

United States of America
Nuclear Regulatory Commission
Briefing on Decommissioning Activities and Status
Friday, September 28, 2001
Rockville, Maryland

The Briefing was held in the Commissioners' Hearing Room, 1F16, One White Flint North, 11555 Rockville Pike, Rockville, Maryland, at 9:30 a.m., Richard A. Meserve, Chairman, presiding.

PRESENT:

RICHARD A. MESERVE, Chairman

GRETA JOY DICUS, Commissioner

EDWARD McGAFFIGAN, Commissioner

JEFFREY S. MERRIFIELD, Commissioner

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

(9:29 a.m.)

CHAIRMAN MESERVE: Good morning. Before I start this meeting, I do want to make one announcement that we have had action by the Senate this week that Professor Diaz has been reconfirmed, soon to become Commissioner Diaz again. His swearing in will be next week and so you will again have five people across the table with you shortly and we all look forward to his return.

We're meeting this morning to hear from the Office of Nuclear Material Safety and Safeguards, the Office of Nuclear Reactor Regulation, and the Office of Research on the status of NRC's decommissioning program. This briefing is part of the annual update that is provided to the Commission on this program and as you know, we have a series of meetings on the variety of our programs and arenas.

It's interesting to note the rapidly expanding and contracting scope of the decommissioning program. In the brief period I've been Chairman, we've gone from what was expected to be a surge in license termination and decommissioning of civilian nuclear power plants to a condition where almost all the plants are pursuing license renewal. The once feared torrent of work in the decommissioning program has evaporated before coming to the NRC, thanks to the changing economics of nuclear power generation.

Nonetheless, the decommissioning program still faces an abundance of challenges. We're very much interested in hearing from the staff about its progress and the challenges that it is meeting and I'm sure overcoming.

With that, why don't we proceed? Dr. Paperiello?

DR. PAPERIELLO: Thank you, Mr. Chairman, and good morning to you and the other Commissioners.

We appreciate the opportunity today to brief you on the status of the decommissioning program and the comprehensive approach the staff is pursuing in its decommissioning efforts. This program includes integrated activities of the Offices of Nuclear Material Safety and Safeguards, Nuclear Reactor Regulation and Research.

As requested by the Commission in its SRM of August 26, 1999, staff provided a comprehensive overview of its activities in SECY-00-0094. As desired by the Commission, staff then developed a followed-on annual overview in SECY-01-0156 that include progress made in a program over the past year. Some of the topics you'll hear about this morning include a summary of the decommissioning program, specific activities in material and fuel cycle decommissioning, including the status of the SDMP and complex sites, environmental evaluations, reactor decommissioning, regulatory improvements, research activities, efforts by staff to enhance efficiency and effectiveness and future challenges faced by the staff and the Commission. The decommissioning program has made significant progress in all of these areas.

With me at the table is Margaret Federline, Deputy Director of NMSS and Larry Camper, Chief of the Decommissioning Branch in the Division of Waste Management at NMSS.

At this time, I'll turn the briefing over to Mr. Camper who will introduce the rest of the presentation team.

MR. CAMPER: Thank you, Dr. Paperiello. Good morning, Chairman, Meserve, Commissioners.

As Dr. Paperiello pointed out, successfully conducting our decommissioning program involves close coordination of several

key organizational components including three major offices and of course, the regions.

I am joined this morning by first line managers that are actively involved in the decommissioning program, who will, in fact, provide you with most of the briefing today. I would first like to introduce Robert Nelson to my right. Bob is the Chief of the Facilities Decommissioning Section within the Decommissioning Branch within NMSS.

To the left of Ms. Federline is Melinda Malloy who is the Chief of the Operational Rulemaking and Decommissioning Section in the Risk-Informed Initiative, Environmental Decommissioning and Rulemaking Branch within NRR. To my right again is Dr. William Ott, the Assistant Branch Chief of the Radiation Protection Environmental Risk and Waste Management Branch within the Office of Research. And to the left at the end and representing the regions is Bruce Jorgensen who is the Chief of the Decommissioning Branch of the Division of Nuclear Material Safety in Region 3.

We have four key messages we hope to make this morning during our briefing. First, we are closely coordinating our efforts to facilitate the safe and effective decommissioning of licensed facilities. Secondly, our decommissioning process is performance oriented and provides ample flexibility for licensees to safely decommission their facilities. Thirdly, we face challenges, both technical as well as policy and political in this complex arena. And lastly, we are making progress and we have successfully decommissioned several materials and reactor facilities.

We look forward to providing you with an overview of the program and we look forward to answering any questions and having any discussions which you might want to have.

Mr. Nelson will start the briefing.

MR. NELSON: Could I have Slide 3, please? Slide 3, the overview slide, please.

(Slide change.)

MR. NELSON: Our presentation today will address the five topic areas listed on this slide. Our discussion of these topics will demonstrate that this program is a team effort that spans the Agency effectively, integrating a substantive involvement by the Office of Nuclear Reactor Regulation, the Office of Nuclear Regulatory Research, and the Regions, in addition to the Office of Nuclear Material Safety and Safeguards.

The first four topics will summarize and highlight information provided in the SECY paper 01-0156. The final topic, challenges, is intended to supplement the Commission paper by identifying those challenges that we see as we move forward with the program.

Although we have attempted to limit the use of acronyms, several are used in our presentation and we have included a list of acronyms at the end of the hard copy presentation package.

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MR. NELSON: The decommissioning program can be divided into five areas listed on this slide and we'll now discuss each of these areas.

Slide 4, please?

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MR. NELSON: The materials and fuel cycle portion of the decommissioning program encompasses a wide range of activities including the five that will be featured in this presentation as identified on this slide.

Other activities include decommissioning guidance consolidation, reviews of decommissioning financial assurance instruments, interacting with other agencies such as the U.S. Environmental Protection Agency and the Interagency Steering Committee on Radiation Standards, inspection of the decommissioning sites, maintenance of the computerized risk assessment and data analysis laboratory or CRADL, evaluating agreement statement of the implementation of the license termination rule and public outreach.

These activities include significant involvement by the Office of Nuclear Regulatory Research in developing dose assessment tools and the Regions. The Regions have project management for several of the decommissioning sites and they conduct all of our inspections. In addition, the Regions are deeply involved with public outreach activities associated with decommissioning sites.

In successive slides, we'll discuss each one of these five highlighted areas.

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MR. NELSON: Since the inception of the site decommissioning management program, a total of 33 sites have been removed from this program, 22 by successful remediation and 11 by transfer to agreement States for other federal

agencies.

Twenty-two of the remaining 27 SDMP are complex sites, have submitted decommissioning plans.

Issues associated with the five sites who have not submitted decommissioning plans include the presence of hazardous waste, lack of funds to complete decommissioning, involvement of State and federal agencies and possible restricted use.

Two sites have submitted decommissioning plans proposing restricted release and we know of seven additional sites that are considering this approach.

SDMP sites may be transferred to the Commonwealth of Pennsylvania when it becomes an agreement State.

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MR. NELSON: License termination file review project is a real success story. This project involved the coordinated effort of the Regions' headquarters staff and contractor staff.

By way of background, in 1989, the General Accounting Office issued a report that raised concerns about the Agency's criteria and procedures used to decommission formerly licensed sites. As a result, in 1990, the NRC undertook a review of terminated materials licenses to assure that previous licensed facilities had been properly decontaminated and did not pose a threat to the public health and safety.

The Oak Ridge National Laboratory was contracted to review all materials licenses terminated by NRC or its predecessor agencies from the inception of materials licensing. This review had two fundamental purposes: the first, to identify sites with potential or meaningful residual contamination based on the information in the license documentation; and second, to identify shield sources with incomplete or no accounting that could represent public hazard.

Oak Ridge examined in excess of 37,000 license files terminated through 1994. From its evaluation of these files, Oak Ridge identified approximately 1200 licenses that required further review and these reviews were conducted by the Regions.

As a result of the regional reviews, 39 sites were found to have residual contamination in excess of NRC's criteria for unrestricted use. Of these 39 sites, 10 are currently undergoing decommissioning and 29 have been successfully remediated, transferred to an agreement State or another federal agency.

A listing of the contaminated sites and the current status is provided as Attachment 6 to the Commission paper.

The Regions have completed reviewing all sites identified by the Oak Ridge National Laboratory and the project is now complete. The staff is preparing a final report which should be finalized today.

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MR. NELSON: In response to a staff requirements memorandum dated March 31, 1997, the staff carried out a decommissioning pilot program. The primary objective of this program was the evaluation of a performance oriented approach for decommissioning that was applied to a few volunteer, noncomplex sites. Under this pilot program, the participating licensees simply submitted their residual contamination goals to NRC and initiated decommissioning without prior approval of the decommissioning plan.

The study showed that performed-based decommissioning can be done safely by certain qualified licensees and the program also demonstrated a cost and schedule savings for the Agency.

Although successful, the study's population was small. Staff is preparing a report and a complete report to the Commission on the pilot program is under development and should be delivered to the Commission shortly.

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MR. NELSON: Another significant program area within the decommissioning program is West Valley oversight. NRC's responsibilities under the West Valley Demonstration Project Act include the activities that are listed here. For example, NRC recently observed a technical meeting of DOE staff which was convened to review procedures for making incidental waste determinations.

After these procedures are finalized, they will be submitted to NRC for review. In support of activities such as these, we routinely interact with the DOE staff at West Valley, the New York State Department of Environmental Conservation, the New York State Energy Research and Development Authority, the U.S. Environmental Protection Agency, particularly Region 2, and several public interest groups.

A recent example of such an interaction was the annual regulatory round table that was hosted by the Department of Energy on July 17th and a follow-up meeting is scheduled for early in October.

Because of the importance of this project, we expect to have focused discussions with the Commission on West Valley in the future.

May I have Slide 9, please?

(Slide change.)

MR. NELSON: In August 2000, the staff provided the Commission with an analysis of issues to facilitate remediation of decommissioning sites in nonagreement States. Staff also provided options to address these facilities and the Commission directed the staff to pursue several of these options. One of the principal options approved by the Commission was to pursue an agreement with the Department of Energy to provide long-term control as authorized under the Nuclear Waste Policy Act for a limited number of decommissioning sites that may choose to use the restricted release option of the license termination rule.

NRC and DOE management have entered into an agreement in principle, in March of 2001, to develop that MOU and that MOU would define the process and the criteria to make the determinations necessary regarding transfer of a potential site.

Although we've completed a draft MOU in April of this year, DOE has put the review on hold pending a review of the broader policy issue.

The staff is also preparing a response to Commission's request to further develop the option of increasing financial assurance requirements. This information will be included in a Commission paper scheduled for October of this year.

In addition, the Commission also tentatively approved the staff's recommendations to request authorized and appropriations for remediation to be directed by State and federal agencies at formerly licensed sites in nonagreement States where there is insufficient funding or there may be insufficient funding.

This project is directly tied to the terminated license review project which I described earlier because that review assisted in determining the population of candidate sites.

Based on our review to date, the total population of sites that may need funding assistance appears to be quite small. We are in the early stages of discussions with several States and other federal agencies regarding their willingness to direct any remediation effort. The staff will provide a full report to the Commission in April of 2002.

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MR. NELSON: As part of our licensing review process, the staff conducts environmental reviews to determine and assess the potential environmental impacts of any proposed licensing action. Activities included in this area are the review of environmental assessments that are prepared by the staff, the preparation of guidance for developing environmental assessments and environmental impact statements, the review of environmental impact statements prepared by other agencies for which our Agency is a cooperating agency, and the development of environmental impact statements for licensing actions that require them.

An example is the revision to NUREG-0586, the generic environmental impact statement on decommissioning nuclear facilities which was published in 1988. This revision will be a supplement which will address only power reactors. The intent of this draft supplement is to consider in a comprehensive manner all aspects related to radiological decommissioning of power reactors by incorporating updated information, regulations and guidance.

We hope to publish the draft supplement for public comment next month which will be followed up by a series of public meetings.

At this point I'd like to turn our presentation over to Melinda Molloy, who will discuss the reactor decommissioning portion of our program.

MS. MOLLOY: Thank you. In addition to the reactor decommissioning activities, I will also be addressing regulatory improvements which, of course, span the entire decommissioning program.

May I have the next slide, please?

(Slide change.)

MS. MOLLOY: There are presently 19

nuclear power plants in the United States that are currently shut down and are in various stages of decommissioning. NRR, NMSS and the Regions work closely together to ensure integration of NRC decommissioning activities.

At the beginning of the decommissioning process which starts when the licensee permanently ceases operations, of course,

through license termination, work is coordinated in a way that would maximize the staff's expertise. For example, the project management lead for a plant is taken by NRR until after all the fuel is safely removed from the spent fuel pool to another licensed storage facility such as an independent spent fuel storage installation or a permanent disposal site at which time NMSS would pick up the project management lead.

NRC review of license termination plans is closely coordinated between NRR and NMSS, for instance, license termination plans are currently under review for Maine Yankee, Saxton and Adam Neck. The Trojan license termination plan review has been completed.

As another example, NRR, NMSS and the Regions work closely on partial site release requests and are handling one currently from Maine Yankee and have completed one already for the Trojan facility.

As a planning assumption, as we have over the past several years assumed that there would be about one new plant shut down per year, recent successes in license renewal, as the Chairman mentioned, as well as license transfers have led us to the current planning assumption that there probably won't be any new plant shutdowns over the next several years, although we do plan in the next several years to be processing some license terminations for plants that are already in the decommissioning pipeline. This time of relative stability gives us an opportunity to reflect on our experience and to consider how we can improve our regulatory program for decommissioning of reactor facilities.

Could I have the next slide, the one on experience. There we go.

(Slide change.)

MS. MOLLOY: Based on reactor decommissioning experience gained during the 1980s and in the early 1990s, in the mid-1990s, the Commission began an effort to significantly change the regulations for decommissioning power reactor facilities to make them more current, efficient and uniform, to reduce regulatory burden and provide greater simplicity and flexibility.

Five years ago this past July, the NRC published a final rule that redefined the decommissioning process for reactors. And a year later, the NRC published a final rule, the license termination rule, to provide specific radiological criteria for decommissioning. These two rules, in our view, provide a solid risk-informed, performance-based, regulatory structure for decommissioning power reactor facilities.

Since then, we've handled a number of decommissioning plants and we have seen that these regulations can be effectively implemented and gained insight and experience that indicate that there is considerable flexibility and how the rules may be implemented by our licensees.

Relatively to public interest and participation in the reactor decommissioning, under the 1996 process rule as I call it, after the licensee permanently ceases operation of the reactor and submits the post-shutdown decommissioning activities report, the NRC notices its receipt and requests public comment on the report and then holds a public information meeting in the vicinity of the reactor site.

Then in order to terminate the facility license, the licensee must submit a license termination plan for NRC review and approval which is accomplished by a license amendment. The NRC will notice receipt of and request public comments on that plan. A public meeting is then held to discuss the content of the plan and the NRC process for reviewing it and then we offer an opportunity for a public hearing on the license amendment that's associated with the approval of the license termination plan by the Commission.

Participation by State and local government representatives and members of the public at outreach meetings has been high. NRC program office and regional representation at these public meetings as well as efforts by our regional offices to get out and make various presentations to local citizen advisory groups and other members of the public are an important aspect of our decommissioning outreach efforts.

In early 1999, the staff proposed using a risk-informed approach to decommissioning plant issues and the use of risk insights to guide the development of new and/or revised decommissioning regulations and for review of requests for exemptions. As part of this effort, the staff completed a study of accidents at decommissioning plants, spent fuel pools, which was issued this past January. Based on the conclusions in this study, the staff has developed policy options and recommendations related to regulatory decision making in the areas of assurance, emergency preparedness and safeguards. These are currently under review before the Commission -- they are currently before the Commission for review.

Could I have the next slide?

(Slide change.)

MS. MOLLOY: We believe we've been very successful in implementing our regulatory processes for decommissioning facilities, yet we continue to try to improve them. For example, there are three rulemakings that are currently underway to further refine the regulatory requirements and options for decommissioning power reactors. These include a recently published rule on partial site release which defines the process for obtaining NRC approval to release a portion of a reactor site or facility for unrestricted use prior to license termination.

Earlier this year, there was a publication of a proposed rule on decommissioning trust provisions for power reactors. And most recently, the staff has developed a rulemaking plan and has gained Commission approval to issue an advanced notice of proposed rulemaking related to entombment as an option for decommissioning power reactors.

Over the last two years, the staff has developed numerous guidance documents covering a wide range of topics to guide the staff and licensees in implementing the NRC's decommissioning regulations and we also have several other documents under development are planned. Two of the most important documents already completed include NUREG-1727, the NMSS decommissioning standard review plan and a regulatory information summary which provides information on how the staff plans to handle requests for partial site release from power reactor licensees pending completion of the rule that I just mentioned.

Another significant effort under way, as Bob has already mentioned, is the supplement to the generic environmental impact statement on decommissioning that pertains particularly to reactors, the NUREG-0586 and the supplement that we're working on for that.

Because public and other stakeholder interest in decommissioning is high and the staff values their participation, we utilize a variety of means to communicate, inform, seek input and feedback and we also routinely are looking for ways to improve our outreach activities. A considerable amount of information is already available on the decommissioning program through the NRC website and the public electronic reading room. The website, as you know, is currently being redesigned to enhance the type and amount of information available and to provide some better ease of use.

In addition, we have developed the reference documents such as NUREG-1628, the NRC NUREG on staff responses to frequently asked questions concerning decommissioning of nuclear power plants. We typically hold public meetings on decommissioning in the evening so that we can get a broader public attendance. For two meetings in the recent past, the staff held an open house and poster session prior to the public meeting so that the public would have an opportunity to speak with the staff and ask questions in a little less formal setting.

The development of many NRC regulatory documents includes public meetings, scoping meetings and workshops to inform, solicit, input and discuss various issues.

Because the decommissioning is very diverse and responsibilities span several organizations at NRC, interoffice communications is very critical to program effectiveness and we give them a very high priority. There are three primary means to ensure effective communication and coordination, the first of which is the Office of Nuclear Material Safety and Safeguards, Office of Nuclear Reactor Regulation, Office of Nuclear Regulatory Research and Regions have management representatives that convene and interface on a bi-weekly basis in what we call decommissioning management board meetings.

Next, we have annual decommissioning counterpart meetings which bring the NRC decommissioning staff and managers together to discuss issues and developments in the decommissioning arena from the perspectives of the regions and the programs' offices.

And thirdly, NRR and NMSS have established an MOU that defines the program responsibilities of both organizations for reactor decommissioning and what the mutual support expectations are. In implementing the MOU, the staff of management of both of the office interface on a very frequent basis. This MOU is presently under review to determine whether any changes are needed or desirable.

Because the Office of Nuclear Regulatory Research plays such a vital role in supporting NRC's decommissioning activities, we've asked Dr. William Ott to discuss several examples of recent research efforts, products and initiatives for decommissioning programs.

DR. OTT: Thank you. The Office of Nuclear Regulatory Research supports decommissioning efforts by providing tools to assess environmental contamination on-site and as a consequence of movement through the environment.

Slide No. 14?

(Slide change.)

DR. OTT: Lists five recent products or on-going activities. They're improving this tool box for dose assessment to allow more realistic estimates of doses from environmental contamination.

As a background to the current activities described here, I'd like to mention a few accomplishments leading up to this year. The D&D screening model was developed and modified to address concerns about excessive conservatism. The final probabilistic version of this code utilizes parameter distributions for USDA, Department of Agriculture defined soil types which allows more site-specific consideration of certain parameters at each site.

We have completed work to characterize and model all the source terms and to assess problems such as activated metals and power plant wastes that may be important to concepts like entombment.

We've completed extensive work on uranium absorption which is pointing the way to more phenomenologically correct ways to model absorption and performance assessments. This work has all laid the foundation for the activities that are listed on the slide.

The first of these deals with the RESRAD family of codes which was developed by DOE at the Argon National Laboratory and is widely used within DOE and outside. NMSS staff, EPA staff and many States use one or more versions of this code. Concerns were raised about certain aspects of the code and addressed by RES in response to a user need request from NMSS. Argonne was funded to conduct an extensive review of the technical basis for the parameter values in the code and assumptions in RESRAD and to develop a probabilistic version consistent with the recently published NUREG-1573 on low level waste PA. We are currently working on a probabilistic version of RESRAD build to address building contamination.

The second issue with many environmental models is that they represent a single simplification or conceptualization of how an actual environmental system works without considering alternative interpretations of available data.

We are doing work at the University of Arizona to develop a methodology for systematically interpreting available data, selecting appropriate models and then testing those models. Quantification of the uncertainty associated with alternative conceptual models is the ultimate goal of this project.

The third item refers to monitoring strategies for the unsaturated zone. Successful detection of containment failure on the unsaturated zone would provide much earlier warning of failure and allow a response that prevents the contamination from actually reaching saturated formations. This will be particularly valuable at sites which qualify for restricted release.

Many of the SDMB sites with minimal processing left slags with elevated levels of radioactive trace elements as a result of concentration during metal extraction processes. We have conducted work at Johns Hopkins University and Pacific Northwest National Laboratory to identify the minerals present, which minerals contain the radioactive contaminants and their rates of degradation. The final product which should be available this fall will be leaching model which will allow a more realistic treatment of the source term over time for these slags than has been possible up to this time.

4SIGHT is a code developed for NRC by the National Institute of Standards and Technology to predict long-term performance of concrete as a barrier material at waste isolation sites. It's a first of its kind tool and should be applicable to underground vaults, covers, entombments or anywhere else that concrete is used as a barrier material.

We sought to validate this work with both contemporary and archeological data, but we're unsuccessful beyond about 50 to 70 years. The conclusion that you draw from this is that reliance on predictions beyond this time frame will require monitoring to confirm predicted performance.

I'd like to end by mentioning a couple of initiatives that we've undertaken in the last year. We have a draft radionuclide transport plan which is being prepared for circulation for outside comment. We've already coordinated this with NMSS and presented the plan to ACNW on July 17th. We next plan to go to NRR and agreement States and then again back to NMSS. And in parallel, to post on the website and issue an FRN seeking public comment. That should be accomplished within the next week or so.

Earlier this year we, along with five other federal agencies, signed a Memorandum of Understanding to facilitate coordination and cooperation on the research and development of all aspects of multi-media environmental models. The goal of this MOU is to seek a shared technology and a common set of tools for environmental analyses, rather than the current structure where each agency develops and supports similar anecdotal capabilities and in some ways we have a diverging technology.

The central challenges for this program are complex sites and innovated waste management options, such as entombment and accelerated transportation of waste.

A focus currently is complex sites with an eye toward entombment. An area to monitor and track for us is ATW. I think that's the end of my remarks on research.

MR. NELSON: Thank you. Dr. Ott's discussion concludes our presentation on the five principle program areas.

I'd like to take a few minutes and discuss some initiatives that we've undertaken to enhance the efficiency and effectiveness of the decommissioning program.

(Slide change.)

MR. NELSON: This slide lists five such initiatives and in the interest of time I will only address the phased review process and improved inspection efficiency.

We've implemented a phased review process for any decommissioning plan of license termination plan that proposes restricted release. The first phase of this review is limited to a review of the financial assurance and institutional control provisions of the plan. Only if a staff finds these provisions acceptable would we initiate the second phase which would involve the rest of the technical review and the development of the environmental impact statement.

This approach ensures that our resources, as well as licensee funds, required to complete the technical review and environmental review are not committed until acceptable conditions for restricted release are established.

The second example is the improvements to the inspection program. The Regions have undertaken several initiatives to improve efficiency in this area. The initiatives include conducting routine inspections during site visits for other purposes, limiting the scope of SDMP inspections that do not have -- at sites that do not have approved decommissioning plans. Most

of these sites are in a possession only status and therefore there aren't any activities with radioactive materials under way.

Focusing inspections on important licensee activities. If multiple inspections are needed, then the inspection activities are divided in a manner that avoids duplication of inspection procedure objectives.

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MR. NELSON: As we move forward with the decommissioning program, we've identified several challenges. In the interest of time, I'll discuss only the first three.

Under staff challenges, the first site specific dose modeling. This represents a continuing challenge to both licensees and the staff. While the staff has prepared extensive guidance on both the preparation and review of dose assessments, each site specific analysis by its nature is unique. This is due to variations in hydrogeologic parameters, the nature and extent of the residual activity at the site, scenario chosen to represent the average member of the critical group, the pathways of exposure at the site and other site specific variables.

In addition to the guidance we have developed, we encourage licensees to meet with us prior to submission of the decommissioning plan so we can discuss concept for dose modeling at the site and specific approaches they might take. In this way, when we get the dose modeling, the proposed dose modeling we have a better idea of what we expect from the licensee and what issues may be before us.

Additional complications can arise if other agencies are involved that use a dose assessment model other than the one the licensee has chosen to use. To address this issue, the staff, led by the Office of Nuclear Regulatory Research is participating in an interagency effort to develop common approaches to dose modeling.

The second example of the staff challenge is the lessons learned that we've experienced during the review of decommissioning plans and license termination plans.

We've identified a number of recurring problems that we've seen and also lessons learned from those problems. Over the past year, we've attended a variety of seminars, conferences and public workshops to discuss these lessons learned. In addition, we are preparing a regulatory information summary to formally communicate these to our stakeholders.

Also, as a matter of standard practice, we discuss these lessons learned in our routine meetings with licensees.

A challenge that faces both the Commission and the staff is the implementation and compliance with restricted release provisions of the license termination rule. This remains a challenge because of the difficulty associated with licensees identifying an independent third party to assume and carry out responsibilities for any necessary control and maintenance of the site.

As discussed briefly earlier to address this issue, the staff is negotiating a Memorandum of Understanding with the Department of Energy to facilitate transfer of restricted release sites to the Department under the Nuclear Waste Policy Act. This section of the act allows, but does not compel, the Department to assume title and custody for such sites following termination of the license by NRC under specific conditions.

However, tentative agreement has not been reached and there is no agreed upon date to complete the MOU. Further, the MOU would not assure the Department's acceptance of any specific site and each site would have to meet the Department's acceptance criteria.

I'd like to turn the briefing back over to Larry Camper who will provide concluding remarks.

MR. CAMPER: As we hope you can see from our presentation, the decommissioning program is indeed multi-faceted, involving activities that span the Agency. We believe that we are effectively integrating the program's various components including regulation and guidance developing, licensing, research, inspection and very importantly, public outreach.

We have initiated and will continue to initiate a number of enhancements that will improve the program's efficiency and effectiveness and we are currently examining the technical and policy issues that confront us.

This concludes our formal presentation. We look forward to answering your questions and addressing your comments.

Thank you.

CHAIRMAN MESERVE: Thank you very much. You covered a lot of territory.

Commissioner Dicus?

COMMISSIONER DICUS: Thank you. Almost back in the Dark Ages, early 1990s I think it was, long before I was here at the NRC, obviously before 1996, but I was up here for a conference on decommissioning in relation to my responsibilities, former responsibilities and one of the things that was talked about and if I recall correctly it was former Commissioner Gail de Planque, perhaps former Chairman Selin, talking about the importance of site characterization to do a proper decommissioning. And in the paper that -- the information paper that accompanies this presentation, at least three sites

are discussed in detail where the clean up of the decommissioning was far more complicated than was originally thought because site characterization had not been done as it should be.

I guess my question goes to since this has been an on-going issue, at least for a decade now, or perhaps longer, what are we doing in this regard? Where are we in trying to be sure and I'm talking about if we go into the issue of new power plants and preliminary site acceptance that we might get into, where are we at looking at the tail end of the situation and I wasn't real clear in your presentation that you really went into the details on the importance of site characterization as it pertains to decommissioning.

Does someone want to address that?

MR. NELSON: Yes ma'am. Site characterization, as you mention, is very important and is one of a dozen or so lessons learned that we've identified through the recent review process.

Site characterization is complicated at the sites that you refer to largely because of the age of the site. The waste was deposited years ago, sometimes 20 to 30 years ago and the records of those depositions simply don't exist any longer and the people who were there at these sites at that time are no longer there.

We called the process, the process of reviewing that historical information, called it historic site assessment and it's the fundamental process to start the characterization effort. Unfortunately, if the records don't exist and the people are gone, the only way you can get a complete understanding of the site is by going out and taking samples. In that case, you have to know where to look and again, that draws you back to your historical records. So if the historical records aren't there, there's a high probability that the characterization you do at the front end is not going to be adequate and what you find is as you remove material, you find more.

We have stressed the importance of the historical site assessment in the review and also suggested for these types of sites that licensees try and seek out former employees, residents that may have lived near the site at the time to get some additional information of how this material may have been deposited.

COMMISSIONER DICUS: That goes to part of what you were addressing on Slide 16 with implementing lessons learned.

MR. NELSON: Yes ma'am. Let's say the sites we have right now that are active sites that we know at some point in time will be decommissioned. Really, it's reactors, but it's also with an emphasis on the material side of the house which I think we're dealing with.

What are we doing today to ensure that the historical knowledge is being gathered today for those sites that are still active that might be decommissioned at some point in time to deal with this?

MR. CAMPER: Fair question. We spent a lot of time doing this. Over the last year, for example, either myself or other management within the Office have gone to meetings with professional societies, with licensee meetings and have tried very hard to share with them a series of lessons learned. There are about 12 of them really. This is one. Another one, for example, is that operational groundwater or operational monitoring of groundwater is probably not adequate to determine whether or not you have a groundwater problem in terms of site characterization. So one thing we're trying to do is get out there often and get the word out.

We're also publishing the RIS which Bob mentioned in his comments. We are also working with NEI developing a series of questions and answers that will be memorialized within our current on-going guidance consolidation project. It will be a three volume guidance consolidation NUREG for decommissioning and we want to memorialize all those lessons learned in that document.

I think more importantly, the point you're making is something we're very, very concerned about because as Melinda pointed out, we have three LTPs right now still in play. We'll go into a brief hiatus, but we know there's three or four more coming. What's terribly important is that we memorialize these lessons learned, that we document what we have found, that we get the word out and that we work with industry to try to address the problem.

MS. FEDERLINE: If I could just add one thing that we feel we need to do is sensitize licensees earlier operating facilities.

COMMISSIONER DICUS: That's the point I'm getting to.

MS. FEDERLINE: Earlier in the process and this is what we're trying to do with educating people. You and I participated in ANS seminar and I think Russ Malore was a breath of fresh air, the Yankee CEO talking about think it through to the end. In other words, operating facilities have to be concerned and focused on thinking during the operating phase about what's going on or what will go on in decommissioning. And we're trying to encourage that by getting Larry out to some operating facilities and to some conferences where operating facilities are participating.

COMMISSIONER DICUS: Yes, that's the point I'm making here and I'm glad to know about this and as Margaret mentioned, she and I did participate in that, but being sure that we're being very proactive in dealing with this so that these problem sites that we're dealing with today, we can leave a legacy in the future that we don't have them to deal with unless it's in some sort of accident scenario.

DR. PAPERIELLO: Commissioner, I'd just like to point out that we already have in the regulations in the decommissioning

rules requirement to keep records of spills and upsets. I mean the practical matter is you have to keep the radioactive material out of soil. When we talk about complicated sites, we're really talking about soil contamination and in many cases or practices in the 1950s and 1960s at which low level waste was just put into in-ground settling ponds and buried on site and things like that which, of course, led to the current situation.

COMMISSIONER DICUS: Okay, switching if I could, Mr Chairman, going a little bit further, switching topics a bit, with regard to our decommissioning regulations and the fact that the agreement States are required to adopt the LTR, at least dose criteria, I can't remember what category it's in. I think it's two or three, but whatever, but 14 States have not adopted any decommissioning regulations. Would someone -- I know we have at least one agreement State, Office of Agreement States and Tribal Programs person with us, but would you care to address where the other 14 are and what are we doing about it?

MR. CAMPER: It's a timely question. As you know, the organization of agreement States meeting is coming up week after next.

COMMISSIONER DICUS: I think it's going to be on the top --

MR. CAMPER: Indeed, it is. And we want to -- there is a decommissioning panel discussion to take place which I'm participating in and one of the things we really want to get a handle on is how is it going out there?

It's interesting, we've not seen a groundswell of problems. We've not heard the States come to us and say this is not working well. We've not heard an opposition to the LTR, by and large, to the States that have put their regulations in place, took a more conservative approach than R25 millirem in ALARA for unrestricted.

COMMISSIONER DICUS: At least one has gone more conservative, I think.

MR. CAMPER: I think there are two.

COMMISSIONER DICUS: Two, okay.

MR. CAMPER: I'm not sure which two. Maine is one and Ohio is the other.

COMMISSIONER DICUS: Yes.

MR. CAMPER: But my sense is that the others are headed toward the LTR. Probably, the Administrative Procedures Act or the equivalent of that or the dealing of the legislature that is slowing it down at this point in time, but we definitely want to talk to them and find out how it's going and what kinds of problems they're observing as they move toward implementation.

COMMISSIONER DICUS: To your knowledge, do any of these States have particularly difficult decommissioning sites to do that have not implemented the LTR? Do we have any information?

MR. CAMPER: I --

COMMISSIONER DICUS: I think we're going to get some feedback.

MR. COMBS: I'm Fred Combs, Deputy Director in State Programs. We're not aware of any particularly difficult sites that the States have in mind, but I might also add that the States do have the ability to give the effect of the regulation to what we call a legally binding requirement which could be a license condition which would be designed to essentially get to the same purpose as the LTR.

COMMISSIONER DICUS: Okay, thank you. And if I could, Mr. Chairman, one final question and then I'll give up my time. I had one other question, but I think I'll pass on that for the moment.

Regarding, I think this was from Slide 7 regarding your pilot study and the evaluation of the pilot study and as this pertained to continuing with almost archaic DSI 9, but I think you made the statement this can be done safely, determining what you're doing in the policy, may be done safely by quote unquote qualified licensees. Would you define what is a qualified licensee? I think you made the comment, Mr. Nelson.

MR. NELSON: Yes. What I meant by qualified licensees, maybe that was a poor term, but licensees that met the criteria for inclusion in the program and that would be that they didn't have extensive groundwater contamination, that it was either uniform soil contamination or building surface contamination such that we didn't -- so for these sites, we used the SDMP action plan criteria which is, as you know, is a concentration-based criteria and could be applied to these sites. So it was that type of site that -- and they had to be volunteer sites in order to be included within the original pilot program.

COMMISSIONER DICUS: So would you be able to extend it then -- having done the pilot, you think it works, but would it only be something you would do decommissioning for sites that did not have groundwater contamination?

MR. NELSON: That would certainly have to be a consideration if the pilot program were extended. The key element of the -- I view the key elements of the pilot program, we had pre-approved clean-up criteria in the form of the SDMP action plan. We had the soil values. We had the building surface contamination values basically pre-approved. Under the LTR we have a similar situation where we have approved generic criteria for both soil and buildings, but the application of those is

specifically soil is limited. For example, the soil criteria cannot be used, the generic criteria cannot be used if there is any groundwater contamination, so again if we were to extend this, it could not -- the likely condition would be the groundwater contamination could not exist at that site and the generic criteria would have to meet the other -- there are several other conditions would have to be able to be met.

COMMISSIONER DICUS: Okay, the other question I had had to do with the cores, but I think I'll pass on that for the moment.

Thank you, Mr. Chairman.

CHAIRMAN MESERVE: Commissioner McGaffigan.

COMMISSIONER McGAFFIGAN: Thank you, Mr. Chairman. I'll start by saying that I think we've made a fair amount of progress. I do think this paper and the paper the preceding year, a major step forward in trying to bring everything together and some of what you all talked about in terms of the coordination among the offices is clearly a step forward from I'd say three years ago. And so I commend you for that.

Since nobody -- I don't think the word EPA has been said yet, so I'll say it.

(Laughter.)

COMMISSIONER DICUS: I came close.

COMMISSIONER McGAFFIGAN: You were hinting. One of the things I note, one of the complex sites we have is Kiski Valley and somebody was talking to me recently about one effect of the December 7, 2000 EPA uranium rule, MCL rule will be that we may end up with a lot more Kiski Valleys or at least there will be a lot of people who treat water out there to take the uranium out to get it down to the MCL value, will end up with source material in their filters. Have you all thought about that or did EPA think about that? In the case of Kiski Valley it was because Babcock and Wilcox was nearby, but as I say, it's fairly straight forward if you're yanking a bunch of uranium out into your filtration system, however you're going to do it. You're over time going to end up with source material there and you're probably going to end up with some complex decommissioning issues, depending on how all this works.

Is there -- does anybody have a thought?

MR. NELSON: I don't know that we specifically examined that at this point, but you would also have actually a mixture of norm and possibly source material because the effluent is carrying things like soils and fertilizers and other naturally occurring materials in addition to whatever might be in their form of licensable material or source material. So it even adds more complexity to the situation in making that distinction.

DR. PAPERIELLO: This brings back old memories because once when I was in Region 3, probably somewhere in the mid-1980s, I had a call from an EPA lab about this subject and I just basically told them the legal answer. If you concentrate uranium and you get it above 500 parts per million, you need a license.

I mean that's a legal answer, but that's the way the rules are now written.

COMMISSIONER McGAFFIGAN: When I look at the Kiski -- the discussion here about Babcock and Wilcox' disposal, that's going to be in the Corps of Engineers hands. Do we know if Congressman Mertha -- I have not paid attention to the appropriations bills this year. Has he gotten them an additional increment in the FUSRAP program for the fiscal year --

MR. CAMPER: Not yet. EPA is currently going through its performance assessment for the site.

COMMISSIONER McGAFFIGAN: So they may not need additional --

MR. CAMPER: They may or may not, depending on the outcome, but my understanding from talking to the Corps is the sense they get is regardless of whether their performance assessment indicates that it's a go, in other words, in terms of continuing their remediation process, there remains a strong interest by the Congressman seeing that the site is remediated. But that is still actively in play as we speak.

But one comment on the Kiski thing too, the only thing that complicates this and not only the technical issue raised, but like a Kiski, you get into the question, this question of who's responsible?

COMMISSIONER McGAFFIGAN: Right, who is the licensee.

MR. CAMPER: Exactly. The water treatment facility, they view their liability as perhaps not being the appropriate place where it can be placed and who is ultimately responsible and Kiski, for example, we've been working with those folks for a long time. Now we're making a lot of progress recently to get a decommissioning plan in here, but you do go through a lot of the behind the scenes discussions and what have you as to who is ultimately responsible.

COMMISSIONER McGAFFIGAN: I think in the case of some of these Western States with lots of uranium in their water supply, it's going to be ultimately God is responsible, whoever put the uranium in the Rocky Mountains. It's had to sue. Whereas if Babcock & Wilcox may be a more easy person to sue.

At the B & W operating, parks operating facility, on page 4 of 60 of this attachment, there's a mention of a site-specific value for plutonium 241 at 1250 picocuries per gram as a clean up level. And that just struck me as high compared to these other levels that I see for thorium or uranium or whatever.

Why is it so high?

MR. NELSON: Because the contamination is very localized. It's a very small, it's almost a hot spot criteria. This is not widespread contamination, so it's not a number that was derived based on a uniform distribution. It's really very -- almost hot particle spots.

COMMISSIONER McGAFFIGAN: So it's sort of a probabilistic approach in some sense?

MR. NELSON: Right, and based on the characterization which we had for the site which is pretty extensive at the time, we knew, had a very good idea where these hot spots were and were able to assess not only the magnitude but the impact so we basically derive this site unique value based on this localization of the contamination.

COMMISSIONER McGAFFIGAN: And that was prior to the decommissioning rule, but it would pass muster today as sort of within the decommissioning rule framework?

MR. NELSON: The plan was developed, approved under the site decommissioning management plan. We have not gone back and done a dose assessment based on those criteria.

DR. PAPERIELLO: Can I make an observation? If I recollect, plutonium 241 is a beta emitter, not an alpha emitter. The half life compared to a daughter, americium is fairly short, so you're going to get 1200 picocuries of plutonium decaying into a much smaller concentration of americium. So I think that has a lot to do with the particular dosimetry besides being a small area.

COMMISSIONER McGAFFIGAN: One of the issues that comes up and again I have our EPA friends in mind is looking at what DOE is doing in its decommissioning programs. Do you all try -- I know to try to sort of keep an eye on what decisions DOE makes say at Rocky Flats with the help of various EPA regional offices and just sort of keep book as to what decisions they're making and then sort of guesstimate -- it's very hard. I mean I've looked at some of the Rocky Flats material. I have a heck of a time figuring out what dose they are using as their decommissioning criterion. It looks like a bunch of just sort of deals get made.

But is this something you try to do just to see what's happening in DOE space where EPA is the regulator and see how good a job they're doing?

MR. CAMPER: We keep an eye on it. I mean we do monitor from time to time, but of course, we're always driven by our standard. Now what I do find interesting in some of our discussions with our colleagues over at DOE is we've worked toward developing MOU. One of the things that they've had some reservations about as we move toward an MOU or try to develop one is what are we doing in our decommissioning process. Now we do find it interesting that we have what we believe is a solid standard of work toward, it's known and that's what we always strive for. Yet, they have had some concerns about what is our decommissioning process. How clean are your sites? Now when you bear in mind some of the things you were just pointing out that there's a certain irony there, but having said that we have worked diligently to try to make them aware of our decommissioning process and how clean our sites really are that they might ultimately, perhaps assume responsibility for, even under a restricted pathway.

COMMISSIONER McGAFFIGAN: Has DOE -- when we, back in the Dark Ages, as Commissioner Dicus referred to the past, my recollection is around 1997, 1998, DOE was trying to do something like our decommissioning rule and indeed, I think we sent them comments around 1999 about their rule to try to be helpful and they solicited us and made comments, but our friends at EPA basically or DOE's friends at EPA basically said if you put that rule forward or you finalize it, I think they'd actually got a proposed rule out, but if you dare finalize your decommissioning rule, DOE would be inconsistent with our what it is drinking water principles and CRCLA principles or whatever and it would be horrible. Has DOE ever formally said they're not going to finalize that rule or is it sort of still sit there with like we've had a fitness for duty rule that sat with the staff for a fair number of years between proposed -- is it sort of sitting there waiting for whether the new EPA will take a different view from the old EPA?

John Greeves has a hand up in the back.

MR. GREEVES: John Greeves. I think we probably ought to give you a hard answer, but my understanding is yes, they have an order out there on their decommissioning approach and it really lines up with the license termination rule.

COMMISSIONER McGAFFIGAN: They have an order out there rather than finalizing that rule?

MR. GREEVES: Uh-huh.

COMMISSIONER McGAFFIGAN: They never really finalized --

MR. GREEVES: They do orders by rulemaking. Maybe OGC can help me on this. They referred to their regulatory structure as a set of orders. They publish them, post them, get comments on it and it looks very much to me like the rulemaking type process that we have, but I think we probably should get back with you. They're instructions to themselves.

COMMISSIONER McGAFFIGAN: I understand that, but I could have sworn that they didn't finalize whatever thing that DOE, that EPA --

MR. GREEVES: I go to meetings all the time and they refer to these orders, but I think for certainty we can send you something and document that.

DR. PAPERIELLO: May I respond to that? To my knowledge, part 834 which is the rule you're discussing is still in draft. I don't think it's been withdrawn. I don't think it's been gone to final. And I'm not aware. I do track things like that.

COMMISSIONER McGAFFIGAN: Was the proposed rule put out for comment and they received various comments including from us and then they just never finalized it? Part 834 --

DR. PAPERIELLO: I see references to it on the internet. People discuss it, but I know it's not been final.

COMMISSIONER McGAFFIGAN: I wish them well in trying to finalize it.

MR. GREEVES: Could I just -- your question is how DOE is using different numbers? At Rocky Flats, a lot of these sites are negotiated with local entities. John Till was going to come in and talk to ISCORS. In fact, a lot of this flows through the ISCORS information process and John Till was going to come in, but due to recent events it got disrupted and talk about how they worked at Rocky Flats. A lot of their numbers are not going to be based on dose. They're going to be based a little bit on site specific negotiation.

COMMISSIONER McGAFFIGAN: And on technical practicality those sorts of things probably to some degree.

MR. GREEVES: And negotiation with local stakeholders as to how low can you set this picocurie per gram number.

MS. FEDERLINE: We are following EPA's records of decision, not in a formal documented way, but to keep up with it and we're finding that there are a lot of different criteria that end up through this process.

COMMISSIONER McGAFFIGAN: I would just mention in passing and I'll pass on at this point, the EPA rule that they proposed in 1996 had -- it didn't get proposed. It got seen by us and never been seen by the public, but it was not dissimilar from our license termination rule in that it had their famous 15 millirems and groundwater MCLs, but they also had ACLs, alternative concentration levels and technical impracticality waivers and you could go to 85 millirems with restricted release. We go to 100, so there was -- it had many of the same features and lots of flexibility compared to the diatribes we get about 15 millirems in groundwater. It was 15 millirems in groundwater was sort of the standard and then let's negotiate which is the way EPA often goes. But I think I've shot my wad. I'll pass to the next Commissioner.

CHAIRMAN MESERVE: Commissioner Merrifield?

COMMISSIONER MERRIFIELD: Thank you very much, Mr. Chairman. I'd like to associate myself with the comments of Commissioner McGaffigan relative to the value of SECY-01-0156 which I think is a very useful document and it is a great improvement on a year by year basis from where we were. Obviously, I think this is becoming an annual report. I think it serves two very important purposes, the first one of which I think it demonstrates, allows us a tool for us to more closely follow the activities that we have under way and I think by having the staff go through that, I think it provides an opportunity to review on a site by site basis the activities we have and I think that's important for us in managing all of these programs to make sure we have a good handle on it.

Secondly, I think as a public confidence standpoint, I think it is a document to which we can take to our public and our stakeholders and demonstrate to them that we indeed do have a good understanding of the sites that we have under our responsibility and the methodology and a mechanism to have those appropriately cleaned up.

That all having been said, I think the report is about 80 percent of where we need to be. I think there are sites for which we have under our control for which there are decommissioning activities or decommissioning like activities which are not captured within the framework of this report. There is really no significant discussion regarding the uranium mill tailings program. There is no discussion about the decommissioning activities for research reactors or non-power reactors. I think that there are -- it lacks a discussion about the magnitude and significant problems that the Commission may have to face relative to decommissioning and there are some areas where we have decommissioning-like activities at on-going sites which are plant activities. I don't think the Division of Fuel Cycle Safety and Safeguard activities have been picked up within the context of this report and I think to make it a more useful report for all parties it will be helpful for us to go more that direction.

My own view is I think there's been a lot of progress between NMSS and NRR in coordinating their activities. I think there's probably more that can be done in that regard. There may be some need for additional brainstorming between the two sides of the house to see if there are additional areas that are not identified and I would suggest to the staff that perhaps further interaction with the Commission to identify areas for which the Commissioners may have information requests or knowledge they'd like to have borne out in this report.

I've got two questions. The first one is that besides West Valley which was brought out in the report, what would we characterize as the more significant remediation activities which are currently underway at this point both within NRR and NMSS in the decommissioning area?

MR. CAMPER: In terms of sites, I mean for example, Sequoyah Fuels comes to mind. Sequoyah Fuels, as you're aware,

has actually approached us about characterizing the waste on their site as 11(e)(2) material. That is currently being assessed by the staff. We're in the near term coming to the Commission with a paper that will propose two options and a recommendation.

The major issue there, of course, is if in the final analysis the material at the site is characterized as 11(e)(2) material, then that would serve to address as choose to control problem at Sequoyah Fuels.

Now SFC has had dialogue with the effect of the Indian tribe about serving as an institutional control, third party liable for the responsibility. That was a no go. They've had some conversations with the State and the State again is not particularly interested in that liability.

So depending upon the decision that we ultimately make as an agency in that particular site, that would have a marked impact upon addressing the more complicated sites.

I think on the reactor side, the material side and the fuel cycle side sites are terribly complicated by comparison to the reactor side. In reality, the reactor side is pristine by comparison and I think the reactor, the major problem we've seen in the reactor has been more -- they're implementing a new rule. It is dose-based standard. They're becoming familiar with it. You always go through that type of growing process. I think Commissioner Dicus has pointed out something earlier that's very important in terms of an early problem that reactor sites need to be aware of is the fact that your operational program from under and groundwater will probably not be adequate in most cases to determine whether or not you have a groundwater problem at your site for purposes of decommissioning, so working with industry to get that word out early is a big deal in the reactor side. But I think in terms of the material sides, there are complicated sides. There's something like 26 or 27 of them. They're making progress. Site characterization is a problem for them, but we are working at the lessons learned.

I think the biggest challenge frankly is this question about institutional control as a restrictive release.

COMMISSIONER MERRIFIELD: You mentioned the 11(e)(2) issue. Are there any other significant problems or Commission policy considerations associated with the decommissioning program that you see that may be coming forward to the Commission within the context of the next year?

MS. FEDERLINE: One thing that I would add here is that an important concept is staff using innovative solutions and over the past year you've seen that we brought forward four or five papers that have suggested innovative solutions to particular sites and I think you will continue to see that over the next year. WE're really looking for practical solutions for these sites and many of them are very specific to the sites because of the problems that are dictated by either political funding, you know, actual characterization of the materials. So we feel it's important to exercise or bring forward innovative solutions and you're going to see us continuing to do that.

MR. CAMPER: To footnote that, I think it's a good point. Licensees, as you know, decommissioning is a very expensive process and they're going to want to find ways under the performance-based approach in the rule to save money. We will be bringing to you in the near term a Commission paper that addresses an innovative approach, if you will. It's being proposed by one of our sites, AAR, it's the Part 40 site. The essence of it, not to get too deeply into it, but what is being proposed is to use the unimportant quantity in value, the .05 percent by weight as a cap to serve as a decommissioning criteria. It has significant policy implications and we hope to move that paper to you in the next week or two. It's currently going through management review at this point. That's a fairly complicated and significant policy issue that we'll need for you to take a good look at for us.

COMMISSIONER MERRIFIELD: I appreciate that. I think as we look toward the meeting next year, you may want to think about highlighting some of the areas where there are particular decommissioning activities that are useful, to go into a little bit more detail and certainly outline the areas of Commission interest or involvement that may be needed over the course of the next year, will probably be a helpful addition to this.

A final comment I want to make at the end, but I'm going to pass for now.

CHAIRMAN MESERVE: Thank you. I just have a few smaller points in comparison to the ones that Commissioner Merrifield has raised.

On Slide 5 you indicate in the SDMP sites that there are five sites that not have submitted decommissioning plans and it is puzzling to me that all these years after this program has been started we have five sites that have not been forced to submit decommissioning plans. I understand they're complicated, but are these ones where we have tolerated this situation? Have we given extensions of time or what's happened that we have five where it isn't even their first step that's been taken?

MR. NELSON: I can address that. Several of the sites that have been mentioned already, Kiski Valley which is not a licensee, the principal problem there is financial. The water authority is a very small municipal authority and their funding is very limited and so whatever funds they expend they need to have some assurance that they're on a path to success so the remedy chosen for that site is crucial because the rate payers will have to bear the cost. The very small rate payer base will have to bear the cost unless they can acquire those funds from some other source. So that's been the principal problem with Kiski Valley.

The B&W SLDA is another example of the site that hasn't submitted a decommissioning plan in that site. It has a long

history. We had, for example, at one point were anticipating a decommissioning plan and developed a draft environmental impact statement that was ultimately withdrawn and then Congressman Mertha got legislation enacted to have the Corps look at that site.

There are two sites in Michigan very closely related. The Michigan Department of Natural Resources site and the SEA Services site. Basically, they're part of the same hazardous waste landfill. And the remedy at these two sites is going to largely be determined by the hazardous waste remedy, so we're working very closely with the State. One of it is a State licensee, the Michigan Department of Natural Resources. It's the smaller of the two landfill areas. A much larger one is the SEA Services site and it's just taking time to walk through those dual processes of a remedial action program plan under the State requirements and our requirements as well.

The Mallinckrodt site is another kind of example. It's actually -- they're decommissioning in two phases. They submitted a decommissioning plan which is called Phase 1 which is looking at the buildings and above ground areas and they owe us a decommissioning plan on Phase 2. The issue --

CHAIRMAN MESERVE: St. Louis?

MR. NELSON: Yes. The issue with Mallinckrodt is is that there's also a core interface because there is FUSRAP waste and the issue with the licensee -- both the Corps and the licensee is whose is whose, defining between the parties who's responsible for what waste and that has just taken a very long time to get that agreement reached.

Another site that may be on the list, Shieldalloy Newfield is actually an active licensee. We've just now been advised that they are planning to shut down and submit a decommissioning plan within the near future.

So I think that covers the sites that are in that category of not submitting decommissioning plans.

In summary, as I mentioned in the discussion, the principal concerns are hazardous waste for NMDR and SEA site, cost for Kiski Valley and for Mallinckrodt, it's an interagency issue and for the SLDA we have a new process under way.

We're tracking all those very closely and hopefully bringing these along. One of the licensees we had to take enforcement action against for failing to submit a decommissioning plan on time and we now have that we think back on track.

CHAIRMAN MESERVE: Okay. I appreciate that. You've indicated that had this effort to engage DOE in developing an MOU where they might take on the long term institutional responsibility that might obviate this policy issue you have at Sequoyah Fuels if that were to be done.

Is this a problem of DOE of their having too many items on their plate and they haven't gotten around to it or is the indication you've had is they are resisting taking on the role?

MR. CAMPER: Two things. I think some -- it is some of that --

CHAIRMAN MESERVE: Some of which?

MR. CAMPER: Some of the -- you have new managers, you have new problems. I mean not too recently you were facing the energy crisis in California and I think to some degree there was a reluctance by some of the managers we were talking with at DOE to surface this type of issue at this point in time. I mean literally we were having weekly discussions with our counterparts over DOE and many of the managers weren't in place yet and so they looked at this and they said how important is this as compared to other things they have on their plate right now. So there were certainly some of that.

But this has been interesting for us. It's been frustrating on the one hand and at times encouraging on the other. We have made progress. We did get an agreement, in principle, to proceed to develop the MOU. We did have numerous staff interactions and management discussions. We did exchange drafts of the MOU and we thought we were moving along smartly.

Then what happened was there became a concern by some of the managers and staff within their long-term stewardship program as to what would entering into an MOU with us, what might it mean? In other words, a concern about why should, frankly, why should DOE position itself to be voluntarily taking on additional sites, additional liabilities under the 151(b) provision. They have quite a basketful already. There is some concern about taking on more voluntarily and there is this question of what does it mean when you say your sites are decommissioned? We work with them to try to clarify that for them so they understand how sites are cleaned when they are, in fact, decommissioned.

But I think it came down to the idea that if we enter into an MOU, we're giving the impression that it's a fait accompli that we will take these sites and therefore let us stop now and explore the much broader policy question and as a result of that the work on the MOU has slowed to a crawl.

MS. FEDERLINE: If I could just add, we are working this at all levels. Marty met at his level over at DOE and explored -- and we have some indication that they are more ready now at all levels to begin to engage on this.

CHAIRMAN MESERVE: I think as you described it, they wouldn't be obligated on any particular site to take the responsibility. They'd have the right to examine it. So isn't quite the all or nothing obligation that they'd be taking on. They'd have to be satisfied that they were to do it and that ought to give them some solace as to their downside liability that they -- by agreeing in principle they're not agreeing to all sites.

MR. CAMPER: That is correct. The 151(d) provision, as you know, of course is discretionary. Case by case. The MOU we put in place to criterion the process whereby they could consider the sites under that discretionary provision.

CHAIRMAN MESERVE: You mentioned that this other inter-agency effort that you have to develop tools, I presume this is a follow-on to the MARSSIM effort? Is this the same type of effort?

DR. OTT: Actually, no. It's different. This effort is aimed entirely at research and development activities of the two agencies and -- six agencies. And the organizations that are involved are generally their offices of research and development, whereas MARSSIM and MARLAP --

CHAIRMAN MESERVE: The actual guidance document.

DR. OTT: Right.

CHAIRMAN MESERVE: I thought one of you had mentioned that there's an effort underway to develop common guidance on dose modeling. That's independent of the research effort.

Is that a follow on to MARSSIM or what's the -- how is that being pursued? It seems to me a lot of these issues you've raised about interagency coordination would be alleviated in public confidence quite frankly and enormously helped if you had a common approach and it was well, gee, EPA would have required this or some other Agency would have required that. That you have at least a common framework would help to eliminate that friction.

MS. FEDERLINE: One of the challenges that we face is in the other agencies. Our research arm is working with their research arm. We're engaged with the regulatory sides of the house. We need to get those other two arms in the other agencies talking to each other and that's one of the challenges that we're working towards. We are engaged on that issue, but it is a challenge.

DR. OTT: In this particular case, in our MOU on research, we've actually had considerable interest from the regulatory side of EPA as well as our regulatory side. And the group that's involved with the operation that Carl referred to is MARMOD or MARPAR and Tony Walburst. They've been attending our MOU meetings and they've actually got a representative in one of our working groups. So there is a nexus of connection there between this effort and the other one.

DR. PAPERIELLO: That is a problem. There is more coherence on this within the NRC than the agencies which we are engaged. I find in EPA different offices are modeling differently. So there's a problem within the Agency. DOE is the same way. I'm not saying it's all, but every laboratory, national lab has its own modeling. Okay, and with various degrees of use within the DOE. So this is what -- this effort is a big effort, I won't say a big effort. It's an effort.

I think it's important, but there are things we can control, and things we can't control, but we've made -- it's been painful, but we have gradually made progress. These practical problems ISCORS can solve. It's just hard to do. It's just not easy.

CHAIRMAN MESERVE: Keep pushing. Okay, thank you very much. On behalf of the Commission, we very much appreciate the briefing as well, and I know -- Commissioner Merrifield, I know, had some closing remarks he wanted to make.

COMMISSIONER MERRIFIELD: Mr. Chairman, in a slightly different tack, quite different tack actually, I do want to make a public comment to you to thank you for the leadership that you have shown for the Agency responding to the incident of September 11th. This has been a tremendous challenge for our Agency. Our staff, some of whom are sitting at the table, some of whom are sitting in the audience, have been here around the clock away from their families working hard to make sure that the facilities that we regulate remain the most highly protected and secure industrial facilities in the United States.

I know we have not been taking to the media to trumpet all of the work that we have been doing, but I don't think anyone should take from that that we're not working very hard. There are others recently who have taken to the media who have been talking in a "sky is falling" approach as to what is happening with our plants. I don't think that's appropriate. I think some of it is inaccurate. Some of it is misleading. And all of it is needlessly inflammatory.

I think one of the lessons we ought to fall back on is the wise words of our former great President, FDR, who once said the most that we have to fear is fear itself. And I think the actions that we are taking and the Chairman is leading us on in a prudent and appropriate reassessment of our security and interactions and interagency context to make sure that we have the appropriate defense in depth at these facilities is the right way to go and again I want to thank you for the leadership you've shown, Mr. Chairman.

CHAIRMAN MESERVE: Thank you very much. I know for several of the people in the room this is the first hour and a half we've had an opportunity to think about something else in the last two weeks. Appreciate your comments.

With that, we're adjourned.

(Whereupon, at 10:52 a.m., the briefing was concluded.)