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DOE'S REVISED SCHEDULE FOR YUCCA MOUNTAIN

HEARING

BEFORE THE

SUBCOMMITTEE ON ENERGY AND AIR QUALITY

OF THE

COMMITTEE ON ENERGY AND COMMERCE
HOUSE OF REPRESENTATIVES

ONE HUNDRED NINTH CONGRESS

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DOE'S REVISED SCHEDULE FOR YUCCA MOUNTAIN

THURSDAY, JULY 19, 2006

HOUSE OF REPRESENTATIVES,
COMMITTEE ON ENERGY AND COMMERCE,
SUBCOMMITTEE ON ENERGY AND AIR QUALITY,
Washington, DC.

The subcommittee met, pursuant to notice, at 2:00 p.m., in Room 2322 of the Rayburn House Office Building, the Hon. Ralph M. Hall [Chairman] presiding.

Members present: Representatives Hall, Norwood, Shimkus, Wilson, Radanovich, Bono, Otter, Murphy, Barton (ex officio); Boucher, Wynn, Allen, Gonzalez, and Dingell (ex officio).

Staff Present: David McCarthy, Chief Counsel for Energy and Environment; Elizabeth Stack, Policy Coordinator; Annie Caputo, Professional Staff Member; Peter Kielty, Legislative Clerk; Sue Sheridan, Minority Senior Counsel; and Alec Gerlach, Minority Research Assistant.

MR. HALL. Okay. I thank everyone. We will come to order.

I might announce first that we are expecting a vote any time, and I am not sure how many votes we will have, anywhere from one to three maybe. But we will vote as quickly as we can and get back to where we were so we don't waste as much time or, for the attorneys in the crowd, that doesn't run your hours up too much. I have been asked to do that by the folks that you work for. We are going to get you in and out of here just as quick as we can.

The main ones are here, Mr. Rick Boucher, who is the leading gentleman from the great State of Virginia.

I will make an opening statement, and probably by the time I finish my opening statement the buzzer will go off, and we will start voting.

Mr. Sproat, we are very happy to have you, and the subcommittee will come to order, and I want to welcome you. I had a chance to visit with you. I know of you. As Director of the DOE Office of Civilian Radioactive Waste Management, you have a big job in front of you.

I was just talking to one of the young men that worked for me back in 1983 when we started working on this legislation, trying to put it together. I was so naive then that I thought we had to hurry up and get it together, get it printed up and get it voted on where we could get it behind us. And here it is 2006, and we are still working on it.

But I have read your background and some of your opening statement, and you are about as straightforward as anybody I have come across yet. You have a huge job, and we really wish you well.

Without objection, the subcommittee will proceed pursuant to committee rule 4(e) which allows members the opportunity to defer opening statements for extra questioning time; and the Chair will recognize himself for an opening statement.

First, I want to thank Ranking Member Rich Boucher--Rick Boucher. I know your name, Rick. And Chairman Barton is usually here and, if he is not here, he will be here; and when he is here, we will open up and let him ask his questions where he can be underway with his major duties as Chairman of the Energy and Commerce Committee.

But I want to thank you, Mr. Boucher, Chairman Barton, and Ranking Member Dingell of the full committee for their help in setting up this hearing.

Yucca Mountain is a necessary solution for how to dispose of our Nation's nuclear waste. We have known that a long time. As I have said before, we can't allow this program to falter any more. We owe it to our children and to our grandchildren to live up to the commitment to build a safe and secure repository. It is my sincere hope that this new schedule is the last time that Yucca Mountain gets delayed.

I am a strong supporter of nuclear energy, and I am anxious to see new plants get built for that to happen. The public needs confidence that DOE will build the repository and meet their obligation to dispose of spent fuel. Otherwise, the lack of process at Yucca Mountain will jeopardize new plant construction; and we need that.

Today's hearing is an opportunity for us to examine the revised schedule for Yucca Mountain. I have noticed that there is no funding profile accompanying this schedule. It is difficult to assess this new schedule without knowing what resources are necessary to accomplish it. So, Mr. Sproat, I would like for you to provide that funding profile to the committee as soon as you possibly can.

I encourage my colleagues to use this hearing to gain a better understanding of the issues before us in preparation of possible legislative action, and I remind all members of the opportunity to ask questions for the record. They will be answered and sent to you. And, Mr. Sproat, I ask you to respond as quickly as possible to the questions; and I look forward to working with you and listening to your testimony today.

I recognize Mr. Boucher.

[Prepared Statement of the Hon. Ralph Hall follows:]

PREPARED STATEMENT OF THE HON. RALPH HALL, CHAIRMAN, SUBCOMMITTEE ON ENERGY AND AIR QUALITY

The Subcommittee will come to order. I would like to welcome Mr. Ward Sproat, Director of DOE's Office of Civilian Radioactive Waste Management, to this Committee. Without objection, the Subcommittee will proceed pursuant to Committee Rule 4(e), which allows Members the opportunity to defer opening statements for extra questioning time.

The Chair recognizes himself for an opening statement. First, I want to thank Ranking Member Rick Boucher, and Chairman Barton and Ranking Member Dingell of the Full Committee for their help is setting up this hearing.

Yucca Mountain is a necessary solution for how to dispose of our nation's nuclear waste. As I've said before, we can't allow this program to falter. We owe it to our children and grandchildren to live up to the commitment to build a safe and secure repository. It is my **sincere hope** that this new schedule is the last time that Yucca Mountain gets delayed.

I am a strong supporter of nuclear energy and I'm anxious to see new plants get built. For that to happen, the public needs confidence that DOE will build the repository and meet their obligation to dispose of the spent fuel. Otherwise, the lack of progress at Yucca Mountain could jeopardize new plant construction.

Today's hearing is an opportunity for us to examine the revised schedule for Yucca Mountain. I've noticed that there is no funding profile accompanying this schedule. It's difficult to assess this new schedule without knowing what resources are necessary to accomplish it. I'd like you to provide that funding profile to the Committee as soon as possible.

I encourage my colleagues to use this hearing to gain a better understanding of the issue before us in preparation for possible legislative action. I remind all Members of the opportunity to ask questions for the record following the hearing. I have asked the committee staff to help pull together those questions that come in quickly. Mr. Sproat, I ask you to please respond to questions as soon as you can. I look forward to working with you, and listening to your testimony today.

MR. BOUCHER. Well, thank you very much, Chairman Hall. I appreciate your work with our side of the aisle as together we made preparations for this hearing, and I appreciate your scheduling the hearing today.

The subject of the Yucca Mountain nuclear waste repository is a matter of great concern to many stakeholders, including the electricity consumers who are each year financing the Nuclear Waste Fund. As a follow-up to our March hearing, it is appropriate that we learn today about the Department of Energy's recent review of the program and the revised schedule for development of the repository.

I would note, Mr. Chairman, and I think you would agree, that there is a bipartisan commitment on this committee to move the Yucca Mountain project forward as rapidly as is possible.

In March, we were told that the Department was undertaking a review of the design of the repository and was unable to provide any updated estimates of when the license application would be filed or when the depository might open and start receiving waste.

Since that time, the Department has concluded its review and prepared a revised schedule for the submission of a license application to the Nuclear Regulatory Commission and subsequent construction and opening of the facility. The announcement of a revised schedule is highly significant, and we welcome a presentation of it today.

In 2002, Yucca Mountain was certified as the site for the Nation's repository of spent nuclear fuel. But the project has experienced numerous delays. The Nuclear Waste Act set the original goal of 1998 for opening the repository, and by missing that date the Department of Energy was found to be in breach of its original obligations.

More recently, the Department had hoped to file a license of application with the NRC by 2004 and begin accepting waste in 2010. The target for the application was missed, and the Department now sees 2017 as the earliest date for opening of the facility.

In addition, the long standing matter of funding for the Yucca Mountain project continues to be of concern, while the balance in the Nuclear Waste Fund is currently approximately $19 billion and annual appropriations for the Yucca Mountain project represent only a fraction of the amount that is annually contributed by the ratepayers. This year, for example, the Administration has proposed $156 million for civilian nuclear waste disposal, but $750 million in ratepayer contributions will enter the Nuclear Waste Fund this year. These moneys are not walled off in the budget and protected and are therefore being spent for other purposes.

Over the past several years, a number of legislative proposals to address the funding mechanism and provide protection for the monies entering the Nuclear Waste Fund have been proposed and debated and approved in this committee. However, given the objections of other committees, no resolution has been reached on this matter.

An issue of long standing concern is the funding mechanism, and I look forward to hearing from Mr. Sproat today regarding the funding system which will be required in order to meet the revised schedule and any comments that he may have regarding the adequacies or inadequacies of the existing funding system. Funding is a central focus of this committee's work with regard to Yucca Mountain. I know it is central concern of yourself, also, Mr. Sproat.

With those comments, let me say that I very much look forward to your testimony; and, Chairman Hall, thank you again for convening today's hearing.

MR. HALL. Thank you.

Recognize the gentleman from Illinois, Vice Chair of this committee, Mr. Shimkus.

MR. SHIMKUS. I will yield for my 8 minutes. But there is a formal statement I have to make based upon the Director's presence and his daughter in the room. I just have to formally say, "Beat Navy," and I yield back.

MR. HALL. With those instructions, we have read the background of our witness and you are the only witness that has been asked to come here today.

I didn't see my friend from Texas, Mr. Gonzalez.

MR. GONZALEZ. I will waive opening. Thank you.

MR. HALL. Thank you for doing that.

Now as I was saying before I was interrupted, we recognize you for your opening statement.

Mr. Dingell just showed up. The Ranking Member is worth waiting for. I recognize you for an opening statement.

MR. DINGELL. Mr. Chairman, thank you for your courtesy; and thank you for holding this hearing. I believe it is timely, and it provides the committee an opportunity to hear and the Department of Energy a chance to honor the commitment it made to the subcommittee in March. I am encouraged and I find it an encouraging sign for DOE to meet the deadline it predicted for setting forth its revised Yucca Mountain program. I hope this trend will continue.

As the Department acknowledged in March testimony, there has been speculation about whether or not we still need Yucca Mountain--I agree with DOE; the answer is yes--and the trust that it can demonstrate today that this long-delayed program can be put on a sound footing. For several reasons, the program now stands at a critical juncture. I would observe that that is not new and it has been going on for more than a little while.

First, as has often been noted, if we were to retain the nuclear option in this country, DOE must demonstrate that it can fulfill its statutory obligation to file a solid license application to the Nuclear Regulatory Commission, the NRC, within a credible timeframe.

Second, the Federal government has a moral duty to use the millions of dollars that ratepayers have contributed to the Nuclear Waste Fund as Congress intended. Thus, the funds should not be diverted to more speculative alternatives.

As you know, the U.S. Treasury is and likely will continue paying out billions of dollars--and I repeat--billions of dollars for breaching its contracts with the utilities, an indefensible situation. A change in the use of the Fund during the appropriations process could undermine the remaining confidence that States, regulatories, and industry may have that Yucca Mountain will ever open; and we will send a disturbing signal

to communities around the nuclear plants who bear the burden of on-site storage.

Finally, I am mindful that the Department set up legislation in April which our Chairman has introduced by request. At the subcommittee's last Yucca Mountain hearing, I indicated that absence of clear understanding of the Department's recent revamping of the program as scheduled for filing an application with NRC and the revised cost applications. It would be impossible for Congress to assess whether or not new legislation is needed.

My impression is that there is plenty of room for DOE to do things while the Congress weighs these developments, starting with the information in today's testimony.

I am a strong supporter of the Nuclear Waste Policy Act, but I am open to considering the need for changes. The Department's legislative proposal, however, does not appear to directly affect the NRC application process; and the Department would be ill-advised to carry--rather, to tarry in completing this task. As we have seen, destined failure to file an application tends to create a vacuum into which all manner of strange ideas might take root and blossom.

In summary, the ratepayers have paid into the fund for so many years, utilities have counted on Yucca Mountain, and the potential investors in the nuclear industry need a clear signal that DOE can put this program right. I look forward to the testimony of our witnesses, and I thank my colleagues for their attention, and I thank you, Mr. Chairman, for this hearing. Thank you.

MR. HALL. Mr. Chairman, we thank you.

Recognize the gentlelady from New Mexico, Ms. Wilson, for opening statement.

MS. WILSON. I will pass.

MR. HALL. The Chair recognizes Tom Allen, the gentleman from Maine, for opening statement.

MR. ALLEN. Thank you, Mr. Chairman, for holding this hearing and for the bipartisan way in which you and Chairman Barton have dealt with the Yucca Mountain issue.

Mr. Sproat, I am glad you are here today and that you have met your Department's commitment to give us revised timetables for submitting a license application for Yucca Mountain as well as a revised timetable for construction and opening of the repository.

I applaud your commitment to the Yucca Mountain Program and to a reform of the Office of Civilian Radioactive Waste Management. There is clearly much work to do. Even with your timetable, the Yucca Mountain license application will be 6 years late and the opening of the

repository will be at best 19 years beyond the deadlines set by the Nuclear Waste Policy Act.

I am troubled by several parts of your prepared testimony.

First, I question the value of making further assessments of the draft license application. If these assessments make the application significantly stronger, then there is value to them. But they must not delay the time table for filing the license application itself. The overriding goal has to be to file the application on time.

Second, I am concerned about the Department's failure to meet its contractual obligations to take possession of the spent nuclear fuel at nuclear power plants.

In Maine, we have no active nuclear power plants, but we do have spent nuclear fuel. Maine ratepayers have paid and continue to pay millions of dollars into the Nuclear Waste Trust Fund, ostensibly to provide funding for Yucca Mountain. These payments continue, even though Maine consumers no longer use nuclear power to generate their electricity.

As taxpayers, Mainers are paying into the Department of Justice's judgment fund which will be used to cover the enormous damages the utilities will inevitably be entitled to because of the Department's breach of contract. In effect, Maine taxpayers will be reimbursing Maine ratepayers and utilities with hundreds of millions of dollars in a financial shell game that will do nothing to achieve the ultimate goal: the transfer of Maine's nuclear waste to Yucca Mountain.

In your prepared testimony you acknowledge the need for a portfolio of legal and financial solutions to address these problems and indicate that you intend to work with Congress on these issues. I would like more specifics as we go forward.

Finally, I am a little surprised that your timetable does not include revised budget estimates. We need that information to make informed policy judgments, and I hope that that information will soon be forthcoming.

And the bottom line, Mr. Sproat, is that I am pleased to have you here and look forward to your testimony.

MR. HALL. Thank you.

The Chair recognizes the Chairman of Energy and Commerce, Mr. Barton.

CHAIRMAN BARTON. Thank you, Mr. Chairman, Ranking Member Boucher, for having this hearing.

I feel very strongly about this issue, and I remain committed to caring out our Nation's nuclear energy policy and building a repository at Yucca Mountain. It is a critical step of that policy.

Today, we have before us the long-awaited, much-anticipated new schedule for Yucca Mountain. In 1982, Congress directed DOE to begin operating the repository by January 31st, 1998. So even as we are holding this hearing, we are already over 8 years late.

The revised schedule projects filing the license application in June of 2008, the commencement of operation in 2017, 11 years from today. If that happens, it is only going to be 19 years late.

There are those that hope and believe that late means never. Frustration over these continued delays prompts questions on whether Congress should just give up on Yucca Mountain and look for other options.

I am frustrated by lack of progress at Yucca, but I am not giving up, because I am not aware of any credible alternative to permanent disposal in a deep geologic repository. Interim storage and reprocessing are attracting discussion today, but they don't eliminate the need for repository for final disposal. I am not convinced that interim storage or reprocessing could be implemented any sooner than a faithful effort to finish Yucca Mountain.

Future generations may develop technology that provides more sophisticated solutions to the problem, and I hope that they do, but it is our job today to complete the one facility that remains necessary in any fuel cycle currently imagined. We in Congress have an obligation to finish what we started in 1982.

I think it is ironic that today, 2006, I am Chairman of the Energy and Commerce Committee. In 1982, I was a White House Fellow with the Department of Energy; and I was on one of the briefing teams that then briefed then Secretary of Energy James B. Edwards on the first proposal about Yucca Mountain back in 1982.

We owe it to everybody in this country who is getting electricity generated by nuclear power and who has already paid for the disposal because of their past contributions and who are paying for it today at the rate of over a billion dollars a year to build and maintain Yucca Mountain on the most feasible timeline possible.

Again, that deadline was supposed to have been 8 years ago in 1998. There are a lot of reasons and excuses to explain why progress on the repository has been so slow, but there is no better time than the present to be exploring what actions are necessary to begin operations as soon as possible.

Mr. Sproat, I met you in my office not too many days ago. I respect your resolve, I respect your energy, I respect your enthusiasm, your commitment to achieving progress on the repository license. As I told you then and I am telling you now, you have got your work cut out for you. But I really hope that you can succeed; and, if at all possible, I am

going to do everything I can as Chairman of this committee to help you succeed while so many other efforts have failed in the past. I look forward to hearing your testimony today.

[Prepared Statement of the Hon. Joe Barton follows:]

PREPARED STATEMENT OF THE HON. JOE BARTON, CHAIRMAN, COMMITTEE ON ENERGY AND COMMERCE

Thank you, Chairman Hall and Ranking Member Boucher for having this hearing. As you know, I feel very strongly about this issue and remain committed to carrying out our nation's nuclear energy policy and building a repository at Yucca Mountain is a critical step.

Today we have before us the long-awaited, much-anticipated new schedule for Yucca Mountain. In 1982, Congress directed DOE to begin operating the repository by January 31, 1998, so we're nearly eight years late today.

The revised schedule projects filing the license application in June of 2008 and commencement of operations in 2017. It will be 19 years late, and there are some who hope and believe that late means never. The frustration over these continuing delays prompts questions on whether Congress should give up on Yucca Mountain and look for other options.

I am frustrated by the lack of progress at Yucca Mountain, but I'm not giving up. I am not aware of any credible alternative to permanent disposal in a deep geologic repository. Interim storage and reprocessing are attracting discussion, but they don't eliminate the need for a repository for final disposal. And I am not convinced that interim storage or reprocessing could be implemented sooner that a faithful effort to finish Yucca Mountain. Future generations may develop technologies that provide more sophisticated solutions to this problem, and I hope they do. But it's our job to complete the one facility that remains necessary in any fuel cycle currently imagined.

We in Congress have an obligation to finish what we started in 1982. We owe it to the many states that are now storing the nuclear waste and spent fuel destined for disposal at Yucca Mountain. We owe it to all those electricity ratepayers who have paid for disposal. And we owe it to all the taxpayers who are paying approximately a billion dollars a year because of DOE's failure to meet the 1998 deadline.

There is a mountain of reasons and excuses to explain why progress on the repository has slow. But there is no better time than the present to begin exploring what actions may be necessary to begin operations as soon as possible.

Mr. Sproat, I respect your resolve and commitment to achieving progress on the repository license. You have your work cut out for you, but I really hope you can succeed where so many others have not. I look forward to hearing your testimony.

MR. HALL. The Chair recognizes the gentlelady from California, Ms. Bono, for opening statement if she likes.

MS. BONO. Thank you for holding this hearing, and I will waive.

MR. HALL. Mr. Murphy, do you have an opening statement?

MR. MURPHY. I will waive.

[Additional statements submitted for the record follows:]

PREPARED STATEMENT OF THE HON. CHARLIE NORWOOD, A REPRESENTATIVE IN CONGRESS FROM THE STATE OF GEORGIA

Mr. Chairman,

Thank you for holding this hearing on Yucca Mountain, which is not only important to our nuclear industry, but also to our overall energy security, diversity and reliability.

The nuclear energy industry is doing its job. It provides clean, cheap, reliable power for about 20% of our electricity needs. One uranium pellet smaller than my thumb equals about 17,000 cubic feet of natural gas, nearly one ton of coal, or 149 gallons of gas. And it does this without any harmful emissions. The industry's safety record is impeccable for both plants and also waste transportation and storage. In a time of rising energy costs, expanding nuclear power should be a no brainer. The Energy Policy Act included good policy to help expand nuclear power, and industry is prepared to do so. But as is the case with most good ideas, one simple thing stands in the way.

In order to move forward, in order to meet the growing need for power, the federal government is going to need to live up to its commitment on waste disposal. Yucca Mountain--after decades of study, after billions of dollars, after years of court battles--needs to be operational. Most people here today refer to that concept as "waste confidence." But we have been around this block a number of times with no resolution.

Frankly, instead of waste confidence what we still lack is Administration confidence. I have been on this panel as long as I have been in Congress and this debate seems to continue endlessly. But we can't afford to give up, because this piece of the puzzle is critical to our nation. Yucca Mountain must open because our power needs aren't going to go away. China and India aren't going to stop aggressively pursuing fossil fuels like oil and gas, keeping their costs high. And leaving the current waste in place all around the nation in temporary sites isn't safe in the long term.

Just as Congress shouldn't ignore its promises to veterans, or its promises to retirees, it cannot ignore its promise in this area now. We need a schedule and need to stick to it.

I believe Mr. Sproat can do this job, and I continue to have faith that this Administration wants to do this work. I look forward to hearing about how the Department is going to take action, not another timeframe for another study to see what the timeframe ought to be to start work.

Thank you and I yield back my time.

PREPARED STATEMENT OF THE HON. EDWARD J. MARKEY, A REPRESENTATIVE IN CONGRESS FROM THE STATE OF MASSACHUSETTS

Mr. Chairman, thank you for calling this afternoon's hearing.

Today we will hear the latest estimates from the Department of Energy regarding its schedule for moving forward to seek a license from the Nuclear Regulatory Commission to store all of the nation's high-level radioactive nuclear waste in Yucca Mountain.

The nuclear waste program has been one of the longest running jokes in Washington for the last thirty years. The Department of Energy and its predecessor agencies started out studying more than 30 potential sites back in the 1970s. After passage of the 1982 Nuclear Waste Policy Act, the search was narrowed to a dozen potential sites for two permanent waste repositories--9 potential sites for the first repository and 12 sites in 7 states for the second. One repository was to be West of the Mississippi and the other East of the Mississippi. In 1986, DOE (for political reasons) dropped the search for the second repository, nominated 5 sites as suitable for the first repository, and (again for political reasons) focused on 3 potential sites in the West for actual site characterization. In 1987, Congress (again for political reasons) put the second repository on permanent hold and further limited the search for the first repository down to a single site: Yucca Mountain, Nevada.

That decision was not based on science. It was based on politics, on the fact that the Congressional delegations from the other states previously under consideration were able to use their political muscle pass the Nuclear Queen of Spades on over to the State of Nevada. The Department of Energy was then left with a fool's errand: come up with a post-hoc technical and scientific rationalization for a policy that was based entirely on politics. It is an unenviable task.

While the testimony we will hear today expresses optimism that a license application can be submitted to the NRC by September 2008 and that the repository itself can begin receiving waste by March 2017, there is good reason to doubt that the Department will be able to meet these objectives. Consider some of the problems that have come to light about this program over the course of the last two years:

- In 2004, the Court threw out EPA's first Radiation Protection Standards because they were not strong enough to protect the public from radiation exposure, and they failed to follow recommendations of the National Academy of Sciences.
- In 2005, EPA responded to this Court decision by issuing draft new standards for the Yucca Mountain site which are wholly inadequate, do not meet the law's requirements, and do not protect the public healthy and safety. In fact, unless EPA substantially revises its proposal, the Yucca Mountain site will have the least protective public health radiation standard in the whole world.
- Also in 2005, numerous scientific and quality assurance problems, transportation problems, corrosion of casks, effectiveness of materials, and many other issues caused DOE to suspend work on the surface facilities and the Nuclear Regulatory Commission to issue a stop order on the containers.
- In 2006, the NRC issued a report that found Bechtel, the main contractor at Yucca Mountain, had failed to accurately measure and estimate the amount of corrosion likely in the casks DOE wants to use to store the nuclear waste. Because of this problem, the Department issued a stop work order on cask research.

Even some of the biggest boosters of the nuclear industry in the Congress now appear to doubt that Yucca Mountain will ever be licensed. Over the last few months, pro-nuclear majorities on the Appropriations Committees in both the House and Senate have shifted funding into nuclear reprocessing and above-ground interim storage of nuclear waste – actions which appear to be driven by a conviction that Yucca Mountain is dead. In fact, the Appropriators over in the Senate have proposed to essentially rewrite the Nuclear Waste Policy Act to set up regional above ground "interim" waste dumps all around the country. I look forward to hearing the Department's views on this proposal, and its impact of both the funding for and the administration of the high-level nuclear waste program.

I would suggest that if Yucca Mountain is dying or dead, it is because ultimately the scientific and technical realities at the site can no longer be ignored, and because ultimately politics cannot trump science when it comes to finding a solution to the problem of safely storing all of the nation's most deadly nuclear wastes.

MR. HALL. All right. We will pick up again.

To start off, thank you for everything. We recognize you prepared written testimony. We ask you to summarize as much as you can. You were kind enough and thoughtful enough to give us your opening statement.

STATEMENT OF THE HONORABLE EDWARD F. SPROAT III, DIRECTOR, OFFICE OF CIVILIAN RADIOACTIVE WASTE MANAGEMENT, U.S. DEPARTMENT OF ENERGY

MR. SPROAT. Thank you very much for the hearing here today.

I heard the frustration and the statements from all of the members. Believe me, not only do I fully understand it and appreciate it, but I share it. One of the reasons that I took this position and accepted the President's offer to be nominated and take this position is because I share not only that frustration but a firm conviction that nuclear energy needs to be a strategic option in our energy portfolio going forward. This project and the issue of disposal of high level nuclear waste and spent fuel has to move forward now in order to make that a reality, and that is why I took this job.

I hope in my discussions with you today that that commitment on my part will come through to you in talking a little bit about what I plan to do and how I plan to bring my experience and my expertise that I have gained in the private sector in the nuclear industry over the years into this project to move it forward smartly in the time that I am in this job, and that is my commitment to you.

Let me say that it has been about 5 years since I have been in front of this subcommittee. When I was here last, I was Vice President of a generation of international projects at Exelon Generation. I came here and I talked about the PBMR. I spent a year in South Africa as Chief Operating Officer of the Pebble Bed Modular Reactor project in South Africa, and I am happy to say that South Africans are moving forward.

After that, I started to do some work on the NGNP Next Generation Nuclear Plant project. But when I stepped back and took a look at what needs to happen now, my feeling was I could best serve the country by getting involved with this project and try to get the Yucca Mountain project unstuck; and that is why I am here.

As you know, Deputy Secretary Sell was here on March 15th and committed to you that we would come here this summer and make a commitment to a schedule for Yucca, and that is why I am here today.

I know you have had a chance to read it so I am not going to go through all of the testimony, but I would like to talk about where I am going to take or try to take this program and my organization with my four strategic objectives.

Number one is get a docketable license application into the NRC no later than Monday, June 30th, 2008. I know the date, and I am not planning on working that weekend. We are going to have a very tight, very driven schedule to drive that.

Mr. Allen, I understand your concern about the assessment and whether or not that would impact that date. I am telling you today that assessment will not impact that date. That assessment is being done so I can fully understand what the gaps are between what I need to have to submit a docketable, credible license application versus what I have sitting on the shelf right now--which I don't know what I have sitting on the shelf right now, having only been there for 4 weeks, but that is what that assessment is about. We have enough time in 23 and a half months to close those gaps and put in a good license application, and that is why we are doing it.

But let me talk about more than just the date. Just getting a license application in on that date is not a measure of success. It has got to be a license application that the NRC will accept and docket, and it has got to be an application that will ultimately lead to receiving a license to build and operate Yucca Mountain. I have five criteria I mentioned in my testimony that that application needs to meet before I am willing to sign it off and send it to the NRC, and my entire office knows what these five criteria are.

We have to have a design that meets the regulatory requirements, we have to have an application that is written that clearly reflects that design, the data upon which the design is based needs to be based on quality assured data; the application needs to address all of the issues that the NRC is looking for, and the people who are writing this need to stand up and be held accountable and willing to sign off and say their part of the application is correct and they are willing to stand behind it. So that is really important.

The one other thing I would say about the application is that I know there are going to be people who are going to say now we have seen their schedule, we think it is overly aggressive, and it shows that they are not committed to safety and quality. And what I will tell you is, based on my experience in the private sector and in the organizations I have been in, the issue of safety, quality, and schedule discipline are not mutually exclusive. I unequivocally believe that, and my office is going to believe that if they don't so far, and that safety and quality are not going to be things that we are going to pass up, but we are not going to bypass schedule discipline either on getting this application in.

The schedule I have attached to the testimony talked about best-achievable date. I wanted to be very clear on what that means. It is predicated on that the legislative package that the Administration sent up to the Hill back in the spring gets passed by the Congress; and I would respectfully request that the Congress look at that legislation, debate it, engage us in dialogue and take it up this year. Because issues that are fundamentally required to allow me and the project to meet this schedule

are tied up with the corrective actions, if you will, that we have requested in that legislation, particularly access to the waste fund revenues and receipts, land withdrawal in Nevada, and certain other key issues that are listed in there; and I can talk about that later. So I would like to reiterate the importance of that legislation in allowing me to meet those dates that are in that schedule.

Of the three other strategic objectives, the second one has to do with the organization itself, the organization now that I am heading up. In order to be seen as a credible NRC licensee, there are certain skills, competencies, behaviors, and culture that that organization needs to have; and I am just in the early stages in my assessment of where that currently stands. I can tell you that it is not where it needs to be. But I can also tell you that I can get it a long way in getting to where it needs to be in the time I am going to be in this position, and I certainly intend to do that.

The third strategic objective is around the issue that several of you brought up already about how do we get the issue of the mounting government liability off of top dead center around the delays associated with Yucca Mountain and the failure of the Department to perform per the standard contract.

As some of you may know, I was the person who was the lead negotiator for PECO Energy in negotiating the settlement for the DOE for the Peach Bottom spent fuel contract. We were the first settlement with the Government on the failure to perform on the spent fuel contract.

So I understand the agreement, I understand the contract, and I understand what we can do, and that is one of the tools in the portfolio of solutions I was talking about as a way of moving forward to minimize government liability.

The fourth and final strategic objective is around transportation. We can get this thing moving. We can get it licensed. We can get it built. But if we can't get the fuel there, we haven't accomplished anything. The whole issue of transportation has been underfunded and not enough attention paid to it; and my commitment to you is it is going to get a lot more attention real fast, with a very heavy emphasis on local involvement in the planning of the transportation routes and understanding the energy procedures and processes that need to go into transporting high-level waste and spent nuclear fuel to the repository.

So, in summation, I am very happy to be here, I understand the challenge that sits in front of me, and I am excited about going to make it happen.

Mr. Chairman, that concludes my remarks.

MR. HALL. Thank you.

[The prepared statement of Hon. Edward F. Sproat III follows:]

PREPARED STATEMENT OF THE HON. EDWARD F. SPROAT III, DIRECTOR, OFFICE OF CIVILIAN RADIOACTIVE WASTE MANAGEMENT, U.S. DEPARTMENT OF ENERGY

Mr. Chairman and Members of the Committee, I appreciate the invitation to appear before the Committee to discuss the current status of the Yucca Mountain Project and my plans over the next two and one-half years.

It has been more than five years since I last appeared before this Committee as a vice president of Exelon Generation and testified about the Pebble Bed Modular Reactor (PBMR) project in South Africa. During 2002 I was in South Africa as the Chief Operating Officer of PBMR assisting the South Africans in determining the feasibility of commercializing that technology. I am pleased to report that the South African government has decided to proceed with demonstration and commercialization of the PBMR.

More recently, I was involved with forming a consortium to compete for the Next Generation Nuclear Plant project to demonstrate the cogeneration of electricity and hydrogen from the PBMR. While that technology and demonstration project holds much promise, I see a more urgent near-term need for this Nation's energy security; that is to move the issue of the disposition of spent nuclear fuel and high-level radioactive waste forward with a sense of urgency. It is for that reason that I accepted President George W. Bush's appointment to serve as the Director of the Office of Civilian Radioactive Waste Management (OCRWM).

I have now been in my new position as Director for about five weeks. During this period I have been conducting a thorough assessment of the Yucca Mountain Project, and that assessment has not yet been completed. I continue to gather data on functional areas of the Project to determine the performance gaps between the current state and the levels of performance that will be necessary for the successful execution of this Project.

In order to expedite this assessment process, I have instructed my Office to issue Requests for Proposals for independent assessments of the draft License Application, the Quality Assurance programs and their implementation by DOE and its major contractor, and of the engineering processes and procedures being utilized by DOE and its major contractor. While I am not yet prepared to give you a full report of my assessment, I can tell you that there are a number of very good people working on this Project who can form the nucleus of a high-quality team needed to successfully design, license, build and operate the Yucca Mountain repository and the waste acceptance and transportation systems. I also can tell you that there are a number of process and organizational issues which must be addressed, all of which are correctable.

There are four strategic objectives that I intend to pursue and implement during my tenure as Director. Let me explain these objectives and why they are important.

My first objective is to submit a high-quality and docketable license application to the Nuclear Regulatory Commission (NRC) no later than Monday, June 30, 2008.

This objective is my first priority and will receive my full management attention. Success in meeting this objective is not measured only by the calendar, but also by the quality and completeness of the application. Before I will allow the application to be submitted, I must be satisfied that:

1. There is a repository design which meets the licensing requirements;
2. The application accurately reflects the design;
3. The data which are used to justify the design in the application are accurate and were generated in compliance with Quality Assurance requirements;
4. The application adequately addresses all of the guidance of the *Yucca Mountain Review Plan* (NUREG 1804); and

5. The writers of the application have attested to the accuracy and completeness of their sections.

I am certain there will be those who will question how these criteria can be met with such an aggressive schedule. I can tell you unequivocally that the concepts of safety, quality and schedule discipline are not mutually exclusive. This concept is demonstrated by world class nuclear organizations on a daily basis and I intend to hold my organization and its contractors to the same standards.

With a license application submittal on June 30, 2008, the best-achievable schedule for Yucca Mountain would lead to receipt of a license to begin to receive and possess spent nuclear fuel and high-level radioactive waste at Yucca Mountain in 2017**.** Attached is a more detailed set of schedule milestones for your information.

Let me define what I mean by "best-achievable schedule." The schedule after the Department submits the License Application is predicated on 1) appropriations consistent with the Administration's requests and passage of our proposed legislation entitled the "Nuclear Fuel Management Disposal Act"; and 2) an NRC construction authorization decision that is consistent with the timelines contained in the Nuclear Waste Policy Act. There are a number of uncertainties currently beyond the control of the Department that have the potential to significantly delay the opening date for the repository and cannot be accurately predicted. The most important is the ability of the Department to have access to the Nuclear Waste Fund to support the cash flows needed to implement the Project. I respectfully ask Congress to pass the Administration's proposed legislation to address this issue; access to the Fund is key to moving the Project forward.

Other factors that have the potential to delay the Project include: 1) the length and outcome of any derivative litigation, 2) Congressional approval of the permanent withdrawal of the lands needed for the operational area of the repository, and 3) obtaining any necessary Federal or state authorizations or permits for the repository and the transportation system. The Administration's proposed legislation addresses most of these uncertainties and will go a long way in reducing schedule risk and the cost uncertainties of the Yucca Mountain Project while still fully protecting public and worker health and safety.

My second objective is to design, staff, and train the OCRWM organization such that it has the skills and culture needed to design, license, and manage the construction and operation of the Yucca Mountain Project with safety, quality, and cost effectiveness.

I am still in the process of assessing the current state of my organization and the skill gaps that may exist compared to what is needed to meet this objective. I do know that additional skills and competencies are required to enhance the current organization and that attracting and retaining individuals with these skills will be a major challenge. I have been encouraged, however, by the Department's Office of Human Capital Management and its help in meeting this challenge.

My third objective is to address the Federal Government's mounting liability associated with unmet contractual obligations to move spent fuel from nuclear plant sites.

What seems to have been lost in the Yucca Mountain debate over the last several years is that the U.S. Government has legally binding contracts with all owners of nuclear power plants to take possession of and remove their spent fuel. There are two major implications of the Government's inability to perform per the contract requirements: 1) the financial liability borne by America's taxpayers for non-performance of the contract continues to grow every year, and 2) the ability of this country to depend on nuclear energy as a strategic energy option for the long term is in jeopardy because spent fuel continues to accumulate at existing plants. There is no one solution to these problems. It will require a portfolio of legal and financial solutions to address these problems; but it can be done, and I intend to work with the Congress and the contract holders to try to break this impasse.

My fourth objective is to develop and begin implementation of a comprehensive national spent fuel transportation plan that accommodates state, local and tribal concerns and input to the greatest extent practicable.

I believe that the planning of the transportation system for the country's spent nuclear fuel and high-level radioactive waste has been underfunded and not given the attention and resources that it demands. The recent National Research Council's report on spent fuel transportation concluded that, while there are no technical barriers to the safe transportation of spent nuclear fuel, there are a number of social and institutional challenges that must be addressed before large-scale shipments commence. I agree with this conclusion and I intend to put into place processes which maximize the ability of the public to understand the risks and mitigating safety precautions, and to influence as appropriate the selection of transportation routes in their areas. Some work has already been done in this area with local planning groups, but much more needs to be done at an accelerated pace.

In summary, these four strategic objectives will form the basis of planning and resource allocation during my tenure. I believe that these areas must be addressed today to move forward on the issue of final disposal of spent nuclear fuel and to prepare the Project for long-term success in meeting the mandated direction of the Nuclear Waste Policy Act. I will do my best to make this a reality.

Attachment

Yucca Mountain Repository Schedule

Milestone	**Date**
Design for License Application Complete	30 November 2007
Licensing Support Network Certification	21 December 2007
Supplemental Environmental Impact Statement (EIS) Issued	30 May 2008
Final License Application Verifications Complete	30 May 2008
Final Rail Alignment EIS Issued	30 June 2008
License Application Submittal	30 June 2008
License Application Docketed by NRC	30 September 2008

Best-Achievable Repository Construction Schedule

Start Nevada Rail Construction	5 October 2009
Construction Authorization	30 September 2011
Receive and Possess License Application Submittal to NRC	29 March 2013
Rail Access In-Service	30 June 2014
Construction Complete for Initial Operations	30 March 2016
Start up and Pre-Op Testing Complete	31 December 2016
Begin Receipt	31 March 2017

The schedule above is based on factors within the control of DOE, appropriations consistent with optimum Project execution, issuance of an NRC Construction Authorization consistent with the three year period specified in the Nuclear Waste Policy Act, and the timely issuance by the NRC of a Receive and Possess license. This schedule also is dependent on the timely issuance of all necessary other authorizations and permits, the absence of litigation related delays and the enactment of pending legislation proposed by the Administration.

MR. HALL. Mr. Boucher and I have agreed to recognize the Chairman of Energy and Commerce first and the ranking Democrat, Mr. Dingell, next for questions.

The Chair recognizes Mr. Barton.

CHAIRMAN BARTON. You caught me right before I was walking out the door. I have got a hearing on global warming downstairs that has been going on all morning and probably going on all afternoon, so I appreciate it.

You talked about your legislative package. The problem I have with trying to move it is--I have told you in my office--it doesn't seem to have a high prospect of being moved in the Senate. So what is the Administration's plan if Mr. Dingell and I decided that we could move either the Administration's proposal or some version of that on a bipartisan basis through the House that we could get a reciprocal action in the other body?

MR. SPROAT. Well, being a political neophyte on the Hill, I may not know all of the typical ways of working these kinds of issues up here, but what I will tell you is that what I find very encouraging is that the appropriations language in both the House and the Senate bills fully recognizes the issue of the importance of moving spent nuclear fuel forward, and the fact that there seems to be at least the consensus that the issue is important enough that it needs to be addressed in both houses is extremely encouraging to me.

What is also obvious, reading both the appropriation languages, is that there is not a clear consensus on exactly what should be done to move it forward. And my commitment to you, Mr. Chairman, is that if I am given the opportunity I would like to play a role in trying to facilitate that discussion between the two organizations. Because I have some ideas, the Department has ideas, clearly you do, and clearly the Senate does. I think we have a unique opportunity here over the next 4 or 5 months to actually make something happen if we can get the right people in the room at the same time to talk about it.

CHAIRMAN BARTON. What happens to your plan if we don't move the legislative package? What is Plan B in terms of meeting that deadline of having the licensing application to the NRC by June of 2008?

MR. SPROAT. Based on the funding levels that are being proposed in both houses for the coming year, I expect no impact whatsoever in terms of funding impact on being able to submit that license application by 2008.

Now having said that, the other key issue is the remaining impact on the remaining program in terms of the long-term certainty of the funding stream, how long the project will take to build, which directly impacts the cash flows on an annual basis in the total cost of the project and it

also impacts the ability to predict what the liabilities are associated with predicting when we can actually move spent fuel.

So not having that legislation clearly impacts the ability to predict with any kind of certainty how this project will move forward. But in the very short term, over the next 12 months it really won't have an impact.

CHAIRMAN BARTON. Does moving forward with the Administration's proposal on GNEP impact the Yucca Mountain schedule and emphasis?

MR. SPROAT. It absolutely will not. Personally, I believe GNEP is important. Closing the fuel cycle is important for the future of this country, and we are going to have to do it. When it is going to occur and how long it is going to take, I think there are a lot of diverse points about that, and I am not going to speculate.

But what is clear is that, number one, regardless of what happens with GNEP, there are waste forms and spent fuel forms that we currently have responsibility for to dispose that can't be recycled. They have to go to repository. They have to go to disposal.

As for the commercial spent nuclear fuel, whatever gets recycled through GNEP eventually will be a different waste form that comes out of the tail end of that process; and when we have that better defined, which may be sometime in the future, we will be able to design a waste package to handle that, qualify that waste package to put in the repository and submit a license application of the NRC to get permission to put that waste form in the repository at that point in time.

CHAIRMAN BARTON. Do we have the Administration's support and promise that they will not support any diversion of funds from the Nuclear Waste Fund that is supposed to go for Yucca to the GNEP program?

MR. SPROAT. Yes, sir.

CHAIRMAN BARTON. Okay. Mr. Chairman, I yield back.

MR. HALL. I thank the Chairman.

I see the President has just issued a veto rejecting the bill to expand Federal research on stem cells obtained from embryos. And they reset the time for the next vote, Mr. Chairman, about 3:30. Then an hour from then they are going to take up the veto message and debate it and then have some votes at 5:00, so we will be interrupted from time to time here.

Mr. Dingell, the Chair recognizes you for as much time as you take, sir.

MR. DINGELL. Mr. Chairman, you are most courteous. Thank you. I will try and stay within my time limit here.

First, for my information alone, would you please submit to me, not for the record, but submit to me a statement of all of the problems that

you anticipate with regard to completing your scheduled construction and completion of the Yucca Mountain facility? I might want to put it in the record, but I don't intend to tip over any garbage cans and inform people who might be out to delay or to stop the project from having you essentially be advising them on what they may do to slow the process.

MR. SPROAT. Just so I understand, what you are asking for is really a risk assessment of what are the key risks that I see to moving the project forward from where it is today to repository opening.

MR. DINGELL. Yes.

MR. SPROAT. Yes, sir.

MR. DINGELL. Now, with regard to the licensing schedule, if the Administration bill is not enacted, can DOE still submit an application to the NRC by 2008?

MR. SPROAT. Yes, sir.

MR. DINGELL. You can?

MR. SPROAT. Assuming that--obviously, appropriations for fiscal years 2008 and 2009 will have some impact on that; and, obviously, I can't without access to the waste fund because I wouldn't have that legislation. I am at the will of the Congress in terms of what appropriations I would get legislated in that fiscal year 2008 which would cover that last part.

MR. DINGELL. Do you feel an enactment of the legislation bill is necessary to meet the best achievable goal of opening Yucca Mountain in 2017?

MR. SPROAT. Yes, sir. I will give you one example.

MR. DINGELL. Will you tell us why?

MR. SPROAT. One specific example--and I am not an attorney, and I don't pretend to understand this. But, for example, we have requested the Congressional authority which we need for land withdrawal. Right now, the Yucca Mountain site is on the Nevada test site which is owned by the U.S. Government. But we need to be able to withdraw that land from public use on a permanent basis so we can assure the NRC that we will have control of that site, both access and future activities on it. Right now, we don't have that--we can't give them that assurance, so that one issue just by itself--

MR. DINGELL. Is that regulatory or statutory action?

MR. SPROAT. I believe that is statutory, as I understand it; and that is one example.

MR. DINGELL. I would suggest if that be the case you get legislation up here as soon as possible.

MR. SPROAT. That is actually in that legislative package that we sent up earlier this year, sir.

MR. DINGELL. Now with regard to DOE's liability of breach of contract with the utilities, your testimony lists a number of concerns related to DOE's inability to meet its contractual obligation to be accepting waste. You stated at page 6 there is no single solution. But then you go on to say, "It will require a portfolio of legal and financial solutions to address these problems," close quote, and that you will, quote, "work with the Congress and the contract holder to try and break this impasse."

Can you tell us exactly what is this impasse?

MR. SPROAT. Well, impasse is my term that I use because, as I said, I started working on this issue when I was with PECO Energy back in 2000 or 2001. The impasse is that we still have the vast majority of the commercial nuclear plant license holders who have contracts with the DOE that we are basically in litigation with, and the potential liability to the taxpayer is continuing to mount. We are making very slow progress in terms of moving that issue off of where it has been stuck.

What I learned from my involvement in this issue back when I negotiated the PECO settlement was that there is no one solution. In other words, one fix doesn't--the industry is--

MR. DINGELL. I was going to say you have got a lot of problems.

MR. SPROAT. There are the issues with the shut-down plants, for example. They are out of the business. They want to get rid of the fuel and get rid of the liability. There are other companies that are planning to stay in the nuclear industry for a long period of time, and they are in it for the long haul, and then there are others who are still trying to figure out what is an appropriate settlement for them.

So the quick answer is there is a portfolio of I think legal settlement and possibly technology issues that can possibly help here, but there is no one quick fix that fixes all of this, I don't believe.

MR. DINGELL. Now I think you are telling us that we should expect a second legislative proposal in addition to that which you set up in April of 2006, is that correct?

MR. SPROAT. I wouldn't say that yet. I don't know if I need any additional legislation. It is certainly a possibility. But what I would like to say is I would like to have an opportunity to have more dialogue and negotiations on this with all of the interested stakeholders first.

MR. DINGELL. Now you had mentioned the impasse and the contract holders. How do you propose to work with the contract holders on this matter?

MR. SPROAT. I am still--having only been here for 4 weeks, I really haven't laid out a full plan about that yet.

MR. DINGELL. But you are going to have to do that?

MR. SPROAT. I am going to have to do that. No doubt about that.

MR. DINGELL. I am not going to expect any miracles from you today. Tomorrow, yes, but not today.

Over many years, DOE provided this committee with summaries of projected spending for Yucca Mountain which outlined future budget needs. While some past summaries have indicated that DOE may need to tap the corpus of the Nuclear Waste Fund to open Yucca Mountain, others have suggested that the program could be squeezed by using only annual contributions to the fund.

Now, questions. Now that you have established revised timetables for filing a license application and for opening repository, can you tell me whether or not DOE will need to tap the corpus of the fund between now and the time the repository opens?

MR. SPROAT. No, I can't, but let me clarify that. There is no doubt in my mind that during the life of this project--assuming we get an authorization to construct and a license to operate, there is no doubt in my mind we will have to tap the corpus of the fund during that time period. In terms of do I need it to build it, my best answer is--right now is I don't know, because I haven't had the time to take a look at the projected cash flows and challenge them from a management perspective. Yet to say this is the right set of cash flows through the construction period and can I meet those cash flows with receipts and interest or do I need corpus, I just can't answer that question yet, sir.

MR. DINGELL. All right. Will you provide the committee with the best updated version of the projected program costs you can give us?

MR. SPROAT. Yes, I will.

[The information follows:]

We are currently in the process of re-calculating the cash flows for the Yucca Mountain Program based on the CD-1 recently approved scope. We anticipate having the revised cash flows available to provide to the Committee by the end of CY 2006.

MR. DINGELL. Mr. Chairman, I have got other good questions, but I am loathe to consume the time of the committee. I don't want to cause problems here.

MR. HALL. The Chair thinks it is worthwhile to grant you another 5 minutes.

MR. DINGELL. Then I'll wait. Thank you, Mr.--

MR. HALL. No. Go ahead now while you are on a run.

MR. DINGELL. I understand that your tenure at DOE has been brief, but I am concerned that your plan to issue new requests for proposals for independent assessments of the repository program could lead to further delays. How do these new studies square with your goal of filing the license application with NRC by 2008? How will you avoid getting

bogged down in new reviews? NRC is not known for the blinding speed with which it processes its business.

MR. SPROAT. Very good question, sir.

As I stated in my opening statement, the issue for me is not necessarily by itself getting an application in no matter what it says or no matter what its quality by that date. I have to have the quality and the completeness by that date. And the only way I can assure myself that I have addressed the issues that need to be addressed by this program--by my program by the time that application goes in is I need to do some additional independent assessments around pieces of this program that I have concerns about, and those concerns are based on what is available in the public record that I was able to read and study up on while I was awaiting confirmation.

It is very clear this program has had a poor history of quality assurance implementation and issues. So I think it is extremely important that I get in a set of outside independent eyes of very qualified people to take a look at the programs at DOE, its primary contractor, and the key national labs to tell me either how good or how bad those programs are so I can get them fixed before that application goes in.

MR. DINGELL. Now I applaud this, but how are you sure this is not going to slow the project down?

MR. SPROAT. I won't let it.

MR. DINGELL. Then let us pray.

Given the existence of a Nuclear Waste Technical Review Board, why are new assessments initiated through requests for proposals necessary? Could involvement by the Board save time?

MR. SPROAT. No, it won't. The Board has a very specific set of expertise that is geared to look at the science and the probabilistic risk of the repository. These issues that I am doing, these independent assessments on are more of a programmatic nature; and the Board doesn't have the right skill mix to do them adequately, in my opinion.

MR. DINGELL. Now I observe here and I concur with your statement on page 4 that it is critical for DOE to have access to the Nuclear Waste Fund to support cash flows to implement the project. I agree with that. I have no particular objection to the legislative reclassification to which you refer, which was included in the Administration's proposed bill. However, I believe this is only a partial solution since it addresses only future rate payers' contributions to the fund.

Now the question. I reluctantly voted against past legislation that did not safeguard the existing corpus of the waste fund. Why does DOE not support this clearly needed reform?

MR. SPROAT. I am sorry. Doesn't support which?

MR. DINGELL. People are raiding this fund left and right. It is being spent for all matters and purposes inconsistent with that which Congress established the fund for. It would appear to me that a responsible and needed reform to this matter would be to say to these other people they need to keep their cotton-picking hands off of it and break their knuckles every time they reach so you can see to it that the fund is spent for the purposes for which the Congress set it up.

MR. SPROAT. I am from a State that has the second-most amount of spent nuclear fuel in the country, and I personally have contributed a lot of money into that Nuclear Waste Fund, and Mr. Shimkus--

MR. DINGELL. There is a whole bunch of people that have.

MR. SPROAT. And Mr. Shimkus is from a State that has the most spent nuclear waste in the country. We are all on the same page that that fund needs to be used for the purpose for which it was intended.

MR. DINGELL. But there are lots of light-fingered folks who are putting their hands in the till and taking that out for other purposes. How are we and why are we not going to insist that that fund be protected instead of dissipated for purposes inconsistent with what the Congress set it up for?

MR. SPROAT. I think that is a very legitimate question, and I am not well versed enough on the budget process and the budgetary procedures and laws around that. I guess all I can commit to you is that I understand exactly what your position is, and with the legislative package we put up here we think it is a good start in moving in that direction and--

MR. DINGELL. Start but not a finish.

MR. SPROAT. Maybe not.

MR. DINGELL. And I am troubled because, again, good-hearted folk are spending this thing for all manners of other purposes. It starts with OMB, the President's Office, it goes on down through the Appropriations Committee and the Budget Committees; and nobody can stop these rascals from doing it. We set the trust fund up so there would be money to address these problems; and, lo and behold, they are using it for different purposes so it is not available.

MR. SPROAT. In terms of--I can't speak for how the accounting in government works, but in terms of disbursements from the fund, it is very clear it can only be used for Yucca Mountain. And there are--at least I am not aware of other programs that are actively taking withdrawals out of the fund for other programs. I don't believe that is the case.

MR. DINGELL. We will send you information in that regard.

Mr. Chairman, I thank you for your courtesy.

MR. HALL. Thank you, sir. We always allow the Chairman and Ranking Member all of the necessary time that they can take because of their schedule.

At this time, I have just a question or so to ask you.

The total system life-cycle cost estimate has not been updated since 2001. Now that DOE has a revised schedule, if I missed it--you may have already said it--but when do you plan to issue a revised estimate?

MR. SPROAT. I understand, sir. We are currently working on that. I would expect that to be probably early fall timeframe, and we will have that ready for examination.

MR. HALL. Will the current one mil per kilowatt hour charge be adequate to fund that?

MR. SPROAT. Based on everything I have seen so far--and let me couch this by saying I haven't done a detailed review, but based on my preliminary discussions with the staff, there is no indication that that needs to change.

MR. HALL. The previous DOE testimony before the committee indicated that DOE estimates that liability costs may reach approximately $500 million per year plus another $500 million per year for continued storage of defense waste. What can DOE do to mitigate these costs to the American taxpayer?

MR. SPROAT. Well, clearly, by my third strategic objective that I outlined, I clearly understand the importance of moving this issue forward. Our protection right now--just to give you the numbers that I have in front of me--that if we were to open the repository in early 2017, the total liability we are projecting at that point in time is about $7 billion--billion with a "b" total.

I think there are things we can probably do both in terms of settlement with people as well as maybe some other things that we may not have legal authority to do right now to help drive that down. Clearly, the other things we can do, assuming we get the funding and the other issues in our legislative package that we have asked for, that upon which our best achievable schedule is predicated, assuming we can get those, I think you know there may be an opportunity to further compress the construction schedule but I am not really ready to commit to that today yet.

MR. HALL. I am going to try to be around to hold you to that 2017 deal. George Burns said he didn't buy green bananas.

All right. Who is next here? Ranking Member Boucher, the Chair recognizes you for 5 minutes.

MR. BOUCHER. Thank you, Chairman Hall. I am totally confident that you will be around in 2017 in order to bless the opening of this

project, and I notice that you normally do buy green bananas. So thank you for recognizing me.

Mr. Sproat, I am very impressed with your confidence and with your determination. I applaud your analytical approach and the determination that you exhibited in your statement here today; and I certainly wish you well with what, as Chairman Barton indicated, will be a very difficult task. I realize you have been here 4 weeks so, obviously, you didn't totally complete the schedule on your own, and I am sure it was well in the process of formulation at the time you arrived.

Let me ask if you are totally comfortable with the schedule. Do you believe this represents a realistic timeframe for moving forward?

MR. SPROAT. Yes, sir, it does. I would not have brought it up here if I didn't believe that. And if you will notice the timeframe of the license applications submittal which is 23 and a half months off now, I still plan to be here by that date. I know that if I miss that date I am probably going to get hauled up here and have to explain it, and I don't intend to go through that.

MR. BOUCHER. Mr. Dingell has propounded many of the questions, I also noted, about budgeting, but let me just extend a couple of those.

Referencing the budget that you will need in order to complete the preparation and submission of the license to the Nuclear Regulatory Commission, I believe $156 million has been requested for fiscal year 2007. Do you believe that amount is adequate for that year and what amount do you think will be necessary for fiscal year 2008 to let you complete this work successfully?

MR. SPROAT. That is a very good question, and I am really not prepared to answer. I would have to say that I know that in the total budget that I have available to me in fiscal year 2007 and what we would hopefully anticipate in fiscal year 2008 there should be more than sufficient funds in there to complete those submissions.

In terms of the allocation of the funds within the budget, in terms of license applications versus other activities, I am very clear my first priority is the license application preparation, in getting it done; and if I need some relief from Congress in terms of moving some funds around in my budget to allow that to happen, I intend to come back and ask for it.

MR. BOUCHER. Then in the fall you are going to present further budgetary information and we will have an opportunity to question you more carefully with that.

MR. SPROAT. Yes, sir.

MR. BOUCHER. Let me ask, as you prepare for that appearance here, to give some attention to a very key question which Mr. Dingell propounded, and let me emphasize this, and that is the point at which you

are going to need to start dipping into the Nuclear Waste Fund and have monies available to you that exceed the annual $750 million dollars that ratepayers are contributing into the fund.

I frankly find it hard to imagine that you will not need that corpus. Over the approximately 10 years that separate now from your projected opening date only about $10 billion would come into the fund. Add another 10 percent in interest and if you can get that these days and that gives you maybe $11 billion. I can't believe you could actually build this facility and do the other work and engage in the settlements that you are going to have to address for $10 billion.

MR. SPROAT. That is a very good point; and, as I said before, I am not quite ready to defend the cash flows yet.

However, let me say there is a piece on the other side of that equation, having come from the private sector on large projects like this where I believe there is a limit to what a project can effectively spend and manage on an annual basis. This project has the potential, if it is not appropriately managed and led, to spend a lot of money and not accomplish a lot.

So as I take a look at the cash flows on this project during the construction years, because we are going to be building a rail line and be building the repository and then whatever other capital investments we need to do in order to get the fuel from wherever it is on that rail line to the mountain, you are right. It is not beyond the realm of credibility that we are going to need more than $800 million a year.

But, at the same time, I have got to make sure I put in place the management processes with the right people to be able to effectively manage a project that can handle cash flows that large or larger; and I will tell you right now I don't think we are there yet.

MR. BOUCHER. And we are also not there in terms of protecting these monies from intrusion from other sources, including the $19 billion that currently resides in the fund which is available for expenditure. And, in fact, I would differ with your statement earlier. That money, in fact, has been expended; and walling off that amount, just having a decision by the Congress to say we are going to protect $19 billion, we are going to put it aside and make it available to finish this program is, in my personal view, of the utmost importance. As you are preparing your future budgetary projections to us, bear in mind that that money is not guaranteed. It is not assured, given the current legal structure.

A couple of other questions. Are we going to need some kind of interim storage between now and 2017? That is still a long time. That is 10 years for waste to continue to pile up at reactor sites. What are we going to do with it?

MR. SPROAT. Let me try to answer the question this way. We currently have a lot of interim storage. We have interim storage at 126 sites. Mr. Shimkus has a lot of interim storage in his State. I licensed one of our plants, and we've got a lot in Pennsylvania, and a lot of the people in this room have interim storage. So it is not a question of interim storage.

It is a question of, number one, how do we reduce and minimize taxpayer liability associated with contract nonperformance by DOE. And, number two, it is about how do we provide waste confidence for the new wave of nuclear plants that are being considered now. This is a real issue for the people who want to build new plants.

So that those are two key issues that further additional interim storage and in my term what I call centralized interim storage is a potential legitimate solution.

Now, having said that, again coming back to looking at both the House appropriations bill and the Senate appropriations bill, there seems to be a recognition on both sides that we wanted to do something with this, but there is not a clear consensus on exactly what. I think that there are some opportunities to work there, but I would say that knowing what it takes to license a centralized interim storage facility in terms of citing whatever litigation that comes with it, the licensing process and the construction process, if we are able to get the legislative package that we have sent up to the Hill passed on Yucca Mountain and we are able to get Yucca Mountain opened up in the 2017 timeframe, I don't think centralized interim storage is going to buy very much, I really don't.

MR. BOUCHER. So if we actually meet the 2017 schedule, that diminishes the need for interim?

MR. SPROAT. Yes, sir.

MR. BOUCHER. Given your expertise, I am compelled to ask this question. I had followed a little bit the Pebble Bed exercise in South Africa. We heard a lot about it for a while in the early phase, and then we didn't hear very much. At the time, probably 4 years ago, when this was a topical subject, some of the electric utilities in the U.S. were saying this might be the new model for going forward here in the U.S. as well.

MR. SPROAT. That was me saying that.

MR. BOUCHER. I thought I heard your name. So what happened to it? Did it pan out as you had expected? Does it add to safety? Does it add to efficiency? Is it lower cost than conventional technology? Is it possibly a model for going forward here in the U.S.?

MR. SPROAT. Well, what happened to it was I went down to South Africa for a year to run the joint venture down there, and I went down because I was asked by the South African--by the board of directors to

come down to get the project to the point where the investors could make an informed decision about cost, design, schedule, commercialization strategy. And basically I did that, and I finished that responsibility in the end of 2002.

What has happened since that time, the South African Government has taken that body of work that we produced and made a decision at the Presidential level that the project is going forward in South Africa as a national strategic project. They have ramped the project up quite a bit from where I have left from a budget and a personnel standpoint, and they are planning on building a demonstration PBMR outside of Cape Town and to break ground on it sometime I think late next year is the latest schedule I have seen.

So it is moving forward, and if they are successful in demonstrating it, part of their overall strategy is to get that license certified here in the U.S. with the NRC so that it could be another option for U.S. utilities who might decide they want a smaller modular reactor as opposed to a big megareactor.

MR. BOUCHER. That would potentially add to safety, to efficiency, to reduce cost?

MR. SPROAT. Yes, it would.

MR. BOUCHER. Thank you.

MR. HALL. Thank you very much, Mr. Boucher. Because we have only one witness, and we have run over a little on the questions, and the Chair at this time recognizes Mr. Shimkus, the gentleman from Illinois -- his name has been taken not in vain, but referred to several times. I give you s3 extra minutes, and recognize you for 8 minutes.

MR. SHIMKUS. Whoo hoo. Thanks, Mr. Chairman. Thanks for being here, and, of course, we have had a lot of work on a lot of issues for a long time, and I am pleased to see you in your current position. And just in the line of--with my friend Mr. Boucher, we are also working on coal liquid applications, which South Africa--and actually the Government paid, invested, took the risk over decades.

MR. SPROAT. Yes.

MR. SHIMKUS. And now they are sitting in the catbird seat as the world is trying to find coal liquid technologies, and maybe that is the same thing with this eventually, and we don't operate that way. Maybe we should. We may do the science here, but we definitely--it is just not in our nature to take on a major risky project. So I have to applaud them for their foresight. Hopefully it will pay off like the coal-to-liquid technology is paying off in South Africa now.

MR. SPROAT. I hope so.

MR. SHIMKUS. There is no bigger issue facing this country than opening Yucca Mountain. It just sends a signal of our desire to be

independent to the market. It will address the waste, it will lower risk, and we look like fools up here.

I will be honest with you, I was teaching high school, and Yucca Mountain was one of the case studies in the book. I remember--and I mentioned this in the hearings, and, you have got this American Indian, this horse sitting on top of Yucca Mountain, and the case study was seizing of land for this repository. And we operated on old textbooks, and this was 1986.

So we just have to--I mean, I think what you hear from Members is, we applaud a schedule. There is some reticence to believing it.

MR. SPROAT. I understand that.

MR. SHIMKUS. And it is justifiable.

MR. SPROAT. I understand that.

MR. SHIMKUS. But let us know what we can do, and ask for assistance, and help hold us accountable to meet these standards, because you have a lot of support here, and in this new environment of the desire to really be diversified in electricity generation, that is my position, and have a lot of competing generators out there, living up to our responsibilities and our requirements under law, we need to be there as a partner to make sure that this happens.

Do you believe the Department has the scientific information, a sufficient breadth and depth, to support a high-quality and defensible license application?

MR. SPROAT. I think it certainly has the base of that. I don't know yet whether or not it has all that it needs.

MR. SHIMKUS. And that is why you are doing that?

MR. SPROAT. One of the reasons I am doing that assessment. It is another reason why I spent several hours with the NWTRB members just this past week to take a look at their latest annual report to Congress of what their key technical issues are that they see, and my intent is to take those issues and incorporate them into my science program this year to make sure that I am focusing the organization on gathering information and doing analysis that will help address the NWTRB's issues that they told us they still have concerns about.

MR. SHIMKUS. As you do this assessment, that will probably help give you some guidelines as to what you plan to do; if there are some gaps, how you will address those.

MR. SPROAT. Exactly.

MR. SHIMKUS. I think also what Members would appreciate, that if in this assessment, in these shortfalls, you see where we can be engaged, then you, through the Department, should be up here--

MR. SPROAT. Yes, sir.

MR. SHIMKUS.--as quick as possible. There will be continued finger-pointing if we do not meet schedules.

MR. SPROAT. I understand.

MR. SHIMKUS. Many of us don't want to be on the end of that. We want to say we have done all we can.

MR. SPROAT. Believe me, I have no doubt that if we don't meet the schedule, the finger-pointing will be right at me.

MR. SHIMKUS. That is that old one this way, five, four this way.

One of the worst ideas that has come out of the Senate is Domenici-Reid and these 33 interim storage sites. Doesn't that make your work additionally more complicated?

And it is okay to bash the Senate while you are over here. You just have to be careful when you go back over there.

MR. SPROAT. I am going to see Senator Domenici tomorrow afternoon. I don't think it makes my job more difficult. And I want to go back to what I said in the beginning. I really am encouraged, the fact that both the House and the Senate have this issue on the table, that this recognition by both houses that this is an important issue that needs to move forward, and I view that as an opportunity more than a threat. And I would like to have more discussion with both houses around that because, quite frankly, I have got some experiences in terms of licensing interim storage and hopefully can inject some reality into the process and into the thinking so that hopefully we can come to some kind of consensus that hopefully make some sense.

MR. SHIMKUS. We are already talking about Yucca Mountain, and we already know we are way behind there. There is already debate in the Department on the second repository. Then you are addressing 33 interim sites. I know our colleague, now Governor of Maine, is already starting to raise some issues.

MR. SPROAT. Yes.

MR. SHIMKUS. I can see 33 other Governors raising some issue. I can see transportation debates, politicization of this issue. We just can't--I am on record. That is the stupidest record I ever heard of, and we need not go there, and if I see Senator Domenici, I will tell him. I am sure he will tell me what--

MR. SPROAT. Let me just talk about the second repository just for a second because that is a very good point. In our legislation package that we sent up, one of the things that we asked for was relief on the administrative limit of 70,000 metric tons of uranium to put in the mountain. That was strictly an administrative limit that was put in the law. Technically the mountain can hold a lot more than that, probably close to double. And what we are asking for is relief from that 70,000 metric ton limit and allow the NRC to make a determination as to what

the maximum licensable limit of storage in the mountain is, based on the actual mountain configuration.

If we get that, I think it is extremely defendable to say that it is unlikely we are going to need a second repository any time in our respective lifetimes. If we don't get that relief, if we don't get that legislation, I am going to have to come back to the Congress sometime while I am in this office and say, we need a second repository.

MR. SHIMKUS. My last question. You understand because you have been in the private sector, the corporate culture. And talk about the corporate culture of the NRC--a DOE site that is going to be regulated by the NRC, and what are we doing in preparation of that?

MR. SPROAT. Well, my second strategic objective I talked about was about getting the organization, the OCRWM organization, and DOE ready to become a credible NRC licensee, and it is all about culture. It is all about understanding safety, quality, integrity, continuous improvement, teamwork. And I am very clear--I was very heavily involved in leading a corporate culture change initiative at the old PECO Energy, Philadelphia Electric, when we changed it from a nuclear organization that had to shut down a plant because operators were found sleeping to being the premier nuclear operator in the country. And we engineered that turnaround of that culture change there, and we then did it for Philadelphia Electric, PECO Energy, across the entire corporation, and that let us become the organization that formed the basis of Exelon with the merger with ConEd.

So I know what it looks like, I know how to do it, and I intend to go make major steps in moving us forward in the next 2, 2-1/2 years while I am here.

MR. SHIMKUS. Thank you, Mr. Chairman. I will end, and I will just end on thanking you. And based upon the success of you and your wife raising a young lady to attend the United States Naval Academy, I am going to say all good things. And the success there bodes well for the success of this. And I yield back

MR. SPROAT. Thank you very much.

MR. HALL. Thank you.

Recognize Mr. Wynn from the State of Maryland.

MR. WYNN. Thank you, Mr. Chairman.

Thank you, Mr. Sproat.

Maybe about four questions. First of all, what is the advantage of putting the fund off budget?

MR. SPROAT. Well, I am certainly not the right person to ask in terms of trying to explain the Federal budget process here, because I just don't understand it. But the reason we are asking for it is because we believe that by giving us the right to receive the annual receipts being

paid by the utilities into the Nuclear Waste Fund and giving us access to those funds directly to allow us to spend them in the years they are received, it eliminates that funding uncertainty that we have right now that up until now has had some impact on the program--

MR. WYNN. Feel certain about whether you will get the appropriations?

MR. SPROAT. I am sorry?

MR. WYNN. Is there uncertainty about whether you will get the appropriation?

MR. SPROAT. Yes, sir. It is an uncertainty on whether we will get the appropriations, and particularly given the fact that based on the current--as I understand, and I may be wrong, but as I understand the current legislative requirements around budgets and the Federal--and the Federal deficit, that where I would go from spending around a half a billion dollars a year now to ramping up maybe during peak construction of maybe more than a billion a year, under the current process that would be very difficult for the House and the Senate and OMB to mark appropriately. And it is probably more than I understand about the process.

MR. WYNN. Okay. What happens to the funds that have already been paid? Are they set aside for you, or are they subject again to appropriation?

MR. SPROAT. They are--

MR. WYNN. I am trying to find out where this money is and get a handle on it.

MR. SPROAT. There is a national trust fund that the Government has called the Nuclear Waste Fund, and it is accumulating interest. It is certainly intended to be used strictly for disposal of high-level nuclear waste material.

MR. WYNN. Do you have authority over that fund?

MR. SPROAT. No, I don't.

MR. WYNN. Who has authority over that fund?

MR. SPROAT. Basically the Congress.

MR. WYNN. So it is up to us. You don't want that uncertainty?

MR. SPROAT. Yes.

MR. WYNN. That is fair.

The other question I wanted to ask, there has been some suggestion that reprocessing might preclude the need for Yucca. Do you agree or disagree with that?

MR. SPROAT. I totally disagree with that. It is very clear, no matter what we do with reprocessing, there are other waste forms, high-level waste from the weapons program and other spent nuclear fuel, probably

spent naval nuclear fuel, that can't be reprocessed and needs to go right into disposal.

MR. WYNN. Okay. Thank you.

Another question I have is a note that you say on about 30 June, 2008, you believe you will have the final EIS rail alignment, EIS issue. Have you considered the potential litigation around the EIS in calculating this schedule? I know with road construction, I have seen delays as much as 10, 15, even 20 years just in terms of litigation over EIS.

MR. SPROAT. Yes. That is a very good question. And let me just be clear, that milestone that I put there indicates when we want and need to have that EIS issued. What is not factored into that schedule that I gave you is litigation that may occur, and we all have our own opinions of will it occur and how long will it take. We have not factored in contingency around litigation on that schedule on any of the milestones.

MR. WYNN. Is there any way to get around that problem, because it seems to me that that could add another 10 years potentially to this issue, to the schedule.

MR. SPROAT. I am not sure. I am not sure.

MR. WYNN. And I guess the last question I have is, now, as a result of the suit by the utilities, DOE has some liability.

MR. SPROAT. Yes.

MR. WYNN. And it is my understanding that the Federal Judgment Fund is the only source you can tap into; is that correct?

MR. SPROAT. That is correct.

MR. WYNN. Is the Federal Judgment Fund sufficient?

MR. SPROAT. That is administered by the Department of Justice, and I just don't know what the funding mechanisms or budget mechanisms are for that, sir. I just don't know.

MR. WYNN. Two questions. One, do you know the amount of the liability, of DOE's liability?

MR. SPROAT. From what I believe as of today--and there are going to be differences between what the industry might say the liability is versus what we would calculate--

MR. WYNN. Ballpark.

MR. SPROAT. But right now we believe the liability is probably in the neighborhood of about $3 billion, and by 2017 we believe it would be up to about $7 billion.

MR. WYNN. Seven billion dollars.

MR. SPROAT. Yes.

MR. WYNN. Is it fair to say the Federal Judgment Fund doesn't have that kind of money?

MR. SPROAT. I don't know. I just don't know.

MR. WYNN. If, in fact, the Federal Judgment Fund doesn't have this kind of money, you are suggesting that there is a legislative fix to cover this liability. Do you have any suggestions for us as to how we might do this? Are we basically saying the taxpayers are going to have to fork over the money for the liability in addition to the money they paid as ratepayers into the fund?

MR. SPROAT. If everything stays the same as it is now, the answer is yes, the ratepayers--I am sorry, the taxpayers need to fund that additional liability. That is why on my third strategic objective of trying to move this issue forward to trying to reduce that liability in some way or through a portfolio of solutions, I think that is really important. How successful we can be in the next 2, 3 years to do that, I just don't know yet.

MR. WYNN. Are there any settlement discussions with regard to perhaps utilities being willing to accept less?

MR. SPROAT. There are settlement discussions going on, yes, and I was the first, when I was with PECO Energy, I negotiated the first settlement with the Department on that.

MR. WYNN. Is it possible that we could be kept abreast of developments in the settlements, kind of either briefing us or--

MR. SPROAT. I would be more than happy to do that, absolutely.

MR. WYNN. Thank you.

Thank you, Mr. Chairman. I have no further questions.

MR. HALL. Chair recognizes the gentleman from Pennsylvania, Dr. Murphy.

MR. MURPHY. Thank you, Mr. Chairman. And thank you for being here as well.

A couple questions I have, and I would like to follow up a little bit on some of these liability issues, but in general the cost. How much have we spent so far on all of the studies, and how much do we anticipate we will spend on everything involved with Yucca Mountain, the land, the preparation, the transportation, all these legal issues, et cetera. What have we spent, and what are we going to continue to need before we even move anything in there?

MR. SPROAT. I had to get some help from the side. My understanding is that in terms of the Yucca Mountain project itself and the site characterization, about $5 billion, with a B, and the total program expenditures for all aspects of spent nuclear fuel disposal in Yucca Mountain and everything, probably about $8 billion total.

MR. MURPHY. And then the liability issues are on top of that?

MR. SPROAT. The liability issues are on top of that, yes, sir.

MR. MURPHY. Now, this is being paid for by the utilities and folks who have the spent nuclear fuel and pass on to the ratepayers. Will all that be enough?

MR. SPROAT. As of right now, based on the numbers that I have seen, again, which I haven't had an opportunity to challenge and scrub, but based on everything I have seen so far, we believe the waste fund and its projected accumulated assets will be adequate to fund the entire project and its operation, assuming we get access to it in the corpus at the appropriate time.

MR. MURPHY. And that leads to my next question then, because representing companies like Westinghouse Electric in my district, which we are waiting to start building several nuclear reactors, and, of course, there is a lot of steps-- Yucca Mountain is one of the steps in the process of approval. I am just trying to get a sense if the pieces are fitting together here in terms of the timeframe for Yucca Mountain, being able to move spent nuclear fuel there, and having the approvals for these new plants. As everything is moving together, it is like a chain being pushed up a hill. Are things moving together in sequence appropriately there?

MR. SPROAT. There are things that have to happen that still, in my opinion, need some close attention. One is the whole issue about waste confidence, as I talked about a little bit earlier. The NRC needs to make a finding with these new license applications that there is a high confidence level that spent fuel will be disposed of, and at least we will have a way to dispose of it by 2025, a reasonable assurance of that. So waste confidence is clearly an issue.

Secondly, the standard spent fuel contracts that the existing plants have written--I am sorry, have signed between the existing licensees and the Department of Energy will not be adequate for the new plants. And we, my organization, needs to put together a new standard contract and negotiate those with the new licensees.

MR. MURPHY. And you will be able to give us ongoing reports of these things? Can you give us quarterly reports on the progress of all those issues there?

MR. SPROAT. Yes, sir.

MR. MURPHY. Another area is the radiation standard that is currently under revision and likely to be finalized by the EPA later this year. Are you confident we can meet that?

MR. SPROAT. Based on what I have been told, the draft standard that has been proposed and put out there in draft form we can meet. I need to see what the final version looks like and what it says before I am able to say in terms of going forward, yes, we absolutely can do it, but based on the draft, the answer is yes.

MR. MURPHY. And you will again provide the committee with your updates on that?

MR. SPROAT. Yes.

MR. MURPHY. How about another issue here, too, because the liabilities also affect public confidence, and whenever there are some problems with regard to scientific studies done, it leaves us to be concerned. What is being done with regard to the USGS e-mails and failures of scientists to properly document water and filtration?

MR. SPROAT. My understanding, as I have done a little research into this, very little in the short time I have been here. I think the Department has done all of the right things in order to address this. They have done investigations, talking to the people involved to understand exactly what was going on back in the--this timeframe was back in the late 1990s, I believe. So, I mean, this didn't happen in the last 2 years or so. This is back in the late 1990s and specifically had to do with the work that was being done on predicting how water from rainfall would infiltrate through the mountain to the repository itself.

What they did besides understanding what the e-mails meant and what the people who wrote them meant is they brought in some outside expertise to take a look at the model that those people did, that infiltration model, and benchmarked it against other work that other people have done that are not related to Yucca Mountain and had them take a look at it and say, is that model giving us reasonable results? And the answer was, yes, it is. It is giving us results that are consistent with these other independent models.

In addition to that, we have commissioned a separate independent group of scientists to put together another independent infiltration model to make sure that their model comes up and gives us basically the same, consistent answers with the original model. So from somebody who is in the nuclear industry who has been very heavily involved with nuclear licensing and nuclear quality issues over my career, they have taken the right approach, and when all this is done, the issue should be well behind us.

MR. MURPHY. Thank you.

Mr. Chairman, I know I am out of time. Can I ask one more question?

MR. HALL. Of course.

MR. MURPHY. It has to do with, I guess, a general sense of where we stand here with United States standards and storage of spent nuclear fuel compared with other countries, but also as it relates to existing laws and regulations about transportation and trying to anticipate other concerns that may come up in the future. But where would you gauge us

and our standards when we are moving forward compared with other nations who are also dealing with this?

MR. SPROAT. My sense is we are close to the front. I would say that the Scandinavian countries have done a lot of work in terms of geological repositories, and they have made some decisions in terms of their licensing regime and their approach that certainly have some appeal to us. If we are not equal with them, we are pretty darn close. For other countries, we are probably ahead.

MR. MURPHY. I thank you very much, and I appreciate your candor on this and look forward to seeing some of those quarterly reports on the progress.

Thank you, Mr. Chairman.

MR. HALL. Thank you.

Chair recognizes Mr. Butch Otter, Idaho.

MR. OTTER. Thank you Mr. Chairman.

Thank you very much for being here today.

MR. SPROAT. You are welcome.

MR. OTTER. I think Mr. Shimkus said it best. There is probably no issue that is of greater importance to us in the United States, especially in the area of energy, because the way we treat our waste today is going to be dependent on the success of a lot of the licensees that are coming along now and asking for new licenses for nuclear waste.

MR. SPROAT. Absolutely.

MR. OTTER. I have got a couple questions. Are you familiar with the 1995 Idaho settlement agreement?

MR. SPROAT. I am aware it exists. I am aware there is a timetable to remove high-level waste and spent fuel, both naval and other, from INL and get it to the repository by, I think, starting in 2025, with a date by which it is supposed to all be removed, and that is about as far as my knowledge scope goes.

MR. OTTER. The date is not too long after that, about 7 or 8 years.

Is there anything in the Domenici-Reid proposal that would in any way infringe upon or reverse anything in that Idaho--

MR. SPROAT. Not that I am aware of.

MR. OTTER. Under their proposal, it is suggested in there that there are certain requirements to be considered in an interim site or a regional site. Because of the nature of Idaho's nuclear waste and how long it has been there, would Idaho be considered as a regional or interim site?

MR. SPROAT. If I understand--I have read the appropriations language which contains this, and there were certain aspects of it I don't fully understand. I haven't had the opportunity to talk to Senator Domenici about it to get to clarifying it, but if I understand it correctly, it certainly tries to encourage the concept of regionalization, consolidation

on a per-region basis. And I believe it is intended to direct the Department to try and reach agreements with certain host States as to whether or not they would be willing to host a regionalized consolidation interim storage site.

Whether or not Idaho would be an appropriate place for that, I just don't know. And I would hate to speculate on that because I just don't know. All I can say is I can see some challenges in trying to make that happen.

MR. OTTER. Can I be fairly comfortable in assuming that if, with your knowledge, although it may be not as deep as we would hope--I would hope that I had knowledge of it--that the Department won't do anything to try to amend that agreement or change that agreement?

MR. SPROAT. I certainly have no intent or plans to amend that agreement. I am working very clearly to a schedule that says I have commitments not only to the State of Idaho, but to the U.S. Navy and a number of other people to get this stuff moving and get it in a repository for disposal, and I intend to do that.

MR. OTTER. If the timelines don't work out, and having been in business for a long time before I came to this place, this isn't what I am used to in business at this place. If you were up against a timeline, let's say the Idaho timeline, on the removal of the waste, would an interim site be considered adequate, removal of the waste from Idaho to an interim site instead of to Yucca Mountain?

MR. SPROAT. I just can't answer that question, sir. I just don't know. I don't know what the right answer to that is. I can certainly take that question for the record and get back to you, but I just can't answer it now.

[The information follows:]

The Idaho Settlement Agreement of 1995 requires the DOE to ". . . remove all spent fuel, including naval spent fuel and Three Mile Island spent fuel from Idaho by January 1, 2035." (Section C.1) Further "DOE shall treat all high-level waste currently at INEL so that it is ready to be moved out of Idaho for disposal by a target date of 2035." (Section C-3)

If Yucca Mountain were not available to meet the requirements to complete the removal of spent nuclear fuel from Idaho by 2035, to fulfill its commitment the Department could evaluate the potential to move the material to another site outside the State of Idaho.

MR. OTTER. I see.

In an answer to one of the previous questions, I think it was Mr. Rush or Mr. Wynn, you said that there were 70 million tons--

MR. SPROAT. Seventy thousand metric ton limit.

MR. OTTER. Seventy thousand metric tons. Pardon me.

MR. SPROAT. Seventy thousand metric ton limit on the mountain.

MR. OTTER. I have got 70,000 metric tons and 126 sites. How many of those would be candidates for reprocessing?

MR. SPROAT. I prefer to get back to you on that. I don't know.

[The information follows:]

Potentially almost all commercial spent fuel could be reprocessed if recycling technologies and processes were successfully developed and commercially deployed in the U.S., however, economics will dictate the desirability of recycling older fuel which is currently in interim storage.

MR. OTTER. Where I am headed with that is if we do get into reprocessing, I think Mr. Wynn's question was an appropriate one, because if we do get into reprocessing, and we are not varying on 97 percent potential fuel, it could be that Yucca Mountain would be large enough. Now, your answer to him was a rejection of that notion because you said no, because we still have military waste, we still have naval waste, we still have these other wastes.

And so it would be, I think, an appropriate question to ask is, well, then, how much of that 70,000 metric tons, how much space would that take up? If you are asking to enlarge it, how much more space is going to be available? And then how much is not going to be needed out of these 126 sites if we do successfully establish reprocessing?

MR. SPROAT. Sure. Well, where we stand right now, I am obligated under the Nuclear Waste Policy Act to come back to the Congress in the next 3 years, I believe, 3, 3-1/2 years, with a recommendation and an analysis of the need for a second repository and an analysis of do we need one. And I would say that if I don't get that 70,000 metric ton limit removed through the legislation that we have sent up to the Hill, I probably can't--given the uncertainties of the timeframes associated with closing the fuel cycle and how long it is going to take to start recycling that fuel, I would probably still have to come back and say I am going to need a second repository.

MR. OTTER. Plus the fact that I am told there is something like 30 license requests in right now for new plants, and so plus if we are not going to reprocess, someday we are going to be facing that waste.

MR. SPROAT. Absolutely. Absolutely.

MR. OTTER. Mr. Chairman, I would ask unanimous consent that members of the committee who are here and who are not here be allowed to, by way of perhaps a letter to the Director, make additional inquiries, some of them on secondary questions that I would have, and then later, on receiving those replies, make them part of the record, this official record.

MR. HALL. Without objection, I think we made that statement initially at the beginning and have asked for a timely return of those questions.

MR. SPROAT. Certainly.

MR. OTTER. Thank you.

MR. HALL. Mr. Otter, do you yield back?

The Chair recognizes the gentleman from Georgia, Dr. Roland.

MR. NORWOOD. Gee, I really appreciate that.

MR. HALL. Dr. Norwood from Georgia.

MR. NORWOOD. Dr. Roland would love to be here questioning this, I tell you.

Mr. Sproat, welcome.

MR. SPROAT. Thank you.

MR. NORWOOD. I am curious how you felt when you were told you were going to come testify before this committee since you had been on the job for 4 weeks. What were your feelings like about that?

MR. SPROAT. Actually, believe it or not, I welcome the opportunity, because I took this job because I have a very strong opinion about its need for the country, and I am committed to making it better. And any opportunity I get to get in front of a group like this and talk about it and talk about what I intend to do, I enjoy that opportunity.

MR. NORWOOD. Well, I associate myself a lot with John Shimkus on this. There is not much more important than us getting this repository open. I can tell you what my feelings were. I wasn't sure if I was in a nightmare or this was something special we were having. I can't remember how many of these hearings that we have had in the last 12 years where the Director sat there and assured us of this and that and this, and nothing has happened.

MR. SPROAT. Yep.

MR. NORWOOD. I find it unbelievable that since 1982, when we first decided to have a repository, and now 23 years later and saying, oh, well, just 11 more years. You come from the private sector. How are your feelings about that?

MR. SPROAT. Well, clearly, number one, as I said when I opened up, I share the committee's frustration with this. I absolutely do. That is one of the reasons why I decided to put myself through this process to come here and try and make this happen.

I would say that--obviously, I can't speak intelligently all the time about why we got ourselves to where we are. Clearly, number one, I think it was a lot harder than people thought it was going to be is one part. And secondly, I think, quite frankly, this project, to move it forward, to get an NRC license and to build this, requires skill sets of the

person running the--of the program that may be a little different than the person--than the people who have been here in the past.

MR. NORWOOD. Took us 23 years to figure that out, huh? It doesn't say a lot for DOE, if you want to know the truth.

MR. SPROAT. I can't answer that.

MR. NORWOOD. Last time I was at Yucca Mountain was 1995, 1996, and they had dug some pretty good holes in that mountain then. All I can remember out of that whole trip was everybody was running around painting signs saying don't run over the turtles, and that is the way we were spending most of our dollars and research about the turtles. The good thing about this to me is I think you might actually get something done.

MR. SPROAT. I plan to.

MR. NORWOOD. And I am all for you, and as Mr. Shimkus said, we want help. This is not just embarrassing, which it is. It is costing this country a great deal of money, and it is interfering, in my mind, greatly with our energy policies. In my part of the world, Georgia and South Carolina, where Savannah River Site is, I mean, we are trying to get in position to build three more reactors down there now, one at SRS and two with Southern Company. But we need the Department of Energy to actually do something, and if it takes 30 years to open up that mountain, I have got great concerns even with a man like yourself who is used to getting stuff done. You hadn't been over there long enough to see all the traps. I mean, you have got bureaucrats around every corner digging a hole, hoping you fall in it so we can't get this done.

MR. SPROAT. Believe me, sir, I am going in to this with my eyes wide open.

MR. NORWOOD. Well, you have friends on this committee who are not scared and who would be willing to help you, but we want to see you actually make this happen, and my question is, my gosh, is it going to take until, what did you say, 2017?

MR. SPROAT. Yes, sir.

MR. NORWOOD. Is it really going to take that long after all this time?

MR. SPROAT. Well, let me say this about that. I do believe it is going to take--to get the quality application in to meet my standards to the NRC, I believe it is going to take me pretty close to that 2008 timeframe. After that, if I haven't had enough time yet, but in terms of the construction process and can we shrink once we get that license to build, can we shrink the construction timeframe, I bet we can, but I just haven't had enough time to really go through the designs and challenge the planners yet around that.

MR. NORWOOD. I have given up on this every other year, thinking, well, it will never happen, don't waste your time on this. What have they been doing for construction in 23 years? They were digging as hard as they could dig in 1995. What are we trying to build yet?

MR. SPROAT. They haven't been building anything. It has been mainly a program to gather data about the geology of the mountain and to put together a license application that they think the NRC--would meet the NRC's needs of 2004.

MR. NORWOOD. Mr. Sproat, now, we won't tell anybody. You really think it takes 23 years to gather data on the geology?

MR. SPROAT. No, sir.

MR. NORWOOD. I don't either. I think somebody is playing games. I hope you can get around them best you can.

One last question, Mr. Chairman. I hope we have made it clear, we are for you, and we are with you.

MR. SPROAT. Yes, sir.

MR. NORWOOD. As the Director of Radioactive Waste, does MOX fuel come under your bailiwick?

MR. SPROAT. No, it does not.

MR. NORWOOD. If you want that mountain to be filled up overnight, all we have got to do is listen to the Chairman of the Appropriations Subcommittee for Energy and Water that wants to liquify all of our nuclear waste in this country, and we will fill your mountain up so fast that you won't know what to do. You know what liquification is of nuclear fuels--nuclear waste, I mean?

MR. SPROAT. Quite frankly, I have not heard of that concept.

MR. NORWOOD. Well, I want you to be interested in it a little bit because there are alternatives. We have tried very hard to put a MOX fuel plan up to reprocess this so that 90 percent of this waste we can burn up in reactors and only send you 10 percent, and there are folks trying to stop that and want to turn it into glass logs. They are as big as that table over there, and it will fill your mountain up real quick. So I hope you will look at that enough to know it is going to affect where you are going to be down the road a little bit.

MR. SPROAT. Yes, sir.

MR. NORWOOD. Hopefully. And believe me, we on this side don't depend on the Senate very often, but hopefully the Senate is going to put the money in this MOX fuel thing so we can actually send you 10 percent of all that waste and not 100 percent of it.

Good luck. I admire you taking this on. I hope you can do it.

MR. SPROAT. Thank you.

MR. NORWOOD. Thank you, Mr. Chairman.

MR. HALL. Dr. Norwood.

MR. NORWOOD. Yes, sir.

MR. HALL. We thank you.

And Dr. Roland is another dentist, and we put him in charge of the turtles.

MR. NORWOOD. I will tell Dr. Roland you asked about him.

MR. HALL. I have one other question, just one last question I want to get in the record. What else can be done to accelerate the schedule and begin receiving spent fuel at Yucca Mountain?

MR. SPROAT. I think, Mr. Chairman, that my best answer to that right now is I need to complete the assessment of the program that I am currently doing and understand and really push and challenge the organization to compress the schedules that they have given me as I have walked in the door, and it is going to take me a little while to do that. I need to make sure they have got a good, credible design first and then really push them on compressing that, both the design schedules as well as the construction schedules.

And then, quite frankly, the other thing is the key critical path goes through the NRC licensing process, and working with the NRC management so that we end up with a 3-year licensing process and not a 10-year licensing process is really important.

MR. HALL. My last question: Can you think of anything we can do legislatively up here that will support a guy with a program that you have laid out, that I respect and Dr. Norwood respects? And you don't have an unfriendly committee in front of you here. We are for you.

MR. SPROAT. I would say--I would just requestfully--I am sorry, respectfully request that the committee give serious consideration to the legislative package we have already sent up, and as part of my assessment with the program here over the next 3 to 6 months, if I need something else, you will hear from me.

MR. HALL. Mr. Boucher, other questions?

MR. BOUCHER. No.

MR. HALL. We thank you for your time, preparation, your background and your service to this country.

We are adjourned.

[Whereupon, at 3:41 p.m., the committee was adjourned.]

RESPONSE FOR THE RECORD OF THE HON. EDWARD F. SPROAT III, DIRECTOR, OFFICE OF CIVILIAN RADIOACTIVE WASTE MANAGEMENT, U.S. DEPARTMENT OF ENERGY

QUESTIONS FROM REPRESENTATIVE HALL

Yucca Mountain

Q1. Previous DOE testimony before this Committee indicated that liability costs may reach approximately $500 million per year plus another $500 million per year for continued storage of defense waste. What can DOE do to mitigate these costs to the American taxpayer?

A1. The surest way for the Department to mitigate liability is to open the Yucca Mountain repository. The Department recently announced a schedule for commencing operation of the Yucca Mountain repository by 2017. This schedule is premised on a number of factors including adequate funding, issuance of a Nuclear Regulatory Commission (NRC) construction authorization consistent with the three year period specified in the Nuclear Waste Policy Act, the timely issuance of a license amendment to receive and possess, the timely issuance of all other necessary authorizations and permits, the absence of litigation related delays and the enactment of pending legislation proposed by the Administration.

Q2. I understand that the DOE is currently paying damages to 3 contract holders under negotiated settlements or court awards. When do you expect to begin paying damages to the other contract holders?

A2. The Department of Justice has entered into settlement agreements with three contract holders and pays settlement amounts from the Judgment Fund pursuant to those agreements. Money damages awarded by a court also would be paid from the Judgment Fund. The government cannot predict whether or when additional settlement agreements with contract holders will be completed or when payments pursuant to those agreements would begin. Similarly, the Department cannot predict if or when courts will enter damage awards in those pending cases that are tried to judgment.

QUESTIONS FROM CHAIRMAN BARTON

Yucca Mountain

Q1. Can DOE implement interim storage faster that [*sic*] Yucca Mountain can be finished?

A1. The Department recently announced a schedule for commencing operations of the Yucca Mountain repository by 2017. Assuming the elimination of the constraints imposed by the Nuclear Waste Policy Act on interim storage, the Department does not believe that off-site interim storage could be deployed appreciably sooner than 2017.

Q2. What are the biggest barriers to docketing the Yucca Mountain license? What will you do to address them? Can anything be done legislatively to resolve them?

A2. The Department recently announced a schedule for docketing the Yucca Mountain license application by the end of 2008. In order to meet this schedule, the Department must complete work on (1) an updated Total System Performance Analysis (TSPA) that takes into account a number of developments including an Environmental Protection Agency (EPA) standards for the post-10,000 year period and replacement of the U.S. Geological Survey (USGS) infiltration model, and (2) completion of surface facility designs to incorporate the clean-canistered approach. This schedule is not dependent on the passage of new legislation, but is dependent on adequate funding and the absence of litigation related delay. In addition, timely finalization of the rulemaking on the EPA standards is essential since completion of the license application is dependent on knowing how that rulemaking will address the uncertainties that become increasingly large in post-10,000 year period.

Q3. Licensing Yucca Mountain will be a significant first of a kind undertaking. Are there ways to improve the NRC licensing process that could improve the chances of success, consistent with protecting public health and the environment?

A3. The Administration has included provisions in its legislation to streamline the Nuclear Regulatory Commission (NRC) licensing process and improve the Projects's chances of success, consistent with protecting public health and the environment. We are evaluating whether or not there are other potential improvements in the current NRC processes which could further promote this effort. The Department strongly encourages Congress to pass the Administration's Yucca Mountain bill.

Q4. What else can be done to accelerate the schedule and begin receiving spent fuel at Yucca Mountain sooner? Could anything be done legislatively?

A4. Maintaining or accelerating the announced schedule depends to a large extent on adequate funding for construction of the repository, development and procurement of canister, and construction of the Nevada rail line. We are evaluating whether there are legislative actions in addition to those in the Administration's Yucca Mountain bill that would assist in accelerating the opening of the Yucca Mountain repository.

Q5. The Yucca Mountain EIS says that the repository should be kept open for monitoring and potential retrieval of the waste for a period of 50-300 years. Will the design allow for retrieval of spent fuel for reprocessing if the technology is successfully developed? How might this period be utilized to improve the effectiveness of the repository over time?

A5. The Yucca Mountain design will allow for the retrieval of spent nuclear fuel while the repository is open. The NRC requirement to maintain a minimum monitoring period of 50 years is to ensure that the system has performed as

expected and that waste could be retrieved, if required. The Department is currently designing repository subsurface systems to last up to 300 years to allow future generations more flexibility in taking steps to improve the efficiency of the repository and in defining when the repository should be sealed and ultimately closed. While the design would permit the retrieval of spent fuel for recycling, the Department has no current plans to emplace spent fuel in the repository with the intent to retrieve it for recycling. Recycling technology most likely will be deployed to deal with spent fuel on an ongoing basis rather than with legacy spent fuel generated prior to the deployment of recycling technology.

Q6. Being regulated by the NRC requires a workforce with a unique skill set, including strict adherence to procedures and quality assurance. Since DOE has never been regulated by the NRC, how do you plan to adapt the workforce culture to enable it to succeed under NRC scrutiny both as the license applicant for Yucca Mountain and ultimately, as the repository operator? Is there any additional authority you need to meet this workforce challenge?

A6. The Department currently holds two NRC licenses for spent fuel storage facilities at the Idaho National Laboratory and can apply that knowledge to Yucca Mountain. The Yucca Mountain Program is in the process of developing a nuclear culture and following prescribed NRC procedures, requirements and regulations which are necessary to become an NRC licensee. The NRC will only issue a license to construct a repository or operate facilities if the Department demonstrates that NRC requirements are being met. The Department will be conducting a skills management evaluation to identify future requirements for Federal and contractor staff skills and competencies, and is confident that its workforce will meet all NRC requirements as a licensee. The Department is not seeking any additional authority to meet these workforce requirements at this time.

Q7. Currently there are plans to build 4 new reactors in Texas and additional plants may be built in the future. There are two significant conditions that license applicants must meet related to spent fuel. First, license applicants must meet the requirements of the waste confidence rule. That will be possible if DOE maintains the 2017 schedule and Congress raises the capacity limit on Yucca Mountain to allow room for spent fuel from new plants. Secondly, under the Nuclear Waste Policy [*sic*] license applicants must sign standard contracts with DOE for spent fuel disposal. Considering that DOE is in the midst of litigation over the vast majority of the existing contracts, does DOE intend to sign new contracts with license applicants?

A7. Yes. The Department intends to enter into contractual arrangements with license applicants that will meet the requirements of the Nuclear Waste Policy Act and support the issuance of licenses to construct and operate new reactors.

Q7a. Will DOE need any additional legislative authority?

A7a. No. The Nuclear Waste Policy Act already authorizes the Secretary to enter into contracts for the disposal of spent nuclear fuel and high-level radioactive

waste from civilian nuclear power reactors. The Department does not require and is not seeking any additional legislative authority.

Q7b. When will DOE begin negotiations with companies interested in building new plants?

A7b. The Department expects to announce its plans in the near future. The Department is committed to undertaking a course of action that does not delay companies from applying for and receiving licenses to construct and operate new reactors.

Q7c. In what ways do you think new contracts might differ from the current generation of contracts?

A7c. The Department has started, but not completed its evaluation of the current Standard Contracts between utilities and the Government to review which provisions may need modification.

Q8. Please provide the Committee with a quarterly report on the Departments [sic] progress toward meeting the various program milestones that are necessary to submit the license application by June 30, 2008.

A8. The Department will provide the Committee a quarterly report on the Department's progress toward meeting Program milestones to submit the license application by June 30, 2008. Attached for the record is a list of the anticipated milestones to license application submittal.

Attachment

Yucca Mountain Repository Schedule

Milestone	**Date**
Design for License Application Complete	30 November 2007
Licensing Support Network Certification	21 December 2007
Supplemental Environmental Impact Statement (EIS) Issued	30 May 2008
Final License Application Verifications Complete	30 May 2008
Final Rail Alignment EIS Issued	30 June 2008
License Application Submittal	30 June 2008
License Application Docketed by NRC	30 September 2008

The schedule above is based on factors within the control of DOE, appropriations consistent with optimum Project execution, issuance of an NRC Construction Authorization consistent with the three year period specified in the Nuclear Waste Policy Act, and the timely issuance by the NRC of a Receive and Possess license. This schedule also is dependent on the timely issuance of all necessary other authorizations and permits, the absence of litigation related delays and the enactment of pending legislation proposed by the Administration.

Q9. Can Yucca Mountain meet the radiation standard that is currently under revision and likely to be finalized by EPA late this year?

A9. The Department believes it can meet the EPA radiation protection standards in the draft rule issued last year. Any revisions to the draft rule would need to be evaluated. While the Department is confident the repository will provide adequate protection up to and beyond the point of peak dose, increasing the compliance period by a hundred fold greatly increases the uncertainties associated with modeling performance and most likely will prolong the licensing process.

Q10. What is being done with regard to the USGS emails and the failure of their scientists to properly document their water infiltration studies? How long will it take to resolve that issue?

A10. The infiltration estimates produced by USGS are corroborated by independent data from around the United States. Still, we recognize that it is essential that the technical basis for the Yucca Mountain repository meet DOE's quality assurance requirements and be without the appearance of question or qualification; therefore, the modeling work performed by the USGS employees who exchanged the emails will be replaced and supplemented, as necessary, and supporting documentation will be reviewed and verified. We have tasked Sandia National Laboratories to review the existing infiltration model and prepare a new model. This new model and the results will be used as part of the technical basis for the license application.

After Sandia completes this task, the models and results will be independently checked by experts outside the Department to ensure the technical soundness and quality assurance traceability, which are required for the license application.

Q11. The "Clean Canister Approach," using one canister design for transportation and disposal, sounds a lot like the old Multi-Purpose Canister proposal that failed. What makes the clean canister approach any more likely to succeed?

A11. The previous multi-purpose canister (MPC) did not fail, but was cancelled for budgetary and political reasons as noted in an extensive report in 1997 by the Electrical Power Research Institute. Based on the scientific and technical information now available, the Department believes it can successfully develop and incorporate a canister approach that can support transport, aging, and disposal requirements for the overall waste management system.

Q11a. How will DOE handle spent fuel that has already been packaged in transportable canisters, especially at decommissioned plants where handling facilities no longer exist?

A11a. The Department expects most such spent fuel to be repackaged in the new canisters at reactor sites. There will be some capability, however, to repackage such spent fuel at the Yucca Mountain repository. While the Department will work with utilities to facilitate the transfer of spent fuel, the Department does

not believe it is obligated under the Standard Contract to accept spent fuel packaged in transportable canisters. The issue of the Department's acceptance of those systems is currently a matter in litigation.

Q12. What is the status of the Defense contribution for the cost of disposing of defense waste and spent fuel in the repository? Is the government on schedule to meet its financial obligation to the project?

A12. The Defense contribution for the disposal of the defense waste is approximately $15 billion of the total life cycle cost of the Program. The Government contribution is on schedule to meet its financial obligation to the Project.

QUESTIONS REPRESENTATIVE ROGERS

Yucca Mountain

Q1. Last November, the Department announced an initiative to develop a multi-purpose canister that could be loaded at reactor sites, transported, and disposed at Yucca Mountain thus eliminating the need for repackaging and multiple handling of used fuel. These canisters were called TADs – for transportation, aging, and disposal. Does the Department remain committed to the TAD initiative? How is this initiative progressing? How does the development of this canister support the licensing of Yucca Mountain?

A1. The Department has adopted a canister-based approach for the repository and is currently re-designing the surface facilities to reflect this new initiative. Industry has responded positively to this new approach. The Department intends to contract with private industry for the development of the TAD systems. We plan to release a performance specification for the TAD system in November of this year and anticipate that conceptual designs of TAD canisters will be available early next year. The Department recently released its schedule to submit the license application to the Nuclear Regulatory Commission (NRC) in June of 2008. This schedule is premised on the ability to use more efficient and simpler surface facilities because of the canister-based approach.

Q2. I understand the Department will be making a Critical Design Decision soon regarding the redesign of the repository surface facility (consistent with the simplified approach [sic] in provided by the TAD initiative), what is the status of this decision?

A2. The Department's internal Critical Decision to adopt the canister-based approach was made in July of this year.

Q3. The Yucca Mountain Environmental Impact Statement says that Yucca Mountain should be kept open for monitoring and potential retrieval of the waste for a period of 50-300 years. Do you see this period providing an opportunity to improve the effectiveness of the repository over time?

A3. Yes. The NRC requirement to maintain a minimum monitoring period of 50 years is to ensure that the system has performed as expected. The Department, however, is currently designing the underground tunnels to last up to 300 years, which will allow future generations more flexibility in taking steps to improve the efficiency of the repository and in defining when the repository should be sealed and closed. The ability to keep the repository open for 300 years will permit the emergence of new technologies that might improve the long-term performance of the repository.

Q4. Transportation of spent fuel is an area that has obvious challenges. In Michigan, one of the concerns has been barging of spent fuel on the Great Lakes. While the Department has stated a preference for rail in shipping spent fuel to Yucca Mountain, the Environmental Impact Statement does contemplate barging spent fuel on the Great Lakes. What are the Department's plans for moving forward and addressing local or regional concerns so that they can be put aside as obstacles to moving the Yucca Mountain project forward?

A4. Any decision to use barge transport would be made only after thorough consultations with stakeholders, including State, Tribal, local and utility representatives. DOE will work with the appropriate State Regional Groups as part of its transportation planning and mode selection process.

QUESTIONS FROM REPRESENTATIVE OTTER

Q1. I understand that the first facility that will be in operation at Yucca Mountain is the initial fuel handling facility. Will both Navy and DOE Spent Nuclear Fuel from Idaho be received at this facility as soon as it opens?

A1. Currently we are evaluating surface facility designs and no final decisions have been made with regard to those facilities. As a general matter, our planning assumption is that, subject to construction sequencing and assuming the capability to transport spent nuclear fuel to the repository site, that commercial, Naval and DOE spent nuclear fuel will be able to begin to be accepted at the site at the time the repository opens, or shortly thereafter. The Department's recently announced Best-Achievable Repository Construction Schedule estimates that the Department would begin receipt in March 2017.

Q2. Are there any Research and development needs that must be addressed before deploying the Transport, Aging, and Disposal (TAD) canister, if so what is the schedule for addressing these needs?

A2. No, the Department does not believe that any research and development needs must be addressed before deploying the Transport, Aging, and Disposal (TAD) canister.

