deterioration and future handling problems. There's
15 been a failure in QA-QC with the Vectra new homes casks with
16 the concrete aggregate. These repeated chemical failures,
17 premature aging, degradation and deterioration really point
18 to the need for a comprehensive review of the cask licensing
19 process. The question in the public mind is not if problems
20 will occur, but how soon, and for this reason, the public is
21 starting to refer to these Nadas ISFSI's which I can't
22 pronounce but is IFI's, which is much easier to pronounce.

23 Because of the importance of the proposals, I'd
24 like to go over them one by one. The first proposal from
25 the public perspective is to eliminate the shortcut of

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1 allowing the general license to serve for these
2 installations. There is no such thing as a generic dry cask
3 because of the licensees' ability to use 7248. In the
4 absence of eliminating the general license shortcut, thereby
5 making every IFI application an application for a site
6 specific license which requires public hearings. The citing
7 of an IFI using a general license must be proceeded by a
8 local public hearing convened by the NRC. Prior to the
9 transfer of control of spent nuclear fuel at any IFI from
10 the licensee to the DOE, the NRC must convene a local public
11 hearing and prepare an EIS. This point is very important.
12 The public confidence i the DOE is very low in their ability
13 and their past record of handling high level waste. Local
14 public hearings are very much in order.

15 Number four, prior to the transfer of control of
16 spent nuclear fuel at any IFI location from the licensee to
17 a nuclear management company, the NRC must convene a local
18 public hearing to address the management company's
19 regulatory capabilities and plans regarding the control and
20 storage of spent nuclear fuel. There are communities that
21 are facing the possibility that nuclear management companies
22 will relocate fuel from a number of plants to a single plant
23 location, and there is tremendous concern about this.

24 Number five, the public should be provided with a
25 local public hearing for applications by a licensee to renew

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1 the certificate of a cask. I should add that perhaps the
2 certificate should be issued for less than 20 years given
3 the early failures of these casks. Five years may be more
4 in order.

5 Number six, prior to NRC's certification of a dry
6 cask, an independent third party must test the cask under
7 live conditions, loading and unloading of spent nuclear
8 fuel, as well as evaluate the vendor's safety analysis
9 report. No exemption should be granted for the construction
10 of a cask, even at the vendor's own risk, until the third
11 party has completed its evaluation and submitted its report
12 to the NRC.

13 Number seven, the final point. The public should
14 be provided access to changes done to casks through the 7248
15 process. Thank you.

16 I'd like introduce my technical expert, Paul
17 Gunter, who can answer more technical questions.

18 CHAIRMAN: Good. Thank you very much. Mr. Davis?

19 MR. DAVIS: Thank you. I'm going to stay within
20 the Commission's admonition to be within the five minute
21 rule this morning. Accompanied by Bill Lee, who is our vice
22 president for engineering, chief engineer pool. Would you
23 stand up and be recognized, please?

24 NAC is operative in the nuclear fuel cycle, both
25 in the front and the back end for over 30 years. We

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1 specialize in the safety, security, storage and
2 transportation. We have successfully licensed 12 systems,
3 12 storage and transportation and over 80 amendments. We
4 have logged over 3,000 shipments over six million miles, I
5 might mention with unblemished safety record. We have
6 unloaded hundreds of casks.

7 If we could go to slide one, please. I have a
8 couple of key points here this morning. Number one, I want
9 to thank the Commission for its leadership and oversight in
10 terms of addressing the issues confronting utilities in
11 terms of dry storage. I particularly want to commend the
12 leadership of the spent fuel project office and the project
13 review team for the significant work that they have made
14 over the last two years. I think there's still room for
15 improvement, and certainly there's additional challenges
16 lying ahead. That doesn't take away from the significant
17 progress that's been made.

18 The second point I might mention is that it's not
19 a static situation, it's a dynamic situation. The utility
20 needs are changing, both for operating plants as well as
21 decommissioned plants, which is creating a gap between
22 what's been certified in terms of the contents that can be
23 loaded in to the storage systems and what actually is in the
24 pools themselves.

25 Thirdly, the point that I've been making is

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1 there's certainly an urgency and importance attached to the
2 resolution of technical issues. High burn-up fuel has been
3 mentioned and standard tech specs, and I would agree with
4 that, and I want to associate myself with Ralph Beedle's
5 testimony today on behalf of NEI. I also want to make a
6 mention that I think there's a need for an urgent effort to
7 resolve some of the process issues in terms of how the
8 certificates get amended and changed. Commissioner
9 Merrifield used the medical term triage, and that's sort of
10 a term I guess is used in the medical profession for
11 prioritizing the medical emergencies. I would like to see
12 the spent fuel project office get out in front and be more
13 proactive. I have a couple of recommendations in that area
14 as well.

15 Lastly, I think there seems to be certainly I
16 think the spent fuel project office and the Commission be
17 well advised that the used risk significance or risk
18 informed decision making. Certainly from our perspective
19 there needs to be -- needs to harmonize the regulatory

20 approaches that are embodied in parts 50, part 71 and part
21 72. The technology has changed. Dual purpose technology
22 now is licensed under both Part 71 and 72. Both of those
23 regulatory regimes had not envisioned dual purpose
24 technologies, and we've had advancements and risk
25 significance, risk informed decision making, Part 50, which

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1 have not been translated into 71 and 72 space.

2 Lastly, a point I think that was raised when the
3 spent fuel project office staff made their presentation,
4 there needs to be consistency and compatibility with
5 international standards. Although they seem to be a slight
6 nuance there, we're trying to amend our current regulations
7 to be compatible as Part 71 and Part 72 with the new
8 international standards. On the other hand, beginning to go
9 down a path, we might change the testing parameters for our
10 own use here in the United States, creating incompatibility
11 and inconsistency with the international standards. So, I
12 would caution the Commission in terms of moving in a
13 direction away from the international standards.

14 Second slide, please. There's been a lot said
15 about this. I'll just mention the fact that there has been
16 progress. I believe it has not compromised the public
17 health and safety or public accountability and consistent
18 within the four corners of safety paramount, public
19 confidence and public accountability and the effectiveness
20 and efficiency in the regulatory process. So, I think the
21 progress as made has stayed within the four corners in the
22 foundation that the Commission has laid out for its
23 improvements in the process area.

24 I believe the rules of engagement did, in fact,
25 establish stability and predictability in the process.

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1 Based on our experience, we received for our last dual
2 purpose system an initial license approval within two years
3 -- two years and two months. We think that certainly
4 represents significant progress from the past. We still
5 think that there's perhaps a 25 percent to 50 percent
6 improvement in that. Particularly on the front end, there
7 was some cue time that's sort of waiting in sort of the
8 regulatory hopper, if you will, and it's also based on sort
9 of a two-round REI process. So, we think that the process
10 can be further improved upon the two years that we
11 experienced in 1999.

12 Having said that, I do want to commend the spent
13 fuel project staff again for what I observed during the last
14 two years for their professionalism and dedication in terms
15 of meeting schedules. I mean, the staff actually as in the
16 weekends working overtime and hours in the evenings trying

17 to maintain these schedules. So, certainly an effort was
18 made there, something which I think it new and different and
19 certainly well welcomed and appreciated on the part of the
20 industry.

21 Third page, please. Mr. Beedle has already spoken
22 to the needs, the drivers that are changing the requirements
23 as far as spent fuel storage. First and foremost, there's
24 the decommissioned plants, number of decommissioned plants
25 in New England that are being decommissioned. The paramount

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1 issue there for them is fuel pool solution. They need to
2 get the entire contents out of their pools into the spent
3 fuel storage canisters. These, as you know, these original
4 certified canisters do not allow a lot of the off normal,
5 non-standard fuel components. These include consolidated
6 fuel, individual fuel rods and fuel debris. That's
7 presently not certified to be containerized in the certified
8 canisters today.

9 In addition to that, as Ralph Beedle has outlined
10 for you, utilities, in the drive to be more competitive or
11 increase in the burn-up of their fuel going beyond the
12 45,000 megawatt days per metric ton limit. That's the
13 current limit as far as the fuel that can be containerized
14 in our current canisters, and therefore there needs to be an
15 effort to raise that limit.

16 Fourth slide, please. As far as the resolution of
17 generic issues, Ralph outlines these issues. The high
18 burn-up fuel certainly is the one for operating plants.
19 Over 50 percent of the fuel that's being discharged is in
20 the high burn-up category, over 45,000 megawatt days per
21 metric ton. Standard tech specs are paramount in terms of
22 developing a smart certificate that would allow more
23 flexibility in terms of the use of 7248 once it's
24 promulgated. Burn-up credit, that's akin to high capacity
25 canisters.

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1 One of the things I believe, again, in the area of
2 -- not to overuse the metaphor, in terms of triage, I
3 believe that the spent fuel project office and the
4 Commission would be well served in establishing a generic
5 program framework, if you will, complete a project plan,
6 complete with schedule milestones and accountability for the
7 process in terms of making progress on some of these generic
8 issues.

9 Page five, please. We, as other designers, have
10 advanced designed that are ready for NRC review. They can
11 credit for partial burn-up credit that's implicit in the
12 interim staff guidance. We are also awaiting resolution in

13 terms of the generic technical issues that we can
14 incorporate in these new designs that we'll be submitting,
15 and we believe it needs, as I mentioned already, there needs
16 to be a formal resolution program on some of these generic
17 issues.

18 Page six, please. In terms of process
19 refinements, it's already been noted that all changes to the
20 COC require a rulemaking process. It's a 12-month process,
21 we think, that needs to be a more effective, more efficient
22 means for changing initial certificates. We think the
23 amendment process needs to be based on some sort of risk
24 significant, some sort of threshold mechanism, if you will.
25 I've already mentioned it's very clear to me at the various

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1 regulatory regimes of 50, 71 and 72 have to be harmonized. The
2 staff has reported earlier to the Commission that they had
3 some 62 amendments to Part 71 and that they're saying ten
4 amendments presently and 20 pending to Part 72. I just
5 don't see, and we believe that the number of amendments will
6 just continue to grow with time. So, we don't believe that
7 the Commission will have enough resources really to process
8 those amendments in an expeditious and a timely manner. We
9 need to implement 7248 as expeditiously as possible. We've
10 already mentioned that the COC rulemaking in terms of the
11 change process has to be changed.

12 In summary, again I want to compliment the spent
13 fuel project office and staff for their dedicated effort
14 over the last two years. They've done a good job. It's too
15 early to spike the ball, if you will. There's new
16 challenges that lie ahead, particularly for decommissioned
17 plants that have a variety of different fuel types that have
18 to be containerized, and they are on a very tight timetable,
19 as you know. For operating plants, they're discharging now,
20 presently, high burn-up fuel that's presently not -- cannot
21 be containerized in a present certified systems. We believe
22 there needs to be a generic process, a structured process, a
23 disciplined process, for resolution of generic issues. Then
24 along with that, complementary to that, we believe there
25 needs to be some sort of process reform to make changes to

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1 the original certificates.

2 I want to thank the Commission for its leadership,
3 it's oversight, and its support for insuring timely changes.
4 Thank you very much.

5 CHAIRMAN: Thank you very much. Mr. Kamps, one of
6 the major points that you made -- you made several, but your
7 concern about the general license and the use of the 72.48
8 process. Mr. Beedle had made the point that these are
9 engineered products and that some modifications to apply to

10 some uses may well be necessary. I'd like to pursue the
11 issue. Let's presume for the moment that the staff has done
12 the job and has imposed adequate technical specifications
13 and conditions that they sort of bounded the performance
14 characteristics that the cask is supposed to meet and made
15 sure it's used in appropriate circumstances. Why isn't that
16 sufficient?

17 MR. KAMPS: Paul, would you like to respond to
18 that? He's closer to this than I am.

19 CHAIRMAN: Okay.

20 MR. GUNTER: I think the issue here is whether or
21 not the public is involved in the process, and I think
22 that's what Kevin's addressed clearly here, is the public
23 wants to be clearly involved and to have the ability to be a
24 part of the process in a legitimate proceeding. We see the
25 changes that are being proposed through this particular

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1 process as a shortcut, and, you know, granted, everybody is
2 trying to move a process along here toward solution. We're
3 not proposing that we're against dry cask, but clearly the
4 concern is that both the financial commitments and the
5 technological commitments that are being put forward by the
6 movement of this waste clearly need more public involvement.
7 I think this is at the crux of the issue.

8 CHAIRMAN: As I understood in the process,
9 however, that when the process of certification is itself a
10 rulemaking in which there is an opportunity for public
11 comment and all the documents are made available. In your
12 view that that's insufficient?

13 MR. GUNTER: You know, public comment and the
14 ability to engage in a process of discovery are worlds
15 apart.

16 CHAIRMAN: Okay, thank you very much. I'd like to
17 follow up, and this is really prompted by Commissioner
18 McGaffigan's comment and something that you had said, Mr.
19 Davis. Commissioner McGaffigan had a whole series of
20 questions he'd asked about this IAEA ST-1 and the
21 possibility that there are aspects of it that may be
22 questionable when viewed from a risk informed perspective.

23 In your comments, you emphasized the importance of
24 our maintaining consistency with the international
25 standards. Perhaps Mr. Beedle would like to comment on this

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1 as well. I mean, is the message you'd like to deliver to us
2 is that we should accommodate ourselves to ST-1, even though
3 there are aspects of it that are not risk informed in order
4 that there would be consistency between our regulations and
5 those that might exist elsewhere?

6 MR. DAVIS: I'm not implying that the Commission
7 would not make reasoned judgments as where there might be
8 diversions from the IAEA, but those areas should be kept to
9 a minimum. I think it's important to understand that most
10 of the spent fuel that's been transported today, some 80,000
11 metric tons, which is very significant, mainly in support of
12 reprocessing campaigns in Great Britain and France and Japan
13 has largely been done safely and efficiently and
14 effectively. So, the body of experience resides, you know,
15 elsewhere rather than the United States.

16 Second, what I was specifically referring to was
17 changing some of the testing requirements, the accepting
18 test requirements for casks. For example, raising the drop
19 tests from 30 feet to 90 feet, or the immersion tests, you
20 know, from 30 minutes, 1,000 degrees to whatever for eight
21 hours. Those sorts of things that have been talked about
22 that are very popular -- full scale testing. All those
23 types of changes which may -- some people may be promoting
24 but certainly are not consistent with international
25 acceptance standards.

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1 CHAIRMAN: Thank you. Commissioner Dicus?

2 MS. DICUS: I have a question for NEI, and it goes
3 to the concerns of the public and public involvement and
4 process. I noted that you, NEI, has brochures, I think you
5 said, to assist the industry in early public communications
6 in engaging the public and the communications about the
7 waste, et cetera.

8 What is your understanding of what the industry is
9 actually actively doing to engage the public?

10 MR. BEEDLE: Well, it's our understanding that as
11 the utilities move toward the development of a spent fuel
12 storage facility, they do engage the public. They make a
13 concerted effort to educate and inform the public as to what
14 they're doing. I mean, the last thing they need is to put a
15 significant investment in this, only to find a significant
16 public outcry against the development of it. So, they've
17 made an effort to try and educate and through that, get some
18 acceptance of it. These brochures are mechanisms that help
19 the utility describe and discuss that in a fairly
20 straightforward manner.

21 MS. DICUS: What about the workshops that you
22 mentioned that you're going to be having? What's sort of
23 the content of them, and are they going to be probably --

24 MR. BEEDLE: Well, by having workshops, as your
25 staff indicated, the workshops that we've had with the staff

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1 have been open to the public.

2 MS. DICUS: Okay.

3 MR. BEEDLE: And by having workshops rather than
4 working groups, we make this a more open process, one in
5 which the NRC can participate and other members of the
6 public. We've had several workshops with the NRC and over
7 the course of the last couple of years. They've all been
8 open to the public, and we've had quite a few non-NEI
9 members, non-NRC employees attend those. So, we've had
10 pretty good reception in that regard.

11 MS. DICUS: Okay, thank you.

12 CHAIRMAN: Mr. Diaz?

13 MR. DIAZ: Yes, maybe there's a question for both
14 Mr. Beedle or Mr. Davis. You both are emphasizing the need
15 to, you know, put additional resources to resolve the
16 substantial issues that remain. Does that mean that you're
17 going to love the Congress so we can get out additional
18 budgets and we can solve this problem since its a zero sum
19 game.

20 MR. BEEDLE: We'll work on that, sir.

21 MR. DIAZ: Very good, appreciate that.

22 MR. DAVIS: Happy to lend a hand.

23 MR. DIAZ: Mr. Davis, is there any single, you
24 know, technical licensing issue that you believe is the, you
25 know, needs to be resolved for the, you know, moving all of

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1 these things forward in a manner that is consistent with
2 our, you know, mission of protecting public health and
3 safety and with the needs of them, is there any single one?

4 MR. DAVIS: If I had to name one, I would say high
5 burn-up.

6 MR. DIAZ: High burn-up.

7 MR. DAVIS: I think that's sort of an -- you'd get
8 that as an industry-wide response to your question.

9 MR. DIAZ: All right, and Mr. Kamps, I know you
10 have raised a series of objections. I think the main one
11 has been someone that's not been able to be involved in
12 every step of the process, is that correct, or every change
13 that is made? You think that every time there is a change,
14 they have to be a full hearing, or you used the words
15 adjudicatory hearings. Is that your position that every
16 time, even if it's what we call a minimal change that we
17 don't think has any significance regarding to risk, you
18 still believe that that process needs to go through an
19 adjudicatory type process. Is that your position?

20 MR. KAMPS: Paul, you want to address that?

21 MR. GUNTER: Again, the issue is, you know, in the
22 eyes of the Commission and the industry, what constitutes a
23 minimum change? We recently saw the changes to the VSC-24.
24 It basically resulted in no change at all to the hydrogen

25 gas generation event, but there was no public oversight,

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1 public involvement in the Trojan area for the changes that
2 were proposed to the VSC-24. So, what constitutes a
3 significant change, you know, that's what's in question.
4 Again, you know, we bounce this word minimum term around,
5 but minimum can constitute some major issues in terms of
6 resolving risk to public health and safety.

7 You know, it is the issue that we are making a
8 significant commitment to a very long term issue, and at --
9 while there is economic risk to the industry, clearly the
10 burden of health and environmental risk is on the public,
11 and for that reason, the public should be able to closely
12 scrutinize, and if deemed, intervene.

13 MR. DIAZ: So now I hear a different thing which I
14 think is an important one. You are saying that the process
15 in which minimal changes are done without, you know, prior
16 Commission approval or a continuation need to be clearly
17 spelled out and identified and that you think that if that's
18 done well, then you have a basis in which to judge the
19 things. In other words, it's a process issue, and that if
20 the process is not clear, then you think that public
21 intervention is necessary. Is that correct?

22 MR. GUNTER: Clearly public, you know, we agree
23 with everyone here that public education is fundamental and
24 necessary. I think that as a further check and balance,
25 though, the public should be given more weight in terms of

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1 its ability to intervene. So, education with the
2 opportunity to intervene, I think keeps everybody in check.

3 MR. DIAZ: To intervene after a certain threshold
4 because we have a large number of checks and balances inside
5 that we believe are very, very clear and, you know, that do,
6 you know, even we think, you know, the staff. There is
7 always a series of checks and balances concurrence that I
8 think brings a lot of credibility. From my position I see
9 bringing credibility to every step of the process. There
10 must be a time in which, you know, we can move forward on an
11 issue and determine that it really doesn't have any risk
12 significance, that the change is minimal and to be able to
13 proceed with it without, you know, keep delay in the
14 process.

15 However, I do agree with you that maintain the
16 public inform is very, very important. Thank you, Mr.
17 Chairman.

18 MR. GUNTER: Can I just add, though, that the onus
19 is now on the NRC and the industry to regain public
20 confidence with the demonstrated failures of a number of
21 cask designs. I think that's why you need to weigh heavier

22 now with bringing the public into a meaningful
23 participation.

24 CHAIRMAN: Thank you. Mr. McGaffigan.

25 MR. MCGAFFIGAN: Mr. Davis, the issue of getting

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1 standard tech specs and getting license conditions that are
2 the right license conditions, let's assume the staff is
3 successful in that effort and we have standard tech specs
4 and we have license conditions that are only the ones that
5 are needed so that the 7248 process could work. Well, that
6 itself, I mean, I'm just trying to look at it from your
7 perspective. They tell you what you can then take out of
8 your tech specs and how you can amend your certificate, but
9 that change, that change itself will require a rulemaking,
10 right?

11 MR. DAVIS: To put that in place?

12 MR. MCGAFFIGAN: To put that in place. Could it
13 require multiple rulemakings if we don't do it all at once?
14 I mean, if we sort of dribble out, you know, you can make
15 this change, you can make that change, or would you wait as
16 a prudent matter until they had finished, you and other
17 licensees, until they had finished their review and told you
18 exactly what it was they were likely to approve before you
19 started that process. How does that work? I'm just trying
20 to understand, you know, is this -- how many amendments of
21 this nature we're going to have through the rulemaking
22 process and all that.

23 MR. DAVIS: Well, first and foremost, you have to
24 finalize the promulgation of 7248 which draws a threshold
25 below which the users of these casks that are certified

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1 under a general license can make changes below that
2 threshold, that bright line. Hopefully there will be some
3 specific, very clear, definitive criteria that are laid out.
4 I believe, having read 7248, that there are the criteria
5 there.

6 The second thing that has to be done for the
7 present systems that are certified, those COC's are
8 extremely comprehensive and detailed. They'll have to be
9 amended, and this I think goes to your question. They're
10 going to have to be amended to incorporate the essence, the
11 concepts of a smart certificate and the standard tech specs.
12 I would, I guess, in addressing that, would not advocate a
13 wait until it's perfected. I would, as the occasion
14 permits, I would amend those certificates on a timely basis
15 to incorporate the changes to the tech specs, as well as the
16 smart certificate so that those certificates can be lined up
17 with sort of the end game as far as where the Commission's

18 spent fuel project office wants to be with the certification
19 process.

20 MR. McGAFFIGAN: Now, 7248 has been promulgated.
21 We're just waiting -- the effective date of it is, it's like
22 5059. It's waiting for the development of guidance, and is
23 it the same process as NEI, in the case of 5059, I think
24 we're working off of NEI 9607, Rev something. Is there an
25 NEI document that's going to be submitted to the staff, or

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1 in this case, is the staff taking the initiative to develop
2 the guidance?

3 MR. BEEDLE: No, there's an NEI document under
4 preparation, in preparation, and we'll follow the same
5 process we did with this.

6 MR. McGAFFIGAN: So, it's following the 5059.
7 It's not --

8 MR. BEEDLE: We're expecting timeline-wise,
9 probably another year before that whole thing is in place.

10 MR. McGAFFIGAN: Okay.

11 MR. BEEDLE: Let me go back and -- to the credit
12 of the spent fuel project office, they took some of our
13 original certification requests and limited the scope of
14 that COC well within the design capability of that cask
15 because that was what they knew they could do at the time.
16 So, in an effort to try and move that certification process
17 along, then you had a cask that was far more robust than the
18 capability of the fuel that they put in it.

19 In issuing that COC, those restrictions prohibited
20 the vendor and the licensees from doing anything else with
21 that cask. So, that's where we're talking about developing
22 these processes so that you can expand the capability of
23 that cask.

24 MR. McGAFFIGAN: An issue that was mentioned by
25 Mr. Brach in passing was that there had been some

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1 discussions between the industry and the staff, presumably
2 at these workshops, about how to transition from a generic
3 license to a site specific license at places like Maine
4 Yankee, Connecticut Yankee, Big Rock Point, et cetera, and
5 this goes to an issue that Mr. Kamps raised. At that point,
6 what are the thoughts at the current time?

7 I didn't have a chance to ask the staff, but what
8 are the -- it would appear at the very point where you're
9 trying to terminate the Part 50 rule where there is a public
10 hearing of the sort that Mr. Gunter has been talking about,
11 you'd simultaneously have a process where you'd be going to
12 a site specific ISFSI transitioning out of 50, where just
13 not even looking at the regulations at the moment, there
14 might be a second public hearing on the ISFSI. That may be

15 what the rules require today and that may be right, but what
16 discussions have there been with regard to this transition
17 from a generic license, specific license, or the other issue
18 that Mr. Kamps raised, if take title ever occurs, and I'm
19 not holding my breath, would, you know, the transition from
20 the licensee to DOE, and DOE taking over the ISFSI.

21 MR. BEEDLE: You have three parties in this. One
22 is the NRC's management over the Part 50 license. Then
23 there's the prospect of the DOE taking custody and how the
24 DOE would regulate that process. Then you've got the
25 states, and once you get out of the Part 50, then you have

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1 the state regulation coming into play, as well as the EPA.
2 The prospects of dual regulation are something that I think
3 we'd just as soon not have to face.

4 MR. MCGAFFIGAN: Isn't the law clear today that
5 ISFSI's are regulated by the Nuclear Regulatory Commission.
6 There is no state involvement in regulating an ISFSI.

7 MR. BEEDLE: I don't think that Maine Yankee would
8 agree with you. Now, whether or not it's a legitimate
9 regulation, it's nonetheless regulation because they keep
10 having to answer questions and deal with issues associated
11 with that construction.

12 MR. MCGAFFIGAN: I'll let our general counsel deal
13 with the state of Maine, but I think it's fairly clear in
14 the Atomic Energy Act and the high level waste acts and
15 whatever that that responsibility is ours. I think even if
16 DOE takes title, I think it's clear in the statutes that DOE
17 would require some sort of license or something from us.
18 They wouldn't be self-regulating in their take title
19 activities. I think that's clear.

20 MR. BEEDLE: Well, I think whenever you bring
21 another federal agency into play here, whether they have
22 strict regulatory authority or not, it brings a certain
23 degree of regulation that you may or may not want.

24 MR. MCGAFFIGAN: Well, this may be all premature.
25 Mr. Kamps, one thing, and I know the Commissioners, we're

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1 running out of time. The one item that you mentioned, item
2 seven on your list, I think you're going to get. I mean, I
3 think 7248 as revised requires that the SAR changes be
4 submitted on an annual basis to the director of NMSS, and
5 that that document be made in the public record. So, I
6 think that that was provided for in the rulemaking. It's in
7 the existing 7248, and I don't recall us changing that in
8 any way when we tried to amend it as part of the process of
9 amending 5059 as well. If I'm wrong on that, let me know,
10 but I think that that's the case. I'm getting nods from the

11 staff, so you're batting one for seven, and maybe higher.
12 Phil, I better let Commissioner Merrifield ask his question.

13 MR. MERRIFIELD. Two questions, the first one
14 directed towards Mr. Davis and Mr. Beedle. Commissioner
15 Diaz raised a point initially that has a degree of
16 seriousness to it. I think we have been trying as an agency
17 overall to appropriate right size ourselves. We're down to
18 around 2800 people down from around 3400 back in 1993. Our
19 budget, from an inflation adjusted perspective, is at the
20 lowest point it's been in the history of this agency, I
21 believe.

22 We are trying to as a Commission craft a balance,
23 and that is to make sure that we are focusing on positive
24 outcomes and doing so in a manner that maximizes our ability
25 to protect public health and safety and yet balance that out

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1 with not inappropriately utilizing or wasting human or
2 economic resources. Occasionally, and this is certainly a
3 possibility, that we overshoot the mark. I certainly don't
4 know if you have any comments now or you want to go back and
5 think about it a little bit, but is this an area, the spent
6 fuel project office, where perhaps we have overshot the mark
7 and we need to provide additional resources which might
8 increase our need for budget requests down the line. I sort
9 of posit that as a thought.

10 The second part of that is to what extent as an
11 alternative have you all thought about -- you know, I talked
12 about triage. Getting together as an industry and providing
13 us with some greater guidance about what you all
14 collectively can agree on the priorities, which is difficult
15 given the fact you have different vendors and different
16 licensees, but to give us some greater clearance and
17 understanding about where we need to go, to utilize our
18 resources to the best extent we can. You may want to think
19 about that one and get back to us.

20 MR. BEEDLE: Well, I think that's a very
21 interesting question, and it's not dissimilar to the
22 question that I ask myself in the budget process for our own
23 organization. As new and emerging requirements pop up and
24 we look at those and say that's something that needs to be
25 dealt with because it has significant ramifications if you

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1 don't deal with it. In this case, we're talking dry cask
2 and the very real potential that you end up with plants that
3 can't operate if they don't have those casks for storage.
4 So, you know, it's kind of an operational issue.

5 MR. MCGAFFIGAN: But the question, if you're going
6 to apply resources to a program or project that you hadn't
7 applied in the past and you can't develop any more

8 resources, you need to look at those areas where you can
9 reduce resources in order to kind of reallocate those.
10 Training, reallocation of resources, better processes, I
11 think all of those all in that category of trying to
12 realign. I mean, I could come back and give you, you know,
13 you ought to take one person from that office and one person
14 from that and get the five that you need to put over here.
15 I don't think that's what you need from the industry. We'd
16 take a bunch of pot shots at you, and I don't think it would
17 really be that helpful.

18 If you'll go back to the study in personnel that
19 was done on behalf of the Senate, and they said you could
20 reduce by, I don't know, 70 --

21 MR. MCGAFFIGAN: Yeah, but they said we should get
22 rid of the research program. Zero was the right number of
23 research. They had ridiculous things in there that doesn't
24 have the support of this CFIS panel in which NEI
25 participated or whatever.

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1 MR. BEEDLE: I was thinking of the Tim Martin
2 study where they --

3 MR. MCGAFFIGAN: That's the Tim Martin study. It
4 said zero was the right --

5 MR. BEEDLE: He was also looking at multiple
6 groups doing the same function and saying if you got three
7 groups doing the same thing, maybe you can eliminate two of
8 them. You know, and to the extent that that may have helped
9 in the board sense, look at the agency, I don't think it
10 really helped you solve the day to day problem of budgeting
11 your resources.

12 MR. MERRIFIELD: I guess the -- to redirect this,
13 we can certainly have a discussion about research on another
14 day. The point is there are additional things you want us
15 to do, and we're trying to -- I think we are trying to
16 accommodate that as much as we can, and there are pushes and
17 pulls that go along with that. To the extent that industry
18 can align itself in some way to help us prioritize where we
19 don't necessary have additional resources we can apply would
20 be helpful. So, I'll leave it at that, and if you've gotten
21 further things, you can respond later, if you wish.

22 MR. DAVIS: If I could comment just a second,
23 specifically directed to the spent fuel project office, at
24 least in my mind, despite heroic efforts on the part of the
25 staff to address both the case work -- that's the licensing

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1 work -- as well as generic issues, I think they're going to
2 fall behind in terms of just keeping up with the amendments.
3 It's a process. It hasn't changed, and I doubt whether or

4 not they'll be able to resolve some of the generic issues
5 like high burn-up that we mentioned. So, in my mind at
6 least, I think there is a need for additional resources.
7 Any time you matrix the resolution of generic issues with
8 your current licensing project teams, you know, it's -- what
9 gets short shrift is the resolution of generic issues, and
10 then you start resolving those on a case by case piecemeal
11 basis, and you're going to get variations from one review to
12 the other. So, I don't think that's the best way to be. I
13 would argue for additional resources on the -- at the very
14 least on the generic -- on the high priority, high profile
15 generic issues that I will also argue that you may have to
16 make an investment in realigning your processes and
17 harmonizing your various Parts 50, Part 71 and Part 72 and
18 go into more of a risk informed basis in establishing those
19 thresholds so you can provide additional flexibility to the
20 users of these license systems. Then preserving for review
21 and approval by the staff are those things that exceed the
22 threshold.

23 MR. MERRIFIELD: That's helpful, and as I said, if
24 you've got additional thoughts after this is concluded,
25 certainly I'm sure the Commission would win on those as

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1 well.

2 Mr. Kamps, I have -- you had a very detailed
3 explanation and explication of many of the issues you've
4 seen in the past with casks, and it would be imprudent of
5 anyone, including me, to assert that there hadn't been
6 problems, and I think you pointed them out, and I think
7 articulately.

8 Many of these, it dawns on me, have occurred
9 before the time that I became a commissioner 16 months ago.
10 I know if you look historically at this agency, the problems
11 that we had on the reactor side in the early years of the
12 program, we have many, many problems. Now that we're 25
13 years to our history, the number of problems and the scope
14 of problems are different and lower than we have encountered
15 with reactors. Some of that is a result of experience and
16 that is the result of having a better understanding on our
17 side, better understanding on the part of our licensees.

18 So, I'm wondering if you could help me work
19 through separating the wheat from the chaff, you know, those
20 areas where there have been some difficulties getting off
21 the runway, so to speak, in terms of understanding how to
22 build and utilize these casks versus what you would perceive
23 as more systemic issues associated with these casks, which I
24 would argue probably -- you would want us as a commission to
25 spend more time focusing on in the future. I'm wondering if

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1 you could comment on that.

2 MR. KAMPS: I think we could talk to our members
3 at all of these locations around the country and get their
4 feedback because they've been denied that opportunity where
5 they live to communicate with the NRC in any meaningful way.
6 We'd be happy to communicate, be a bridge, but it would be
7 so much more effective for the NRC to speak directly with
8 these affected communities at the reactor sites. So, we'd
9 be happy to --

10 MR. MERRIFIELD: I'm trying to get some
11 particulars. Are there particular issues associated with
12 these casks that you believe are more the result of the
13 early learning process versus those which are more subject
14 to substantial issues that are ongoing?

15 MR. KAMPS: Paul?

16 MR. GUNTER: Right now I think the biggest concern
17 that we have is that, as has been amply pointed out, we're
18 looking at a tsunami of nuclear waste destined for some
19 resolution in dry cask out of spent fuel. The public is
20 quite concerned that this is all being put into the context
21 of a competitive market when, in fact, this raises long term
22 public health and environmental safety issues. So, at the
23 root of the issue is that the public is looking to the NRC
24 with eroding confidence to deal with the issue of public
25 health and safety in a balance, where obviously competition

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1 has now entered with a heavier weight.

2 The cask problems to date that continue to unfold
3 put in light of what looks to be a fast track and expedited
4 proceedings does not win back that public confidence in
5 light of the magnitude of the problem yet to come.

6 So, what we look to you for is a restored
7 confidence that your process is going to not only fairly
8 evaluate outside of the arena of competition the issues of
9 health and safety and at the same time, because of the
10 problems to date, reinvolve the public in a meaningful,
11 participatory, and as a continue to check to assist you in
12 the pressures that this regulatory body's facing from this
13 industry.

14 MR. MERRIFIELD: That's fair. I mean, I just
15 wouldn't want to leave the impression -- I hope you don't
16 --that we are completely excluding people. I mean, I think
17 this Commission has taken a very active role in trying to
18 seek public comment in a variety of areas where regulating
19 and to try to help the Commission understand how we should
20 move forward. Clearly the participation of NIRS today is
21 part of that process.

22 I guess what I'm trying to get at, and I'll stop,

23 because we may not be able to address this today. By
24 separating those issues, for example, a burn issue at
25 Palisades relative to a welder torch touching off a small

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1 burn, which is more of a -- to a certain extent is a
2 management problem that can be addressed in one way, versus
3 issues associates with cracks of the casks themselves which
4 would point out to me a more systemic problem that has a
5 greater degree of concern. I'm trying to -- what I'm trying
6 to understand through my question to the two of you was how
7 do we separate those two so that we can truly focus on those
8 issues which are more risk significant, presumably from a
9 public standpoint as well in terms of moving forward. That
10 may be something you want to come back again in the future
11 with some further thoughts. Thank you, Mr. Chairman.

12 CHAIRMAN: Thank you very much. I'd like to
13 express my appreciation to the panel and also to the first
14 panel for a very helpful briefing. With that, we're
15 adjourned.

16 [Whereupon, at 11:23 a.m., the briefing was
17 concluded.]

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March 1, 2000

MEMORANDUM TO: William D. Travers
Executive Director for Operations
FROM: Edward McGaffigan, Jr. /s/
SUBJECT: FOLLOW-UP QUESTIONS TO THE PUBLIC COMMISSION BRIEFING ON THE STATUS OF SPENT
FUEL PROJECTS HELD ON FEBRUARY 23, 2000

First, I would like to thank the staff for a very informative briefing on spent nuclear fuel and related transportation issues and I look forward to future briefings on these matters. While I explored several important issues during the briefing, such as international surface contamination standards for casks and potential fire protection standards, time did not allow me the opportunity to complete my inquiry of other important questions regarding reactor decommissioning, ISFSI license transfers to DOE, and dry cask storage license renewal. Therefore, I request that the staff provide brief, concise responses to the following questions within two weeks from the date of this memorandum in order to close out the public record of the briefing in a timely manner. I also request that the Office of the Secretary ensure that this memorandum and the staff responses are made part of the Commission briefing public record.

1. Mr. Brach, you noted in your remarks that there had been discussions with industry on how an ISFSI at a decommissioning reactor would transition from a general Part 72 license to a specific Part 72 license as part of the preparation to terminate the Part 50 license. Could you elaborate on the nature of these discussions and on the staff's current position on this matter? What prevents licensees at these decommissioning reactors from just applying for a specific Part 72 license for their ISFSIs at the time the ISFSI is planned?
2. In his prepared statement, Mr. Kamps recommended that "prior to the transfer of control of spent nuclear fuel at any

ISFSI from the licensee to the DOE, the NRC must convene a local public hearing and prepare an EIS." How under current regulations would such a license transfer from a licensee to DOE be handled? If DOE were to only take title to part of the ISFSI, how under current regulations would that work? Can a license be divided? Would DOE need to apply for a separate license? Would it matter whether the ISFSI were generally or specifically licensed? What, if any, changes in regulations are necessary to allow for future license transfers to DOE?

3. On slide 8 you mention the status of dry cask storage license renewal. This process appears to be required only for a specific Part 72 licensed ISFSI, such as Surry. Will the result of the license renewal process be a new license as is the case for reactor license renewals? What is the nature of the opportunity for public involvement in specifically licensed ISFSI license renewal? For a general Part 72 licensed ISFSI, are the only renewal requirements those on the cask certificates of compliance at 72.212? What is the opportunity for public involvement in the certificate of compliance renewal process?

If you have any questions, please contact Janet Schlueter or Jeffrey Sharkey of my staff on 415-1810.

cc: Chairman Meserve
Commissioner Dicus
Commissioner Diaz
Commissioner Merrifield
SECY
OGC
OCA
OPA
CFO
CIO

March 13, 2000

MEMORANDUM TO: Commissioner McGaffigan
FROM: William D. Travers */RA/*
Executive Director for Operations
SUBJECT: FOLLOW-UP QUESTIONS TO THE PUBLIC COMMISSION BRIEFING ON THE STATUS OF SPENT FUEL PROJECTS, ON FEBRUARY 23, 2000

In response to your memorandum to me, dated March 1, 2000, staff has developed the following responses to the three questions you raised after the Spent Fuel Project Office briefing to the Commission on February 23, 2000.

Q1. Mr. Brach, you noted in your remarks that there had been discussions with industry on how an ISFSI at a decommissioning reactor would transition from a general Part 72 license to a specific Part 72 license as part of the preparation to terminate the Part 50 license. Could you elaborate on the nature of these discussions and on the staff's current position on this matter? What prevents licensees at these decommissioning reactors from just applying for a specific Part 72 license for their ISFSIs at the time the ISFSI is planned?

A1. Under Section 72.210, a general license for an ISFSI is issued to persons authorized to possess or operate nuclear power reactors under Part 50. Current requirements in Part 72 require a reactor licensee with a generally licensed ISFSI to apply to the NRC for a specifically licensed ISFSI, if the reactor licensee plans to retain its ISFSI and to terminate its Part 50 reactor license. There are no restrictions or limitations that would prevent the reactor licensee from applying for the specific ISFSI license under Part 72.

Staff discussions with the industry on the potential transfer from a generally licensed ISFSI to a specifically licensed ISFSI have focused on the resources and time required for: (1) completion of the application; (2) review of the application; (3) opportunity for public involvement and a hearing; and (4) issuing a regulatory decision for the proposed licensing action. Staff and industry discussions have focused on the value or need for expenditure of the resources necessary to support a Part 72 specific license review for an already existing facility. Discussions to date have been very general and no specific recommendation or alternative has been suggested.

Further, the NRC has published a proposed rule for public comment which would allow a specific licensee to include a cask previously certified by the NRC and listed in Section 72.214 in the specific license application. In this case, the specific license applicant only has to describe the interface of the approved cask system with the site specific conditions. No further technical evaluation of the cask design system is required of the applicant and the cask design would not be subject to hearing contention. (64 FR 59677, 59679, November 3, 1999)

Q2. In his prepared statement, Mr. Kamps recommended that "prior to the transfer of control of spent nuclear fuel at any

ISFSI from the licensee to the DOE, the NRC must convene a local public hearing and prepare an EIS." How under current regulations would such a license transfer from a licensee to the DOE be handled? If DOE were to only take title to part of the ISFSI, how under current regulations would that work? Can a license be divided? Would DOE need to apply for a separate license? Would it matter whether the ISFSI were generally or specifically licensed? What, if any, changes in regulations are necessary to allow for future license transfers to DOE?

A2. The consideration of the DOE taking title to spent nuclear fuel at existing reactors and ISFSIs was a legislative initiative considered by Congress this past year. On March 30, 1999, the NRC provided Congress with comments on some questions that would need to be considered through either legislation, or implementing regulations, to address certain conditions for the DOE taking title to spent fuel at NRC-licensed facilities. These comments considered the implications, both of DOE taking title to spent nuclear fuel and taking control of an ISFSI under an NRC license or under its own authority. The March 30, 1999, letter discussed issues and questions needing resolution, for example, whether DOE would become an NRC licensee, or would DOE act under DOE regulatory authority regarding control of the spent fuel; the regulatory interface between either NRC and DOE separately regulated activities, or the interface between two separate NRC licensees at the same site; and how a generally licensed activity would be transferred to the DOE. The NRC letter to Congress did not provide an answer to these questions, but, rather, identified the need to consider these and other issues.

Q3. On slide 8 you mention the status of dry cask storage license renewal. This process appears to be required only for a specific Part 72 licensed ISFSI, such as Surry. Will the result of the license renewal process be a new license, as is the case for reactor license renewals? What is the nature of the opportunity for public involvement in specifically licensed ISFSI license renewal? For a general Part 72 licensed ISFSI, are the only renewal requirements those on the cask certificates of compliance at Section 72.212? What is the opportunity for public involvement in the certificate of compliance renewal process?

A3. Slide 8 addressed the staff's efforts to prepare for renewal of a specific license for an ISFSI. Section 72.42 addresses the application process for renewal of the license. The outcome of an ISFSI license renewal review would be the renewal of the existing Part 72 license for a 20-year term. This action would not result in a new license. A Part 72 license renewal process will be very similar to the license renewal process under Parts 30, 40, and 70. Public opportunity for involvement and hearing is provided under Section 72.46 with NRC issuance of a notice of proposed action to renew the ISFSI license.

The renewal or re-approval of a cask certificate to permit continued use at a generally licensed ISFSI will require an application from the cask certificate holder, or the general licensee, under the provisions of Section 72.240. The opportunity for public involvement in the staff's action and review of the cask certificate renewal will be provided through the public review and comment on the staff's rulemaking action to revise the listing of approved casks in Section 72.214. The rule change supporting the re-approval of the certificate will include the reference to the revised safety analysis report submitted by the applicant supporting the re-approval, and the revised expiration date of the certificate. Supporting information such as the revised certificate and technical specifications, and the staff's

safety evaluation report, will also be available for public review and comment.

If you have any additional questions, the staff is available to meet with you or your technical assistants to clarify or respond to questions.

cc: Chairman Meserve
Commissioner Dicus
Commissioner Diaz
Commissioner Merrifield
SECY
OGC
OCA
OPA
CFO
CIO