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UNITED STATES OF AMERICA
NUCLEAR REGULATORY COMMISSION

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BRIEFING ON STATUS OF NEW SITE AND REACTOR LICENSING

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WEDNESDAY

APRIL 6, 2005

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The Commission met in open session at 9:30 a.m., at the Nuclear Regulatory Commission, One White Flint North, Rockville, Maryland, the Honorable Nils Diaz, Chairman of the Commission, presiding.

COMMISSIONERS PRESENT:

NILS J. DIAZ	Chairman
EDWARD McGAFFIGAN	Commissioner
JEFFREY S. MERRIFIELD	Commissioner
GREGORY B. JACZKO	Commissioner
PETER B. LYONS	Commissioner

1 NRC STAFF PRESENT:

2 JIM DYER, Director, NRR

3 LAURA DUDES, Chief, New Reactor Licensing Center,

4 NRR

5 CARL PAPERIELLO, Director, RES

6 LUIS A. REYES, EDO

7 FAROUK ELTAWILA, RES

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

CHAIRMAN DIAZ: Good morning, the Commission is pleased to welcome the staff to discuss new reactors. That is something that we don't talk about that often but is becoming a little more popular theme lately. And we, of course, have the obligation to be ready and we appreciate the efforts of the staff of making sure that we have the proper technical staff, appropriate processes to respond to whatever the needs of the Nation are.

We are progressing. We need to sometimes come and say we're ready and capable of responding to what the needs are and with our mandate of maintaining public health and safety and protecting the environment and the common defense and security.

We continue to, of course, besides worrying about new reactors, have this day-to-day obligation of maintaining the safety of our facilities. And I think especially nuclear power plants, Jim will have his hands busy with that.

I think the staff has made significant progress in preparing for new reactor applications. I think this past year we gave the final deciding approval to the AP-1000, are in the process of doing the rulemaking.

We also know that a significant amount of, oh, I wouldn't say juggling of resources, but that might be a good term of how the staff

1 is trying to be able to face with the workload, the different design
2 certifications and potential for new applications.

3 I agree, by the way, with the recent statement that
4 Commissioner Merrifield said at the nuclear energy conference that
5 regulatory instability, and I quote, "is no longer the convenient excuse for
6 the failure of nuclear power plants to be built." That's our responsibility to
7 make sure that we're not an impediment, that we are an effective
8 regulatory body, that we will conduct our activities in a manner that the
9 law has prescribed, and we will do that well.

10 I look forward to an open discussion in the progress that
11 the staff has made and in some of the challenges that you're facing. And,
12 with that, do my fellow Commissioners have any comments,
13 Commissioner Merrifield?

14 COMMISSIONER MERRIFIELD: Mr. Chairman, I
15 appreciate your quoting me in that regard. I do feel strongly that we
16 made extraordinary progress in the time that I've been here and even
17 beforehand in really striking a sword through the heart of the call of
18 regulatory instability. I don't believe that is the case at the agency that we
19 now lead.

20 Another comment I would want to add, this is a very
21 timely presentation on the part of our staff. We are entering that
22 wonderful time of year where we begin to think about the choices that we
23 need to make in terms of our budget.

1 For this year and this period, particularly for the
2 Commission, is the time period in the summer, June and July, when we
3 are very busy in reviewing what we have already been considering in the
4 review we made in a previous fiscal year -- and in this regard, I'm talking
5 about fiscal year '06 coming up -- as well as how we look forward to how
6 we will be spending money in the following fiscal year, which for this year
7 will be '07.

8 The staff today is providing us with a significant amount
9 of information about some challenges that are ahead for us. And there
10 will be some choices that the Commission will have to grapple with in
11 terms of making decisions about how we will fund some of these issues.
12 And we're going to talk about some of those today.

13 The one thing I want to mention as a predicate, which I
14 think is important for folks to remember, some of the most interesting
15 things that we do as a Commission among the members of the
16 Commission are involved with the decisions that we make in the budget.
17 And all of that because of the way that the budgetary process works is not
18 transparent, although we are, I believe, a relatively transparent regulator.

19 There are interesting choices and interesting discussions
20 that go on between and among the Commissioners. The three members
21 of the Commission who have been here for a while have all at various
22 points repeatedly said during their time on the Commission that they are
23 fiscal conservatives. And that is something I don't think without being a
24 part of the budget process you can necessarily appreciate.

1 The three of us in the time that we have shared time on
2 the Commission have debated budgetary items. And this drives our staff
3 crazy, but have debated budgetary items in the six figures and in the five
4 figures.

5 For folks who are outside of this agency, and, of course,
6 this is timely given the fact that we are now in the time of the year when
7 we have to start telling people what our fees are. And that brings with it a
8 lot of pain from our licensees. We really challenge our staff in the
9 information they give to us on the budget.

10 And we cut. You know, we make some tough decisions.
11 There may be some out there who look at the information that is brought
12 to us by our staff and might say, "Well, you ought to be doing these
13 things. We ought to just cut more waste to make it happen."

14 I just want to add as a predicate so that people are
15 aware I think that this Commission in the time that I have been on here
16 has made extraordinary efforts to try to cut the waste and fat out of this
17 agency.

18 We don't have waste and fat in this agency. I say that as
19 a conservative Republican, fiscal conservative. And we're going to have
20 to make choices about how we want to fund these programs going
21 forward.

22 But for those who might assert you've just got to cut
23 more waste and fat to make it happen, that's just not the case. We are

1 running a tight, lean budget right now. And we've got hard choices ahead
2 of us. And I think that just needs to be said.

3 CHAIRMAN DIAZ: Thank you, sir.

4 Mr. Reyes?

5 MR. REYES: Good morning, Chairman and
6 Commissioners. The staff is ready to present to you information on new
7 reactors. We specifically are going to talk about accomplishments, the
8 status of some of our activities, challenges, and perhaps some strategies
9 moving forward.

10 Let me turn over the presentation to Jim Dyer, the
11 Director of the Office of Nuclear Reactor Regulation.

12 MR. DYER: Thank you. Thank you, Luis. Good
13 morning, Chairman, Commissioners.

14 Let me start with the slide presentation. Slides 2 and 3
15 are a listing of new reactor acronyms. We looked into putting them in the
16 text of our slide but struggled with keeping the flow of the presentation
17 moving. We also incorporated acronyms from several slides that we
18 chose not to put into the package there. They were provided in your
19 background information.

20 So can I move to slide 4, please? The agenda for
21 today's presentation will begin with my brief overview of the NRC's
22 licensing process as laid out in Title 10 of the Code of Regulations, Part
23 52 or 10 CFR 52. Then Laura Dudes and Carl Paperiello will present the
24 accomplishments and status of our licensing and research activities for

1 new reactors. I will then conclude the presentation with a discussion of
2 the challenges facing the NRC staff in the new reactor area and our
3 strategies for addressing these challenges.

4 Slide 5, please. This slide provides a flowchart depicting
5 the 10 CFR Part 52 licensing process. The various components of the
6 flowchart provide the subjects for Carl's and Laura's discussions later on
7 in the presentation.

8 10 CFR 52 was promulgated in 1989 to provide an
9 alternative to the 10 CFR Part 50 two-stage licensing process that was
10 used for the current fleet of operating reactors.

11 Rather than going through the licensing process twice at
12 the construction permit and operator license stage, licensees can apply
13 for a combined construction and operating license, or COL, provided they
14 submit up-front detailed site and design information necessary for the
15 licensing process.

16 The combined license process is depicted by the circular
17 figure in the center of the flowchart. It involves the same level of staff
18 review for the design and site and opportunities for public participation as
19 the 10 CFR Part 50 process but only earlier in the process.

20 Upon successful completion of the combined license
21 process, a license may be issued to allow both construction and operation
22 of the facility conditioned on the successful completion of inspection tests,
23 analysis, and acceptance criteria, or ITAC, that are specified in the
24 combined license.

1 Other licensing alternatives established by 10 CFR Part
2 52 include the early site permit, which allows a licensee to obtain approval
3 of a site for a range of reactor characteristics and bank this site for up to
4 20 years; and standard design certification, which approves a design
5 through the rulemaking process. These alternatives are shown in the
6 flowchart as the rectangle inputting to the combined license process.

7 As a result, the combined license reviews can be as
8 simple as verifying the compatibility of a certified design with an early site
9 permit to requiring a complete review of a proposed site and a proposed
10 reactor design together.

11 Additionally, applicants may engage in the pre-
12 application review activities before the submittal of a standard design
13 certification application, an early site permit, or a combined license.

14 These activities are conducted in the public and facilitate
15 information exchange between a prospective applicant and the NRC to
16 allow both of us to better prepare for the formal submittal.

17 Now at this point let me turn the presentation over to
18 Laura for licensing.

19 MS. DUDES: Thank you.

20 Good morning. The design certification process is the
21 best evidence of our readiness to license new plants. The NRC has
22 already certified three new reactor designs: the advanced boiling water
23 reactor, or ABWR; the System 80 plus; the advanced plant 600, AP-600.

1 And we expect to complete the AP-1000 design certification rulemaking
2 before the end of this year.

3 We are also prepared to receive the economic simplified
4 boiling water reactor, or ESBWR, design certification application in
5 Summer of 2005.

6 Depending on the complexity of the reactor design and
7 the staff's familiarity with the technology, the staff has estimated design
8 certification review times of 42 to 60 months with staff review costs
9 ranging from 60 to 120 full-time equivalents and 10 to 25 million dollars in
10 contract support.

11 An example, a gas-cooled technology would probably
12 come in at the upper limits of these schedule and resource estimates and
13 evolutionary light water would probably be closer to the lower limits.

14 As interest in the new reactors increases, the staff is
15 being asked to do more and more. Prospective applicants are asking for
16 aggressive review schedules.

17 COMMISSIONER McGAFFIGAN: The months, is that
18 all the way to the end?

19 MS. DUDES: That includes a nominal 12 months for the
20 rulemaking, yes.

21 COMMISSIONER McGAFFIGAN: So if I subtract the 12,
22 it's 30 months to get to -- what do you call it, final design approval?

23 MS. DUDES: Final design approval. That's correct.

1 COMMISSIONER McGAFFIGAN: That's an important
2 clarification there.

3 MS. DUDES: Prospective applicants are asking for
4 aggressive review schedules. The final review schedules will not be
5 established until the staff has examined the application for completeness
6 and quality for our acceptance review process.

7 Our ability to meet and possibly improve on the 42 to
8 60-month schedules depends on the applicant's performance and the
9 NRC's prioritization.

10 The design certification reviews are conducted using the
11 Standard Review Plan, NUREGS, Regulatory Guides, Commission
12 papers, and their associated Staff Requirements Memorandum.

13 The staff conducts pre-application reviews in accordance
14 with the Commission's advanced reactor policy statement, which
15 encourages early interaction on unique design features.

16 Designs that are in or may in the near future be in a pre-
17 application review status are: the advanced CANDU reactor; the EPR;
18 the International Reactor, Innovative and Secure, otherwise known as
19 IRIS; the Pebble Bed modular reactor. And although we have had no
20 formal pre-application activities, the staff has met with representatives
21 from Galena, Alaska to discuss siting issues associated with siting a
22 reactor in their town.

1 Slide 7, please. The staff worked with stakeholders to
2 develop an early site permit review standard, which has served as a
3 guide in the review of the first applications.

4 We are in progress of reviewing three first-of-their kind
5 early site permits for the North Anna, Clinton, and Grand Gulf sites. In
6 addition, we expect to receive an early site permit application from
7 Southern Nuclear Company in 2006.

8 An early site permit focuses on site safety issues, such
9 as seismology, hydrology, emergency preparedness, and environmental
10 protection issues. It's important to point out here that the early site permit
11 mandatory hearing is the first Part 52 mandatory hearing and this is also
12 the first mandatory reactor siting hearing that we have had in well over 20
13 years.

14 As with most first-of-a-kind reviews, some technical and
15 regulatory challenges have been identified. Examples include the staff's
16 review of a performance-based seismic methodology, a concept of a
17 emergency preparedness major features, and the exact level of detail and
18 finality that will be associated with this option in the early site permit. And,
19 more recently, we received comments from over 1,300 individuals on the
20 North Anna environmental impact statement.

21 This reflects positively on the large public involvement in
22 our process. And it may take additional time and resources to address
23 these comments.

1 We are capturing lessons learned from these first
2 reviews. And we do plan to revise the review standard after the first early
3 site permit safety evaluation has been completed.

4 The staff originally estimated a 36-month review
5 schedule, which, again, included a nominal 12 months for the mandatory
6 hearing. Currently we're on track to complete the staff's evaluation of the
7 safety issues for all three applications by the end of 2005.

8 However, as I mentioned, we are still evaluating possible
9 schedule changes to the final environmental impact statements due to the
10 large number of public comments.

11 Slide 8, please. In December 2004, the staff received
12 the Nuclear Energy Institute's draft guidance for a combined license
13 application. We're on schedule to provide our initial comments on this
14 draft in June. And we're holding monthly meetings with stakeholders to
15 discuss issues regarding the form and content of this document. We
16 believe that this effort will yield useful guidance for applicants in preparing
17 their combined license application.

18 One very challenging issue that the staff has made
19 significant progress on is the review of operational programs in the
20 combined license application. The staff and other stakeholders have
21 done extensive work on this subject. And we have been very successful
22 in bringing issues to closure.

23 In particular, work on the development of emergency
24 preparedness inspection tests, analysis, and acceptance criteria, or ITAC,

1 which are required by the Atomic Energy Act, was highly successful. And
2 those ITAC are now referenced in NEI's COL application document.

3 The construction inspection team issued the construction
4 inspection program framework document in April of 2004. The team has
5 drafted inspection procedures for early site permit and pre-combined
6 license activities and is continuing to work with stakeholders to resolve
7 issues associated with new construction inspection activities.

8 The staff continues to work on clarifications to the 10
9 CFR Part 52 rule. Although the proposed changes to Part 52 are
10 expected to improve efficiency and effectiveness of the licensing process,
11 they are not needed to successfully implement this rule, as evidenced by
12 our effective use of the design certification and our early site permit
13 process.

14 All of these activities support the staff's ability and
15 readiness to review a combined license application. A COL can
16 reference an early site permit, a design certification, either, or both.

17 If we assume a base case; that is, an early site permit
18 and a design certification is referenced in a COL application, we estimate
19 a review time of approximately 27 months, again assuming a nominal 12
20 months for the mandatory hearing process. As applicants choose other
21 scenarios to pursue a more customized combined license, review
22 durations will be adjusted accordingly.

23 Even for the base case scenario, there may be some
24 schedule adjustments due to additional issues that have been developed

1 as a result of applicants choosing greater flexibility in the intermediate
2 Part 52 products, such as the use of the plant parameter envelope in the
3 early site permit and the use of design acceptance criteria in the design
4 certification process.

5 Lastly, the mandatory hearing associated with the early
6 site permit and the implementation of the new Part 2 hearing process has
7 raised several infrastructure issues that show information technology and
8 record management improvements that the staff will need to address prior
9 to the receipt of a combined license.

10 Thank you. Carl?

11 MR. PAPERIELLO: Research has a supporting role in
12 the area of new reactors. We support NRR. We support NRR in the pre-
13 application and design certification combined operating license
14 application as necessary as they ask us to.

15 We generally communicate with the applicant through
16 NRR, policy is NRR. We essentially supply specialist support. And we
17 have the tools, the knowledge, the expertise in place to support designs
18 that are similar to current light water reactors.

19 To give you an example of some of the things we do, in
20 the case of the ACR-700, which, again, was pre-application but this is
21 kind of the things we do, we deal with computer codes, we deal with
22 thermal hydraulics. We will do work, if needed, on reactor kinetics. We
23 will look at metallurgy. If there are new materials being used, we'll give
24 support in the materials area. We will look at fuel design if the fuel design

1 is different. We will help with the PRA analysis. We will look at severe
2 accidents. In some cases, we have been involved with fire protection and
3 in the case of the ACR-700 on-line refueling. When you get close to
4 existing water designs, we have everything we need to support NRR.

5 Go to the next slide. We do lead in potential pre-
6 application reviews of non-light water reactors; for example, the PBMR.
7 And the product of these reviews if it goes that far because we will
8 engage with an applicant and after a while, they may suspend their
9 activities -- that happened with Pebble Bed before. We're in a bit of a
10 hiatus right now with the ACR-700. So this can be on again, off again.
11 But generally the product produced in cooperation with NRR is a pre-
12 application safety analysis report.

13 We also lead in the development of our longer-range
14 technical needs for reviewing and licensing new plant designs,
15 technologies, and the licensing framework.

16 Now, based on current fiscal direction, we are doing very
17 limited work in this area. We have a small knowledge preservation
18 program in place for the high-temperature gas-cooled reactor because we
19 have done work in the past. And I wanted to make sure we preserve our
20 computer codes for both thermal hydraulics and severe accidents. And
21 we do keep track of what is going on around the world at very low effort.
22 And we have very limited work going on in Generation IV reactors,
23 primarily an occasional meeting with DOE.

1 Could I have the next slide? As we did get away from
2 current light water reactors, even the advanced light water reactors, you'll
3 need greater technical development because there are more issues.

4 The ACR-700, for example, it turned out we were able to
5 get a lot of assistance from Korea. I talked about collaboration on
6 computer codes, but they had adapted our thermal hydraulic codes for a
7 CANDU reactor. So because of the pressure tube design, we were able
8 to build on -- they built on what we did, and then we built on what they did.

9 We obviously have had pre-application review in the past
10 on the PBMR and have identified, ranked the issues that you need to deal
11 with. We have done nothing on the Toshiba or any Generation IV reactor.
12 They're just potentials.

13 Next slide, we do generic technical development.

14 Now, most of this is not all brand new stuff. The new
15 reactor licensing framework is the closest that comes to things that are
16 new. We're working on a framework for how you would have licensed
17 non-light water reactors with risk-informed, performance-based
18 regulations, trying to be far more flexible than we currently are now.

19 When you do this, you start getting into policy issues.
20 We have had an exchange with the Commission on a number of policy
21 issues. We'll have some in the future. And you start getting into things
22 should risk criteria be by module at a site or by the site.

23 As a health physicist, I'll raise one, even though it's not in
24 our thing. Appendix I applies to light water reactors. It doesn't apply to

1 non-light water reactors. Somewhere along the line, we'll have to make a
2 decision there.

3 PRA. If we have a risk criteria in the policy, which is
4 current guidance, what would the PRA look like for a non-light water
5 reactor? And where would you get the data for it? And what are the
6 codes that you would use to do that?

7 Human performance. There's a lot of collaboration here.
8 There's work being done at the Halden reactor looking at automated
9 control rooms. During the RIC I was talking to the French representatives
10 about what they did on licensing their last reactor that had a computer
11 control system. Well, they were concerned about errors in the system.
12 And they said that was presenting operators with some data that wasn't
13 quite right, that they required a lot of manual backup.

14 They're the kind of things that you get into when you talk
15 about human performance, how are the operators going to interact with a
16 new reactor. But we could face this with our current reactors as efforts to
17 introduce new equipment and may automate them.

18 Seismic and structural issues. We have a small effort
19 here because the industry has concerns with our existing Regulatory
20 Guides that deal with seismic design. Now, I'm not a seismic person. All
21 I know, it deals with the frequency spectrum, the high frequency
22 responses, and the like. We're working with the industry to revise two
23 Regulatory Guides.

1 Digital instrumentation and control. More is being
2 introduced in the current generation of reactors. If you take a look at at
3 least the MOX facility in England and France, they are both controlled by
4 computers. I understand the one here in the United States if it's ever built
5 will be. And as part of our review, again, not an area I have expertise in, I
6 have required my staff to put together an overall digital INC program plan,
7 research plan. That plan right now sits in front of the offices we support
8 for their endorsement. We're going to get a plan that the whole agency
9 agrees on. And that's the one we'll execute. But that will kind of cover
10 not just new reactors, but as old reactors are retrofitted with more
11 instrumentation like that.

12 And, of course, we have cooperative activities with a
13 number of countries where we track issues that are in new and advanced
14 reactors.

15 That's generally the role of Research. We support the
16 NRR. Jim?

17 MR. DYER: Slide 13, please. Looking forward in the
18 new reactor area, we are facing a number of challenges. First, as Carl
19 and Laura indicated during their presentations, a significant amount of
20 preparation is required for the NRC staff to be ready for a design
21 certification and early site permit or a combined license review.

22 The pre-application review phase of the new reactor
23 licensing process is very important to ensure that our analytical tools are

1 ready and that we have the right complement of technical and legal staff
2 and contractors available for the review and licensing efforts.

3 Second, we currently have a large number of potential
4 applications before us for nearly every aspect of the 10 CFR Part 52
5 licensing process. I'll discuss it a little further in the next slide.

6 And, third, the schedule and combination of potential
7 licenses, designs, and sites is continually changing.

8 And last, certainly but not the least, utilizing resources to
9 support current operating reactor safety and the security needs are our
10 highest priority, as the Chairman alluded to in his opening remarks, and
11 affect the resources available for the new reactor work.

12 Emerging technical issue resolution and operator reactor
13 licensing activities, such as license renewals, power uprates, and major
14 safety amendments take precedent over our future reactor activities.
15 Collectively these challenges create an uncertain environment for the new
16 reactor work on both the part of licensees and the staff.

17 Slide 14, please. This slide provides a very rough look at
18 the new reactor licensing activities currently being considered for the
19 fiscal year 2006 through 2008 time frames. We intentionally made this
20 slide imprecise. We don't have that level of precision and understanding
21 of where the schedules are right now.

22 In 2006, we are scheduled to complete work on the three
23 early site permit applications that Laura discussed and are currently
24 under review; possibly start a fourth early site permit at the Southern

1 Company site, as Laura described; continue the economic and simplified
2 boiling water reactor design certification review, which we're scheduled to
3 receive later this year; and continue our pre-application review activities.

4 In 2007, we could be starting a combined license review
5 for Dominion Nuclear, in addition to our continuing workload from 2006.
6 In 2008, we could receive a design certification application for the
7 Framatome EPR and three combined license applications from Duke
8 Power and new start consortium of major nuclear operators and vendors.

9 This is a very tentative and changing schedule and could
10 cause a new reactor workload to triple between 2006 and 2008. This is
11 an increase that we are currently not prepared to handle. This is also
12 during the same time period that our projected workload for license
13 renewals is at its peak. We need to determine the level of support we
14 want to achieve for fiscal year 2008 and then decide how to proceed.

15 Slide 15, please. The NRC staff has begun to develop
16 strategies for moving forward in this new reactor area. The challenges I
17 just described are very similar but on a larger scale to the challenges the
18 staff faced with our license renewal program several years ago.

19 Our strategies for addressing these challenges are
20 similar to those employed for dealing with the license renewal. The three
21 strategies listed on this slide are not in sequential order. Rather, they are
22 interactive approaches for appropriately trying to match supply and
23 demand on our resources.

1 We need to determine how much to expand the staff
2 capabilities. We need to determine how much to expand our contractor
3 capabilities. And we need to develop a disciplined licensing approach for
4 both new reactor and operating reactors to understand what our demand
5 will be. Each of these strategies will come to the Commission for
6 approval, either through a budget request or policy decisions.

7 Slide 16. In order to expand our staff capabilities to meet
8 increased demand, we need a concerted effort to hire, train, house, and
9 outfit additional technical, administrative, and legal staff.

10 What is important to realize is that this will require a team
11 effort in fiscal year 2006 by NRR, Research, Office of General Counsel,
12 and Nuclear Security and Incident Response office working with the
13 Office of Administration, Human Resources, and Office of Information
14 Services, and the Chief Financial Officer to have a qualified staff available
15 for a projected increased workload in 2008.

16 We have begun discussions to identify approaches.
17 However, currently there are no resources in the fiscal year 2006 budget
18 to support this kind of investment in human capital that may be required
19 for the 2008 workload.

20 NRR is also considering a reorganization alternative to
21 prepare for an increased workload and accommodate the flexibility for
22 change going forward as part of our normal budget development process.

23 Slide 17. The staff has also looked into expanding our
24 contractor support base. In order to expand our contractor capabilities,

1 we will also require an agency-wide effort to expand our existing contracts
2 with labs and commercial entities as well as solicit new support contracts.

3 The NRC staff has initiated contact with existing
4 contractors to determine the extent of their capabilities to support new
5 reactor work. And this strategy will also require a significant lead time for
6 the contracting process.

7 Slide 18. In conjunction with determining what
8 capabilities are available for new reactor review work, we must also
9 develop a disciplined licensing approach. The staff needs to develop the
10 infrastructure to clearly identify the expectations for quality submittals for
11 all licensing work and live by these standards.

12 We must also work with applicants to firm up their
13 schedules for submittals and expected resource needs to conduct the
14 reviews. And we will need to develop a prioritization policy for
15 determining which reviews to conduct on what schedule. This will be
16 particularly important if the demand for new reactor work exceeds our
17 capabilities.

18 The staff recognizes that a combined license application
19 is a ten-year commitment by a licensee and the NRC to get a design and
20 site approved, constructed, and prepared for operation. We plan to
21 develop a prioritization scheme for Commission approval that is
22 consistent with the national energy goals of getting electricity production
23 safely under the grid.

1 Slide 19. In conclusion, the NRC's process is all ready
2 for new reactor licensing, although our revisions could improve our
3 efficiency and our effectiveness.

4 NRC resources are limited when compared to the
5 industry scheduling demand possibilities. However, that demand
6 schedule from the industry is uncertain and continually changing. And the
7 staff has a strategy for dealing with the increased uncertain demands that
8 we will need Commission support and decisions to execute.

9 Lastly, the staff is committed to keeping the Commission
10 informed of this ever-changing environment through increased frequency
11 of our periodic reports, Commission papers on future reactor status, and
12 briefings on emerging technical issues.

13 And that concludes my presentation. Luis

14 MR. REYES: Chairman, Commissioners, that concludes
15 the staff presentations. We're ready for questions. And we'll try to
16 answer them briefly and to the point.

17 MR. DYER: I must say we also brought the staffs. We
18 asked for support from ADM, Human Resources, the CFO's office in case
19 the questions chose to go in that direction beyond our capabilities.

20 CHAIRMAN DIAZ: Well, thank you so very much. I think
21 that we'll find a very light change. We'll look forward to the very concise
22 and clear answers.

23 Commissioner McGaffigan?

1 COMMISSIONER McGAFFIGAN: Thank you, Mr.
2 Chairman.

3 I'll start not with a question but, as often, with a
4 statement. I want to associate myself with Commissioner Merrifield's
5 remarks about the way I am proud of how we have conducted the
6 business of this agency in a fiscally conservative way. And there is no
7 waste that I am aware of, or the others are aware of, that would be in the
8 budget.

9 A lot of stuff happens, particularly in security space, but
10 I'll mention safety space, just in recent weeks with the issue of simulator
11 fidelity, the issue of -- is it Heymc or whatever the name of the material is
12 that is used for fire protection? Issues arise.

13 GSI-191 was an issue that arose some time ago and we
14 have resources for. But issues arise, and they force difficult choices,
15 even within the budget that we approve. We approve a budget. And then
16 you all execute that budget starting 15 months after we approve it. And
17 vast numbers of changes have to be made during that 15-month period.
18 And it extends to the 27-month period. It's just the way federal budgeting
19 is.

20 But rarely are we surprised on the down side in terms of
21 workload. And our focus, as Jim said in one of his last slides, has to be
22 on the safety and security of the existing facilities. I think it is, and I
23 commend the staff for that.

1 If somebody is looking for a magic pot that we haven't
2 tapped yet, if we're going to put more resources in this area, it's going to
3 require more resources. So that's more a statement. And it's entirely in
4 agreement with Commissioner Merrifield.

5 Now to questions. The issue of how to prioritize this
6 stuff, I'll go tack to Commissioner Merrifield that the Reg Info Conference
7 and concept cars, which I subscribe to, speaking as one Commissioner,
8 some of these pre-application reviews for folks who don't have much
9 interest in them and are unlikely to have much interest soon, is an area
10 where I'm not sure we should be investing.

11 I mean, you know, we have a lot of rulemaking petitions.
12 I know each office tends to have a book of sort of active/inactive low
13 priority. My sense is that a low-priority rulemaking, a rulemaking petition,
14 hopefully -- I haven't looked at Jim's book lately, but, say, the NEI petition
15 with regard to science advisers in the control room -- what's the proper
16 name? STA, senior technical advisor. That is I hope being given the
17 appropriate priority in your rulemaking process. And I haven't heard
18 about it. So I assume that is happening.

19 We put things into a very inactive status around here, a
20 very inactive status, because we have to focus on the things that matter
21 in safety space or security space. Fidelity assimilators matter. Taking an
22 extra person out of the control room may or may not be a good idea.

23 So do we have to do something other than as a group
24 tell you, not a single Commissioner, put these things on inactive status

1 and tell the applicants that we really don't think that we can put resources
2 in any time soon and if they really want us to put resources in, have
3 somebody who is going to apply for a COL, combined operating license,
4 say that they're going to use that technology?

5 I mean, that strikes me as the threshold for us investing
6 even, hundreds of thousands of dollars, which if it's \$500,000 for a fee
7 application review for Pebble Bed, that \$500,000 could be used on
8 simulator fidelity or something better in my view than just spinning wheels
9 on something that I don't think is going to happen.

10 You guys at times cite the 1985 policy statement or
11 whatever, '89. Do you feel obliged to deal with every person who comes
12 in the door at a resource level of hundreds of thousands of dollars per
13 application?

14 MR. DYER: I don't believe it's at hundreds of thousands
15 of dollars per application and resources, but we do in the budget process
16 talk about pre-application review. And we do try to maintain an open
17 channel of communications.

18 What I've been amazed at when you take a look back
19 through the years is that the designs come and go. Which one is the lead
20 one? The PBMR was on the front burner a few years ago. And it lost its
21 support. The --

22 COMMISSIONER McGAFFIGAN: It never really had
23 support. It had support from a single industry individual, who didn't even
24 have his co-CEO with him on that. His departure ended.

1 That was never in my view realistic. And I said so at the
2 time. But whatever.

3 MR. DYER: Yes. We engage in --

4 COMMISSIONER MERRIFIELD: Well, I mean, just for
5 historical clarification, Corbin MacNeill was the CEO of our largest utility.
6 It's one we couldn't ignore. He had actually gotten to the point where they
7 had arrangements with the PBMR folks. He clearly had a plan to do it.

8 Now, ultimately his board chose to go a different way, but
9 I took it very seriously.

10 COMMISSIONER McGAFFIGAN: Is there an
11 impediment to you all not putting resources into pre-application reviews
12 that may not be likely to result in a reactor any time soon?

13 MR. DYER: No.

14 COMMISSIONER McGAFFIGAN: So we can put
15 something into inactive status, we can tell people we don't have the
16 resources?

17 MR. DYER: Correct. Yes, sir.

18 COMMISSIONER McGAFFIGAN: Okay. Well, I want to
19 make that clear for some of the applicants because they can guess how I
20 would vote on that.

21 Looking at my time here, the programmatic ITACs.
22 Where are we today on the 13 programmatic ITACs and the discussion
23 with industry? My understanding is you are working toward something by

1 the end of this year. How much agreement is being reached on
2 programmatic ITACs?

3 MS. DUDES: A lot of agreement. Actually, we now call
4 what's formerly known as programmatic ITACs, review of operational
5 programs in the combined license application. So we are moving quite
6 well.

7 Actually, 8 of the 14 programs that we had originally
8 discussed in our previous papers, we have laid out plans in external,
9 meetings, these monthly meeting that we're holding with stakeholders.
10 We have come to agreement on 8 of the 14 in terms of what we think the
11 level of information will be needed in the COL application and any other
12 conditions that we may need to satisfy the staff's reasonable assurance
13 determination.

14 We have another monthly meeting tomorrow, which will
15 take on two more of those programs. So at this point, we have had a
16 tremendous amount of success in coming to closure on those issues.

17 COMMISSIONER McGAFFIGAN: I may not have and I
18 almost surely did not fully understand what an industry official said to me
19 in passing at a meeting yesterday, but he warned me that there was
20 trouble brewing in emergency preparedness ITACs or that the resources
21 required after it had grown from like 50 or something -- do I have it
22 wrong? We'll have a good discussion tomorrow. He said the staff is
23 going to say everything is hunky-dory in the ITAC area and beware.

24 MS. DUDES: Well, I can clarify what I know.

1 COMMISSIONER McGAFFIGAN: Right. Okay.

2 MS. DUDES: I am not sure what product the official was
3 referencing, but we came to closure on emergency preparedness ITAC
4 last fall. And, actually, we had developed a set of 30 generic emergency
5 preparedness ITACs, which now is referenced in the NEI COL application
6 document that we are reviewing.

7 COMMISSIONER McGAFFIGAN: As I understood it --
8 and I didn't understand it. It was a very passing conversation. It's the
9 amount of resources required to process the emergency preparedness
10 ITAC and then the amount of resources needed later in the process to
11 verify that they were quite large or something. I don't understand it.

12 MS. DUDES: Currently we have had no feedback on
13 that issue other than positive. And I think their referencing the 30 ITAC
14 that we developed in a public forum in their own application guidance
15 document was positive feedback in itself.

16 Mr. Chairman, I'll pass on this round because I'm close to
17 my ten minutes, and I'm a good Boy Scout.

18 CHAIRMAN DIAZ: All right. Commissioner Merrifield?

19 COMMISSIONER MERRIFIELD: Thank you, Mr.
20 Chairman.

21 I think looking at the slides that we had this morning, I
22 think the slide in the comment that encapsulates the most important thing
23 that we have to grapple with today is on slide 19 with a bullet that says,

1 "Industry demand is uncertain." What we grapple with as a Commission
2 is going to be the difficulties of dealing with that particular bullet.

3 Perhaps it's because I've got three small children, but I'm
4 reminded of an effort that I undertook a while back to try to figure out what
5 kind of toys my kids wanted. And, like many parents do, I got the wish
6 book from Toys R Us. And I handed it to my kids. And I said, "circle the
7 items in this book that you would like for Christmas." And the response
8 was virtually everything in the book was circled, thus making it very
9 difficult to sort out what was important.

10 I think that is part of the problem that we have right now.
11 The staff in the slides here, in the backup slides, has incorporated the
12 best information that they have been able to obtain about what some of
13 those future plans may be.

14 Having gone through it, I noticed a number of instances
15 of utilities or others I have spoken to, who clearly have plans outside of
16 what the staff has been able to capture. So, even though this is
17 somewhat a relatively large wish list, it is not encompassing of all of the
18 plans out there.

19 I think this is clearly indicative of the fact that times have
20 changed. When we all first got here in the late '90s, we had been working
21 on the ABWR, the System 80 plus, and the AP-600, all of which were
22 efforts to try to do a couple of things. One, on the part of the industry to
23 try to maintain the possibility of future reactor orders in the United States.
24 And for our part, it was an effort to try to maintain our capabilities.

1 There was no thinking at that point of any solid reactor
2 orders at the time we were undertaking those reviews. It was always,
3 "Well, five years down the road, we might be able to utilize these." I think
4 given the breadth of the things that we have talked about today, I think we
5 were in quite a different situation.

6 In my speech before the RIC that Commissioner
7 McGaffigan referenced, I used an analogy to concept cars versus -- I use
8 the example of Ford F-150s, a vehicle that a whole lot of people buy. I
9 think that's part of the sorting process, to follow on to Commissioner
10 McGaffigan's comment, that we are going to have to think about.

11 With all apologies, I think some of these designs just
12 aren't on the picking list right now for the utilities that are in the United
13 States. And for us to dedicate significant time and resources toward
14 reviewing those in a crash program, as we have with AP-1000 and we will
15 be doing with ESPWR and others, just doesn't make a lot of fiscal sense
16 to me.

17 With all apologies, I think one of the examples of this is
18 the reactor that's being talked about in Galena, Alaska. Now I've been to
19 Alaska. I've been to Native villages up there.

20 And I appreciate and I understand the difficulties that
21 those folks have with diesel engines. They have to bring in all of their fuel
22 in the two summer months to supply power needs for those villages
23 through the rest of the year. It's expensive. It's complicated. It's difficult.

1 It's not the most environmentally friendly way of producing power. But
2 that's what they have to do in Alaska.

3 That notwithstanding, the extraordinary policy challenges
4 that would be presented to the Commission to deal with providing a
5 power plant for a small Alaskan village does seem to be somewhat out of
6 whack.

7 But if that is what Congress wants to do, we will
8 obviously fulfill that goal. But right now I think it is very difficult for us to go
9 too far down that road.

10 Now, that having been said, I don't think we can ignore
11 realities. One of the things that is not on this briefing slide to any great
12 degree is the proposals about the possibility of a next generation nuclear
13 plant at INEEL. That is something that the Congress could make a
14 reality, and I think it is something that many have spoken about the need
15 for us to be regulator of that technology.

16 We need to make sure that our staff has the skills, the
17 resources, and the understanding necessary to put us in a position to
18 make that a success if, in fact, we are given that challenge.

19 So while I think the heart of our work obviously has to be
20 focused on things that could really pan out, I think we can't simply say
21 we're not going to do anything on some of these technologies. I think we
22 do what Carl talked about yesterday. We need to have some level of
23 resources to at least be knowledgeable about what is going on in the rest
24 of the world and going on with the possibility so that, in fact, at some point

1 down the line when a future Commission is presented potentially with one
2 of these orders, that we can respond to it.

3 Okay. I have used up half of my time. I'd like to focus on
4 slide 17. In that slide, you talk about the use of contractors by our
5 agency.

6 On the one hand, and I said many instances before, I
7 think we ought to do more with, for example, the Center for Nuclear
8 Waste Regulatory Analysis, our closest analog to a national lab. They do
9 an excellent job. I think there are things, even in this area, that they could
10 perhaps expand in.

11 That having been said, it is a challenge. And we talked
12 yesterday about some of the challenges that we're seeing of our
13 contractors. There's a desire for us to have sufficient regulatory
14 independence and not be overly reliant on contractors.

15 I'd like to have you talk a little bit philosophically about
16 how we are dealing with some of those challenges. What is the
17 maximum credible growth that you're talking about? And how does that
18 deal with these contractors? And do we have a challenge? If this
19 industry is growing at the rate it is, are we going to be competing with
20 some of the same contracting resources that may potentially be out
21 there?

22 So give me some better flavor about where you are
23 going in this area.

1 MR. DYER: Yes, sir. I think right now we're capitalizing
2 on our experience from license renewal except on a much grander scale.
3 And in that case, we leveraged -- I guess what is the word? It's a better
4 word than leveraged. We utilized our -- collaborated, I think. We
5 collaborated with the labs and that to identify what are the key things.
6 What are the things that they do best and we can do effective oversight
7 with? And what are the things that we need to bring in-house?

8 That is the pattern we are taking now to look after it. You
9 know, we are still in the process of trying to identify what this maximum
10 achievable growth is. As I said, we're just now starting to look and
11 solicited from some of the DOE labs that we have done business with,
12 that we have history, and we understand their technical capabilities.,
13 Southwest Research Center is one of them.

14 COMMISSIONER MERRIFIELD: Abilities and
15 limitations.

16 MR. DYER: And their limitations. And to identify what
17 are the resources they have and then to develop an overall strategy. But
18 our game plan would be to pattern it after the license renewal activities.

19 COMMISSIONER MERRIFIELD: Are we are going to
20 have a second round?

21 CHAIRMAN DIAZ: Yes.

22 COMMISSIONER MERRIFIELD: Let me hold on that for
23 the second round.

24 CHAIRMAN DIAZ: All right. Commissioner Jaczko?

1 COMMISSIONER JACZKO: I'd like to talk a little bit
2 about historical perspective. I think it's fair to say that probably 25-30
3 years ago, I guess this agency wasn't -- I'll do the math. Thirty years ago
4 we are okay. We are okay 30 years ago.

5 Our focus was a lot more on licensing new reactors and
6 not as much on operational safety. That has obviously changed over the
7 last 25-30 years.

8 One of the things that I am concerned about is that, as
9 the Chairman mentioned in his opening remarks, we don't get into a
10 situation with new licensing activities, that we lose our focus on
11 operational safety. That will continue to be one of the primary things that
12 we do.

13 As Commissioner McGaffigan asked in one of his first
14 questions, do we ever say no to people when they come in? This is the
15 first time that I've heard that we do say no. I'm reminded that there is a
16 commercial I think for a credit card, where the commercial constantly
17 says, "No, no, no."

18 I think sometimes when people come in with their exotic
19 ideas, we tend to say, "Great. We'll take a look at it." I think we could
20 learn a lesson from that commercial and perhaps be more willing to say
21 no to some of these things.

22 One of the reasons that I am concerned is I don't think
23 we still have a good grasp on the resource needs and challenges that
24 we're going to have.

1 I want to ask a specific question on that. On slide 8, we
2 talk about the combined operating license associated with an early site
3 permit and all of these things taking about 60 FTE and about 27 months
4 to complete. That doesn't quite agree with what we have in SECY-
5 01-0188, which talks about needing about 23 people for a combined
6 license review and about another 65 for construction. So altogether I get
7 about 88 in that.

8 So briefly can you tell me what the difference is? What is
9 the right number if we're looking at that?

10 MS. DUDES: Well, I think that in SECY-01-0188, we
11 were taking an estimate at what it was going to take for those activities.
12 What we have done: A) the 60 FTE is an agency FTE. It includes not
13 only our technical review but our admin., our OGC staff. So it's a much
14 broader number.

15 COMMISSIONER JACZKO: So it does not include the
16 construction, inspection piece of that?

17 MS. DUDES: No, no. And we have also identified
18 lessons learned and gaps that we think will need to be addressed as we
19 do this COL. So we are adding a technical review, all of the other
20 full-time equivalents that support that technical review, editing OGC, other
21 activities, and then --

22 COMMISSIONER JACZKO: So that's how you get from
23 the 23 to 60?

24 MS. DUDES: Yes.

1 COMMISSIONER JACZKO: So there's an additional 37
2 FTE there. And those would be new FTEs or --

3 MS. DUDES: Let me clarify. The additional 30 is also as
4 we have done lessons learned going through design certifications and
5 early site permits and understanding that it may take additional resources.
6 But a small fraction of that, maybe five, would be additional personnel
7 associated with the support of the review.

8 COMMISSIONER JACZKO: Okay.

9 MS. DUDES: But the other additions are lessons
10 learned and closing the gaps.

11 COMMISSIONER JACZKO: Okay. So my question, I
12 guess, then, is would the 60 FTE that we have or are projecting -- that is
13 a very conservative estimate in the sense that that is taking the best case
14 scenario, which is a combined operating license, and with an early site
15 permit with a certified design. Currently we have three certified designs,
16 neither of which the conversations I'm hearing about people are actually
17 talking about utilizing.

18 So what is a realistic number for an FTE? I guess
19 somewhere in the background documents I think you talk about there
20 would be a significant increase in resources needed if we did not have
21 kind of this best case scenario.

22 So what's the number if we have what I'll call maybe to
23 use the Chairman's term of realistic conservatism?

24 CHAIRMAN DIAZ: There you go. There you go.

1 COMMISSIONER JACZKO: Is that the right term? So
2 what is a realistic conservative number? I don't think 60 is that number. I
3 mean, what are we talking about?

4 MR. DYER: Commissioner, if I could, I think we gave
5 realistic conservative in some of our background slides for the various
6 permutations and accommodations that we currently believe licensees
7 are going for. We didn't provide that in the public package. So I'd say
8 that is a realistic conservative.

9 Using I would say a RADCON math level of
10 conservatism, one of the things you can do is add the resources that were
11 identified in these slides. If a COL comes in and they don't have a
12 certified design and we're starting from scratch and they don't have an
13 early site permit and they're starting from scratch, you can start to add
14 that altogether. And you can start to tack the duration of the design
15 review prior to the early site permit.

16 Now, there will be some efficiencies, but it can be a very
17 lengthy and expensive process.

18 COMMISSIONER JACZKO: Give me a number.

19 MS. DUDES: We can map this out. We have to know
20 the design. We estimated between 60 and 120 full-time equivalents for a
21 design certification.

22 COMMISSIONER JACZKO: Okay.

1 MS. DUDES: We haven't completed any estimates, but
2 we'll assume 20 full-time equivalents. So right there we're between 80
3 and 140 and add some for the COL. Again, we're sort of --

4 COMMISSIONER JACZKO: So close to probably 200
5 maybe? Would that be a good estimate?

6 MS. DUDES: Well, and, remember, that higher estimate
7 for the design certification is a gas-cooled advanced technology.

8 COMMISSIONER JACZKO: Okay.

9 MS. DUDES: We'll stick to the closer limit there, lower
10 limit.

11 MR. REYES: We can give you a number. If you stay
12 with light water reactor technology, we can give you a better number.

13 COMMISSIONER JACZKO: Okay.

14 MR. REYES: If you use the concept car that
15 Commissioner Merrifield used in the RIC, we can guess.

16 COMMISSIONER JACZKO: We can go with the --

17 MR. REYES: If you want to go with the F-150, we can
18 give you a number.

19 COMMISSIONER JACZKO: Yes.

20 (Laughter.)

21 COMMISSIONER JACZKO: I can drive a pickup. So
22 yes. Yes.

23 (Laughter.)

1 COMMISSIONER JACZKO: So if we could get a
2 number? You don't have to provide that -- my point being you gave us a
3 number in the briefing slides. And I think that that number is a very rosy
4 picture of the future.

5 And my concern is that we don't get into a situation
6 where we start relying on those numbers and then in fiscal year 2008, we
7 find that we're several hundred FTEs short and then we find ourselves
8 pulling those from operational safety. I think that's the situation we cannot
9 find ourselves in. And I think we need to be prepared to handle that.

10 MR. REYES: I know you want a brief, precise answer,
11 but it's a little more complicated than that. If you talk to the contracts
12 people, they will tell you that we are already late to set up contracts for
13 '08.

14 COMMISSIONER JACZKO: Yes.

15 MR. REYES: So the dimension of what we have to do in
16 the next fiscal year, '06, it's really important that we start moving in that
17 direction in a lot of fronts.

18 COMMISSIONER JACZKO: Thanks.

19 CHAIRMAN DIAZ: Commissioner?

20 COMMISSIONER MERRIFIELD: Mr. Chairman, may I
21 say to Commissioner Jaczko, having spoken of realistic conservatism and
22 indicating your willingness to drive a Ford F-150 pickup truck, I would
23 imagine some of your friends down on the Hill would probably imagine
24 what we have possibly done to you in your time here, just as an aside.

1 (Laughter.)

2 CHAIRMAN DIAZ: Let's move on.

3 (Laughter.)

4 COMMISSIONER McGAFFIGAN: To defend
5 Commissioner Jaczko, it was an F-150 compared to a concept car.

6 COMMISSIONER JACZKO: The one thing I would say
7 in my defense, I think some of the folks in rural Nevada would appreciate
8 the Ford.

9 (Laughter.)

10 COMMISSIONER MERRIFIELD: Coming from rural
11 New Hampshire, I appreciate that.

12 CHAIRMAN DIAZ: Commissioner Lyons?

13 COMMISSIONER LYONS: I can think of all kinds of
14 comments to make to Commissioner Jaczko offline.

15 In any case, by this point, there have already been a
16 number of outstanding points made. Certainly I'd want to agree with and
17 associate myself with the comments that Commissioner Jaczko just made
18 on the importance that we don't lose our focus on safety. I'm sure that all
19 of us would say exactly the same thing.

20 And the comments that Commissioner Merrifield made
21 on the degree of uncertainty facing you, facing us, facing the entire
22 agency are very, very important.

1 I guess the main suggestion I would make with regard to
2 that uncertainty is that I think Commissioner Merrifield also suggested this
3 -- that we need to look very, very carefully to Congress for guidance.

4 Whether the Galena reactor is going to be real or not I
5 think is very likely going to be determined in some guidance that we're
6 likely to see in some form from Congress.

7 Whether NGNP is going to be likely on what time scale,
8 again I think we'll get our best guide from the appropriations process as it
9 moves ahead. And just in general, it seems to me that the degree of
10 uncertainty that we're facing we need to carefully communicate to the
11 appropriations staff and members on the Hill.

12 I know the Chairman and probably Jesse Funches in
13 some of your interactions, I hope you are communicating that because
14 the same industry folks who are, if you will, driving our uncertainty are
15 also certainly very active on the Hill describing their interests and needs
16 and plans. And in some sense, this is all one interconnected puzzle.

17 We have tremendous uncertainties that we have to staff
18 for. Congress has the same uncertainties that they have to be trying to
19 appropriate towards. Ideally this will all be coordinated, at least to some
20 extent, better coordinated than it is now. Beyond that, I'm not quite sure
21 what to add.

22 I think also, though, that the appropriators need to be
23 well-aware, I think you would agree, that there is a limited, if you will,
24 fungibility between the kinds of people that you would bring in to assist in

1 this activity as compared to our other gigantic uncertainty of high-level
2 waste. I assume there is a very limited degree of ability to move people
3 back and forth in there.

4 But my main suggestion is that where we foresee what
5 could be tremendous, very substantial appropriation shortfalls, the
6 appropriators need to know about it and use their guidance, use their best
7 judgment based on the guidance they're getting from industry to help us.

8 With that, I was hoping to turn a little bit to the question
9 of possible revisions in Part 52. You provided some additional
10 information in the comments just now. And there was some additional
11 information that came in in written form to us.

12 But I have to admit that I am fairly confused on exactly
13 what the impacts are of deferring a revision of Part 52 to October,
14 perhaps advancing that to August. And then, Laura, I think you made the
15 point that, really -- maybe, Jim, you did -- that it's not quite clear we have
16 to do this revision to Part 52 in order for industry to be moving ahead.

17 I'm just trying to better understand what is driving our
18 need to revise Part 52 if we really have to revise it and what guidance
19 we're getting from industry and how much we're really impeding their
20 ability to make progress, if we are.

21 MR. REYES: I'll let the staff answer, but the first answer
22 is clarity. And the second one is industry would just like for us to clarify
23 some things in Part 52. But they don't see that as an impediment to
24 coming forward. They would just like to have that accomplished.

1 MS. DUDES: Yes. I think that the driver is clarity. And
2 just an example which may give you some context, making sure that the
3 Part 52 regulations, we have specific pointers from Part 52 to Part 50,
4 Part 21, to try and make sure that someone who is using that, we used to
5 have a blanket statement. And now we're trying to be more specific on
6 what applies in each of the regulations.

7 What's driving that? What would have to be deferred, we
8 have senior staff working on Part 52. We would like to get that completed
9 by October, but we also don't want to take resources away from the NEI
10 application guidance and the AP-1000 rulemaking activities, which it's just
11 a timing issue in that we have a schedule to complete the NEI document
12 in June, to give them our first round comments on combined license
13 guidance.

14 From a timing perspective, the AP-1000 rulemaking
15 comment period will end in July. And so moving the Part 52 date out to
16 October just provides we can complete our work with our senior staff in
17 series.

18 COMMISSIONER LYONS: I guess to the extent I
19 understand these trade-offs, the October date sounds fine to me to the
20 extent I understand it and allows you more flexibility to continue work on a
21 number of other areas that I think also have to be treated as high-priority.

22 MR. REYES: I specifically queried the industry about
23 that. And I said, "I understand all the things that you would like us to
24 complete, but given these choices, how do you view the Part 52 clarity?"

1 The feedback I got was that they have no concerns about the current
2 schedule that we have --

3 COMMISSIONER LYONS: The current October
4 schedule?

5 MR. REYES: Correct, current schedule.

6 COMMISSIONER LYONS: I appreciate that that inquiry
7 was made. This is probably a case where I think we should be giving
8 considerable weight to that view.

9 MR. REYES: Because the trade-off is either not
10 completing the early site permits on the schedule we have or delaying the
11 Part 100 rulemaking.

12 So we're now to the point that everything is important.
13 And what is more important than the other item, it's what we're talking
14 about.

15 COMMISSIONER LYONS: Okay. Thank you.

16 I had one other question that may be a bit lengthy.

17 Where am I in time?

18 CHAIRMAN DIAZ: You're okay.

19 COMMISSIONER LYONS: Laura, I believe you
20 mentioned the construction inspection program development. I don't
21 know much about that, but I gather that is something that has to also be
22 done and well-understood by industry at whatever time they're going to
23 launch into a construction program.

24 MS. DUDES: Correct.

1 COMMISSIONER LYONS: I was curious both from the
2 standpoint of if you see that entire program, the construction inspection
3 program, do you see that moving ahead in an appropriate time scale?

4 And I was also wondering if this may be an area where
5 we perhaps have particularly acute personnel needs just because I'm
6 guessing that there are relatively few people in the agency now who have
7 been involved in a substantial construction project.

8 So I was kind of wondering on both of these whether the
9 program is on schedule and whether the human capital resources are on
10 schedule for, again, a highly uncertain schedule.

11 MS. DUDES: I'll talk about the program and then maybe
12 let you talk about the human capital. Actually, the program, I mentioned it
13 briefly. And in and of itself, it's worth a pretty long discussion because the
14 construction inspection team, led by Mary Ann Ashley, has done quite a
15 bit of work in preparing the activities and developing the procedures that
16 would be necessary, identifying the gaps in personnel, working with
17 industry to really address our largest concern for construction of new
18 reactors, which is the modular construction, and how we would handle
19 that.

20 They have at least begun to work on demonstration
21 projects for a construction inspection program information management
22 system, which would help to address the modular construction concerns.

23 They have a workshop scheduled this May to address
24 how we would close ITACs and non-ITAC inspection issues. So there's

1 quite a bit of substance in that program. And I think we probably would
2 like to get the framework document and get you specific information and
3 briefings on that

4 COMMISSIONER LYONS: I would be interested in that.
5 And to follow up with one point you made before the manpower issue,
6 again, without knowing in detail, I would guess that the trend, at least
7 overseas towards modular construction, is going to lead to some very
8 specific challenges.

9 MS. DUDES: Absolutely.

10 COMMISSIONER LYONS: I can almost imagine you're
11 going to have to be conducting inspections at a variety of sites
12 simultaneously.

13 MS. DUDES: Yes, yes. And I think human capital and
14 travel resources will enter into that.

15 MR. DYER: Commissioner, as it turns out, probably the
16 license design with the most aggressive modular construction was the
17 ACR-700. And it was going to be built all over the world and brought
18 together at whatever site.

19 Up until the end of last year, we thought that might be the
20 next site to come in for design certification before they delayed their
21 submittals. It was originally going to come in in March, but the
22 construction team was working towards being able to put together a
23 construction program to fit that.

1 And it was quite a bit of an elaborate matrix of tracking
2 that literally confused communication between the vendor and us as to
3 when and where things were going to be built, what inspection holds did
4 we need to get people out for, and that. And it was quite an extensive
5 thing.

6 The other thing on the human capital and the manpower
7 side of it, one of the things, I was actually still out in Region III when it
8 started. NRR put out a request for participation in this team. The regions
9 actually went around and solicited to get the remaining construction
10 inspectors to participate in this and usually assigned a lead inspector from
11 each region.

12 I know literally I had a senior inspector who has
13 dedicated almost full-time to this effort out in the region and then would
14 network with the existing inspectors who had construction experience
15 within the region to get the program development to capture the
16 knowledge transfer and get it factored into this program.

17 MR. REYES: Do we have time to follow up? On the
18 human capital Jim touched, we had a construction inspection program
19 before. We used the experienced people that we had remaining as part
20 of the task to modify it accordingly.

21 Now the problem is going forward. We're going to use
22 rehired annuants, some of these people who have retired, to continue to
23 help us develop and implement this program.

1 The problem I think is what Jim talked about. It's when
2 you take a schedule like that and you shrink it because you do modular
3 construction. Then our resources have to be in that same direction with a
4 lot of different skills, whether it's welding, electrical, et cetera, et cetera.

5 So the basic construction inspection program we had in
6 place, in fact, we're going to have a little bit of a test. We took that
7 construction inspection program, extracted from it, and developed one for
8 the proposed mixed oxide facility in Savannah River, which if the
9 schedule remains the same as it is, it will go first before any one of these
10 proposed projects. So we're going to test a little bit of what we put
11 together, not the whole thing but in the MOX facility.

12 So we have plans to once it's institutionalized use human
13 capital, but we are going to have to train the new generation. There's no
14 question about that.

15 CHAIRMAN DIAZ: All right. Thank you.

16 Let me start at that point in the Part 52. I think it is
17 obvious that when Part 52 revisions are finished, I think it will be important
18 that the staff by that time or not too long after that be able to brief the
19 Commission on where we are and also devote a very good chunk of time
20 to ITAC.

21 It is important that we know how ITACs are going to be
22 conducted, the relationships between the ITAC and this criteria that we
23 have put in regarding what you call reasonable assurance that it has met
24 the intent of the application.

1 I think these are issues that the Commission needs to
2 have well ahead. And so I would just start putting it in the calendar.

3 COMMISSIONER MERRIFIELD: Mr. Chairman, if I
4 could concur in that thought? ITAC is an area that we have long had
5 significant Commission interest.

6 I'm pleased to hear the staff is making progress. But, as
7 they always say, the proof of the pudding is in the eating. And I think I
8 would like to learn more of really where we are there.

9 CHAIRMAN DIAZ: All right. And I think, you know, one
10 of the real objectives of this meeting is the staff who has been working on
11 these things needs to put all of them in something that makes it through
12 the Commission's scrutiny. And that is very important.

13 I think, you know, late October, early November sounds
14 like a very good time. So I'm just giving you a little bit of warning.

15 Let me go back to slide 19 a minute. I think it really
16 shows the tremendous amount of work that we need to do. And by "we,"
17 I really mean we, the staff and the Commission, in trying to manage this
18 issue.

19 If you look at the first bullet, it says processes are ready.
20 We know that processes are ready, but they are ongoing. They continue
21 to be modified and updated. So they're ready, but they are ready and in
22 what I call a dynamic stability. I don't know whether that's the right word
23 or not.

1 However, the next two slides are, of course, red flags.
2 Resources are limited. And industry demand is uncertain. So right there
3 we have two significant ifs. And I know, my fellow Commissioners, we
4 have been talking about this, the message being sent to the appropriate
5 people in the Congress of the United States is that we are facing very
6 serious issues that cannot be resolved overnight. If we are going to be
7 able to address these issues, we need to have the resources, the
8 technical resources, already put inside this machine that we call the
9 Nuclear Regulatory Commission. And they need to be able to be
10 functional. That cannot happen overnight.

11 Contractors. I thought that we could get them in a year,
12 but I understand that that is not possible and that the reason is that there
13 is going to be a significant amount of competition.

14 So it comes down to the issue of also reducing the
15 uncertainty of what is needed. Again, I join my fellow Commissioners in
16 sending a clear message to the industry that it is vital that we know what
17 is really realistic to expect because we need to be prepared and we
18 cannot be just waiting until the last minute.

19 The last bullet is intriguing. And I don't think we have
20 enough time to go in it, but the staff has a strategy. Well, I think we need
21 to engage a little more on that.

22 I'd like to understand that strategy a little better because
23 if you have the strategy, we need to know what that strategy is. I think we

1 have seen some today, but fundamentally it needs to be made more
2 mature and to a point that it can be communicated.

3 COMMISSIONER McGAFFIGAN: Mr. Chairman, I think
4 prayer is part of that strategy.

5 (Laughter.)

6 MR. DYER: It might be closer described as a strategy
7 for a strategy.

8 CHAIRMAN DIAZ: So I know the staff is trying to convey
9 the message, but I think this brings to the point all of the things that my
10 fellow commissioners have already dealt with.

11 So the resolution of that last point I think we're going to
12 be really engaged in very strongly in the coming month and two months.
13 So we need to be able to really establish an agency-wide strategy that
14 incorporates the Commission. We're going to put all the commissioners
15 to work in here additionally to what they have.

16 Let me go to some of the questions. Are we really to the
17 point that we can say that for light water reactors, we have a very, very
18 well-developed framework to be able to do a design certification or final
19 design approval?

20 Do we have all of the tools for light water reactors? I
21 want to be specific right now because we have got to be realistic.
22 Realism in this case is that the most probable case would be a light water
23 reactor. Do we have all we need for the light water reactors in the menu

1 to be able to take decisions in the amount of time that we're expected to
2 make those decisions?

3 There's no big test that needs to be done. There's no
4 facility that needs to be constructed. Do we have the technical framework
5 to make the decisions that need to be made in the amount of time that it
6 needs to be made?

7 MR. ELTAWILA: If you don't consider ACR-700 as a
8 light water reactor --

9 CHAIRMAN DIAZ: No. I said speak to light water
10 reactors.

11 MR. ELTAWILA: Well, ACR-700 is introduced as light
12 water reactor.

13 MR. REYES: Exclude that.

14 MR. ELTAWILA: I will exclude that. For light water
15 reactors, without any doubt, we don't need any experimental program.
16 Our tools and data are ready to respond to any pre-application or
17 certification review.

18 MR. PAPERIELLO: I'm going to disagree with that
19 because in the AP-1000, we actually had to do some experiments
20 because of the stretching of certain components. And they didn't perform
21 the same way.

22 So, you know, like I say, it is a tedious job just to take a
23 code and prepare it to do the analysis of one new design. It is about a

1 person-year. The input for it is this thick on paper, so that aspect of the
2 whole thing. It depends on what the configuration is.

3 The primary problem is with fluids, you're talking about
4 non-linear partial differential equations. And fluids do strange things
5 under --

6 CHAIRMAN DIAZ: Do we have the required knowledge
7 of what needs to be done?

8 MR. PAPERIELLO: Yes.

9 CHAIRMAN DIAZ: All right. If we are going to a certain
10 way, can we in a timely manner determine what else is needed and be
11 able to focus on what is needed in a timely manner?

12 MR. PAPERIELLO: Under the current arrangements,
13 where we have the pre-application meetings, the answer is yes.

14 CHAIRMAN DIAZ: The answer is yes. So for the light
15 water reactors, evolutionary light water reactors, you would say that the
16 agency is ready to be able to technically --

17 MR. PAPERIELLO: Technically, yes. We have the
18 people. We have the tools, people who know how to use the tools. We
19 can do it. We may have to do some experiments for a given
20 configuration, but other than that, we're fine.

21 CHAIRMAN DIAZ: Okay. I would think that we are
22 ready for our second round. And I think we have about five minutes each.

23 COMMISSIONER McGAFFIGAN: Five minutes each?
24 Okay. Thank you, Mr. Chairman.

1 I don't want to sound like a protectionist, but I throw this
2 out as an idea. Probably, you know, like many ideas, it may not be
3 perfect. The Galena reactor involves Toshiba, which has not bothered to
4 even approach the Japanese regulator, coming in in a very
5 resource-intensive thing, it is not a light water reactor, it's liquid metal
6 cooled and supposedly a battery and all of that, require, you know,
7 supposedly no maintenance. I use the word "supposedly" for all of the
8 claims.

9 Other foreign reactors -- and shouldn't, couldn't we ask
10 that they at least deal with their home regulator a little bit before they
11 come to us? The EPR would pass. I mean, obviously Mr. LaCoste and
12 the German regulators look very carefully at EPR, and it's being built in
13 Finland.

14 But a lot of these other reactors, and I think ACR-700 or
15 1000 or whatever it will prove to be when they finally build one in Canada
16 clearly there was great intent of Linda Keen to work with us in some sort
17 of parallel process.

18 Every salesman of nuclear reactors on the face of the
19 Earth shouldn't necessarily have to start where the first place is that they
20 go to.

21 So I just throw that out. I mean, I almost don't want a
22 staff reaction because I've already said these aren't high priorities but
23 whatever.

1 On the peak resources, as Commissioner Jaczko
2 pointed out, we were once a licensing agency with a growing operational
3 arm as the licenses in the late '70s and early '80s, and we invited the
4 resident inspector program just before TMI, I think it was, and we became
5 more and more operationally focused in the intervening years.

6 When you talk about organizations in the 2009-2010 time
7 period -- and I'm listening to all of these enormous numbers for FTEs,
8 contractor support. We haven't even gotten to the construction inspection
9 phase yet, where there are more enormous numbers to follow.

10 Have you thought about splitting licensing of new
11 reactors and inspection of new reactors from the rest of NRR, which may
12 be in a small appendage, again, as it was in the late '70s?

13 I'm not trying to put up arbitrary walls because we'll have
14 to swing resources. But at some point, this becomes far more than
15 license renewal, a dominant activity of the agency if all of these things
16 come along.

17 We talk about not diverting from safety and security.
18 One way to do that is to budget it separately and think about it separately
19 and make sure that the rest of Mr. Dyer or whoever has the resources on
20 the safety side and Mr. Zimmerman on the security side.

21 MR. REYES: One of the issues that is in front of what I
22 believe, in front of this organization -- and I have to throw in the rest of the
23 fuel cycle because the activity that we were just talking about has created
24 a lot of activity in the uranium mining, in the fuel manufacturing. Every

1 point in the fuel cycle now is showing an increase driven by the potential
2 of new reactors.

3 The organization has served us well for 30 years. This
4 year is the 30th anniversary. It may not be the organization that we need
5 for the future.

6 Jim mentioned that he is planning an organizational
7 change. Now, these are modest changes. And what I intend to do -- and
8 I have a senior managers' meeting in May, and this is the first topic in the
9 agenda, is making sure that we're looking forward to what the needs are
10 and how best the organization can respond to those needs.

11 So we haven't ignored that concept. It's just that until we
12 have more certainty of the type of issues --

13 COMMISSIONER McGAFFIGAN: I agree. I just throw it
14 out for future Commissions that at some point we're going to face some
15 organizational issues here. And organization oftentimes drives resources
16 and priorities. It's premature at this point.

17 But when you listen to some of these numbers for
18 2009-2010, it's a very large organization. And I think your point is entirely
19 well-taken that there are going to be large implications back over in
20 NMSS as fuel cycle facilities try to catch up.

21 MR. REYES: We're going to come to the Commission in
22 an evolutionary way on organizational adjustments as things come to us.
23 Jim mentioned one this summer. And we have others under

1 consideration on the administrative support side, too, because it's a whole
2 organization that has to work together.

3 COMMISSIONER MERRIFIELD: Mr. Chairman, to
4 follow on, Commissioner Lyons made some comments about our
5 interactions with Congress. I think that there are four of us who sit on this
6 side of the table who worked up there. I think I agree with your
7 sentiments about the need for us to be clear, particularly with the folks in
8 the Appropriations Committee, as to our needs.

9 I do think we need to make it clear to the folks in
10 Congress that non-light water-moderated technologies are more
11 complicated for us, and it's going to cost more money.

12 And so if there is a push within Congress to try to provide
13 some promotion to those technologies, whether it's Galena or whether it's
14 a next generation nuclear plant or something else, I think we just need to
15 make it quite clear that we would need to have the resources
16 commensurate with our ability to meet our health and safety mission in
17 the right kind of way. So I just want to make that comment.

18 On the issue of future reactor orders and again going
19 back to the uncertain industry demand, I want to touch on that one more
20 time. What has struck me, I think one of the reasons why many utilities
21 are reticent to make too many comments about their plans is because of
22 an uncertainty of how that announcement is going to affect their stock
23 price.

1 So a lot of them are keeping that information very, very
2 tightly held until the point where they are actually willing to make the
3 decision so that they don't have to take some near term perceived hit
4 from some folks on Wall Street. I understand that. That doesn't help us.

5 The question I would have coming out of this is, has the
6 staff thought about or have you engaged at all with NEI to perhaps try to
7 have some of these conversations in a non-licensee specific way? So
8 that we could get, for example, information that licensee A, without
9 naming names, is thinking about coming in at a certain point six months
10 down the road or three years down the road so we can put a little bit more
11 meat and bones on our game charts here without necessarily naming the
12 individual company that's been giving us better data. Have we tried to do
13 that?

14 MR. REYES: Yes. As you know, we did that with
15 license renewal. And, in fact, our license renewal schedule for the future
16 does not have designated names in all cases.

17 We understand, we have engaged with the industry that
18 there's a forthcoming notification to the Commission with such
19 information, which will be non-individual specific.

20 That's the good news. The problem with that, you say
21 the presentation this morning, we do need specificity in terms of, does
22 that mean an ESP first, design certification, because it has a significant
23 variation on the resources.

1 So that would be a great step. We understand that in the
2 very near future, the industry is going to communicate with the
3 Commission with a total fiscal year by fiscal year description of their
4 desires or plans. So that will go a long way to help us. I think when we
5 see it, we are still going to have a little bit of uncertainty because of the
6 specificity.

7 COMMISSIONER McGAFFIGAN: Well, I think we
8 should think about having a key team from your group with some
9 counterparts in NEI to really engage in a relatively detailed way, as we did
10 with the license renewal process, so that we can get as great a specificity
11 on that information as well as perhaps bringing some likelihood on some
12 of those things coming through.

13 I did want to come back to a comment that you made
14 about our inspection program. I know Commissioner Lyons asked about
15 it, and we have spoken before about the challenges with inspecting
16 modular designs and the fact that our inspection time might be
17 constricted, which may, at least during a period of time, increase the
18 number of FTE we would have directed toward a single license
19 application.

20 I just want to give you an opportunity to clarify that. That
21 doesn't necessarily mean we're going to stack those on top of each other,
22 which would leave us with a much larger organization. Isn't it more a
23 matter of shifting the resources in a way for timing issues, not necessarily
24 just a big –

1 MR. REYES: Let me give you an example. In the past,
2 as the construction was getting going on site, if we were looking at
3 welding, let's think welding for a minute, as the pipes are being welded,
4 we could follow the work on site. In fact, if one weld got delayed and
5 others got moved on, the inspection could just within the campus there
6 move around, much more flexibility.

7 Now think about all of those activities being welded at the
8 same time in different countries. So now we have to go to different
9 countries to observe the welding of components lining up outside at the
10 same time.

11 So there's a skill issue and a complexity issue on how
12 you organize that activity.

13 COMMISSIONER MERRIFIELD: Okay. I understand
14 that a little differently, but I do want -- and this is my last comment and I'll
15 stop. I hope and I'm certain we are thinking differently than just taking the
16 way we did inspections back in 1980 in trying to fit that into a modular
17 world because I trust that with modular constructions, the way we go
18 about doing our inspections and the need to be there at given times is
19 different.

20 And I would hope that we would have greater use of
21 technologies, whether it's information technologies or remote data that we
22 can see. I would hope that we have got some other ways that we can
23 effectuate meeting our quality assurance and quality control
24 requirements, not necessarily --

1 CHAIRMAN DIAZ: Or have specific agreements with --

2 COMMISSIONER MERRIFIELD: Right.

3 CHAIRMAN DIAZ: -- somebody who would actually do
4 that and then transmitting --

5 MR. REYES: The answer is yes because the model
6 construction at one site of a particular component that may be repeated
7 for multiple reactors for multiple facilities will be under a particular quality
8 assurance program.

9 So we could really leverage. We can really leverage
10 that. We can do it --

11 COMMISSIONER MERRIFIELD: Carl doesn't like the
12 word leverage. The Commission has no opine on leverage by the way.

13 MR. REYES: We are going to use "leverage" and
14 "collaboration." We are going to -- but you are exactly right. There are
15 some efficiencies we can take between technology and this.

16 COMMISSIONER McGAFFIGAN: But quality assurance
17 was central to the late licensing of some of the reactors. It's central to a
18 facility that is under discussion at the current time.

19 CHAIRMAN DIAZ: Part of the insurance is central to the
20 way we do things. But it doesn't have to be the way we did it.

21 MR. REYES: Correct. And technology is now with
22 automatic welding machines, et cetera, et cetera. There's a lot of
23 changes that have occurred since we last did this.

24 CHAIRMAN DIAZ: Okay. Commissioner Jaczko?

1 COMMISSIONER JACZKO: I want to talk a little bit
2 about, I think it was, slide 6 maybe. You talked about the Standard
3 Review Plan is available.

4 Parts of the Standard Review Plan look to me to be a
5 little bit out of date. So I wonder if you can talk a little bit about what its
6 status is and --

7 MS. DUDES: Overall update? Well, with respect to
8 design certification, there are parts that are out of date. And we're
9 informed of that. I know the office is taking on a project for an overall
10 update of the Standard Review Plan.

11 COMMISSIONER JACZKO: Just kind of as I have gone
12 through and reviewed it, it looks like there's over 100 and some sections
13 that were last revised in '96. So those are about ten years out of date.

14 A very, very small portion of it is current as of 2000. And
15 I think those are, as I understand it, areas of fire protection, human
16 factors, and conduct of operation.

17 So on the technical side, there seemed to be a lot of
18 areas that are not particular I think since 2001, we have had five bulletins
19 on reactor coolant system issues. And all of the section in the Standard
20 Review Plan dealing with that dates back to 1996.

21 So, you know, again, this is an area where it seems like
22 we have a lot of work to do to get that document up to date. So I'm
23 wondering just in general, how do you deal with design certification, kind

1 of dealing with the more modern -- I won't say modern -- more up-to-date
2 aspects of those issues when they're not in the Standard Review Plan.

3 MR. DYER: Commissioner, the Standard Review Plan,
4 you're right. We have a plan. We can get it later, the plan for updating
5 the Standard Review Plan.

6 It can work. It's sort of where 52 is now. It can work. It's
7 the most efficient or effective way of doing it. You know, it's in a continual
8 improvement process. And depending on emergent work, that's the
9 project that gets cut.

10 COMMISSIONER McGAFFIGAN: It is almost surely the
11 first on the list. We have had previous discussions outside of this area,
12 about updating guidance. I remember there was as hearing a few years
13 ago, and I'm sure it's finished now. So I can comment on it.

14 The staff was working off of some element of this huge
15 guidance process they have, the only thing that had been documented
16 was a draft Reg Guide from '77 or something.

17 In the security area, there's all sorts of Reg Guides that
18 go back to the Atomic Energy Commission that we never quite had the
19 resources to fix.

20 And we have asked the staff in the past where all of this
21 stands in terms of what are the high-priority ones and what aren't. In this
22 area, it's just the tip of the iceberg. And the staff, they always say, "We
23 can make do with what we have."

1 COMMISSIONER LYONS: It's been a very good
2 discussion, but I'm out of questions. I appreciate it.

3 CHAIRMAN DIAZ: All right. That gives me extra time.

4 COMMISSIONER McGAFFIGAN: Prerogative of the
5 Chair, Mr. Chairman.

6 CHAIRMAN DIAZ: Just one comment. I think how
7 timely this meeting is. As my fellow commissioners know, we are
8 potentially approaching the time that we will testify in the Senate on the
9 issue of 2010 and the issue of how is the NRC prepared to address what
10 is coming ahead. I think we need to work these coming weeks to make
11 sure we have a comprehensive strategy that incorporates the
12 Commission opinions.

13 In other words, going to this last bullet, the NRC staff has
14 the strategy. I want to get to that meeting and say, "The agency has a
15 strategy, and this is what the strategy is."

16 COMMISSIONER McGAFFIGAN: I think they've
17 corrected it. They have a strategy for a strategy. It may not be quite as
18 compelling –

19 CHAIRMAN DIAZ: But the time has come in which we
20 have to have the strategy for the strategy work out. So it's actually a
21 strategy.

22 In that regard, I know that the staff -- this is because of
23 many other painful experiences -- has a conservative prioritization

1 scheme in what they put in the budget, because they don't see where
2 their resources are coming.

3 I think that, although I call myself a fiscal conservative, I
4 see the needs for expansion of our thinking to consider more aggressive
5 prioritization schemes that consider not only the low-priority but the
6 medium-priority items. And I think the Commission needs to have both of
7 those put in a time line that we can then go and do the work that we are
8 supposed to do in getting the resources that the agency will need.

9 So I would move you from just the low prioritization or the
10 low uncertainty to the low to medium so we can actually get at least a
11 band that we know where we need to go in this case.

12 Going back to the issue of light water reactors, I still have
13 a little bit of a concern. For example, we are going to have to do some
14 modifications to the Puma facility to be able to do the ESBWR.

15 My question before was directed at making sure that we
16 look and make sure that we have every facility that is needed, every
17 analysis at least put in a manner that we know what needs to be done,
18 not that we are going to do it, but I don't want to be caught in a situation
19 where we don't have the code development or we don't have the facility
20 and then that will introduce a significant delay in what we want to do.

21 MR. ELTAWILA: I think, in fact, Mr. Chairman, I think the
22 Puma facility Modification that we are proposing is very minor
23 modification, just to accommodate the power increase between SBWR
24 and ESBWR.

1 As far as the AP-1000, we finished our work and our
2 tests in this area. APR, I believe it's conventional in its design. So we
3 just will do some scaling analysis and see if our code has been assessed,
4 say, against the same range of applicability. But we have the Apex facility
5 if we need to do additional test data. The facility is available for boiling
6 water after we have our other facility, the Puma facility. So from an
7 experimental facility, we have all of the facilities that we need for light
8 water reactors.

9 CHAIRMAN DIAZ: Okay. Digital I&C becomes a major
10 issue. You know, I think we need to realize that we have been treading
11 on this. We made some improvement. We kind of stop and stop and
12 keep thinking of the next technology. But I think this is an issue that we
13 eventually need to resolve in the framework of whatever the year is.

14 We know there are going to be modifications, but this is
15 an important issue.

16 MR. PAPERIELLO: It needs to be disciplined, which is
17 what I am trying to do. And I referred yesterday on building, on
18 experience and knowledge outside of the nuclear industry. Digital I&C is
19 not unique to the nuclear industry. So we need to build on the things.

20 Discipline and build-on what is known outside of the
21 nuclear industry is what I am striving for.

22 CHAIRMAN DIAZ: That needs a specific plan because it
23 might be that this is the one area which we are not the world experts on.

1 And, therefore, it could come at the very late end. And we need to be
2 ready for that.

3 MR. PAPERIELLO: Once I get the rest of the supportive
4 offices on board, the ACRS is getting engaged, the Commission will see
5 the plan. It is my intent to show it and get the plan endorsed by the
6 Commission, but you need to know where everybody sits on the thing.
7 Yes.

8 CHAIRMAN DIAZ: On the issue of organization, I think
9 many good points have been made, but I still would like to go back to the
10 fact that during the last five years, we have had a tremendous amount of
11 learning regarding the issue of license renewal. That made us technically
12 more capable. It actually lifted us a notch.

13 We had to review the things. We have to go back
14 sometimes to fundamentals, look at the entire issue of safety and safety
15 over a longer period of time. I think there is a tremendous amount of
16 technical lessons from that program as well as the power uprate.

17 I think the technical staff that were involved in those
18 things are a tremendous resource that we need to utilize. And we cannot
19 forget that. They're there, and it's some additional guidance. They can
20 be put in the right positions to provide a foundation for where we are
21 going to go with these programs.

22 With that, I want to thank the staff. I know Commissioner
23 Merrifield has a comment, and I know that my fellow Commissioners have
24 other comments.

1 COMMISSIONER MERRIFIELD: Mr. Chairman, on an
2 unrelated topic but I thought one that you might be interested in, as you
3 all know, I came to the Commission as a non-technical lawyer.

4 What is less well-known is when I came to the
5 Commission, the Chairman made a promise to me that he was going to
6 try to make an engineer out of me as a Commissioner. I have to tell my
7 Chairman today that he appears to have had some success in that
8 regard.

9 As I was opening my mail this morning, I got my
10 membership acceptance form from the American Society of Mechanical
11 Engineers inviting me to join as a member. Now, it didn't have the word
12 "honorary" on it. Perhaps it should well have.

13 I just wanted the Chairman to know that, like in many
14 things, he is making a great deal of success.

15 CHAIRMAN DIAZ: Thank you so much. You don't know
16 how much that cost me.

17 (Laughter.)

18 COMMISSIONER McGAFFIGAN: Mr. Chairman, I
19 would note that we have a long tradition of lawyers serving well on the
20 Commission, going back to the early stages, and that Mr. Merrifield
21 should be happy to know that he's in, according to the Academy of
22 Sciences, one of the 50 most important science and technical jobs in the
23 U.S. government.

24 COMMISSIONER MERRIFIELD: All right.

1 COMMISSIONER JACZKO: And if I could just make
2 one comment? I congratulate you.

3 (Laughter.)

4 COMMISSIONER JACZKO: I think the one thing you
5 have to recognize now that you are a technical expert, you no longer can
6 criticize people for using acronyms.

7 (Laughter.)

8 MR. REYES: Thank you, Commissioner.

9 COMMISSIONER MERRIFIELD: I'm not buying it.

10 CHAIRMAN DIAZ: On that note, I really want to thank
11 the staff for this extremely important, interesting meeting. I appreciate my
12 fellow Commissioners, the depth of their questions.

13 We do have some things that we need to finish. And
14 some of them have to be finished before we get in front of the United
15 States Senate.

16 With that, we're adjourned.

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