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1 UNITED STATES OF AMERICA

2 NUCLEAR REGULATORY COMMISSION

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4 BRIEFING ON NUCLEAR WASTE SAFETY

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6 TUESDAY

7 JANUARY 30, 2001

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9 ROCKVILLE, MARYLAND

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11 The Commission met in the Commissioners'
12 Conference Room, 1F16, One White Flint North, 11555
13 Rockville Pike, Rockville, Maryland, at 9:30 a.m.,
14 Richard A. Meserve, Chairman, presiding.

15
16 PRESENT:

17	RICHARD A. MESERVE	Chairman
18	NILS J. DIAZ	Commissioner
19	GRETA J. DICUS	Commissioner
20	EDWARD McGAFFIGAN, JR.	Commissioner
21	JEFFREY S. MERRIFIELD	Commissioner

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

(9:30 a.m.)

CHAIRMAN MESERVE: Good morning. On behalf of the Commission, I'd like to welcome you to today's briefing by the Office of Nuclear Materials Safety and Safeguards, the Office of Nuclear Regulatory Research and the Regional Office, represented by Region 4 on the status of programs in the nuclear waste safety arena.

As I think everyone in the audience knows, this is the third of our arena briefings. We've had them previously in the nuclear reactor safety area and in the materials safety arena and this one will move on to the area of the waste area.

Although the activities in this arena are perhaps less diverse than those in the materials arena, they present challenges that are unique and are very significant and difficult. We very much look forward to the presentations by the staff that has confronted them, the difficulties that this area presents.

Let me turn to Dr. Travers now to start the briefing.

DR. TRAVERS: Thank you, Chairman Meserve and good morning. The staff is glad to be here to

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1 provide the Commission with the status of the nuclear
2 waste safety arena, as you've indicated. Today, as we
3 have been doing, we plan to highlight for the
4 Commission our achievements in the past fiscal year,
5 talk about some on-going and planned staff initiatives
6 in the waste arena and some of the key Agency
7 challenges that we see for the current and upcoming
8 fiscal years.

9 As you are aware, the nuclear waste safety
10 arena is a dynamic arena. It does have some
11 diversity, certainly, and it includes facility
12 decommissioning. It includes areas of both high level
13 and low wastes, including the storage transportation
14 and the disposal of those licensed materials.

15 And once again, we've brought together a
16 key senior management team to provide the briefing.
17 Carl Paperiello is, of course, the Deputy Executive
18 Director for Materials Research and State Programs.
19 Marty Virgilio is the Deputy Director for the Office
20 of Nuclear Materials Safety and Safeguards. Margaret
21 Federline is the Deputy Director for the Office of
22 Research. And as you've indicated, Ellis is here with
23 us today, Ellis Merschoff who is the Regional
24 Administrator for NRC's Region 4 and with that, let me
25 turn it over to Carl for the briefing.

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1 DR. PAPERIELLO: Thank you. Good morning.
2 Could I have Slide 2, please?

3 (Slide change.)

4 DR. PAPERIELLO: Today, I'm pleased to
5 report to you on the NRC activities in the nuclear
6 waste area as both the Chairman and EDO have alluded
7 to this strategic arena includes some of the most
8 dynamic and sensitive areas in which the NRC is
9 involved, including high-level waste storage
10 transportation disposal, decommissioning and license
11 termination, low-level waste and release of material
12 from regulatory control.

13 The Commission is and will continue to be
14 involved in a number of very important policy
15 decisions in this arena in the coming year. The
16 nuclear waste arena is the smallest of the three
17 technical programs the Commission is being briefed on
18 with about one fifth of the FTE that is in the reactor
19 arena.

20 The NRC has met all strategic and
21 performance goals in this arena in Fiscal Year 2000.
22 There were no deaths, no major radiological events, no
23 significant releases and no loss of formula,
24 quantities of materials and no major environmental
25 impacts.

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1 There were no events that resulted in
2 radiation, overexposure, no breakdowns of physical
3 protection that resulted in a vulnerability to
4 radiological sabotage, threat, diversion or loss of
5 special nuclear materials or radioactive waste; no
6 environmental releases from operational activities
7 that exceeded the regulatory limits and no cases in
8 which radioactive wastes could not be safely handled,
9 transported, stored or disposed of.

10 The NRC met 7 of 10 output measures. Mr.
11 Virgilio and Margaret Federline will discuss the
12 output measures further, but those that were not met
13 involved high-level waste which were two items for
14 which lacked an EPA standard, or one item, a lack of
15 incoming applications in the case of transportation
16 containers.

17 I want to acknowledge that success on many
18 issues in this area is due in large part from the
19 cooperation of many offices and these issues involve
20 clearance, reactor license termination, congressional
21 inquiries, partial site release, decommissioning and
22 license termination and international coordination.

23 I would now like to discuss some of the
24 key challenges in this arena. Could I have Slide 3,
25 pleas?

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(Slide change.)

DR. PAPERIELLO: Although we are challenged to risk inform our activities, especially our way of thinking and reacting to regulatory challenges, I believe this arena has been informed by risk considerations in several areas. The decommissioning rule is both risk informed and performance based. We are working to achieve the same result in Part 63.

Later in this presentation, Mr. Virgilio will describe additional activities in dry cask storage and spent fuel transportation to risk inform them.

Stakeholder confidence in this arena is very complex. In a case of high-level waste, there's a wide array of stakeholders from the Congress, DOE, Department of Defense, utilities, State utility regulators, Nevada State and local government officials and the public. Decommissioning has had a large amount of public involvement and has been affected by differences between the NRC and the EPA. We are involved with hearings on the licensing of private fuel storage and numerous stakeholder meetings have been held on clearance, a topic currently being studied by the

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1 National Academy of Sciences.

2 We have developed communications plans
3 discussed later in this presentation to enhance
4 stakeholder confidence and the NRC's ability to
5 complete its mission in an efficient and timely
6 fashion.

7 We have discussed in previous
8 presentations the need to maintain a highly competent
9 staff in the materials and reactor safety arenas.
10 Some of the core competencies in this arena include
11 performance assessment, criticality, particularly
12 relating to burn-up credit, several disciplines
13 relating to the geological sciences and the overall
14 ability to master computer codes for a variety of
15 environmental evaluations. And as we have discussed
16 in the other arenas, there is a focus on entry level
17 hiring and a formal qualification program for
18 inspectors and license reviewers.

19 Our interfaces with other agencies are
20 very important in this arena. The matrix of EPA
21 interaction shows interactions in 18 areas. The NRC
22 is extensively involved with DOE in this arena, both
23 as a licensee or applicant under Parts 40, 63, 71 and
24 72, a co-regulator on ISCORS and a supporting agency
25 with respect to material or site custody. We are

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1 engaged with the other federal agencies making up
2 ISCORS.

3 Key Commission policy issues involving
4 other federal agencies could include the presidential
5 guidance on public exposure. And recall that although
6 our Part 20 limit is 100 millirem per year, the
7 presidential guidance which hasn't been updated in a
8 couple decades is still 500 millirem per year. We
9 anticipate that the EPA may offer a revision of that
10 guidance in the coming year. The finality on
11 decommissioning is still an open issue.

12 Sewer sludge and ash standards, this
13 project to characterize sewer sludge and establish
14 standards of the EPA began as a result of a
15 congressional hearing several years ago. It is coming
16 to completion in a coming calendar year.

17 We are interacting with DOE as you're well
18 aware on decommissioning criteria for West Valley and
19 we are interacting with DOE on other issues, one is
20 taking title or custody of certain sites under Section
21 151(b) of the Nuclear Waste Policy Act and also their
22 accepting greater than Class C waste that has been
23 placed in dry cask canisters. And all of these issues
24 will likely be coming to the Commission for policy
25 decisions.

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1 I'll now turn the presentation to Marty
2 Virgilio.

3 MR. VIRGILIO: Thank you, Carl. Good
4 morning. If I can have Slide 4, please?

5 (Slide change.)

6 MR. VIRGILIO: The first part of this
7 presentation I'd like to talk about the output
8 measures. MNSS met six of the output measures, those
9 associated with resolution of technical issues for the
10 Yucca Mountain site, those associated with commenting
11 on DOE's programs, specifically comments on the draft
12 environmental impact statement, high-level waste
13 storage and installation design reviews, maintenance
14 of the low-level waste regulatory framework,
15 specifically a branch technical position for low-level
16 waste performance assessments, and we've removed three
17 sites from the site decommissioning management plan
18 list.

19 What we did not meet were three measures,
20 as Carl said, associated with this program. The first
21 we did not publish Part 63 on the schedule that we had
22 anticipated, that having to do with the resolution of
23 a number of complex technical issues and it was also
24 complicated by the delay of the standards required to
25 be issued by EPA.

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1 Similarly for the draft Yucca Mountain
2 Review Plan, the guidance that we're going to use to
3 evaluate a submittal by DOE, we did not publish that
4 guidance, again, because of the resolution of complex
5 issues and the delay in the issuance of the standard
6 by EPA.

7 With regard to transportation reviews, we
8 completed 96 of our transportation container design
9 reviews. We had originally scheduled to complete 125.
10 However, mid-cycle, about the middle of the year in
11 the January-February time frame, we realized that the
12 incoming, that did not meet our expectations. We
13 weren't getting the submittals at the rate that we
14 expected to get the submittals. So therefore we
15 revised our target downward and took those resources
16 and used them to work down the expending cases that we
17 had. So that's how we did against those output
18 measures.

19 The next slide I just wanted to talk
20 about, actually the next two slides I want to talk
21 about some on-going assessments that we have within
22 the waste arena.

23 (Slide change.)

24 MR. VIRGILIO: The first is to rebaseline
25 the materials decommissioning program. Much of this

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1 effort was described in a SECY paper. It was SECY-
2 0094, the status of the decommissioning program that
3 we issued last April. NMSS is currently in the
4 process of rebaselining the materials decommissioning
5 program to determine the current status of each site
6 on the site decommissioning management plan and also
7 the status of each of our complex sites.

8 What we'll be doing is is developing site
9 status summaries and updating those site status
10 summaries on a quarterly basis. For those licensees
11 that have submitted a decommissioning plan, we'll use
12 the schedules that are included in those
13 decommissioning plans. For those licensees that have
14 not yet submitted a plan, what we intend to do is work
15 aggressively with the licensees to get the information
16 we need to make the projections.

17 Individual site milestones will be
18 established and they'll be tracked, not only in this
19 plan, but at a more detailed level in our own
20 operating plants.

21 In addition, I mentioned interacting more
22 directly and more aggressively with these licensees.
23 We will be doing that to get the information we need.
24 We will also be doing that to resolve any issues that
25 we have. We're going to streamline our review

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1 processes so that we get down to one question per
2 review approach to doing business. We'll be
3 conducting side by side confirmatory surveys with the
4 licensees as they go through the decommissioning
5 process and we'll wrap this up in terms of status
6 reports periodically for the Commission. The next
7 status report for the Commission is due to you in
8 August of this year.

9 That's all I wanted to say about that
10 effort, but there's another effort that's closely
11 linked to that and that has to do with the
12 decommission appropriations funding analysis that we
13 have under way. Here, in response to Commission
14 direction, we've started a number of additional
15 initiatives and assessments under way. The first
16 having to do with estimating and requesting funds for
17 State directed remediation of terminated licenses in
18 affected States.

19 These are nonagreement States. Then we're
20 also -- the second phase of this is to look at the
21 SDMP or site decommissioning management plan sites and
22 other complex sites and look at establishing an
23 agreement with DOE for long-term care of these sites
24 following the termination of the license. And the
25 third phase of this effort is to identify potential

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1 sites where licensees may have insufficient funds to
2 conduct decommissioning and as part of that
3 assessment, we'll be preparing initial cost estimates
4 for both unrestricted and restricted release options
5 and determining whether the State or other federal
6 agencies might be willing to direct site remediation
7 for these facilities.

8 Like the decommissioning program, we'll be
9 wrapping this up periodically in assessments for the
10 Commission to give you updates on where we stand on
11 these programs and the next update for the Commission
12 on this program is due in April of 2002.

13 If I can have Slide 6, please?

14 (Slide change.)

15 MR. VIRGILIO: The next assessment I
16 wanted to brief you on is the consolidation and update
17 of the NMSS decommissioning policy and guidance. This
18 is a two-phase program that we have underway today.
19 The first phase is basically to identify the guidance
20 documents that we would be consolidating and updating,
21 not all of them are subject to this updating process;
22 developing technical basis to support the updating
23 process and interacting with the stakeholders as part
24 of the decommissioning process.

25 Phase 2 will actually be the revision and

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1 consolidation of the guidance and approval of any
2 policy issues will come forward to the Commission and
3 then we'll go forward and implement that program.

4 I wanted to also mention the risk group
5 case studies of Bill Kane. When we briefed on the
6 materials arena mentioned these studies. What we're
7 doing today is looking at the waste arena in specific
8 areas to determine what has been done in terms of risk
9 informing our programs to see what can be done in the
10 future to establish a framework for further risk
11 informing the activities in the waste arena and also
12 to see if we can derive and develop safety goals in
13 this area.

14 Individual studies that we'll be doing in
15 the waste arena include site decommissioning,
16 radioactive material transportation and spent fuel
17 interim storage.

18 On the subject of risk, I'll divert for
19 just a second and talk about risk training. We have
20 just taught the first basic risk training course. We
21 did that here in headquarters. It's the introduction
22 to risk assessment. It's a P400 series course. We
23 did this here in headquarters with a lot of assistance
24 from TTC. Ken Raglia and his staff were very
25 instrumental in helping us develop this course.

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1 This is a course that's being designed for
2 all headquarters' employees that are involved in the
3 waste arena, and also, the region-based employees that
4 are involved in the waste arena as well, so it's for
5 both reviewers and inspectors that are working in the
6 technical matter.

7 This course was developed with significant
8 headquarters and regional input and another course
9 that we're working on today is the introduction to
10 risk management for NMSS and technical managers.
11 That's going to be a P401 course.

12 These courses, although they're primarily
13 going to be given here in headquarters in FY01 we have
14 one scheduled to be given in Region 3 as well. So
15 we'll be getting out into the field and offering these
16 courses out there as well.

17 Now the next phase of the project, beyond
18 teaching or providing course opportunities for the
19 managers working in this arena is to provide more
20 detailed training for the people that are actually
21 using these tools. This is just a basic course that
22 we have now. What we want to do is more forward and
23 have an advanced training program and NMSS and the TTC
24 staff today are working together to develop a needs
25 assessment that will allow us to better design this

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1 course more specifically to the decisions that have to
2 be made.

3 That's all I wanted to say on that slide.
4 If I could move to Slide 7, please.

5 (Slide change.)

6 MR. VIRGILIO: NMSS has a number of other
7 related initiatives that I just wanted to highlight to
8 you in the waste arena, the first being in
9 communications. Carl mentioned our initiatives here
10 to improve stakeholder confidence. We are
11 communicating both internally and externally.

12 Today, internally we are developing policy
13 and procedures guidelines and individual
14 communications plans. Our internal communications
15 initiatives include regular staff meetings and then
16 periodic meetings at the office management level with
17 all NMSS staff.

18 We're also getting out to the regions
19 periodically. Our senior managers are out
20 participating in the region counterpart meetings.
21 Also speaking of the topics that we have, hot topics
22 and issues of the day.

23 We're creating an NMSS internal website
24 and we're using an NMSS e-mail box for additional
25 communication purposes internally. When I think about

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1 externally, I look at the communications plans that
2 we've developed and are further refining particularly
3 in high level waste, including transportation. We
4 have communications plans. We have established a
5 website in that area. We're developing a set of
6 frequently asked questions and answers to those
7 questions to be used both internally and externally.

8 For decommissioning we have a number of
9 related initiatives under way including workshops that
10 we've had. Site-specific training and we're starting
11 to use the site survey, the feedback form that's been
12 developed for the public meetings and getting a sense
13 for how these presentations are going.

14 On the web status, NMSS has been actively
15 engaged in the Agency-wide effort to redesign the web.
16 We're working along with CIO and other partners in
17 this project. We are currently mapping our web pages,
18 the NMSS web pages to the new web design and we're
19 looking at how we periodically maintain these pages to
20 keep them up to date and keep them relevant so that
21 the stakeholders that log on to the web can get to
22 them easy and have information that they can readily
23 understand.

24 Another initiative that we have underway
25 has to do with empowerment. What we want to do is

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1 basically increase employee satisfaction at NMSS and
2 also increase the efficiency and effectiveness of our
3 programs.

4 We believe that we have a number of
5 initiatives underway that have the capability to
6 increase empowerment in NRC and when I talk about
7 increasing empowerment, I'm just basically talking
8 about increasing the authority and accountability of
9 the staff at all levels to make decisions within their
10 scope of responsibility and perform tasks that they're
11 responsible to perform.

12 On the last item I just wanted to speak to
13 briefly is rulemaking for certificates of compliance.
14 We have a number of initiatives there to improve our
15 efficiencies.

16 Three initiatives I wanted to highlight to
17 you include the use of standard rulemaking packages,
18 both for the rulemaking plans and the final rulemaking
19 packages. Having these certificates signed out by the
20 EDO has also streamlined the process and we're also
21 using direct final rulemaking for the amendment
22 process which has been very successful. We've used
23 this six times thus far. We've had one case where we
24 had significant comments that dictated we go back into
25 the more normal routine rulemaking process. But when

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1 you think about efficiency, we've gone to a cycle that
2 typically takes about 51, 52 weeks and we brought it
3 down to 23 weeks. So it's a significant time and
4 resource savings by using the direct final rulemaking
5 process.

6 There are also a number of other
7 initiatives beyond these three that I'd just like to
8 highlight, one being the new 7248 change process.
9 This is like 5059 allowing licensees to make changes
10 that don't significantly increase risk or have a
11 minimal increase on risk without prior NRC approval.
12 And we are currently responding to a petition for
13 rulemaking that's come in from NEI that would amend
14 the rulemaking process to make it more traditional,
15 more like a traditional licensing process forecast as
16 opposed to what we do today which is a rulemaking
17 process. And our staff recommendations to the
18 Commission are due within the next few months.

19 That's basically all I wanted to say about
20 the initiatives that we have on-going in the waste
21 arena and Ellis Mershoff is next and is going to speak
22 about what the regions are doing in the waste arena.

23 MR. MERSHOFF: Thank you, Marty. Good
24 morning, Chairman, Commissioners. I appreciate the
25 opportunity to be here today.

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(Slide change.)

MR. MERSHOFF: The Regions are implementing a diverse and evolving inspection program in the waste area. By way of illustration of this diversity, we inspect permanently shut down reactors to assure that activities are being performed safely and in compliance with NRC requirements, with emphasis on safe dismantlement operations and verifying that systems critical to the safe storage of spent fuel are properly monitored and maintained.

For shutdown reactors and active dismantlement, we inspect about four times per year and may increase the number of inspections based on the level and nature of safety significant activities in progress.

For permanently shut down reactors and safe store, we inspect about one or two times per year.

Our decommissioning inspections include reactors, fuel cycle facilities and materials sites where the emphasis is placed on radiation safety and control, the rigor and adequacy of licensee decommissioning programs and independent measurements. A number of materials and former fuel cycle sites are under enhanced oversight through the site

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1 decommissioning management plan, the SDMP plan.
2 Nationwide, we currently have about 18 reactors in
3 decommissioning or safe store, 27 SDMP or other
4 complex decommissioning sites, and 18 former uranium
5 recovery sites in remediation.

6 In addition to the major decommissioning
7 activities just mentioned, the Regions also conduct
8 inspections as needed of partial site release and
9 routine materials licensed decommissioning and close
10 out. Construction and licensing of independent spent
11 fuel storage installations is a growth business in the
12 Regions. We inspect civil, structural, security,
13 operational and health physics aspects of ISFSI
14 construction and operation. Currently, there are 19
15 operating ISFSIs with 18 more announced and in the
16 planning stages nationwide.

17 Although uranium recovery activities are
18 actually in the materials arena, a majority of the
19 uranium recovery licensees are in some phase of
20 decommissioning and site reclamation and a Region's
21 inspection program for these sites is focused on these
22 activities.

23 Inspections are conducted by Region 4 at
24 18 former uranium recovery sites. Most of these
25 operated as conventional mills at one time and have

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1 large volumes of tailings and other waste. During
2 these inspections we assess the adequacy of the rock
3 cover, the radon barrier, ground water management and
4 we take independent measurements. These inspections
5 are conducted at least once every two years with a
6 number of inspections increasing as a function of site
7 activity.

8 May I have Slide 9, please?

9 (Slide change.)

10 MR. MERSHOFF: Formerly licensed sites
11 nationwide include about 675 loose material and 564
12 sealed source sites that have been or will be located
13 and surveyed by regional inspectors as an overcheck of
14 the former AEC and NRC decommissioning decisions. So
15 far, 38 of these sites have been found to have
16 contamination levels above NRC's restrictive release
17 limit.

18 The current role of the Regions in the
19 inspection of high-level waste entails oversight of
20 ISFSI construction, loading and operation and in the
21 future may include, if licensed, inspection of
22 construction activities at Yucca Mountain and private
23 fuel storage.

24 Our low-level waste inspection program
25 includes facilities like Envirocare where we focus on

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1 control and isolation of 1182 waste. These
2 inspections focus on waste recede and handling
3 operations, radiation safety and environmental
4 protection. The Regions also conduct routine
5 inspections of waste generators which include operator
6 and reactor fuel cycle facilities and material
7 licensees to ensure the proper storage, packaging,
8 classification and transfer of low-level waste for
9 disposal.

10 In the waste arena, the Regions are
11 involved in the inspection of transportation
12 activities involving all classifications of waste,
13 from low specific activity material up to irradiated
14 and spent fuel. These inspection activities include
15 the preparation of the shipments, verification of
16 shipping package requirements have been met and route
17 surveys.

18 Slide 10, please.

19 (Slide change.)

20 MR. MERSHOFF: The Regions have made
21 excellent progress in these areas. Our inspections
22 have ensured safety operations at decommissioning
23 facilities and recent successes include activities
24 such as the Trojan reactor vessel removal project,
25 progress in the large component removal and vessel

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1 segmentation at Adam Neck and at Maine Yankee and
2 removal of the ventilation stack at Humboldt Bay.

3 In the fuel cycle areas, the Siemen's
4 Power Corporation rafenate pond and legacy waste
5 cleanup progress and General Atomic's trigger fuel
6 facility decommissioning and release are both examples
7 of success and progress.

8 In the materials are, waste material
9 processing and recovery at the Fan steel site in
10 Oklahoma, the hot cell facility decommissioning and
11 release at General Atomics in California, and the
12 underground waste removal at the Safety Light
13 Corporation in Pennsylvania additionally represent
14 successes in this area.

15 Our public outreach efforts have been
16 successful as evidenced by positive feedback from
17 public, local officials, licensees and the media.

18 In the areas of waste management we've
19 contributed to safety at Envirocare in the areas of
20 dose control and effluence; at Atlas Mohab where
21 exposure to members of the public were approaching
22 public dose limits was largely as a result of site
23 radon emissions and this resulted in changes to the
24 licensee's program for monitoring public dose.

25 In the high-level waste area at Fort Saint

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1 Rein fuel was successfully loaded into their ISFSI at
2 TMI too also loaded into the ISFSI at the Idaho
3 National Engineering and Environmental Laboratory and
4 transportation of foreign research reactor fuel to DOE
5 Idaho was accomplished safely.

6 Finally, challenges in this arena will be
7 addressed later by Carl, however, I'd like to
8 highlight the Regions' key challenge for Fiscal Year
9 2001 which is staffing and training to support these
10 diverse areas and their associated evolving
11 requirements, while simultaneously training and
12 transitioning to a risk-informed regulatory
13 environment.

14 At this point, I'll turn the presentation
15 over to Margaret Federline and I'd be happy to answer
16 questions at the end of the presentation.

17 MS. FEDERLINE: Thanks, Ellis. Good
18 morning. May I have Slide 11, please?

19 (Slide change.)

20 MS. FEDERLINE: During my presentation
21 this morning, I'd like to discuss how research is
22 contributing to meeting Agency performance goals in
23 the waste arena and just touch on a few of the
24 challenges which we see are specific to research in
25 this arena.

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1 Research exceeded its waste arena output
2 measure of issuing three research products that
3 respond to high and medium priority needs by
4 completing four products. As discussed in the
5 materials briefing earlier, Fiscal Year 2000 targets
6 focused on our developing realistic models for
7 assessing radiation exposure. During Fiscal Year 2001
8 we have moved additional activities into the waste
9 arena including the release of solid materials, dry
10 cask storage and burnup credit and I'll discuss those
11 on the next slide.

12 The goal of our radionuclide transport
13 program has been to develop a tool box of analytical
14 tools which facilitate the reviews of the broad range
15 of sites that are included in this arena, including
16 decommissioning sites, waste disposal sites and
17 uranium recovery and mill tailing sites.

18 This year, we've made important progress
19 in completing our tool box. We completed a technical
20 data base of hydrologic parameter distributions for
21 use in the probabilistic versions of radionuclide
22 transport models and the goal of this is to facilitate
23 a more transparent understanding of uncertainties
24 related to these analyses.

25 We also completed a probabilistic version

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1 of RESRAD which is a popular radionuclide transport
2 model and we've had very positive feedback from our
3 stakeholders as they're able to use this to calculate
4 more realistic estimates of potential doses.

5 We also completed guidance for
6 characterization of decommissioning sites containing
7 mineral slags from ore processing at SDMP sites. This
8 work draws upon our cooperative work with Johns
9 Hopkins University on degradation of archeological
10 slags and it provides a more realistic basis for leach
11 rates from such slags and will be used in the reviews
12 of SDMP sites.

13 We also completed recommendations to the
14 Commission on the entombment option for
15 decommissioning considering previous research and also
16 reflecting the views of our stakeholders that we
17 interacted with during this process.

18 We'll continue to support NMSS in this
19 regard as they develop a rule making plan which will
20 come to the Commission in June of this year.

21 Now one of the most significant challenges
22 specific for research in this area which will really
23 benefit public confidence is the development of common
24 models among federal agencies who worry about the
25 transport of radioactive materials. We're excited to

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1 say that we're reaching an important milestone in that
2 regard. We're culminating a Memorandum of
3 Understanding with five other research organizations
4 and EPA, DOE, the U.S. Agricultural Research Service,
5 U.S. Geologic Service and the Corps of Engineers.
6 This work will not only focus on the modeling
7 concepts, but also on exchanging scientific
8 information as a basis for the models and making sure
9 we have a common understanding among the federal
10 agencies. This will facilitate our work on the next
11 tool that we need which is a linkage to a multi-
12 dimensional ground water flow model for use in our
13 more complex decommissioning sites.

14 May I have the next slide, please?

15 (Slide change.)

16 MS. FEDERLINE: The discussion on this
17 slide will illustrate our broad involvement in arena
18 activities. Research has actively supported NMSS in
19 their activities related to controlling the release of
20 solid material. Our role in this regard is to develop
21 the technical basis which the Commission will need in
22 its deliberations on how to move forward on
23 controlling the release of solid materials.

24 We've been sharing the results of our work
25 internationally and also trying to take advantage of

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1 the extensive work that's going on elsewhere in this
2 area.

3 In Fiscal Year 2000, the Commission is
4 familiar, we placed the contract with the National
5 Academies of Science to examine the alternatives for
6 controlling release of solid materials. We also
7 completed significant technical work in these areas,
8 including more realistic parameters for dose modeling
9 for clearance of soils.

10 In 2001, we plan to expand upon the work
11 that was conducted in NUREG-1640 for estimating
12 individual doses. We want to look at estimating
13 collective doses, get a better handle on inventories
14 of clearance materials, as well as looking at the
15 implementation and operational costs of the scenarios
16 that we've defined in this area.

17 One of the most significant areas of
18 technical work during the coming year will be to
19 develop a performance-based regulatory approach in
20 this area, focusing on measurability as opposed to
21 detectability. Our work emphasizes defining practical
22 survey protocols and analytical techniques. For
23 example, we're working on expanding the MARSSIM
24 methodology which covered surface contamination and
25 expanding it to use

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1 performance-based techniques to look at volumetric
2 contamination.

3 And of course, our challenge in this area
4 is to see that the technical work all stays on
5 schedule so that we can provide this information to
6 the Commission in a time frame consistent with the
7 results of the National Academy Study.

8 In the dry cask storage area, we support
9 NMSS by providing technical information to confirm
10 decisions on renewal of dry cask storage
11 certifications. As you are probably aware, Virginia
12 Power is planning to come in for a license renewal in
13 April of 2002. We're involved -- our stakeholder
14 interactions in this area are particularly
15 significant. We're involved in a cooperative program
16 with DOE and EPRI to confirm the predicted behavior of
17 a cask that's been storing fuel for 15 years. We've
18 completed the visual inspections in this work and it's
19 shown no cask degradation, no tears in the seals and
20 no binding of the assemblies that were removed. So
21 this year we're planning to move on to some
22 destructive testing in this area to confirm the actual
23 fuel performance during long-term storage.

24 Another important component in future
25 activity is to confirm cask performance with storage

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1 of high burnup fuels by confirming cask integrity and
2 fuel integrity.

3 I just wanted to mention in the area of
4 burnup credit, the Commission is aware that fuel,
5 press fuel assumptions have been used for evaluating
6 criticality safety. Research has worked with NMSS in
7 defining a phased research approach which will allow
8 NMSS to grant incremental levels of more realistic
9 guidance in this area. You're probably aware that
10 NMSS has issued interim Staff Guidance 8, Revision 1,
11 which will allow licensees to take credit for Actinide
12 burnup credit. Our research was used in this effort
13 and we also have just provided information in December
14 which will allow licensees to expand the types of fuel
15 on which Actinide burnup credit can be used.

16 We're also going to respond to needs in
17 this area evaluating the feasibility of burnup credit
18 for fission products and we'll be using our phenomenon
19 identification and ranking process to focus on key
20 issues in this regard.

21 Our key challenge in this area is to make
22 sure that we don't duplicate work that's already been
23 done around the world and try and take advantage of
24 all the international work as well as RIVA's
25 experiment in Belgium that will benefit us in this

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1 regard.

2 That completes my presentation. I'll turn
3 it over to Carl.

4 DR. PAPERIELLO: Can I have Slide 13?

5 (Slide change.)

6 DR. PAPERIELLO: The program is evolving
7 and there'll be somewhat different emphasis in Fiscal
8 Year 2001 than in Fiscal Year 2000.
9 Risk-informed activities will increase. You have
10 heard a number of initiatives today and activities in
11 this area and I do want to note the role of research
12 in establishing the technical basis for a number of
13 these activities.

14 This is the year the high-level waste
15 transitions from prelicensing consultations with DOE
16 which I want to remind everybody were mandated by
17 Congress, to more traditional licensing activities:
18 review of the EIS and review of site suitability.

19 We expect the site recommendation this
20 year with a possible license application next year.

21 Using PBPM, we're going to be assessing
22 all program results and make appropriate changes and
23 this is being conducted as part of the Fiscal Year
24 2003 budget process which we have recently started.

25 May I have the next slide?

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(Slide change.)

DR. PAPERIELLO: What are the key issues that are likely to come up and in fact, will come up in Fiscal Year 2001, many of which will have Commission policy decisions involved? Licensing casework, significant licensing casework. Private fuel storage. High-level waste. Dry cask amendments. We mentioned the licensed renewal which will get an application in 2002, we expect for the slurry cast and will begin the process of renewing and establishing policies for IFSFI license renewals. Decommissioning and the SDMP program is now involved in more of the more complicated sites where there is going to be coordination needed with the EPA for chemicals and perhaps even DOE custody of the site, if for restricted release.

We will be working on a lot of environmental and technical standards. Margaret mentioned the multi-media models. This is a follow-on to MARSSIM and I'm going to talk about harmonization under emerging issues, but it plays an important role in harmonizing standard. At least, we ought to be able to predict the same consequences for a given distribution of radioisotopes in the environment.

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1 The Yucca Mountain Review Plan, clearance
2 studies, National Academy of Sciences review, the
3 modeling work both for material and for soil is on-
4 going. The contracts are in place for looking at the
5 detection, the measurement and surveying of
6 radioisotopes and material. Engineering barrier
7 research is on-going. We need to define more of what
8 we mean by institutional control.

9 There's a number of issues with ISCORs.
10 I mentioned the sewer sludge and presidential
11 guidance. We may also be dealing with issues on mixed
12 waste depending again on the speed at which EPA is
13 involved in rule making and I think I previously
14 mentioned West Valley.

15 Rulemaking, we've touched briefly on the
16 petition from NEI for changes in Part 72. There may
17 be changes in Part 72 that we recommend to you as a
18 result of our efforts to streamline the licensing of
19 dry cask, particularly the amendment process. We have
20 to complete, we expect to complete Part 63. We have
21 the greater than Class C waste rule. We have the
22 revision of Part 71 to bring it into alignment with
23 the international, current international criteria.
24 And we also have an OU, a potential -- a rulemaking
25 plan for entombment, potentially a plan. You'll get

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1 a paper. It will be your decision on whether to go
2 forward.

3 Emerging issues. What could happen? Low-
4 level waste, I think we're all aware that Barnwell is
5 closing. There is not much of a change in what they
6 will receive this year over previous years, but next
7 year it gets cut in half and in about, I think about
8 6 or 7 years, it is phased out, at least for out of
9 compact waste. That could evoke any number of
10 creative ways of dealing with waste. I don't know
11 what will happen, but some of these, we have a State
12 come in and talk to us and I guess to you, about
13 assured storage. Somebody may raise that. In fact,
14 if we would propose to accept entombment, one could
15 logically argue that assured storage isn't a lot
16 different. I'm not saying that we're going to prove
17 this. I'm just saying it could cause somebody to make
18 a proposed -- extended storage. In the past, when we
19 had the loss or potential loss of low-level waste
20 disposal sites, we encouraged utilities to build
21 facilities for extended storage of waste.

22 My guess is with the change in technology,
23 a facility built a decade or more ago that had a
24 capacity for certain number of years, would probably
25 have a much higher capacity because there's been

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1 tremendous volume reductions in waste over the last 20
2 years.

3 And we may be involved with the entire
4 care application to accept Class B and C waste. We've
5 already dealt with at least one letter from the State
6 of Utah on this issue. We may be asked questions from
7 the State for assistance and I don't know. We could
8 get asked to get involve with that.

9 And although we have responded recently to
10 a petition on FUSRAP, that could still come up in the
11 coming year.

12 There's any number of issues that deal
13 with harmonization. Traditionally, harmonization and
14 it was a meeting recently at the National Academy to
15 ask for input, is considered harmonizing chemical and
16 radiation standards. What I would assert and somebody
17 at that meeting did, not me, that we don't even have
18 harmonization among the radiation standards. I'll
19 give you an example. Soil. Licensed termination,
20 clearance or what we may get into later this year, the
21 spreading of sewer sludge on soil, you have the same
22 end state. Why shouldn't the standards be the same?
23 Why should the standard be a function of how you get
24 there? But in fact, we are evolving to a point where
25 the standard is a function of how you get there.

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1 There are issues with license termination
2 and transportation package contamination.
3 Transportation criteria evolved from essentially
4 nondetectable 50 years ago, based on portable
5 instruments at Los Alamos or at least I was told by
6 somebody who claimed to be on the panel to a dose-
7 based standard for decommissioning which could, in
8 fact, be higher than the package limit. So therefore,
9 I could decommission a facility and then a package
10 could be offered with higher contamination than Part
11 71 would permit. So there's an inconsistency in the
12 standards.

13 In institutional control, how do you
14 implement it and how long is it good for? And then
15 there is an issue in the Part 71, at least in the IAEA
16 proposal where whether or not a material is hazardous
17 is a function of what I intend to do with it. So if
18 an ore is going to be processed for say gold or
19 silver, the limits for hazardous material in terms of
20 uranium or thorium are 10 times higher if I intend to
21 process that mineral for its uranium values.

22 International developments, it could
23 certainly affect us on clearance, on exemptions, on
24 exclusions and commodities. We can't preclude
25 additional, at least if I read the tarde press

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1 legislation, it could affect us. So these are all
2 issues that are emerging and could come up in the next
3 year, at least that I could foresee.

4 We have the licensing support network.
5 This is the information handling system to deal with
6 all the information that would -- that might be
7 involved in a hearing on an application for high level
8 waste disposal. The target to have that system in
9 place is this year. There's also issues involving
10 build out for the hearings, not necessarily to be
11 completed this year, but in future years, to build the
12 facilities both here and in Nevada to hold such a
13 hearing.

14 We've already heard about the diverse and
15 evolving inspection program. We have to recognize as
16 the number of facilities grows, we're going to have to
17 be handle the inspection of these facilities within
18 the current staffing levels. We have to implement our
19 various goals for hiring and retention. Our target
20 this year is 25 percent entry level and that is a
21 major challenge because in previous years we didn't
22 make it.

23 Margaret touched on the expanding
24 cooperative research program that we're entering into.

25 If I could have the next slide?

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1 (Slide change.)

2 DR. PAPERIELLO: In summary, we have met
3 our strategic and performance goals. We met 7 of the
4 10 output measures and we discussed the ones that we
5 did not meet. We have -- we are using -- we're
6 beginning to use the PBPM process to emphasize
7 outcomes and I think I presented to you, I hope I
8 have, the key challenges that we face and what we're
9 doing about them.

10 I would now like to turn it over to Bill
11 Travers.

12 DR. TRAVERS: Well, I'll just simply say,
13 Mr. Chairman, that that completes the staff's
14 presentation.

15 Thank you very much.

16 CHAIRMAN MESERVE: I'd like to thank all
17 of you for a very helpful presentation. You certainly
18 have arrayed before us an intimidating list of matters
19 for us, all of us, to deal with.

20 Let me turn to my colleagues for
21 questions.

22 Mr. Diaz?

23 COMMISSIONER DIAZ: Mr. Chairman, first,
24 I'd like to thank Carl for his introduction and when
25 he clearly talked about risk-informed and performance-

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1 based approach it's a long story, I'll make it short.
2 But I have a bunch of white hairs trying to convince
3 Chairman Jackson to separate risk-informed from
4 performance-based. I'm pleased to see that Carl now
5 is right at that stage where I'll trust that he will
6 do that.

7 However, having said that, if you look at
8 page 13 of the presentation, the staff is still using
9 --

10 COMMISSIONER MERRIFIELD: Don't bask in
11 self-congratulations.

12 (Laughter.)

13 COMMISSIONER DIAZ: The staff is still
14 using risk-informed, performance-based, while in the
15 presentation, these issues were clearly separated and
16 can only be put together on certain specific
17 occasions.

18 Will you please make up your mind whether
19 you have risk-informed or performance-based which I
20 agree with Carl, of risk-informed, performance-based
21 and reality, you know that the Commission has said
22 clearly we are behind
23 risk-informed and/or performance-based. And that is
24 a very clear distinction and I will encourage the
25 staff when they put these things in their slides to

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1 make that effort.

2 Now let me to go the real issues in here.
3 First, now that I have Carl on the burner and I
4 praised him so highly, now I'm going to put him back
5 on the burner.

6 The beginning statement you stated that
7 there was no release from any site that was in excess
8 of NRC limits. But however, Mr. Merschhoff says that
9 there were 37 formerly licensed sites that have
10 exceeded NRC limits. You put those two things
11 together for me? There's something I'm missing in
12 there.

13 DR. PAPERIELLO: I think we were referring
14 to the fact that we went back and looked at all of the
15 previously released sites, sites that were released by
16 the AEC and like in the old days. And we identified
17 that many sites that had to be recharacterized and re-
18 looked at because we think we may have released them
19 without -- I would argue we probably released them in
20 accordance with the criteria that we thought we had in
21 the 1960s. In other words people were working against
22 500 millirem per year. By today's criteria using 25
23 millirem, that is not acceptable. So I think -- and
24 I don't have numbers. I can't tell you which sites
25 fall in which categories, but we did find that number

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1 of sites over the years, over the last several years
2 when we went back and looked at all of -- I forget how
3 many sites.

4 DR. TRAVERS: I think we're rolling up a
5 compilation of that information. I think all the
6 inspections are intended to be complete this year.

7 COMMISSIONER DIAZ: So we will have that
8 information.

9 DR. PAPERIELLO: I understand.

10 COMMISSIONER DIAZ: There just seemed to
11 be a little discrepancy in there.

12 The issue of public confidence and I know
13 that that has been a major new undertaking for you
14 this year and you had plenty of opportunities to test
15 how well we're doing in many different areas. Are you
16 gathering these things together in a more compact plan
17 with your lessons learned and these things? Are we
18 getting to a point where we can really more
19 effectively use our efforts in this area?

20 MR. VIRGILIO: I would say high-level
21 waste and transportation, Commissioner Diaz, are two
22 areas where we're continuously assessing the feedback
23 and the lessons learned from the meetings and
24 incorporating these in our plans and activities.
25 Staff are being trained, procedures are changing. The

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1 way we interact at the meetings are constantly
2 evolving as a result of these lessons learned. And
3 they're tough lessons too. It's a tough crowd out
4 there when it comes to high-level waste and
5 transportation issues. So these are challenging
6 meetings for our staff, but they are meeting the
7 challenges.

8 COMMISSIONER DIAZ: All right, thank you.

9 Mr. Merschhoff, you talk about the diverse
10 and evolving inspection program and you talk about how
11 we're trying to train both the headquarters and the
12 region staff on becoming more aware of what risk-
13 informed regulation is.

14 There's a lot of issues in here that are
15 performance-based. How is our training program in the
16 regions addressing these issues of really looking
17 ahead, having our people trained to be able to address
18 that very diverse performance-based issues?

19 MR. MERSHOFF: We have a training program,
20 training journals that we follow that have been
21 revised and reviewed to move more towards performance-
22 based and in fact, we've seen that in the past year or
23 two, moving away from in the materials area, in
24 particular, program reviews and out into the field at
25 the site and observing activities actually being done.

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1 So we're ahead in terms of performance-based. The
2 next big challenge is risk-informed and we have the
3 tools in place. MARSSIM is having us focus in areas
4 that have the highest risk, so we can employ our
5 performance-based tools. The ISAs that are being
6 developed for the fuel cycle facilities are doing the
7 same thing.

8 COMMISSIONER DIAZ: All right, thank you.

9 Margaret, you talk about two words that
10 are very close to me, assurability and detectability.
11 Can you tell me specifically what have we gained in
12 that area that is positioning us well to be in good
13 tracking with where we should be regarding timeliness
14 in this issue?

15 MS. FEDERLINE: Yes. We essentially have
16 a three-pronged approach that we're looking at. We're
17 looking at developing improved survey protocols,
18 looking at improved analytical methods which will
19 allow us to enhance the survey protocols and then
20 finally, we're looking at implementation, cost
21 effective implementation of these. We have the
22 contractors in three different areas working to bring
23 those products all together and deliver them in a time
24 frame which the Commission will be able to consider as
25 it decides whether or not to go forward.

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1 COMMISSIONER DIAZ: Thank you. Maybe I'll
2 wait for my second turn, if there's time.

3 CHAIRMAN MESERVE: Commissioner
4 McGaffigan.

5 COMMISSIONER MCGAFFIGAN: Thank you, Mr.
6 Chairman. I'll join the other Commissioners in
7 commending the staff for doing a great job this last
8 year, moving the ball forward in so many areas.

9 There's a couple of questions I have, a
10 lot of them dealing with decommissioning. I see Mr.
11 Collins in the audience.

12 In terms of this arena, you mentioned,
13 Ellis mentioned the reactors. Is the reactor
14 decommissioning activities in this arena or are they
15 considered in the reactor arena?

16 DR. PAPERIELLO: They are considered in
17 this arena, but we overlap. That's not a --

18 COMMISSIONER MCGAFFIGAN: I'm just trying
19 to figure -- there's one challenge that I would have
20 thought might have been mentioned. There's a couple.
21 There's the spent fuel pool study that we're going to
22 have a separate Commission meeting on on the 20th of
23 February and we don't need to dwell on that. But NRR
24 also has an update of the supplement to the EIS on
25 reactor decommissioning underway that EPA and others

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1 asked us to do, I think the last time we had updated
2 that EIS may have been in the late 1980s, I forget.
3 And we've done some town hall meetings around the
4 country. We've got some complaints from some
5 stakeholders that they would have liked to have had
6 even more time to prepare for that -- those scoping
7 meetings and they've asked us to delay, etcetera,
8 which I don't think we're going to do, but that's a
9 major undertaking, fairly controversial and I would
10 have thought it might be included here. I think I
11 still see a little bit of stovepiping. It's a slight
12 -- in that we focus on NMSS waste arena as opposed to
13 the integrated waste arena here and it's just -- I
14 think that's an important undertaking and I think the
15 spent fuel pool issue study is an important
16 undertaking and if they're in the waste arena, I would
17 have listed them as challenges, just in passing, the
18 decommissioning rulemaking, the decommissioning
19 environmental impact statement, etcetera. It's just
20 for next year you might want to think about that.

21 DR. PAPERIELLO: I do want to address your
22 points and I think they're important. None of these
23 areas are really -- we broke them up a certain way,
24 but in fact, there's an overlap between materials,
25 both in the reactors as well as in the waste arena, so

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1 all the things -- we are paying attention to the EIS.
2 NRR has the lead on writing it, but I believe we're
3 giving them support. There's issues there.

4 On the spent fuel pool, obviously,
5 Zirconium Fire and the like, obviously research being
6 under me, I have an interest. I have read the paper.
7 I understand the paper. I have raised some issues
8 with the staff on the whole thing. Even though it may
9 be a predominant reactor, NRR project. I didn't put
10 it in this arena although I'm very cognizant of it.

11 MR. VIRGILIO: There is also a
12 decommission coordination committee that we have, so
13 managers on both NMSS and NRR. And I would say that
14 when I think about what we're going to hold up as a
15 significant accomplishment in 2001, it's going to be
16 the decommissioning of the Trojan and approval of
17 their license termination plan.

18 COMMISSIONER McGAFFIGAN: Ellis mentioned
19 the reactor. In the regions, all this stuff tends --
20 Ellis is the one person who integrated, and I want to
21 compliment him for that because he can't not integrate
22 in the regions.

23 MR. MERSHOFF: We are in the middle in the
24 case of SONGS, there's a project manager for NMSS.
25 There's a project manager for NRR.

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1 One thought, if I can add, we recently had
2 a decommissioning counterpart meeting that Region 4
3 hosted. It was a headquarters meeting. NRR was
4 there. NMSS was there. All of the offices work
5 together in discussing the common problem, so the
6 integration does occur.

7 COMMISSIONER McGAFFIGAN: I am sure the
8 integration occurs. And I'm sure -- I just think you
9 should highlight it at this meeting each year, just if
10 there are challenges. It doesn't mean that Sam or one
11 of his deputies has to be at the table, but I think it
12 would be worthwhile just saying we are working on this
13 major EIS and we're working on decommissioning.

14 By the way, I think that that paper,
15 Marty, that you mentioned, SECY-0094 was an excellent
16 paper. I mean it was in response to Commission
17 guidance, Commission Merrifield and I, to a lesser
18 extent, worked on that guidance at the time, but it
19 really gave us a comprehensive look at decommissioning
20 as it existed last April. I think the Commission,
21 you'll find, wouldn't mind having the -- you mentioned
22 an August due date. I think we wouldn't mind a June
23 due date for the update, but we thought it was going
24 to be annual and we can negotiate on that.

25 Margaret, on the complex codes, the last

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1 time we did have a decommissioning briefing for the
2 Commission, I thought we also were working on various
3 dates of the DND code to make it more realistic.

4 MS. FEDERLINE: Yes.

5 COMMISSIONER McGAFFIGAN: And I know we've
6 done some, but there was -- my recollection was that
7 we were trying to do a probabilistic RESREV --

8 MS. FEDERLINE: Yes.

9 COMMISSIONER McGAFFIGAN: And then we were
10 going to try to do a probabilistic DND.

11 MS. FEDERLINE: Yes, that's correct.

12 VICE CHAIRPERSON MITTEN: Where does that
13 latter stand?

14 MS. FEDERLINE: Yes, we have completed the
15 probabilistic version of DND as well. It was just not
16 featured as one of our performance targets.

17 COMMISSIONER McGAFFIGAN: Is it that the
18 stakeholders didn't like it as much as the
19 probabilistic RESREV?

20 MS. FEDERLINE: No, I think it was just
21 the tail end of a significant activity that we'd been
22 doing and our focus was on trying to also bring RESREV
23 into the probabilistic fold.

24 COMMISSIONER McGAFFIGAN: Finally, in
25 terms of maintaining staff, one of the staffs we have

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1 that's an extension, maintaining competence staff, one
2 of the staffs we have that's an extension of our staff
3 is the center staff. It's the only FFRDC that works
4 primarily for NRC.

5 How are we doing in terms of maintaining
6 competent technical staff there? Do they have
7 advantages compared to the civil service in being able
8 to maintain competent staff?

9 MR. VIRGILIO: I don't know about their
10 benefits package, but I do know that where we were
11 when I think two years ago back where we had vacancies
12 there that we were working to see and pressure the
13 center to fill, they've overcome that. They're
14 staffed today. And what we've done is I think we've
15 improved our ability to put additional work out there.

16 There are challenges as the flow of work
17 associated with the high-level waste project. It
18 tends to be a little bit cyclic. What we've been able
19 to do over the last several years, working very
20 cooperatively with their senior management is to
21 balance that work load out with other activities and
22 other projects.

23 So they've been able to maintain a fully
24 staffed center and be able to work as work comes in
25 for us on high-level waste to be able to focus on that

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1 work and not have to staff up again.

2 COMMISSIONER MCGAFFIGAN: I think that's
3 terribly important as we move forward towards
4 potentially dealing with site suitability
5 recommendations and potential license applications.
6 It's important that we maintain a very highly
7 qualified, fully occupied staff there.

8 Thank you very much, Mr. Chairman.

9 CHAIRMAN MESERVE: Commissioner
10 Merrifield.

11 COMMISSIONER MERRIFIELD: Thank you, Mr.
12 Chairman. I'd like to second the comments that
13 Commissioner McGaffigan just made about the center.
14 I think it's a very important resource for this
15 Commission and our moving forward in an informed wind
16 in decisions we have to make relative to
17 high-level waste and other waste issues, so I thank
18 him for those comments.

19 Directing first towards Carl, I make a
20 comment. To the extent we sometimes congratulate
21 ourselves as a Commission or the staff in terms of all
22 of the work that we have accomplished, the key
23 challenges, as you have outlined them certainly seem
24 to find that we remain relevant and have tasks ahead,
25 so I guess that's a positive thing.

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1 The first question I have is directed
2 towards Marty Virgilio. On page 4 of your slides, you
3 talked a bit about the output measures related to
4 transportation container design reviews where you had
5 an original target of 125. You've actually completed
6 96 and mentioned that, in fact, that was because of a
7 lower than anticipated number of -- lower than
8 anticipated receipt of materials from licensees.

9 You said as a result of that you modified
10 your goals. I didn't quite -- if you could sort of
11 walk through me what the actual numbers are. Did the
12 number of submissions equate to the number of your
13 modified goals and how are we to take that?

14 MR. VIRGILIO: We started out the year
15 with a projection of 125. And it's -- we do our best
16 to work with the stakeholders to get an understanding
17 of what the incoming is going to be, but sometimes
18 their estimates are not very precise. What we found
19 and this was our projections early on, so we started
20 into the year, the fiscal year, in September.

21 What we found in the January time frame or
22 so, January-February is receipts were down by roughly
23 30 percent. So we adjusted our projections and
24 revised that target from 125 down to 75, again,
25 there's a lot of uncertainty in the estimates.

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1 There's a difference between 30 percent, but there's
2 uncertainties, so we said let's revise our target down
3 to 75 and let's also start working on the pending
4 cases as a result of switching resources and attention
5 to some of the pending cases at the end of the year we
6 completed 96, so again, there's a little bit of
7 uncertainty.

8 You start with 125. You revise your
9 estimate down to incoming, expecting 75, start working
10 on the backlog and wind up in the end at the end of
11 the year with the combination of incoming and backlog
12 having completed 96 cases.

13 What we did was we reduced our pending
14 which at the time we started into this which is
15 roughly 50 down to roughly 35. So we were able to
16 bring the backlog down.

17 We also -- so in the end, we wound up
18 using roughly 90 so percent of the resources that we
19 had targeted for this area in this area and we shifted
20 some of our resources to dry cask storage. It was
21 roughly 10 percent of our resources were shift.

22 DR. TRAVERS: We are in what I call some
23 of the initial stages of looking at output measures
24 and tracking them to make sure that we're not gaming
25 the system. At the same time, I think an important

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1 point is here. If you think of the outcome that we
2 are looking to achieve, I think we've actually met
3 that even though when we report on some of this
4 quantitative prediction and actual accomplishment,
5 which we want to be pure on, I think an important
6 point would be to say that we've done it in a way that
7 we still met the outcome of the strategic goals of the
8 Commission in carrying out and using the resources
9 wisely given a change in the incoming requests that
10 we've had from stakeholders, from licensees and
11 applications.

12 COMMISSIONER MERRIFIELD: So I take it,
13 given your revised expectation of receipts, the number
14 you received was -- I was trying to follow your
15 numbers, around 80 receipts this year?

16 You said you worked off your backlog, 15
17 off your backlog and down to 35. So you're sort of in
18 that range?

19 MR. VIRGILIO: Right and as Bill said, the
20 desired outcome is to meet the incoming and to reduce
21 the pendings.

22 COMMISSIONER MERRIFIELD: I look forward
23 to -- I'm sure you're working on a more detailed
24 analysis of the accomplishments and I look forward to
25 reviewing those down the line.

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1 The second question goes to Margaret
2 Federline. On page 11 of the slides you discuss some
3 of your research initiatives that you currently have
4 underway. And in fact, you mentioned in your verbal
5 testimony that, in fact, you had four products that
6 were completed versus what you originally anticipated
7 would be three work products.

8 But my question is this, obviously the
9 Commission has spent a lot of time over the course of
10 the last year looking overall at the research programs
11 and balancing out those resources that we direct
12 towards short-term initiatives versus those which are
13 more engaged with long-term measures. In your
14 opinion, do we have at least as it relates to the
15 nuclear waste arena, do we have the right level of
16 balance between the short and long-term research
17 initiatives under way right now?

18 MS. FEDERLINE: Well, I think we're
19 discussing that with NMSS. Currently in the waste
20 arena we're 100 percent user need. That does not say
21 that the user needs don't look forward and I would
22 just identify a case of NMSS has asked us to look at
23 the package performance study.

24 You know, we have confidence that packages
25 are transported safely in this country, but one thing

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1 we want to do is provide more transparent
2 illustrations for public confidence and NMSS has asked
3 us to take a look at that and that would be a long-
4 term project, would involve international partners and
5 domestic partners as well.

6 So you know, we are looking at that very
7 closely. We'd like to move more in a direction of
8 anticipatory engineered barriers, I think, given the
9 emerging needs that Carl identified, looking at
10 assured storage and what not. We need to look at
11 effectiveness in that area, so you know, we continue
12 to talk with NMSS about this.

13 COMMISSIONER MERRIFIELD: Okay, and to
14 follow along Commissioner McGaffigan's line of
15 questions, is it your expectation to try to focus to
16 the extent that we can on some of those efforts to the
17 center to take full advantage of perhaps some of those
18 dips and peaks in terms of their work?

19 MS. FEDERLINE: Yes, absolutely. This
20 year we did ask for an independent review of
21 NUREG-1640 and the center conducted that, so we're
22 looking for opportunities to involve the center
23 wherever we can.

24 COMMISSIONER MERRIFIELD: Okay. The final
25 questions I've got for now and I may have some

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1 additional for you in the second round, but I direct
2 this toward Carl Paperiello and it's relative to the
3 Yucca Mountain efforts we have underway.

4 As you know, there has been over the
5 course over the last few weeks some concerns raised
6 over DOE relative to the extent to which they may be
7 leaning forward in their efforts at Yucca Mountain.
8 And questions have been raised by the Nevada
9 delegation and individuals from Nevada about the
10 activities over there. Obviously, I think certainly
11 from the rest of us the interest of the individuals
12 from Nevada, people live in that site are important
13 and should be appropriately balanced.

14 I want to direct a couple of questions at
15 you just to clarify my own concerns. Do you believe,
16 is it your impression that our Agency has a
17 predetermined outcome relative to our review of issues
18 associated with Yucca Mountain?

19 DR. PAPERIELLO: No.

20 COMMISSIONER MERRIFIELD: Have you been
21 instructed by the Commission or anyone else associated
22 at the Commission to reach a specific outcome related
23 to the recommendations of the NRC relative to the --

24 DR. PAPERIELLO: Definitely not.

25 COMMISSIONER MERRIFIELD: You've not. If

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1 you or other members of the staff believed that the
2 science either through what we do independently or
3 through the center or other information becomes
4 available to us, demonstrates that the licensing of
5 Yucca Mountain would not be appropriate, are you
6 prepared to give that recommendation to the Commission
7 or do you have any reservations about giving that
8 recommendation to the Commission?

9 DR. PAPERIELLO: Most certainly. We're
10 going to give the Commission our best views and it's
11 more complicated than that because we're putting out
12 continuous reports on what we're finding in the
13 raising issues. I mean we raised a number of issues
14 with DOE. We do it in a public forum. So I don't
15 think we have exhibited a predisposition. We're
16 looking at the information and we're challenging the
17 information and we're applying our own thoughts to the
18 issues.

19 Now you say you're working on Yucca
20 Mountain. That's because Congress mandated that be
21 the place to be evaluated and mandated that we consult
22 with DOE. I mean I don't actually have the resources
23 or the mandate to say go out and evaluate, work on
24 another site. But we are doing our -- trying to do
25 and I think we are doing the best science that we can

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1 and making, and showing it to everybody.

2 COMMISSIONER MERRIFIELD: I thank you for
3 those answers. I certainly am comforted by -- I don't
4 know if anybody else of the Panel wants to make an
5 addition to any comments that Carl Paperiello has
6 made?

7 DR. TRAVERS: I don't think we could add
8 anything to that. That's just where we are. Thank
9 you.

10 COMMISSIONER MERRIFIELD: Great.
11 Obviously, it's important and I think the public
12 expects us to be independent in our views and to make
13 whatever decision we feel is scientifically
14 appropriate to the site so I thank the staff for that
15 comment. Thank you.

16 CHAIRMAN MESERVE: I have just a few
17 questions to follow up on some minor items in the
18 slides that provoked -- my questions are really
19 provoked by the oral presentation.

20 On Slide 6 when you were talking about the
21 various case studies underway associated with the risk
22 task group, obviously this was a vehicle for us to
23 learn how we might think about risk-informing some of
24 the activities in the materials and waste area.

25 You had indicated that one of the areas

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1 that you were examining as one of those case studies
2 was decommissioning. If I were to pick one example of
3 something where I think the Commission has already on
4 record of proceeding on a risk-informed basis it was
5 decommissioning in that our license termination rule
6 is a dose standard which obviously is related to risk
7 and everything is driven by trying to achieve
8 compliance in that area.

9 What more -- I'm intrigued to know what
10 more the staff contemplates, thinks we should do in a
11 decommissioning standards area to make it more risk-
12 informed than it is already.

13 MR. VIRGILIO: I don't know that there is
14 anything. I agree with you. We've done a lot. The
15 license termination rule has taken us to a dose-based
16 standard that is a risk-informed approach to
17 regulating and decommissioning. What I think we can
18 do here is look to see if there are insights that
19 could help us shape safety goals in this area and that
20 would be, I think, the emphasis of this study.

21 All of these studies go to what have we
22 done, what can we do, what further could we do to
23 risk-informed our programs, but they also are going to
24 inform our on-going study to see if we can derive
25 safety goals in these areas, whether one goal would be

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1 sufficient to envelope all of what we're doing within
2 the waste arena or whether a series of goals would be
3 a more appropriate way to address this issue.

4 And so we've broken it down in these case
5 studies and in this decommissioning case study it
6 would inform us, at least in this segment of what
7 we're looking at as to what would be a safety goal or
8 a set of safety goals?

9 CHAIRMAN MESERVE: On Slide 7 under "Other
10 Related Initiatives" you have a relation, you
11 indicated empowerment as an on-going task which, of
12 course, is a very important area and one in which we
13 want to make this a work environment in which people
14 feel that they're accomplishing appropriate goals and
15 feel satisfied with the work. You indicated that one
16 of the ways you were trying to do that was increasing
17 authority and responsibility at lower levels?

18 MR. VIRGILIO: Yes sir.

19 CHAIRMAN MESERVE: And you might talk
20 about that a little bit more. It comes to mind and
21 particularly to me in that we had a -- not in this
22 arena, but we had an IG report that had talked about
23 the review of the steam generator issue and was -- the
24 assertion was that it had been done at too low a level
25 without adequate supervision. I recognize there's a

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1 factual issue there that we and the staff may
2 disagree, but there's -- it does seem to me that
3 there's a dilemma for us on making sure the decisions
4 are made at the right level, but at the same time
5 making sure there's a satisfactory review and I'd like
6 to -- you might talk about how you confront that sort
7 of dilemma and how you make sure decisions are made at
8 the right level?

9 MR. VIRGILIO: Let me just set a little
10 bit of a backdrop. I'll get to your question. With
11 respect to how we're approaching this at NMSS, it's
12 almost on an individual basis, an organizational unit
13 basis. It's -- there are so many diverse activities
14 that I don't know that we could band everything with
15 one policy or one set of tools to promote decision
16 making at the right level.

17 So what we've done is we've established
18 groups within NMSS to go down and look at -- for
19 example, licensing reviewers and inspectors and staff
20 working on rulemaking. What decisions do they have
21 before them? What decisions are they making today and
22 could they make decisions at the higher level?

23 We recognize that rulemaking -- within
24 this context you recognize that rulemaking is the
25 responsibility of the Commission, so that there are

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1 limits to decisions that can be made at any level as
2 you work up the chain of command, but certainly we
3 have division directors, we have deputy office
4 directors, division directors, branch chiefs, section
5 chiefs that are making decisions through that process
6 on a particular rule and can we elevate that? Can we
7 bring some of the decisions that are being made at the
8 branch level down to the section level or down to the
9 reviewer level?

10 That's the challenge today, not that we
11 would at the staff level sign out a rule. We
12 recognize that that's not -- that's the prerogative of
13 the Commission, not been empowered to the staff. But
14 there are things that the staff can do with regard to
15 outlining options. Who is responsible for determining
16 what would be the best set of options for a given
17 rulemaking? What we'd like to do is bring that down
18 to the staff level and have the staff members who's
19 working on that lay out the options, lay out the pros
20 and cons for the options. We believe that that will
21 lead to a more satisfying job for that individual and
22 promote even better decision making.

23 Now you work your way up the management
24 chain and concurrence chain and as you work higher up
25 you make sure that the policy is right, you make sure

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1 that the decisions are sound in light of other things
2 that maybe that individual staff members can't see
3 from their perspective. But I see that's our vision
4 of how empowerment can work, just in that one example.

5 We do have team leaders. We do use the
6 team leader concept, so we are now moving decisions
7 downward in the organization.

8 CHAIRMAN MESERVE: My question is really
9 how you police it. We've all had opportunities to
10 work with, work for bosses before who have possessive
11 of issues and sometimes appropriately so and sometimes
12 inappropriately so from the vision of the worker. And
13 I just wonder how as a management matter you sort of
14 police the issue of how you make sure decisions are
15 made at the right level and things that can be done
16 quickly at a low level, a lower level are done that
17 way?

18 MR. VIRGILIO: Part of it is feedback from
19 the employees themselves. That's one mechanism that
20 we're going to test in NMSS to see if we can do that,
21 by surveying the employees, understanding how they
22 feel about their job, how they feel about the
23 decisions they're making and then coming back again as
24 we move through these empowerment initiatives and see
25 if the attitudes have changed.

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1 If we're sensitive to this as managers, I
2 think we'll look at the accomplishments and how the
3 work was accomplished at the staff level and we
4 provide feedback through the performance assessment
5 process as well.

6 CHAIRMAN MESERVE: Margaret, I'd like to
7 follow up on a question which Commissioner Merrifield
8 had asked you in that you had indicated at the moment
9 that work that you, research now undertakes in the
10 waste arena and I think materials arena as well is one
11 that is basically 100 percent driven by requests that
12 are made from others of research.

13 I think one of the great challenges for
14 research operation here is looking over the horizon
15 for the issues that are emerging that are not yet so
16 really apparent to those who are in the trenches of
17 having to deal with the every day business of the
18 Agency.

19 I wonder do you share that view, first of
20 all?

21 MS. FEDERLINE: Yes.

22 CHAIRMAN MESERVE: And then secondly, you
23 had mentioned engineering barriers, I think as one
24 issue where you think that maybe research might want
25 to move out of a little more quickly than your patrons

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1 would suggest.

2 Are there other things that NMSS has
3 identified as things that it thinks it should be doing
4 that relate to this arena that it does not have
5 underway?

6 MS. FEDERLINE: I think engineering
7 barriers is one of our primary areas. I think looking
8 at methods for uncertainty analysis in terms of
9 modeling environmental effects, I think we can push
10 the state of the art there. I think where we can be
11 very effective in supporting our internal stakeholders
12 is perfecting the methods in a particular area and
13 looking generically at the science, not in a case
14 specific way, but making sure the best science is
15 brought to bear.

16 And I think in the materials arena there's
17 a lot of development in materials, ceramics and other
18 materials, that offer long-term promise. They're not
19 things that are being used today for waste disposal
20 sites, but we see over the horizon could be used and
21 that we could prepare the Agency to make decisions in
22 that regard, but we think it's extremely important to
23 have the balance between looking ahead and doing
24 short-term needs.

25 The waste arena in research has a very

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1 small budget and sometimes we have to have the
2 flexibility to in responding to current needs, you
3 know, to do that work, but I think our long-term goal
4 and I think NMSS shares this with us is to have a
5 balance between anticipatory and confirmatory
6 research.

7 CHAIRMAN MESERVE: Commissioner Dicus?

8 COMMISSIONER DICUS: I want to follow up
9 on the empowerment questions that the Chairman asked
10 and I think you answered one of my questions was how
11 are you evaluating what the staff feels of
12 empowerment? How is this coming back and you said you
13 are going to do that. I assume that hasn't been done
14 yet?

15 MR. VIRGILIO: No.

16 COMMISSIONER DICUS: So we'll hear about
17 it next year?

18 MR. VIRGILIO: Right. We are working very
19 cooperatively with Office of Human Resources. They've
20 been supporting us with contract assistance and we are
21 in the process of working to initiate the first survey
22 and then we would come back and test that baseline
23 again at a later time, but basically it is to test
24 employee satisfaction, how do they feel about
25 empowerment and then to come back. As a result of

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1 that survey, then we would go in and we would do some
2 training for the managers and staff, specific to that
3 organizational unit. So you might have one manager
4 that's more empowered than another. They might get a
5 different training program as a result of the survey
6 and then we'll come back and test it again
7 periodically.

8 COMMISSIONER DICUS: We'll look forward to
9 hearing about that next year.

10 Research. One of the criticisms that has,
11 on occasion, been leveled with research and I don't
12 know -- it was more of a general, was a timeliness
13 issue, whether the projects that were done were done
14 in a way that the user that needed the information got
15 it in a timely fashion. I'm assuming these products
16 that did come out of research this year were timely?

17 MS. FEDERLINE: Yes, we believe we've
18 implemented some process improvements working with
19 Marty and Bill.

20 One thing we've done is integrate our
21 operating plans, in other words, research milestones,
22 go into NMSS operating plans and precursor items go
23 from NMSS, go into research operating plans. So we
24 can tell at any one point in time if they have a shift
25 in a need or if we have a delay because of some new

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1 findings, it will immediately become apparent as part
2 of our management review of the operating plan and we
3 meet quarterly with Bill and Carl to go over by
4 exception changes either new research information or
5 emerging needs that have changed at NMSS. So we feel
6 we have a process in place to make that happen.

7 As with any research, you can't guarantee
8 results, you know, so you have to have a process that
9 allows you to follow it.

10 COMMISSIONER DICUS: Something of a little
11 plug for the cooperative research that you mentioned,
12 particularly with international. I think you're aware
13 that last week I was in Switzerland and I did visit
14 the Paul Shearer Institute and among the many
15 facilities that we visited in the half day that we
16 spent there, was one where we're dealing with now on
17 burnup, fuel burnup.

18 MS. FEDERLINE: Good.

19 COMMISSIONER DICUS: I was very impressed
20 with what they're doing with the capabilities that
21 they have there.

22 MS. FEDERLINE: Yes.

23 COMMISSIONER DICUS: I thought I would
24 pass that along to you.

25 MS. FEDERLINE: Thank you.

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1 COMMISSIONER DICUS: One final thing on
2 Yucca Mountain, you mentioned if there's going to be
3 a license application we might get it next year, is
4 that building in the fact that there's basically been
5 a 12-month delay?

6 DR. PAPERIELLO: I am basing my statement
7 on what DOE told me within the last two weeks. It's
8 sort of a moving target. I mean clearly, the site
9 recommendation has slipped by somewhere in the order
10 of five to six months. Exactly how that affects the
11 license application -- it has to affect it. I'm just
12 going by what DOE told me.

13 COMMISSIONER DICUS: And it affects what
14 we're doing with the center, back to those questions
15 and when everything starts slipping, it's just that it
16 is something that we have to take into account.

17 That's it. Thank you, Mr. Chairman.

18 CHAIRMAN MESERVE: We have a little more
19 time. Why don't we do, if people are interested,
20 another quick round of question or so apiece so that
21 we can -- if people have more, we'll give everyone an
22 opportunity to share.

23 Commissioner Diaz?

24 COMMISSIONER DIAZ: Yes, two quick ones.
25 One was already partially asked by the Chairman, but

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1 I want to focus on high-level waste research and we
2 recently received a letter that I'm kind of quoting
3 that the credibility and public acceptance of the
4 NRC's licensing decision will also depend upon the
5 adequacy and quality of NRC's independent confirmatory
6 research. So it's looking at the high-level waste and
7 with the confirmatory research is being established in
8 that area.

9 Does NMSS and Research have any specific
10 opinion on this issue, a little more specific than
11 what we did just a moment ago?

12 MS. FEDERLINE: Well, the plan that we've
13 worked out across the Agency is that, of course, the
14 center will do the site-specific technical
15 investigations. We have a generic environmental
16 transport program where we focus on the fundamental
17 elements, are there uncertainties with respect to
18 absorption and uncertainties related to hydrologic
19 transport? Are we using the best methods and we
20 provide feedback to NMSS which they can use across
21 their programs.

22 So in terms of we do not have a specific
23 program that is Yucca Mountain specific, but our
24 generic environmental transport program certainly is
25 geared to the kind of issues that we will encounter as

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1 an agency in going through the hearings and we provide
2 this information in NMSS and they use it across the
3 various waste arena.

4 COMMISSIONER DIAZ: The question is are we
5 thinking outside of the box, just in case we need to
6 have a program that will be, could be relatively
7 established if it needs to be? Are we looking ahead
8 in those issues that appear that some of them will
9 come out?

10 MS. FEDERLINE: Well, I think in areas in
11 Fiscal Year 2001 coming up we have major products in
12 conceptual model uncertainty which is a key issue for
13 high-level waste. Also, more mechanistic absorption
14 coefficients which are going to be extremely important
15 in that area and uncertainty methodology. So
16 certainly we're trying to think outside the box in
17 terms of the issues.

18 COMMISSIONER DIAZ: Thank you. On page 14
19 when we talk about the key challenges and the SDMP
20 sites, I noticed that one of the output measures is
21 removal for Fiscal Year 2001, 2002, one site per year.
22 For the past two years, we have removed three sites
23 from the list. Is there a reason for the low number
24 or are we revising it?

25 DR. PAPERIELLO: I would argue that we

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1 -- I know we have plucked a lot of relatively and this
2 is very relative low hanging fruit. We are getting
3 into sites that are going to be extremely difficult.
4 There's groundwater, chemicals in some cases and I
5 don't know exact number. I have the staff working on
6 it. Whether there's sufficient money, so we can tell
7 you who -- we're going to have to figure, scratch for
8 money. So it's a more complicated one.

9 Some of the easiest ones and I say that in
10 a relative sense are done and that's --

11 COMMISSIONER DIAZ: That's a complexity.

12 DR. PAPERIELLO: It's a complexity. In
13 the report we owe you in June they're going to be
14 described on decommissioning.

15 CHAIRMAN MESERVE: Thank you. We can look
16 forward to June. Thank you.

17 (Laughter.)

18 Commissioner McGaffigan.

19 COMMISSIONER MCGAFFIGAN: I am probably
20 just going to make a couple of statements. The letter
21 that Commissioner Diaz referred to, basically, was
22 written by a former research staffer who retired who
23 was urging that we put the center under research as
24 opposed to NMSS. That was the essence of his letter.

25 I personally think that that would be a

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1 very, very bad idea, given that the process has worked
2 well the last five years with the center under NMSS
3 and would site suitability potentially looming with
4 the license application thereafter. It makes no sense
5 to me to change the institutional framework and the
6 letter also mentions, I dealt with this issue at the
7 waste water reactor safety conference when David
8 Lochbaum mentioned a concern that he was going to
9 bring to the IG about whether we were violating the
10 law by having this way.

11 I pointed out the AUOD had been a separate
12 office for many years and it's one of his favorite
13 research organizations within the NRC and no one had
14 ever raised the issue that AUOD was somehow a
15 violation of law.

16 So I think that there's -- that it's clear
17 that we have the right to have the center report to
18 NMSS and I think as we approach these critical
19 milestones potentially, that it's vital that we keep
20 the integrated effort going and I think the center
21 does contribute a lot of long-term research. I think
22 they're right at the state of the art in terms of
23 understanding these complex issues.

24 The other item -- this is my usual lecture
25 in case it's a GAO person in the audience and watching

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1 Commissioner Merrifield's dialogue with Mr. Virgilio.
2 I think we have to be given the ability to make these
3 mid-course corrections and just explain them to folks.
4 I remember when Mr. Collins testified during the
5 reactor meeting, we underperformed in terms of
6 license, operating license exams. We didn't really
7 underperform.

8 The rule overperformed in that we had
9 fewer people coming to us for license exams and more
10 people doing their own and these are hard to predict
11 and so in advance, looking oftentimes 18 months ahead
12 when we're setting these goals, what the real input
13 will be for us in any given year and so we have to be
14 able to make these mid-course corrections. We just
15 have to explain them as Marty did in this case and as
16 Mr. Collins did in the previous meeting and with those
17 changes, we have the flexibility to put our resources
18 where they need to be.

19 So please don't hold us to every output
20 measure because it's nonsensical to hold us to every
21 output measure. Give us the flexibility, Mr. GAO, or
22 whoever watches these output measures to do whatever
23 the right thing is.

24 Thank you.

25 CHAIRMAN MESERVE: Commissioner

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1 Merrifield.

2 COMMISSIONER MERRIFIELD: I find myself
3 seconding Commissioner McGaffigan twice in a meeting.
4 I agree with that. I think for us to do the best job
5 we can as a Commission, I think the staff does have to
6 have the flexibility to have those mid-course
7 corrections, are justifying in the appropriate manner,
8 obviously, will fulfill the obligations to be at GAO
9 or to Congress or our general public.

10 Just two comments. I do appreciate the
11 inquiry that the Chairman has made as did Commissioner
12 Dicus about empowerment. I think obviously empowering
13 people down the chain is important. I think it's a
14 good initiative. There is a counterbalance to that
15 and the counterbalance is the concurrence chain.

16 The sense of empowerment is not
17 necessarily measured very well if it just means a
18 longer concurrence chain, and so as you look toward
19 empowering people, I think you also need to think
20 about are there ways to shorten that concurrence chain
21 so that we don't simply just add more names at the
22 bottom of the concurrence chain to the extent that
23 we're empowering people lower down the level.

24 The second comment I would make and you
25 did have some detailed comments on pages 5 and 6

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1 regarding decommissioning. You had a lot of things
2 underway in decommissioning lately. We've gotten some
3 papers up. I just want to note or I should say
4 reinforce earlier sensitivities that I've given to the
5 staff about our need to be cognizant of the fact that
6 those efforts in decommissioning ultimately are passed
7 along to our licensees and those who are involved with
8 decommissioning are perhaps in less of a position to
9 afford some of that operating reactor licensees.

10 The important point is to make sure that
11 those facilities are decommissioned in a safe manner
12 as soon as practical, even their own expectations and
13 we just need to be cognizant about what we do and how
14 impacts feeds. That's a standard warning I've said
15 before and I just want to reinforce that.

16 Thank you, Mr. Chairman.

17 CHAIRMAN MESERVE: I have just one
18 question to follow up on and this is directed at
19 Margaret and it really is to follow up on the
20 beginning comment that Commissioner Diaz has
21 emphasized that we should all remember we are a
22 performance-based organization as well as one that is
23 seeking to be risk-informed.

24 We talked about MARSSIM or you mentioned
25 MARSSIM which is, of course, basically a method, a

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1 sampling method that one uses for surface
2 contamination and it basically sets out the protocol
3 for determining how many samples you need to collect,
4 how you collect them and so forth so that you have the
5 balance of Type 1 and Type 2 errors. It's a
6 statistical process.

7 And when we talked about that, you
8 mentioned that the great shortfall of MARSSIM is that
9 it doesn't deal with volume metric contamination which
10 is the significance of many sites and it needs to be
11 expanded to cover that. But when you talked about
12 it, you said we're going to make MARSSIM performance-
13 based. And I'm wondering how we're using the
14 terminology. To me, MARSSIM is a sampling protocol.
15 And I'm just curious what we mean, how we make -- what
16 we mean when we say that's a performance-based
17 activity.

18 MS. FEDERLINE: The intent is to define a
19 statistical method which will allow licensees to
20 determine how many samples they have to take according
21 to a statistical rigor. In other words, it would not
22 say you must take 150 samples or it would define the
23 statistical protocol based on --

24 CHAIRMAN MESERVE: Okay, so it's basically
25 the volumetric counterpart of the surface

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1 contamination, nothing else?

2 MS. FEDERLINE: Yes.

3 CHAIRMAN MESERVE: Thank you.
4 Commissioner?

5 COMMISSIONER DICUS: Nothing further.

6 CHAIRMAN MESERVE: Good. Well, I think
7 that I'd like to thank you all for a very informative
8 briefing. This is an area that has got many difficult
9 problems with which you are grappling and you are
10 therefore presenting to us, for us to grapple with.
11 We very much appreciate the efforts that you've made.
12 This is perhaps an area of the Commission's activities
13 that reflects I think well on the Commission in terms
14 of the performance we've achieved in the past.

15 It's one that is going to be one that's
16 increasingly, I think, in the public eye, when and if
17 we have to deal in particular with a Yucca Mountain
18 licensing action. So that this is an important area
19 for the Commission and on behalf of the Commission,
20 I'd like to express our appreciation to you for your
21 good efforts.

22 For that, we're adjourned.

23 (Whereupon, at 11:10 a.m., the briefing
24 was concluded.)

25

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