1 UNITED STATES NUCLEAR REGULATORY COMMISSION

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3 BRIEFING ON DECOMMISSIONING FUNDING

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5 TUESDAY

6 FEBRUARY 23, 2010

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8 The Commission met at 9:30 a.m., the

9 Honorable Gregory B. Jaczko, Chairman, presiding.

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11 COMMISSIONERS PRESENT:

12 GREGORY B. JACZKO, Chairman

13 DALE E. KLEIN, Commissioner

14 KRISTINE L. SVINICKI, Commissioner

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1 **FIRST PANEL:**

2 ADAM LEVIN, Director, Spent Fuel & Decommissioning, Exelon

3 DONNA JACOBS, Senior VP, Planning, Development & Oversight, Entergy

4 JOHN STEWART, Director of Utility Rates and Services, New York State

5 Department of Public Service

6 PAUL GUNTER, Director of Reactor Oversight, Beyond Nuclear

7 JOHN MOTHERSOLE, Principle, Industry Practices Group

8 IHS Global Insight

9 **SECOND PANEL**

10 MARTIN VIRGILIO, Deputy Executive Director for Operations

11 ERIC LEEDS, Director, Office of Nuclear Reactor Regulation

12 TIM MCGINTY, Director, Division of Policy and Rulemaking, NRR

13 TOM FREDRICHS, Sr. Advisor, Licensee Financial Policy, Division of

14 Policy and Rulemaking, NRR

15 PAUL BAILEY, Senior Fellow, ICF International

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P R O C E E D I N G S

1 CHAIRMAN JACZKO: Good morning,
2 everyone.
3 We will hear today from a group of
4 stakeholders and the staff as well on the issue of
5 decommissioning funding. Decommissioning is such an
6 important issue and it's really an issue that
7 demonstrates the breadth of the NRC's regulatory
8 work.
9 Our responsibilities for regulating
10 nuclear power plants really begins with making sure
11 that licensees are setting aside appropriate and
12 adequate amount of funds to provide the appropriate
13 financial assurance while they are operating to
14 cover their decommissioning costs after they
15 ultimately shut down.
16 And our responsibilities don't end until
17 decades later once license operations have ceased,
18 and the agency oversees the actual clean up efforts
19 at the site or facility.
20 The agency requires licensees to provide
21 detailed reports at least once every 2 years on the
22 financial investments and instruments that they have

1 set aside to cover their decommissioning costs. And
2 certainly during the recent economic downtown, I
3 think we have seen that some licensees have
4 experienced challenges in maintaining sufficient
5 decommissioning funds. And I think we will hear
6 about that today.
7 Overall, though, I believe that the
8 experience of the last 2 years has shown that our
9 regulatory approach is generally sound, because in a
10 time when almost everyone's 401-Ks and other assets
11 were severely depleted, most of the licensees were
12 able to maintain their decommissioning funds at
13 appropriate levels. So, I think this is really a
14 testament to the kinds of conservative financial
15 investments we allow as part of the rule, and I
16 think it helped many licensees to maintain the
17 appropriate amount in their funds.
18 So during our first panel today, we will
19 hear from several stakeholders, including State,
20 public advocacy and licensee representatives who
21 will provide several different perspectives and the
22 funding challenges that some of our licensees

1 experienced.

2 We will then hear from the staff on our

3 second panel this morning. And they provide a

4 general overview of our decommissioning funding

5 regulations, review some of the challenges our

6 licensees have experienced in meeting their

7 financial assurance requirements and discuss some of

8 the proposed changes to our guidance and potential

9 changes to our regulations.

10 So, we have a lot to cover this morning.

11 I think we will begin, then, with our panelists. I

12 think we will begin with you, Adam Levin, who is the

13 Director of Spent Fuel & Decommissioning for Exelon.

14 MR. LEVIN: Thank you, Mr. Chairman, and

15 thank you, Commissioners, for the invitation this

16 morning. We will get right to it.

17 If I could have the next slide, please.

18 As a note on my first slide, there is a discrepancy

19 between Exelon's and NRC's staff's position

20 regarding Exelon minimum funding shortfall. There

21 are three reasons why:

22 First, in its March 31st submission,

1 Exelon did not refer NRC staff to previously
2 docketed sight specific SAFSTOR cost estimates for
3 the six units at Byron, Braidwood and LaSalle, which
4 accounted for a substantial portion of that
5 difference.
6 Exelon had determined but not yet
7 submitted a site-specific SAFSTOR cost estimate and
8 accompanying parent guarantee for Clinton, which
9 brought that unit into compliance.
10 And finally, for the eighth unit, NRC
11 staff identified Limerick Unit 1. We recognized
12 that it remained under Pennsylvania State
13 regulation, and we were prepared to discuss the
14 shortfall at our next rate hearing with the
15 Pennsylvania Public Utility Commission, if
16 necessary.
17 After a number of discussions with NRC, on
18 July 29, 2009, Exelon communicated to NRC staff its
19 15-month remediation plan. We proposed submitting
20 site-specific SAFSTOR cost estimates for Clinton and
21 LaSalle by August 2009, which we have done. We
22 proposed submitting site-specific SAFSTOR estimates

1 for Byron by November 2009, and for Braidwood by
2 January 2010, which we have also done.
3 And finally, we committed to establishing
4 a financial guarantee for any remaining underfunded
5 position as measured on December 31, 2009, by April
6 1st of 2010.
7 Based upon newly submitted estimates for
8 Clinton and LaSalle and recovering the financial
9 markets, we have been informed that NRC staff has
10 determined that Clinton and LaSalle now meet minimum
11 funding requirements. And based upon improvements
12 in the financial markets, Limerick 1 now meets
13 funding requirements without any action on our part.
14 May I have the next slide, please.
15 From the onset, although some NRC staff
16 was encouraging us to take early action to bridge
17 the shortfall, we recognized that attempting to
18 close the funding gap along a short time line might
19 be highly detrimental to funding efficiency. Funding
20 strategies are strongly matched to timing as well as
21 the amount needed when required. By rapidly
22 shifting portfolio investments in an attempt to grow

1 assets more quickly for such a long-term liability
2 invites poor investment behavior.
3 Additionally, for the qualified trust
4 funds in particular, realizing gains in the
5 portfolio earlier than required results in
6 considerable tax inefficiencies. So absent
7 rebalancing our portfolios, we carefully evaluated
8 our options.
9 We considered contributing to the funds.
10 However, without a mechanism to withdraw assets if
11 the trusts become overfunded, as they will likely do
12 with license renewal, contributions were deemed to
13 be an inappropriate use of corporate liquidity.
14 We looked into obtaining letters of credit
15 to cover the shortfalls; however, if we turned the
16 clock back to mid-2009, even if we could obtain an
17 LOC at that time on the open market, the costs for
18 doing so would have been a serious imposition on our
19 liquid assets.
20 Finally, we settled on the action plan
21 that we submitted to NRC on July 29th, with the
22 follow-up actions to complete updated site-specific

1 cost estimates, measure the funding shortfall as of
2 the close of last year, and as we ultimately
3 decided, to put in place apparent guarantee to
4 address any shortfalls.
5 Next slide, please.
6 As of December 31, 2009, and taking credit
7 for the updated site-specific SAFSTOR estimates we
8 submitted to NRC, we recognized an NRC minimum
9 funding shortfall for three of our units at Byron
10 and Braidwood in the aggregate present value amount
11 of $32 million. The updated decommissioning cost
12 estimates, slightly increased SAFSTOR costs for
13 decommissioning; however, improvement in the
14 financial markets deserve much of the credit for
15 closing the gap. But we did not need 2 years to
16 evaluate all of our options.
17 I can easily envision a situation where a
18 smaller single asset utility would need to spend
19 additional time performing an assets liability study
20 to evaluate their portfolio mix before committing to
21 any particular funding assurance guarantee. The
22 bottom line is that the most prudent course of

1 action is to allow time for the financial markets to
2 sort themselves out from such a fall in value, and
3 to take the time to move wisely, recognizing that it
4 is likely to be counterproductive and not in the
5 best interest of any of our stakeholders if we move
6 too rapidly.
7 Thank you.
8 CHAIRMAN JACZKO: Thank you for those
9 comments.
10 We will now turn to Donna Jacobs, who is
11 the Senior Vice President for Planning, Development
12 & Oversight at Entergy Nuclear.
13 MS. JACOBS: Chairman, Commissioners,
14 thank you for the opportunity to address you this
15 morning.
16 We will go ahead and go to the next slide,
17 please.
18 Because of the long operating life of
19 nuclear reactors, decommissioning funds are
20 long-term investments that are expected to grow over
21 time to fulfill a future obligation. Over the
22 investment period, market fluctuations are

1 inevitable, and the current NRC regulations are
2 written to allow flexibility in responding to
3 unfavorable market conditions.
4 Despite the worst financial crisis since
5 the great depression, the decommissioning funds for
6 70 percent of the operating nuclear reactors
7 remained at or above the NRC required minimum
8 levels. Six of nine Entergy fleet plants were
9 demonstrated to have adequate decommissioning
10 assurance.
11 Two regulated plants have returned to
12 their Public Utility Commissions or PUCs to
13 reinstate collections that the PUCs had ceased
14 previously. And Entergy employed a parent guarantee
15 on one plant, which we do expect to be short-term.
16 The conservatism applied to the NRC's
17 decommissioning funding assurance program is clearly
18 effective.
19 In addition, after ceasing operations,
20 power reactor licensees may opt to place their
21 facilities in SAFSTOR mode in order to allow shorter
22 lived radionuclides to decay prior to undertaking

1 substantial decontamination activities.

2 Now, while the primary purpose of SAFSTOR

3 is to enhance health and safety by reducing the

4 occupational exposure of decommissioning workers, it

5 also has the collateral effect of adding time to a

6 licensee's investment horizon for accumulating

7 decommissioning funds.

8 In fact, licensees currently may take

9 credit for earnings above inflation on their

10 decommissioning funds during the SAFSTOR period if

11 their funding estimate is based on a site-specific

12 cost estimate. This additional earnings period has

13 a significant beneficial impact on licensees' level

14 of decommissioning funding assurance.

15 The adequacy of the existing regulatory

16 framework is most directly demonstrated by the fact

17 that every power reactor that has shut down and

18 which has been or is currently being decommissioned

19 has been able to fund and safely perform required

20 decommissioning activities. This has been the case

21 even in situations in which the licensee did not

22 operate the facility to the end of its licensed

1 term, for example, a premature shutdown.

2 For example, the Zion Nuclear Power

3 Station, Units 1 and 2 were prematurely shutdown in

4 1997 and 1998. Despite the premature shutdown, and

5 the fact that it was caused by economic

6 considerations, the units were safely shutdown,

7 defueled and placed into SAFSTOR status to allow for

8 radioactive decay prior to the conduct of decom

9 activities.

10 Also, both the Yankee Rowe and Connecticut

11 Yankee facilities shutdown prematurely, and despite

12 not having fully funded decommissioning at the time

13 of plant shutdown, were able to obtain additional

14 funding and complete decommissioning.

15 That original rule has served its purpose

16 well and it has been fortified by appropriate

17 amendments that have further enhanced the level of

18 decommissioning funding assurance.

19 In addition, the NRC's decommissioning

20 regulations are supported by regulatory guidance,

21 which has also been the subject of careful NRC

22 evaluation and stakeholder scrutiny.

1 Next slide.

2 In response to a 2002 stakeholder comment,

3 the NRC changed the language in Draft Guidance 1106

4 to reflect the, quote, "at least once every

5 2 years," end of quote, guidance currently provided

6 in Reg Guide 1.159. Thus, to us, it is evident that

7 the NRC has previously considered and rejected the

8 concept of annual funding adjustments.

9 Notably, neither Draft Guidance 1229 nor

10 the Federal Register notice announcing its

11 availability provide any explanation or basis for

12 the significant change in the NRC's interpretation

13 of 10 CFR 50.75 BRAVO.

14 Further, the concern that frequent changes

15 of funding amounts could result in losses and

16 increase cost originally expressed in the

17 stakeholder's comments quoted above is more, not

18 less, relevant today than it was in 2002.

19 The guidance proposed in Section 2.1.5 of

20 Draft Guide 1229 that interprets 50.75 BRAVO is

21 requiring licensees to adjust funds annually to

22 address any deficiencies would limit the flexibility

1 allowed by 10 CFR 50.75. The current economic crisis
2 highlights the need for increased flexibility not
3 additional restrictions.
4 If the proposed guidance were applied to
5 the current situation, the NRC effectively would be
6 forcing utilities to pay an unnecessary premium for
7 decommissioning funds that will not be used for
8 decades. This premium would likely be paid at the
9 expense of other programs. That would have an
10 immediate impact on the company's financial health
11 and operations.
12 Imposing new staff positions prior to
13 publicly dispositioning comments on draft guidance
14 is fundamentally unfair to licensees and is
15 inconsistent with what we see as the NRC's
16 principles of good regulation. Significant changes
17 in staff position, we believe, warrants significant
18 discussion and input by all stakeholders.
19 Thank you.
20 CHAIRMAN JACZKO: Thank you.
21 We will now turn to John Stewart, who is
22 the Director of Utility Rates and Services at the

1 New York State Department of Public Service.

2 Mr. Stewart.

3 MR. STEWART: Good morning, Chairman,

4 good morning, Commissioners. I appreciate the

5 opportunity to speak to you on these timely matters.

6 The only thing I have to offer is

7 disclaimer. I can't speak for the Commission. I

8 can only speak for myself. Unfortunately, I spent

9 the bulk of my time, '99 through 2001, working on the

10 on the sales of five of the plants in New York.

11 I think if we can jump over to Slide 5 in

12 my presentation. That's really the points I'm

13 trying -- that right there. That's the points I'm

14 really trying to make.

15 I want to talk about SAFSTOR. I want to

16 talk about commingling of funding and

17 responsibilities. I just want to talk about the RAS

18 2001/2007 a bit.

19 Regarding SAFSTOR, back in '99 when we

20 were in the process of selling the power plants,

21 nuclear power plants in New York, the main concern

22 for the Commission was getting maximum value for

1 ratepayers in order to offset stranded costs, my
2 stranded cost responsibility for ratepayers. In that vein,
3 to the extent that we could do things like purchase
4 power contracts on any other vehicles like lighten
5 regulation to get more value for ratepayers, we were
6 all ears. We were very interested in doing it.
7 As a result, we had the sale of several of
8 the nuclear power plants. And our reviews of the
9 bids when they came in were interesting. The best
10 bids, the most lucrative bids from a ratepayer's
11 perspective were those that assumed two things. One
12 was license extension in almost all cases.
13 And the second was SAFSTOR would be
14 employed as a vehicle for accumulating money to
15 decommissioning at a point in time that looked to
16 us, at least, to be substantially later than the end
17 of the license life.
18 And I can say this with pretty much
19 confidence because our point of reference prior to
20 the sales was that in every rate case we would have
21 arguments about what the right amount was in rates
22 for decommissioning expenditures. Ratepayers were

1 contributing money for decommissioning in every
2 case.
3 By contrast, the new owners agreed that
4 ratepayers would never have to provide any more
5 money into decommissioning funds. It was their
6 responsibility, it was the new owners'
7 responsibility on a going forward basis.
8 So, I guess while I have heard some people
9 say that SAFSTOR should not be viewed as a vehicle
10 to accumulate funds, I think the reality that, at
11 least we have known for 10 years, is that the
12 industry practice, at least for the companies buying
13 power plants in New York, was that it would be used
14 as a vehicle for accumulating funds to do
15 decommissioning at a much later date.
16 The second thing I want to talk about is
17 commingling of funds. I also call it commingling of
18 responsibilities.
19 At the time of the transfers in the late
20 '90s, early 2000s, we knew commingling was a
21 possibility. There was a lot going on. There were
22 Federal income tax concerns, there were transaction

1 costs of keeping various funds separate. There was
2 a possibility of NRC taking additional action. And
3 there were also accounting requirements that were
4 possibly being promulgated at the same time.
5 We also knew that time was on our side.
6 The more time it took, if we went SAFSTOR, we would
7 have time to hopefully have other companies get
8 experience with decommissioning of radioactive decay,
9 hopefully more time to address spent fuel, and, of
10 course, more time to accumulate funds.
11 So given all this, it was very easy for
12 the Commission to disengage the idea of whether
13 funds were commingled or not commingled, and instead
14 just go to the general requirement as a condition of
15 sale that the new owners agreed to decommission the
16 plant radiologically and nonradiologically,
17 including site restoration.
18 And just as an aside, site restoration is
19 not a unique requirement in New York for nuclear
20 plants. It is a requirement for all generating
21 plants.
22 So basically, we were aware of commingling

1 being an issue, but we got around it by requiring
2 full decommissioning including site restoration.
3 Final point, which is really where we are
4 at today. And NRC and New York DPS have different
5 legal responsibilities, although I think we do have
6 a common interest. And the common interest is that
7 to be sure there are sufficient funds available at
8 some point in the foreseeable future -- I'm not
9 saying at the end of the license life, but in the
10 foreseeable future to perform a variety of
11 decommissioning activities.
12 Your definition is a little different than
13 ours, but we still have the same goal that we want
14 to get it done. And we want to make sure funding is
15 sufficient.
16 Regarding the RIS, I think your questions
17 were right on point, and I'm loathe to say that if I
18 look at the information as filed in New York, I
19 could not give you the answers to those questions on
20 the basis of New York, since we have sort of went to
21 enlightened regulation.
22 So, I think your questions were right on

1 point, but I also understand why the industry might
2 be loathe to want to respond to them, particularly
3 if it causes them to re-create reality that has not
4 existed for them for some time. They have not had
5 separate funds. They have not differentiated what
6 funds were available for what purposes.
7 So, that leaves us with a question of what
8 to do going forward. And what I would urge at some
9 point would be to get specific information from each
10 operator indicating, one, what their nonradiological
11 responsibilities are; two, if funds are commingled;
12 and three, what their plans are to do both
13 radiological and nonradiological responsibilities.
14 That may make you feel a little nervous
15 because your responsibilities are just for
16 radiological, but reality, I believe, is that if
17 funds may be available do a radiological -- just
18 because they are available to do radiological does
19 not mean that it will go forward for decommissioning
20 if funds are not available for the nonradiological
21 at the same time.
22 So you really -- in order do determine

1 whether or not radiological decommissioning can go
2 forward, you need to have a point of view of fund
3 availability for the other responsibilities of
4 cotenants or the operators have made.
5 So I thank you for your time.
6 CHAIRMAN JACZKO: Thank you for your
7 presentation.
8 Now I will turn to Paul Gunter, who is the
9 Director of Reactor Oversight at Beyond Nuclear.
10 MR. GUNTER: Mr. Chairman,
11 Commissioners, thank you for the opportunity to
12 address the Commission on the issue of
13 decommissioning funding.
14 Peter Shumlin, the president pro tem of
15 the Vermont State Senate recently made some remarks
16 relevant to this briefing in an announcement that
17 the State legislature will vote this week on whether
18 or not to allow Entergy's Vermont Yankee to operate
19 beyond its current 40-year license, which
20 terminates on March 12, 2012.
21 He is quoted to say, “Vermont Yankee has been
22 further marred by Entergy's attempt to create a debt

1 ridden, spin off corporation to take ownership of
2 the plant. The cleanup fund is already more than a
3 half billion dollars short, and Vermonters cannot
4 afford a corporation that may shift that risk to
5 ratepayers."
6 Monthly decommissioning funding
7 disclosures to the State of Vermont, made Vermont
8 Yankee the nuclear industry's bellwether for the
9 steep decline industry wide in decommissioning
10 funding. This practice should be required of each
11 nuclear power plant and provided to state and
12 federal regulators.
13 Vermont Yankee may now become the
14 bellwether for an industry also misrepresenting
15 facts, significantly affecting accurate estimates
16 for, quote, unquote, "minimum decommissioning
17 funds," namely, the presence and condition of an
18 uninspected, miles long tangle of corroding buried
19 pipes that run under every nuclear site in the
20 country carrying radioactive effluent amidst
21 protected groundwater resources.
22 Senator Shumlin's remarks exemplify an

1 emerging public mistrust, exacerbated by an
2 operator's false statements made under oath to State
3 officials with regard to tritium leaks into ground
4 water and underground radioactive contamination that
5 has now moved off-site, at least as far as the
6 Connecticut River.
7 In fact, the public confidence and trust
8 is more broadly eroded in the industry's commitment
9 to decommissioning with each additional uncontrolled
10 and unmonitored radioactive release at still growing
11 numbers of reactor sites in the United States.
12 As we know, tritium is a tracker isotope
13 for a larger host of slower moving
14 radionuclides that can escape through those same
15 uncontrolled and unmonitored radioactive effluent
16 release paths.
17 Senator Shumlin's remarks are poignant for
18 our dialogue today. They point to the increasing
19 uncertainty and mistrust with regard to the nuclear
20 industry's accountability for the protection of
21 natural resources and the adequacy of funding for
22 decommissioning operations in light of these

1 uncontrolled and unmonitored radioactive leaks.

2 Uncontrolled and unmonitored significantly

3 escalate the unreliability of "minimum"

4 decommissioning cost estimates, and therefore, the

5 availability of maintained funds for cleanup of the

6 sites and protected resources that flow beyond the

7 company's property lines.

8 Two examples illustrate this concern. The

9 decommissioning costs for the Yankee Rowe atomic

10 power plant escalated from an initial estimate of

11 $120 million to $750 million, in large part, the

12 result of the spread of groundwater contamination,

13 some readings of elevated tritium in aquifer systems

14 as deep as 300 feet.

15 Because of the company's inadequate

16 decommissioning funds, true to Senator Shumlin's

17 concerns for Vermonters, the bulk of the cost was

18 passed on to Yankee Atomic ratepayers.

19 Connecticut Yankee had set aside

20 $410 million in its fund for decommissioning that

21 ultimately tallied up to the cost of 1.2 billion, do

22 in no small part to Strontium-90 contamination

1 traveling along with a radioactive tritium plume
2 into surrounding water table.
3 The extent of that contamination was only
4 discovered well after the decommissioning process
5 began. Again, the decommissioning fund shortfall
6 and mitigation cost overrun was passed on to
7 Connecticut ratepayers.
8 Uncontrolled radioactive releases have
9 raised the issue of how current methods of
10 establishing meaningful, "minimum" decommissioning
11 cost target estimates are fundamentally flawed and
12 misleading with a formulaic one-size-fits-all
13 approach that does not take into account the
14 potential for significant, even catastrophic
15 groundwater contamination from uncontrolled and
16 unmonitored radioactive leaks.
17 These formulaic and generic flaws raise
18 the public's concern that a reactor's parent company
19 or its subsidiary limited liability corporation
20 could some day declare bankruptcy and leave
21 extensive and costly clean up operations of
22 contaminated soil and water as well as the

1 indefinite or permanent on-site storage of
2 irradiated nuclear fuel to a State and its
3 ratepayers.
4 As Senator Shumlin further pointed out, the
5 establishment of shell corporations are recognized
6 as financial liability firewalls for parent
7 corporations and foster further public concern for
8 the adequacy of environmental protection, supposedly
9 afforded through current decommissioning funding mechanisms.
10 Furthermore, inadequate funding compounded
11 by the added and uncertain cost of extensive soil
12 and water contamination can in and of itself cause a
13 delay in the completion of an environmental cleanup
14 for decades, leaving long-lived radioactive toxins
15 to infiltrate deeper and contaminate underground
16 aquifers as well as surface water rivers, lakes in
17 proximity and downstream of the site.
18 The issue before the Commission regards
19 how these gaps in decommissioning funds will be
20 closed to protect public health and safety and
21 maintain environmental quality. However, one
22 element missing from the equation is how the cost

1 from these recurring and uncontrolled, unmonitored
2 radioactive releases around the country are to be
3 captured and incorporated in the impact of already
4 significant financial gaps and shortfalls in
5 decommissioning funds.
6 Beyond Nuclear concurs with Senator
7 Shumlin, as well as Fairwinds Associates in
8 Burlington, Vermont, and other public interest
9 advocates that these untallied costs should not be
10 the financial burden of the ratepayers and of the
11 states. Having significantly profited from plant
12 operations, the parent companies should be more
13 tightly regulated and held accountable to absorb
14 these costs as part of a thorough completion of
15 decommissioning and site clean up operations.
16 In fact, uncontrolled and unmonitored
17 releases from reactor effluent discharge paths are
18 in violation of 10 CFR 50, Appendix A, General
19 Design Criteria; 60, Control of Radioactive Effluent
20 Pathways; and General Design Criteria 64, Monitoring
21 Radioactive Effluent Pathways.
22 Given that uncontrolled radioactive

1 releases are in evidence, is significantly
2 increasing decommissioning costs and widening an
3 already significant gap in decommissioning fund
4 shortfalls, we contend that stronger regulatory
5 action is warranted. In our view, it is reasonable
6 for the Nuclear Regulatory Commission to take
7 enforcement action against violators of their
8 license conditions at minimum by imposing on the
9 licensee the loss of options for decommissioning
10 finance methods as designated in DG 1229.
11 The loss of design control and monitoring
12 of radioactive effluent pathways would result in a
13 licensee being required to establish and maintain,
14 in a prepaid segregated fund, 100 percent of an
15 independently assessed final decommissioning cost.
16 Factors for making additional future adjustments in
17 decommissioning cost estimates would include a
18 periodic independent review and reassessment of
19 costs associated with each disclosure of
20 uncontrolled and unmonitored releases from the
21 reactor's radioactive effluent pathway.
22 Similarly, the advent of limited liability

1 corporations formed as a result of the growing
2 consolidation of nuclear ownership has created the
3 very real risk of shifting decommissioning
4 shortfalls to the public from the parent
5 corporations whose LLCs only asset may, in fact, be
6 an individual reactor site.
7 We contend that LLCs should be required to
8 similarly establish prepaid segregated
9 decommissioning funds with 100 percent of an
10 independently assessed decommissioning cost.
11 I thank you for your time.
12 CHAIRMAN JACZKO: Thank you.
13 We will now turn to Mr. John Mothersole;
14 is that correct?
15 MR. MOTHERSOLE: Yes, you got it right.
16 CHAIRMAN JACZKO: Who is the Principle
17 with the Industry and Practices Group at IHS
18 Global Insight.
19 MR. MOTHERSOLE: Thank you. I would
20 just like to again thank the Commission for being
21 able to present here today.
22 I'm going so shift gears a little bit and

1 talk about escalation in nuclear plant
2 decommissioning costs and what we have learned or
3 what we have gleaned from the data that is
4 available. And I state that because nuclear plant
5 decommissioning is something unique and very
6 specialized. In some sense, it reflects
7 construction.
8 It is a deconstruction project, not a
9 construction project, but because of the limited
10 amount of work in this arena, as an economist, there
11 is not the coveted time series to be able to look at
12 these costs over an extended period of time.
13 However, we do have experience with nuclear plant
14 construction, and here we do have a number of data
15 points, time series that are available that help us
16 track escalation in nuclear-specific construction.
17 And to the extent that deconstruction,
18 nuclear plant deconstruction and nuclear plant
19 construction share some similar elements, we can use
20 the evidence or the information on nuclear plant
21 construction to draw some inferences or conclusions
22 about decommissioning cost escalation.

1 Okay. So having established that affinity
2 between these two sets of costs or cost escalations,
3 some basic similarities, what are the conclusions
4 that we can reach? Based on our analysis, over the
5 last 40, 45 years, we do see that nuclear plant
6 construction and/or decommissioning cost escalation
7 does exhibit a premium over general inflation and
8 general types of construction. We estimate that
9 premium, that real increase to be about one
10 percentage point, 1 percent.
11 What's interesting, though, is when we
12 look at the sources of those increases, it's not due
13 to commodity prices. In fact, commodity prices,
14 real commodity prices have fallen over that span,
15 over the last 45 to 50 years. And in fact, if we
16 want to go back a full century, what we will note is
17 that commodity prices have fallen over an extended
18 period of time.
19 Go to slide -- I guess my second slide.
20 We can note that raw material price
21 volatility, commodity price volatility has increased
22 since 2000. But this volatility, this growing

1 volatility, in our view, does not reflect growing
2 resource scarcity.
3 Now, I don't not claim to be a geologist,
4 and my firm does not employ geologists, but our
5 review of the literature would suggest that there is
6 no fundamental resource scarcity for the types of
7 goods, the raw materials that would go into either
8 nuclear plant construction or deconstruction
9 decommissioning. And that is on a long-term basis,
10 not a 10 or a 20, but even as far out as a 50-year
11 basis.
12 And then point three in the slide sort of
13 plows over the ground about real commodity prices,
14 that, in fact, that they have fallen.
15 If we can go to chart one, Slide Number 4.
16 Here we have a graphic depiction of escalation in a
17 number of different construction cost indexes. One
18 is the producer price index for building materials,
19 strictly materials, no labor included.
20 The second is the engineering news record
21 building cost index, a recognized index of general
22 construction in the building industry.

1 And the third is focused specifically on
2 nuclear plant construction. And these are the
3 Handy-Whitman Indices of public utility construction
4 costs specifically for electric utilities and
5 specifically for nuclear generating units.
6 And you can see the 10-year intervals, the
7 escalation rates displayed. And the fact that one,
8 the 2000 to 2009 time interval, we have seen uptick
9 in those escalation rates. But more prominently and
10 I think the point I want to communicate is that over
11 a long period of time, the nuclear plant index
12 exhibits a slightly faster rate of increase.
13 Looking at the data in a little more
14 detail, in Slide 5, this speaks to the volatility in
15 these indices and indeed in commodity prices
16 generally.
17 Chart 2 looks at the volatility in
18 commodity price movements, again over 4-year
19 intervals going back to 1982. And what stands out
20 in chart number 2 is the increase in volatility as
21 defined by the standard deviations in the price
22 changes for a group of commodities, the increase in

1 volatility in just the most recent 3 or 4 years.

2 If we look at Slide Number 3, we translate

3 that commodity price volatility and look at measures

4 of building cost escalation. And again, the

5 volatility in nuclear plant construction stands out

6 as being more prominent, higher than the others,

7 again, sort of re-enforcing this notion. Good deal

8 of uncertainty with regard to nuclear costs, but

9 over a broad period of time that those have

10 increased with a slight premium over the general rate of

11 construction cost inflation.

12 But finally, Slide Number 4, when we look

13 at the source or try to decompose the source of

14 those increases, what we note is that, in fact,

15 commodity price escalation is not the source of

16 those increases.

17 Chart number 4 looks at a collection of

18 real commodity prices, in this case, the producer

19 price index for industrial commodities deflated by

20 consumer price index to gain a measure of real price

21 change over a very long period of time. And here we

22 are going back a full century.

1 And I think what is noteworthy is that the
2 super cycle in commodity prices or what has been
3 labeled the super cycle in commodity prices which
4 took place over the last 3 to 4 years, really
5 represents a small blip in this long continual
6 either steady decline, or if we believe something
7 has changed in the past couple of years, maybe a
8 certain flattening in that real price decline.
9 CHAIRMAN JACZKO: Well, thank you for
10 those comments. I think those are certainly
11 interesting conclusions and probably interesting
12 what happens in the next 10 years on that chart.
13 And probably, if we knew the answer to
14 that, we would probably all not be sitting here --
15 well, you may be sitting here, but the rest of us
16 would probably be doing something else.
17 We will begin our questions with
18 Commissioner Svinicki.
19 COMMISSIONER SVINICKI: Thank you.
20 Thank you all for your participation today.
21 I think a number of your presentations
22 addressed more or less directly the proposed change

1 that staff has put forward to Reg Guide 1.159
2 regarding -- well, there is really, two prongs here.
3 One is the frequency of assessing the adequacy of
4 the decommissioning funding assurances. And then
5 there is what I call the doing something about it or
6 the remedy part.
7 And staff has proposed to shorten the time
8 period within which licensees would have the ability
9 to address a shortfall, I think, from 2 to 1 years.
10 And, Ms. Jacob, you addressed this in a lot of
11 detail in your comments. But I wanted to throw it
12 open more broadly for anyone who wanted to express
13 an opinion on that.
14 I will, of course, be asking the staff
15 panel about the basis for their proposed change.
16 But are there any additional thoughts that anyone
17 would like to put forward or comments on that
18 proposed change to the guidance?
19 MR. LEVIN: I would, Commissioner. As a
20 matter of fact, based on our experience with the
21 downside market that we have seen over the past 24
22 months, as well as the plans that we took the time

1 time to exercise and put in place, it is my belief
2 that the 2-year cycle is an appropriate cycle.
3 We were able to finish up our analysis and
4 work in 15 months. But as I did point out in my
5 comments, I can see where a smaller company may have
6 to step back and look at what I call the asset
7 liability study, which is to take a look at their
8 assets, take a look at the timing of the liability
9 and when that is incurred. and sit down and decide
10 based upon that portfolio, the appropriate
11 investment measures or other types of guarantees to
12 put in place as a corporate entity. And that does
13 take a long time.
14 Plus, I think that what was very
15 beneficial here was the opportunity to allow the
16 markets to sort themselves out a little bit over the
17 past 24 months. Without some sort of understanding,
18 at least market direction, and where the market may
19 settle out, I think one would be sensitive to making
20 knee-jerk reactions, if you will, in terms of
21 investments or portfolio strategies that may not
22 necessarily in the long run be appropriate for

1 these types of long time liabilities.

2 COMMISSIONER SVINICKI: Did anyone else

3 want to address the --

4 MR. STEWART: The only thing I would

5 add, just from experience in New York, is anything

6 that would cause an operator to have to think about

7 adding more money to decommissioning in the short

8 run probably forces them -- I think this goes to

9 something we just heard -- probably forces them to

10 consider pushing out the decommissioning date a

11 little further on a SAFSTOR approach in order to buy

12 more time.

13 COMMISSIONER SVINICKI: Mr. Mothersole,

14 I might ask you, and I'm not suggesting you spend

15 your free time reading proposed revisions to Reg

16 Guide 1.159, so I'm going to step the question back

17 a little bit and say, as someone who looks at

18 volatility in markets, so here is a government

19 regulatory agency, we have an obligation to look at

20 the adequacy of these funds that will be needed at

21 some point in the future, I don't know where markets

22 would be headed. As the Chairman mentioned, if I

1 knew that, I might be somewhere else doing something
2 else.
3 But it's been suggested that this may be a
4 period of some heightened volatility in market
5 returns over maybe the next 10 or 20 years. I don't
6 know if that is true or not. But my question to you
7 might be, what would you say from an economic
8 standpoint is a meaningful period of time? Is it 2
9 years, as the agency requires now, in order to
10 compel again these replenishment or augmentation of
11 funds if they are found to be falling short against
12 the calculations? Is a 2-year period meaningful?
13 Is it 1-year? Is it hard to pin it down?
14 MR. MOTHERSOLE: It is hard to say. I
15 think the question you're asking is how long is a
16 business cycle? When would we move from a peak to
17 a trough and then back?
18 And in post-war history, you know, again,
19 answering the question rather loosely, I think the
20 interval of time over a full business cycle ranges
21 anywhere from -- you know, can be anywhere from 2 to
22 5 years, depending on the cycle. And that's sort of

1 just a rough estimate.

2 So, if you're asking me if 2 years is

3 prudent or a longer time interval, that is hard for

4 me to say.

5 What I can say, generally speaking, is

6 that business cycles play out over a period of time.

7 And that span would seem to be -- you know, I'm

8 going to say on a 2 to 4, 2 to 5-year interval or

9 length.

10 COMMISSIONER SVINICKI: I got Levine

11 written down but is it --

12 MR. LEVIN: Levin.

13 COMMISSIONER SVINICKI: Levin, I'm

14 sorry. Then I had that in error.

15 But you had mentioned in your presentation

16 that NRC's estimated shortfall for your units was

17 1.1 billion approximately, and that your estimate

18 was 184 million. And you explained at least three

19 causes that were the principle -- made up the

20 principle difference there.

21 I have only been at NRC really for one

22 cycle of review of these assurance calculations. Is

1 it typical that the NRC would calculate very
2 differently, then, the licensee or was that a
3 uniqueness having to do that licensees found
4 themselves in a shortfall situation so then, there
5 began this forensic examination of the differences
6 in the shortfall calculations?
7 MR. LEVIN: The NRC's staff had put
8 forward their estimate of the shortfall based upon
9 NRC minimum funding formula. And one of the things
10 that, unfortunately, we neglected to do was to refer
11 staff back to previous filings we had made for
12 site-specific cost estimates for Byron and Braidwood
13 and LaSalle. And that was a big part of that large
14 difference between the two.
15 But, typically, I think in conversation
16 back and forth with the staff as we go through
17 this process, typically, we either recognize
18 collectively or don't recognize where we should be
19 with respect to minimum funding, and we land in the
20 same place.
21 Again, I think this was part of one of
22 those instances where enough communication was not

1 made for the staff to be fully aware of certain
2 pieces that were out there that would factor into
3 that shortfall though.
4 COMMISSIONER SVINICKI: The heart of the
5 question really is my sense of the methodology for
6 doing the calculation was that it was well-defined,
7 up to and including various Bureau of Labor
8 Statistics factors and other things, so I guess I
9 was, you know, surprised that there would be a
10 significant difference.
11 Often when there is a big range like that,
12 it means that the calculation is given to a lot of
13 assumptions or it's highly stylized. And, so, I
14 don't think I'm hearing that from you.
15 I think I'm hearing that there were just
16 some elements and components here that were a factor
17 in this big difference between the NRC staff and
18 your calculation.
19 MR. LEVIN: That is correct,
20 Commissioner, because, again, the NRC staff referred
21 to the NRC minimum funding formula in their
22 estimate, and we had existing site-specific cost

1 estimates out there. And the measure by which you
2 look at shortfalls or calculations of funding
3 sufficiency are a little different from the formula
4 to the site-specific studies themselves.
5 COMMISSIONER SVINICKI: Okay. Thank
6 you.
7 MR. GUNTER: Commissioner, can I respond
8 just quickly.
9 COMMISSIONER SVINICKI: Certainly.
10 MR. GUNTER: Just as the Commission has
11 this flexibility for enforcement discretion, it
12 would seem reasonable in this period of financial
13 uncertainty that the Commission also has the
14 discretion to speed up these reporting requirements,
15 or, you know, to take an opportunity for a
16 determined discretionary period that the Commission
17 could require more frequent reports.
18 COMMISSIONER SVINICKI: Thank you for
19 that.
20 And Mr. Stewart, very quickly, you
21 mentioned the topic of the commingling, which is
22 something I learned about as I began to learn about

1 how we go about decommissioning funding assurance.

2 What I took from your presentation, and

3 please augment this if there are additional elements

4 of concern here, but that because of the

5 commingling, I think you called it a commingling of

6 responsibility as well as funds -- and so that the

7 nature of the commingling is that it is difficult to

8 kind of suss out, you know, what is truly for

9 radiological and then what might be driven by other

10 requirements.

11 Are there other just concerns about the

12 commingling, or is it just the inherent ambiguity of

13 what funds are then truly dedicated to what?

14 MR. STEWART: I think that the concern

15 is really the ambiguity, and the other concern --

16 and I'm not saying it's happening in New York, but

17 to the extent you have those situations, you know,

18 has to do with what the showing is to the NRC

19 concerning the adequacy of the funding for the

20 radiological piece.

21 COMMISSIONER SVINICKI: Thank you.

22 Thank you very much.

1 Thank you, Mr. Chairman.

2 CHAIRMAN JACZKO: Sure.

3 Mr. Mothersole, I don't know if you

4 have -- you may not have looked at our Reg Guides,

5 but I don't know if you have ever looked at our

6 rules, our minimum funding requirements is

7 $150 million plus and there is this factor of three

8 things with various weighting factors that get added.

9 They are -- I guess there's a multiplication or an

10 addition, however it works out but these three

11 factors.

12 One is, as Commissioner Svinicki

13 mentioned, Bureau of Labor Statistics that measures

14 the increase in labor costs; one of them has to do

15 with, I think, increase in some commodities cost,

16 perhaps; and the last one is a fact factor that

17 deals with waste disposal costs.

18 Given your statements and your

19 understanding of the costs of decommissioning and

20 how that may be rising slightly faster than

21 inflation and other kinds of things, if you're

22 familiar with that formula, is that the right

1 formula? Is there a better formula we should use to
2 try and figure on how to escalate those costs and
3 figure out what they need to be?
4 MR. MOTHERSOLE: I mean, what we always
5 argue for is that you try to identify a measure or
6 set of measures that as closely as possible
7 represents what you're actually going to be spending
8 money on. And it seems to me that the formula that
9 is in place today does attempt to do that.
10 It says, okay, these are our big buckets,
11 these are the things that we are spending money on.
12 Now, what is an appropriate measure for tracking
13 movements, cost escalation in those buckets?
14 And then it is just a question of whether
15 you have selected the appropriate index or set of
16 indices. And that's something that we do -- as part
17 of what my firm does for our clients. And it seems
18 to me in this instance, that you're going through
19 the same basic function and in the same basic way
20 and methodologically in a straightforward and correct
21 fashion, it seems to me.
22 CHAIRMAN JACZKO: You don't use our

1 formula, do you?

2 MR. MOTHERSOLE: We have advised clients

3 on sort of developing indices, measures of cost

4 escalation that can be more detailed. And it,

5 again, goes to the degree of specificity in defining

6 these indexes. How close can you get to the unique

7 set of inputs that you're using?

8 And in some cases, we can zero in a little

9 more closely. In some cases, that additional detail

10 does not necessarily yield any great insight. So,

11 again -- especially when you're looking out over a

12 very long period of time. You have to ask yourself

13 whether the exercise is worth the end result, if the

14 original, more simple formula captures those cost

15 categories adequately, and I think, you know, for

16 the most part, they do.

17 CHAIRMAN JACZKO: I appreciate that. I

18 think there is so many things that we have done as

19 an agency. If you go back and look at them in a

20 historical context, they seem to be fairly

21 straightforward and perhaps unsophisticated in a

22 way. But this is one perhaps that, as you have

1 indicated, maybe have stood the test of time and may
2 be our best guess at trying to estimate this.
3 Mr. Gunter, I wanted to ask you a question. You
4 make a very interesting point about on-site
5 contamination and the impacts that that has on
6 decommissioning.
7 I remember one of the very first meetings
8 I attended as a Commissioner here was a Commission
9 meeting on decommissioning, and we had an
10 individual, I think, from Big Rock Point who had
11 been the decommissioning manager.
12 One of the things that he indicated, I
13 would not exactly say said, because I have gone back
14 and looked and he didn't exactly say, but indicated
15 is that one of the best things to do when you get
16 around to decommissioning is to have cleaned up or
17 have kept track of where things got spilled, I think
18 along the lines of what you said. So, you have a
19 good inventory, you know where materials are, that
20 will help you better estimate then what your actual
21 decommissioning costs are going to be.
22 One of the things that the Commission has

1 or the staff has certainly has proposed within the
2 last year is a change to our decommissioning
3 regulations. That would, in many ways, address that
4 issue and require licensees to more directly
5 catalogue and report and potentially even look at
6 remediation of spills if they are going be a challenge
7 for decommissioning.
8 I don't know if you have looked at that
9 regulation, if you think that that would address
10 some of the concerns that you have about how some of
11 these spills can have an impact on ultimate
12 decommissioning costs?
13 MR. GUNTER: I think the problem is
14 that the extent of these -- I think the examples
15 that I cited, particularly with Connecticut Yankee,
16 points to the difficulty of actually ascertaining
17 the extent of a contamination until the
18 decommissioning process is on you and you actually
19 have spades in the ground. And frankly, that's too
20 late in many ways, because you're left with the
21 responsibility to be transferred to a third party,
22 which is -- you know, in effect, turns out to be

1 ratepayers and the States.

2 So, I think there is this problem that we

3 are not addressing that goes back to -- and I

4 understand it's not really the point of this

5 meeting, but they are closely related. They are

6 very closely related in that if we have a “leak

7 first, fix later” kind of approach to this source of

8 cost, I think we are going to -- we are not going to

9 really address the problem at the other end of how

10 much it actually costs.

11 CHAIRMAN JACZKO: Right. I think -- I

12 think that is an interesting point. And I think --

13 you know, if you want to take a look that rule, it

14 may be -- it is a proposed rule at this point that

15 is in front of the Commission. I think it does try

16 and get at the issue.

17 I would, perhaps, characterize it, and

18 maybe the staff can do it better than me, is maybe

19 if you leak, then you characterize early. And the

20 intention being so that these spills are known well

21 in advance so that if remediation work can we done

22 earlier, that will make decommissioning more

1 effective, and that can be done, those kinds of
2 things.
3 So I think it gets at many of the concerns
4 that you have expressed in terms of from the
5 decommissioning funding standpoint.
6 MR. GUNTER: Thank you.
7 CHAIRMAN JACZKO: Both, Ms. Jacob and
8 Mr. Levin, you're both here as sites that didn't
9 weather the economic cycle as well as others. What
10 do you all think you didn't do as well as the other
11 folks did? How are you managing your portfolios and
12 your funds in a way that was different from the
13 others? Either one of you if you want to comment.
14 MS. JACOBS: I'm not sure when you say
15 "than the others," so if we look at and say that --
16 CHAIRMAN JACZKO: You mentioned there
17 were 70 percent --
18 MS. JACOBS: -- 70 percent of the
19 reactors maintain the minimum requirements. I think
20 part of it looks at -- and I would have to go back and
21 check -- but investment strategies and really
22 allowing the length of time to take care of that.

1 And I know that that's been -- one of the
2 discussions today is about that length of time.
3 But you mentioned it in your opening
4 comments with our 401-Ks that many of us become
5 201-Ks, right. It looks at that period of time and
6 just like we tell people to start and invest early,
7 you have to take advantage of that.
8 I think the other point for us, which may
9 be a little bit different, is within our regulated
10 group, we had two regulated plants that we had met
11 with our PUCs, gone through the process as it exists
12 and had actually based on the projections before
13 from that cycle of reviewing it, had backed off on
14 some of the funds being put into it.
15 And I think the process now has us come
16 back up in our regularly scheduled meeting with the
17 PUC to discuss decommissioning, it addresses that
18 shortfall, that will be addressed, we will make an
19 adjustment , and frankly, I think that works.
20 The time frame, perhaps, may not be what
21 we were looking at. That may be really -- the
22 question is, what about that length of time? But if

1 I look at it from a broader sense, that process is
2 working for us. And so for those plants, that's
3 going to be addressed.
4 MR. LEVIN: Frankly, I don't think I can
5 add anything further to that. We fell in exactly
6 the same shoes with respect to our funding.
7 One of the things that we look forward to
8 is that Byron and Braidwood and LaSalle, three sites
9 that have not received license renewal, we be
10 applying for. Obviously, we can not take credit
11 for that at this junction in time. But we
12 understand that when the license renewal does occur,
13 that these funds would then be rather robust at that
14 point in time.
15 Mr. Chairman, if I may step back for a
16 second and comment on something Mr. Gunner said?
17 Characterization --
18 CHAIRMAN JACZKO: I have a couple of
19 more questions that I need to get to --
20 MR. LEVIN: Oh, sure. Sure.
21 CHAIRMAN JACZKO: -- so I would rather
22 finish those and then --

1 MR. LEVIN: Please.

2 CHAIRMAN JACZKO: -- if you want to make

3 some comments, you can do that afterwards.

4 To what extent -- you use the term, and I

5 think -- which perhaps is a term that I think in a

6 regulatory position, I'm not sure what it means and

7 I'm not sure if it is the right approach for us. I

8 think both of you may have used the term "market

9 sorting out," which seems to be -- I would interpret

10 to mean, well, the market is now going back up

11 again, because we know markets always go up, and

12 that's what they do. Perhaps that is why I sit on

13 this side of table, and I'm not over there with

14 Mr. Mothersole.

15 But I don't think that is a good

16 assumption to be using to base our strategies around

17 for the approach, because there was a time when

18 markets went down, too. And I don't know that

19 everyone is clear exactly where the market is going

20 tomorrow. It has been bouncing around for a while

21 and could go down, could go up, I don't know. I

22 wish I did.

1 So, to what extension does that play into
2 your strategy, and to what extent do you think that
3 that is an appropriate mechanism for these funds
4 to be correcting themselves is that the market
5 corrected it for us?
6 MR. LEVIN: These funds are enormous,
7 tens of thousands of different investments invested
8 in international, equities, invested in fixed
9 instruments in the United States. And I think when
10 we discuss sorting themselves out, the market
11 sorting themselves out, it's trying to take a more
12 global look at the direction of the markets as
13 opposed to assuming that the markets are necessarily
14 going to come up.
15 Are the equities going to be stronger?
16 Are the fixed instruments going to be stronger?
17 Where is the strength in the market so that we can
18 rebalance our portfolio? So I think when we talk
19 about sorting out, really what we are looking for is
20 market direction in these various places to
21 understand that to be able to make our forward
22 investing proper.

1 CHAIRMAN JACZKO: One more question.
2 How often do you rebalance these funds? Is this an
3 annual, biannual, semiannual?
4 MR. LEVIN: We are typically doing asset
5 liability studies, where we looked at our assets, we
6 looked at our liabilities and trying to figure out
7 how to match the two up.
8 We are doing those about once every 3
9 years or so at this point in time. And we do take a
10 look at it annually. We actually have an internal
11 committee that meets four times a year to discuss
12 are we still appropriate in our portfolio strategy.
13 So this is something that as a
14 corporation, we do take very seriously.
15 CHAIRMAN JACZKO: So it's about once
16 every 3 years?
17 MR. LEVIN: Yes.
18 CHAIRMAN JACZKO: Okay. Great. Thanks
19 I'm a little over time, so if you want, we can
20 have another round, and I will give you an
21 opportunity to make the comments.
22 MR. LEVIN: Please. That's fine.

1 MS. JACOBS: The only thing I would add
2 with those comments, because we approach it quite
3 similarly, is that the other piece is the length of
4 time.
5 And if you look at how something reacts,
6 the shorter the time frame that you look at that, I
7 don't think you can get a full, perhaps, evaluation
8 of that. And so if you even look at the market or
9 whatever you're looking at, if you have an
10 appropriate length of time, I think you see what
11 that cycle is going to do, or at least get a better
12 indication of the trend.
13 And that's why we really look at what we
14 have with the current 2-year is appropriate, if we
15 shorten that down, I think it could yield some
16 trends that may not be appropriate and force us to
17 take direction that may not actually be in the
18 long-term the right direction to take.
19 So that's what the other piece I would add
20 is just that length of time.
21 CHAIRMAN JACZKO: Thanks.
22 COMMISSIONER KLEIN: Commissioner

1 Svinicki and I had a briefing from our staff many
2 months before people's 401-Ks went into 201-Ks, and
3 we were trying to better understand our
4 decommissioning fund requirements and what those
5 funds were. And it was one of the most confusing
6 briefings I think that I have experienced, and I'll let
7 Commissioner Svinicki comment on how her perception
8 was.
9 But I thought it would have been fairly
10 straightforward, that we would have a formula that
11 the industry understood on what the amount of funds
12 were required for decommissioning. And we were
13 looking at this issue regarding some large
14 components at sites, whether they should be moved
15 off-site early or should they just be stored
16 on-site, you know, steam generators and things
17 of that nature. So, whether those decommissioning
18 funds could be used for that.
19 And, so, what I would have expected us to
20 have had was a very simple table that said, Plant X,
21 this is how much money you should have in your
22 decommissioning fund, and over to the side, how much

1 funds were actually there.

2 It turns out that was not what we found.

3 We found commingled funds, we found a very confusing

4 answer from the staff that was hard to follow on how

5 much -- you know, how did they determine their

6 amount of funds. So it was a challenging

7 presentation, to say the least.

8 And I guess from -- you know, a lot more

9 focus has been directed towards the decommissioning

10 funds because of the issues related to the stock

11 market and I guess from Exelon's standpoint,

12 I was also surprised, as Commissioner

13 Svinicki was, that the NRC estimated shortfall was

14 much different than Exelon's, both in the

15 magnitude and the number of plants. So, I guess are

16 we now on the similar pages from both Exelon and

17 Entergy's standpoint? Do we sort of agree with what

18 amount of funds should by required for each plant in

19 the formula that we come up with those?

20 MR. LEVIN: I believe we are working

21 towards that end. We are about halfway there, I

22 believe, with staff. I know they are in the process

1 of reviewing two sites specific-cost estimates that
2 we have for Byron and Braidwood. And obviously,
3 they will pass their judgment on the validity of
4 those estimates. But I think we are approaching
5 that, and we should be there certainly by the end of
6 this quarter.
7 MS. JACOBS: And from our perspective, I
8 think we are much closer than that. I think that we
9 see the alignment on the amendment funding
10 requirements and what it is going to take to be able
11 to achieve those. Like I mentioned with the three
12 units that we have, two going back into the
13 regulated market and one putting through the parent
14 guarantee.
15 COMMISSIONER KLEIN: And were those
16 differences primarily due to site-specific
17 considerations as opposed to the methodology, the
18 formula?
19 MR. LEVIN: I guess I'm not sure I
20 understand exactly the question, in that we produced
21 site-specific estimates which resulted in the
22 minimum funding requirements that were different

1 than those when calculated by formula. So that's
2 where we are different.
3 COMMISSIONER KLEIN: Have you addressed
4 the commingling issue? Do you now have a table that
5 says this is how much funds the NRC requires and this
6 is how much amount is in those funds?
7 MR. LEVIN: Five years prior to plant
8 retirement, we are required to submit site-specific
9 cost estimates. And we do typically look at and
10 indicate to staff where we are with respect to the
11 various bins of funds at that point in time. So
12 that is something that is done 5 years prior to
13 shutdown.
14 COMMISSIONER KLEIN: And I guess from
15 the State's perspective, I think when we first
16 started looking at the decommissioning funds, we did
17 not anticipate large components being removed and
18 potentially stored on site.
19 Does the State take any position on
20 whether you have a preference for those components
21 being moved off or safely stored on-site.
22 MR. STEWART: I think ideally, we would

1 like to see them moved off the site, but, you know,
2 we also recognize that that may not be practical for
3 a variety of reasons right now.
4 COMMISSIONER KLEIN: Thanks. And I
5 guess Paul had raised a comment that it might be
6 good for him to talk about but also from the utility
7 standpoint, you gave a couple of examples of Yankee
8 Rowe and Connecticut Yankee where the costs ended up
9 being higher.
10 And I think, Donna, that the good news is
11 that the sites were cleaned up; in other words, it
12 was not an issue. And I guess are you recommending
13 that the decommissioning funds be larger than they
14 currently are?
15 MR. GUNTER: Well, the concern is
16 that -- these are profit making ventures. And
17 that I think that these are costs that are unduly
18 and unfairly being borne upon ratepayers that, in
19 fact, represent sort of uncontrolled costs. And I
20 don't think that is the intent of the regulation and
21 oversight that these costs sort of be randomly
22 tracked.

1 So, I think that particularly in terms of
2 trying to capture the actual costs, that we need to
3 have a -- I don't see that this formulaic approach,
4 particularly with a number of the issues that are
5 arising now is actually working for us in terms of
6 capturing costs, but, clearly, this minimum
7 standard, I think, has grossly missed the mark.
8 That it's not reflecting true costs. And those are
9 costs that I believe are unfairly being passed on to
10 States and ratepayers.
11 COMMISSIONER KLEIN: I remember there
12 was a commercial where you can pay me now or you pay
13 me later. And I think for the regulated utilities,
14 aren't you allowed to include decommissioning costs
15 as part of the rate base? Eventually, they would go
16 to the ratepayers probably anyway in a regulated
17 environment.
18 And I guess I was just curious about whether
19 you wanted to start collecting from the ratepayers
20 earlier or later, if that was the end goal that you
21 were looking at.
22 MR. GUNTER: Well, again, I believe that

1 these -- you know, as it is currently being
2 addressed, these costs are not being reflected
3 accurately in terms of the operation of these
4 facilities.
5 And I think these represent a very real
6 concern in terms of hidden costs, particularly in
7 terms of how these plants are affecting -- how they
8 are competing or not, these are issues that I
9 believe are related to these hidden costs and raise
10 concerns for ratepayers and States.
11
12 COMMISSIONER KLEIN: Well, John, you
13 were talking about the business cycle, typically a 2
14 to 4-year. So, I guess based on that, a
15 1-year look is a little short?
16 MR. MOTHERSOLE: I would agree with that,
17 yes.
18 COMMISSIONER KLEIN: Thank you. No more
19 questions.
20 CHAIRMAN JACZKO: Commissioner Svinicki,
21 you have more? Sure.
22 COMMISSIONER SVINICKI: I would like to

1 follow-up on something that Chairman Jaczko was
2 asking about, and it was this rebalancing of the
3 funds or kind of the investment philosophies.
4 And with forecasting it depends on when
5 someone writes a paper or publishes a report on
6 something. But I was looking at a published report
7 by the Bank of New York, and it was from 2006, which
8 I think is the interesting thing here, because that
9 was a right before the downturn in '08, and
10 certainly, where maybe if you had, as you said, a
11 large, large fund and you saw the kind of returns
12 the market was generating and you needed to get up
13 to decommissioning funding level, ultimately, you
14 might have been looking at those returns rather
15 enviously and saying how could I have a more
16 aggressive strategy?.
17 And, so, this report in '06 concluded with
18 the statement that says while there is still a
19 strong case for investment conservatism, some
20 utilities are moving to enhance their returns using
21 or considering the use of securities lending,
22 alternative investments and equity classes beyond

1 the S&P 500.

2 And, so, is that something that in your

3 view, you saw kind of occurring in the early 2000's,

4 was there a movement towards -- I think

5 typically, there was the -- this report claims that

6 there was a more traditional balancing of 60 percent

7 equities and 40 percent fixed income ratio. And

8 this 2006 report said many utilities were

9 considering something more aggressive, maybe 55

10 percent equities, 30 percent fixed, and 15 percent

11 of these alternatives that might generate a better

12 rate of return.

13 Would it be your observation that that was

14 occurring in that time period?

15 MR. LEVIN: I can't go back in time,

16 unfortunately, and give you details about the

17 investment strategy at that point, because I have

18 only been involved with the investment strategy

19 about the past 4 years or so at this point.

20 But what I can tell you is that as I look

21 back as I prepared for this meeting today, one of

22 the things I did was to look back at how we did at

1 the end of last year with our trust funds relative
2 to the S&P 500. And I took a 5-year window because
3 I thought that was a reasonable window to look at.
4 And as it turns out, the S&P 500 was down
5 a fraction, I think .4 percent or something of that
6 nature. And our trust funds overall were up about four
7 and-a-half percent over that same period.
8 So, I think in general, we have been
9 successful with our investment strategy and managed
10 by virtue of some prudent investing to not --
11 although we did get burned just as everybody else
12 did, where folks were looking at 30 to 40 percent
13 downturn in their personal asset wealth, we dropped
14 15 to 25 percent.
15 So we are actually pretty will well off in
16 terms of the investment strategy and style that we
17 have.
18 COMMISSIONER SVINICKI: And maybe the
19 core that I'm really getting to there is that -- and
20 I'm reluctant to compare this to personal finance,
21 but I will in this case, which is that a
22 financial planner would advise a young person

1 entering the work force that if they are too
2 conservative for their retirement investments, then
3 they will actually punish themselves.
4 So they cannot have an entirely guaranteed
5 return on investment punishing to you over the
6 financial long-term. There has got to be a risk
7 management and balancing. So that's what I found
8 curious.
9 And again, looking at a time when
10 markets -- as the Chairman was mentioning, you know,
11 maybe there was a fiction that they were trending up
12 and they would always be trending up, is that the
13 compulsion there was to maybe have a little bit more
14 risk in the investment strategy.
15 And, so, it's interesting, like I said, it
16 always depends on the window in time. That's the
17 nature of forecasting rates. So right now, many
18 people might advocate a more -- returning to a more
19 conservative philosophy. Thank you.
20 Thank you, Mr. Chairman.
21 CHAIRMAN JACZKO: I just have one
22 question, I think.

1 As I understood one of the difficulties
2 that we had with the submittals from Exelon, and I
3 think it was the phrase that you used, which was
4 site-specific minimum estimates, my understanding of
5 our regulations is that minimum estimates or the
6 minimum estimates provided by the formula that
7 licensees are allowed to provide site-specific
8 estimates if those estimates are above, but can't
9 replace minimum estimates, I think probably without
10 an exemption request.
11 Were your initial submittals of the
12 site-specific estimates lower than the minimum
13 estimates?
14 MR. LEVIN: No. The costs for
15 decommissioning the site-specific estimates are
16 larger than the minimum funded amount.
17 CHAIRMAN JACZKO: I'm sorry, say that
18 again.
19 MR. LEVIN: The site-specific SAFSTOR
20 estimates are larger than the minimum funding
21 calculation.
22 CHAIRMAN JACZKO: Okay. So the

1 difference, then, was in the staff's calculation of
2 the site-specific estimates and your site -- and
3 your submittals of the site-specific estimates?
4 What was the difference?
5 MR. LEVIN: Well, the difference is that
6 the SAFSTOR decommissioning cost estimates because
7 they contemplate expenditure over a much longer
8 period of time, the present value of the cost to
9 decommission is lower for the SAFSTOR style of
10 estimate.
11 So what happens is that our shortfall,
12 based on our lower site-specific SAFSTOR estimate
13 was not as large as staff's calculation of the
14 minimum formula verses our actual needs.
15 CHAIRMAN JACZKO: Because they were not
16 considering the longer term for accumulation with
17 the SAFSTOR?
18 MR. LEVIN: And as I mentioned, we
19 neglected unfortunately to highlight that in our
20 submission.
21 CHAIRMAN JACZKO: Okay. So, that
22 accounted for a large portion --

1 MR. LEVIN: It accounted for a large
2 portion of it, yes.
3 CHAIRMAN JACZKO: Okay. Good. That's
4 helpful.
5 Well, again, did you want --
6 MR. LEVIN: No. Actually, there was one
7 other comment I wanted to make about soil
8 contamination. I think it's a very relevant issue
9 with respect to decommissioning and decommissioning
10 costs. I can't speak for other utilities,
11 obviously, but I can speak for Exelon.
12 We are required by regulation, 10 CFR
13 50.75G, to keep what's colloquially known as a spill
14 log. So we do keep track, in fact, of all of the
15 issues that we have with leaks, et cetera, at the
16 sites. And typically, what we will do is we will
17 identify and keep a characterization record of soils
18 that are contaminated. And I will factor those into our
19 site-specific estimates.
20 So as a minimum, 5 years prior to
21 shutdown, when a site-specific estimate is required,
22 you should have or we will have certainly that

1 record of soil contamination and identify what
2 funding needs are required for that sort of clean up
3 effort.
4 CHAIRMAN JACZKO: Are you aware of the
5 staff's proposal to modify Part 20 and I think
6 it is 20 1406?
7 MR. LEVIN: Yes, I am.
8 CHAIRMAN JACZKO: Are you comfortable
9 with that change to perhaps provide then a greater
10 degree of fidelity on the characterization and --
11 well, I guess on characterization, on the spills as
12 they -- more as they occur --
13 MR. LEVIN: Frankly, I would like to sit
14 down with staff and discuss it a little bit more,
15 because I think some of the utilities are taking
16 some actions already to ensure, and they have to by
17 50.75G, to keep this record, this log. And the
18 question is what beyond that is really necessary.
19 So I think the staff and utilities need to
20 spend a little bit more time understanding where the
21 gaps are before we go forward with this.
22 MS. JACOBS: And I guess I have to say I

1 agree. We look at it the same way with 50.75G and
2 how we look at our site specifics. And with any of
3 the material that may be -- if we want to call it
4 leak -- but the material that's there, and the
5 updates that we perform.
6 And also, we think it would be worthwhile
7 to have a good dialogue on the proposed regulation.
8 I think we need to talk through that, and again,
9 look at what's being done currently and what
10 differences, you know, we would be looking at with
11 that proposal.
12 CHAIRMAN JACZKO: We are actually at a
13 final rule stage. This was a proposed reg and I
14 think it -- you know, it's an interesting, I think,
15 the standard of kind of significant spills that the
16 staff established in that regulation is something that would challenge
17 decommissioning.
18 So that's -- which seems like a fairly
19 common sense performance-based standard that should
20 be relatively easy, I think, for licensees to comply
21 with. If you have a tritium contamination, and that
22 is likely to be causing you costs at

1 decommissioning, then I think the rule would say
2 take a look now, it may be cheaper to remediate that
3 now then to wait and have the plume migrate,
4 depending on where you are in your operation, in your
5 facility in a lifetime.
6 So, I think it's an interesting
7 regulation. I think it has gone through a lot of
8 notice and comment, and I hope we will be able to
9 finalize it soon.
10 Again, I appreciate all of your testimony.
11 And your information, I think, has been very helpful
12 for us, and we will now conclude this part and turn
13 over to staff for their presentation.
14 Thanks.
15
16
17
18
19 CHAIRMAN JACZKO: We’re ready for the second half
20 of the meeting and I will turn it over to Marty for staff
21 presentation.
22

1 MR. VIRGILIO: Good morning Commissioners.
2 Thank you for the opportunity to discuss our
3 decommissioning financial program.
4 I will say that our financial assurance program
5 began over two decades ago and during the period of
6 public utility dominance in the industry and since
7 then, the program has evolved and become much more
8 sophisticated and I can say that with some
9 credibility having many years ago been a branch
10 chief responsible for this program in NRR.
11 I would cite as examples, the rate deregulation of the industry
12 that resulted in major changes to the program in the late
13 1990's And the program continues to build on past
14 successes and responds to new challenges.
15 For example, as you heard from the
16 panelists this morning, roughly a quarter of the
17 U.S. power reactor fleet experienced shortfalls in
18 decommissioning financial assurance during the
19 recent market downturn. The majority of the
20 facilities with short-falls now we're very confident
21 that they provide adequate decommissioning financial
22 assurance and the six remaining facilities that you

1 will hear about today we believe are on the right
2 track.
3 So I think we have some degree of confidence
4 although we are not complete yet.
5 With that, I want to turn this over to Eric Leeds
6 who is going to introduce the members of our staff
7 at the table and our special guest speaker.
8 MR. LEEDS: Good morning Commissioners,
9 Mr. Chairman. Today's public forum on
10 decommissioning financial assurance is especially
11 appropriate since the origins of the agency's
12 current regulations was a petition for rulemaking
13 submitted by a public interest group.
14 That petition eventually led to the 1988
15 creation of Section 50.75 to the Code of Federal
16 regulations governing the accumulation of funds for
17 decommissioning nuclear power plants. The concern
18 was and remains today that funds are for
19 decommissioning a plant will be available when
20 needed. Today the staff will provide a discussion
21 of the NRC's financial assurance program.
22 Tim McGinty, the Director of the Division of Policy

1 and Rulemaking, will lead off with a discussion on
2 the current status of decommissioning funds for the
3 nation's commercial reactors.
4 Thomas Fredrichs, our Senior Level Adviser for
5 Licensee Financial Policy will cover the remaining
6 topics in the staff presentation.
7 Following the staff's presentation, we will hear
8 from Mr. Paul Bailey, but let me introduce him now.
9 Mr. Bailey is a senior fellow with ICF Consulting.
10 He's consulted for the NRC and other United
11 States and Canadian agencies on financial and
12 environmental matters.
13 At the end of staff's presentation, Mr. Bailey will
14 provide his own perspective on the
15 inter-jurisdictional nature of decommissioning funding and
16 provide some remarks on the parent guarantee method
17 of assuring funds.
18 But at this time, I will turn it over to
19 Mr. McGinty.
20 MR. MCGINTY: Thank you Eric. Regarding the
21 status of 2008 short-falls, as you will recall, we
22 received the biennial reports from all 104 units in

1 the March of 2009 time frame.

2 I think you will also recall we had a very focused

3 and detailed effort to quickly ascertain the

4 situation given what we knew about the market

5 conditions.

6 And we determined the 77 units that had adequate

7 decommissioning funding assurance rather readily

8 and by June of last year, we had sent letters to the

9 27 units for which we had found we did not have

10 adequate decommissioning funding assurance.

11 As of today, 21 of the 27 short-falls have been

12 resolved. I want to give you a flavor for the way

13 those 21 short-falls were resolved from the NRC

14 perspective.

15 There was one license extension at Beaver Valley.

16 One parent guarantee resolved an issue at Vermont Yankee.

17 Six were resolved effectively by market gain, Nine

18 Mile Point 2, Point Beach 1 2, Calvert Cliffs 1,

19 Indian Point 2 and Palisades. Five were resolved with

20 the SAFTOR projection methodology that was discussed

21 previously at LaSalle 1 and 2, Clinton, Nine Mile

22 Point 1 and Ginna. Two were by rate increases

1 that are to be requested in the future.
2 And Limerick and Waterford and six were by rate
3 increases that were already obtained and those were
4 the TVA units.
5 Which brings to us the six that are currently
6 considered to still be in the short-fall situation.
7 Five of those are within the process of exchanging
8 information and actually, the five are Braidwood 1 and
9 2, Byron 1 and 2 and Duane Arnold. And the staff does
10 have responses to our RAIs for those and we are
11 evaluating them.
12 And one of them is a contractual
13 obligation type of review for which we are about to
14 issue another RAI. But I would say that the near
15 term resolution for all six of these remaining
16 outstanding short-fall situations is going to be
17 resolved timely in the very near term.
18 With that said, I would like to turn it over to Tom
19 Fredrichs who's going to provide an overview of the
20 regulations, financial instruments as well as the
21 path forward on the broad topic.
22 MR. FREDHICH: Thank you Tim.

1 Thank you Commissioners and also, thank you
2 all our stakeholders and members of
3 the public here attending our meeting.
4 I'm going to talk about the regulations in a more
5 conceptual manner rather than going through a
6 detailed recitation of requirements. The two
7 sections that are most important to us in this
8 context are 50.75 which governs accumulation of funds
9 during operation and 50.82 which governs the spending
10 of the funds once decommissioning starts.
11 The accumulation phase was intended to be
12 a forward looking three step process that starts out
13 with a certification by the licensee or an applicant
14 that they would meet the minimum requirement which
15 is specified in the regulations.
16 During operation, the intent is that they will
17 adjust the funding levels according to an escalation
18 formula that we have and provide ongoing financial
19 assurance.
20 And finally, about five years before license
21 expiration, they are expected to come in with a site
22 specific cost estimate which would account for any

1 special circumstances on the site and also provide
2 hopefully, enough time to make sure that funding is
3 available at the time of permanent shutdown.
4 In 10 CFR 5082, the basic thrust is that they have
5 to complete their decommissioning within the budget
6 allowed them by the decommissioning fund.
7 And they are restricted from withdrawing from that
8 fund if that would put them into a case where they
9 were unable to make up the shortfall and complete
10 the project.
11 The original rule was issued in 1988, was utility
12 based at the time and the NRC rules were
13 complimented by the economic oversight of the states
14 where the NRC regulated the form of the financial
15 assurance and methods that could be used, and
16 although there was a rule requiring annual
17 contributions to the trust funds, it was left up to
18 the states to decide exactly how much that would be
19 per year.
20 The goal was to accumulate the full amount of
21 funding by the time of permanent shutdown and those
22 words are actually in the regulations from 1988 and

1 have been continued at least for the prepayment and
2 external sinking fund methods through today.
3 One reason that I believe that the rules have been
4 successful in the past is because the State Public
5 Service Commissions have a duty to act in the public
6 interest and they have access to funds outside the
7 company itself.
8 And because of that, there is a reduced risk of
9 financial stress that the NRC relied upon when it
10 created its original rule. And our experience as a
11 number of people have noted has been successful in
12 that regard even for some utilities that have shut
13 down early and have not had time to fully fund their
14 trust amounts. In 1998, the agency amended its rule
15 in a major amendment recognizing that rate
16 deregulation was coming and that some licensees
17 would no longer be subject to the oversight by the
18 Public Utility Commissions.
19 As a result, the NRC increased its own oversight
20 notably by requiring a decommissioning fund status
21 report at least every two years, and annually in the
22 case of a merger or acquisition or within five years

1 of the anticipated site shutdown.

2 It also required from the merchant plants, full up

3 front financial assurance as opposed to the

4 accumulation over time that was allowed for the

5 public utilities.

6 And the NRC explicitly reserved the right to review

7 the accumulation of fund and if necessary, to modify

8 their schedules.

9 We also expanded the number of financial assurance

10 methods that were allowed based on some experience

11 and also, to allow flexibility for the licensees.

12 We no longer required annual contributions. And for

13 the first time, we recognize that the accumulated

14 funds do make earnings and those were allowed to be

15 counted as a credit toward the financial assurance

16 that was being provided.

17 However, we had limited experience with non-utility

18 decommissioning of reactors at that time and we've

19 learned more since then.

20 Next slide please.

21 Some the financial instruments, I will talk about

22 the -- but first, I'll mention the criteria for

1 funding methods.

2 This was actually first published by the Commission

3 in an advanced notice of public rulemaking in 1985.

4 And of the 2 criteria, the degree of assurance is provided by

5 the mechanism is the more important one. And there was a discussion

6 of which were the highest. At the time, it was

7 thought that prepayment was considered the highest

8 level because the money was there and even in the

9 case of premature shutdown, the funding was

10 available.

11 The second one is reasonable cost that financial

12 assurance needs to be reasonable because there is --

13 to make it available at a reasonable price

14 to the ratepayers.

15 And we have several methods and I have categorized

16 them here rather than naming them because it helps

17 people to understand the differences between them.

18 The first one is the cash accumulation which is

19 prepayment or external sinking fund.

20 And although prepayment when you realize that it is

21 allowed to take credit for earning is similar in some

22 ways to the external sinking fund because you don't

1 need the full amount up front to get credit for a
2 number of years of earnings.
3 The second one is an agreement to provide cash and
4 there is quite a variety of instruments there,
5 surety bond, insurance, letters of credit and also
6 contractual obligations with customers. And that
7 turned out to be a fairly effective method in
8 decommissioning of some of the Yankee plants because
9 while they were wholesale plants, their customers
10 were electric utilities and they had contracts which
11 required the utility to pay for decommissioning even in
12 the event the plant shutdown early. But still,
13 it's only agreement to provide cash because this was
14 cash that was supposed to come in over time.
15 There is a commitment to seek cash.
16 This is available only to our governmental licensees
17 because that's essentially a commitment to seek cash
18 from a legislative body, no power reactors used that
19 and there are a number of research and test reactors
20 that qualify as being owned by a state university
21 for example.
22 And finally, there are combinations of the above

1 that can be used and there is a possibility that
2 some method that we have not thought of can be
3 proposed by a licensee and if it provides equivalent assurance,
4 we may approve its use.
5 The next slide: Final thing that I would like to
6 say about financial instrument are some of the
7 potential trends that we have seen.
8 And one of them is a response to increasing fund
9 balances although last year was characterized by a
10 number of shortfalls, at the same time, funds are
11 being built up in some states. And a few states
12 have created a refundable escrow account where
13 collections from the ratepayers are held in escrow for a period of
14 time and the State will decide sometimes on an
15 annual basis whether those funds should be poured
16 over into the decommissioning trust fund which
17 cannot be withdrawn, or refunded to the ratepayers
18 depending on the projections that the State is
19 making at the time.
20 We have initiated some discussion with our
21 licensees on this matter because there is a question
22 of whether those funds should be reported to us as

1 actually useful for financial assurance or if they
2 should not be because until the State makes its decision,
3 it's not clear whether they will be kept or not.
4 The second trend we have seen is using SAFSTOR as a
5 vehicle to provide decommissioning funding
6 assurance. The regulations permit that because you
7 are allowed to take an earnings credit for a period
8 of safe storage after shutdown. If you subtract
9 out the cost of maintaining the unit in safe storage.
10 However, as I mentioned earlier, the goal of
11 the regulations has long been to get full funding at
12 the time of permanent shutdown. And in the 2002
13 rulemaking for decommissioning trust provisions,
14 that goal was reiterated. And we mention it again,
15 in a rulemaking petition by Energy Solution asking to withdraw from the
16 trust fund. This was a goal.
17 So, we have a situation where the rules permit using
18 SAFSTOR but that's in some tension with the goal of
19 full funding at time of shutdown because SAFSTOR
20 implies that you won't be getting your
21 decommissioning funding and you won't achieve full
22 funding until some time after shutdown.

1 We are also noticing a greater reliance on market gains to
2 make up the amount of monies being held. And we
3 notice that some licensees have discontinued
4 contributions to the trust funds relying on market
5 gains instead. Next slide please.
6 And this slide is 113 year history of the Dow Jones
7 Industrial Average.
8 And as everybody knows, its goes up generally
9 speaking over time but the point of this is to show
10 that first of all, that are long term bull and bear markets. And
11 I wanted to give people an appreciation of the
12 frequency of these flat markets and how long they
13 persist although it may by hard to read on the
14 reproduction. The first one starting about 1906 was
15 I think 18 years, the great depression, 25 years.
16 Another one of 17 years and by this count, we are in
17 a ten year market now of relatively flat returns.
18 And I put this here because we want to balance the
19 optimism that the market will rise with the
20 realization that returns can stagnate for decades at
21 a time and while decommissioning is a long term
22 goal, decades are also long term and we don't want

1 to unnecessarily delay the decommissioning because
2 we are depending too much on market returns.
3 Next slide please.
4 I'll talk about draft guidance 1229, that's -- the
5 full title of that is Assuring the Availability of
6 Funds for Decommissioning Nuclear Reactors. And
7 this is meant to be a revision to Reg Guide 1.159
8 published in June and proposed a number of changes to
9 our guidance.
10 The staff intended by this guidance to enhance the
11 consistency between our guidance and the
12 regulations.
13 One of the changes was an adjustment to the guidance
14 on the time to adjusting the funding levels and this
15 was thought to bring in greater consistency with
16 regulations and 50.75(b)(2) and (3) which require plants
17 to do an annual update of the target amount and to
18 cover the target amount.
19 We reduced the time for merchant plants from two years in conjunction
20 with the biennial report to every year when they
21 recalculate the target amount.
22 And utility plants have been allowed to wait six

1 years to address them in the rates and we
2 suggested that they do it with every rate case.
3 And there is a reason for the difference between
4 the two of them and particularly because as I
5 mentioned, the Public Service Commissions and the
6 rules that have worked with them have been
7 successful in the past and the states have done a
8 good job of keeping those funds fully funded or
9 properly funded.
10 The merchant plants on the other hand have no access
11 to ratepayers or other sources of funds and so,
12 it's appropriate for them to maintain a closer watch
13 on their own funds.
14 We had a public meeting in August of last year to
15 gather comments on that. That was pretty well
16 attended.
17 We had over a hundred participants both in person,
18 by the phone lines and by webinar and received
19 extensive industry comments that staff is still working
20 through.
21 Next slide please: Staff is also looking at ways of
22 enhancing decommissioning funding assurance.

1 In the shorter term, we are looking at regulations
2 and guidance. I mention revising Reg Guide 1.159.
3 We also expect to have revised our office
4 instruction on calculating the amounts of financial
5 assurance. That should be out very soon.
6 And it's also going to be publicly available
7 document. The previous revision had been removed
8 from public distribution and that may have
9 contributed to some of the confusion because people
10 could not get the original document.
11 And also, there is decommissioning planning rule
12 that is with the Commission for approval.
13 The Chairman mentioned that a few times earlier in the
14 program.
15 And while it's primarily a lead by FSME and geared
16 toward material sites, there are also a few parts
17 for reactors in that and some revised reporting
18 requirements for decommissioning reactors to be sure
19 that their funds are not out running their project
20 -- I should say their spending is not out running
21 their funding.
22 And it was mentioned that there is going to be more emphasis on

1 monitoring and characterizing sub-surface contamination because
2 that can be a large cost driver. And the earlier
3 the licensees are aware of it the better they can
4 prepare for it.
5 There is also going to be some changes on the parent
6 company guarantee to enhance its I guess
7 defensibility in case of a bankruptcy.
8 So, some other things we are working on,
9 Pacific Northwest National Lab is looking
10 again at the minimum formula to reassess it.
11 We expect their report in early 2011. They have been working
12 with industry to get actual cost data and compare
13 that to the studies earlier made and how the formula
14 works out with them.
15 In the longer term, we want to continue to work with
16 our stakeholders to clarify the rules. I think one
17 experience that we had with the shortfalls was a lot
18 of discussion with licensees as to what is the
19 shortfall. And it has to do with how we calculate
20 it and how they calculate it and a number of cases
21 the difference came down to whether we were using
22 discounting future expenses back to the

1 present with present value or not.

2 And the NRC does not do that.

3 We wanted to work with them to clarify those and

4 some other things such as reporting requirements,

5 separation of fund issues.

6 We are also considering a probabilistic approach to

7 decommissioning financial assurance. Our current rule is deterministic where

8 earning are set at a certain rate, either two percent or some other rate specified

9 by a Public Service Commission and the escalation is essentially

10 backward looking and picks a number based on our

11 NUREG that we publish every two years. We believe that a

12 statistical method could give us technical basis to assess the

13 probability that given a specific amount in the

14 trust fund with certain amounts of annual

15 contributions, and what are the chance you will

16 actually achieve the funding target in your time

17 frame? We can do that not just by looking at a

18 specific rate of return and cost escalation but over

19 a range of them to give us a better sense of whether

20 it appears they are on track or not.

21 Well, thank you for time, I appreciate it and I will

22 turn it back to Mr. Leeds.

1 MR. LEEDS: Thanks Thomas.

2 In closing, the staff's portion of this session, I

3 would like to point out that the decommissioning

4 regulations have been successful in preparing

5 licensees to fund and complete decommissioning of a

6 number of commercial U.S. facilities, including Main

7 Yankee, Fort St. Vrain, Trojan and others.

8 Our regulations as you've heard and Commission

9 policy have evolved to meet the new conditions

10 facing the industry and the nation.

11 However, as you just heard, staff believes our

12 regulatory structure needs to continually evolve to

13 handle current situations.

14 We plan to have continued interaction with our

15 stakeholders, plan to explore the differences

16 between utility and merchant plants and their access

17 to funds, and we want to enhance licensee ability to

18 avoid to possibility of shortfall.

19 We need to maintain the nation's confidence that

20 funds twill be available for decommissioning, that

21 each licensee decommissioning fund remains adequate

22 to meet its obligation.

1 As we discussed the majority of U.S. power reactors
2 have adequate funds available for decommissioning and the six remaining
3 units are on track to resolve their shortfalls.
4 That conclude the staff presentation and I will ask
5 Mr. Bailey to provide his perspective on
6 decommissioning funding.
7 MR. BAILEY: Thank you Eric.
8 I'm very honored to be able to appear today before the
9 Commission. This may be the highlight of my 30 year
10 career as a financial assurance professional.
11 As Eric mentioned and the reason I'm seated here
12 with staff is ICF has been working for the past 20
13 years as a task order support contractor for NRC's
14 financial assurance programs, initially on the
15 materials licensee side and subsequently on the
16 reactor side.
17 But, what we bring to NRC is also informed by 30
18 years of work on a variety of financial assurance
19 programs both for Federal agencies such as different
20 EPA programs, Department of Transportation, a
21 whole host of state agencies, agencies in Canada and the European
22 Commission and this work has covered a broad variety of types of

1 facilities ranging from the small being an
2 underground tank of petroleum, albeit, there may be
3 2 million of them around the country, to the very
4 large and very few such as reactor sites or
5 currently, looking at prospects of underground
6 storage of carbon dioxide for long time period.
7 So, in our work when we are tasked by NRC, we bring
8 that breadth of experience to the technical support
9 we provide such as on the decommissioning planning
10 rule that Tom has mentioned.
11 Now, we have not been tasked to work on the issues
12 that are the subject of today's meeting So, my
13 comments are going to reflect a little bit different
14 perspective.
15 I'm not going to be commenting from within the weeds but
16 taking a step outside as you will see a couple of
17 themes with respect to transparency and
18 accountability effect my comments and there are
19 three points -- next slide -- that I will be
20 discussing.
21 And we can go to the next slide. The first has to
22 do with the variety of roles and responsibilities

1 and stakeholders that you have that are part of the
2 decommissioning financial assurance policy
3 challenge.
4 And the jurisdictions aren't always totally
5 encompassing so that NRC's jurisdiction is with respect
6 to radiological issues, FERC’s concern is with their
7 jurisdictional wholesale power producers.
8 You have state environmental and health agencies,
9 who are more involved in the spending side than the
10 accumulation side as Tom described those two sides.
11 You have the PUCs who are involved where ratepayers
12 are funding these costs. They are on the
13 accumulation side and somewhat concerned with the
14 spending side. And stepping back, next slide
15 please, the question is given all those roles and
16 responsibilities, is it clear how much is being or
17 needing to be assured for radiologic, versus
18 non-radiologic? Is there some transparency in the
19 division of labor that all parties are aware of?
20 The dollar amounts as you mention, Commissioner
21 Klein, can one easily figure out what are the dollar
22 amounts either being assured for the different

1 purposes and or required for the different purposes.
2 And the question of whether the radiologic and
3 non-radiologic funds are some how walled off from each
4 other or whether they are commingled in a way that can allow
5 use of funds for perhaps unanticipated
6 purposes.
7 My second point has to do with parent
8 guarantees and this is an issue that has come up
9 with the states and U.S. EPA and may well be
10 expected to be an issue for NRC.
11 Your guarantees like EPA's are based on solid technical
12 basis and require satisfaction of financial tests.
13 Experience with those mechanisms has actually
14 been excellent where it's been reviewed and
15 researched. Unfortunately, that's rarely been the
16 case.
17 And despite that solid performance and technical
18 basis, there are lots of concerns and opposition to
19 the use of a guarantee which is sometimes somewhat
20 accurately characterized as a promise to pay. And
21 I note here that the vulnerability to criticism of
22 these mechanisms is facilitated because in a number

1 of cases, parts of the financial test have not been
2 brought up-to-date in the last 20 years and this is
3 something the decommissioning planning rule would
4 address if finalized.
5 I guess I do want to say as strongly as I feel
6 about the strength of the parent guarantee, I'm
7 uncomfortable linking it to a net present value
8 amount of coverage.
9 Finally, the third point I want to make goes back to the notion of
10 accountability and transparency and that relates to the issues that you all have
11 been sorting out in terms of when and why should NRC
12 or perhaps other agencies that are stakeholders
13 intervene in the accumulation of funding for
14 decommissioning and documenting the criteria and the
15 processes to be used coordinating with the other
16 stakeholders and certainly no reason that NRC can't
17 provide the leadership but I would like to see
18 involvement of the other parties.
19 And a good documented rationale, I'm a sucker for
20 technical basis for any exercise of authority. I
21 think that is desirable in terms of transparency and
22 accountability.

1 That conclude my prepared comments.

2 CHAIRMAN JACZKO: Thank you for your

3 presentations. We will begin questions with

4 Commissioner Svinicki.

5 COMMISSIONER SVINICKI: Thank you all for your

6 presentations. I want to augment what Dr. Klein

7 said.

8 It took me a little time between listening to the

9 presentations to recall the briefing he was talking about because it was a

10 long time ago and it was hard to remember these

11 things. But some dim details begin to be filling in

12 in my mind. And so with NRC staff represented at

13 the table, I don't think any of you were at this

14 briefing.

15 But it was I guess two points. One is

16 that it was engineers trying to talk to economists

17 and that's always going to be ugly no mater how you slice it. But I do

18 remember that it cumulated toward the end, it was orderly, every one

19 was seated and there were briefing charts but it ended

20 up I think you and I were at your white board, we

21 each had markers and so did the staff briefing

22 person and we were all markings up the same diagram

1 I think.

2 So I recall that but, the reason I mention that is

3 that obviously, this is a complex topic. Tom, you

4 even mentioned that in terms of getting stakeholder

5 comments on the proposed revision to the Reg Guide,

6 what a complicated topic this is,

7 When I look at the history and we heard kind of a

8 quick overview of that in your presentation, what I

9 interpret there, it is the regulator really trying

10 to keep apace of changes in the corporate structure

11 that we're regulating.

12 So I think we've not tried to be ahead of

13 it but we need to be apace of it and where kind of

14 the industry is corporately changing, we need to modify our

15 requirement in ways that make sense.

16 So that's kind of what I interpret from the history

17 and I think at this moment in time, we are

18 struggling once again to make sure we are

19 contemporary and that we have in place what we need.

20 I might since I did mention to the first panel, I

21 have to make a note to remind myself when I tell the

22 first panel I'm going to raise this, sometimes I

1 forget, but Tom, you actually covered it in your
2 presentation very thoroughly but I wanted to return
3 to it. It is the proposed revision in the Reg Guide
4 that on merchant plants reduce the time to adjust the
5 funding level from two years in conjunction with the
6 status report to once per year. And you've given
7 the basis for when you propose that revision, what
8 was staff's basis and I will not repeat it.
9 But you also heard the commentary of the first
10 panel.
11 Is there anything -- I wanted to give you
12 this opportunity since I said I would; do you have
13 any reaction to what they put forward, the other
14 caveat being that you said the staff is still
15 reviewing the comments received.
16 So you alerted me that you are not done yet
17 reviewing those?
18 MR. FREDRICHS: Yes, thank you. One thing I think strikes
19 me when our licensees are talking about the long time frames involved and the
20 amount of money involved is that they have great faith in
21 the market being able over a period of time to
22 reach the targets that they have had.

1 As prudent regulators, we need to question that and
2 show whether or not -- whether or not those targets
3 are reasonable and whether or not our assumption
4 that we have in our regulations are the right ones.
5 We now have about 12 years of experience with the
6 earnings credit and we have learned more about how
7 well that works.
8 The other thing is I guess on the timing
9 issue is the fact that we were suggesting that it
10 should be trued up every year. Part of that was
11 due to our reading of the regulation but also part
12 of it was due to the fact that we believe small
13 increments every year are easier to handle than
14 large increments every once in a while.
15 Another thing that I think I might take
16 some issue with, that the idea that having to true
17 up the fund on some regular basis would lead to risky
18 investment behavior I think is kind of an
19 overstatement of the facts.
20 Our regulations in fact require a prudent
21 investor standard so our licensees are not really
22 free to engage in any particular risky investments.

1 So those are some of the perspectives I have on
2 that.
3 COMMISSIONER SVINICKI: I would just
4 comment that I didn't necessarily hear from the
5 first panel, and I will review the transcript but I
6 didn't really hear necessarily an objection to having to true up
7 the funds on some frequency. I think the
8 question became more of what's the right frequency.
9 And I addressed that question to Mr. Mothersole,
10 again, maybe thinking it would be a helpful
11 perspective if he is not too close to the issue to
12 say what is a reasonable time period.
13 And I think his response is characterized, there is
14 no magic number and that a business cycle is a
15 little bit longer.
16 But he wasn't willing to say that as the regulator,
17 there is some really natural choice for us there.
18 So that was that topic. But on the concerns about
19 the parent guarantees, can you again, you know, this
20 is the engineer/economist thing, can you help me
21 understand what the staff's concerns are and were
22 proposed in modifying the requirements associated

1 with the use of the parent guarantee? What are we
2 guarding against there in kind of the simplest
3 terms?
4 MR. FREDRICHS: With the parent guarantee that's available
5 to all licensees essentially and one of the concerns, well there are two
6 concerns really and one of them goes back to some of the accounting
7 scandals around 2000 with Enron and World Com and
8 off balance sheet types of requirements. So the
9 parent guarantee will include an auditor's opinion of
10 the off balance sheet transaction,
11 whether there might be
12 significantly adverse risk to the parent. And the
13 second thing we are putting in there is some protection in the event that
14 the parent company would be called into bankruptcy.
15 We propose requiring an acceleration clause which is
16 that if they are called into bankruptcy, the
17 immediate amount would be immediately due if the NRC
18 so choose to do so. It was primarily to give us a larger
19 claim in the bankruptcy court because your votes on
20 the settlement plan are commensurate with the size
21 of the debt that they owe you. So those were a
22 couple of the major thing that is I recall.

1 COMMISSIONER SVINICKI: Thank you. That's very
2 helpful.
3 MR. FREDRICHS: If I could, expand on my earlier
4 answer on the timing of these covering the
5 shortfalls: The other thing that I think I'm struck
6 hearing the licensees is that they are
7 asking for a certain amount of time from the time
8 that shortfall occurs.
9 Our regulations as I mentioned earlier in
10 the three step process are intended to be forward
11 looking.
12 The licensee know that every two years they are
13 going to have to give us a report.
14 They know that before they give the report which way
15 the markets are trending and how their funds are doing.
16 And the real intent there is for them to use some
17 planning ahead rather than taking that report date
18 as the discovery date and working from there, they
19 should be looking ahead and when they make the
20 report, at the very least, we would expect them to
21 at least have a plan to resolve it if not already
22 resolving it.

1 That's part of the experience we had that except for
2 one case, 26 of the 27 licensees waited until we
3 called them and said, what are you going to do about
4 it?
5 So, that's something that I think we would
6 like to encourage licensee to do is get that forward
7 looking response rather than backward looking.
8 COMMISSIONER SVINICKI: First step of course would be to come to
9 some agreement on the magnitude of the shortfall and I
10 think each of us on this side of table with the
11 Exelon example asked about at least what were
12 the differences and why was there such a large range
13 there.
14 There would need to be some understanding
15 if that was the case where your suggestion that they
16 have a plan immediately if they calculate the
17 shortfall to be significantly different, they are
18 going to have a proposed remedy that would also be
19 different.
20 So it seemed to me that coming to some adjudication
21 of the agreed upon shortfall would be a necessary kind of
22 precursor to the step that you just outlined.

1 I wanted to turn quickly to commingling of funds
2 since that also came up with a number of the
3 participants in the first panel. And Mr. Bailey,
4 you talked about this some in your presentation.
5 And I had asked the earlier panel about this inherit
6 ambiguity, it's a little bit like -- and I said I was
7 going to resist comparisons to personal
8 finances, but if I look at my
9 bank account and I say
10 well, next month's mortgage payment is in there
11 but so is my utility bill, my cable bill and I
12 can't tell you which dollars are for which but I know
13 it's in there. You don't really have proof of that
14 until you pay it out.
15 So is there anything that you see again
16 given your broader experience with decommissioning
17 funding, anything that gets to the heart of this or
18 nervousness about the inherit ambiguity of
19 commingling these funds?
20 Are there any smart people who have come up with
21 great ways other than complete segregation of it?
22 MR. BAILEY: Well, there are advantages and

1 disadvantages to commingling.

2 Commingling by creating a pool gives you the

3 advantage of risk sharing so that if indeed the

4 costs for radioactive cleanups turn out to be more

5 than needed, perhaps you can share the funds that

6 have been put aside for none radioactive cleanup.

7 That's an advantage, a disadvantage of course is

8 that you have a common pool that may be drawn upon

9 for purposes that are in conflict with purposes for

10 which you have asked that the money be put aside.

11 And certainly, I could envision provisions

12 that could be added to trust funds that might be

13 able to provide a process if the funds remain

14 commingled for the interested parties to try to

15 arbitrate situations where they may be crossing the

16 lines for the amount that each is asked to be set

17 aside.

18 COMMISSIONER SVINICKI: And I guess I

19 would just add in response that there is some

20 commonality and effort here in that we used a lot

21 today soil contamination or spills, that if I hire

22 labor to go in and remediate, they are not going to

1 pick out if it has hazardous and radioactive
2 constituents. That is going to be one remediation
3 that solves both,. Thank you, Mr. Chairman. I'm sorry, I'm
4 over my time.
5 But I'm done.
6 CHAIRMAN JACZKO: Well, we had a lot of
7 discussion about the dates and unfortunately all of
8 us on this side of table, we probably don't
9 understand the dates as well as we would hope or I
10 should speak for myself, I certain don't. A year
11 has been thrown around a lot and right now, as I
12 understand right now in practice essentially we do is
13 every two years, licensees are required to come in
14 and report the status of their funds.
15 That's the current phase in which we find
16 ourselves now. When did licensee actually report
17 the status of the funds to us? When is this cycle?
18 MR. FREDRICHS: March 31, of the odd number
19 years.
20 CHAIRMAN JACZKO: So it's almost a year
21 ago already that they reported.
22 Now, so we are already a year into getting --

1 once we do the staff review and do all of this. So when we talk
2 about the current practice, it's effectively,
3 every two years they are require to report and at
4 that point, they come to us, they tell us what the
5 status of the funds are and we maybe have a situation
6 in which there are things that need to be modified.
7 It is shown that right now, that took us about a
8 year to do that.
9 So, what is the year at which we are
10 talking about -- what is the year we are talking
11 about? Is it a year from the time they report? Is
12 it when they report? What do we mean by when we say
13 we change the guidance to a year?
14 MR. FREDRICHS: The guidance now says every two
15 years in conjunction with the biennial report so
16 that would be March 31 of every odd numbered year.
17 CHAIRMAN JACZKO: They should come in on
18 March 31 with the status of the fund and their
19 correction.
20 MR. FREDRICHS: And their correction.
21 In fact, there was a case where that arose, I think
22 in the 2003 report where there was one licensee who

1 had the opinion that they had two years from the
2 time of the report to do it.
3 The staff position was no, you are
4 supposed to look forward two years and be done by
5 March 31st in the event and that particular case
6 by September of that year, the market had risen so
7 it become a moot point.
8 CHAIRMAN JACZKO: So going back to our
9 current situation, so effectively, nobody did what
10 they were supposed to do here because we got
11 accounting on March 31st. And now, it has taken
12 us nine months to a year to get some folks to make
13 the correction. So, at a minimum, we're not even
14 following the current guidance?
15 MR. FREDRICHS: I would say that's reasonably
16 fair. And I think the change we are going to make,
17 you were asking about the year, is that the
18 regulations do require the licensees to recalculate
19 the target amount every year.
20 And in the guidance, it was I guess it was taken to
21 be as of December 31st of the year.
22 So if on for example last year, they would have

1 calculated a shortfall, the proposed guidance would
2 say to correct it by the end of the following year.
3 CHAIRMAN JACZKO: So and I think and we
4 got some interesting things from OGC and they gave
5 us a good look back at the historical development
6 and it was clear at some point the Commission said
7 we're not going to specify in the rule when you have
8 to do this but leave it to guidance which is a
9 double edged sword because that puts it into
10 guidance which throws it into a year, two years, six
11 months, two months, 25 years, I don't know what the
12 right number is.
13 But, it seems at a minimum at least
14 understanding that concept, that when we get -- the
15 request comes in, because in theory what it was this
16 time around was 3 years realistically because from the
17 last reporting to this reporting was a two year period
18 and now it has taken us about a year to get the
19 funds corrected so we are really talking in this
20 case about a three year time period when the current
21 guidance says at least two years so we are not even in the
22 current guidance so the starting point is to try to get the current

1 guidance to work maybe before we start shortening
2 down further to a year as we go forward but I think
3 that certainly, and that's something that I think as
4 we -- I'm sure as the Commission continues to look at this
5 issue, we will figure out some way to do that. But
6 I guess now, I was looking at it as kind of a four
7 year, every two years they update us and I had that
8 interpretation as the others from what I have been seeing happening around me
9 that then, they had another two years to make good
10 on the shortfall.
11 But that is not really the practice and is
12 not what's in the guidance. At least, even if we
13 don't change the guidance, we should be expecting in
14 March, 31 if there are shortfalls, those should come
15 with a kind of get well plan what that time which is
16 about a year from now.
17 I don't know what that means in grand scheme of the
18 years and all the things that we are doing but that
19 may be a place at least to start and put some great
20 focus on this.
21 One of the issues as I heard at the discussion with
22 Exelon was about the differences in their use of

1 SAFSTOR.

2 Maybe you can talk a little bit more about

3 what was the confusion there and how do we go

4 forward, if there are things we can change to make

5 the to guidance that would further clarify how if

6 people are going to use SAFSTOR how they properly do

7 their submittal so what we are aware of it appropriately and

8 we can come to a better agreement as Commissioner Svinicki

9 and Dr. Klein said in making sure at least, we

10 understand the numbers to begin with.

11 MR. MCGINTY: I would say the primary confusion is

12 that as Mr. Levin mentioned, the licensee needs to

13 explicitly reference the appropriate methodology

14 that they are using in order for staff to make a

15 determination, otherwise, we default to the minimum

16 formula. That was the primary driver.

17 As you know through the course of the year for plants

18 even beyond Exelon, we have successfully resolved issues. We had

19 a number of conference calls. My staff which is

20 primarily located over there in that section, they are truly

21 experts in this field.

22 They very successfully got to common ground and

1 common understanding with the licensees upon
2 discussions. It is a complex topic.
3 It takes some amount of working through the issues
4 but they are able to get there. So that's what I
5 think was the primary cause.
6 CHAIRMAN JACZKO: Well, I think I certainly
7 appreciate the work the staff did to do that and I
8 think in general, this has been a success story.
9 By and large, I think that there were certainly a lot
10 of utilities that had challenges. There were a
11 lot that didn't and the ones that did, we by and
12 large made progress and the six remaining we have a
13 path forward particularly with the SAFSTOR
14 clarification but certainly I guess as we go
15 forward perhaps if there is anything we can leave
16 folks who are listening with if you are a utility out there and intend
17 to use SAFSTOR just le us know and then it is easier.
18 I didn't every any other questions so I will turn to Dr.
19 Klein.
20 COMMISSIONER KLEIN: I guess I'll start with you, Tim. Of the
21 six plants that are in process and about to be resolved,
22 was there any theme that made those more challenging

1 than the 21 that are okay?

2 MR. MCGINTY: I can't really come with a common theme so we

3 discussed that in advance. Again it is working through

4 issues.

5 I think the most valuable thing the staff is

6 endeavoring, we mentioned we did a workshop in

7 August of 2009 and we are doing a -- we have a

8 session at the RIC, continuing to work with all

9 stakeholders to make sure there is a common

10 understanding and in future changes to seek to

11 achieve clarity, certainty in the regulations and the

12 guidance is the best thing that we can do to prevent

13 any such issues in the future.

14 COMMISSIONER KLEIN: Well Tom, are the

15 merchant plants allowed to consider market gains in

16 their decommissioning funds?

17 MR. FREDRICHS: Well, they can take advantage of

18 any gains they have made to the extent that the

19 balance on the trust fund has risen.

20 As far as going forward, the regulations allow them

21 an earnings credit of 2 percent on that balance

22 until well, until such time as they get to

1 the decommissioning project which could be at license
2 expiration or could be after a period of SAFSTOR.
3 But they only get the 2 percent. They can't really
4 project something else.
5 COMMISSIONER KLEIN: I guess Mr. Bailey, from your
6 perspective, should merchant plants be considered significantly
7 different than non merchant plants for their decommissioning funds?
8 MR. BAILEY: I would have to say absolutely yes.
9 They live in a different world unless they have non
10 bypassable wire charges or other mechanisms that get
11 them back to the ratepayer. They are in the
12 marketplace by choice and they will reap the
13 benefits but also reap the risks of that. And from
14 the financial assurance point of view, I would say
15 they have to fall in a different category than the
16 rate regulated utility.
17 COMMISSIONER KLEIN: I thought that Commissioner Svinicki's
18 assessment of engineers trying to talk to economists was a very good
19 assessment. In terms of us trying to come to a common language. I will repeat
20 a question that Commissioner Svinicki asked at our briefing many months ago,
21 are there any utilities that have a surplus in their decommissioning funds?
22 MR. FREDRICHS: Yes, there are.

1 In particular the California utilities where
2 apparently, the State has decided that more money is
3 better than the minimum amount for NRC.
4 COMMISSIONER KLEIN: And then, her follow-up
5 question was, if a utility that has a surplus in
6 their decommissioning funds wanted to, can they come
7 in and use some of those funds to move some of these
8 large components off-site with the understanding
9 that they might have to replenish those funds at a
10 later point if they were not sufficient?
11 MR. FREDRICHS: Well, I believe the staff
12 position on that is that the regulations would
13 state that once money is into the fund,, that
14 withdrawals are not permitted except for
15 decommissioning purposes.
16 So, the staff's position would be that it should not
17 be so used.
18 However, it is also possible in extraordinary
19 cases to get an exemption from that and it would depend on I think the precise
20 case that's before us. In the event where
21 there is a public service commission there is extra funds and it
22 may be that there is a set of circumstances where it

1 would be approved. But staff position at least on
2 the face of it would be that generally speaking we
3 would not entertain withdrawals from the
4 decommissioning funds.
5 COMMISSIONER KLEIN: So is the staff's position that
6 removing those large components is not
7 decommissioning?
8 MR. FREDRICHS: To the extent it is done during
9 the operating phase, yes, that's true.
10 The definition of decommissioning is to remove
11 residual radioactivity in order to release the site.
12 Radioactive waste removed during operation is not
13 decommissioning. It's operating cost.
14 MR. MCGINTY: Commissioner, if I could, could you also discuss
15 how the use of subaccounts would be germane to this
16 topic?
17 MR. FREDRICHS: Yes. It is a little different
18 view on it but, particularly in the case where there
19 is a State Utility Commission involved but a merchant
20 plant could do the same because they still have to
21 collect money that certainly, a plant could set up
22 forward looking saying starting today I'm going to start

1 collecting money to dispose of large components and
2 assuming they could show decommissioning funding
3 assurance, they might be able to reduce
4 contributions to the trust fund for .
5 example on a going forward basis and
6 in fact, the South Texas project recently came to
7 that sort of understanding with the State of Texas.
8 Although the plant itself was a merchant plant,
9 nonetheless, the State has arrangements for
10 ratepayers to pay into their trust fund.
11 And they recently set up a series of subaccounts
12 where some of the decommissioning.
13 collections will be paid into an account to dispose
14 of their reactor head rather than being paid into the
15 decommissioning trust where it would be they couldn't
16 withdraw it.
17 So there are ways for the licensees to approach the
18 problem without necessarily withdrawing from the
19 funds from the trust account.
20 COMMISSIONER KLEIN: Are there many utilities
21 that have subaccounts that could let them remove
22 vessel head and steam generators if they so desire?

1 MR. MCGINTY: I would have to defer to Tom.

2 MR. FREDRICHS: The one we were aware of is

3 South Texas partly because there is a provision in

4 their trust fund to notify NRC if there are

5 withdrawals going on so they notified us.

6 I mean, I mentioned before, refundable escrow

7 accounts that some states have set up and you could

8 imagine the case where that's in the escrow funds,

9 not really in the decommissioning funds and the

10 State could refund it, pour it into the

11 decommissioning fund or authorize it for use in

12 these large components removal purposes.

13 COMMISSIONER KLEIN: When you established

14 your decommissioning guidelines, were you

15 considering the possibility of removing large

16 components at that time?

17 MR. FREDRICHS: Well, if you're referring to the

18 latest guidance that we reviewed with the timing on

19 the funding, I would say no, that was not something

20 we had looked at that point.

21 COMMISSIONER KLEIN: You also talked that you had a

22 draft Reg Guide 1229 out for comment. Has there

1 been a theme of comments you been getting back?

2 MR. FREDRICHS: Well, the theme is really amazing

3 variety and breadth of comment, although kind of

4 summarized them all, I would say that the comments

5 which are essentially industry comments are that our

6 rules are good now, they have been successful in the past and

7 no change is needed.

8 And that there are concerns for financial

9 disclosure requirements. There are concerns that the use of

10 parent company guarantee as staff believes it should

11 be used could impact their bond ratings.

12 There is concern that truing up the trust funds too quickly

13 could cause sub-optimal investment decisions, that

14 sort of thing. But it's just a wide variety.

15 COMMISSIONER KLEIN: What has been the response

16 to the possibility of using PRA for the

17 decommissioning funds?

18 MR. FREDRICHS: Well, we have not really had

19 responses yet because while we were working through

20 I think the comments and also in preparation for

21 this in trying to look forward to the future, that

22 this is I think probably, the first mention that we

1 might want to do that.

2 So, that's why we were putting it in the phrase of

3 considering it and of course, we would be welcoming

4 a lot of comment and information on it.

5 COMMISSIONER KLEIN: Thanks.

6 I would encourage you as you move forward to

7 how you handle your decommissioning funds to

8 consider really the best way to handle some of these

9 large components, that if utilities want to remove

10 those off-site as you heard from the State of New

11 York and I have heard from others where several of

12 the states would like the opportunity for those

13 components to be moved, and so I would encourage you

14 to look at a balance of how one can do that but yet

15 still maintain appropriate funds if

16 various states and utilities want to do that and

17 not just get locked in on no you can’t and so I encourage you to

18 consider that as one of your options as you move

19 forward.

20 Thank you.

21 No further questions.

22 CHAIRMAN JACZKO: Well, thank you. I will just

1 close with a couple of thing and one I think
2 certainly Dr. Klein brings up an interesting point on the large
3 components the staff did have a petition for rulemaking. The
4 staff denied so staff's position has been clear on
5 this issue and the Commission didn't take any action
6 at the time.
7 So certainly baring any Commission action, the
8 staff position is what it is and I think it will
9 stay that way.
10 I think it's interesting when we talk about
11 these issues of large component decommissioning, do you know how much a s
12 steam generator replacement costs a utility?
13 MR. FREDRICHS: I can recall being at Point Beach.
14 It took six months to do it so half a year's
15 revenue. It's expensive
16 MR. LEEDS: Hundreds of millions of dollars.
17 CHAIRMAN JACZKO: How much does it cost to dispose
18 of steam generators? Does anybody
19 in the audience?
20 AUDIENCE MEMBER: The South Texas proposal for the large
21 component removal estimated it at about $20 million.
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2 CHAIRMAN JACZKO: So we are talking about

3 hundreds of millions of dollar projects, a cost of

4 $20 million. I continue

5 to believe there is a way

6 for utilities to find the resources to appropriately

7 dispose of those steam generators without needing to

8 use decommissioning funds. They find the resources

9 to do hundreds of millions of dollars in steam generator

10 replacement.

11 We are not talking about a significant cost relative

12 to steam generator replacement, of course, the steam generator

13 replacement often has advantages from a revenue standpoint. It

14 generates additional revenue. It does a lot of

15 things that potentially provides the incentive for

16 longer operation of facility, all of those kind of

17 things. So, there is a tremendous financial incentive to it.

18 I think in the end from a safety and a radiological

19 dose perspective, the right answer is to move those

20 steam generators right away regardless of what the

21 funding mechanism is and I don't think it is a

22 prohibitive cost at all in the entire program of

1 steam generator replacement.

2 So I think as we go forward, it is important to keep

3 that in mind as we do this. But I think this has

4 been a very informative meeting and I think the

5 Commission probably has some interest I would sense

6 on the Reg Guide as you go forward and figure out

7 the right mechanism to get that up to the Commission

8 so we can review it and make any comments or give

9 you feedback and suggestions on that as you go

10 forward. But appreciate very, very good

11 presentation. I appreciate the work you did in the

12 last year to get these decommissioning funding

13 issues solved and the whole issue put behind us

14 until next year. Thanks.

15 (Whereupon, the proceedings were concluded)

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